

Research Report

Redhead Mountain Bike Park 2023 Trail Visitor Survey

PREPARED FOR Iron Range Tourism Bureau

BY Parks & Trails Council of Minnesota

April 2024





About Parks & Trails Council

Parks & Trails Council of Minnesota is a 501(c)(3) organization dedicated to acquiring, protecting, and enhancing critical land for the public's use and benefit. Founded in 1954, Parks & Trails Council acquires threatened and critical parcels of land, advocates at the Minnesota Capitol, supports volunteers, and produces original research on issues and trends facing Minnesota's parks and trails.

More information about Parks & Trails Council is available at www.parksandtrails.org.

About Iron Range Tourism Bureau

Iron Range Tourism Bureau is a nonprofit destination-marketing organization serving the communities of Aurora, Biwabik, Buhl, Chisholm, Eveleth, Gilbert, Hibbing, Hoyt Lakes, Mountain Iron, and Virginia. Iron Range Tourism Bureau is governed by a 15-member board of directors serving three-year terms.

More information about Iron Range Tourism Bureau is available at www.ironrange.org

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Acknowledgments

This report is a collaborative effort and wouldn't have been possible without the input, guidance, support, patience, and hard work of many. A very special thanks to the volunteers and city staff who collected surveys, the many IROC volunteers who make Redhead's trails possible, and Linda Picone for her excellent editing support.

Project Team:

- Beth Pierce, Iron Range Tourism Bureau
- Bridgit Maruska, City of Chisholm
- Jordan Metsa, Minnesota Discovery Center
- Steve Rahkola, Giants Ridge
- Andrew Oftedal, Parks & Trails Council
- Brett Feldman, Parks & Trails Council

About the Author

Andrew Oftedal is the Research and Policy Manager at Parks & Trails Council, where he leads research on the issues, trends, and attitudes shaping Minnesota's parks and trails. Andrew earned his bachelor's degree at Iowa State University and his Master of Science in Natural Resources Science and Management from the University of Minnesota, Twin Cities.

Parks & Trails Council's research program is made possible by generous support from its members.

Cover Photo: Cliffside at Redhead Mountain Bike Park. Photo from the City of Chisholm.

Published April 2024

Executive Summary

Redhead Mountain Bike Park 2023 Trail Survey



About: Redhead Mountain Bike Park, located in Chisholm, is an outdoor recreation destination built on a reclaimed iron ore mine. The park boasts 25 miles of mountain biking and hiking trails, a crystal-blue pit lake, dramatic redrock cliffs, scenic vistas, rugged bedrock, and new-growth forest. The park is owned by the City of Chisholm.



Visitor Demographics

- + Men 63%
- + Women 37%
- + Average age ≈ 41
- + Income over \$100k **58%**
- + Gen Z 16%
- + Millennials 34%
- +Gen X 36%
- + Baby Boomers 13%



Absolutely amazing. Wonderful experience!

~ First-time visitor from Osseo, MN



Trail Experience

Primary trail activity



Mountain biking





Rated experience "very good"

What would improve Redhead?



More trail miles More scenic overlooks

Bike wash station



Avg. time spent on trail



16%

Visiting with children



Rider Characteristics

Preferred trail difficulty rating

- Beginner 6%
- Intermediate 27%
- Intermediate Plus 42%
- Black Diamond 21%
- Double Black Diamond 4%

Favorite type of trail





All-mountain or enduro



Downhill or jump lines



Cross-country trails





67%

of Redhead visitors were tourists



65%

of tourists at Redhead visited another city on the Iron Range



of tourists were visiting Redhead for the first time



79%

of tourists said Redhead was a significant reason they visited the Iron Range



75%

of tourists ate out on the Iron Range during their trip



67%

of tourists participated in another outdoor activity on the Iron Range during their trip

Where visitors were from



States







Twin Cities 35%

Grand Rapids Area 19%

(°) Iron Range 14%

Duluth-Superior 12%

Lodging preferences



Camping 41%



Private home / cabin 34%



Hotel / resort 21%



Airbnb/VRBO 9%

2.7 Avg. # of nights

Visitor spending



\$495

Average household spending on the Iron Range during trip

Top spending categories:



Lodging

Restaurants / bars

Transportation / gas

What does the Iron Range need more of to increase tourism?



74%

of tourists said more bars, restaurants, or coffee shops



58%

or tourists said more lodging options

Methodology: In 2023, Iron Range Tourism Bureau, in collaboration with the City of Chisholm and Minnesota Discovery Center, contracted with Parks & Trails Council to conduct a visitor survey at Redhead Mountain Bike Park. Trained surveyors collected 439 surveys at the Redhead trailhead between July 31, 2023 and October 25, 2023. Surveys were collected during peak and non-peak visitor hours, and results are representative of non-winter visitors to Redhead Mountain Bike Park in 2023, with a margin of error of +/- 4.7 percentage points.

For full results and methodology, see the full report.

Introduction

Redhead Mountain Bike Park, located in Chisholm in northeastern Minnesota, is a destination mountain biking facility built on a reclaimed mining site. The park features 25 miles of trails that weave around a deep, cerulean-blue lake surrounded by the steep redrock walls of a former iron ore pit (Figure 1). The trails carve through red rock canyons, traverse slabs of rugged bedrock, descend to the lake shore, and wind through birch, aspen, and pine forests. The park boasts dramatic cliffs and scenic vistas, and the iron-rich dirt gives the entire park a reddish hue. Redhead's trails are used by mountain bikers and hikers, and the lake is used for kayaking, canoeing, paddleboarding, and swimming. An ATV trail and the Mesabi Trail — a 165-mile paved trail connecting Grand Rapids to Ely — also travel through Redhead and provide trail connections to downtown Chisholm. The adjacent Minnesota Discovery Center, Greater Minnesota's largest museum complex, serves as the trailhead and houses exhibits, train tours, a restaurant, and a bike and gift shop.

Redhead Mountain Bike Park officially opened in 2021 thanks to funding from the Department of Iron Range Resources and Rehabilitation and is a cooperative effort between the City of Chisholm, the

Minnesota Discovery Center, and the Iron Range Off-Road Cyclists (IROC). The City of Chisholm owns the park, and IROC, a local member-based organization, oversees the maintenance of the trail system.

In 2023, Iron Range Tourism Bureau contracted with Parks & Trails Council of Minnesota to survey visitors using Redhead's trail system. Iron Range Tourism Bureau is a destination-marketing organization supporting, serving, and promoting the communities of Aurora, Biwabik, Buhl, Chisholm, Eveleth, Gilbert, Hibbing, Hoyt Lakes, Mountain Iron, and Virginia. The survey was conducted to understand Redhead's visitors particularly tourists — and inform planning and marketing of the park.

The visitor survey was collected systematically by intercepting visitors at Redhead's trailhead on weekdays and weekends during peak and non-peak hours. Surveying occurred between July 31, 2023, and October 25, 2023. Trained volunteers, Chisholm city staff, and Minnesota Discovery Center staff administered the survey. Respondents had the choice of completing the survey on paper or electronically on a tablet. The sampling plan was designed for results to be representative of Redhead's non-winter visitors and provide a snapshot of their characteristics, motivations, experiences, and origins.

Results for the full sample (n=439) have a margin of error of +/- 4.7 percentage points at the 95% confidence level.

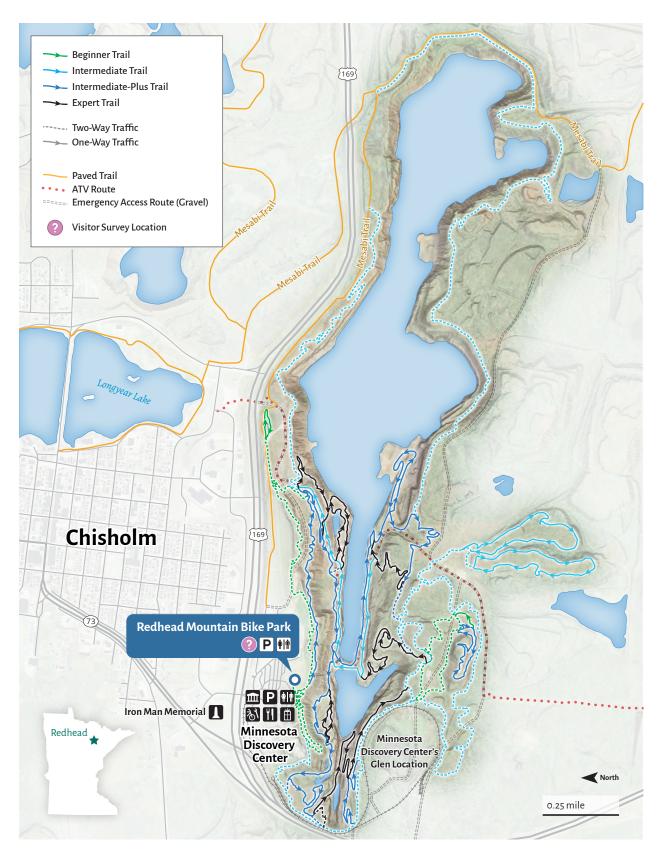
Redhead is a year-round destination open for snowshoeing and fat-tire biking in the winter. This report focuses exclusively on non-winter visitors using Redhead's trails.

This report uses a much narrower definition of "Iron Range" than is typical. "Iron Range" is broadly used to describe a vast geographical area, including the Cuyuna, Mesabi, Vermillion, and Gunflint ironore ranges (stretching from Cuyuna to Hibbing to Ely and the Canadian border). In contrast, whenever this report refers to the "Iron Range," it is referring specifically to the service area of Iron Range Tourism Bureau (Aurora, Biwabik, Buhl, Chisholm, Eveleth, Gilbert, Hibbing, Hoyt Lakes, Mountain Iron, and Virginia).

For more details on this report's methods, see our methodology.

Figure 1

Redhead Mountain Bike Park Overview Map



Visitor Demographics

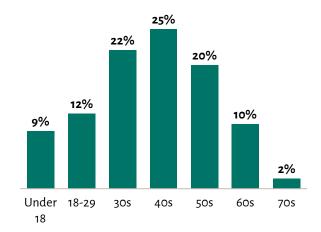
Redhead's visitors span a wide range of ages

Adult visitors ranged in age from 18 to 77 years old. The average adult visitor to Redhead was between 43 and 46 years old (median = 44; mean = 44.4; 95% C.I. [43.1, 45.7]). Among all adult visitors, the majority (52%) were in their 30s or 40s.

