

# **Final Report: Foothills Plan Survey Analysis**

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Photo Credit: Norm Keally, City of Fort Collins Natural Areas

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## Executive Summary

**Overview and Purpose** – Between April 10, 2019 and May 5, 2019, the City of Fort Collins Natural Areas Department (NAD) collected 1,664 surveys in response to the Foothills Natural Areas Management Plan Virtual Open House (surveys collected electronically and hard copy). With public interest and participation at a record high, a third party neutral categorization and summarization process was desired by the City of Fort Collins NAD to provide professional coding and unbiased results.

The purpose of this report is to summarize and thoroughly explain the high number of public comments received via open-ended survey feedback. The analysis of this data will inform the Impact and Decision Framework process, specifically the “Visitor, Stakeholder and Community Considerations” section.

**Method** – Survey responses were analyzed using constant comparison, a qualitative method well-suited for extracting key themes from data to better understand the phenomenon or object under investigation. Data was organized and coded using Nvivo qualitative software. Additionally, this software was used to generate ‘sunburst’ visualizations to visually explain the results.

**Results** – Results are briefly explained per survey question:

**Q3: Do you further understand the planning process (using the Impact and Decision Framework) that the Natural Areas Department will use to evaluate new visitor use opportunities?**

- Thirty-six respondents indicated yes, they do understand the planning process, while only 5 stated they do not. Perhaps of greater importance, though, is the majority of responses to this question focused on ‘trails’ and/or the approach the City should take (161 total comments). Eighty-eight respondents indicated that they want to see more trails including bike specific directional trails, multi-use trails, and connection of existing trails.

**Q5: Please indicate which you would prefer at Maxwell Natural Area – options include:**

**Option 1:** A new trail that separates hikers and horseback riders from mountain bikers

**Option 2:** Alternating days trail is open to mountain bikers and hikers/equestrians

**Option 3:** Keep current trail system as is with continued maintenance

- Analysis of comments revealed overwhelming support for Option 1 (286 respondents indicated they are in favor of this option)
- Further, 88 respondents indicated they are opposed to Option 2, while 19 respondents stated they would be in favor of alternating days for trail use

**Q7: Would you use a short loop interpretive trail in the foothills?**

- Analysis of comments revealed significant support for the addition of a short loop interpretive trail in the foothills (212 comments). Respondents shared that they would support this trail addition for the following reasons:
  - It would be nice for kids, elderly, inexperienced users, and visitors (33 comments)
  - It would help to ease congestion (25 comments)
  - A shorter place to hike would be beneficial as it would help provide greater accessibility and possibly diversify users (22 comments)

**Q10: Do you support discontinuing sledding at Pineridge Natural Area?**

- Analysis of comments revealed that many citizens did not know sledding was an option at Pineridge (67 comments) (and the City should advertise it better)
- A total of 92 respondents stated *no*—sledding should not be discontinued at Pineridge for these reasons:
  - Sledding is a fun pastime that should not be taken away from kids, families, and other users as there is a need for outdoor recreation during winter months (53 comments)
  - Confine the location where sledding is allowed at Pineridge (or limit the use period) *or* find a new location for the activity (20 comments)
  - No – do not discontinue it (no specific reasons provided) (14 comments)
- A total of 87 respondents stated *yes*—sledding should be discontinued at Pineridge for these reasons:
  - Discontinue it but find an alternate place for the activity (40 comments)
  - Discontinue due to ecological damage (39 comments)
  - Discontinue it (no specific reasons provided) (4 comments)
  - Discontinue it due to low use (3 comments)

**Q12: What else should City of Fort Collins Natural Areas consider in the future?**

- The most frequent comment shared in response to this question focused in some way on the topic of ‘trails’ (621 total comments were coded in this category). Analysis of comments revealed that citizens show immense support for the building of new trails (in part due to population growth) (436 comments). Some specific requests include:
  - Building in more trail connectivity (182 comments)
  - Building more mountain bike specific trails (63 comments)
  - Adding one-way or directional trails (26 comments)
  - Building trails that will accommodate all skill levels (15 comments)
  - Creating a beginner-friendly trail (12 comments)
  - Building more multi-use trails (9 comments)
- Further, respondents commonly shared that the City of Fort Collins should look at other successful trail systems (regionally or nationally) for ideas on how to improve (32 comments)
- The second most prominent category for this question was Ecological (133 comments). Within this category, respondents shared comments pertaining to:

- Development commentary such as negative opinions about the Hughes Stadium housing development and/or support for the City to acquire more land (64 comments)
- Conservation and/or preservation commentary (38 comments)
- Population growth remarks (e.g., impacts on the community) (12 comments)

\*For more detailed information about other categories that emerged in response to Question 12, see Figure 5 and Table 5)

**Q13: Is there anything else you’d like to share about the Foothills Trail, Reservoir Ridge, Maxwell, Pineridge, or Coyote Ridge natural areas?**

- Similar to Question 12, analysis of comments for Question 13 also revealed that ‘trails’ was the dominant category (331 total comments). Prominent sub-themes include:
  - Build more trails (182 comments)
  - Build more trail connections (52 comments)
  - Do not limit access to trails (43 comments)
  - Keep trails natural (i.e., do not sanitize) (35 comments)
  - A variety of trail types is good to accommodate multiple skill levels (23 comments)
  - Maintain or build more single track trails (15 comments)
  - Build more bike specific trails (13 comments)
- The second most prominent category for Question 13 was ‘Other,’ which was developed to encompass comments that did not fall into other categories. The dominant theme here was ‘positive comments’ with a total of 180 comments. Comments were broken into two sub-themes:
  - Enjoyment-oriented response (e.g., user enjoys using the trails, loves the trail system) (98 comments)
  - ‘Good job’ / ‘thank you’ (to the City of Fort Collins) – the user expressed that the City does a good job maintaining the trails, appreciation for the trail system, and/or appreciation for the opportunity to share feedback through the survey (82 comments)

\*For more detailed information about other categories that emerged in response to Question 13, see Figure 6 and Table 6)

**Conclusion** – To summarize the large amount of information that was collected through detailed analyses and interpretation of survey data, the City of Fort Collins NAD needs to foremost address the theme of ‘trails’ as it is incredibly prominent throughout responses to the above questions. In short, respondents expressed a strong desire for more trails: the addition of new trails (including a short loop and multi-use), the connection of existing trails, and the addition of trails designated for user groups.

# Introduction

## Project Overview

In 2019, the City of Fort Collins Natural Areas Department (NAD) began updating its management plan that applies to Coyote Ridge, Pineridge, Maxwell, and Reservoir Ridge natural areas and the Foothill Trails.

The plan includes goal setting and creating strategies to promote ecological integrity, protect natural and cultural resources, and connect people to nature. The process for developing the Foothills Plan also includes analyzing the existing management plan, evaluating visitor amenities (including trails), and facilitating a public engagement process.

The public engagement portion involves multiple activities to solicit feedback:

- On-site surveys at the Foothills Natural Areas
- Feedback from non-visitors:
  - This entailed Natural Areas staff seeking input from community members at the several locations in Fort Collins (King Soopers on Taft Hill Road, the Northside Aztlan Center, and the Fort Collins Boys & Girls Club). This effort to reach community members who don't often visit the Foothills Natural Areas is part of a larger NAD effort to connect underrepresented community members to nature.
- Stakeholder events
- A hike with a planner activity
- Two open houses
- A virtual open house available April 10, 2019 to May 5, 2019

Comments analyzed in this report were from the paper open house surveys and the virtual open house surveys, combined. This is not a statistically valid survey. Respondent demographics do not match the demographics of Fort Collins. Mountain bikers were over-represented (57% in the surveys analyzed here, while the City of Fort Collins intercept survey shows 19% (Vaske, 2019 – see Table 7, p. 11).

The final management plan is set to be released in early fall 2019. To achieve the outcomes described in the plan, a handful of specific projects will be outlined for accomplishment in the next 1-3 years (how best to manage the Maxwell trail; the possible construction of a short loop trail; and, sledding at Pineridge Natural Area).

To evaluate visitor amenities as well as facilitate public engagement, the NAD conducted a virtual open house wherein respondents were asked to share feedback regarding their use of and opinions about the future of the trail systems managed by the NAD. Comments gathered through the virtual survey will inform the Impact and Decision Framework process, specifically the “Visitor, Stakeholder and Community Considerations” section.

## Purpose Statement

The purpose of this report is to summarize and make understandable the high number of public comments received in response to the Foothills Natural Areas Management Plan Virtual Open House and open house surveys (n=1,664).

## Method

A total of 1,664 surveys were received from physical and virtual open houses. The survey included multiple choice options followed by an opportunity to comment (see Appendix A for an example of the survey). A total of 2,657 comments were received in response to the 6 survey questions wherein respondents were asked to share open-ended feedback. Survey questions are included in the Results section.

## Data Analysis

Comments in response to these questions were coded using constant comparison, a qualitative method that can be useful when the researcher's goal is to extract key themes from the data to form a better understanding of the phenomenon or object under investigation. The method is often used in studies that deal with observations, interviews, documents, articles, and books (Glaser & Strauss, 1965, p. 438).

Constant comparison takes an inductive approach as it allows themes or patterns to emerge from the data. Generally, data will be broken into units of analysis as appropriate for the topic being studied. In the case of this research, units of analysis consisted of individual comments per survey question.

During the coding process, the researcher must delineate each category's "core properties" by revisiting the data multiple times (Lindlof & Taylor, 2002, p. 219). It is important to note that during this process some comments may be excluded from coding due to a lack of relevance or for being an outlier (i.e., comment does not relate to the question or idea in focus) (see Lindlof & Taylor, 2002, p. 219).

Below is a breakdown of the steps taken to analyze survey comments for this research:

1. **Data immersion and code categorization** – The researcher began by immersing herself in the data to understand dominant themes and sub-themes associated with each survey question. Known as open coding (Strauss & Corbin, 2008), this phase involved reading and comparing comments to form a general sense of what participants shared in response to each question. This involved highlighting key themes that emerged during the initial review to determine overarching codes and sub-codes (i.e., themes). This phase culminated in a preliminary list of codes to be reviewed by staff working on the Foothills Plan at the City of Fort Collins NAD. The goal of this review was to ensure the appropriate level of detail was captured in the coding.

2. **Elaboration and refinement of codes** – Feedback from the NAD requesting a higher level of detail was incorporated to form the final list of codes. During this phase, the researcher returned to the initial list of codes to re-examine relationships among concepts and ensure the necessary coding details were included. This phase of coding is known as axial coding and involves data being “pieced together in new ways...allowing connections between categories” (Strauss & Corbin, 2008 as cited in Kolb, 2012).
3. **Simplifying and integrating data into a coherent structure** – The final stage of coding is known as selective coding (Strauss & Corbin, 2008), which involves fine-tuning the codes into their ultimate categories (consisting of codes and sub-codes). Eventually, the total number of codes levels out as most concepts are accounted for. The end result is a list of categories the researcher can use as he/she begins to interpret the findings. Engaging in this detailed process allows the researcher to ‘feel’ the data. In other words, to understand the relationship between themes that emerged during analysis and provide a coherent picture to represent the findings (Johnson, 2017).

## Coding Software

To organize and analyze the mass amount of data for this project, the researcher used Nvivo qualitative software. This software is especially helpful for organizing and analyzing mass amounts of data—an excellent tool for examining and interpreting the thousands of comments received for this project. It also useful for coding at the ‘granular’ level (i.e., recording the very fine details) across a large amount of qualitative data. This software assists the researcher in moving beyond numeric or linear data to a more detailed picture of the phenomenon under study through its ability to aggregate numeric data and create helpful visualizations, which are included in the forthcoming Results section.

## Results

Results are listed by question and explained through a visualization as well as a table that breaks down the codes and sub-codes (i.e., theme categories) into frequencies.

**Note:** Comments that only appeared one or two times (excluding those wherein the respondent posed a question) are not included in the forthcoming tables (see Appendix B for a list of these comments). These low frequency comments are, however, counted toward the overall code frequency. The researcher used the code aggregation function within Nvivo that allows codes to be organized in a hierarchical manner, a valuable approach when working with a large amount of data.

