



ASSESSMENT REPORT

Managing Recreation-related Impacts in the **ADIRONDACK PARK** and Building a Culture of Wildlands Stewardship

Prepared by Ben Lawhon, MS
Leave No Trace Center for Outdoor Ethics | February 2020

Confidentiality Notice: This document contains confidential and proprietary information of the Leave No Trace Center for Outdoor Ethics (the Center). Accordingly, this document is confidential and is intended solely for the information of the individual or entity to which it is delivered by or on behalf of the Center. By accepting a copy of this document, the recipient agrees not to copy, distribute or otherwise disclose this document or its contents or any other related information to any other individual or entity without the prior written consent of the Center. For more information on Leave No Trace, please visit www.LNT.org or call 1.800.332.4100

*Stewardship – the management necessary to preserve wilderness, natural resources, and access for current and future generations.

Assessment Report Overview

This report details findings and observations from a comprehensive assessment performed by staff from the Leave No Trace Center for Outdoor Ethics (the Center). The assessment involved several components including:

1. Initial consultation with the Adirondack Council and the Adirondack Mountain Club (ADK) staff via phone, email, and video calls to gain baseline understanding of recreation-related issues facing the Adirondack Park;
2. Administration of an online survey to Adirondack Park managers, key partners, and others during August of 2019 to collect data on recreation trends, recreation patterns, pressing recreation-related issues, significant impacts from recreation, and strategies currently being utilized to address these concerns;
3. An on-site visit conducted by Center staff in conjunction with Council and ADK staff to explore and observe current park conditions, meet with key Park management staff from both the NY Department of Environmental Conservation and the Adirondack Park Agency and other stakeholders, and to acquire a solid understanding of how Leave No Trace might be effectively and efficiently overlaid on and deployed in the Adirondack Park.

This report is intended to serve as a guiding document for the Adirondack Park as managers and key partners move through the process of integrating Leave No Trace into overall management of the Park where an educational approach to visitor management is warranted. Education is most successful when implemented as part of a larger comprehensive management strategy, and in concert with other management techniques, including infrastructure, staffing, and direct intervention. Furthermore, while the strategies, techniques, and methods outlined in this document have been successfully utilized in many parks and protected areas across the country, these should be considered a starting point for the Adirondack Park.

When local land managers tailor educational and stewardship efforts to their specific environment, constituents, and visitors, the efforts are generally more successful and garner broader buy-in from the community at large. As such, the Center encourages Park managers and key partners to view this report as a living document that has the potential to provide a foundation from which innovation and adaptation can occur to best meet the evolving needs of the Adirondack Park for years to come.

Table of Contents

Assessment Report Overview	2
Adirondack Park Overview	5
Need for Effective Leave No Trace Education.....	7
Adirondack Park Usage Patterns and Impacts Survey	9
<i>Overview</i>	<i>9</i>
<i>Executive Summary.....</i>	<i>9</i>
<i>Results Summary.....</i>	<i>10</i>
<i>Survey Methodology.....</i>	<i>11</i>
<i>Survey Results.....</i>	<i>11</i>
<i>Discussion of Survey Results.....</i>	<i>26</i>
Understanding and Managing Visitors – Literature Review	28
<i>Introduction</i>	<i>28</i>
<i>Education and Information.....</i>	<i>28</i>
<i>Efficacy of Visitor Education.....</i>	<i>30</i>
<i>Depreciative Behaviors</i>	<i>31</i>
<i>Visitor Perceptions of Impacts</i>	<i>32</i>
<i>Messaging and Signage.....</i>	<i>33</i>
<i>Barriers to Compliance</i>	<i>35</i>
<i>Leave No Trace.....</i>	<i>36</i>
<i>Attitude Theory</i>	<i>37</i>
<i>Implications for Management – Key findings from the literature.....</i>	<i>37</i>
<i>Conclusion</i>	<i>38</i>
Leave No Trace Program Implementation – 2020 and Beyond.....	39
Recommendations for Managing Recreation-related Impacts in the Adirondack Park and Building a Culture of Wildlands Stewardship	41
<i>I. Management & Planning Recommendations</i>	<i>41</i>
<i>II. Research & Monitoring Recommendations</i>	<i>43</i>
<i>III. Tourism & Marketing Recommendations</i>	<i>45</i>
<i>IV. Social Media Recommendations</i>	<i>48</i>
<i>V. Partnerships & Coordination Recommendations</i>	<i>49</i>