The average age of all visitors, however, was significantly younger. The survey did not directly ask for the ages of children visitors, but it did ask how many children were in each visitor group.¹ Overall, 9% of all visitors were children under 18 (Figure 2). If it's assumed the average age of children visiting was 12, the average age of all visitors was approximately 41 years old.²

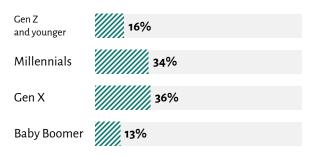
Another method of understanding visitors is to look at their place in life, whether they are young adults, middle-aged, or retired. Looking at generations is helpful because it provides a way to understand how different formative experiences (e.g., world events, technological advances) interact with visitors' life stages to form recreational preferences. Millennials (aged 27-42) and Generation X (aged 43-58) accounted for the vast majority of Redhead's adult

Figure 2 **Visitors by age**% of all visitors



Visitors by generation

% of all visitors



Q29: What year were you born? (n = 391)

Notes: Ages were only asked of adult visitors. Percentage under 18 is calculated based upon group composition (Q7) and includes non-respondents and groups without adults. Generations are defined as Gen Z and younger (born 1997 or after; Age 26 and younger), Millennials (born 1981-96; Age 27-42), Gen X (born 1965-80; Age 43-58), and Baby Boomer (born 1946-64; Age 59-77). Percentages don't add up to 100% due to rounding.

 ¹ The survey asked visitors how many children were in their group, and each household in a group was eligible to complete a survey. Consequently, visitors in large groups are slightly overrepresented in the data on visitor age.
 2 The Loppet Foundation, a large organization that serves youth in Minneapolis, offers mountain biking camps for kids starting at age 7. Assuming a normal distribution of ages between 7 and 17, children on the trail have an average age of 12.

visitors (70%). Generation Z (age 26 and younger) was the next largest generational cohort, accounting for 16% of visitors. Baby Boomers (aged 59-77) were the smallest generational cohort, accounting for 13% of visitors.

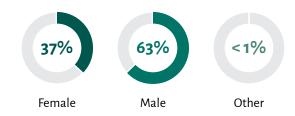
Males account for a significant majority of Redhead's visitors

Nearly two-thirds (63%) of adult visitors identified as male, compared to only 37% of visitors who identified as female (Figure 3). Studies conducted on other trail systems

Figure 3

Visitors by gender identity

% of adult visitors



Q28. What is your gender identity? (n = 428)

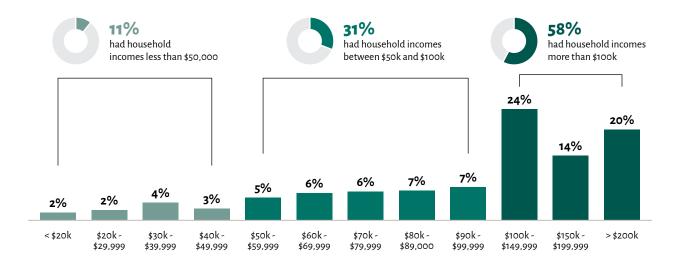


Mountain bikers looking across Redhead lake. Photo from Iron Range Tourism Bureau.

Figure 4

Visitors by annual household income

% of adult visitors



Q30. Please indicate your total household income before taxes last year (n = 383)

Note: Percentages don't add up to 100% due to rounding.

support the finding that mountain biking is predominantly a male activity.

The majority of visitors are high-income

Redhead visitors had disproportionately high incomes compared to the statewide and local average; over half of visitors (58%) had annual household incomes of \$100,000 or higher (Figure 4). For comparison, only 41% of Minnesota households and 29% of St. Louis County households make over \$100,000 annually.³ Visitors also were less likely to have below-average incomes. Only 11% of Redhead's visitors had household incomes below \$50,000 annually, compared to 29% of Minnesota households and 41% of St. Louis County households.

³ U.S. Census Bureau, 2022 estimate (American Community Survey 1-year estimates)



Redhead's trails are used primarily for mountain biking

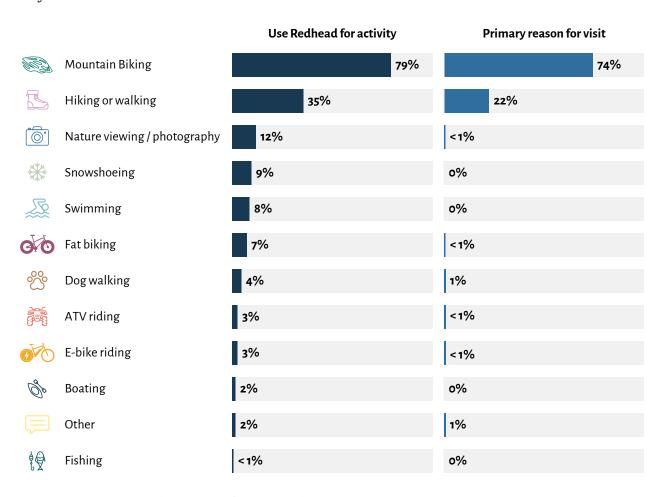
Redhead is designed and marketed primarily for mountain biking, and most visitors (79%) said they've mountain biked on the trails (Figure 5). Hiking is the next

most common trail activity; 35% of visitors said they sometimes visit Redhead to hike. Small minorities of visitors have visited for a wide range of other activities: nature viewing or photography (12% of visitors),

Figure 5

Participation in trail activities during visit

% of all visitors



Q1. What activities do you use Redhead Mountain Bike for? Select all that apply [Answers presented in randomized order] (n = 438) and the selection of theQ2. Which activity was your primary reason for visiting Redhead Mountain Bike Park today? (Includes non-respondents and groups without adults; n =

Note: Percentages for primary reason to visit don't add up to 100% due to rounding.

snowshoeing (9%), swimming (8%), fat biking (7%), dog walking (4%), ATV riding (3%), e-bike riding (3%), boating (2%), and fishing (< 1%). Mountain biking and hiking were the primary reasons nearly all visitors were visiting: 74% of visitors were visiting primarily to mountain bike and 22% were visiting primarily to hike.

The majority of visitor groups are pairs or individuals recreating alone

Most visitors (76%) were recreating with other people (Figure 6). However, most groups were relatively small: 35% of visitors were visiting with just one other person, and 24% were in groups of three to four people. Only 18% of visitors were recreating in groups of five or more people. Approximately one-quarter of visitors (24%) were visiting alone.

The average visitor was in a group of 3.7 people (median = 2; mean = 3.7, 95% C.I. [3.2, 4.1]). Relatively few visitors were recreating with children. Only 16% of adults were visiting with children under 18, and such groups tended to be larger than groups without children. The average group with children had 5.5 people compared to 3.3 people in the average group without children (*p* < 0.001).

Most visitors spend between one and three hours on the trail each visit

On average, visitors spent approximately 2.4 hours on the trail per visit (median = 2;

Figure 6

Group size and composition



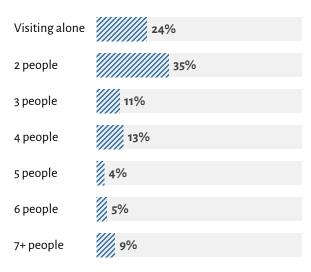
Average visitor is in group of:

Total people

Adults

Children

% of adult visitors visiting in groups of...





Q7. Including yourself, how many people are in your group today? [Adults 18 years and older, including yourself; Children under 18] (Includes non-respondents and groups without adults; n = 413)

mean = 2.4, 95% C.I. [2.3, 2.6]). Most visitors (65%) spent between one and three hours on the trail (Figure 7). Sizable minorities spent longer on the trail: 18% of visitors spent three to four hours at Redhead, and 15%

spent four hours or longer. Very few visitors (2%) spent less than an hour at Redhead during their visit.

Visit duration varied significantly across several visitor subgroups. Visits on weekends were 40 minutes longer than weekday visits (p < .001). Riders who said their skill level was advanced or expert tended to have slightly longer visits than beginner and intermediate riders (2.8 hours vs. 2.4 hours, p < .05). Tourists spent longer on the trail than locals, and people visiting without kids had longer visits than groups with kids, although neither of those differences persisted when controlling for activity type.

Nearly a third of visitors were visiting Redhead for the first time

Redhead's trails have only been open for a few years and still attract many new visitors. Nearly a third of all visitors (30%) were visiting Redhead for the first time. How often visitors visit Redhead depends on whether they are locals or tourists (Figure 8). Nearly half of local visitors (47%) said they visit weekly; another 30% reported visiting monthly. A small, although not insignificant, minority (12%) of local visitors were visiting Redhead for the first time.

Tourists don't visit nearly as frequently. Almost four in 10 tourists (39%) were visiting for the first time, and another 34% said they only visit Redhead once a year.

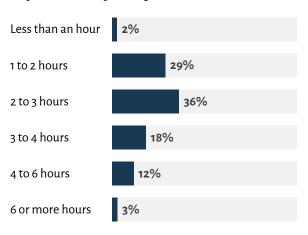
Figure 7

Duration of trail visit



The average visitor spent 2.4 hours on the trail

% of all visitors spending ____ at the trail



Q8. Approximately how much time did you spend on the trail during today's visit? [Hours: Minutes] (n = 414)

Note: Percentages don't add up to 100% due to rounding.

Approximately a fifth of tourists (21%) reported visiting monthly; another 5% reported visiting at least once a week.

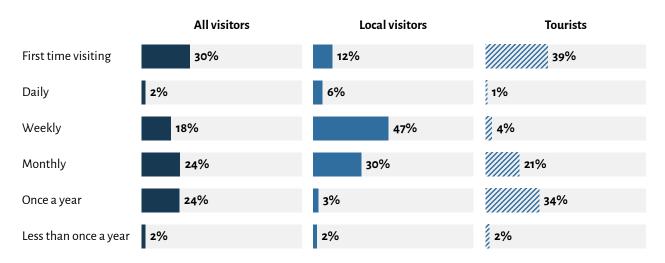
Visitors gave Redhead very high ratings

Visitors rated their experiences at Redhead very highly. Four-fifths of all visitors (80%) said their trail experience was "very good" and another 19% rated it as "good." Only 1% of visitors had a "fair" experience, and no visitors rated their experience as "poor" or "very poor" (Figure 9).

Figure 8

Visitation frequency

% of adult visitors



Q9. Approximately how often do you visit Redhead Mountain Bike Park during the spring, summer and fall?

All visitors (n = 417), Local visitors (n = 140), Tourists (n = 277)

Notes: "Tourist" defined as visitor who lives more than 50 miles away and/or is spending a night away from home. Percentages calculated by column and don't add up to 100% due to rounding.

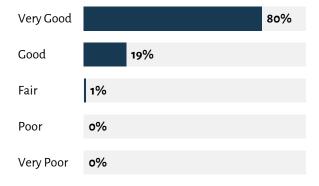
Very few significant differences in trail ratings were observed across visitor subgroups. Visitors tended to give the trails similarly high ratings regardless of whether visitors were men or women, young or old, first-time or repeat visitors, tourists or locals, or beginners or advanced riders. Several differences in trail ratings did emerge, however. Visitors on weekends reported slightly better experiences than weekday visitors (82% of weekend visitors said their experience was "very good," compared to 76% of weekday visitors, p < .05). Hikers reported significantly better experiences than mountain bikers (91% of hikers rated their experience very good,



Visitor ratings of trail experience



% of adult visitors who rated overall trail experience as...



