

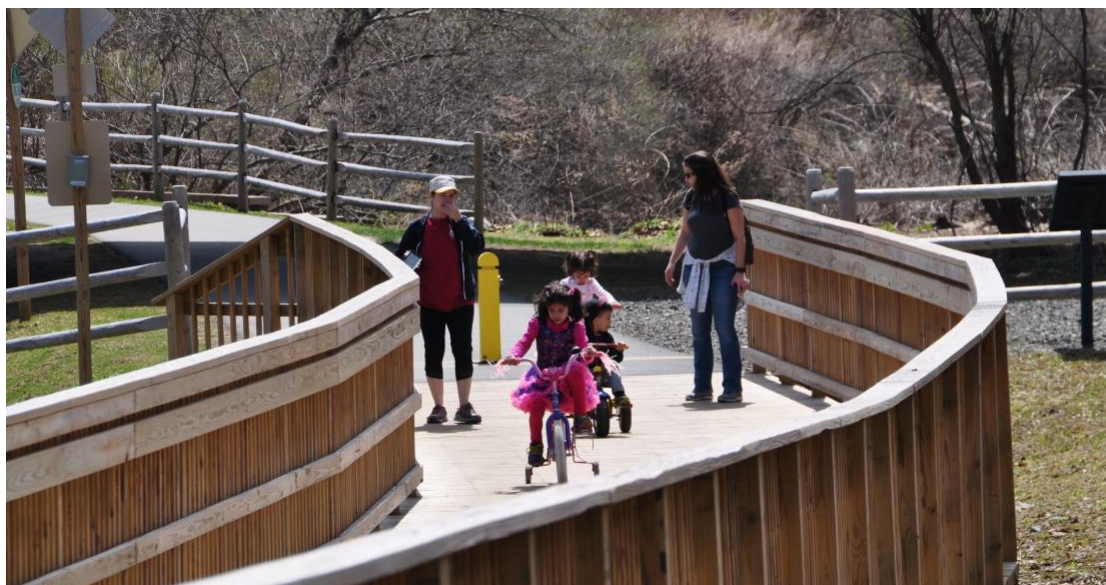
# Connecticut Trail Census

Statewide multi-use trail user study



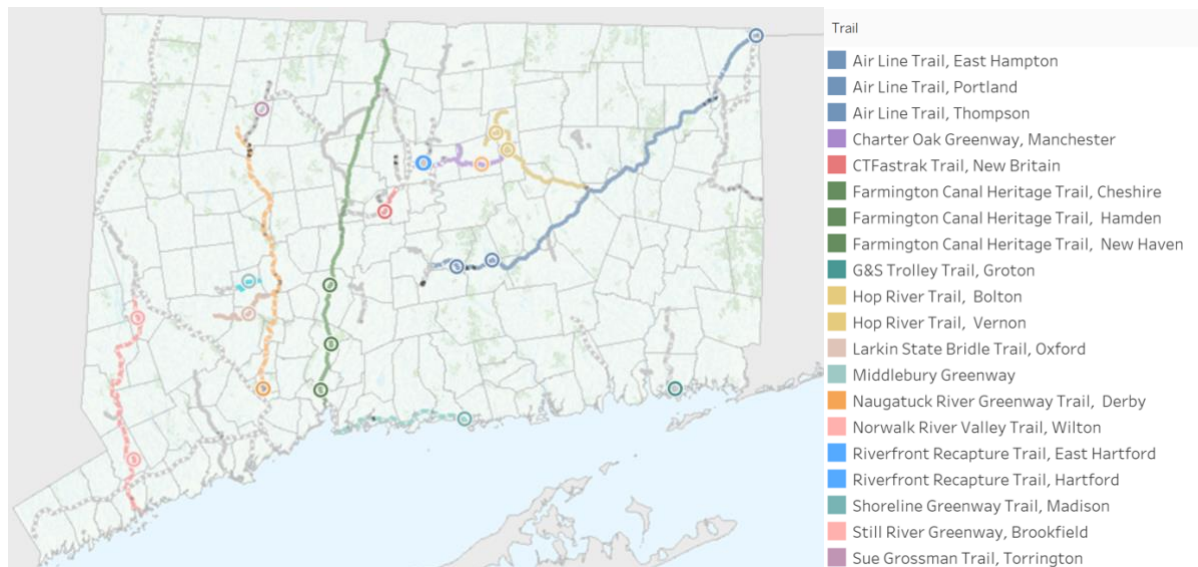
## 2019 Trail Use Count Data Report

*March 17, 2020*



## Overview

The following report includes the final adjusted infrared (IR) counter data from 20 multiuse trail locations in CT for 2019. This is the third year of counts for all locations, except the Riverfront Recapture site in Hartford (added in late 2017) and three new sites: the Air Line Trail in Portland; Charter Oak Greenway in Manchester; and G & S Trail in Groton, (all added in summer 2019). Counts are recorded using TRAFx brand infrared (IR) pedestrian counters.



### Trail Counter Sites

This user count is part of a larger multi-use trail data collection effort, the [Connecticut Trail Census](#), a statewide volunteer data collection program intended to inform a better understanding of multi-use trail use and to make this information available to trail user groups, administrators, government agencies, and the general public. In addition to this report, we have also created a new data portal to visualize trail use data. Please visit our website to view the data portals. The project is funded by the Department of Energy and Environmental Protection Recreational Trails Program; project partners include the Connecticut State Greenways Council and the Naugatuck Valley Council of Governments.

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## Connecticut Trail Census Goals

1. Understand when, who, how, and why people use Connecticut's trails
2. Educate trail user groups, administrators, state and local government agencies, and the general public about trails and their impacts
3. Obtain multi-year information about trail use, user demographics, economic impacts, and trail amenities for identification of patterns and trends
4. Promote citizen participation in monitoring and understanding the value of trails and to encourage data-based trail design, construction and management.

## 2019 Trail Use: Key Takeaways

- **Weather Rules:** The most significant factor in trail use volume is weather. On days with mild to warm temperatures, trails see higher user volumes overall. It is worth noting that although the majority of trail use occurs in the summer/spring and fall, roughly 12% of use occurs in winter. Even on rainy days with moderate temperatures, people are still using trails.
