



**PERCEPTIONS OF CONFLICT
SURROUNDING FUTURE E-BIKE USE
ON THE ARIZONA TRAIL**

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Funded by the Arizona Trail Association, Back Country Horsemen of America and People for Bikes

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DISCLAIMER:

We want to acknowledge that these survey responses do not necessarily align with the opinions of:

- Arizona Trail users
- Arizona Trail stakeholders
- Communities along the Arizona Trail

The results of this study should be considered among other data sets and should not be used as a generalization for the opinions of these groups.

To further understand the population sample that participated in this study, please see the methods section of the report.

Photo Credit:

Front Cover: A view of the Arizona Trail along Passage 10 (Redington Pass) by Larry Simkins

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ABSTRACT

The majority of e-bike related research has taken place on city streets, often outside of the United States, and has focused on e-bikes as a form of transportation with recreation as a secondary function. This type of research provides little insight into the potential outcomes from the 2019 U.S. Department of Interior (DOI) Order 3376, which may allow e-bikes to be used on non-motorized recreational trails.

This study gathered opinions from individuals who were knowledgeable about and connected to the Arizona National Scenic Trail (AZT). Comments were solicited in reaction to Secretary Bernhardt's e-bike statement via the Arizona Trail Association (ATA) Facebook page and the ATA email newsletter. Quantitative data was collected by way of an online questionnaire and distributed via the Arizona Trail Association (ATA) Facebook page, the ATA email newsletter, as well as the email lists for Arizona members of People for Bikes and Back Country Horsemen of America. The questionnaire asked about e-bikes and their use on the AZT. The analysis aimed to better understand how survey respondents' most frequent method of travel, exposure to e-bikes and other factors shape their opinion of this new user group and where there may be potential for user conflict. Our findings only reflect the opinions of our pool of participants and should not be assumed to represent the opinions of Arizona Trail users at large.

The majority of respondents disapproved of e-bikes being allowed on the trail. This sentiment remained true across the board for each of the major user groups; however, mountain bike riders surveyed were less likely to disapprove of allowing e-bikes on non-motorized trails, and equestrians surveyed were more likely to disapprove. Findings also showed that experience with e-bikes improved tolerance for e-bike use on non-motorized trails amongst survey respondents, but on average exposure alone was not enough to create favorability. Survey responses also strongly suggested a polarized divide between the pro-e-bike and anti-e-bike camps, where both sides are highly reluctant to sympathize with the opposing camp's argument, which could lead to conflict.

INTRODUCTION

Electric power assisted bicycles, also known as e-bikes, have been gaining popularity throughout the world (Popovich et. al, 2014; Weinert, Ma, Cherry, 2007). This growth has been most substantial in China and Europe. It has been estimated that as of 2013, 150 million e-bikes have been sold in China and 400,000 sold in Germany, but sales are also beginning to increase in the United States with up to 159,000 units sold (MacArthur & Kobel, 2014). As the usership of e-bikes quickly increases, researchers and regulators are attempting to keep up with the implications so we can better understand both the challenges and opportunities being created and address them as needed.

A comprehensive review of e-bike laws in North America by MacArthur and Kobel (2014) shows that, to date, rules and regulations regarding e-bikes have been vague or undefined. Local government agencies have struggled to determine if this new form of transportation falls more in the realm of bicycles or motorcycles (McLeod, 2016). This is partially because the amount of power assistance an e-bike has can influence its speed and torque. At this time, roughly half of all states divide e-bikes into three classes and the other half either regulate e-bikes the same as standard bicycles or as motor vehicles (PeopleForBikes, 2020; Povich, 2018).

The inconsistency in regulation from state to state and town to town has led to a lot of uncertainty for e-bike riders. In an attempt to address this issue on a federal level, the Secretary of the Interior issued an order for all land managers within the Department of the Interior to formalize their position on e-bikes and encouraged them to be made legal wherever bicycles are currently allowed in August of 2019 (Bernhardt, 2019) (Appendix C). This order is forcing various parks and agencies to quickly develop new rules for the use of e-bikes in their management areas.

On Sept 24, 2020, while this report was being developed, proposed e-bike directives were published by the U.S. Forest Service and made available for public comment (Terrell, 2020).

With these pending rule changes, people are left wondering how this will affect their public lands. Understanding existing research and parsing out the potential social and physical impacts that result from this e-bike rule change can help to guide future studies in this area. Noteworthy subjects of existing research include health and safety, trail impacts, and user conflict.

Health and Safety

In making the case for allowing e-bikes on trails where traditional bicycles are already allowed, Secretary Bernhardt points out that this will “increase recreational opportunities for all Americans, especially those with physical limitations” (2019). Research confirms that e-bikes demand 24% less energy than traditional bikes and are considered to be more enjoyable to ride than traditional bikes (Langford, Cherry, Bassett, Fitzhugh, & Dhakal, 2017). While riding an e-bike is a healthier choice than not riding a bike at all, it is possible that e-bike expansion is also causing people to abandon traditional bike riding, which could reduce the overall physical activity of some riders (Jones, Harms, & Heinen, 2016).

The vast majority of research that has been conducted on the safety of e-bikes has centered around urban usage on city streets and paved shared use trails; this data should be considered but may not directly translate to recreational e-bike use on public lands. These studies suggest that e-bike riders tend to reach higher speeds on roads than traditional bicyclists and accelerate faster than traditional bicyclists (Langford, Chen, & Cherry, 2015; Schleinitz, Petzoldt, Franke-Bartholdt, Krems, & Gehlert, 2017, MacArthur, Dill, & Person, 2014). They also show that electric bicycles are “more likely to be involved in a crash,” but the severity of crashes are generally the same as traditional bicycle crashes (Schepers, Fishman, Hertog, Wolt, & Schwab, 2014). Langford et al. (2015) observed that 70% of both e-bike and traditional bike riders violate traffic signals, while Schepers et. al (2017)

found that 54% of e-bike riders reported making complete stops at stop signs whereas only 25-35% of traditional bike riders reported stopping.

Trail Impacts

While extensive research has been conducted on the trail impacts of hikers, mountain bikes, horses, and motorcycles, very little research has been done on the impacts from e-bikes (Goeft, & Alder, 2001; Marion, & Wimpey, 2007; White, Waskey, Brodehl, & Foti, 2006; Wilson, & Seney, 1994). One of the only studies done on e-bike trail impacts was conducted by the International Mountain Biking Association (IMBA), which compared the impacts from a mountain bike, a Class 1 eMTB, and an off-road motorcycle (2015). They found the impacts of Class 1 eMTBs to be much closer to that of mountain bikes than to off-road motorcycles, but it should be noted that while this study did follow the scientific method, it was limited in scope, and itself states that “No broad conclusions should be made from the observations presented” (International Mountain Biking Association, 2015). This study also did not look at Class 2 or Class 3 e-bikes, which are mentioned in Secretary Bernhardt’s order.

User Conflict

Beyond health and safety concerns and trail impacts, consideration should also be given to the potential for conflict. By choosing to allow e-bikes where traditional bikes are allowed, the Department of the Interior has effectively introduced a new user group to many of its trails, and it is possible that there will be conflict between existing trail user groups and the new e-bike user group. Recreation conflict can present itself as interpersonal conflict, this is generally defined as one user group having a negative effect on the experience of another user group; or as social conflict, this is when one user group is perceived to have different values than another user group regardless of direct interaction (Vaske, Donnelly, Wittmann, & Laidlaw, 1995).

A number of studies have touched on perceived conflict between e-bike riders and traditional bike riders. One common theme is that e-bike riders are accused of “cheating.” (Chaney, Hall, Crowder, Crookston, & West, 2019; MacArthur et. al, 2014; Popovich et. al, 2014) This is a social value conflict where some bicyclists feel that physical strain is an integral part of the biking experience that e-bike riders are avoiding. One study found that narrower paths tended to elicit more interpersonal conflict, which may suggest that singletrack mountain bike trails could present more conflict than wider shared use trails (Chen, Xie, & Qian, 2010). The study by Chaney et. al (2019) is focused on how mountain bike riders perceive electric mountain bikes (eMTBs), and some of their primary concerns were about e-bike speed and trail impacts.

Further Research

To date the vast majority of e-bike related research has taken place on city streets, often outside of the United States, and has primarily focused on e-bikes as a form of transportation with recreation as a secondary function. This type of research does little to inform us about the likely outcomes from the Department of the Interior rule change that will allow e-bikes on recreational trails and where bicycles are currently allowed.

Given what we already know about this issue and the gaps that have been identified through existing research, this study aims to better understand: “What do current Arizona Trail users think about allowing e-bikes onto non-motorized trails?”

Hypotheses

Based on previous research on recreational conflict we submit these three hypotheses:

H1: Across all existing user groups there will be a general opposition for permitting e-bikes (a nontraditional user group) to utilize the trail.

H2: Given the similarities between mountain bikes and e-bikes, mountain bike riders will hold less opposition to e-bikes than other existing user groups such as hikers and equestrians.

H3: Increased exposure to e-bikes, such as seeing them in person or riding one, will reduce the level of opposition one has toward allowing them on trails.

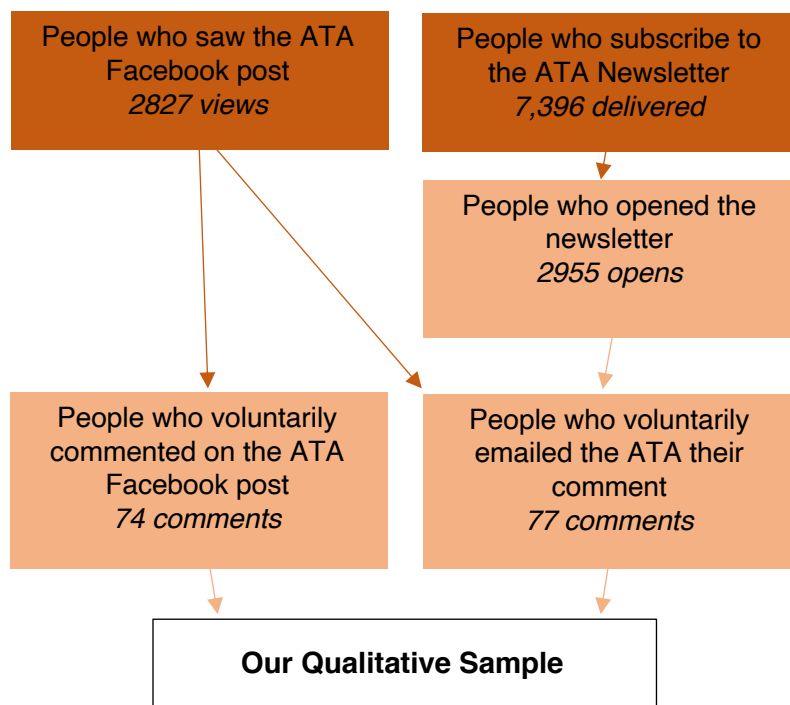
METHODS

This study used a mixed methods approach by gathering and analyzing both qualitative and quantitative data. More specifically, the study followed the triangulation design: convergence model (Creswell & Plano Clark, 2017). This model requires qualitative and quantitative data to be gathered and analyzed independently, then once the results from each are obtained, they can be compared to one another and interpreted.

This data gathering is a form of non-probability sampling known as targeted sampling (Newing, 2011). We chose this approach because while “Arizona Trail users” is a clearly definable group (anyone who uses the AZT, anywhere, anytime and in any way), it is a difficult group to sample in a comprehensive way. Targeted sampling makes the study results reflective of people who at least claim to have utilized the trail.

For qualitative data gathering, the Arizona Trail Association (ATA) solicited comments in response to Secretary Bernhardt’s (Appendix C) e-bike statement via the ATA Facebook page (Appendix A, Figure 1) and ATA email newsletter (Appendix A, Figure 2) and asked for respondents’ opinions of e-bikes being allow on sections of the Arizona Trail. This comment period originally opened and was promoted on August 31, 2019, and all comments received up to May 13, 2020 were included.

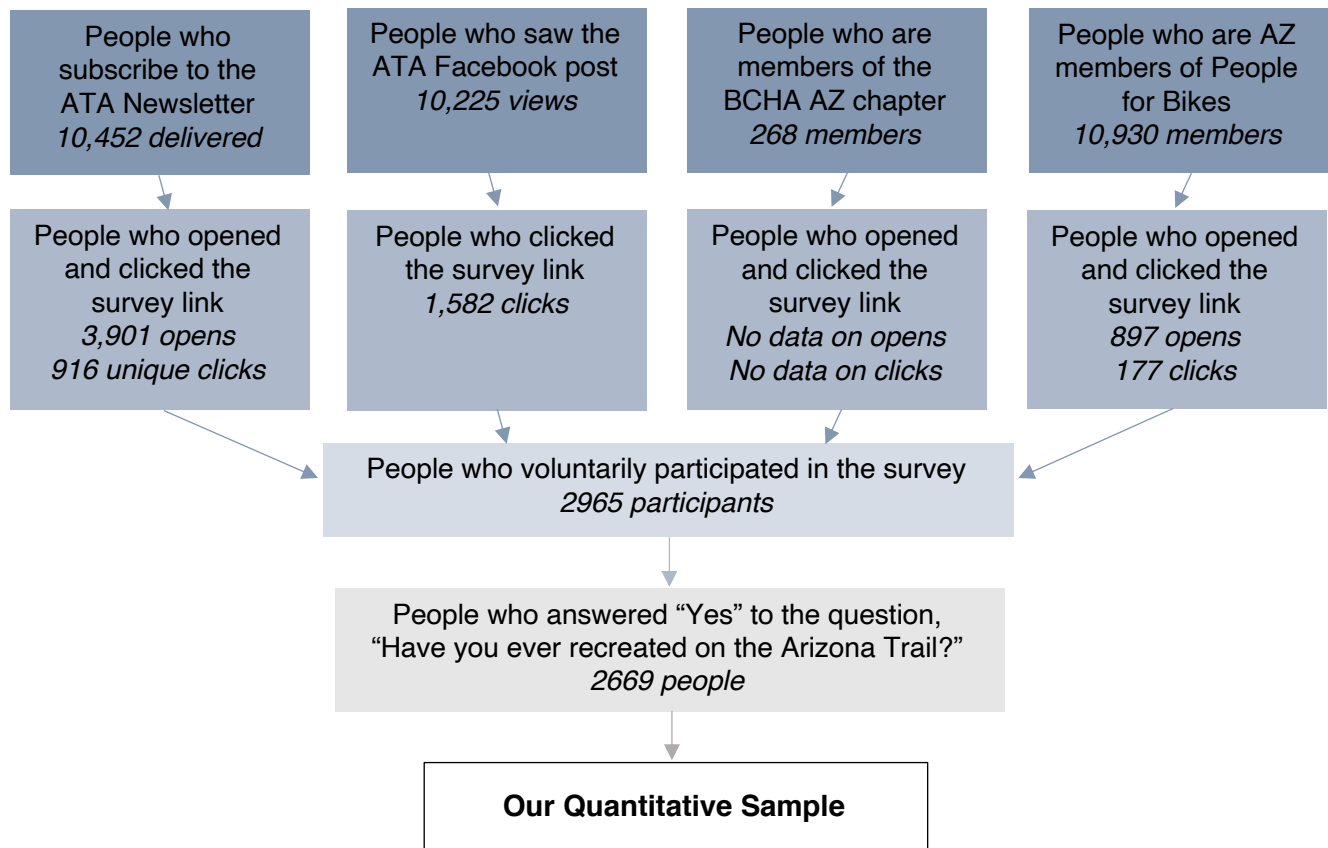
FIGURE 1: Qualitative Sample Gathering



For quantitative data gathering, a questionnaire (Appendix B) was generated on Google Forms, embedded into a webpage on the Arizona Trail website, and was open from April 9, 2020 to May 13, 2020. The link was distributed online through a single post on the ATA Facebook Page (Appendix A, Figure 5), and sent out through an ATA email newsletter (Appendix A, Figure 6). The link was also distributed via email to the Arizona membership base of Back Country Horsemen of

America (BCHA) and People for Bikes (Figure 2). It is also possible that the link was shared beyond these avenues as there was no control in place to prevent the link from being shared with a wider audience. As a control, participants who did not answer “Yes” to the question “Have you recreated on the Arizona Trail?” were excluded from the data set (n=296). While there are no notable signs that the quantitative data set was manipulated, there were not controls in place to prevent a single person from submitting multiple responses.

