



Parks & Open Space

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BOULDER COUNTY PLANNING COMMISSION
Dec. 18, 2019 – 1:30 p.m.
Commissioners Hearing Room, Third Floor
Boulder County Courthouse
BCCP-19-0003: Decision on Passive Recreation Definition in the Open Space Element
of the Boulder County Comprehensive Plan to Include E-bikes

Staff presenter:

Tina Nielsen, Special Projects Manager, Boulder County Parks & Open Space (BCPOS)

I. Background

The purpose of this public hearing is to update the passive recreation definition in the Open Space Element of the Boulder County Comprehensive Plan in order to provide consistency with the newly adopted e-bike policy. The table below summarizes the events and processes leading up to this decision.

Summary of E-bike Process	
2017	<ul style="list-style-type: none"> • Aug: Governor signed HB17-1151: Electric Assisted Bicycles Regulation Operation changing the way e-bikes are classified and regulated under state law: e-bikes no longer classified as motorized vehicles and class 1 and 2 e-bikes are allowed on bike paths unless prohibited by local governments • Dec: POSAC hearing on updates to POS Rules and Regs to clarify that e-bikes are not allowed on BCPOS trails • Flurry of public response objecting to e-bike “ban” resulting in decision to begin a public outreach effort on the topic of whether and where to allow e-bikes on county trails
2018	<ul style="list-style-type: none"> • Feb.: 3 open houses, 2 with e-bike demos • 4 POSAC presentations in Jan., March, May and June; POSAC recommended approval of allowing e-bikes in June • Aug.: BOCC hearing to consider 3 options for pathway to allowing e-bikes (allow under state law, dispose of property underlying trails, change comp plan definition), with resulting decision to pursue an update to passive recreation definition • Nov. BOCC hearing with approval of 2019 e-bike pilot • Dec. PC study session to introduce the topic and lay out the process
2019	<ul style="list-style-type: none"> • March: Joint PC-BOCC study session to discuss research goals and methods • Hired 2 interns and conducted intercept survey, phone survey, speed observation study, and literature review • Oct.: 3 open houses to present research results and staff recommendation • Oct. 16: PC study session to present research results and comp plan language options • Oct. 24: POSAC hearing: POSAC recommended approval of staff recommendation • Nov. 13: BOCC approved staff recommendation and provided input on comp plan language • Dec. 18: PC Hearing for decision on Comp Plan language

II. Options for Amending the BCCP Passive Recreation Definition

The current BCCP Open Space Element¹ definition of passive recreation is:

Passive Recreation, referred to in the *Open Space Element* policies, is defined as non-motorized outdoor recreation with minimal impact on the land, water, or other resources that creates opportunities to be close to nature, enjoy the open space features, and have a high degree of interaction with the natural environment. Further,

- Passive recreation requires no rules of play or installation of equipment or facilities, except for trails and associated improvements.
- Passive recreation includes activities such as hiking, snowshoeing, cross-country skiing, photography, bird-watching, or other nature observation or study.
- If specifically designated, passive recreation may include bicycling, horseback riding, dog walking, boating, or fishing.

At the Oct. 16 study session, Planning Commissioners discussed three options outlined by staff to consider for updating the definition of passive recreation (see Attachment A for the full discussion of these alternatives in the Oct. 16 PC staff report):

Option 1. Amend the 3rd bullet of the passive recreation definition to add e-bikes to the list of activities allowed if specifically designated (designation would be a policy action of the BOCC). The content would read as follows (revisions shown in red):

- *“If specifically designated, passive recreation may include bicycling, horseback riding, dog walking, boating, fishing, or riding e-bikes.”*

Option 2. Remove the reference to non-motorized recreation and add a bullet that characterizes limited acceptable motorized uses.

*“Passive Recreation, referred to in the *Open Space Element* policies, is defined as ~~non-~~**motorized** outdoor recreation with minimal impact on the land, water, or other resources that creates opportunities to be close to nature, enjoy the open space features, and have a high degree of interaction with the natural environment. Further,*

- *Passive recreation is traditionally non-motorized. However, certain low-powered electrical-assist modes may be permitted if*
 - *Travel speeds are comparable to non-motorized modes or are dependent on the user’s condition, skill, terrain, trail conditions, and weather*
 - *Noise is no greater than that generated by non-motorized modes or other uses*
 - *No pollution is emitted as a result of use*
 - *Potential trail damage is no greater than that caused by similar non-motorized modes, and can be mitigated through management actions such as trail closures*
 - *Potential impacts to land, water and other resources are no greater than those caused by similar non-motorized modes*