- **Steady Use on Commuter Trails:** Trails with heavy commuter use seem to be less impacted by weather. The CTFastrak Trail in New Britain registers steady and consistent daily use, even during inclement weather.
- **Trails Are Social Spaces:** Large spikes on the Riverfront Recapture Trail show that events attract people to trails. Major events sponsored by Riverfront Recapture, City of Hartford and the Convention Center, such as the Dragon Boat & Asian Festival, the Head of the Riverfront Regatta are reflected on (7/13, 8/3, 8/11, 9/25, and 10/6). October events on the Charter Oak Greenway in Manchester also boosted visitation (10/11-10/12).





## 2019 Totals

A total of 1,544,158 uses were recorded across all 20 sites. Using average daily counts to account for missing data, the 20 sites had an estimated 1,744,543 uses in 2019. The most heavily used trails during 2019 were the Naugatuck River Greenway in Derby, Still River Greenway in Brookfield and Hop River Trail in Vernon. The Air Line Trail counters in Thompson and Portland recorded the lowest use.

Trail Location	Total Count	Days with Data	Daily Average	Daily Average X 365
Air Line Trail, East Hampton	73,108	365	200	73,108
Air Line Trail, Portland	8,824	176	50	18,300
Air Line Trail, Thompson	6,901	346	20	7,280
Charter Oak Greenway, Manchester	53,533	176	304	111,020
CTFastrak Trail, New Britain	43,580	365	119	43,580
Farmington Canal Heritage Trail, Cheshire	109,296	365	299	109,296
Farmington Canal Heritage Trail, Hamden	52,051	284	183	66,897
Farmington Canal Heritage Trail, New Haven	116,228	365	318	116,228
G and S Trolley Trail, Groton	22,808	193	118	43,134
Hop River Trail, Bolton	81,600	355	230	83,899
Hop River Trail, Vernon	146,978	360	408	149,019
Larkin State Bridle Trail, Oxford	20,751	255	81	29,702
Middlebury Greenway	66,988	365	184	66,988
Naugatuck River Greenway, Derby	160,754	266	604	220,583
Norwalk River Valley Trail, Wilton	37,629	257	146	53,290
Riverwalk Trail, East Hartford	69,220	365	190	69,220
Riverwalk Trail, Hartford	143,243	365	392	143,243
Shoreline Trail, Madison	92,609	365	254	92,609
Still River Greenway, Brookfield	178,577	357	500	182,579
Sue Grossman Trail, Torrington	59,084	334	177	64,568
<b>Total</b>	<b>1,544,158</b>	<b>6279</b>	<b>4777</b>	<b>1,744,543</b>

