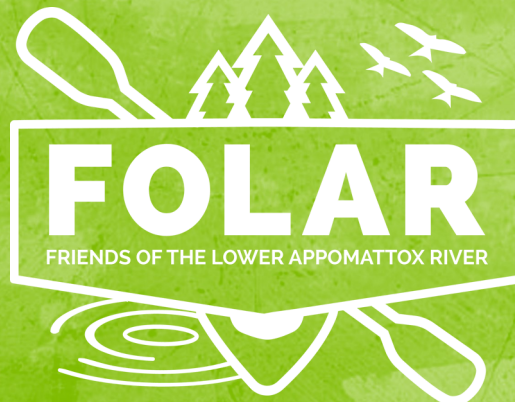




# TRAIL COUNT REPORT 2020







# 2020 TRAIL COUNT REPORT HIGHLIGHTS

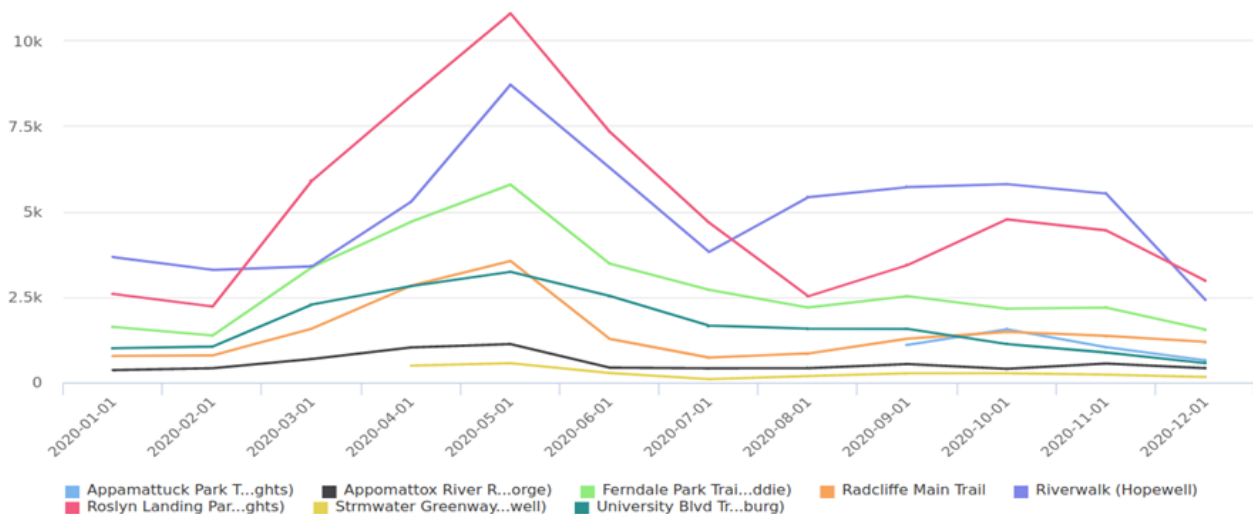
Friends of the Lower Appomattox River (FOLAR) is excited to share our first, annual trail count report from trails in all 6 jurisdictions along the lower Appomattox River. FOLAR's automated trail counters tallied over **210,000 trail counts on the Appomattox River Trail in 2020 - an average of 4,200 per week - peaking at over 9,600 during one week.** The most active trails tend to have ample parking, proximity to population centers, and scenic river views. As trail segments are improved and become more connected, the lesser used trails will likely see more activity.

## MOST ACTIVE TRAILS

1. **Hopewell Riverwalk** pg. 15
2. **Roslyn Landing Park** pg. 16
3. **Ferndale Park** pg. 12

Trail activity increases on the weekend, indicating primarily recreational users. Throughout the week, peaks tend to occur in the late afternoon. Our data also found that weather plays a significant role in usage. Because we do not have comparable data from previous years, the effects of the COVID-19 pandemic and various public health mandates on trail counts are not certain.

## TRAIL COUNTS FOR ALL 8 LOCATIONS JANUARY–DECEMBER 2020



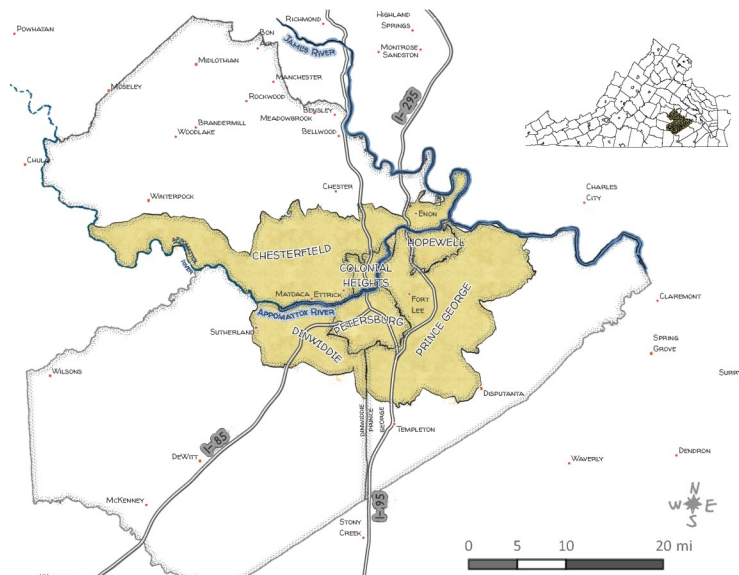
Get involved! Learn more at [www.FOLAR-VA.org/membership](http://www.FOLAR-VA.org/membership)

# APPOMATTOX RIVER TRAIL | 2020 TRAIL TRAFFIC REPORT

## FOLAR AND THE APPOMATTOX RIVER TRAIL

### [The Friends of the Lower Appomattox River](#)

[\(FOLAR\)](#) is the only regional organization working collaboratively with six jurisdictions and the community to develop, maintain and protect a 20+ mile regional blueway-greenway corridor along the lower Appomattox River. As part of their work, FOLAR is leading the development of the 25-mile long bicycle-pedestrian Appomattox River Trail. FOLAR also devotes resources to protecting water quality and land conservation, as well as promoting economic strengthen and healthy lifestyles.



The Lower Appomattox River corridor is located in Central Virginia in a region known as the Tri-Cities area. The river is a state-designated Scenic River that flows through the Cities of Colonial Heights, Hopewell and Petersburg and the Counties of Chesterfield, Dinwiddie and Prince George. **The population for the trail service area is approximately 210,000** (does not count the northern portion of Chesterfield) and the median income for the region ranges from \$38,293 to \$81,641. The region is racially and ethnically diverse. Many areas are considered socially vulnerable with higher rates of poverty, single income households, and high rates of obesity and other preventable diseases.

**The completed Appomattox River Trail will serve to reduce these vulnerabilities by increasing access for recreation and daily exercise as well as provide a safe and alternative form of transportation for the region.** The completed bicycle-pedestrian trail will transform the quality of life for the region by attracting new jobs and employees, generating more sales for local businesses and increasing home values. And, this investment will increase civic engagement, encourage neighbors to meet, and improve public health, environmental protection and conservation.

Protection and conservation of the Appomattox River corridor is critical for protecting the water quality of the river, a key source of drinking water for the region. The river appears on the 303D Impaired Waters list, and the entire corridor is a priority in the Governor's Conserve VA initiative.