<i>VI. Group Use & Adirondack ‘Challenges’ Recommendations</i>	<i>50</i>
<i>VII. Outreach & Education Recommendations</i>	<i>51</i>
<i>VIII. Training Recommendations.....</i>	<i>55</i>
<i>IX. Dept. of Environmental Conservation Recommendations</i>	<i>56</i>
<i>X. Infrastructure Recommendations.....</i>	<i>57</i>
Additional Recommended Methods and Tactics for Educating Adirondack Park Visitors	59
Benefits of Using Leave No Trace for the Adirondack Park	62
Potential Research.....	63
<i>Sample Methodologies</i>	<i>63</i>
<i>Research Could Answer the Following Questions.....</i>	<i>64</i>
Model Leave No Trace Language to Address Issues.....	65
Examples of Signage, Brochures, and Digital Media	71
Conclusion	90
References	91
Appendices	96
<i>Appendix A – Leave No Trace Ethics Card Examples</i>	<i>96</i>
<i>Appendix B – Leave No Trace Resolution – San Juan Islands, WA</i>	<i>97</i>
<i>Appendix C – What are the 3-5 most pressing issues on the lands you manage?.....</i>	<i>99</i>
<i>Appendix D – Are there other recreation-related impacts in the Adirondack Park not listed above?</i>	<i>100</i>
<i>Appendix E – How familiar are you with the typical Adirondack Park visitor?</i>	<i>101</i>
<i>Appendix F – What are the main objectives for your volunteer program?</i>	<i>101</i>
<i>Appendix G – What types of sites require a fee? Check all that apply.....</i>	<i>102</i>
<i>Appendix H – What agencies provide law enforcement on public lands in the Adirondack Park?.....</i>	<i>102</i>
<i>Appendix I – What are your goals for a Leave No Trace program for the lands you manage?.....</i>	<i>102</i>
<i>Appendix J – How would you envision Leave No Trace information being disseminated to Adirondack Park visitors? Check all that apply.</i>	<i>104</i>
<i>Appendix K – Please list additional feedback or comments or feedback regarding Leave No Trace efforts in the Adirondack Park.....</i>	<i>104</i>

Adirondack Park Overview

The Adirondack Park was created in 1892 by the State of New York, effectively forming the largest publicly protected area in the contiguous United States. At the time of its creation, the Adirondack Park was a wild landscape containing prodigious water, vast forests, and high mountain peaks. While the land in the Park was under threat from logging and cultivation, it was also poised for an incredible conservation effort, the likes of which had never before been undertaken. Though the Adirondack Forest Preserve was established in 1885, it was not recognized as a constitutionally protected Forever Wild area until 1894, making it the one-of-a-kind Park that it is today. Of the Adirondack Park's 6 million acres, 2.6 million acres are owned by New York State. The remaining 3.4 million acres are privately owned. The Park is also home to over 100 towns and villages. There is common confusion regarding the Park's status – many think it is a national park. Regardless of any confusion, the Park's mix of public and private land allows for conservation and civilization to flourish.

The original surveyor of the Adirondack Park was Verplanck Colvin, who among other things, was a topographical engineer. His early work in and fondness of the region helped generate awareness of the need to protect the area which would eventually become the Adirondack Park. In the 1860s, Colvin spent much time exploring the region, and by the late 1860s he decided a geologic survey of the area was necessary. Colvin applied for funds from New York State in 1872 to cover the costs of the survey. With a grant of \$1,000, Colvin was named Superintendent of the Adirondack Survey, and the work began. Because of his work in the Adirondacks, he was able to express the growing need to conserve the state's wildest lands. Colvin eventually was appointed as Superintendent of the New York Land Survey. His work in this position played a significant role in the establishment of the Adirondack Park Forest Preserve.

Forest Preserve land comprises a significant portion of the Adirondack Park – 2.6 million acres. Forest Preserve land has specific regulations and land use codes, meaning the land is designated as “Forever Wild” under the New York State Constitution, Article XIV. Forever Wild land is designated “to preserve the exceptional scenic, recreational, and ecological value” in perpetuity. For more information, see: <http://www.dec.ny.gov/lands/4960.html> This level of protection from the State ensures that these lands will not be logged, that resource protection will be prioritized, and that lands will offer exceptional recreational opportunities. The state-owned lands in the Park consist of historic, wilderness, canoe, primitive, wild forest, and administrative lands. Of the remaining 3.4 million acres in the Park, they are privately owned (towns, villages, businesses, and farms), and the use of these lands is overseen and regulated by the Adirondack Park Agency.

The unique nature of the Adirondack Park adds complexity to consideration of recreational impacts on several fronts. First, the term “visitor” is not, strictly speaking, accurate of many of the recreationists. Many are residents, living within the bounds of the Park, although visitors to the public land. Second, unlike many of the federal lands, the mandate for the Forest Preserve is not equally weighted between recreation and protection. The primary

reason for protection of the Forest Preserve was for preservation of water quality and timber. Recreation is not given equal weight in the NYS Constitution, or later, in the Adirondack Park State Land Master Plan, although this latter is a document that inherently deals with recreation management.¹ Nor, indeed, does recreation appear in the mission statement of the agency charged with managing the Forest Preserve: The mission of the NYS Department of Environmental Conservation is "To conserve, improve and protect New York's natural resources and environment and to prevent, abate and control water, land and air pollution, in order to enhance the health, safety and welfare of the people of the state and their overall economic and social well-being."

As is true of many protected landscapes, a stakeholder group left out of discussion of recreational impacts is the non-use group (those who may never visit a protected landscape, but value its existence)². While protection of a landscape includes protection on behalf of this group, the focus of this report is mitigation of recreational impacts through education. As such, protection on behalf of future generations and non-visitors is implied, but otherwise not explicit.

