

Who's on the Trail

Erie Canalway Trail

2021 Trail User Count



April 2022



NEW YORK
STATE OF
OPPORTUNITY

Canal
Corporation

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Prepared by Parks & Trails New York for the New York State Canal Corporation.

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EXECUTIVE SUMMARY

The Canalway Trail system is one of New York State's premier outdoor destinations. The trail gives millions of New Yorkers in more than 200 communities a dedicated place to walk, jog, and bike right from their doorsteps and is a draw for visitors from around the world. Since 2005, Parks & Trails New York (PTNY) and the New York State Canal Corporation (NYSCC) have been at the forefront of quantifying the trail's popularity through annual Canalway Trail counts. Since 2019, the Who's on the Trail report has included an estimate of the total number of visits to the full 360-mile Erie Canalway Trail and 90-mile Champlain Canalway Trail.

The Canalway Trail counts analyzed in the Who's on the Trail report gives trail managers, municipalities, planners, and members of the public answers to important questions about trail use, including how many people are using the trail, and when and how people are using the trail. Over the years, the answers to these questions have helped to secure millions of dollars in public investment for maintenance and construction across the Canalway Trail system. Decisions regarding design, funding, operation, maintenance, and promotion of the Canalway Trail system are based, in large part, on understanding the level and type of trail use. Estimates of annual trail traffic volume help inform current and future expenditures for construction and maintenance.

The Canalway Trail counts have also been used to help assess the impact of trail use on New York's economy. A 2014 Economic Impact Study of the Erie Canalway Trail, completed by PTNY, found that more than 1.6 million visits to the trail supported more than 3,400 jobs and created more than \$250 million in economic impact. Since then, subsequent Who's on the Trail reports have demonstrated that the popularity of the Erie Canalway Trail is increasing as is, presumably, its economic impact.

At the end of 2020, the Empire State Trail was completed, resulting in a 750-mile trail network that incorporates the Erie and Champlain Canalway Trails and the Hudson River Valley Greenway, as well as connections to regional trails, including the Glens Falls Feeder Canal Trail.

PTNY estimates that the Canalway Trail system as a whole saw over 3.3 million visits in 2021, including approximately 3.1 million visits to the Erie Canalway Trail and approximately 215,000 visits to the Champlain Canalway Trail. Total visits to the Erie Canalway Trail were down from a peak of 4.2 million visits in 2020, likely due to increased use of trails during the COVID-19 pandemic.

In 2021, PTNY measured use at nine locations along the Erie Canalway Trail. Electronic counters recorded use at Tonawanda (Erie County), Pendleton (Niagara County), Brockport (Monroe County), Macedon (Wayne County), Canastota (Madison County), German Flatts and Little Falls (Herkimer County), Schoharie Crossing (Montgomery County), and Watervliet (Albany County). Four of the nine counters had been in place since 2020, so this report is able to show some changes in use patterns between 2020 and 2021. Manual counts were also conducted at one location, in Rochester (Monroe County). Use at all locations was strongest on weekends and holidays, suggesting the trail is very popular for recreational activities. Peak use for all locations occurred between June and September, though the busiest month varies by location.

The 2021 Who's on the Trail report also includes, for the first time, information on those trail users who completed an end-to-end journey on the trail and registered as an official Erie Canalway Trail "End-to-End." The "End-to-End" registration form includes questions about trip characteristics, trip planning resources used, and demographic information. This qualitative information provides a new level of detail about trail users beyond count information collected by the electronic counters.



BACKGROUND

Parks & Trails New York (PTNY) and the New York State Canal Corporation (NYSCC) began using trail counts in 2005 to support anecdotal indications of the Erie Canalway Trail's popularity among walkers and cyclists. In 2010, PTNY and the NYSCC began using the current protocol and methodology developed by the National Bicycle and Pedestrian Documentation Project (NBPD). The NBPD is a nationwide effort to provide consistent data collection and adjustment factors to estimate annual trail use.

Since 2005, Canalway Trail counts have been conducted by volunteers across the Canal corridor. Observational counts were conducted on the Champlain Canalway and Feeder Canalway Trails in 2012, which was the first year counts were conducted on a segment of the Canalway Trail system other than the Erie.

The first year that an electronic trail counter was installed for a full year at a location to obtain trail use data for the annual count was 2014. Since then, electronic counters have been a major component of the counts.

METHODOLOGY

PTNY's electronic count process relies on the PYRO-Box counter manufactured by Eco-Counter, a French company that sells a range of pedestrian and bicycle counting products. PTNY currently owns 10 PYRO-Box counters, Eco-Counter's most popular counter, after purchasing three counters in 2019 and having one of our oldest counters refurbished.

The PYRO-Box counter is a simple gray plastic box that can be installed on a post or other vertical surface. The counter uses infrared pyroelectric technology to count the people passing within range of the sensor by detecting body temperature. Counters are installed for a minimum of one month, although PTNY prefers to install counters for one year or longer so as to use actual counts rather than samples of data to estimate full-year counts. To collect data from the counter, PTNY staff visits the counter or removes the counter to return it to the office. Using Bluetooth technology, the counter can be connected to a mobile phone application or a laptop program to sync the data.

Four counters (Tonawanda, Canastota, German Flatts, and Schoharie Crossing) were in place at the beginning of 2021. The counters in German Flatts and Tonawanda were removed in spring, and the Canastota and Schoharie Crossing counters were removed in the fall. A counter was installed in Little Falls from May through August,

when it was removed due to planned construction work. Additional counters were installed in Macedon and Brockport in April, in Pendleton in June, and in Watervliet in September. Those four counters will remain installed in their current locations through the summer of 2022.

Since 2010, PTNY and the NYSCC have used the National Bicycle and Pedestrian Project (NBPD) protocol and methodology to estimate full-year trail use based on a subset of observed data. The adjustment factors account for season, type of facility (multi-use path or high-density pedestrian and entertainment area), day of the week and month when the count was conducted, and type of climate. Since NBPD methodology is becoming the national standard for trail count studies, it allows the Canalway Trail data to be compared with annual use estimates from trails across the country.

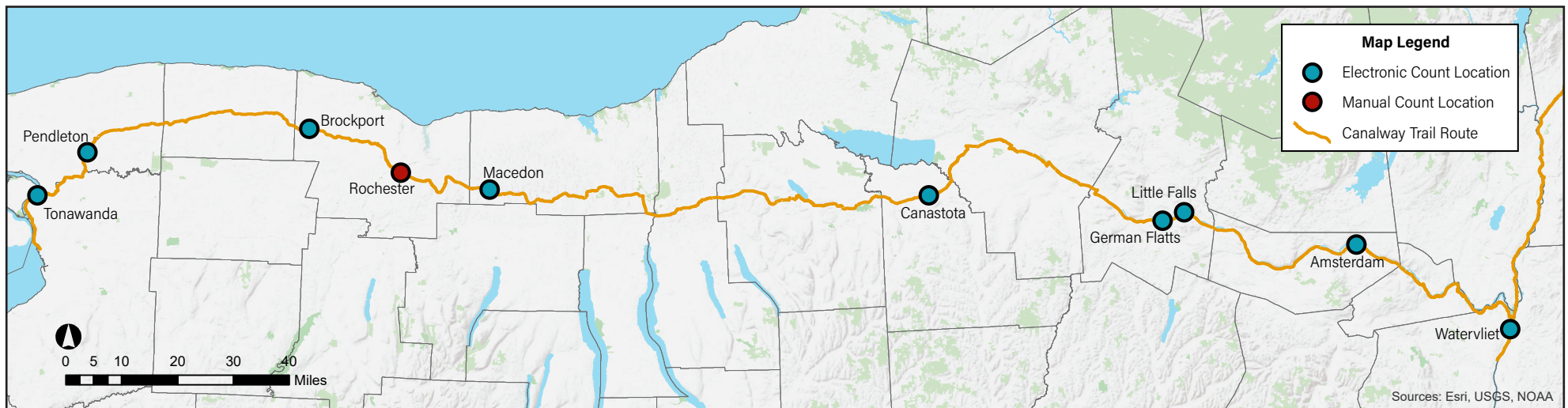
The 2021 Who's on the Trail report includes a projection of total trail use across the Erie and Champlain Canalway Trail corridors for the third year in a row. The methodology for the trail projections is based on an analysis completed by Alta Planning and Design in July 2018 to project total trail use upon the completion of the Empire State Trail in 2020. Previous year projections estimated that the Canalway Trail system saw 3.3 million visits in 2019 and over 4.2 million visits in 2020.



COUNTER LOCATIONS

Electronic counters recorded trail use along the Erie Canalway Trail at nine locations during 2021, covering portions of the year in each location. Counters were installed in Tonawanda (Erie County), Lockport (Niagara County), Brockport (Monroe County), Macedon (Wayne County), Canastota (Madison County), German Flatts and Little Falls (Herkimer County), Schoharie Crossing (Montgomery County), and Watervliet (Albany County).

Observational counts were also performed, in Rochester (Monroe County). Following standard observational count protocol established by the National Bicycle and Pedestrian Project (NBPD), the observational counts were completed during summer months, with two hours of visitation counted on three separate occasions.



Map 1: 2021 Counter Locations

The 2021 Canalway Trail count locations represent geographic and environmental diversity. Tonawanda, Lockport and Brockport are located in Western New York, Macedon is in the Finger Lakes, Canastota is in Central New York, German Flatts, Little Falls and Schoharie Crossing are in the Mohawk Valley, and Watervliet in the Capital District. The Lockport, Macedon, German Flatts, and Schoharie Crossing counters were located in more rural locations, in communities with smaller population density. The Brockport, Canastota, Little Falls and Watervliet counters were located in large villages or small cities along the trail, while the Tonawanda counter was in a medium-sized city located just north of Buffalo, a major Canalway Trail city and the western end of the trail.

TRAIL USE BY LOCATION

The 2021 Who's on the Trail report analyzes data from nine locations, as seen in the table below. Previously collected data from Tonawanda, Canastota, German Flatts and Amsterdam were analyzed in the 2020 Who's on the Trail report. Counters were installed in Pendleton, Brockport, Macedon, Little Falls and Watervliet during 2021; partial data for the months shown below was analyzed for those locations.

TABLE 1 – 2021 USE AT CANALWAY TRAIL ELECTRONIC COUNT LOCATIONS

	Niawanda Park, Tonawanda			Robinson Road, Pendleton			Corbett Park, Brockport			Lock 30, Macedon			Canal Street, Canastota			Lock 18, German Flatts			Lock 17, Little Falls			Yankee Hill Lock, Amsterdam			16th Street, Watervliet		
Months	Total	Days	Daily Avg	Total	Days	Daily Avg	Total	Days	Daily Avg	Total	Days	Daily Avg	Total	Days	Daily Avg	Total	Days	Daily Avg	Total	Days	Daily Avg	Total	Days	Daily Avg	Total	Days	Daily Avg
January 2021	6429	31	207	-	-	-	-	-	-	-	-	-	908	31	29	399	31	13	-	-	-	498	31	16	-	-	-
February 2021	6,771	28	242	-	-	-	-	-	-	-	-	-	1,382	28	49	324	28	12	-	-	-	1,598	28	57	-	-	-
March 2021	20,173	31	651	-	-	-	-	-	-	-	-	-	818	31	26	1,660	31	54	-	-	-	421	31	14	-	-	-
April 2021	21,439	30	715	-	-	-	6,122	29	211	2,610	29	90	953	30	32	3,207	30	107	-	-	-	1,653	30	55	-	-	-
May 2021	25,520	31	823	-	-	-	7,637	31	246	4,55	31	147	1,392	31	45	378	5	76	2,041	25	82	2,378	31	77	-	-	-
June 2021	5,766	6	961	7,508	23	326	6,387	30	213	5,106	30	170	1,629	30	54	-	-	-	8,145	30	272	4,083	30	136	-	-	-
July 2021	-	-	-	11,367	31	367	6,889	31	222	5,926	31	191	2,066	31	67	-	-	-	7,243	31	234	2,804	31	90	-	-	-
August 2021	-	-	-	10,485	31	338	6,363	31	205	5,270	31	170	1,694	31	55	-	-	-	2,115	25	85	3,581	31	116	-	-	-
September 2021	-	-	-	9,049	30	302	6,866	30	229	4,720	30	157	1,657	30	55	-	-	-	-	-	-	3,250	30	108	2,952	20	148
October 2021	-	-	-	6,002	31	194	4,363	26	168	2,523	26	97	668	19	35	-	-	-	-	-	-	1,369	31	44	4,280	31	138
November 2021	-	-	-	3,101	30	103	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	37	1	37	1,435	30	48
December 2021	-	-	-	1,224	17	72	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2021 RECORDED	86,098	157	548	48,736	193	253	44,627	208	215	30,705	208	148	13,167	292	45	5,968	125	48	19,544	111	176	21,672	305	71	8,667	81	107
2021 ANNUAL USE*	230,209	365	631	80,098	365	219	58,210	365	159	40,051	365	110	14,848	365	41	23,155	365	63	43,276	365	119	23,763	365	65	44,829	365	123

*Annual use estimates based on NBPd factors

Niawanda Park, Tonawanda



Daily Average Based on
Full Year Estimate

631



Highest Daily
Volume Recorded

2,758

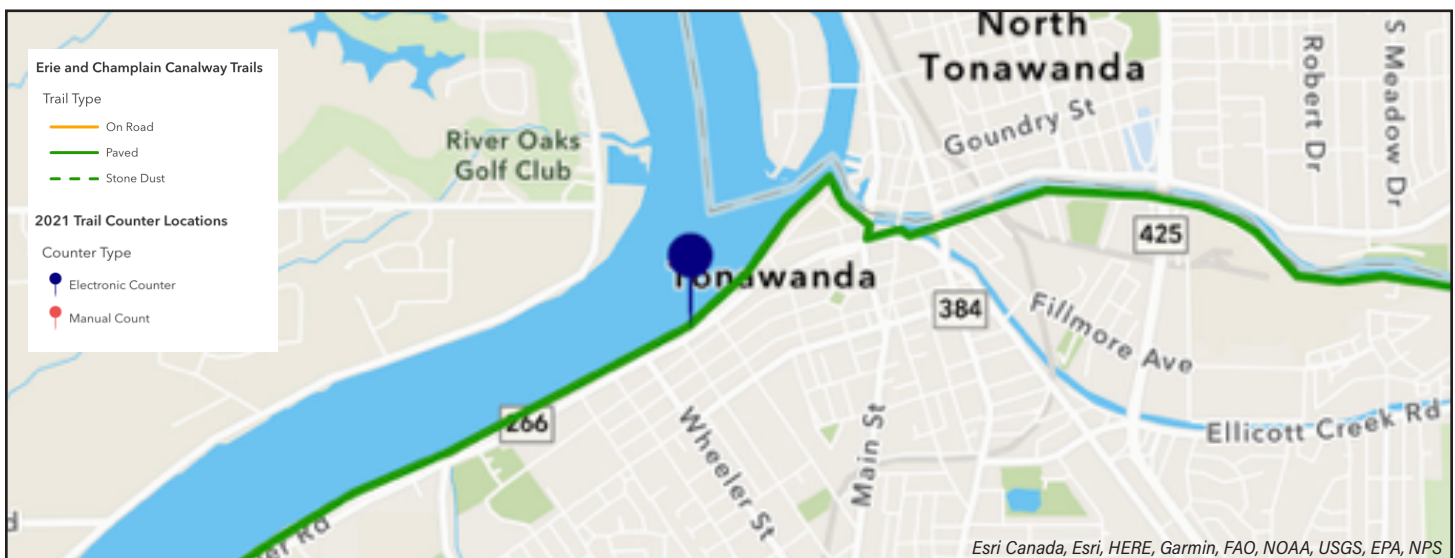


2021 Total
Estimated Use

203,309

About the location

The counter in Tonawanda was installed in July 2019 in Niawanda Park and collected data for over nearly two years, until it was removed in early June 2021. The trail in Tonawanda is also known as the Buffalo and Erie County Riverwalk, a 10.2-mile paved stretch of trail along the east bank of the Niagara River. It connects the urban center of Buffalo with the city of Tonawanda to the north, and extends north to Niagara Falls and Lake Ontario, and south along the shore of Lake Erie as part of the Shoreline Trail system. Niawanda Park is a riverfront recreational area offering parking and a trailhead within walking and biking distance of several surrounding neighborhoods and business areas, and within biking and driving distance of Buffalo's large urban population.