Nvivo encourages thinking in a familial generation terms to designate codes. Below is an overview of how codes are categorized hierarchically in Nvivo:

- Overarching theme = *grandparent* code
  - Sub-theme = *parent* code

- Sub-sub theme = *child* code
  - Sub-sub-sub theme = *grandchild* code
    - Sub-sub-sub-sub theme = *great grandchild* code

For this project, the researcher primarily focused on grandparent, parent, and child codes. The sunburst visualizations below include grandparent and parent codes, while the tables feature more detailed code levels including child and/or grandchild.

Further, it is important to mention that one comment may be coded at multiple codes. A comment may fall into more than one category therefore resulting in a higher number of coded comments in comparison to the number of comments received. For example, Question 5 received 511 responses but has 534 codes. This is because some responses were dual-coded.

## Survey Results

**Question 3:** Do you further understand the planning process (using the Impact and Decision Framework) that the Natural Areas Department will use to evaluate new visitor use opportunities? Yes | No | Somewhat | I don't know

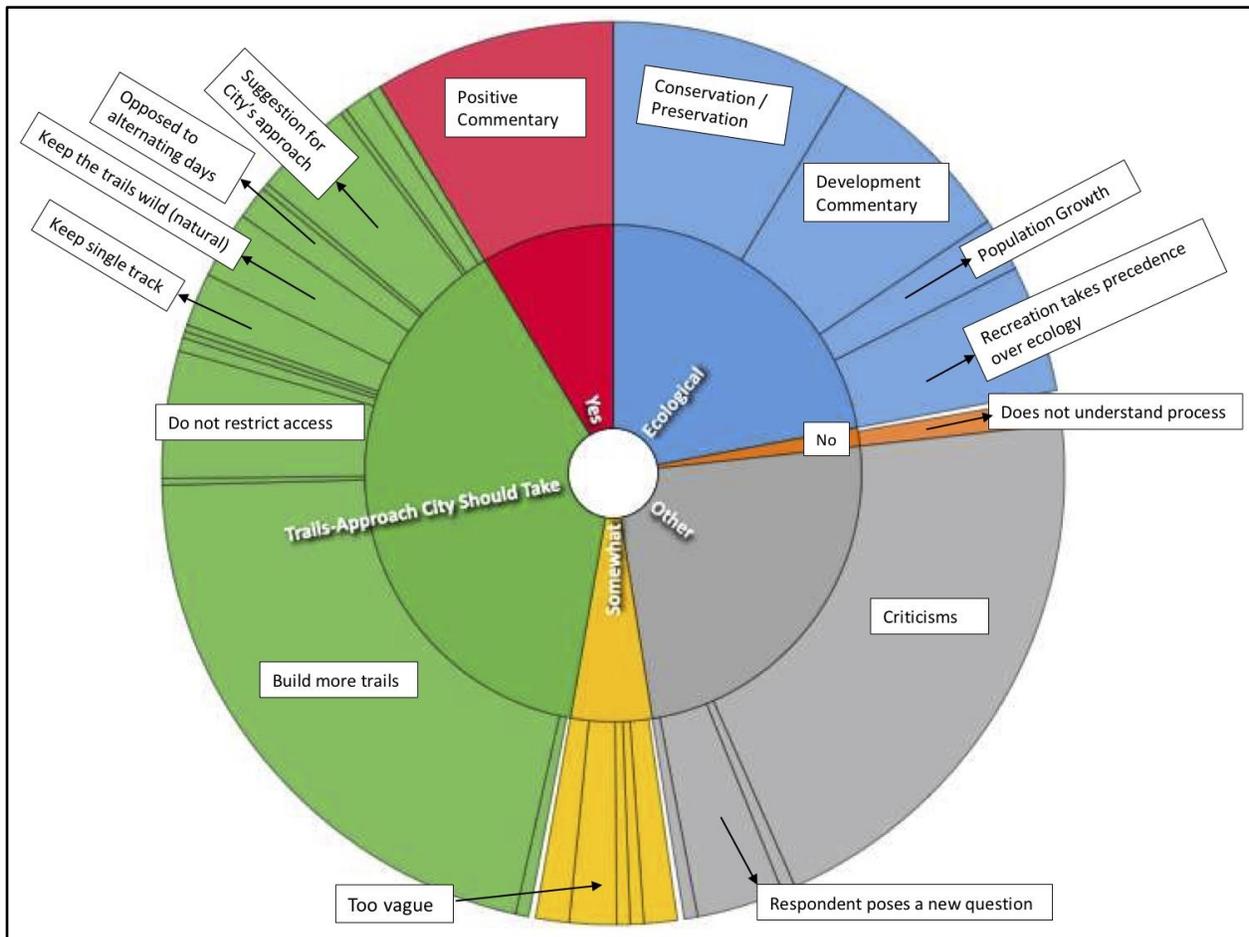


Figure 1: Sunburst visualization of dominant codes for Question 3

<b>Question 3: Code Breakdown</b>	<b>Code Frequency</b>
<b>Trails / approach City should take</b>	<b>161</b>
• Build more trails	88
○ Build bike specific directional trails	17
○ Build multi-use trails	11
○ Connect existing trails	9
• Do not restrict access	19
• Keep the trails wild (natural)	10
• Keep single track	8
• Opposed to alternating days	5
• Suggestion for the City's approach	15
• Commentary about using professional trail builders, ecological data, scientific literature to use for decision-making, survey updates, etc.	10
○ Look at methods implemented in other counties	5
• Support the stance of the Overland Mountain Bike Club	4
<b>Other</b>	<b>101</b>
• Criticisms	84
○ Meeting or presentation	35
▪ Slides or poster	12
▪ Jargon	8
○ City's approach	23
○ Survey	20
▪ Data measurement or weighting	17
○ Public voices not being heard or heeded	4
○ Impact and decision framework is 'dumb' / hard to understand	2
<b>Ecological</b>	<b>92</b>
• Conservation / Preservation	36
• Development commentary	29
• Recreation takes precedence over ecology	19
• Population growth commentary	8
<b>Yes</b>	<b>36</b>
• Positive commentary	36
• Planning and evaluation efforts	13
<b>Somewhat</b>	<b>22</b>
• Too vague or general	7
• Process described – detailed documentation should be provided to the public	5
• Understand the 'big' question but not the process	5
• Thank you for conducting this survey and/or listening to the public	8
<b>No</b>	<b>5</b>
• Do not understand the process	5

*Table 1: Breakdown of dominant codes and frequencies for Question 3*

**Question 5:** Please indicate which you would prefer at Maxwell Natural Area – options include:

Option 1: A new trail that separates hikers and horseback riders from mountain bikers

Option 2: Alternating days trail is open to mountain bikers and hikers/equestrians

Option 3: Keep current trail system as is with continued maintenance

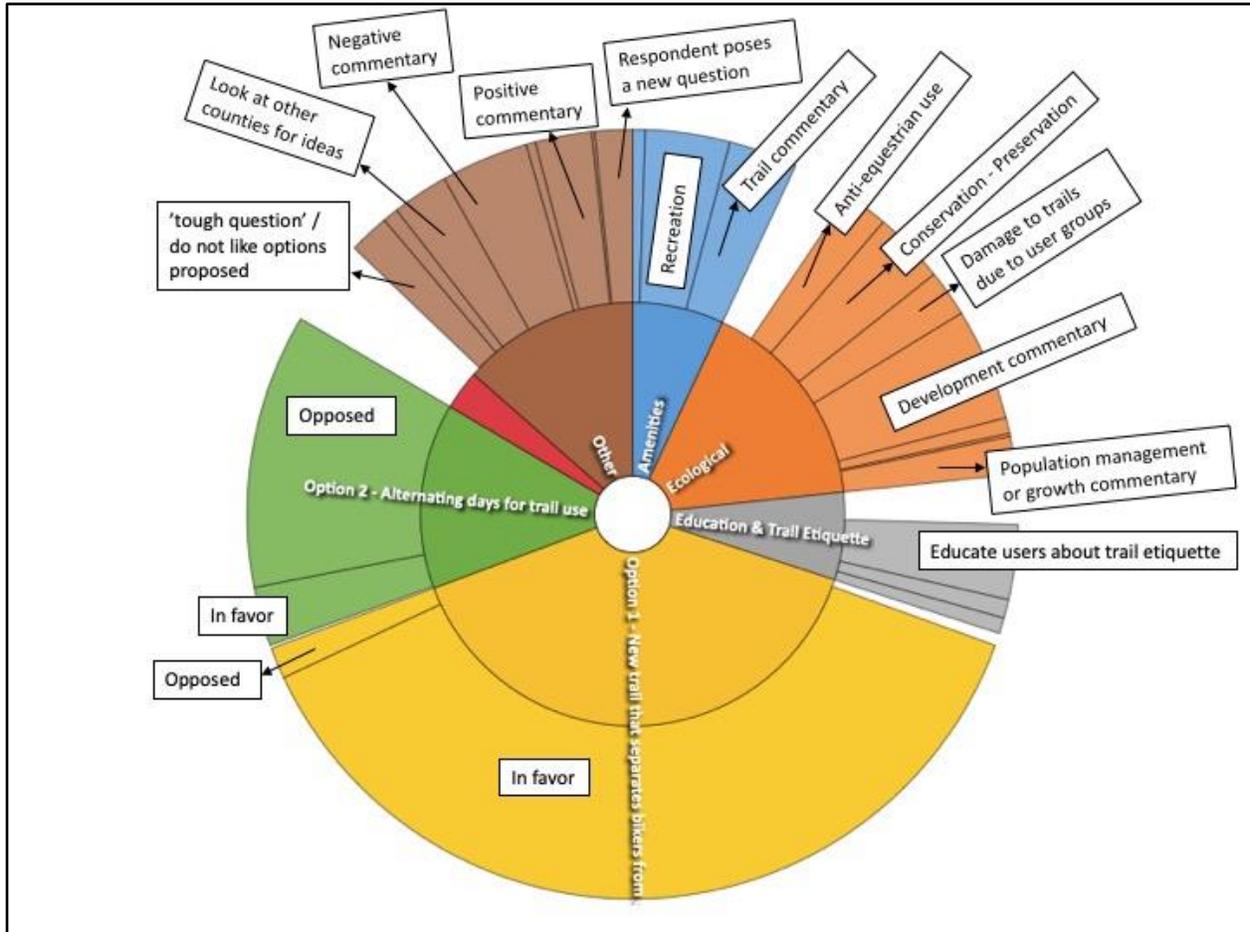


Figure 2: Sunburst visualization of dominant codes for Question 5

Question 5: Code Breakdown	Code Frequency
<b>Option 1: New Trail</b>	<b>300</b>
• In favor	286
○ Build more trails	201
▪ Build a separate and-or directional trail	70
▪ Connect existing trails	13
▪ Add easier trails	6
○ Create use and/or direction specific trails	42
▪ Build bike specific trails	26
○ Inclusive access – new trails open to all users at all times	24
○ Support for Overland Mountain Bike Club’s approach / utilize their services	7
• Opposed	10
○ Do not add new trails	8
○ Other comments that indicate not in favor of new trails (e.g., “we already have enough”; “a separate trail will only cause confusion and lead to more frustration”)	2
<b>Ecological</b>	<b>125</b>
• Development commentary (e.g., Hughes Stadium development)	36
• Conservation / Preservation	23
• Damage to trails due to user groups	15
• Anti-equestrian use	14
○ Equestrian waste rules	7
• Population management or growth commentary	12
• Dog leash rules	5
<b>Option 2: Alternating Days of Use</b>	<b>108</b>
• Opposed	88
○ Opposed to alternating days	88
• In favor	19
○ Support for alternating days	14
<b>Other</b>	<b>103</b>
• Negative Commentary	28
○ Opposed to the City’s approach	10
▪ Lack of support for mountain bikers	5
○ Survey and/or presentation commentary (disappointed in presentation; negative remarks about survey methodology [e.g., seemed biased, administered at a bad time])	9
○ Criticism of the amount of trail built in the last 12 years	7
• Look at other counties for ideas on how to address the issue(s)	18
• “Tough question” / do not like the options proposed	13
• Positive Commentary	18
○ Respondent has not experienced conflict while using the trails	13
• Respondent poses a new question (does not address the question being asked)	12
○ Can you get more rangers to occasionally patrol the trails?	1
○ Could you consider building a trail along the road to prevent more habitat fragmentation but also provide access to the road/reservoir?	1
○ Did you consider the degree to which people do not attempt to use the resource because they know it will be too busy?	1