As envisioned, the Appomattox River Trail will extend from Lake Chesdin to the confluence with the James River at City Point, in Hopewell Virginia. The trail development is being guided by the regional [Appomattox River Trail Master Plan and Signage Plan](#) completed in 2017, funded by The Cameron Foundation. Approximately 10 miles of this trail are on the ground today.

## **ABOUT TRAIL COUNTS**

This report presents trail use information and analysis from data collected from the automated TRAFx counter system which has been installed at eight Appomattox River Trail segments. The data is gathered and analyzed by FOLAR volunteers and program partners.

FOLAR collects trail data for several important reasons. First, this data provides accurate metrics on how much trail use, or trail traffic, each trail section is receiving. This information is useful for Parks & Recreation Departments to understand use trends for maintenance purposes and understand the demand for trails for planning purposes. We can get a better understanding of what types of trails are most popular based on their use and what type of volume to expect in other areas.

For public health determinations, this data is helpful to understand how and where the community is physically active and if that trend increases or decreases based on other efforts. This data can help communicate the positive impacts trails have on the general health of a community. As FOLAR continues to collect yearly data, we can better understand trends about trail use including the most active time of day, season, or other events that might impact trail use.

**The data presented in this report provides information about the overall traffic on the Appomattox River Trail. It does not report on specific numbers of trail users or visitors,** which are variables that are difficult to isolate using automated counters. For example, in most cases, people will pass by a trail counter at least twice when visiting a trail but could pass a counter multiple times. It is also possible a person may enter a trail segment at one point and exit at another point, thereby only passing the counter once.

**The TRAFx counter system was donated to FOLAR by the Crater Health District.** The Crater Health District works with partners to foster healthy communities through disease prevention & control, health promotion, environmental protection and emergency preparedness & response. Improving and promoting physical activity through biking and walking is one of the local health district's priorities.

Through grant funding, the Crater Health District partnered with FOLAR to provide Appomattox River Trail signage throughout the community and purchased 12 TRAFx trail counters. FOLAR installed the counters in the fall of 2019 to collect trail use data along the Appomattox River Trail and will continue to install additional counters as the trail expands. The Crater Health District and FOLAR purchased the same brand of counters that are used throughout the trail network in Chesterfield County, including counters installed along portions of trail along the Appomattox River. Data from Chesterfield County's counters is included in this report. **[FOLAR partners](https://www.folar-va.org) with many organizations and stakeholders to accomplish the vision of the Appomattox River Trail, and we are so grateful for their ongoing support.**



## ABOUT TRAFx INFRARED TRAIL COUNTERS

FOLAR has installed seven [TRAFx infrared trail counters](#) at trailheads along the Appomattox River Trail. Chesterfield County maintains a network of TRAFx counters throughout the county and data from the John J. Radcliffe Conservation Area is included in this report.

TRAFx trail counters are the size of a deck of cards, with an attached infrared sensor at the end of a short cable. The assembly is mounted in a small electrical circuit breaker box, providing some environmental and tamper protection. The boxes are mounted on posts adjacent to trails, at a distance of approximately ten feet from the trail. Trail counters are installed at slightly above waist height. The sensor works by detecting the infrared wavelength that humans emit. **It collects no personally identifiable information.**

TRAFx trail counters have a tendency to undercount people walking past, both because the counters have a 30 second delay between triggering (counting) events and because they recognize one person walking by and multiple people walking abreast as a single count. **In order to gather more specific data, and to provide a measure for calibrating the data logged by the TRAFx counters, FOLAR organizes volunteer trail counts twice each year.** The data collected from volunteer trail counts will be used in the 2021 report. TRAFx counter data is collected once each month by volunteers. This monthly collection helps ensure that any counter malfunction issue can be addressed quickly.

**The eight trail counters included in this report, identified east to west, are located at:**



FOLAR volunteers installing a TRAFx counter, from left to right, Craig Reynolds and Mike Golden

1. Hopewell Riverwalk
2. Stormwater Greenway (Hopewell)
3. Appomattox River Regional Park (Prince George County)
4. Roslyn Landing Park Trailhead (Colonial Heights)
5. Appamatuck Park Trailhead (Colonial Heights)
6. University Boulevard Trailhead (Petersburg)
7. Ferndale Park Trailhead (Dinwiddie County)
8. John J. Radcliffe Conservation Area (Chesterfield County)

Note: Detailed analyses of trail activity observed at each of these locations appear later in this report by alphabetical order on pages 11-18.

## FOLAR VOLUNTEER TRAIL COUNT PROGRAM

FOLAR organizes a volunteer trail count program which supplements the data from the TRAFx system. The volunteer count program is modeled on the National Bicycle and Pedestrian Documentation Project. Trail count events occur in May and September each year. Each event includes counting on a Thursday and a Saturday, both in the morning and afternoon. FOLAR asks volunteers to sit alongside the trail at specific location and count everyone who passes by in a 2-hour window on a standard form.

This volunteer trail count allows collection of more detailed information that the TRAFx counters do not collect such as the type of trail user (walker or bicyclist) and gender. FOLAR is also able to observe other details about trail users that help understand use trends. Volunteer count data provides details such as, whether the trail is visited by families or individuals; it is used by people pushing strollers or using a wheelchair; or if the trail is being used to access a location for another activity like fishing. These observations and stories that we gather from volunteers help us better understand who is using the trail and why they use the trail. The data is not robust enough to include in this report at this time, but we plan to include the data from that program in the future.



FOLAR relies on volunteers (pictured here) to verify the automated TRAFx infrared counters twice a year.

*Are you interested in volunteering with FOLAR?*

[Sign up for our newsletter!](#)