FIGURE 2: Quantitative Sample Gathering



The format of the quantitative questionnaire was made up of closed questions primarily consisting of closed checklists, such as Yes/No responses, and rating scales, particularly the Likert scale, to gauge how strongly participants felt about the subject matter (Newing, 2011). The questionnaire was designed to examine gaps in existing research about perceptions surrounding e-bikes.

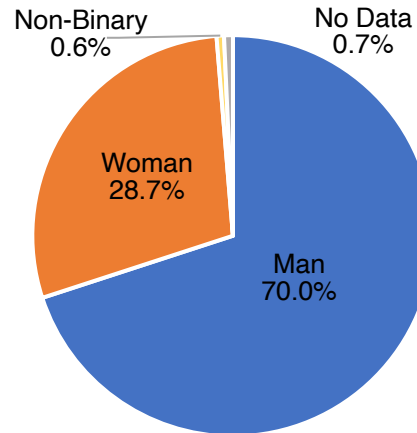
Results for the qualitative responses were coded and analyzed using MAXQDA software, and the qualitative responses were analyzed in SPSS Statistics software.

RESULTS

Demographics

Gender - Which of the following best describes how you identify?

Gender	Count	Percentage
Man	1868	70.0%
Woman	766	28.7%
Non-Binary	16	0.7%
No Data	19	0.6%

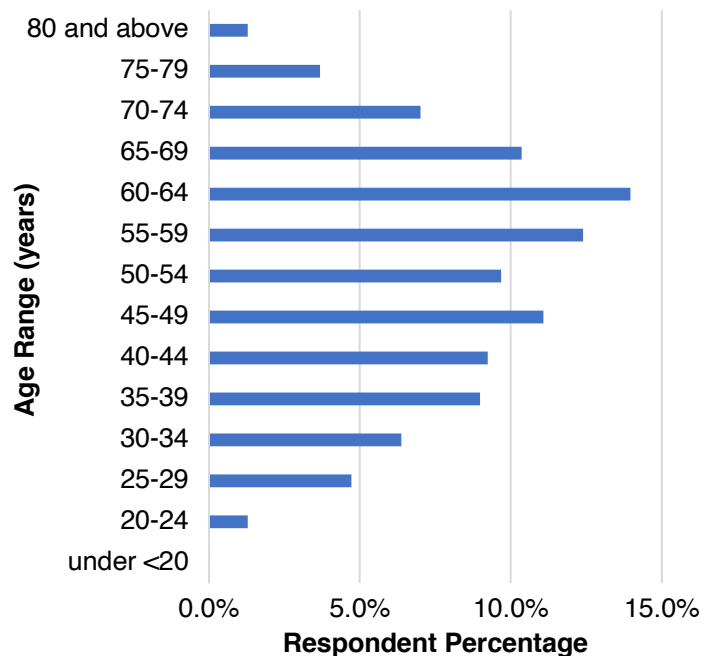


Age - How old are you?

Age was broken down into equal spans of 5 years for comparison, except for the categories “Under 20,” and “Over 69,” where ages represented were significantly less. Three ages under 5 years old were omitted.

Average Age: 52.5 years, Median Age: 54, Mode Age: 60

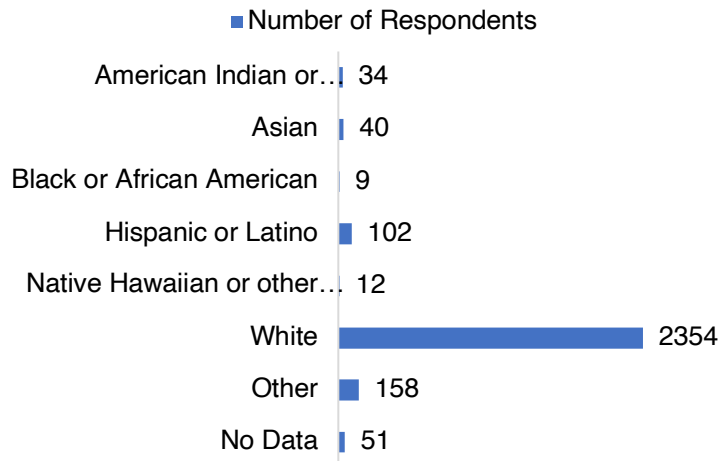
Age Range	Count	Percentage
under <20	1	0.0%
20-24	34	1.3%
25-29	126	4.7%
30-34	170	6.4%
35-39	239	9.0%
40-44	246	9.2%
45-49	295	11.1%
50-54	258	9.7%
55-59	330	12.4%
60-64	372	14.0%
65-69	276	10.4%
70-74	187	7.0%
75-79	98	3.7%
80 and above	34	1.3%



Race and Ethnicity - Which of these categories best indicates your race/ethnicity? (Select as many as apply)

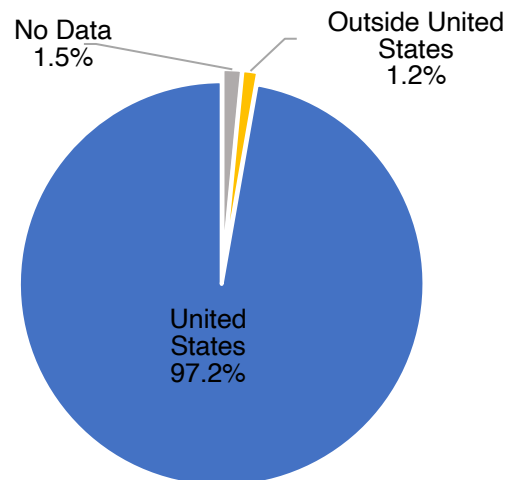
61 or 3.6% of respondents selected more than one race or ethnicity, and this is reflected in the percentages.

Race / Ethnicity	Count	Percentage
American Indian or Alaska Native	34	1.3%
Asian	40	1.5%
Black or African American	9	0.3%
Hispanic or Latino	102	3.8%
Native Hawaiian or other Pacific Islander	12	0.4%
White	2354	88.2%
Other	158	5.9%
No Data	51	1.9%

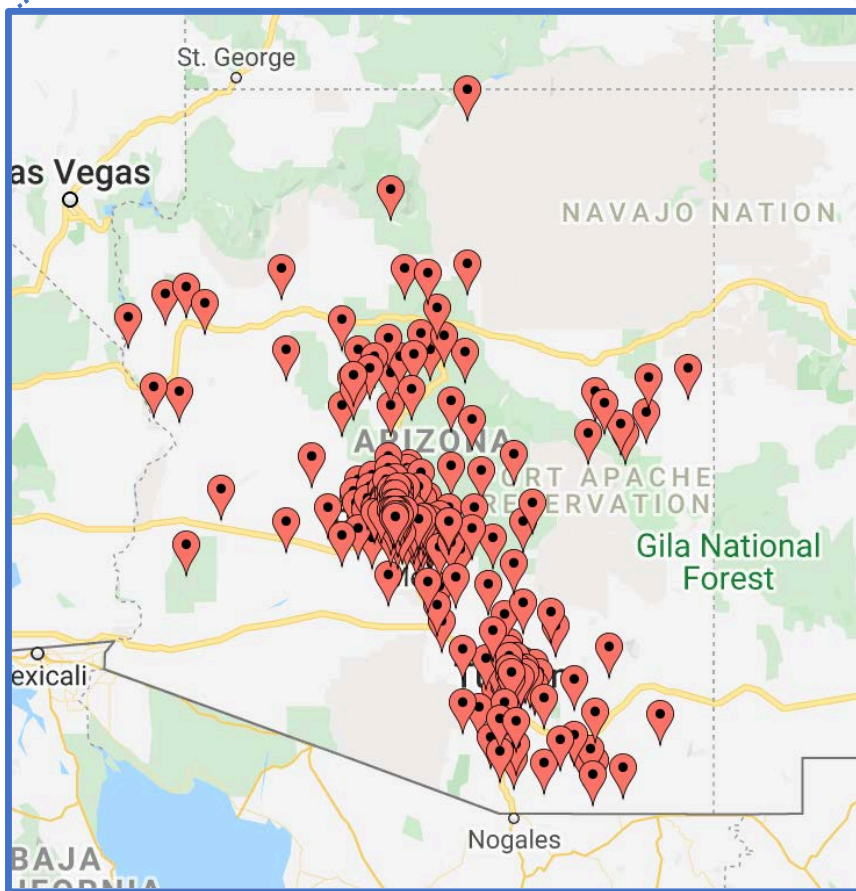
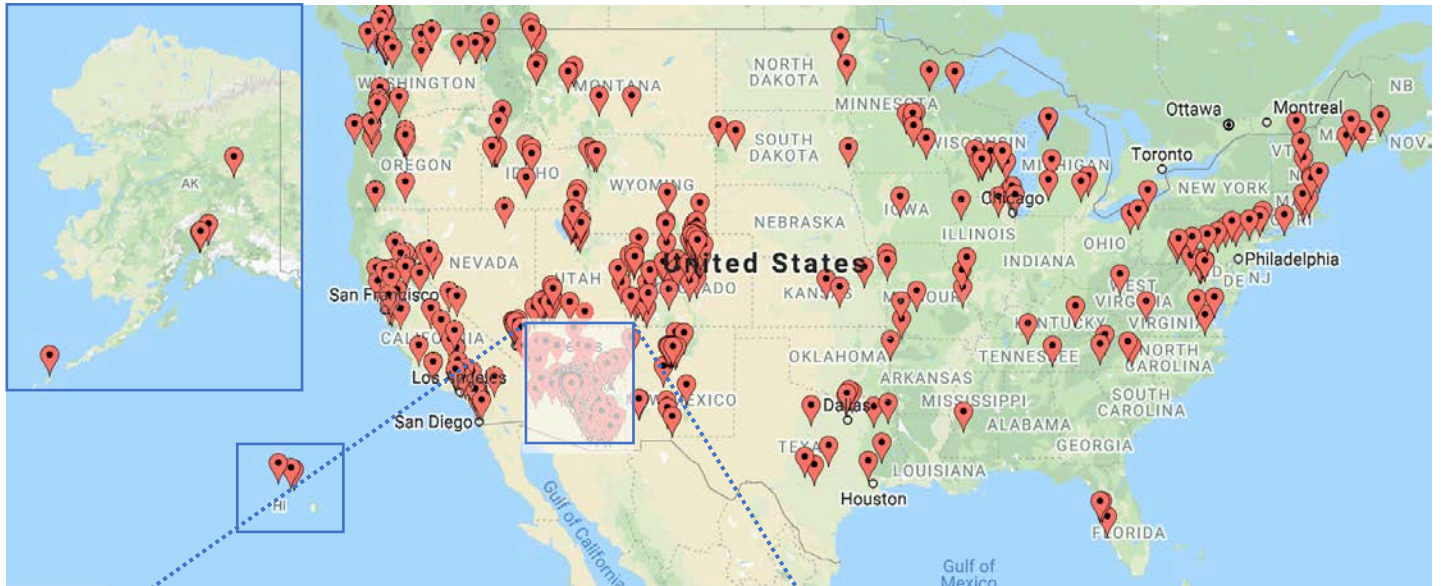


Region - Are you a permanent resident or citizen of the United States?

Country	Count	Percentage
United States	2595	97.2%
Outside United States	33	1.2%
No Data	41	1.5%



Countries represented include: United States (2595), Canada (16), Mexico (3), United Kingdom (4), Australia (1), France (1), Germany (1), Netherlands (1), New Zealand (1), Portugal (1), Scotland (1), Slovenia (1), Spain (1) and Switzerland (1).



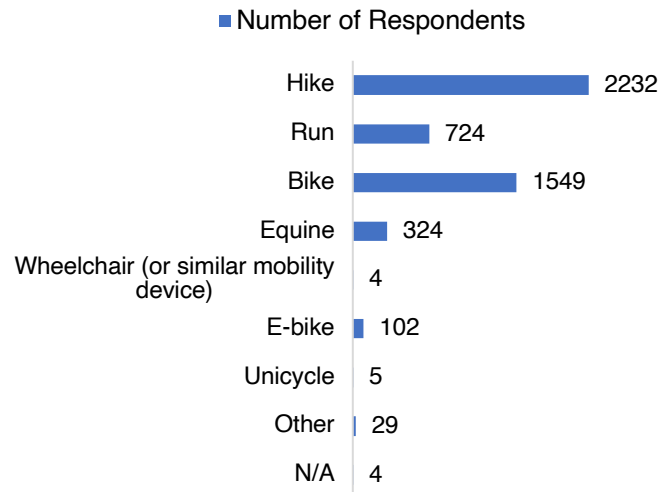
Within the United States, 2147 of the zip codes listed by respondents were from Arizona.

Method of Travel

How have you traveled on the Arizona Trail? (Select as many as apply)

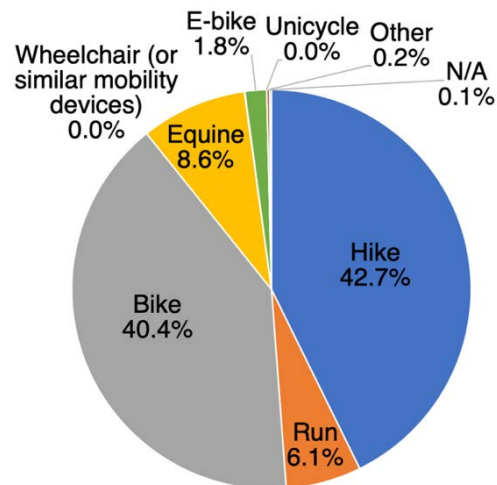
1647 or 86.3% of respondents selected more than one method of travel, and this is reflected in the percentages.

	Count	Percentage
Hike	2232	83.6%
Run	724	27.1%
Bike	1549	58.0%
Equine	324	12.1%
Wheelchair (or similar mobility devices)	4	0.1%
E-bike	102	3.8%
Unicycle	5	0.2%
Other	29	1.1%
N/A	4	0.1%



What has been your most frequent method of travel on the Arizona Trail? (Select only one option)

	Count	Percentage
Hike	1140	42.7%
Run	163	6.1%
Bike	1079	40.4%
Equine	229	8.6%
Wheelchair (or similar mobility devices)	1	0.0%
E-bike	47	1.8%
Unicycle	0	0.0%
Other	6	0.2%
N/A	4	0.1%

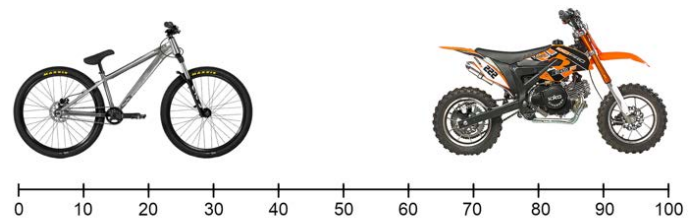


E-Bike Perceptions

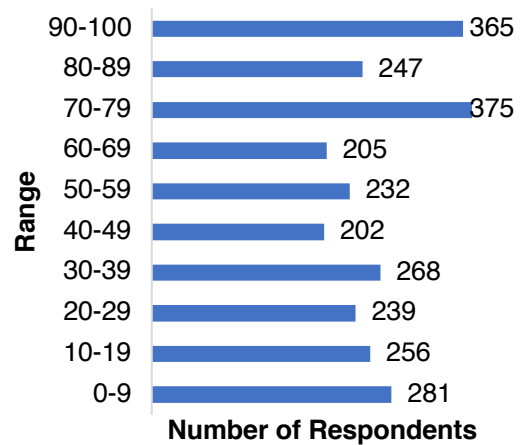
Are e-bikes more like mountain bikes or dirt bikes? In your opinion, where do e-bikes fall on the scale?