○ Does this plan address crowding usage at other areas?	1
○ How will split days be used and managed?	2
○ Need more information – need to learn more about Maxwell options	2
○ Where will users go on alternate days – won't that hurt other already crowded areas? Is there a way to connect to other existing areas nearby to spread out visitors?	2
<b>Amenities</b>	<b>53</b>
• Recreation	27
○ Trail commentary	22
▪ Keep trails natural (do not widen or sanitize)	17
• Parking commentary	4
<b>Option 3: Keep trail as it is</b>	<b>23</b>

Table 2: Breakdown of dominant codes and frequencies for Question 5

**Question 7:** Would you use a short loop interpretive trail in the foothills?

Yes | No | Somewhat | I don't know

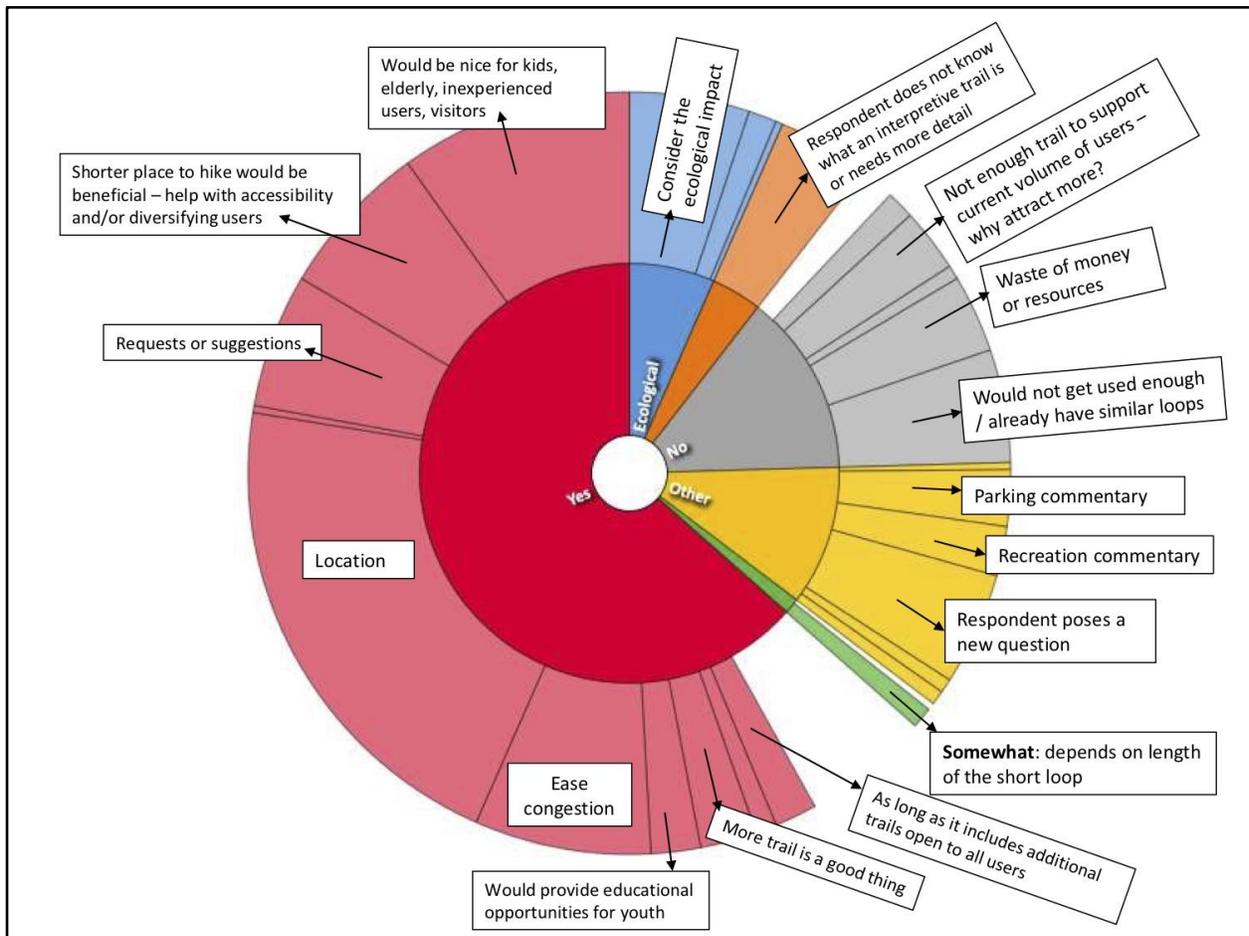


Figure 3: Sunburst visualization of dominant codes for Question 7

<b>Question 7: Code Breakdown</b>	<b>Code Frequency</b>
<b>Yes</b>	<b>212</b>
<ul style="list-style-type: none"> <li>• Location / Trail Specifications *See further explanation below</li> </ul>	70
<ul style="list-style-type: none"> <li>○ Maxwell</li> </ul>	21
<ul style="list-style-type: none"> <li>○ Pineridge</li> </ul>	15
<ul style="list-style-type: none"> <li>○ Reservoir Ridge</li> </ul>	6
<ul style="list-style-type: none"> <li>○ Any location is fine</li> </ul>	6
<ul style="list-style-type: none"> <li>○ Preference for longer trails</li> </ul>	5
<ul style="list-style-type: none"> <li>○ Coyote Ridge</li> </ul>	4
<ul style="list-style-type: none"> <li>○ Trail should be close to town for easy access</li> </ul>	4
<ul style="list-style-type: none"> <li>○ New trail location should be based on least amount of environmental invasion</li> </ul>	3
<ul style="list-style-type: none"> <li>• Would be nice for kids, elderly, inexperienced users, visitors</li> </ul>	33
<ul style="list-style-type: none"> <li>• Ease congestion</li> </ul>	25
<ul style="list-style-type: none"> <li>• Shorter place to hike would be beneficial – help with accessibility and/or diversifying users</li> </ul>	22
<ul style="list-style-type: none"> <li>• Requests or suggestions</li> </ul>	19
<ul style="list-style-type: none"> <li>○ Trail logistics and/or connectivity</li> </ul>	4
<ul style="list-style-type: none"> <li>○ To diversify user group, ensure there is convenient public transportation and promote across various economic and social communities</li> </ul>	3
<ul style="list-style-type: none"> <li>○ Resources should be put toward advanced opportunities and trail connectivity</li> </ul>	3
<ul style="list-style-type: none"> <li>○ Short loop trail should be wheelchair accessible</li> </ul>	2
<ul style="list-style-type: none"> <li>○ Allow dogs on leash at Coyote Ridge</li> </ul>	1
<ul style="list-style-type: none"> <li>○ Build more single track</li> </ul>	1
<ul style="list-style-type: none"> <li>○ Look at other locations for ideas on traffic management</li> </ul>	1
<ul style="list-style-type: none"> <li>○ Sponsor a meet-up group for people interested in exploring natural areas</li> </ul>	1
<ul style="list-style-type: none"> <li>○ Consolidate and restructure trail system at Pineridge</li> </ul>	1
<ul style="list-style-type: none"> <li>○ Short loop trails should be closed to horses and mountain bikes</li> </ul>	1
<ul style="list-style-type: none"> <li>○ Add family picnic area</li> </ul>	1
<ul style="list-style-type: none"> <li>• Building more trail is a good thing</li> </ul>	8
<ul style="list-style-type: none"> <li>• Building a short loop would provide the youth with educational opportunities</li> </ul>	7
<ul style="list-style-type: none"> <li>• As long as it includes additional trails open to all users</li> </ul>	6
<b>No</b>	<b>47</b>
<ul style="list-style-type: none"> <li>• Would not get used enough – have similar loops already</li> </ul>	16
<ul style="list-style-type: none"> <li>• Waste of money / resources</li> </ul>	11
<ul style="list-style-type: none"> <li>• Not enough trail volume to support current users – why build more to attract more users?</li> </ul>	9
<ul style="list-style-type: none"> <li>• Insufficient parking to support additional users</li> </ul>	4
<b>Somewhat</b>	<b>4</b>
<ul style="list-style-type: none"> <li>• Depends on length of the short loop</li> </ul>	3
<b>Other</b>	<b>36</b>
<ul style="list-style-type: none"> <li>• Parking commentary (build more, expand existing, ease congestion in busy lots)</li> </ul>	8
<ul style="list-style-type: none"> <li>• Recreation commentary</li> </ul>	7
<ul style="list-style-type: none"> <li>• Respondent poses a new question (does not answer question being asked) or makes request</li> </ul>	16

○ Is the short loop open to mountain bikers and trail runners?	2
○ Respondent needs to see a map (of potential trails) to form an opinion	2
○ How short is short	2
○ Is it possible to balance ecological impacts while also increasing amount of trail?	1
○ Would this be with signs to describe flora, fauna, and habitat information?	1
○ What are the benefits?	1
○ Where is Bobcat Ridge?	1
○ How do you know what would attract diverse visitors? Who is your target audience?	1
○ In favor of an interpretive trail with increased wildlife opportunity for habitat work for prairie dogs	1
○ Is this high on the list of what users are asking for?	1
○ What would be interpreted – geology, animal, insect, cultural, etc.?	1
○ Doesn't Coyote Ridge already have an interpretive trail?	1
<b>Ecological</b>	<b>22</b>
● Consider the ecological impact	17
● Hughes Stadium development commentary (negative feedback [e.g., 600-700 new homes will greatly impact traffic at Maxwell; wildlife and trail recreation will be forever impacted in a very negative way])	4
<b>I don't know</b>	<b>13</b>
● Respondent did not know what interpretive trail is or needed more detail	13

Table 3: Breakdown of dominant codes and frequencies for Question 7

\*In regard to desired location for a short loop, respondents had two outlets through which they could provide feedback. The survey included a 'radio button' style question wherein respondents were prompted to indicate their location preference. Additionally, respondents could provide written feedback about location in the open-ended comment portion of the survey.

The table below compares 'radio button' feedback to the written feedback portion (which is also included in Table 3).

Location	Radio Button Totals	Written Feedback Totals
Pineridge	322	15
Reservoir Ridge	319	6
Maxwell	318	21
Coyote Ridge	303	4