¹ www.bouldercounty.org/open-space-element

Option 3. Remove the reference to non-motorized recreation and add a bullet with language that provides guidance for evaluating the desirable characteristics associated with the new use:

“Passive Recreation, referred to in the Open Space Element policies, is defined as ~~non-motorized~~ outdoor recreation with minimal impact on the land, water, or other resources that creates opportunities to be close to nature, enjoy the open space features, and have a high degree of interaction with the natural environment. Further,

- *Passive recreation is traditionally non-motorized. However, certain low-powered electrical-assist modes may be permitted if they complement or enhance accessibility, sustainability, or the visitor’s enjoyment without diminishing or damaging natural resource values.”*

Planning Commission discussion

At the Oct. 16 study session discussion, Planning Commissioners indicated support for option 1 or a hybrid of option 1 with parts of option 2 or 3. Planning Commission comments:

- Consider combining option 1 intent with option 2 language
- Consider first where bikes in general are allowed for speed and safety concerns instead of regulating for e-bikes
- Scooters need a more in-depth discussion/investigation. The problem with e-bikes and scooters is that e-bikes are similar to a well-defined recreation and transportation mode, but scooters have no similar activity to help regulate them.
- Consider adding e-bike and e-scooter definitions
- Option 2 provides best guidance for the community since #1 would be policy, not guiding document
- Option 3- gets to a broader discussion of what is permissible
- Combine option 1 with options 2 or 3 for a hybrid version? If we do that should we keep non-motorized in the definition?
- Support the specificity of Option 1, but also like that 2-3 have the “assist” piece as that is well aligned with the intent of the current definition
- Support hybridization; if hybrid, advocate for removing “non-motorize” since that would create a wording conflict.

BOCC Discussion and Input

At their November 13 hearing, the Board of Commissioners voted to allow e-bikes on most county open space trails on the plains where bikes are allowed. They also provided thoughts about the passive recreation definition, expressing strong and unanimous support for option 1 as the narrowest alternative. If the Planning Commission is inclined towards broader language in the passive recreation update, two of the Commissioners expressed a preference for option 2 since it provides concrete criteria against which to measure acceptance of potential recreational modes, with a high bar for potential new future uses.

Update on Electric Scooter Legislative Action

Like electric bikes, electric scooters, or e-scooters, are another emerging mobility technology. E-scooters can serve as a viable and efficient “first mile” and “last mile” transportation option, but their rapid deployment in many urban areas, including Denver, has resulted in regulators struggling to catch up. To

address this challenge, in the 2019 State Legislative Session the General Assembly passed and Governor Polis signed into law HB 19-1221, updating the state statutes that regulate the operation of e-scooters.

As a result of these changes, e-scooters are now included within the statutory definition of “vehicles.” Similar to e-bikes, e-scooters do not need to be registered and are generally permitted on roads with some exceptions. While HB 1221 allows local authorities to prohibit electric scooters on bike or pedestrian paths, the law states that “[a] local government may regulate the operation of an electric scooter in a manner that is no more restrictive than the manner in which the local government may regulate the operation of a class 1 electrical assisted bicycle.” CRS § 42-4-221(8.5)

Electric scooters were not studied as part of Boulder County’s e-bike pilot, nor have they been approved for use on county open space trails. While e-scooters are designed for urban transportation and not well suited to the crusher fines or dirt trails found throughout the Boulder County open space and parks system, as a result of HB 19-1221, the county cannot permit e-bikes on its trail system without also allowing e-scooters on the same trails.

Thus, Boulder County legislative staff is leading an effort along with peer agencies for a surgical amendment of HB 19-1221 in the spring 2020 session. The proposed amendment would provide Colorado’s home rule municipalities and statutory cities, towns, and counties with permissive authority to limit the use of e-scooters to trails with paved surfaces.

Updated Staff Proposal

Based on the PC and BOCC discussions, staff offers the following updated hybrid option for consideration (new language in **purple**).