The scale was broken down into ranges of 10 in the chart below, except for 90-100, which includes a range of 11. A total of 188 respondents put "0" as their answer, and 197 respondents put "100."

Mean: 49.0, Median: 50, Mode: 70



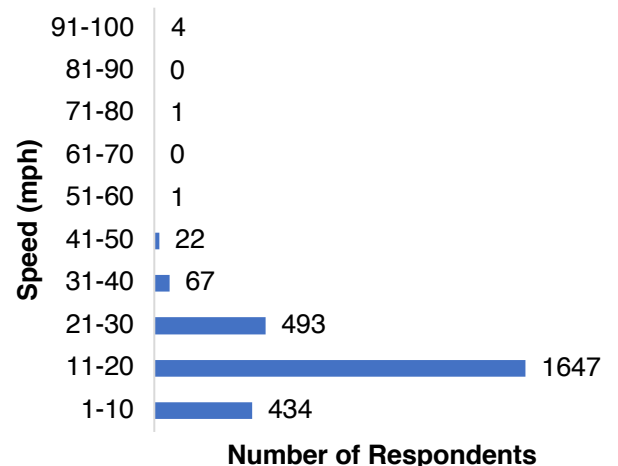
Range	Count	Percentage
0-9	281	10.5%
10-19	256	9.6%
20-29	239	9.0%
30-39	268	10.0%
40-49	202	7.6%
50-59	232	8.7%
60-69	205	7.7%
70-79	375	14.0%
80-89	247	9.3%
90-100	365	13.7%



How fast do you think e-bikes go on average? (Enter a number between 1 and 100 mph)

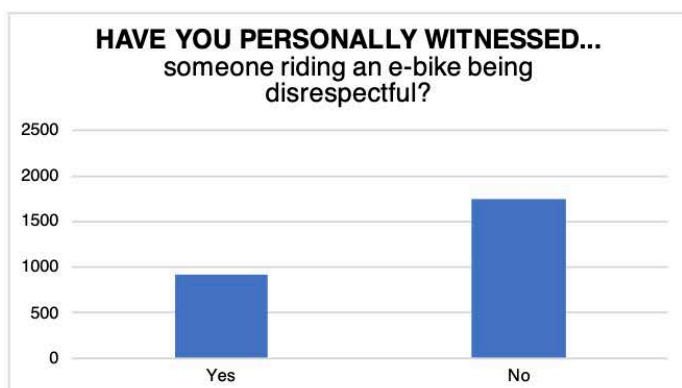
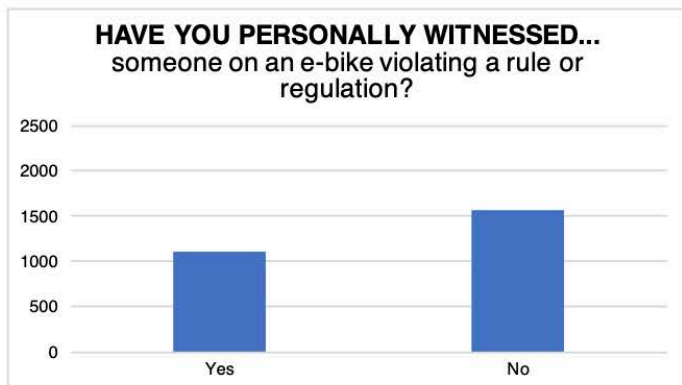
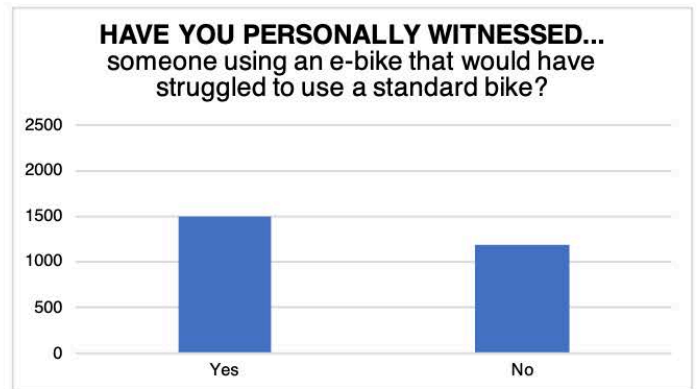
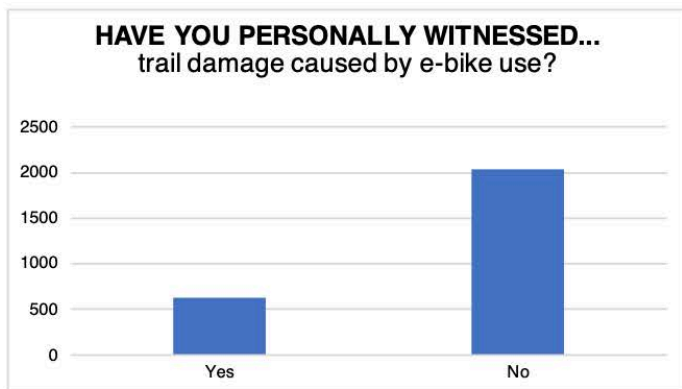
Mean: 18.3, Median: 18, Mode: 20

Speed (mph)	Count	Percentage
1-9	149	5.6%
10-19	1249	46.8%
20-29	1039	38.9%
30-39	175	6.6%
40-49	45	1.7%
50-59	7	0.3%
60-69	1	0.0%
70-79	0	0.0%
80-89	1	0.0%
90-100	4	0.1%



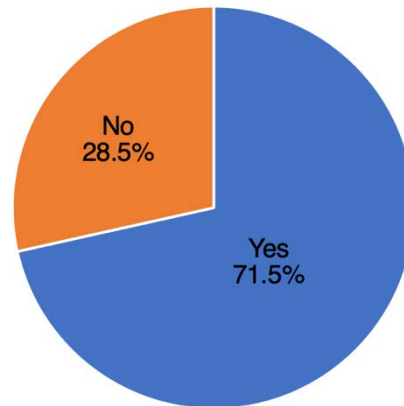
E-Bike Exposure

<i>Have you personally witnessed...</i>	Yes	No
<i>Someone injure themselves or someone else while riding an e-bike?</i>	376	2293
<i>Trail damage caused by e-bike use?</i>	628	2041
<i>Someone using an e-bike that would have struggled to use a standard bike?</i>	1492	1177
<i>Someone on an e-bike violating a rule or regulation?</i>	1105	1564
<i>Someone on an e-bike riding too fast on a trail?</i>	1001	1668
<i>Someone riding an e-bike being disrespectful?</i>	917	1752



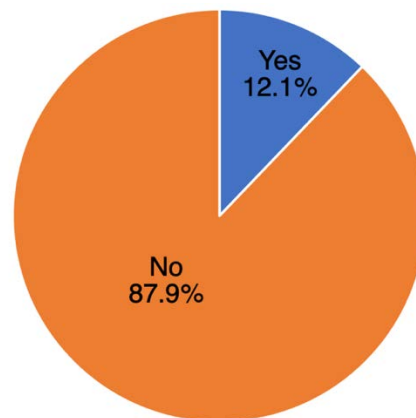
Are you aware that there are different classes of e-bikes?

Answer	Count	Percentage
Yes	1908	71.5%
No	760	28.5%



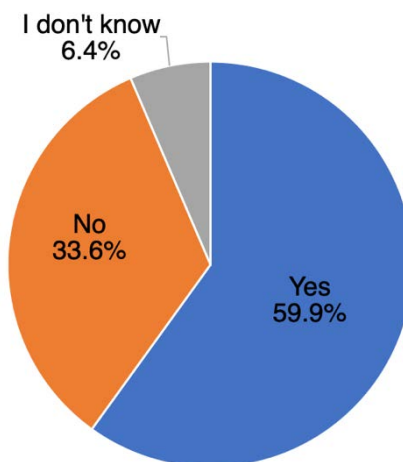
Do you own an e-bike?

Answer	Count	Percentage
Yes	324	12.1%
No	2345	87.9%



Have you ever seen someone ride an e-bike on a trail?

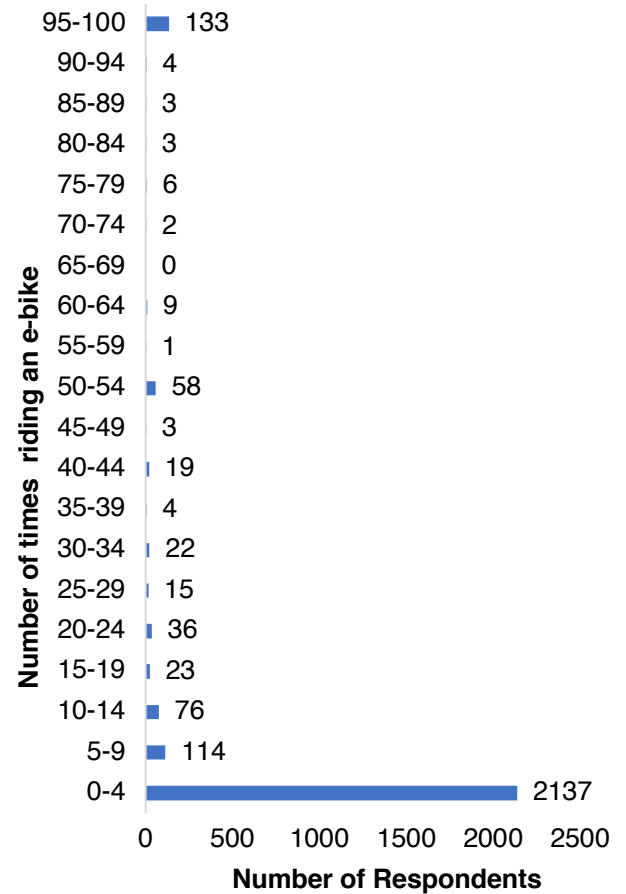
Answer	Count	Percentage
Yes	1600	59.9%
No	897	33.6%
I don't know	172	6.4%



How many times have you personally ridden an e-bike? (Enter a value between 0 and 100)

The survey accepted responses between 0 and 100. As a result, respondents who have ridden an e-bike more than 100 times was recorded as 100. 131 respondents recorded having ridden an e-bike at least 100 times, while 1551 respondents recorded never having ridden an e-bike. The scale was broken down into ranges of 5 in the chart and graph below, except for 95-100, which includes a range of 6.

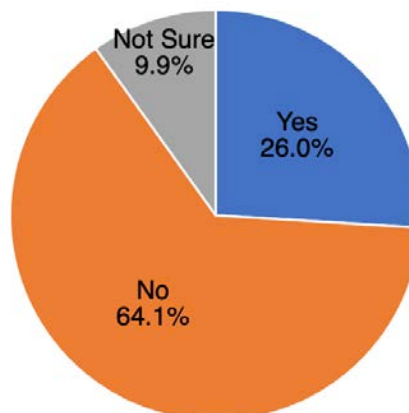
Range	Count	Percentage
0-4	2137	80.1%
5-9	114	4.3%
10-14	76	2.8%
15-19	23	0.9%
20-24	36	1.3%
25-29	15	0.6%
30-34	22	0.8%
35-39	4	0.1%
40-44	19	0.7%
45-49	3	0.1%
50-54	58	2.2%
55-59	1	0.0%
60-64	9	0.3%
65-69	0	0.0%
70-74	2	0.1%
75-79	6	0.2%
80-84	3	0.1%
85-89	3	0.1%
90-94	4	0.1%
95-100	133	5.0%



Opinions

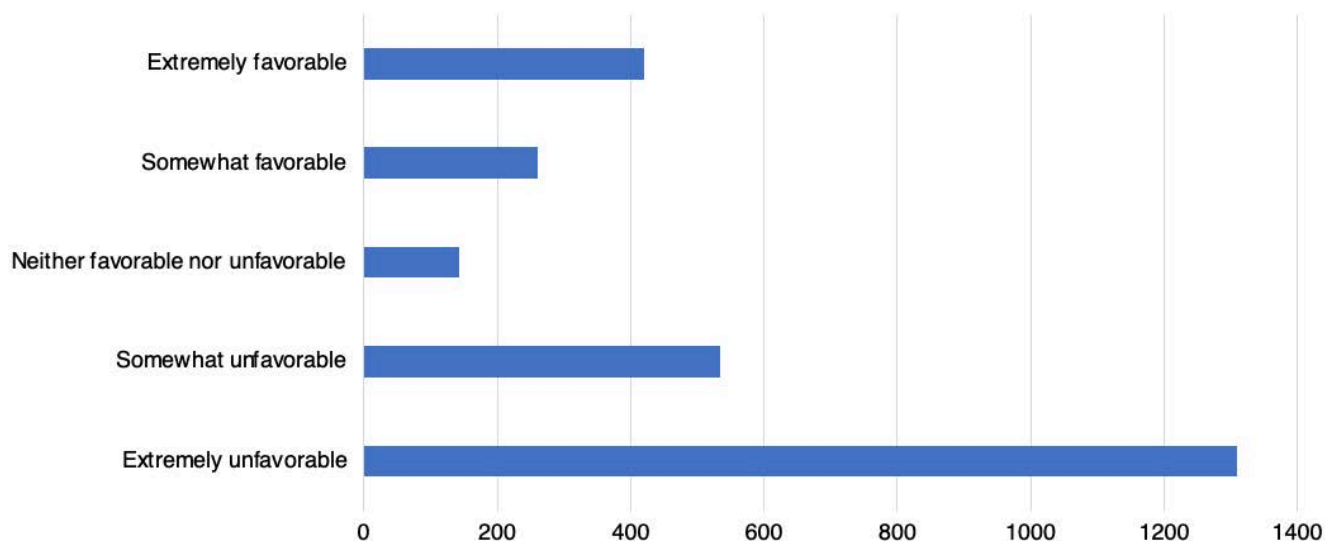
Do you think e-bikes should be allowed on the Arizona Trail?

Answer	Count	Percentage
Yes	693	26.0%
No	1711	64.1%
Not Sure	265	9.9%



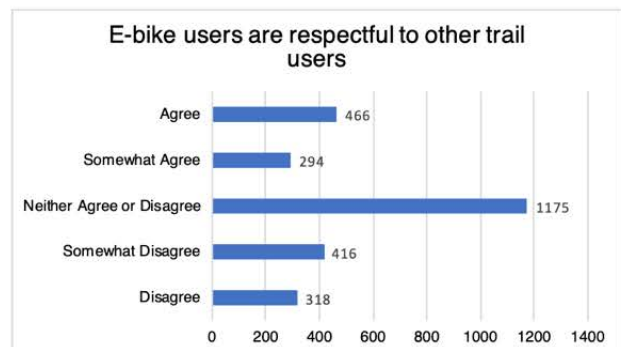
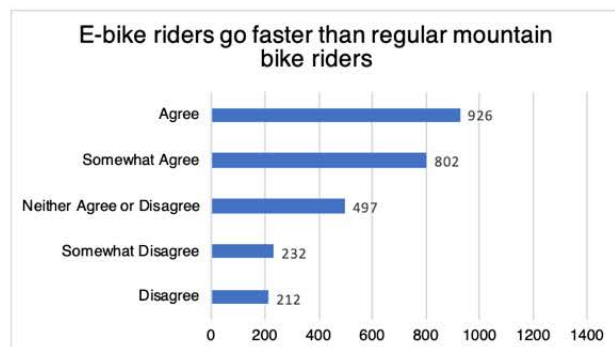
In general, how do you feel about policies that support e-bike access to non-motorized trails on a trail by trail basis?