Q10. Overall, how would you rate your trail experience today? (n = 405)

Note: Overall rating based on scale where 5 = very good, 4 = good, 3 = fair, 2 = poor, and 1 = very poor

Q13. Do you live more than 50 miles from this trail?

Q14. Are you on a trip where you have or plan to stay at least one night away from home?

compared to 77% of mountain bikers, p < .05). Among mountain bikers, visitors with children reported significantly lower ratings than visitors without children (67% of mountain bikers recreating with children said their experience was "very good," compared to 79% of mountain bikers recreating without children, p < .05).

Visitors were split on which amenities would improve their Redhead experience

Visitors shared diverse opinions on which amenities would improve their experience at Redhead. Approximately a third of visitors said adding more trail miles, scenic overlooks, or a bike-wash station would improve their trail experience (Figure 10). Roughly a quarter of visitors said adding a skills course, more bathrooms, lake access by vehicle, and additional trailheads would improve their experience. Just under a fifth of visitors said adding a pump track, shower facilities, or a trail connection to downtown Chisholm would improve their experience. Adding interpretive signage, shade structures, and adaptive trails would improve experiences for the fewest number of visitors.

Note that the percentage of visitors who said any particular amenity would improve their experience differs from asking visitors to prioritize potential amenities. For example, visitors may think Redhead should prioritize adding adaptive trails or shade

structures even if doing so wouldn't improve their own experience.

Local visitors rated several amenities significantly higher than tourists. Locals were disproportionately likely to say adding hiking-only trails (24% vs. 10%, p < .001), trailheads or entrances (29% vs. 19%, p < .05), picnic areas (23% vs. 9%, p < .001), and vehicle access to the lake (33% vs. 18%, p < .001) would improve their experience. Tourists were more likely to say adding a bike-wash station (35% vs. 23%, p < .05) and shower facilities (22% vs. 13%, p < .05) would improve their experience.

The most frequently cited negative impact was poor signage

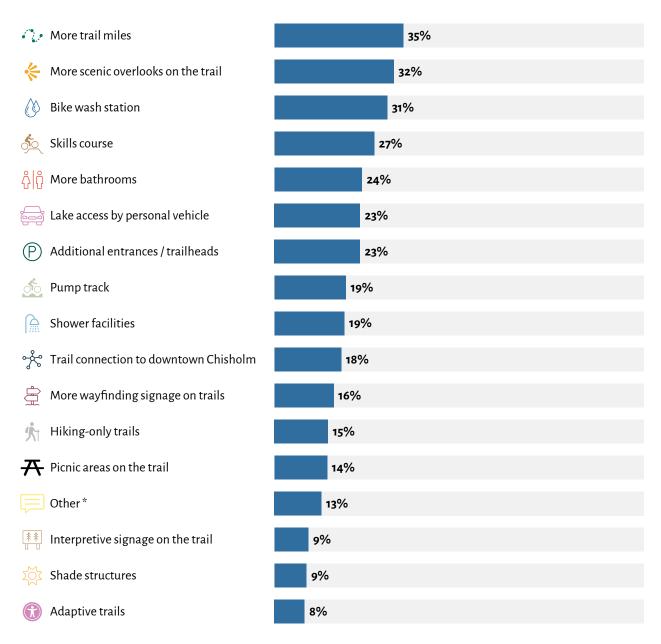
Most visitors (70%) said nothing negatively impacted their trail experience at Redhead. Visitors who said something negatively impacted their experience cited inadequate signage more than any other factor (12%). Mountain bikers with beginner or intermediate skills were the most likely to say inadequate signage negatively impacted their experience (18%, compared to only 5% of advanced riders, p < .001).

Small minorities of visitors reported other negative items that impacted their trail experience. Only 5% (or fewer) of visitors said that ATV crossings, the multi-use status of trails, the difficulty level of trails, poor trail etiquette by other users, poor

Figure 10

Amenities that would improve visitor experience

% of adult visitors who said _____ would improve their trail experience



Q11. Which amenities would improve your trail experience at Redhead Mountain Bike Park? Select all that apply [Answers presented in randomized order]

Note: See Appendix B for open-ended responses to "other"

maintenance, and road crossings negatively impacted their trail experience (Figure 11).

Few differences across visitor subgroups emerged regarding negative trail experiences. One notable exception is that visitors recreating with children were significantly more likely to report that the difficulty level of the trails negatively impacted their experience. Among visitors recreating with children, 11% said the difficulty level of the trails negatively impacted their experience. While that's a small minority, it's significantly higher than visitors recreating without children, only 1% of whom said the trail difficulty was a problem (p < .001).

Key differences between mountain bikers and hikers

Mountain bikers and hikers at Redhead differed in numerous ways (Figure 12). Mountain bikers were much more likely than hikers to be tourists (78% vs. 32%, p < .001), more likely to be male (74% vs. 26%, p <.001), and spend an average of 42 minutes longer on the trail per visit (p < .001). Hikers were slightly more likely to be visiting with children (23% vs. 14%, p < .05) and also reported better experiences on average (91% of hikers said their experience was "very good", compared to 77% of mountain bikers; p < .05).

The two user groups also desire different amenities. Mountain bikers are significantly

Figure 11 **Negative visitor experiences** % of adult visitors who said _ negatively impacted their trail experience Lack of adequate signage 12% Other* 5% ATV crossings Multi-use status of trails 4% Difficulty level of trails 3% Poor trail etiquette and/or 2% unfriendliness of other trail users Poor upkeep or maintenance 2% 1% Road crossings

Q12. Did any of the following negatively impact your trail experience today? Select all that apply [Answers presented in randomized order] (n

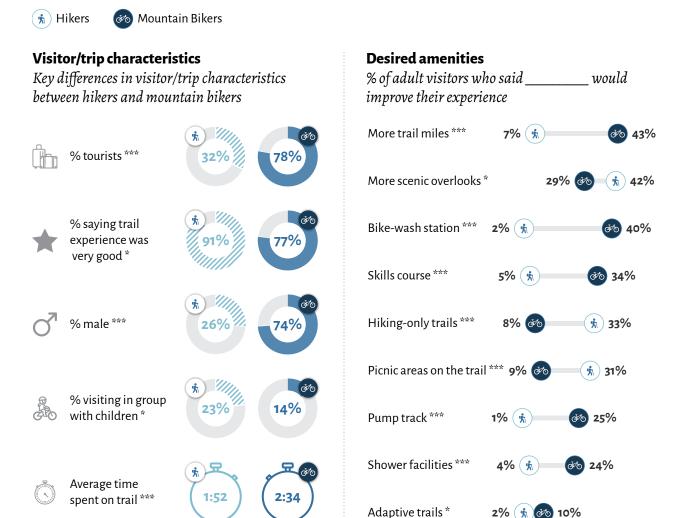
Note: See Appendix B for open-ended responses to "other"

None of the above

more likely than hikers to want more trail miles, a bike-wash station, a skills course, a pump track, shower facilities, and adaptive trails. Hikers, conversely, are more likely than mountain bikers to want additional scenic overlooks, picnic areas, and hikingonly trails.

Figure 12

Differences between hikers and mountain bikers



- Q2. Which activity was your primary reason for visiting Redhead Mountain Bike Park today?
- Q7. Including yourself, how many people are in your group today? (n = 419)
- Q8. Approximately how much time did you spend on the trail during today's visit? (n=394)
- Q11. Which amenities would improve your trail experience at Redhead Mountain Bike Park? (n=400)
- Q10. Overall, how would you rate your trail experience today? (n=383)
- Q13. Do you live more than 50 miles from this trail? (n=414)
- Q14. Are you on an overnight trip away from home? (n=414)
- Q28. What is your gender identity? (n=407)

Notes: "Tourist" defined as visitor who lives more than 50 miles away and/or is spending a night away from home. Above sample sizes are for cross tabulations with Q2.

^{***} p < 0.001, ** p < 0.01, * p < 0.05.



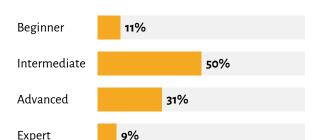
Half of mountain bikers at Redhead are intermediate riders

Most mountain bikers classified themselves as either intermediate or advanced riders. Half of riders (50%) reported having intermediate skills, while another third (31%) said their skills were advanced. Relatively few visitors were beginners (10%) or expert riders (8%) (Figure 13).

More advanced riders differed from less advanced riders across several sociodemographic characteristics. More advanced riders were significantly more likely to be men (49% of male visitors said they were advanced or expert riders, compared to only 16% of female visitors; p < .001). More advanced riders also were less likely to be recreating with children (only 8% of advanced/expert riders were recreating with children, compared to 16% of beginner/ intermediate riders, p < .05). More advanced riders also were more likely to be tourists. Whereas 43% of tourists said they are an advanced or expert rider, only 31% of local visitors said the same (p = .056). Neither group size nor age varied significantly across mountain biking skill levels.

Skill levels on the survey were self-reported and the survey did not provide skill-level definitions or descriptions. As such, results

Figure 13 Mountain biking skill level % of adult visitors, mountain bikers only



Q3. What is your mountain biking skill level? (n = 347)

are based on each respondent's perception of their skills and what each skill level entails. Results should be interpreted with this in mind.

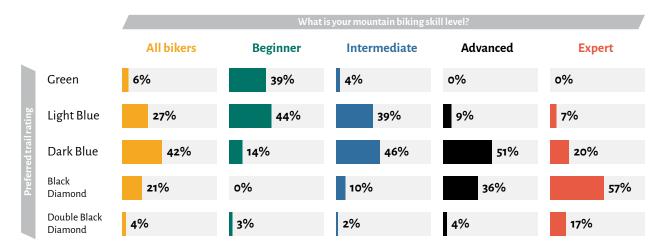
Most riders prefer blue-rated trails, although preferences vary by skill level

Preferences for trail difficulty rating tracked closely with self-reported rider skill levels. Overall, the majority of riders (69%) said they prefer riding blue-rated trails (27% said "light blue or intermediate," and another 42% prefer "dark blue or intermediate plus"). Approximately a fifth of riders (21%) said they prefer Black Diamond (very difficult) trails. Only a small minority of riders preferred either green-rated trails (beginner) or Double Black Diamond trails (extremely difficult) (Figure 14).

Figure 14

Preferred trail difficulty ratings

% of adult visitors who prefer to ride trails of _____ difficulty rating, by skill level



O3 What is your mountain biking skill level?

Q4. Which type of trail difficulty rating do you prefer to ride?