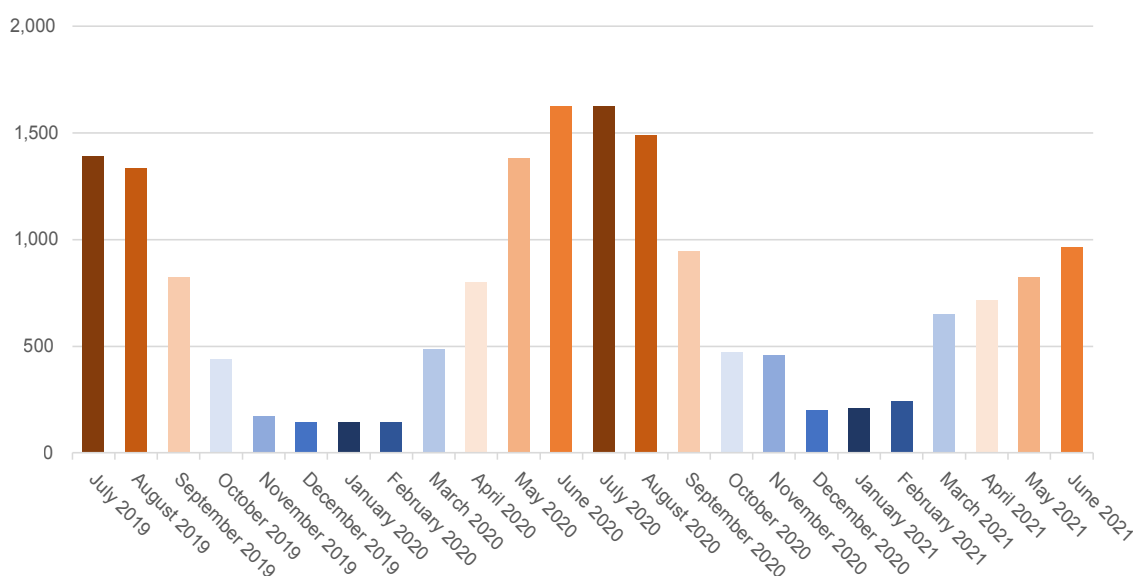
ANALYSIS

The data analyzed in this year's report uses counter data from July 7, 2019 to June 6, 2021. Over the course of the 701 days the counter was installed, 508,168 visits to the trail were recorded. In 2021, the counter recorded 86,098 visits to the trail over 157 days, corresponding to an annual use estimate of 230,209. This figure was 23% lower than 2020's annual use estimate of 298,288. While January 2021 through March 2021 saw 43% higher use than those same months in 2020, April and May saw 30% lower use than the same months a year prior. This trend was most noticeable in May 2021, which saw 25,520 visits to the trail, a 40% drop from the 42,849 visits recorded in May 2020.

As the counter was installed for nearly two years, the data captured multiple 365-day stretches that can be summed to provide a "full year snapshot" of trail use. The total use over these various 365-day periods ranged from a low of 270,423 visits during the one-year period from July 15, 2019 to July 14, 2020, to a high of 310,901 visits during the year between April 11, 2020 and April 10, 2021. The most recent one-year period captured, between June 7, 2020 and June 6, 2021, saw 284,863 visits to the trail.

TABLE 2 - NIAWANDA PARK, TONAWANDA Trail Use by Month (July 2019 - June 2021)			
Months	Total	Days	Daily Avg
July 2019	34,774	25	1,391
August 2019	41,284	31	1,332
September 2019	24,665	30	822
October 2019	13,554	31	437
November 2019	5,156	30	172
December 2019	4,349	31	140
2019 Recorded	123,782	178	695
2019 ANNUAL USE	245,191	365	672
January 2020	4,378	31	141
February 2020	4,167	29	144
March 2020	15,029	31	485
April 2020	23,989	30	800
May 2020	42,849	31	1,382
June 2020	48,694	30	1,623
July 2020	50,342	31	1,624
August 2020	46,142	31	1,488
September 2020	28,343	30	945
October 2020	14,570	31	470
November 2020	13,692	30	456
December 2020	6,093	31	197
2020 Recorded	298,288	366	815
2020 ANNUAL USE	298,288	366	815
January 2021	6,429	31	207
February 2021	6,771	28	242
March 2021	20,173	31	651
April 2021	21,439	30	715
May 2021	25,520	31	823
June 2021	5,766	6	961
2021 Recorded	86,098	157	548
2021 ANNUAL USE	230,209	365	631

Chart 1- Daily Average Use by Month, Tonawanda



Robinson Road, Pendleton



Daily Average Based on
Full Year Estimate

219



Highest Daily
Volume Recorded

646

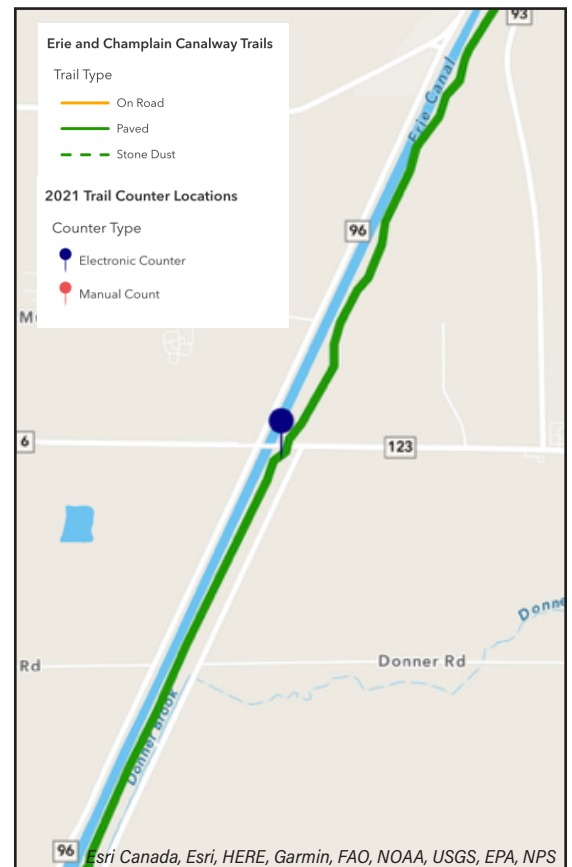


2021 Total
Estimated Use

80,098

About the location

A counter was installed in June 2021 along the trail near the trailhead off of Robinson Road in Pendleton. The trail in Pendleton is part of a 7.3-mile off-road stretch running from Orbit Drive in Amherst, crossing Tonawanda Creek into Niagara County at Pendleton, and continuing to Stevens Street in Lockport. Robinson Road is a rural area, although the trail through this region receives heavy use, as it is less than 3 miles south of the city of Lockport, about 10 miles east of the cities of Tonawanda and North Tonawanda, and within 30 miles of the western end of the Erie Canalway Trail/Empire State Trail in Buffalo. A counter had previously been installed in this location from July 2016 to July 2017.



Map 3: Counter Location at Robinson Road, Pendleton

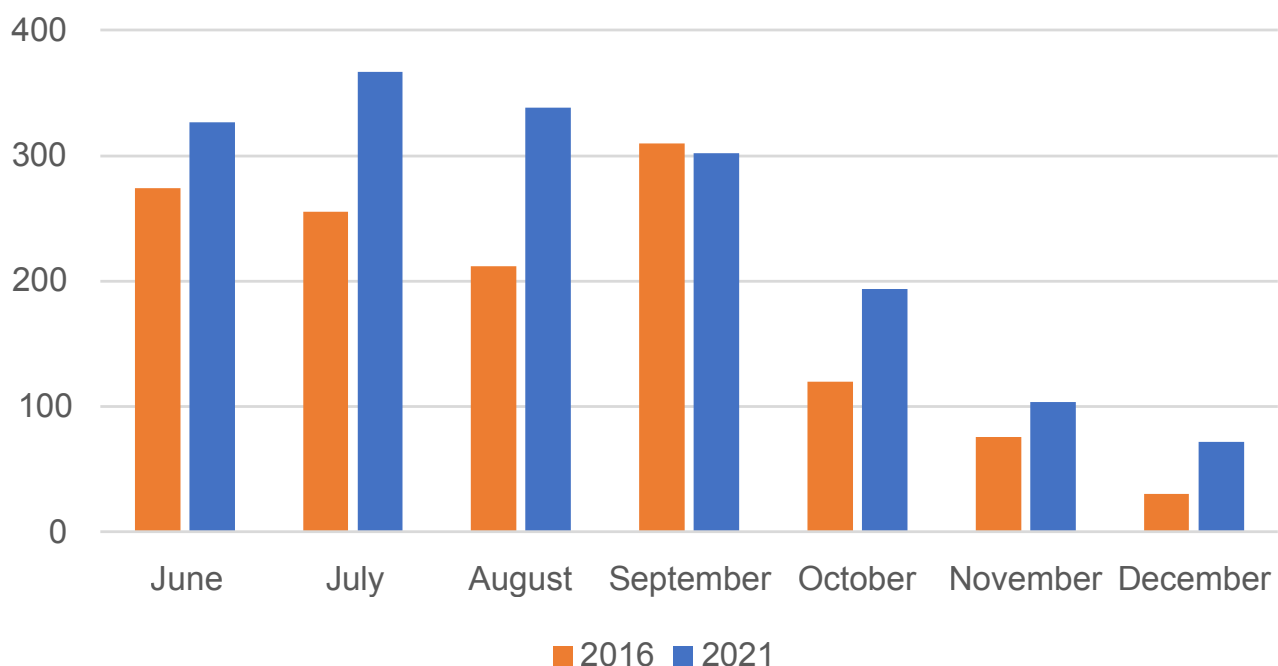
ANALYSIS

The data analyzed in this year's report uses counter data from June 8, 2021 to December 17, 2021. Over the course of the total 193 days the counter was installed, it recorded 48,736 visits to the trail, corresponding to an annual use estimate of 80,098. This figure represents a 52% increase over the 52,454 annual visits recorded from the previous counter installation at this location, from 2016-2017.

The counter remains installed in this location collecting data, and will be removed some time in 2022. Additional data from this counter will be analyzed as part of the 2022 version of Who's on the Trail: Erie Canalway Trail.

TABLE 3 - ROBINSON ROAD, PENDLETON Trail Use by Month (June 2021 - December 2021)			
Months	Total	Days	Daily Avg
June 2021	7,508	23	326
July 2021	11,367	31	367
August 2021	10,485	31	338
September 2021	9,049	30	302
October 2021	6,002	31	194
November 2021	3,101	30	103
December 2021	1,224	17	72
2021 Recorded	48,736	193	253
2021 ANNUAL USE	80,098	365	219

Chart 2 - Daily Average by Month, 2016 and 2021, Pendleton



Corbett Park, Brockport



Daily Average Based on
Full Year Estimate

159



Highest Daily
Volume Recorded

533

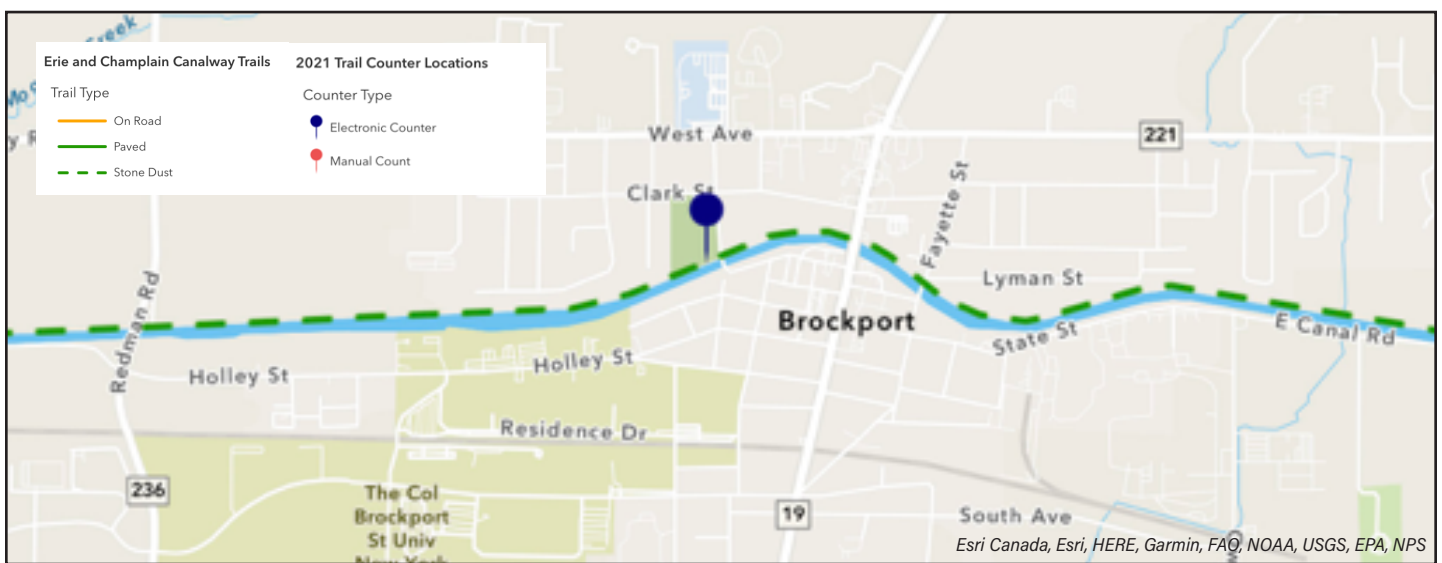


2021 Total
Estimated Use

58,210

About the location

A counter was installed in April 2021 along the trail near the spillway just west of the bridge where Smith Street in Brockport crosses the Erie Canal. Brockport's Corbett Park is adjacent to the trail, although there is no direct connection between the trail and the park. The trail through Brockport is part of a lengthy continuous stretch of trail, running 55 miles between downtown Lockport and Long Pond Road in Gates. Most of the trail along that stretch, including the trail in Brockport, features a stone dust surface. Brockport is roughly 20 miles west of Rochester. 2021 was the first time that PTNY has installed an electronic trail counter in Brockport, although manual counts were conducted at three locations in Brockport (Main Street, Park Avenue and Lyman Street) in 2013.



