



Catskill “Formerly Trailless” Peaks

RECOMMENDATIONS FOR MESSAGING AND VOLUNTEER PROGRAMS

SUBMITTED MARCH 2024 BY THE
New York-New Jersey Trail Conference



Department of
Environmental
Conservation



Executive Summary

The New York-New Jersey Trail Conference, in collaboration with the New York State Department of Environmental Conservation (DEC), has prepared recommendations for addressing impacts to sensitive habitats on the 17 “formerly trailless” peaks in the Catskill Mountains. Recommendations are based on results from a 2023 visitor survey with 802 participants, scientific literature, and experience-based observations.

Educational outreach through a multi-pronged approach should be an essential component of any proposed solutions. Messaging should be considered in conjunction with DEIJ initiatives and in line with the Authority of the Resource Technique. Specific messaging will depend on which management practices are enacted, and it is envisioned that solutions may vary from one peak to the next and include multiple management practices.

Online and digital outreach should be a key focus to educate visitors early in their trip planning. Collaborating with partner organizations on social media messaging, developing relationships with popular smartphone app platforms, and spreading messaging using existing websites from the DEC and partners should be considered.

On-site messaging should provide further education about desired behaviors for accessing these peaks. Trailhead and on-trail signage with simple messaging should be developed, and messaging about these peaks should be incorporated into in-person interactions by steward programs and the Catskills Visitor Center.

Other outreach opportunities should also be considered, including continued collaboration with hiking clubs and organizers of hiking challenges, continued collaboration with publishers of popular maps and guidebooks, and integration of education and training requirements as part of existing permitting and licensing programs.

Volunteer and steward programs offer an effective conduit for providing messaging to visitors, and expansion of these programs should be considered as the DEC and partner organizations work together to enhance the impact and reach of stewardship initiatives for the “formerly trailless” peaks of the Catskill Mountains.

TABLE OF CONTENTS

Summary of Visitor Perception Survey Report	4
Management Scenarios	5
Messaging Recommendations	10
• Online and Digital Outreach	11
• Physical On-Site Messaging	14
• Other Outreach	20
Volunteer and Steward Program Recommendations	23
Conclusions	26
References	28



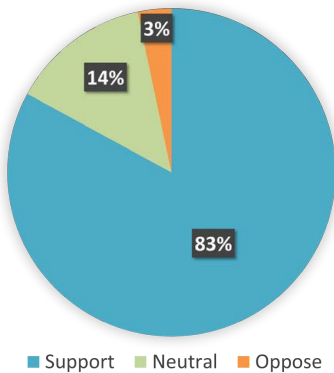
Summary of Visitor Perception Survey Report



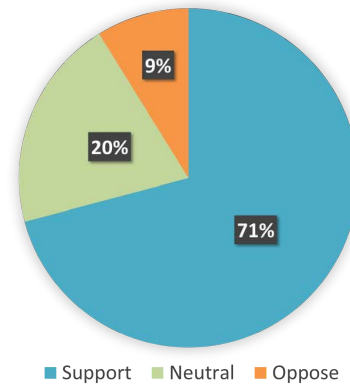
The Catskill “Formerly Trailless” Peaks Survey Report (New York-New Jersey Trail Conference [NYNJTC], 2024) provides results and analysis of a survey conducted in autumn of 2023 that focused on 17 “formerly trailless” peaks in the Catskill Mountains and impacts to the sensitive habitats on these peaks. 802 participants submitted surveys over a 39-day period. The survey findings were referenced for this recommendations report, and the primary findings regarding potential long-term management practices were:

- Concerning posting educational signage, 83% supported this practice and 3% opposed it (14% neutral).
- Concerning designating formal trails to summit peaks on a case-by-case basis by using existing informal trails, 71% supported this practice and 9% opposed it (20% neutral).
- Concerning designating formal trails to summit peaks on a case-by-case basis by closing unmarked trails and building new sustainable trails, 64% supported this practice and 14% opposed it (22% neutral).
- Concerning the establishment of a seasonal and/or annual permitting system to limit access to these peaks, 39% opposed this practice and 36% supported it (25% neutral).

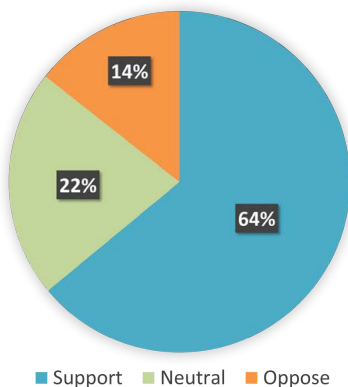
Question 13
Post signage at trailheads with access to the peaks with informal trails that note the presence of threatened and/or vulnerable species, Leave No Trace and Forest Preserve regulations



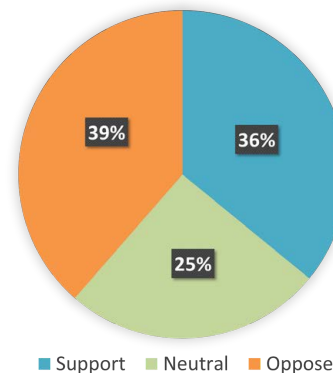
Question 13
Designate a formal trail to the summit using existing informal trails



Question 13
Close unmarked trails and build a new sustainable and formal trail to the summit



Question 13
Seasonal and/or annual permitting system to limit user access to these areas that provide critical habitat for several species of ground nesting threatened and/or vulnerable species



Management Scenarios



While this report focuses on Messaging and Volunteer/Steward Programs related to the “formerly trailless” peaks rather than management, potential management scenarios need to be considered as they will directly impact both areas of focus. To provide a framework for making recommendations in the following sections, this section outlines 5 management scenarios. Each scenario references survey findings regarding visitor feedback about potential management solutions for these peaks as well as other existing recommendations from sources including the Catskill Advisory Group Report (Catskill Advisory Group [CAG], 2022).

The scenarios presented here do not cover all options to consider, but instead are representative of the survey’s questions and participant feedback in terms of management practices to consider for each peak. Ultimately, management solutions for any specific peak may include a combination of these scenarios and/or other practices not addressed here.

