

**Research** Report

# Winona Bluffs Traverse 2022 Summer Visitor Profile

**PREPARED FOR** *Greater Minnesota Regional Parks and Trails Commission*

**BY** *Parks & Trails Council of Minnesota*

November 2022



## About the 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, the 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](http://www.parksandtrails.org).

## About the Greater Minnesota Regional Parks and Trails Commission

Greater Minnesota Regional Parks and Trails Commission is comprised of 13 members appointed by the governor, two members from each of the six districts, and one at-large member. The Greater Minnesota Regional Parks and Trails Commission was created to undertake system planning and provide recommendations to the legislature for grants from the Parks and Trails Legacy Fund to counties and cities outside of the seven-county metropolitan area that have been designated as regionally significant.

More information about the Greater Minnesota Regional Parks and Trails Commission is available at [www.gmrptcommission.org](http://www.gmrptcommission.org).

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# Executive Summary

## Winona Bluffs Traverse

### 2022 Summer Visitor Profile



**About:** The Winona Bluffs Traverse is a series of three parks — Bluffsides, Garvin Heights, and Sugar Loaf — along the bluffs overlooking the City of Winona and the Mississippi River. Together, the parks offer miles of trails, rock climbing, and scenic overlooks. A planned trail will link the three parks. The Winona Bluffs Traverse has been part of the Greater Minnesota Regional Parks and Trails System since 2019.

#### Trail Traffic Estimates

##### Total Traffic

Summer total traffic on the Winona Bluffs Traverse ranges from approx. **3,500** to **39,000**, depending on location

##### Daily Patterns



**3pm** Weekend peak \*



**6pm** Weekday peak \*

\* Average across all locations. Individual site patterns vary.

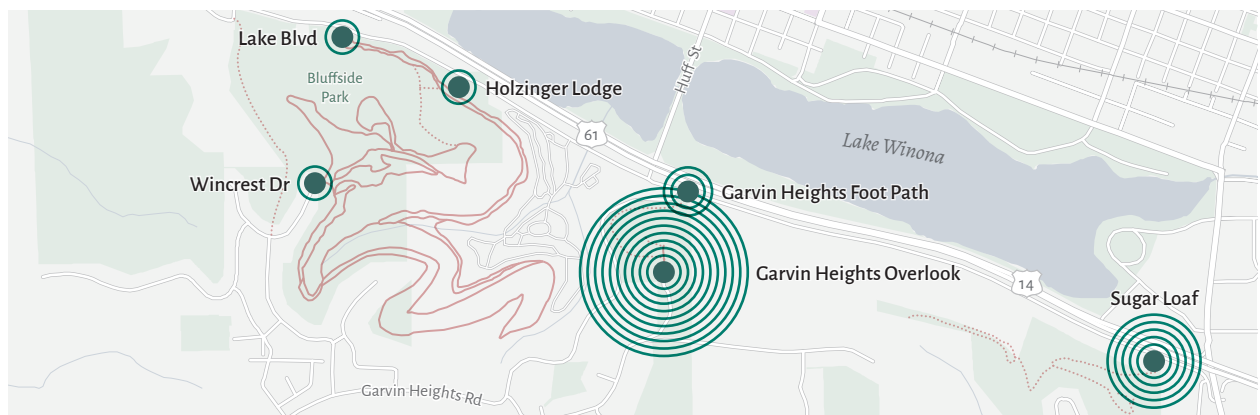
##### Weekend Traffic



**31%** of use at Bluffsides Park

**53%** of use at Garvin Heights

**54%** of use at Sugar Loaf



0.5 miles

Mixed-use trail  
Hiking trail



Each ring represents ≈ 4,000 summer traffic

#### Visitor Demographics

+ Women **51%**  
+ Men **48%**  
+ Average age ≈ **37**

+ Gen Z **37%**  
+ Millennials **18%**  
+ Gen X **26%**  
+ Baby Boomers **18%**

+ White **90%**  
+ Asian **5%**  
+ Hispanic **4%**  
+ Black **2%**

+ Bachelor's degree **60%**  
+ Income under \$50k **30%**  
+ Income over \$100k **33%**  
+ Disability **6%**



## Trail Experience

### Bluffside Park



**53%**

hiking is  
primary activity



**26%**

mountain biking  
is primary activity



**56%**

Rated the trail  
"very good"



**74%**

visiting to  
experience nature



**1:19**

Average (mean)  
time spent on trail



**20%**

visiting with  
children

### Sugar Loaf



**84%**

hiking is  
primary activity



**7%**

rock climbing  
is primary activity



**75%**

Rated the trail  
"very good"



**61%**

visiting to spend  
time with family/friends



**1:28**

Average (mean)  
time spent on trail



**29%**

visiting with  
children

### Garvin Heights



**73%**

hiking is primary  
activity on *foot path*



**13%**

jogging is primary  
activity on *foot path*



**83%**

Rated the *overlook*  
"very good"



**79%**

visiting the *overlook*  
to experience nature or  
take in scenic views



**62%**

using the *foot path*  
to improve  
physical health



**48%**

Rated the *foot path*  
"very good"



**10%**

visiting *overlook*  
with children



**0:30**

Average (mean)  
time spent at *overlook*



**0:54**

Average (mean)  
time spent on *foot path*



## Trail Tourism



**74%**  
from  
Minnesota



**49%**  
tourists visiting  
Winona



**21**  
Different states  
represented  
+ 2 countries



**42%**  
of overnight visitors  
stayed in hotels



**32%**  
of overnight guests  
stayed in Winona  
for 3+ nights



**48%**  
said the parks were  
part of the reason they  
visited Winona



**Awesome!**

So cool, **love coming here.**

~ 10-year-old visiting Garvin Heights with mom

Would be great to **expand this trail system!**

~ Bluffsides Park visitor from La Crosse, WI



## Information Sources



**46%**  
have known about  
the trails for years



**41%**  
heard about the trails  
from family and friends



**18%**  
used the internet  
to learn about the trails

**Methodology:** In 2022, the Greater Minnesota Regional Parks and Trails Commission contracted with Parks & Trails Council to conduct a visitor profile for the Winona Bluffs Traverse. Automated counters were installed at six locations across the trail system and a systematic visitor intercept survey collected information on visitor characteristics (n = 323). Results are representative of summer (Memorial Day through Labor Day) visitors to the Winona Bluffs Traverse during 2022, with a margin of error of +/- 5.5 percentage points.

For full results and methodology, see the full Visitor Profile Report.

# Introduction

The Winona Bluffs Traverse is a series of three parks along the 500-foot-high blufflands overlooking the City of Winona and the Mississippi River Valley (Figure 1):

- **Sugar Loaf Park**, on the eastern end of the Traverse, is centered on an 85-foot-high rock pinnacle that is an iconic landmark overlooking the city. A 1.2-mile hiking trail leads to the top of Sugar Loaf for scenic views and access to a climbing area.
- **Garvin Heights Park**, in the center of the Traverse, is accessible by car and offers a 180-degree scenic overlook of the city, surrounding bluffs, and the Mississippi River valley. A 1-mile foot path links the Garvin Heights overlook to the base of the bluff and the Lake Winona multi-use path.
- **Bluffside Park**, on the western end of the Traverse, is the largest of the three parks and offers over 10 miles of hiking and mountain biking trails. Visitors can access Bluffside Park's trails either at the base of the bluffs (at the Holzinger Lodge trailhead or the Lake Boulevard parking area) or at the top of the bluff (at the Wincrest Drive trailhead).

Combined, the three parks preserve over 500 acres of steep slopes, rocky

outcroppings, and significant biodiversity. Recreationally, the parks offer hiking trails, mountain biking trails, scenic overlooks, and climbing opportunities. A planned trail will eventually link all three parks.

The Winona Bluffs Traverse is owned and managed by the City of Winona, in cooperation with Winona State University and Winona Area Mountain Bikers (WAMB). The Winona Bluffs Traverse was designated and became a part of the Greater Minnesota Regional Park and Trail System in 2019.

In 2022, the Greater Minnesota Regional Parks and Trails Commission (GMRPTC) contracted with Parks & Trails Council of Minnesota (P&TC) to conduct a visitor profile of the Winona Bluffs Traverse. GMRPTC is responsible for system planning and recommendations to the legislature for grants funded by the Parks and Trails Legacy Fund to counties and cities outside the seven-county metropolitan area. The visitor profile was undertaken to understand user numbers, visitor origination, trip characteristics, and basic demographics of park and trail users. This data is meant to help inform planning and marketing efforts by GMRPTC and collaborative partners.

Figure 1

## Winona Bluffs Traverse

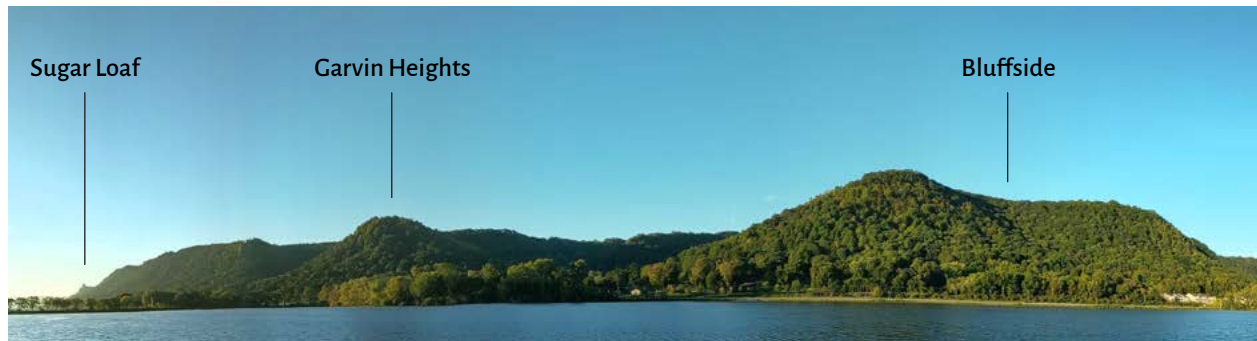
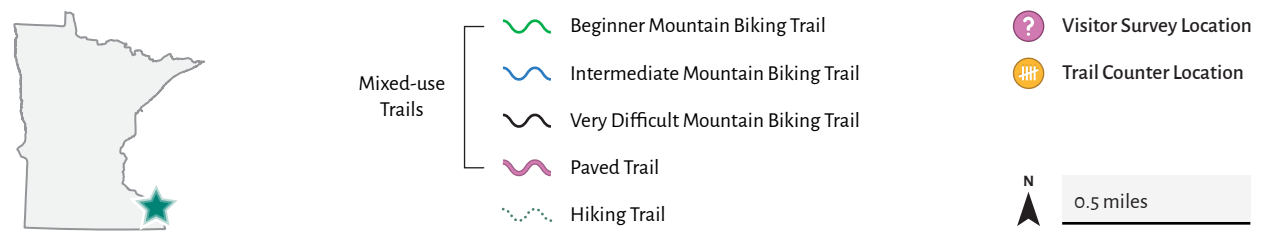


Figure 2

## Winona Bluffs Traverse Park and Trail Map



This visitor profile consists of two parts. First, automated trail counters were installed at six locations across the Traverse (Figure 2). The trail counters collected data on total traffic, travel direction, hourly patterns, and weekly patterns. Second, a systematic intercept visitor survey was conducted at each of the three parks. Staff used electronic tablets to collect surveys during high- and low-use periods. A total of 323 surveys were collected, and results have a margin of error of +/- 5.5 percentage points. Together, the trail counts and visitor surveys provide a snapshot of how many people use the parks along the Winona Bluffs Traverse and who those people are. The visitor studies were conducted during the summer and early fall of 2022 and were designed to be representative of the summer season, defined as Memorial Day through Labor Day. This report does not attempt to quantify or understand the

use of the Winona Bluffs Traverse during the winter, spring, or fall. Such use may be significant: the parks are open year-round and used by trail runners, hikers, dog walkers, sightseers, mountain bikers, fat-tire winter bikers, snowshoers, and ice climbers, depending on the season. This report focuses only on summer use.

The visitor survey was designed to be representative of Winona Bluffs Traverse as a whole. Each park along the Traverse is unique, however, and key differences between visitors to each park unit are highlighted throughout the report. Park-level cross-tabulations are also provided in Appendix A. Park-level results are derived from smaller sample sizes and as such contain more uncertainty.

For more details on this report's methods, [see our methodology](#).



# Trail Traffic Estimates

## Garvin Heights is the busiest park on the Winona Bluffs Traverse

Traffic volumes varied significantly across the Winona Bluffs Traverse (Figure 3). Of the three parks that comprise the Traverse, Garvin Heights received the most visitors. The Garvin Heights overlook trail was by far the busiest location where counts took place, with estimated total traffic volumes during the summer surpassing 39,000. That number includes visitors traveling outbound (toward the overlook) and those traveling inbound (toward the parking area). The vast majority of visitors on the paved overlook trail were doing out-and-back trips from the parking area,

and traffic direction was split roughly evenly (51% of traffic was going toward the overlook, 49% towards the parking lot). On the average summer day, an estimated 196 people walked from the parking area to the overlook and 192 people walked from the overlook to the parking area (Figure 4). Since nearly all visitors at the overlook are doing out-and-back trips from the parking lot, we estimate the Garvin Heights overlook received approximately 19,500 visits during the summer of 2022.

The Garvin Heights foot path, a natural-surface trail that climbs 500 feet from the base of the bluff up to the overlook, received

Figure 3

## Estimated total summer traffic

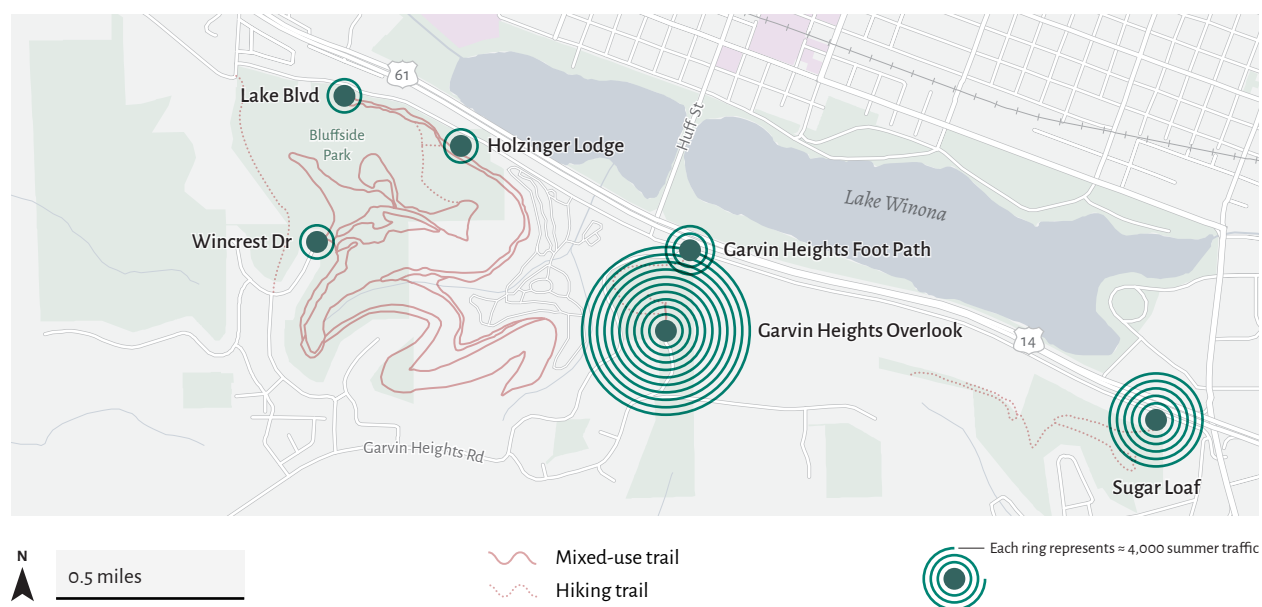
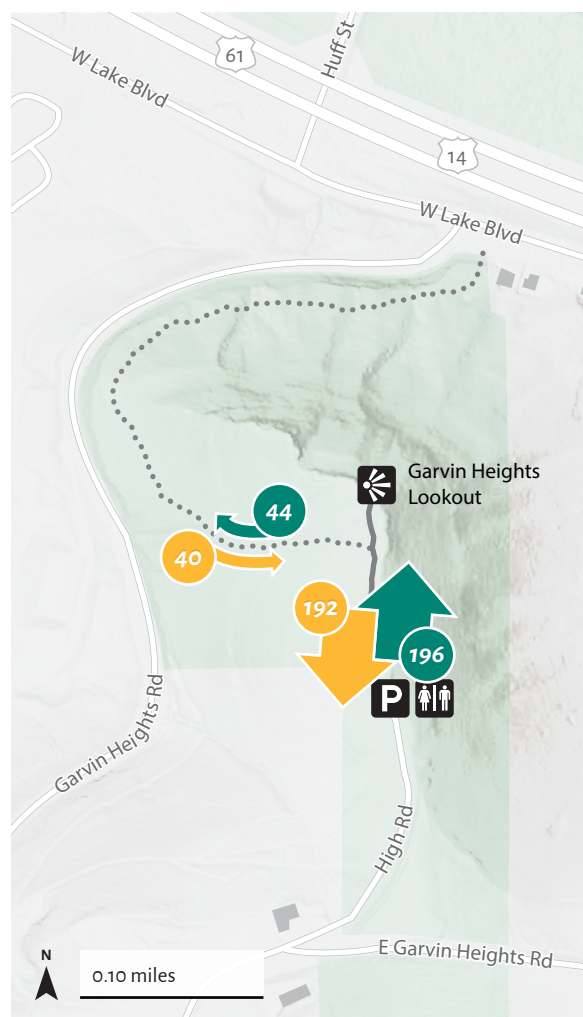


Figure 4

### Garvin Heights Traffic Flows

Summer Average Daily Traffic



significantly less use than the paved overlook trail. The estimated total summer traffic on the Garvin Heights foot path was nearly 8,500. Traffic on the foot path was primarily out-and-back, with visitors being slightly more likely to be going downhill (52% vs. 48%). On the average summer day, uphill traffic averaged 40 per day and downhill traffic averaged 44 per day. (Figure 4). Those figures may translate to nearly

4,500 visits during the summer of 2022, although that's a slight overestimate due to some visitors hiking up and down the path multiple times per visit.

The travel direction on both the foot path and the paved overlook trail suggest a handful of visitors (approximately four people per day, on average) at Garvin Heights may start at the overlook parking lot, hike down the bluff on the foot path, and then be picked up (or link up to a different trail in Winona's trail system). The difference in outbound and inbound traffic is also within our traffic estimate's margin of error, however, and may simply be due to uncertainty in the estimate (see our methodology for more details). Future research is needed to confirm the number of visitors doing one-way trips to or from Garvin Heights.










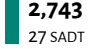
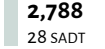
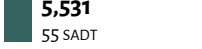
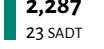
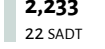
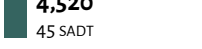
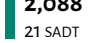
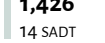
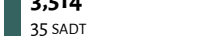
### Sugar Loaf is the second busiest park on the Winona Bluffs Traverse

After Garvin Heights, Sugar Loaf was the next busiest park in the Winona Bluffs Traverse system (Figure 5). The total estimated summer traffic on the Sugar Loaf hiking trail was nearly 19,000, representing approximately 9,500 visits during the summer of 2022.

The Sugar Loaf hiking trail received significantly more use than the comparatively similar Garvin Heights foot path. Both are approximately 1-mile

Figure 5

## Estimated summer traffic flows

	▶ Outbound	◀ Inbound	Total Traffic
Garvin Heights Overlook	 <b>19,837</b> 196 SADT	 <b>19,351</b> 192 SADT	 <b>39,188</b> 388 SADT
Sugar Loaf	 <b>9,464</b> 94 SADT	 <b>9,464</b> 94 SADBt	 <b>18,927</b> 187 SADBt
Garvin Heights Foot Path	 <b>4,451</b> 44 SADT	 <b>4,043</b> 40 SADBt	 <b>8,494</b> 84 SADBt
Bluffside Park (Holzinger)	 <b>2,743</b> 27 SADT	 <b>2,788</b> 28 SADT	 <b>5,531</b> 55 SADT
Bluffside Park (Wincrest Dr)	 <b>2,287</b> 23 SADT	 <b>2,233</b> 22 SADT	 <b>4,520</b> 45 SADT
Bluffside Park (Lake Blvd)	 <b>2,088</b> 21 SADT	 <b>1,426</b> 14 SADT	 <b>3,514</b> 35 SADT

### Notes:

Summer defined as Saturday, May 28, 2022 through Monday, September 5, 2022 (Saturday of Memorial Day weekend through Labor Day). Directional counts at Sugar Loaf are not available; 50/50 split assumed.