Map 4: Counter Location at Corbett Park, Brockport

ANALYSIS

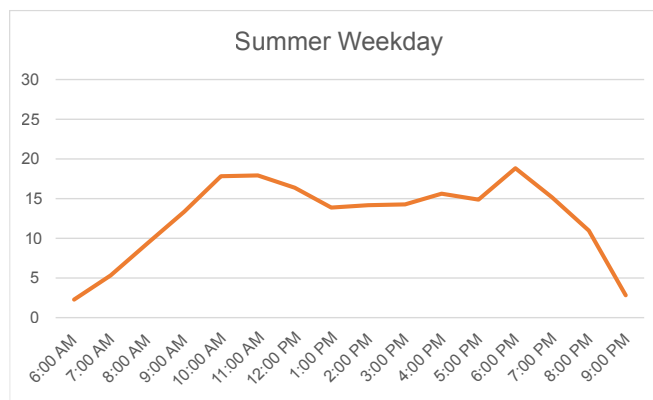
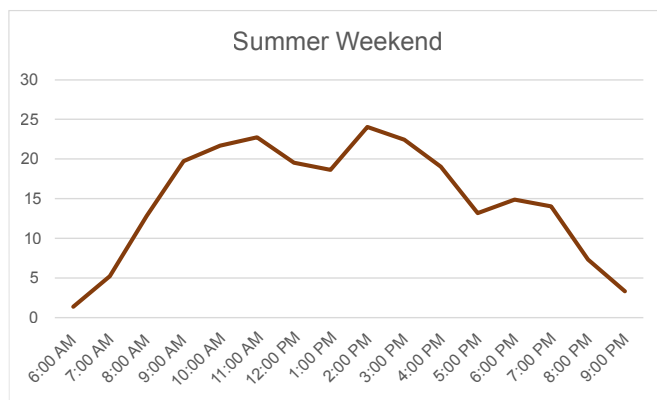
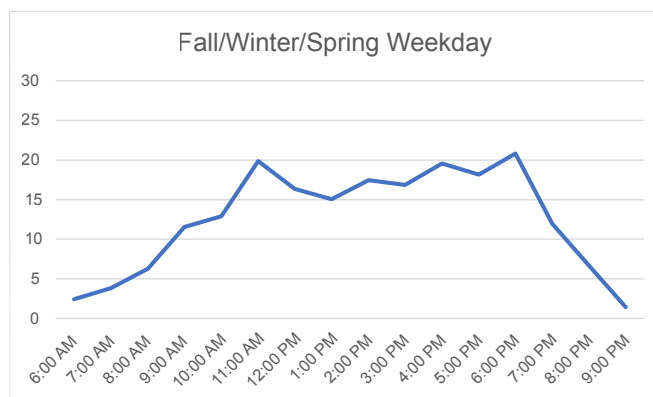
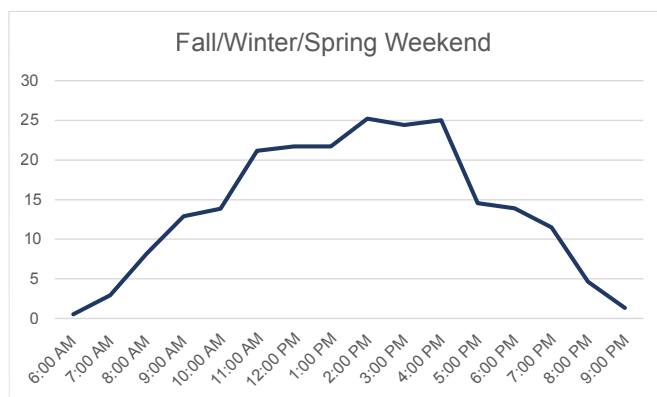
The data analyzed in this year's report uses counter data from April 2, 2021 to October 26, 2021. Over the course of the total 208 days the counter was installed, it recorded 44,627 visits to the trail, corresponding to an annual use estimate of 58,210. This figure was lower than any of the estimates derived from manual counts in 2013, which ranged from 62,700 at Lyman Street to 72,390 at the Main Street Bridge.

The counter remains installed in this location, and will be left in its current location throughout the duration of 2022. Data from the counter will allow for a more in-depth picture of trail use in Brockport to be attained. A new pedestrian bridge is being built west of where the counter is currently installed to connect the trail to the campus of SUNY Brockport as part of the Reimagine the Canals initiative. This data will serve as a baseline to measure the popularity of the trail in this area; when that project is completed, this section of the trail will undoubtedly see much higher use.

TABLE 3 - CORBETT PARK, BROCKPORT
Trail Use by Month (April 2021 - October 2021)

Months	Total	Days	Daily Avg
April 2021	6,122	29	211
May 2021	7,637	31	246
June 2021	6,387	30	213
July 2021	6,889	31	222
August 2021	6,363	31	205
September 2021	6,866	30	229
October 2021	4,363	26	168
2021 Recorded	44,627	208	215
2021 ANNUAL USE	58,210	365	159

Chart 3 - Hourly Use Patterns (Weekday/Weekend) by Season, Brockport



East Henrietta Road, Rochester



Daily Average Based on
Full Year Estimate

544



Highest Daily
Volume Recorded

1,510

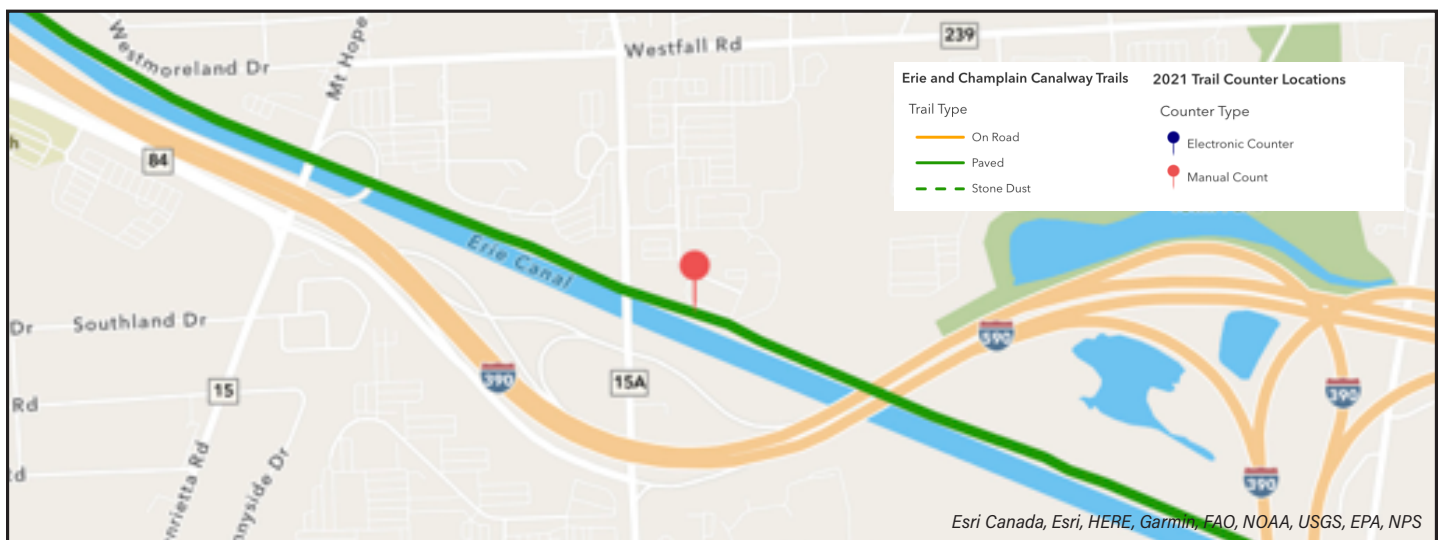


2021 Total
Estimated Use

198,716

About the location

In addition to the electronic counters installed across the state, manual counts were performed by volunteers along the trail at East Henrietta Road in Rochester. This location is right on the edge of the city of Rochester, one of the largest cities along the trail. The trail in this area runs from Rochester, through two populous suburban areas (Henrietta and Brighton) to the canalside villages of Pittsford and Fairport. As such, the trail in this stretch is generally popular as a regional destination. At East Henrietta Road, the Rochester location of the REI Co-op sporting goods store is located adjacent to the trail and offers a number of amenities for trail users.



Map 5: Counter Location at East Henrietta Road, Rochester

ANALYSIS

Volunteers performed two-hour manual counts on three different days, all Saturdays, during summer and early fall 2021. All three counts covered the 11:00 AM to 1:00 PM time period. The first count, on July 24, was on a sunny, 79-degree day; the second (August 14) was on a partly cloudy, 77-degree day; and the final, on September 25, was on a sunny, 66-degree day.

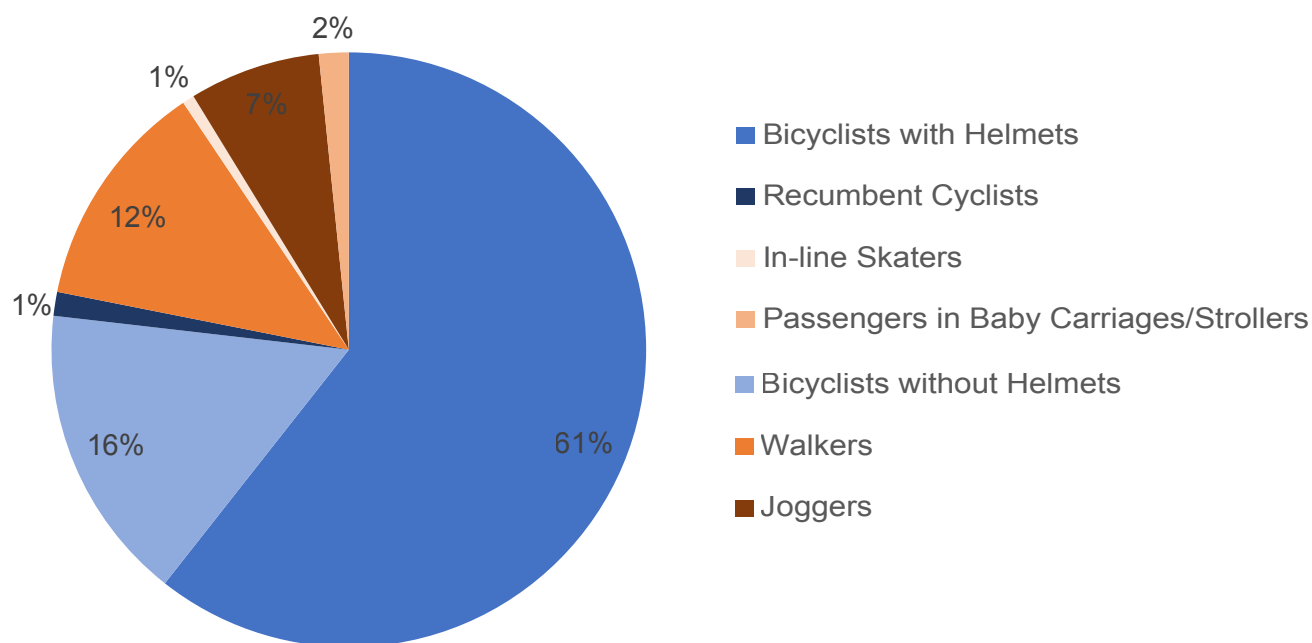
Observed two-hour count totals can be seen in the table above. As can be seen, the majority of use in this location was by cyclists in this location, with more than 80% of observed users on both the July and September count dates. More than 75% of cyclists were observed wearing helmets on all three occasions, increasing to a high of 87% on September 25.

One previous count had been conducted close to this location, at West Henrietta Road, less than half a mile west of this location. That electronic count, conducted during 2018, recorded 128,129 annual visits to the trail.

TABLE 5 - EAST HENRIETTA ROAD, ROCHESTER
Manual Trail Counts (July 2021-September 2021)

	Count #1	Count #2	Count #3
Date	7/24/2021	8/14/2021	9/25/2021
Time	11:00 AM-1:00 PM	11:00 AM - 1:00 PM	11:00 AM - 1:00 PM
Bicyclists with Helmets	181	75	118
Bicyclists without Helmets	57	25	18
Recumbent Cyclists	8	-	-
Cyclists Total	246	100	136
Walkers	35	25	17
In-line Skaters	4	-	-
Joggers	12	20	12
Passengers in Baby Carriages/Strollers	5	5	-
Pedestrians Total	56	50	29
Two-Hour Total	302	150	165
Daily Estimate	1,510	750	825
Weekly Estimate	8,389	4,167	4,583
Monthly Estimate	37,151	18,452	19,643
Annual Estimate	285,775	131,803	178,571
AVERAGE ANNUAL ESTIMATE			198,716

Chart 4 - Trail Use by Mode, Rochester



Lock 30, Macedon



Daily Average Based on
Full Year Estimate

110



Highest Daily
Volume Recorded

494

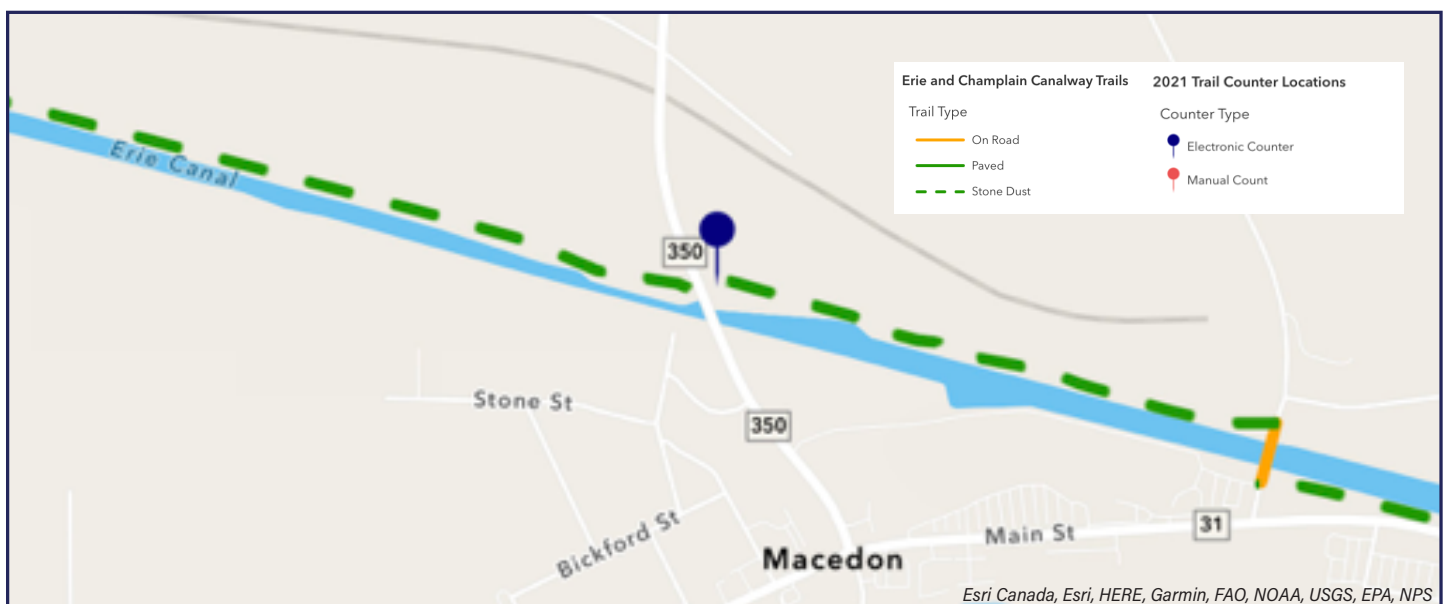


2021 Total
Estimated Use

40,051

About the location

A counter was installed in April 2021 along the trail just east of Lock 30 in Macedon, under the bridge that carries State Route 31F over the canal. Lock 30 features a small green area on the north side of the canal, where the trail runs, and Macedon Canal Park is located on the south side of the canal and features a picnic area and a walking trail known as the “Butterfly Trail”. The trail through this stretch features a stone dust surface and is part of an 11.8-mile continuous stretch of trail from Fairport to Palmyra. No counts had previously been performed by PTNY in Macedon.