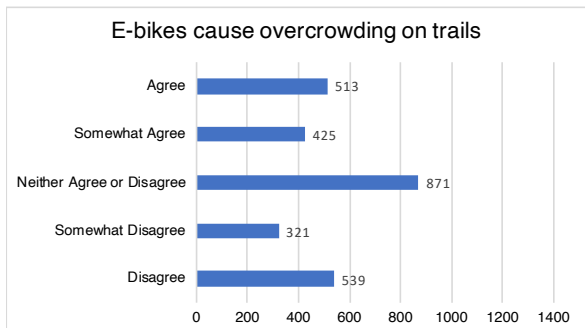
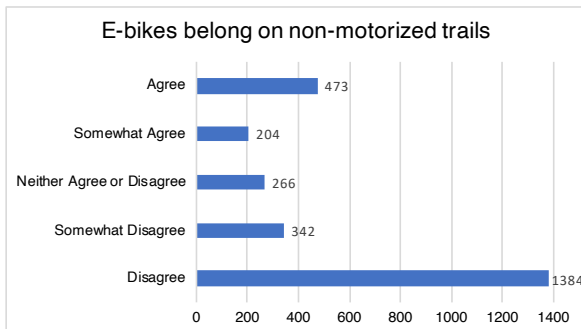
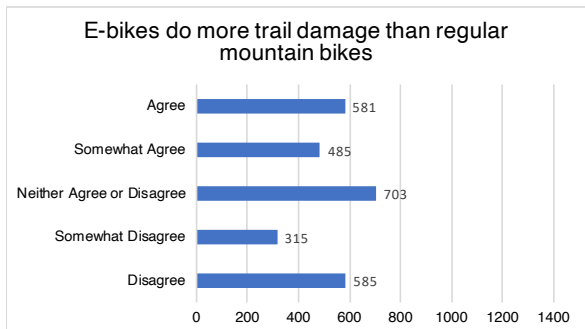
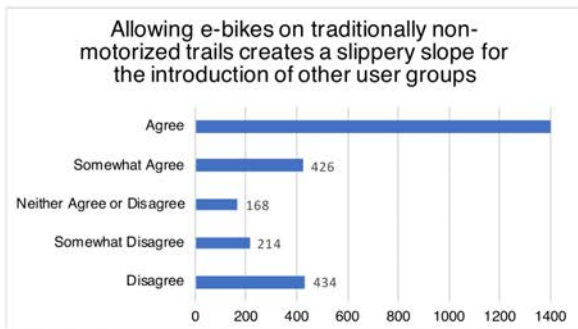
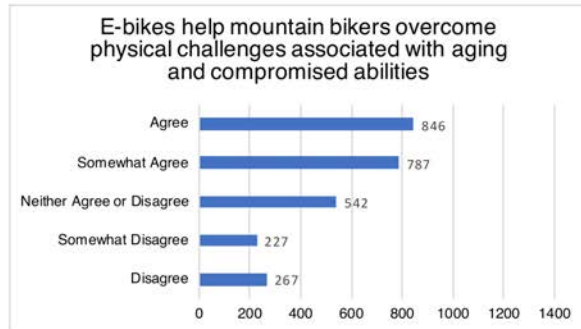
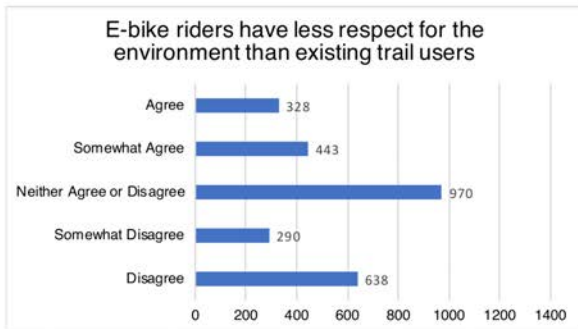
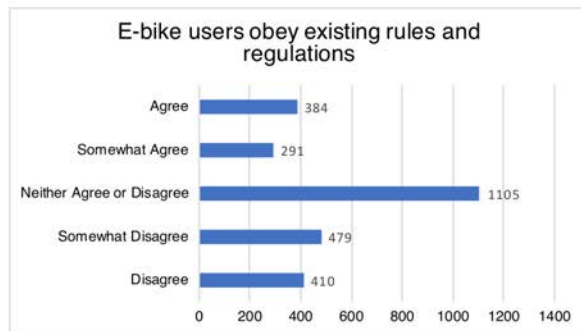
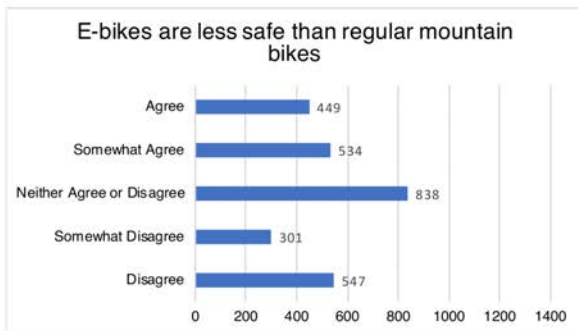
Answer	Count	Percentage
Extremely unfavorable	1310	49.1%
Somewhat unfavorable	535	20.0%
Neither favorable nor unfavorable	143	5.4%
Somewhat favorable	261	9.8%
Extremely favorable	420	15.7%



How much do you agree with the following statements?

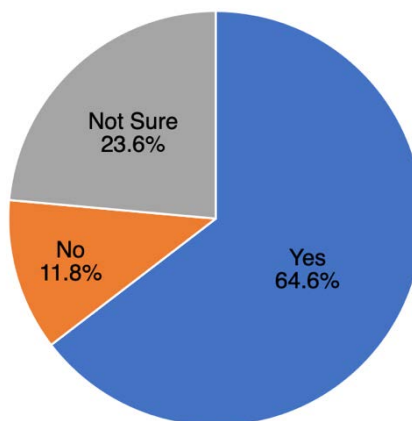
Statement	Disagree	Somewhat Disagree	Neither Agree or Disagree	Somewhat Agree	Agree
<i>E-bike riders go faster than regular mountain bike riders</i>	212	232	497	802	926
<i>E-bike users are respectful to other trail users</i>	318	416	1175	294	466
<i>E-bikes are less safe than regular mountain bikes</i>	547	301	838	534	449
<i>E-bike users obey existing rules and regulations</i>	410	479	1105	291	384
<i>E-bike riders have less respect for the environment than existing trail users</i>	638	290	970	443	328
<i>E-bikes help mountain bikers overcome physical challenges associated with aging and compromised abilities</i>	267	227	542	787	846
<i>Allowing e-bikes on traditionally non-motorized trails creates a slippery slope for the introduction of other user groups</i>	434	214	168	426	1427
<i>E-bikes can encourage new people to start mountain biking</i>	477	334	635	658	565
<i>E-bikes do more trail damage than regular mountain bikes</i>	585	315	703	485	581
<i>E-bikes belong on non-motorized trails</i>	1384	342	266	204	473
<i>E-bikes cause overcrowding on trails</i>	539	321	871	425	513





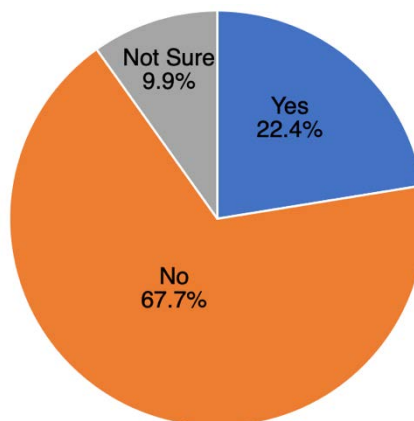
Would you continue to visit the Arizona Trail if e-bikes were allowed on the trail?

Answer	Count	Percentage
Yes	1724	64.6%
No	316	11.8%
Not Sure	629	23.6%



If e-bikes were permitted on sections of the Arizona Trail would you be interested in riding one where allowed?

Answer	Count	Percentage
Yes	599	22.4%
No	1807	67.7%
Not Sure	263	9.9%



DISCUSSION

General Response

For the qualitative portion of the study, the Arizona Trail Association's solicitation for comments in response to Secretary Bernhardt's e-bike order yielded 151 comments from unique individuals in the form of 77 emails and 74 Facebook comments. The majority of the statements provided a stance either for or against e-bikes on the Arizona Trail (AZT) and often included a brief explanation of their reasoning.

The quantitative e-bike survey returned 2,965 responses. Respondents who had first-hand experience on the AZT were evaluated, while respondents who stated that they had never recreated on the trail ($n=296$) were omitted from this analysis, except for in Graph 8.

Much of our analysis of the quantitative data stemmed from what participants identified as their most frequent method of travel on the AZT. This included hike ($n=1140$), bike ($n=1079$), equine ($n=229$), and in some circumstances run ($n=163$) and e-bike ($n=47$). While we did receive responses from people who identified their most frequent method of travel on the AZT to be wheelchair (or similar mobility device) ($n=1$), and "other" ($n=6$), the low number of responses from each of these categories meant that we could not draw statistically significant conclusions about these user groups, thus these user groups are not broken out for comparison.

Even though e-bikes were generally prohibited from the Arizona Trail during the time these responses were collected, data from the quantitative survey shows that many respondents are familiar with e-bikes and have had direct experience with them. Approximately 60% of participants ($n=1600$) stated that they had at least seen an e-bike on a trail, 42% of participants ($n=1117$) stated that they rode an e-bike at least one time, and 12% own an e-bike ($n=324$). In terms of knowledge, 72% of participants were aware that there are different classes of e-bikes ($n=1909$).

Viewpoints and the Effect of E-Bike Exposure

Overall, both the qualitative and quantitative survey results showed that the majority of participants were against allowing e-bikes on the Arizona Trail. While the quantitative survey only specified three options (Yes, No and Not Sure), in response to "Do you think e-bikes should be allowed on the AZT?" we found that the qualitative data showed a fourth response: those who were in support of e-bikes on the AZT, but only if certain restrictions or regulations were in place. These responses were categorized as "Yes, only if" and included the following stipulations:

- Restricted to individuals with physical disabilities
- Restricted to Class 1 E-bikes and E-Wheelchairs (or similar mobility devices)
- Restricted to traveling where licensed vehicles are already allowed
- Regulations for trail right-of-way were in place

As Table 1 shows, approximately 62% of the qualitative responses and 64% of the quantitative responses were opposed to allowing e-bikes on the AZT. Of the quantitative responses 26% supported allowing e-bikes on the Arizona Trail and the qualitative responses showed 21% supported allowing e-bikes on the AZT and an additional 13% supported allowing them if certain restrictions and regulations were established.

TABLE 1: Do you think e-bikes should be allowed on the AZT?

	Qualitative	Quantitative
No	61.9%	64.1%
Yes	21.2%	26.0%
Yes, only if	12.7%	--
Not Sure/Neutral	4.2%	9.9%

In order to understand the varying viewpoints of different user groups, we broke down the quantitative survey results based on how participants answered the question, “What has been your most frequent method of travel on the AZT?” We then looked at how they responded to “How much do you agree with the following statement: E-bikes belong on non-motorized trails.” Each answer to this question was given numeric weight including disagree (-2), somewhat disagree (-1), neither agree nor disagree (0), somewhat agree (1), and agree (2). Taking the mean from each user group provides for a broad overview of how each user group felt about e-bikes being allowed on non-motorized trails.

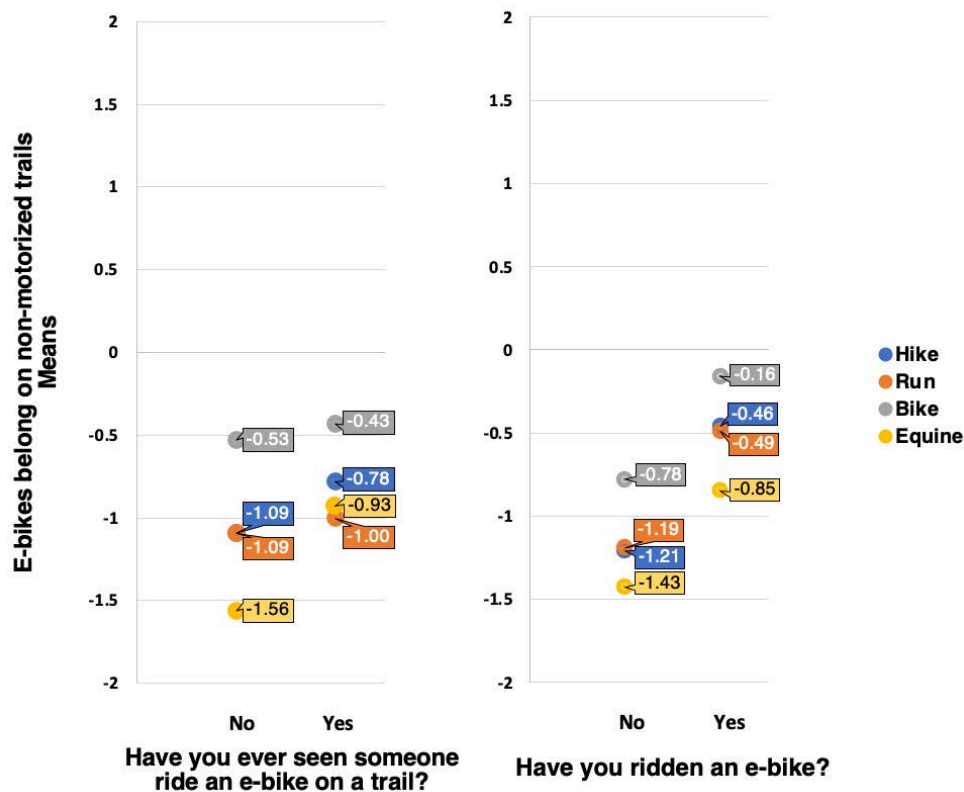
TABLE 2: How much do you agree with the following statement: E-bikes belong on non-motorized trails.

Most Frequent Method of Travel	Mean	Median	Std. Deviation	<i>n</i>
Hike	-0.96	-2	1.441	1140
Bike	-0.42	-1	1.633	1079
Equine	-1.34	-2	1.337	229
Run	-1.03	-2	1.307	163
E-bike	1.64	2	1.131	47

The results showed that across all major user groups, participants on average had an unfavorable opinion of policies that would allow e-bikes on non-motorized trails. Users who listed “equine” as their most frequent method of travel on the AZT showed the strongest opposition (Mean= -1.34), while those who selected mountain bike as their most frequent method of travel on average hold less opposition (Mean= -0.42) (Table 2). Those who chose hike or run as their most frequent method of travel appeared to hold very similar viewpoints to one another (Mean= -0.96 and Mean= -1.03, respectively) falling between mountain bike and equestrian views. Those who chose e-bikes as their most frequent method travel on the AZT showed overwhelming support for e-bikes being allowed on non-motorized trails (Mean=1.64).

While this shows that the majority of participants from each existing user group oppose e-bikes on non-motorized trails, a common argument that is made in support of e-bikes has been that seeing one in-person or riding one will change your opinion from negative to positive. With this in mind, we wanted to know how much survey participants opinion’s differed based on their exposure to e-bikes. Using the same data set, we subdivided the results by participants who have seen an e-bike on a trail and those who have not (Graph 1). We also subdivided the results by those who have ridden an e-bike at least once and those who had never ridden an e-bike (Graph 2).

GRAPH 1 (left) and **GRAPH 2** (right): How much do you agree with the following statement: E-bikes belong on non-motorized trails. (Quantitative)



Graph 1 shows that across all user groups, respondents who had seen an e-bike on a trail had a slightly higher tolerance for e-bikes riding on non-motorized trails. Graph 2 shows that respondents who had ridden an e-bike one or more times on average had a higher tolerance of e-bike policies. However, in both Graph 1 and Graph 2 the improved sentiment was still on average negative for every major existing user group. This data suggests that increased e-bike exposure improves tolerance, but exposure alone may not be significant enough to change the overall sentiment from negative to positive.

Perceived Concerns and Benefits

To gain a clearer picture of why participants hold these sentiments about e-bikes, we looked a variety of metrics.

