VALLEY Bike

2018

In its first five months ValleyBike, the Pioneer Valley's regional Bikeshare was a great success. Initial planning for ValleyBike was coordinated by the Pioneer Valley Planning Commission, in partnership with interested communities. When ValleyBike changed to implementation, the leadership and fiscal management transferred from PVPC to the City of Northampton, in collaboration with Amherst, Holyoke, South Hadley, Springfield, the University of Massachusetts, and PVPC. Bewegen is the primary system vendor and operator and Corps Logistics handles day-to-day operations.

Report on Year 1

VALLEY Bike

The Pioneer Valley's regional BikeShare initiative

Led by the City of Northampton and coordinated regionally by the Pioneer Valley Planning Commission with active participation and leadership of UMASS Amherst, the cities of Holyoke and Springfield and the Towns of Amherst and South Hadley. (Easthampton joined the consortium in late 2018 with system rollout planned for spring 2019)

Funded in part by the Massachusetts Department of Transportation and the US DOT Congestion Mitigation Air Quality (CMAQ) grant and supplemented by funding support from various Pioneer Valley institutions, organizations and businesses including: Mercy Medical Center, Baystate Medical Center, Florence Bank, Cooley Dickinson Hospital, and NETA.

Implemented by Bewegen & Corps Logistics

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INTRODUCTION

Bikeshare in the Pioneer Valley, known as ValleyBike, is the culmination and realization of state, regional and municipal goals articulated in the region's 2014 sustainability plan, Our Next Future, as well as in municipal and state plans and goals.

Bikeshare is an integral component of the region's path to a regenerative and sustainable future and strives to promote healthy habits and reduce air polluting greenhouse gas emitting vehicle trips. If managed effectively and expanded appropriately, ValleyBike could also mitigate the need for expensive road repairs and expansion, and has the potential to dramatically improve the effectiveness of our region's struggling transit system. ValleyBike represents one of the lowest cost per passenger mile traveled of any active transportation system in the Valley.

ValleyBike has had great success in its first five months of operation in the region. While there were some significant shortcomings with the launch of ValleyBike - such as less than half of the planned number of bikes were available in the first five months - the enthusiastic response from the community and businesses who stepped up and supported ValleyBike led to the generation of 83,735 ridden miles (equivalent to 3.3 trips around the earth!), on 26,353 bicycle trips.

ValleyBike officially launched on June 28th, 2018 and remained open until November 30th hosting a total of 26,353 rides, an average of 170 per day. An average of 167 bikes were available at any given time throughout the season at 43 stations spread amongst five cities and towns (Amherst, Holyoke, Northampton, South Hadley, and Springfield). The ValleyBike program is designed to have 500 bikes available at 50 stations throughout the region. Twenty-six stations were opened at the launch in June and 17 more opened in July and August. The remaining seven stations will open in Year Two. The average rides per bike for the entire season was approximately 157.8, and the average rides per bike per day was just over 1.

Month	Total Rides	Avg Distance	Avg Bikes Available	Avg rides/bike
June	98	2.2	94	1.0
July	2836	3.6	94	30.2
August	7369	3.8	237	31.1
September	9889	3	152	65.1
October	4404	2.3	151	29.2
November	1757	2	202	8.7
Total	26353	3.1	167	157.8

HISTORY OF BIKESHARE IN THE PIONEER VALLEY

2008: PVPC produces a Report on the state of BikeShare, 1968-2008 documenting types of programs around the world, including the Yellow Bike program that existed at Hampshire College as well as the Bixi (precursor to Bewegen) Bikeshare program in Montreal and encourages Pioneer Valley municipalities to look into bikeshare.

2012: UMASS-Amherst launches no-cost Bikesharing program on campus funded by Student Government fees.

Early 2012: Northampton Planning and Sustainability begins researching bicycle share for Northampton.

Late 2012: Northampton Mayor Narkewicz approves a single Dero bike-share station in downtown Northampton and city raises part of the funds.

Early 2013: Northampton determined that having a system that was not scaleable only made sense if it wasn't possible to have a larger system, either city-wide or region wide.

2013: Amherst meets with representatives from Amherst College, Hampshire College and UMASS to explore a town-wide bikesharing program.

Spring 2013: Northampton Planning and Amherst Sustainability discussed what a regional system would look like.

2013-2015: PVPC secures a Massachusetts Clean Energy Center grant to work with the communities of Amherst, Hadley, Easthampton and Holyoke to advance Clean Energy Strategies, selecting advancement of a regional Bikeshare initiative as a priority for funding.

Late 2013: PVPC solicits partners for a state District Local Technical Assistance (DLTA) funded effort to advance regional bike share.

2014-2016: PVPC works with a group of member municipalities: Amherst, Holyoke, Northampton, and Springfield, to research and advance regional bikesharing.

2016: Northampton, with PVPC and regional support, applies for and obtains CMAQ funds for regional bike share for four communities, and an amendment to increase funding to five communities, adding South Hadley.

2017: Northampton, with PVPC and regional support and consensus, releases a bike share RFP and, awards contract to Bewegen Technology for a 500-bike, 50-station, five municipality system.

June 2018: ValleyBike Share opens.

November 2018: ValleyBike Share closes for the 2018 season.

December 2018: Easthampton obtains a Massachusetts Housing Choice grant for ValleyBike and joins the regional consortium, growing it to six municipalities.

