

# Evaluation of E-biking on Open Space

**OPEN SPACE BOARD OF TRUSTEES  
NOV. 9, 2022**



**MARNI RATZEL  
OSMP PRINCIPAL PLANNER**

# Presentation Overview



**Background**



**Community Input**

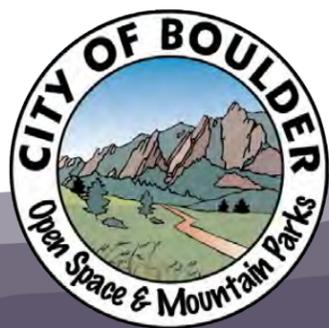


**Additional Staff analysis**

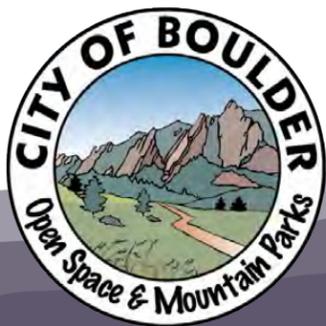
- **Approach for authorizing e-biking**
- **Proposed management approach**
- **Preliminary Staff Recommendation**



**Next steps**



# Background



# MASTER PLAN STRATEGIES

- EHR.1  Preserve and restore important habitat blocks and corridors
- EHR.2  Update and continue implementing system plans guiding ecosystem management
- EHR.3  Address the global climate crisis here and now
- ATT.1  Reduce maintenance backlog for agriculture & water infrastructure
- ATT.2  Increase soil health & resilience
- ATT.3  Address conflicts between agriculture and prairie dogs
- RRSE.1  Assess and manage increasing visitation
- RRSE.2  Reduce trail maintenance backlog
- CCEI.1  Welcome diverse backgrounds and abilities
- CCEI.2  Enhance communication w/visitors

**TIER 1**

- EHR.4  Reduce undesignated trails
- EHR.5  Extend on-trail requirements
- EHR.6  Control invasive species
- EHR.7  Develop a learning laboratory approach to conservation
- ATT.4  Protect water resources in a warmer future
- ATT.5  Encourage diverse and innovative agricultural operations
- RRSE.3  Update guidelines and standards for quality trail design and construction
- RRSE.4  Encourage multimodal access to trailheads
- RRSE.5  Manage passive recreation activities requiring a permit
- CCEI.3  Connect youth to the outdoors
- CCEI.4  Support city-wide engagement with federally recognized American Indian Tribes and Indigenous Peoples

**TIER 2**

- EHR.8  Reduce impacts from noise, light and nearby land uses
- EHR.9  Reduce and offset OSMP greenhouse gas emissions
- ATT.6  Support the success of ranchers and farmers
- ATT.7  Integrate native ecosystems and agriculture
- ATT.8  Further reduce or eliminate pesticide use
- ATT.9  Enhance enjoyment and protection of working landscapes
- RRSE.6  Support a range of passive recreation experiences
- RRSE.7  Build new trails as guided by past and future plans
- RRSE.8  Provide welcoming and inspiring visitor facilities and services
- RRSE.9  Develop a learning laboratory approach to recreation
- CCEI.5  Foster wellness through immersion in the outdoors
- CCEI.6  Inspire environmental literacy and new involvement in OSMP
- CCEI.7  Cultivate leaders in stewardship
- CCEI.8  Heighten community understanding of land management efforts
- CCEI.9  Preserve and protect Boulder's cultural heritage

**TIER 3**

Spring 2022

**Evaluation of alternatives and preliminary proposal**

Summer 2022

**Community Engagement**

Fall 2022

**Board Input and Action**

**Nov 9:** Present public feedback, additional analysis and preliminary staff recommendation

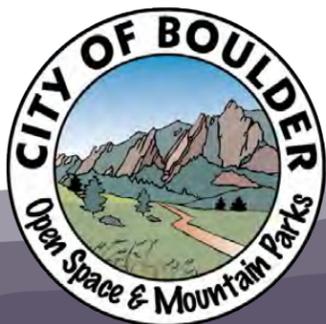
**Dec 14:** Public Hearing on Final Staff Recommendation

**Jan 13:** OSBT consideration and recommendation to City Council

Winter 2023

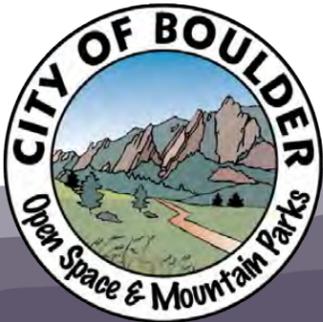
**Council Consideration**

We are  
Here



**Board & Council Consideration**

# Project Interdisciplinary Team



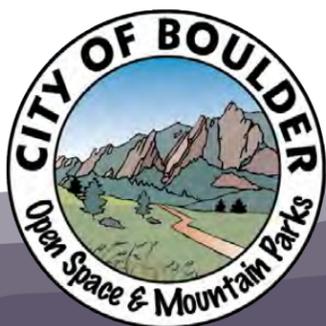
# Status Quo / Existing Conditions



- E-bikes are not allowed on OSMP trails
- Disposal of open space required

## ADA exception

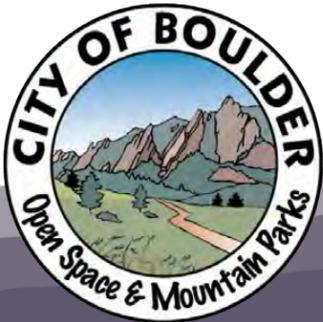
People experiencing disabilities allowed to use Other Power- Driven Mobility Devices (OPDMDs)



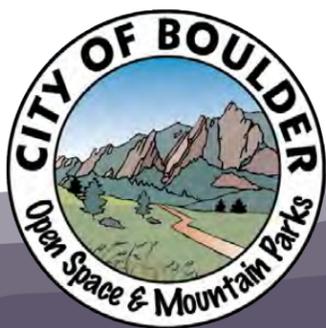
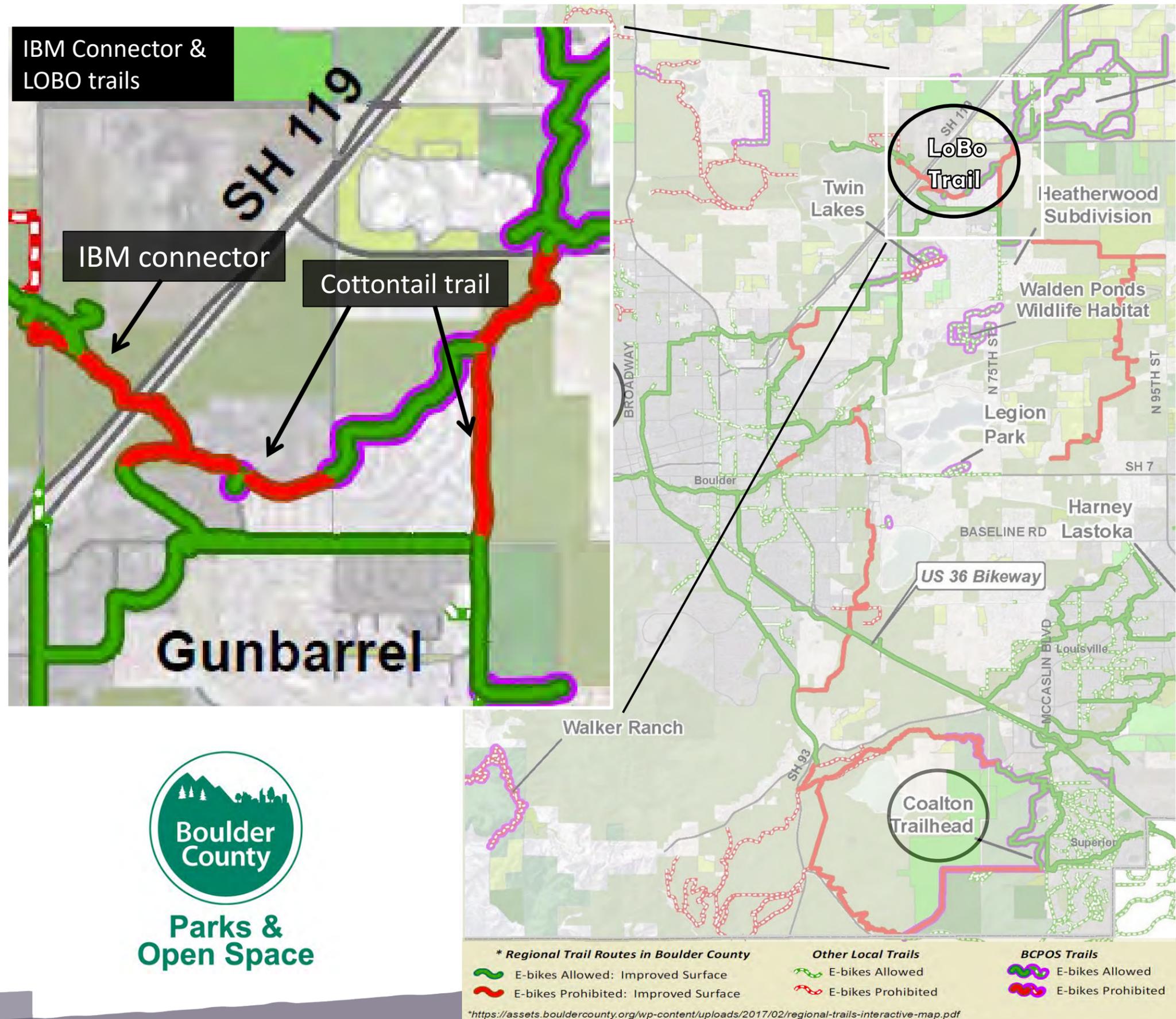
# Peer Community Regulations

	<b>CLASS 1</b> Pedal Assist Only Max. Assisted Speed of 20mph	<b>CLASS 2</b> Pedal & Throttle Assist Max. Assisted Speed of 20mph
COB-Transportation/Greenways	✓	✓
Boulder County - Plains Trails	✓	✓
Colorado Parks & Wildlife	✓	✓
Jefferson County	✓	✗
US Fish & Wildlife Service	✓	✗
Other Boulder County municipalities*	✓	✓
City & County of Denver	✓	✓

*\*Follows the state model traffic code*



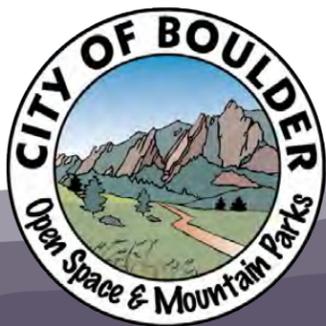
# OSMP in the regional context



# OSMP Existing Conditions

# Alternatives to the Status Quo

- A. All Trails that allow bikes
- B. Plains trails located east of Broadway, and the Boulder Canyon Trail
- C. Inter-Connected Trails that allow bicycling and are part of the regional trail.



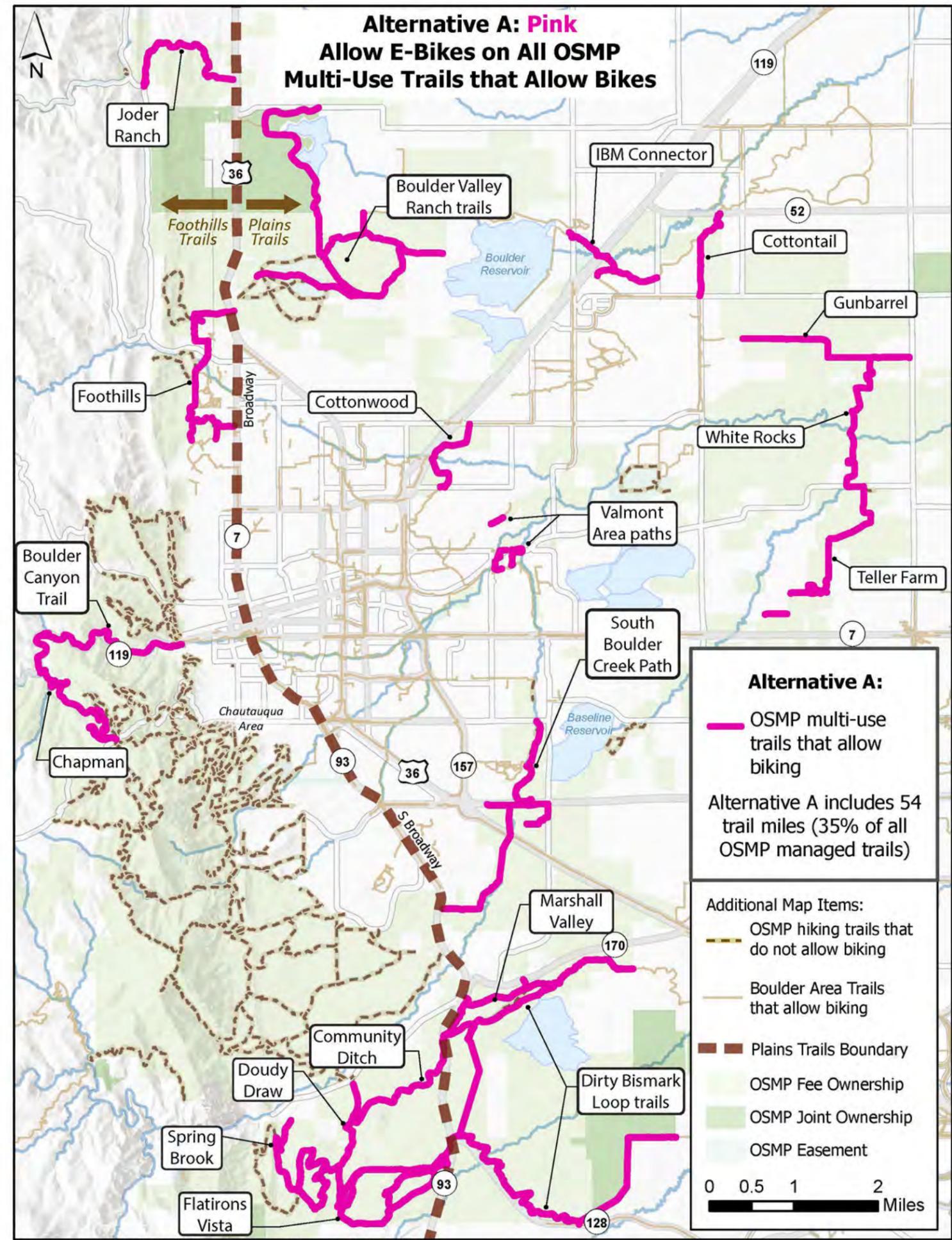
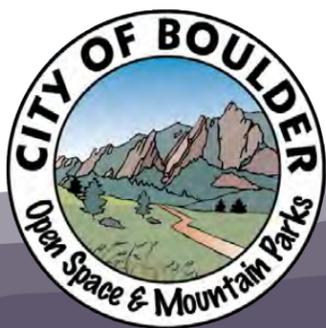
# Alternative A