All mountain bikers (n = 340), Beginner (n = 36), Intermediate (n = 169), Advanced (n = 105), Expert (n = 30)

Notes: Green trails defined as "easy," light blue defined as "intermediate," dark blue defined as "intermediate plus," black diamond defined as "expert, very difficult," and double black diamond defined as "expert, extremely difficult." Percentages calculated by column and don't add up to 100% due to rounding.

Unsurprisingly, mountain bikers with more advanced skills prefer to ride trails with higher difficulty ratings. Nearly threequarters of expert riders (74%) preferred riding Black Diamond or Double Black Diamond trails, whereas 83% of beginner riders preferred green or light-blue-rated trails. Preferences of intermediate and advanced riders fell predictably between the extremes.

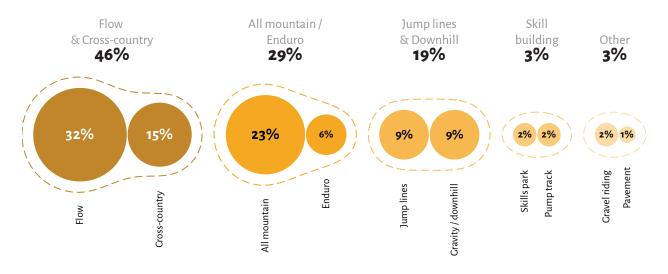
Except for expert riders, riders showed the greatest preference for blue-rated trails regardless of skill level. The majority of beginner riders (58%), intermediate riders (85%), and advanced riders (60%) all said they prefer blue-rated trails.

Flow trails top the list of favorite trail types

Nearly a third of Redhead riders (31%) said flow trails are their favorite, more than any other type of trail. Flow trails are characterized by a roller-coaster kind of experience, where momentum from rollers and berms allows riders to "flow" from one section to the next with minimal pedaling. Another 15% of riders said cross-country trails are their favorite. Cross-country trails can include flow features but traditionally traverse more natural, undulating terrain with some technical features and are more taxing to ride. Overall, 46% of Redhead riders said either flow or cross-country trails are their favorite (Figure 15).

Figure 15 **Favorite trail type**

% of adult visitors, mountain bikers only



Q5. 5. Which type of trail is your favorite to ride? (n=330) Notes: Percentages don't add up to 100% due to rounding.

Downhill trails and jump lines are on the other end of the trail spectrum from cross-country trails. Approximately a fifth of riders at Redhead (19%) said either jump lines or downhill trails are their favorite. Jump lines are trails designed with intentionally spaced and shaped ramps to launch riders into the air, allowing them to flow from one jump to the next. Downhill trails are typically associated with ski resorts that offer lift service and focus on the downhill experience. Downhill trails are sometimes called gravity trails and can include technical sections, flow sections, and jumps.

All-mountain and enduro trails combine elements of both cross-country and downhill trails and typically include larger obstacles, rougher terrain, and steeper ups and downs. Nearly a quarter of riders at Redhead (23%) said all-mountain trails are their favorite and another 6% said enduro trails are their favorite.

Very few riders said either skill parks (2%) or pump tracks (2%) are their favorite types of trail. Both skill parks and pump tracks are generally small areas designed for riders to practice and develop riding skills and techniques.

Preferred trail types were consistent across rider skill levels, with a few exceptions. Beginner and intermediate riders were twice as likely than advanced and expert riders to say flow trails are their favorite (40% vs. 20%). Conversely, advanced and

expert riders were likelier than beginner and intermediate riders to prefer jump lines (14% vs. 6%) and enduro trails (12% vs. 3%). All three differences make sense, as flow trails generally require the fewest technical skills to enjoy. In contrast, jump lines require significant practice and enduro trails are typically associated with racing.

The survey did not define each trail type, and mountain biking trail classifications are loosely defined and often overlapping. Downhill trails, for example, often include many "flow" features. As such, different riders likely interpreted each

trail classification slightly differently and results should be interpreted with that in mind. Still, the results help give a broad understanding of the types of trails and experiences Redhead riders most prefer.

Summer and fall are the most popular seasons for mountain bikers

Nearly all visitors said they mountain bike in the summer (94%) and fall (89%) (Figure 16). Spring is also a popular season to ride, with 70% of visitors saying they ride in the spring months. Winter mountain biking is far less prevalent, though nearly a quarter of visitors (23%) said they mountain bike in the winter.



Fractured Falls Trail at Redhead Mountain Bike Park. Photo from the City of Chisholm.

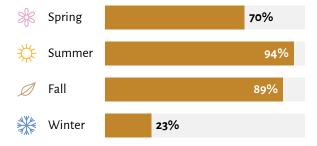
Both springtime and winter riding is more common among mountain bikers with higher skill levels. Over a third of advanced and expert riders (34%) said they ride in the winter, compared to only 16% of beginner and intermediate riders (p < .001). Fourfifths of advanced and expert riders (80%) said they ride in the spring, compared to only 63% of beginner and intermediate riders (p < .001).

The survey was only conducted during the summer and fall months, so riders' preferences for those seasons are likely overestimated (i.e., riders who only ride in the spring or winter had no chance of being included in the survey sample). We suspect, however, that the vast majority of riders who ride in the colder, muddier months also ride in the summer and fall. As such, results are likely a good indication of how riding fluctuates throughout the year.

Figure 16

Mountain biking by season

% of adult visitors who mountain bike in each season



Q6. What seasons do you typically mountain bike? (n=330)



The majority of visitors to Redhead are tourists

Two-thirds of visitors (67%) at Redhead were tourists, defined as someone 50 miles or more away from home or staying at least one night away from home. Most tourists (79%) were on overnight trips. Overall, 53% of visitors were tourists staying overnight, 14% of visitors were tourists on day trips, and 33% of visitors were locals (Figure 17).

These numbers represent unique visitors rather than visits. Because locals visit more frequently than tourists (e.g., many locals visit weekly during the warmer months; see Figure 8 on page 10), they accounted for a disproportionate number of visits. Based on how frequently respondents reported visiting and the share of local and non-local visitors, our tentative estimate is that locals accounted for approximately 71% of visits to Redhead.

Tourists and locals at Redhead differed in several key ways. Most tourists (76% of day trippers and 89% of overnight visitors) were visiting Redhead to mountain bike. Conversely, nearly half of locals (46%) came to the park to hike (Figure 18). Tourists also tended to be visiting in larger groups (4.2 vs. 2.9, p < .05). Tourists also had slightly higher incomes than local visitors (63% had incomes over \$100k, compared to 50% of

Figure 17

Visitor travel segments

% of adult visitors







Q13. Do you live more than 50 miles from this trail? (n = 436)Q14. Are you on a trip where you have or plan to stay at least one night away from home? (n = 430)

Note: "Local Visitor" defined as someone who lives within 50 miles and is not spending a night away from home. "Day Visitor" is someone who lives more than 50 miles away but is not spending a night away from home. "Overnight visitor" is someone spending at least one night away from home, regardless of how far away they live.

locals, p < .05). Tourists differed from locals in several other ways (more likely to be male, less likely to be visiting with children, longer time spent on the trail). However, those differences disappeared when controlling for activity type.

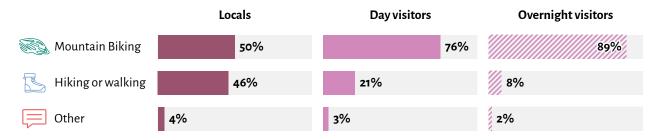
Redhead's visitors come from all over the country

Redhead hosts visitors from all over the

Figure 18

Trail activities by visitor type

% of adult visitors



 ${\tt Q2.}\ Which\ activity\ was\ your\ primary\ reason\ for\ visiting\ Redhead\ Mountain\ Bike\ Park\ today?$

Q13. Do you live more than 50 miles from this trail?

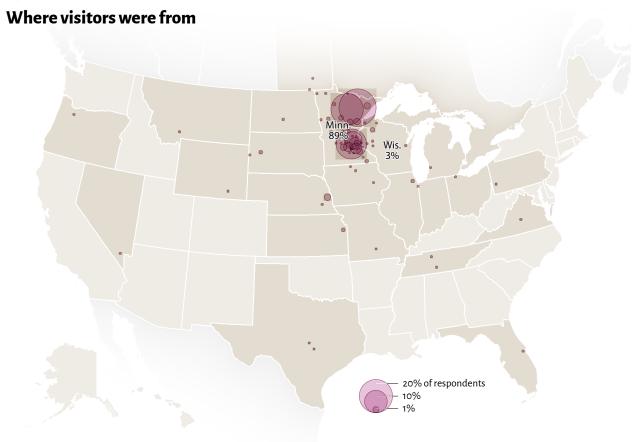
Q14. Are you on a trip where you have or plan to stay at least one night away from home? Locals (n = 138), Day visitors (n = 58), Overnight visitors (n = 225)

Notes: "Tourist" defined as visitor who lives more than 50 miles away and/or is spending a night away from home. Percentages calculated by column and don't add up to 100% due to rounding.



Riding Redhead. Photo from the City of Chisholm.

Figure 19



Q27. What is the zip code of your home address, or what is your country of residence? (Data displayed at county level; n = 420)

country: survey respondents were from 21 states and two provinces (Figure 19). Visitors came from as far away as Oregon, Nevada, and Florida. International visitors were from Canada (Ontario and Manitoba) and the United Kingdom.

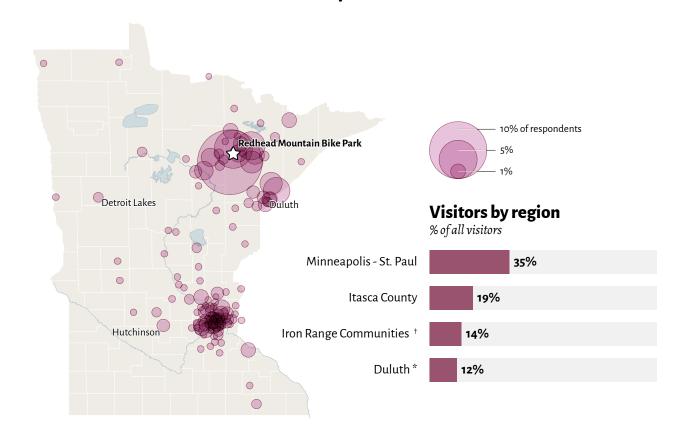
While visitors arrived from both coasts, the vast majority of visitors were from Minnesota and other Midwestern states. Most visitors (89%) were from Minnesota, and another 4% were from bordering states (Iowa, North Dakota, South Dakota, and Wisconsin).

The Twin Cities are Redhead's primary tourist market

Over a third of visitors (35%) were from the Twin Cities metropolitan area (Figure 20). Within the Twin Cities metro, Hennepin County accounted for the most visitors (47% of metro visitors), followed by Anoka County (18%), Ramsey County (10%), Dakota County (8%), and Carver County (7%).