The Park has 30,000 miles of streams and rivers as well as 3,000 ponds and lakes, making it ideal for water-based recreation including paddling and angling. Additionally, there are 46 mountain peaks in the Adirondacks that are over 3,900 feet in elevation known as the High Peaks. The highest of the High Peaks is Mount Marcy, which is also the tallest peak in the state at 5,343 feet. Hiking and backpacking are popular activities in the Park which possesses more than 2,000 miles of trails. Year-round recreation occurs in the Park including cross country and downhill skiing, snowmobiling, and snowshoeing during the winter months. Given the Park's proximity to 60 million people, it draws visitors from across the region.

*This information was adapted from: Adirondack Regional Tourism Council. *About the Adirondack Park*. (n.d.). Retrieved January 7, 2020 from <https://visitadirondacks.com/about/adirondack-park>

¹ ("If there is a unifying theme to the classification system, it is that the protection and preservation of the natural resources of the state lands within the Park must be paramount. Human use and enjoyment of those lands should be permitted and encouraged, so long as the resources in their physical and biological context and their social or psychological aspects are not degraded" (APSLMP 1987)

² <https://www.nationalparks.org/connect/blog/beyond-visit-how-we-value-national-parks>

Need for Effective Leave No Trace Education

Decades of public investment have yielded millions of acres of land set aside for the protection and preservation of natural resources, with recreation encouraged as well—the Adirondack Park. Various initiatives have not only provided an unparalleled catalyst for creating world-class recreational opportunities in the region, but they have also created an expectation of tangible public benefit.

Those currently engaged in managing the public lands within the Adirondack Park have a legal mandate in the New York State Constitution to protect the natural resources of the Forest Preserve.³ This is not in conflict with a goal of providing access to exceptional recreational opportunities,⁴ particularly if critical minimum impact education and programming directly related to outdoor recreation and responsible enjoyment of the Park is also provided.

Leave No Trace information has the capacity to be a substantial and meaningful part of this goal. By developing and providing locally-tailored, Park-specific and activity-based Leave No Trace information, recreation-related resource and social impacts can be avoided, minimized, or mitigated in the Adirondack Park. Leave No Trace is a globally recognized education program, backed by science. In the United States, it has been adopted by all five federal land management agencies (US Forest Service, National Park Service, Bureau of Land Management, US Fish and Wildlife, Army Corps of Engineers) as well as the Association of State Parks. It is widely implemented across public lands from small municipal parks to large Wilderness areas. Research has demonstrated its efficacy in reducing recreation-related impacts through behavior change.

Using consistent, uniform language both increases the message penetration amongst recreationists and decreases the burden on land managers to create unique educational programming. Research including surveys of recreationists from across federal and state lands shows that the Leave No Trace message is widely recognized.

Adopting this messaging allows other areas to amplify a message that Adirondack land managers want visitors to hear. Consistency in messaging increases the likelihood of success in changing visitor behavior. Additionally, as visitors to other world-class recreational destinations are accustomed to seeing Leave No Trace as the preferred message, reiteration of that message reinforces both the message and the world-class nature of the Adirondack Park.

Defining and better communicating a sustainable recreation paradigm for Park visitors is going to become increasingly important in the years to come. Park managers and partners

³ Article XIV, Section 4, NYS Constitution: “The policy of the state shall be to conserve and protect its natural resources and scenic beauty”

⁴ “.. [The Adirondack Park] was made a wild resort in which nature is given free rein. Its uses for health and pleasure must not be inconsistent with its preservation as forest lands in a wild state. It must always retain the character of a wilderness” *Assn. for Protection of Adirondacks v. MacDonald*, 228 App. Div. 73, 81 (N.Y. App. Div. 1930)

need to address expectations for public use while simultaneously protecting the critical natural and cultural resources found in the Park. Visitors need a clear understanding of both the experiences available to them in the Park as well as appropriate and responsible behavior while enjoying these shared resources.

Adirondack Park Usage Patterns and Impacts Survey

In order to obtain baseline data on, and perceptions of, recreational use and related impacts in the Adirondack Park, Center staff surveyed pertinent Park land management agency and NGO staff, key stakeholders, and others such as trail club representatives or members. The survey data yielded consistent results across the spectrum regarding perceptions of current usage of the Park and the associated impacts.

Overview

The following report summarizes the results of a survey administered by the Leave No Trace Center for Outdoor Ethics (the Center) August and September of 2019. The purpose of this survey was to collect data regarding:

- 1) Perceptions of current recreation trends and patterns in the Park
- 2) Perceptions of recreation-related impacts in the Park
- 3) Current management techniques being used to address these impacts
- 4) Potential development of locally-tailored Leave No Trace program(s)

The following is a summary of the survey data. Open-ended responses can be found in the appendices of this report.