Allow e-bikes on All multi-use trails that allow bikes

- About 54 miles of trails on OSMP are designated for use by bicyclists.
- These trails would allow e-biking

Alternative A would allow e-bikes on

- 54 miles of open space trails
- 35% of the 154 miles OSMP trail network



# Alternative B

## Allow e-bikes on Plains trails east of Broadway and Boulder Canyon trail

### Plains trails are located east of

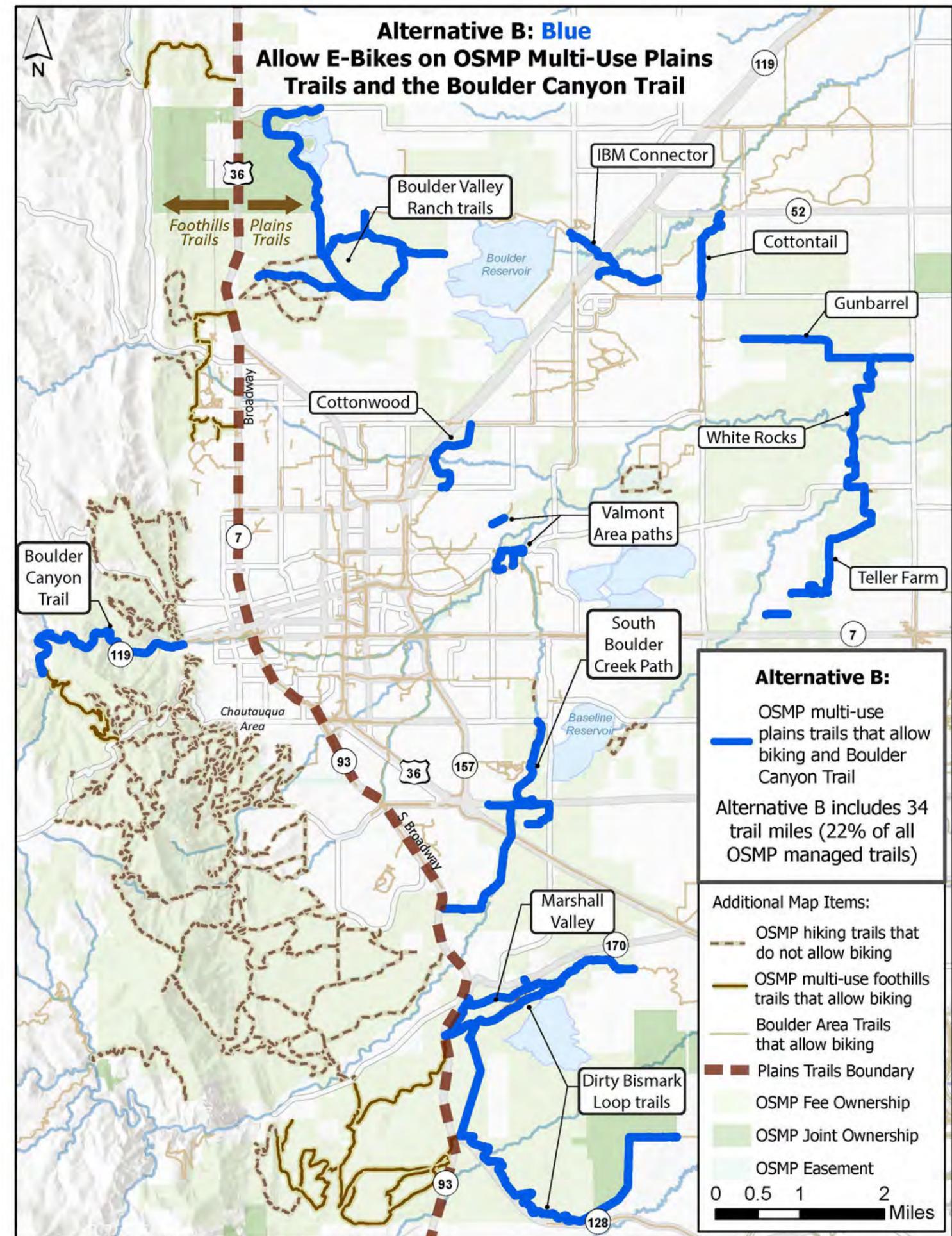
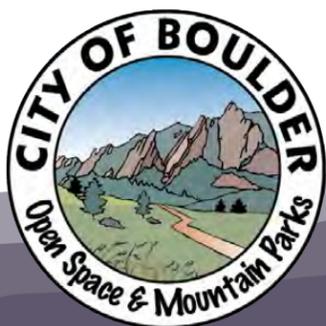
- Broadway within the city of Boulder limits
- North Foothills/US 36 corridor to the north, and
- CO 93 to the south of city limits

### Boulder Canyon Trail

- A regional trail west of Broadway with a segment on OSMP lands.
- Maintained by COB Transportation & Mobility within city limits
- Maintained by Boulder County in unincorporated Boulder County.

### Alternative B would allow e-bikes on

- 34 miles of open space trails
- 22% of the 154 miles OSMP trail network



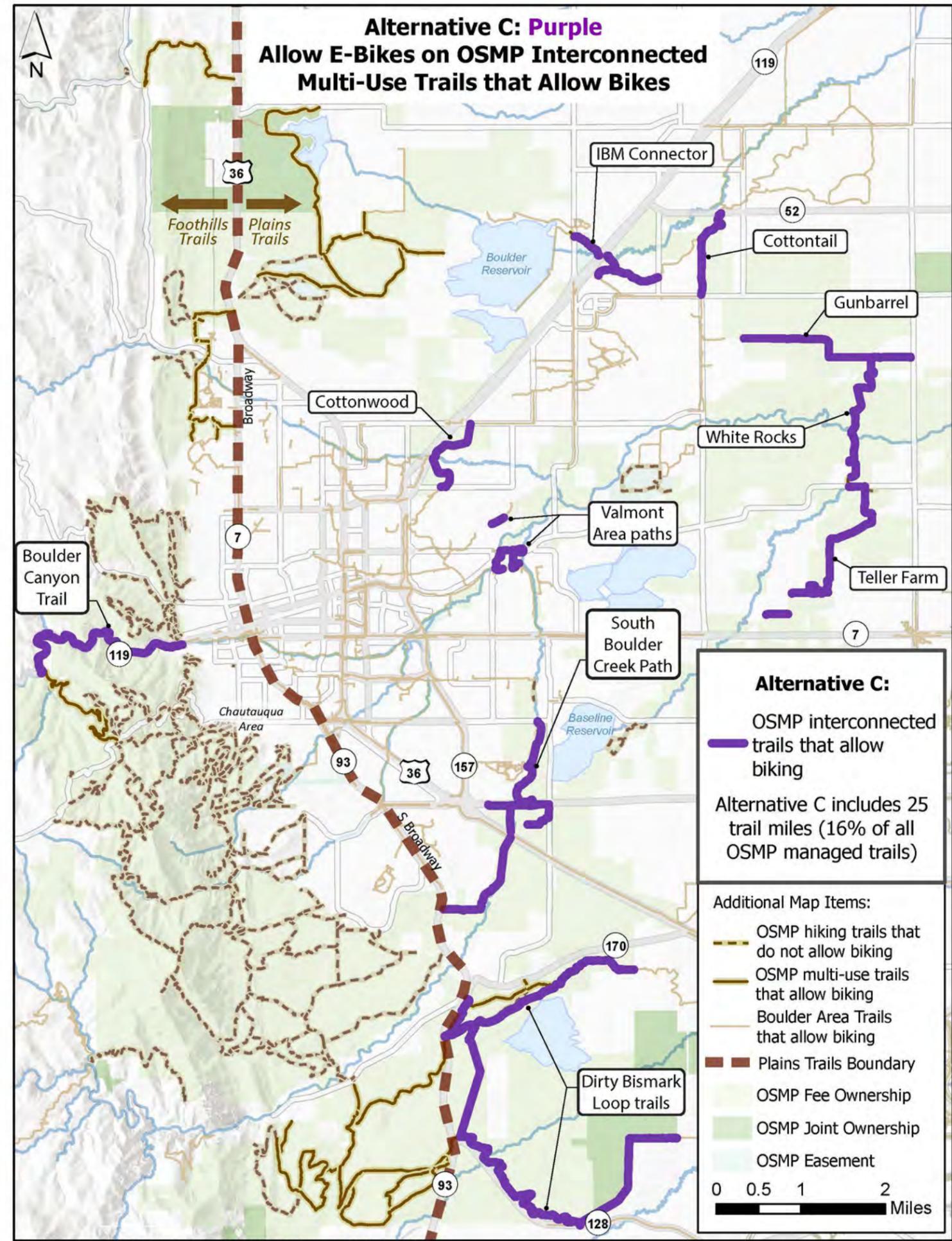
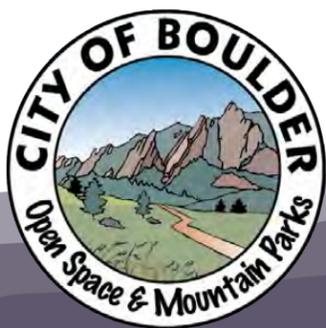
# Alternative C

## Allow e-bikes on Inter-Connected Trails that allow bikes

- OSMP trails that are part of the great Boulder County Regional Trail Network.

### Alternative C would allow e-bikes on

- Approximately 25 miles of open space trails
- 16% of the 154 miles OSMP trail network



# Criteria

**Community support**

**Equitable access to open space lands**

**Consistency with Boulder County and other City inter-connected trails**

**Disposal of open space**

**Effectiveness of regulations**

**Safety / Conflict**

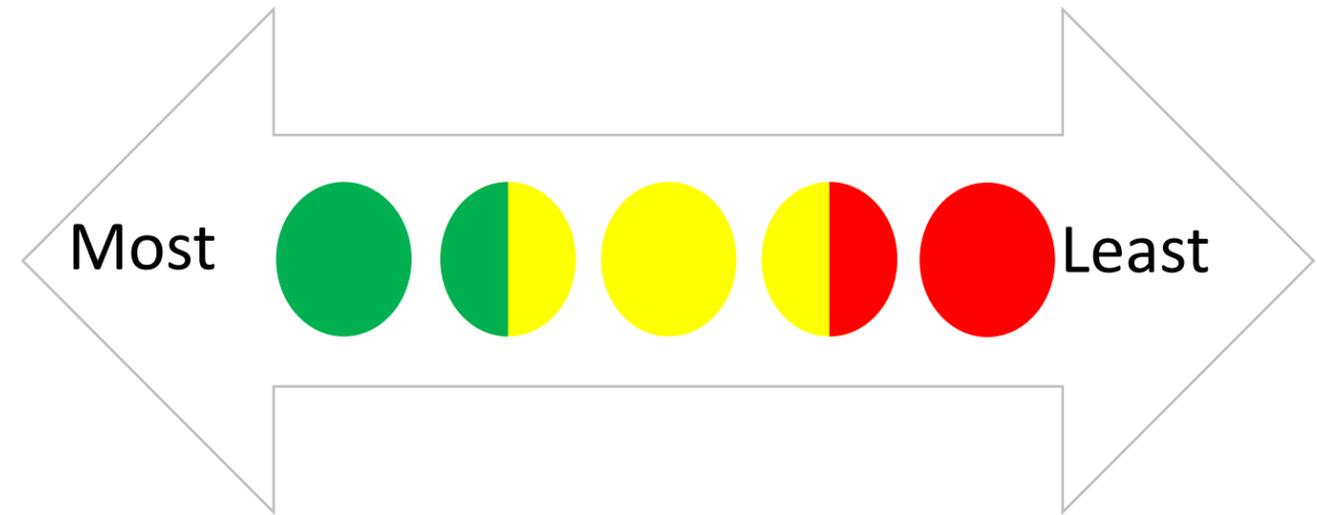
**Aligned with city climate initiatives**

**Protection of natural resources**

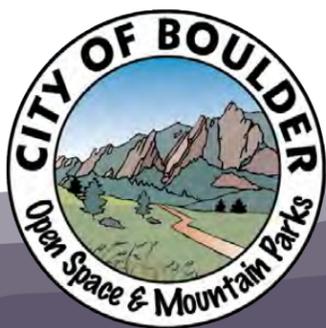
**Visitor displacement**

**Trail maintenance**

**Visitation**

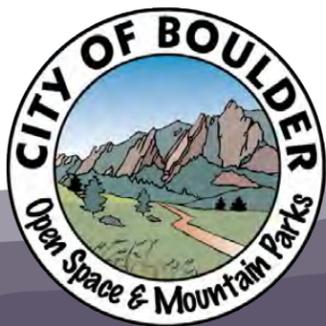


*Preliminary Staff Proposal*  
**Alternative B**



**Alternatives Evaluation**

# Community Input



# About the datasets

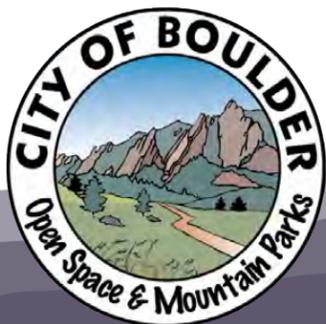
## Online Engagement

- 2,331 responses were submitted between July 11 to Aug. 8.
- 1,543 participants provided open ended comments.
- Open participation opportunity to provide input through Be Heard Boulder platform