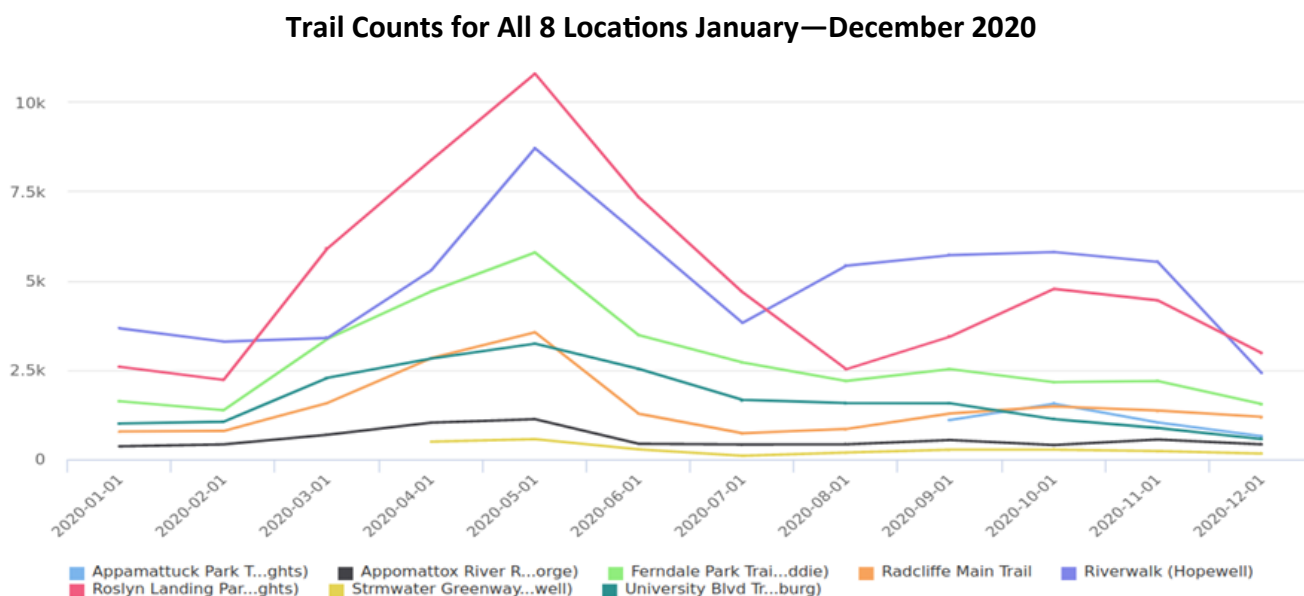


## KEY FINDINGS

This section provides key findings for the overall trail counter network and is followed by detailed reports for each trail count location. All trails allow bicycle traffic except the Hopewell Riverwalk. There is not enough data from volunteer counts at this time to provide statistics that separate walkers from bicyclists.

**Trail use varies by type** – Differences in use patterns among trails are likely due to the presence of a variety of amenities and conveniences including availability of ample parking, proximity to population centers, views of and access to the river, and the accessibility of the trail itself, for example paved versus rustic. The two most frequently used trails, the Hopewell Riverwalk and the trail at Roslyn Landing, have hard surfaces. However, “rustic” cannot explain all differences in trail use. The popular Ferndale trail (heavier use) and the ARRP trail (lighter use) are both rustic. More analysis is needed here.

**Trails were most popular in the spring** - Monthly patterns of activity, shown below, demonstrate that trail use increased substantially in April and May of 2020 and remained high through November 2020. The increase in trail use in the spring may correspond to citizen escape from Covid-19 stay-at-home restrictions. However, April is also when the weather becomes warmer, which likely attracted more walkers. No data was collected to try to discern which of these two likely causes had a greater influence. In the future we expect year-over year data to provide more insight.



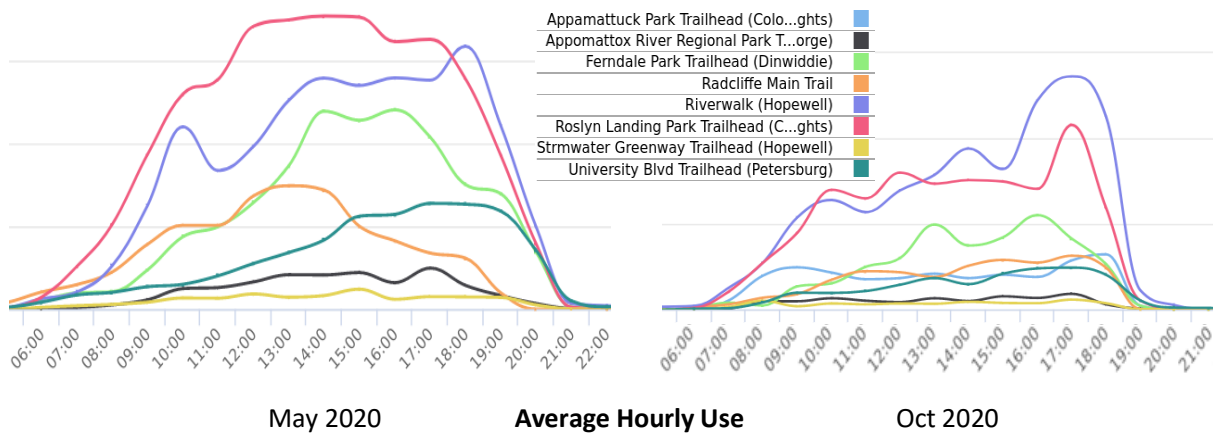
**Peak daily use reached a count of 1950** - Peak daily trail use occurred on May 10<sup>th</sup>, when the total traffic count on the seven trails being measured (Appamattuck was not yet active) was 1,950.

On the same seven trails total daily use exceeded 1,500 on eight different occasions in May.

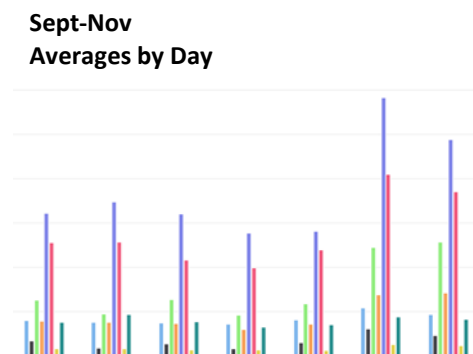
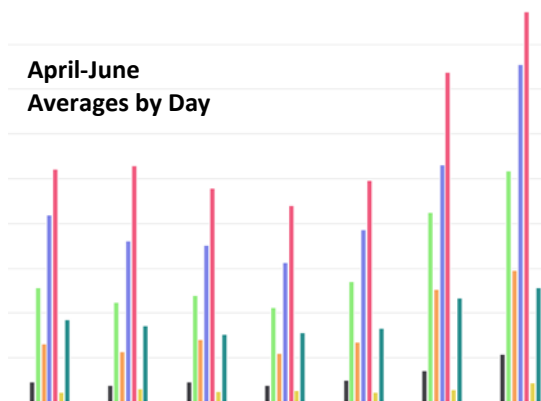
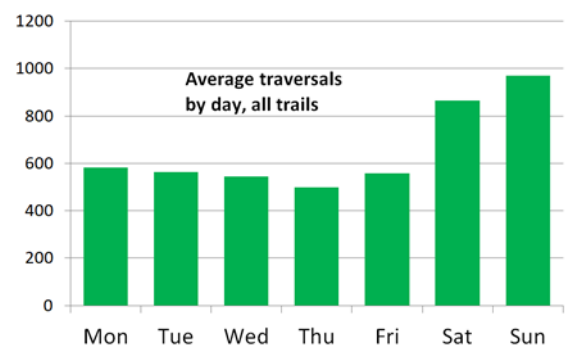
**Average daily traffic (ADT)** use on all eight trails ran highest in the spring months. Data for Appamattuck has been approximated from data collected later in the year.

## KEY FINDINGS CONTINUED

**Afternoons are popular** – Hourly use statistics on all trails clearly show active afternoon use. The charts below show average hourly statistics for May 2020 and October 2020. (Appamattuck not shown for May.) The increasing preference towards late afternoon use in October, versus May, is likely explained by later sunrises and cooler morning temperatures.



**Weekends are popular** – Daily use statistics on the eight trails clearly show a preference towards weekend use, as can be seen in the chart to the right. Averages in this chart represent use between April and December of 2020. In this period, on average, nearly twice as many people are on the trails on a Sunday as on a Thursday. Analyzed by season, Spring and Fall, the same trends hold except that Saturday replaces Sunday as the most active day during the Fall, as can be seen below.