Executive Summary

Survey results indicate that respondents feel there are several significant issues facing the Adirondack Park. Furthermore, four of the reported issues were categorized as *severe* in terms of level of impact. However, survey respondents indicated that there are numerous potential opportunities to utilize Leave No Trace education through a variety of means to improve conditions in the Park. A few of the most salient findings include:

- *Hiking, flat water activities, winter sports, camping in developed sites, and peak bagging* were reported to be the top five recreational pursuits in the Adirondack Park.
- *Overuse, crowding, trail degradation, trail erosion, human waste, pet waste, parking issues, and unprepared visitors* were listed as the most pressing issues facing the Park.
- *Improper disposal of human waste, trail impacts, increased visitation due to social media, and parking issues* were all rated severe in terms of the impact resulting from these problems.
- A variety of techniques are currently in use to educate Park visitors about enjoying the Park responsibly, which include *Leave No Trace education, printed educational materials, web-based information, signage, and direct visitor education*.
- When asked whether or not the development of a Park-specific Leave No Trace program was a proactive effort or in response to increased recreation-related impacts, over 75% of respondents indicated it was both proactive *and* reactionary.

- Respondents indicated that the goals of a focused Leave No Trace program for the park include: *educating visitors about protecting the Park, reducing/preventing impact to the Park, and promotion of a consistent Leave No Trace/stewardship message.*

Results Summary

Survey respondents were given a list of 22 recreational activities and asked to report which were the most popular in the Adirondack Park. Respondents indicated that hiking, flat water activities, winter sports, camping in developed sites, and peak bagging were the five most popular activities in the Adirondack Park. Respondents were also asked about the most pressing issues facing the Adirondack Park. Though this was an open-response question, the majority of survey participants wrote in the following: **overuse/crowding, trail degradation/trail erosion, human and pet waste, parking issues** and **unprepared visitors**. Respondents were also given a list of 20 recreation-related impacts and were instructed to rate each as having *No impact, Slight impact, Moderate impact, Extensive* or *Severe impact*. **Improper disposal of human waste, trail impacts, increased visitation due to social media** and **parking issues** were all selected by the majority of respondents as having a *Severe impact*.

Survey respondents were asked to report on the management techniques currently in use to address recreation-related impacts. They were provided with a list of 15 mitigation methods and asked to note if each was *Currently in use, Used in the past* or *Never used*. Each method was reported as being currently in use by the majority of respondents with the exception of **limiting access** and **permit system**. Five methods were selected by over 90% of the respondents including **Leave No Trace information, printed educational materials, website information, signage/kiosks** and **visitor education**. When asked how frequently Leave No Trace was used in the Adirondack Park, 48% of respondents said it was *Used occasionally*. None of the survey respondents indicated that Leave No Trace was *Never used*.

Survey respondents were asked how familiar they are with the typical Adirondack Park visitor. The majority of respondents (58.5%) said that they were *Extremely familiar* with the typical visitor to the Adirondack Park. Respondents were also asked whether their agency or organization administers a volunteer program. Nearly three-quarters of the survey respondents (72.5%) indicated that their organization administers a volunteer program. When asked in an open-response question what the main objectives of their volunteer program were, most of the responses focused on **trail work/maintenance, stewardship** and **education**.

Respondents were asked whether or not there were any use fees in the Adirondack Park. The majority of survey respondents (92.7%) indicated that there were areas in the Park with use fees. When asked to report what type of sites required fees at least half of the respondents reported that **campgrounds, day use sites** and **trailhead parking areas** had use fees. When asked whether or not there was a law enforcement presence in the

Adirondack park, 100% of respondents indicated, Yes, there was. Additionally, 100% of respondents reported the **Department of Environmental Conservation (DEC)** was an agency providing a law enforcement presence for the Adirondack Park.

The final portion of the survey focused on the potential future of a locally-tailored Leave No Trace program in the Adirondack Park. First, respondents were asked whether or not they believed that the development of the program was being used to address existing issues or if it was a *proactive* effort. Over 75% of respondents believed that the development of a Leave No Trace program was both a proactive effort as well as one to address existing issues. Survey respondents were asked to write in desired goals for a Leave No Trace program. Though this was an open-response question many of the responses focused on **educating visitors about protecting the park, reducing/preventing impact to the park, and promotion of a consistent Leave No Trace/stewardship message**. The majority of respondents (87.8%) reported that their agency or organization had staff that are trained in Leave No Trace. Additionally, over 72% of these agencies had staff that had completed a Leave No Trace 5-day Master Educator Course and another 44.4% reported having staff that had participated in a 2-day Leave No Trace Trainer Course.

Survey respondents were asked how they envisioned Leave No Trace being disseminated to visitors. They were provided with a list of 14 different methods of dissemination and asked to select all that apply. Six of the 14 methods were selected by at least 90% of survey respondents as being a way they envision Leave No Trace being disseminated to park visitors. These methods included **social media, print media, website, local user groups and volunteers**. Finally, survey respondents were asked what type of agency or organization they worked or volunteered for. The majority of respondents (43.9%) worked for a **State agency**. Another 22% of respondents worked for **Non-governmental organizations** and 14.6% reported working for a **Trail organization or club**.