## Onsite Intercept

- 431 survey responses were gathered across 9 weeks between July 2<sup>nd</sup> and August 26<sup>th</sup>
- 12 OSMP access points/trailheads were surveyed, including 8 multi-use and 4 pedestrian only trails
- Randomized sample size with response rates between 70% and 82% (quite high for intercept surveys)

Consideration	Online Engagement	Onsite Intercept
Generalizable	✗	✓
Bias	↑	↓
Trend Analysis	✗	✓
Informs decision-making	👍	👍



# Key findings

## Overall

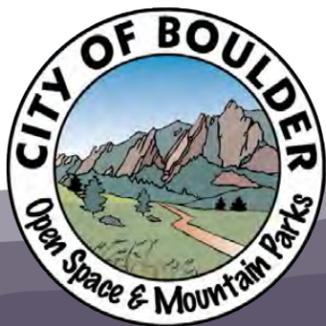
- Majority support for e-biking on some trails

## Preferences

- Alternative B supported by most online engagement respondents
- Support across all three alternatives by many onsite intercept respondents

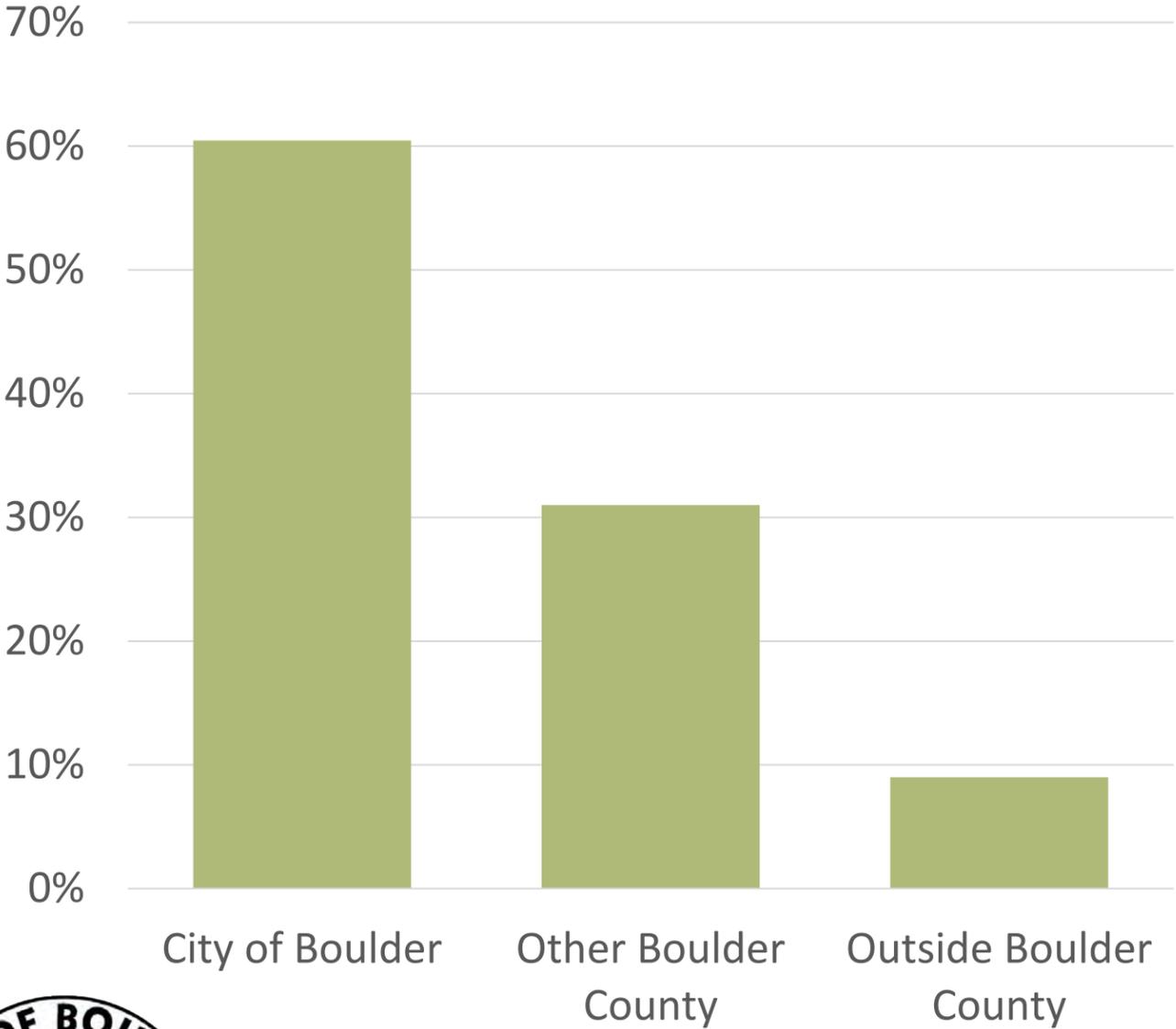
## Management Considerations

- E-biker speed
- concern for conflict
- Potential impacts to trail conditions

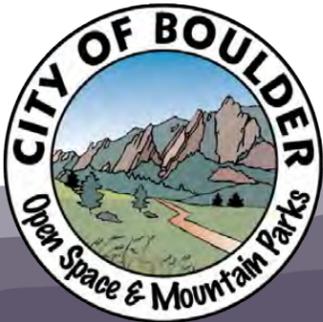
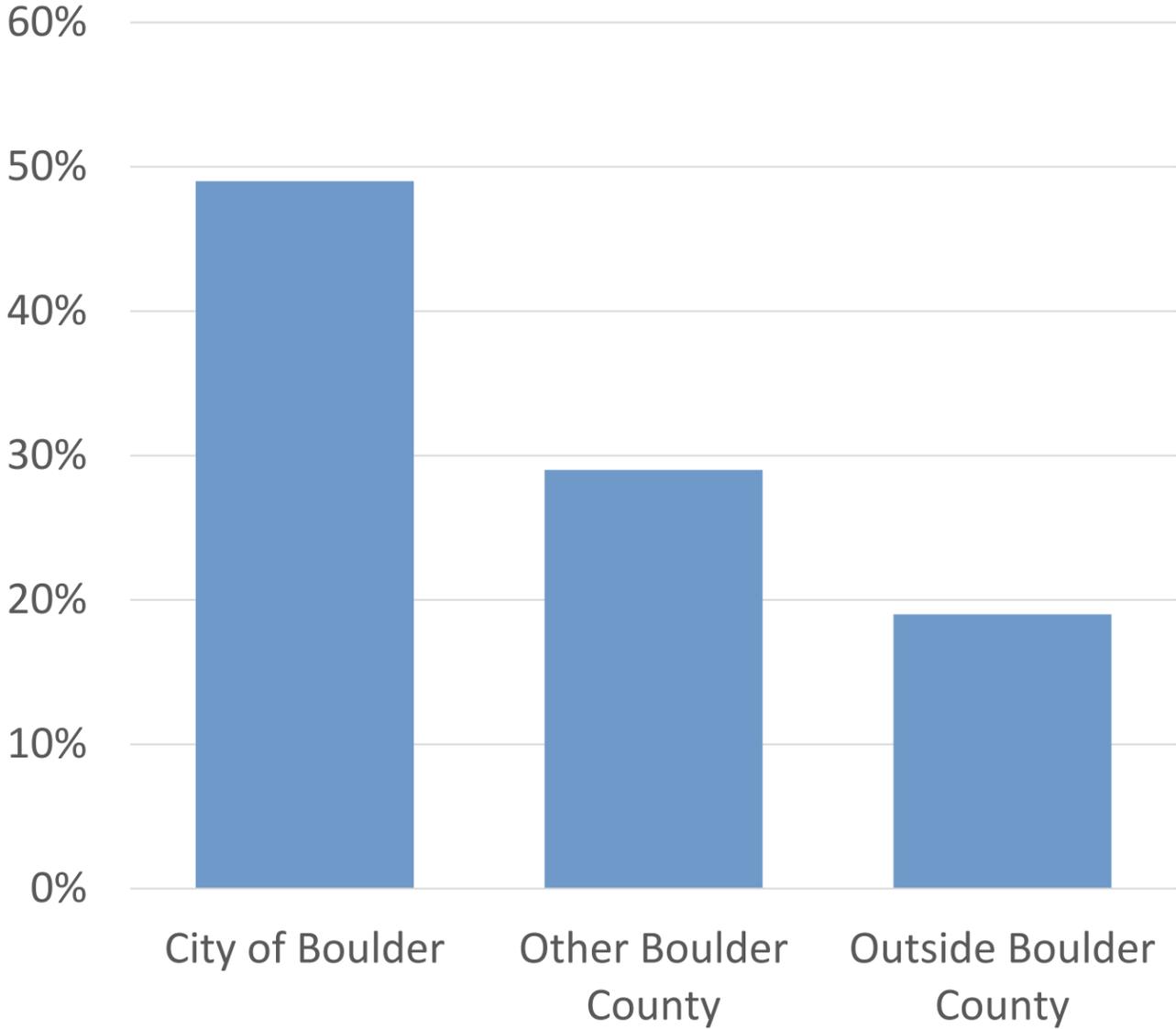


# Residence

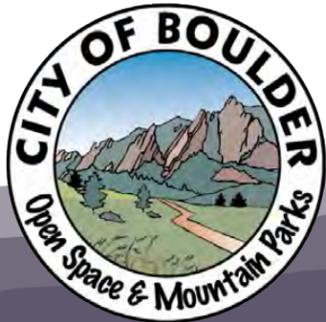
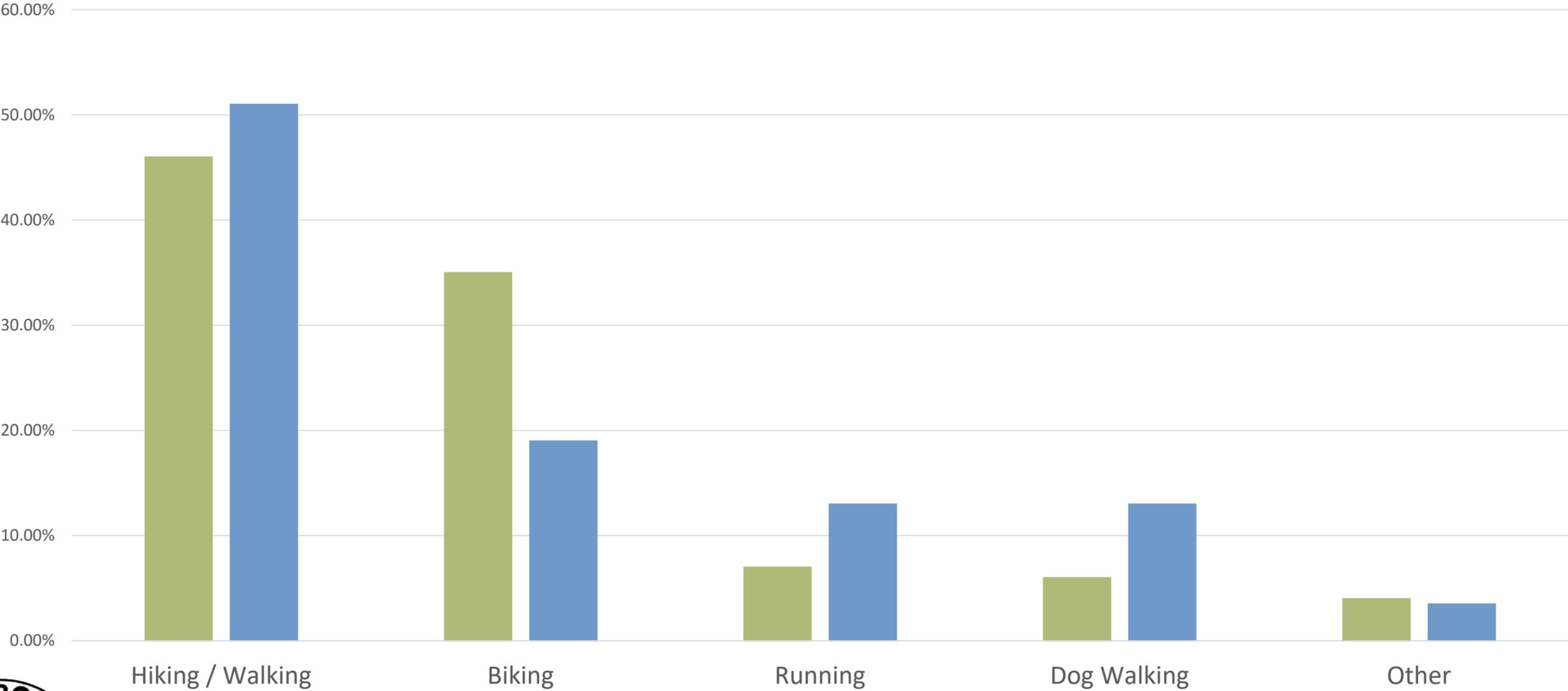
## Online Engagement