**Question 10:** Do you support discontinuing sledding at Pineridge Natural Area?

Yes | No | Somewhat | I don't know

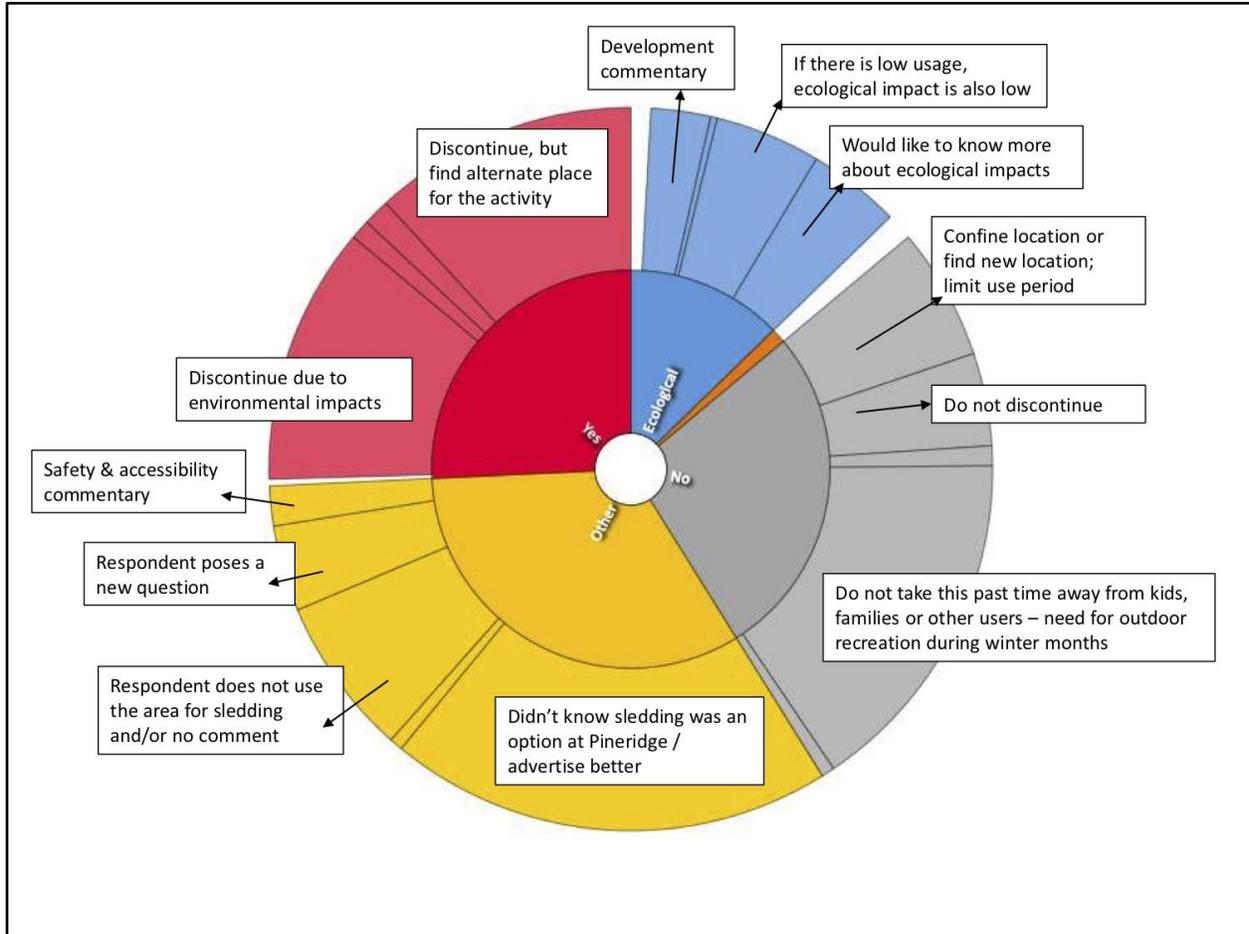


Figure 4: Sunburst visualization of dominant codes for Question 10

<b>Question 10: Code Breakdown</b>	<b>Code Frequency</b>
<b>Other</b>	<b>112</b>
• Didn't know sledding was an option / advertise better	67
• Respondent does not use the area for sledding and/or has no comment	24
• Respondent poses a new question	13
○ Would discontinuing it actually curtail use?	1
○ Why would this (sledding) need to be discontinued?	1
○ Where can information about parking and management be found?	1
○ Does this mean the Stadium detention pond?	1
○ How low is usage?	1
○ Location questions	8
▪ Where is the sledding going to be?	2
▪ Where else would kids sled in town?	2
▪ Where else can someone find a decent sledding hill?	2
▪ Where at Pineridge can you sled? Witnessed people get a ticket for it	1
▪ Is sledding confined to one location?	1
• Safety and accessibility commentary	6
• Dog rules	2
○ Unleashed dogs make more of an impact	1
○ Allow dogs off leash at Pineridge to swim at least one week per month	1
<b>No</b>	<b>92</b>
• Do not take this pastime away from kids, families & other users – need for outdoor recreation during winter months	53
• Confine location or find new location; limit use period	20
• Do not discontinue	14
<b>Yes</b>	<b>87</b>
• Discontinue, but find an alternate place for the activity	40
• Discontinue due to ecological damage	39
• Discontinue it	4
• Discontinue it due to low use	3
<b>Ecological</b>	<b>43</b>
• If there is low usage, ecological impact is also low	16
• Would like to know more about ecological impacts	14
• Development commentary	9
○ Hughes Stadium housing development (negative commentary – respondents opposed to the development and impacts it may have on natural areas)	8
<b>I don't know</b>	<b>4</b>
• Not enough data provided in the report to make a decision	1
• Not fully aware of sledding issue	1
• Tough call – prohibiting at one natural area makes it hard to prohibit at others	1
• Sledding can be detrimental to the land – but with lack of snow in recent years, hard to make a firm decision	1
<b>Somewhat</b> – no data coded	-----

Table 4: Breakdown of dominant codes and frequencies for Question 10

**Question 12:** What else should City of Fort Collins Natural Areas consider in the future?

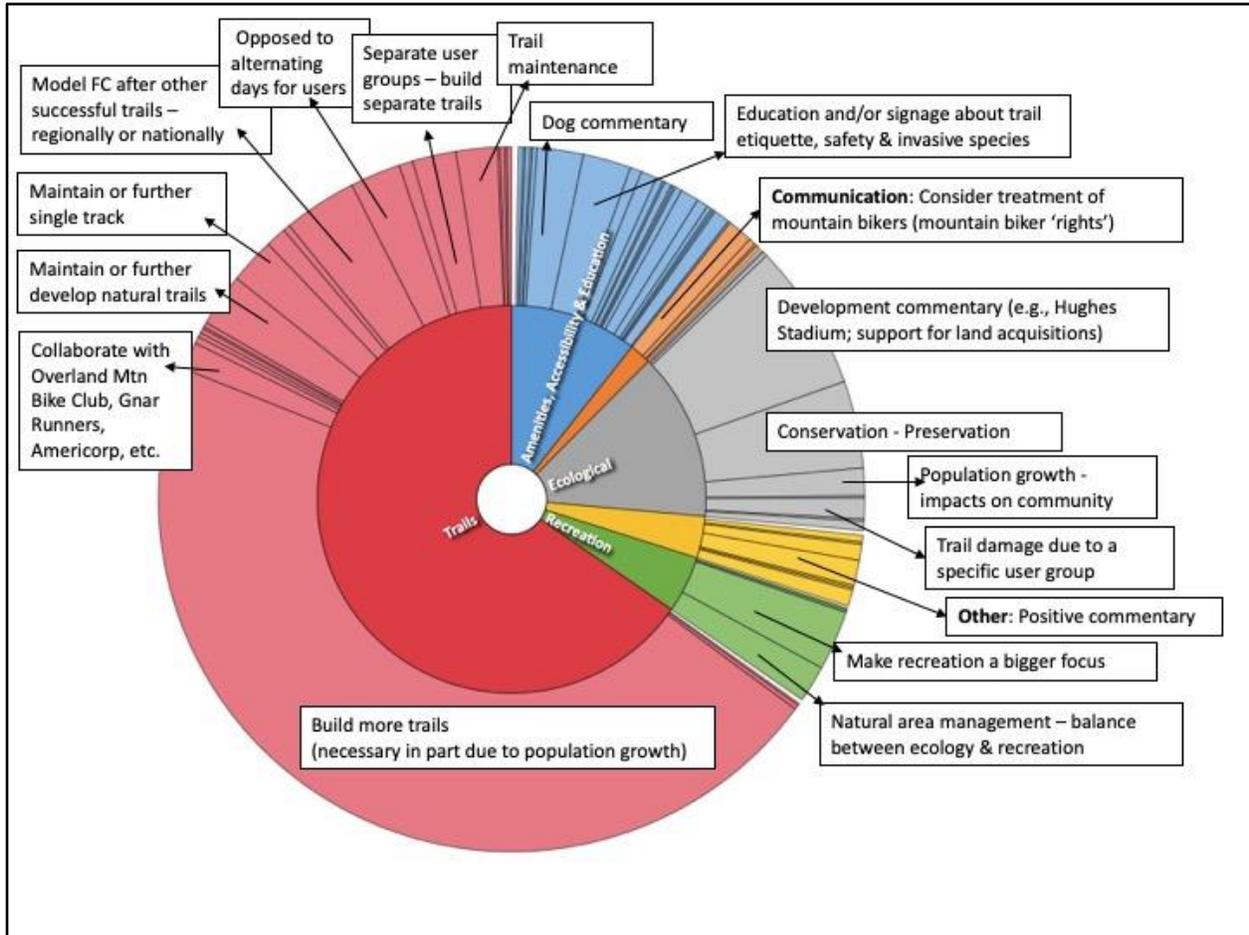


Figure 5: Sunburst visualization of dominant codes for Question 12

<b>Question 12: Code Breakdown</b>	<b>Code Frequency</b>
<b>Trails</b>	<b>621</b>
• Build more trails (in part due to population growth)	436
○ Build in more trail connectivity	182
○ Build more mountain bike specific trails	63
○ Add one-way or directional trails	26
○ Build trails that will accommodate all skill levels	15
○ Create a beginner-friendly trail	12
○ Build more multi-use trails	9
• Model Fort Collins after other successful trails – regionally or nationally	32
• Maintain or further develop natural trails	23
• Opposed to alternating days for users proposal	22
• Trail maintenance	21
○ Trail building and/or maintenance through volunteers	14
○ Consider a user fee, parking pass, and/or required volunteer hours for trail maintenance	3
○ More trail maintenance	2
• Maintain or further develop single track trails	20
• Separate user groups – build separate trails	19
• Collaborate with Overland Mountain Bike Club, Gnar Runners, AmeriCorps, etc.	12
• Make a jump bike park	9
• Provide or improve the trail rating system	6
• Minimize the introduction of new trails – maintain those that exist	3
• Widen trails	2
• Use same closure policy as Lory State Park	2
• Enforce wet condition closures	2
• Do not close trails when muddy – let users decide whether to use	2
• Consider the user and how the trail system can be most enjoyed by its various users	2
• Consider a user fee, parking pass, and/or required volunteer hours for trail maintenance	2
<b>Ecological</b>	<b>133</b>
• Development commentary (e.g., anti-Hughes Stadium, support for more land acquisitions)	64
• Conservation – Preservation	38
• Population growth (impacts on community)	12
• Trail damage due to a specific user group (‘finger pointing’)	9
• Wildlife management and/or restoration	4
• Anti-equestrian use	2
<b>Amenities, Accessibility &amp; Education</b>	<b>101</b>
• Education and/or signage about trail etiquette, safety & invasive species	21
• Dog commentary	20
○ Dog rules – enforcement of leash rules; waste removal enforcement	15
○ Dog park location	2
• Parking commentary	11

○ Build more parking lots	6
● Install water stations, bike maintenance stations, bathrooms, and benches (for older users)	3
● Hire more full-time rangers / patrol areas more heavily	7
● Safety commentary (e.g., high mph speeds on roads bikers must use)	7
● Encourage youth to use natural areas (improve outreach efforts)	5
● Provide additional transportation opportunities to help those without vehicles (minimize footprint)	5
● Improve and/or provide maps for users (trails & markers)	3
● Consider financial constraints of under-represented community members	2
● Build more bike lanes	2
● Additional volunteer service groups for trail maintenance & ecological surveys	2
● Provide an app that features trail closure, interpretive information, etc.	2
<b>Recreation</b>	<b>45</b>
● Make recreation a bigger focus (e.g., open space, fishing, place for solitude)	26
● Natural area management – find a balance between ecology & recreation	16
<b>Other</b>	<b>33</b>
● Respondent poses a new question	7
○ Biggest challenge is population growth – what options are there other than continued acquisition?	1
○ How can recreation and ecology be managed together without increased development?	1
○ How can people volunteer to help with meeting the goals of the natural area?	1
○ If that huge development goes in next to Maxwell, will other trails survive?	1
○ Is it possible to add a potable water source at a foothills location?	1
○ What will our city look like in 50, 100 years - how can we maintain natural areas with urban pressures?	1
○ Will redirecting usage to those trails help keep maintenance costs down by spreading things out?	1
● Positive commentary	11
○ What you've proposed are good considerations	3
○ Thank you for reaching out to communities / listening to feedback	2
● Negative commentary	7
○ Survey or meeting commentary or criticism	5
▪ Criticism of plan – needs revision	2
○ Hire consultants to help with trail planning – City doesn't "get it"	3
<b>Communication</b>	<b>17</b>
● Consider treatment of mountain bikers (i.e., mountain biker 'rights')	11
● Share meeting summaries and additional information	3

Table 5: Breakdown of dominant codes and frequencies for Question 12

**Question 13:** Is there anything else you'd like to share about the Foothills Trail, Reservoir Ridge, Maxwell, Pineridge, or Coyote Ridge natural areas?