Survey Methodology

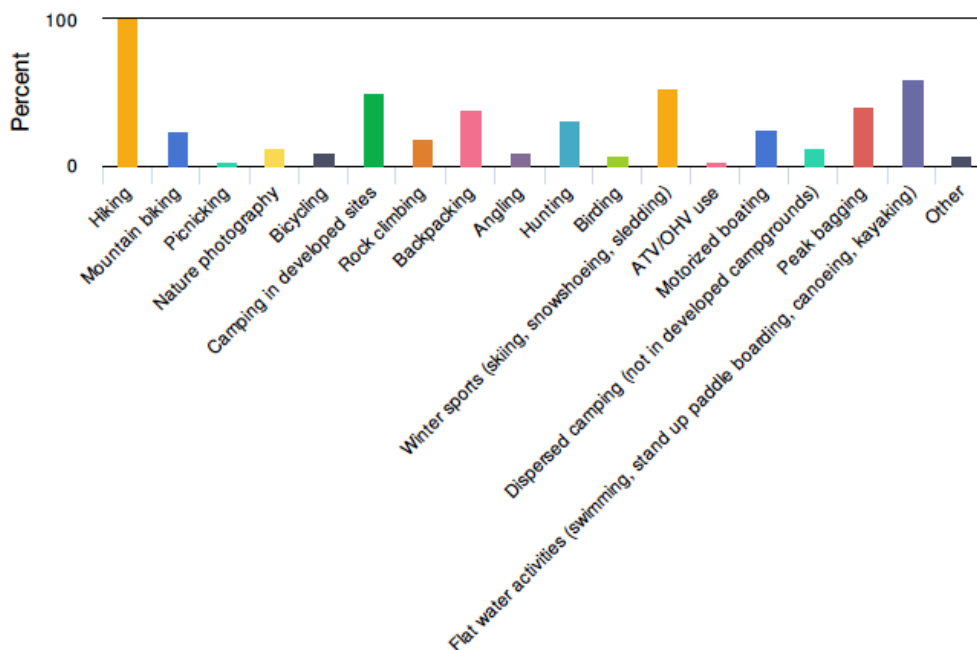
This survey was facilitated using the online survey platform www.SurveyGizmo.com. The survey was administered from August 19 - September 25 in 2019. The sample was a convenience sample which was generated by staff from both the Adirondack Council and the Adirondack Mountain Club. The survey link was distributed to over 60 individuals throughout the region, and a total of 44 survey responses were generated. This survey was not password-protected.

Survey Results

1. Please select the five most popular recreational activities in the Adirondack Park.

Survey respondents were given a list of 18 recreational activities including *Hiking, Mountain biking, Picnicking, Nature photography, Bicycling, Camping in developed sites, Rock climbing, Backpacking, Angling, Hunting, Birding, Winter sports (skiing, snowshoeing, sledding), ATV/OHV use, Motorized boating, Dispersed camping (not in developed sites), Peak*

bagging, Flat water activities (swimming, stand up paddle boarding, canoeing, kayaking) and Other in which they could write in additional activities not included on the list. From this



list respondents were asked to select the five most popular activities taking place in Adirondack Park.

Hiking was selected as being the most popular activity with 100% of respondents selecting it within the five most popular activities. This was followed by *Flat water activities* (swimming, stand up paddle boarding, canoeing, kayaking), *Winter sports* (skiing, snowshoeing, sledding), *Camping in developed sites* and *Peak bagging* were also listed in the top five recreation activities in the Park. Respondents were also given the chance to select *Other* and write in other popular recreational activities that were not included in the list. Of those who wrote in a response, all responded with **snowmobiling**. These write in answers can be found in the appendices.

2. What are the 3-5 most pressing recreation-related issues facing the Adirondack Park?

This question was an open-response question in which respondents could write in the 3-5 most pressing issues on the lands in Adirondack Park. The answers to this question can be found in the appendices. However, the majority of the responses related to **overuse/crowding, trail degradation/trail erosion, human and pet waste, parking and under prepared visitors**.

3. Rate the following recreation-related impacts in the Adirondack Park.

Respondents were given a list of 22 recreation-related impacts (see table below) and were asked to rate each one as either having *No impact*, *Slight impact*, *Moderate impact*, *Extensive impact*, *Severe impact* or *Not applicable*.