Hybrid Option:

Passive Recreation, referred to in the *Open Space Element* policies, is **traditionally** defined as non-motorized outdoor recreation with minimal impact on the land, water, or other resources that creates opportunities to be close to nature, enjoy the open space features, and have a high degree of interaction with the natural environment. Further,

- Passive recreation requires no rules of play or installation of equipment or facilities, except for trails and associated improvements.
- Passive recreation includes activities such as hiking, snowshoeing, cross-country skiing, photography, bird-watching, or other nature observation or study.
- If specifically designated, passive recreation may include bicycling, horseback riding, dog walking, boating, fishing, **or riding e-bikes.**
- **Though passive recreation is traditionally non-motorized, the sustainability and inclusion benefits of certain low-powered electrical-assist modes align with Boulder County’s mission and goals. Such modes may be considered for designated use if:**
 - **Travel speeds are comparable to non-motorized modes or other permitted uses, or are dependent on the user’s condition, skill, terrain, trail conditions, and weather.**
 - **Noise is no greater than that generated by non-motorized modes or other permitted uses.**
 - **Potential trail damage is no greater than that caused by similar non-motorized modes or other permitted uses and can be mitigated through management action such as trail closures.**

- Potential impacts to land, water, other resources, and visitors are no greater than those caused by similar non-motorized modes or other permitted uses.

Discussion

This proposed hybrid option combines elements of the three previously discussed options with these changes and additions:

- Introductory paragraph: rather than delete the reference to “non-motorized,” the proposal is to modify the term with “traditionally” in order to preserve the intent of the original language.
- Bullet #3: add e-bikes to the list of activities allowed if specifically designated as proposed in option 1. Note, the Parks & Open Space Rules and Regulations will be updated to set forth the types of e-bikes permitted and the locations where they are permitted.
- New bullet #4:
 - Introductory language includes elements of option 3, including the sustainability and inclusion rationale for contemplating permitting low-power electric assist modes. A note about inclusion: under Federal ADA guidelines, people with mobility disabilities are permitted to use motorized modes on many trails. The proposed language here is intended to address a broader spectrum of users who may not qualify under ADA guidelines but who may have physical challenges that are ameliorated by low-power assist modes.
 - Sub-bullets enumerate measurable criteria from option 2.
 - Delete bullet reference to “pollution emitted” given that battery charging would potentially be a source of emissions, and because manufacturing of all bicycles would emit pollution. Further, this concept is addressed in the first sentence of the passive recreation definition by reference to “minimal impact on the land, water, or other resources.”
 - Add “other permitted uses” in several bullets to broaden the set of uses that the new mode would potentially be compared against.
 - Add “visitors” to the last bullet to round out the consideration of impacts to include not just resource values, but the visitor experience.

III. Action Requested

Adopt staff proposed updated definition of passive recreation for the Open Space Element of the Boulder County Comprehensive Plan.

Attachments:

- A. Oct. 16, 2019 Planning Commission staff report (report only, no attachments. Full report with attachments along with all materials from all public hearings are available on the county’s e-bike web page: www.bouldercounty.org/e-bikes).

BOULDER COUNTY PLANNING COMMISSION

Oct. 16, 2019 – 1:30 p.m.
Commissioners Hearing Room, Third Floor
Boulder County Courthouse

Study Session: E-bikes Pilot Study Research Results & Proposed Updates to Passive Recreation Definition in the Open Space Element of the Boulder County Comprehensive Plan

Information item only, public testimony will be taken

Staff presenter:

Tina Nielsen, Special Projects Manager, Boulder County Parks & Open Space (BCPOS)

Staff team:

Eric Lane, Director, BCPOS

Al Hardy, Recreation and Facilities Division Manager, BCPOS

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Tonya Luebbert, Regional Trails Planner, Boulder County Transportation Department

Study Session Agenda

1. Staff presentation
2. Public Hearing
3. Planning Commission Discussion

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I. Introduction

Boulder County Commissioners approved a one-year pilot study to allow e-bikes on most county open space trails on the plains starting Jan. 1, 2019. During spring and summer, staff conducted studies on the visitor and trail impacts of e-bikes on county trails. The commissioners also directed staff to explore an update to the definition of passive recreation in the Open Space Element of the Comprehensive Plan as a means for allowing e-bikes on certain county trails. Planning Commission held a study session on this topic in December 2018 and a joint study session with the Board of County Commissioners in March 2019.

The three goals for the e-bike pilot study are based on input from the initial public outreach in 2018, review of e-bike research and other related literature, and direction from BOCC and the Planning Commission. Both the BOCC and Planning Commission highlighted the importance of sound survey design and sampling methods to achieve statistically valid results.

- Goal 1: Study the visitor and trail impacts of e-bikes on trails
- Goal 2: Work with Planning Commission to explore options for updating the passive recreation definition
- Goal 3: Employ a robust public engagement process

The purpose of this study session is to provide an overview of the 2019 e-bike pilot study research results and present options for updating the passive recreation definition in the Open Space Element of the Boulder County Comprehensive Plan.