Map 6: Counter Location at Lock 30, Macedon

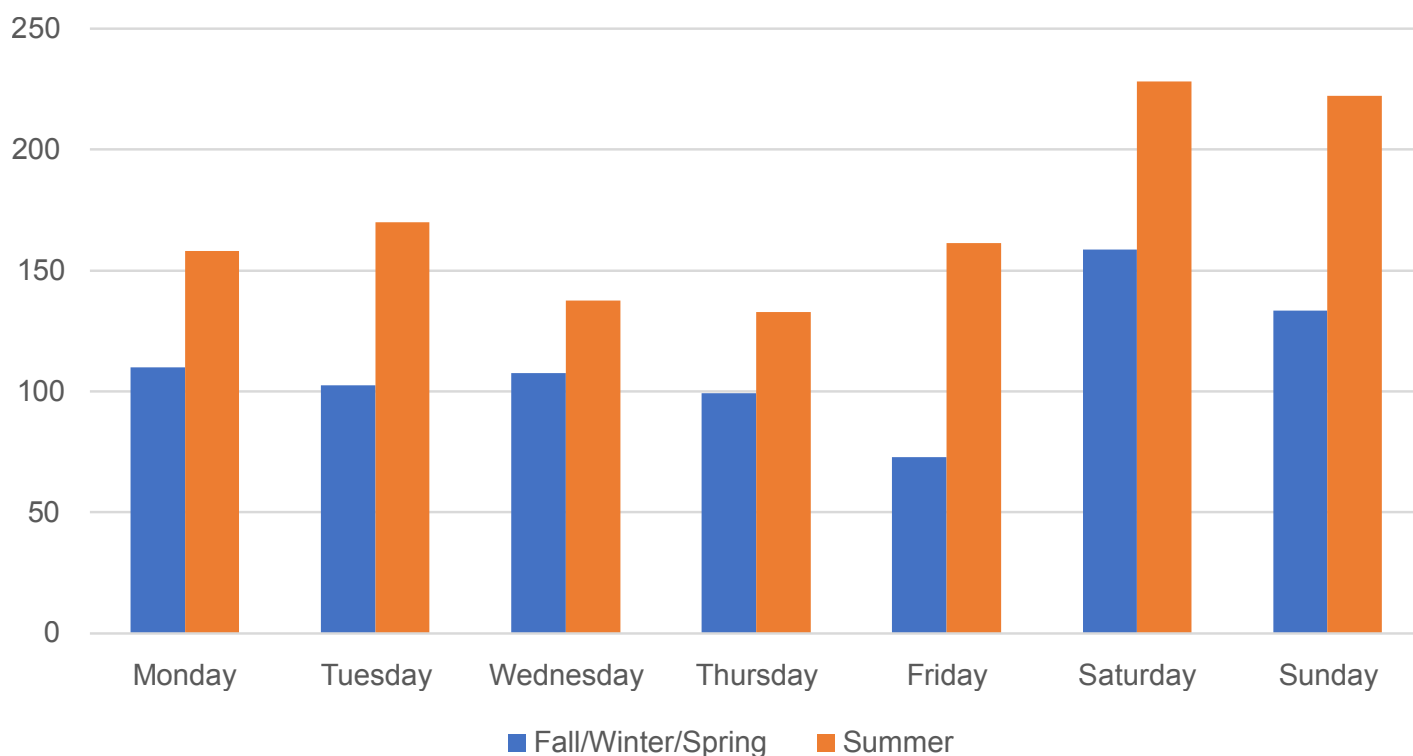
ANALYSIS

The data analyzed in this year's report uses counter data from April 2, 2021 to October 26, 2021. Over the course of the total 208 days the counter was installed, it recorded 30,705 visits to the trail, corresponding to an annual use estimate of 40,051.

The counter remains installed in this location and will be removed some time in 2022. Additional data from this counter will be analyzed as part of the 2022 version of Who's on the Trail: Erie Canalway Trail.

TABLE 6 - LOCK 30, MACEDON Trail Use by Month (April 2021 - October 2021)			
Months	Total	Days	Daily Avg
April 2021	2,610	29	90
May 2021	4,550	31	147
June 2021	5,106	30	170
July 2021	5,926	31	191
August 2021	5,270	31	170
September 2021	4,720	30	157
October 2021	2,523	26	97
2021 Recorded	30,705	208	148
2021 ANNUAL USE	40,051	365	110

Chart 5 - Trail Use by Day of Week and Season, Macedon



Canal Street, Canastota



Daily Average Based on
Full Year Estimate

41



Highest Daily
Volume Recorded

351

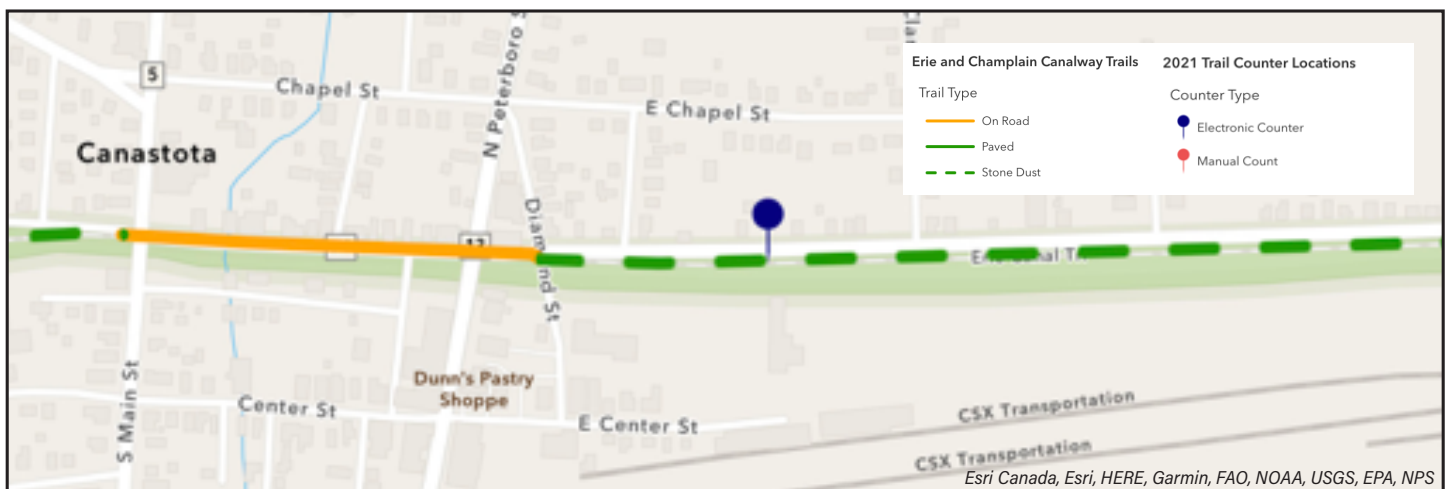


2021 Total
Estimated Use

14,848

About the location

The village of Canastota, located in the town of Lenox in Madison County, is home to the International Boxing Hall of Fame. Canastota is about halfway between the bigger urban centers of Syracuse and Utica, but the immediate surrounding area is rural. The trail here has a stone dust surface and runs along the Old Erie Canal, part of Old Erie Canal State Historic Park. The counter is located in the village downtown, to the east of a small trailhead and parking lot. The trail here is accessible by foot by inhabitants of the village but is also easily reached by car by populations coming from further afield.



Map 7: Counter Location at Canal Street, Canastota

ANALYSIS

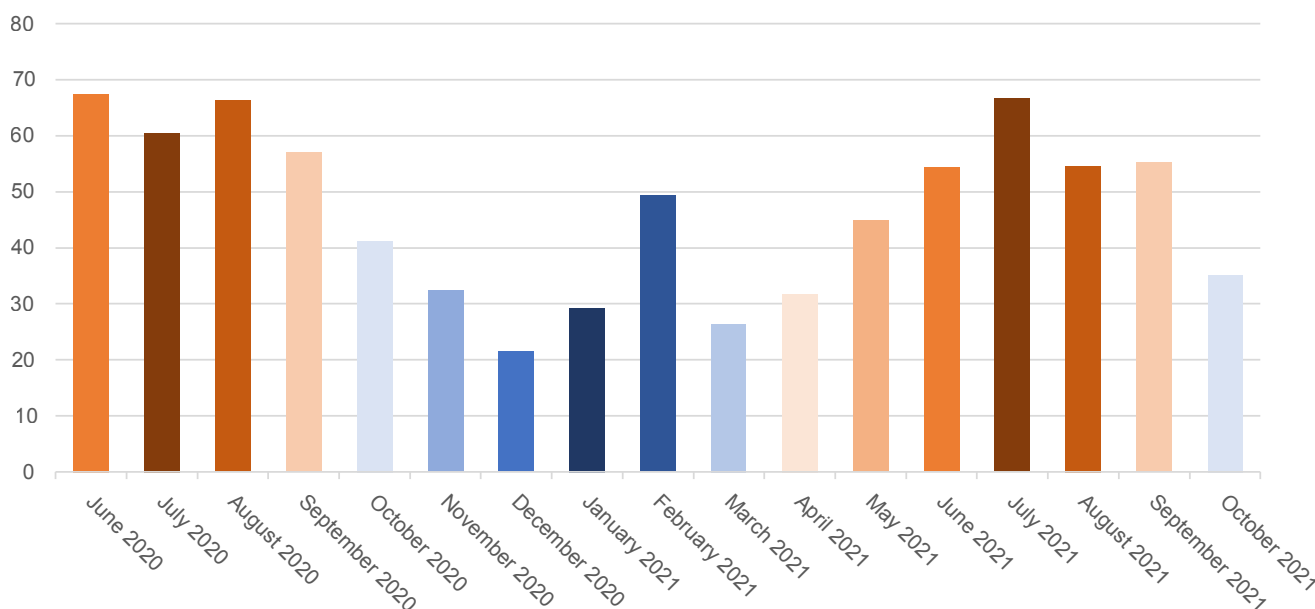
The data analyzed in this report reflects use between June 13, 2020 and October 19, 2021. Over the course of 494 days, the counter recorded 22,932 visits to the trail. In 2021 alone, the counter recorded 13,167 visits to the trail over 292 days, corresponding to an annual use estimate of 14,848. This figure was 8% lower than 2020's annual use estimate of 16,221 visits. July 2021 saw 10% higher use than did July 2020, averaging 67 visits per day to 2020's 60 visits per day. However, June, August, September, and October all saw lower use in 2021, ranging from 3% to 19% lower use per day.

This counter was installed to provide a more in-depth picture of trail use at Canastota. Canastota is planned to be home to a new "pocket neighborhood" along the canal, having been selected as the winner of New York's Reimagine the Canals competition in 2018. This data will serve as a baseline to measure the popularity of the trail in this area; when that project is completed, this section of the trail will undoubtedly see much higher use.

As the counter was installed for nearly two years, the data captured multiple 365-day stretches that can be summed to provide a "full year snapshot" of trail use. The total use over these various 365-day periods ranged from a low of 15,072 visits during the second to last one-year period, from October 19, 2020 to October 18, 2021, to a high of 15,895 visits during the year between July 17, 2020 and July 16, 2021. The most recent one-year period captured, between October 20, 2020 and October 19, 2021, saw 15,146 visits to the trail.

TABLE 7 - CANAL STREET, CANASTOTA Trail Use by Month (June 2020 - October 2021)			
Months	Total	Days	Daily Avg
June 2020	1,214	18	67
July 2020	1,874	31	60
August 2020	2,054	31	66
September 2020	1,709	30	57
October 2020	1,277	31	41
November 2020	971	30	32
December 2020	666	31	21
2020 Recorded	9,765	202	48
2020 ANNUAL USE	16,221	366	44
January 2021	908	31	29
February 2021	1,382	28	49
March 2021	818	31	26
April 2021	953	30	32
May 2021	1,392	31	45
June 2021	1,629	30	54
July 2021	2,066	31	67
August 2021	1,694	31	55
September 2021	1,657	30	55
October 2021	668	19	35
2021 Recorded	13,167	292	45
2021 ANNUAL USE	14,848	365	41

Chart 6- Daily Average Use by Month, Canastota



Lock 18, German Flatts



Daily Average Based on
Full Year Estimate

63



Highest Daily
Volume Recorded

345



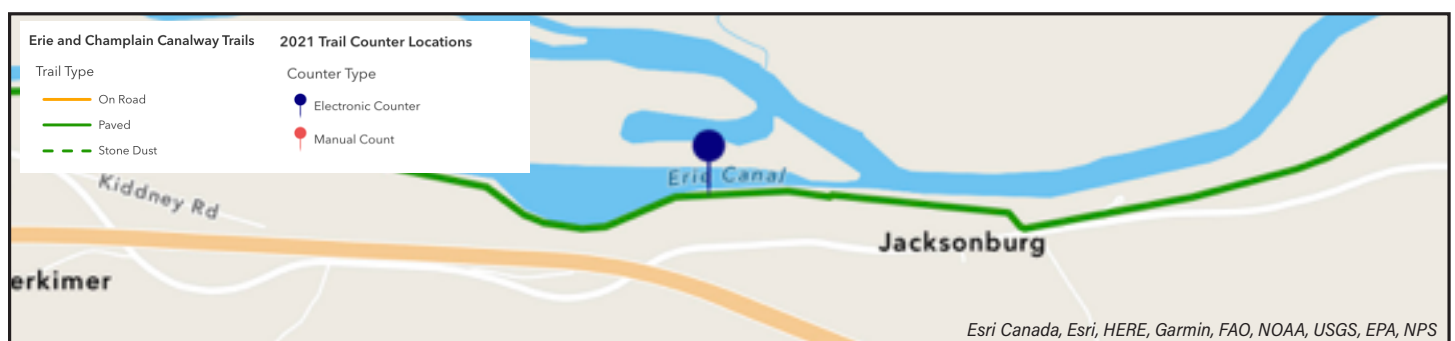
2021 Total
Estimated Use

23,155

About the location

The counter in the town of German Flatts in Herkimer County was installed just west of Lock E-18 in October 2019 and was removed in May 2021, remaining in place for more than 18 months. A small parking area at the lock allows trail users to drive to access the trail. A smaller number of trail users may walk or bike from the Village of Mohawk or one of the other Herkimer County communities, and for those users Lock E-18 would likely be a turn-around point.

The trail between Fort Herkimer Church and Lock E-18 was opened to the public in 2019, closing a significant on-road gap that ran most of the way between Utica and Little Falls. The only previous stretch of trail that was open in this stretch ran for about two miles along the canal from the Village of Mohawk to Fort Herkimer Church; the new stretch extends this off-road segment for an additional two miles. In 2020, the trail was further extended to Route 167 in Little Falls, where it connects to the off-road trail running east to Schenectady. Additionally, a newly completed stretch of trail runs west from the previous terminus in Mohawk to the village of Ilion, creating a more than 10-mile stretch of continuous trail between Ilion and Little Falls.