First, we examined how each user group evaluated 11 statements about e-bikes in the quantitative survey. In an effort to avoid bias, the survey included five statements that presented e-bikes in a positive light, five that presented them in a negative light, and one neutral. Participants were asked to select whether they agreed, somewhat agreed, neither agreed nor disagreed, somewhat disagreed, or disagreed with these statements. In Table 3, we consolidated agree and somewhat agree (affirm), as well as disagree and somewhat disagree (dissent), to provide a more concise overview of the responses. This table displays how each major user group responded as well as the combined results from all participants.

Of all the statements provided, participants were most aligned (69%) in affirming the statement, "Allowing e-bikes on non-motorized trails creates a slippery slope for the introduction of other user groups," indicating that of the topics presented, the "slippery slope" argument was the most consistent concern.

TABLE 3A: Statements Supporting E-Bikes
(Quantitative)

	<u>Sample</u>		Most Frequent Method of Travel			
			Hike	MTB	Equine	E-Bike
	<i>n</i>	%	(%)	(%)	(%)	(%)
Users are respectful of other trail users						
Affirm (<i>Agree/Somewhat Agree</i>)	760	28	20.8	38.7	11.8	97.9
Neither Agree nor Disagree	1175	44	50.0	35.6	54.6	2.1
Dissent (<i>Disagree/Somewhat Disagree</i>)	734	27	29.2	25.7	33.6	0.0
Users obey existing rules and regulations						
Affirm	675	25	19.9	31.4	13.5	87.2
Neither Agree nor Disagree	1105	41	48.3	31.8	53.7	8.5
Dissent	889	33	31.8	36.8	32.8	4.3
Help MTB riders overcome physical challenges associated with aging & compromised abilities						
Affirm	1633	61	55.8	72.1	33.2	100.0
Neither Agree nor Disagree	542	20	23.2	12.4	41.5	0.0
Dissent	494	19	21.0	15.5	25.3	0.0
Can encourage new people to start MTB riding						
Affirm	1223	46	40.1	54.9	31.0	91.5
Neither Agree nor Disagree	635	24	26.8	18.8	36.2	6.4
Dissent	811	30	33.2	26.3	32.8	2.1
Belong on non-motorized trails						
Affirm	677	25	18.8	33.8	12.7	91.5
Neither Agree nor Disagree	266	10	10.4	10.7	5.7	0.0
Dissent	1726	65	70.9	55.5	81.7	8.5

The statement “e-bikes belong on non-motorized trails,” returned responses showing that nearly two-thirds of participants (65%) strongly disagreed or somewhat disagreed with the statement. This is same question that was explored in greater detail through Table 1, Graph 1 and Graph 2.

Another commonly held belief was that “e-bikes go faster than regular mountain bikes,” with 65% of respondents affirming this statement and only 17% dissenting. Because this statement was presented in a neutral way, it does not distinguish whether participants felt this was a concern or a benefit. However, it does acknowledge that e-bikes are perceived to be different than mountain bikes.

The majority of respondents (61%) agreed or somewhat agreed with the statement, “E-bikes help mountain bike riders overcome physical challenges associated with aging and compromised abilities,” making this the most consistently perceived benefit. This statement particularly resonated with people who selected mountain bike as their most frequent method of travel on the AZT with 72% affirming and only 16% dissenting.

In general, those who selected e-bike as their most frequent method of travel on the AZT affirmed supporting statements and dissented with opposing statements.

TABLE 3B: Statements Opposing E-Bikes
(Quantitative)

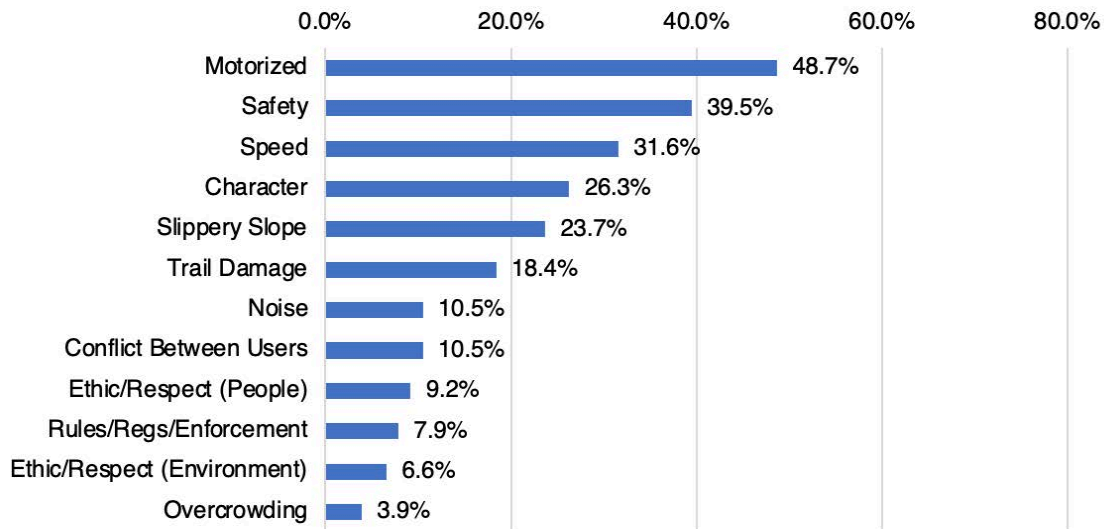
	<u>Sample</u>		<u>Most Frequent Method of Travel</u>			
	<i>n</i>	%	Hike (%)	MTB (%)	Equine (%)	E-bike (%)
Are less safe than regular MTBs						
Affirm (<i>Agree/Somewhat Agree</i>)	983	37	34.6	37.6	47.6	0.0
Neither Agree nor Disagree	838	31	37.7	24.4	34.5	4.3
Dissent (<i>Disagree/Somewhat Disagree</i>)	848	32	27.6	38.0	17.9	95.7
Riders have less respect for the environment						
Affirm	771	29	31.1	24.6	39.3	0.0
Neither Agree nor Disagree	970	36	41.5	30.3	43.2	2.1
Dissent	928	35	27.4	45.1	17.5	97.9
Allowed on non-motorized trails creates a slippery slope for the introduction of other user groups						
Affirm	1853	69	76.2	59.4	88.6	4.3
Neither Agree nor Disagree	168	6	5.4	7.5	4.8	2.1
Dissent	648	24	18.4	33.1	6.6	93.6
Do more trail damage than regular MTBs						
Affirm	1066	40	38.8	41.2	47.2	4.3
Neither Agree nor Disagree	703	26	32.5	17.6	35.8	0.0
Dissent	900	34	28.8	41.1	17.0	95.7
Cause overcrowding on trails						
Affirm	938	35	39.5	28.7	45.0	2.1
Neither Agree nor Disagree	871	33	35.5	29.5	37.1	4.3
Dissent	860	32	25.0	41.8	17.9	93.6

TABLE 3C: Neutral Statements
(Quantitative)

	<u>Sample</u>		<u>Most Frequent Method of Travel</u>			
	<i>n</i>	%	Hike (%)	MTB (%)	Equine (%)	E-Bike (%)
Go faster than regular MTBs						
Affirm (<i>Agree/Somewhat Agree</i>)	1728	65	61.5	68.9	65.5	31.9
Neither Agree nor Disagree	497	19	23.2	13.4	23.6	12.8
Dissent (<i>Disagree/Somewhat Disagree</i>)	444	17	15.3	17.7	10.9	55.3

Turning to the qualitative data, 76 participants noted one or more concerns that they held about e-bikes. Of those who expressed a concern, the most frequently mentioned was that e-bikes are motorized (48.7%). This was followed by safety concerns (39.5%), and speed (31.6%) (Graph 3). The fourth most expressed concern was about the introduction of e-bikes affecting the character of the trail. This element of “character” was not addressed anywhere in the quantitative survey, and the qualitative data suggests this is an area that should be considered when designing future studies.

GRAPH 3: Noted Concerns (Qualitative)



There were 36 qualitative responses that included notes about either the benefits of e-bikes or issues that participants were not concerned about. Graph 4 shows the frequency at which these supportive notes were presented. The benefit of helping people overcome physical disabilities was mentioned in 72% of these responses making it by far the most frequently noted benefit. This category also included overcoming disabilities associated with age. Next were notes expressing that they were not concerned about the sound of e-bikes (31%) followed closely by the benefit of general accessibility (28%). General accessibility included any mentioned of accessibility that was not tied to age or physical ability.

GRAPH 4: Noted Benefits and Non-Issues (Qualitative)

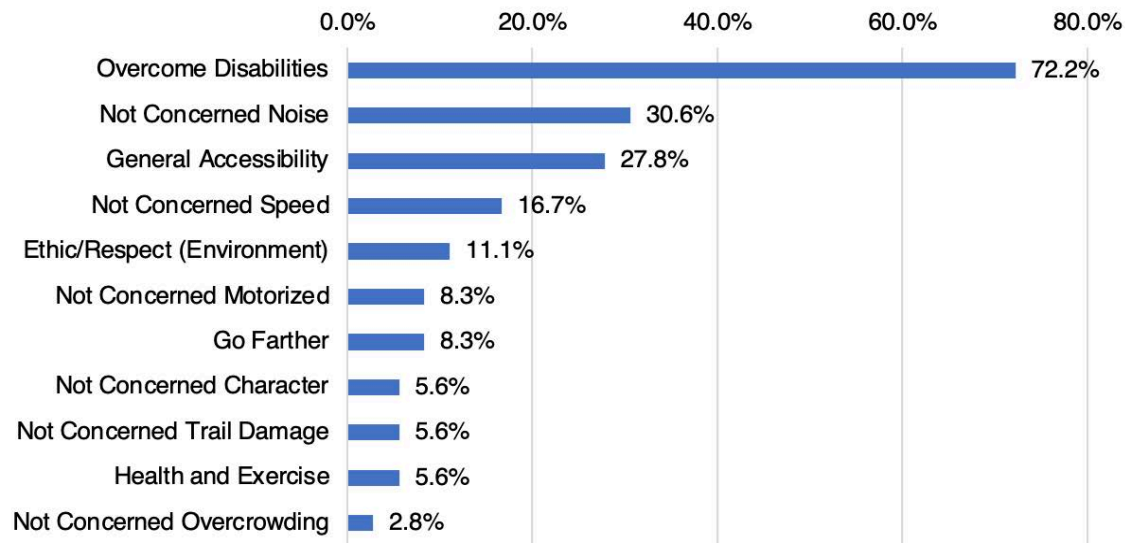


TABLE 4: Respondent Quotes for Concerns and Benefits (Qualitative)

	Concern	Benefit
Motorized	"The Arizona Trail was designated by Congress as a non-motorized trail. E-bikes are motorized, so they are illegal on it."	"They are quiet and not remotely related to motorized vehicles."
Safety	"...as batteries improve and motors become more efficient, which is very soon, it will be the pedestrian who will be at great risk. E-bikes will improve in design so that, if the 20mph limit is kept in place, they will 'fly' along at that pace, wreaking havoc on the trail and with the pedestrian users. E-bikes at any speed will cause accidents on the trails and will result in many more 'rescues' of people who are not adequately prepared for the realities of the great outdoors."	
Go Farther	"Depending on how long a rider of an e-bike is out on a trail, battery life can become an issue. Although we've seen improvements in the weight and performance of e-bikes, they're still comparatively heavy, and with no battery life it's a real burden to get around on difficult or hilly terrain. Add in potential exposure for riders being out longer than planned can be a real issue."	"We've got great friends that are aging and have long loved cycling but find it more difficult to go longer distances without electric assist."
Speed	"We have lots of bikes on the trails in Flagstaff and we have had several missed collisions with fast bikes here which are going downhill fast and we've had to jump out of their way. I shudder to think how fast a motorized bike will go on a downhill section."	"They require human power to move. The pedal-assist motor cuts out at 20 mph, so gravity and rider skill will always be the determinants of top speed, not the motor."
Overcome Disabilities		"E-bikes are inclusive, allowing people who are older, and people with other physical limitations, to enjoy cycling."
Character	"...ultimately, it deeply offends my love for the wild spirit of the trail, as it was originally dreamt and formulated."	"They are silent and do not detract from the wilderness experience. Riding with people on e-bikes is the same experience as riding with people on nonmotorized bikes."
Slippery Slope	"I suspect that once you open the doors to motorized vehicles there will be no going back."	
Noise	"Making noise and moving fast is totally against the Arizona Trail as a back-country experience."	"They don't make any more noise than a typical [mountain bike]."
Trail Damage	"...for a given tire footprint trail damage will increase with weight and speed. Since e-bikes will likely be using similar tires to standard [mountain bikes] but weigh significantly more and are capable of going faster on the same sections of trail (as stated above, they're heavier and therefore more stable), there will be a higher proportion of damage associated with e-bikes. Additionally, since a freely spinning wheel will cause more damage to the surface than one that is firmly engaged, and	"...don't see how e-bikes could do any more damage to the trails than regular mountain bikes."

	it is easier to generate enough torque on an e-bike to cause a wheel to break free in this manner, the proportion of damage caused by e-bikes will be even higher.”	
Overcrowding	“As our population continues to grow, and trail usage grows with it, stewardship of these areas will become increasingly important (for safety, access, environmental management, and eco-system protection); understanding the potential influence of e-Bikes being added to an already complex equation makes good sense.”	“Highly doubt there will be packs of 5+ e-bike riders that will take up the whole trail.”
Conflict Between Users	“Non- motorized trails let us relax and ride our animals without fear of "vehicles" appearing out of nowhere and scaring them causing accidents.”	
General Accessibility		“...open up the opportunity for people to experience greater adventures than they otherwise would be able or willing to experience.”
Health And Exercise		“It is a welcome relief for those to be able to continue extend their cycling years and continue their healthy exercise habits.”
Ethic Respect (People)	“much less likely to give adequate notice to hikers.”	
Ethic Respect (Environment)	“...consequences of ORV trails [include] increased pollution (users not passionate enough to hike/bike/ride, so do not feel the responsibility to be good stewards of the land).”	“They don't make noise or have a noxious exhaust.”
Rules/Regs/Enforcement	“It is simpler from an enforcement standpoint, as well as for the safety of those the non-motorized trail users, to keep anything with any type of motor off of the trail.”	

Understanding the Potential for Conflict

Past research on recreational conflict has assessed areas and trails where a new user group has been introduced; then they asked members of both the new and existing user groups to express their perceptions of themselves and one another (Carothers, Vaske, & Maur, 2001 and Vaske, Carothers, Donnelly & Baird, 2000). Since e-bikes were not formally permitted to be used on the AZT at the time of this study, we were mostly restricted to assessing the potential for conflict between existing users who support e-bikes on the AZT and existing users that oppose e-bikes on the AZT.

While Table 1 shows a split in opinions about the introduction of e-bikes to the AZT, which in and of itself may indicate a certain potential for conflict, other data sets provide additional insight on how polarized participants were on the topic.

For instance, in questions 16 and 17 of the quantitative survey, we asked participants to select one benefit of e-bike introduction that they would be most excited about and one issue that they would be most concerned about. For question 16 we listed a series of benefits and for question 17 a series of concerns, but in each case, we also gave the options “I am not excited about any of these outcomes” and “I am not concerned about any of the above issues.”

We were curious to see if people who support e-bikes on the AZT perceive any issues with allowing e-bikes on the AZT, and if people who oppose e-bikes perceive any benefits in allowing e-

bikes on the AZT. We did this by taking those who felt that e-bikes *should* be allowed on the AZT and looking at how they answered “Which of the following issues surrounding the possible introduction of e-bikes to the AZT would you be most concerned about?” and by taking those who felt that e-bikes *should not* be allowed on the AZT and looking at how they answered “Which of the following outcomes of allowing e-bikes on the AZT would you be most excited about?”