II. E-bike Pilot Research Results

During the pilot, staff endeavored to obtain answers to the following questions in relation to Goal 1:

- Are county residents' perceptions about e-bikes on certain county trails generally favorable or unfavorable? How many e-bikes are on county open space plains and regional trails? What proportion of open space visitors do e-bikes represent?
- How fast are bikes traveling on regional and plains trails, and can we determine if e-bikes speeds differ from speeds of regular bikes?
- What are visitors' perceptions of conflict on trails, can those perceptions be attributed to e-bikes? Are there differences in perceived conflict on regional trails compared to trails at open space parks?
- Do county residents avoid trails because of e-bike use?
- What safety concerns are associated with e-bikes?

In order to answer these questions, staff conducted research through several methods.

1. Literature review. The regulatory landscape is a fast-changing landscape, and many agencies are regulating and studying e-bikes—in Colorado, across the country, and other places in the world. The literature review gives a picture of potential positives and negatives associated with e-bikes and how other agencies are addressing them. In addition to e-bike research and regulations, the literature review investigates the broader topics of recreation conflict and emerging technology.

Key results:

- E-bikes increase recreation access for aging populations and those with mobility disabilities. They enable riders to go further and comfortably ride over hilly terrain. For younger

populations e-bikes tend to serve a utilitarian purpose, replacing car trips for commuting and errands. Given this substitutability of e-bikes, an increase in their transportation mode share could reduce carbon emissions.

- Safety, speed, crowding, and user conflict are common concerns related to bicycles generally, and these concerns are heightened for e-bikes. Recreation conflict literature suggests that most conflict follows an asymmetrical pattern, and research on e-bikes shows that experience informs perceptions. Several studies show that trail users who are unfamiliar with e-bikes express a preference to not share the trail with them, but the majority did not notice that they were sharing the trail with e-bikes. Similarly, once they were exposed to e-bikes, concerns about them decrease for many.
- All forms of recreation may have negative impacts to wildlife habitat, but there is little research to suggest that e-bikes have greater negative impacts on trails or wildlife than regular bikes and mountain bikes.
- Many Colorado jurisdictions have acted to allow some or all classes of e-bikes, including City of Boulder (certain multi-mode paths), Durango, Jefferson County, Eagle County, Summit County Rec Path, and the Rio Grande Trail. Many other local jurisdictions allow e-bikes by default under the August 2017 change in state law, including Lafayette, Louisville, Longmont, and Superior. Colorado Parks and Wildlife allows e-bikes wherever conventional bikes are allowed. In August 2019 the Department of the Interior issued an order directing all DOI lands to exempt e-bikes from the definition of motorized vehicles and to permit them wherever conventional bikes are allowed. In addition, the order gave agencies 30 days to develop proposals to guide implementation.

2. Countywide telephone survey. A statistically valid countywide telephone survey gives a snapshot of Boulder County voters' opinions and behaviors as contrasted with surveys of visitors. This tool is especially appropriate to measure e-bike perceptions in the general population, opinions about the importance of the various values and functions of open space, and potential displacement of users. Drake Research and Strategy called a random sample of Boulder County voters between Aug. 1 and Aug. 12, 2019. A total of 605 surveys were completed, 65% on cell phones. The results are statistically representative with a margin of error of +/-4%.

Key results:

- 24% have ridden an e-bike and just 2.3% own an e-bike. Of these e-bike owners, 54% do not know what class of e-bike they own.
- 88% use their e-bike for errands around town, 63% for commuting, and 55% for recreation.
- When asked if they support allowing e-bikes on Parks & Open Space properties, 43% support allowing them on regional trails and flat trails on the plains, while 29% opposed. Feelings about e-bikes on foothills trails is exactly the reverse: 43% opposed allowing e-bikes and 29% were in support.
- 50% of Boulder County residents predicted that allowing e-bikes on a trail would have no effect on their use of that trail, 9% would be more likely to visit, and 32% would be less likely to visit.

3. Visitor intercept surveys at targeted trail locations: Boulder County Parks & Open Space has been collecting visitor use data at open space properties and regional trails every five years since 1995; these results provide a baseline for information about trail users' behaviors, experiences, and opinions. Intercept surveys were conducted from April through Sept. 2019 at regional trail and open

space park locations where e-bikes were allowed during the pilot. Survey shifts were randomized by day of week and time of day to capture a broad range of users. A total of 427 surveys were completed.