METHODS

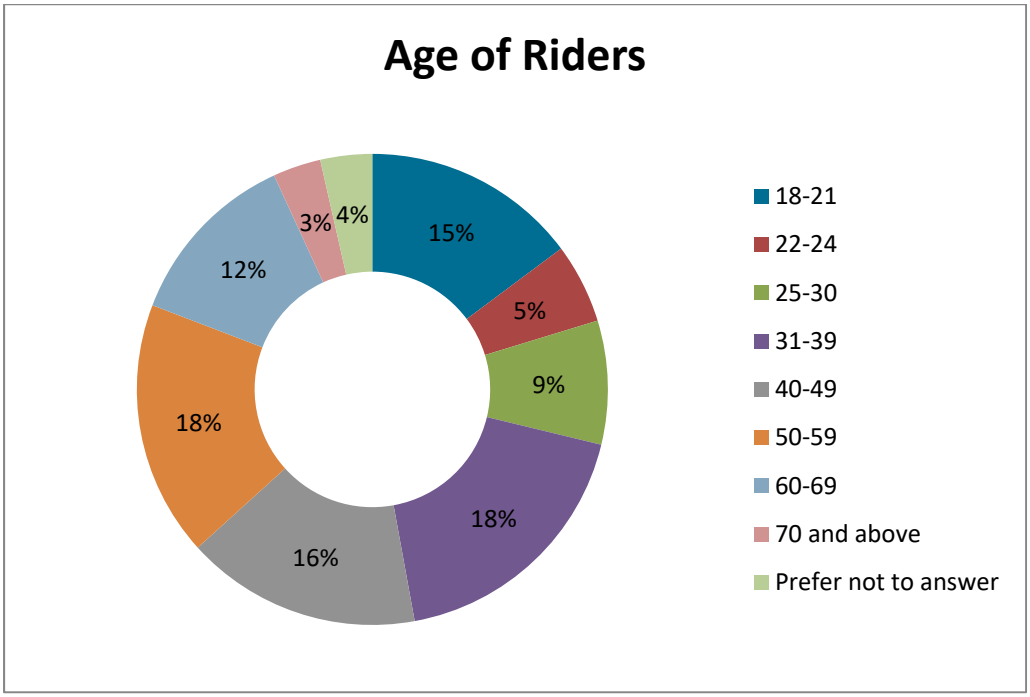
Each ride taken on a ValleyBike was tracked through the Backoffice system, allowing management to understand how riders used the bike throughout the season. However, some user error may have contributed to slightly skewed data. For this reason, some rides were removed from the data used for this report. For example, all rentals lasting longer than 24 hours were removed, as were rides that were less than .15 miles (this is the approximate distance between the two closest stations). All rides logged by Corps members and Technicians were also removed.

A user survey was sent to each email address associated with a ValleyBike account in October 2018 to solicit feedback on the program. 364 individual responses were gathered.

CHARACTERISTICS OF RIDERS BASED ON EMAIL SURVEY RESPONSES

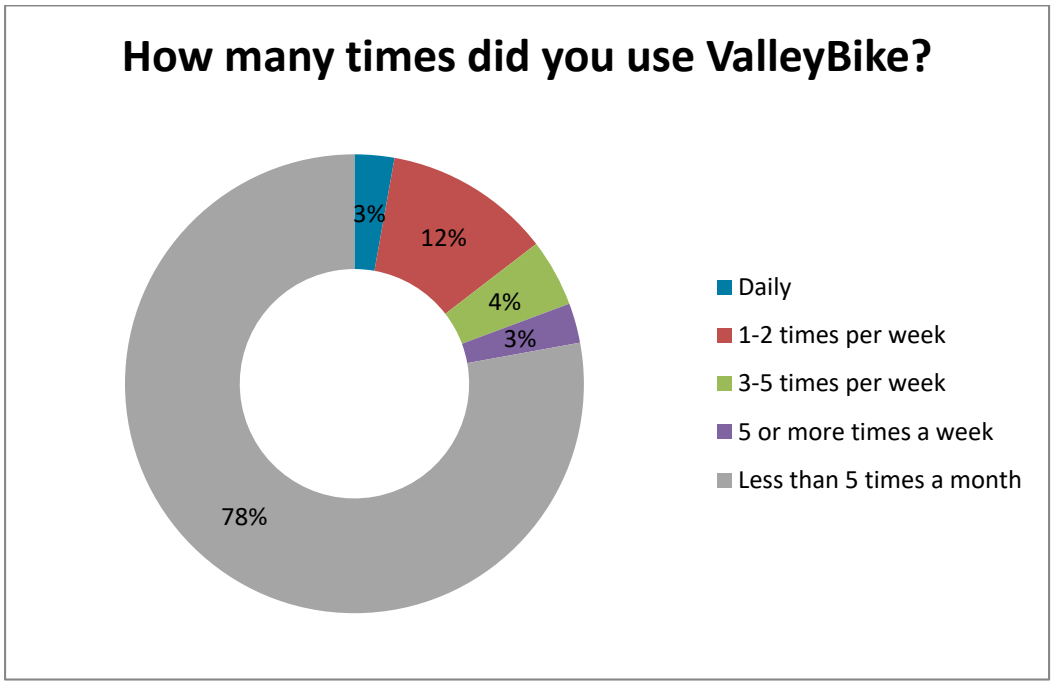
The End of Season Rider Survey helped us to better understand who used the program during its first year of operation. 50.5% of survey respondents reported that they reside in Northampton, followed by 22% who reside in Amherst, 7.1% in Springfield, 5.2% in Holyoke, 3.6% in South Hadley, and 11.5% in other communities. 35% reported making $75,000 or more a year, 19.6% chose not to answer the question, 12.7% were full time students, 10.2% made between $55k and $75k and the rest (22.4%) made under $55k/year.

More than half of ValleyBike users are over 30 years old. 28.8% of respondents were between the ages of 18 and 30, 52.1% were between the ages of 30 and 60, and 6.9% were over 60 years old. 47.7% of respondents were men, 48.5% were women, 1.4% identified as another gender, and 2.5% preferred not to answer. The age group with the lowest usage was between 22 and 30. These numbers are significant considering that the bike sharing program in New York City has significant gender disparities—in 2013, 76.3% of all trips were taken by men and 23.7% were taken by women[1].



[1] https://wagner.nyu.edu/rudincenter/2014/05/citi-bike-and-gender

According to the survey, the vast majority (77.87%) of users rode ValleyBike less than 5 times per month. This suggests that many users rode the bikes for leisure rather than to commute. Only 2.8% responded as having used ValleyBike daily, with another 2.8% reporting that they rode 5 or more times per week. Those who rode between 1-5 times per week made up about 17% of all riders. 52% of survey respondents said that they used ValleyBike for leisure when asked what they used the bikes for most. 21.2% responded that they used the bikes to commute, 5.2% used for the health benefits, and 5.5% used to reduce pollution and traffic congestion.



When asked if users rode a bike more or less frequently since they became ValleyBike members, an impressive 36% reported an increase in riding. 52.5% reported riding the same amount, and 12.5% reported riding less. About 70% of ValleyBike members own their own bicycle and 78% own a motor vehicle. Those who own their own bicycle may have been attracted to the program for its electric-assist bicycles as well as for the convenience of not having to worry about their personal bikes being vandalized or stolen as bike parking can be an issue.