SADT = Summer Average Daily Traffic.

long, natural-surface trails that feature steep climbs to scenic overlooks. Sugar Loaf received approximately twice as much traffic than the Garvin Heights foot path did, making it the most heavily used natural-surface trail on the Winona Bluffs Traverse.

### Bluffside Park has the least trafficked trails on the Winona Bluffs Traverse

Bluffside park is the largest of the three parks on the Winona Bluffs Traverse, yet received the least amount of use. The estimated total summer traffic at the three primary Bluffside Park trailheads ranged from approximately 5,500 at Holzinger Lodge to 4,500 at the Wincrest Drive trailhead to 3,500 at the Lake Boulevard parking area.

Traffic at both Holzinger Lodge and Wincrest Drive was split roughly evenly between outbound and inbound traffic, likely indicating most visitors were using each trailhead to both enter and exit the park. Directional patterns were more disparate at the Lake Boulevard parking area, however, where 59% of the traffic was traveling toward Holzinger Lodge (Figure 6).

The nature of the Bluffside Park trail system makes it challenging to estimate unique visits. Based on the trail network and observed traffic patterns, we suspect nearly all the traffic at Holzinger Lodge and Wincrest Drive represent unique visits (i.e., only a negligible number of visitors enter

the park at Holzinger Lodge and exit at Wincrest Drive, or vice versa). At the Lake Boulevard parking area, however, traffic was highly correlated with traffic at Holzinger Lodge and we suspect a large but unknown share of traffic at the Lake Boulevard trail

count location were visitors starting at Holzinger and riding or hiking the Low Rollers Loop.

### Garvin Heights and Sugar Loaf are extra busy on weekends

Across the Winona Bluffs Traverse, traffic

Figure 6

## Bluffside Park Traffic Flows

*Summer Average Daily Traffic at Bluffside Park trailheads*

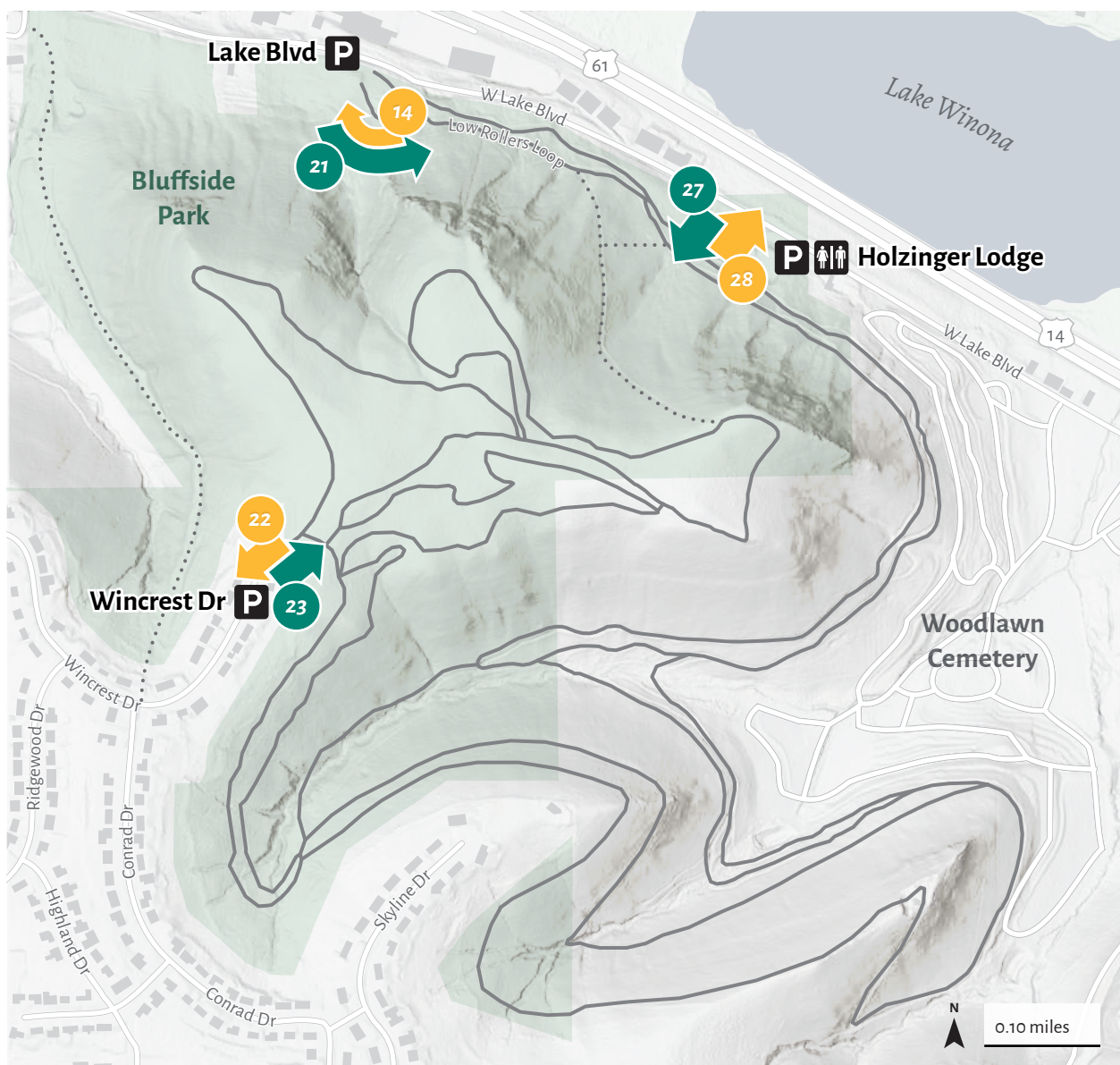
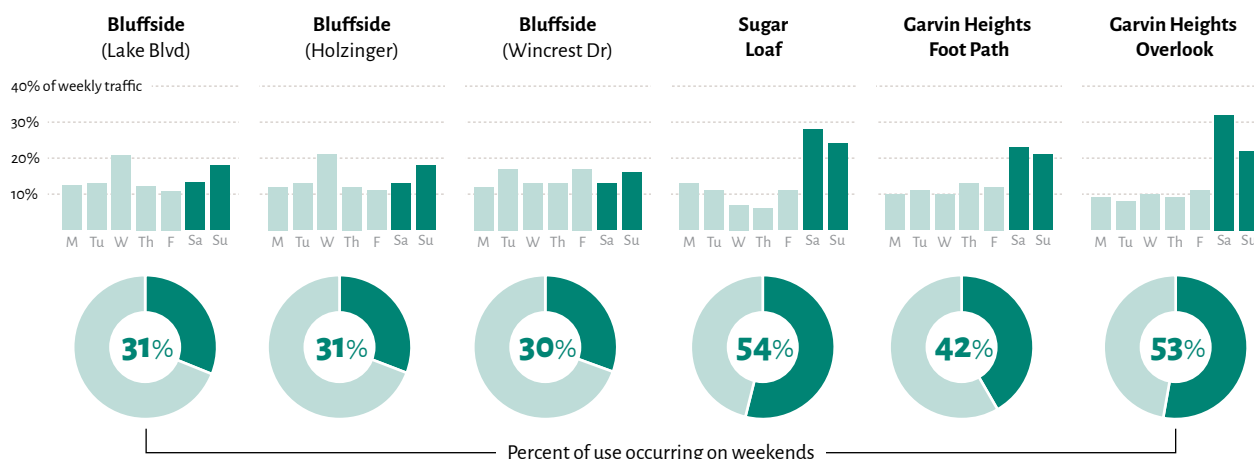




Figure 7

## Summer day-of-week traffic

*Summer average day-of-week total traffic on the Winona Bluffs Traverse*



volumes varied depending on the day of the week. Garvin Heights and Sugar Loaf, both of which received more tourist visitors (see the “Trail Tourism” section), were significantly busier on weekends than on weekdays. There were 2.9 times as many visitors at Sugar Loaf on the average summer weekend day than on the average summer weekday. Similarly, at the Garvin Heights overlook, there were 2.8 times as many visitors on the average summer weekend day as on the average summer weekday. The Garvin Heights foot path had 1.8 times as many visitors on the average summer weekend day as on the average summer weekday. Overall, over half of visitation at Sugar Loaf and Garvin Heights overlook occurred on weekends. On the Garvin Heights foot path, 42% of use occurred on weekends (Figure 7).

In contrast to the heavy weekend use at Sugar Loaf and Garvin Heights, use at Bluffsides Park was more evenly distributed across the week. The average summer weekend day at Bluffsides Park was only 1.1 times busier than the average summer weekday. Wednesdays were the busiest day of the week, on average, at the Holzinger Lodge and Lake Boulevard trailheads. Tuesdays and Fridays were the busiest days of the week at the Wincrest Drive trailhead. The relatively busy weekdays at Bluffsides Park were likely reflective of club and group rides, which Bluffsides Park visitors were disproportionately likely to be affiliated with.

### Daily use generally peaks in the mid to late afternoon and early evening

Several hourly traffic patterns emerged across each park and trail unit of the Winona Bluffs Traverse (Figure 8). Weekday

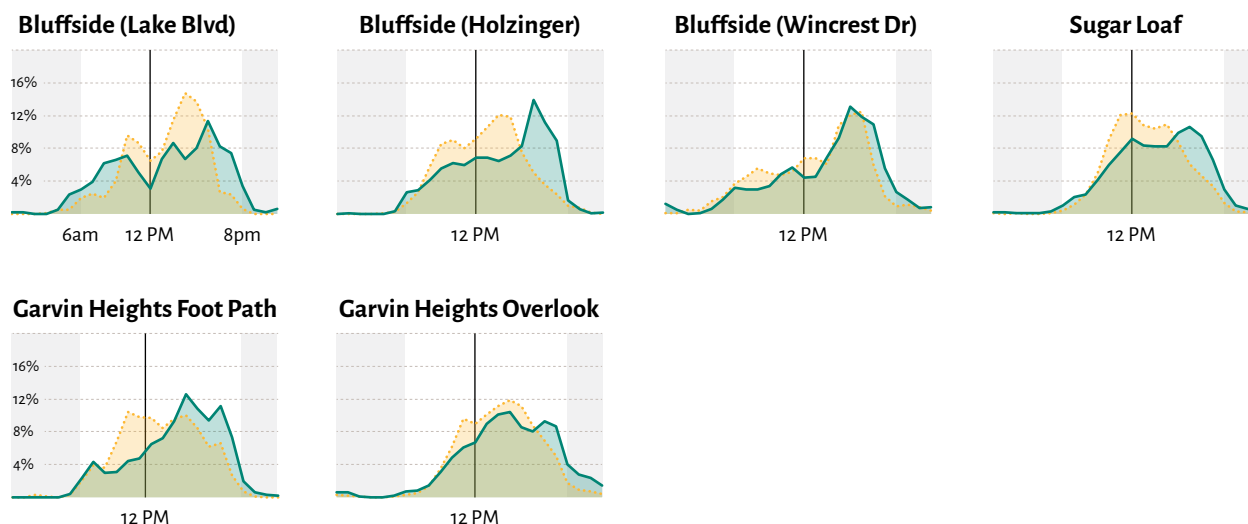
Figure 8

## Hourly traffic patterns

% of daily traffic

Weekday

Weekend



patterns were most distinct at the Garvin Heights overlook, where visitors began arriving later in the morning, peaked mid-afternoon (between 3 pm and 4 pm), and stayed relatively stable through the early evening. While most visitors were off the trail by sunset at other locations, visitors continued arriving at the overlook well into the evening: 11% of weekday traffic at the Garvin Heights overlook occurred between 8 pm and 12 am. This makes sense, as the overlook is accessible by car and is an easy (and scenic) place to watch the sunset and see the city lights after dark.

Hourly weekday patterns at the other locations were generally similar to one another. The first visitors started arriving early in the morning (between 6 am and 7 am), visitation increased slowly through the

morning and early afternoon, peaked late afternoon (between 4 pm and 6 pm), and most visitors were off the trail by 8 pm. At Sugar Loaf, for example, only 5% of average weekday traffic occurred after 8 pm.

Weekend hourly patterns at the Garvin Heights overlook and Wincrest Drive trailhead were identical to their respective weekday patterns. But weekend patterns differed at the other locations, with use generally following more of a bell-curve pattern and peaking earlier in the day.

Fact sheets summarizing key trail count metrics for each location are available in Appendix B.





## Visitor Demographics

### Visitors to the Winona Bluffs Traverse span a wide range of ages

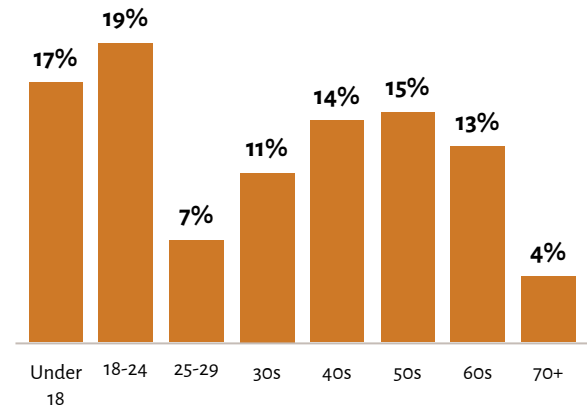
Winona is home to two colleges, Winona State University and St. Mary's University, and college-aged people were well-represented among visitors to the Winona Bluffs Traverse. People aged 18 to 24 accounted for 19% of visitors to the three parks, more than any other age bracket. Visitors of all ages use the Traverse, however. A quarter of visitors (25%) were people in their 30s or 40s, and 28% were people in their 50s or 60s. Relatively few visitors were in their late 20s (7%) or over 70 (4%) (Figure 9). Among adult visitors, the average visitor to the Winona Bluffs Traverse was between 41 and 44 years old (median = 43; mean = 42.6; 95% C.I. [40.8, 44.3]).

The survey did not directly ask for the ages of children visitors, but it did ask how many children were in each visitor group. Overall, 17% of all visitors were children under 18. If it's assumed the average age of children visiting was 12, the average age of all visitors was approximately 37 years old.

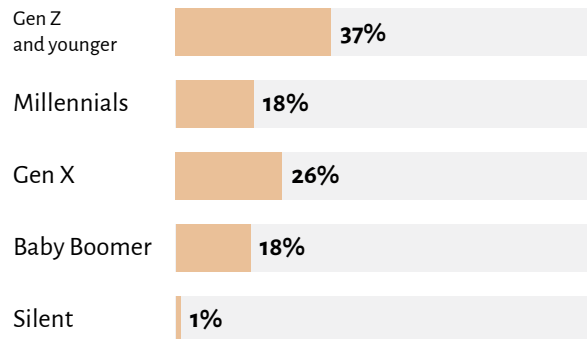
Generations provide another method of understanding visitors by looking at their place in life, whether young adult, middle-aged, or retired. Looking at generations is helpful because it provides

Figure 9

### Visitors by age % of all visitors



### Visitors by generation % of all visitors



Q22: What year were you born? (n = 363)

Notes: Ages were only asked of adult visitors. Percentage under 18 is calculated based upon group composition (Q11) and includes non-respondents and groups without adults. Generations are defined as Gen Z and younger (born 1997 or after; Age 25 and younger), Millennials (born 1981-'96; Age 26-41), Gen X (born 1965-'80; Age 42-57), Baby Boomer (born 1946-'64; Age 58-76), and Silent Generation (born 1928-'45; Age 77-94).

a way to understand how different formative experiences (e.g., world events, technological advances) interact with visitors' life stages to form recreational preferences. Generation Z and younger (those born in 1997 or after) made up the largest share of visitors (37%), reflecting use by students of the two local universities. The remaining visitors were split relatively evenly between Millennials (age 26-41; 18% of all visitors), Generation X (age 42-57; 26% of all visitors), and Baby Boomers (age 58-76; 18% of all visitors). Only 1% of visitors were a part of the Silent Generation (age 77-94).

### Men and women visit the Winona Bluffs Traverse in roughly equal numbers

About the same number of women (51% of all visitors) and men (48%) visited the Winona Bluffs Traverse during the summer of 2022. A small minority of visitors (1%) identified as either a third gender or non-binary.

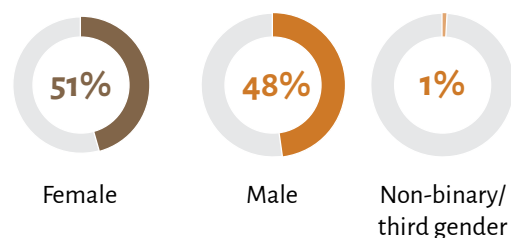
A small minority (1%) of visitors identified as transgender. The majority of visitors (98%) did not identify as transgender, while 1% of visitors preferred not to answer (Figure 10).

The gender split at Bluffside Park in particular was different than the Winona Bluffs Traverse as a whole, likely due to the mountain biking trails. A third of visitors at Bluffside were mountain bikers, of which 75% were male. Studies conducted

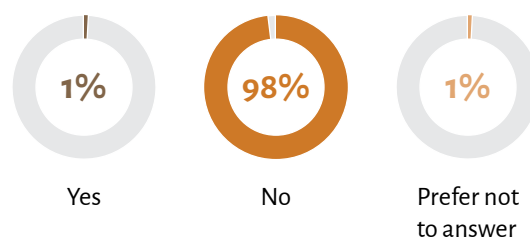
Figure 10

### Visitors by gender identity % of adult visitors

What is your gender identity?



Do you identify as transgender?



Q23. What is your gender identity? (n = 316)

Q24. Do you identify as transgender? (n = 303)

on other trail systems support the finding that mountain biking is a predominantly male activity. Overall, 64% of the visitors at Bluffside Park identified as male.

### The majority of visitors to the Winona Bluffs Traverse are White

A significant majority of visitors (90%) identified as White (Figure 9). Minorities of visitors identified as Asian (5%), Hispanic or Latinx (4%), Black or African American (2%), or Middle Eastern or North African (1%). Fewer than 1% of visitors identified as Pacific Islander, and no respondents identified as Native American, First Nation, or Alaska Native (Figure 11).

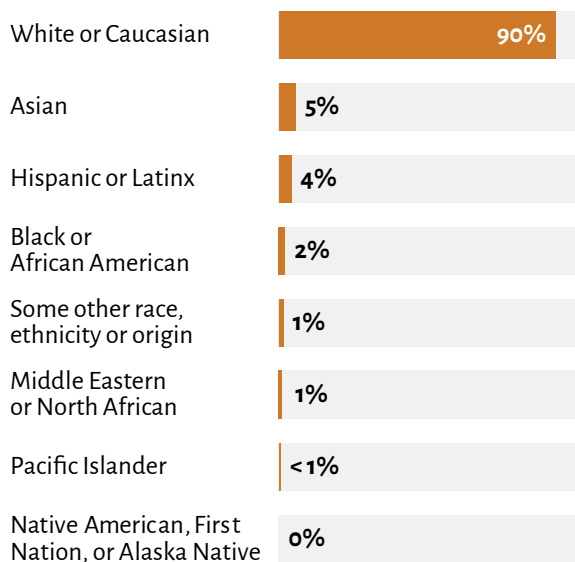
While a majority of visitors to the Winona Bluffs Traverse are White, they are slightly more racially and ethnically diverse than Winona County as a whole. Approximately 95% of Winona County residents identify as White, whereas only 90% of Winona Bluffs Traverse visitors did.<sup>1</sup> This may be due to the Traverse attracting tourists from other areas, but also indicates that the parks have broad appeal to many different people.