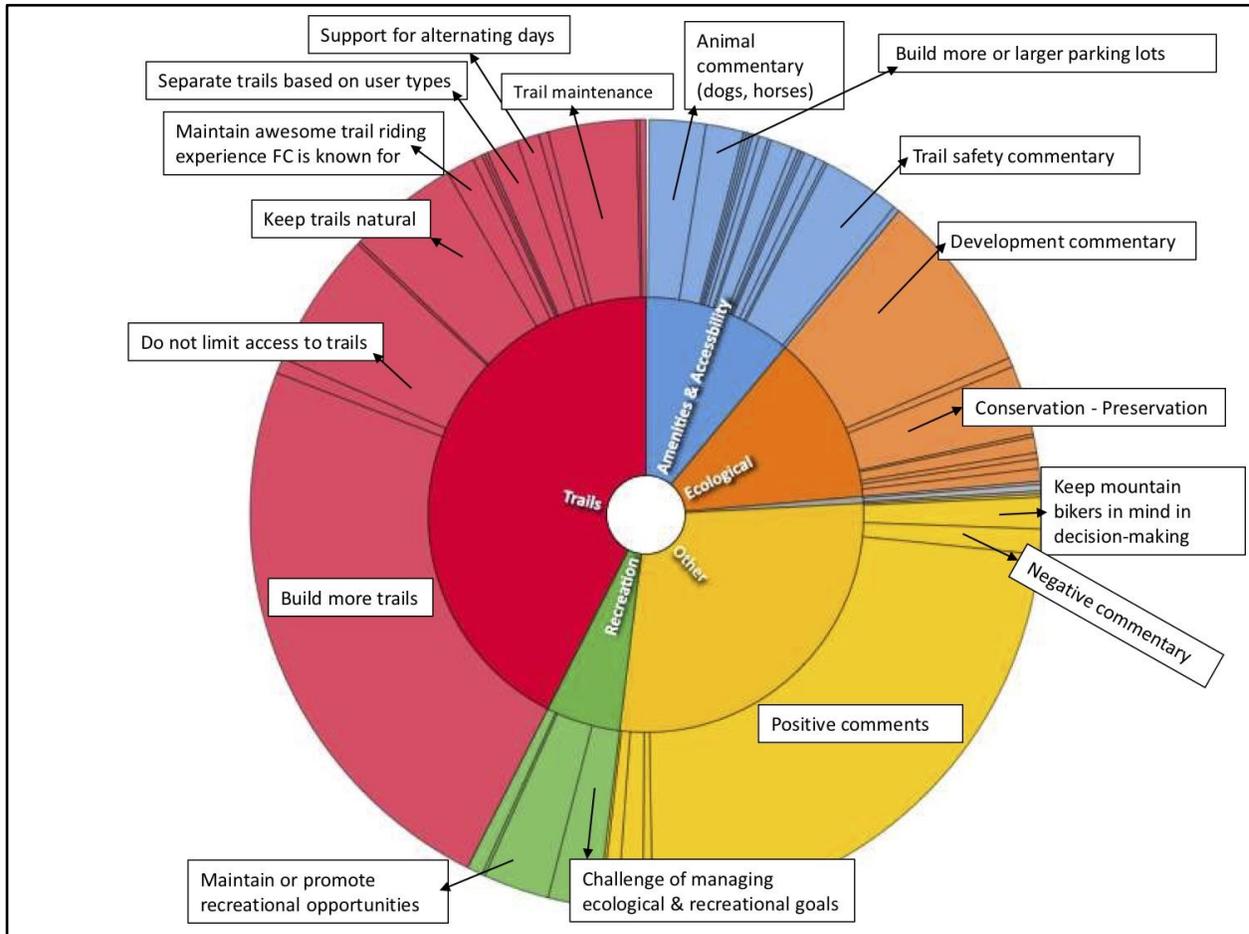


Figure 6: Sunburst visualization of dominant codes for Question 13

<b>Question 13: Code Breakdown</b>	<b>Code Frequency</b>
<b>Trails</b>	<b>331</b>
• Build more trails	182
○ Build more trail connections	52
○ A variety of trail types is good (i.e., for multiple skill levels)	23
○ Maintain or build more single track trails	15
○ Build more bike specific trails	13
○ Improve trail design	7
○ Provide more access to trails from town	5
○ Build directional trails for hikers and bikers	5
○ Build more multi-use trails	4
• Do not limit access to trails	43
• Keep trails natural (i.e., do not sanitize)	35
• Trail maintenance and/or impact to trails	28
○ Do more outreach to promote trail building & maintenance	10
○ Mountain bike community will donate time to build trails	6
○ Seek expert opinion on trail building & maintenance	4
• Separate trails based on user types	10
• Maintain awesome trail riding experience that Fort Collins has become known for	9
• Support for the proposal of alternating days (i.e., separate use)	7
• Close trails when conditions are poor (e.g., muddy)	5
• Support of Overland Mountain Bike Club’s proposal	3
• Model Fort Collins trails after other successful trails – regional or national	3
• e-bike commentary (i.e., do not allow; educate users on trail rules)	2
<b>Other</b>	<b>216</b>
• Positive comments	180
○ Enjoyment-oriented response (e.g., enjoy using the trails, love the trail system)	98
○ ‘good job’ / ‘thank you’ (e.g., good job maintaining trails; appreciation for trail system; appreciation for opportunity to share feedback)	82
• Keep mountain bikers in mind in decision-making	10
• Respondent poses question	8
○ Can rangers better enforce the mountain bike use to ensure limiting damage to trails?	1
○ Could these areas have a different focus– why does one size have to fit all?	1
○ Could you include CSU Center for Public Deliberation to help resolve the issue?	1
○ How will Hughes development impact land and wildlife?	1
○ If you build trails close together, but with different purposes, will this reduce ecosystem fragmentation?	1
○ Increase in users due to Hughes development – what are your plans to prevent overuse?	1
○ Is there any area to build a bike park?	1
• Negative comments	8
○ Survey or meeting commentary (e.g., poor timing; JPEG images poor quality)	4
○ Disappointed with land management (e.g., lack of trail added)	3
• Trails belong to all users – consider all perspectives in decision-making	5

<b>Ecological</b>	<b>98</b>
• Development commentary	58
○ Hughes Stadium housing development (acquisition commentary)	31
○ Population growth (impact on community)	25
• Conservation / Preservation	27
○ Limit use to reduce ecological impact	5
• Wildlife impacts / monitoring	4
• Trail damage due to horses	3
• Do not build more trails	3
<b>Amenities &amp; Accessibility</b>	<b>86</b>
• Trail Safety Commentary	25
○ Provide more education and signage about trail use & etiquette	17
○ Signage about rattle snake safety; phone number to call for rattle snake removal	2
○ Mountain bikes are a hazard	3
• Animal Commentary	18
○ Dog leash rules	6
○ Animal waste issue	6
○ Horse waste removal & enforcement	2
○ Allow dogs at Coyote Ridge	2
• Build more and/or larger parking lots	12
• More rangers on the trails for enforcement and education	7
• Provide shuttles or busses to access trailheads	4
• Require a user fee	3
• Install parking lot and trailhead web cams	3
<b>Recreation</b>	<b>43</b>
• Maintain and/or promote recreational opportunities	21
• Challenge of managing ecological & recreational goals	16
• Provide more (do not decrease) open space	5
<b>Education, Community, and Youth Outreach</b>	<b>4</b>
• Increase outreach to youth and under-represented groups	2

Table 6: Breakdown of dominant codes and frequencies for Question 13

## Discussion

The discussion includes the overall interpretations the researcher generated after thorough analysis of all survey commentary as well as examples of survey comments to provide context. It is again organized per question.

### ***Question 3: Do you further understand the planning process (using the Impact and Decision Framework) that the Natural Areas Department will use to evaluate new visitor use opportunities?***

Although Question 3 asked respondents to share whether they understand the planning process the NAD will use to evaluate new visitor use opportunities, responses to this question focused foremost on the topics of trails and the approach the City should take. Comments demonstrate that there is overwhelming support for the addition of trails (this surfaced as the most dominant sub-theme with 88 comments). In particular, bike specific directional trails, multi-use trails to split user groups, and connection of existing trails. Moreover, there is noticeable opposition to the idea of trail access being restricted (19 comments). For instance, one respondent said, “Given the recent and projected growth in trail use, I recommend additional trails to separate mountain bikers from hikers and walkers...in a way that preserves natural habitat.” Another stated: “I think more multi-use trails are an imperative to maintaining our quality of life here in FOCO.”

Comments that were coded as ‘other’ (developed to encompass a variety of comments that did not fit into the other categories) emerged as the second most frequent (101 total comments). Ranking highest within this category is criticisms, which accounts for comments that criticized the City and its approach, the survey, open house, and/or the presentation slides. Additionally, this theme includes comments that featured a question (as opposed to a response to the question being asked – see Table 1 for a full list of the questions). Below are several comments to further explain this theme:

This is overly simplistic and just a list of categories and data sources and not a ‘framework,’ which is a basic structure underlying a system. So, I suggest that TCNA consider discussing/presenting this in more detail, e.g., how elements within categories are compared, ranked and weighted, how shared with public, how public input is considered and communicated.

I understand the inputs that you are considering in your decision-making process and as a natural resource manager myself I realize the many different aspects that need to be taken into consideration in making your management plan however the slide show did not really discuss how you will quantify each of you inputs to help make your management plan decisions.

I understand the framework. I don't understand the logic behind the framework. Ecological considerations have the most weight. Why? How much more weight? Why are Community considerations not higher? Or Visitors?

Ecological considerations emerged as the third most prominent theme (92 comments) with a large focus on conservation and/or preservation efforts as well as negative feelings toward residential development at Hughes Stadium. A total of 36 comments focused on conservation and preservation of the environment. Below are two comments to demonstrate sentiments that were coded for this theme:

As an outdoor enthusiast I absolutely value the ecological impact of visitors. I hope that we can minimize this impact whilst allowing access for all to include mountain bikers. I supported to keep the tax to support our natural areas, I would hate to not be able to then utilize those natural areas.

I would prefer to see fewer trails through our natural areas. Even if that means heavier use on existing and planned trails. I would also prefer the trails to not fragment the landscape or traverse through sensitive areas / habitats.

Two sub-themes within ecological include development commentary (i.e., Hughes Stadium housing development) (29 comments) and population growth (8 comments). In general, respondents expressed negative comments toward these ideas. For instance:

What is the impact if 600 plus homes are placed in the existing open space of the former Hughes stadium? This development would seriously impact the natural corridor for eternity. The city needs to buy this parcel for the future of the wildlife and recreational opportunities.

With this decision framework taking place is anyone on the Fort Collins council paying attention to the fact that the city wants to build a development of 600-700 homes right in the heart of this natural area.

I am more concerned about the process & decision framework for additional development! Surely 700 new homes near the confluence of these natural areas has MORE impact overall than a two-foot margin bordering single-track!

Lastly, the idea that recreation takes precedence over ecology came through as the third most prominent sub-theme (19 comments). This theme encompasses the idea that respondents value their opportunity to recreate more than the potential ecological damage that could be caused, or at the very least, the City should make recreation more of a focus in its planning efforts. Here are several comments that exemplify this idea:

Although I understand the importance of Ecological considerations, I feel more weight needs to be put on recreation/trail or user needs. Trail supply has not kept up with demand - people move/live here (hence pay for everything through taxes- salaries, lands, etc.) for outdoor recreation opportunities. We simply need more trail and to recognize all user groups - not just hiking conservationists.

It is clear that ecology is the most dominant factor in these decisions. I am concerned that too great an emphasis is placed on restoration and ecology.

I'd like to see prioritizing the opening of these areas for trail users (biking and hiking). Preservation without public use is not what our taxpayer dollars were intended for.

Comments wherein respondents directly addressed Question 3 were coded as Yes, No, and Somewhat. A total of 36 comments were coded as positive commentary. Thirteen comments indicated that respondents do understand the planning and evaluation efforts and 8 comments focus on appreciation for the City conducting the survey and/or listening to the public. Only five comments were coded as 'no' with the respondent sharing that they do not understand the process.

A total of 22 comments were coded as 'somewhat.' Here, respondents indicated that the planning process was too vague or general, that they would like detailed documentation available to better understand, and/or they understand the 'big' question, but not the process behind the planning.

