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Building Capacity and Technical Skills for Effective Trail Management through Local Practitioner Training in NYC

This is a case study of the Trail Improvement Techniques Training developed by the New York City Citywide Trail Program. This annual training is provided to partners across the city and includes in-field technical skills, identification of trail concerns, trail management best practices and reporting of trail activities. The case study includes the training's target audience, lessons learned since 2019, professionalization through provision of credentials and a reflection on future growth opportunities.

Keywords

urban forested natural areas, practitioner notes, network, urban forests, trail, trails, New York City, trail management, best practices, training

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CONTEXT

Since 2017, NYC Parks and the Natural Areas Conservancy have operated in partnership as the Citywide Trails Team. Our work focuses on management of NYC's nearly 300-mile nature trail network through trail formalization, trail improvement, community engagement, and stewardship projects. In 2018, the Natural Areas Conservancy began to develop the NYC Strategic Trails Plan to create a unified approach for improving, managing, and activating trails in NYC, which included working with stakeholders across the city to establish a vision and goals for the trail network.

During our process to draft the [Strategic Trails Plan for NYC](#), the NAC hosted a series of stakeholder engagements, which occurred over the span of multiple sessions from 2018 to 2019 with various partners, practitioners and members of the public. Engagements included focus groups with NYC Parks employees, local conservancy trail practitioners, and other outdoor recreation groups in NYC. We also hosted "hikeshops," or hiking workshops, with community members to get real-time input on their experience being on trails in NYC. They were interviewed and surveyed about topics such as navigation, safety, access, cleanliness, and general experience with nature.

One of the areas for improvement identified through these engagements was a lack of standardized trail management and design citywide. Prior to the development of the Citywide Trails Team, the skill level of staff working on trails varied across the city, which at the time did not have dedicated trails staff with trail-specific skillsets and training. As such, a goal in the Strategic Trails Plan calls for the "adoption of consistent approaches to design and maintenance of nature trails." As part of that effort, NAC hosted the first annual Trail Improvement Techniques Training in 2019, which instructed NYC Parks and local conservancy partners in basic trail management principles. When the first training was hosted, the Citywide Trails Team consisted of four full-time staff, three of whom were working solely on improvement projects. Due to funding constraints, these three staff were responsible for over 100 miles of the then-formalized network, which made it imperative to have more practitioners trained in sustainable techniques to bolster capacity for on the ground operations.

GOAL

The training has five key goals which have been developed over the six years the training was held:

1. As the overarching thematic goal, train local NYC Parks and conservancy practitioners on trail design guidelines, trail resources, and maintenance standards from the Strategic Trails Plan to standardize trail management best practices in NYC;

2. Establish the Citywide Trails Team as the leading technical trail experts in NYC;
3. Provide post-training guidance and ongoing support for trail management and operations through supplemental trainings and project consultations;
4. Train staff on Natural Areas Management Application to promote utilization and adoption of NYC Parks Natural Resources Group's centralized tracking database to record all work occurring in the natural areas of NYC Parks; and
5. Increase operational capacity for trail operations through employment of a "train the trainer" model, where trained partners citywide would have the knowledge and feel empowered to lead projects at their parks.

APPROACH

The Trails Techniques Training provides opportunities for partners working on nature trails throughout NYC to learn best practices in their management and maintenance. The training shares insights on ways to critically examine nature trails, identifying how and why a trail may be unsustainable, then utilizing these insights for practical applications that mitigate concerns. As part of this effort, curriculum is imparted through use of trail terminology, so we all are speaking the same language. The goal of this approach is to ensure all practitioners have a shared understanding of best practices, wherein we can work together on various project needs throughout the city. The training has typically occurred over the course of three to four days, with the first day structured as an orientation that provides context specific to work that has occurred on nature trails to date, as well as an overview of what will be covered in the following days. The majority of the training after the first day revisits some key terms and approaches through hands-on work, as well as a repetition of terminology.

Each year the team determines the training location based on the following criteria: variety of trail projects to ensure a comprehensive training curriculum, meeting location approximate to project sites, and restroom availability and indoor space with A/V capabilities (if needed). An outreach list is created, which includes park managers, administrators, and conservancy partners working in natural areas. To attend the training, participants fill out a short Request for Applicants (RFA) and include their experience, which modules they are interested in attending, and availability. Due to high demand for training, applicants are reviewed by the team, who then identify which applicants will participate with respect to slots available per module. Participants are selected for the modules that are most suited for their skill set and how useful the module will be for the park they work in. In the first and sixth year, there was an indoor component to the training, with the sixth year structured as a training and symposium. The training lasted from three to five days. Beginning in 2022, the training was offered as a module-based approach, so participants could select the most applicable training for their work. Each year, the team rotates the training location to a different borough, which ensures the training is accessible for all partners, which has been reflected in the diversity of staff and overall attendance numbers.

Staff are included at varying hierarchical levels within their organization, although we give preference to supervisors who can impart knowledge to their fellow staff. The training includes staff across various divisions and disciplines, which has led to a constructive two-way flow of expertise and enhancements to our collective approach to nature trail management.

