Results from the 2023 Legacy Trail User Survey

4/18/23

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The primary objective of this survey was to determine the average distances traveled on The Legacy Trail for four categories of trail usage: “Bike”[1], “Walk”, “Run”, and “Other”. Good estimates of these average values are required for accurately calculating trail usage, as documented in References [1] and [2].

The first survey of this type was performed in the summer of 2016 and was supplemented by a limited online survey in 2018. The results of these surveys are documented in References [3] and [4]. Trail usage calculations from 2016 until present have relied upon values obtained from these surveys.

In the five years since the last survey, the northern extension has been added to the trail, the number of trail users has increased, and there has been a significant increase in the number of electric bikes. Because these can potentially affect the average distances traveled, and hence the accuracy of the calculated trail usage, it was decided that a new survey was needed to update the estimates of these parameters.

Acknowledgments

I would like to gratefully acknowledge the work of Friends of The Legacy Trail volunteers who contributed to the success of this project. These include our survey team of Sarah Calabrese, Ivan Kazen, Charlotte Kimmerling, Barbara Miller, Julie Selberg, Pat Schindeler, and Eugene Somogyi. Also, many thanks to FLT board members: Roger Normand for helping with initial questionnaire testing, Rita Miotti for coordinating our volunteers, Carla Martin for helping with data processing, and finally, the Friends of The Legacy Trail Board of Directors for supporting this project.

The Survey Results

Table 1 gives a summary of the results of the data analysis. The primary objective of the survey was to determine the four average distances shown in the table.

The survey included both on-trail interviews conducted by Friends of The Legacy Trail (FLT) volunteers, and an online version of the survey on the FLT website. A total of 600 valid survey responses were obtained, with 221 of these coming from the online survey, and 379 from on-trail interviews.

Both The Legacy Trail and the Venetian Waterway Park were included in the survey. However, there were insufficient data from the island-side Venetian Waterway Park for a meaningful statistical analysis of distance traveled on that part of the trail.

[1] In this report, the term “bike” includes bicycles and tricycles.

Table 1 – Summary of Results				
	Number of People Responding	**Average Distance per Trip (miles)**	**Standard Deviation**	**95% Confidence Interval**
Bike	495	16.26	0.44	[15.45, 17.06]
Walk	77	2.83	0.19	[2.47, 3.20]
Run	18	4.39	0.59	[3.24, 5.55]
Other	10	8.34	2.4	[3.65, 13.04]

In Table 1, trail users have been divided into four groups: “Bike”, “Walk”, “Run”, and “Other”. These are the four groups currently used in the algorithm to calculate trail usage. The “Other” category includes skaters, skateboards, scooters, and anything else that can be counted as a trail user. Note that it is the average distance per trip that is reported here, not the average distance per person interviewed. The average per trip is calculated by weighting the distance reported on each questionnaire by the reported number of trips per year.

Figures 1 through 4 show histogram plots of the number of people vs. distance reported for the four usage categories.