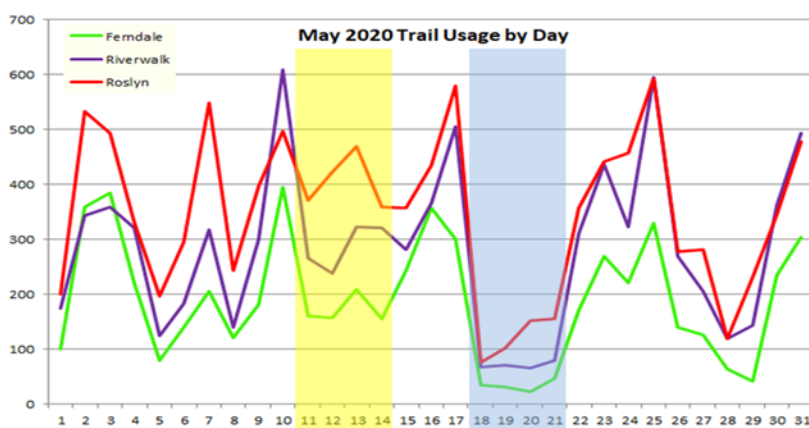
**Weather has a substantial impact** – It's no surprise, as reported above, that April and May are popular months: as a rule, temperatures are comfortable and many days are without precipitation.



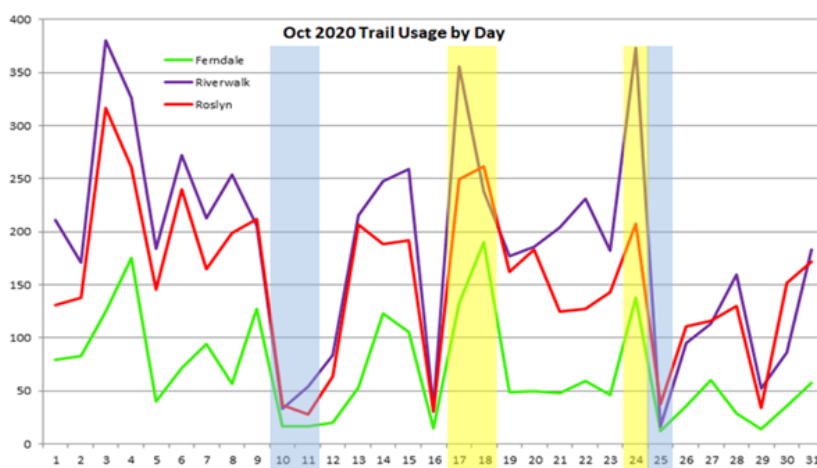
## KEY FINDINGS CONTINUED

However, analysis of groups of similar days of the week *even within the same month*, where days are classified as either warm/sunny or cool/rainy, can show *very significant* differences in trail use.

Consider May 2020 data for the three most popular trails in the region, as shown in the graph to the right. For the four-day period Monday—Thursday, May 11-14, there was no recorded precipitation in the region and the average daytime temperature was 66. For the same four-day period a week later, Monday through Thursday, May 18-21, there was precipitation every day and the average daytime temperature was 62, an average of four degrees cooler. The average daily traffic (ADT) during sunny May 11-15 on the three trails was **287**, while during rainy May 18-21 it was **75**. In other words, from this sample, **trail use is nearly 4-1 when the weather is fair**, over when it is slightly cooler and wet. There are no known other factors (e.g. holidays, Covid-19 restrictions) influencing this outcome.



Similarly, as shown in the graph to the right, Saturday and Sunday October 10-11 had an average temperature of 65, rain both days, and were the first two days of a three-day (Columbus Day) holiday weekend, a time other holiday weekend statistics would suggest high use. A week later Saturday and Sunday October 17-18 had a slightly *lower* average temperature of 62, no precipitation, and were not a holiday weekend.



Average daily traffic on the holiday weekend was **31**. The weekend of the 17<sup>th</sup>/18<sup>th</sup> it was **238**, a **factor of nearly 8-1**, for sunny/dry over cloudy/wet. Later in the month, Saturday the 24<sup>th</sup> was 79 degrees and sunny while Sunday the 25<sup>th</sup> was 54 and rainy. Saturday/Sunday ADTs were 240 and 22, **more than a factor of 10-1** at a time Saturday over Sunday ADT's averaged about 1.2 -1. **All indicators are that bad weather has a significant negative impact on trail use.**

## **FUTURE TRAIL COUNT REPORTS & TRAIL EXPANSION EFFORTS**

This report will be produced by FOLAR annually to track trail use and analyze trends. New counters will be installed as new trails sections open or conditions are improved. Information collected through the volunteer trail count program will be incorporated into this report.

In 2021, several trail and bicycle infrastructure improvement projects are planned. FOLAR and local partners will evaluate which projects should have new TRAFx counters installed or where new volunteer trail counts should occur. Projects include the extension of the Hopewell Riverwalk another 1/3 mile to connect to the Hopewell City Marina. In addition, a network of bike lanes will be installed throughout Hopewell, some of which are along the route of the Appomattox River Trail. In Petersburg, the University Boulevard Trailhead will be improved with a new riverfront overlook and 1/3 mile of trail will be paved to the west (completed August 10, 2021). In Colonial Heights, the trail at Roslyn Landing Park will extend another 1/4 mile to the east. In addition to these physical infrastructure improvements, there are several land acquisition and park and trail master planning efforts underway.

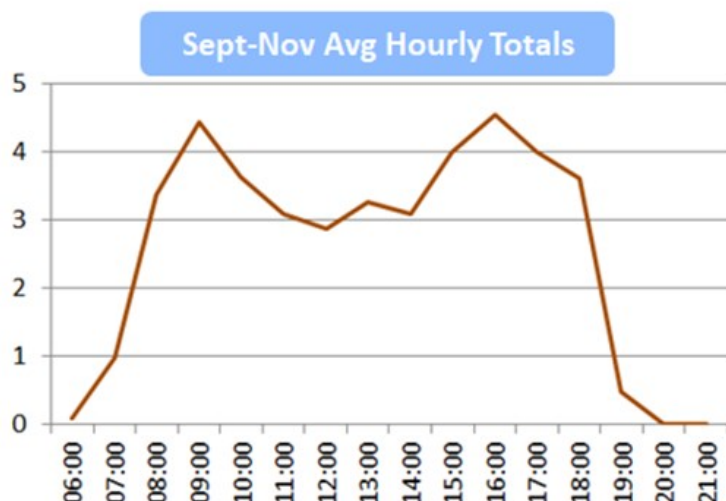
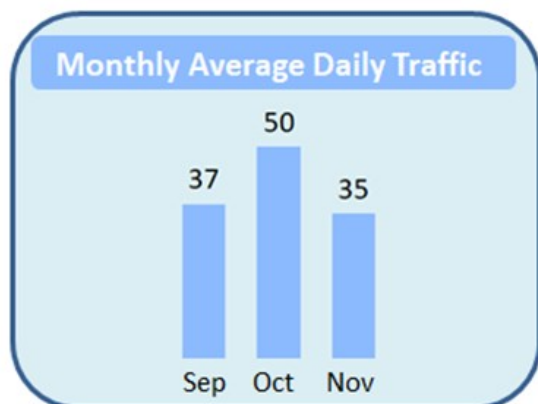
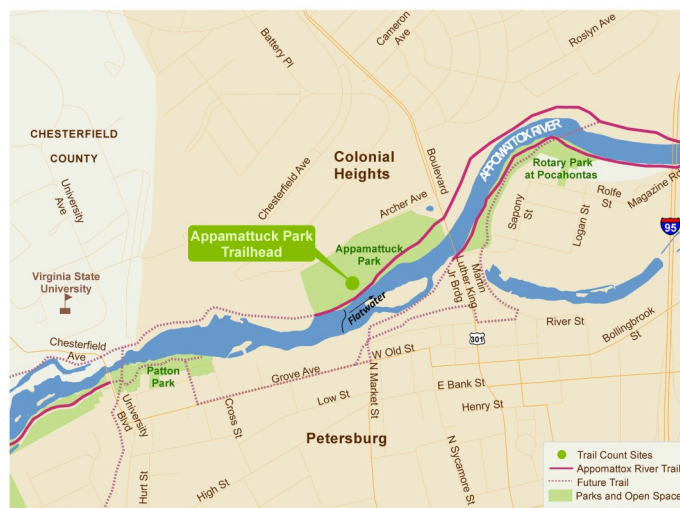
Developing the Appomattox River Trail is a regional effort that will take many years to complete. It is the community's vision to develop this world class trail, and it will take many partners, including private, public and nonprofit, coming together to bring the vision alive. Efforts like this trail count report show the importance of this infrastructure to our community.