Scenario 1: No changes to accessing a peak

The 17 “formerly trailless” peaks exhibit a range of impacts from recent increases in use (New York Natural Heritage Program [NYNHP], 2022). If it is decided for any specific peak that messaging solutions are all that is necessary, this scenario would involve retaining the existing informal trail network and not closing informal trails, not formalizing trails, not implementing a permitting system, and not implementing closures. The aim would be to effectively manage access and natural resource protection for these peaks only through signage, education, and other messaging solutions.

Scenario 2: Close some informal trails to a peak and refrain from creating a formal trail

For locations with dispersed informal trail networks, this scenario would involve closing some informal trails to a peak, especially within sensitive habitat, but not establishing a formal trail. Closures of informal trails in a braided network should ensure a clear route remains available, otherwise the closure may be impossible to work as intended and potentially lead to greater impact (Johnson et al., 1987). Closure strategies may vary and include signage and messaging components, but any decisions to close an informal trail should consider what degree of physical trail obstruction, if any, is appropriate for limiting further impacts.

Decisions about which informal trails to close for a peak should focus on sections that are the least sustainable, as well as sections that negatively impact sensitive habitats the most. Efforts should be made to minimize habitat fragmentation for wildlife protection especially, and closing some informal trails can be one strategy for accomplishing this.

Management Scenarios



The NYNHP (2022) makes several peak-specific recommendations that should be referenced in deciding whether to close some informal trails to a peak. One example, concerning South Doubletop, is:

The establishment of one formal trail with blockage of the remaining network of herd paths may allow this area to recover overtime[sic]. (NYNHP, 2022, p. 11)

Scenario 3: Create a formal trail to a peak and close all informal trails

From the survey findings, the management practice of designating a formal trail to peaks on a case-by-case basis received support (NYNJTC, 2024). 71% of participants supported using existing informal trails to designate a formal trail, and 64% of participants supported closing unmarked trails and building new sustainable formal trails. 41% of the open-ended comments emphasized support for the practice of formalizing trails. It is important to note that the wording of the survey questions and feedback from open-ended comments does not infer support for broadly formalizing trails on all 17 peaks covered by the survey, but rather support for this being a management option to consider for each peak on a case-by-case basis.

In deciding whether to create a formal trail to a peak, the full spectrum of trail types should be considered, as outlined in the High Peaks Wilderness Complex Unit Management Plan's "Trail Classification System" (New York State Department of Environmental Conservation [DEC], 1999) or other guidelines used by the DEC. It is also important to acknowledge that a single peak may have multiple trailheads of ingress for users, so creating a formal trail to a peak may involve a combination of formalization methods along multiple routes of access.

The two methods of creating formal trails presented in the survey received similar levels of support. Establishing a formal trail using existing informal trails may produce short-term benefits, but if the existing informal trail is damaged, not sustainably located, or traverses sensitive habitat that could potentially be avoided, formalization could lead to further damage of the habitat. Establishing a formal trail by building new sustainable trail may produce long-term benefits, but this method may be cost prohibitive. A hybrid solution should be considered as a formalization method, in which acceptable sections of one or more informal trails are integrated with some retrofitting into an eventual formal trail, and new sections are built to piece them together into a sustainable whole.

The NYNHP (2022) makes several peak-specific recommendations that should be referenced in deciding whether to create a formal trail to a peak. One example is:

Establishment of a formal trail to summit of both Rusk and East Rusk Mountains may allow this community to recover from the currently significant level of disturbance and vegetation destruction from trampling impacts. (NYNHP, 2022, p. 33)

Management Scenarios



Scenario 4: Implement a permitting system to access a peak

From the survey findings, the management practice of a seasonal and/or annual permitting system to limit user access was the least popular management practice of the four options presented (NYNJTC, 2024). 39% of overall participants opposed a permitting system. Several open-ended comments elaborated on opposition to permit systems, including referencing systems in the Adirondacks that they did not support and suggesting that permitting or restricting access should be a last resort only after other solutions have been exhausted.

Implementation of a permitting system, and enforcement of it, would be difficult to accomplish using a typical trailhead reservation system such as the system in place for accessing the Adirondack Mountain Reserve and its approaches to several high peaks. Many of the “formerly trailless” peaks in the Catskills can be accessed via bushwhacks or informal trails from multiple established trailheads and roadside parking areas, or via formal trails for a portion of the route, so the dispersed and varied access would require a different permitting model to be explored. It is also important to consider how a permitting system would affect user groups beyond hikers, including hunters.

The CAG (2022) recommends, in part, the following for managing areas with increased use:

Investments in education, stewards, forest rangers, and other mitigation steps should be implemented before a permit system is used. Determining the need for a permit system should be included in the VUMF process. Park managers should be especially cautious about charging for permits. (CAG, 2022, p. 12)

Parks across the globe have implemented reservation or permit systems in response to increased use. The CAG’s Final Report recommends that DEC look at models across the country to understand which are the most effective and replicable for our park. (CAG, 2022, appendix A)

Scenario 5: Implement seasonal or long-term closures of sensitive habitats on a peak

The survey did not directly ask participants about their support or opposition to seasonal or long-term closures of peaks. 8% of open-ended comments referenced support for seasonal closures or restricting visitation of these peaks to be winter only, with some feedback referencing the current rules about no camping above 3,500’ during non-winter months (NYNJTC, 2024). Winter months were the least popular time of the year that survey participants visited the peaks, with visitation rates ranging from 43%-48% for December through March, and visiting the peaks during these colder and snowier months may make less of an impact to the habitat as compared to the other months of the year.