## Monthly Summary

Monthly Summary tables present trail use totals by month. The first table details adjusted count totals by site by month. The second table shows the percent of total annual counts by month, and is formatted with higher percentages shaded in darker green. Be aware that the percent of total for months with missing data reflects that fact.

## Key Takeaways

- **Weather Rules:** The heaviest use occurred between April and October
- **August Wins:** August yielded the highest trail use volume for most trails.
- **Commuting is a Leveler:** Use on trails that may have more commuter use, like the Farmington Canal Heritage Trail in New Haven or CTfastrak Trail in New Britain, have more evenly distributed uses over the year.



## Monthly Summary Totals

Trail	Date											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Air Line Trail, East Hampton	2,684	2,030	3,516	6,000	7,941	9,201	7,719	11,702	9,626	6,665	4,202	1,822
Air Line Trail, Portland							1,156	2,092	2,216	1,525	1,010	825
Air Line Trail, Thompson	119	104	85	276	977	961	703	1,165	927	461	607	516
Charter Oak Greenway, Manchester							9,539	12,836	11,145	12,582	5,312	2,119
CTFastrak Trail, New Britain	3,069	2,901	3,112	4,036	4,267	4,484	4,480	4,607	3,878	3,465	2,961	2,320
Farmington Canal Heritage Trail, Cheshire	3,030	3,044	5,572	8,502	11,376	12,933	12,432	17,854	16,974	9,401	5,372	2,806
Farmington Canal Heritage Trail, Hamden	1,672	1,855	3,434	6,290	8,242	7,226			10,022	6,613	4,278	2,419
Farmington Canal Heritage Trail, New Haven	5,832	5,671	6,707	9,810	12,094	11,247	11,060	14,295	16,092	11,217	7,430	4,773
G&S Trolley Trail, Groton						1,337	4,189	4,503	4,196	3,072	2,899	2,612
Hop River Trail, Bolton	1,992	1,419	2,900	4,912	7,727	10,494	10,648	15,997	12,969	6,879	4,213	1,816
Hop River Trail, Vernon	5,605	2,470	6,174	11,717	15,718	18,568	20,118	21,963	20,484	12,497	8,245	3,449
Larkin State Bridle Trail, Oxford	896		1,210	1,839	1,036	2,669	2,032	3,040	3,694	2,817	1,240	278
Middlebury, Greenway	2,800	2,009	3,509	7,338	9,137	9,471	7,926	8,208	7,909	4,969	2,861	851
Naugatuck River Greenway Trail, Derby	12,806	15,059	31,098	2,118			16,900	32,488	17,215	4,816	15,891	12,363
Norwalk River Valley Trail, Wilton	4,217	3,766	4,417	4,729	4,442	2,302				3,472	5,483	4,801
Riverfront Recapture Trail, East Hartford	2,237	1,887	3,833	3,200	6,287	9,816	9,912	9,291	9,758	7,484	4,070	1,445
Riverfront Recapture Trail, Hartford	3,078	2,970	5,418	4,938	9,495	16,195	17,883	32,086	21,690	20,833	6,443	2,214
Shoreline Greenway Trail, Madison	3,686	3,797	5,075	7,334	9,611	12,793	12,286	13,127	11,786	5,825	3,806	3,483
Still River Greenway, Brookfield	7,454	7,448	13,154	17,771	20,317	15,625	17,872	23,249	23,497	15,911	10,231	6,048
Sue Grossman Trail, Torrington	2,125	230	6,619	7,243	7,735	6,257	5,045	5,827	7,226	5,269	4,076	1,432