**The members and staff of FOLAR sincerely thank the volunteers who put in countless hours on the trail and at the computer to make this program possible.**



# Appamatuck Park Trailhead (Colonial Heights)

The Appamatuck Park trail segment in Colonial Heights was completed in September 2020. The trail is paved and extends 1.8 miles eastward to the Roslyn Landing Trailhead. The total on this page does not include a full year of data. Collection of trail counts began on September 23, 2020 and extended through the end of November 2020. A counter failure prevented December trail counts collection. The counts presented here are only a preliminary view of what is anticipated to be an actively used trail based on type of trail and high use of the connecting segment.



**By-day / By-season ADTs**

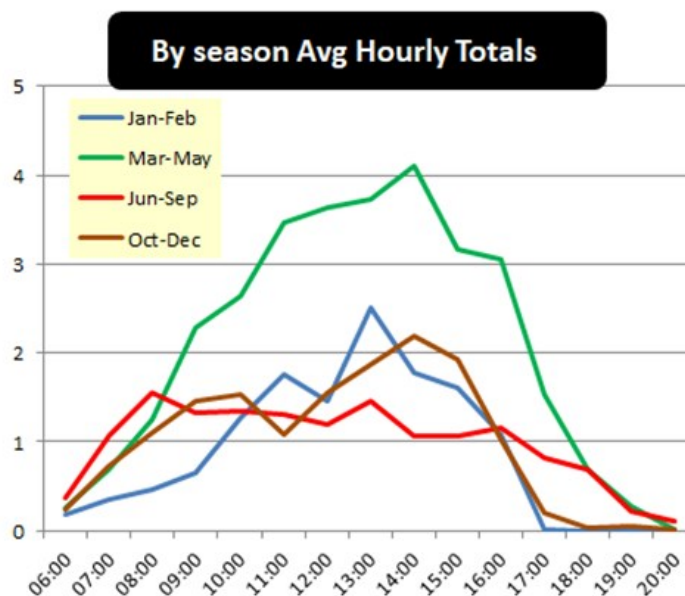
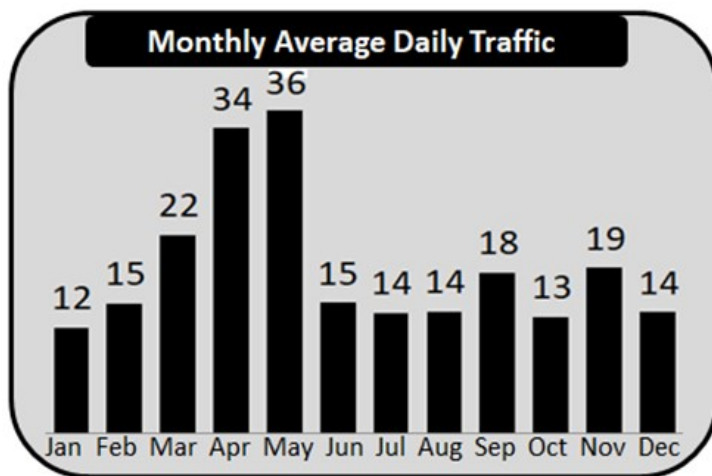
	M	TU	W	Th	F	Sa	Su
Sept-Nov	40	35	37	36	41	54	47



*\*Not a full year of data.*

# Appomattox River Regional Park (Prince George)

Appomattox River Regional Park is located in Prince George County, adjacent to Interstate 295. Over 3 miles of rustic (not paved) trails and several loop options are available within the park. The trail counter is located at the trailhead of the park trail system. The trail features exercise stations, and the park includes a pavilion, restrooms and direct access to the river, including an observation deck and a canoe/kayak launch. The trailhead is located near the Riverside Regional Jail.



**By-day / By-season ADTs**

	M	TU	W	Th	F	Sa	Su
Jan-Feb	15	7	11	7	11	17	24
Mar-May	23	21	24	22	27	39	57
Jun-Sep	14	9	12	11	12	23	25
Oct-Dec	11	11	12	10	16	23	23

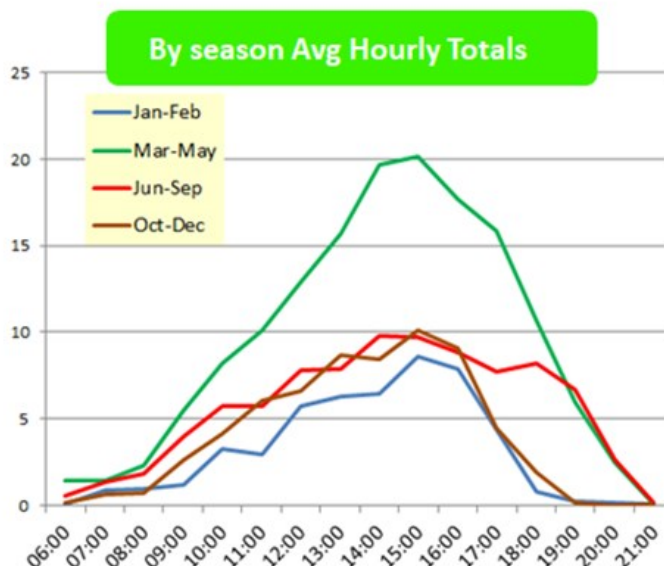
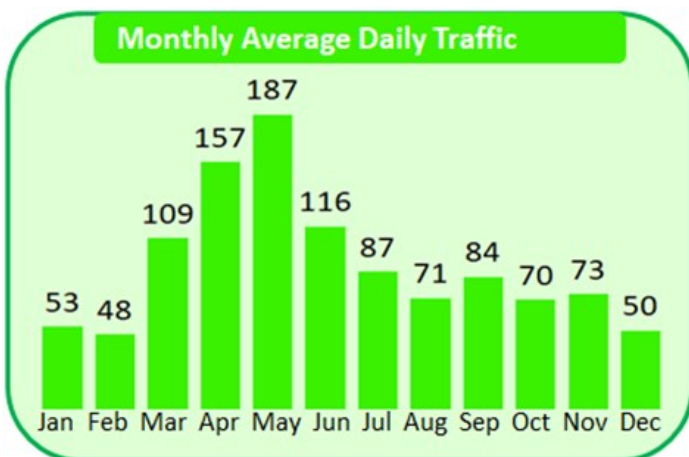
**Total 2020 Traffic**

**6,843**



# Ferndale Park Trailhead (Dinwiddie)

Ferndale Park is a historic park site located in Dinwiddie County, just south of the Village of Matoaca in Chesterfield County. A historic shipping canal traverses the park. Amenities include a playground, numerous picnicking areas, and river access for fishing, and kayak and canoe launching. A hiking trail along the canal extends 1.5 miles from the trailhead in Ferndale Park westward to the historic abutment dam. This trail is not paved, but is generally flat and accessible.