Key results:

- Only about 5% of respondents saw an e-bike on the day of survey. Four of the 427 respondents were riding an e-bike when they took the survey.
- Support for allowing e-bikes is very similar to the phone survey results: support is greatest for e-bikes on regional trails (41%) and flat trails in the plains (42%) with another third of respondents neutral or unsure for both trail types. Conversely, nearly half of respondents were opposed (49%) to allowing e-bikes on foothills trails (compared to 43% in the phone survey), with 26% in support and a quarter neutral or unsure.
- 96% of trail users did not experience conflict on the day they took the survey, which is consistent with data collected in the 5-year visitor surveys (in 2015, 5% of survey respondents reported experiencing conflict on that day, and conflict ratings were lowest on plains trails and regional trails). There were no reports of conflicts with e-bikes, which is not surprising given the low numbers of e-bikes currently on county trails. Of those who did experience conflict, the most frequently cited reasons are:
 - Off-leash dogs or dogs crowding the path
 - Other trail user was wearing headphones or blasting music and not able hear the individual approaching
 - Cyclists not announcing themselves when passing

4. **Bike speed observation studies:** While intercept studies capture visitors' opinions and impressions, observation studies measure real time behavior. Observation studies are effective for measuring speeds of conventional bikes versus e-bikes, as well as providing a snapshot of the mode share of e-bikes. Observers were trained in speed observation protocols and how to identify e-bikes. Observations were conducted in two-hour segments either preceding or following the intercept survey shift. In addition to the intercept survey locations, observations were recorded at Betasso Preserve, Ron Stewart Preserve at Rabbit Mountain, and the US36 bikeway. At each location, speeds of oncoming cyclists were taken 100 ft away from the observer. The type of bike was recorded (conventional/electric/recumbent) as well as slope of travel (uphill/downhill). Trail condition (wet/dry) and weather were also recorded.

Key results:

- 504 bikes were observed: 12 e-bikes and 492 conventional bikes.
- Perhaps counterintuitively, the average e-bike speed was less (13.8 mph) than the average conventional bike speed (14.9 mph), which may reflect the demographics of e-bike riders (based on research, e-bike riders are older, and thus perhaps more cautious and aware of their speeds given that most e-bikes have a speedometer). Because of the small number of e-bikes observed, these observations may not be predictive of future trends.
- Across survey locations, uphill e-bike speeds were faster than conventional bike speeds at 13.8 and 12.9 mph respectively. For average downhill speeds, conventional bikes traveled at 15 mph on average, while e-bikes traveled at a slower average speed of 13.5 mph. [n (electric uphill)=10, n (conventional uphill)=152, n (electric downhill)=2, n (conventional downhill)=339]
- Comparing speed at different locations, the highest average e-bike speed was recorded on the Meadowlark Trail near Coalton Trailhead (16.0 mph), the lowest average e-bike speed was recorded at Carolyn Holmberg Preserve (11 mph). The highest average conventional bike

speed was recorded at Betasso Preserve (15.9 mph—speed at this location was measured in order to capture mountain bikes, and the highest individual speed observation—26 mph—was also recorded at Betasso Preserve). The lowest average conventional bike speeds were observed at Niwot Trails (13.2 mph).

5. Technical trail evaluation: While the majority of regional and open space plains trails are 8' or wider, some trail segments have vegetative encroachments at ground level or in the overstory, causing the trail to be narrower or have sight obstructions. In addition, some segments have limited sight distance due to slopes and/or curves. Trails staff is conducting a technical trail evaluation to provide data to inform decisions about management actions including maintenance, hazard signage and possible speed limits. As a result of this evaluation, staff will identify maintenance needs and possible locations for hazard signage. Discussions about the pros and cons of speed limits and whether they are appropriate for BCPOS trails are ongoing.

III. Staff Recommendation For E-bike Policy

The research did not generate any results that suggest changes to the e-bike recommendation staff proffered after initial public engagement in 2018. The research has served to solidify the rationale for allowing class 1 and class 2 e-bikes on plains trails:

- E-bikes are here and though they are a small portion of trail visitors today, their use will likely continue to increase as price points become more competitive combined with demographic trends of aging baby boomers. Acceptance of e-bikes is fairly high and will likely continue to grow.
- The accessibility and sustainability benefits provided by class 1 and class 2 e-bikes outweigh the negatives that may result from crowding, conflict, and safety concerns. These negatives are a result of increased recreational demand and use of all uses, not just e-bikes. One lesson from the pilot study research is that the county can be more proactive in its trail maintenance, hazard signage, and education and outreach efforts.

Thus, the staff recommendation remains: to allow class 1 and class 2 e-bikes on Boulder County trails on the plains where regular bikes are allowed, including regional trails and trails on open space parks, with the exception of three county trails requested to be off limits to e-bikes by the City of Boulder¹.

With this recommendation, the Parks & Open Space staff also proposes to increase education and outreach efforts on trails where e-bikes are allowed, including trailhead displays about sharing the trail with hikers, runners, bikers, equestrians, and trail users with dogs. In addition, the department will direct Boulder Mountain Bike Patrol and Volunteer Ranger Corps to properties where e-bikes are permitted and engage with parks visitors about proper trail etiquette. Staff will also address maintenance needs and add caution signs along trails in areas with hazards such as limited sight-distance.

IV. Options for Amending the BCCP Passive Recreation Definition

In order to implement the recommended e-bike policy it is necessary for it to be in alignment with the policy direction provided in the Boulder County Comprehensive Plan (BCCP). The definition of passive

¹ The City of Boulder requested e-bikes not be allowed on the Boulder Canyon Trail (due to prohibition of motorized uses on a conservation easement parcel owned by City of Boulder), and Coalton and Mayhoffer-Singletree Trails (because these two county trails lead to city-owned trails where e-bikes are not allowed, and there is no option to leave the trail).

recreation in the Open Space Element of the Boulder County Comprehensive Plan (BCCP) (www.bouldercounty.org/open-space-element) reads as follows:

Passive Recreation, referred to in the *Open Space Element* policies, is defined as non-motorized outdoor recreation with minimal impact on the land, water, or other resources that creates opportunities to be close to nature, enjoy the open space features, and have a high degree of interaction with the natural environment. Further,

- Passive recreation requires no rules of play or installation of equipment or facilities, except for trails and associated improvements.
- Passive recreation includes activities such as hiking, snowshoeing, cross-country skiing, photography, bird-watching, or other nature observation or study.
- If specifically designated, passive recreation may include bicycling, horseback riding, dog walking, boating, or fishing.

The BCCP was adopted in 1978 and this definition has not changed substantially in subsequent updates². In 1978 and up until recently, the prohibition on motorized uses served as a clear shorthand for distinguishing between desired passive recreational uses and other recreational uses that were not desired, since motors meant loud, polluting, heavy, and fast machines such as dirt bikes.

The advent of e-bikes as a hybrid technology presents a challenge and opportunity to reconsider this definition. In 2017 the State Legislature passed [HB17-1151 Electrical Assisted Bicycles Regulation Operation](#), changing Colorado's bike law such that e-bikes are now classified as bicycles and have the same rights of the road as conventional bicycles. Specifically, C.R.S. § 42-4-1412 allows class 1 and 2 electric assisted bicycles on multi-use trails unless explicitly prohibited by the managing land agency.

For purposes of study session discussion, staff offers three options to consider for updating the definition of passive recreation:

Option 1. Add e-bikes to the list of activities allowed if specifically designated in the 3rd bullet (designation would be a policy action of the BOCC):

- "If specifically designated, passive recreation may include bicycling, horseback riding, dog walking, boating, fishing, or e-bikes."

Option 2. Remove the reference to non-motorized recreation and add a bullet that unpacks the characteristics that would be associated with motorized uses vs. non-motorized uses.

Passive Recreation, referred to in the *Open Space Element* policies, is defined as ~~non-motorized~~ outdoor recreation with minimal impact on the land, water, or other resources that creates opportunities to be close to nature, enjoy the open space features, and have a high degree of interaction with the natural environment. Further,

- Passive recreation requires no rules of play or installation of equipment or facilities, except for trails and associated improvements.
- Passive recreation includes activities such as hiking, snowshoeing, cross-country skiing, photography, bird-watching, or other nature observation or study.

² The definition of passive recreation was updated in the most recent Open Space Element update in 2017 to include dog walking and boating if specifically designated. These common activities were addressed in the Parks & Open Space regulations but was not encompassed in the passive recreation definition before the 2017 update.