Table 5 and Graph 5 show that 64% of participants who support allowing e-bikes on the AZT were not concerned about any possible issues ($n=446$), and Table 6 and Graph 6 show that 87% of participants who are against allowing e-bikes on the AZT are not excited about any possible benefit ($n=1488$). This strongly suggests a polarized divide between the pro-e-bike and anti-e-bike camps, where both sides are highly reluctant to sympathizing with the opposing camp’s argument. It is also worth noting that only 10% of participants were unsure about whether or not e-bikes should be allowed on the AZT, meaning that the vast majority of users fall into one of these two polarized groups.

TABLE 5: Which of the following outcomes of allowing e-bikes on the AZT would you be most excited about?
(Quantitative)

Do you think that e-bikes should be allowed on the Arizona Trail?	I am not concerned with any of the above issues	Expressed concern
Answer: Yes	64.4%	35.6%

GRAPH 5: For E-Bikes on the AZT, Top Concern (Quantitative)

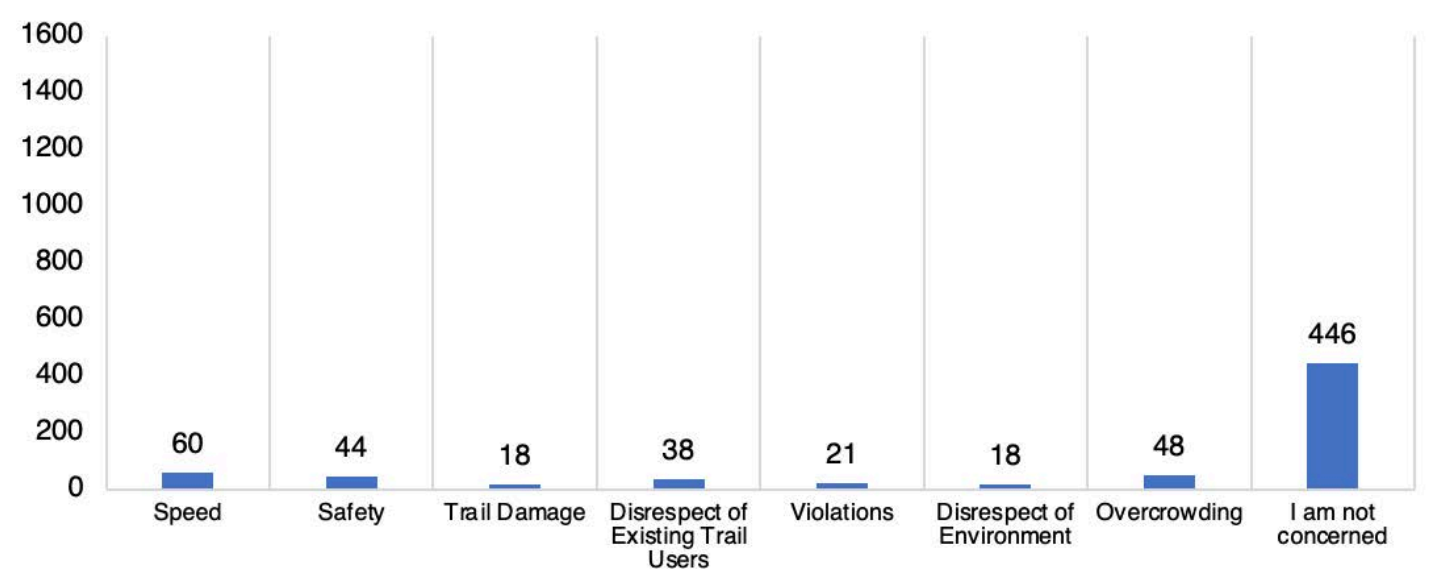
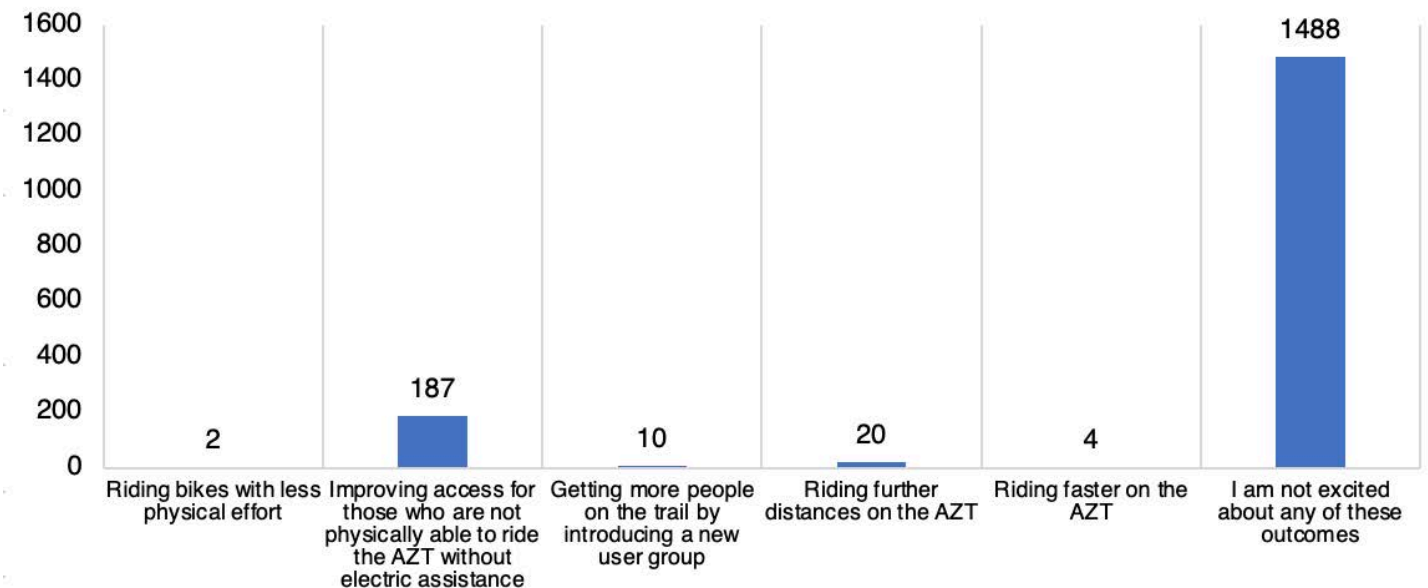


TABLE 6: Which of the following issues surrounding the possible introduction of e-bikes to the AZT would you be most concerned about? (Quantitative)

Do you think e-bikes should be allowed on the Arizona Trail?	I am not excited about any of these outcomes	Expressed benefit
Answer: No	87.0%	13.0%

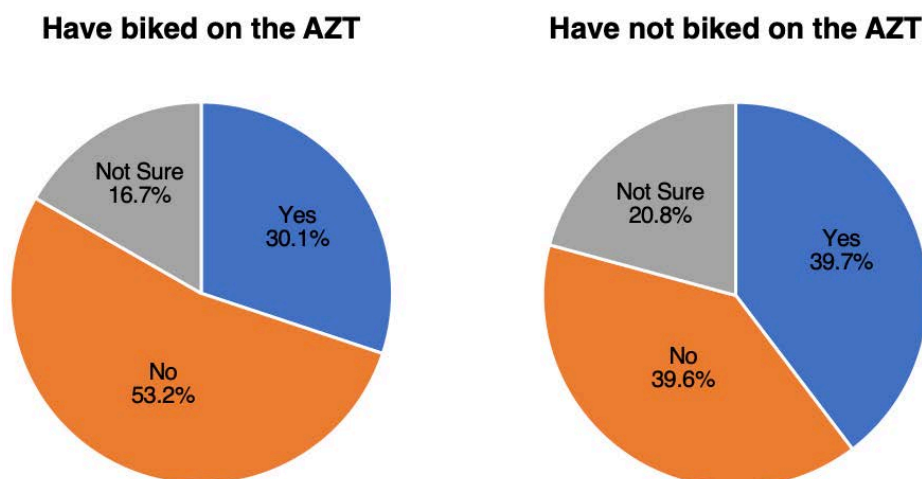
GRAPH 6: Against E-Bikes on the AZT, Top Benefit (Quantitative)



Looking more specifically at mountain bike perceptions of e-bikes, past research has highlighted that mountain bike riders may perceive the use of e-bikes as “cheating” (Chaney, Hall, Crowder, Crookston, & West, 2019). When we looked at quantitative survey participants who have biked on the trail, we found that 30% felt using an e-bike was cheating, whereas 53% felt it was not.

However, participants who had never biked on the trail were split on this question, with roughly 40% considering it cheating and 40% not seeing it as cheating. This again suggests that mountain bike riders are on average less critical of e-bikes than other user groups such as hikers and equestrian users.

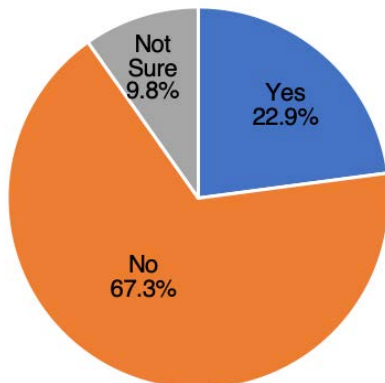
GRAPH 7: Do you consider the use of e-bikes on trails to be an unfair advantage, or “cheating?” (Quantitative)



Potential Effects on Future Trail Usership

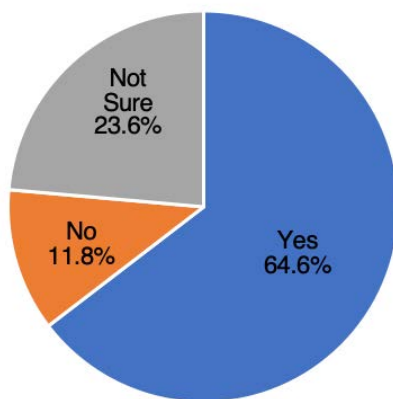
Feelings about e-bikes aside, we also wanted to know how allowing e-bikes on the AZT could affect the use of the trail. First, we wanted to know how many survey participants would have an interest in riding an e-bike on the AZT if they were allowed. Approximately 23% said “Yes” they would, 67% said “No” and 10% were “Not Sure” (Graph 8). There are limits to what this data tells us. For those who said “Yes” it does not indicate whether or not this would become their primary method of travel on the AZT. It also does not account for a possible influx of new e-bike users.

GRAPH 8: If e-bikes were permitted on section of the Arizona Trail, would you be interested in riding one where allowed? (Quantitative)



In addition to existing users of the AZT, Graph 8 also includes those who indicated that they would use the trail in the next 12 months

GRAPH 9: Would you continue to visit the Arizona Trail if e-bikes were allowed on the trail? (Quantitative)



On the other end of the spectrum, we asked participants if they would continue to visit the AZT if e-bikes were allowed on the trail. Approximately 65% answered “Yes,” 24% answered “Not Sure,” and 12% answered “No.” This means that up to a third of participants would consider not recreating on the AZT if e-bikes were allowed on the trail. Breaking this down by most frequent method of travel, we see that equestrian users lean heavily towards “No” or “Not Sure” with only 30% saying that they would continue to visit the AZT (Table 4). Given that this question is purely hypothetical there are again limits to the conclusions that can be drawn by this data.

Since both Graph 8 and Graph 9 illustrate potential outcomes from e-bikes being allowed on the AZT, we can consider these results in tandem. Doing this we see that allowing e-bikes on the AZT would likely result in an uptick of e-bike use from both new users and existing users transitioning to e-bikes, while simultaneously there could be a notable reduction in use from existing hikers, bikers, and equestrian users. The data cannot provide conclusive evidence as to whether this would be a net increase or decrease in overall AZT usership.

TABLE 7: Would you continue to visit the AZT if e-bikes were allowed on the trail?

Most Frequent Method of Travel	Yes (%)	No (%)	Not Sure (%)
Hike	59.5	12.6	27.9
Bike	76.2	7.2	16.6
Equine	30.1	32.8	37.1

Validating the Data

Because the qualitative responses were unstructured, validating the data is restricted primarily to the opinion of whether e-bikes should be allowed on the AZT. Table 1 shows us that quantitative responses showed 64% of respondents opposed e-bikes on the AZT and qualitative responses showed 62% opposed e-bikes. Responses supporting e-bikes on the AZT were 26% on the quantitative survey and 21% on the qualitative surveys, but considering that the “Yes, only if” option created in the qualitative responses was not an option in the quantitative survey it is possible that these numbers are even closer. The similarity of these numbers indicates that the data is valid.

We can also assess the quantitative data by looking at how participants have recreated on the AZT. The ATA asked its members to share how they have traveled on the trail, and we compared these numbers with the methods of travel the survey respondents selected.

TABLE 8: Respondent Validation

	Methods of Travel on AZT			
	Hike	Run	Bike	Equine
Quantitative Survey Respondents	84%	27%	57%	12%
ATA Membership Base	91%	26%	36%	9%

In general, the percentages seem to relate; however, we did have a notably higher representation of bikers and equestrians in the survey than the ATA member base and a slightly lower representation of hikers. This could indicate that we received a higher rate of response from the biking and equestrian communities, likely because the questionnaire was distributed by a bike organization and an equestrian organization driving a disproportionate amount of traffic to the study. There is also the possibility that the breakdown of actual Arizona Trail users is not fully reflected in the ATA membership base, this could be explained if for instance hikers are more likely to become members than mountain bikers.

CONCLUSION

On average, the majority of survey respondents disapprove of e-bikes being allowed on the trail. This remains true across the board for each of the major user groups; however, mountain bike rider respondents are less likely to disapprove of allowing e-bikes on non-motorized trails and equestrian respondents are more likely to disapprove. This confirms hypothesis 1 and hypothesis 2.

The most frequent argument in support of e-bikes is making the trail more accessible to those looking to overcome physical challenges associated with age or compromised abilities. The most frequent arguments in opposition to e-bikes center around e-bikes being motorized and the potential for this to create a slippery slope for the introduction of other motorized user groups.

Exposure to e-bikes, such as seeing one on a trail or having ridden one in the past, did tend to make respondents more open to allowing e-bikes on non-motorized trails. While this confirms hypothesis 3, these shifts were not substantial enough to move any respondent user group's average perception from negative to positive. This suggests that experience with e-bikes may improve tolerance, but exposure alone may not be enough to garner a general acceptance of e-bike use on non-motorized trails.

The data shows a polarized divide between survey respondents who support and oppose e-bikes on the AZT, with less than 10% of survey participants remaining undecided on the topic. Both camps tended not to sympathize with arguments coming from the other side, with 64% of those in support of e-bikes not seeing any issues with them being allowed on the trail and 87% of those opposed to e-bikes not seeing any benefit to them being allowed.

If e-bikes were to be permitted on the AZT the increase in use from e-bikes may be accompanied by a decrease in use from existing user groups, particularly equestrians. Whether this would be a net increase or decrease in trail usership is unknown.

Again, we want to acknowledge that these survey responses do not necessarily align with the opinions of Arizona Trail users, Arizona Trail stakeholders, or communities along the Arizona Trail. The results of this study were obtained via online target sampling and should be considered among other data sets and should not be used as a generalization for the opinions of these groups. To further understand the population sample that participated in this study, please see the methods section of the report.

There are still many opportunities for further research around the recreational use of e-bikes. Future studies on user conflict should consider perceptions about the effect e-bikes have on the "character" of a trail. It would also be valuable to conduct similar surveys on trails where e-bikes are permitted. This would allow for a more direct comparison to previous research on recreational conflict and show if and how viewpoints shift after e-bikes have been introduced to the usership mix. Future research also needs to explore perceptions of the various classes of e-bikes to see if these variations have differing levels of acceptance.

Lastly, gathering additional data on the Arizona Trail usership, along with conducting a similar survey on the trail could serve to validate our findings and provide valuable insight to the true opinions of Arizona Trail users.