Outside the Twin Cities, 19% of all visitors came from Itasca County and 14% from Iron

Figure 20 Where visitors were from: Minnesota map



Q27. What is the zip code of your home address, or what is your country of residence? (Data displayed by zip code; n = 420)

Range local communities. Another 12% of visitors were from the Duluth-Superior area. Just over 1% of visitors came from Omaha, which was the largest out-of-state market.

Day tourists and overnight tourists tended to be from different places. Among overnight visitors, 61% were from the Twin Cities, and 8% were from Duluth. However, visitors from Duluth accounted for 50% of

visitors on day trips. The Twin Cities was the next largest market for day trippers, accounting for 20% of visitors on day trips.

Most overnight visitors were staying on the Iron Range

Most visitors on overnight trips away from home (81%) spent at least one night in Iron Range communities during their trip (Figure 21). For overnight visitors opting to stay elsewhere, Grand Rapids — where 39% of visitors staying outside the Iron

^{*} Includes St. Louis County (excluding Iron Range communities), Carlton County, and Douglas County (WI)

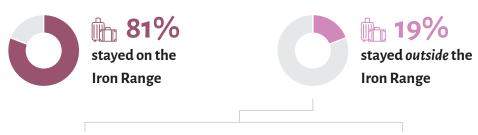
[†] Includes Hibbing, Chisholm, Buhl, Mountain Iron, Virginia, Eveleth, Gilbert, Biwabik, Aurora, and Hoyt Lakes

¹ Aurora, Biwabik, Buhl, Chisholm, Eveleth, Gilbert, Hibbing, Hoyt Lakes, Mountain Iron, and Virginia.

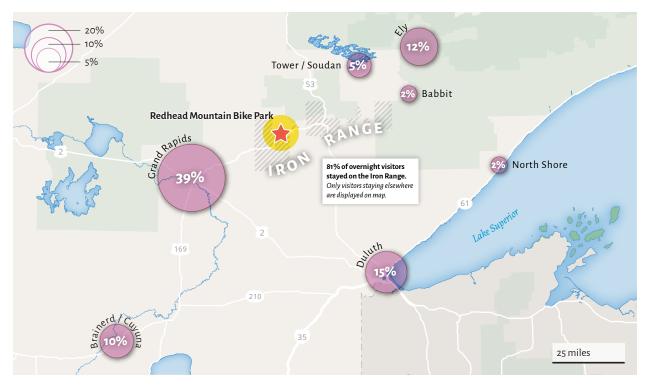
Range communities stayed — was the most frequent choice. Duluth (15%), Ely (12%), and the Brainerd/Cuyuna area (10%) were also relatively common areas for visitors staying outside the local area to spend a night. Very

few overnight visitors spent the night in Tower, Soudan, Babbit, or along the North Shore.

Figure 21 Where overnight visitors spent the night



Of visitors staying elsewhere, percentage that stayed in...



Q15a. Do you plan to spend at least one night in this area during your trip? (n=209)

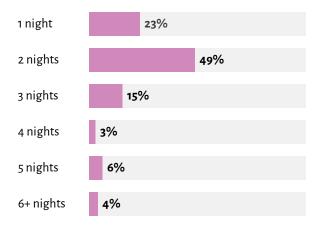
Q17. In which of the following cities/regions are you staying overnight during your trip? Select all that apply [Asked if respondent was on an overnight trip but NOT spending a night in the Iron Range] (n = 41)

Note: "Iron Range" defined as Hibbing, Chisholm, Buhl, Mountain Iron, Virginia, Eveleth, Gilbert, Biwabik, Aurora, Hoyt Lakes, and the immediate surrounding area. Respondents were provided a map when answering question. See Appendix B for reasons given for why staying outside the Iron

Figure 22

Nights stayed in the Iron Range

% of overnight tourists staying on Iron Range



Q15b. How many nights are you spending in this area during your trip?

Note: "Iron Range" defined as Hibbing, Chisholm, Buhl, Mountain Iron, Virginia, Eveleth, Gilbert, Biwabik, Aurora, Hoyt Lakes, and the immediate surrounding area. Respondents were provided a map when answering question.

Overnight visitors most often spend between one and two nights on the Iron Range

Overnight visitors most frequently spent two nights on the Iron Range. Nearly threequarters (72%) of overnight visitors spent one or two nights in the area (Figure 22). Another 18% of overnight visitors spent three or four nights on the Iron Range, and 10% were on longer, week-long trips (five or more nights).

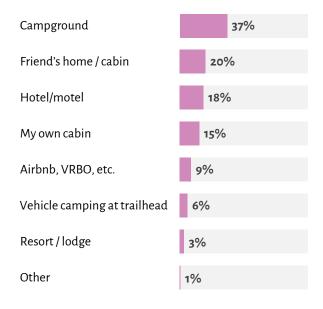
The majority of overnight visitors stay in paid accommodations

Redhead's overnight visitors stayed in a wide variety of accommodations, with over

Figure 23

Visitor overnight accommodations

% of overnight tourists



Q18. What type of overnight accommodations are you staying in during your trip? Select all that apply [Answers presented in randomized order] (n = 206)

Note: Percentages don't add up to 100% because some visitors stayed in multiple types of accommodations during their stay

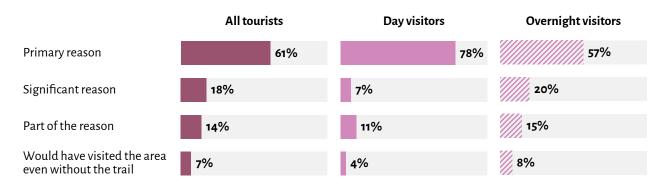
two-thirds (65%) staying in some type of paid accommodation. The most common accommodation for overnight visitors was camping; 37% of overnight tourists stayed in campgrounds, and another 6% camped in their vehicle at a trailhead (Figure 23). Approximately a fifth of overnight visitors stayed in commercial lodging (18% in hotels or motels and 3% at resorts or lodges). Relatively few overnight visitors (9%) stayed in vacation rentals by owner (e.g., Airbnb, VRBO).

Over a third of overnight visitors stayed in private residences for at least part of their

Figure 24

Importance of trail in decision to visit the Iron Range

% of adult visitors, tourist visitors only



Q19. How important was this trail in deciding to visit the area? (n = 275)All tourists (n = 275), Day visitors (n = 55), Overnight visitors (n = 220)

Note: "Tourist" defined as visitor who lives more than 50 miles away and/or is spending a night away from home. "Day Visitor" is someone who lives more than 50 miles away but is not spending a night away from home. "Overnight visitor" is someone spending at least one night away from home, regardless of how far away they live. Percentages calculated by column.

stay on the Iron Range. A fifth of overnight visitors (20%) stayed at the home or cabin of a friend, and another 15% stayed in their own cabin.

Most tourists at Redhead say the trails were a significant reason for their decision to visit the Iron Range

For tourists at Redhead, the trails themselves were usually a key reason for their trip to the Iron Range (Figure 24). Nearly two-thirds (61%) said Redhead was the primary reason they visited the Iron Range, and another 18% said it was a significant reason. Only 7% of tourists said they would have visited the Iron Range regardless of Redhead's trails. Day tourists were significantly more likely than overnight visitors to say the trails were the primary reason for their visit. Nearly fourfifths of day visitors (78%) said Redhead was the primary reason for their visit, compared to 57% of overnight visitors. Even though overnight visitors had more nuanced reasons for visiting the area, Redhead was a significant factor for most. Only 8% of overnight visitors said they would have visited the Iron Range even if Redhead didn't exist, and 77% said Redhead was a significant (or primary) reason for their trip.

Trail quality and variety are both key reasons riders choose to visit Redhead

The quality of Redhead's trails is their biggest selling point, evidenced by most tourists (55%) saying that Redhead's quality influenced their decision to visit. Riders also were drawn by the variety of trails offered (an influencing factor for 33% of tourists) and the size of Redhead's trail system (an influencing factor for 27% of tourists). Nearly a quarter of tourists (23%)

were influenced to visit Redhead through recommendations from friends.

Wanting to try new trails was also an important reason many tourists visit. Redhead is a relatively new trail mountain biking park, and 37% of tourists said trying new trails influenced their decision to visit (39% of tourists were first-time visitors).

Convenience is also a factor for many tourists; 15% said that Redhead's proximity to their cabin influenced their decision to visit, which matches the number of tourists staying at personal cabins, and 14% said proximity to their home influenced their decision to visit, which matches very closely to the number of tourists on day trips.

The Iron Range's many attractions were not a major draw for most of Redhead's visitors. Only 9% of tourists said that Redhead's proximity to other amenities or attractions influenced their decision to visit the area (Figure 25).

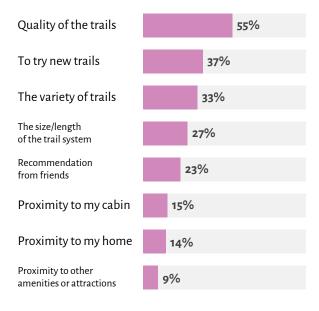
Tourists use a wide variety of information sources to learn about Redhead

Over half of tourists (54%) used a trail app to get information about Redhead. No other information source is used by a majority of tourists, although friends and family (37%) and prior knowledge (22%) were also relatively common (Figure 26).

Figure 25



% of tourists saying influenced their decision to visit Redhead



Q20. Which of the following factors influenced your decision to visit this trail? Select all that apply [Answers presented in randomized order] (n = 287)

Beyond trail apps, tourists used various online information sources to learn about Redhead. GoRedhead.com was the most used website (24% of tourists used it), followed by the Minnesota Discovery Center website (11%), RidetheRange.com (9%), and Ironrange.com (3%). Facebook was a relatively common source of information about Redhead (used by 18% of tourists), but only a few visitors used other social media sites such as YouTube (9%) and Instagram (8%). Very few tourists used Explore Minnesota Tourism (4%) or traditional media (e.g., TV, radio, newspaper, etc.; 2%).

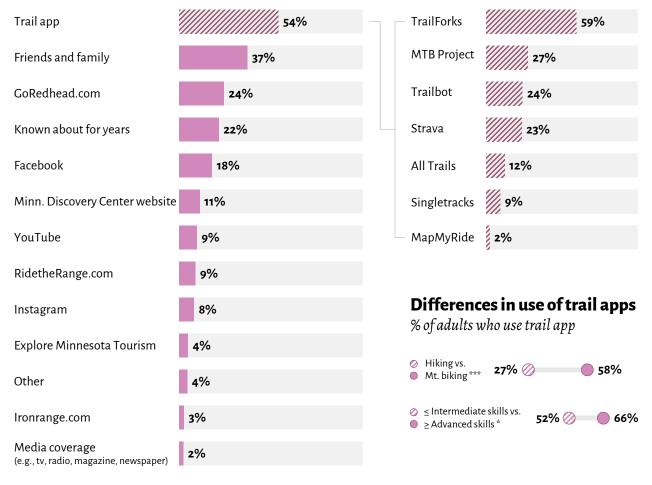
Figure 26

Information sources about the trail

% of tourists who used information source to plan trip

Most popular trail apps

Of trail app users, % who use...