Figure 1

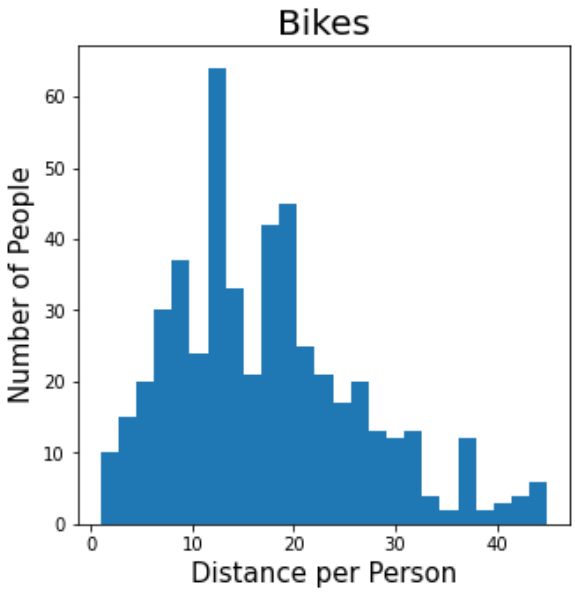


Figure 2

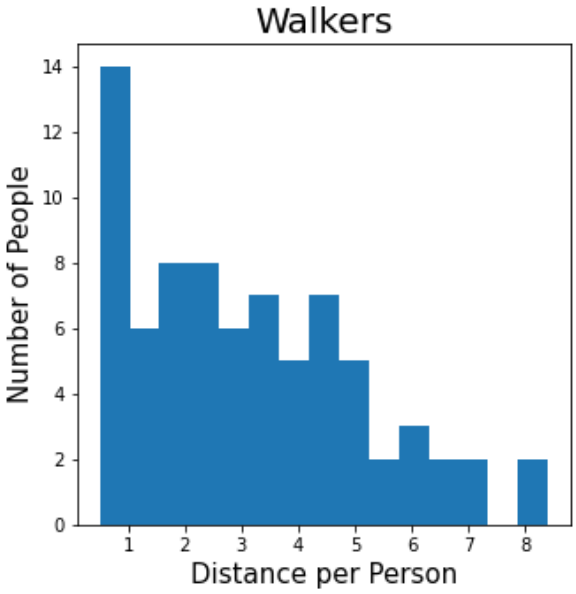


Figure 3

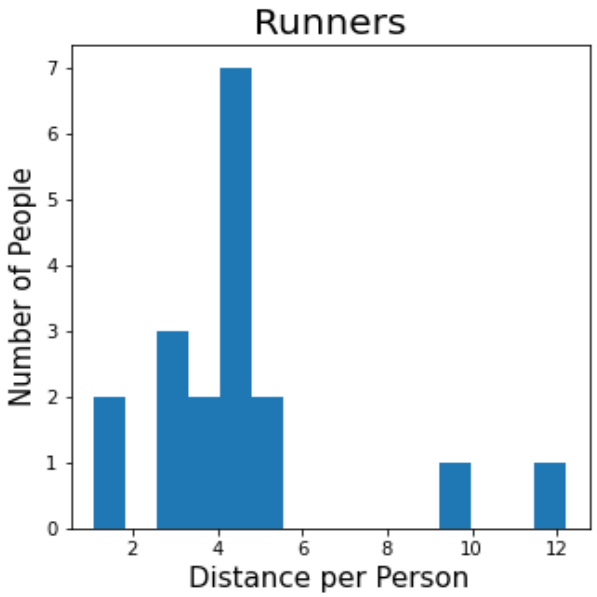
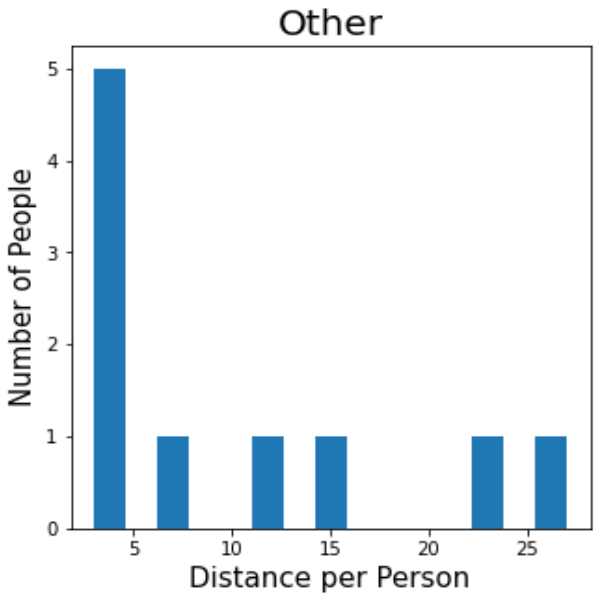


Figure 4



Comparison with Previous Survey Results and the Effect on Trail Usage

Table 2 shows the changes from the 2016/2018 survey for the four categories of trail users. The overall effect of the changes will be an increase in the calculated trail usage of approximately 10% from the usage that would have been calculated using the 2016/2018 numbers.