### By-day / By-season ADTs

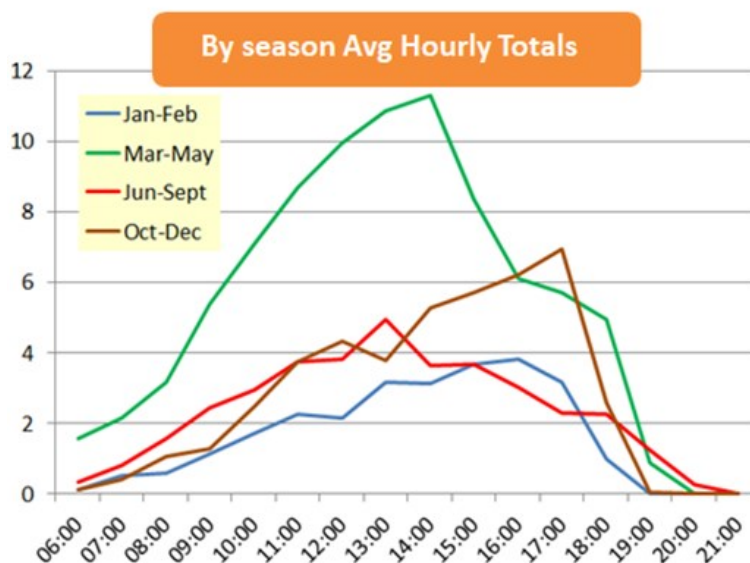
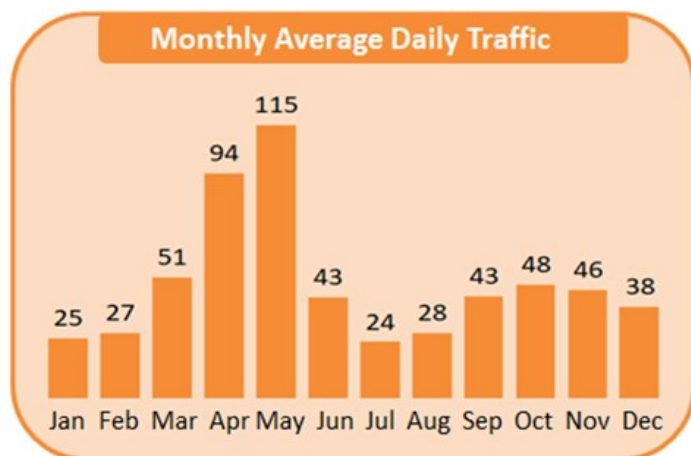
	M	Tu	W	Th	F	Sa	Su
Jan-Feb	44	26	39	26	28	75	116
Mar-May	121	111	114	115	130	211	245
Jun-Sep	92	65	68	61	75	115	152
Oct-Dec	36	46	50	48	54	104	111

**Total 2020 Traffic**

**33,669**

# John J. Radcliffe Conservation Area (Chesterfield)

The John J. Radcliffe Conservation Area begins just below the Brasfield Dam at Lake Chesdin and extends nearly 2 miles downstream, to a point across the river from the western extent of the Ferndale Trail. The conservation area features 2.8 miles of trails, ample parking, launch areas for non-powered boats, a picnic area and fishing access. The site is mostly wooded. The trail with the counter is not paved, but is flat and a generally accessible surface of stone dust. Owing to counter failure, data for July is estimated.



**By-day / By-season ADTs**

	M	TU	W	Th	F	Sa	Su
Jan-Feb	26	18	24	12	18	38	48
Apr-May	64	61	73	60	72	128	143
Jun-Sep	35	28	25	22	24	51	78
Oct-Nov	30	40	38	35	39	65	61

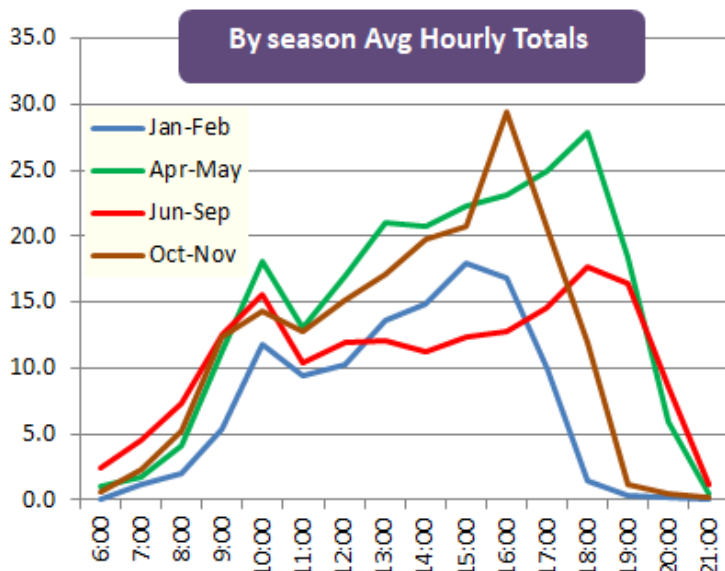
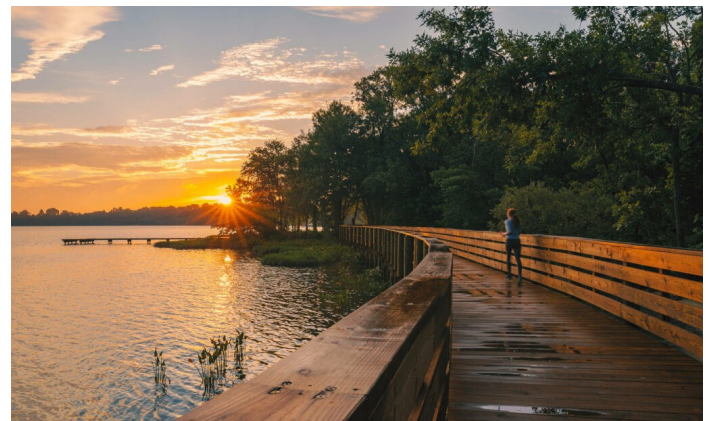
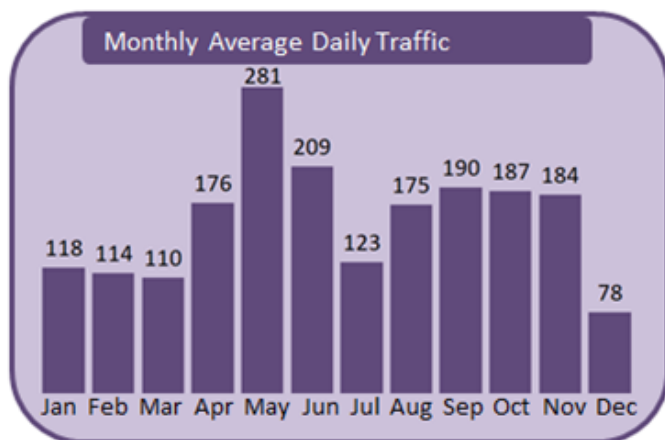
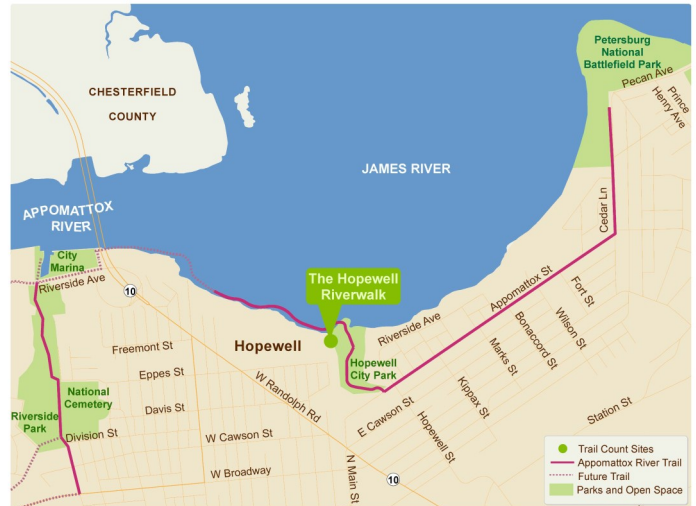
**Total 2020 Traffic**