## Monthly Summary Percent of Totals Table:

Trail	Date											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Air Line Trail, East Hampton	4%	3%	5%	8%	11%	13%	11%	16%	13%	9%	6%	2%
Air Line Trail, Portland							13%	24%	25%	17%	11%	9%
Air Line Trail, Thompson	2%	2%	1%	4%	14%	14%	10%	17%	13%	7%	9%	7%
Charter Oak Greenway, Manchester							18%	24%	21%	24%	10%	4%
CTFastrak Trail, New Britain	7%	7%	7%	9%	10%	10%	10%	11%	9%	8%	7%	5%
Farmington Canal Heritage Trail, Cheshire	3%	3%	5%	8%	10%	12%	11%	16%	16%	9%	5%	3%
Farmington Canal Heritage Trail, Hamden	3%	4%	7%	12%	16%	14%			19%	13%	8%	5%
Farmington Canal Heritage Trail, New Haven	5%	5%	6%	8%	10%	10%	10%	12%	14%	10%	6%	4%
G&S Trolley Trail, Groton						6%	18%	20%	18%	13%	13%	11%
Hop River Trail, Bolton	2%	2%	4%	6%	9%	13%	13%	20%	16%	8%	5%	2%
Hop River Trail, Vernon	4%	2%	4%	8%	11%	13%	14%	15%	14%	9%	6%	2%
Larkin State Bridle Trail, Oxford	4%		6%	9%	5%	13%	10%	15%	18%	14%	6%	1%
Middlebury, Greenway	4%	3%	5%	11%	14%	14%	12%	12%	12%	7%	4%	1%
Naugatuck River Greenway Trail, Derby	8%	9%	19%	1%			11%	20%	11%	3%	10%	8%
Norwalk River Valley Trail, Wilton	11%	10%	12%	13%	12%	6%				9%	15%	13%
Riverfront Recapture Trail, East Hartford	3%	3%	6%	5%	9%	14%	14%	13%	14%	11%	6%	2%
Riverfront Recapture Trail, Hartford	2%	2%	4%	3%	7%	11%	12%	22%	15%	15%	4%	2%
Shoreline Greenway Trail, Madison	4%	4%	5%	8%	10%	14%	13%	14%	13%	6%	4%	4%
Still River Greenway, Brookfield	4%	4%	7%	10%	11%	9%	10%	13%	13%	9%	6%	3%
Sue Grossman Trail, Torrington	4%	0%	11%	12%	13%	11%	9%	10%	12%	9%	7%	2%