Map 8: Counter Location at Lock 18, German Flatts

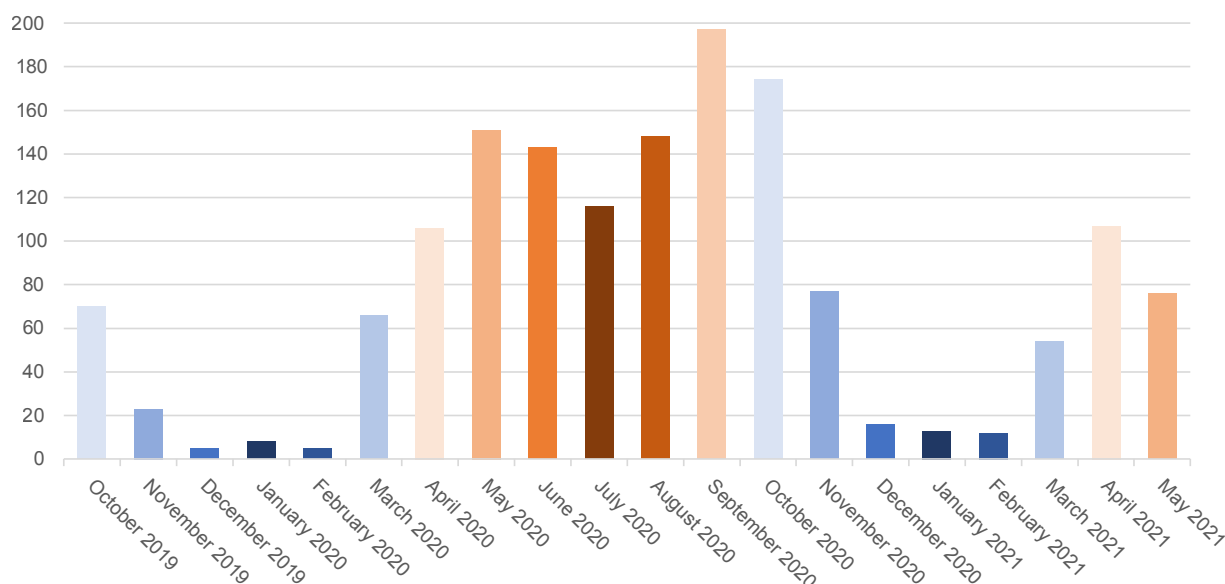
ANALYSIS

The data analyzed in this report reflects use between October 10, 2019 and May 5, 2021, except for five days in September 2020, which appeared to be anomalies in the data and were removed from analysis. This inconsistent data was likely due to ongoing active construction during that month, with workers moving back and forth in front of the counter during the process. In 2021 alone, the counter recorded 5,968 visits to the trail over 125 days, corresponding to an annual use estimate of 23,155. This figure was 36% lower than 2020's annual use estimate of 36,440 visits, but 32% higher than 2019's annual use estimate of 17,513 visits. Use in January and February 2021 was much higher than in the corresponding months of 2020, and April 2021's use was slightly higher than use in April 2020. However, March 2021 saw 18% lower use than March 2020.

As the counter was installed for more than a year and a half, the data captured multiple full year stretches that can be summed to provide a "full year snapshot" of trail use. Due to the data anomalies in September 2020, an exact sum of continuous 365-day visitation is not possible to calculate. However, an estimated use figure using a 365-day period for which we have data is possible. Visitation ranged from a low of 33,652 visits was recorded for the 365 days that data was collected between October 12, 2019 and October 16, 2020 to a high of 36,670 for the 365 days of data between April 19, 2020 and April 24, 2021. The most recent 365 days of data, between April 30, 2020 and May 5, 2021, saw 36,061 visits to the trail.

Months	Total	Days	Daily Avg
October 2019	1,464	21	70
November 2019	684	30	23
December 2019	140	31	5
2019 Recorded	2,288	82	28
2019 ANNUAL USE	17,513	365	48
January 2020	247	31	8
February 2020	151	29	5
March 2020	2,035	31	66
April 2020	3,190	30	106
May 2020	4,668	31	151
June 2020	4,284	30	143
July 2020	3,597	31	116
August 2020	4,574	31	148
September 2020	4,934	25	197
October 2020	5,207	30	174
November 2020	2,323	30	77
December 2020	491	31	16
2020 Recorded	13,167	292	45
2020 ANNUAL USE	14,848	365	41
January 2021	399	31	13
February 2021	324	28	12
March 2021	1,660	31	54
April 2021	3,207	30	107
May 2021	378	5	76
2021 Recorded	5,968	125	48
2021 ANNUAL USE	23,155	365	63

Chart 7 - Daily Average Use by Month, German Flatts



Lock 17, Little Falls



Daily Average Based on
Full Year Estimate

119



Highest Daily
Volume Recorded

613

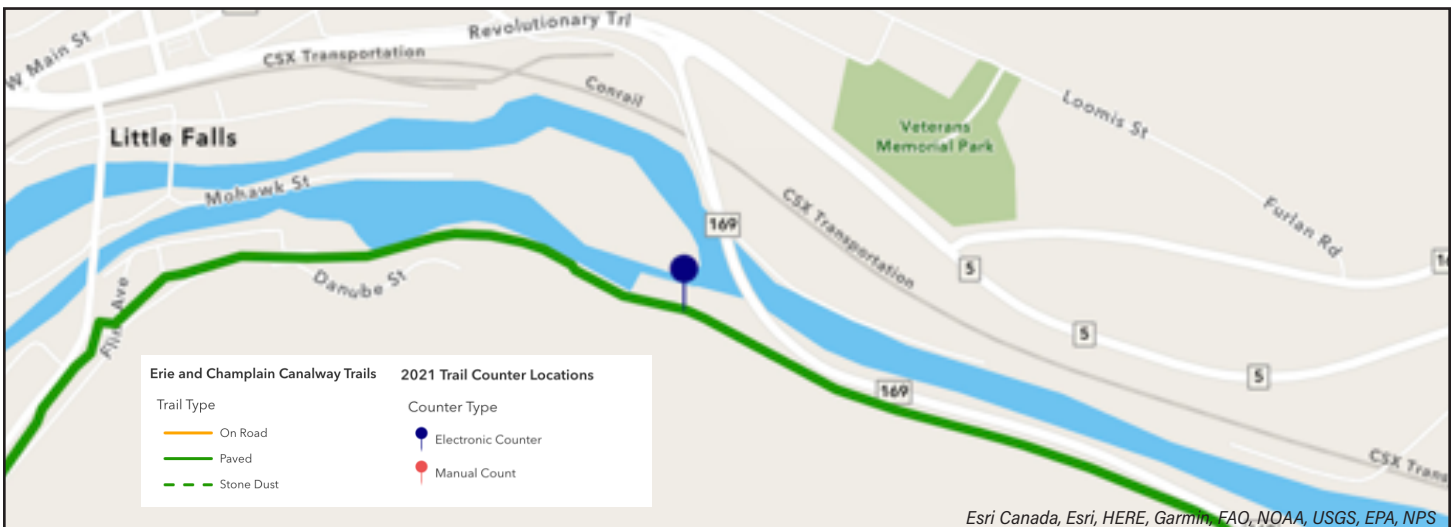


2021 Total
Estimated Use

43,276

About the location

A counter was installed along the trail in Little Falls at the point where a staircase to a parking lot at Lock 17 meets the trail, the only access point between the trail and lock. The counter was only installed between May and August 2021, as a construction project to reconstruct the trail through that stretch was planned to begin in September 2021. The trail in this location was, as of when the counter was installed, a 2.3-mile-long stretch of paved trail, located at the western end of a 9.4-mile continuous stretch of trail between Little Falls and Lock 16 in Minndenville. A short on-road stretch separates this segment of trail from a newly opened 9.9-mile stretch of paved trail that extends to Ilion, effectively creating a roughly 19-mile stretch of continuous trail in the Little Falls area.



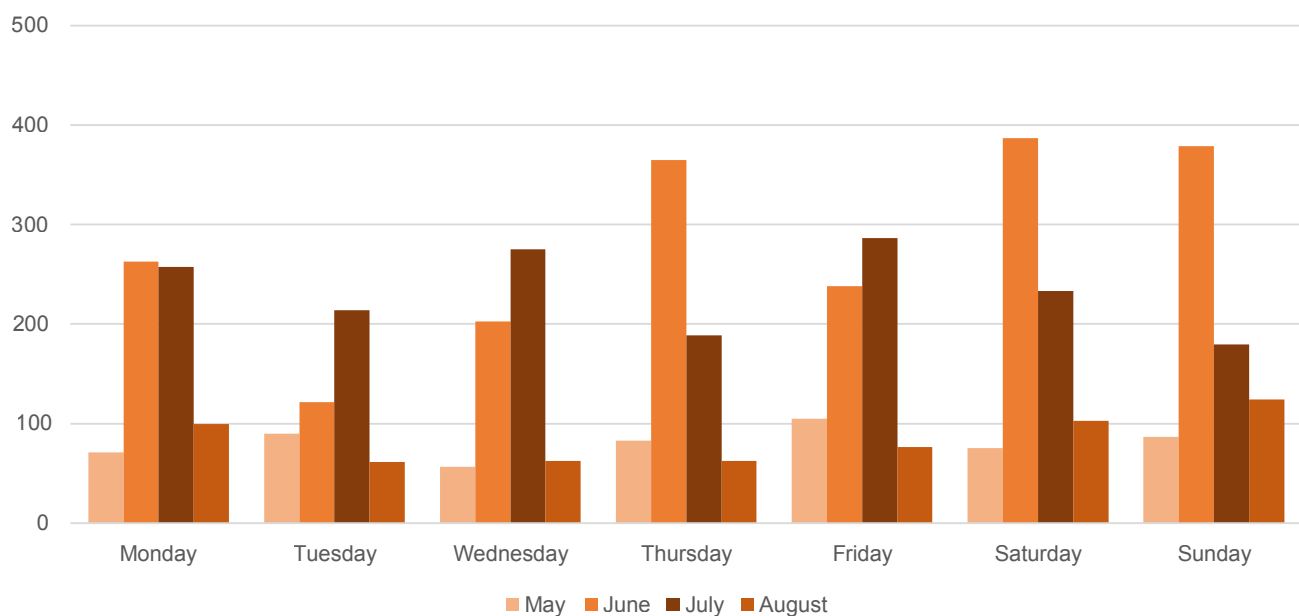
Map 9: Counter Location at Lock 17, Little Falls

ANALYSIS

The data analyzed in this year's report uses counter data from May 7, 2021 to August 25, 2021. Over the course of the total 111 days the counter was installed, it measured 19,544 visits to the trail, corresponding to an annual use estimate of 43,276. The counter in this location was the only time PTNY has had a counter installed in Little Falls.

TABLE 9 - LOCK 17, LITTLE FALLS Trail Use by Month (April 2021 - October 2021)			
Months	Total	Days	Daily Avg
May 2021	2,041	25	82
June 2021	8,145	30	272
July 2021	7,243	31	234
August 2021	2,115	25	85
2021 Recorded	19,544	111	176
2021 ANNUAL USE	43,276	365	119

Chart 8 - Trail Use by Day of Week and Month, Little Falls



Yankee Hill Lock, Amsterdam



Daily Average Based on
Full Year Estimate

65



Highest Daily
Volume Recorded

574

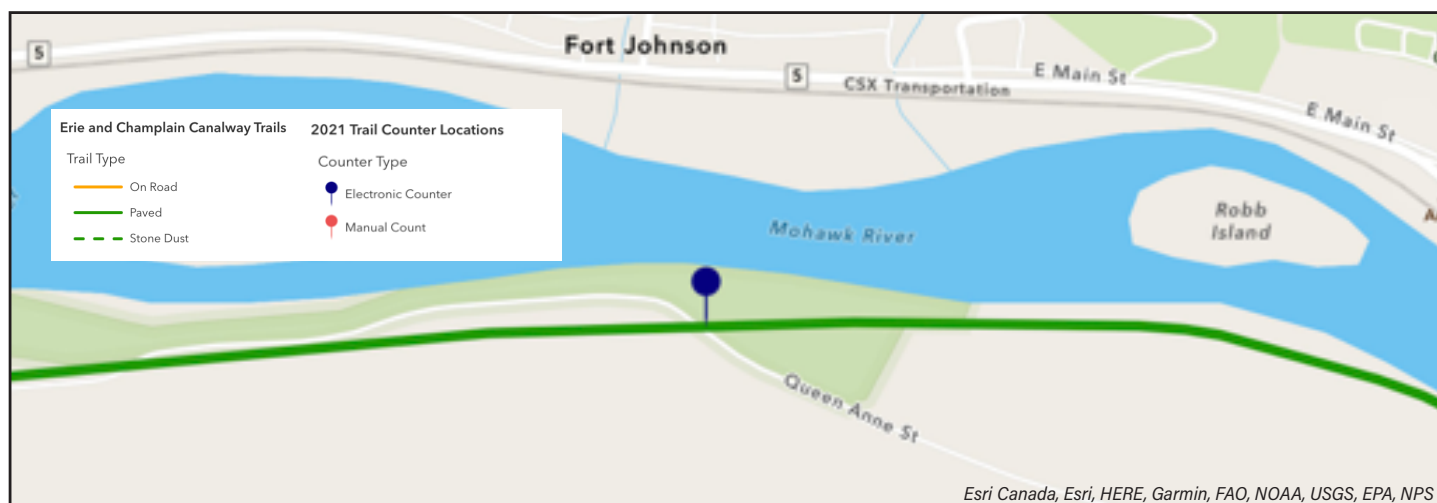


2021 Total
Estimated Use

23,763

About the location

The counter was placed near the eastern end of Schoharie Crossing State Historic site, located about four miles east of the City of Amsterdam. This location is known as the Yankee Hill Lock, one of the locks along the historic “Enlarged” Erie Canal, and the restored former Putnam Canal Store. The area contains a parking lot and a picnic area. There are no neighborhoods immediately within walking distance of the trailhead, as this site is located in a rural setting, so visitors using the trail at this location likely arrived by car to park at the trailhead or bicycle via the trail. The counter also would have recorded snowmobile use in the winter, as this stretch of trail allows use by snowmobiles.



Map 10: Counter Location at Yankee Hill Lock, Amsterdam

ANALYSIS

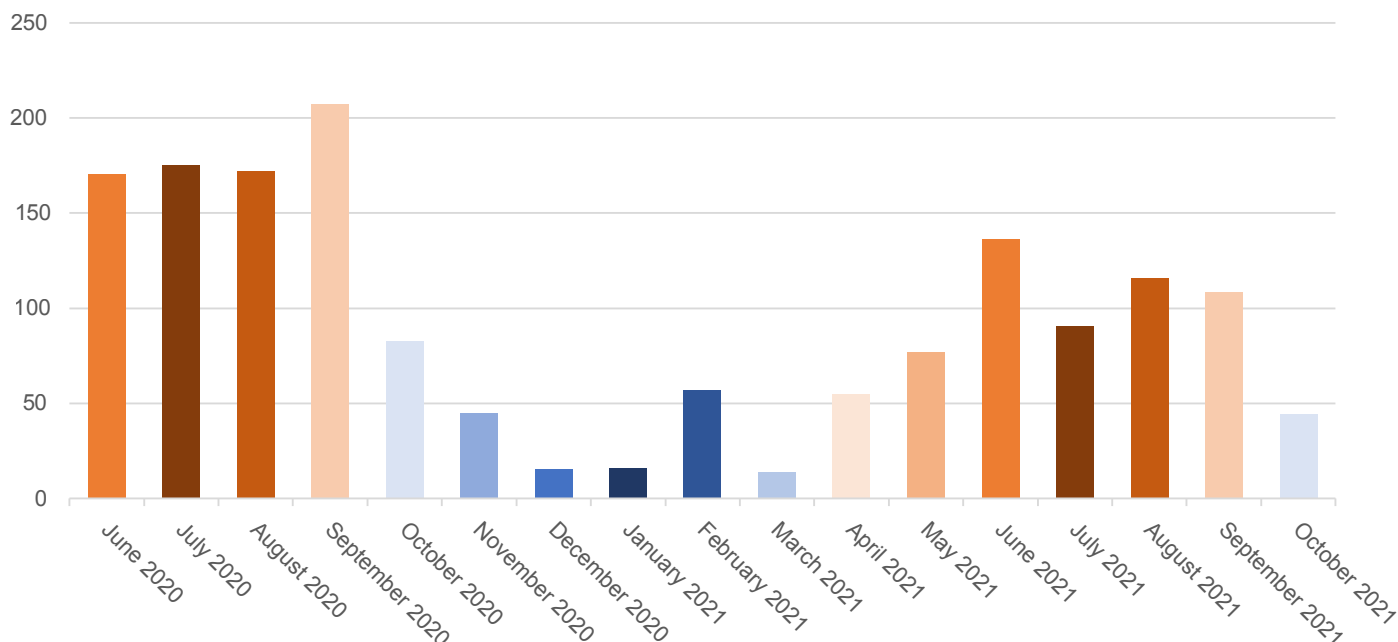
The data analyzed in this report reflects use between June 13, 2020 and November 1, 2021. Over the course of 507 days, the counter recorded 46,094 visits to the trail. In 2021 alone, the counter recorded 21,672 visits to the trail over 305 days, corresponding to an annual use estimate of 23,763. This figure was 41% lower than 2020's annual use estimate of 40,568 visits. For all five months that had more than one day of use recorded in both 2020 and 2021, the 2021 use level was much lower, ranging from 20% lower use in June to as much as 48% lower use, in both July and September.