Q21. What information sources did you use to plan your trip to Redhead Mountain Bike Park? Select all that apply [Answers presented in randomized order] (n = 265). Only tourist visitors were asked question.

Among tourists who used trail apps, Trailforks (used by 59% of app users) dominated the market; MTB Project (27%), TrailBot (24%), and Strava (23%) were also relatively common. Relatively few app users used All Trails (12%), Singletracks (9%), or MapMyRide (2%).2

App users were similar to non-app users in terms of age, time spent on the trail, group size and composition, gender, and income. However, several differences were found between app users and non-app users. App users were more likely to be mountain bikers and more likely to be advanced or

^{***} p < 0.001, ** p < 0.01, * p < 0.05.

² The percentages don't add up to 100% because many trail app users reported using more than one app.

expert riders. Trail app users were also more likely to visit Redhead due to the size of the trail system and the quality of the trails.

Where else on the Iron Range do Redhead visitors go?

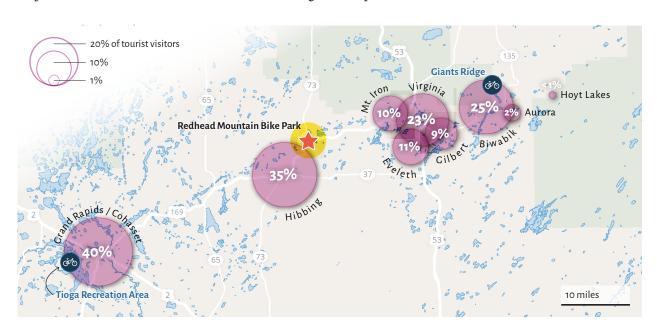
Most tourists (65%) at Redhead visited at least one city on the Iron Range besides Chisholm. A third of tourists (35%) visited Hibbing, which neighbors Chisholm and is the largest city on the Iron Range (Figure 27). Tourists were also relatively likely to visit Biwabik (25%), where Giants Ridge mountain biking park is located, and Virginia (23%). Small numbers of tourists stopped in the smaller towns of Eveleth

(11%), Mountain Iron (10%), Gilbert (9%), Aurora (2), and Hoyt Lakes (less than 1%). Grand Rapids, which is 40 miles to the west of Redhead and outside the Iron Range local area, received visits from 40% of tourists at Redhead (more than any Iron Range city). The high number of Redhead tourists visiting Grand Rapids is probably due to Tioga Recreation Area, another destination mountain biking park located just outside Grand Rapids. Grand Rapids is also a midway point between Redhead and the popular mountain biking trails at Cuyuna, and some visitors may have visited all three mountain biking areas on their trip (along

Figure 27

What other cities do Redhead visitors visit?

% of tourist visitors who visited selected cities during their trip



Q22. Have you visited, or do you plan to visit, any of the following cities during your trip? Select all that apply [Asked if respondent was a tourist] (n = 272) Note: Since all surveys were completed within Chisholm city limits, Chisholm was not listed as an answer option.

with Giants Ridge, where 20% of visitors also visited during their trip).

The survey did not define "visit," and respondents may have defined it differently. Results should be interpreted with that in mind.

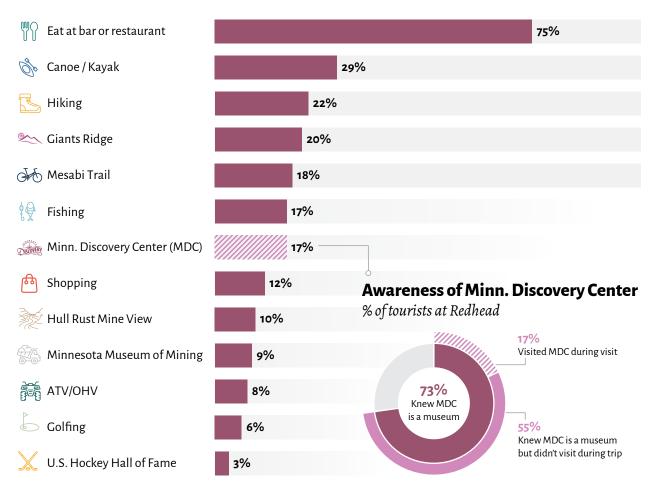
Majority of Redhead tourists eat out during their trip and participate in at least one other outdoor activity

Tourists to Redhead don't just mountain bike when visiting the Iron Range (Figure 28). Nearly three-quarters of tourists (75%) ate out at a bar or restaurant on the Iron Range during their trip, and two-thirds (67%) participated in at least one other

Figure 28

What other activities do Redhead visitors do while on the Iron Range?

% of tourists who participated in selected activities during their trip



Q23. What other activities will you participate in while you are on the Iron Range? Select all that apply (n = 275) Q24. Did you know that the Minnesota Discovery Center is a museum? (n = 257)

Notes: Percentages don't add up to 100% due to rounding.

outdoor recreation activity. Redhead visitors participated in a wide range of other outdoor activities during their trip: 29% went canoeing or kayaking, 22% hiked, 20% went to Giants Ridge, 18% biked the Mesabi Trail, 17% went fishing, 8% went ATVing, and 6% golfed.

Fewer Redhead visitors visited cultural, retail, or educational attractions during their Iron Range trip. The Minnesota Discovery Center (MDC) serves as the trailhead for Redhead, and while 73% of tourists at Redhead knew MDC is a museum, only 17% visited it during their trip. Still, the MDC was the most visited non-recreational attraction among Redhead tourists. Only 10% (or fewer) of tourists also visited the Hull Rust Mine view, Minnesota Museum of Mining, or the U.S. Hockey Hall of Fame during their trip.

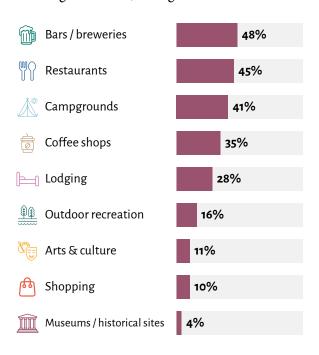
The Iron Range needs more food and drink options and camping to increase visitation

Survey results suggest that adding more bars, breweries, restaurants, and coffee shops would encourage tourists to visit the Iron Range more often and stay longer. Three-quarters of tourists at Redhead (74%) said having more bars, breweries, restaurants, or coffee shops on the Iron Range would encourage them to visit more and have extended stays. Nearly half of tourists (48%) said having more bars or breweries to choose from would encourage more or longer stays; another 45% said

Figure 29

Encouraging more frequent visits and longer stays to the Iron Range

% of tourists who said more_ encourage more and/or longer visits



Q25. What does the Iron Range need more of to encourage you to visit more frequently and/or have longer stays? Select all that apply [Answers presented in randomized order] (n = 252)

having more restaurants would encourage more visits (Figure 29).

Most tourists (58%) also desired more lodging accommodations on the Iron Range. More campgrounds were the most desired lodging option; 41% of tourists said having more campgrounds would encourage more and longer visits. Over a quarter of tourists said having more lodging (e.g., hotels, resorts, Airbnb's) would encourage more visits.

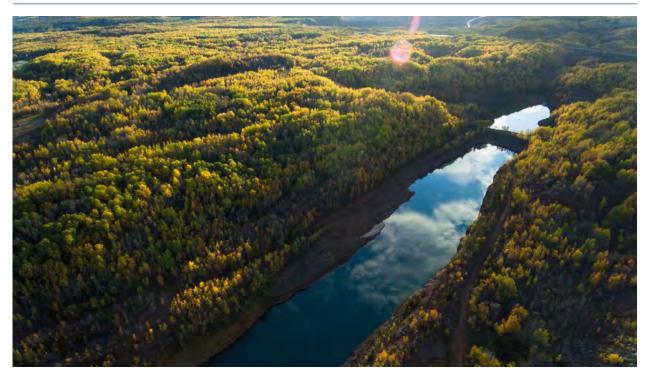
Other attractions were less desirable for Redhead visitors. Only 16% of tourists said more outdoor recreation opportunities would encourage more visitation, 11% said more arts and culture would encourage more visitation, and 10% said more shopping options would encourage more visitation. Even fewer tourists (4%) said having more museums or historical sites would encourage more visitation.

The average household visiting Redhead spent nearly \$500 on the Iron Range during their trip

On average, households spent \$495 on the Iron Range during their trip (median = \$350, 95% C.I. [\$414, \$576]). Overall, household spending varied between households that didn't spend any money on the Iron Range

during their visit and those that spent \$4,000 on the Iron Range. Households on overnight trips spent significantly more than households on day trips (\$535 vs. \$280, p < .05).

Lodging was the largest expense for overnight visitors (\$182 per household per trip, 95% C.I. [\$121, \$242]), followed by restaurants, transportation, groceries, shopping, miscellaneous, entertainment or attractions, and equipment rentals (Figure 30). Overnight tourists tended to spend more than day-trippers on transportation (\$84 vs. \$36, *p* < .001) and groceries (\$71 vs. \$32, p < .05). Spending on other categories did not differ significantly between overnight tourists and day-trippers.

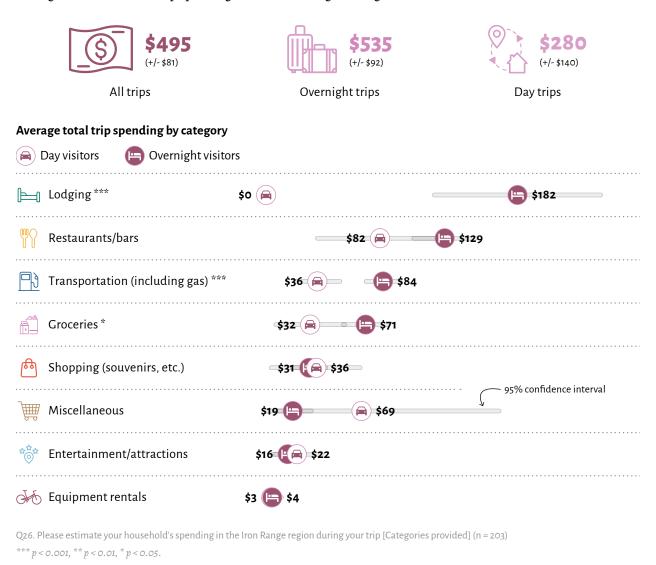


Redhead Mountain Bike Park from above. Photo from the City of Chisholm.