## Daily Totals

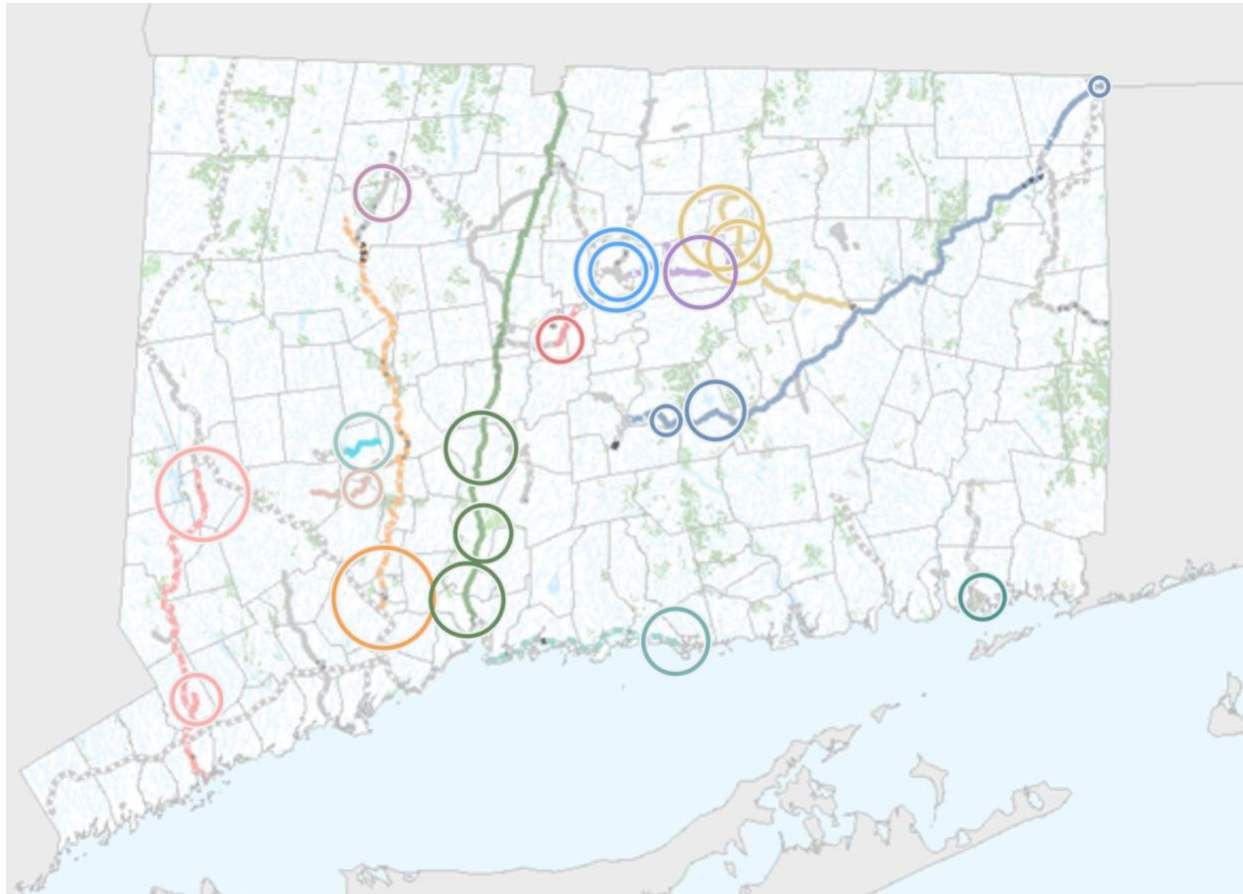
For visualizing daily totals by individual trail or in the aggregate, visit the new [Trail Census data visualization portal](#). The new [trail use and weather](#) site integrates trail use and daily high temperature, precipitation, snowfall, and snow depth.

## Key Takeaways

- **Weather Rules:** The most significant factor in trail use and the daily totals is weather. On days that are warm to mild, trails get the most use overall. It is worth noting that although the majority of trail use occurs in the summer/spring and fall, significant use (12%) occurs in winter. Even on rainy days with moderate temperatures, people are still using trails.
- **Steady Use on Commuter Trails:** Trails that experience commuter use seem to be less impacted by weather. See the CTFastrak Trail in New Britain which registers steady and consistent daily use, even during snow storms.
- **Trail Plowing Works:** Trails that plow and remove snow after storms experience rapid rebounds in use following major snowfall. For example, a major snow event on January 28-29 drastically impacted trail use across all trails. But trail use in Derby, where the trail is plowed, rebounded quickly.
- **Autumn in New England:** The highest total trail use total for all trails combined was Saturday, September 29, a warm (74 F) and clear day.
- **Spring Fever?** On rare days in winter and early spring when temperatures rise, so does trail use. On February 5, the weather was unseasonably warm (64 degrees) and total daily trail usage spiked to 5,314.



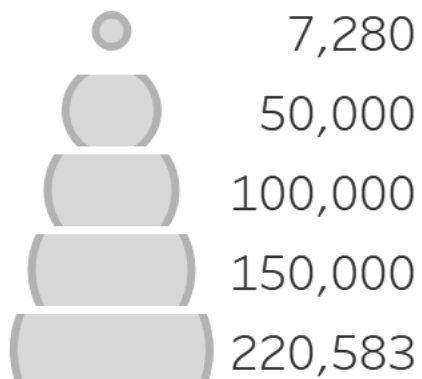
## Average Annual Daily Totals (AADT) by Trail