Table 2 – Comparison of 2023 Results with 2016/2018 Results

	2023 Survey Average Distance (Miles)	2016/2018 Survey Average Distance (Miles)	Percent Change from 2016/2018 Survey
Bike	16.26	16.10	+1.0%
Walk	2.83	3.62	-21.8%
Run	4.39	6.72	-34.7%
Other	8.34	7.83	+6.5%

Note that the algorithm for calculating trail usage is such that there is an inverse relationship between distance traveled and calculated trail usage. An increase in

distance results in a decrease in calculated usage, and vice versa. The primary reason for the increase in overall usage is the 21% decrease in the “Walk” distance. The change in the “Bike” category distance is negligible and, while the changes in the “Run” and “Other” distances are significant, the number of users of these types is small and changes have little effect on the overall total.

Table 3 shows the approximate change in the percentage of trail usage for the four categories.

Table 3 – Percent of Total Trail Usage		
	2023 Survey	**2016/2018 Survey**
Bike	55.2%	62.8%
Walk	35.7%	31.0%
Run	7.7%	5.6%
Other	1.4%	1.6%

Standard Bikes vs. Electric Bikes

Table 4 shows a comparison of the data for these two types of bikes. Surprisingly, the electric bikes did not travel as far as the standard bikes.

Table 4 – Standard vs. Electric Bike/Trike Distances				
	Number of People Responding	**Average Distance (miles)**	**Standard Deviation**	**95% Confidence Interval**
Standard	425	16.70	0.44	[15.83, 17.57]
Electric	70	13.95	1.06	[11.87, 16.03]

The are several possible explanations of this result:

- Many cyclists on standard bikes are very exercise and fitness oriented and going long distances is a part of their training program.
- Electric bikes are used for more utilitarian purposes, such as errands or commuting to work, which involve shorter trips.
- Electric bikes may be more likely to use the trail for only a portion of their trip because they are commuting to, or shopping at, off-trail locations.

Figures 5 and 6 show histogram plots for standard and electric bikes. Because the total number of standard bikes in the survey differed from the number of electric bikes, the histograms plot the fraction of bike trips, rather than the absolute number of trips. This permits a valid visual comparison of the two charts.

One can see a slight trend in these plots showing that standard cyclists take a higher fraction of long-distance trips than their electric counterparts.

Figure 5

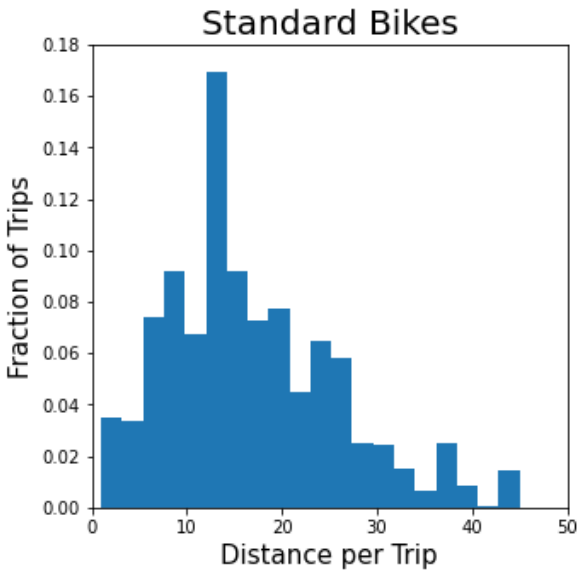
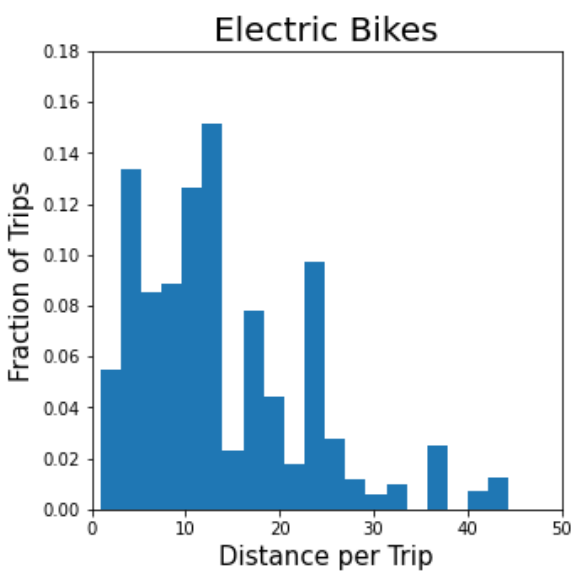