REFERENCES

- Bernhardt, D. Increasing Recreational Opportunities through the use of Electric Bikes (2019). Washington, DC. Retrieved from https://www.doi.gov/sites/doi.gov/files/elips/documents/so_3376_-_increasing_recreational_opportunities_through_the_use_of_electric_bikes_-_508_0.pdf?fbclid=IwAR3NnLakQqcZ6Wj_EsBIVXCy56QhG0oh-0lsVQSH5VJgtiaukmq5HUSDrdw
- Chaney, R. A., Hall, P. C., Crowder, A. R., Crookston, B. T., & West, J. H. (2019). Mountain biker attitudes and perceptions of eMTBs (electric-mountain bikes). *Sport Sciences for Health*. doi: 10.1007/s11332-019-00555-z
- Chen, J., Xie, Z., & Qian, C. (2010). Traffic Conflict Models on Shared-Use Paths Used by Pedestrians, Cyclists, and Electric Bicycle Riders. *Icctp 2010*. doi: 10.1061/41127(382)208
- Creswell, J. W., Plano Clark, V. L., (2017) *Designing and conducting mixed methods research* (3rd ed.) Los Angeles, CA: SAGE.
- Goeft, U., & Alder, J. (2001). Sustainable Mountain Biking: A Case Study from the Southwest of Western Australia. *Journal of Sustainable Tourism*, 9(3), 193–211. doi: 10.1080/09669580108667398
- International Mountain Bicycling Association (2015) A comparison of environmental impacts from mountain bicycles, Class 1 electric mountain bicycles, and motorcycles: soil displacement and erosion on bike-optimized trails in western Oregon forest. Retrieved from https://b.3cdn.net/bikes/c3fe8a28f1a0f32317_g3m6bdt7g.pdf.
- Jones, Tim, Harms, Lucas, & Heinen, Eva. (2016). Motives, perceptions and experiences of electric bicycle owners and implications for health, wellbeing and mobility. *Journal of Transport Geography*., 53, 41-49. doi: 10.1016/j.jtrangeo.2016.04.006
- Langford, Brian Casey, Chen, Jiaoli, & Cherry, Christopher R. (2015). Risky riding: Naturalistic methods comparing safety behavior from conventional bicycle riders and electric bike riders. *Accident Analysis and Prevention*., 82, 220-226. doi: 10.1016/j.aap.2015.05.016
- Langford, Brian Casey, Cherry, Christopher R, Bassett, David R, Fitzhugh, Eugene C, & Dhakal, Nirbesh. (2017). Comparing physical activity of pedal-assist electric bikes with walking and conventional bicycles. *Journal of Transport & Health*., 6, 463-473. doi: 10.1016/j.jth.2017.06.002
- MacArthur, J., & Kobel, N. (2014). Regulations of E-Bikes in North America - A Policy Review. *National Institute for Transportation and Communities, RR (564A)*. Retrieved from https://ppms.trec.pdx.edu/media/project_files/NITC-RR-564A_Regulations_of_E-Bikes_in_North_America_r4Durz3.pdf

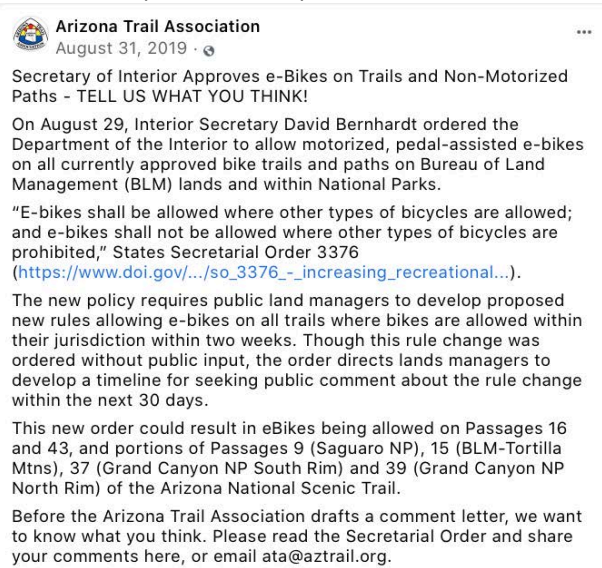
- MacArthur, John, Dill, Jennifer, & Person, Mark. (2014). Electric Bikes in North America. *Transportation Research Record: Journal of the Transportation Research Board*, 2468(1), 123-130. doi: 10.3141/2468-14
- Marion, J., & Wimpey, J. (2007). Environmental Impacts of Mountain Biking: Science Review and Best Practices. *Managing Mountain Biking*. Retrieved from http://www.allegra-tourismus.ch/hubfs/Collections/The_Environmental_Impacts_Of_Mountain_Biking/Marion_Wimpey.pdf
- McLeod, K. (2016). Bicycle Laws in the United States-Past, Present, and Future. *Fordham Urban Law Journal*, 42(4). Retrieved from <https://ir.lawnet.fordham.edu/cgi/viewcontent.cgi?article=2573&context=ulj>
- Newing, H., Eagle, C.M., Puri, R., Watson, C.W. (2011). *Conducting Research in Conservation: Social Science Methods and Practice*. Routledge, London, New York.
- Pam Carothers, Jerry J Vaske, Maur, P. (2001). Social Values versus Interpersonal Conflict among Hikers and Mountain Bikers. *Leisure Sciences*, 23(1), 47-61. doi: 10.1080/01490400150502243
- Parker, A. A. (2011). In Europe 250 watt pedelecs reduce pollution and improve the safety and mobility of young and elderly riders. *Australian Transport Research Forum*. Retrieved from https://www.atrf.info/papers/2011/2011_parker_a.pdf
- Popovich, N., Gordon, E., Shao, Z., Xing, Y., Wang, Y., & Handy, S. (2014). Experiences of electric bicycle users in the Sacramento, California area. *Travel Behaviour and Society*, 1(2), 37–44. doi: 10.1016/j.tbs.2013.10.006
- Povich, E. S. (2018). E-Bikes Race Ahead of City, State Rules, *Planning*, 84(10), 14. Retrieved from <http://search.ebscohost.com.proxy-sru.klnpa.org/login.aspx?direct=true&db=bth&AN=132799678&site=ehost-live>
- Schepers, JP, Fishman, E, Den Hertog, P, Wolt, K Klein, & Schwab, AL. (2014). The safety of electrically assisted bicycles compared to classic bicycles. *Accident Analysis and Prevention*, 73, 174-180. doi: 10.1016/j.aap.2014.09.010
- Schleinitz, K, Petzoldt, T, Franke-Bartholdt, L, Krems, J, & Gehlert, T. (2017). The German Naturalistic Cycling Study – Comparing cycling speed of riders of different e-bikes and conventional bicycles. *Safety Science*, 92, 290-297. doi: 10.1016/j.ssci.2015.07.027
- Terrell, T. J. (2020). *Forest Service Manual 7700 Travel Management; Chapter 7700, Zero Code; Chapter 7710 Travel Planning* (No. 186, Vol. 85, p. 60129) (United States, Forest Service, Agriculture (USDA)). Federal Register.
- Vaske, J. J., Donnelly, M. P., Wittmann, K., & Laidlaw, S. (1995). Interpersonal versus social-values conflict. *Leisure Sciences*, 17(3), 205–222. doi: 10.1080/01490409509513257

- Weinert, J., Ma, C., & Cherry, C. (2007). The transition to electric bikes in China: history and key reasons for rapid growth. *Transportation*, 34(3), 301–318. doi: 10.1007/s11116-007-9118-8
- White, D. D., Waskey, M. T., Brodehl, G. P., & Foti, P. E. (2006). A Comparative Study of Impacts to Mountain Bike Trails in Five Common Ecological Regions of the Southwestern U.S.. *Journal of Park and Recreation Administration*, 24(2), 21–41. Retrieved from <https://www.nemba.org/sites/default/files/PDF%20%20Files/Comparative%20Impact%20Study%20White%20et%20al%202006.pdf>
- Wilson, J. P., & Seney, J. P. (1994). Erosional Impact of Hikers, Horses, Motorcycles, and Off-Road Bicycles on Mountain Trails in Montana. *Mountain Research and Development*, 14(1), 77. doi: 10.2307/3673739

APPENDIX A: Sample Gathering

FIGURE 3: ATA Facebook Post

Saturday, August 31, 2019, 2:28 PM MST (Qualitative)



"Secretary of Interior Approves e-Bikes on Trails and Non-Motorized Paths - TELL US WHAT YOU THINK!"

On August 29, Interior Secretary David Bernhardt ordered the Department of the Interior to allow motorized, pedal-assisted e-bikes on all currently approved bike trails and paths on Bureau of Land Management (BLM) lands and within National Parks.

*"E-bikes shall be allowed where other types of bicycles are allowed; and e-bikes shall not be allowed where other types of bicycles are prohibited," States Secretarial Order 3376
[https://www.doi.gov/sites/doi.gov/files/elips/documents/so_3376_-_increasing_recreational_opportunities_through_the_use_of_electric_bikes_-_508_0.pdf?fbclid=IwAR2n5LhgkedEIO1qvJC5nyibh_8XJ37DUSvmJFdxLaz5RzLJLUZ3lUOBwIA](\"https://www.doi.gov/sites/doi.gov/files/elips/documents/so_3376_-_increasing_recreational_opportunities_through_the_use_of_electric_bikes_-_508_0.pdf?fbclid=IwAR2n5LhgkedEIO1qvJC5nyibh_8XJ37DUSvmJFdxLaz5RzLJLUZ3lUOBwIA\").*

The new policy requires public land managers to develop proposed new rules allowing e-bikes on all trails where bikes are allowed within their jurisdiction within two weeks. Though this rule change was ordered without public input, the order directs lands managers to develop a timeline for seeking public comment about the rule change within the next 30 days.

This new order could result in eBikes being allowed on Passages 16 and 43, and portions of Passages 9 (Saguaro NP), 15 (BLM-Tortilla Mtns), 37 (Grand Canyon NP South Rim) and 39 (Grand Canyon NP North Rim) of the Arizona National Scenic Trail.

Before the Arizona Trail Association drafts a comment letter, we want to know what you think. Please read the Secretarial Order and share your comments here, or email [ata@aztrail.org](\"mailto:ata@aztrail.org\")."

FIGURE 4: ATA Email Newsletter Article

Thursday, Sep 2, 2019, 2:34 PM MST, (Qualitative)

What Do You Think About e-Bikes on the Arizona Trail?



On August 29, Interior Secretary David Bernhardt ordered the Department of the Interior to allow bicycles powered by electric motors (e-bikes) on all trails and paths within National Parks and Bureau of Land Management (BLM) lands and where bicycles are currently allowed. E-bikes were previously defined as motorized and therefore prohibited from all non-motorized trails and paths.

"E-bikes shall be allowed where other types of bicycles are allowed; and e-bikes shall not be allowed where other types of bicycles are prohibited," States [Secretarial Order 3376](#).

The new policy requires public land managers to develop proposed new rules allowing e-bikes on all trails where bikes are allowed within their jurisdiction within two weeks. Though this rule change was ordered without public input, the order directs lands managers to develop a timeline for seeking public comment about the rule change within the next 30 days.

This new order could result in e-bikes being allowed on Arizona Trail Passages [16](#) and [43](#), and portions of Passages 9 ([Saguaro NP](#)), 15 ([BLM-Tortilla Mtns](#)), 37 ([Grand Canyon South Rim](#)) and 39 ([Grand Canyon North Rim](#)).

Before the Arizona Trail Association drafts a comment letter, **we want to know what you think**. Please read the [Secretarial Order](#) and share your comments on our [Facebook page](#), or email ata@aztrail.org.

"What Do You Think About e-Bikes on the Arizona Trail?"

On August 29, Interior Secretary David Bernhardt ordered the Department of the Interior to allow bicycles powered by electric motors (e-bikes) on all trails and paths within National Parks and Bureau of Land Management (BLM) lands and where bicycles are currently allowed. E-bikes were previously defined as motorized and therefore prohibited from all non-motorized trails and paths.

"E-bikes shall be allowed where other types of bicycles are allowed; and e-bikes shall not be allowed where other types of bicycles are prohibited," States Secretarial Order 3376

[https://www.doi.gov/sites/doi.gov/files/elips/documents/so_3376_-_increasing_recreational_opportunities_through_the_use_of_electric_bikes_-508_0.pdf].

The new policy requires public land managers to develop proposed new rules allowing e-bikes on all trails where bikes are allowed within their jurisdiction within two weeks. Though this rule change was ordered without public input, the order directs lands managers to develop a timeline for seeking public comment about the rule change within the next 30 days.

This new order could result in e-bikes being allowed on Arizona Trail Passages 16 [<https://aztrail.org/explore/passages/passage-16-gila-river-canyons/>] and 43 [<https://aztrail.org/explore/passages/passage-43-buckskin-mountain/>], and portions of Passages 9 (Saguaro NP [<https://aztrail.org/explore/passages/>]), 15 (BLM-Tortilla Mtns [<https://aztrail.org/explore/passages/>]), 37 (Grand Canyon South Rim [<https://aztrail.org/explore/passages/>]) and 39 (Grand Canyon North Rim [<https://aztrail.org/explore/passages/passage-39-grand-canyon-north-rim/>]). Before the Arizona Trail Association drafts a comment letter, **we want to know what you think**. Please read the Secretarial Order [https://www.doi.gov/sites/doi.gov/files/elips/documents/so_3376_-_increasing_recreational_opportunities_through_the_use_of_electric_bikes_-508_0.pdf] and share your comments on our Facebook page [<https://www.facebook.com/Arizona.Trail.Association>], or email ata@aztrail.org.”

FIGURE 5: ATA Facebook Post

Monday, April 13, 2020, 11:54 AM MST (Quantitative)



“The Arizona Trail Association, PeopleForBikes.org [<https://www.facebook.com/PeopleForBikes/>], and the Back Country Horsemen of America [<https://www.facebook.com/bcha.org/>] have teamed up to fund a research study about electric bicycle (e-bike) use on trails. If you are a user of the Arizona Trail, we want to hear from you. Please take 5 minutes to complete this short questionnaire: <https://aztrail.org/e-bike-questionnaire/>.”

FIGURE 6: ATA Email Newsletter Article

Monday, April 13, 2020, at 5:14 PM MST (Quantitative)



Electric Bicycles on Non-Motorized Trails? Take the Online Survey



As land management agencies consider whether to allow electric motorized bicycles (e-bikes) on trails throughout America, the Arizona Trail Association has launched a research project to help inform land managers about perceived e-bike conflicts on the Arizona National Scenic Trail. Since you're a core part of the AZT, we want to hear from you.

Please take 5 minutes to complete this short [questionnaire online](#). The 30-day comment period ends May 10.

The research is funded by [PeopleForBikes](#), the [Back Country Horsemen of America](#) and the [Arizona Trail Association](#).

"Electric Bicycles on Non-Motorized Trails? Take the Online Survey

As land management agencies consider whether to allow electric motorized bicycles (e-bikes) on trails throughout America, the Arizona Trail Association has launched a research project to help inform land managers about perceived e-bike conflicts on the Arizona National Scenic Trail. Since you're a core part of the AZT, we want to hear from you.

Please take 5 minutes to complete this short questionnaire online. The 30-day comment period ends May 10.

The research is funded by PeopleForBikes, the Back Country Horsemen of America and the Arizona Trail Association"

APPENDIX B: Questionnaire

All answers were required, unless otherwise specified. Only one answer was accepted, unless otherwise specified.

1. Have you ever recreated on the Arizona Trail?

- Yes
- No

2. Do you plan to recreate on the Arizona Trail within the next 12 months?

- Yes
- No
- Not Sure

3. Do you own an e-bike?

- Yes
- No

4. Have you ever seen someone ride an e-bike on a trail?

- Yes
- No
- I don't know

5. How many times have you personally ridden an e-bike? (Enter a number between 0 and 100.)

- [Fill in numeric value between 0 and 100]

6. Are you involved in any type of mountain bike advocacy?

- Yes
- No

7. How have you traveled on the Arizona Trail? (Please check all that apply)

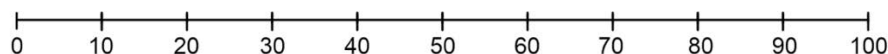
- Hike
- Run
- Bike
- Equine
- Wheelchair (or similar mobility devices)
- E-bike
- Unicycle
- Other
- N/A

8. What has been your most frequent method of travel on the Arizona Trail? (Please check only one)

- Hike
- Run
- Bike
- Equine
- Wheelchair (or similar mobility devices)
- E-bike
- Unicycle
- Other
- N/A

9. Are e-bikes more like mountain bikes (left) or dirt bikes (right)? In your opinion, where do e-bikes fall on the scale below?