- If specifically designated, passive recreation may include bicycling, horseback riding, dog walking, boating, or fishing.
- **Passive recreation is traditionally non-motorized. However, certain low-powered electrical-assist modes may be permitted if**
 - **Travel speeds are comparable to non-motorized modes or are dependent on the user's condition, skill, terrain, trail conditions, and weather**
 - **Noise is no greater than that generated by non-motorized modes or other uses**
 - **No pollution is emitted as a result of use**
 - **Potential trail damage is no greater than that caused by similar non-motorized modes, and can be mitigated through trail closures**
 - **Potential impacts to land, water and other resources are no greater than those caused by similar non-motorized modes**

Option 3. Remove the reference to non-motorized recreation and add a bullet with language that provides guidance for evaluating the desirable characteristics associated with the new technology:

Passive Recreation, referred to in the *Open Space Element* policies, is defined as ~~non-motorized~~ outdoor recreation with minimal impact on the land, water, or other resources that creates opportunities to be close to nature, enjoy the open space features, and have a high degree of interaction with the natural environment. Further,

- Passive recreation requires no rules of play or installation of equipment or facilities, except for trails and associated improvements.
- Passive recreation includes activities such as hiking, snowshoeing, cross-country skiing, photography, bird-watching, or other nature observation or study.
- If specifically designated, passive recreation may include bicycling, horseback riding, dog walking, boating, or fishing.
- **Passive recreation is traditionally non-motorized. However, certain low-powered electrical-assist modes may be permitted if they complement or enhance accessibility, sustainability, or the visitor's enjoyment without diminishing or damaging natural resource values.**

Discussion

Option 1 is the simplest and most narrow way to update the passive recreation definition, and there is precedent for this approach with the addition of dog walking and boating in the most recent update of the Open Space Element of the BCCP. This list can be amended over time as needed when future technological advances are introduced. During initial discussions with the Planning Commission in 2018, and during the joint study session with the Board of Commissioners, one Commissioner and a couple Planning Commissioners expressed a preference to keep any changes to the passive recreation definition narrowly focused on e-bikes.

However, option 1 doesn't address the underlying reason for considering an update to the passive recreation definition: the emergence of low-power hybrid technology that doesn't present the negative qualities (loud, polluting, heavy, fast) of motorized uses such as the dirt bikes that were envisioned in the 1970s by the drafters of the definition.

Option 2 is an attempt to unpack the positive characteristics associated with non-motorized uses that are in direct contrast to motorized uses. Though interest in this approach was not strong during the initial Planning Commission discussion in 2018 or the March 2019 joint study session, staff feels that there is value in going through this exercise. Table 1 below presents a comparison of positive non-motorized

characteristics for bikes, e-bikes, and dirt bikes. E-bikes fit the measurable characteristics, highlighting the similarities between e-bikes and bicycles.

Table 1
Option 2: Unpacking Measurable Characteristics of “Motorized”

Characteristic of non-motorized use	Conventional bikes	e-bikes	Dirt bikes
Travel speeds are limited by terrain, weather, the rider’s condition and skill	true	True for class 1 e-bikes Not true for class 2 if throttle engaged	False
Noise is minimal or no greater than that generated by non-motorized modes or other uses	True	True, though electric motors on older models may have slight noise	False
No pollution is emitted as a result of use	True	True	False
Potential trail damage is no greater than that caused by similar non-motorized modes, and can be mitigated through trail closure	Trail damage is a function of rider weight, bike weight, style of riding, and trail conditions.	True. The only study performed to date did not find significant difference in impacts caused by mountain bikes and eMTBs.	False. The same study found that dirt bikes cause significantly greater erosion and soil displacement than mountain bikes and eMTBs.
Potential impacts to land, water and other resources are no greater than those caused by similar non-motorized modes	Most recreation has a disruptive and potentially harmful impact on wildlife. BCPOS regulations require bikes to stay on trail.	Some evidence suggests that motorized recreation has a higher impact due to noise, which isn’t a factor with e-bikes. Other research suggests that motorized uses cause less impact because they are more likely to stay on trail. This would not be a distinguishing quality because BCPOS regulations require all bicycles to stay on trail.	False

The criteria outlined above are measurable dimensions of user experience and trail/environmental impacts. However, research shows that many aspects of the visitor use experience aren’t easily measured and are a result of perceptions influenced by exposure, experience, and social lenses. An example that may be instructive is the initial resistance to the introduction of snowboards by skiers. Part of the resistance had to do with the perception that snowboards were disruptive to the norms and traditions of skiing—in other words, low social acceptance of an upstart technology that was associated with rebellious youth. Snowboards were not allowed at a number of ski resorts in the early days, but they are now widely accepted.

Which brings us to option 3. Instead of enumerating the characteristics represented by “motorized” uses, option 3 attempts a more wholistic approach through a qualitative reference to county guiding values of inclusivity and sustainability.