Figure 30

Tourist spending on the Iron Range

Average household total trip spending on the Iron Range among Redhead visitors



Methodology

Questionnaire development

The questionnaire was designed collaboratively between Iron Range Tourism Bureau, the City of Chisholm, Minnesota Discovery Center, Giants Ridge, and Parks & Trails Council. Iron Range Tourism Bureau designed a draft questionnaire based on on project goals and past visitor surveys, which was then reviewed and revised by project partners to improve questionnaire clarity, focus, and length. The questionnaire was designed to be used at Redhead Mountain Bike Park and Giants Ridge, with minor differences in question-wording and answer choices to reflect both locations. Whenever possible, questions were designed to collect data comparable to visitor survey data collected by the Greater Minnesota Parks and Trails Commission, the Metropolitan Council, and the Minnesota Department of Natural Resources.

The final questionnaire was 31 questions long (15 questions were asked of all visitors, with four additional questions for mountain bikers and 12 additional questions for tourists). Question topics included trail activities, overall quality of the trail experience, group characteristics, trip planning, information sources, and demographics (Appendix A).

The questionnaire was available only in English and was offered via tablet or paper. Approximately half of the surveys (49%) were completed on an electronic tablet using QuestionPro (a professional online survey software). The survey was stored on the tablet and did not require Wi-Fi or cellular phone service. Skips and data validation were programmed into the survey to help speed up completion and improve the accuracy of data entered by the visitor. Survey responses were stored on the tablet and uploaded to the online account for Parks & Trails Council. The other half of respondents (51%) completed the survey on paper. Validation testing didn't find any systematic differences between visitors who completed the survey electronically and those who completed the survey on paper.

Data collection protocol

Staff with Iron Range Tourism Bureau, the City of Chisholm, and Minnesota Discovery Center, and volunteers administered the survey questionnaire. A primary team of staff attended a training session and was responsible for training volunteers. All surveyors received an 18-page training manual that reviewed project purpose, study design and procedures, checklists, and frequently encountered issues.

Surveys were conducted at the Minnesota Discovery Center trailhead and parking area. Only adult visitors (age 18 and older) using the trail system were eligible to take the survey. Surveyors were trained to screen all visitors to determine visitor eligibility (Appendix A). Each household was eligible to complete the survey; for households with multiple adults present, the adult with the most recent birthday was asked to complete the survey. Households were only allowed to complete the survey once during the summer.

At the beginning of each survey shift, surveyors set up a station to welcome visitors. The station provided a visual presence for staff and included a large "Trail Survey" sign, maps, and a trash bag.

During each survey shift, surveyors tried to talk to each visitor entering or leaving the trailhead. Surveyors would approach each visitor group, introduce themselves, explain the purpose of the survey, and ask them to participate. If the visitor agreed, they were handed the tablet (or paper questionnaire) and self-administered the questionnaire. If the visitor asked to have the questionnaire read aloud, surveyors read the questionnaire verbatim and recorded responses on the tablet. All visitors were assured their participation was completely voluntary and that their identities would

be anonymous. Visitors who refused to participate were logged to track any potential non-response bias. As an incentive to complete the survey, respondents could enter their name and address in a random drawing for free Redhead merchandise. Names and addresses were never associated with survey answers.

When high traffic volumes made it impractical to approach every visitor, the "next to pass method" was used to select respondents. During these periods, surveyors selected and approached the next group or person to pass the survey site after a questionnaire had been completed by someone else.

Sampling schedule

A stratified sampling plan was developed to ensure the survey sample was as representative of non-winter visitors as possible. Surveys were collected on 38 days (15 weekends and 23 weekdays) between July 31, 2023, and October 25, 2023. Surveyors were assigned to collect surveys at different hours of the day to ensure a representative sample.

Response rate and margin of error

A total of 457 eligible visitor households were approached and asked to complete the questionnaire. Additionally, one group was observed where no adults were present. Of the 457 eligible households, 439 completed the survey for a response rate of 96%. This

response rate is exceptionally high and sufficient to ease any concerns of nonresponse bias (in which results are biased due to systematic differences between people willing to complete the survey and those not).

Whenever a potential respondent declined to participate, the surveyor recorded the group size and primary activity and asked if they would be willing to answer two quick "non-response questions." These questions aimed to test if visitors who declined to participate were systematically different from those who participated. Our non-response bias testing found that non-respondents did not significantly differ from respondents regarding trail activity or group size.

The final sample size (n=439) provides 95% confidence that the sampling error does not exceed plus or minus 4.7 percentage points. The margin of error differs for every question depending on the sample size, the proportion of responses, and the population size. Margins of error are higher in subgroups (Figure 31).

In addition to sampling error, questionwording and other biases can introduce errors in surveys. Answer orders were randomized for non-ordinal answer choices on the electronic version of the

Figure 31 Margin of error for selected subgroups

Member segment	Sample size	Plus or minus (percentage points)
All adult visitors	439	4.7
Activity		
Mountain biking	320	5.5
Hiking	95	10.1
Tourism		
Local visitors	142	8.2
Tourist	292	5.7
Day visitors	59	12.8
Overnight visitors	230	6.5
Gender		
Male	268	6.0
Female	159	7.8
Skill Level		
Beginner/Intermediate	209	6.8
Advanced/Expert	138	8.3

questionnaire to help reduce answer option order bias.

Data analysis

Survey data were downloaded from the QuestionPro server and prepped for import into the statistical software SPSS using Microsoft Excel. Data entry for the paper questionnaires was completed by Parks & Trails Council staff and volunteers, SPSS was used for accuracy checks, recoding, descriptive statistics, cross-tabulations, and statistical significance testing.

^{1 (1)} Are you a local or a tourist? and (2) What year were you born? Unfortunately, no non-respondents offered their age and only 4 answered if they were a tourist or local (all who answered were locals).

Throughout the report, means are provided where informative, with an accompanying confidence interval. Confidence intervals are written as 95% C.I. [#, #], where the bracketed numbers refer to the upper and lower bounds of the 95% confidence interval for the reported mean.

Statistical hypothesis tests are included throughout the report to indicate statistically significant differences between visitor subgroups (e.g., locals and tourists, men and women, skill levels, etc.). Probability values (p-values) are included alongside these tests to indicate the probability that the observed (or greater) difference would be observed if no actual difference existed in the population of Redhead visitors. We use the standard threshold of 5% to indicate "statistical significance" (p < 0.05), meaning there is less than a 5% chance the difference would have been observed in our sample if no actual differences existed between the two subgroups.

Responses to the open-ended questions were loosely grouped into categories (see Appendix B).

Appendix A: Survey Script and Questionnaire

Survey Script:		
Hi, my name is and I'm working with conducting a visitor survey to understand visitor experiences at [Redhead / Giants Ridge]. Are you using any of the trails here today?		
 ☐ Yes [Continue] ☐ No [Discontinue; thank visitor and let them continue on their day] 		
Are you willing to participate in the survey? It will take 5 to 7 minutes. All your answers are voluntary and confidential, and respondents can enter a drawing for free trail merch.		
If <u>YES:</u>	If <u>NO</u> :	
Are you 18 years old or older? □ Yes [Continue]	That's okay, no problem. Thanks for your time. Do you mind if I ask you just two quick questions before you go?	
☐ No [Discontinue; log Non-Response] Have you already taken this survey at this trail this summer?	☐ Yes [Ask questions, log Non-Response Qs] 1. Are you a local visitor or a tourist?	
 ☐ Yes [Discontinue survey] ☐ No [Hand visitor the tablet and let them complete the questionnaire; For households 	(Tourist is anyone more than 50 miles away from home or staying at least one night away from home)	
with multiple adults present, ask the adult with the nearest birthday to complete the survey]	2. What year were you born? □ No [Discontinue; log Non-Response]	

	Administrator:	Date: Time:
Range TRAIL VISITOR SU		
What activities do you use Redhead Mountair	Biking What is your mounta	ain biking skill level?
Park for? (Select all that apply)	☐ Beginner	
☐ Mountain biking	□ Intermediate	
F-bike riding If biking, please ans		
☐ Fat biking questions to right	□ Expert	
☐ Hiking or walking	-	rating do you prefer to ride?
☐ Boating	☐ Green (easy)	
☐ Snowshoeing	☐ Light blue (interme	*
☐ ATV Riding	☐ Dark blue (intermed	
□ Nature viewing / photography	,	nond (expert, extremely difficult)
☐ Dog walking	□ Don't know	iona (export, extremely announ)
□ Swimming □ Fighing		s your favorite to ride?
☐ Fishing ☐ Other:	□ Jump lines	□ Pump track
If you selected multiple activities please circle your prim	i i i i i i i i i i i i i i i i i i i	☐ Skills park
If you selected multiple activities please circle your prim reason for visiting.	☐ All mountain	☐ Gravel riding
<u> </u>	□ Flow	□ Pavement
Including yourself, how many people are in your		□ Other:
group today?	□ Enduro	☐ Don't know
Adults (18 years and older, including yours	villat seasons do yo	ou typically mountain bike?
Children (under 18 years)	(Select all that apply)	
Approximately how much time did you spend	on the Spring	□ Fall
trail during today's visit?	□ Sullillei	☐ Winter
(If you're just starting your day, how much time do you plan to	o spend?)	ving negatively impact your trail
hours minutes	experience today?	mig negatively impact your train
Approximately how often do you visit Redhea	(Select all that apply; If you	re just starting out, please answer based on
the spring, summer and fall?	9 1 1	
☐ This is my first time visiting ☐ Once a year	☐ Lack of adequate s☐ Poor upkeep or ma	0 0
□ Daily □ Less than one		nd/or unfriendliness of other trail users
□ Weekly □ Unsure	□ ATV crossings	id/of difficultiess of other trail users
□ Monthly	□ Road crossings	
•	☐ Multi-use status of	trails
Overall, how would you rate your trail experie	ence	ails
today? (If you're just starting your day, please answer based on your	r last vist) □ None of the above	
□ Very good □ Poor	☐ Other:	
□ Good □ Very poor	☐ I've never used this	s trail before
☐ Fair ☐ I've never used this	trail before What is your home 2	7IP code?
	LISA ZIP Codo:	
Which amenities would improve your trail exp	perience	
at Redhead? (Select all that apply)	CAN Postal Code:	or country:
☐ More scenic overlooks on the trail	What is your gender	?
☐ More trail miles	☐ Female ☐	☐ Male ☐ Other
☐ Hiking-only trails		
☐ Interpretive signage on the trail	What year were you	born?
☐ Additional entrances / trailheads ☐ Pump track	Please indicate your	total household income before
☐ Picnic areas on the trail	taxes last year	Total industrial income before
☐ Lake access by personal vehicle	□ Less than \$20,000	□ \$70,000 - \$79,999
□ Skills course	□ \$20,000 - \$29,999	□ \$80,000 - \$89,999
☐ Adaptive trails	□ \$30,000 - \$39,999	□ \$90,000 - \$99,999
☐ Shade structures	□ \$40,000 - \$49,999	□ \$100,000 - \$149,999
☐ Shower facilities	□ \$50,000 - \$59,999	□ \$150,000 - \$199,999
☐ More bathrooms	□ \$60,000 - \$69,999	☐ \$200,000 or more
☐ Bike wash station		
☐ More wayfinding signage on trails	Do you live more the miles from this trail	
☐ Trail connection to downtown Chisholm		
Other:	☐ Yes	□ Yes
Is there anything else you would like us to kn	□ No	□ No
about your experience at Redhead?		
		C/VEC to either superior
		☑YES to either question, ease answer questions
		n backside