### Trail

- Air Line Trail, East Hampton
- Air Line Trail, Portland
- Air Line Trail, Thompson
- Charter Oak Greenway, Manchester
- CTFastrak Trail, New Britain
- Farmington Canal Heritage Trail, Cheshire
- Farmington Canal Heritage Trail, Hamden
- Farmington Canal Heritage Trail, New Haven
- G&S Trolley Trail, Groton
- Hop River Trail, Bolton
- Hop River Trail, Vernon
- Larkin State Bridle Trail, Oxford
- Middlebury Greenway
- Naugatuck River Greenway Trail, Derby
- Norwalk River Valley Trail, Wilton
- Riverfront Recapture Trail, East Hartford
- Riverfront Recapture Trail, Hartford
- Shoreline Greenway Trail, Madison
- Still River Greenway, Brookfield
- Sue Grossman Trail, Torrington

### AADT(Average Daily Total\* 365)





## Day of Week Summary

The day of week summary breaks down the annual adjusted counts by day of week. The first table details total counts by the day of week and the second table shows the percent of trail use by day of week for each trail, and is formatted with higher values shaded darker green.

## Key Takeaways

- **A 60/40 Split:** Overall, 62% of total uses were on weekdays and 38% on weekends. The most active trail day is Saturday, closely followed by Sunday. During the week Monday is the most active weekday, Thursday the least active.
- **See You on the Weekend:** Nearly all trails saw heavier use on weekends than weekdays, with the exception of the CTFastrak Trail, for which the opposite was true. This use pattern is indicative of heavier commuter use, as the trail runs parallel to the CTFastrak.



## Day of Week Summary Table:

Trail	Date						
	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Air Line Trail, East Hampton	16,546	9,769	8,172	7,807	7,482	7,708	15,624
Air Line Trail, Portland	1,934	1,319	1,020	876	958	1,107	1,610
Air Line Trail, Thompson	1,737	853	705	490	547	799	1,770
Charter Oak Greenway, Manchester	10,549	7,407	6,908	4,922	6,172	6,053	11,522
CTFastrak Trail, New Britain	4,682	6,673	6,560	6,764	6,490	6,583	5,828
Farmington Canal Heritage Trail, Cheshire	24,826	13,762	12,286	11,790	10,960	12,305	23,367
Farmington Canal Heritage Trail, Hamden	11,042	5,285	5,852	6,353	4,433	5,482	13,604
Farmington Canal Heritage Trail, New Haven	16,039	16,700	16,310	15,993	14,605	16,673	19,908
G&S Trolley Trail, Groton	5,098	2,748	2,783	2,285	2,312	2,667	4,915
Hop River Trail, Bolton	20,932	9,934	7,156	8,241	7,326	8,862	19,515
Hop River Trail, Vernon	29,693	20,009	15,347	17,658	17,578	17,301	29,422
Larkin State Bridle Trail, Oxford	4,884	2,116	2,236	2,156	2,047	2,383	4,929
Middlebury, Greenway	11,173	10,055	9,315	9,517	7,834	7,969	11,125
Naugatuck River Greenway Trail, Derby	26,625	22,764	23,454	18,546	20,032	19,686	29,647
Norwalk River Valley Trail, Wilton	7,069	4,349	5,157	4,667	4,153	4,747	7,487
Riverfront Recapture Trail, East Hartford	7,528	10,847	9,679	11,278	8,983	8,838	12,067
Riverfront Recapture Trail, Hartford	20,384	16,751	18,475	19,503	16,688	17,229	34,213
Shoreline Greenway Trail, Madison	21,075	11,614	10,155	9,755	9,500	10,529	19,981
Still River Greenway, Brookfield	30,092	25,782	24,650	23,471	20,439	21,942	32,201
Sue Grossman Trail, Torrington	8,694	9,068	8,095	9,127	7,308	7,152	9,640