**18,491**



# Hopewell Riverwalk

The Hopewell Riverwalk originates in Hopewell's City Park and extends westward approximately 1/3 mile. At high tide the wooden walkway crosses over water, providing a unique walking experience. The trail counter is located at the eastern end of the walkway. The Riverwalk will be extended to the Hopewell City Marina by the end of 2021. Due to counter failure, counts for March and December are extrapolated. The Hopewell Riverwalk received a Governor's Environmental Excellence Award in 2020.



**By-day / By-season ADTs**

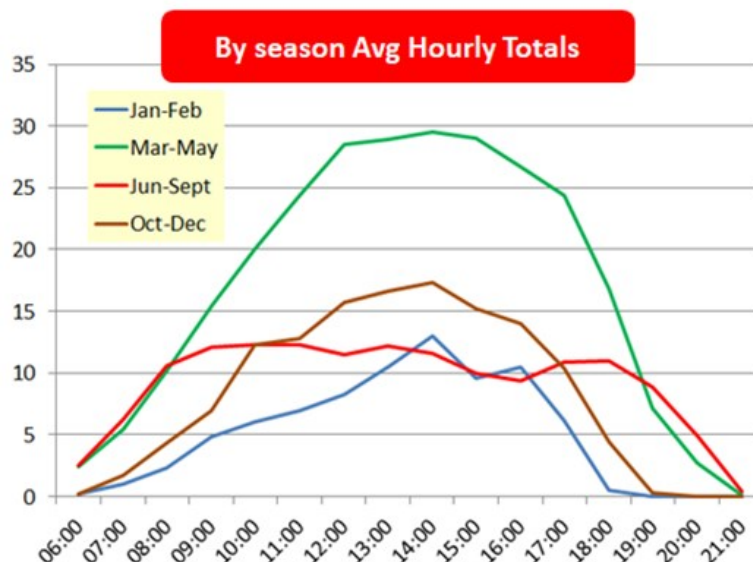
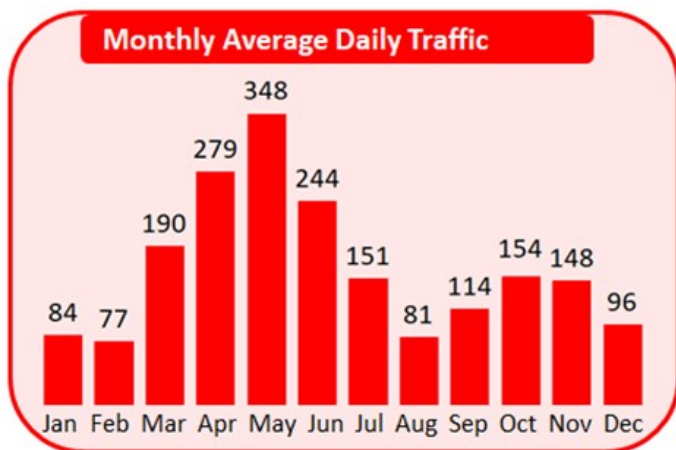
	M	TU	W	Th	F	Sa	Su
Jan-Feb	124	69	96	69	82	169	214
Apr-May	230	191	193	162	180	265	379
Jun-Sep	165	157	148	119	146	215	271
Oct-Nov	132	172	157	172	158	295	208





# Roslyn Landing Park Trailhead (Colonial Heights)

The Roslyn Landing Trailhead is a paved trail that extends westward 1.8 miles to the new Appamatuck Park Trailhead. The Roslyn Landing trail counter is located along the path at its east end. Roslyn Park has a large parking area, a boat launch, a small dock and a picnic pavilion. The trail is used by bicyclists as well as walkers. Funding has been secured to extend the trail eastward 1/4 mile.