Beginning in 2021, the team has engaged in a debriefing activity after each training called [Plus, Minus, Delta](#) to inform planning for the following year. Some challenges that have been identified and improved upon include: supervisor buy-in (partners need to take time away from other tasks for training), proximity of work site to meeting location, and late registration/registrant drop off. The team has made adjustments to meet these challenges and continues to assess ways to provide excellent and accessible training. Another addition to the training that was appreciated by attendees and allowed us to provide a level of accreditation was the inclusion of a training certificate, which also connects to LinkedIn, as well as a custom NYC Trails patch. This was also the second year ISA credentials were available to ISA-certified practitioners.

RESOURCES

The Trail Improvement Techniques Training has been funded through grants awarded to the Natural Areas Conservancy by the Leona M. and Harry B. Helmsley Charitable Trust since its inception in 2018. This funding enables us to purchase tools, personal protective equipment, supplies, and supplemental resources for the training. As of 2024, the technical resources include the *NYC Strategic Trails Plan*, *NAC Trail Design Guidelines*, and *NAC's Invasive Plants and Biodiversity: Targeted Management Guide for New York City Stewards*. A suite of trail management resources including Trail Management Objectives (TMOs), Maintenance Activity Plans, and corresponding TMO maps based on GIS Trails Data. Funding also allows us to provide the training free to participants.

KEY RESULTS

- 157 participants were trained from 2020–2024 (six trainings in five Parks). Participants learned invasive species and native plant ID, navigation to work sites using trail segment ID maps, assessment of management concerns, utilization of trail resources, and identification and utilization of appropriate erosion mitigation techniques to address erosion issues in parks. Curriculum modules included:
 - Intro to Trail Management (safety, trail resources, basic trail management concerns, native vs invasive species plant ID),
 - Desire Line Closures (trail restoration),
 - Trail Fundamentals I (Corridor pruning, Invasive species removal, ID of common trail structures),
 - Trail Fundamentals II (Tread Maintenance),
 - Erosion Mitigation I (Water bars and check steps), and
 - Erosion Mitigation II (Punches and turnpikes).
- 13 engagements (projects or additional trainings) were held with previously trained trail techniques training participants (six parks in four boroughs).
- Training has proven to be beneficial and enjoyable for trainees, who have anecdotally expressed how they had enjoyed time away from their routine tasks to learn a new skill.
- Increased technical support has been available for project requests, engaged with teams who now have knowledge of the Trails Team as a resource and have collaborated to varying degrees with staff across the city.



Figures 1 & 2. NAC staff and partners showing turnpike they installed as part of 2024 trails techniques training; NAC staff and partners showing puncheon they installed as part of 2025 trails techniques training.

OPEN QUESTIONS

In 2024, NAC Trails staff hosted our sixth annual trail improvement techniques training. Although a great group of participants attended the training, recruitment posed a challenge, requiring additional outreach. Some of this was attributed to a lack of capacity across NYC Parks and conservancy partners due to significant city budget cuts that adversely impacted NYC Parks. With reduced staff, there were limitations on availability to attend a multi-day training. In 2024, the team hosted a symposium-style training for the first time, where three guest speakers showcased different aspects of the program that they benefited from in their work: advanced volunteer engagement, impact of training and continued collaboration with the team, and universal access work. This was a great addition to the training but was something that did shorten the trail training time in the morning.

To address the potential time-based capacity conflict, an opportunity we identified in 2025 is to provide two smaller training engagements in spring and fall, as opposed to one larger training. In the Spring, we would focus on trail fundamentals such as navigation, corridor pruning, vegetation management and possibly tread maintenance. The spring training will best be suited to staff with little to no trails experience. The second training offered in the fall will accommodate more advanced staff (who have attended previous trainings or have prior experience) in trail structure(s) installation, structural maintenance, and possibly new trail construction. This approach would increase opportunities for engagement outside of the busy

summer season and would also allow for a shorter time commitment of one to two days over the current four-to-five-day training series. Another aspect of this engagement we are currently exploring is sourcing the project sites from past training attendees and correlating these suggestions with our trail improvement priorities. The team is likely to eliminate the RFA this year and maintain only a standard registration page, in an effort to minimize any actual or perceived obstacles to attendance.

Our team continues to discuss and explore ways to engage trainees post-training. The team still sees more potential in activating and working alongside training previous training attendees and hopes to pilot some new approaches to engagement in 2025. We are committed to ensuring that practitioners are using the Strategic Trails Plan to guide their work citywide. We intend to enhance the professionalization of the training, as well as trail work in NYC more broadly, by exploring how the current training curriculum relates to national standards established within the Trail Competency Framework. The Trail Competency Framework is a resource developed by American Trails, in partnership with trail professionals across the country, such as the Professional Trail Builder Association and the U.S Forest Service, that identifies the skills needed to be considered a trail professional. This approach will strengthen our level of practice, which will result in more sustainable trail management, as well as a higher quality of professional advancement for trails staff and community who steward nature trails in NYC.

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