Figure 6



Online Responses vs. On-Trail Interviews

Table 5 shows a comparison of the results from these two types of surveys. For the “Bike” category, there is a statistically significant difference between the two survey methods. One possible reason for the difference is that the respondents to the online survey were aware of the survey via the FLT newsletter, website, or social media. These people might tend to be more active cyclists than randomly chosen users on the trail.

For the “Walk” category, the table shows that the average travel distance for the online and on-trail surveys is almost identical, indicating that there was little bias between the two surveys.

The large average distance for the online “Other” category is due to two of the three respondents being skaters who went 23 and 27 miles per trip. It is difficult to get sufficient statistical data for the “Run” and “Other” categories because the number of users of this type is relatively small, and because these users are more reluctant to stop and take surveys.

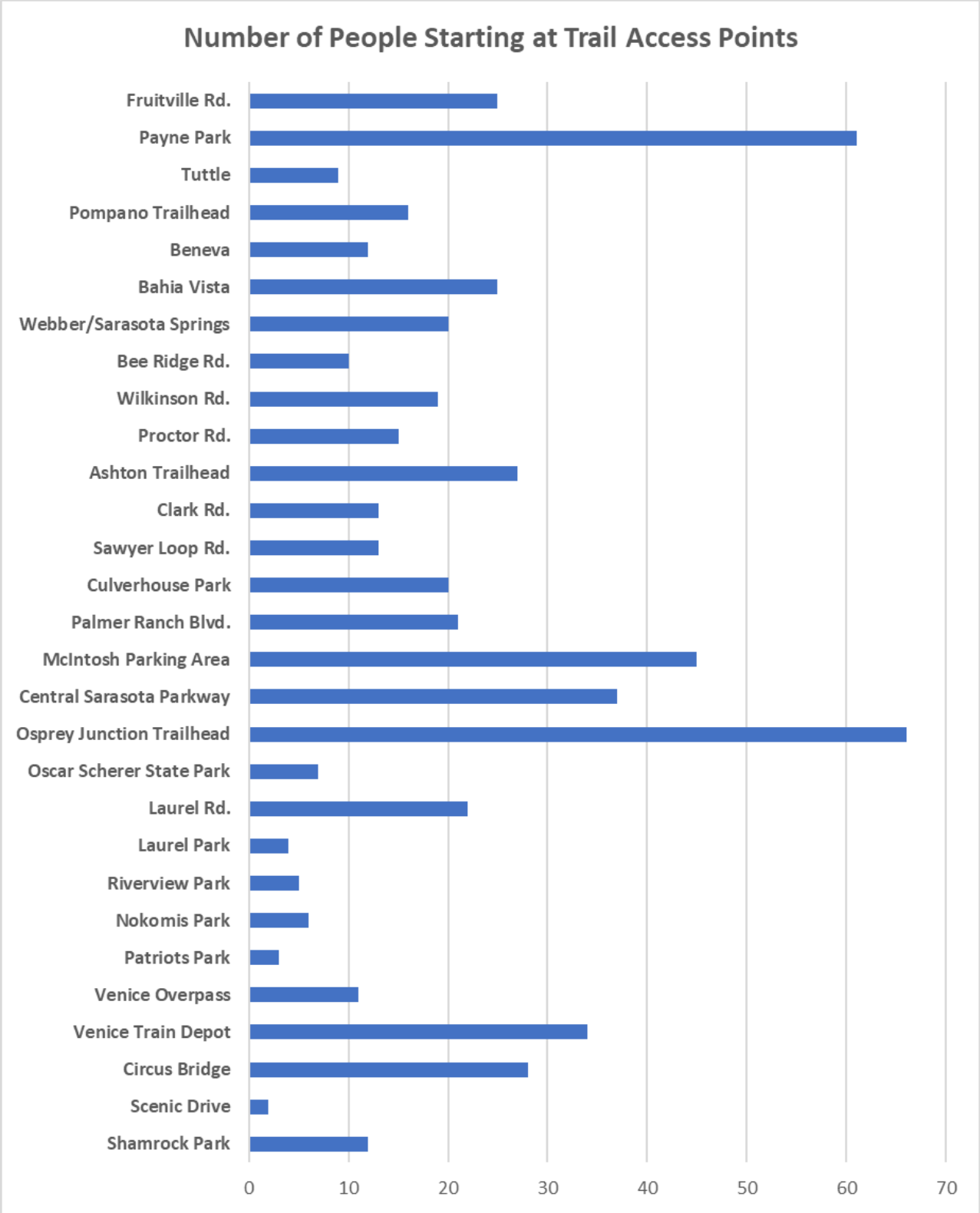
Table 5 – Online vs. On-Trail Results

		Number of People Responding	Average Distance (miles)	Standard Deviation	95% Confidence Interval
Bike	**Online**	191	17.7	0.71	[16.32, 19.09]
	On-Trail	304	15.27	0.49	[14.31, 16.24]
Walk	**Online**	18	2.83	0.37	[2.11, 3.55]
	On-Trail	59	2.83	0.22	[2.41, 3.26]
Run	**Online**	9	4.67	0.80	[3.10, 6.24]
	On-Trail	9	4.06	0.91	[2.28, 5.84]
Other	**Online**	3	22.49	4.28	[14.10, 30.89]
	On-Trail	7	5.93	1.54	[2.91, 8.96]

Starting Location