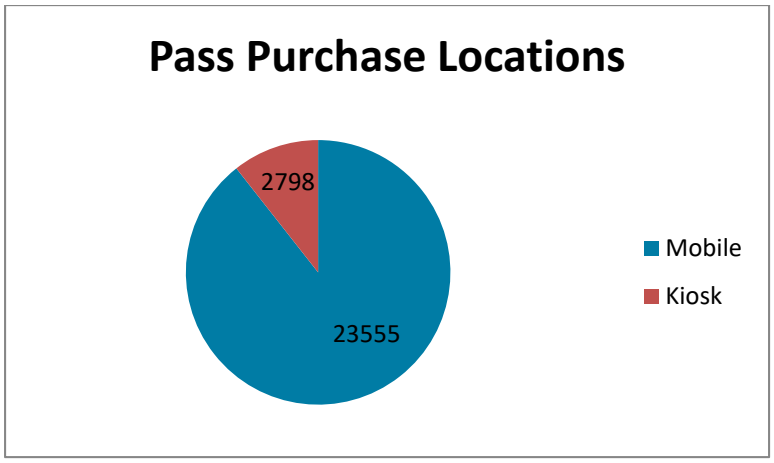
MEMBERSHIP TYPES

ValleyBike offered six different types of memberships for sale during its first season of operation. Most of the rides taken during ValleyBike's first season were purchased by occasional riders- those using Day Passes or Go Passes (41%). The two forms of long-term passes, Annual and Founding Members, made up about 13% of all rides. Monthly passes made up about 28% of all rides. The pass with the least popularity was the Single Trip Pass, which can only be purchased at the kiosk and made up less than 1% of purchases.

Purchases	Number of rides	Percent of Total	Cost of Pass	Average Miles Per Ride
Annual Pass	705	2.6%	$80/year, 45 min of each ride included	1.7
Day Pass	7,359	27.9%	$6.00/day, unlimited 45 min trips for 24 hours	4.0
Founding Member	2,812	10.7%	$90/year, 60 min of each ride included	2.4
Go Pass	8,045	30.5%	$5.00 to sign up, $2.00/trip	3.3
Monthly Pass	7,412	28.1%	$20/mo, 45 min of each ride included	2.5
Single Trip Pass*	26	.1%	$2.00	4.1
Total	**2,6353**	**100%**		**3.1**

*Can only be purchased at kiosks which were not operational until later in the season.

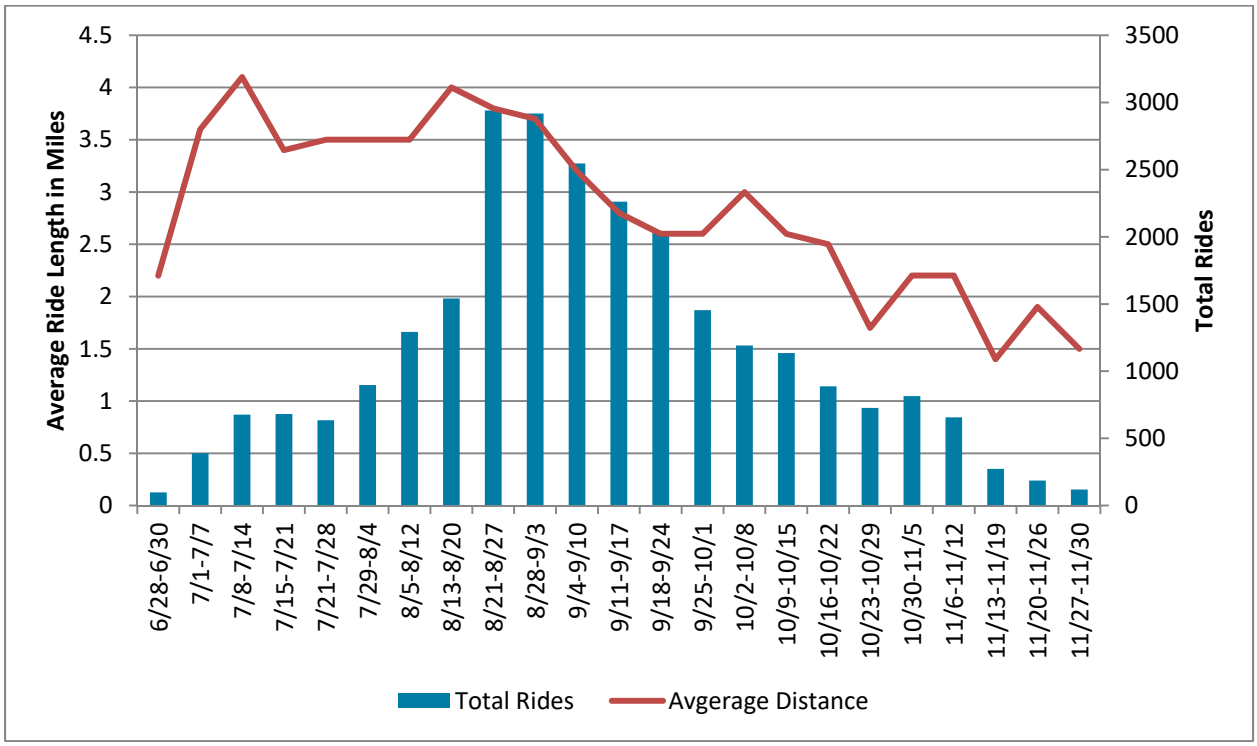
Most ValleyBike riders purchased their passes and memberships online as opposed to at a kiosk. This may be due to issues with the kiosk technology, the delay in kiosk installation and function and the ease of using the online system on one's phone or computer.