As the counter was installed for more than a full year, the data captured multiple 365-day stretches that can be summed to provide a "full year snapshot" of trail use. The total use over these various 365-day periods ranged from a high of 32,352 visits during the initial 365-day period ranging from June 13, 2020 to June 12, 2021, to a low of 23,409 visits during the 365-day period from October 24, 2020 to October 23, 2021. The most recent one-year period captured, between November 2, 2020 and November 1, 2021, saw 23,464 visits to the trail.

TABLE 10 - YANKEE HILL LOCK, AMSTERDAM
Trail Use by Month (June 2020 - November 2021)

Months	Total	Days	Daily Avg
June 2020	3,065	18	170
July 2020	5,434	31	175
August 2020	5,330	31	172
September 2020	6,215	30	207
October 2020	2,557	31	82
November 2020	1,342	30	45
December 2020	479	31	15
2020 Recorded	24,422	202	121
2020 ANNUAL USE	40,568	366	111
January 2021	498	31	16
February 2021	1,598	28	57
March 2021	421	31	14
April 2021	1,653	30	55
May 2021	2,378	31	77
June 2021	4,083	30	136
July 2021	2,804	31	90
August 2021	3,581	31	116
September 2021	3,250	30	108
October 2021	1,369	31	44
November 2021	37	1	37
2021 Recorded	21,672	305	71
2021 ANNUAL USE	23,763	365	65

Chart 9 - Daily Average Use by Month, Amsterdam



16th Street, Watervliet



Daily Average Based on
Full Year Estimate

123



Highest Daily
Volume Recorded

1,222



2021 Total
Estimated Use

44,829

About the location

The most recent counter installed along the Erie Canalway Trail was installed at 16th Street in Watervliet in early September 2021. This counter was installed along a newly constructed sidepath that runs along Broadway in the city of Watervliet, between the roadway and the adjacent highway I-787. This paved stretch of trail is one of the more urban stretches of trail along the entire length of the Canalway Trail, with Watervliet's neighborhoods and stores located just across Broadway from the trail, and the larger cities of Cohoes, Troy, and Albany within easy biking distance. The trail serves as part of a direct connection between these cities.



Map 11: Counter Location at
16th Street, Watervliet



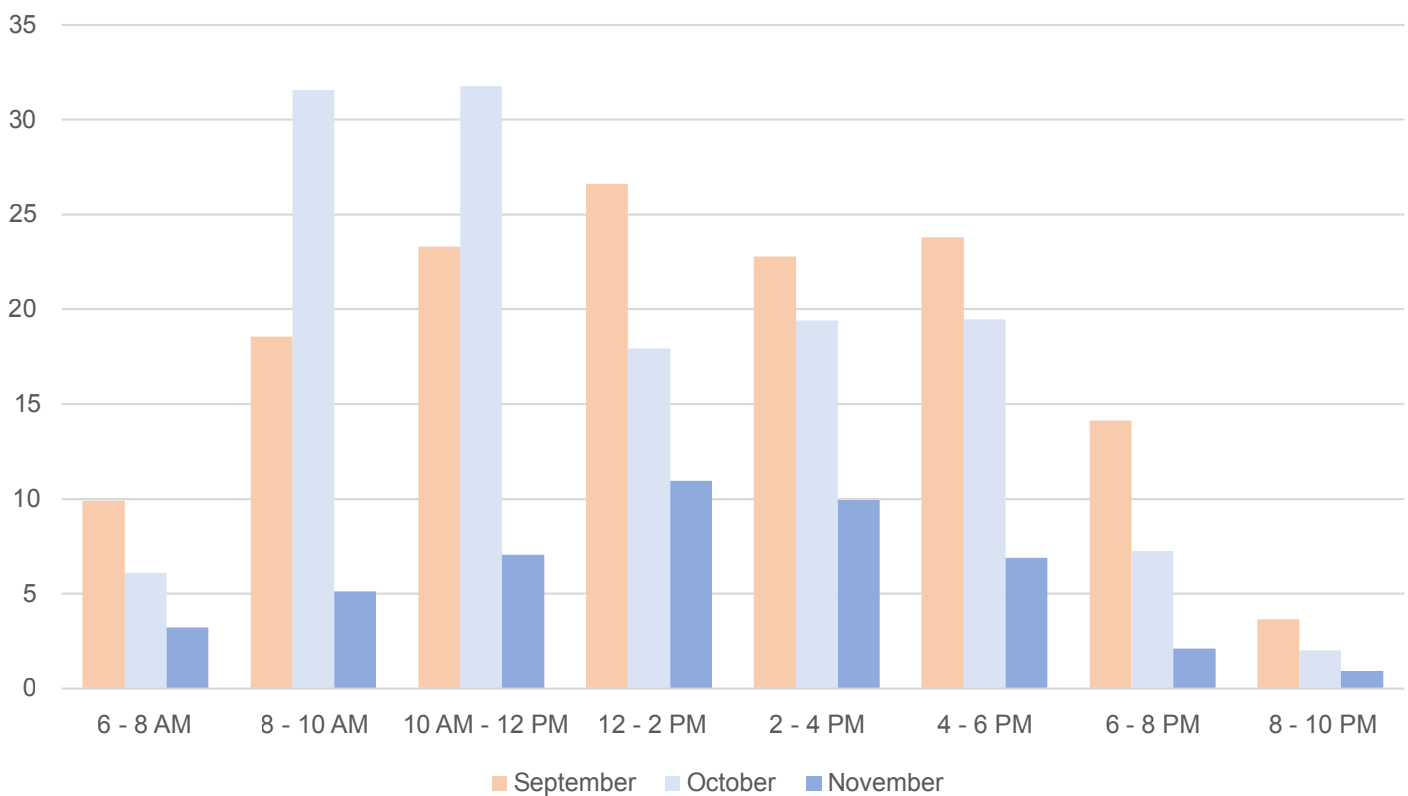
ANALYSIS

The data analyzed in this report reflects use between September 11, 2021 and November 30, 2021. Over the course of 81 days, the counter measured 8,667 visits to the trail, corresponding to an annual use estimate of 44,829.

The counter remains installed in this location collecting data and will be removed some time in 2022. Additional data from this counter will be analyzed as part of the 2022 version of Who's on the Trail: Erie Canalway Trail.

TABLE 11 - 16TH STREET, WATERVLIET Trail Use by Month (September 2021 - November 2021)			
Months	Total	Days	Daily Avg
September 2021	2,952	20	148
October 2021	4,280	31	138
November 2021	1,435	30	48
2021 Recorded	8,667	81	107
2021 ANNUAL USE	44,829	365	123

Chart 10- Monthly Use by Two-Hour Time Intervals, Watervliet



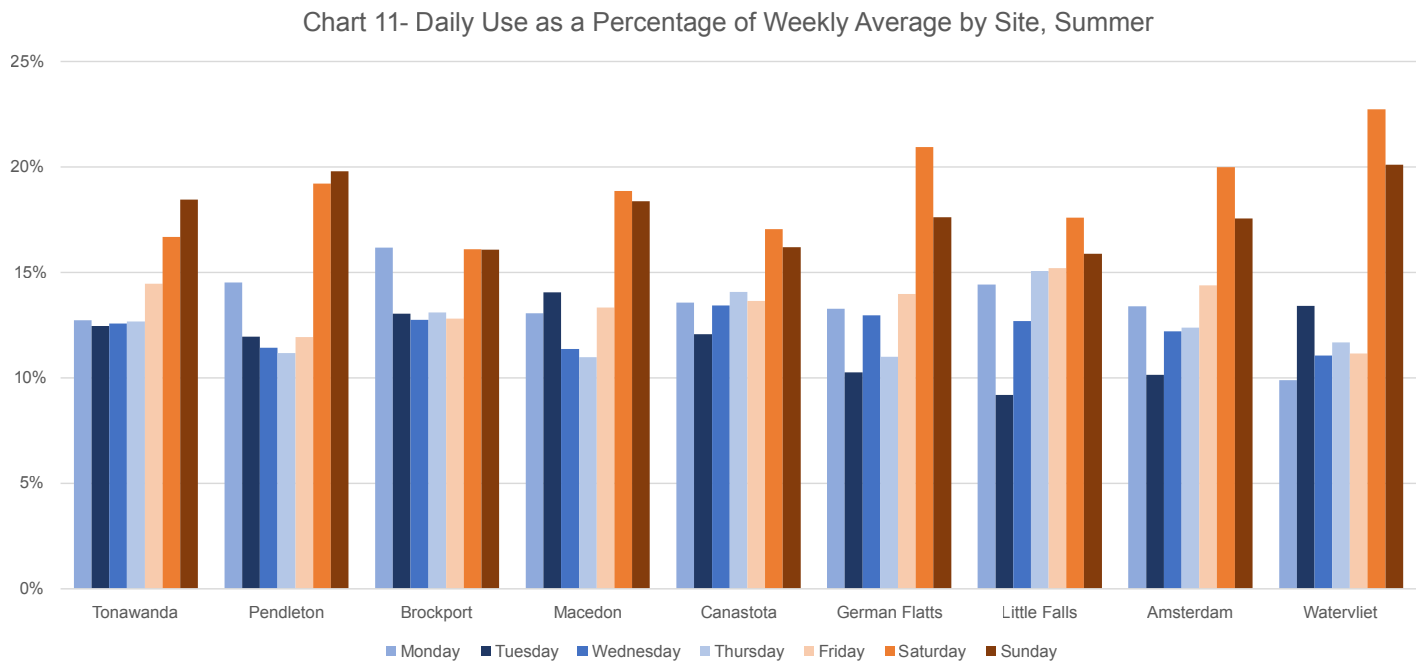
TRAIL USE CHARACTERISTICS

Trail use at all nine electronically recorded sites was analyzed in aggregate to determine overall use trends and to identify instances where the observed use at one site varies greatly from the other locations along the trail. This observation was split into two general categories - summer (June to September) and fall/winter/spring (October to May).

SUMMER

Each location saw more visitors during an average weekend day than an average weekday. In Tonawanda and Pendleton, the popular day to visit the trail was Sunday, and in Macedon, Canastota, German Flatts, Little Falls, Amsterdam and Watervliet, the most popular day was Saturday. The one outlier, with a most popular day during the week, was Brockport, which saw the highest average use on Mondays. Other than Brockport, the second most popular day at each location was the other weekend day; even at Brockport, the 3rd most popular day (after Monday and Saturday) was Sunday, with less than 2 average visitors per day separating the two sites.

The lowest use days were both weekdays at all locations, but varied from site to site, other than Wednesday, which was lowest at one site and second lowest at seven of the nine sites. German Flatts was the one exception, with Tuesday and Thursday as the lowest and second lowest visitation days. Tuesday was also the lowest visitation day at Tonawanda, Canastota, Little Falls and Amsterdam. Thursday was the lowest visitation day in Pendleton and Macedon, and interestingly, Watervliet's lowest use day was Monday.



The busiest time of trail use during the week was highly variable ranging from 9:00 a.m. to 11:00 a.m. in Pendleton to 6:00 p.m. to 8:00 p.m. in Tonawanda. Four of the locations - Brockport, Macedon, Canastota, and German Flatts - saw the highest use between 10:00 a.m. and 12:00 p.m. This is consistent with what was observed in 2020, which also saw peak use at sites primarily in late morning or early afternoon, but represents a shift from 2019, when trail use peaked for all locations consistently after 4:00 p.m. This likely is a result of trail users taking

advantage of more flexible schedules due to the COVID-19 pandemic, and enjoying the trail throughout the day, as opposed to just in the evenings, although the observed change may simply reflect differing use patterns in different locations.

On the weekends, the peak use ranged between 10:00 a.m. and 4:00 p.m. Pendleton, Macedon, Canastota and German Flatts experienced the earliest peaks, between 10:00 a.m. and 12:00 p.m., and Brockport the latest, between 2:00 p.m. and 4:00 p.m. Again, this continues trends first observed in 2020, with peak use coming later in the day at some locations, but stands in contrast to 2019, when all sites measured experienced peak use on the weekends in the morning, between 8:00 a.m. and 12:00 p.m.

FALL/WINTER/SPRING

Each location was found to have fewer visitors in the off-season than in the summer, which is to be expected with the onset of colder weather and shorter days. Tonawanda and Schoharie Crossing saw the highest drop in use between summer and the other seasons, and Pendleton, German Flatts and Little Falls also saw a more than 60% drop in use. Brockport saw the least change in use, followed by Macedon and Watervliet.

As in summer, there was higher recorded use on the weekends than on weekdays. For six of the nine locations, Saturday was the busiest day of the week, followed by Sunday as second busiest day at five of those six. Brockport was the one exception, as Wednesday followed Saturday as the second busiest day. For two other locations, Sunday was more popular, followed by Saturday in Pendleton and by Thursday in Watervliet. Little Falls was an outlier in this data, with Friday as the most popular day followed by Tuesday. However, as with the other sites noted above, Little Falls data only included one month of fall/winter/spring data and this data may not be representative of larger trends.

During the cooler months, all sites experienced peak use in the afternoon on weekdays. This peak ranged from a comparatively early 12:00 p.m. to 2:00 p.m. in German Flatts to a late peak of 5:00 p.m. to 7:00 p.m. in Brockport, although Brockport's later peak may have been influenced by the comparatively warmer weather and later sunset in October compared to other sites. During the weekend, peak use ranged from 9:00 a.m. to 4:00 p.m. Watervliet had the earliest peak, from 9:00 a.m. to 11:00 a.m., while the latest observed peak was in Tonawanda and Brockport, from 2:00 p.m. to 4:00 p.m.

