



FARMINGTON VALLEY TRAILS COUNCIL

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Farmington Valley Trail Usage Study 2013-15

Background & Summary

This study seeks to offer a local and regional count of the users of the multi-use paved trail system in the Farmington Valley, which currently runs contiguously from Red Oak Hill Road in southern Farmington, CT north to the State border in Suffield, CT and on into Westfield, MA. It is critically important to quantify usage of bicycle and pedestrian facilities to measure the positive benefits of investments in these modes. The system encompasses the Farmington Canal Heritage Trail (FCHT) and the Farmington River (Loop) Trail (FRT) all told, over 32 miles of paved off-road facilities in the towns of Farmington, Avon, Simsbury, East Granby, Granby, Suffield, Canton and Burlington. These heavily used facilities are essentially linear parks and repurposed rail corridors retained as improved community open space. They are used as recreational facilities for physical activity and health, as tourist destinations and sources of economic development, as an abatement of pollution and noise by replacing automobile trips, as significant regional amenities where people congregate and interact, and as a growing form of alternative transportation through commutation. Intermodal opportunities through connections with bus lines and other mass transportation are expanding and are slowly and steadily increasing in use. For more information please see our Website, www.fvgreenway.org.

Table I. Extrapolated Summary Data

Metric	Trail Uses 2013	2014	2015
Annual Farmington Total	97,482	80,451	121,584
Annual Canton Total	71,668	156,297	124,429
Annual Suffield Total	159,442	89,639	161,550
Average Total	107,451	108,995	135,854
Annual Regional Trail System Total¹	262,874	261,110	326,050
Weekday Peak Hour	11:00 am	11:00 am	12:00 pm
Weekend Peak Hour	1:00 pm	12:00 pm	12:00 pm
Month with Highest Activity	August	July	August
Month with Lowest Activity	January	January	February
Weekday Peak Day Volume	565	610	698
Weekend Peak Day Volume	1,066	950	940

Raw data is the average of three days at each site extrapolated using the National Bicycle and Pedestrian Documentation Project Methods: <http://bikepeddocumentation.org/>

¹ This number is approximate and includes an estimate that 20% of uses at each of the three collection sites must be factored out as users traveling to or from another counted site. Note: 2013 numbers are restated to reflect the same time period as 2014 and 2015.

Table II: Averaged Extrapolated Data by Time Period

Time	2013	2014	2015
Day	435	403	489
Week	2,758	2,798	3,771
Month	11,876	11,991	16,163
Year	107,451	108,995	135,854

Average count of users for three days at three sites extrapolated using the National Bicycle and Pedestrian Documentation Project Methods: <http://bikepeddocumentation.org/>

Table III: Three Year Averaged Annual Data

Area	3-Year Average
Farmington	99,839
Canton	117,465
Suffield	136,877
Valley Region	283,345

Extrapolated Summary Data Methodology

Regarding the Summary Data shown above in *Table I*, the National Bicycle and Pedestrian Documentation Project has developed a method to estimate annual trail usage from raw counter data. The use of expansion factors is common in transportation planning. In this case, they are a tool for taking the seasonal counts and using them to develop estimates of bicycle and pedestrian activity in familiar and comparable units, such as daily, weekly, monthly and yearly activity. This method uses one week of data and multiplies it by a monthly adjustment factor derived from analysis of trail counts from across the country. Given the variability of bicycle and pedestrian activity, these estimates are based on the average of three counts during the same time period and week. The counts were from 12-2 PM on a Sunday, Tuesday and Friday during the same week in mid-September.

Overall Study Methodology

The FVTC recognizes that at best this study can only estimate multi-use trail patterns along the FCHT and FRT. These estimates are based on three primary data sources. That source is information gathered from three TRAFx counters, infrared counters that track trail use at fixed locations along the trail. The counters are located many miles apart to provide local as well as aggregate user counts. They are located on the FCHT in Farmington between the Farmington Bridge and Red Oak Hill Road and near the State line in Suffield. The third counter is

on the FRT at Commerce Drive in Canton. Please see *Appendix I* for more detail. An important part of this study is to not only to count locally but to be able to aggregate the count to estimate regionally. Appropriately, the north and south counters on the FCHT are located 21 miles apart and the FRT counter in Canton 9 miles from the southern counter and 20 miles from the northern counter. The data sets cover the 2013 season from May 1st, to October 22nd and the 2014 and 2015 years in their entirety. The data provided by the trail counters was placed into a Microsoft Excel database so that it could be analyzed. Data was investigated for hourly, daily, monthly, and yearly usage.

TRAFx Infrared Counters

TRAFx counters were picked by the FVTC because they are used by most of the important trail organizations and the federal government. These counters are semi-portable in that they are small and movable, but must be fixed to an immovable object on either side of the trail. They are battery-powered active infrared light beam instruments designed for counting moving objects in the outdoors. In this study, the intent was to count only human trail users as moving objects. The light beam was positioned high enough to not count most animals, with the exception perhaps of deer and bear. It was also placed so that vegetation could not impede the light beam. However it must be noted that this type of counter is still open to a variety of miscounts some of which can be accounted for below, but the results generated from this data should be judged in that light. Note that the counters record the number of “uses” rather than unique “users.” For example, a trail user may pass the counter once when leaving his car and a second time when returning to it. This user would be counted twice.

All infrared trail counters under-count when people travel side by side, or in tight groups. Therefore, it can be said that trail counters yield estimates rather than absolutes. It is difficult to give a single number regarding accuracy because it is dependent upon various factors: how people typically use the trail (single file or side by side), how far apart people are spaced, how busy the trail is, trail width, how a counter is set up, etc. If the trail is narrow and people travel single file and spaced apart, accuracy can be as high as 95 to 100%; however, for the most part the trail system in the Farmington Valley is ten feet wide making accuracy approximately 80%.

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Resources

Farmington Valley Trails Council: <http://www.fvgreenway.org>

TRAFx Research Ltd.: <http://trafx.net>

The National Bicycle and Pedestrian Documentation Project: <http://bikepeddocumentation.org/>

“Bicycle and Pedestrian Data Collection Manual” Minnesota Department of Transportation; MnDOT Report No. MN/RC 2015-33. Office of Transit, Bicycle / Pedestrian Section. bikepedcounts.dot@state.mn.us and www.dot.state.mn.us/bike

Farmington Canal Heritage Trail & Farmington River Trail

Effective Date: Spring, 2011

Farmington Canal Heritage Trail	Paved Trail Surface
Farmington River Trail	Under Construction or Expected Completed by 2011
Proposed Route	Stonedust Trail Surface
Parking	Bike Route (on Roadway)
Parking with Wheelchair Access	Unfinished - Passable
Mile Marker*	Unfinished - May be Impassable
Porta Potty (seasonal)	
Water Fountain (seasonal)	

Scale in Miles: 0, 3/4, 1.5, 3

*Mileages are based on the actual and proposed route of the trail. Actual mileage may vary slightly.

Northern CONNECTICUT

Counter 2 @ MA State Line, Suffield

For temporary on-road portions of trail see East Coast Greenway Maps at greenway.org/maps

SIMSBURY

AVON

COLLINSVILLE