Management Scenarios



Open-ended comments also referenced the potential for seasonal closures of sensitive habitats based on practices on other DEC-managed lands or other locations such as Acadia National Park. A nearby example of a seasonal closure, although outside the Catskill Park boundary, is at Vroman's Nose Unique Area, where a section of cliff and trail are closed February 1 through July 31 to protect nesting peregrine falcons. For the "formerly trailless" peaks, decisions about seasonal closures should consider sensitive periods for ground-nesting birds as well as periods of typical muddy trail conditions in the spring and fall, particularly where a trail follows a less than sustainable route through sensitive habitat. A few comments also were in support of long-term closures, from a year to indefinitely, for the most damaged/threatened peaks to allow for recovery of the fragile resources.

The CAG (2022) recommends, in part, the following for using natural-resource protection as a driver for decision making:

Although we should strive to keep public lands open, certain threats to natural resources may require restrictions or temporary closures in some areas that need to recover from high use. Again, these decisions should be made based on the collection of data, and with the recognition that the park's natural beauty, biotic communities, water quality, and other natural elements should not take a back seat to public access. (CAG, 2022, p. 16)

Additional Survey Findings to Consider

Additional survey findings that should be considered in making decisions about management practices related to the "formerly trailless" peaks include the following:

- Several open-ended comments included negative feedback about hiking challenges that involve these peaks and suggestions for changes to how these challenges are conducted, such as removing summit canisters, limiting participation to less-sensitive months, and education requirements for challenge participants. Challenges limited to using formal trails have been popular, including the Fire Towers Challenge and All Trails Challenge, and new challenges focused on formal trails might be created to help disperse visitors and avoid sensitive habitats. The CAG (2022) recommends, in part, the following for addressing recreational challenges:

Group-use and recreational challenges have become more common across the Catskill Park[...]Many of these are a great opportunity to drive visitation to certain areas of the Catskill Park, but inadvertently result in the trampling or degradation of natural resources. The State should continue to collaborate with these clubs and challenges. Leave No Trace training should be required for group leaders, event organizers, and participants. (CAG, 2022, p. 14)

Management Scenarios



- To aid with distributing visitor use, viewpoint clearing along existing formal trails throughout the Catskills should be considered when appropriate. Viewpoints are often popular destinations, and establishing new viewpoints or clearing back overgrown viewpoints could provide one means of creating attractive hiking options that don't involve sensitive habitat. If a trail to a peak is formalized, creating and maintaining a viewpoint outside of sensitive habitat could be one strategy to divert foot traffic away from natural viewpoints that may be present within or adjacent to the most sensitive habitat.



Messaging Recommendations



Educating the public about the sensitive habitats on the “formerly trailless” peaks, the impacts that increased foot traffic is having on these peaks, and how to responsibly recreate in these areas should be a primary component of any management solutions that are pursued. All management scenarios presented above, as well as other options that may not be addressed here, will likely include some degree of education and messaging, although the specific messaging recommendations may vary depending on the scenario.

The Catskill Advisory Group (CAG), comprised of stakeholders in the Catskill Forest Preserve that work with the DEC, provided messaging recommendations for the Catskills as part of their Catskill Advisory Group Report submitted in 2022. This report covers the Catskills as a whole, but several recommendations can apply to the “formerly trailless” peaks, and the following sections include references to this report where appropriate.

Need for More Research:

While the messaging recommendations in this document are derived from a combination of research-based sources, inferences from recent visitor use studies, and general anecdotal assumptions and experience-based observations, additional research should be conducted. Better understanding the types of visitors that use these areas, and the ways that they get their information about the Catskills for their trips that may include the “formerly trailless” peaks, would allow for messaging strategies to reach the target visitors most effectively. From the survey findings, some specific user types that should be targeted for messaging include long-time Catskill hikers, new-to-the-Catskills hikers, hunters or other users for which the peak summits may not be the primary destination, and hikers who hike with their dogs.

The CAG (2022) recommends the following, in part, for doing market research to drive messaging:

Market research should be conducted to understand where travelers to the Catskills get information to make their decisions, what messages about the Catskills resonate with visitors, and how to affect their decision making and behavior. (CAG, 2022, p. 18)

Inclusive Messaging:

Any messaging concerning these “formerly trailless” peaks should be considered through the lens of diversity, equity, inclusion, and justice (DEIJ) initiatives that have become increasingly important to implement within the Catskills. The CAG (2022) recommends the following, in part, for addressing diversity, equity, inclusion, and justice initiatives:

Ensure public-facing park resources are as inclusive as possible—including visitor centers, information delivery points, advertising, publications, etc. Special attention should be paid to language and words used, and how people are portrayed. (CAG, 2022, p. 33)

Messaging Recommendations



Authority of the Resource Technique:

As much as possible, messaging should also be framed by the Authority of the Resource Technique outlined by Wallace (1990) and championed by Leave No Trace. This technique has been shown to be more effective than alternate messaging strategies for educating visitors about responsible stewardship (George & Gaudry, 2002; Settina et al., 2020). Specific recommendations for this technique are described in the appropriate sections below.

Multi-Platform Approach:

Despite the need for additional market research, it can be safely assumed that efforts to educate visitors would be best accomplished by leveraging as many avenues for messaging as possible. The CAG (2022) recommends the following, in part, for how to approach visitor education:

While digital communication has helped to drive the uptick in visitation across the Catskills, evidence suggests that it will take a multi-platform approach to educate visitors about the park and their role in caring for it. (CAG, 2022, p. 17)

The following recommendations are structured in terms of the platform, or method, for disseminating the messaging. The three categories detailed below are Online and Digital Outreach, Physical On-Site Messaging, and Other Outreach.