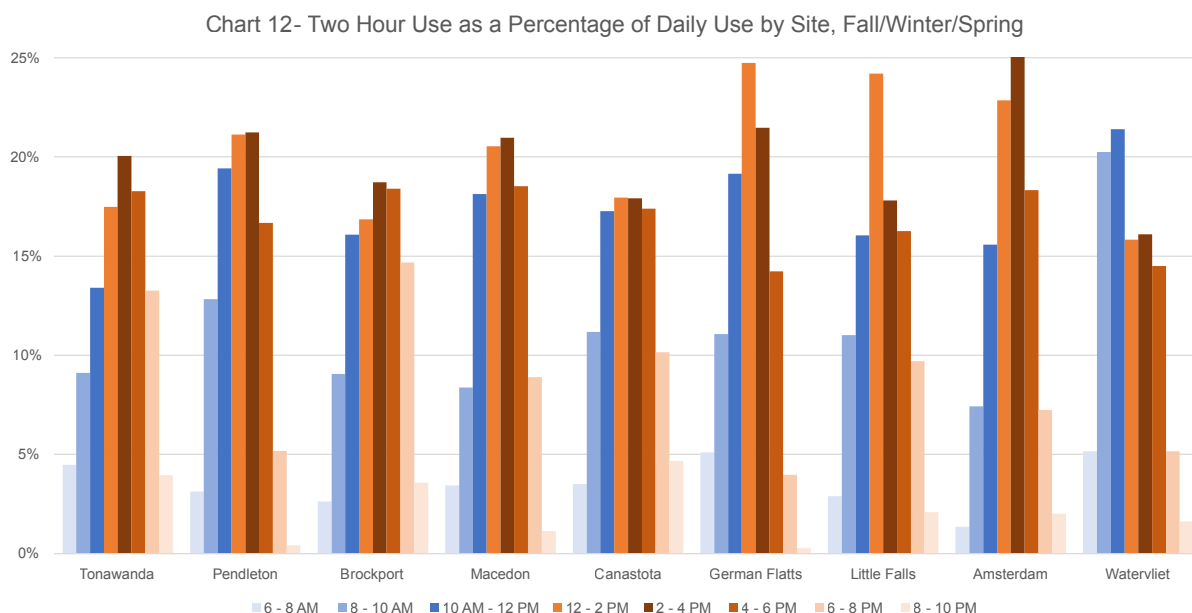


TABLE 12 – TRAIL USE CHARACTERISTICS, ALL ELECTRONIC COUNTER SITES (2019-2021)

	SUMMER (June-September)					FALL/WINTER/SPRING (October-May)				
	Weekday Average	Weekend Average	Busiest Day of the Week	Peak Weekday Period	Peak Weekend Period	Weekday Average	Weekend Average	Busiest Day of the Week	Peak Weekday Period	Peak Weekend Period
Niawanda Park, Tonawanda <i>(July 2019-June 2021)</i>	1,188	1,610	Sunday	6-8pm	1-3pm	429	566	Saturday	3-5pm	2-4pm
Robinson Road, Pendleton <i>(June 2021-December 2021)</i>	286	458	Sunday	9-11am	10am-12pm	122	160	Sunday	1-3pm	11am-1pm
Corbett Park, Brockport <i>(April 2021-October 2021)</i>	207	245	Monday	10am-12pm	2-4pm	204	227	Saturday	5-7pm	2-4pm
Lock 30, Macedon <i>(April 2021-October 2021)</i>	152	225	Saturday	10am-12pm	10am-12pm	98	146	Saturday	4-6pm	12-2pm
Canal Street, Canastota <i>(June 2020-October 2021)</i>	56	70	Saturday	10am-12pm	10am-12pm	30	45	Saturday	4-6pm	11am-1pm
Lock 18, German Flatts <i>(September 2019-May 2021)</i>	128	200	Saturday	10am-12pm	10am-12pm	46	90	Saturday	12-2pm	1-3pm
Lock 17, Little Falls <i>(May 2021-August 2021)</i>	190	240	Saturday	1-3pm	12-2pm	82	81	Friday	1-3pm	12-2pm
Yankee Hill Lock, Amsterdam <i>(June 2020-November 2021)</i>	127	192	Saturday	2-4pm	1-3pm	35	68	Saturday	3-5pm	1-3pm
16th Street, Watervliet <i>(September 2021-November 2021)</i>	117	219	Saturday	5-7pm	12-2pm	71	148	Sunday	4-6pm	9-11am





END-TO-END CYCLISTS

Since 2012, PTNY and the Canal Corporation have recognized individuals who complete the entire length of the Erie Canalway Trail. The End-to-End program features riders and hikers who have traveled the distance between Albany and Buffalo either in segments or in one multi-day journey. Since the start of the recognition program, almost 5,000 travelers have registered. This recognition program has provided invaluable data about the people that travel across the state.

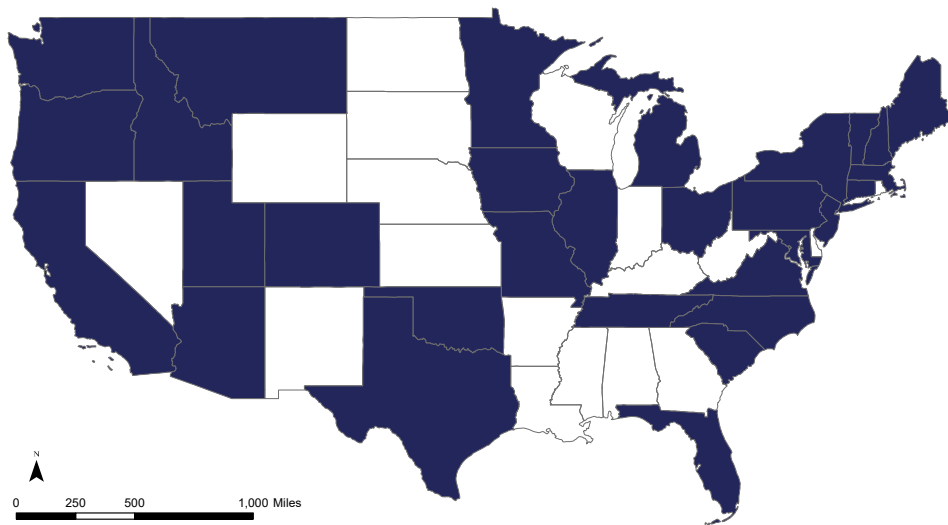
DEMOGRAPHIC INFORMATION

In 2021, those that completed the trip ranged between the ages of 8 and 81. The largest group of End-to-Enders (39 percent) were between the ages of 55-64, followed by 19 percent who were 65 and over. In 2021, only 33 percent were under the age of 50, as compared to 2020, when those under 50 were nearly half of the End-to-Enders.

Map 12: States Where End-to-Enders Came From

Nearly 60 percent of 2021 End-to-Enders reported working full time, while 30 percent were retired. Over 50 percent reported that their household earned more than \$100,000 annually, an additional 37 percent earning between \$50,000 and \$99,999 a year.

Due to travel restrictions this year, many travelers chose to stay close to home. In 2021, 37 percent of End-to-Enders called New York home with just a few respondents indicating that they were from the United Kingdom and Canada. However, canceled international travel plans meant that there were other travelers who decided to travel farther afield within the United States, coming from 33 states to ride the Erie Canalway Trail.



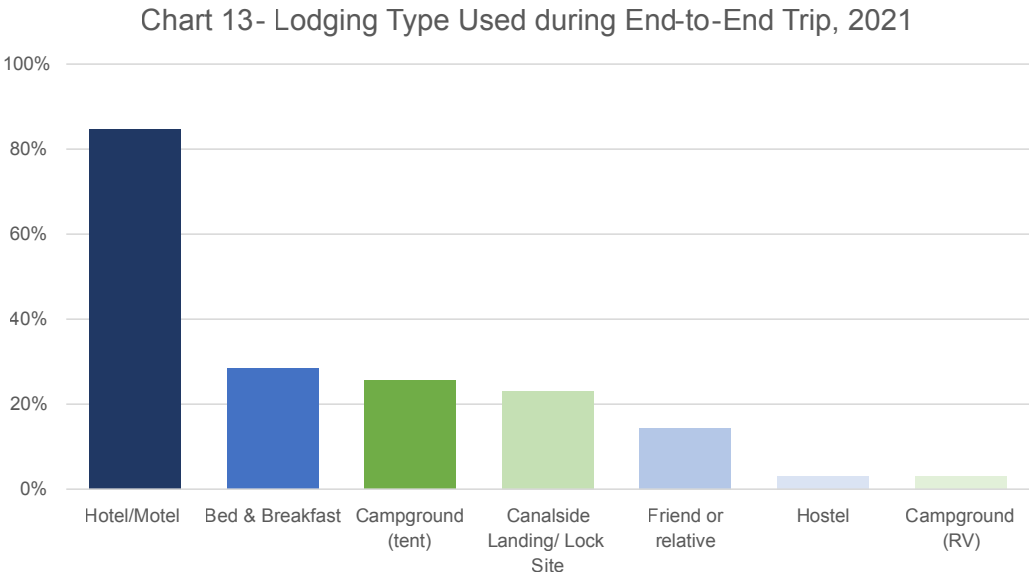
For many End-to-Enders, COVID-19 restrictions proved to be the impetus they needed to hit the trail running—or cycling. End-to-Enders expressed that their decision to participate in the end-to-end challenge was driven by the opportunity to travel while following social distancing guidelines and the flexibility of working

from home. Many saw the end-to-end challenge as a personal or physical goal they could accomplish. Along the trail, End-to-Enders were consistently impressed by everything from the charming canal towns to the evolving scenery and the delightful interactions with locals and other strangers along the way.

ABOUT THEIR TRIP

The majority of riders traveled in a group of two, with 30 percent having traveled in groups of three to five, and 26 percent having made the trek alone. Nearly a quarter of respondents said that they heard about the Erie Canalway Trail End-to-End recognition program through word of mouth, such as from someone who had previously ridden on PTNY’s Cycle the Erie Canal bike tour, whereas 40 percent found out about it through Parks & Trails New York website.

Despite some restrictions, End-to-Enders found many options for accommodations along the Erie Canalway Trail. Notably, 85 percent of riders spent at least one night at a hotel or motel during their expedition, similar to 2020 figures (86 percent). In addition, 23 percent stayed at a lock site, 29 percent at a campsite, and 28 percent at a bed and breakfast. End-to-Enders, on average, spent seven nights on the trail.



Daily spending varied considerably. Some End-to-Enders reported they were able to travel with minimal spending, others reported spending up to \$1,000. The daily average amount that individuals spent was \$150. Once again, PTNY’s resources proved very useful for End-to-Enders. Nearly 60 percent used PTNY’s interactive Canalway Trail map, and three quarters of riders used PTNY’s Cycling the Erie Canal Guidebook.





TOTAL TRAIL USE ESTIMATE

As part of the completion of the statewide Empire State Trail (EST), new stretches of both the Erie Canalway Trail (ECT) and Champlain Canalway Trail (CCT) have been constructed, helping to create increasingly long stretches of continuous trail across the state. In anticipation of the completion of the Empire State Trail by the end of 2020, the Hudson River Valley Greenway, with the assistance of Alta Planning & Design, published the Empire State Trail: Trail User Projections report which estimated the potential number of annual users on the EST. The report states that 8.6 million users will visit the EST annually once it is completed, based on existing trail counts and the population density surrounding the stretches of trail. This methodology provides the basis for PTNY to count the total estimated use on the ECT and CCT. PTNY first estimated total use over the entire trail in 2019 and has updated and refined the estimate with data collected in 2020 and 2021.

In 2021, PTNY estimates that 3,319,670 cyclists, pedestrians, and other users enjoyed the ECT and CCT. This number is a significant decrease from last year's estimate of 4,257,404 visits, but similar to 2019's estimate of 3,311,737 visits. While trails across the country saw increased use in 2020 due to the COVID-19 pandemic, those use figures returned to a more "normal" level in 2021 as alternative options for outdoor recreation re-opened.

The ECT saw an estimated 3,104,591 visits to the trail in 2021, a 28 percent decrease from 2020. However, the 2021 use on the ECT does represent a 3% increase over the 2019 use estimate of 3,017,024. The CCT saw an estimated 215,079 visits in 2020, a decrease of 34% from the estimated 288,003 visits in 2019. Both use estimates reflect refinements to the method used to calculate expected use at locations at which actual data was not collected.

DETAILED METHODOLOGY

The below methodology was developed by Alta Planning & Design and replicated with their permission for use in calculating total trail use along the Erie and Champlain Canalway Trails.

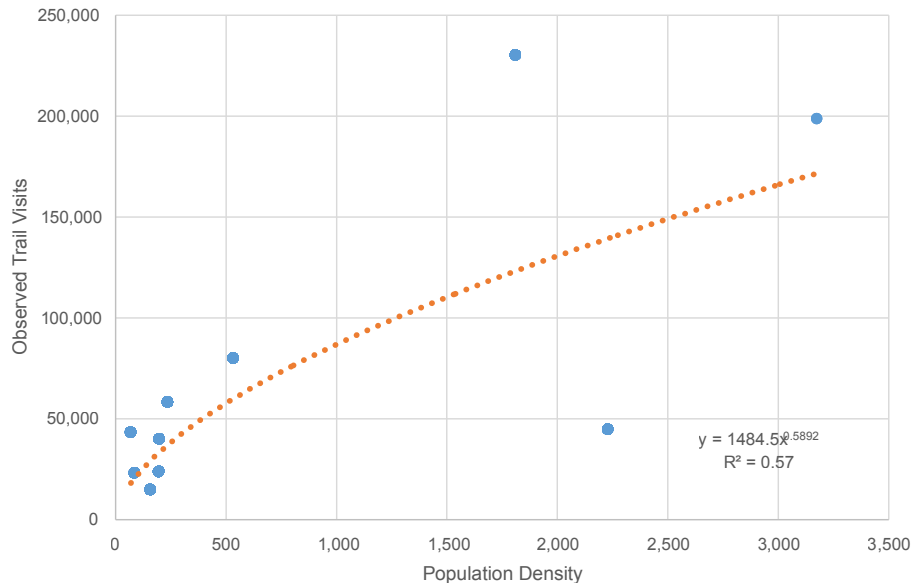
The core assumption in the methodology is that trail use correlates with population density in surrounding areas. This is supported by research cited in the Empire State Trail report. Population densities around a three-mile radius of each electronic counter location were calculated using the following steps:

1. **Map the 10 locations along the ECT where PTNY conducted trail counts in 2021**
2. **Determine the population density of block groups within a three-mile distance from each count location.** All block groups that fall within a three-mile radius of each existing counter location were selected, and 2020 Decennial Census Total Population data was joined to the block groups (POP). Each block group agglomeration had its area calculated (SQMI).

3. **Determine population density for each individual counter location.** The sum of the population and (POP_SUM) and sum of the area (SQMI_SUM) for each block group agglomeration was calculated. These values were then used to determine the unique population densities (POP_DEN) associated with each counter location by dividing the sum of the population by the sum of the area ($POP_DEN = [POP_SUM / SQMI_SUM]$).

Each of the 10 trail counts and the corresponding population densities were plotted. The counter data was weighted based on the number of days that each station was active, with each manual count being used to account for one day, so the model considered those locations which had more observed days rather than projected data based on the NBPD formula. The resulting trendline was used to estimate trail users at each sample location on the Erie Canalway Trail system.

Chart 14- Correlation between Population Density and Observed Trail Visit Data



Determining the trendline to be used was the one way in which this methodology diverged from that used by Alta. While that projection used a linear trendline, the R2 value for the trendline was only 0.1299, showing a fairly weak correlation. Instead, PTNY used a power regression, with the equation ($y = 1484.5x^{0.5892}$, where x is population density and y is annual trail visits). This equation more accurately reflected the observed trend in trail use, where the rate of increase in expected trail count increased rapidly at low population densities, and then the rate of increase slows at higher population densities. The resultant R2 value was 0.5226, a much stronger correlation than that used by Alta.

The estimated trail use for the entirety of the ECT and CCT were calculated based on this trendline equation using the following steps:

1. **Map sample count points along the ECT and CCT.** These sample locations were remapped by PTNY based on the methodology used by Alta in its report. A total of 45 sample points were identified across the two trails. Any sample count location that could have data instead provided by one of the 2020 count locations was then removed. This resulted in 35 estimate points, fewer than the 37 estimate points used to generate the 2020 use estimates. These are provided in Table 11 below.
2. **Determine population, area, and population density for each sample point.** Following a similar methodology to that which was used for the electronic count points, each block group within a three-mile radius of the sample points were combined, and a total population figure (2020 Decennial Census Total Population data), square mileage, and population density) was calculated.
3. **Calculate estimated trail use at each sample location.** Population densities at each of the 45 sample locations along the Canalway Trail system were entered into the equation ($y = 1484.5x^{0.5892}$), where x is population density and y is annual trail visits. For locations where actual data was collected, that data was used rather than the projected use data.