### The Winona Bluffs Traverse is used by people from across the economic spectrum

Visitors to the Winona Bluffs Traverse had a wide range of household incomes (Figure 12). Approximately a third of visitors (30%) had annual household incomes below

Figure 11

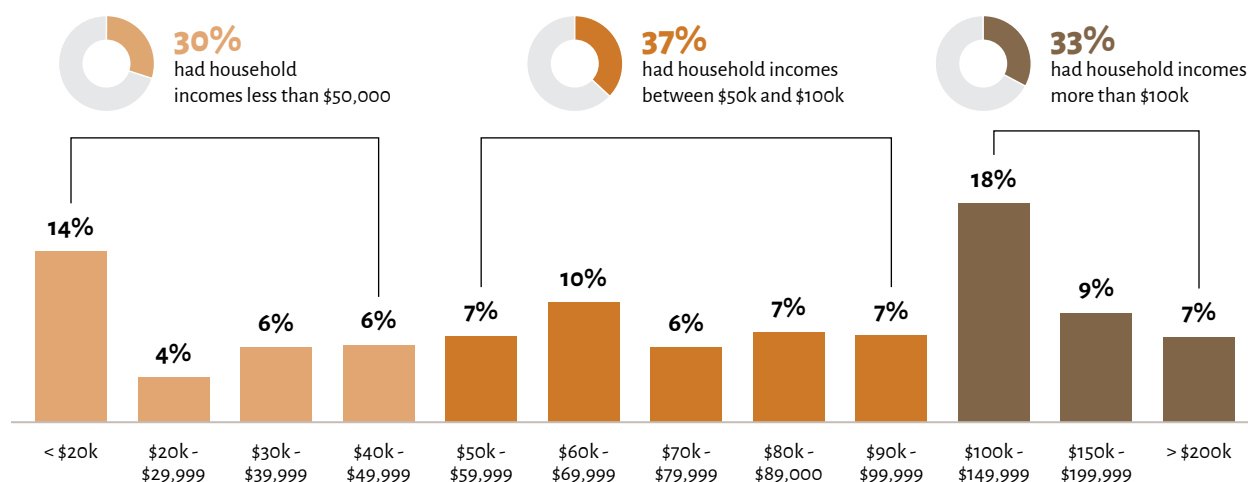
### Visitors by race/ethnicity % of adult visitors



Q25. How do you describe yourself? Select all that apply (n = 317)

Figure 12

### Visitors by annual household income % of adult visitors



Q31. Please indicate your total household income before taxes last year (n = 271)

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

1 U.S. Census Bureau, American Community Survey (2020; 5-year estimates).

\$50,000, approximately a third (37%) had household incomes between \$50,000 and \$100,00, and another third (33%) had household incomes above \$100,000. A relatively large share of visitors (14%) reported household incomes under \$20,000, corresponding closely to the share of visitors who were college-aged.

Compared to local averages, visitors to the Winona Bluffs Traverse had slightly higher household incomes; 43% of Winona County residents have annual household incomes under \$50,000, compared to 30% of park visitors. Only 25% of Winona County residents have annual household incomes above \$100,000, compared to 33% of park visitors.<sup>2</sup> Visitors' household incomes were

more comparable to statewide averages; 31% of Minnesota households have annual incomes below \$50,000, and 31% of Minnesota households make more than \$100,000 annually.<sup>3</sup>

### Visitors have above-average levels of education

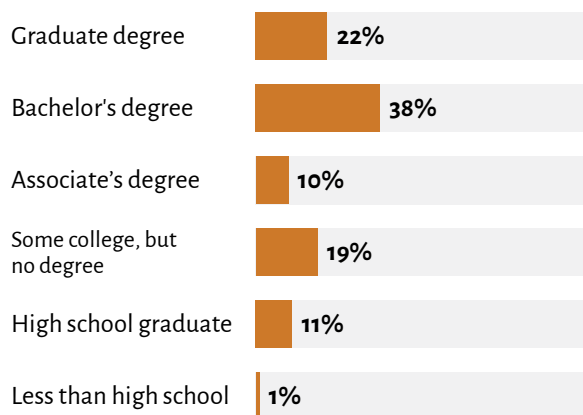
Winona Bluffs Traverse visitors were disproportionately highly-educated compared to the local and statewide averages. Over half (60%) of visitors had either a graduate degree or a bachelor's degree (Figure 13). For comparison, only 37% of Minnesotans over the age of 25 — and 31% of people in Winona County — have a college degree.<sup>4</sup>

### A minority of visitors have a physical, mental, or sensory disability or condition

A minority (6%) of visitors reported having a physical, mental, or sensory disability or condition. In comparison, nearly 11% of Minnesotans — and residents of Winona County — have a disability.<sup>5</sup>

Figure 13

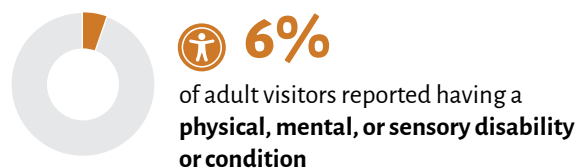
#### Visitors by educational attainment % of adult visitors



Q29: What is the highest level of education you have completed? (n = 312)

Figure 14

#### Visitors with disabilities



Q30: Do you, or does someone in your group, have a physical, mental or sensory disability or condition? (n = 302)

2, 4, 5 U.S. Census Bureau, American Community Survey (2020; 5-year estimates)

3 U.S. Census Bureau, American Community Survey (2021 estimate).



## Trail Experience

### **The Winona Bluffs Traverse trails are used primarily for hiking and walking**

The vast majority (85%) of visitors using the Winona Bluffs Traverse were hiking or walking. The percentage of visitors hiking or walking was driven largely by Garvin Heights and Sugar Loaf, the two busiest parks on the Traverse and where hiking is the primary trail activity offered. The Traverse is used for many other activities, however: 12% of visitors were doing nature photography, 11% were dog-walking, 9% were birding or wildlife watching, 8% were running or jogging, 7% were rock climbing, 7% were mountain biking, and 2% were geocaching (Figure 15).

Nearly a third of visitors (28%) participated in more than one activity during their visit. This is due to many activities being complementary (e.g., nature photography and hiking) or people within a visitor group doing different activities (e.g., a parent hiked while their children rode a mountain bike). Overall, hiking or walking was the primary activity for 78% of visitors across the Winona Bluffs Traverse. Dog walking (5%), mountain biking (5%), running or jogging (4%), and rock climbing (3%) rounded out the primary reasons people were visiting.

Activities varied significantly across the

three parks that make up the Winona Bluffs Traverse. Hiking or walking was the primary activity at every location, while secondary activities varied by location. Nearly all mountain biking occurred at Bluffside Park, where a quarter of visitors (26%) were visiting primarily to go mountain biking. Trail running was most frequent at the Garvin Heights foot path (where running or jogging was the primary activity for 13% of visitors) and Bluffside Park (where running or jogging was the primary activity for 10% of visitors). Rock climbers were primarily visiting Sugar Loaf, where 7% of people were visiting primarily to climb.

### **Experiencing nature and scenic views were the top motivations for visiting**

Visitors to the Winona Bluffs Traverse were most often visiting to experience nature and/or take in scenic views. Over two-thirds of visitors (70%) said experiencing nature and scenic views was one of their most important reasons for visiting. Other reasons for visiting were generally less important to visitors. Relaxation and/or stress relief (45% of visitors), spending time with family or friends (42%), improving physical health (40%), and doing something exciting or adventurous (30%) were cited by between one-third and half of visitors as important reasons for visiting. Only a handful of visitors said learning or practicing

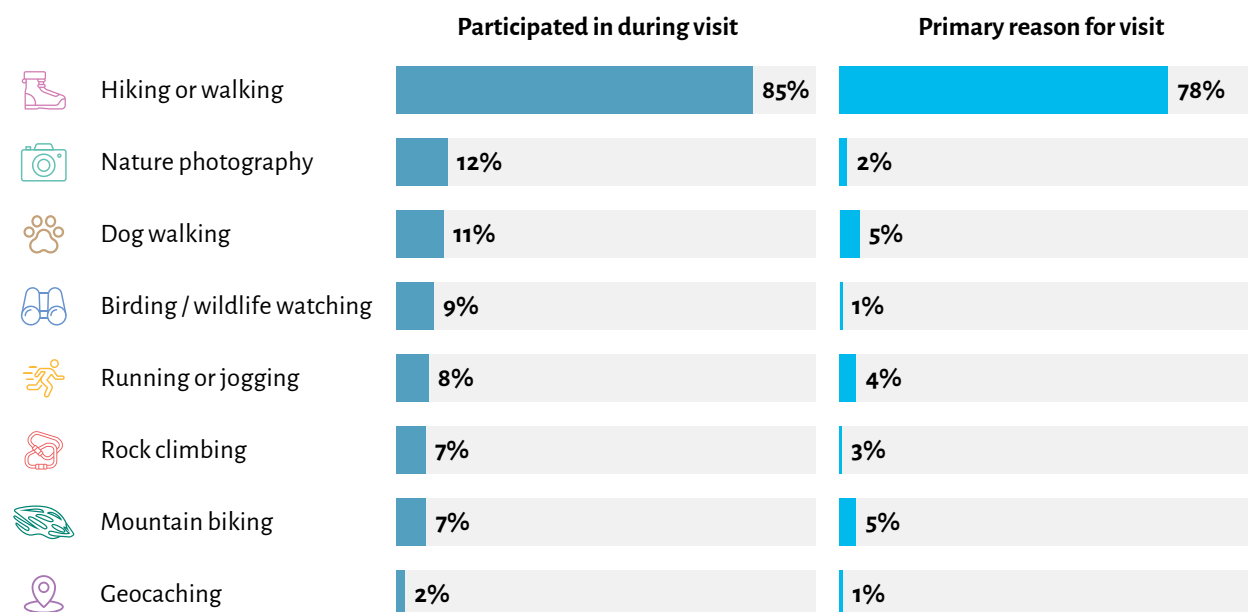
skills (8%), getting their children outdoors (8%), training for an event or competition (5%), or meeting new people (3%) were motivations for their visit (Figure 16). Motivations for visiting differed slightly

across each park location. Compared to other park locations, visitors at Bluffsides Park and the Garvin Heights foot path were disproportionately likely to say improving their physical activity was a primary

Figure 15

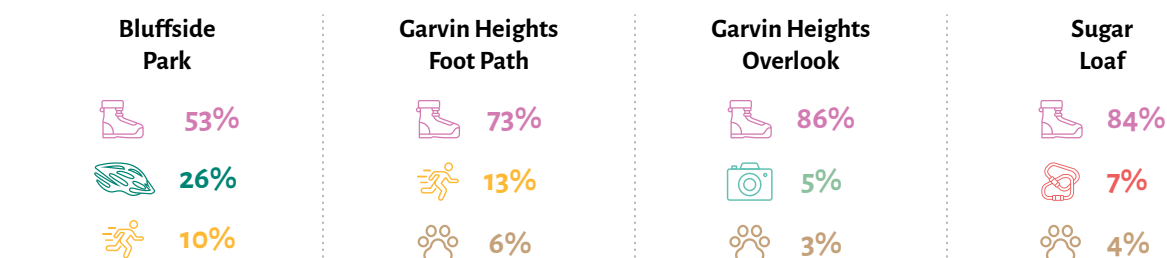
## Participation in trail activities during visit

% of all visitors



## Top 3 activities by park location

% of all visitors, primary reason for visit



Q1. Which trail activities are you and your group doing during your visit today? *Select all that apply* [Answers presented in randomized order] (n = 323)

Q2. Which one of these activities was your main reason for visiting this trail? (Includes non-respondents and groups without adults; n = 461)

Notes: Percentages for primary reason to visit don't add up to 100% due to rounding. For Garvin Heights, "hiking or walking" includes "sightseeing." Visitors responding "other" not displayed



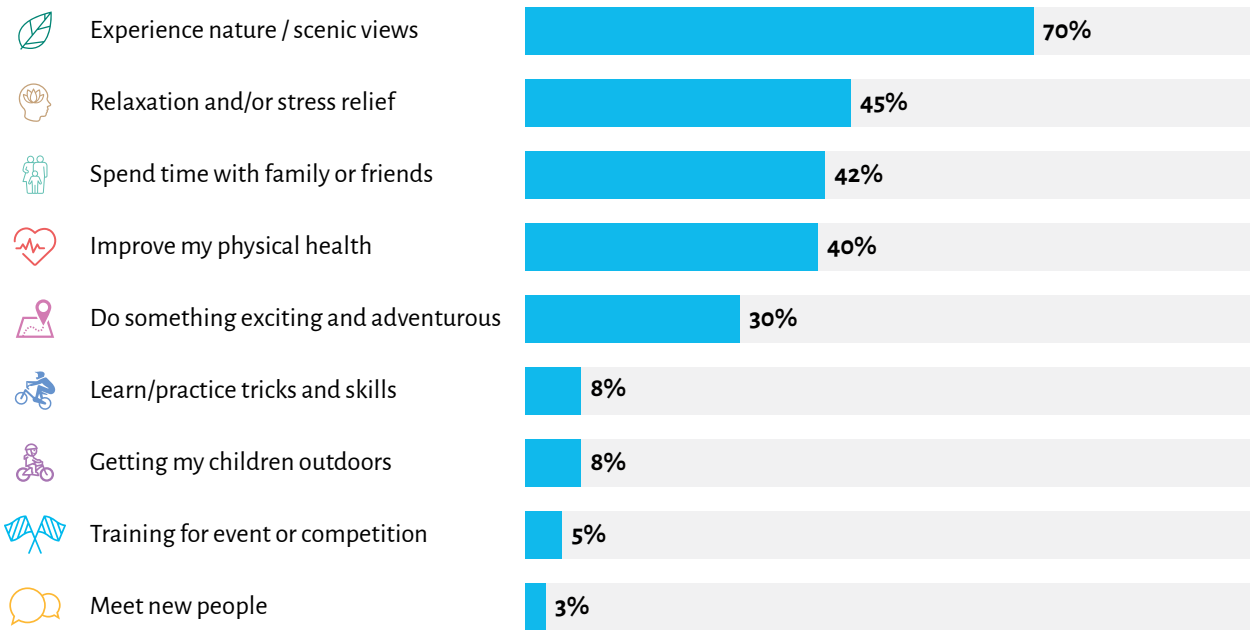
motivation for their visit, whereas visitors at Sugar Loaf were disproportionately likely to say spending time with friends and family and doing something exciting or adventurous were important reasons for visiting.

### Motivations for visiting varied across visitor subgroups

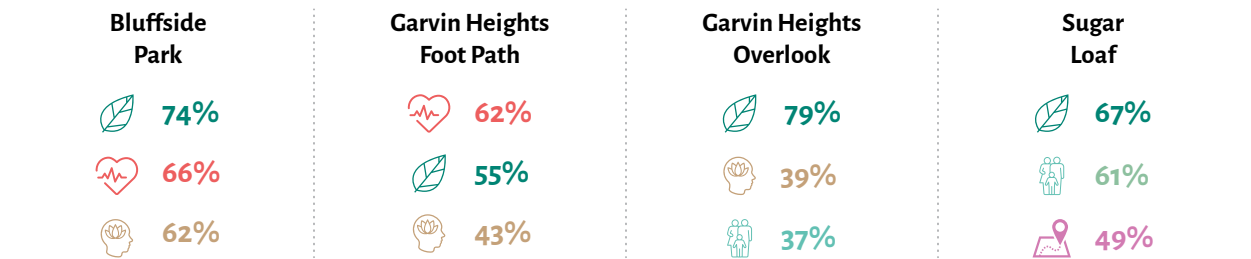
Several key differences in trip motivations emerged across visitor subgroups. Tourists, for example, were more likely than locals to be motivated by spending time with family and friends (49% vs. 35%,  $p < .05$ )

Figure 16

### Most important reasons for visiting the park or trail % of adult visitors



### Top 3 most important reasons for visiting by park location % of all visitors



Q7. What are your most important reasons for visiting the trail today? *Select all that apply* [Answers presented in randomized order] (n = 321)

and meeting new people (5% vs. 1%,  $p < .05$ ). Physical fitness was a more important motivation for locals than for tourists (57% vs. 24%,  $p < .01$ ).

Motivations also varied across age groups. Millennials and Gen Zers were more likely than Gen Xers and Baby Boomers to be visiting to spend time with family and friends (55% vs. 31%,  $p < .001$ ), do something exciting or adventurous (40% vs. 22%,  $p < .001$ ), and learn or practice new skills (11% vs. 4%,  $p < .05$ ).

**Local visitors tend to use the Winona Bluffs Traverse on a regular basis**

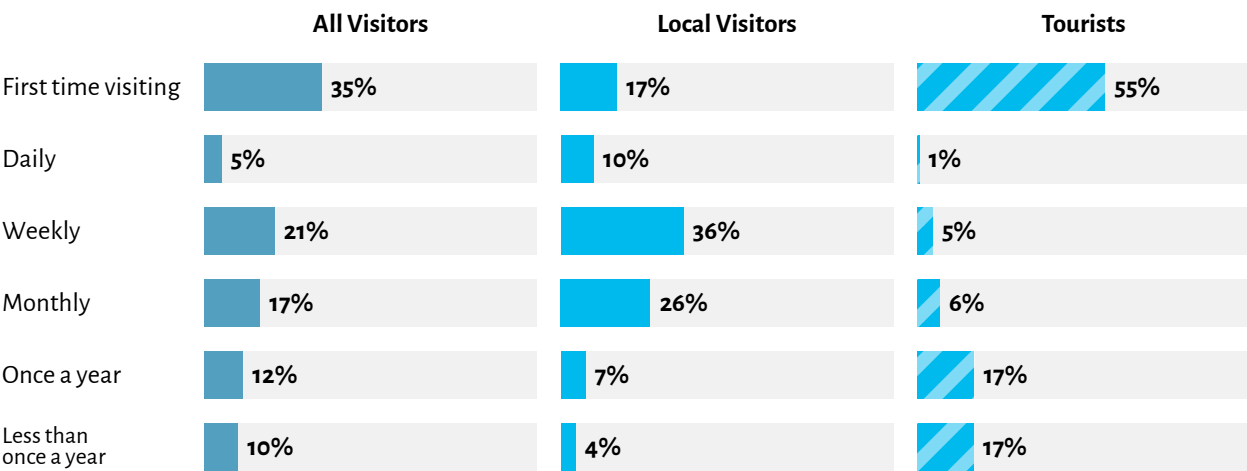
Nearly three-quarters of local visitors (72%) are “regulars” on the Winona Bluffs Traverse, meaning they reported visiting

at least once per month. The largest share of local visitors reported visiting weekly (36%), while 10% visited daily and another 26% visited monthly. Most locals using the Traverse had used the trails at least once before, although a significant minority (17%) of locals were visiting for the first time. This suggests there may be significant potential to increase local visitation to the parks in future years.

Tourists, unsurprisingly, visit the Winona Bluffs Traverse far less frequently than locals. Over half of tourists (55%) were visiting the Traverse for the first time, and 34% said they visit the Traverse about once per year (or less). A small minority (12%) of tourists said they visit monthly or more (Figure 17).

Figure 17

**Visitation frequency**  
*% of adult visitors*



Q9. Approximately how often do you visit this trail during spring, summer and fall? (n = 321)

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

## Most visitors spend less than two hours on the trail each visit

On average, across all park units, visitors spent approximately 58 minutes on the trail per visit (median = 1 hour; mean = 0:58, 95% C.I. [0:52, 1:03]). Nearly half of the visitors (46%) spent less than an hour on the trail, and another 40% spent between one and two hours (Figure 18). About a tenth of visitors (11%) spent between two and three hours on the trail, and only a few visitors (3%) spent longer than three hours.

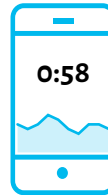
The amount of time people spend on the trail varied significantly across the three parks. Visitors spent the longest at Sugar Loaf and Bluffside Park, on average. The average visitor at Sugar Loaf spent 1.5 hours at the park per visit, and the average visit to Bluffside Park lasted about an hour and 20 minutes. Visits to Garvin Heights Park tended to be shorter in length. People hiking the Garvin Heights foot path took about an hour, on average. And visitors just using the overlook typically spent about half an hour at the park.

## The majority of visitor groups are pairs or individuals recreating alone

Most visitors (74%) were visiting the Winona Bluffs Traverse with other people (Figure 19). However, most groups were relatively small; 41% of visitor groups were two people, 17% of groups were three people, and 9% of groups were four people. Only 8% of groups had five or more people. Approximately a quarter of visitors (26%) were visiting alone.