A similar comparison for option 3 is presented in Table 2, illustrating that e-bikes meet the standard

Table 2
Option 3: Comparing more qualitative “Guiding Principles”

Characteristic	Conventional bikes	e-bikes	Dirt bikes
Complements or enhances accessibility	Access may be limited based on physical limitations due to certain lung, heart, muscle or joint conditions or due to aging. Access may also be affected by challenging terrain or distance.	True. Research shows that e-bikes enable people get out more frequently and for longer rides, contributing to both accessibility and positive health outcomes.	True, dirt bikes can enhance accessibility for individuals with some mobility constraints.
Complements or enhances sustainability	Ability for bikes to be a tool for sustainable travel may be limited by both the rider’s physical condition and terrain.	True, e-bikes may enhance sustainability in the recreation arena especially if used to travel to a trail rather than drive.	Dirt bikes consume fossil fuels and emit pollution and not a tool for enhancing sustainable recreation
Does not diminish or damage natural resource values		True, no more damage than conventional bicycle, especially in the context of plains trails and regional trails	False

V. Electric scooters

Electric scooters, or e-scooters, are another emerging technology. Designed for “first mile” and “last mile” transportation, e-scooters have caused enormous disruption in the urban transportation space, and regulators have been struggling to catch up. On May 23, 2019, the Colorado Governor signed HB 19-122, updating the Colorado Revised Statutes that regulate the operation of e-scooters. Before this bill, electric scooters were classified as “toys” which meant they could be driven on sidewalks, but not on streets. Under the new amendments, electric scooters and low-powered scooters are excluded from the definition of “motor vehicles” (CRS § 42-1-102(58)) but are within the definition of “vehicles” (CRS § 42-1-102(112)). Similar to e-bikes, they do not need to be registered. Electric scooters are now generally permitted on roads except that local authorities can prohibit electric scooters from roads in situations where suitable bike paths, horseback trails, or other trails have been established on the right-of-way or parallel to it within four hundred fifty feet of the right-of-way of heavily traveled streets (CRS § 42-4-109(11)). Local jurisdictions would not be able to ban electric scooters from roads where there is no path that permits electric scooters.

The law allows local authorities to prohibit electric scooters on bike or pedestrian paths (CRS §§ 42-4-111(dd) and (ff)). However, CRS § 42-4-221(8.5) provides that “[a] local government may regulate the operation of an electric scooter in a manner that is no more restrictive than the manner in which the local government may regulate the operation of a class 1 electrical assisted bicycle.”

Electric scooters are designed for urban transportation and not well suited to crusher fines or dirt trails such as those in Boulder County. While it is unlikely that they will be used on Boulder County trails both

because of their design and due to the location and surface of Boulder County trails, Boulder County cannot permit e-bikes on POS trails without also allowing e-scooters on the same trails.

Boulder County legislative staff is researching the intent of the bill and will propose amendments to the drafters in the coming legislative session to unlink the regulation of e-scooters and e-bikes. There has been no public discussion or staff analysis of whether to allow e-scooters on BCPOS trails and it is not clear that this would be problematic or desired.

VI. Discussion Questions

1. Do Planning Commissioners have questions about the e-bike pilot study research results?
2. Do Planning Commissioners have questions or a preference about the proposed options for amending the Comp Plan definition of passive recreation?
3. Do Planning Commissioners wish to consider electric scooters for inclusion in the passive recreation definition?
4. Any other questions or feedback?

VII. Public Engagement and Next Steps

The Boulder County Commissioners gave clear direction that the pilot period should include a robust public process to ensure that members of the public have a chance to weigh in on the merits of e-bikes on open space trails and potential changes to the definition of passive recreation.

2019 Public Engagement to date:

- Notices to public through all the usual channels including social media, list serves, press releases, etc.
- Public input form on department's e-bike webpage throughout the pilot period
- Three open houses in October (Longmont 10/2, Lafayette 10/3, and Boulder 10/6) to review research results and invite comment on the draft recommendation
- Courtesy updates to the Parks & Open Space Advisory Committee (POSAC)

Next Steps:

- Oct. 24 Public hearing at POSAC for recommendation to Board of County Commissioners
- Nov. 16 Public hearing for policy decision with Board of County Commissioners
- Dec. 18 Public hearing with Planning Commission for decision on passive recreation definition amendment

Attachments: All research documents and history of public engagement process are available on the county's [e-bike page](#).

- A.** Final Draft Recreation Conflict Literature Review
- B.** 2019 E-bike Visitor Intercept Survey and Speed Observation Report
- C.** Boulder County Telephone Survey Results, Aug. 2019
- D.** Public Comments received through the county e-bike website, March-Sept. 2019