## Onsite Intercept



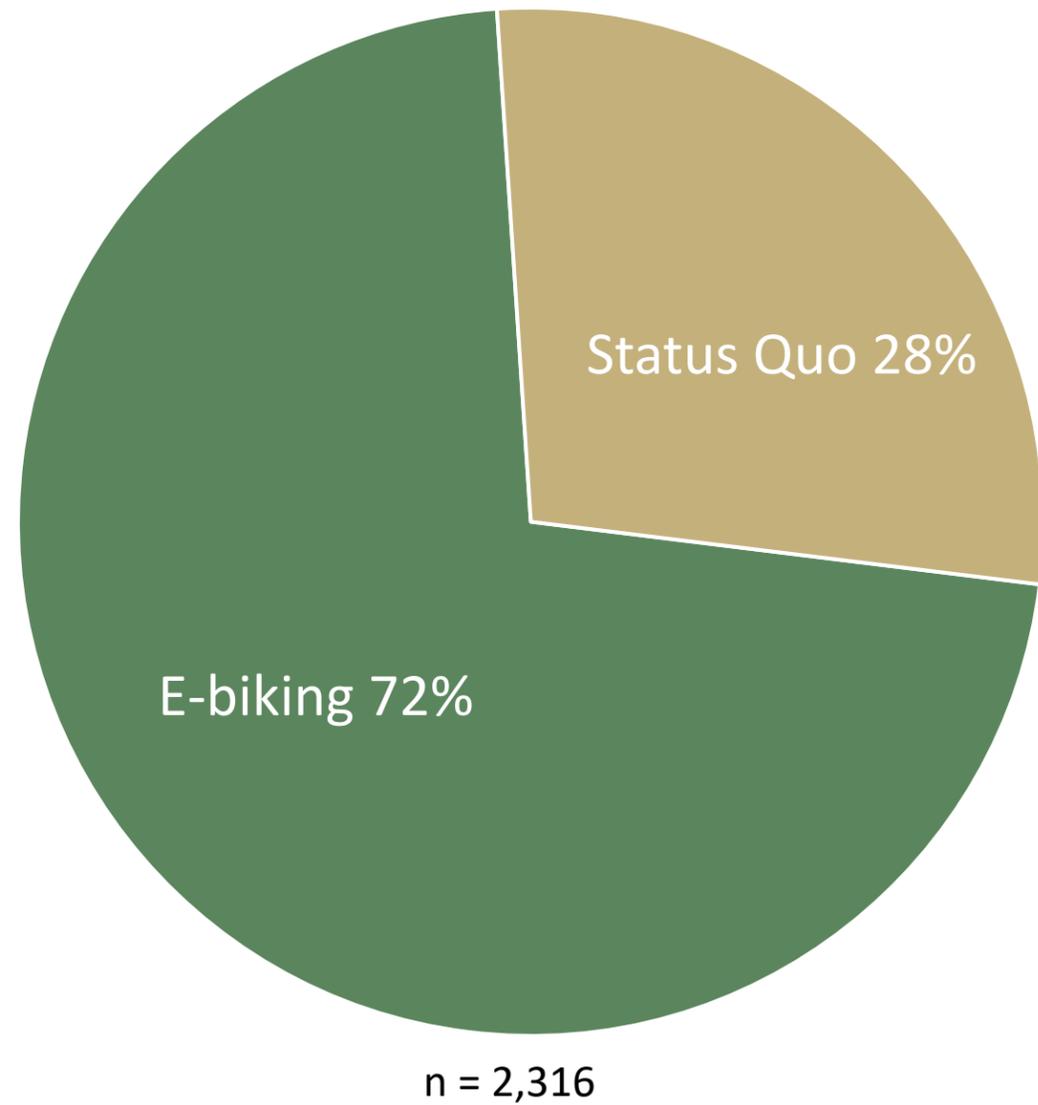
# Primary Open Space Activity



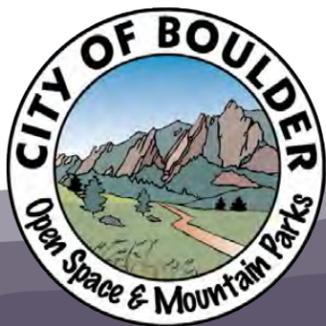
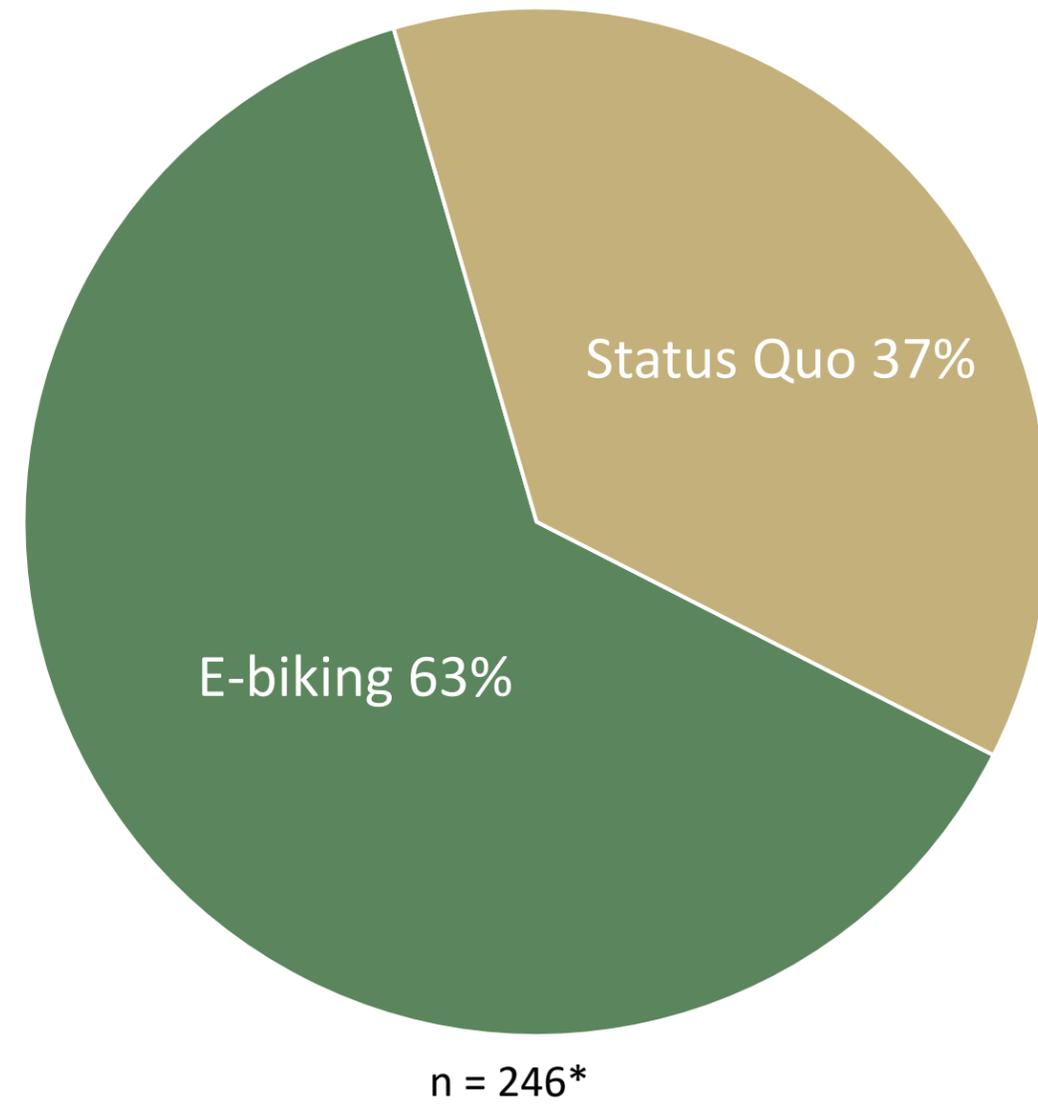
■ Online Engagement (n = 2,331)    ■ Intercept Survey (n = 287)

# Support for E-bikes on Open Space

## Online Engagement



## Onsite Intercept

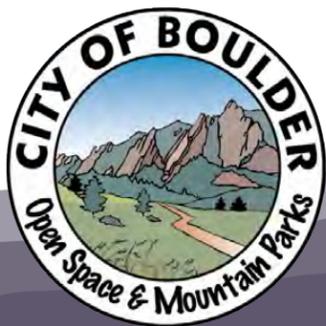


## Community Input Comparison

\*These percentages come from a question that was added starting in week 4 of the 9-week survey that specifically asked respondents to indicate which option they "most prefer".

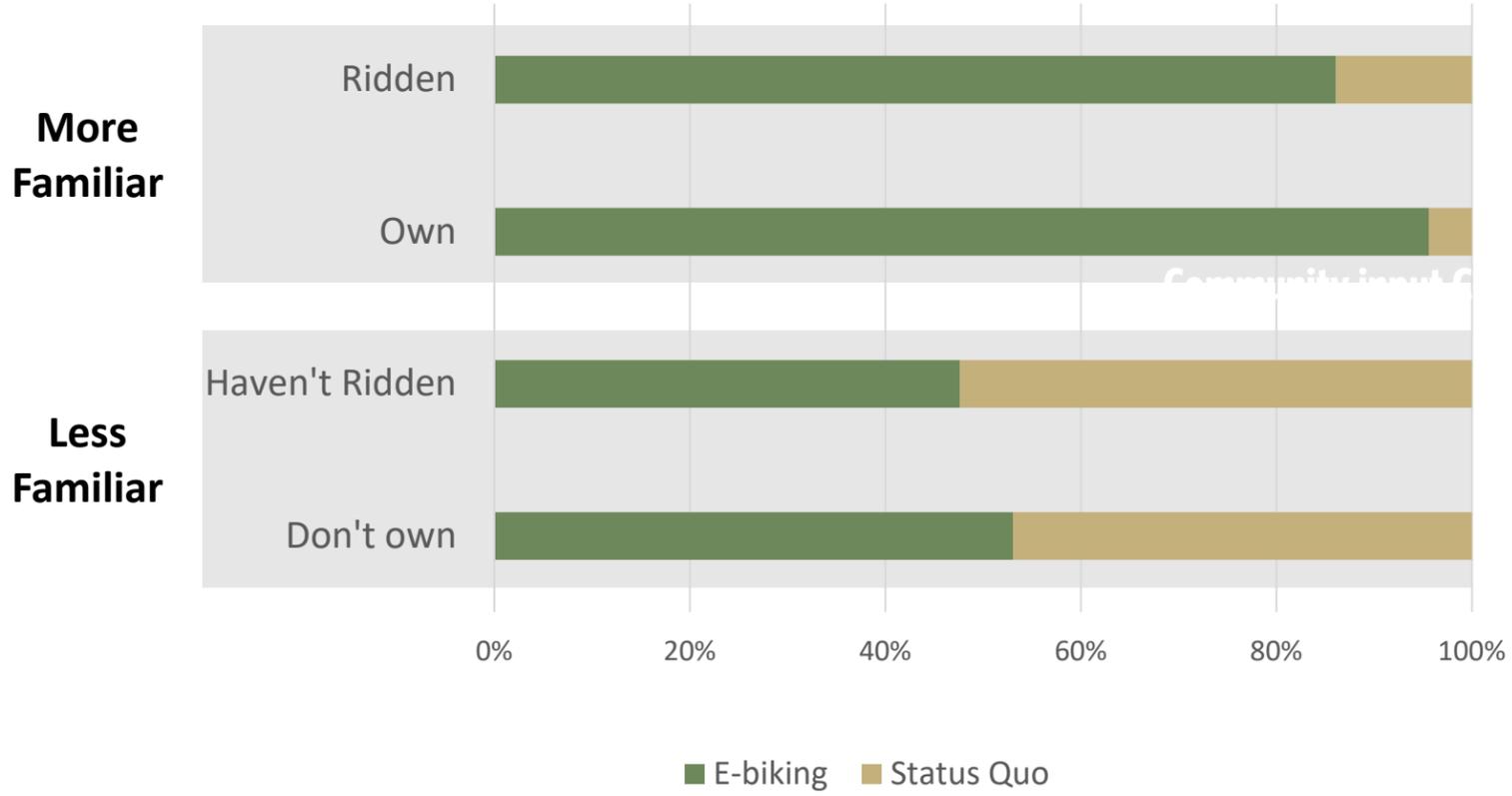
# Support preferences by demographics

- **Primary activity**
- **Residence**
- **Age group**
- **Familiarity with e-bikes**
  - **Ownership**
  - **Ridership**

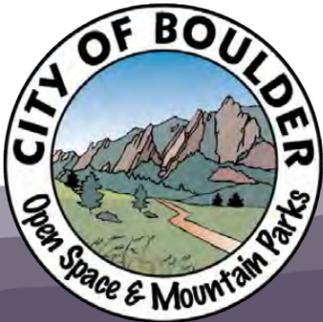
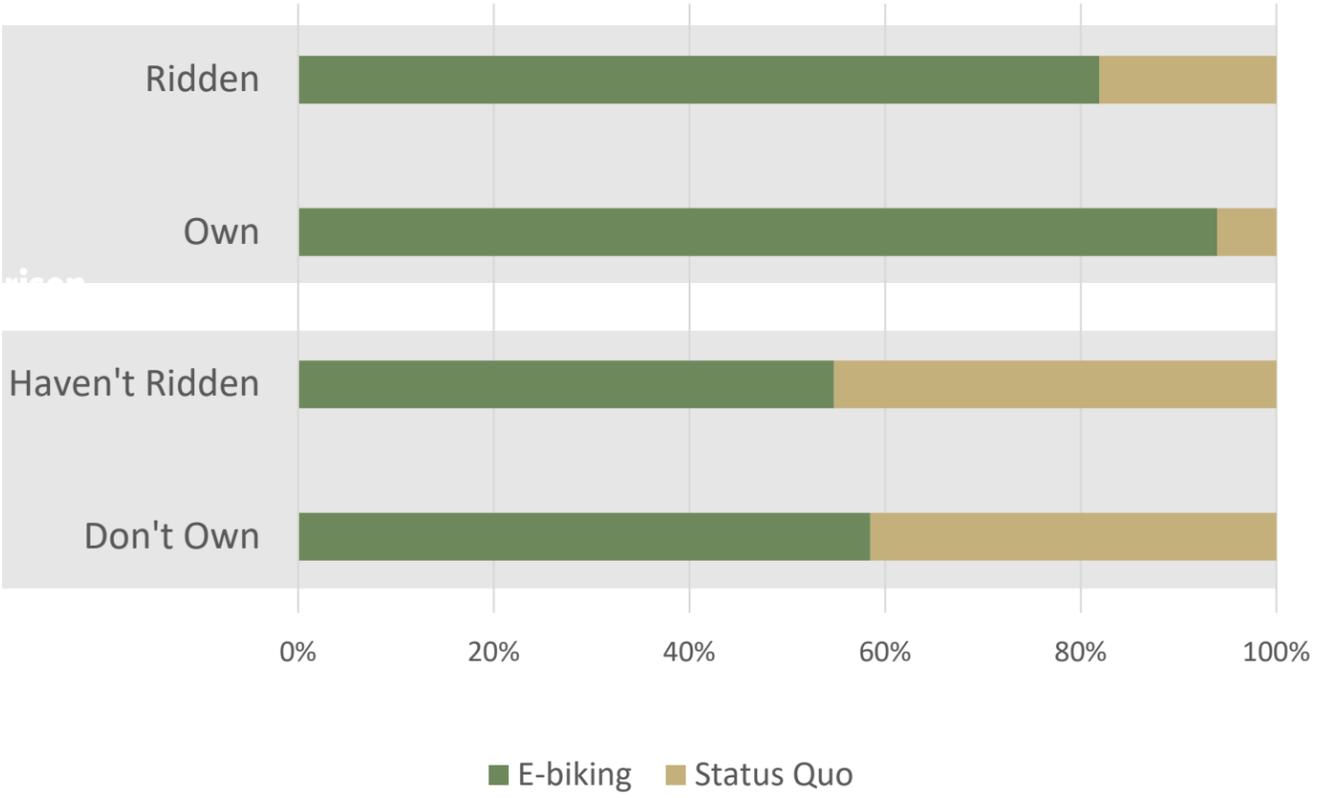