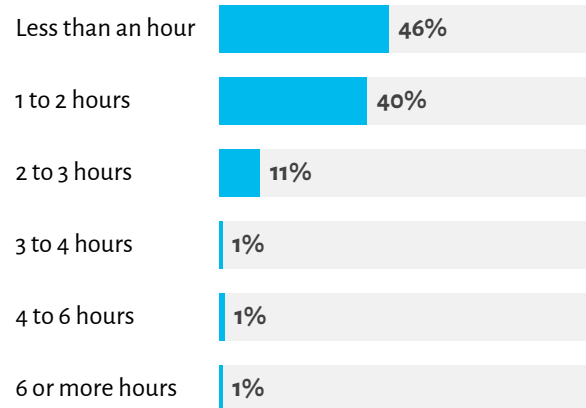
Figure 18

## Duration of trail visit



The average visitor spent **58 minutes** at the trail

% of all visitors spending \_\_\_\_\_ at the trail



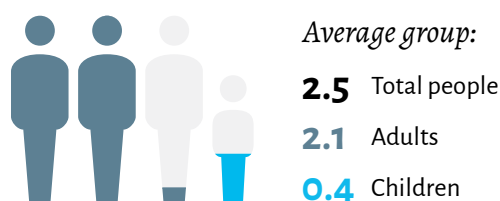
## Average visit duration by park

	Average Visit
Sugar Loaf	<b>1:28</b> (+/- 13 min.)
Bluffside Park	<b>1:19</b> (+/- 12 min.)
Garvin Heights Foot Path	<b>0:54</b> (+/- 7 min.)
Garvin Heights Overlook	<b>0:30</b> (+/- 4 min.)

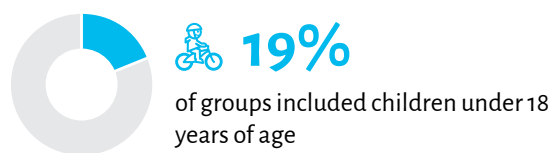
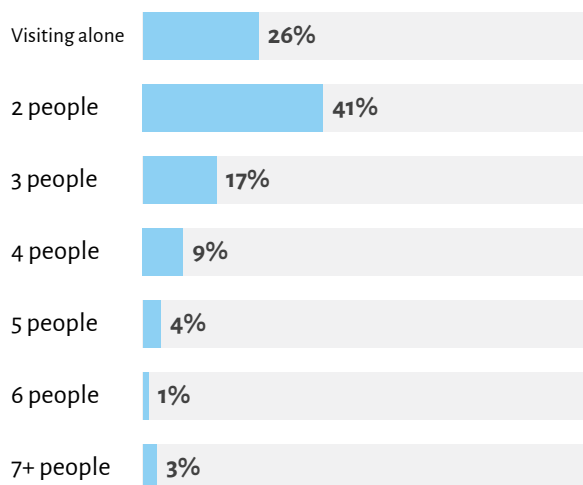
Q8. Approximately how much time did you spend at the trail on this visit? [Hours: Minutes] (n = 321)

Figure 19

## Group size and composition



### % of all visitor groups



Q11. How many people are in the group you're recreating with today?  
[Adults 18 years and older, including yourself; Children under 18]  
(Includes non-respondents and groups without adults; n = 483)

The average visitor group size was 2.5 people (median = 2; mean = 2.5, 95% C.I. [2.3, 2.7]). Approximately a fifth of visitor groups (19%) included children, and such groups tended to be larger than groups without children. The average group with children had 3.9 people, nearly twice the size of the average group without children (2.2,  $p < 0.001$ ).

## Most visitors said their experience was “good” or “very good”

Visitors rated their experiences at the Winona Bluffs Traverse highly. Over two-thirds of all visitors (69%) said their experience was “very good,” and another 23% rated it as “good.” Only 6% of visitors had a “fair” experience, and only 2% said their experience was “poor” or “very poor” (Figure 20).

Two key differences in trail ratings were observed across visitor subgroups. First, mountain bikers generally gave the system worse reviews than non-mountain bikers; 72% of non-bikers had a very good experience, compared to only 40% of mountain bikers ( $p < .01$ ). Second, women tended to have slightly better experiences than men; 72% of women said their experiences were very good, but only 66% of men said the same ( $p < .05$ ). The gender difference persisted even when controlling for mountain biking.

Visitor ratings also differed across the park units. Visitors at the Garvin Heights overlook and Sugar Loaf generally gave their experiences very high ratings; 83% of visitors at the Garvin Heights overlook said their experience was very good and 75% of visitors at Sugar Loaf said the same. Visitors at Bluffsides Park and the Garvin Heights foot path gave significantly lower reviews. Only 55% of the visitors at Bluffsides Park, and 48% of the visitors at the Garvin Heights foot path said their experience was very good.

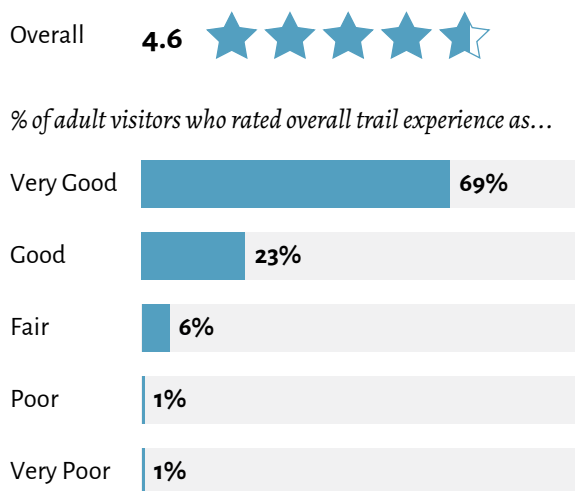
### Mountain biking profile

Mountain biking is a significant trail use at Bluffsides Park (26% of visitors there said it was their primary reason for visiting), and our survey included several additional questions to gain a deeper understanding of the mountain bikers using the park. Because mountain bikers account for only a small share of all visitors to the Winona Bluffs Traverse, however, our survey sample only captured a small number of mountain bikers using the trail system (n = 28). This sample size is insufficient for a robust analysis but does provide a quick snapshot of the mountain biking community on the Winona Bluffs Traverse (Figure 21).

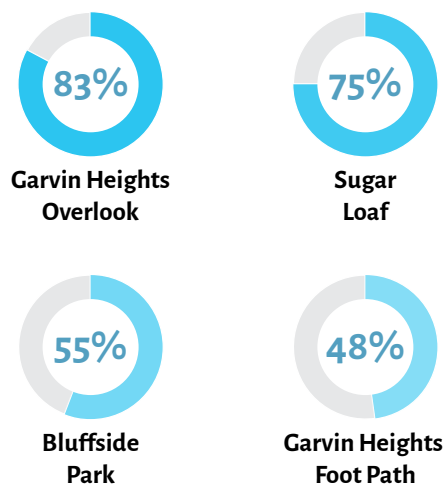
The majority of mountain bikers surveyed were men (74%) and ranged in age from 19 to 57 (mean = 40, 95% C.I. [35, 45]). Half of mountain bikers (54%) were visiting alone and the average mountain biking group

Figure 20

### Visitor ratings of experience



% of adult visitors rating experience as “very good” at each park location



Q10. Overall, how would you rate your trail experience today? (n = 302)

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

size was 1.6 people (median = 1, 95% C.I. [1.1, 2.0]). Approximately a quarter (25%) of mountain biking groups included children under the age of 18. Nearly all mountain bikers surveyed were riding their own

personal bikes (93%), a tenth (11%) were riding fat-tire bikes, and most (67%) said they had either intermediate or advanced riding skills. The vast majority of mountain bikers (96%) were local users.

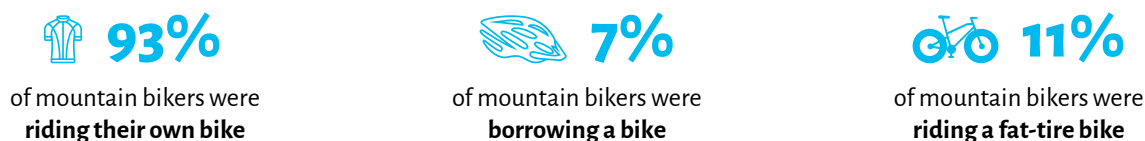
Bluffs Traverse. Future research will be needed to understand how planned enhancements and expansions of the mountain biking trail system impact trail use.

Due to the small sample size of mountain bikers surveyed, these results have a large margin of error (+/- 18%) and should be interpreted cautiously. Nevertheless, they provide a broad baseline to help understand current mountain biking on the Winona

Figure 21

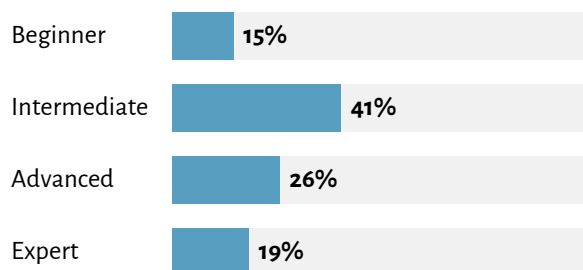
### Mountain biker characteristics

% of adult visitors, mountain bikers only



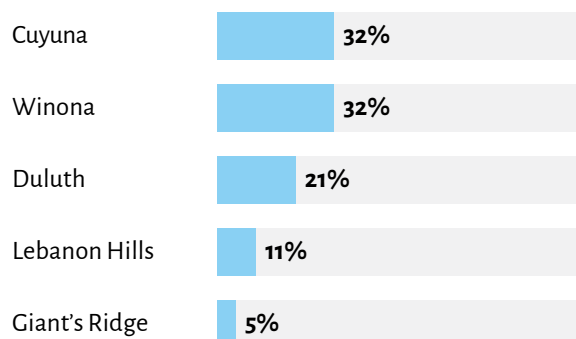
### Skill levels

% of adult visitors, mountain bikers only



### Favorite places to ride

% of visitors who said \_\_\_\_\_ is their favorite place to go mountain biking in Minnesota...



Q3. What is your mountain biking skill level? (n = 27)

Q4. Do you have a favorite place in Minnesota to go mountain biking? (n = 27)

Q4a. If so, where? [Open ended response] (n = 19)

Q5. Are you riding a fat-tire bike today? (n = 28)

Q6. Are you riding your own bike today? (n = 27)





## Trail Tourism

### Half of Winona Bluffs Traverse visitors are tourists

Approximately half of all visitors (49%) were tourists, defined as someone who was 50 miles or more away from home and/or staying at least one night away from home. Most tourists were on overnight trips. Approximately a third of all visitors (36%) were on overnight trips away from home, while 13% of visitors were on day trips away from home. Locals accounted for 51% of all visitors.

Tourist use of the Winona Bluffs Traverse was concentrated at the Garvin Heights

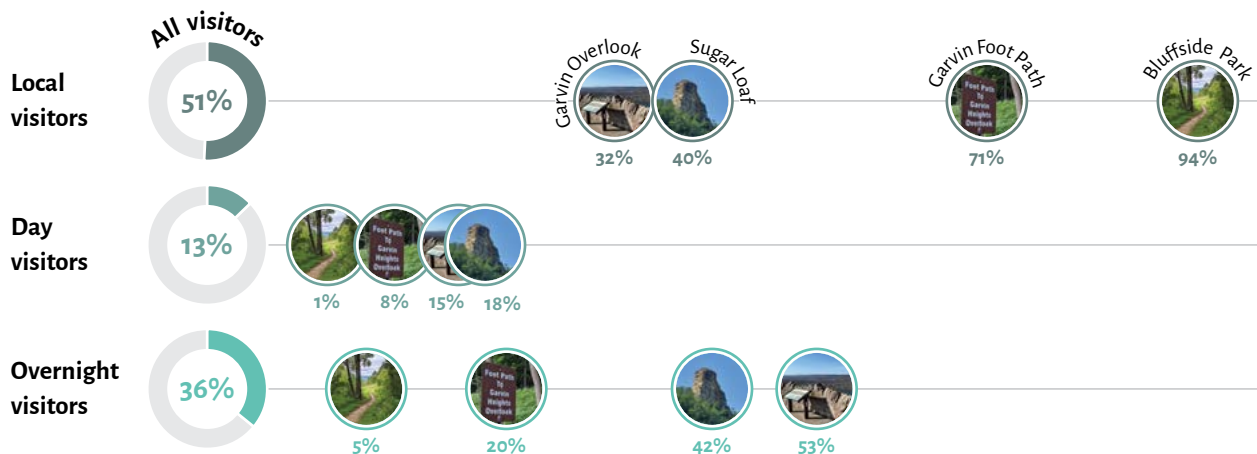
overlook and Sugar Loaf (Figure 22). Over two-thirds of visitors at the Garvin Heights overlook were tourists, and 60% of visitors at Sugar Loaf were tourists. The majority of visitors on the Garvin Heights foot path (71%) and Bluffside Park (94%) were locals.

Tourists and locals differed across several dimensions. Locals were more likely to be mountain biking, dog walking, and running or jogging, and more likely to be motivated by physical fitness. Tourists were more likely to be visiting the parks to spend time with family and friends and to do something exciting and adventurous. Tourist visitor

Figure 22

### Visitor travel segments

% of all visitors



Q15. Do you live more than 50 miles from this trail? (n = 321)

Q16. Are you on a trip where you have or plan to stay at least one night away from home? (n = 321)

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

groups also tended to be larger than local groups (average group size of 2.9 vs. 2.1,  $p < .001$ ).

Demographically, tourists were older than locals. Over half (61%) of tourists were Baby Boomers or Gen Xers, compared to only 47% of locals ( $p < .01$ ). Tourists also had higher incomes than local visitors, on average. Over two-thirds of tourists (32%) had household incomes over \$100,000, compared to 26% of locals ( $p < .01$ ). Tourists and locals had similar gender splits and levels of education.

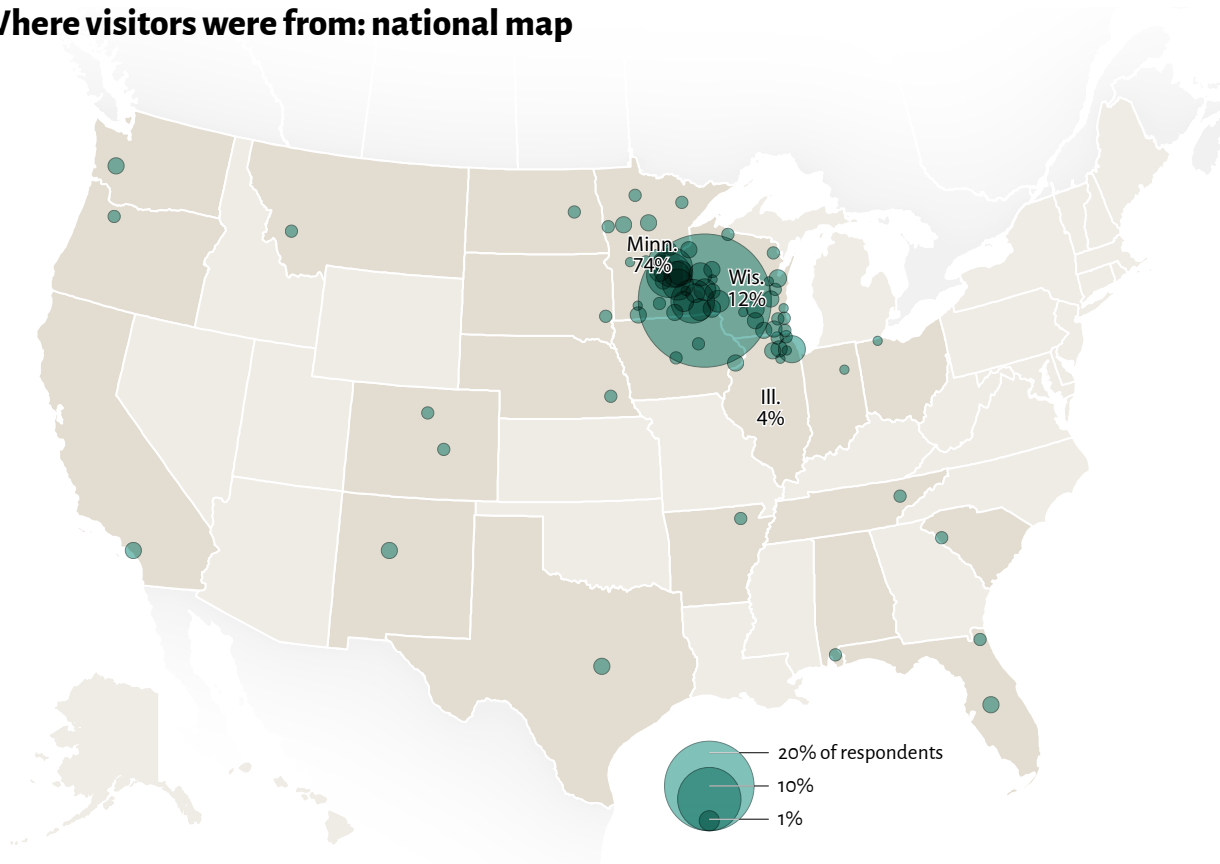
### Visitors on the Winona Bluffs Traverse come from all over the country

The Winona Bluffs Traverse hosts visitors from all over the country: 21 different states were represented among survey respondents (Figure 23). Visitors came from as far away as California, Oregon, Washington, and Florida. International visitors came from South Korea and Bangladesh.

While visitors arrived from both coasts, the vast majority of visitors were from Minnesota and other Midwestern states. Most visitors (74%) were from Minnesota

Figure 23

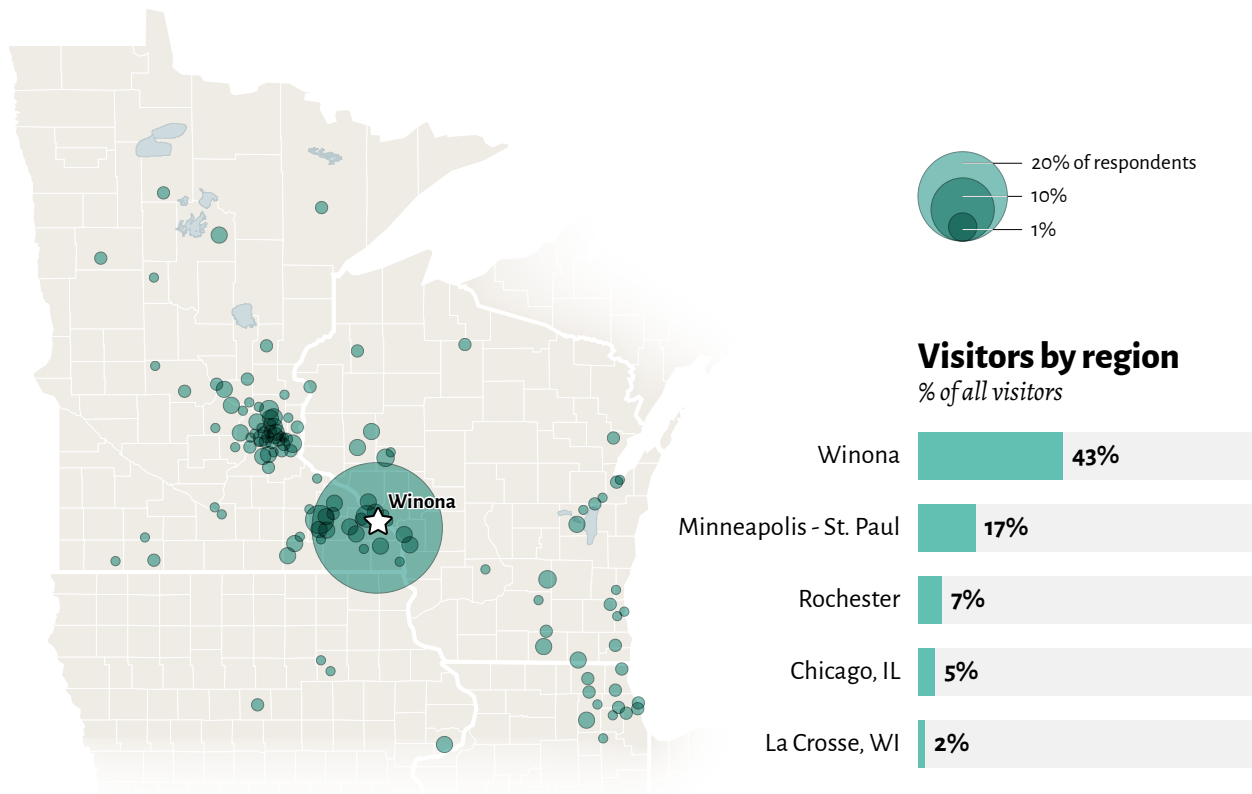
### Where visitors were from: national map



Q21. What is the zip code of your home address, or what is your country of residence? (Data displayed at county level;  $n = 309$ )

Figure 24

## Where visitors were from: regional map



Q21. What is the zip code of your home address, or what is your country of residence? (Data displayed by zip code; n = 309)

and another 12% were from Wisconsin. Minnesota, Wisconsin, Iowa, and Illinois combined to account for 91% of all visitors.