**Question 5: Please indicate which you would prefer at Maxwell Natural Area – options include:**

Option 1: A new trail that separates hikers and horseback riders from mountain bikers

Option 2: Alternating days trail is open to mountain bikers and hikers/equestrians

Option 3: Keep current trail system as is with continued maintenance

As demonstrated through the visualization and table explaining the results for Question 5, respondents overwhelmingly support Option 1 – a new trail that separates hikers and horseback riders from mountain bikers at Maxwell Natural Area (286 comments). Building more trails (201 comments), creating use and/or direction specific trails (42 comments), and creating trails with inclusive access (i.e., available to all users at all times) (24 comments) were the preferred options. It is important to note, however, that 8 respondents indicated they were opposed to Option 1.

A total of 108 comments were coded for Option 2. Eighty-eight respondents indicated they were opposed to the proposal of alternating trail use days, while 19 reported being in favor of this option. As shown in Table 2, 14 respondents support the proposal of alternating days. Comments coded as 'supporting' this idea included comments such as Option 2 would be the second-best choice or a comment like "I think alternating days would work for a while but in the long term we need a separate trail." Further, a total of 23 respondents support Option 3.

Throughout the analysis, the code 'other' was used to account for comments that did not fit into the other categories. For Question 5, 103 comments were coded as 'other.' 'Negative' commentary was coded 28 times. Included within this are sub-sub-themes of opposition toward the City's approach, survey and/or presentation commentary (often criticism), and criticism of the amount of trail built in the last 12 years. Here are several comments that demonstrate these sub-themes:

Why do we only have 2 options in #5 and why are mountain bikers being singled out? It is almost as if you believe we are a problem when we donate more hours to conservation and trail maintenance than any other user group.

We desperately need more trails. Less than 2 miles of new trail in more than 10 years does not meet the growth needs of the area.

I'd like to know why the survey was only administered at trailheads until 3:30 p.m. During the spring/summer/fall, many people don't even get to the trailhead until after that time. I can almost guarantee that mountain bikers account for far more than just 19% if you were to administer a new survey over the course of several weeks and covering broader timeframes.

Nonetheless, it is important to also mention that 18 respondents shared 'positive' commentary indicating that they have not experienced conflict while using the trails and/or that they appreciate the opportunity to provide feedback.

Another sub-theme to emerge within the 'other' category is the suggestion for the City to look at other counties for ideas on how to address the issue (18 comments). And finally, 12 comments were coded as 'new questions' wherein the respondent did not answer the question being asked but posed a new one (possibly in relation to the focus of Question 5 – see Table 2).

#### ***Question 7: Would you use a short loop interpretive trail in the foothills?***

In short, results indicate that 'yes,' a majority of respondents would use a short loop interpretive trail in the foothills (212 comments). For specific information on which locations rank highest, see Table 3. Through analysis, it became apparent that a short loop is preferred by many because it would be nice for kids, elderly, inexperienced users, and/or visitors (33 comments). For example, one respondent shared: "It would be nice to have these short loops for kids and elderly as I would more than likely bring my toddlers on those trails."

Twenty-five comments show that this option is appealing because it would help to ease congestion on the trails: "More trail systems in the front range would be a great idea. More trail = less crowds." Additionally, 22 respondents expressed that having a shorter place to hike would be beneficial because it would help with accessibility and/or diversifying trail users. For instance, "A short trail loop at pine ridge would be great to attract more diverse visitors and could be family friendly. It's the only place that has some shady areas too."

Coded within the 'yes' category is the sub-theme of requests or suggestions for the City to consider in its planning efforts (19 comments). This sub-theme encompasses comments wherein respondents made a request about the prospective loop or offered a suggestion (see Table 3).

While there is great support for the short loop option, 47 respondents indicated no – they do not support this trail addition. Reasons include it would not get used enough (have similar short loops already) (16); it would be a waste of money/resources (11), there is not enough trail to support current users (why attract more?) (9), and insufficient parking to support additional users (4).

Only four respondents reported ‘somewhat,’ three of which indicated that it depends on the length of the short loop. Moreover, 13 respondents shared that they did not know what an interpretive loop is or needed more detail to form an answer. For instance:

Depends somewhat on how long the “short” loop is, but I don't see this adding much benefit to existing trail options while adding to habitat fragmentation and maintenance costs.

I feel like all those areas are already short loop trails. I guess you could make something shorter though.

Ecological considerations came in relatively low-ranking for this question with only 22 comments coded, 17 of which the respondent mentioned the importance of considering the ecological impact:

I lean to ‘no’ on this question, however, perhaps a short trail could alleviate some congestion by allowing people who do only want a short walk/hike to experience the natural areas. My concern, however, is that adding trails impacts the ecology of the space. While there are some areas where the ecological value is lower, and could be suitable for such a trail, I think it needs further consideration.

The priority of this management plan is ecological integrity - you can't have both. If that is the priority, we should limit our impact in these areas - given the increasing population these areas will continue to see the effects of stress. If we are to manage that impact, then we should leave them as they are and deal with the current issues of impact rather. FC has plenty of trails throughout the area to attract diverse visitors

And finally, ‘other,’ which again is comprised of comments that do not fit within the aforementioned categories (36 comments). Sixteen comments are questions posed by the respondent (see Table 3). Eight comments focus on parking commentary such as building additional lots, expanding the existing, and requiring a parking pass (all methods that could help ease congestion). Additionally, seven comments pertained to recreation (e.g., natural areas should be used for recreating). For instance, “I feel all these areas are underutilized. It feels like resource and ecology are more important than recreation. Nothing but homeland fill and humans around these areas that want to recreate.”

#### **Question 10: Do you support discontinuing sledding at Pineridge Natural Area?**

When it comes to the discontinuing sledding at Pineridge, 92 respondents indicate that they *do not* want it to be discontinued while 87 *support* its discontinuation. Although there is support for stoppage, 40 respondents indicate that they prefer an alternate location to be provided. However, 39 respondents shared that they want it to be discontinued due to ecological damage. For instance, “I like the idea of a sledding area as someone with young children, but if ecological impacts are a primary consideration I would much rather have more single track and dedicated mountain biking trails rather than sledding.”

Respondents feel strongly that this pastime should not be taken away from kids, families, and other users as it is important to have a way to recreate outdoors during the winter months (53 comments). “The ecological impact of sledding. Really? Our children deserve the opportunity to recreate outside. We are not talking about motorized vehicles here,” shared one respondent. Further, 20 respondents expressed that the activity should be confined at Pineridge or allowed at a new location all together.

While there is noticeable support for the continuation of sledding at Pineridge, the largest number of comments were coded in ‘other’ (112). Most prominent here is the sub-theme that respondents were unaware that sledding was an option at Pineridge (67 comments). Secondly, 24 respondents shared that they do not use the area for sledding and/or have no comment about this question. And finally, a total of 13 comments were coded as ‘new questions,’ which are listed in Table 6.

**Question 12:** What else should City of Fort Collins Natural Areas consider in the future?

Data analysis indicates that first and foremost, citizens are most in favor of and concerned about the building of more trails (436 comments overall [broken into various sub-themes]). In part, citizens want new trails to help spread out users and provide more opportunities for riding given the population growth Fort Collins has (and will continue to) experience.

There is overwhelming support for the connection of existing trails (182 comments) as well as the addition of more mountain bike specific trails (63 comments). Consider these comments:

Trail connectivity and integration of trail systems is an area where I would like to see continued development and streamlining.

Increase the connectivity of existing trail systems and not be opposed to the creation of new trail systems on new and preexisting land acquisitions. This will not only provide new experiences but disperse impact on current trails leading to less trail degradation and impact on wildlife. It will also promote less reliance on automobiles to get to trail systems. Natural Areas should also **STRONGLY** consider altering their mission statement to more heavily promote recreational needs for our community. We do not need a preserve in our backyard we need quality access to recreation.

Connecting Maxwell and Reservoir Ridge along the base of the foothills to eliminate the need to ride the Overland road.

Additionally, 26 respondents indicated that they would like to see one-way or directional trails as well as trails that will accommodate all skill levels (15 comments).

Thirty-two respondents indicated that Fort Collins should model its trails after other cities (regionally or nationally) who have successfully updated their trail systems. For instance:

I believe the City of Fort Collins has fallen short in trail development and fostering an active community. I would suggest looking to the recent accomplishments and future

goals of areas such as Southern Wyoming (Happy Jack & Curt Gowdy, Glendo), Salida, Buena Vista, Durango, Steamboat, or Brevard, NC to gain perspective on the Fort Collins trail system accomplishments and goals, especially considering the relative population of these areas and financial resources available.

Focus on the biking trails to boost the support from the large cycling community, and using bike trails to create a new revenue stream through mountain biking. (A great example to research is Bentonville, AK.)

Further, respondents demonstrated strong support for maintaining or further developing natural trails (23 comments) and single track trails (20 comments), in addition to separating user groups (i.e., building separate trails for users) (19 comments). Here are several comments to demonstrate these ideas:

Please discontinue the changes to the trails that make them considerable easier. Getting through a difficult section on a trail is a right of passage and it appears that whoever is 'maintaining' the trails is routinely ruining them by taking it distinctive features that are more difficult.

Keep single track single please! Biking is a huge part of this community and we want to keep it that way. I support easier trails if you are looking to get more people involved, but please do not compromise the existing difficulty.

Quality single track trails. Develop a Coyote Ridge to Cathy Fromme single track connector trail. Develop a new single track trail connecting Coyote Ridge with the Long View Trail.

Trail maintenance surfaced as a theme users feel passionate about as well (21 comments). Fourteen respondents indicated that trail building and/or maintenance should be done through volunteers. It was also mentioned that the City should consider a user fee, parking pass, and/or required volunteer hours for trail maintenance (3 comments), in addition to collaborating with organizations like Overland Mountain Bike Club, Gnar Runners, AmeriCorps, etc. (12 comments).

A total of 133 comments were coded within the theme of ecological. Overall, it appears citizens care most about development and conservation/preservation. Respondents most frequently shared feedback about development, specifically being opposed to the development of Hughes Stadium (64 comments). Included here were comments about the City acquiring more land to create recreational space. For example, one respondent said:

Trying to acquire more lands in Fort Collins that could be turned into natural areas instead of housing. I know that the demand for living in Fort Collins is growing and will continue to grow. However, habitat fragmentation is a big concern and the more pockets of land that are kept more 'natural,' the better the ecosystem will be. And this leads to our benefit (connection with nature as well as increased water quality).

Further, conservation/preservation-related comments were coded 38 times. Here, citizens talked about the importance of protecting the land:

Preserving more open spaces. People can find other ways to recreate...the ecological elements should remain the highest priority to protect what cannot be re-created. This means limiting the use of natural areas to protect wild life.

Finally, population growth and the potential impacts on community were coded 12 times. Here are two comments to illustrate this theme:

Huge growth of the community over the next few years will demand larger trail capacity. Please consider the long-term community impact, not just natural resources. Users will possibly create their own trails if the system is insufficient.

The population growth has outpaced access. We should have a plan that considers growth, not just current usage.

Amenities came through as the third most common theme for Question 12 (101 comments). Here, respondents focused on the importance of education and/or signage about trail etiquette, safety, and invasive species (21 comments). In close second was dog commentary (20 comments), wherein respondents mentioned the importance of enforcing leash and waste removal rules. For instance, "...allow dogs but make the fines extremely high for those that disobey. Post signs so people know the fines." Parking commentary was coded 11 times, with a focus on the addition of new parking lots as parking can often be an issue.

Recreation was coded 45 times, with the sub-theme of 'make recreation a bigger focus' being coded 26 times. Secondly, citizens commented about the management of natural areas, mentioning that a balance should be found between ecology and recreation. The comment below helps to demonstrate these ideas:

Please balance habitat protection/ecological considerations with recreational use. As users of the Natural Areas, most hikers, equestrian users and cyclists ALSO can be your strongest advocates for the Natural Areas. They value these areas more than the average citizen BECAUSE they use and appreciate them. If you reduce or exclude recreation, you may lose the community advocates for these important spaces.