USAGE

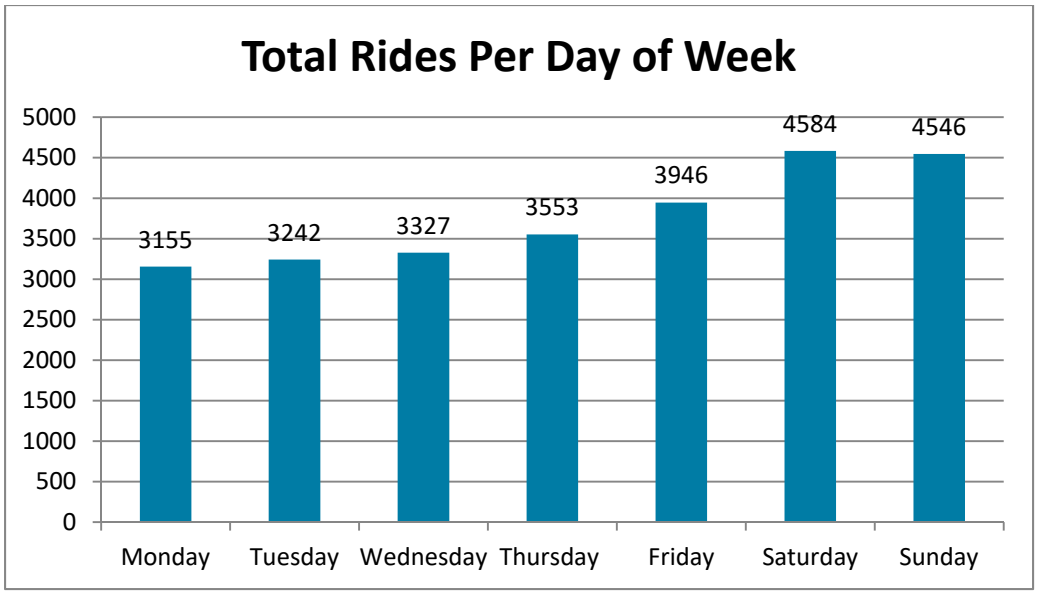
USAGE OVER TIME

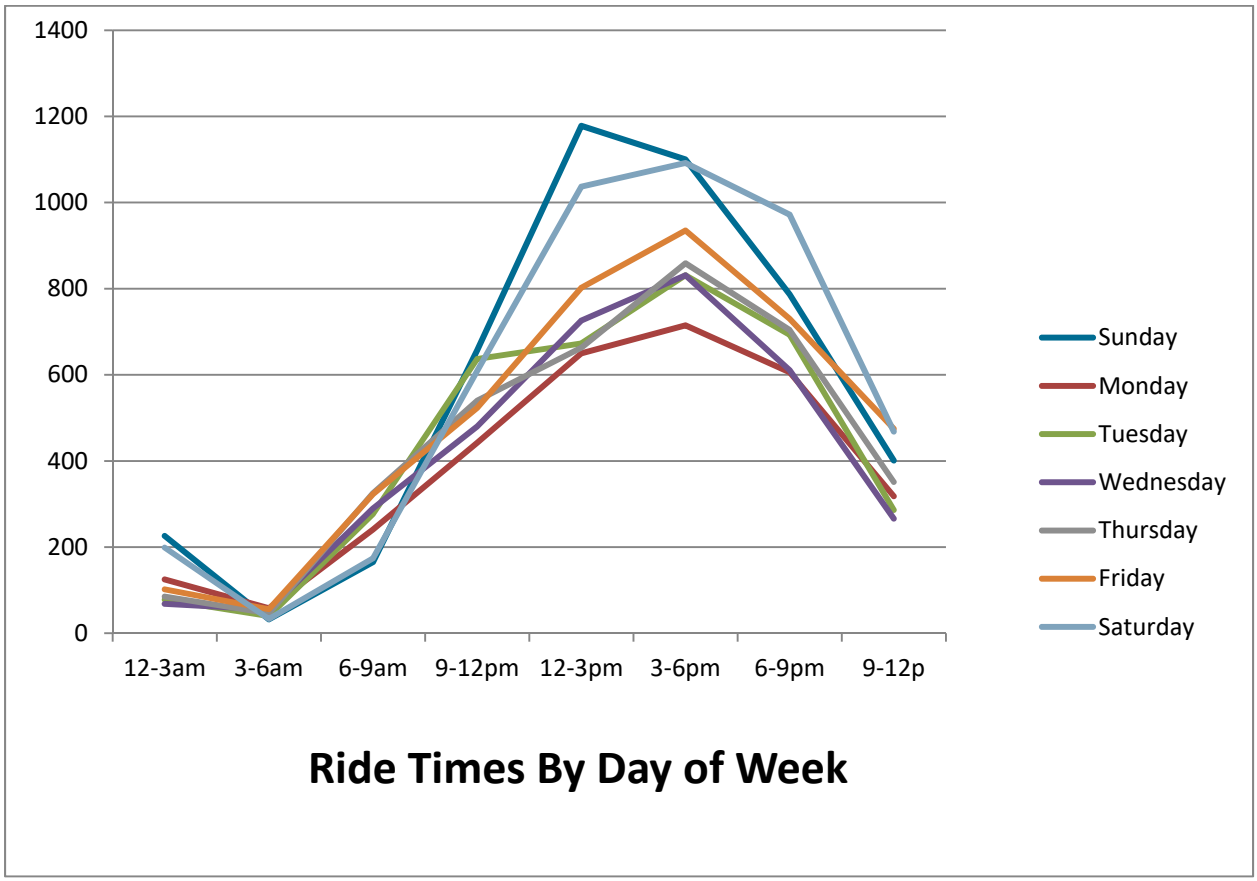
The ValleyBike program had a rocky start due to issues with station installation, bike availability, and kiosk usability. That being said, once the program was up and running, it gained momentum and attracted increasing numbers of users over the course of the summer. The popularity of ValleyBike saw large increases in the first few weeks of August, reaching its peak ridership between August 21st and September 3rd. Average ride distances stayed relatively similar over the course of the summer, dipping slightly as temperatures dropped and students went back to school in early September.