### After Winona itself, the Twin Cities is the Winona Bluffs Traverse's primary visitor market

The Winona Bluff Traverse's local market — Winona County — accounted for the largest share of visitors. Approximately two-fifths (43%) of visitors were from Winona County (Figure 24). Nearly all visitors (97%) from Winona County had a 55987 zip code, which

covers the cities of Winona, Goodview, and Stockton.

The Twin Cities metropolitan area was the Winona Bluffs Traverse's largest tourist market. Nearly a fifth of all visitors (17%) to the Traverse were from the Twin Cities metropolitan area. Within the Twin Cities metro, Hennepin County accounted for the most visitors (29% of metro visitors), followed by Anoka County (24%), Dakota County (15%), Ramsey County (10%), and Washington County (9%). After the Twin

Cities, the next largest visitor markets were Rochester (7% of all visitors), Chicago (5% of all visitors), and La Crosse (2% of all visitors).<sup>1</sup>

Not surprisingly, day tourists and overnight tourists tended to be from different places. Every visitor from Chicago surveyed was spending at least one night in Winona, while 22% of visitors from the Twin Cities were on day trips.

### Overnight visitors stay in a wide variety of accommodations during their visit

Overnight visitors to the Winona Bluffs Traverse stayed in a wide variety of accommodations during their visit, with a majority (72%) staying in paid accommodations. Hotels or motels were the most frequent overnight accommodation, accounting for 42% of overnight visitors. Other types of paid accommodations included vacation rentals by owner (13%), campgrounds (13%), resorts or lodges (2%), and bed and breakfasts (1%). Nearly a third of visitors (28%) stayed with friends or family members, and 3% of visitors stayed in their own vacation home (Figure 25).

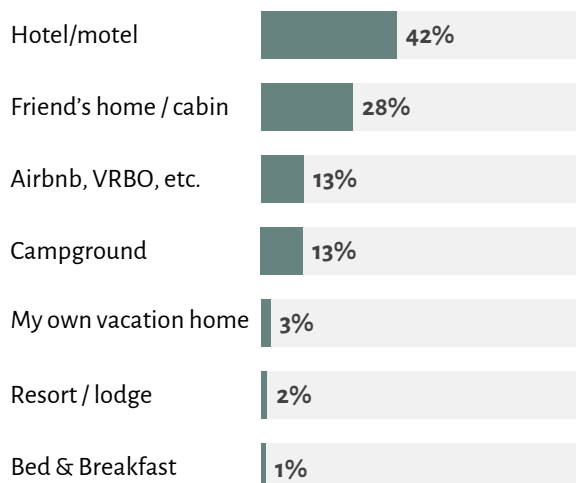
### Overnight visitors most often spend between one and two nights in Winona

Overnight visitors to the Winona Bluffs Traverse spent an average of two to three

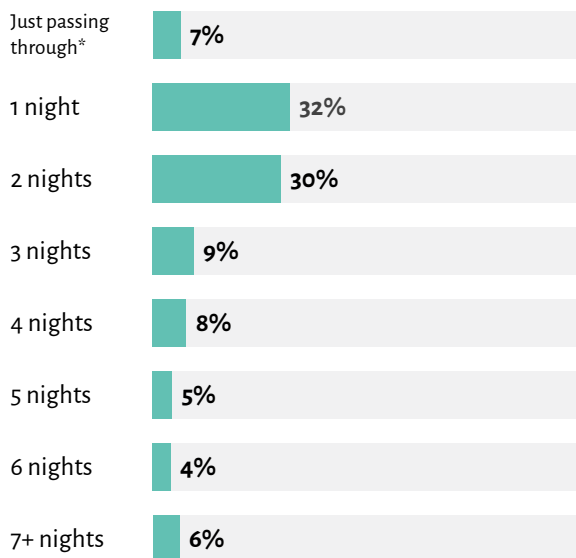
<sup>1</sup> Rochester is approximately 50 miles from Winona, which is the distance used to differentiate locals from tourists. Two-thirds (64%) of visitors from Rochester classified themselves as local visitors, while 36% classified themselves as tourists on day trips.

Figure 25

### Visitor overnight accommodations % of overnight visitors



### Nights stayed in Winona % of overnight visitors



Q17. How many total nights do you plan to spend in this area during your trip? (n = 98)

Q18. What type of overnight accommodations are you staying in during your trip? *Select all that apply*

[Answers presented in randomized order] (n = 99)

Notes: Visitors on an overnight trip away from home but staying zero nights in Winona are classified as "just passing through." Percentages for nights stayed don't add up to 100% due to rounding.

nights in Winona (median = 2; mean = 2.7, 95% C.I. [2.1, 3.3]). Overnight visitors were most frequently spending only a night in the area, however. Nearly a third of overnight visitors (32%) were spending one night in Winona, and another 30% were spending two nights (Figure 25). Approximately a fifth of overnight visitors (22%) were spending between three and five nights in the area, and 10% of visitors were on trips of a week or longer.

### **Most tourists were visiting Winona for reasons other than the Winona Bluffs Traverse**

There are all kinds of reasons tourists choose to visit different areas. Some tourists visit for a specific reason (e.g., to hike a spectacular trail), others visit for a complex mix of reasons (e.g. the area has great food, stunning scenery, and lots of different activities), and others visit for completely unrelated reasons (e.g., they're visiting a family member and go to the park as a group activity). Understanding whether tourists on the Winona Bluffs Traverse were visiting primarily for the trails, or if they were in town primarily for other reasons is helpful for tourism marketing and planning.

Approximately half the tourists (52%) on the Winona Bluffs Traverse said the parks and trails did not influence their decision to visit Winona. Other visitors said the parks and trails were at least part of the reason they

were visiting. Approximately a quarter of tourists (25%) said the Traverse was part of the reason they were visiting, and another quarter (23%) said the parks and trails were a significant reason they were in Winona (Figure 26).

Day tourists were significantly more likely than overnight tourists to say the Traverse was a significant reason for their visit. Nearly half of day visitors (45%) said the parks and trails were a significant or the primary reason they were visiting Winona, compared to only 16% of overnight visitors. Approximately a third of day visitors (29%) were in town for reasons unrelated to the parks and trails, compared to 59% of overnight tourists. Only 16% of overnight visitors said the Traverse was a significant reason they were in town.

Importantly, amenities do not have to be the reason a tourist is visiting to play a vital role in their overall experience. The fact that half of the visitors on the Traverse were tourists, half of whom said the parks were at least part of the reason they were in town, shows the Winona Bluffs Traverse is an important piece of Winona's tourism infrastructure.

### **There's a wide range in how far in advance tourists plan their visits**

Most tourist trips to the Winona Bluffs Traverse were planned with relatively little notice. Nearly half of tourists (45%) planned their trip within a week of arriving; another

7% of tourists planned their trip within two weeks of arriving. Nearly a third of visitors (29%) planned their trip one to two months in advance, and 19% of tourists planned their trip two months or more in advance.

Day visitors were significantly more likely to make their plans at the last minute (Figure 26). A large majority of day visitors (86%) planned their trip within a week of arriving, and another 6% planned their trip less than two weeks in advance. No day visitors surveyed planned their trip more than one month in advance. There was far more variety in how far in advance overnight tourists planned their trips.

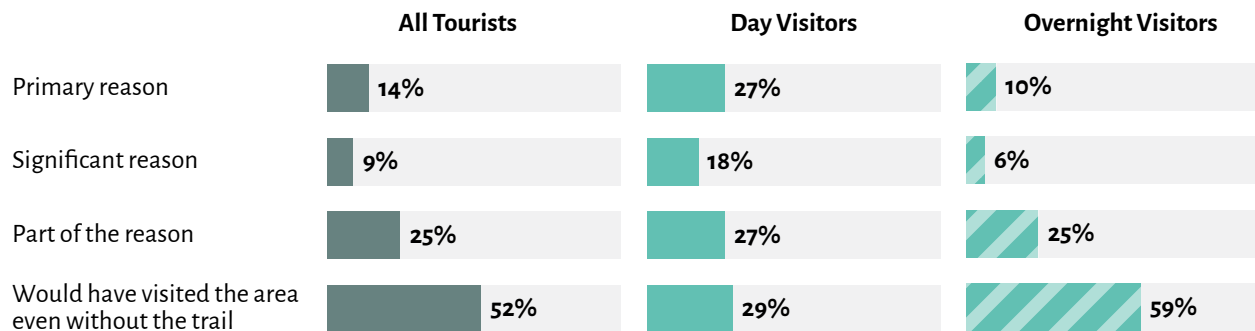
Nearly a third of overnight tourists (30%) planned their trip within a week of arriving, approximately a quarter (27%) planned their trip within one to three weeks of arriving, another quarter (26%) planned their trip one to three months in advance, and a fifth (18%) planned their trip more than three months in advance.



Figure 26

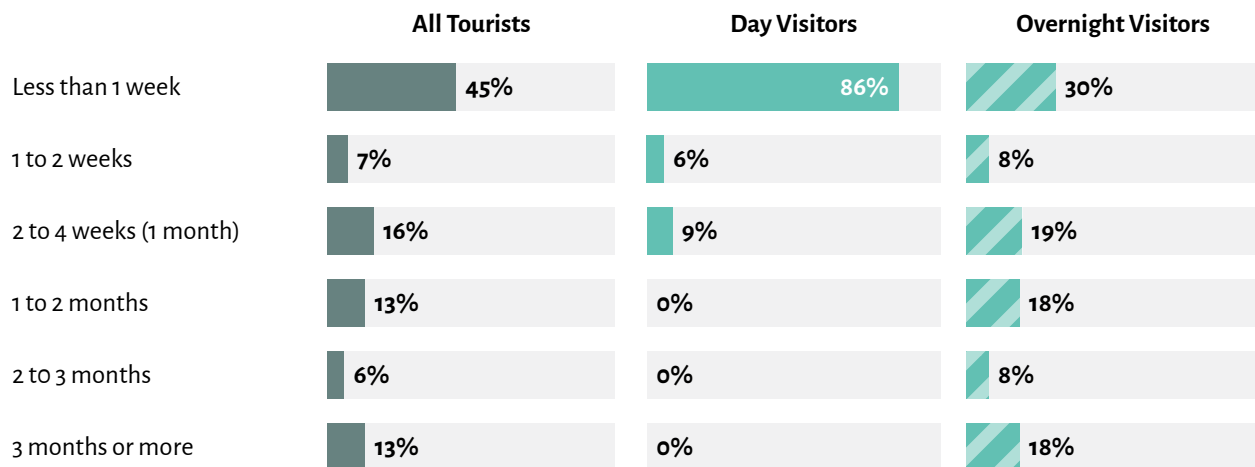
## Importance of trail in decision to visit Winona

% of adult visitors, tourist visitors only



## How far in advance tourists planned their trip

% of adult visitors, tourist visitors only



Q17. How important was the trail in deciding to visit this area? (n = 132)

Q20. How far in advance did you plan this trip? (n = 141)

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 don't add up to 100% due to rounding.



## Trip Planning

### **Visitors generally rely on past knowledge and friends and family to learn about the Winona Bluffs Traverse**

Approximately half of the visitors (46%) to the Winona Bluffs Traverse said they have known about the trails for years and 41% said they learned about the trails through friends and family. No other information source was used by more than a fifth of visitors. Internet searches were used by 18% of visitors and 10% of visitors used a trail app or website (e.g., All Trails, Strava, TrailForks, etc.) to learn about the trails. Less than 10% of visitors reported using the Visit Winona website, social media, Winona Parks & Recreation website, recommendations from businesses or visitor centers, clubs or group rides, the Winona Area Mountain Bikers (WAMB) Facebook page, a print publication, TV or radio, or the “Minnesota Great Outdoors” park and trail finder to learn about the Winona Bluffs Traverse (Figure 27).

Information sources varied slightly across the different parks. Visitors at Sugar Loaf were disproportionately likely to rely on internet searches (29% of visitors at Sugar Loaf, compared to 18% of all visitors). Visitors at Bluffside Park were more likely than visitors at other parks to rely on trail apps and websites (used by 30% of visitors at Bluffside Park), the Winona Parks &

Recreation website (22%), clubs and group rides (11%), and the WAMB Facebook page (11%). The different information sources used by visitors at Bluffside Park is largely driven by mountain bikers, who were more likely to use trail apps, clubs and group rides, and the WAMB Facebook page.

### **Locals and tourists get their information about the trails from different places**

There were several differences between how locals and tourists find information about the Winona Bluffs Traverse (Figure 27). Many of these differences are intuitive. For example, locals were far more likely to have “known about the trail for years” (65% vs. 26%,  $p < .001$ ). Locals were also more likely to learn about the trails through clubs or group rides (4% vs. 1%,  $p < .05$ ) and the WAMB Facebook page (4% vs. 0%,  $p < .05$ ), although neither was used by a large number of visitors.

Tourists were more likely than locals to rely on internet searches (29% vs. 8%,  $p < .001$ ), print publications (4% vs. 1%,  $p < .05$ ), and recommendations from businesses or visitor centers (7% vs. 3%,  $p < .07$ ). Tourists were not any more likely than locals to use either the Visit Winona website or social media.

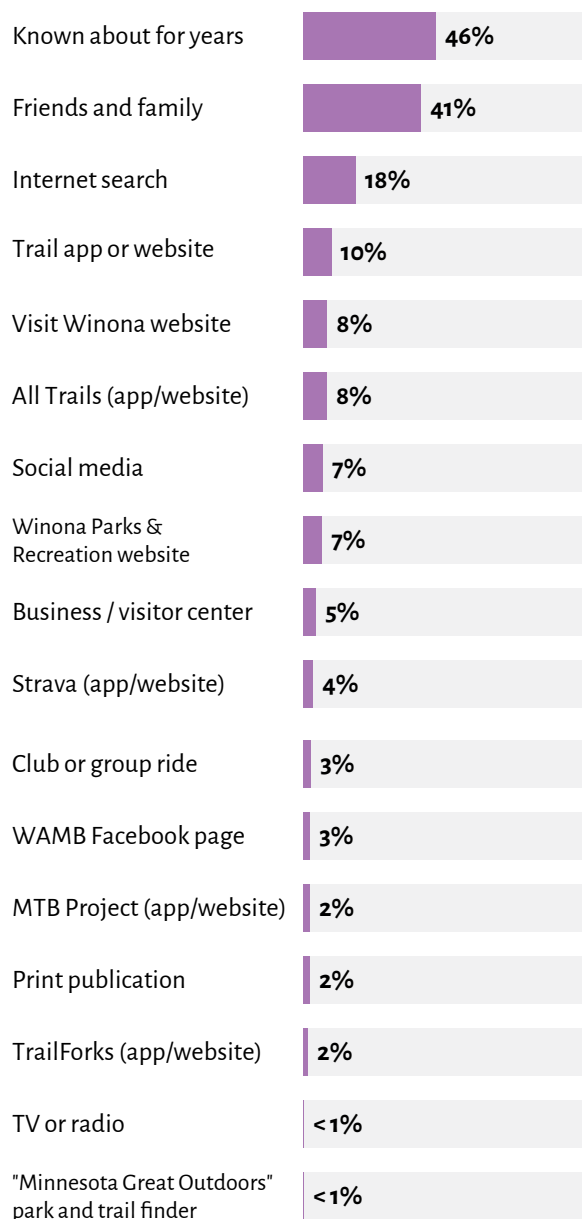
## Tourists are more likely than locals to seek out information before visiting the trails

Not only do tourists and locals use different information sources, tourists

were also more likely than locals to look for information in the first place (presumably because they were less familiar with the

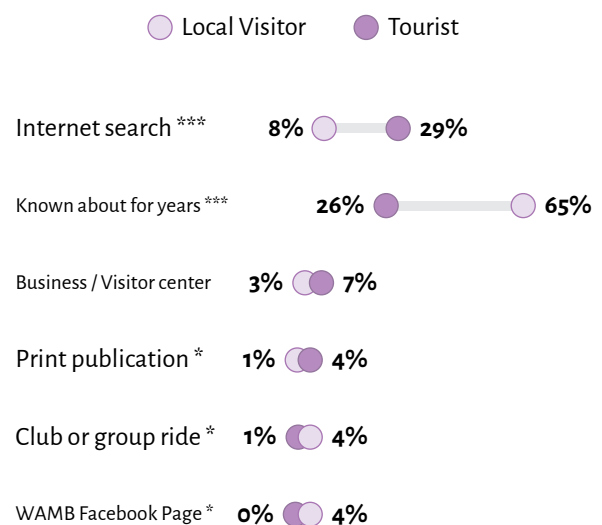
Figure 27

### Information sources about the trail % of adult visitors who use information source



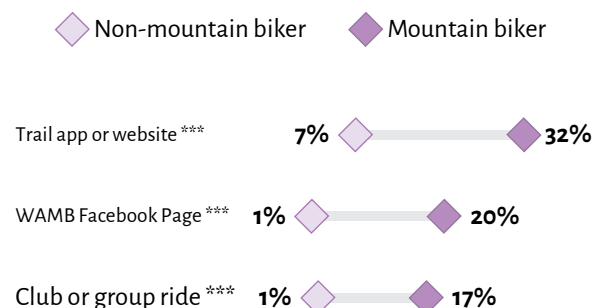
### Local and tourist use of selected information sources

% of visitors who used information source



### Mountain bikers use of selected information sources

% of visitors who used information source



Q12. What information sources have you used to learn about this trail? Select all that apply [Answers presented in randomized order] (n = 312)

\*\*\*  $p < 0.001$ , \*\*  $p < 0.01$ , \*  $p < 0.05$ .

trails). Two-fifths of tourists (39%) looked for information about the parks or trails before their visit, compared to only 16% of locals. Overall, a quarter of all visitors (26%) looked for information about the trails before their visit (Figure 28).

### When visitors look for information, they most often look for travel directions

Over half of visitors (57%) who searched for information before their trip looked up travel directions. No other type of information was searched for by a majority of visitors. Approximately two-fifths of visitors (41%) looked up trail maps and mileage, a third (28%) looked up parking

information and/or park hours, and a fifth (21%) looked up trail reviews or photos. Between 10% and 20% of visitors looked up information about trail conditions or trail difficulty ratings before their visit. Less than 10% of visitors searched for trail rules, lodging options, user fees, restaurants, or equipment rentals (Figure 29).

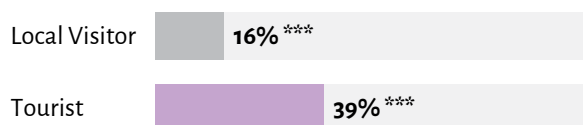
Figure 28

### Pre-trip planning information



### Tourists were more likely than locals to look for information before their visit

*% of adult visitors who searched for information before their visit*



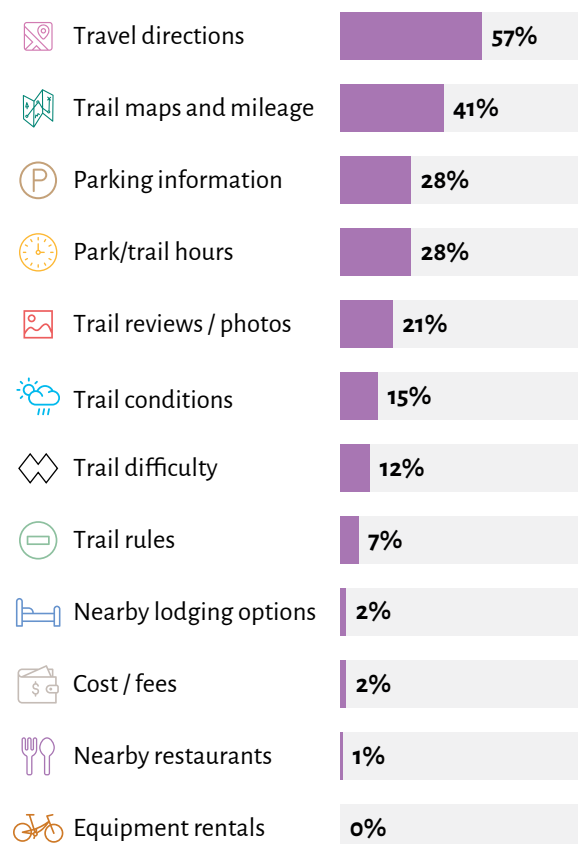
Q13. To prepare for your visit, did you or your group look for information about this trail before you came? (n = 219)

\*\*\*  $p < 0.001$ , \*\*  $p < 0.01$ , \*  $p < 0.05$ .

