# Visitors to Fossil Creek Reservoir Natural Area

CITY OF FORT COLLINS NATURAL AREAS

# **Executive Summary**

Natural Areas staff administered visitor exit interviews (n = 190) at Fossil Creek Reservoir Natural Area during 2021 and 2022. Interviews were conducted on both weekdays and weekends in four shifts (i.e., 8 am to 9:30 am, 10:15 am to 11:45 am, 12:30pm to 2 pm, and 2:45 pm to 4:15 pm). Shift times and days were selected using a stratified random sampling procedure.

The purpose of this effort was to gain a better understanding of visitors to Fossil Creek Reservoir Natural Area. This report is intended to (a) provide a baseline of visitor information at Fossil Creek Reservoir Natural Area and (b) to aid Natural Areas staff in making informed management decisions.

Given the population of Fort Collins, the sample size, and random selection procedures this data has a 95% confidence interval  $\pm 7\%$ . Data is represented in terms of frequencies of responses and represents the average visitor.

#### **Demographics (Table 2)**

- Over 60% of respondents lived within Larimer County.
- Slightly more respondents were female (52%) than male (47%).
- The average respondent was 56 years old, non-Hispanic (89%), and White (92%).
- Over 75% of respondents possessed a bachelor's degree or higher
- Slightly more than half the respondents reported annual household incomes under \$100,000.

#### Visitation Characteristics (Table 3)

- Respondents reported visiting Fossil Creek Reservoir an average of twenty-nine times per year.
- The top primary activities reported were hiking (51%) and wildlife viewing (32%) followed by trail running (10%)

#### **Group Characteristics (Table 5)**

- Most respondents visited alone (49%) or with one other individual (31%).
- Children were reported present in 13% of groups.

#### Motivations for Visiting (Table 6)

• The top two motivations for visiting Fossil Creek Reservoir Natural Area included "to be in nature" (24%) and because "its close to home" (23%).

#### Visitor Satisfaction (Tables 7 & 8)

- Facility ratings at Fossil Creek Reservoir were high, with between 87% and 98% of respondents rating them either "good" or "very good".
- Ninety-nine percent of respondents rated their overall experience as either "good" or "very good."

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## Introduction

Public land managers are often tasked with providing high quality recreational experiences for visitors. However, it can be difficult to accurately understand the quality of a visitor's experience without a thorough evaluation. Self-report surveys provide an easy, expedient way to gather large amounts of information for visitor studies. When grounded in theory and paired with a stratified random sampling process, self-report surveys can yield valid, representative, and generalizable data for decision makers.

The objectives of this study were to gather data on:

- 1. Demographic characteristics (e.g., gender, ethnicity)
- 2. Trip characteristics (e.g., group size, primary activity)
- 3. Motivations for visiting
- 4. Visitor satisfaction

This report is intended to (a) provide a baseline of visitor information at Fossil Creek Reservoir Natural Area and (b) to aid Natural Areas staff in making informed management decisions.

### Methods

#### **Data Collection**

Natural Areas staff conducted visitor exit interviews (n = 190) at Fossil Creek Reservoir Natural Area during 2021 and 2022.

Development of the survey instrument was guided by theoretical concepts (e.g., cognitive theory, goal interference) and seeks to build off previous research related to indicators and standards for quality visitor experiences (Vaske, 2019).

A stratified random sampling procedure was used to ensure representativeness and generalizability to the community of Larimer County, Colorado. Survey days and times were selected using a random number generator (stattrek.com). Interviews were conducted on both weekdays and weekends in four shifts (i.e., 8 am to 9:30 am, 10:15 am to 11:45 am, 12:30pm to 2 pm, and 2:45 pm to 4:15 pm). Table 1 summarizes this data collection effort.

#### Table 1. Visitor survey data collection effort at Fossil Creek Reservoir Natural Area

Year	
2021	19%
2022	81%
Season	
Winter	15%
Spring	20%
Summer	28%
Fall	37%
Day of Week	
Weekday	45%

Weekend	55%
Shift	
8:00 - 9:30	18%
10:15 - 11:45	32%
12:30 - 2:00	33%
2:45 - 4:15	17%

Over 60% of respondents lived within Larimer County. Slightly more respondents were female (52%) than male (47%). The average respondent was 56 years old, non-Hispanic (89%), and White (92%). Over 75% of respondents possessed a bachelor's degree or higher, and more than half reported annual household incomes under \$100,000.