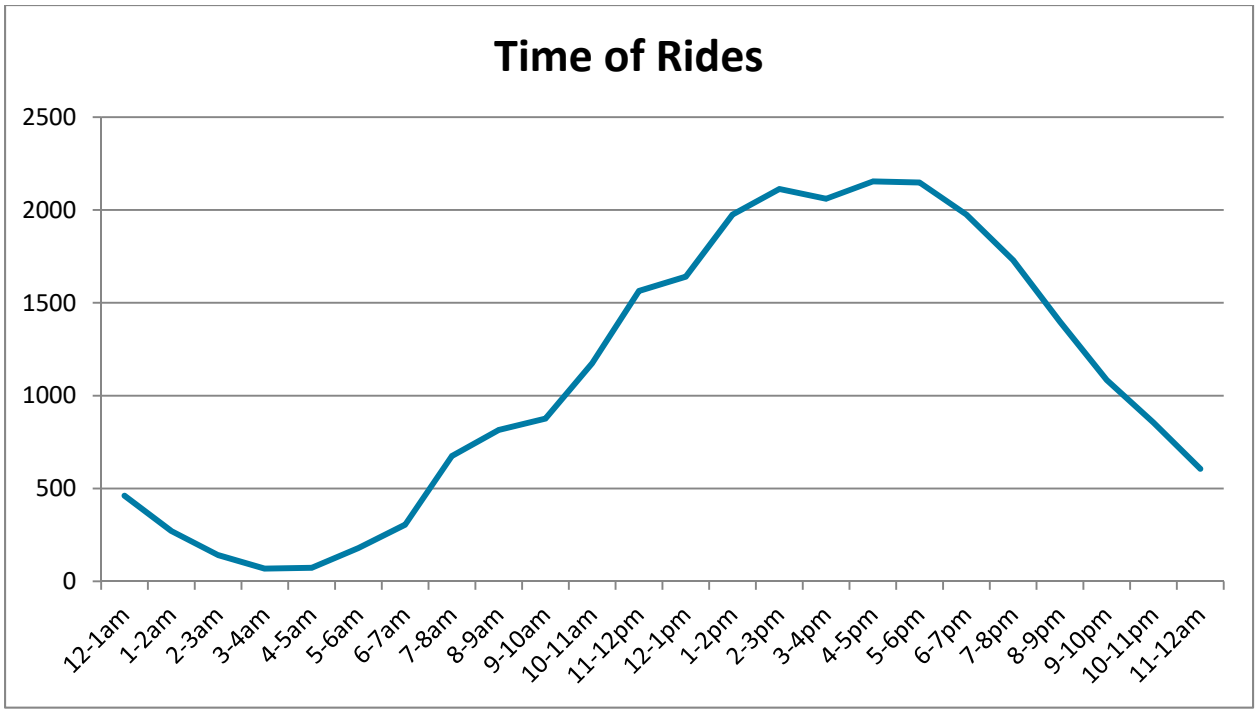


PEAK RIDE TIMES

While ridership was fairly consistent over an average week during the season, the ValleyBike program was most popular over the weekends. This suggests that the bicycles may have been used more for recreation than for commuting. The bikes were also used more frequently in the afternoon. While the number of rides steadily increased into the morning hours, most rides took place after noon, suggesting that bike commuters may be outnumbered by those using the bikes for recreational purposes or to run errands. Typical morning commute times (6-9am) did not see a large spike in usage to suggest overwhelming commuter use. Late night rides were also more frequent on weekend evenings.

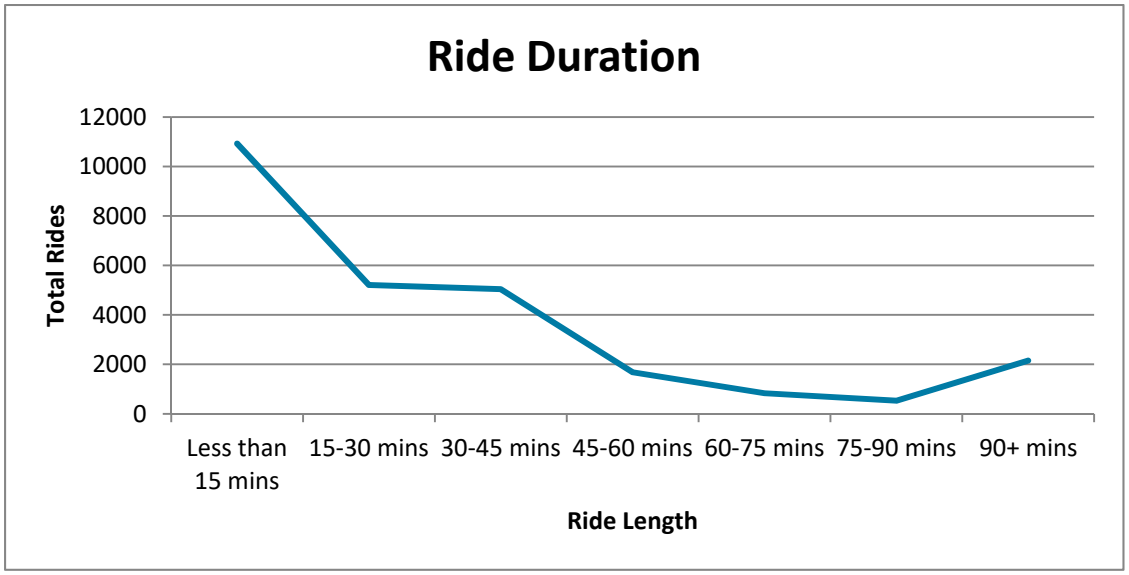

Total Rides Per Day of Week
5000
4500
4000
3500
3000
2500
2000
1500
1000
500
0
3155
3242
3327
3553
3946
4584
4546
Monday
Tuesday
Wednesday
Thursday
Friday
Saturday
Sunday


1400
1200
1000
800
600
400
200
0
12-3am
3-6am
6-9am
9-12pm
12-3pm
3-6pm
6-9pm
9-12p
Sunday
Monday
Tuesday
Wednesday
Thursday
Friday
Saturday
Ride Times By Day of Week



DURATION OF TRIPS

A large portion (41.5%) of trips were short, lasting less than 15 minutes. About 80% of all rides lasted less than 45 minutes. However, some users did rent bikes for longer periods of time to go for lengthy rides as can be seen by the 8.2% of trips that lasted over 1.5 hours. Some of these lengthier trips may have resulted from a lack of knowledge about when one needed to return a bike. **The average length of a trip was 42.5 minutes and the average distance of a ride was 3.1 miles.**



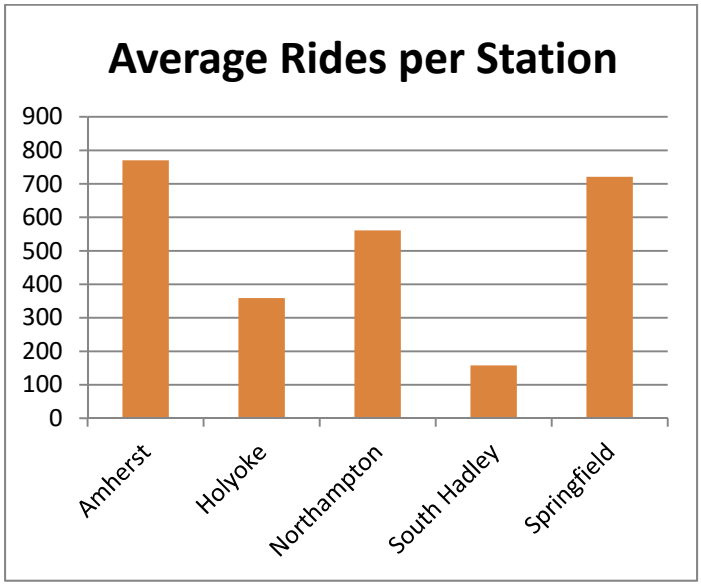
TRIP LOCATIONS

Over 2/3 of all trips taken using ValleyBike were one-way trips: rides that began and ended at different stations. This suggests that people used the bikes for utilitarian purposes and appreciated being able to drop their bikes at new stations, rather than holding onto them for the entirety of their ride and dropping them back off at the point of origin.

Type of Ride	Total Rides	Percent of Rides
Round Trips	8104	30.8%
One Way	18249	69.2%

According to the End of Season Rider Survey, approximately 27.5% of riders used ValleyBike in conjunction with other types of public transportation (such as rail or bus services). One of the original intentions of the ValleyBike program was to address the "last mile" in our public transportation system. The organizers hoped that ValleyBike stations could be located close to public transportation so that public transit riders could utilize the bikes to reach their final destinations. However, due to complications regarding the need for electrical outlets in close proximity to stations, this goal was not always met. In making plans for future station development, location of public transportation hubs should be taken into consideration.