Figure 29

### What information did visitors search for before their visit?

*Of adult visitors who looked for information before their visit, % who searched for...*



Q14. What information did you search for before your visit today?

Select all that apply [Answers presented in randomized order] (n = 55)

# Methodology

## Overview

Data in this report was drawn from two complementary studies conducted on the Winona Bluffs Traverse during the summer and early fall of 2022. First, to measure system use and traffic patterns, automated trail counters were installed at six locations across the system. Second, a visitor intercept survey contacted visitors at Bluffside Park (Holzinger Lodge and Wincrest Drive), Garvin Heights Park, and Sugar Loaf Park to collect information on trail experience, trip characteristics, and demographics.

Trail counters were installed for varying lengths of time between May 28, 2022 (the Saturday before Memorial Day) and Saturday, October 1. Visitor surveys were collected between May 28, 2022, and October 3, 2022. The original data collection window was Memorial Day through Labor Day, which was then extended through September to increase sample sizes and ensure that students at Winona State University and St. Mary's University were included in the sample. Trail use on the Winona Bluffs Traverse, as measured by our trail counts, did not differ across months (i.e., average September traffic was statistically identical to average summer

traffic at all three parks). Therefore, we assume survey data collected between late May and September is representative of the summer season, and also extrapolated our trail counts to the summer season (defined as the Saturday before Memorial Day through Labor Day). Focusing visitor studies on the summer season ensures comparability with other visitor studies conducted in regional and state parks and trails across Minnesota.<sup>1</sup>

While beyond the scope of this study, the Winona Bluffs Traverse is open all year, and use during other seasons (particularly the fall) may be significant. This report does not quantify the full, year-round regional impact of the Winona Bluffs Traverse.

## Trail use estimates

Data on trail use was collected using EcoCounter PYRO boxes, which are passive-infrared automated trail counters that detect trail users as they pass by. The passive-infrared counters count all users, and occasionally wildlife, that pass by and do not differentiate between bikers and hikers. Field staff validated the counters after installation by hiking past each counter 50 times to ensure they were counting properly.

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<sup>1</sup> See "Regional Parks System Visitor Study Report" (Metropolitan Council, November 2016), "2017 State Park Visitor Survey" (Minnesota DNR, November 2017), and "2019 Minnesota State Trail Visitor Survey" (Minnesota DNR, July 2020).

The trailhead at Holzinger Lodge (in Bluffside Park) was chosen as the primary trail count location. A trail counter was installed just beyond the map kiosk near the parking lot permanently for the entirety of the data collection period. Holzinger Lodge was chosen as the primary count location because it's the primary trailhead to Bluffside Park, which is the only park on the Winona Bluffs Traverse that offers both hiking trails and mountain biking trails.

To complement the permanent counting location at Holzinger Lodge, short-duration counts were conducted at five additional locations: the Wincrest Drive trailhead (Bluffside Park), the parking area along Lake Boulevard (Bluffside Park, on the west end of the Low Rollers Trail), the Garvin Heights foot path, the Garvin Heights overlook paved trail, and the Sugar Loaf hiking trail. Short-duration counts ranged in length from 14 to 43 days (Figure 30). All trail-counting locations were determined in consultation with Alicia Lano with the City of Winona Parks and Recreation Department.

At the end of the counting season, trail-count data were downloaded, checked, and cleaned. We then analyzed data at each trail location for daily traffic patterns, hourly traffic patterns, and estimated summer average daily traffic (SADT). Fact sheets for each trail-count location are provided in Appendix B.

Figure 30

### Trail counting locations and dates

Location	Dates	Duration (days)
Bluffside Park (Holzinger)	5/28/22 - 10/1/22	127
Bluffside Park (Wincrest Dr)	5/28/22 - 6/12/22 9/8/33 - 10/1/22	40
Bluffside Park (Lake Blvd)	6/14/22 - 6/27/22	14
Garvin Heights foot path	6/29/22 - 7/12/22 9/8/22 - 10/1/22	38
Garvin Heights overlook	9/8/22 - 10/1/22	24
Sugar Loaf	8/20/22 - 10/1/22	43

The trail counter at Holzinger Lodge was installed at an atypically wide section of the trail. Wide trails are prone to occlusion error, which occurs when two visitors traveling side-by-side are only counted once. To account for this error, we conducted 57 hours of validation counts and compared the automated counts to field observations. On average, trail counts at Holzinger undercounted actual traffic by 6% ( $R^2 = .85$ ,  $F(1, 56) = 307$ ,  $p < .000$ ). All hourly counts at Holzinger were adjusted by 6% to account for occlusion error. Other trail count locations were less prone to occlusion error and left unadjusted.

SADT for short-duration count locations was estimated using the day-of-year factoring method. The day-of-year factoring method is a standard method to extrapolate short-duration non-motorized traffic counts because it captures the effects of local conditions such as weather, events,



and holidays.<sup>2</sup> Under the day-of-year factoring method, observed traffic at a short-duration site is assumed to equal the proportion of season-long traffic observed at a nearby location (i.e., “reference site”) where counts were collected for the entire season. We used the counts collected at Holzinger Lodge as the reference site to extrapolate data collected elsewhere on the Winona Bluffs Traverse. For example, if traffic between June 14 and June 27 accounted for 8% of seasonal use at Holzinger, it’s assumed that observed traffic at the Lake Boulevard trailhead during the same period also accounted for 8% of seasonal use. Because day-of-week patterns were significantly different at each park, we included a dummy variable for weekend use (1 = Saturday or Sunday) in our model to estimate use at Garvin Heights Park, Sugar Loaf, and Wincrest Drive. This method results in estimates with a margin of error of approximately 10-15% for each short-duration trail count location.

All summer traffic estimates are specific to 2022 and are not necessarily representative of an average year. Trail use is highly sensitive to weather, which can vary greatly from year-to-year.

### **Questionnaire development**

The questionnaire was designed through a

collaborative process between the Greater Minnesota Regional Parks and Trails Commission (GMRPTC) and Parks & Trails Council (P&TC). GMRPTC designed a draft questionnaire based on the University of Minnesota’s Handbook for Minnesota Parks and Trails Surveying and previous surveys conducted by the Metropolitan Council.<sup>3</sup> P&TC reviewed the questionnaire and offered recommendations to improve questionnaire clarity, focus, and length. Whenever possible, questions were designed to collect data that is comparable to visitor survey data collected by the Metropolitan Council and the Minnesota Department of Natural Resources.

The final questionnaire was 20 questions long, with 12 additional questions asked only of specific users (e.g., mountain bikers, tourists). Question topics included trail activities, overall quality of the trail experience, group characteristics, trip planning, information sources, and demographics (Appendix C). The 2022 questionnaire was the same instrument used in GMRPTC visitor profile projects in 2021, with only minor changes made for clarity. On average, respondents took four to six minutes to complete the survey.

An abbreviated version of the survey was used at Garvin Heights starting in late

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<sup>2</sup> Minge, E., Falero, C., Lindsey, G., Petesch, M., & Vorvick, T. (2017). *Bicycle and Pedestrian Data Collection Manual*. Minnesota Department of Transportation.

<sup>3</sup> Pradhananga, A., Davenport, M.A., Saari, H. (2016). *Handbook for Minnesota Parks and Trails Visitor Surveying*. University of Minnesota, Department of Forest Resources.

August. The Garvin Heights survey was shorter (to accommodate the shorter visits at the overlook) and several answer choices relevant to Garvin Heights Park were added. The Garvin Heights version of the survey is available in Appendix C.

To limit potential language bias, the questionnaire was translated and made available in English, Spanish, and Somali. One respondent completed the survey in Spanish. All other respondents completed the survey in English.

Questionnaires were administered to visitors on Samsung 8" tablets 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 later uploaded to P&TC's online account. Paper surveys were also available as a backup or if requested. The Garvin Heights version of the survey was only offered on paper. The majority of surveys (61%) were completed electronically on the tablet.

### **Data collection protocol**

The visitor survey was conducted by P&TC staff and volunteers. All surveyors attended a training session and received an 18-page

training manual that reviewed project purpose, study design and procedures, checklists, and frequently encountered issues.

Surveys were conducted at all three parks along the Winona Bluffs Traverse. At Bluffside Park, surveys were conducted at both the Holzinger Lodge trailhead and the Wincrest Drive trailhead. At Garvin Heights, surveys were conducted near the junction of the foot path and paved overlook trail. At Sugar Loaf, surveys were conducted at the trailhead. Only adult visitors (age 18 and older) using the trail system were eligible to take the survey, and surveyors were trained to screen all visitors to determine visitor eligibility (Appendix C). Visitors were only allowed to complete the survey once during the summer. If visitors arrived as a group, the adult with the most recent birthday was asked to complete the survey.

To welcome visitors at each survey location, a survey station was set up at the beginning of each survey shift. The station provided a visual presence for staff and included a large "Trail Survey" sign, free water, maps, and a trash bag.

During each survey shift, staff and volunteers made every effort to talk to each visitor entering or leaving the trailhead. Staff 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 and self-administered the questionnaire. If the visitor asked for the questionnaire to be read aloud, staff 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.

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

### **Sampling**

A stratified sampling plan was developed to ensure the survey sample was as representative as possible. Surveys were conducted for a total of 247.5 hours stratified across high-use and low-use periods. Surveying hours were split between weekends (33%) and weekdays (67%), and between Holzinger Lodge (27% of hours), Wincrest Drive (21%), Garvin Heights (25%), and Sugar Loaf (28%). A full sampling schedule and collection rates are available

upon request.

### **Response rate and margin of error**

A total of 487 eligible visitor groups were approached and asked to complete the questionnaire. Additionally, 22 groups were observed where no adults were present and so no one was eligible to complete the survey. Of the 487 eligible groups, 323 visitors completed a survey, for a response rate of 69%. Response rates varied from 64% at Sugar Loaf to 74% at Bluffside Park. This response is considered good for survey research.

Whenever a potential respondent declined to participate, the surveyor recorded the group size and primary activity and asked if they would be willing to quickly answer two quick “non-response questions.”<sup>4</sup>

The purpose of these questions was to test if visitors who declined to participate were systematically different from those who participated. Respondents and non-respondents were similar in terms of age and group size. But testing found non-respondents were more likely to be locals, recreating with children, and hiking or walking. Differences in response rates were small, however, and the overall high response rate ensured our overall sample was comparable to all observed groups. For example, 14% of respondents were recreating with children compared to 16%

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4 (1) Are you a local or a tourist? and (2) What year were you born?

of all observed groups, 77% of respondents were walking or hiking compared to 78% of all observed groups, and 49% of respondents were tourists compared to 46% of all known groups. Our sample was similar enough to these benchmarks that we do not suspect non-respondents biased our results. Where appropriate in the report, data from non-respondents and non-eligible groups are included in the analysis.

The final sample size (n=323) provides 95% confidence that the sampling error does not exceed plus or minus 5.5 percentage points. The margin of error is different 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, question wording and other biases can introduce error into survey research. To reduce answer option order bias, answers were randomized for non-ordinal answer choices

### Data analysis

Survey data were downloaded from the QuestionPro server and prepped for import into the statistical software SPSS using Microsoft Excel. SPSS was used for accuracy checks, recoding, descriptive statistics, cross-tabulations, and statistical significance testing.

Throughout the report, means are provided

Figure 31

### Margin of error for selected subgroups

Member segment	Sample size	Plus or minus... (percentage points)
All adult visitors	323	5.5
Tourism		
Local visitors	170	7.5
Tourists	152	7.9
Day visitors	40	15.5
Overnight visitors	112	9.3
Park unit		
Bluffside Park	74	11.4
Garvin Heights foot path	42	15.1
Garvin Heights overlook	91	10.3
Sugar Loaf	116	9.1

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, different parks, men and women, etc.). Probability values (p-values) are included alongside these tests to indicate the probability the observed differences are due to actual underlying differences in the population rather than sampling error. We generally used the standard threshold of 5% to indicate “statistical significance” ( $p < 0.05$ ), meaning there is less than a 5% chance the difference would be observed

if no actual differences existed between the two subgroups. In a small number of instances, differences are reported that were just above that 5% threshold.

Responses to the open-ended question (Q32: Do you have any additional comments about your visit you'd like to share?) were loosely grouped into categories and are provided in Appendix D.

### Weighting

Despite our best efforts to collect a representative sample, visitors to Bluffside Park and Sugar Loaf (on weekends) were overrepresented in our final dataset (Figure 32). To compensate for this sampling bias,

the survey data were weighted by day of the week (weekday vs. weekend) and park traffic. Weighting the data should provide a more accurate reflection of all visitors, but must be done cautiously because it risks over-representing the views of several people who may not be an accurate reflection of their subgroup. For all analyses, we created two sets of cross-tabulations: one set weighted and one set unweighted. Cross-tabs were compared side-by-side to verify the weighting didn't cause any extreme or unexplainable changes in the dataset.

Figure 32

### Data weights

Visitor segment	Percentage of total traffic	Completed surveys	Percentage of survey sample	Weight
<b>Weekdays</b>				
Bluffside	10%	48	15%	0.70
Garvin Heights	27%	77	24%	1.14
Sugar Loaf	13%	37	11%	1.10
<b>Weekends</b>				
Bluffside	5%	26	8%	0.58
Garvin Heights	30%	56	17%	1.75
Sugar Loaf	15%	79	24%	0.60

## Appendix A: Park level results for selected questions

### Trail activities participated in during visit

	Garvin Heights Foot Path	Garvin Heights Overlook	Bluffside Park	Sugar Loaf	Total
Hiking or walking	82%	85%	74%	93%	85%
Nature photography	6%	19%	11%	8%	12%
Dog walking	17%	7%	22%	8%	11%
Birdwatching / wildlife viewing	5%	14%	9%	6%	9%
Running or jogging	8%	5%	22%	3%	8%
Rock climbing	3%	6%	3%	14%	7%
Mountain biking	2%	2%	33%	3%	7%
Geocaching	3%	3%	--	1%	2%

Note: "Hiking or walking" for Garvin Heights overlook includes visitors selecting "sightseeing." Visitors responding "other" not displayed.

### Primary trail activity

	Garvin Heights Foot Path	Garvin Heights Overlook	Bluffside Park	Sugar Loaf	Total
Hiking or walking	73%	86%	53%	84%	78%
Dog walking	6%	3%	8%	4%	5%
Mountain biking	--	1%	26%	1%	5%
Running or jogging	13%	--	10%	3%	4%
Rock climbing	3%	--	--	7%	3%
Nature photography	--	5%	--	1%	2%
Geocaching	3%	1%	--	1%	1%
Birdwatching / wildlife viewing	--	1%	1%	--	1%

Note: "Hiking or walking" for Garvin Heights overlook includes visitors selecting "sightseeing." Visitors responding "other" not displayed.

● Indicates disproportionately low percentage. ● Indicates disproportionately high percentage.  
Multiple comparison correction (Bonferonni): false discovery rate correction ( $p = 0.05$ )



## Appendix A: Park level results for selected questions

### Most important reasons for visiting the park or trail

	Garvin Heights Foot Path	Garvin Heights Overlook	Bluffside Park	Sugar Loaf	Total
Experience nature / view scenery	55%	79%	74%	67%	70%
Relaxation and/or stress relief	43%	39%	62%	45%	45%
Spend time with family or friends	32%	37%	28%	61%	42%
Improve my physical health	62%	21%	66%	38%	40%
Do something exciting or adventurous	19%	18%	37%	49%	30%
Learn/practice tricks and skills	7%	6%	14%	8%	8%
Getting my children outdoors	--	6%	15%	11%	8%
Training for event or competition	7%	4%	8%	3%	5%
Meet new people	--	6%	2%	1%	3%

### Duration of park or trail visit

	Garvin Heights Foot Path	Garvin Heights Overlook	Bluffside Park	Sugar Loaf	Total
Less than an hour	38%	80%	22%	17%	46%
1 to 2 hours	54%	17%	50%	58%	40%
2 to 3 hours	8%	2%	24%	18%	11%
3 to 4 hours	--	--	3%	1%	1%
4 to 6 hours	--	--	1%	5%	1%
6 or more hours	--	--	--	1%	0%

● Indicates disproportionately low percentage. 
 ● Indicates disproportionately high percentage.

Multiple comparison correction (Bonferonni): false discovery rate correction ( $p = 0.05$ )

## Appendix A: Park level results for selected questions

### How often visit park or trail

	Garvin Heights Foot Path	Garvin Heights Overlook	Bluffs Park	Sugar Loaf	Total
First time visiting	27%	42%	10%	46%	35%
Daily	5%	2%	18%	3%	5%
Weekly	32%	9%	53%	12%	21%
Monthly	18%	15%	17%	19%	17%
Once a year	11%	16%	2%	10%	12%
Less than once a year	7%	16%	--	10%	10%

### Overall park or trail experience

	Garvin Heights Foot Path	Garvin Heights Overlook	Bluffs Park	Sugar Loaf	Total
Very good	48%	83%	56%	75%	69%
Good	31%	16%	33%	23%	23%
Fair	16%	2%	10%	2%	6%
Poor	2%	--	2%	--	1%
Very poor	3%	--	--	--	1%

### Group size and composition

	Garvin Heights Foot Path	Garvin Heights Overlook	Bluffs Park	Sugar Loaf	Total
Visiting alone	49%	16%	59%	13%	26%
2 people in group	31%	46%	23%	46%	41%
3 people in group	10%	17%	13%	21%	17%
4 people in group	5%	13%	5%	8%	9%
5 or more people in group	6%	8%	--	13%	8%
Visiting with children	22%	10%	20%	29%	19%

● Indicates disproportionately low percentage. ● Indicates disproportionately high percentage.  
Multiple comparison correction (Bonferroni): false discovery rate correction ( $p = 0.05$ )

## Appendix A: Park level results for selected questions

### Information sources used to learn about park or trail

	Garvin Heights Foot Path	Garvin Heights Overlook	Bluffsides Park	Sugar Loaf	Total
Known about trail for years	60%	42%	58%	36%	46%
Friends and family	29%	45%	45%	43%	41%
Internet search (e.g. Google)	16%	15%	10%	29%	18%
Trail app or website	3%	4%	30%	11%	10%
Visit Winona	5%	6%	8%	14%	8%
Social media (e.g., Facebook, Instagram, Twitter)	6%	7%	7%	8%	7%
Winona Parks & Recreation website	--	3%	22%	7%	7%
Recommendation from a business/visitor center	2%	5%	4%	5%	5%
From a club or group ride	--	0%	11%	3%	3%
WAMB Facebook page	--	--	11%	--	3%
Print publication (e.g., magazine, newspaper)	2%	2%	0%	4%	2%
TV or radio	--	--	0%	1%	0%
"Minnesota Great Outdoors" park and trail finder	--	--	--	1%	0%

### Visitor origin

	Garvin Heights Foot Path	Garvin Heights Overlook	Bluffsides Park	Sugar Loaf	Total
Live >50 miles away	29%	64%	6%	56%	46%
On an overnight trip	20%	53%	5%	42%	36%
Day visitor	8%	15%	1%	18%	13%
Overnight visitor	20%	53%	5%	42%	36%
Local visitor	71%	32%	94%	40%	51%
Minnesota resident	88%	57%	91%	77%	74%

● Indicates disproportionately low percentage. ● Indicates disproportionately high percentage.  
Multiple comparison correction (Bonferroni): false discovery rate correction ( $p = 0.05$ )