Appendix A: Survey Script and Questionnaire

How important was this trail in deciding to visit this area? The trail was the primary reason why I visited the area The trail was a significant reason why I visited the area The trail was part of the reason why I visited the area I would have visited this area even without the trail Don't know What does the Iron Range need more of to encourage you to visit more frequently and/or have longer stays? (Select all that apply) Lodging Restaurants Bars, breweries, and night clubs Coffee shops Campgrounds Outdoor recreation. Please describe: Museums and historical sites Shopping Arts & culture (galleries, live music, theater, etc.) Other:	What information sources did you use to plan your trip to Redhead Mountain Biking Park? (Select all that apply) Facebook Instagram YouTube Minnesota Discovery Center website GoRedhead.com Friends and/or family I've known about this trail for years Media coverage (e.g., tv, radio, magazine, newspaper) RidetheRange.com Ironrange.org Explore Minnesota Tourism Trail app/website: MTB Project Trail Forks Singletracks Strava MapMyRide All Trails Trailbot
Have you visited, or do you plan to visit, any of the following cities during your trip? (Select all that apply) Hibbing (e.g., Maple Hill Mountain Bike trails) Grand Rapids / Cohasset (e.g., Tioga Recreation Area) Mountain Iron Virginia (e.g., Lookout Mountain trails) Eveleth Gilbert Biwabik (e.g., Giants Ridge) Aurora Hoyt Lakes Other: What other activities will you participate in while you are on the Iron Range? (Select all that apply) Canoe / Kayak	Which of the following factors influenced your decision to visit this trail? (Select all that apply) Proximity to my home
Answer only if on an overnight trip Mountain 33 Biwabik Aurora Hoyt Lakes Eveleth Hibbing 533 Do you plan to spend at least one night in this area (see map above) during your trip? Yes. How many nights? No. If no, please answer questions to right What type of overnight accommodations are you staying in during your trip? (Select all that apply) Hotel / motel Resort / lodge / commercial cabin Vacation rental by owner (Airbnb, VRBO, etc.) Vehicle camping at trailhead Campground Home/cabin of friend or relative My own cabin / vacation home Other:	Why aren't you spending a night in this area during your trip? In which of the following cities/regions are you staying overnight during your trip? (Select all that apply) Grand Rapids / Cohasset nights Duluth / Hermantown nights Duluth / Hermantown nights Tower / Soudan nights Babbitt nights Babbitt nights Sudan nights Sudan nights Other: nights

Q11. Which amenities would improve your trail experience at Redhead Mountain Bike Park? Responses to "Other"

Camping (4)	More developed trailhead and one way
Camping / food	trails
Camping at trailhead (2)	One Way Trails
Campsites, selfie stands	
Campsites/Camping	Chairlift
Trailhead camping	Chairlift up
Places to sleep and eat	Gondola to see all the trees
Being able to end ride on downhill	More jumps (4)
Easier Trails	More jump lines
Green for young b riders near start	
More kid friendly trails. No huge climb out	More Fat biking grooming
	More single track on rim
Coffee shop	More uu
Food truck	Clear Trail Signage
Food/Beer	Rain Structure
Grills	Repair Stations (2)
Restaurant/food	single track entire "rim" trail
······································	Steps to dock from Rugby Trail Down
Water filler at entrance	Trail Skinnies
Water stations (5)	Trail to hibbing
Water station, better signage	Trailhead amenities and enhancements
Drinking water stations	Trash cans
Running water	Trees in parking lot
Less two way trails	
Less two ways	

Q12. Did any of the following negatively impact your trail experience today?

Responses to "Other"
Just missing a couple signs to help navigate a complete redhead trail ride
I've hiked often enough to know where I
am but need better signage for new people
signage just on roads to match trail forks
Lack of flow (2)
So much climbing
Too rough for wives
2 way trail
Two Way
Access to water on the trail
Water
Water puddles
water paddies
Leafs. but pretty
Local people by dock
Need a few bathrooms
Only bathroom at trailhead
Snake on the trail. I hate them
Horse poop

Q16. Why aren't you spending a night in this area during your trip?

Asked if the visitor was on an overnight trip but NOT staying in the local area (edited slightly for clarity)

Visitor staying elsewhere:
Airbnb on vermillion
BWCA Ely
Staying in Duluth
Stayed in grand rapids last night
Spending night just out of map view
Grand rapids
Visitor staying at cabin outside local area:
Cabin un north
Cabin
Cabin
family cabin
Have own cabin
Staying somewhere further away at a
cabin
Camping on private land
Visitor staying with family outside local area:
Family is in grand rapids
Friends live in the area
Relatives in Duluth
Staying w/ friend in Duluth
, ,
Visitor en route to another destination:
Heading to Intl Falls
Heading towards Itasca state park
Going to see friends in McGregor
Traveling through family in Bemidji

Visitor found better/cheaper lodging outside local area:
Lack of lodging
Need inexpensive camping
Better camping outside the zone. Stayed
at mccarthy
Cheaper camping at Grand Rapids

Q31. Is there anything else you would like us to know about your experience at Redhead Mountain Bike Park?

Generally positive comments about trail experience	Great Place
Absolutely amazing. Wonderful experience. THANK YOU	Great place, feels like the outdoors and not a crazy tourist place even though there is a lot to do here for visitors
Amazing trail Awesome trails will be back	Great progress on trailhead Great state asset,
Beautiful! Best trail in state. Live in Cloquet and come up once a month. Camp at McCarthy	Great time Great trail system!
and visit every day for 10 in a row. Signage is amazing, views are awesome, conditions are great.	Great trails and fun riding Great trails!!
Bike shop is great. Trails are scenic. Excellent job with these trails!	Had a blast! Hope to come back soon! I enjoyed the trails. Beautiful scenery. It is awesome. Great work
Friendly people And great trails. Thank you	It was a blast! It was great
Fun place	It was great It was great, ill definitely come back
Glad I did this Great experience Great facility	It's awesome! Just so grateful that its here
Great job Great job so far. As good as a lot of the	Keep it world class Keep up the great work!! :)
trails in Bentonville Great mountain bike park - was referred	Love it Love the beautiful trails
to this park by my son who is an avid mountain biker and lives in the twin cities area ~ 200 miles from here. The park is	Love the trails Love this trail system :)
becoming popular! Great place	Love this trail! Always a great experience Love. It

Q31. Is there anything else you would like us to know about your experience at Redhead Mountain Bike Park? (Continued)

Generally positive comments about trail experience (cont.)	Views are unbeatable
Loved it	We liked it so much we hiked it twice
Loved it!!	We think this is a extremely special resource!
Loved our first experience. We will definitely be back to explore more.	Wonderful experience, so glad it's here! Wonderful place
My family and friends love it and feel so grateful to have this so close to home. My favorite park in the State!	Generally negative comments about trail experience
My favorite singletrack mtb area in iron	Don't like ATV
range Nice place. Redhead is awesome!	Trail too difficult for people in our party. Rented 3-bikes and couldn't use it on trail. Won't be coming back
RH is rad. Keep up the great work! So great an experience. So beautiful and so	Comments wanting more camping opportunities
fun.	A quality campground would increase
Such a wonderful resource so close to my home. It is beautiful. SUPER FUN	my visits. The one in Chisholm sucks, but that's the only choice. Needs large spacious sites with full hookups.
Thank you. Redhead adds so much to the quality of the area. It's a game changer for	would be great to have camping/RV overnight near trail
me.	Campsites!!
Thanks	Love to see a campground on premise.
The trails are incredible!	Need better close campgrounds. The
This is a fabulous park, absolutely love it!	chisholm campground is a dump. M 7 year old daughter really struggled. She loved
This is awesome. Keep expanding.	tioga and cuyuna .
This place is great	Need more places to camp. Would come
This place is so beautiful!	more often.
This place is sweet!	
Trails were awesome!!!	

Q31. Is there anything else you would like us to know about your experience at Redhead Mountain Bike Park? (Continued)

Comments about wayfinding	Great trails, could use more advertising
Would be nice to have some signage on	and infrastructure
lose corners with cliffs by them	Have a trailhead at lower elevation to end
Clearer mileage on trails	the day on a downhill.
Consider putting a convex mirror on the blind corner behind the MDC Amphitheater. It would help with safe access and preventing any future collisions between hikers and bikers alike. Thank you Crossfire Orange Crush intersection needs better signage	I would like to paddle with my wife with our kayaks. Your trailer doesn't work with fiberglass sea kayaks. Will be damaged on the road down. We would paddle often if we could get down there or if you had a kayak/canoe specific trailer. I'd love more jump/drops
Great trails, need more directional signage	Love the trails at red head just need more
Loved the trails. Got lost several times. Signs [illegible]	jump lines Make a jump run for mountain bikers!
more connecting trails to each other and larger trail signs	Make a zip line More black diamond trails please.
QR code for trail forks app	More water stations
Trails and intersections well marked, best	Need more connector trails
we have seen.	Needs to be more kid friendly
Use trailforks app which is SO helpful Suggestions for improving Redhead	Pump track at trailhead. Water and electricity at trailhead. Camping/RV onsite. Bathrooms throughout.
Another trailhead would be nice	Water at trailheads is important. Keep up
As weekly riders of cuyuna our only recommendation would be to eliminate two ways and reduce intersections Bike wash and water at trailhead smartest move u can make thanks	the great work
	Water station at trailhead
	We need more businesses in town for sleeping and eating
Disc ball light night riding	
Excited for more trails add more	
jumplines	

Q31. Is there anything else you would like us to know about your experience at Redhead Mountain Bike Park? (Continued)

Miscellaneous comments 1) Bugs - yikes warn to spray 2) Shortcuts back if needed 3) Sharp rocks - we blew 3 times from Duluth Kari is a wonder asset to the redhead More cow bell There are bears here! We cannot stop Came up for the Renegade 5k trail race Send it

For more information:



Iron Range Tourism Bureau

111 Station 44 Road Eveleth, MN 55734 218.749.8161

www.ironrange.org



Parks & Trails Council of Minnesota

275 East 4th Street, Suite #250 St. Paul, MN 55101 651.726.2457

www.parksandtrails.org