The 'other' category was again used to encompass comments that did not fit into any of the other areas (33 comments). Within it, seven comments were coded as 'new questions' posed by the respondent (see Table 5 for a complete list of questions). 'Positive' commentary was coded 11 times. Here, respondents stated that what the City has proposed are good considerations and/or thanked the City for providing the opportunity for community members to provide feedback. There was relatively little 'negative' commentary coded. However, a few respondents shared negative remarks about the survey and/or meeting as well as the City's plan overall (i.e., it needs revision). Below are several comments to provide context:

Given the Front Range predicted growth and the draw of FTC as a bike-centered culture, the plan does not seem to consider how growing bike trails has an impact on this culture. This should be analyzed. Additionally given the high density of users and demand, sustainable trails must consider volume (e.g., widening trails are resulting from poor design and high volume).

Scheduling meetings when cyclists aren't doing scheduled cycling things. And take a sample of users on the trails when they're busy – not the middle of the day. I go in the middle of the day because THATS WHEN THE TRAILS ARE THE MOST EMPTY.

And lastly, communication came through as the most infrequent theme for Question 12, coded a total of 17 times. Here, respondents mentioned the importance of considering the treatment of bikers (e.g., mountain biker 'rights') (11 comments). Further, three respondents indicated they would appreciate meeting summaries and additional information.

Mountain bikers are a large part of users in natural areas. With the growth of mountain biking in youth sports, we will continue to see a growth in mountain bikers using our trails. Please consider this passionate and respectful population in the future.

Mountain biking in the foothills has provided our family with continuous joy with the community over the past 20 years. Please consider hearing our voice as you undergo planning.

**Question 13:** Is there anything else you'd like to share about the Foothills Trail, Reservoir Ridge, Maxwell, Pineridge, or Coyote Ridge natural areas?

In response to the last survey question, comments again centered on the theme of trails (331). Similar to responses shared for Question 12, citizens indicated that they want to see more trails (182 comments). Table 6 provides a complete breakdown of the most frequent sub-themes coded within this category. In short, respondents indicated that they want more trail connections (52 comments), a variety of trail types (i.e., for multiple skill levels) (23 comments), maintenance and/or addition of single track trails (15 comments), and more bike specific trails (13 comments). Consider these comments:

Please expand bike trails! This is what makes our community unique and different from other cities like Boulder. Let's be more like Steamboat than Boulder!

A connection trail/dirt road to Horsetooth Park would be another way to disperse the traffic by giving cyclist a safe route without having to drive to Horsetooth. That is a huge part of what makes the foothills so much fun, you don't have to drive to get there.

We are so lucky to have these natural areas so close to town, but increasing miles of trails as well as a variety of difficulty in the trails is essential.

In addition, there was emphasis put on keeping the trails natural (i.e., not sanitizing) (35 comments). One respondent said, “Keep them natural first and foremost.” Another stated: “These areas are wonderful because they are wild. Adding larger trails with gravel or pavement will take away from this.”

Moreover, respondents mentioned comments related to trail maintenance and/or impact to trails (28 comments). Specifically, they shared that they would like to see more outreach to promote trail building and maintenance (10 comments), and mentioned that the mountain bike community will take time to build trails (6 comments). For example:

...please consider working with local organizations who support outdoor recreation to help improve existing trails to make them more sustainable.

Single track trails are desirable, sustainable, and you have a host of hundreds of motivated volunteers available to provide whatever level of regular support is needed from the recreation (trail running, mountain biking, etc.) community.

Mountain bikes shoulder a disproportionate share of trail building and maintenance and should be a key partner in any trail development.

‘Other’ was the second most prominent category (216 comments), and again included positive and negative commentary. Here, positive comments were dominant (180 total). Included as sub-themes were ‘enjoyment-oriented’ responses wherein citizens shared that they love using the trail, appreciate the great trail system Fort Collins has to offer, etc. (98) as well as ‘good job’ / ‘thank you’ comments (82). Here are several comments to exemplify these sub-themes:

I love these trails and feel so fortunate to have them so close to where we live. They are do well maintained. Thank you so much!

I value these trails, and want to say thank you to all the hard work you do to maintain them for both the community and the wildlife and plant life that live there. I know that this is difficult to make all parties (nature included) happy, and appreciate you listening to the community. As a mountain biker, I highly respect and value our trail system. I want to do everything I can to maintain a community that plays nice together, and have a trail system that can be accessed with little confrontation, and minimal impact on the environment. I do believe that this can be done.

I applaud Natural Areas continued maintenance and advocacy for these places.

Thanks for providing access and being proactive with growth plans.

‘Negative’ comments were not at all prominent (only 8 total). The majority dealt with criticisms of the survey and/or meeting or that the respondent was disappointed with the City’s land management. For instance, “Please get in touch with us – the cycling community – not by sitting in a parking lot when you determine- not with an email- get someone in your organization that actually participates in our lives.”

Further, eight comments were coded as ‘new questions’ (which are listed in Table 6).

Ecological-related comments were coded 98 times. Again, development-oriented commentary emerged as a prominent sub-theme, with a total of 58 comments. Thirty-one comments focused on Hughes Stadium housing development and/or acquisition commentary and 25 pertained to population growth and the potential impact on the community. Consider these comments:

They [the trails] add amazing value to life in Fort Collins. As a former CSU alumni, I believe that since Hughes Stadium was torn down near the Maxwell area, that space should be kept open and potentially further invested in as an open space to enrich the lives of the community members.

There aren't enough trails to support adding 650 homes to the old stadium site. Either get rid of the idea of adding all those houses or make them pay to add lots of trails.

I'm concerned of the impact of proposed housing development near Maxwell (old Hughes Stadium site) will have on the natural areas of Maxwell & Pineridge.

My only concern at the moment is the development of the former Hughes Stadium. This will be the development that will most likely have the biggest impact to the lower trail systems and natural corridor the currently exists.

Conservation/preservation was another fairly prominent sub-theme (within ecological) with 27 total comments. Here are several comments that provide context for what citizens talked about in relation to this theme:

Please do not add any more trails. My tax dollars went to natural areas to protect habitat and provide limited recreation. Adding more trails would greatly impact the wildlife and sensitive plant communities.

I'm glad that ecological/habitat considerations are given a high priority. This should continue.

I love our natural areas, and I think it's important to consider impacts of increased use. That may mean having a hard conversation about limiting use, and I'm ok with that. There are many other places to recreate very close by.

Amenities and accessibility commentary was coded 86 times. The most prominent sub-theme within this category was trail safety commentary with 25 comments. Here, citizens indicated that the City should provide more education and signage about trail use and etiquette (17 comments). For example, one respondent said, “Public education about how trails should be used, maybe at trail heads. Trail etiquette and information on minimizing deterioration of trails by conscientious use.” Another stated: “I would like to see a community education program on the safe and courteous use of all trails. Most people do not know to stay on the right, or who should yield, or why dogs on long leashes are dangerous, etc. Ringing a bell or yelling ‘passing on left please; etc.’”

The second most frequent sub-theme was animal-related comments (18) wherein citizens mentioned animal waste issues and leash rules. For example:

If my dog defecates on a trail, I am expected to clean it. If I defecate on a trail, I am subject to fines/arrest. I have never understood why horses seem to be exempt from trail defecation.

As mentioned above, the management plan needs to find better tools for ticketing violators, sending in dog feces for penalty, ensuring that people are using the trails only - being out there almost daily, I can tell you in the hour or two I spend out there, I see more than one violation. I don't see anything in the plan about how to deal with these increasing violations.

Moreover, the idea of adding more and/or larger parking lots came through fairly often (12 comments). Simply put, citizens would like to see more parking space to ease congestion. One respondent said, "Increased parking availability at Maxwell. This lot is always packed when I am visiting and I often end up on the street. I see many visitors who take up more than one space or one person per car." Further, seven respondents indicated that they would like to see more rangers on the trails for increased enforcement and education.

Recreation-related commentary was coded 43 times. Here, respondents discussed the importance of maintaining and/or promoting recreational opportunities (21 comments), the challenges associated with managing ecological and recreational goals (16 comments), and the importance of providing more open space (5 comments). Below are several comments that illustrate sentiments shared within these sub-themes:

You have provided excellent trails in wonderful spaces – please keep it for everyone, all the time and just help educate all people on the best way to co-recreate!

Our natural areas are what makes Fort Collins unique and the reason many people decide to visit and live here. I don't envy the Natural Areas team this job but I think that there is a way to find a balance between increased user activity and wildlife/habitat preservation without losing the unique qualities that each of these trails has. I don't think anyone wants to see a Fort Collins where you can't tell one of these trails from the next or where only one user group has access because it was the easiest solution. We don't want to become Boulder.

I appreciate this conversation and careful thought. Recreation friendly open space that is as non-invasive to wildlife as possible is a hard balance. I also appreciate efforts to have it be enjoyed by all as opposed to just those in privilege. Recreation in open spaces is a HUGE value in our community and needs to be fostered during growth as opposed to restricted.

It's a rare gem that must be kept open for reasonable recreation while maintaining habitat for our natural wildlife.

And last but not least, education, community, and youth outreach came through as a relatively infrequent theme (4 comments). Here, respondents shared that it is important to increase outreach to youth and under-represented groups. For instance, “Add more school outreach efforts to engage youth/future trail users. Additional outreach to mitigate under representation of low income, lower education portion of population.”

## Conclusion

To summarize the large amount of information that was collected through detailed analyses and interpretation of survey data, the City of Fort Collins NAD needs to foremost address the theme of trails as it is incredibly prominent throughout responses to the majority of survey questions. Respondents expressed a strong desire for more trails: the addition of new trails (including a short loop and multi-use), the connection of existing trails, and the addition of trails designated for user groups.

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Appendix A: Open House Survey Example

## Foothills Natural Areas Management Plan Update Questions

1. Do you participate in these recreational activities in the foothills? (Check all that apply):

- Hiking or walking    Trail Running    Biking    Horseback Riding  
 Wildlife Watching    Picnicking    Fishing    Other (write in below):

*Indicate the locations where you recreate (check boxes for natural areas).*

- Coyote Ridge Natural Area    Foothills Trail    Maxwell Natural Area    Pineridge Natural Area  
 Reservoir Ridge Natural Area

2. Do you further understand the planning process (using the Impact and Decision Framework) that the Natural Areas Department will use to evaluate new visitor use opportunities? (Circle one)

Yes   Somewhat   No   I don't know

Comments:

3. Please indicate which you would prefer at Maxwell Natural Area (check one box):

- A new trail that separates hikers and horseback riders from mountain bikers. This option would spread out visitors and provide additional access, however the habitat at Maxwell would be further fragmented.
- Alternating the days that the trail is open to mountain bikers and hikers/equestrians. No new trail would be added, and habitat would be left unfragmented but depending on mode of recreation, visitors would not have access 7 days a week.
- Keep the current trail system as it is with continued maintenance.

Comments:

4. Would you use a short loop interpretive trail in the foothills? (Circle one):

Yes   Somewhat   No   I don't know

*Indicate location (check boxes for natural areas).*

- Coyote Ridge Natural Area    Maxwell Natural Area    Pineridge Natural Area  
 Reservoir Ridge Natural Area

Comments:

**Continued on back >>>**

5. Do you support discontinuing sledding at Pineridge Natural Area? (Circle one):

Yes    Somewhat    No    I don't know

Comments:

6. What else should City of Fort Collins Natural Areas consider in the future?

7. Is there anything else you'd like to share about the Foothills Trail, Reservoir Ridge, Maxwell, Pineridge, or Coyote Ridge natural areas?

If you'd like to get Foothills Management Plan updates, please share your email address:  
*(email will only be used to contact you about this project)*

The City gathers demographic information to help improve communications and engagement. All questions are optional, and any information gathered will be kept completely anonymous. Thank you for your help! *(circle one per category)*

**Age Range:**

- 15–19 yrs
- 30–39 yrs
- 40–49 yrs
- 50–59 yrs
- 60–69 yrs
- 70 yrs or older
- Decline to specify

**Race:**

- American Indian/Alaska Native
- Asian
- Black/African American
- Native Hawaiian/Pacific Islander
- White
- Two or more races
- Decline to specify

**Household Income Range:**

- Less than \$10,000
- \$10,000–\$14,999
- \$15,000–\$24,999
- \$25,000–\$34,999
- \$35,000–\$49,999
- \$50,000–\$74,999
- \$75,000–\$99,999
- \$100,000–\$149,999
- \$150,000–\$199,999
- \$200,000 or more
- Decline to specify

**Ethnicity:**

- Hispanic/Latinx
- Non-Hispanic/Latinx
- Prefer to self-identify:
- \_\_\_\_\_
- Decline to specify

**Educational Attainment:**

- Less than high school graduate
- High school graduate (or equivalency)
- Some college or associate's degree
- Bachelor's degree or higher
- Decline to specify



## Appendix B: Low Frequency Comments

The tables below feature a list of comments that appeared one or two times during analysis. These comments are considered ‘low frequency,’ yet important to further understanding respondent opinions toward the various questions asked in the survey. The tables are color coded to match the sunburst visuals included earlier in the report.