There were a total of 43 ValleyBike stations the first year of bike share in the Pioneer Valley. Amherst, Springfield, and Northampton were the most popular cities for ValleyBike. While more rides started in Amherst and Northampton, Springfield, with its fewer stations, had more rides per station than Northampton. Holyoke and South Hadley both had lower ridership in general as well as in relation to the number of stations in each municipality. Because fewer stations were located in Holyoke and South Hadley, pick-up and drop off options were limited. The two stations in South Hadley, for example, are relatively far away from each other (2 miles) and relatively isolated from stations in other towns.



Rides by Municipality						
Town	Total Rides	Percent of Rides	Average Length (Miles)	Average Time (Minutes)	Number of Stations	Average Ride per Station
Amherst	7704	29.2%	2.3	25.7	10	770
Holyoke	2875	10.9%	3	41.7	8	359
Northampton	7851	29.8%	3.2	34.34	14	561
South Hadley	316	1.2%	3.9	41.8	2	158
Springfield	6486	24.6%	4	71	9	721

The longest average rides both in duration and length started in Springfield and the shortest started in Amherst. This may be due to the number of students using the bikes to get around campus at UMass Amherst. South Hadley rides tended to be longer in distance and shorter in time, likely due to the stations in this area being further away from one another.

All of the top ten stations for ride starts are located in Amherst (5), Springfield (4), and Northampton (1).

Top Ten Most Popular Stations for Ride Starts		
Station Name	**Total Rides Started**	**Town**
South End/Main Street	1848	Springfield
UMass Southwest	1180	Amherst
UMass Knowlton	1105	Amherst
Cooley Dickinson Hospital Station @ Amherst Town Hall	1046	Amherst
Pulaski Park/Downtown	947	Northampton
Court Square	946	Springfield
Live Well Springfield Station @ Mercy Medical Center	898	Springfield
UMass Haigis Hall	890	Amherst
Kenefick Park	889	Springfield
Kendrick Park	842	Amherst

A specific route is determined by its start and end station. Of the ten most popular routes, only two were one way trips with a different start and end location, the rest were round trip routes that started and ended at the same station. Those two one way routes were both located on the UMass Amherst Campus.

Top 20 Most Popular Routes	
Route	**Times Route Taken**
South End/Main Street-South End/Main Street	916
Live Well Springfield Station-Live Well Springfield Station	456
Kenefick Park-Kenefick Park	437
Court Square-Court Square	342
Mason Square Library-Mason Square Library	317
UMass Southwest-UMass Knowlton*	293
UMass Knowlton-UMass Southwest*	267
Mackenzie Field-Mackenzie Field	248
Northampton Train Station-Northampton Train Station	248
UMass Southwest-UMass Southwest	244
UMass Knowlton-North Pleasant Street*	240
Amherst Town Hall-Amherst Town Hall	239
STCC - Springfield Armory-STCC - Springfield Armory	237
Main Street/Bridge Street-Main Street/Bridge Street	232
YMCA/Childs Park-YMCA/Childs Park	221
Kendrick Park-Kendrick Park	216
UMass Central Residential Area-UMass Haigis Mall*	211
North Pleasant Street-North Pleasant Street	207
Holyoke Medical Center Station-Holyoke Medical Center Station	201
South Holyoke-South Holyoke	197

Of the top ten one-way routes taken, 6 either started or ended at UMass. This suggests that most of the one-way rides taken are those taken by students to get around campus and to get into town. Students may be most savvy in locating stations close to their final destinations, or in simply using the bikes to commute to class and run errands. A one way ride indicates a person is not just using the bike for leisure. The top two most frequent one-way trips are between the UMass Southwest Station and the UMass Knowlton Station in both directions.

Top 10 One-Way Routes	
One Way Route	**Times Route Taken**
UMass Southwest-UMass Knowlton	293
UMass Knowlton-UMass Southwest	267
UMass Knowlton-North Pleasant Street	240
UMass Central Residential Area-UMass Haigis Mall	211
Court Square-South End/Main Street	189
North Pleasant Street-UMass Knowlton	189
Amherst Town Hall-Kendrick Park	184
South End/Main Street-Court Square	181
UMass Haigis Mall-UMass Knowlton	180
Kendrick Park-Amherst Town Hall	177

POLLUTION

One intention of the ValleyBike program is to cut down on the pollution created by cars as they drive around the Valley. According to the user survey, 26.72% of users ride ValleyBike to commute to work or school, or to help reduce pollution and traffic congestion. 78% of respondents reported owning a vehicle which would result in about 3,916 vehicles. Based on calculations using the CMAQ Quality Analysis Worksheet, the ValleyBike program was responsible for the following emissions reductions in kilograms:

Summer VOC	Summer NOx	Summer CO	Summer CO2
992.9	**730.6**	**12,175.2**	**966,197.7**

The amount of emission reductions accounts for the equivalent of removing about 210 passenger vehicles from roads per year. These reductions account for approximately $2,459 per kilogram of emissions if the total project cost was $1,000,000. A copy of the Congestion Mitigation Air Quality (CMAQ) analysis for Year One ValleyBike follows.

CMAQ Air Quality Analysis Worksheet for Bike Sharing Project

FILL IN SHADED BOXES ONLY

TIP YEAR:

MPO: Pioneer Valley **Municipality:** Northampton

Project: Valley Bike Share

Step 1: Details of Project:

			User Input (blank for default)	Default
Number of Bikes in Project:	167	Bikes		
Average Bike Trip Length:	3.1	Miles	3.1	1.1
Average Number of Trips per Bike per Day:	1.0	Trips	1.0	3.7
Bike Sharing Operating Days per Year:	155	Days	155.0	251

Step 2: Mode Substitution by Bike Sharing Project:

Note: A bike sharing project would attract new riders from different modes. Actual surveys can determine the extent of the transition from different modes to such program. If site specific data is unavailable, use the defaults provided below.