TABLE 13 – TRAIL USE PROJECTIONS

Sample Number	Trail	Sample Location	2021 Estimate
1	ECT	Buffalo	232,747
2	ECT	Black Rock	239,776
-	ECT	Tonawanda*	230,209
3	ECT	Amherst	82,447
-	ECT	Pendleton*	80,098
4	ECT	Gasport	24,770
5	ECT	Medina	24,843
6	ECT	Albion	23,778
-	ECT	Brockport*	58,210
7	ECT	Spencerport	59,579
8	ECT	Gates	175,089
-	ECT	Rochester*	198,716
9	ECT	Pittsford	118,661
10	ECT	Fairport	108,054
-	ECT	Macedon*	40,051
11	ECT	Newark	31,965
12	ECT	Clyde	17,718
13	ECT	Port Byron	21,797
14	ECT	Jordan	24,227
15	ECT	Camillus	55,015
16	ECT	Syracuse	193,588
17	ECT	DeWitt	90,870
18	ECT	Chittenango	30,230
-	ECT	Canastota*	14,848

Sample Number	Trail	Sample Location	2021 Estimate
19	ECT	Lock E22	18,644
20	ECT	Rome	47,000
21	ECT	Utica	70,290
-	ECT	German Flatts*	23,155
-	ECT	Little Falls*	43,276
22	ECT	St. Johnsville	16,673
23	ECT	Canajoharie	19,623
24	ECT	Fultonville	22,165
-	ECT	Amsterdam*	23,763
25	ECT	Pattersonville	20,697
26	ECT	Schenectady	128,384
27	ECT	Niskayuna	81,800
28	ECT	Colonie	99,323
29	ECT	Cohoes	139,575
-	ECT	Watervliet	44,829
30	ECT	Albany	128,108
ECT TOTAL			3,104,591
31	CCT	Waterford	89,786
32	CCT	Halfmoon	50,594
33	CCT	Hudson Crossing Park*	20,879
34	CCT	Fort Edward	34,640
35	CCT	Hudson Falls	19,180
CCT TOTAL			215,079
TOTAL ALL LOCATIONS			3,319,670



Map 13: Trail User Projection Sample Locations

CONCLUSION

The 2021 Who's on the Trail report is the 16th edition of this report. Trail use in 2021 was down from the previous year, but this was largely a result of the huge surge in use observed at many locations in 2020 when the COVID-19 pandemic limited indoor leisure options.

That being said, the Canalway Trail remains popular, and use was higher than any year pre-pandemic. The statewide popularity of the Canalway Trail system has grown significantly over the past decade, and that growth continues to be strong. The estimate of over 3.3 million visits to the Canalway Trail system in 2021 reflects the results of major investments in closing the gaps in the trail network and the completion of the Empire State Trail. This trail system is clearly a major recreational asset for communities across the canal corridor, and it is essential to care for and highlight the ongoing value of these trails.

The 2022 Who's on the Trail report will include additional data from locations that currently have counters installed and data from new count locations. We hope to find new ways to engage with volunteers to complete in-person trail counts, which rely more heavily on projections but are able to provide valuable data on the modes used by trail users, as well as confirm the accuracy of electronic counts. As we gain additional insight into the nature of trail use, we will be better able to estimate total trail use. Continuing to expand the availability of data for the Canalway Trail will provide trail managers with the information needed to continue to provide a quality experience for all trail users.



APPENDIX I

FULL-YEAR TRAIL USE EXTRAPOLATION METHODOLOGY

For all nine electronic counters sites, the observed use was extrapolated to calculate a full-year estimate for that site. The raw data was downloaded for the entirety of the time the counters were installed at each location. The oldest data downloaded for this report was data from Tonawanda and German Flatts, at which counters were installed in July 2019 and October 2019. Data was downloaded at an hour-level granularity to ensure that it was available for hour-by-hour analysis as used above. The data was checked for any anomalies, and any data excluded that may have been downloaded from outside the period of time when the counter was installed. The data was then aggregated by day.

The NBPD extrapolation figures allow for the conversion of hourly, daily, or monthly count data into daily, weekly, or yearly figures, respectively. The instructions to the NBPD extrapolation spreadsheet, which is publicly available at <http://bikepeddocumentation.org/>, are based on the use of manual counts. The directions recommend that estimates are based on the average of at least two and preferably three two-hour counts during the same period and week or during consecutive weeks. Weekday counts are directed to occur on Tuesdays through Thursday and not on holidays, and weekend counts can be completed on either Saturday or Sunday.

The extrapolation spreadsheet calls for five input variables - count dates, count times, type (multi-use path or street/sidewalk), climate zone, and two-hour count volume. Count dates provide the spreadsheet with information on the day of week and month of the count, and count time provides the inputs on what times were observed. The type factor allows the extrapolation methodology to be used for multi-use pathways or for users cycling on the street or walking on sidewalks in medium- to high-density areas. All counts included in this analysis were done on paths and use the path extrapolation factors. Climate zone give users one of three choices: “Long Winter-Short Summer,” “Moderate Climate,” or “Very Hot Summer-Mild Winter.” All of the counts in New York were categorized in the “Long Winter-Short Summer” climate region. Finally, the input calls for the two-hour count total. Based on these five variables, the NBPD spreadsheet is set up to return the daily, weekly, monthly, and annual count figures based on a two-hour count total.

The NBPD structure is based on three tables. Table One calculates daily use based on what each hour period is as a percentage of total daily use. These figures differ based on path or street/sidewalk, on weekday or weekend, and on whether the counts are done between April and September or between October and March. For each of these circumstances, each hour of time between 6:00 a.m. and 10:00 p.m. is estimated to be a set percentage of total daily use - i.e., from 5:00 p.m. to 7:00 p.m. is considered 14% of daily use. The observed two-hour count is first multiplied by 1.05 to account for the fact that 6:00 a.m. to 10:00 p.m. is assumed to be 95% of all trail use, and then the resulting figure is divided by the two-hour count proportion to come up with a daily estimate.

The second table converts the daily total to a weekly total using a similar estimation factor, where each day of the week is given a percentage of total weekly use. This figure is used to generate the monthly estimate (without using a separate table) by multiplying the weekly estimate by the number of weeks in the month (accounting for partial weeks). While the notes in the table include a correction that holidays should be accounted for weekend use rates, it does not appear that the formulas account for that correction.

The final table adjusts the monthly estimate to an annual estimate and is based on the climate regions. For each of the three climate regions, each month of the year is considered to be a set portion of total annual use. The three tables as they appear in NBPD are listed below (with the categories that don't apply to the upstate region removed).

Table 1: Hour to Day

(6AM - 10PM = 95% OF ALL USAGE)

Hour	APR-SEP		OCT-MAR	
	6am - 9pm		6am - 9pm	
	---- Path-----		---- Path-----	
	wkdy	wkend	wkdy	wkend
600	2%	1%	2%	0%
700	4%	3%	4%	2%
800	7%	6%	6%	6%
900	9%	9%	7%	10%
1000	9%	9%	9%	10%
1100	9%	11%	9%	11%
1200	8%	10%	9%	11%
1300	7%	9%	9%	10%
1400	7%	8%	9%	10%
1500	7%	8%	8%	10%
1600	7%	7%	8%	8%
1700	7%	6%	7%	5%
1800	7%	5%	6%	3%
1900	5%	4%	4%	2%
2000	4%	3%	2%	1%
2100	2%	2%	2%	1%

Table 2: Day to Week

DAILY ADJUSTMENT FACTORS

SUN	18%
MON	14%
TUES	13%
WED	12%
THURS	12%
FRI	14%
SAT	18%

Note: Holidays use weekend rates

Table 3: Region and Month

MONTHLY ADJUSTMENT FACTORS

CLIMATE REGION	Long Winter Short Summer
JAN	3%
FEB	3%
MAR	7%
APR	11%
MAY	11%
JUN	12%
JUL	13%
AUG	14%
SEP	11%
OCT	6%
NOV	6%
DEC	3%

The month-long extrapolation factors were the only piece of this calculation that PTNY used in determining annual use. For all seven sites, an estimated 2020 total use figure was calculated based on the available data collected during 2020. To calculate this, a percentage of total annual use figure was calculated by summing the NBPD figure for months where full month data was available and adding a portion of the NBPD monthly factor for months where only a part of the month had data available. The total observed use was divided by the percentage of annual use to obtain the total annual use figure. Similar calculations were used to calculate 2019 total use at DeWitt, German Flatts, Camillus, Tonawanda, and Schuylerville.

For five of the seven sites, counters were installed for more than 365 days, although at none of them do we have data for a full January 1-December 31 calendar year. For each of these sites, the most recent 365-day figure is also presented; this often differs slightly from the calculated figures, with the calculated figures usually showing higher figures due to the assumptions built into the NBPD calculations.

APPENDIX II

ELECTRONIC COUNT DATA, 2019-2021

	Niawanda Park, Tonawanda			Robinson Road, Pendleton			Corbett Park, Brockport			Lock 30, Macedon			Canal Street, Canastota			Lock 18, German Flatts			Lock 17, Little Falls			Yankee Hill Lock, Amsterdam			16th Street, Watervliet		
Months	Total	Days	Daily Avg	Total	Days	Daily Avg	Total	Days	Daily Avg	Total	Days	Daily Avg	Total	Days	Daily Avg	Total	Days	Daily Avg	Total	Days	Daily Avg	Total	Days	Daily Avg	Total	Days	Daily Avg
July 2019	34,774	25	1,391	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
August 2019	41,284	31	1,332	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
September 2019	24,665	30	822	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
October 2019	13,554	31	437	-	-	-	-	-	-	-	-	-	-	-	-	1,464	21	70	-	-	-	-	-	-	-	-	-
November 2019	5,156	30	172	-	-	-	-	-	-	-	-	-	-	-	-	684	30	23	-	-	-	-	-	-	-	-	-
December 2019	4,349	31	140	-	-	-	-	-	-	-	-	-	-	-	-	140	31	5	-	-	-	-	-	-	-	-	-
2019 Recorded	123,782	178	695	-	-	-	-	-	-	-	-	-	-	-	-	2,288	82	28	-	-	-	-	-	-	-	-	-
2019 ANNUAL USE*	245,191	365	672	-	-	-	-	-	-	-	-	-	-	-	-	17,513	365	48	-	-	-	-	-	-	-	-	-
January 2020	4,378	31	141	-	-	-	-	-	-	-	-	-	-	-	-	247	31	8	-	-	-	-	-	-	-	-	-
February 2020	4,167	29	144	-	-	-	-	-	-	-	-	-	-	-	-	151	29	5	-	-	-	-	-	-	-	-	-
March 2020	15,029	31	485	-	-	-	-	-	-	-	-	-	-	-	-	2,035	31	66	-	-	-	-	-	-	-	-	-
April 2020	23,989	30	800	-	-	-	-	-	-	-	-	-	-	-	-	3,190	30	106	-	-	-	-	-	-	-	-	-
May 2020	42,849	31	1,382	-	-	-	-	-	-	-	-	-	-	-	-	4,668	31	151	-	-	-	-	-	-	-	-	-
June 2020	48,694	30	1,623	-	-	-	-	-	-	-	-	-	1,214	18	67	4,284	30	143	-	-	-	3,065	18	170	-	-	-
July 2020	50,342	31	1,624	-	-	-	-	-	-	-	-	-	1,874	31	60	3,597	31	116	-	-	-	5,434	31	175	-	-	-
August 2020	46,142	31	1,488	-	-	-	-	-	-	-	-	-	2,054	31	66	4,574	31	148	-	-	-	5,330	31	172	-	-	-
September 2020	28,343	30	945	-	-	-	-	-	-	-	-	-	1,709	30	57	4,934	25	197	-	-	-	6,215	30	207	-	-	-
October 2020	14,570	31	470	-	-	-	-	-	-	-	-	-	1,277	31	41	5,207	30	174	-	-	-	2,557	31	82	-	-	-
November 2020	13,692	30	456	-	-	-	-	-	-	-	-	-	971	30	32	2,323	30	77	-	-	-	1,342	30	45	-	-	-
December 2020	6,093	31	197	-	-	-	-	-	-	-	-	-	666	31	21	491	31	16	-	-	-	479	31	15	-	-	-
2020 Recorded	298,288	366	815	-	-	-	-	-	-	-	-	-	9,765	202	48	35,701	360	99	-	-	-	24,422	202	121	-	-	-
2020 ANNUAL USE*	298,288	366	815	-	-	-	-	-	-	-	-	-	16,221	366	44	36,440	366	100	-	-	-	40,568	366	111	-	-	-
January 2021	6,429	31	207	-	-	-	-	-	-	-	-	-	908	31	29	399	31	13	-	-	-	498	31	16	-	-	-
February 2021	6,771	28	242	-	-	-	-	-	-	-	-	-	1,382	28	49	324	28	12	-	-	-	1,598	28	57	-	-	-
March 2021	20,173	31	651	-	-	-	-	-	-	-	-	-	818	31	26	1,660	31	54	-	-	-	421	31	14	-	-	-
April 2021	21,439	30	715	-	-	-	6,122	29	211	2,610	29	90	953	30	32	3,207	30	107	-	-	-	1,653	30	55	-	-	-
May 2021	25,520	31	823	-	-	-	7,637	31	246	4,55	31	147	1,392	31	45	378	5	76	2,041	25	82	2,378	31	77	-	-	-
June 2021	5,766	6	961	7,508	23	326	6,387	30	213	5,106	30	170	1,629	30	54	-	-	-	8,145	30	272	4,083	30	136	-	-	-
July 2021	-	-	-	11,367	31	367	6,889	31	222	5,926	31	191	2,066	31	67	-	-	-	7,243	31	234	2,804	31	90	-	-	-
August 2021	-	-	-	10,485	31	338	6,363	31	205	5,270	31	170	1,694	31	55	-	-	-	2,115	25	85	3,581	31	116	-	-	-
September 2021	-	-	-	9,049	30	302	6,866	30	229	4,720	30	157	1,657	30	55	-	-	-	-	-	-	3,250	30	108	2,952	20	148
October 2021	-	-	-	6,002	31	194	4,363	26	168	2,523	26	97	668	19	35	-	-	-	-	-	-	1,369	31	44	4,280	31	138
November 2021	-	-	-	3,101	30	103	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	37	1	37	1,435	30	48
December 2021	-	-	-	1,224	17	72	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2021 Recorded	86,098	157	548	48,736	193	253	44,627	208	215	30,705	208	148	13,167	292	45	5,968	125	48	19,544	111	176	21,672	305	71	8,667	81	107
2021 ANNUAL USE*	230,209	365	631	80,098	365	219	58,210	365	159	40,051	365	110	14,848	365	41	23,155	365	63	43,276	365	119	23,763	365	65	44,829	365	123

WORKS CITED

Empire State Trail: Trail User Projections (2018, July). Empire State Trail, Hudson River Valley Greenway, Alta Planning + Design.

<https://www.ny.gov/empire-state-trail/about-empire-state-trail#documents-amp-resources>

Lindsay, Greg, Jeff Wilson, Elena Rubchinskaya, Jihui Yang, Yuling Han. (2007). Estimating urban trail traffic: Methods for Existing and Proposed Trails. Landscape Urban Planning, 299-325.

National Bicycle and Pedestrian Documentation Project Count Adjustment Factors. (2009, March). Retrieved December 1, 2017, from National Bicycle & Pedestrian Document Project Count:

<http://bikepeddocumentation.org/>

Scipione, Paul. (2014). The Economic Impact of the Erie Canalway Trail: An Assessment and User Profile of New York's Longest Multi-Use Trail. Albany, NY: Parks & Trails New York.