**Note:** Not all categories appear in these tables—they feature only comments that were recorded as low frequency. In some cases, a category may not have had any low frequency comments.

Question 3: Low Frequency Comments		Code Frequency
<b>Yes</b>		
• Wide array of considerations are kept in mind by the City; good job trying to find balance		2
• User has not experienced tension while riding the trails		2
• Information sharing (appreciation for the City sharing information with the public)		2
• Appreciation for the City hosting the open house		2
• Appreciation for the direct bullet points on slides		1
• Thank you for providing riders with a place to ride		1
• Cooperation between Natural Areas and organizations is fantastic		1
<b>Somewhat</b>		
• Talk more about larger picture (e.g., where we are in the process; timeline; the actual options that Natural Areas is considering [Maxwell area in particular]; pros and cons of each option)		2
• Provide examples (e.g., demonstrate how ecological considerations are the most important; provide visual example of the two trail implementation)		2

Table 7: Question 3 Low Frequency Comments

Question 5: Low Frequency Comments		Code Frequency
<b>Option 1: New Trail</b>		
• Disperse use at Maxwell by adding other trails that do not originate from there		1
• Include trail runners in the new plan		1
<b>Other</b>		
• Excellent plan that would help alleviate user conflict and spread out users		1
<b>Amenities</b>		
• Provide more parking		1
• Alleviate parking issues through a required parking pass		1
• Add a passing or pull-off area for hikers		1
• Widen trails and remove large rocks		1
<b>Ecological</b>		
• Dog and horse waste rules		1

Table 8: Question 5 Low Frequency Comments

Question 7: Low Frequency Comments	Code Frequency
<b>Yes</b>	
• Short loop should be wheelchair accessible	2
• Sponsor a meet-up group for people interested in exploring natural areas	1
• Short loop trails should be closed to bikes and horses	1
• Look at other locations for ideas on traffic management	1
• Build more single track	1
• Add a family picnic area	1
• Allow dogs on leash at Coyote Ridge	1
• Consolidate and restructure trail system at Pineridge	1
<b>No</b>	
• Resources should be put toward advanced opportunities, longer trails, and connectivity	2
<b>Ecological</b>	
• Keep trails natural	1

Table 9: Question 7 Low Frequency Comments

Question 10: Low Frequency Comments	Code Frequency
<b>No</b>	
No issue with sledding—don't devote efforts to this (bigger concerns City should deal with)	2
<b>Other</b>	
• Allow dogs off leash at Pineridge to swim at least one week per month	1
• Unleashed dogs make more of an impact	1
<b>Ecological</b>	
• Do research to determine the severity of the damage	1

Table 10: Question 10 Low Frequency Comments

Question 12: Low Frequency Comments	Code Frequency
<b>Trails</b>	
• Ban e-bikes	2
• Consider the user and how the trail system can be most enjoyed by its various users	2
• Do not close trails when muddy – let the user decide whether to use	2
• Use same closure policy as Lory State Park	2
• Enforce wet condition closures	2
• Widen trails	2
• Allow e-bikes	1
• Trail users need to learn how to co-exist	1
• Enforce alternating day use on trails	1
• When trails close, close to all users	1
<b>Ecological</b>	
• Anti-equestrian use (e.g., horseback riders cause trail damage, leave feces on trail)	2

• More and better prescribed fire utilization (help reduce foothills wildfire risk while improving ecosystem health)	1
• Wildfire management	1
• Start aggressive weed management	1
<b>Amenities, Accessibility &amp; Education</b>	
• Additional volunteer service groups for trail maintenance and ecological surveys	2
• Provide an app that features trail closure information, interpretive information, etc.	2
• Build more bike lanes	2
• Consider financial constraints of under-represented community members	2
• Dog park issues (e.g., stench of urine needs to be addressed [location of dog park is not specified in this comment]; add a dog park at beginning of the trail)	2
• Allow dogs with leashes	1
• Do not limit dog access (i.e., user's reason for not using Coyote Ridge)	1
• Build gate at Cathy Fromme for safety (prevent drug deals, prostitution, etc.)	1
• Consider adding handicap accessible trails	1
• Install more interpretive signs	1
• Install permanent blinds to observe wildlife; trail cams with access from home	1
• Install rattlesnake call boxes on Horsetooth Rock Falls hike	1
• Continue providing horse parking and trail access	1
• Provide directions on how to find parking at trailheads	1
• Provide staffed booths at local events to educate about trail conservation	1
• Stop putting up meaningless signage directed toward mountain bikers	1
<b>Recreation</b>	
• Provide backpacking / bike packing campsites at Soapstone Prairie	1
• Do not over-organize, develop, or direct activity in natural areas	1
<b>Other</b>	
• Listen to your trail users	1
• Provide maps of proposed trail alterations at open houses	1
• Provide more information about the plan for greater inclusivity of under-represented populations	1
<b>Communication</b>	
• Update mission statement (i.e., Natural Areas mission statement should be updated to reflect its values / more heavily promote recreational needs for our community)	2
• Target users more effectively	1

Table 11: Question 12 Low Frequency Comments

<b>Question 13: Low Frequency Comments</b>	<b>Code Frequency</b>
<b>Trails</b>	
• e-bike commentary (do not allow; educate the public and bike retailers about the rules and reasons behind this type of bike)	2
• Do not make existing trails 'easier' to attract new users	1
• Remove OMBC - out of touch with current bike culture & riding desires	1
• Responsible users can deal with one another and share space w/out requiring additional trails	1
• Use OMBC as a resource	1
• Install a 'step' type trail that goes straight up the foothills	1
<b>Other</b>	
• Continue to engage public as much as possible with future planning	1
• Negative portrayal of mountain bikers in the report is discouraging	1
• Use resource of remote control drones to provide unique views, outreach & research activities, as well as hobbies	1
• I don't know what you mean by the Pineridge-QH 'social trail'	1
• Understanding usage for specific trails vs. natural areas would provide great information for managing impacts to natural resources	1
• Would like more info. about Pineridge-QH social trail	1
<b>Ecological</b>	
• Trail damage due to bikers	2
<b>Amenities &amp; Accessibility</b>	
• Trails are inaccessible or toned down for handicapped; inaccessible for pet owners	2
• Install a water pump & water fountain at Maxwell	2
• Online NoCo trail report is great	1
• More up-to-date trail condition reports would be great	1
• Install a trail rating system	1
• Provide benches along the trail	1
• Provide horse trailer parking at Coyote Ridge	1
• Improved notification of trail closures	1
• Funds to support natural areas hurt lower income members of community far more than the affluent	1
• Keep Reservoir Ridge open later in the evening (runners prefer to run at dusk)	1
• Stop closing parking lots at natural areas to appease property owners - they are to be open until 11 p.m.	1
• Motorized vehicles on trails (e-bikes, scooters, etc.) are a hazard that will cause physical injury	1
• Make at least one trail allow dogs off leash	1
• Offer more dog free trails	1
<b>Recreation</b>	
• Provide access to open space that doesn't require driving	1
<b>Education, Community, and Youth Outreach</b>	
• The trails provide great educational opportunities for youth - growing up respecting nature	1
• Offer community service hours to get kids outside or volunteer work opportunities	1

Table 12: Question 13 Low Frequency Comments

## Appendix C: Researcher Qualifications

### Emily Johnson, Ph.D.

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#### SUMMARY

Highly skilled audience researcher who employs expert knowledge of various research methodologies to understand customer behaviors, needs, and motivations. A self-driven, detail-oriented, and excellent communicator who thrives on examining data to create innovative programs, inspire product development, and produce recommendations to meet communication goals.

#### EXPERIENCE

##### National Park Service (NPS)

November 2017 – August 2018

##### Audience Researcher

August 2015 – August 2018

##### ~ Content Evaluation of the Response to the Centennial Find Your Park Campaign

- Served as lead investigator to explore how participants (NPS and citizen) engaged with the Find Your Park campaign via Facebook, Instagram, Twitter, and YouTube
- Qualitatively analyzed 430 posts to understand how participants made meaning and presented various identities through sharing their national park experiences via social media
- Wrote a final recommendations report for the NPS as a guide for social media managers to use when crafting future messages and developing campaigns

##### Communication Specialist

November 2017 – May 2018

- Served as lead content editor and site designer for an internal community of practice website
- Improved usability of an existing internal website by reorganizing and editing content to make it more accessible for intended audience(s)
- Designed approximately 20 program briefs (i.e., project updates) to educate regional chiefs on current projects, accomplishments, and future endeavors

##### Colorado State University

August 2009 – Present

##### Audience Researcher ~ JMC Curriculum Review Assessment

Summer 2018

- Analyzed surveys and participant comments to assess the experience of students (graduating seniors and alumni) as well as reviews from industry stakeholders; extracted key themes through qualitative analyses of data
- Wrote and presented a recommendations report to the JMC Department Curriculum Committee
- Goal of this research was to identify strengths and weaknesses of the undergraduate degree program to ensure optimal experience of future undergraduate students

##### Program Coordinator, Professional & Technical Communication (JTC 300)

August 2018 – Present

- Re-design existing curriculum to meet the goals of 21<sup>st</sup> century learners by implementing innovative digital tools
- Recruit and coordinate guest speakers to assure students learn from industry experts
- Coordinate and schedule monthly meetings with JTC 300 instructors and GTAs to verify that teaching objectives are met
- Lead orientation and training of incoming JTC 300 lecture and recitation instructors
- Provide oversight and evaluation of teacher performance for on campus and online classes

##### Instructor of Record, Professional & Technical Communication (JTC 300)

August 2012 – Present

- Teach three sections (~125 students per section) of a junior to senior-level writing course that focuses on technical writing, resumes, cover letters, and research-based writing; receive consistently strong teaching evaluations each semester
- Manage 5-8 graduate teaching assistants by maintaining frequent email communication and holding monthly meetings to enforce consistency across the various recitation sections

##### Argonne National Laboratory

Communications Manager – CSU EcoCAR 2 & 3

August 2012 – December 2014

- Strategically marketed EcoCAR at campus, local, and state levels to connect with key influencers and gain media coverage
- Built relationships with stakeholders at the campus, local, and state levels through networking and publicity events
- Planned, organized, and executed multiple community outreach events per month
- Produced content for and managed multiple social channels; wrote blog posts geared toward various audiences
- Researched and wrote communication plans, implementation plans, and technical reports
- Oversaw undergraduate interns and worked collaboratively to meet communication deliverables

## EDUCATION

### **Colorado State University, Fort Collins, CO**

**Doctor of Philosophy**, Public Communication and Technology, 2017

- Dissertation: Pinning for Leisure or Labor?: Unveiling Constructions of Wedding Planning via Pinterest ~ Specialization in Digital Audience Analysis
- Research foci: digital media and its intersection with user experience, identity, women, and gender roles
- Received \$5,000+ in department-funded travel stipends to present research nationally and internationally
- Teaching and Research Using Digital Methods: A Basic Toolkit – Certified October 2017

**Master of Science**, Public Communication and Technology, 2012

- Thesis: Exploring Haul Videos on YouTube: A Collective Case Study Approach
- Graduate Student Board Member, Center for Women and Gender Studies Research (CWSGR)
- Recipient of the Harriet Patsy Boyer Scholarship – \$3,000
- Recipient of the Programs of Research and Scholarly Excellence (PRSE) Fellowship – \$8,000

**Graduate Certificate in Women's Studies** (Gender, Power, and Difference), 2011

### **Iowa State University, Ames, IA**

**Bachelor of Arts**, Journalism and Mass Communication, Spanish minor, 2008