Percentage of Bikes Used Shifted from Walking:	25%	Percent		25%
Percentage of Bikes Used Shifted from Public Transit:	41%	Percent		41%
Percentage of Bikes Used Shifted from Taxis:	5%	Percent		5%
Percentage of Bikes Used Shifted from Cars:	12%	Percent		12%
Percentage of Bikes Used Shifted from Private Bikes:	8%	Percent		8%
Percentage of Bikes Used Shifted from Motorcycles:	4%	Percent		4%
Percentage of Bikes Used Shifted from Other/New Trips:	5%	Percent		5%
Total Percentage of Bikes Used Shifted from Other Modes **(Must be 100%)**:	100%	Percent		
Public Transit Vehicle Occupancy:	40	Persons		40
Taxi Vehicle Occupancy:	1.18	Persons		1.18
Car Vehicle Occupancy:	1.18	Persons		1.18
Motorcycle Vehicle Occupancy:	1.16	Persons		1.16

Step 3: Emission Factors for Average Commuter Travel Speed:

Note: Use 25 MPH as a default if average speed is not known. Speed Used: 25 MPH

	Summer VOC Factor grams/mile	Summer NOx Factor grams/mile	Summer CO Factor grams/mile	Summer CO2 Factor grams/mile
2016 Bus	**0.014**	**0.023**	**0.150**	**22.645**
2016 Auto	**0.169**	**0.252**	**2.879**	**398.914**
2016 Motorcycle	**1.362**	**0.466**	**13.331**	**342.739**

Step 4: Calculate emissions reductions in kilograms per year (Seasonally Adjusted):

Summer VOC	Summer NOx	Summer CO	Summer CO2
5.8	**4.3**	**71.6**	**5,683.5**

Step 5: Calculate cost effectiveness (first year cost per kg of emissions reduced)

Emission	Project Cost		Emission Reduction in kg per year		First year cost per kilogram
Summer VOC	$1,000,000	/	5.8	=	**$171,212**
Summer NOx	$1,000,000	/	4.3	=	**$232,695**
Summer CO	$1,000,000	/	71.6	=	**$13,963**
Summer CO2	$1,000,000	/	5,683.5	=	**$176**
					$418,046

CONCLUSIONS

ValleyBike was successful in providing electric-assist bike sharing to the Pioneer Valley for a five month season. ValleyBike is gearing up for the 2019 season and will address the equipment challenges that occurred with the initial rollout, known as the Beta phase of the project. The future effectiveness of the ValleyBike program will hinge on increasing membership and increasing the frequency of use by members. When asked what would encourage them to ride ValleyBike more often, 28.7% of survey respondents said more bikes and/or docks. As noted, the program is designed to have 500 bikes at 50 stations, so that suggestion will be addressed in part when Bewegen provides the full complement of 500 bicycles. 21.5% of survey respondents said longer free use time, 14.5% said stations in different places, 8.4% said different pricing, and 5.8% said more outreach on how to use the bikes. Luckily, it seems as though the way to sign up more riders will also please current riders. When asked how they learned about the program, 53.3% of respondents said that they saw bikes on the street. The best form of advertisement for the program is the quantity and visibility of stations.

As we look for the balance between providing long term membership for ever larger number of users while ensuring the system is economically sustainable, we will keep long term membership prices stable (Go Pass and monthly and yearly membership) while increasing short term use prices (hourly and day use).

As was stated previously, the program would also benefit by coordinating more closely with public transit systems. If bike docks are located in close proximity to transit stations, riders may be more likely to use both forms of transportation to get to their final destination. Other bike share programs (notably New York City's) have had success in encouraging use through proximity to public transportation options.

Finally, the Community Foundation of Western Massachusetts (CFWM) did work with the Pioneer Valley Regional Ventures Center, the not for profit arm of the PVPC, to allocate $12,000/year for three years to provide subsidized memberships for economically disadvantaged residents of the region – particularly many who live in transit-rich urban cores and could provide a boost in multi-modal transportation usage of ValleyBIke. Unfortunately Bewegen was not able to launch this aspect of the ValleyBike initiative in Year One, so it is anticipated that more people will use ValleyBike when the "access Passes" are available,.

MEASURES OF SUCCESS

During the 2019 season, we plan to track a variety of indicators to measure the success of ValleyBike. These indicators include:

- Number of riders as well as their demographic characteristics
- The number or rides taken per bike per day
- General customer satisfaction
- Percent of rides taken in conjunction with public transportation
- Percent of rides that have replaced trips taken in an automobile
- Percent of one-way rides
- Number of long-term passes purchased (yearly and monthly memberships)

RECOMMENDATIONS AND NEXT STEPS (EXPANSION CONSIDERATIONS)

ValleyBike has worked with other municipalities in the region to facilitate region-wide system expansion. The city of Easthampton is the first new community to secure funding for ValleyBike expansion using the Housing Choice funding from the Massachusetts Department of Housing and Community Development. Their four stations should be open by July 2019. Also in 2019, Northampton is adding one additional station using its own funding. Other possible expansion communities include: West Springfield, Chicopee, and Hadley in the short term and Agawam in the longer term.

The communities have applied for CMAQ funding again, but that funding is highly competitive. West Springfield is looking at casino gambling mitigation funds as another possible source of financing.

APPENDICES

Below, you will find charts and graphs outlining the program in greater detail.

Town	Station Name	Total Rides	Avg Distance (Miles)	Avg Duration (Minutes)
Amherst	Cooley Dickinson Hospital Station @ Amherst Town Hall	1046	1.7	14
Amherst	East Hadley Road	326	4	39.6
Amherst	Kendrick Park	842	2.7	32.2
Amherst	North Pleasant Street	751	1.9	20.6
Amherst	Total Amherst	2965	2.3	25.7
Amherst	UMass Central Residential Area	724	1.5	17.3
Amherst	UMass Haigis Hall	890	1.5	20.4
Amherst	Umass Integrative Learning Center	299	1.3	15.3
Amherst	UMass Knowlton	1105	1.4	18.7
Amherst	UMass Southwest	1180	1.9	23.9
Amherst	University Drive	541	4.2	42
Holyoke	Croisier Field	301	3.6	46.4
Holyoke	Depot Square	360	2.9	33.6
Holyoke	Downtown	297	2.6	39.5
Holyoke	Holyoke Medical Center Station @ Library Square	505	2.5	32.1
Holyoke	Mackenzie Field	574	3	44.6
Holyoke	Pleasant Station	298	2.8	49.4
Holyoke	South Holyoke	459	3.3	47.3