## Day of Week Summary Percent of Totals Table:

Trail	Date						
	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Air Line Trail, East Hampton	23%	13%	11%	11%	10%	11%	21%
Air Line Trail, Portland	22%	15%	12%	10%	11%	13%	18%
Air Line Trail, Thompson	25%	12%	10%	7%	8%	12%	26%
Charter Oak Greenway, Manchester	20%	14%	13%	9%	12%	11%	22%
CTFastrak Trail, New Britain	11%	15%	15%	16%	15%	15%	13%
Farmington Canal Heritage Trail, Cheshire	23%	13%	11%	11%	10%	11%	21%
Farmington Canal Heritage Trail, Hamden	21%	10%	11%	12%	9%	11%	26%
Farmington Canal Heritage Trail, New Haven	14%	14%	14%	14%	13%	14%	17%
G&S Trolley Trail, Groton	22%	12%	12%	10%	10%	12%	22%
Hop River Trail, Bolton	26%	12%	9%	10%	9%	11%	24%
Hop River Trail, Vernon	20%	14%	10%	12%	12%	12%	20%
Larkin State Bridle Trail, Oxford	24%	10%	11%	10%	10%	11%	24%
Middlebury, Greenway	17%	15%	14%	14%	12%	12%	17%
Naugatuck River Greenway Trail, Derby	17%	14%	15%	12%	12%	12%	18%
Norwalk River Valley Trail, Wilton	19%	12%	14%	12%	11%	13%	20%
Riverfront Recapture Trail, East Hartford	11%	16%	14%	16%	13%	13%	17%
Riverfront Recapture Trail, Hartford	14%	12%	13%	14%	12%	12%	24%
Shoreline Greenway Trail, Madison	23%	13%	11%	11%	10%	11%	22%
Still River Greenway, Brookfield	17%	14%	14%	13%	11%	12%	18%
Sue Grossman Trail, Torrington	15%	15%	14%	15%	12%	12%	16%

## Hour of Day Summary

The Hour of Day summary reports use broken out by time of day. The table shows percent of daily use by hour of day for each trail and for all trails combined. The Percent of Daily Average table is formatted so that cells with higher values are shaded darker green. For summary totals, visit the data portal.

## Key Takeaways

- **9-5 is Primetime:** Most trail use (85%) takes place between 9am-5pm. Trails were busiest from 10am-1pm, with 12 pm-1 pm being the busiest hour on average.
- **Commuter Hours:** The CTFastrak Trail in New Britain and the Farmington Canal Trail in New Haven saw heavier morning/evening use, consistent with their urban settings and commuting use.
- **Lunch and Walk:** The spike in use on the Riverfront Recapture trails during the noon hour reflects the popularity of the trail for lunchtime walks for workers in nearby downtown Hartford.