# Familiarity of E-Bikes

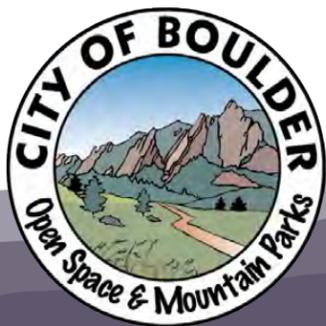
## Online Engagement



## Onsite Intercept

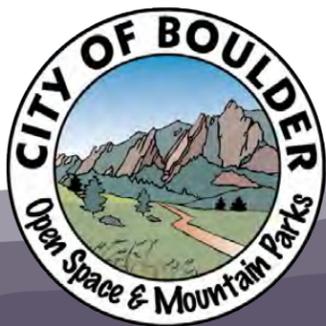


# Support by Alternative



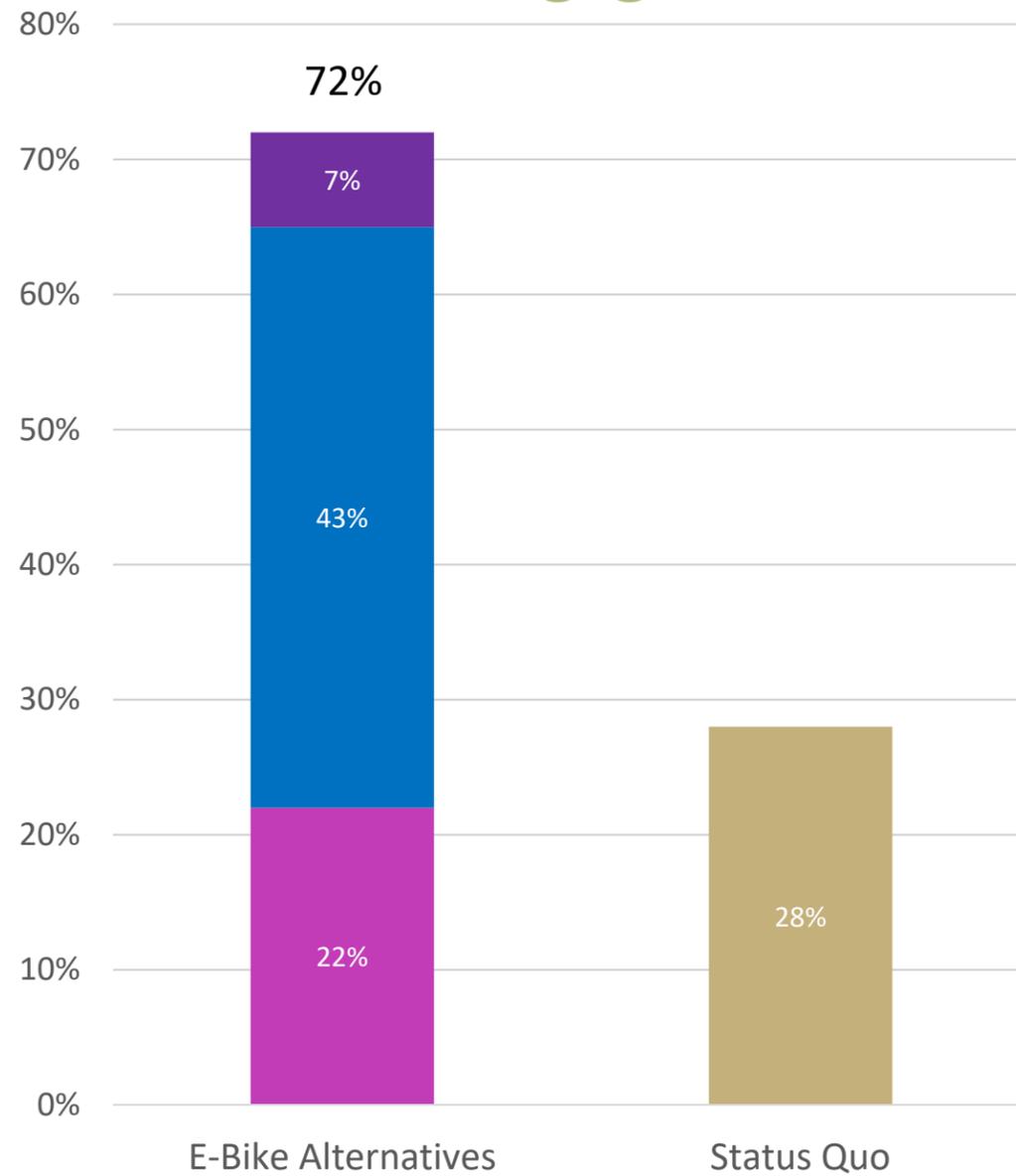
# Alternatives to the Status Quo

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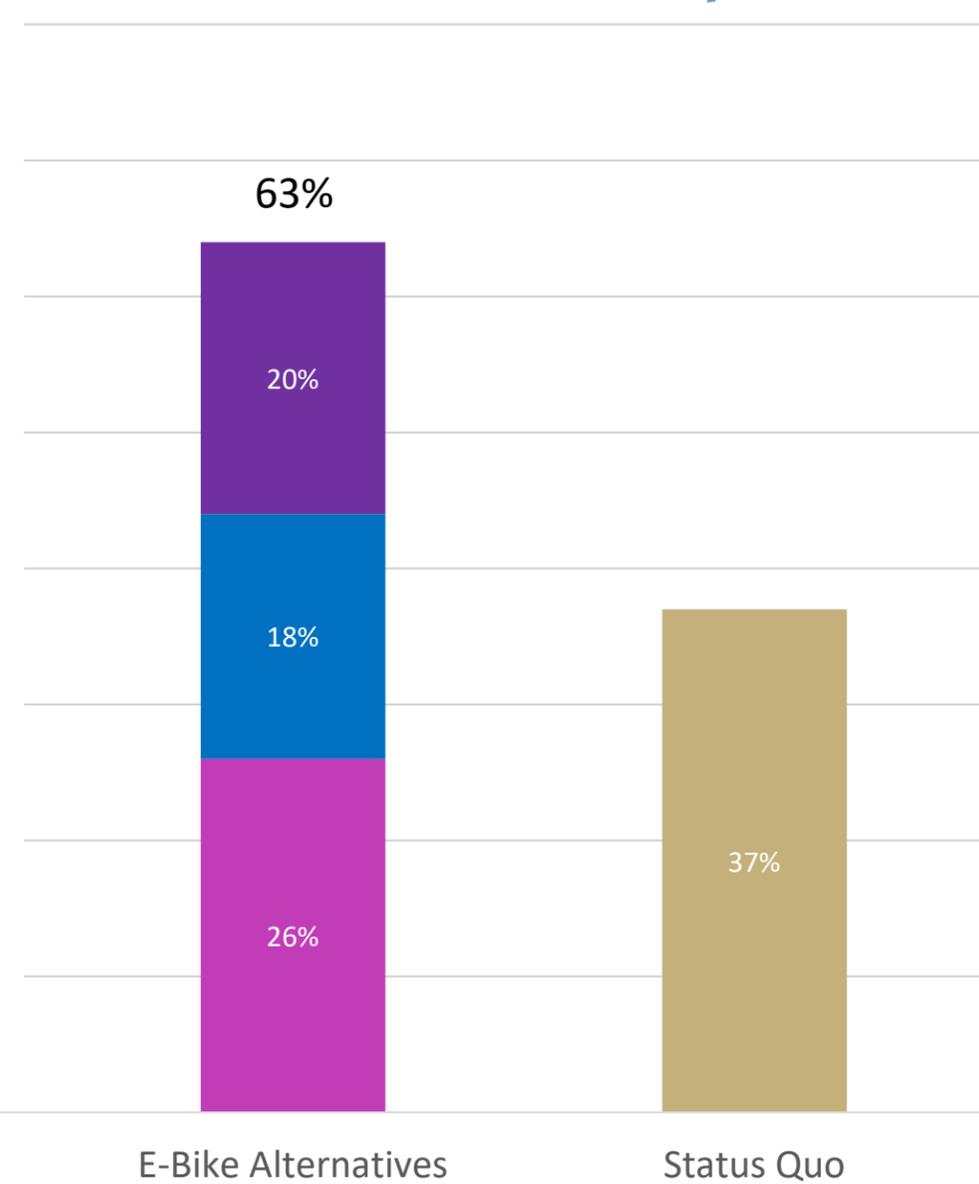


# Support for Alternatives or Status Quo

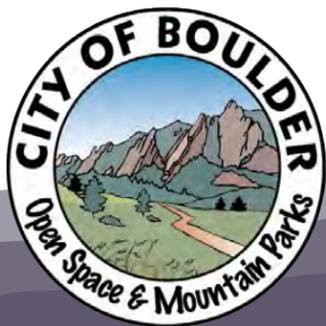
## Online Engagement



## Onsite Intercept

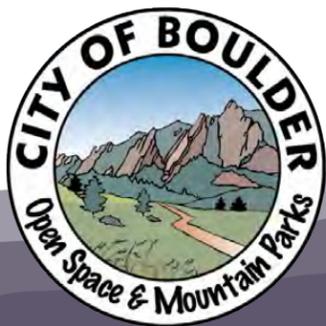
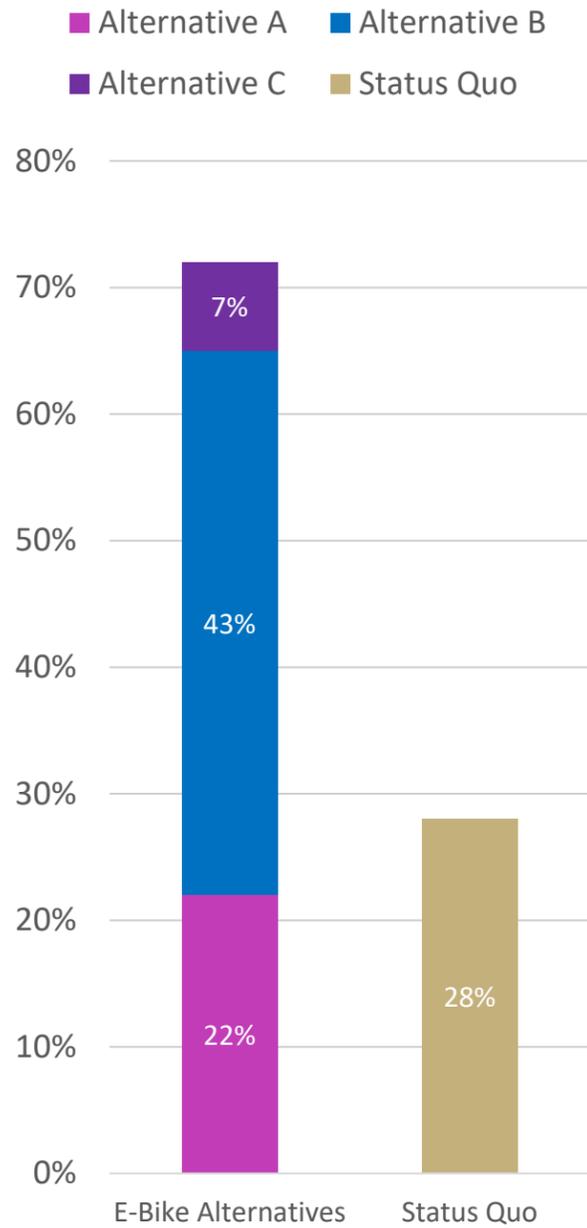