[Fill in numeric answer between 0 and 100]



10. How fast do you think e-bikes go on average? (Please enter a number between 1 and 100 mph)
[Fill in numeric answer between 1 and 100]

11. Are you aware that there are different classes of e-bikes?

- Yes
- No

12. In general, how do you feel about policies that support e-bike access to non-motorized trails on a trail by trail basis?

- Extremely unfavorable
- Somewhat unfavorable
- Neither favorable nor unfavorable
- Somewhat favorable
- Extremely favorable

13. How much do you agree with the following statements?

	Disagree	Somewhat Disagree	Neither Agree or Disagree	Somewhat Agree	Agree
E-bike riders go faster than regular mountain bike riders	-2	-1	0	1	2
E-bike users are respectful to other trail users	-2	-1	0	1	2
E-bikes are less safe than regular mountain bikes	-2	-1	0	1	2
E-bike users obey existing rules and regulations	-2	-1	0	1	2
E-bike riders have less respect for the environment than existing trail users	-2	-1	0	1	2
E-bikes help mountain bikers overcome physical challenges associated with aging and compromised abilities	-2	-1	0	1	2
Allowing e-bikes on traditionally non-motorized trails creates a slippery slope for the introduction of other user groups	-2	-1	0	1	2
E-bikes can encourage new people to start mountain biking	-2	-1	0	1	2
E-bikes do more trail damage than regular mountain bikes	-2	-1	0	1	2
E-bikes belong on <u>non-motorized</u> trails	-2	-1	0	1	2
E-bikes cause overcrowding on trails	-2	-1	0	1	2

14. Have you personally witnessed...

...someone injure themselves or someone else while riding an e-bike?	Yes	No
...trail damage caused by e-bike use?	Yes	No
...someone using an e-bike that would have struggled to use a standard bike?	Yes	No
...someone on an e-bike violating a rule or regulation?	Yes	No
...someone on an e-bike riding too fast on a trail?	Yes	No
...someone riding an e-bike being disrespectful?	Yes	No

15. Do you consider the use of e-bikes on trails to be an unfair advantage, or "cheating"?

- Yes
- No
- Not Sure

16. Which of the following outcomes of allowing e-bikes on the AZT would you be most excited about? (Check only one)

- Riding bikes on the AZT with less physical effort
- Improving access for those who are not physically able to ride the AZT without electric assistance
- Getting more people on the trail by introducing a new user group
- Riding further distances on the AZT

- Riding faster on the AZT
- I am not excited about any of these outcomes

16. Which of the following outcomes of allowing e-bikes on the AZT would you be most excited about? (Check only one)

- Riding bikes on the AZT with less physical effort
- Improving access for those who are not physically able to ride the AZT without electric assistance
- Getting more people on the trail by introducing a new user group
- Riding further distances on the AZT
- Riding faster on the AZT
- I am not excited about any of these outcomes

18. Do you think e-bikes should be allowed on the Arizona Trail (mark only one)

- Yes
- No
- Not Sure

19. Would you continue to visit the Arizona Trail if e-bikes were allowed on the trail? (mark only one)

- Yes
- No
- Not Sure

20. If e-bikes were permitted on sections of the Arizona Trail would you be interested in riding one where allowed?

- Yes
- No
- Not Sure

What is your age?

[fill in numeric answer]

What is your gender?

- Female
- Male
- Non-binary
- Other [fill in answer]

Which of these categories best indicates your race/ethnicity? (Check all that apply)

Optional

- *American Indian or Alaska Native*
- *Asian*
- *Black or African American*
- *Hispanic or Latino*
- *Native Hawaiian or other Pacific Islander*
- *White*
- *Other*

What is your zip code? (If participating from outside of the U.S. please write in your country of origin)

Optional

[fill in answer]

APPENDIX C: Department of Interior Order 3376



THE SECRETARY OF THE INTERIOR
WASHINGTON

ORDER NO. 3376

Subject: Increasing Recreational Opportunities through the use of Electric Bikes

Sec. 1 Purpose. This Order is intended to increase recreational opportunities for all Americans, especially those with physical limitations, and to encourage the enjoyment of lands and waters managed by the Department of the Interior (Department). This Order simplifies and unifies regulation of electric bicycles (e-bikes) on Federal lands managed by the Department and also decreases regulatory burden.

Sec. 2 Authorities. This Order is issued under the authority of section 2 of Reorganization Plan No. 3 of 1950 (64 Stat. 1262), as amended, as well as other relevant statutes.

Sec. 3 Background. Bicycling is an excellent way for visitors to Federal lands to experience America's rich natural heritage. Bicycling has been popular in America since the early nineteenth century. Since then, innovation in the design and production of bicycles has dramatically increased mechanical efficiency, opening bicycling to a greater number of people in a larger number of environmental and geographical conditions.

A relatively recent addition to the design of some bicycles is a small electric motor which can provide an electric power assist to the operation of the bicycle. Reducing the physical demand to operate a bicycle has expanded access to recreational opportunities, particularly to those with limitations stemming from age, illness, disability or fitness, especially in more challenging environments, such as high altitudes or hilly terrain.

While e-bikes are operable in the same manner as other types of bicycles and in many cases they appear virtually indistinguishable from other types of bicycles, the addition of a small motor has caused regulatory uncertainty regarding whether e-bikes should be treated in the same manner as other types of bicycles or, alternatively, considered to be motor vehicles. This uncertainty must be clarified. To resolve this uncertainty the Consumer Product Safety Act (Act) provides useful guidance. That Act defines a "low-speed electric bicycle" to include a "two- or three-wheeled vehicle with fully operable pedals and an electric motor of less than 750 watts (1 h.p.), whose maximum speed on a paved level surface, when powered solely by such a motor while ridden by an operator who weighs 170 pounds, is less than 20 mph", subjecting these low-speed e-bikes to the same consumer product regulations as other types of bicycles (15 U.S.C. § 2085). A majority of States have essentially followed this definition in some form.

Uncertainty about the regulatory status of e-bikes has led the Federal land management agencies to impose restrictive access policies treating e-bikes as motor vehicles, often inconsistent with State and local regulations for adjacent areas. The possibility that in some cases e-bikes can be propelled solely through power provided by the electric motor, a function often used in short duration by older

or disabled riders as an assist, has contributed to confusion about e-bike classification. Further, Federal regulation has not been consistent across the Department and has served to decrease access to Federally owned lands by e-bike riders.

Sec. 4 Policy. Consistent with governing laws and regulations:

- a) For the purpose of this Order, “e-bikes” shall mean “low-speed electric bicycle” as defined by 15 U.S.C. § 2085 and falling within one of the following classifications:
 - i) “Class 1 electric bicycle” shall mean an electric bicycle equipped with a motor that provides assistance only when the rider is pedaling, and that ceases to provide assistance when the bicycle reaches the speed of 20 miles per hour;
 - ii) “Class 2 electric bicycle” shall mean an electric bicycle equipped with a motor that may be used exclusively to propel the bicycle, and that is not capable of providing assistance when the bicycle reaches the speed of 20 miles per hour; and
 - iii) “Class 3 electric bicycle” shall mean an electric bicycle equipped with a motor that provides assistance only when the rider is pedaling, and that ceases to provide assistance when the bicycle reaches the speed of 28 miles per hour.
- b) E-bikes shall be allowed where other types of bicycles are allowed; and
- c) E-bikes shall not be allowed where other types of bicycles are prohibited.

Sec. 5 Implementation. I direct the Assistant Secretaries for Fish and Wildlife and Parks, Land and Minerals Management, and Water and Science, as appropriate, to do the following:

- a) Within 14 days of the date of this Order, unless otherwise prohibited by law or regulation:
 - i) To the extent existing regulations allow, adopt a Bureau/Service-wide policy that conforms to the policy set forth in Sec. 4 of this Order;
 - ii) Amend or rescind any prior written policies as appropriate;
 - iii) Instruct the Director, Fish and Wildlife Service (FWS) to develop a proposed rule to revise 50 CFR § 25.12 and any associated regulations to be consistent with this Order, add a definition for e-bikes consistent with 15 U.S.C. § 2085, and expressly exempt all e-bikes as defined in Sec. 4a from falling under the definition of off-road vehicle;
 - iv) Instruct the Director, National Park Service (NPS) to develop a proposed rule to revise 36 CFR § 1.4 and any associated regulations to be consistent with this Order, add a definition for e-bikes consistent with 15 U.S.C. § 2085, and expressly exempt all e-bikes as defined in Sec. 4a from the definition of motor vehicles;

v) Instruct the Director, Bureau of Land Management (BLM) to develop a proposed rule to revise 43 CFR § 8340.0-5 and any associated regulations to be consistent with this Order, add a definition for e-bikes consistent with 15 U.S.C. § 2085, and expressly exempt all e-bikes as defined in Sec. 4a from the definition of off-road vehicles or motorized vehicles; and

vi) Instruct the Commissioner, Bureau of Reclamation (BOR) to develop a proposed rule to revise 43 CFR § 420.5 and any associated regulations to be consistent with this Order, add a definition for e-bikes consistent with 15 U.S.C. § 2085, and expressly exempt all e-bikes as defined in Sec. 4a from the definition of off-road vehicles.

b) Within 30 days of the date of this Order, submit a report to the Secretary including:

i) A summary of the policy changes enacted in response to this Order;

ii) A summary of any laws or regulations that prohibit the full adoption of the policy described by this Order; and

iii) A timeline to seek public comment on changing any regulation described above.

c) Within 30 days of the date of this Order, provide appropriate public guidance regarding the use of e-bikes on public lands within units of the National Park System, National Wildlife Refuge System, lands managed by BLM, and lands managed by BOR.

Sec. 6 Effect of the Order. This Order is intended to improve the internal management of the Department. This Order and any resulting reports or recommendations are not intended to, and do not create any right or benefit, substantive or procedural, enforceable at law or equity by a party against the United States, its departments, agencies, instrumentalities or entities, its officers or employees, or any other person. To the extent there is any inconsistency between the provisions of this Order and any Federal laws or regulations, the laws or regulations will control.

Sec. 7 Expiration Date. This Order is effective immediately. It will remain in effect until its provisions are implemented and completed, or until it is amended, superseded, or revoked.



Secretary of the Interior

Date: AUG 29 2019

APPENDIX D: U.S. Forest Service Request for Comments



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option to password protect their accounts.

USDA Non-Discrimination Statement

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Send your completed complaint form or letter to USDA by mail, fax, or email:
Mail: U.S. Department of Agriculture, Director, Office of Adjudication, 1400 Independence Avenue SW, Washington, DC 20250-9410.

Fax: (202) 690-7442.

Email: program.intake@usda.gov.

Persons with disabilities who require alternative means for communication (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD).

Done at Washington, DC.

Paul Kiecker,
Administrator.

[FR Doc. 2020-21061 Filed 9-23-20; 8:45 am]

BILLING CODE 3410-DM-P

DEPARTMENT OF AGRICULTURE

Forest Service

Forest Service Manual 7700 Travel Management; Chapter 7700, Zero Code; Chapter 7710 Travel Planning

AGENCY: Forest Service, Agriculture (USDA).

ACTION: Notice of availability for public comment.

SUMMARY: The United States Department of Agriculture (USDA), Forest Service, is proposing to revise its directives to update and clarify guidance on management of electric bicycle (e-bike) use on National Forest System (NFS) lands. E-bikes have become increasingly popular nationwide among outdoor recreationists on NFS and other federal

lands. E-bikes expand recreational opportunities for many people, particularly the elderly and disabled, enabling them to enjoy the outdoors and associated health benefits. Currently e-bike use is not allowed on NFS roads, on NFS trails, and in areas on NFS lands that are not designated for motor vehicle use. To promote designation of NFS roads, NFS trails, and areas on NFS lands for e-bike use, the proposed revisions include new definitions for an e-bike and a Class 1, Class 2, and Class 3 e-bike, as well as guidance and criteria for designating e-bike use on NFS roads, on NFS trails, and in areas on NFS lands.

DATES: Comments must be received in writing by October 26, 2020.

ADDRESSES: Comments may be submitted electronically to <https://cara.ecosystem-management.org/Public/ReadingRoom?project=ORMS-2619>. Written comments may be mailed to Director, Recreation Staff, 1400 Independence Avenue SW, Washington, DC 20250-1124. All timely received comments, including names and addresses, will be placed in the record and will be available for public inspection and copying. The public may inspect comments received at <https://cara.ecosystem-management.org/Public/CommentInput?project=ORMS-2619>.

FOR FURTHER INFORMATION CONTACT: Penny Wu, Recreation Staff, penny.wu@usda.gov, (303) 275-5168. Individuals who use telecommunication devices for the deaf may call the Federal Relay Service at (800) 877-8339 between 8:00 a.m. and 8:00 p.m., Eastern Standard Time, Monday through Friday.

SUPPLEMENTARY INFORMATION: Over 27 States have adopted a standard definition for an e-bike and a three-tiered classification system for e-bikes. Additionally, the United States Department of the Interior (DOI) recently issued proposed e-bike rules for the Bureau of Land Management, U.S. Fish and Wildlife Service, Bureau of Reclamation, and the National Park Service pursuant to a Secretarial Order that promotes e-bike use on DOI-managed federal lands.

The Forest Service's proposed directive revisions align with the 27 States and DOI's proposed e-bike rules in adopting a standard definition for an e-bike and a three-tiered classification for e-bikes and align with DOI's proposed e-bike rules in requiring site-specific decision-making and environmental analysis at the local level to allow e-bike use. In particular, the proposed revisions would add a paragraph to Forest Service Manual (FSM) 7702 to establish promotion of e-

bike use on NFS lands as an objective; would add a cross-reference in FSM 7703.13 and 7703.14 to specific guidance on designating NFS trails and areas on NFS lands for motor vehicle use; would add definitions in FSM 7705 for "bicycle" and "e-bike," including "Class 1," "Class 2," and "Class 3 e-bike"; would revise FSM 7711.3, paragraph 6, to add a category for designating e-bike use on NFS trails; would add a paragraph to FSM 7715.03 to establish promotion of e-bike use on NFS lands as a policy; would revise FSM 7715.5 to add a criterion to consider trail management objectives in designating trails for motor vehicle use generally and to add criteria and guidance for designating e-bike use on NFS trails; and to add a paragraph in FSM 7715.72 to enhance coordination with appropriate Federal, State, and local governmental entities and Tribal governments on travel management decisions and operational practices on routes crossing multiple jurisdictions to provide continuity of recreation experiences.

After the public comment period closes, the Forest Service will consider timely comments that are within the scope of the proposed revisions to the directives in the development of the final revisions. A notice of the final revisions, including a response to timely comments, will be posted on the Forest Service's web page at <https://www.fs.fed.us/about-agency/regulations-policies>.

Tina Johna Terrell,
Associate Deputy Chief, National Forest System.

[FR Doc. 2020-21128 Filed 9-23-20; 8:45 am]

BILLING CODE 3411-15-P

COMMISSION ON CIVIL RIGHTS

Notice of Public Meeting of the Hawai'i Advisory Committee; Correction

AGENCY: Commission on Civil Rights.

ACTION: Notice; correction.

SUMMARY: The Commission on Civil Rights published a notice in the *Federal Register* on Friday, September 18, 2020, concerning a meeting of the Hawai'i Advisory Committee. The document contained an incorrect day of the week, which now has changed to Monday the correct day of the week.

FOR FURTHER INFORMATION CONTACT: Angelica Trevino, (202) 695-8935, atrevino@usccr.gov.

SUPPLEMENTARY INFORMATION: