



NSRC Progress Report 2022

Influence of Multiple Impacts on User Experience and Decision Making in the Northern Forest

PI Andrea Feldpausch-Parker, State University of New York, College of Environmental Science and Forestry

Project Abstract

During the COVID-19 pandemic, recreation lands in the Northern Forest saw a dramatic increase in visitors. While this has clear positive outcomes (revenue for communities, emotional and physical benefits for users), there are also challenges associated with increased use and crowding (ecological degradation, litter, waste, conflict, risk) that, when combined, interfere with user satisfaction and impact overall experience. Most studies have addressed the ways individual impacts (parking or congestion on trails) inform user experience and decision-making in forested outdoor recreation landscapes. Few studies have investigated the combined influence of these impacts on user experience and decision-making in the context of user density, crowding, displacement, conflict, and risk and safety. This lack of analysis hinders our ability to develop holistic management strategies and crowd mitigation techniques in forested environments.

Research will contribute to understanding the ways various impacts work together to inform the whole picture of user experience and decision-making. This, in turn, will allow for more comprehensive management and mitigation strategies than management approaches based on a single stressor. This work is widely applicable to forested areas of the northeastern United States and beyond. For this study, researchers work in high-use areas of the Adirondack Park that provide outdoor recreational opportunities for health and wellness, receive high visitor volume, and may be at heightened risk because of increased visitation during and since COVID-19. A combination of field observation, surveys, and interviews will result in an analytical model that Park managers can use to simultaneously assess, and more effectively mitigate, multiple impacts on site and user experience.

Progress in 2022

A master's student, Laura Kelly, was hired and began her position at UConn in April 2022. An opportunity was presented to align the ADK study with a separate study planned in CT. A stratified random sampling design was developed to maximize data collection across days of the week and time intervals. Human subjects approval was received in May 2022. A second master's student from SUNY-ESF, Katie Storey, was hired on an hourly basis to assist Laura with some of the summer data collection. From June-October 2022, data were collected at thirteen sampling locations across four study sites (Shelving Rock Road and Pilot



Hogtown parking area on Shelving Rock Road, near Lake George, NY, on a weekend day in October 2022. Hogtown serves as “overflow” parking for Dacy parking lot, two miles further up the road. Hikers then walk up the road to reach trails accessible from the Dacy lot, including the very popular Sleeping Beauty Mountain. Photo by A.T. Morzillo.



NSRC Progress Report 2022

Knob Road by Lake George, NY, and Bulls Bridge Scenic Area and Steep Rock Preserves in CT). Two data collection components were completed. First, site access and use density, with a focus on parking density and longevity, were assessed using unique vehicle information (license plates) collected during car counts at parking lots at each study site. There were approximately 4,700 independent observations in CT and 1,300 in NY; additional information collected included daily weather and information to assess distance traveled by visitors (e.g., car dealer identifiers on plate mounts). Second, signs and flyers containing QR codes were placed at all parking lots to collect information from visitors about site access and conditions, impacts, conflicts, visitor experiences, and demographics. Approximately 450 surveys were completed across all sites. The research team is currently completing data cleaning, preliminary analysis, and reviewing and revising data collection protocols in preparation for the 2023 field season.

Plans for 2023

Now well staffed, plans for the second field season are underway. Morzillo and Kelly are in the process of field season one data analysis. They are also assembling a proposal for planned changes to the data collection process for the next field season to increase data collection and management efficiency and increase survey response rates (e.g., addition of in-person on-site surveys). Banerjee will be added to monthly team meetings in preparation for the upcoming season, though in a voluntary capacity until her position starts in May. She will also be added to the research team's data sharing system and IRB protocols. Moving forward, we will also station Banerjee in the ADK for data collection for the entirety of the second field season so she can conduct interviews, car counts, and assist with passive (through signage and postcards) and active (in-person) survey collection. Kelly will be responsible for car counts and surveys for the CT field sites during the same time period.



Buck Mountain parking lot on Pilot Knob Road, near Lake George, NY, on a weekend day in July 2022.

Collaboration

Collaborators for site access and data collection include NY Department of Environmental Conservation (all sites in NY), Steep Rock Association (Steep Rock Preserves, CT), and FirstLight Power (Bulls Bridge Scenic Area, CT)