Alternative A Alternative B Alternative C Status Quo



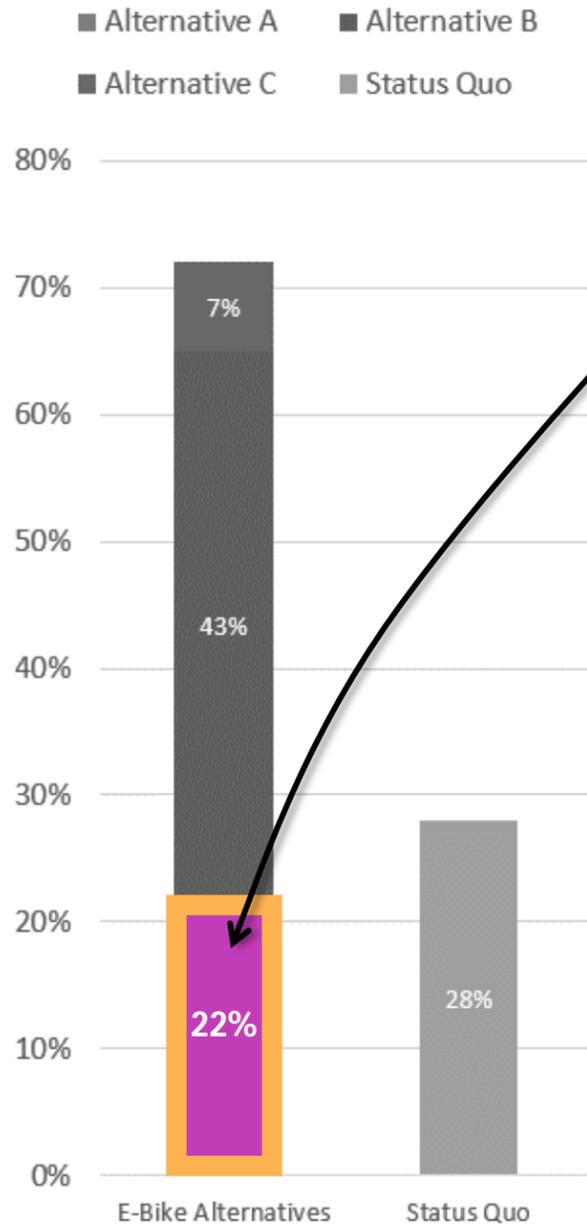
# Online Engagement

## Top 3 Reasons in Support of Each Alternative



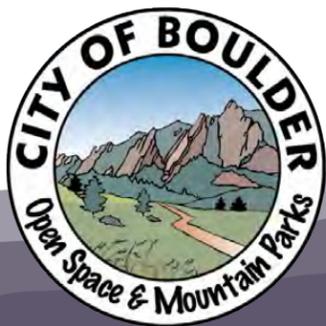
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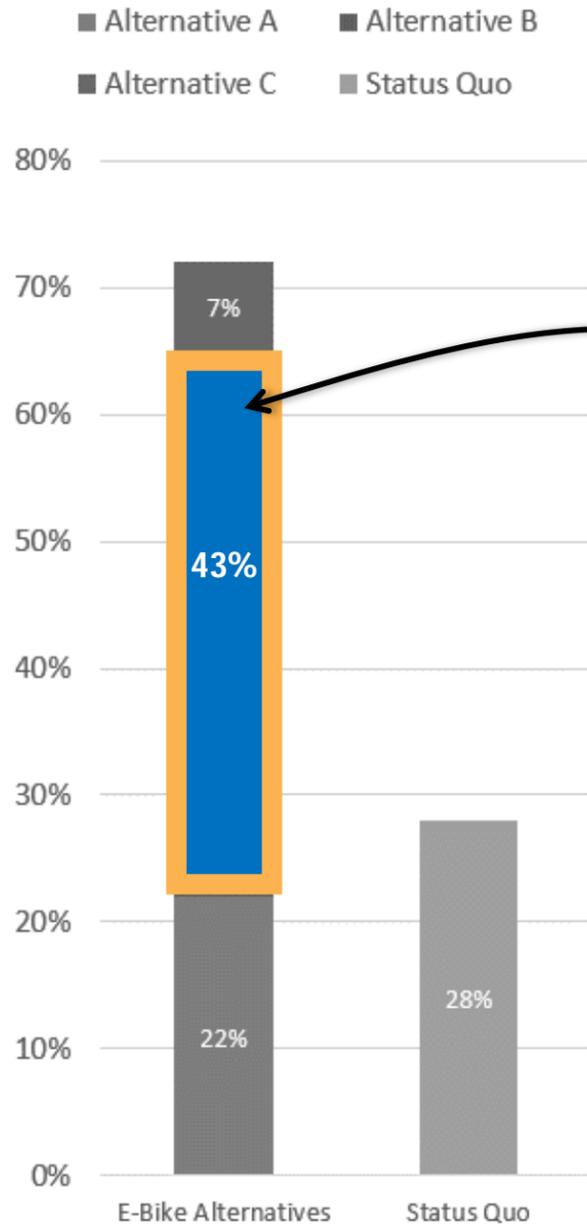
**A:**

It supports a wider range of ages and abilities and permits e-bikes everywhere traditional bikes are allowed.



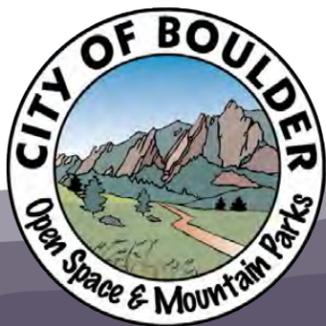
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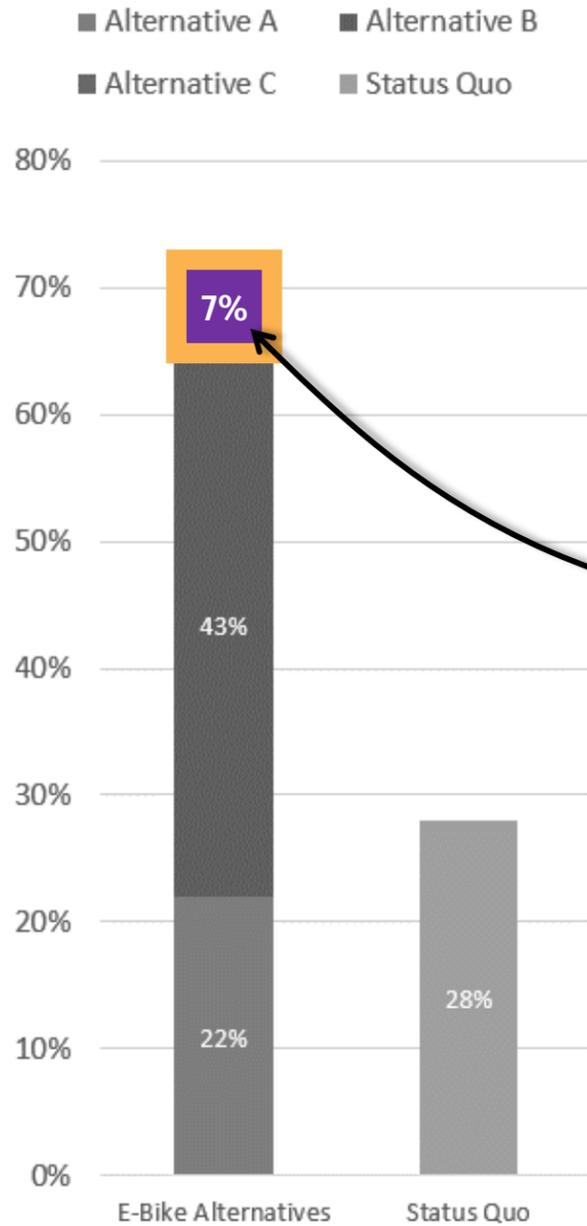
**B:**

It increases access for a wider range of ages and abilities and also reduces trips by car.

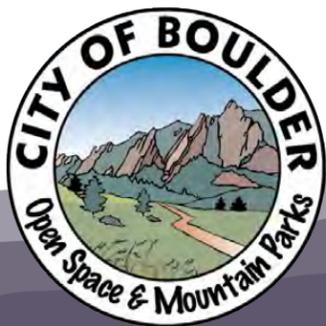


# Online Engagement

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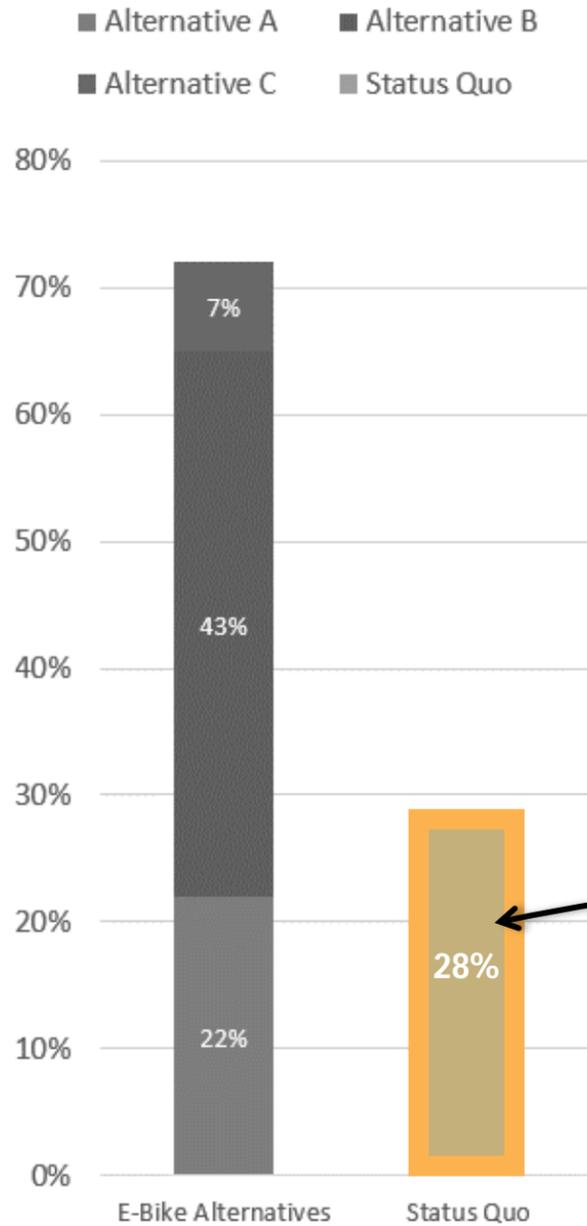


It still allows use of regional and interconnected trails but best addresses safety and conflict-related concerns while minimizes displacement of other visitors.



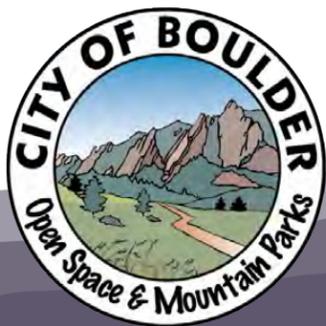
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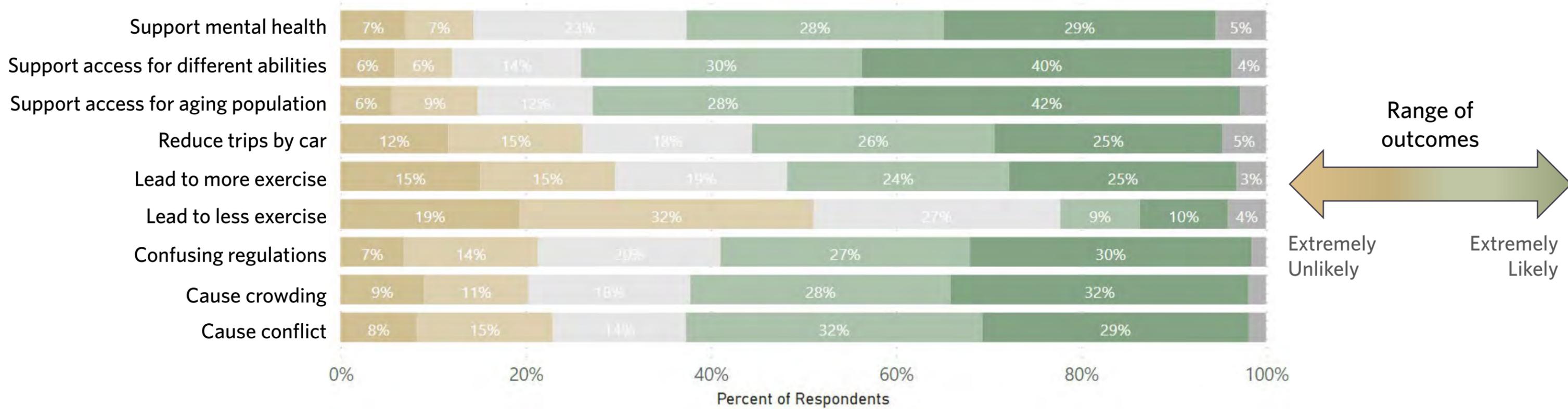


### Status Quo:

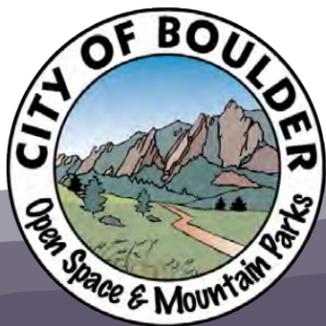
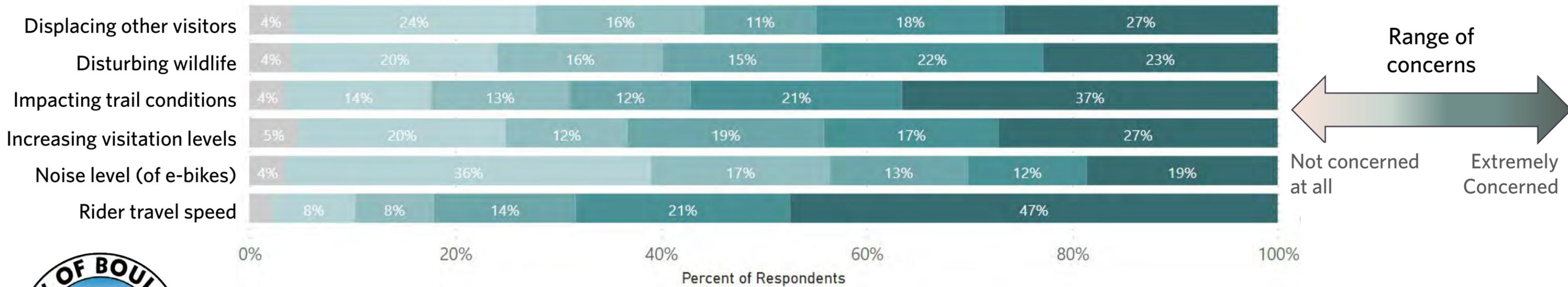
Concerns about e-bike rider travel speed, disagreement with electric-assist as non-motorized, and allowing e-bikes on multi-use trails causing visitor conflict led these participants to support the status quo.