	No Impact	Slight Impact	Moderate Impact	Extensive Impact	Severe Impact	Not applicable
Pet waste	0 (0.0%)	16 (40.0%)	17 (42.5%)	7 (17.5%)	0 (0.0%)	0 (0.0%)
Damage to vegetation	0 (0.0%)	4 (9.8%)	9 (22.0%)	22 (53.7%)	6 (14.6%)	0 (0.0%)
Trash	0 (0.0%)	5 (12.2%)	16 (39.0%)	14 (34.1%)	6 (14.6%)	0 (0.0%)
Visitor conflicts	1 (2.4%)	12 (29.3%)	24 (58.5%)	4 (9.8%)	0 (0.0%)	0 (0.0%)
Inappropriate use of technology (geocaching, drones, etc.)	1 (2.4%)	13 (31.7%)	18 (43.9%)	6 (14.6%)	3 (7.3%)	0 (0.0%)
Invasive species	0 (0.0%)	2 (4.9%)	17 (41.5%)	10 (24.4%)	12 (29.3%)	0 (0.0%)
Improper disposal of human waste	0 (0.0%)	3 (7.5%)	11 (27.5%)	11 (27.5%)	15 (37.5%)	0 (0.0%)
Public safety issues	0 (0.0%)	7 (17.1%)	11 (26.8%)	13 (31.7%)	9 (22.0%)	1 (2.4%)
Pet management	1 (2.5%)	16 (40.0%)	16 (40.0%)	6 (15.0%)	1 (2.5%)	0 (0.0%)
Pollution of water sources	0 (0.0%)	13 (31.7%)	21 (51.2%)	6 (14.6%)	1 (2.4%)	0 (0.0%)
Damage to cultural or historical features	1 (2.4%)	24 (58.5%)	10 (24.4%)	5 (12.2%)	1 (2.4%)	0 (0.0%)
Campfire impacts	0 (0.0%)	15 (36.6%)	16 (39.0%)	7 (17.1%)	2 (4.9%)	1 (2.4%)
Impacts to wildlife	0 (0.0%)	11 (26.8%)	16 (39.0%)	12 (29.3%)	2 (4.9%)	0 (0.0%)
Trail impacts	0 (0.0%)	0 (0.0%)	8 (19.9%)	13 (31.7%)	20 (48.8%)	0 (0.0%)
ATV/OHV Impacts	0 (0.0%)	16 (39.0%)	15 (36.6%)	6 (14.6%)	4 (9.8%)	0 (0.0%)

	No Impact	Slight Impact	Moderate Impact	Extensive Impact	Severe Impact	Not applicable
Increased impacts due to social media	0 (0.0%)	0 (0.0%)	10 (24.4%)	15 (36.6%)	14 (34.1%)	2 (4.9%)
Off trail travel damage	2 (4.9%)	18 (43.9%)	9 (22.0%)	9 (22.0%)	3 (7.3%)	0 (0.0%)
Stock (horse, llama, etc.) impacts	16 (39.0%)	21 (51.2%)	3 (7.3%)	0 (0.0%)	0 (0.0%)	1 (2.4%)
Undesignated camping	3 (7.3%)	24 (58.5%)	11 (26.8%)	2 (4.9%)	0 (0.0%)	1 (2.4%)
Shooting impacts	14 (35.0%)	20 (50.0%)	4 (10.0%)	0 (0.0%)	1 (2.5%)	1 (2.5%)
Increased visitation due to social media	0 (0.0%)	1 (2.4%)	5 (12.2%)	16 (39.0%)	18 (43.9%)	1 (2.4%)
Parking issues	0 (0.0%)	0 (0.0%)	6 (14.6%)	16 (39.0%)	19 (46.3%)	0 (0.0%)

Trail impacts were rated as having the heaviest impact with over 48% of survey respondents rating them as *Severe*. This was followed closely by *Parking issues* (46.3%) and *Increased visitation due to social media* (43.9%) which were both rated by more than 40% of respondents as having a *Severe impact* on the Park. Finally, 53.7% of respondents rated *Damage to vegetation* as an *Extensive impact* in the Adirondack Park.

4. Are there any other recreation-related impacts not listed above?

Respondents were asked to report on other recreation-related impacts that were not included in the original list. This question was an optional, open-response question. Many of the 16 responses to this question addressed the *Diminished wilderness character* of the Park. A full list of responses can be seen in the appendices.

5. How does your agency or organization address recreation-related impacts in the Adirondack Park?

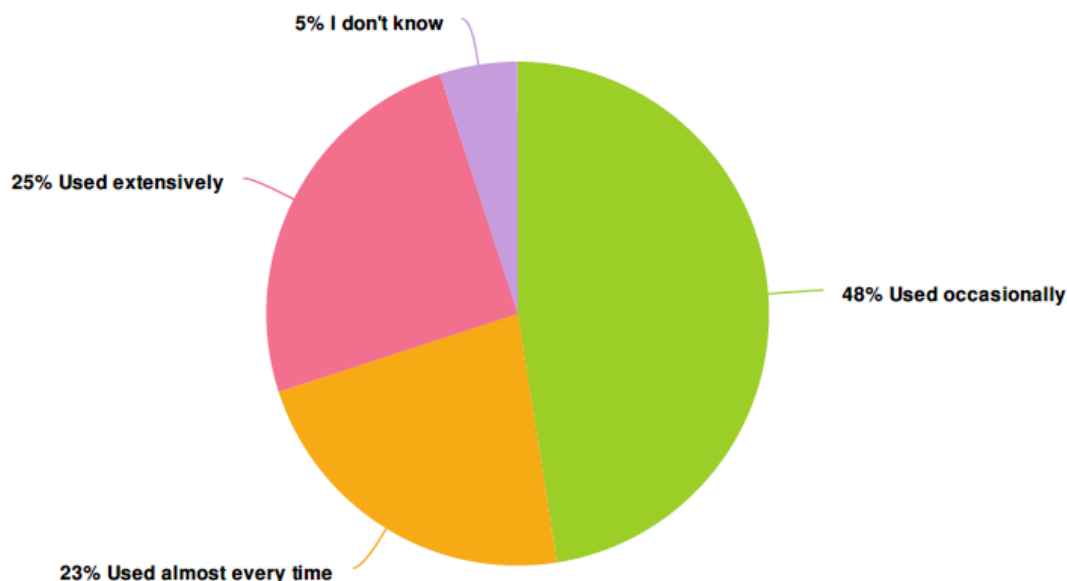
Survey respondents were given a list of 15 mitigation methods (see table below) and asked to select whether each is *Currently in use*, *Used in the past*, or *Never used*. Additionally, survey respondents were given the option to write in other mitigation methods.