Online and Digital Outreach

Outreach through online and digital methods has the potential to reach visitors at multiple points in their experience, including the planning stage, on-site stage, and post-trip reflection stage. Messaging that can reach a visitor during the initial planning stage may have the greatest potential to influence behavior. In a report about recreation-related impacts in the Adirondack Park published by Leave No Trace Center for Outdoor Ethics (Lawhon, 2020), the author describes the importance of messaging reaching visitors early in the process in the following way:

Research has shown that most outdoor enthusiasts first encounter Leave No Trace information in a park or protected area (from various sources: rangers, signage, etc.). While there are benefits to people being reached on-site in parks, there is also the issue that the information may be coming too late in the 5-step process of a recreational experience to actually make a difference (at least for that visit). The 5-steps of recreational experiences include: 1) anticipation - this involves trip planning and preparation; 2) travel to - the physical act of traveling to a park or protected area whether it's just across town or across the country; 3) on-site - individuals are actually in a park, engaged in various forms of recreation; 4) travel

Messaging Recommendations



back - the physical act of traveling back home; and 5) reflection - taking stock of the experience, posting photos to social feeds, blogging, sharing the adventure with family or friends. Given this 5-step process, the ideal time to reach outdoor enthusiast [sic] with Leave No Trace information is in the anticipation phase as they're planning their outing. When people are reached earlier in the planning process there is a greater likelihood that they will be better prepared for their outing, which generally means they will also create less impact. (p. 45)

Regardless of the management scenarios that are pursued for these "formerly trailless" peaks, educating visitors early in the process should be a primary focus of any messaging solutions. Messaging at the trailhead or on-trail is also important, but information such as informal trail closures, undesirable conditions on informal trails, or preferred seasons for traversing sensitive habitat may not be as effectively communicated at these on-site locations.

Social Media Messaging:

Many hikers regularly utilize various social media platforms to plan their outings, arrange group hikes, and share experiences, advice, and opinions with others. Messaging disseminated through social media has great potential to reach visitors during the crucial trip preparation stage. The CAG (2022) recommends the following for working with stakeholder collaboratives:

Sharing key messages on social media, across the accounts of dozens of organizations, to ensure they reach the broadest audience possible. (CAG, 2022, p. 12)

While DEC-managed social media accounts on platforms such as Facebook and Instagram have significant followings, messaging about the "formerly trailless" peaks through social media should be coordinated with partner organizations, such as members of the Catskill Advisory Group, and individuals who have established themselves as influencers in the Catskills. Not only does coordinated sharing broaden the reach, but it is also key for messenger credibility and increasing the potential for the messaging to influence changes in behavior.

Messaging through social media should be simple and easy to understand at a glance and be presented in a variety of formats including short videos. The content should not only inform users about regulations and specific behavioral requests, but also highlight the reasons why they should care about the sensitive habitats on these peaks. Users who can connect with the messaging on a "why does this matter to me" level might better understand the need to limit further degradation of both the environment and the visitor experience in these areas, and therefore be more receptive to management solutions that might require behavior changes.

Messaging Recommendations



Responsible Education on Popular Recreation App Platforms:

In addition to social media platforms, many hikers regularly use popular smartphone recreation apps or websites for their trip planning, outing navigation, and post-trip reflection. The Catskill “Formerly Trailless” Peaks Survey Report indicated that 49% of participants used AllTrails while hiking, or preparing to hike, in the Catskills; 31% used Avenza Maps, 22% used Gaia GPS, 11% used Strava, and 2% used Trailforks (NYNJTC, 2024). Relationships with these popular app platforms should be further developed as a strategy for providing messaging about these peaks and other responsible use education, as this messaging has the potential to be presented to visitors during their trip preparation and information gathering stage.

The CAG (2022) recommends the following, in part, for developing working relationships with popular smartphone app developers:

The State should establish working relationships with entities whose smartphone apps (AllTrails, Strava, etc.) and search engines drive visitation to certain areas of the Catskill Park[...]The State should help these companies pair their maps with information about Leave No Trace, park rules and regulations, and more. (CAG, 2022, p. 13)

AllTrails has recently established the Public Lands Program, which aims to allow land managers and partner organizations to have more direct access to making content changes, educating visitors with alerts, and understanding usage patterns. Regardless of the management scenarios pursued for these “formerly trailless” peaks, the DEC and its partners should continue to foster a relationship with this popular platform. Use of these tools could have a significant reach in helping disseminate messaging about accessing these peaks and reducing traffic along informal trails that may be undesirable or closed.

Avenza Maps is a recreation app that allows users to plan their trip or navigate on-site using maps provided by other map publishers. In the Catskills, the primary maps used by visitors are published by the New York-New Jersey Trail Conference. The Trail Conference already works closely with the DEC and partner organizations in developing and regularly updating its maps, and including messaging about these peaks on future maps should be considered.

Messaging on DEC, Partner Websites:

Messaging about these peaks should be clearly presented on appropriate pages of the DEC website, using consistent language and content as any social media messaging that is developed but also expanding as needed with additional information. Partner organizations with their own websites should be encouraged to similarly include messaging about the “formerly trailless” peaks on appropriate pages.

Messaging Recommendations



Physical On-Site Messaging

Providing education to visitors about the “formerly trailless” peaks once they’ve reached their starting point in the Catskills, or while they are navigating on or off formal trails, is an important approach. For the purposes of the recommendations below, on-site messaging is focused on signage at trailheads, signage further along the trail or at summit locations, and messaging that could be delivered by in-person interactions at the Catskills Visitor Center or at various locations through steward programs.

Whereas the messaging recommendations for online and digital outreach should focus on conveying information to assist with a visitor’s trip planning, trailhead and on-trail communication should focus instead on how visitors can improve their decision-making under the assumption that they have likely committed to an itinerary already. Broader messaging aimed at influencing visitors to consider other destinations or other less-impactful times of the year for traversing sensitive habitat may have limited effectiveness at these locations, perhaps with the exception of the Catskills Visitor Center, although this information can still be conveyed on-site. On-site messaging should instead focus on guiding visitors toward desired behaviors for accessing these peaks that don’t require them to backtrack or cancel their plans, such as guiding them toward formal trails, educating them about any closed informal trails, and educating them about responsible use through areas of sensitive habitat.

Authority of the Resource Technique Messaging:

For in-person interactions, the four basic steps of the Authority of the Resource Technique (ART) are outlined in more detail in the research literature (George & Gaudry, 2002; Wallace, 1990), but in summary, one should:

1. Make an announced approach with an introduction and ice-breaking conversation.
2. Provide an objective/non-judgmental description of the observed undesirable behavior.
3. Shift focus to the resource and reveal the implications of the behavior on the resource and/or visitor experience.
4. Describe the desired behavior, and model/demonstrate that behavior if possible.

Messaging Recommendations



Other suggested practices include:

- Eliminate or reduce distractions.
- Refer to norms shared by fellow users.
- Approach or touch/handle things in nature.
- Be conscious of being a role model in the way you speak and carry yourself.
- Model any desirable behaviors yourself.
- Use a passive voice.
- Regularly remove evidence of prior impacts.
- Prepare by creating a list of undesirable behaviors common in your area, and work through ART approaches for each.
- Stand shoulder-to-shoulder instead of face-to-face, to be less confrontational when approaching and having a conversation.
- When using the technique with a large group or family, take the trip leader or parent aside for a private conversation.
- Balance with Authority of the Agency techniques, but keep the focus on education before enforcement.
- If undesirable behavior is intentional, these techniques may not be effective, and the agency officials may need to decide when more traditional levels of enforcement are necessary.

The exact messaging that may be appropriate in connection with the “formerly trailless” peaks are dependent on which management scenarios pursued. The following suggested messaging examples are based on the Authority of the Resource Technique, and these may be referenced for both in-person interactions as well as signage messaging where applicable:

- Off Trail Travel
 - Explore Responsibly: The trail network passes through delicate ecosystems vital to the Catskill Forest Preserve. Stay on designated paths as much as possible to protect these fragile environments and ensure the preservation of diverse flora and fauna.
- Sticking to Durable Surfaces
 - Tread Lightly: Stick to durable surfaces like established trails and rocky areas. This minimizes soil erosion and protects the natural landscape. Your footsteps can make a lasting impact, so choose your path wisely.
- Keeping Dogs on Leash
 - Leash Up for Wildlife: Emphasize the importance of keeping furry friends on a leash. Unleashed dogs can disturb nesting birds and other wildlife. By maintaining control, you protect your pet and respect our ecosystem's natural balance.

Messaging Recommendations



- Respecting Sensitive Breeding Times for Montane Bird Species
 - Whisper Through the Woods: Small migratory songbirds such as the Bicknell's Thrush breed in dense, stunted spruce and fir forests at elevations ranging from 2,500 to 5,000 feet. This bird faces conservation concerns due to its limited breeding range, susceptibility to climate change, and potential habitat disturbances. Help protect them by being mindful of breeding times. Keep noise levels down, avoid sensitive areas, and use binoculars to observe birds from a distance.
- Overall Stewardship Emphasis
 - Guardians of the Preserve: We all play a crucial role in protecting the Catskill Forest Preserve. Listen to the advice of experienced staff and volunteers and follow established guidelines. By embodying responsible actions today, you can help set a positive example, ensuring that future generations can inherit and appreciate the beauty of the Catskill Forest Preserve.

Trailhead Signage:

A broad set of research literature suggests that visitors have a limited attention span to read, or even notice, signage at trailheads or on-trail (Kidd et al., 2015; Park et al., 2008). Some literature has also provided support for concluding that trailhead signage by itself is not effective in influencing social trail behaviors, but should instead be part of a multi-pronged management approach to be the most effective (Hockett et al., 2017).

Since a variety of access points may be used to reach the “formerly trailless” peaks, the term “trailhead” in these recommendations primarily applies to established parking locations with existing trailhead signage. Signage may also be considered for other locations without current signage, such as roadside parking locations with no formal trail access, but these efforts should be balanced against any potential negative impacts of attracting additional use of informal trails.

Signage at trailheads that can be used to approach these peaks should therefore include messaging that is simple and to the point, and wherever possible, placed in a way as to not compete with other messages for a visitor’s finite attention. Strategies to accomplish this could include using a prominent graphic and short “hook” message in a large font to convey the basic idea within only a few seconds of reading, followed by additional text in smaller font that could provide more context for those with the interest and patience to read further. As part of overall kiosk signage, preparedness language should be incorporated and include components beyond just formal trail use to help visitors better understand what to expect in terms of trail markings or lack thereof, rugged or undeveloped conditions, and other situations off formal trails.

Messaging Recommendations



An ideogram, or easily recognizable non-linguistic symbol that can transcend cultures, should be incorporated into trailhead signage to provide education at a glance in the face of limited attention spans and also tie into related on-trail signage that the visitor may encounter. The “no step” symbol of a footprint framed with a red circle and slash has been effectively used to convey similar messages about staying out of sensitive habitat or staying off closed trails. A variation of this “no step” symbol that includes a depiction of vegetation has also been used for highlighting sensitive habitat, but this variation would not be appropriate for these peaks where informal trails may already exist with bare ground and visitors may interpret the signage incorrectly.

Proscriptive language consistent with Authority of the Resource Technique methods and Leave No Trace guidelines should be used on trailhead signage. Research literature suggests that messaging focused on telling people what NOT to do (such as “Do not use closed informal trails.”) can be more effective than telling people what they SHOULD do (such as “Stay on formal trails.”) (Winter, 2006). In addition, the reasons or outcomes for complying with these asks should include the reasons in terms of describing damage to sensitive habitats, as this can be more effective than providing no reason and relying on the authority of the land managing agency (Cialdini et al., 2006). The reasons should explicitly note negative behaviors that contribute toward the damage in an effort to dissuade those behaviors. Messaging should also focus on the actions of an individual (such as “your footsteps are making an impact”) instead of a broad group (such as “people’s footsteps are making an impact”) to more effectively influence behavior.

One example trailhead sign is presented on the following page to represent several of the recommendations stated above. This example is similar in form and content to signage developed for sensitive summit habitats in Acadia National Park (Park et al., 2023). Usage of this example sign would primarily be focused on “formerly trailless” peaks where a formal trail through the summit habitat is created and informal trails are closed (Management Scenario 3). For Management Scenarios 4 and 5, where permitting or area closures may be implemented, signage could include additional agency authority information.

Production and installation of trailhead signage should consider material and maintenance options that account for the likelihood of damage through vandalism and/or natural effects. Signage should be inexpensive to produce, use evergreen language, be easy to replace, and be consistent from one location to the next as much as possible, and signage should be placed on a structure or post that is more resistant to being damaged.

Messaging Recommendations



LEAVE NO TRACE of your Summit Visit



Department of
Environmental
Conservation

- *Protect vulnerable ground-nesting birds* -

PLEASE:

Do Not Leave
Marked Trails



Leash Dogs to Protect Wildlife

Trailhead Sign Example: for Management Scenario 3

Messaging Recommendations



On-Trail Signage:

Signage beyond the trailhead should primarily be located at junctions where visitors may depart from existing formal trails, especially where either a new formal trail to a “formerly trailless” peak begins or a closed informal trail begins. In instances where informal trails may be closed, including a closure sign can be more effective than relying only on physical obstruction efforts (Bradford & McIntyre, 2007; Park et al., 2008). Signage directly within the summit sensitive habitats should only be considered if the presence of formal or informal trails and the amount of damage warrants their inclusion.

Signs at junctions where informal trails are closed should use the same ideogram developed for trailhead signage, such as the “no step” symbol described above. These junction signs could be text-free and rely on the graphic to convey the message, or include optional text in line with messaging recommendations describe above.

Two example trail junction signs are presented here to represent the recommendations stated above.



Smaller “symbol only” sign example for trail junctions: for management scenarios 2, 3 and 5



Larger “symbol plus text” sign example for trail junctions: for management scenarios 2, 3 and 5

Messaging Recommendations



Catskills Visitor Center:

The Catskills Visitor Center (CVC) has become an important visitor gateway since opening in 2015, offering educational resources and in-person assistance to a mix of user groups. Messaging about the “formerly trailless” peaks should be offered at the CVC, as this location provides great potential for reaching captive audiences during the planning stages that could result in increased awareness and possibly behavior change. This messaging could be combined with Leave No Trace messaging, and accomplished through a variety of formats including educational flyers or brochures, an interpretive exhibit, and in-person engagement by staff.

Messaging for Steward Programs:

Direct engagement of visitors by stewards at locations throughout the Catskills has been an effective means of educating about topics including stewardship, responsible use, and regulations. In-person interactions with stewards, using the Authority of the Resource Technique, have the potential to allow messaging to be more readily and easily understandable as compared to relying on signage alone. Messaging about the “formerly trailless” peaks should be integrated into the Leave No Trace education provided by steward programs. More specific recommendations about steward programs are provided below in the Volunteer/Steward Programs Recommendations section.

Other Outreach

Hiking Clubs and Hiking Challenges:

Hiking clubs play an important role in the Catskills in a variety of ways, and their often large and engaged membership provides a great opportunity for disseminating messaging about the “formerly trailless” peaks. Some clubs do already include messaging about the sensitive habitats on these peaks, but additional consistent messaging should be a highlighted component of the education offered by the hiking clubs in the Catskills. Detailed and advanced messaging that may be difficult to convey succinctly through signage or some forms of digital outreach, such as concepts surrounding responsible off-trail hiking/bushwhacking or sensitive habitat issues specific to individual peaks, may be better communicated through collaboration with these clubs and their members.

Messaging Recommendations



In addition, several hiking clubs and other groups help to manage or sponsor hiking challenges that involve summiting some or all of these peaks, with the completion of a challenge often recognized with special patches or certificates. From the Catskill “Formerly Trailless” Peaks Survey Report, 54% of participants noted participating in a Catskill hiking challenge; of those individuals, 88% specified regular 3500 Club participation, 28% specified winter 3500 Club participation, 11% specified a 420 Grid, 10% noted other grid or season challenges, and 6% specified the 100 or 102 highest peaks (note that 23% specified participating in the Fire Tower Challenge and 11% specified participating in the All Trails challenge, both of which use marked trails and do not include the “formerly trailless” peaks) (NYNJTC, 2024). The Catskill 3500 Club, Catskill Mountain Club, and Hikers Anonymous are the 3 primary hiking clubs or groups that coordinate these hiking challenges.

The DEC should work with organizers of these hiking challenges to disseminate messaging and provide guidelines and best practices for them to refer to in evaluating existing challenges or designing new challenges. Options to consider include requiring club members and challenge participants to be trained in Leave No Trace with supplemental messaging about the “formerly trailless” peaks, and establishing some form of blackout windows for challenges when certain summit ascents would not be recognized during periods of highest potential impact to the sensitive habitats on these peaks.

Print Maps and Guidebooks:

Maps in print form, along with guidebooks, are an important educational resource for exploring the Catskills. The DEC should work with authors and publishers who are developing new maps or guides, or revising existing publications, to ensure messaging about the “formerly trailless” peaks is included in their resources.

The Catskill “Formerly Trailless” Peaks Survey Report indicated that 76% of participants used Trail Conference maps and/or the Trail Conference website while hiking, or preparing to hike (NYNJTC, 2024). More than 125,000 Catskill maps have been printed since the Trail Conference’s first map of the area in 1972, and this map continues to be very popular. Similar to the Avenza Maps app maps, future editions of these print maps should consider including messaging about these peaks.

Messaging Recommendations



Education Requirements for Group-Use Permits, Other Educators, Guides, Volunteers:

The CAG (2022) recommends the following, in part, for revising the group-use permitting system:

Groups above a certain threshold are required to get a permit for their use of the Catskill Park. The permitting system must be updated to require education before a group's visit. That education should focus heavily on Leave No Trace principles and the protection of natural resources. (CAG, 2022, p. 12)

The CAG (2022) recommends the following, in part, for training educators and volunteers:

Those providing education, doing business, or guiding trips within the Catskill Park should be trained on the principles of Leave No Trace. Entities operating under a Volunteer Service Agreement (VSA) should be trained in Leave No Trace. DEC should make Leave No Trace a required component of New York Guide License Program[...] Specific DEC staff, including forest rangers, should be trained in Leave No Trace and the Authority of the Resource technique, which are proven methods of effectively interacting with park visitors about stewardship. (CAG, 2022, p. 21)

Beyond the Leave No Trace and general natural resource protection components of these recommendations, messaging regarding the "formerly trailless" peaks should also be incorporated.

Press Releases, Local News:

Information disseminated via press releases or otherwise made available to local news outlets can sometimes reach a broader audience than some of the more focused forms of outreach. Efforts should be made to prepare press releases with messaging about the "formerly trailless" peaks and follow up with news outlets, magazine publishers, or other media outlets to get the messaging out to their audiences.



Volunteer and Steward Program Recommendations



Volunteer and steward programs can play a critical role in ensuring that awareness about the “formerly trailless” peaks is spread to the general public that utilize these areas, and that these areas are maintained to a standard that allows for safe travel to and from the peaks. While the future of any volunteer or steward program devoted to these peaks is dependent on the management solutions that are implemented by the land manager, the following options should be considered alongside the listed management scenarios as part of deciding the most effective ways to manage these areas for future users and the preservation of these sensitive habitats.

The Catskill Advisory Group (CAG) recommended a variety of management solutions for use within the Catskills as part of their Catskill Advisory Group Report submitted in 2022, and a number of recommendations can apply to the “formerly trailless” peaks. The CAG (2022) recommends the following, in part, for expanding opportunities for in-person interactions between visitors and stewards:

Although many of its new visitors are discovering the Catskill Park through digital and other media, experience suggests that it is important for educational messages about stewardship and outdoor ethics to be delivered face-to-face. Therefore, the state and its partners should continue to pursue avenues for in-person communication with visitors whenever possible[...]. Recommendations include:

- Expand the Catskill Park Stewards Programs[...]
- Hire additional forest rangers and assistant forest rangers[...] (CAG, 2022, p. 18)

Based on the results gathered throughout this process, the DEC should continue to explore management options for these peaks with special attention to ways that in-person interactions can be expanded between visitors and stewards.

Funding and Staffing:

The successful implementation and expansion of volunteer and steward programs are contingent upon addressing aspects such as funding, staffing realities, and the need for volunteer recruitment and involvement. As these programs aim to enhance environmental stewardship and promote responsible trail usage, evaluating the financial and personnel requirements associated with their growth is essential.

Volunteer and Steward Program Recommendations



Recognizing the financial constraints faced by organizations overseeing these initiatives, there may be a need for financial assistance. To ensure these programs' continued success and effectiveness, the DEC should consider providing funding opportunities to the organizations responsible for their administration. Simultaneously, the staffing realities pose a challenge to the potential expansion of these programs, as organizations may need to increase their staff capacity to broaden the reach and impact of volunteer and ambassador programs. When expanding the workforce is not immediately feasible, alternative strategies should be explored. One avenue to explore involves the engagement of dedicated volunteers who can contribute their time and skills to augment the operational capacity of these programs.

Trail Maintenance:

If new trails are established or informal trails are formalized for any of these peaks (Scenario 3), there will be impacts to the long-standing trail maintenance efforts provided by organizations and their volunteers. Expansion of formal trails will require expansion of existing trail maintenance programs. Due to the often remote locations, lack of easy accessibility, and miles of hiking required to reach many of these peaks, traditional trail maintenance procedures may not be feasible. To address efforts to improve unsustainable trails, the creation of a volunteer trail crew dedicated to these new trails should be considered to lead heavy trail maintenance projects. Heavy maintenance could include short-term rehabilitation projects like blowdown removal, drainage work, small reroutes, and closure of braided trails. Trail improvements beyond the scope of heavy maintenance, like stonework and large reroutes, could be outsourced to a professional trail building organization.

Hiking Club and Hiking Challenge Volunteerism:

A further volunteer recommendation is to encourage local hiking clubs, especially those which organize hiking challenges, to require some level of volunteer service for membership. This tactic has become increasingly employed by trail racing organizations as a way to integrate stewardship and responsible use, as they may require an 8-hour volunteer day on trail to qualify for an event. Hikers pursuing certain hiking challenges have been contributing to the increasing foot traffic on these "formerly trailless" peaks, and required volunteerism could help mitigate these impacts. As an added benefit, trail volunteerism that includes an educational component may have a trickling effect, by teaching the club members what goes into maintaining, building, or stewarding on trails.

Volunteer and Steward Program Recommendations



Steward Deployment and Education:

The practicality of deploying in-person stewards to address the challenges at hand requires a nuanced assessment. While existing steward locations have been strategically placed throughout the Catskill Forest Preserve to tackle high-volume areas with a diverse range of users, the volume and variety of users at the “formerly trailless” peaks may present challenges for the effectiveness of in-person stewardship efforts. The DEC and partner organizations should evaluate whether deploying stewards in these locations aligns with practical considerations and resource optimization.

Recognizing a need for comprehensive stewardship efforts, one strategy may involve integrating awareness about Leave No Trace and responsible off-trail travel practices into existing in-person steward programs and locations. For example, this educational component could be implemented at trailheads, campgrounds, and other locations across the Catskill Forest Preserve, even if they do not directly access the “formerly trailless” peaks. This approach acknowledges the interconnectedness of trail systems and aims to convey crucial information about responsible recreation practices to a broader audience.

To enhance the versatility of stewardship efforts, incorporating "roving" Trail Stewards into the framework could seamlessly integrate educational initiatives with trail maintenance tasks and other responsibilities, allowing for a dynamic and adaptive approach. This strategy addresses the specific issue at hand and ensures a more comprehensive and efficient use of steward resources.





Conclusions

Education about the “formerly trailless” peaks should be a primary component of any management solutions that are pursued by the DEC in the Catskill Forest Preserve. Messaging and Volunteer/Steward Program recommendations in this report are dependent on the management practices that may be enacted. The recommendations are therefore framed in relation to five potential management scenarios. This report does not broadly recommend one management scenario over another, and it may be envisioned that solutions for any specific peak might include a combination of these scenarios and/or other practices not addressed here.

It is recommended that any messaging be considered in conjunction with diversity, equity, inclusion, and justice (DEIJ) initiatives, be based on the framework of the Authority of the Resource Technique, and employ a multi-platform approach to outreach. Additional user studies and research should be conducted to allow messaging strategies to be as effective as possible.

Outreach through online and digital methods can allow messaging to reach visitors during the crucial planning stages before they travel to their destination, and educating visitors early in the process should be a primary focus. Messaging through social media should be done collaboratively among partner organizations and influencers, utilizing simple messages presented in a variety of formats. Relationships with popular recreation smartphone app platforms like AllTrails should be further developed to enhance responsible use education and help spread messaging about these “formerly trailless” peaks, and websites managed by the DEC and partner organizations should also be used to disseminate this messaging.

Conclusions (continued)



On-site messaging, either through signage or in-person interactions, has great potential to educate visitors about desired behaviors for accessing these peaks. Established practices of the Authority of the Resource Technique should provide guidance for these messaging initiatives. Trailhead signage with simple messaging should be developed for placement at locations that may provide access to these peaks, and on-trail signage should be developed to reemphasize this messaging more directly at the locations of closed informal trails or sensitive habitats. In-person interactions, including at the Catskills Visitor Center and as part of steward programs throughout the Catskills, should incorporate messaging about these “formerly trailless” peaks.

There are several other opportunities for conveying messaging that should be considered as part of the multi-platform approach. Hiking clubs and organizers of hiking challenges should continue to collaborate with the DEC to disseminate messaging and consider guidelines and best practices for challenges that account for accessing these peaks. Guidebooks and maps, in either print or digital format, continue to be a popular education resource for visitors to the Catskills, and these publications should incorporate messaging about these peaks in future revisions or new titles. Initiatives to include an education and training requirement as part of the group-use permitting system, volunteer service agreements, and guide licensing programs should be considered.

Volunteer and steward programs can offer an important conduit for messaging to reach visitors, and should the expansion of these programs be deemed essential, the DEC should play a role in facilitating this growth, either through funding initiatives or by considering the possibility of recruiting additional staff dedicated to overseeing and coordinating these stewardship efforts. As noted by the Catskill Advisory Group (2022) and reemphasized by the data gathered through this process, the practicality of an on-site presence necessitates carefully examining the context, user dynamics, and available resources. By strategically incorporating education, exploring innovative stewardship and trail maintenance approaches, and integrating new focuses into existing programs, the DEC and partner organizations can enhance and expand the impact and reach of their stewardship initiatives for these “formerly trailless” peaks.

References



- Bradford, L. & McIntyre, N. (2007). Off The Beaten Track: Messages As A Means Of Reducing Social Trail Use At St. Lawrence Islands National Park. *Journal of Parks and Recreation Administration*, 25, 1-21.
- Catskill Advisory Group. (2022). Catskill Advisory Group Report. https://extapps.dec.ny.gov/docs/lands_forests_pdf/cagfinalreport.pdf
- Cialdini, R. B., Demaine, L. J., Sagarin, B. J., Barrett, D. W., Rhoads, K., & Winter, P. L. (2006). Managing social norms for persuasive impact. *Social Influence*, 1:1, 3-15.
- George, N. W. & Gaudry, C. J. (2002). An Evaluation of the "Authority of the Resource" Interpretive Technique by Rangers in Eight Wilderness/Backcountry Areas. *Journal of Interpretation Research*, 7(1), 43-68.
- Hockett, K. S., Marion, J. L., & Leung, Y. (2017). The efficacy of combined educational and site management actions in reducing off-trail hiking in an urban-proximate protected area. *Journal of Environmental Management*, 203, 17-28.
- Johnson, B., Bratton, S., & Firth, I. (1987). The feasibility of using brushing to deter visitor use of unofficial trails at Craggy Gardens, Blue Ridge Parkway, North Carolina. CPSU Report No. 43. USDI National Park Service Cooperative Studies Unit, Institute of Ecology, University of Georgia, Athens, GA.
- Kidd, A. M., Monz, C., D'Antonio, A., Manning, R. E., Reigner, N., Goonan, K. A., & Jacobi, C. (2015). The effect of minimum impact education on visitor spatial behavior in parks and protected areas: An experimental investigation using GPS- based tracking. *Journal of Environmental Management*, 162, 53-62.
- Lawhon, B. (2020). Managing Recreation-related Impacts in the Adirondack Park and Building a Culture of Wildlands Stewardship. https://drive.google.com/file/d/1ZsN34Nu_X5ihqfbiYtz-kpBbd27O3oy5/view
- New York-New Jersey Trail Conference. (2024). Catskill "Formerly Trailless" Peaks Survey Report. Submitted to New York State Department of Environmental Conservation.
- New York Natural Heritage Program. (2022). Effects of informal trail use on natural communities in Catskill Park. https://extapps.dec.ny.gov/docs/lands_forests_pdf/nynhpcatskill.pdf
- New York State Department of Environmental Conservation. (1999). High Peaks Wilderness Complex Unit Management Plan. https://extapps.dec.ny.gov/docs/lands_forests_pdf/hpwump.pdf
- Park, L. O., Manning, R. E., Marion, J. L., Lawson, S. R., & Jacobi, C. (2008). Managing visitor impacts in parks: A multi-method study of the effectiveness of alternative management practices. *Journal of Park & Recreation Administration*, 26.
- Park, L. O., Marion, J. L., & Wimpey, J. F. (2023). Efficacy of Combining Education and Site Management in Reducing Off-Trail Travel in a Fragile Biotic Community, Acadia National Park. *Journal of Interpretation Research*, 28(1), 25-49.
- Settina, N., Marion, J. L., & Schwartz, F. (2020). Leave No Trace Communication: Effectiveness Based on Assessments of Resource Conditions. *Journal of Interpretation Research*, 25(1), 5-25.
- Wallace, G. N. (1990). Using the Authority of the Resource as an interpretive technique. *Legacy*, 1(2), 4-9.
- Winter, P. L. (2006). The impact of normative message types on off-trail hiking. *Journal of Interpretation Research*, 11 (1), 35-52.