# What do you think the likelihood is for each outcome below?



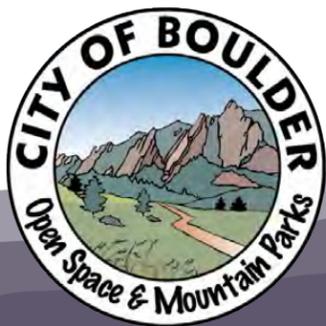
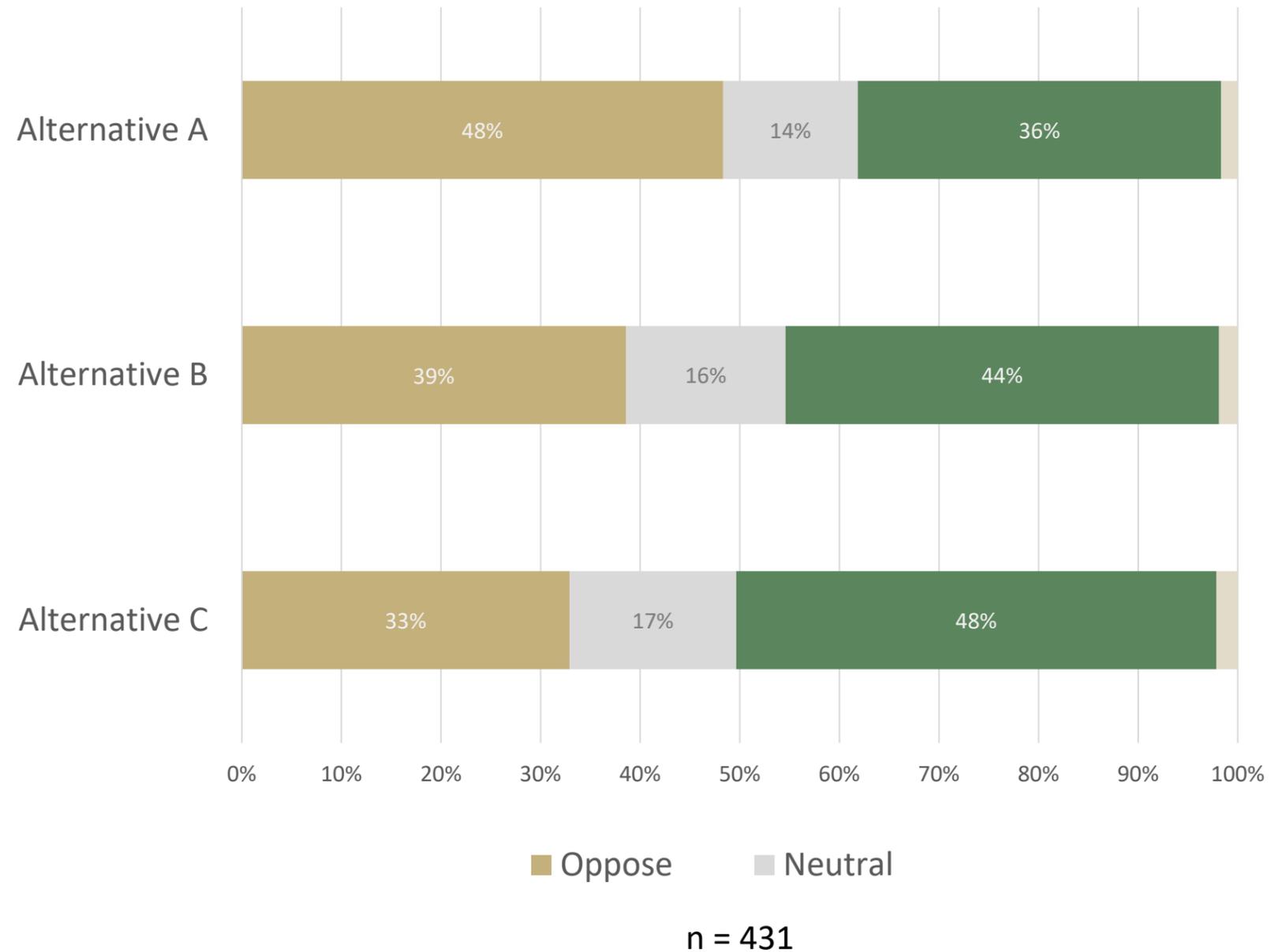
# To what degree are you concerned about...



# Onsite Intercept

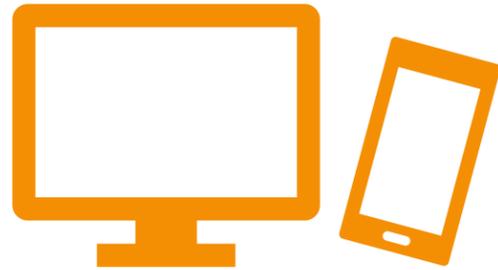
Many respondents indicated support for all 3 alternatives

## Alternatives level of support



# Engagement Window

**SUMMER  
2022:**



**Online Engagement Questionnaire**



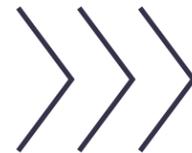
**On-Site Intercept  
Survey**



**Office Hours**



**Compendium of  
Community Comments**



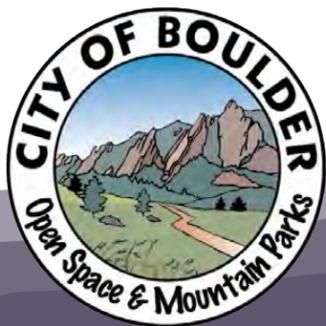
## Comment themes include:

### Concern for:

- Safety
- User Conflict
- E-biking Speed

### Support for:

- Speed Limit Enforcement



# Overall Conclusions from Datasets

## Overall

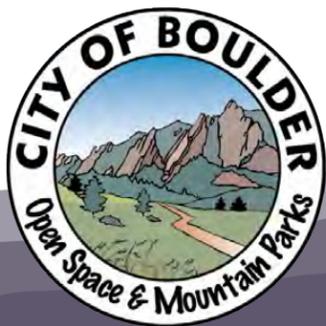
- Majority support for e-biking on some trails

## Preferences

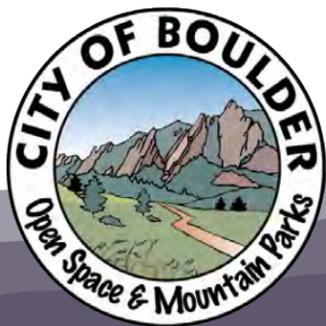
- Alternative B supported by most online engagement respondents
- Support across all three alternatives by many onsite intercept respondents

## Management Considerations

- E-biker speed
- concern for conflict
- Potential impacts to trail conditions



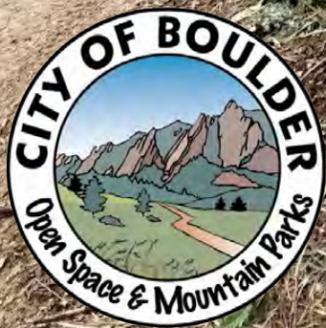
# Additional Staff Analysis



# Boulder City Charter

## Use of Open Space Land

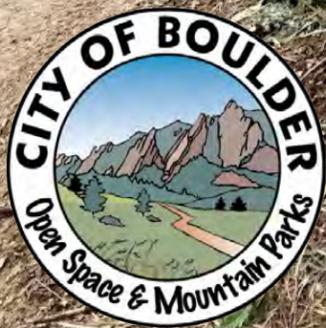
- Section 176 limits the use of open space land
  - ✓ Preservation of land for passive recreational use such as hiking, photography or nature studies, and, if specifically designated, bicycling, horseback riding, or fishing *Section 176 (c)*



# Boulder City Charter

## Use of Open Space Land

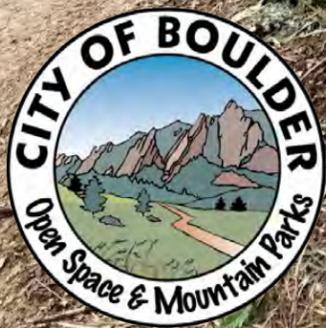
- **Section 176 limits the use of open space land**
  - ✓ Preservation of land for passive recreational use such as hiking, photography or nature studies, and, if specifically designated, bicycling, horseback riding, or fishing *Section 176 (c)*
- **Does not define all passive recreational uses**



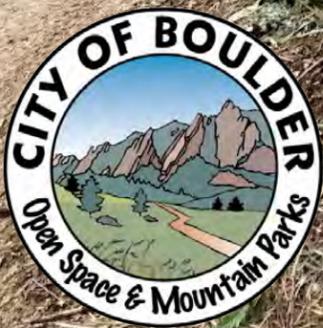
# Boulder City Charter

## Use of Open Space Land

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- Does not define all passive recreational uses
- Allows for other activities to be considered "passive recreation" by use of phrase "such as"



# Boulder City Charter



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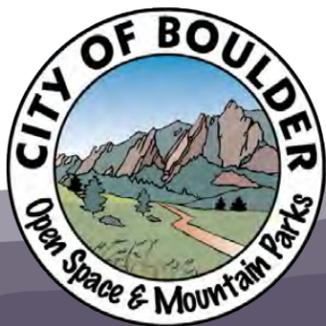
## City Council Role

- Section 2(h) provides that all non-delegated functions reside with City Council.
  - Charter does not delegate defining Charter terms to OSBT
  - Within Council authority to define "passive recreational uses"

# 2005 Visitor Master Plan

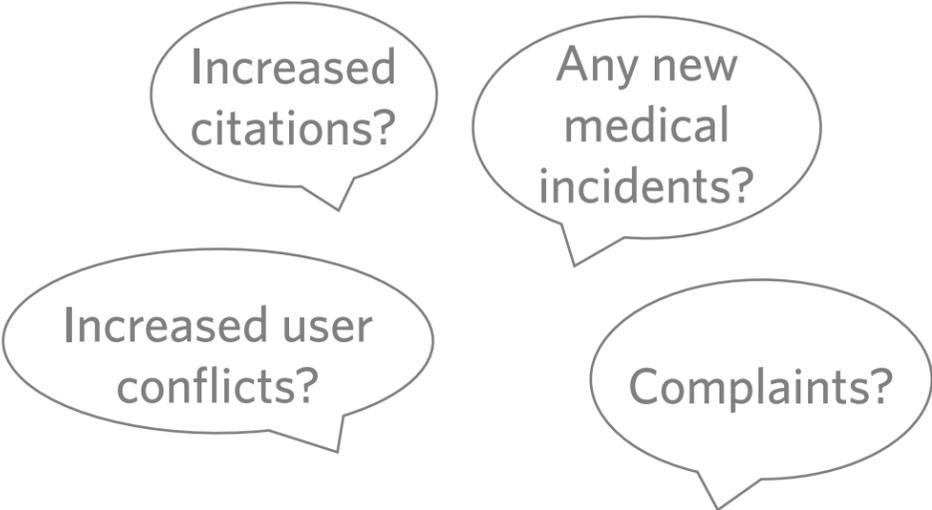
Includes a definition of passive recreation as *non-motorized* activities that:

- Offer constructive, restorative, and pleasurable human benefits that foster an appreciation and understanding of Open Space [and Mountain Parks] and its purposes
- Do not significantly impact natural, cultural, scientific, or agricultural values
- Occur in an Open Space and Mountain Parks setting, which is an integral part of the experience
- Require only minimal facilities and services directly related to safety and minimizing passive recreational impacts
- Are compatible with other passive recreational activities

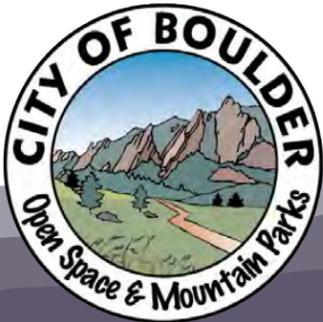
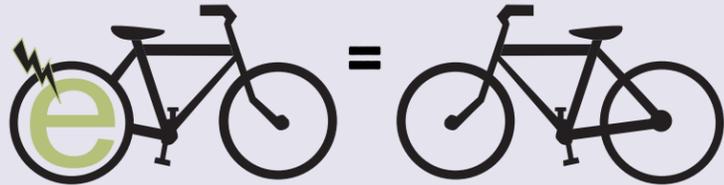


The cover of the 2005 Visitor Master Plan for Open Space &amp; Mountain Parks. The title "City of Boulder OPEN SPACE &amp; MOUNTAIN PARKS" is at the top in a mix of script and bold sans-serif fonts. Below is a stylized illustration of a mountain landscape with a path. The main title "VISITOR MASTER PLAN" is in large, bold, black letters. At the bottom, there is a green box containing the text "ENJOY &amp; PROTECT" next to a white tree silhouette, and a photograph of people hiking on a trail. The City of Boulder logo and the text "APPROVED APRIL 2005 www.osmp.org" are in the bottom right corner.