## Hourly Percent of Totals Table:

Trail	Hour																							
	12 AM	1 AM	2 AM	3 AM	4 AM	5 AM	6 AM	7 AM	8 AM	9 AM	10 AM	11 AM	12 PM	1 PM	2 PM	3 PM	4 PM	5 PM	6 PM	7 PM	8 PM	9 PM	10 PM	11 PM
Air Line Trail East Hampton	0%	0%	0%	0%	0%	0%	1%	2%	4%	7%	9%	10%	9%	9%	10%	10%	10%	9%	6%	3%	1%	0%	0%	0%
Air Line Trail Portland	0%	0%	0%	0%	0%	0%	1%	3%	6%	9%	12%	11%	8%	8%	8%	8%	8%	8%	7%	3%	1%	0%	0%	0%
Air Line Trail Thompson	0%	0%	0%	0%	0%	2%	2%	2%	4%	7%	10%	10%	10%	10%	12%	10%	8%	6%	4%	2%	1%	1%	0%	1%
Charter Oak Greenway Manchester	0%	0%	0%	0%	0%	0%	1%	3%	6%	7%	8%	8%	8%	7%	7%	8%	7%	9%	9%	7%	3%	1%	0%	0%
CTFastrak Trail New Britain	1%	1%	0%	0%	0%	3%	5%	6%	4%	4%	5%	6%	5%	6%	7%	7%	8%	9%	8%	6%	4%	2%	2%	2%
Farmington Canal Heritage Trail Cheshire	0%	0%	0%	0%	0%	0%	1%	3%	6%	8%	10%	11%	10%	10%	8%	8%	8%	7%	6%	3%	1%	0%	0%	0%
Farmington Canal Heritage Trail Hamden	0%	0%	0%	0%	0%	0%	1%	2%	4%	6%	8%	13%	10%	9%	10%	9%	9%	8%	6%	3%	1%	0%	0%	0%
Farmington Canal Heritage Trail New Haven	0%	0%	0%	0%	0%	0%	2%	5%	7%	7%	7%	7%	7%	6%	7%	8%	9%	10%	7%	5%	3%	2%	1%	1%
G&S Trolley Trail Groton	0%	0%	0%	0%	0%	0%	1%	3%	5%	8%	11%	12%	10%	8%	8%	9%	9%	9%	6%	3%	1%	0%	0%	0%
Hop River Trail Bolton	1%	0%	0%	0%	0%	1%	1%	3%	6%	8%	9%	10%	9%	10%	9%	8%	8%	8%	7%	3%	1%	0%	0%	0%
Hop River Trail Vernon	0%	0%	0%	0%	0%	0%	2%	4%	6%	10%	10%	9%	8%	8%	7%	8%	8%	8%	7%	4%	1%	0%	0%	0%
Larkin State Bridle Trail Oxford	0%	0%	0%	0%	0%	0%	1%	5%	7%	9%	11%	10%	9%	7%	8%	7%	7%	8%	5%	3%	1%	0%	0%	0%
Middlebury Greenway	0%	0%	0%	0%	0%	0%	4%	6%	8%	10%	10%	9%	8%	7%	6%	7%	7%	7%	6%	4%	2%	0%	0%	0%
Naugatuck River Greenway Trail Derby	0%	0%	0%	0%	0%	1%	2%	3%	6%	8%	9%	9%	9%	9%	9%	8%	8%	7%	6%	4%	1%	0%	0%	0%
Norwalk River Valley Trail Wilton	0%	0%	0%	0%	0%	0%	1%	2%	6%	10%	11%	10%	10%	9%	9%	9%	9%	8%	4%	2%	0%	0%	0%	0%
Riverfront Recapture Trail East Hartford	0%	0%	0%	0%	0%	0%	2%	2%	4%	5%	5%	8%	16%	12%	7%	6%	6%	7%	7%	6%	3%	2%	1%	0%
Riverfront Recapture Trail Hartford	0%	0%	0%	0%	0%	0%	1%	3%	5%	6%	6%	8%	16%	13%	9%	7%	6%	5%	5%	4%	2%	1%	1%	1%
Shoreline Greenway Trail Madison	0%	0%	0%	0%	0%	0%	1%	3%	5%	8%	10%	12%	10%	10%	10%	8%	9%	7%	4%	2%	1%	0%	0%	0%
Still River Greenway Brookfield	0%	0%	0%	0%	0%	0%	1%	3%	6%	8%	9%	8%	8%	7%	8%	9%	9%	9%	8%	5%	1%	0%	0%	0%
Sue Grossman Trail Torrington	0%	0%	0%	0%	0%	1%	2%	4%	7%	10%	9%	9%	9%	8%	7%	7%	8%	8%	6%	3%	1%	0%	0%	0%



## Understanding the Data



The count data represented in this report shows the number of uses or trips, not individual visits or visitors. Infrared counters register warm bodies passing by the IR scope. Therefore, trail users who travel out and back on the same route will pass the counter twice and

be counted twice. For trails with primarily out and back traffic, trail visits can be estimated at  $\frac{1}{2}$  of the count total. The raw data was adjusted or “calibrated” using manual counts completed by volunteers in the beginning in 2017. The manual counts of trail use at the counter locations were compared to the counts registered by the IR counter in that location for identical time periods. Individual adjustment factors were then established for each trail location by dividing the manual count total by the IR count total. Since the count data in this report also only provides information about use at a single point on a trail where the counter is installed, the figures may not necessarily be indicative of use of an entire trail or trail network. For more information about specific locations of counters, please see the program webpage.

## Missing Data

There were some issues that resulted in missing or corrupted data, so not all counters produced complete data for the entire year. Data issues include: moisture in the IR scope, heated vegetation within view of the IR scope, nesting insects obstructing IR scope. Missing data or data during time periods when a malfunction was identified (and was removed) from the dataset. In order to account for missing data on annual use estimates, the annual totals were calculated by multiplying the average daily use for days with valid data on each trail by 365. All other breakdowns of the data are based on the adjusted (calibrated) counts, but still reflect the missing or removed data. More detailed information can be found on our website.