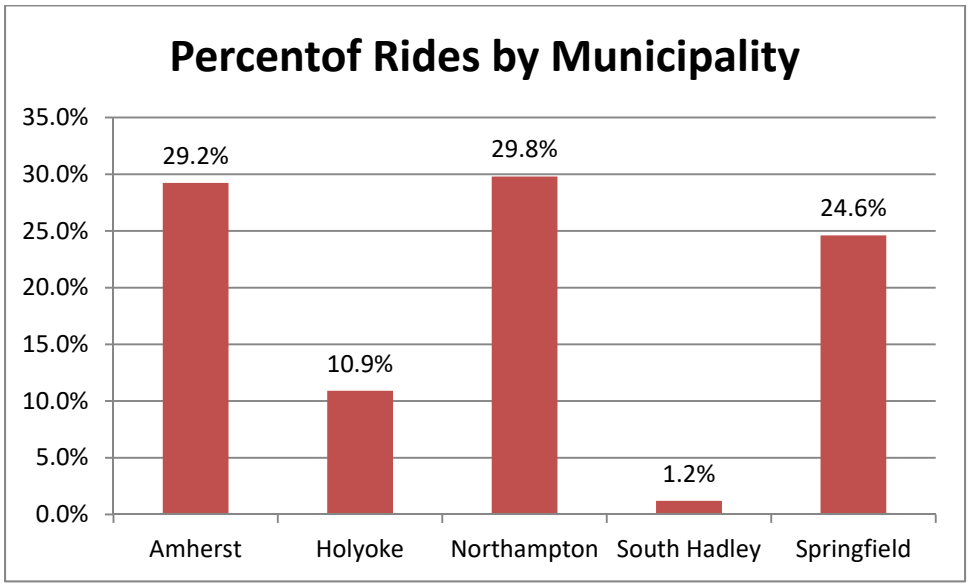
Holyoke	Springdale Park	81	3.7	47.6
Holyoke	Total Holyoke	2875	3	41.7
Northampton	Cooley Dickinson Hospital	88	3.64	33.8
Northampton	Florence Bank Station @ Lilly Library	486	4	36
Northampton	Florence Center	558	3.1	34.3
Northampton	Forbes Library	194	2.5	28.2
Northampton	Jackson Street	396	2.7	29.3
Northampton	John M. Greene Hall/Smith College	574	2.7	33.7
Northampton	Main Street/Bridge Street	738	4.2	43.2
Northampton	Main Street/Court House	796	3.2	40.5
Northampton	Northampton High School	690	2.3	27.3
Northampton	Northampton Train Station	723	5	49.6
Northampton	Pulaski Park/Downtown	947	3	34.7
Northampton	State Street/Mass Central Rail Trail	622	2.6	25
Northampton	Total Northampton	9768	3.2	34.34
Northampton	Village Hill/State Hospital	388	2.3	24.8
Northampton	YMCA/Childs Park	651	2.8	28.3
South Hadley	Eink Station @ South Hadley Falls	148	3.8	48.2
South Hadley	Mount Holyoke College Station @ South Hadley Commons	168	3.9	36.3
South Hadley	Total South Hadley	799	3.9	41.8
Springfield	Basketball Hall of Fame	225	4.45	58.74
Springfield	Congress Street	7	0.34	2.8

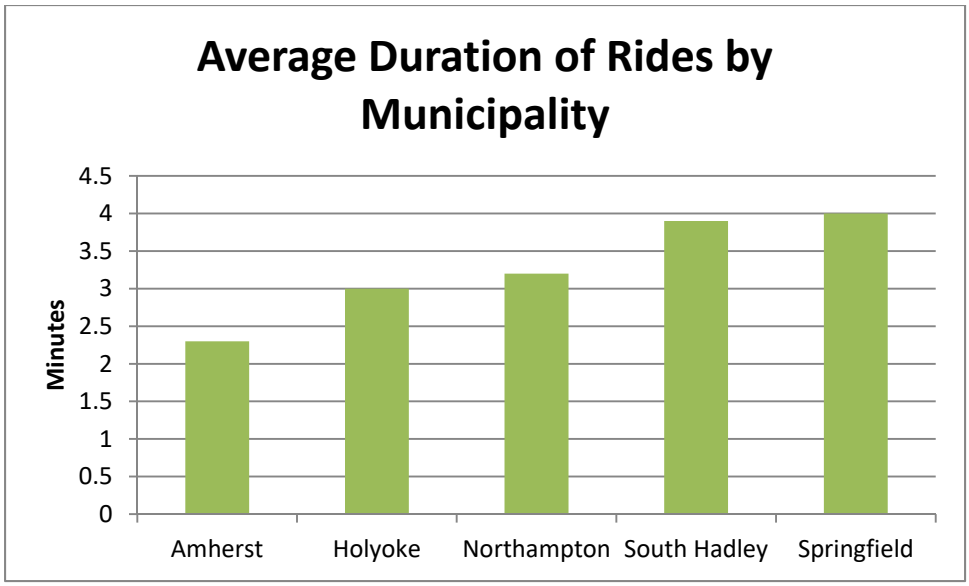
Springfield	Court Square	946	3.6	60.4
Springfield	Kenefick Park	889	4.8	69.5
Springfield	Live Well Springfield Station @ Mercy Medical Center	898	4.5	92
Springfield	Mason Square Library	755	4.3	90.4
Springfield	Mercy Medical Center Station @ Union Station	79	2.3	32.5
Springfield	MGM Springfield	156	3	44.6
Springfield	South End/Main Street	1848	4	72.9
Springfield	Total Springfield	6487	4	71
Springfield	STCC Springfield Armory	683	3.2	48.8
	Undetermined	1121	3.3	51.7
	Total	26353	3.1	42.5

Ride Times								
Day	12-3am	3-6am	6-9am	9-12pm	12-3pm	3-6pm	6-9pm	9-12pm
Sunday	226	32	165	657	1178	1100	787	401
Monday	125	58	241	442	650	715	606	318
Tuesday	78	40	277	637	673	831	693	286
Wednesday	68	55	290	480	726	831	611	266
Thursday	85	46	325	540	663	859	704	351
Friday	102	56	323	523	802	935	730	475
Saturday	199	33	174	609	1037	1092	972	468
Total	**883**	**320**	**1795**	**3888**	**5729**	**6363**	**5103**	**2565**

Duration of Trip	Total Trips	Percent of Trips
Less than 15 mins	10927	41.5%
15-30 mins	5205	19.8%
30-45 mins	5035	19.1%
45-60 mins	1678	6.4%
60-75 mins	830	3.1%
75-90 mins	529	2.0%
90+ mins	2149	8.2%

Rides by Day of Week		
Day	Rides	Percent of Rides
Monday	3155	12.0%
Tuesday	3242	12.3%
Wednesday	3327	12.6%
Thursday	3553	13.5%
Friday	3946	15.0%
Saturday	4584	17.4%
Sunday	4546	17.3%





Time Ride Begins	Rides	Percent of Rides
12-1am	461	1.8%
1-2am	271	1.0%
2-3am	141	0.5%
3-4am	68	0.3%
4-5am	72	0.3%
5-6am	179	0.7%
6-7am	305	1.2%
7-8am	675	2.6%
8-9am	815	3.1%
9-10am	876	3.3%
10-11am	1175	4.5%
11-12pm	1564	5.9%
12-1pm	1641	6.2%
1-2pm	1975	**7.5%**
2-3pm	2113	**8.0%**
3-4pm	2061	**7.8%**
4-5pm	2154	**8.2%**
5-6pm	2148	**8.2%**
6-7pm	1975	**7.5%**
7-8pm	1730	**6.6%**
8-9pm	1398	5.3%
9-10pm	1084	4.1%
10-11pm	855	3.2%
11-12am	606	2.3%