## Appendix A: Park level results for selected questions

### Visitor age

	Garvin Heights Foot Path	Garvin Heights Overlook	Bluffsideside Park	Sugar Loaf	Total
18-24	19%	23%	16%	29%	23%
25-30	4%	5%	8%	13%	8%
30s	17%	7%	15%	17%	13%
40s	19%	10%	25%	20%	17%
50s	12%	25%	19%	13%	18%
60s	29%	18%	15%	5%	15%
70+	--	11%	2%	3%	5%
Silent Generation (age 77 -94)	--	4%	--	--	1%
Baby Boomer (age 58-76)	34%	28%	18%	10%	21%
Gen X (age 42-57)	21%	31%	41%	30%	31%
Millennial (age 26-41)	26%	13%	22%	30%	22%
Gen Z (age 10-25)	19%	24%	19%	31%	25%

### Gender identity

	Garvin Heights Foot Path	Garvin Heights Overlook	Bluffsideside Park	Sugar Loaf	Total
Female	57%	51%	36%	55%	51%
Male	38%	49%	64%	45%	48%
Non-binary / third gender	6%	--	--	--	1%
Transgender	--	--	1%	2%	1%

### Do you, or does someone in your group, have a physical, mental or sensory disability or condition?

	Garvin Heights Foot Path	Garvin Heights Overlook	Bluffsideside Park	Sugar Loaf	Total
Yes	--	8%	6%	6%	6%
No	100%	92%	94%	94%	95%

● Indicates disproportionately low percentage. ● Indicates disproportionately high percentage.  
Multiple comparison correction (Bonferonni): false discovery rate correction ( $p = 0.05$ )

## Appendix A: Park level results for selected questions

### Visitor racial/ethnic identity

	Garvin Heights Foot Path	Garvin Heights Overlook	Bluffsides Park	Sugar Loaf	Total
White or Caucasian	93%	90%	98%	84%	90%
Asian	2%	6%	--	9%	5%
Hispanic or Latinx	5%	2%	1%	7%	4%
Black or African American	3%	3%	1%	--	2%
Some other race, ethnicity or origin	--	2%	1%	2%	1%
Middle Eastern or North African	3%	--	--	1%	1%
Pacific Islander	--	1%	--	--	0%
Native American, First Nation or Alaska Native	--	--	--	--	--

### Highest level of education completed

	Garvin Heights Foot Path	Garvin Heights Overlook	Bluffsides Park	Sugar Loaf	Total
Less than high school	--	2%	2%	1%	1%
High school graduate or GED	16%	7%	12%	11%	11%
Some college, but no degree	14%	20%	9%	27%	19%
Associate, vocational or technical degree	11%	12%	9%	7%	10%
Bachelor's degree	41%	36%	48%	30%	38%
Graduate or professional degree	17%	23%	21%	24%	22%

### Annual household income

	Garvin Heights Foot Path	Garvin Heights Overlook	Bluffsides Park	Sugar Loaf	Total
Less than \$50,000	26%	32%	19%	36%	30%
\$50,000 - \$99,999	44%	42%	41%	24%	37%
\$100,000 - \$149,999	17%	11%	29%	22%	18%
\$150,000 - \$199,999	7%	8%	6%	13%	9%
\$200,000 or more	7%	8%	6%	5%	7%

● Indicates disproportionately low percentage.
 ● Indicates disproportionately high percentage.
 Multiple comparison correction (Bonferonni): false discovery rate correction ( $p = 0.05$ )

# Winona Bluffs Traverse Bluffside Park (Lake Boulevard)

## 2022 TRAFFIC ESTIMATES

### Counting Location:



### Counting Period:

June 14, 2022 - June 27, 2022

### Summer ADT: 35

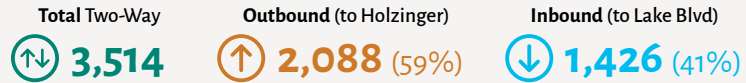
Weekdays: 34

Weekends: 38

Weekday Peak Hour: 5 pm

Weekend Peak Hour: 3 pm

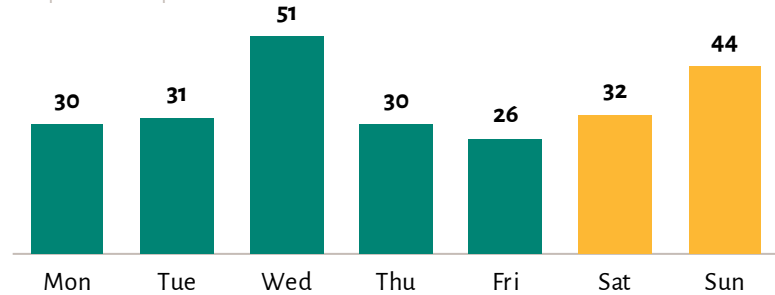
### Estimated 2022 Summer Traffic



### Summer Day-of-Week Patterns

Average summer traffic

Sample data extrapolated to summer estimates

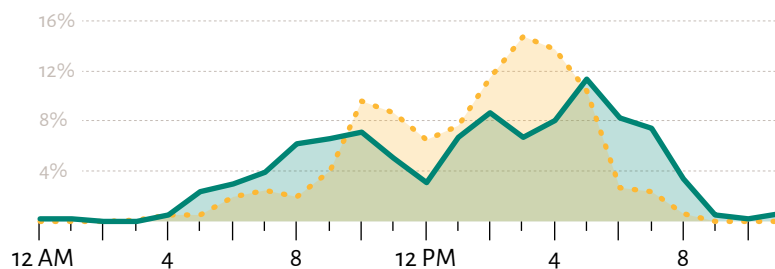


### Summer Hourly Traffic Patterns

% of daily traffic

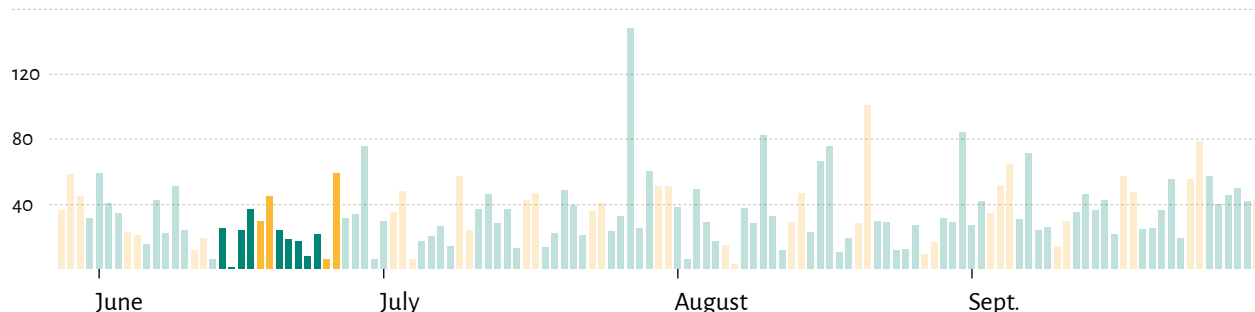
Weekday (teal) Weekend (orange)

Short-duration count data (smoothed)



### 2022 Summer Total Daily Traffic

Weekdays (observed) (teal) Weekend / Holiday (observed) (orange)  
 Weekdays (estimated) (light teal) Weekend / Holiday (estimated) (light orange)





# Winona Bluffs Traverse Bluffside Park (Holzinger Lodge)

## 2022 TRAFFIC ESTIMATES

### Counting Location:



### Counting Period:

May 28, 2022 - Oct. 1, 2022

**Summer ADT:** 55

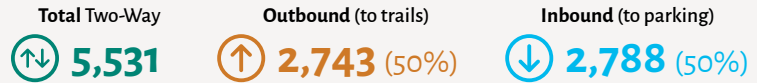
**Weekdays:** 53

**Weekends:** 59

**Weekday Peak Hour:** 5 pm

**Weekend Peak Hour:** 2 pm

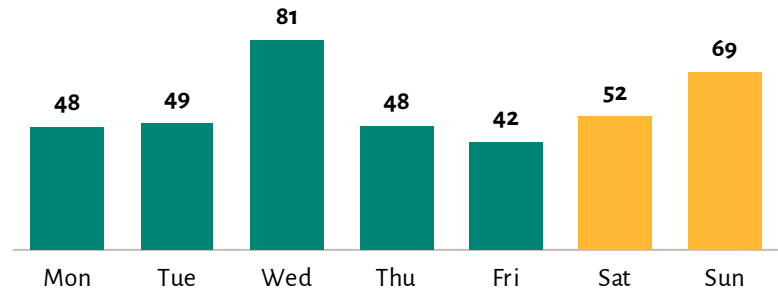
### Estimated 2022 Summer Traffic



### Summer Day-of-Week Patterns

*Average summer traffic*

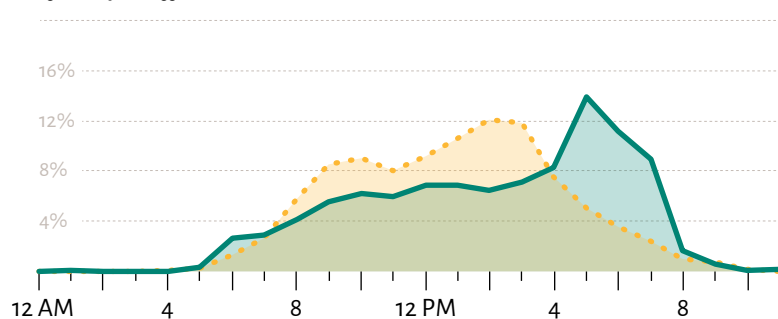
Based on data collected 5/28 - 10/1



### Summer Hourly Traffic Patterns

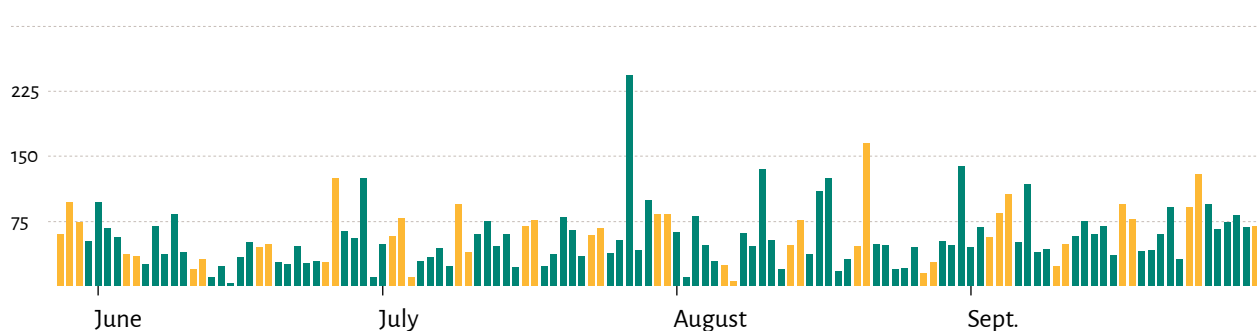
*% of daily traffic*

Weekday Weekend



### 2022 Summer Total Daily Traffic

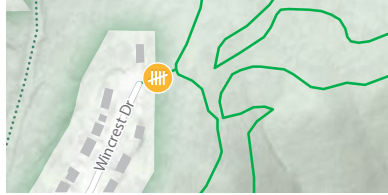
Weekdays (observed) Weekend / Holiday (observed)  
 Weekdays (estimated) Weekend / Holiday (estimated)



# Winona Bluffs Traverse Bluffside Park (Wincrest Drive)

## 2022 TRAFFIC ESTIMATES

### Counting Location:



### Counting Periods:

May 28, 2022 - June 12, 2022

Sept. 8, 2022 - Oct. 1, 2022

### Summer ADT: 45

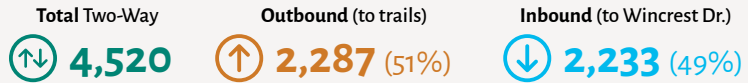
Weekdays: 43

Weekends: 48

Weekday Peak Hour: 4 pm

Weekend Peak Hour: 5 pm

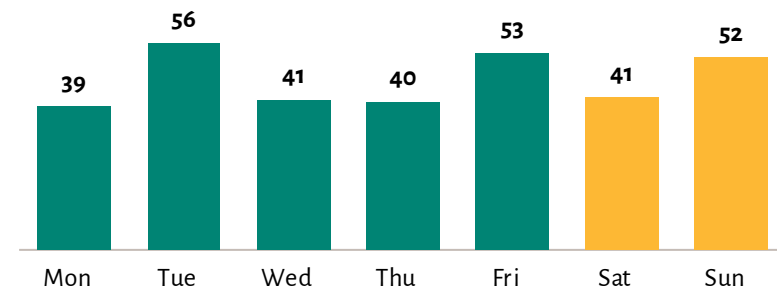
### Estimated 2022 Summer Traffic



### Summer Day-of-Week Patterns

Average summer traffic

Based on data collected 5/28 - 6/12 and 9/8 - 10/1

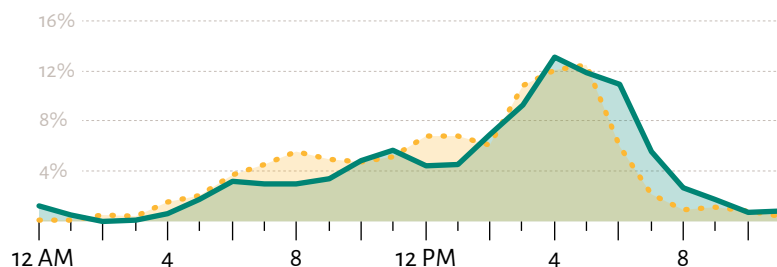


### Summer Hourly Traffic Patterns

% of daily traffic

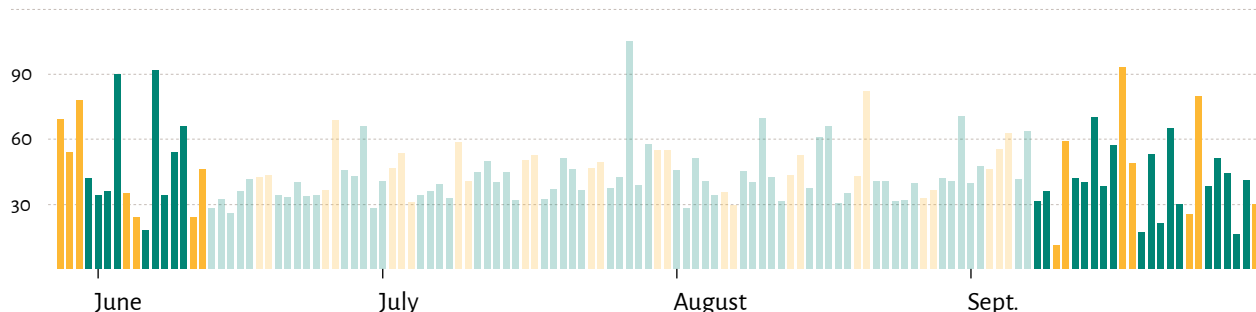
Weekday Weekend

Short-duration count data (smoothed)



### 2022 Summer Total Daily Traffic

Weekdays (observed) Weekend / Holiday (observed)  
Weekdays (estimated) Weekend / Holiday (estimated)



# Winona Bluffs Traverse Garvin Heights Foot Path

## 2022 TRAFFIC ESTIMATES

### Counting Location:



### Counting Periods:

June 29, 2022 - July 12, 2022

Sept. 8, 2022 - Oct. 1, 2022

**Summer ADT:** 84

**Weekdays:** 69

**Weekends:** 122

**Weekday Peak Hour:** 3 pm

**Weekend Peak Hour:** 10 am

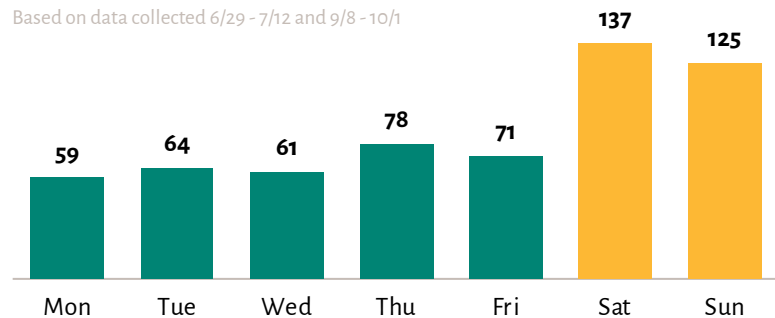
### Estimated 2022 Summer Traffic



### Summer Day-of-Week Patterns

*Average summer traffic*

Based on data collected 6/29 - 7/12 and 9/8 - 10/1

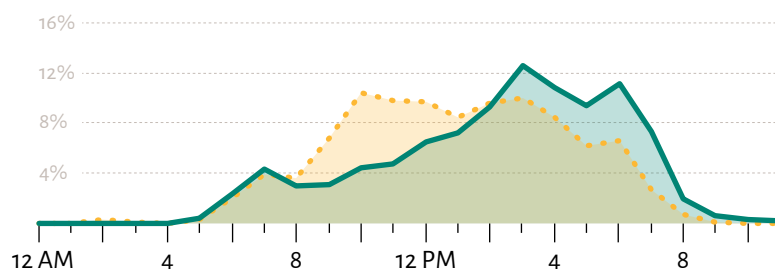


### Summer Hourly Traffic Patterns

*% of daily traffic*

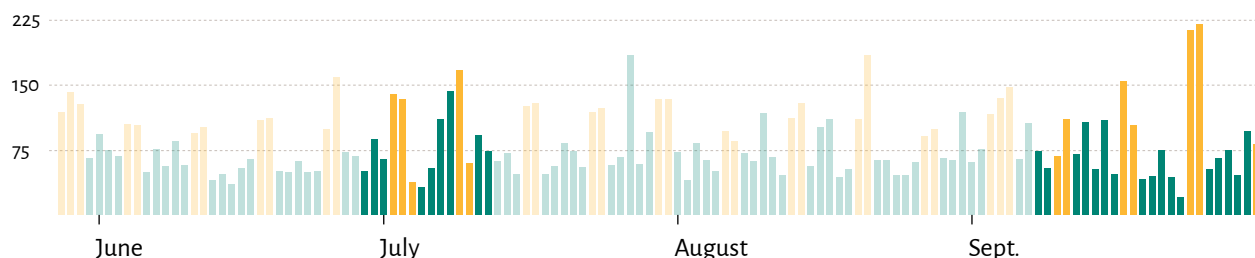
Weekday Weekend

Short-duration count data (smoothed)



### 2022 Summer Total Daily Traffic

Weekdays (observed) Weekend / Holiday (observed)  
Weekdays (estimated) Weekend / Holiday (estimated)



# Winona Bluffs Traverse Garvin Heights Overlook

## 2022 TRAFFIC ESTIMATES

### Counting Location:



### Counting Period:

Sept. 8, 2022 - Oct. 1, 2022

**Summer ADT:** 388

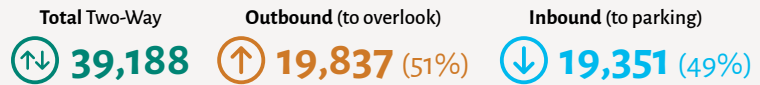
**Weekdays:** 256

**Weekends:** 713

**Weekday Peak Hour:** 3 pm

**Weekend Peak Hour:** 3 pm

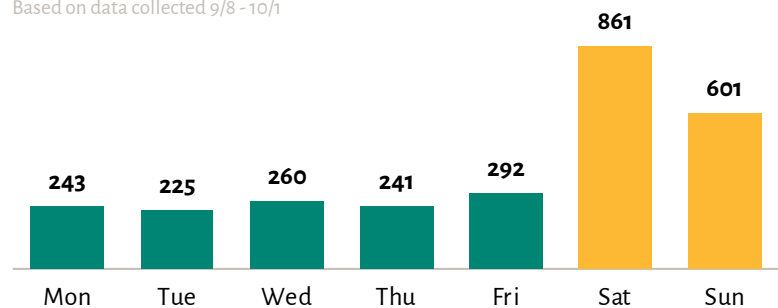
### Estimated 2022 Summer Traffic



### Summer Day-of-Week Patterns

Average summer traffic

Based on data collected 9/8 - 10/1

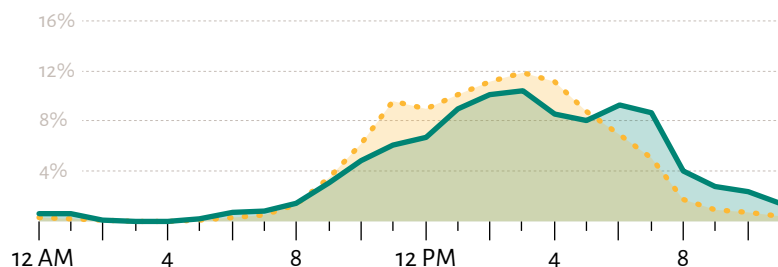


### Summer Hourly Traffic Patterns

% of daily traffic

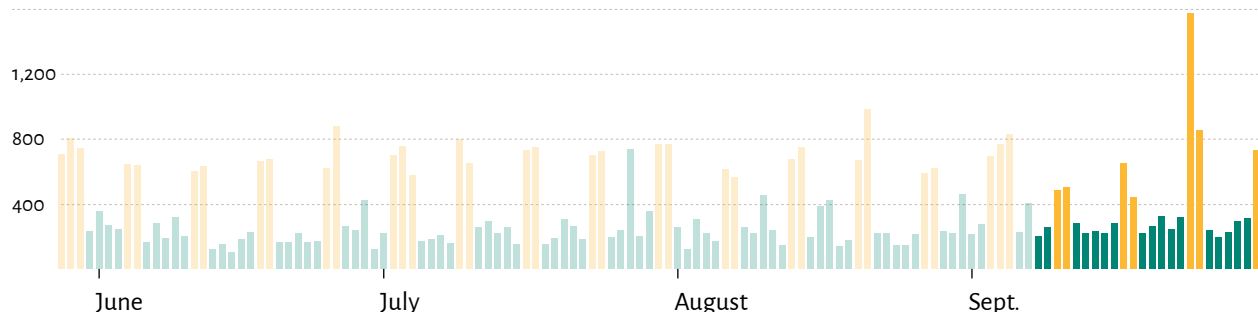
Weekday Weekend

Short-duration count data (smoothed)



### 2022 Summer Total Daily Traffic

Weekdays (observed) Weekend / Holiday (observed)  
Weekdays (estimated) Weekend / Holiday (estimated)





### Example Survey Script:

Hi, my name is \_\_\_\_\_ and I'm working with Parks & Trails Council conducting a 5-minute trail survey to understand visitor experiences at the Winona Bluffs. Are you using any of the trails today?

- ☐ Yes [Continue]
- ☐ No [Discontinue; thank visitor and let them continue on their day]

Are you willing to participate in the survey? All your answers are voluntary and confidential.

#### If **YES**:

Is anyone in your group 18 years old or older?

- ☐ Yes [Continue]
- ☐ No [Discontinue; log Non-Response]

Have you already taken this survey at this trail this summer?

- ☐ Yes [Discontinue survey]
- ☐ No [Hand visitor the tablet and let them complete the questionnaire; If multiple adults in the group are willing to participate, only the adult in the group with nearest birthday should complete the survey]

#### If **NO**:

That's okay, no problem. Thanks for your time. Do you mind if I ask you just two quick questions before I let you go?

- ☐ Yes [Ask questions, log Non-Response Qs]

1. Are you a local visitor or a tourist?

*(Tourist is anyone more than 50 miles away from home or staying at least one night away from home)*

2. What year were you born?

- ☐ No [Discontinue; log Non-Response]

## Winona Bluffs Trail Survey

**1. Which trail activities did you and your group do during your visit today?**

*Select all that apply*

- ☐ Mountain biking
- ☐ Hiking or walking
- ☐ Dog walking
- ☐ Running or jogging
- ☐ Geocaching
- ☐ Nature photography
- ☐ Birdwatching / wildlife viewing
- ☐ Rock climbing
- ☐ Other: \_\_\_\_\_

▶ *If multiple activities are checked...*

**2. Which one of these activities was your primary reason for visiting this trail today?** \_\_\_\_\_

▶ *If mountain biking...*

**3. What is your mountain biking skill level?**

- ☐ Beginner
- ☐ Intermediate
- ☐ Advanced
- ☐ Expert

**4. Do you have a favorite place in Minnesota to go mountain biking?**

- ☐ Yes. Where? \_\_\_\_\_
- ☐ No

**5. Are you riding a fat-tire bike today?**

- ☐ Yes
- ☐ No

**6. Are you riding your own bike today?**

- ☐ Yes
- ☐ No, I'm using a rental bike
- ☐ No, I'm borrowing a bike from a friend or family member

**7. What are your most important reasons for visiting the trail today?**

*Select all that apply*

- ☐ Experience nature
- ☐ Improve my physical health
- ☐ Relaxation and/or stress relief
- ☐ Spend time with family or friends
- ☐ Meet new people
- ☐ Training for event or competition
- ☐ Do something exciting and adventurous
- ☐ Learn/practice tricks and skills
- ☐ Getting my children outdoors
- ☐ Other: \_\_\_\_\_



**8. Approximately how much time did you, or do you plan to, spend on the trail during today's visit?**

\_\_\_\_\_ hours      \_\_\_\_\_ minutes

**9. Approximately how often do you visit this trail during spring, summer and fall?**

- |   |  |
|---|--|
| <input type="checkbox"/> This is my first time visiting | <input type="checkbox"/> Once a year           |
| <input type="checkbox"/> Daily                          | <input type="checkbox"/> Less than once a year |
| <input type="checkbox"/> Weekly                         | <input type="checkbox"/> Unsure                |
| <input type="checkbox"/> Monthly                        |  |

**10. Overall, how would you rate your most recent experience on this trail?**

- ☐ Very good  
☐ Good  
☐ Fair  
☐ Poor  
☐ Very poor  
☐ I've never used this trail before

**11. How many people are in the group you're recreating with today?**

\_\_\_\_\_ Adults (18 years and older, including yourself)  
 \_\_\_\_\_ Children (under 18 years)

**12. What information sources have you used to learn about this trail?**

*Select all that apply*

- ☐ I've known about this trail for years  
☐ Friends and family  
☐ From a club or group ride  
☐ Recommendation from a business or visitor center  
☐ Internet search (e.g., Google)  
☐ Social media (e.g., Facebook, Instagram, Twitter)  
☐ Print publication (e.g., magazine, newspaper)  
☐ TV or radio  
☐ Official Website:
  - ☐ City of Winona Parks & Recreation website
  - ☐ Visit Winona website
  - ☐ Winona Area Mountain Bikers Facebook Page
  - ☐ "Minnesota Great Outdoors" online park and trail finder
- ☐ Trail app/website:
 

<input type="checkbox"/> MTB Project	<input type="checkbox"/> Trail Forks
<input type="checkbox"/> Singletracks	<input type="checkbox"/> Strava
<input type="checkbox"/> MapMyRide	<input type="checkbox"/> All Trails
<input type="checkbox"/> Trailbot	
- ☐ Other: \_\_\_\_\_

**13. To prepare for your visit, did you or your group look for information about this trail before you came?**

- ☐ Yes  
☐ No

► *If yes...*

**14. What information did you search for before your visit today?**

*Select all that apply*

- |   |   |
|---|---|
| <input type="checkbox"/> Travel directions                | <input type="checkbox"/> Equipment rentals      |
| <input type="checkbox"/> Trail rules / Allowed activities | <input type="checkbox"/> Parking information    |
| <input type="checkbox"/> Trail maps and miles             | <input type="checkbox"/> Park/trail hours       |
| <input type="checkbox"/> Trail difficulty                 | <input type="checkbox"/> Nearby lodging options |
| <input type="checkbox"/> Trail reviews / photos           | <input type="checkbox"/> Nearby restaurants     |
| <input type="checkbox"/> Cost / Fees                      | <input type="checkbox"/> Other: _____           |
| <input type="checkbox"/> Trail conditions / closures      |   |

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

- ☐ Yes  
☐ No

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

- ☐ Yes  
☐ No

► *If spending at least one night away from home...*

**17. How many total nights do you plan to spend in this area during your trip?**

\_\_\_\_\_

**18. What type of overnight accommodations are you staying in during your trip?**

*Select all that apply*

- |  |   |
|--|---|
| <input type="checkbox"/> Hotel / motel                                 | <input type="checkbox"/> Campground                       |
| <input type="checkbox"/> Resort / lodge / commercial cabin             | <input type="checkbox"/> Home/cabin of friend or relative |
| <input type="checkbox"/> Vacation rental by owner (Airbnb, VRBO, etc.) | <input type="checkbox"/> My own vacation home             |
| <input type="checkbox"/> Bed & Breakfast                               | <input type="checkbox"/> Other: _____                     |

► *If 50 miles away from home and/or spending at least one night away from home...*

**19. How important was the 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

**20. How far in advance did you plan this trip?**

- ☐ Less than 1 week  
☐ 1 to 2 weeks  
☐ 1 month  
☐ 1 - 2 months  
☐ 2 - 3 months  
☐ 3+ months

**21. What country do you live in?**

- ☐ United States. If yes, what is your home ZIP code? \_\_\_\_\_
- ☐ Canada If yes, what is your home Postal Code? \_\_\_\_\_
- ☐ Other: \_\_\_\_\_

**22. What year were you born?** \_\_\_\_\_

**23. What is your gender identity?**

- ☐ Female
- ☐ Male
- ☐ Non-binary / third gender
- ☐ Prefer to self-describe: \_\_\_\_\_
- ☐ Prefer not to answer
- ☐ Don't know

**24. Do you identify as transgender?**

- ☐ Yes
- ☐ No
- ☐ Prefer not to answer
- ☐ Don't know

**25. How do you describe yourself?**

*(Select all that apply)*

- ☐ Asian
- ☐ Black or African American
- ☐ Hispanic or Latinx
- ☐ Native American, First Nation or Alaskan Native
- ☐ Middle Eastern or North African
- ☐ White or Caucasian
- ☐ Pacific Islander
- ☐ Some other race, ethnicity or origin

► *If Native American, First Nation or Alaskan Native...*

**26. Which tribe do you affiliate with?**

*(Select all that apply)*

- ☐ Bois Forte Band of Chippewa
- ☐ Fond du Lac Band of Lake Superior Chippewa
- ☐ Grand Portage Band of Lake Superior Chippewa
- ☐ Leech Lake Band of Ojibwe
- ☐ Lower Sioux Indian Community
- ☐ Mille Lacs Band of Ojibwe
- ☐ Prairie Island Indian Community
- ☐ Red Lake Nation
- ☐ Shakopee Mdewakanton Sioux Community
- ☐ Upper Sioux Community
- ☐ White Earth Nation
- ☐ Other: \_\_\_\_\_
- ☐ Prefer not to answer
- ☐ Don't know

**27. What language do you speak most often at home?**

- |                                  |   |
|----------------------------------|---|
| <input type="checkbox"/> English | <input type="checkbox"/> Other: _____         |
| <input type="checkbox"/> Hmong   | <input type="checkbox"/> Prefer not to answer |
| <input type="checkbox"/> Somali  | <input type="checkbox"/> Don't know           |
| <input type="checkbox"/> Spanish |   |

► *If you speak a language other than English at home...*

**28. How well do you speak English?**

- ☐ Very well
- ☐ Well
- ☐ Not well
- ☐ Not at all
- ☐ Prefer not to answer
- ☐ Don't know

**29. What is the highest level of education you have completed?**

- ☐ Less than high school
- ☐ High school graduate or GED
- ☐ Some college, but no degree
- ☐ Associate, vocational, or technical degree
- ☐ Bachelor's degree
- ☐ Graduate or professional degree
- ☐ Prefer not to answer

**30. Do you, or does someone in your group, have a physical, mental or sensory disability or condition?**

- ☐ Yes
- ☐ No
- ☐ Prefer not to answer
- ☐ Don't know

**31. Please indicate your total household income before taxes last year**

- ☐ Less than \$20,000
- ☐ \$20,000 - \$29,999
- ☐ \$30,000 - \$39,999
- ☐ \$40,000 - \$49,999
- ☐ \$50,000 - \$59,999
- ☐ \$60,000 - \$69,999
- ☐ \$70,000 - \$79,999
- ☐ \$80,000 - \$89,999
- ☐ \$90,000 - \$99,999
- ☐ \$100,000 - \$149,999
- ☐ \$150,000 - \$199,999
- ☐ \$200,000 or more
- ☐ Prefer not to answer

**32. Do you have any additional comments about your visit you'd like to share?**

Administrator: Date: \_\_\_\_\_ Time: \_\_\_\_\_

### GARVIN HEIGHTS VISITOR SURVEY

#### 1. What activities did you and your group do during your visit to Garvin Heights today?

*(Select all that apply)*

- ☐ Sightseeing
- ☐ Hiking or walking
- ☐ Dog walking
- ☐ Running or jogging
- ☐ Biking
- ☐ Geocaching
- ☐ Nature Photography
- ☐ Birdwatching / wildlife viewing
- ☐ Rock climbing

**If you selected multiple activities, please circle your primary reason for visiting.**

#### 2. What were your most important reasons for visiting Garvin Heights today?

*(Select all that apply)*

- ☐ Experience nature
- ☐ Improve my physical health
- ☐ Relaxation and/or stress relief
- ☐ Spend time with family or friends
- ☐ Scenic overlook
- ☐ Meet new people
- ☐ Training for event or competition
- ☐ Do something exciting and adventurous
- ☐ Learn/practice skills
- ☐ Getting my children outdoors
- ☐ Other: \_\_\_\_\_

#### 3. Approximately how much time did you spend at Garvin Heights today?

\_\_\_\_\_ hours  
\_\_\_\_\_ minutes

#### 4. How many people are in the group you're visiting with today?

\_\_\_\_\_ Adults (18 years and older, including yourself)  
\_\_\_\_\_ Children (under 18 years)

#### 5. Approximately how often do you visit Garvin Heights during the spring, summer and fall?

- ☐ This is my first time visiting
- ☐ Daily
- ☐ Weekly
- ☐ Monthly
- ☐ Once a year
- ☐ Less than once a year

#### 6. Overall, how would you rate your visit today?

- ☐ Very good
- ☐ Good
- ☐ Fair
- ☐ Poor
- ☐ Very poor

#### 7. What information sources have you used to learn about Garvin Heights?

*(Select all that apply)*

- ☐ I've known about the park for years
- ☐ Friends and family
- ☐ From a club
- ☐ Internet search (e.g., Google)
- ☐ Print publication (e.g., magazine, newspaper)
- ☐ Visit Winona website
- ☐ City of Winona Parks & Recreation website
- ☐ "Minnesota Great Outdoors" online park finder
- ☐ Recommendation from a business or visitor center
- ☐ Social media (e.g., Facebook, Instagram, Twitter)
- ☐ TV or radio
- ☐ Trail app/website (Which one: \_\_\_\_\_)

#### 8. What is your home ZIP code?

USA ZIP Code: \_\_\_\_\_

CAN Postal Code: \_\_\_\_\_ or country: \_\_\_\_\_

#### 9. What year were you born?

Year: \_\_\_\_\_

#### 10. How do you describe yourself?

*(Select all that apply)*

- ☐ Asian
- ☐ Black or African American
- ☐ Hispanic or Latinx
- ☐ Native American, First Nation or Alaskan Native
- ☐ Middle Eastern or North African
- ☐ White or Caucasian
- ☐ Pacific Islander
- ☐ Some other race, ethnicity or origin

#### 11. What is the highest level of education you have completed?

- ☐ Less than high school
- ☐ High school graduate or GED
- ☐ Some college, but no degree
- ☐ Associate, vocational, or technical degree
- ☐ Bachelor's degree
- ☐ Graduate or professional degree

#### 12. What is your gender?

- ☐ Female
- ☐ Male
- ☐ Transgender Female
- ☐ Transgender Male
- ☐ Non-binary / third gender
- ☐ Prefer to self-describe: \_\_\_\_\_

#### 13. Do you, or does someone in your group, have a physical, mental, or sensory disability or condition?

- ☐ Yes
- ☐ No
- ☐ Don't know

#### 14. Please indicate your total household income before taxes last year

- |  |  |
|--|--|
| <input type="checkbox"/> Less than \$20,000  | <input type="checkbox"/> \$70,000 - \$79,999   |
| <input type="checkbox"/> \$20,000 - \$29,999 | <input type="checkbox"/> \$80,000 - \$89,999   |
| <input type="checkbox"/> \$30,000 - \$39,999 | <input type="checkbox"/> \$90,000 - \$99,999   |
| <input type="checkbox"/> \$40,000 - \$49,999 | <input type="checkbox"/> \$100,000 - \$149,999 |
| <input type="checkbox"/> \$50,000 - \$59,999 | <input type="checkbox"/> \$150,000 - \$199,999 |
| <input type="checkbox"/> \$60,000 - \$69,999 | <input type="checkbox"/> \$200,000 or more     |

#### 15. Do you live more than 50 miles from Winona?

- ☐ Yes ► *If yes, please answer questions on backside*
- ☐ No

#### 16. Are you on a trip where you are staying at least one night away from home?

- ☐ Yes ► *If yes, please answer questions on backside*
- ☐ No

#### 17. Do you have any additional comments about your visit you'd like to share?

### GARVIN HEIGHTS VISITOR SURVEY TOURIST QUESTIONS

#### How important was Garvin Heights in deciding to visit Winona?

- ☐ Garvin Heights was the **primary reason** why I visited Winona
- ☐ Garvin Heights was a **significant reason** why I visited Winona
- ☐ Garvin Heights was **part of the reason** why I visited Winona
- ☐ I would have visited Winona even without Garvin Heights
- ☐ Don't know

#### How far in advance did you plan this trip?

- ☐ Less than 1 week
- ☐ 1 to 2 weeks
- ☐ 1 month
- ☐ 1 - 2 months
- ☐ 2 - 3 months
- ☐ 3+ months

#### *If staying at least one night overnight...*

#### How many total nights do you plan to spend in Winona during your trip?

Number of nights: \_\_\_\_\_

#### 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.)
- ☐ Bed & Breakfast
- ☐ Campground
- ☐ Home/cabin of friend or relative
- ☐ My own vacation home
- ☐ Other: \_\_\_\_\_

## Appendix D: Responses to open-ended “Additional Comments” (Q32)

### Comments at Bluffs Park:

!!! Love this place!!!

A lot of fun when the trails are groomed.

Clearing the trails of fallen trees quickly would be appreciated. I used my hand saw last night to clear three trees on my own.

Fabulous place!

Great asset to community.

I love being on this trail.

I wish there was an easier way to the top.

Looking forward to getting the new trails!

Love the trails. Always room for expansion.

More trails please.

Thanks for doing this.

This park is a huge community resource for many people.

Trail was in good shape, a few trees down though.

Trails are awesome.

We visit this area yearly and hike and bike the trail a handful of times.

Beautiful trail.

I love Winona!

More trails!

Put more trails in. 11 miles isn't enough here at Holzinger.

This trail is great. Keep it funded.

Would be great to expand this trail system!

### Comments at Sugar Loaf:

A porta potty would be nice.

Beautiful.

Good view!

Great trails.

Great trails great sights!

Great visit.

Have a bathroom, Please.

I am A WSU ALUMNI.

It was fun.

Love the trails.

Nice kept trails.

Thanks.

We love hiking this trail.



## Appendix D: Responses to open-ended “Additional Comments” (Q32)

### Comments at Garvin Heights Foot Path:

Fallen trees need to be removed.

Garvin trail is awful and dangerous. Needs info sign about length.

Improve marketing so trails can be better marked and publicized.

Love the hike.

Love the trail down the hill towards the lake. Hoping it can be restored :)

Love this hike and view.

Poor maintenance.

Would like the three big logs that lay across the trail removed.

### Comments at Garvin Heights Overlook:

Awesome! So cool, love coming here.

Beautiful place and helps understand the Mississippi. We just sold family farm land to TPL, so nice to see how important public land is.

Beautiful... love the view and photo opportunity!

Enjoyed the view.

Great childhood memories!

Great place to live and to visit. Live here 7 years in the 70's.

Happy to do this.

I love this place.

Keep up the good work, signs need cleaned so they can be read more easily.

New updated panoramic picture.

Utilizing restored dry prairie and oak savanna for teaching purposes.

Very beautiful park with great views.

Very beautiful!

Visiting Winona for music festival at Prairie Island Campground.

Winona is one of our favorite places to visit. We come at least once a year.

Wish I could have stayed longer.

For more information:



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