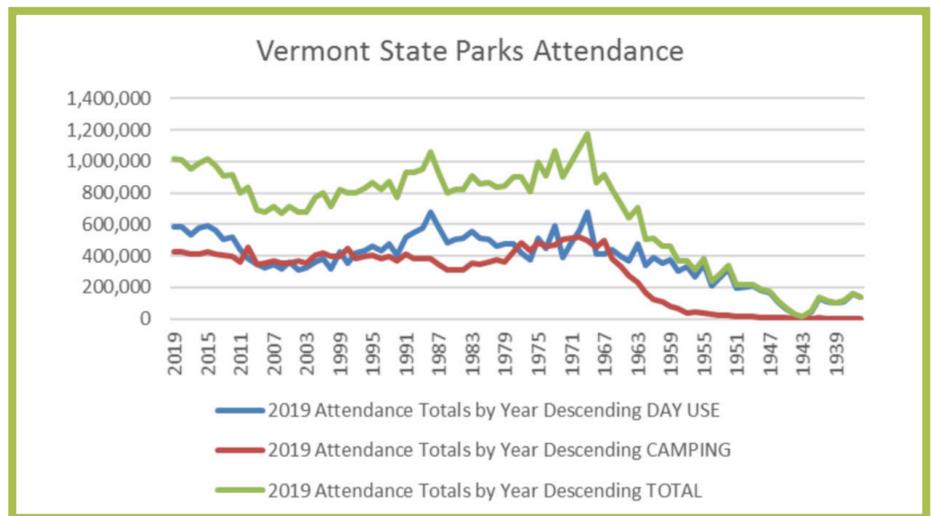


# Learning from Vermont's Park, Bike and Pedestrian Non-motorized Count Programs

The Vermont Department of Forests, Parks, and Recreation manages about 227,500 acres of land in the state of Vermont including about 1,500 miles of trail. There are more trails in the winter because of cross-country skiing and snowmobiling trails, which are not open in the summer. They offer hiking, snowmobiling, skiing, mountain bikes, and handicapped-accessible trails and most are multi-use. The first trail park opened in 1983. Current collection methods include trailhead register boxes, trail counters (both infrared and magnetic counters), parking lot counters, and the ArcGIS Collector application. With the COVID-19 Pandemic, register boxes were closed so the ArcGIS Collector app was developed to collect information about trail structures on the land.



The chart below shows how park attendance has changed in Vermont over time. As seen below, there was an upward trend in trail use in the 1960s and 1970s but use has generally declined over time. The primary use of state parks has been day use versus camping, largely as a result of daytime trail use.

The Vermont Department of Forests, Parks, and Recreation has deployed assessment crews that receive training, set up infrared counters, calibrate the counters, do observational studies, and conduct some intercept surveys. Intercept surveys are conducted either by handing people a piece of paper with a link on it or having users complete the survey through an iPad. Over the years, the response rate has been good and the chart above is an example of how the information is communicated to the public.

A Visitor Use Monitoring Plan was developed as a plan for collecting user data. Goals for use of this data include 1) balancing sustainability, user expectations, and resources available 2) leveraging more resources for maintenance or improvements or to develop new assets to disperse visitors and 3) prioritizing projects and matching these with available funding sources.

# Case Study: Non Motorized Counts at the State of Vermont Agency of Transportation

Vermont's statewide count program started in the early 2000's. The agency purchased several Eco-Counters and Vermont was their first North American customer. VTrans, worked in collaboration with the Regional Planning Commissions (RPCs) around the state to implement non-motorized counts including loaning out equipment and providing technical support. The RPCs shared data back with the agency, which encouraged repeat counts in the same location every year and short-term counts over a duration of several weeks. This enabled them to look at trends overtime, see variations during the week and at different times of the year, and ask community specific research questions.

VTrans hired The University of Vermont (UVM) Transportation Research Center to review the data collected between 2016 and 2017, conduct analysis to determine if there were gaps, and determine if more or fewer counts were needed. As a result, UVM developed an online portal for all the data which allows users to click on an individual site and obtain information about the counter location. Future needs include developing a plan for inclusion of roads in the count program, understanding how use varies across the state, and analysis that ties counts to economic data, particularly in areas where the trail is near downtowns or business districts.

These examples highlight several key challenges in non-motorized data collection. First, establishing counter programs over a long time can be a significant challenge. While shorter duration counts are efficient, longer term or permanent counters add to the longevity of data and can provide insights into how use changes over the year. Long duration data is needed to develop factors that show trends over time. Second, the count technology itself represents a challenge, particularly since the technology for counting on-road bikes is not well developed. Finally, keeping data organized can be overwhelming. Developing an online portal is a step but this is a time consuming process and to be very useful it must be user friendly. The future count program at VTrans will include establishing more permanent count sites, (which is tied to regular funding), obtaining more before and after counts to be able to evaluate the impact of new facilities, and obtaining counts in support of specific construction projects.



This infosheet is part of a series based on webinar presentations for the Northeast Regional Center for Rural Development small grant project *Best Practices in*

*Bike/Pedestrian Trail Data and Monitoring.*

More information can be found at

<https://cttrailcensus.uconn.edu/nercrd/>

By: Eniola Fasola, Khadija Shaikh, Laura Brown  
Based on a webinar presented on June 3, 2020, 1:30pm  
by Jessica Savage (VT Department of Forest, Parks and Recreation) and Jon Kaplan (VTrans Bike/Pedestrian Program)

Graphics and photos courtesy  
Jon Kaplan, VTrans

## Resources

[State of Vermont Bicycle & Pedestrian Program](#)

[University of Vermont Transportation Research Center](#)

[New Hampshire Vermont Trail Finder](#)