	Currently in use	Used in the past	Never used
Interpretative programs	26 (68.4%)	4 (10.5%)	8 (21.1%)
Law enforcement	25 (67.6%)	1 (2.7%)	11 (29.7%)
Leave No Trace information	37 (92.5%)	0 (0.0%)	3 (7.5%)
Limiting access	13 (34.2%)	3 (7.9%)	22 (57.9%)
Permit system	8 (21.1%)	3 (7.9%)	27 (71.1%)
Printed educational materials	36 (92.3%)	1 (2.6%)	2 (5.1%)
Website information	35 (92.1%)	2 (5.3%)	1 (2.6%)
Signage/kiosks	37 (94.9%)	0 (0.0%)	2 (5.1%)
Staff training	34 (85.0%)	2 (5.0%)	4 (10.0%)
Issuing citations	24 (63.2%)	0 (0.0%)	14 (36.8%)
Visitor education	39 (100.0%)	0 (0.0%)	0 (0.0%)
Volunteer programs	34 (87.2%)	1 (2.6%)	4 (10.3%)
Youth education	30 (76.9%)	0 (0.0%)	9 (23.1%)
Area closures	12 (33.3%)	7 (19.4%)	17 (47.2%)
Public outreach	33 (84.6%)	3 (7.7%)	3 (7.7%)

Of the 15 mitigation methods, 12 were reported by the majority of survey respondents as being *Currently in use*. The most popular methods of mitigation were **Visitor education** (100%), **Website info** (94.9%), **Leave No Trace information** (92.5%) and **Printed educational materials** (92.3%). **Permit systems**, **Limiting access** and **Area closures** were the only methods reported by the majority of respondents as *Never used*. There were only four write-in answers for additional ways recreation-related impacts were being addressed. They were *Land conservation*, *Investment in infrastructure*, *Public comment letters & advocacy*, *Trail maintenance and construction*, and *trailhead and Summit stewards*.

6. **To what extent is Leave No Trace information currently utilized to address recreation-related impacts in the Adirondack Park?**

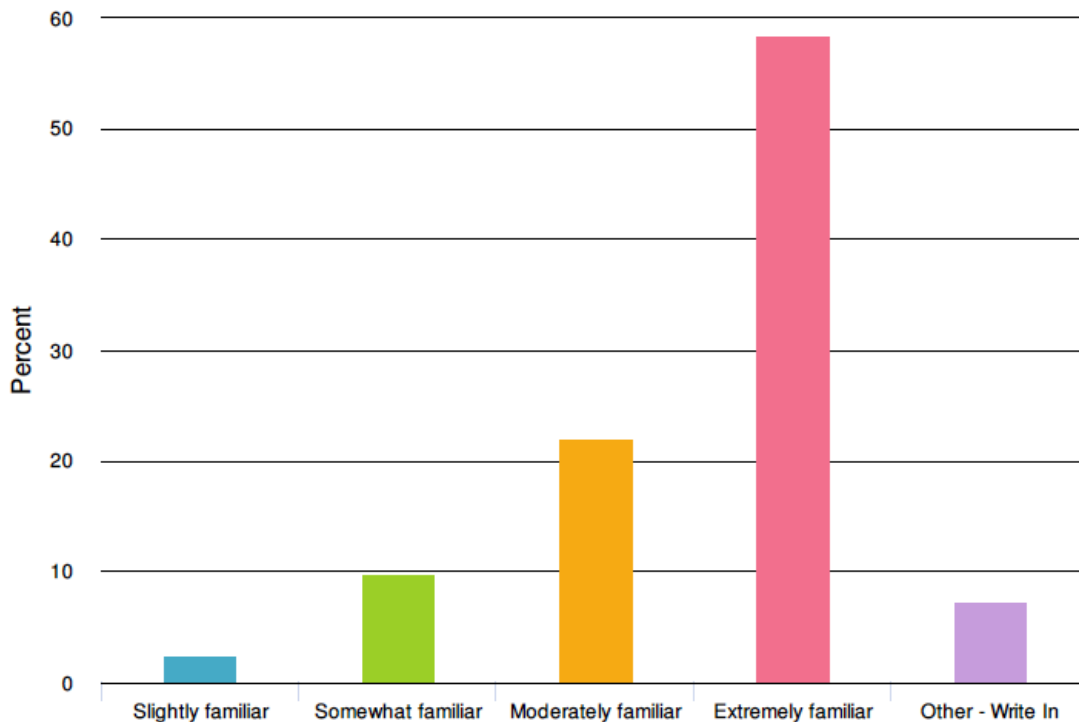
Respondents were asked to report the extent to which Leave No Trace is being utilized to address recreation related impacts in the Adirondack Park. They were given the options ranging from *Never used*, *Almost never used*, *Used occasionally/sometimes*, *Used almost every time*, *Frequently/extensively used*, or *I don't know*.