# Peer Agency Experience

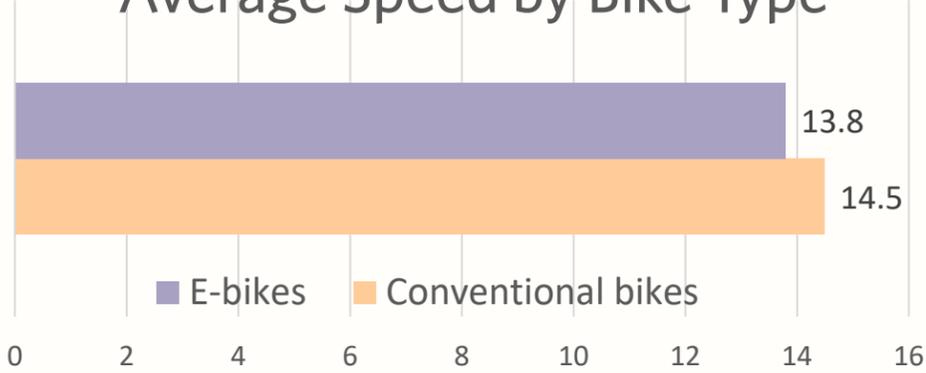


**Peer agencies reported no increase in these concerns as a result of allowing e-biking on the lands they manage.**



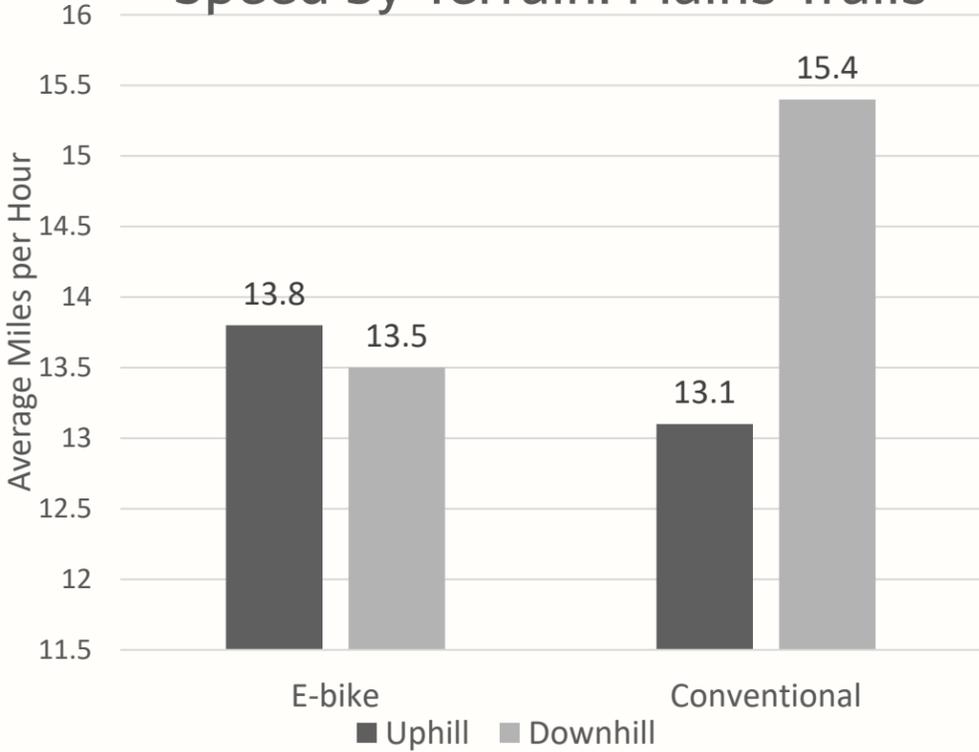
# Boulder County Parks & Open Space Speed Study

Average Speed by Bike Type



- Bike speeds don't differ much by bike types
- Bike speeds vary by terrain

Speed by Terrain: Plains Trails



# OSMP Experience

## Biking Activity

9-11% of visitors

20% on trails that allow bikes

86% from Boulder County

## Conflicts

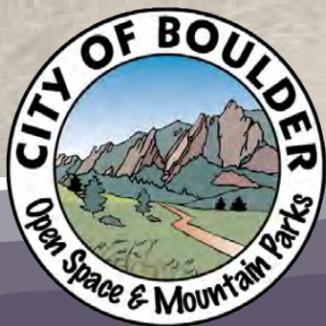
6% reported a conflict, overall

2% involved a bicyclist

## Encounters among visitors

69% positive

26% neutral

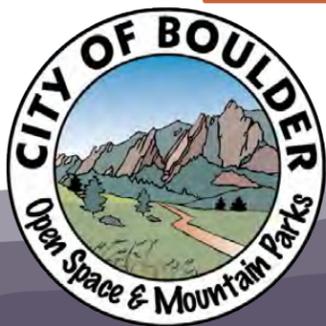


# Approach to Authorize E-biking on Open Space

## VMP Criteria for passive recreation

- Offer constructive, restorative, and pleasurable human benefits that foster an appreciation and understanding of Open Space [and Mountain Parks] and its purposes
- Do not significantly impact natural, cultural, scientific, or agricultural values
- Occur in an Open Space and Mountain Parks setting, which is an integral part of the experience
- Require only minimal facilities and services directly related to safety and minimizing passive recreational impacts
- Are compatible with other passive recreational activities

- **Legislative finding by Council that e-biking is passive recreational activity**
- **Designate trails for e-biking through rule-making authority by City Manager**



# A Holistic Management Approach

**Trail Design & Maintenance**



**Monitoring**

**Education & Outreach**



**Enforcement**



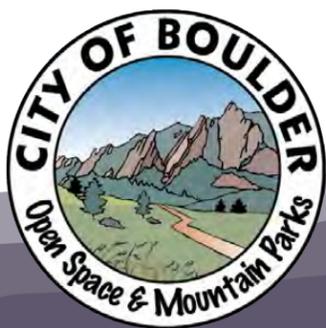
# Trail Design and Maintenance

## ***Continue to:***

- Employ design best practices
- Identify and prioritize strategic trail maintenance

## ***Enhance:***

- Focus on pinch points for biking and e-biking





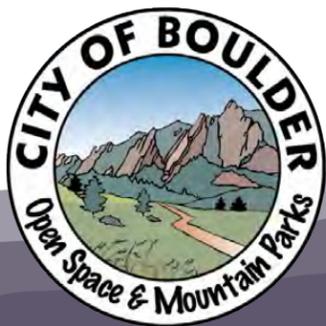
# Education & Outreach

## ***Continue to:***

- Welcome visitors at trailheads and trails
- Engage broader visitor population at community-based events
- Partner with volunteer Mountain Bike Patrol
- Ranger presence on the land

## ***Enhance:***

- Add messaging about e-biking as a new activity and trails designated for e-biking use
- Expand awareness of trail courtesy and Yield Triangle understanding





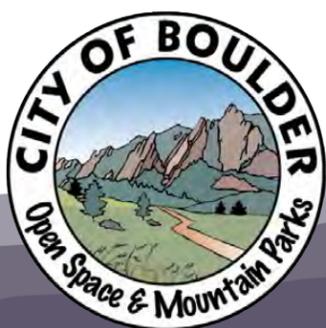
# Enforcement

## ***Continue to:***

- Patrol high visitation trails

## ***Enhance:***

- Add e-biking to BRC 8-8-6 Regulation of Vehicles and amend other applicable rules
- Targeted enforcement activities, as needed
- Targeted patrol on trails with high bike & e-bike use





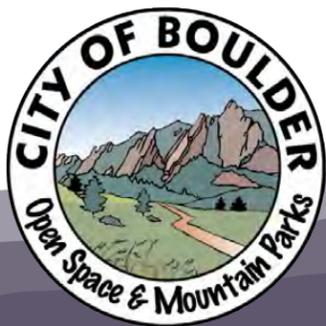
# Monitoring

## ***Continue to:***

- Collect visitation data
- Track incidents involving bikers
- Assess visitor behavior and trends
- Trail conditions

## ***Enhance:***

- Add e-biking as a new activity
- Track incidents involving e-bikers
- Monitor conflict rates attributed to e-biking



# Preliminary Staff Recommendation

- **Allow Class 1 and Class 2 e-biking as a passive recreational activity permissible on open space.**
- **Allowed only on certain designated trails.**

class

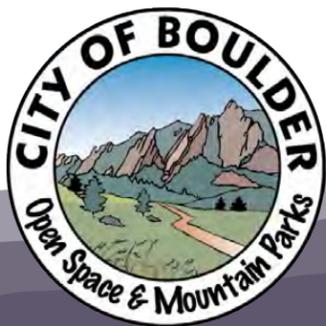
1

Pedal assist only,  
maximum assisted  
speed of 20 mph

class

2

Pedal & throttle  
assisted, maximum  
assisted speed 20 mph

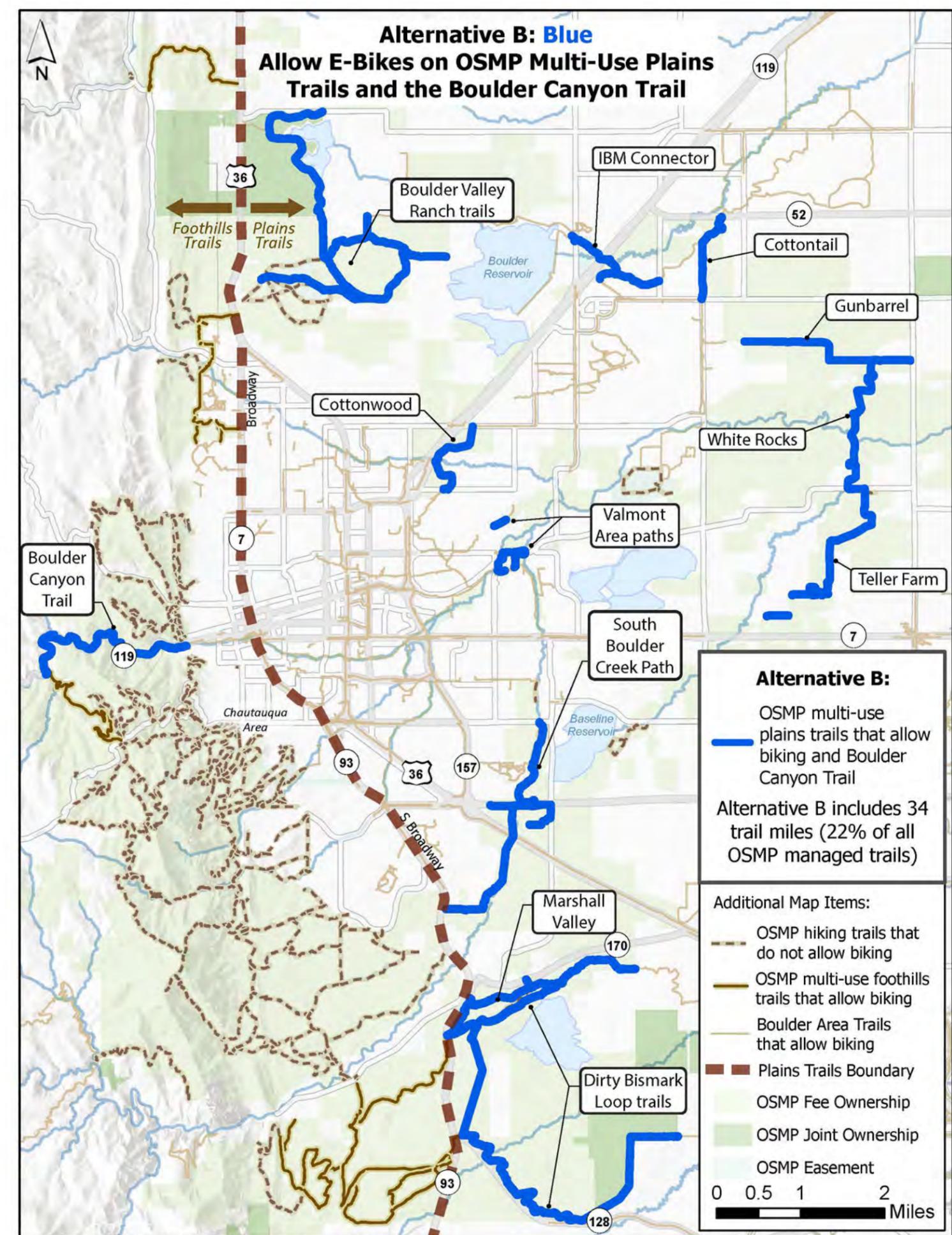
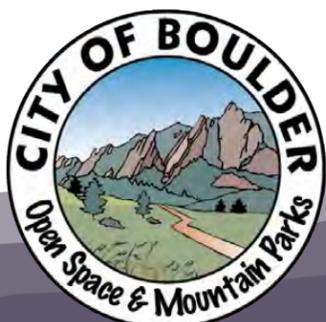


# Alternative B

## Preferred Alternative

### OSMP Plains trails and Boulder Canyon trail

- Consistency with e-biking regulations interconnected trails.
- Effectiveness of regulations.
- Significantly increases equitable access to open space.
- Create an adaptive approach and alternative to disposal.
- Minimal impacts to natural resources, visitor experiences, visitor safety, and the trail system.
- Supports broader city climate goals.



Spring 2022

**Evaluation of alternatives and preliminary proposal**

Summer 2022

**Community Engagement**

Fall 2022

**Board Input and Action**

**Nov 9:** Present public feedback, additional analysis and preliminary staff recommendation

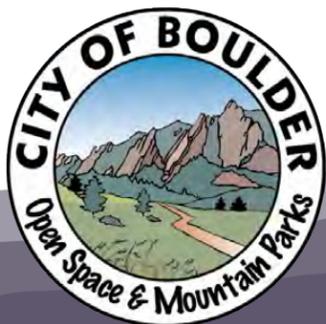
**Dec 14:** Public Hearing on Final Staff Recommendation

**Jan 13:** OSBT consideration and recommendation to City Council

Next  
Step

Winter 2023

**Council Consideration**



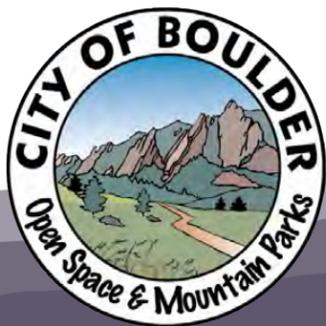
**Board & Council Consideration**

# Questions for OSBT

- 1. Do Trustees have comments or questions about the community input?**

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- 2. Do Trustees have comments or questions about the Additional Staff Analysis?**

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- 3. Is there any additional information Trustees need to consider an action item regarding e-biking on open space trails?**



**Thank You!**



**Questions?**