**By-day / By-season ADTs**

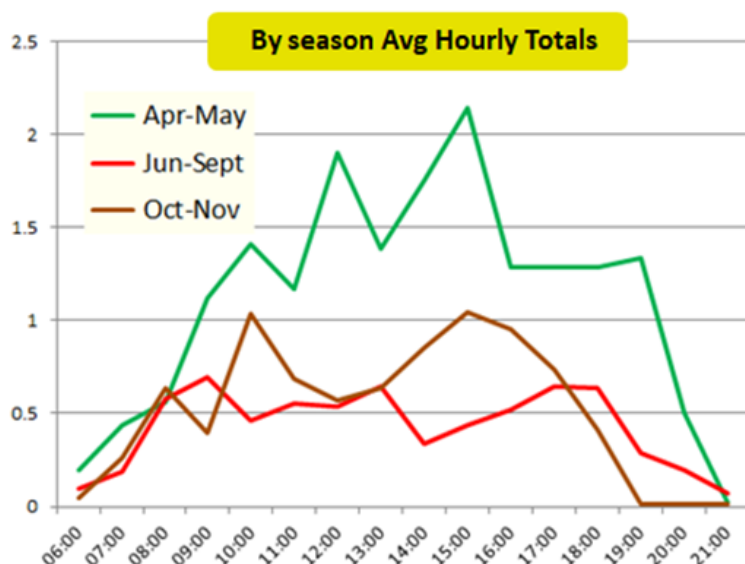
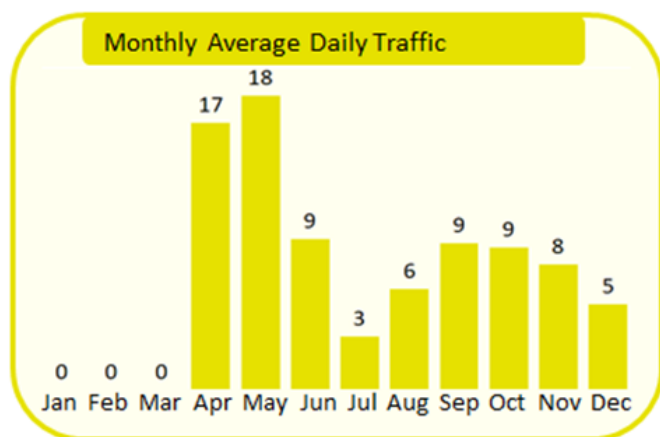
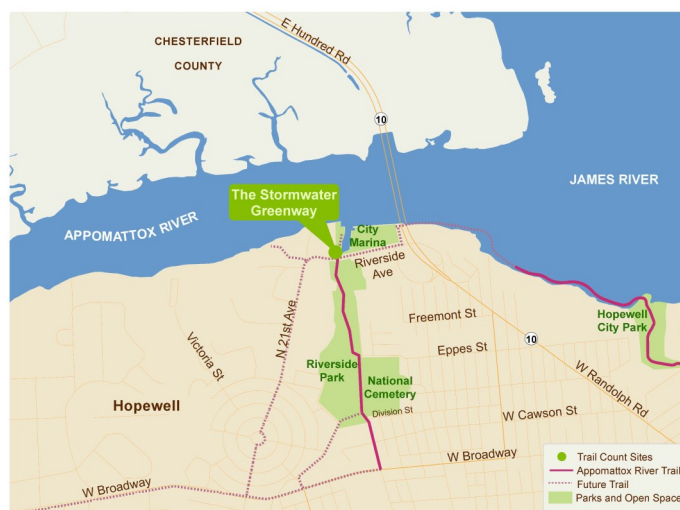
	M	TU	W	Th	F	Sa	Su
Jan-Feb	81	50	63	57	50	103	166
Apr-May	230	243	223	215	247	343	396
Jun-Sep	141	133	121	120	121	190	207
Oct-Nov	107	122	104	111	124	195	167

**Total 2020 Traffic**

**60,020**

# Stormwater Greenway Trailhead (Hopewell)

The Hopewell Stormwater Greenway Trail originates at the Hopewell City Marina and extends southward approximately 1/3 mile to the Riverside Park. The trail is gravel and has educational signage and many observation waysides. The trail counter is located at the northern end of the trail. The total on this page does not include a full year of data. The trail counter was installed on April 20, 2020.



**By-day / By-season ADTs**

	M	TU	W	Th	F	Sa	Su
Apr-May	15	22	17	15	13	18	26
Jun-Sept	8	5	5	7	7	7	10
Oct-Nov	5	9	6	7	6	15	10

**\* Total 2020 Traffic**

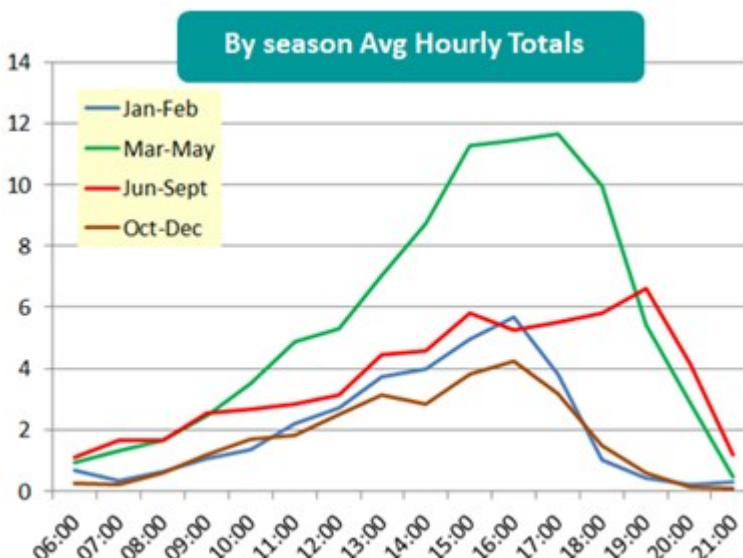
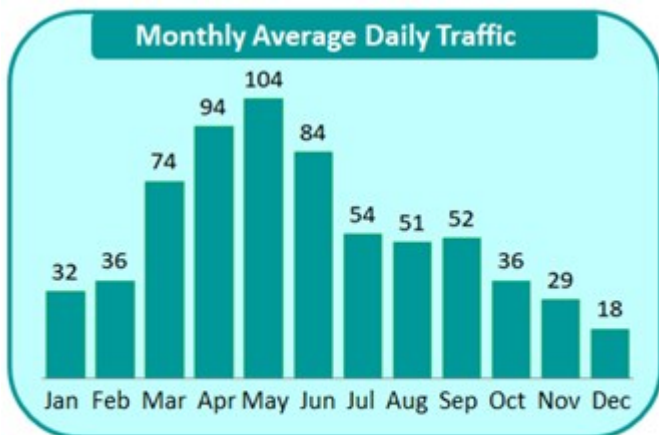
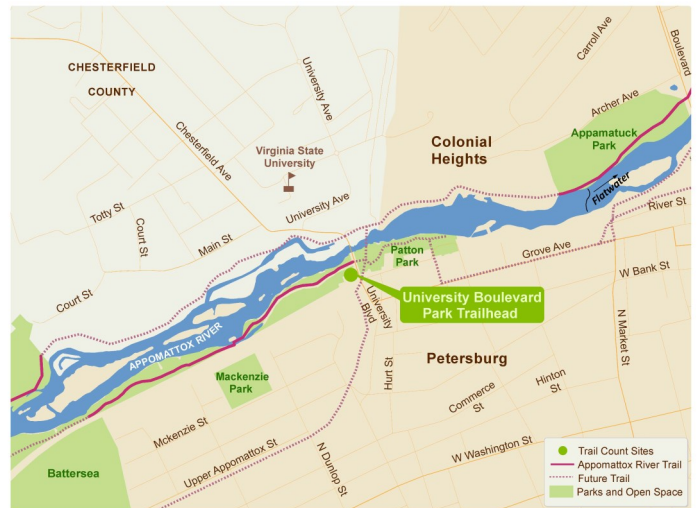
**3,247**

*\* Not a full year of data.*



# University Boulevard Trailhead (Petersburg)

University Boulevard Trailhead begins on the west side of University Blvd in Petersburg, just south of Virginia State University and Campbell's Bridge. The trail is partially paved and extends 1 mile west. Patton Park is across University Blvd to the east. This trail segment crosses the fall line along the river, with beautiful views of the old shipping canal, rapids and dams. The planned Fall Line Trail (formerly known as the Ashland to Petersburg Trail study) will intersect the Appomattox River Trail at the University Blvd Trailhead and Patton Park. Funding has been secured to extend the trail 1/3 mile east through Patton Park and 1/3 west past the Battersea Bridges.



**By-day / By-season ADTs**

	M	TU	W	Th	F	Sa	Su
Jan-Feb	39	28	26	24	25	42	59
Apr-May	86	74	73	82	84	111	122
Jun-Sep	69	69	50	48	46	64	75
Oct-Nov	21	25	26	29	31	35	30