To obtain a more accurate estimate of their travel distance on the trail, people were asked to indicate or draw their current or most recent route on a map on the survey form. Approximately 94% of the respondents indicated that they started and ended their trip at the same access point, i.e., did a round trip. Figure 7 shows a compilation of the number of people starting at each access point shown on the questionnaire. As shown, Payne Park and Osprey Junction Trailhead have the highest popularity.

Figure 7


Number of People Starting at Trail Access Points
Fruitville Rd.
Payne Park
Tuttle
Pompano Trailhead
Beneva
Bahia Vista
Webber/Sarasota Springs
Bee Ridge Rd.
Wilkinson Rd.
Proctor Rd.
Ashton Trailhead
Clark Rd.
Sawyer Loop Rd.
Culverhouse Park
Palmer Ranch Blvd.
McIntosh Parking Area
Central Sarasota Parkway
Osprey Junction Trailhead
Oscar Scherer State Park
Laurel Rd.
Laurel Park
Riverview Park
Nokomis Park
Patriots Park
Venice Overpass
Venice Train Depot
Circus Bridge
Scenic Drive
Shamrock Park
0
10
20
30
40
50
60
70

References

All of the following references are available on the Trail Usage Documents page of the Friends of The Legacy Trail website.

[1] Martin, Stephen, *Calculating Trail Usage from Counter Data*, 3/18/2019.

[2] Martin, Stephen, *2020 Status Report: The Calculation of Trail Usage on The Legacy Trail and Venetian Waterway Park Trail,* 6/4/2020.

[3] Martin, Stephen, Megan Donoghue, Jerry Droll, Darryl Lang, Carla Martin, Caroline Nondin, Roger Normand, and Andrea Seager, *Results and Analysis of a Survey of Users of The Legacy Trail and Venetian Waterway Park Performed During June and July of 2016*, 1/17/2017.

[4] Martin, Stephen, *2018 Online Trail Usage Survey*, 4/24/18.