#### Table 2. Demographic profile of visitors to Fossil Creek Reservoir Natural Area

Do you live in Larimer County?	Percentage of responses
Yes	62.6%
No	37.4%
Gender	
Female	52.4%
Male	46.5%
Gender non-conforming	1.1%
Age	
<20	2.1%
21 to 25	3.2%
26 to 35	9.5%
36 to 45	15.3%
46 to 55	14.8%
56 to 65	21.7%
Over 65	33.3%
Mean age	56
Ethnicity	Percentage of responses
Hispanic/Latinx	6.0%
Non-Hispanic/Latinx	89.2%
Prefer to self-identify	4.2%
Race	
American Indian/Alaska Native	1.1%
Asian	2.7%
Black	.5%
White	92.3%
Two or more races	3.3%
Highest Level of Education	
Some high school or less	.5%
GED or high school grad	11.2%
Associate degree	12.3%

Highest Level of Education	Percentage of responses
Bachelor's degree	33.7%
Masters/PhD	41.7%
Household Income	
Less than \$24,999	5.6%
\$25,000 – \$34,999	5%
\$35,000 – \$49,999	8.1%
\$50,000 – \$74,999	19.9%
\$75,000 – \$99,999	12.4%
\$100,000 - \$149,999	28.6%
\$150,000 - \$199,999	11.2%
\$200,000+	9.3%
Years of Residency	
One year or less	12.9%
2 to 3	7.6%
4 to 5	5.3%
6 to 10	10.6%
11 to 20	32.6%
21 to 30	10.6%
More than 30 years	20.5%

Respondents reported visiting Fossil Creek reservoir an average of twenty-nine times per year.

#### Table 3. Visitation Patterns to Fossil Creek Reservoir Natural Area

Visits	Percentage of responses
First time visiting	19.3%
1 to 2 visits	23.3%
3 to 5 visits	12.5%
6 to 10 visits	9.7%
11 to 20 visits	12.5%
21 to 50 visits	10.2%
Over 50 visits	12.5%
Mean visits	29

The top primary activities reported were hiking (51%) and wildlife viewing (32%) followed by trail running (10%).

#### Table 4. Primary Activities Reported at Fossil Creek Reservoir Natural Area

Primary Activity	Percentage of responses
Hiking	51.2%
Trail Running	10%
Family Gathering	2.4%

Primary Activity	Percentage of responses
Picnicking	1.8%
Photography/Art	2.4%
Wildlife Viewing	31.8%
Dog walking	.6%

Most respondents visited alone (49%) or with one other individual (31%) and children were reported in 13% of groups.

Number of people in group	Percentage of responses
1	48.9%
2	31.4%
3	8%
4 to 5	11.2%
6 or more	.5%
Mean	1.9
Range	1 to 10
Number of adults in group	Percentage of responses
1	51.9%
2	36.9%
3	4.3%
4 to 5	6.4%
6 or more	.5%
Mean	1.7
Range	1 to 10
Number of children in group	Percentage of responses
0	86.6%
1	9.6%
2	2.7%
3 or more	1.1%
Mean	0.2
Range	0 to 3

The top two motivations for visiting Fossil Creek Reservoir Natural Area included "to be in nature" (24%) and because "it's close to home" (23%).

#### Table 6. Two Primary Motivations for Visiting Fossil Creek Reservoir Natural Area

Motivations	Percentage of responses
It's close to home.	22.6%
To get exercise.	16.5%
I feel safe here.	1.2%

Motivations	Percentage of responses
To learn about nature.	2.4%
To be in nature.	24.2%
For relaxation.	5.8%
To escape from everyday responsibilities or pressure.	3.7%
To feel better spiritually.	1.8%
It's less crowded than other natural areas.	10.1%
To develop my skills and abilities.	1.2%
To spend time with friends or family.	4.6%
Other.	5.8%

Facility ratings at Fossil Creek Reservoir were high, with between 87% and 98% of respondents rating them either "good" or "very good". While ninety-nine percent of respondents rated their overall experience as either "good" or "very good."

Table 7. Facility Type and Overall Experience Ratings

Facility Type	Rating of "good" or "very good"
Restrooms	98%
Parking areas	98%
Picnic areas	95%
Trash receptacles	90%
Kiosk information	87%
Trails	96%
Overall Quality of Experience	Rating
Average	1%
Good	22%
Excellent	77%

# Conclusion

To better understand visitors at Fossil Creek Reservoir Natural Area, staff conducted on-site, visitor exit interviews (n = 190) during 2021 and 2022. The purpose of this effort was to (a) provide a baseline of visitor information at Fossil Creek Reservoir Natural Area and (b) to aid in decision making. A stratified random sampling procedure was used to select shift times and days. Unfortunately, despite a year's worth of collection, the effort yielded a sample size (n = 190) too small to be considered statistically significant. However, the data collected does provide an understanding of the average visitor to Fossil Creek Reservoir Natural Area.

Over 60% of respondents lived within Larimer County, and slightly more respondents identified as female (52%). The average respondent was 56 years old, non-Hispanic (89%), and White (92%). Over 75% of respondents possessed a bachelor's degree or higher, and more than half reported annual household incomes under \$100,000. Respondents reported visiting Fossil Creek Reservoir an average of twenty-nine times per year and were primarily engaged in either hiking (51%), wildlife viewing (32%), or trail running (10%). Most respondents visited alone (49%) or with one other individual (31%), and

children were reported in 13% of groups. The top two motivations for visiting Fossil Creek Reservoir Natural Area were reported as "to be in nature" (24%) and because "it's close to home" (23%). The average respondent rated facilities at Fossil Creek Reservoir between 87% and 98% as either "good" or "very good", and ninety-nine percent of respondents rated their overall experience as either "good" or "very good".

Some notable differences emerged from this data set compared to visitor data collected throughout other City of Fort Collins Natural Areas. First, a third of visitors are not residents of Larimer County. This provides potential for future analysis should the need arise. Secondly, visitors are somewhat older and skew more female than visitors to other areas (e.g., Maxwell). There also seems to be more diversity in annual household income levels compared to other management zones (e.g., Foothills; Mountain to Plains). Additionally, more children (13%) are present in groups at Fossil Creek Reservoir than compared to other areas (e.g., Foothills), but less than in others (e.g., Gateway). While not surprising, reports of wildlife viewing (32%) as a primary activity were higher than in most zones, but equal to responses at Soapstone Prairie Natural Area. Finally, in terms of visitor satisfaction, Fossil Creek Reservoir has some of the highest ratings reported across the City of Fort Collins Natural Areas landscape.

# Appendix A- Verbatim responses

#### **Reasons for facility ratings**

Adult has difficulty walking. Need more benches to rest. all in fine shape always clean, easy access always lovely & well maintained Always pleasant Beautiful area! Beautiful day. Great location, clean Beautiful, well-maintained trails. because I like to come here Cause I'm honest. clean clean & kept up clean, easy access, smooth walking areas & clear picnic tables Clean, nice cleanliness, beauty Cleanliness; natural beauty Close location. Gravel trail. Close to home and beautiful scenery. Close to home, gravel trail, great bathrooms. concrete overgrown Did not use. easy to park. Clear, informative signs. Easy to walk on trails - good accessibility Either didn't use or good. Enjoyed the trail/facilities Everything in great condition. everything is clean + great. The picnic area can be covered in birds' nests/bees. Everything is good. No complaints. everything is very clean, and trails were great. Bird watching areas are great. everything terrific everything was clean, trash was empty Everything was great everything was very good` Excellent Excellently maintained! found nothing wrong good overall can use new or more info kiosks great location & concept of protecting wetlands Great place for a morning walk great place to hike & visit

Great place. No bikes and no dogs! Great trails! high quality and clean I like it here - walking is great I like lots of information! I love coming here and birdwatching. I really enjoy how tranquil and well-kept the area is. I walk every day and enjoy the trail/facilities very much impressed, first time It is my sanctuary. It is a blessed place. It's always clean and peaceful It's good. It's lovely & both wild and attentive to natural needs it's very clean & enjoyable. The trails are maintained well It's well maintained Just went on a short walk with a 1.5 yr old Lots of mud, wasp nests on inside of wildlife viewing blinds (shelters). Needs good cleaning. Restrooms should have auto sensors - Toilets not flushed and not 100% sanitary - carpenter road trail had prairie dog mounds in the middle = hazard Love Fort Collins Love that its quieter than most. Like to birdwatch. Would like to be closer to water. love this area love to come here for the well-done open spaces Love visiting here! Wonderful mountain/grassland views Lovely spot might be good to have some trash receptacles near picnic areas Mostly great, but not perfect need a trail sign out by the observation lookout on the loop Need higher benches w/ back for handicapped access Need some clean up on trails of overgrowth needs map posted by dock Nice facilities, trails had some vegetation overgrowth nice natural area Nice paved & gravel trails which are easy to follow & provide multiple views of reservoir & grassland Nice place in general; looks natural. One of my favorite birding locals one of my favorite outdoor places option of paved/groomed trails and a restroom Overall experience is very good, but on other visits the trash has been full. overall, very good Overall, very nice. positive experience

Restroom nice to have but some areas are stinky Restrooms are always clean, parking is available; trails could extend further Restrooms are clean Restrooms clean but without paper towel. Parking good, trails groomed Safe place to come signs could be more detailed. Need a trail closer to the lake. Signs have faded and need replacement. Maybe an additional trash receptacle. signs were very informational and pretty at the same time! Things looked maintained here. The bird ID sign was very helpful! The facilities are great The trail + facilities are great There's a bit of a blind spot coming into the parking - would be nervous about pedestrians They are just so! They are very good, clean, well paved. Trails and parking lot are maintained. Very little litter. I usually only come here for birdwatching. Trails are a bit overgrown Trails are good, but traces of dogs and bicycles Trails nicely maintained through all years **Typical Condition** Very beautiful, but tons of flying bugs. very clean very clean, well kept very good compared to other parts; very accessible very nice Very well kept up. Pleasant people use the park. very well maintained & in great condition Very well maintained. Loved the viewing area with blinds benches to sit on while using binoculars and the descriptions/illustrations of local birds - fantastic! Very well-maintained and planned. well maintained area all around! Well maintained, clean What we used was good. Would be nice to have signs to show wildlife, wish the picnic table were closer. Parents can't walk.

#### Reasons for overall experience rating

Ability to get close in all good Almost perfect, except that I saw in the past the wildflowers were ploughed. Always a pleasure to visit always clean & well taken care of Always clean and something "new" to see always pleasant Awesome! bathroom needed cleaning beautiful Beautiful spot - didn't see eagles today but have other times beautiful views **Beautiful views** beautiful, natural, and well-preserved space beautiful! beautifully kept, quiet, and opportunity to view wildlife birds cared for Clean and with animals in mind Clean, low traffic. clean, not very busy, plenty to see clean; quiet clean/not crowded Could have more extended trails despite trails & restroom development, it seems very natural. Easy access and great trails Easy on my legs to walk. Scenic. Maintained. Easy, clean. Everything is great. The swallows make a big mess during the season, but it is what it is. Excellent prairie habitat Except for the algae bloom? Very soothing, scenic, tranquil favorite place. good overall good place to view birds Good trails and well maintained. good walkways great area great area. No dogs. No bicycles Great habitats. great open area, maintained well. Great place to bird watch, close to home, great views Great place to go for lunch walks great place to walk during my lunch break Great quiet place to walk and see birds. great wildlife viewing, easy trails I am always impressed by the cleanliness of this area I enjoy this area I love how its kept close to natural

I rated it excellent due to clean walks, beautiful views, respectable people I would recommend this trail to others. It is my sanctuary. It is a blessed place. It's drop dead gorgeous it's nice! It's a nice place to relax. it's beautiful Less crowded, quiet. less traveled, lots of open space Long way to picnic tables, very hot in summer with sunny trails Lots and lots of different birds. lots of animals Love it here Love the birds & grassland & water. Nature thrives - glad dogs are not allowed. Love this place. Lovely spot Low usage, usually clean Magnificent Many beautiful spots in CO mileage signage perhaps More trails. Native plants. Natural areas, native plants. No bikes or dogs. no bikes, no dogs. Nice area NO DOGS! Northern hide overgrown. No longer able to see the lake or birds not crowded & nice walking trails & views not too busy, very user-friendly, meets many needs Openness, Cleanliness, natural Beauty, serenity. Peaceful Peaceful and clean Pretty good birding, easy parking Pretty good, sometimes smelly. Quality habitat balanced with recreation. Quiet and uplifting. Quiet place to spend lunch break quiet, clean, peaceful, trails well kept Quiet, good views Quiet, lots of solitude, lots of waterfowl on reservoir. Quiet, love the water, views, and sounds of birds Quiet, no dogs, lots of birds, easy trails.

Relaxing and away from the crowds. relaxing, nice views same same as #4 see other comment see previous Short trails. Longer trails would be nice. Smell? so beautiful The area is always quiet + peaceful The variety of landscapes paired with ample space to roam. This natural area is a great quiet place between Loveland + Ft Collins This trail is great Trails are maintained. trails are well maintained & easy to walk Trails have some overgrowth of plants Trails overgrown Trails were too far from the water Variety of wildlife sometimes active, sometimes quiet vast, truly natural areas very accessible Very accessible, good birding very beautiful & clean Very few people. very nice - need to come back in the spring! very nice place to visit. Imagine would be even better if water levels were higher very nicely maintained very peaceful Very Pretty Viewing blinds for birding. water treatment plant smell. We like this area because it is not over traveled. we love the mountain views! Well maintained well maintained & peaceful area

#### **Additional comments**

Add additional signage (e.g., scat, literati app), plant more natives, grateful no bikes or dogs. add birding to list appreciate upkeep- terrific! beautiful Beautiful nature reserve

Glad that dogs aren't allowed.

Have just moved here recently, like what we've seen so far in our explorations

I miss the board that named the mountains that used to be along the trail

I see several times in the past year wildflowers were ploughed away, not sure why. But I enjoyed them. Hope this won't happen again.

I'm glad it is being watched via TV. My son's car broken into last year! The no dogs is great.

Lived in the area from 2006-2016 and had never been here

Looks like a great place to see migrating ducks & other waterfowl. Sorry the water levels are so low now.

Love Fossil Creek!

Love Natural Areas.

love out in nature

main entrance not easy to see

Many dogs are present, people fish here, people dump animals here.

Overall enjoyable, easy to access. Today the air smelled like a raw sewer. Beautiful views and wildlife.

such a nice day, always well-maintained easy access - nice to have a paved area for wheelchairs and elderly to use

Thank you!

Thanks for maintaining very inviting natural areas.

Thanks for your work preserving this beautiful spot!

This is convenient to get to, and open to easy walking`

We could use some volunteer time cleaning out invasive thistle, wasp nests and cobwebs in blinds and restroom roof

We enjoy a picni without having to drive too far from our home

We utilize service dog. Thank you for reposting "service dogs allowed" signs. Reduces confrontations.

Would like to be closer to water to the east

## Appendix B – Survey Instrument



This survey will help **City of Fort Collins Natural Areas** staff better understand visitors' views and improve service delivery. Your participation is completely voluntary, and your answers will remain anonymous. **Thank you for your help-your input is greatly appreciated!** 

#### TODAY'S VISIT

- 1. About how many visits have you made to this natural area in the past 12 months? (If this is your first visit or you come here less than once per year, write 0) \_\_\_\_\_
- 2. What was your primary activity **TODAY** during your visit? (Check only one)

Hiking	Family gathering	Wildlife viewing
Mountain biking	Horseback riding	Photography/Art
Trail running	Picnicking	

- WHO were you travelling\_with today? (Check one and write in the number of people in your group, if more than just you today.) Just me! Group ( # adults, # children)
- 4. Please rate the quality of each of the facilities that you used today by circling the appropriate number for each facility.

	Did Not	Very				Very
	Use	Poor	Poor	Average	Good	Good
Restrooms	0	1	2	3	4	5
Parking Areas	0	1	2	3	4	5
Picnic Areas	0	1	2	3	4	5
Trash Receptacles	0	1	2	3	4	5
Kiosk Materials & Signs	0	1	2	3	4	5
Trails	0	1	2	3	4	5

Please explain why you rated the facilities this way: \_\_\_\_\_

5.	How would you rate the overall quality of this natural area? (Circle one number)
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Please explain why you rated it this way: \_\_\_\_\_\_

6. Please check the two main reasons you choose to visit THIS natural area instead of other places?

	To be in nature.	It's less crowded than other natural
It's close to home.		areas.
To get exercise.	For relaxation.	To develop my skills and abilities.
I feel safe here.	To escape from everyday	□ To spend time with friends or family.
	responsibilities or pressure.	
To learn about nature.	To feel better spiritually.	□ Other

7. Is there a particular City of Fort Collins Natural Areas site that you choose to no longer visit?

\_\_\_\_ No \_\_\_\_ Yes If yes, where? \_\_\_\_\_\_

If yes, why do you avoid this property?

#### Please tell us about yourself (All responses will be kept confidential).

8. Which best describes your gender?

🛛 Fema	le	Transgender Female		Gender non-conforming
🛛 Male		Transgender Male		Prefer to self- identify
9. What is yo	ur age?	(Years)		
10. What is yo	ur ethnicity?			
🗆 Hispa	nic/Latinx [	□ Non-Hispanic/Latinx	□ Prefe	r to self-identify

11. What is your race?

American Indian/Alaska Native	Asian	Black/African American
Native Hawaiian/Pacific Islander	□ White	Two or more races

12. What is your highest level of completed education?

Some High School or less	Graduated from High S	chool/GED
Associate degree	Bachelor's degree	□ Master's/Ph.D.

#### 13. What is your annual household income?

Less than \$24,999	□ \$50,000 to \$74,999	□ \$150,000 to \$199,999
□ \$25,000 to \$34,999	□ \$75,000 to \$99,999	□ \$200,000 or more
□ \$35,000 to \$49,999	□ \$100,000 to \$149,999	

14. What is your Zip Code for your PRIMARY residence?

If you live in Larimer County, how long have you lived here? \_\_\_\_\_\_(Years)

**COMMENTS**