Nearly half of respondents (48%) reported that Leave No Trace was *Used occasionally* to address recreation-related impacts. **Used extensively** (25%) and **Used almost every time** (23%) were also reported. No respondents indicated that Leave No Trace was *Never used* or *Almost never used*.

7. **How familiar are you with the typical Adirondack Park visitor?**

Survey respondents were asked to report how familiar they were with the typical Adirondack Park visitor. Respondents were given the option of *Not familiar at all*, *Slightly familiar*, *Somewhat familiar*, *Moderately familiar*, or *Extremely familiar*. They were also given the option to select *Other* and write in a response. A full list of responses can be seen in the appendices.



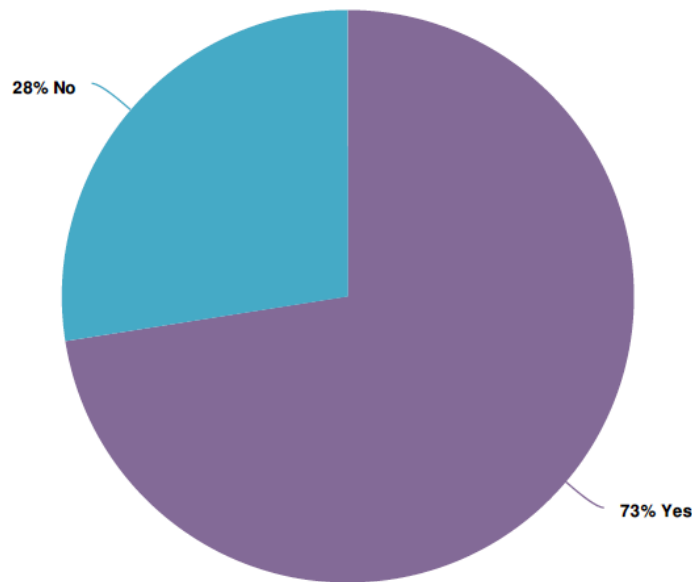
The majority of respondents (58.5%) reported that they were *Extremely familiar* with the typical visitor to Adirondack Park. Another 22% said that they were *Moderately familiar*. Overall, survey respondents were familiar with the average visitor with no respondents indicating that they were *Not at all* familiar with the typical visitor.

8. Is the Adirondack Park open to commercial use (outfitter/guide, summer camps, organized groups, etc.)?

Survey Respondents were asked to report whether or not the lands they manage or work on are open to commercial use by groups such as outfitters/guides, summer camps, or other organized groups. All of the respondents (100%) reported, **Yes**, the Adirondack Park is open to commercial use. This indicates broad understanding of current use of the Park by commercial entities.

9. Does your agency or organization administer a volunteer program?

Survey respondents were asked if their agency or organization administers a volunteer program. They were given the option of selecting *Yes*, *No*, or *Not sure*.



Over 72% of respondents reported, **Yes**, that the agency or organizations they work for administers some type of volunteer program. The remaining 27.5% reported that their agency did not have a volunteer program.

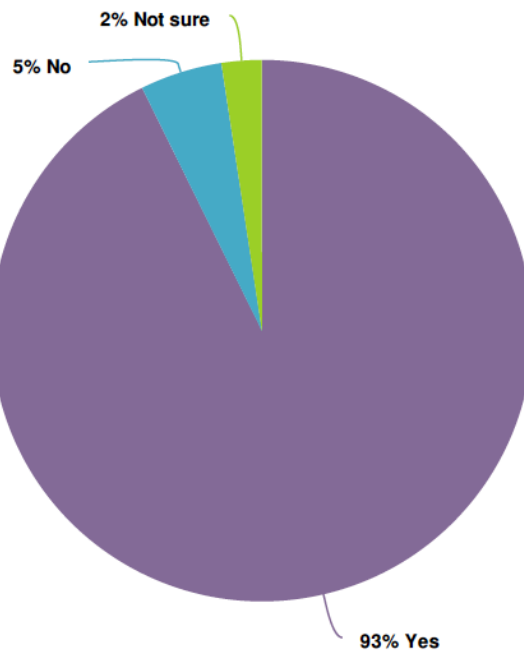
10. What are the main objectives for your volunteer program?

This question was an open-ended question in which survey respondents could list the main objectives of the volunteer programs on the lands they manage. Most of the responses centered around **Trail work/maintenance, Stewardship** and **Education**. A full list of responses can be found in the appendices.

11. Are there use fees at any sites in the Adirondack Park?*

Survey respondents were asked whether or not there were any use fees at any areas in the Park. They were able to select from the responses *Yes*, *No*, and *Not sure*.

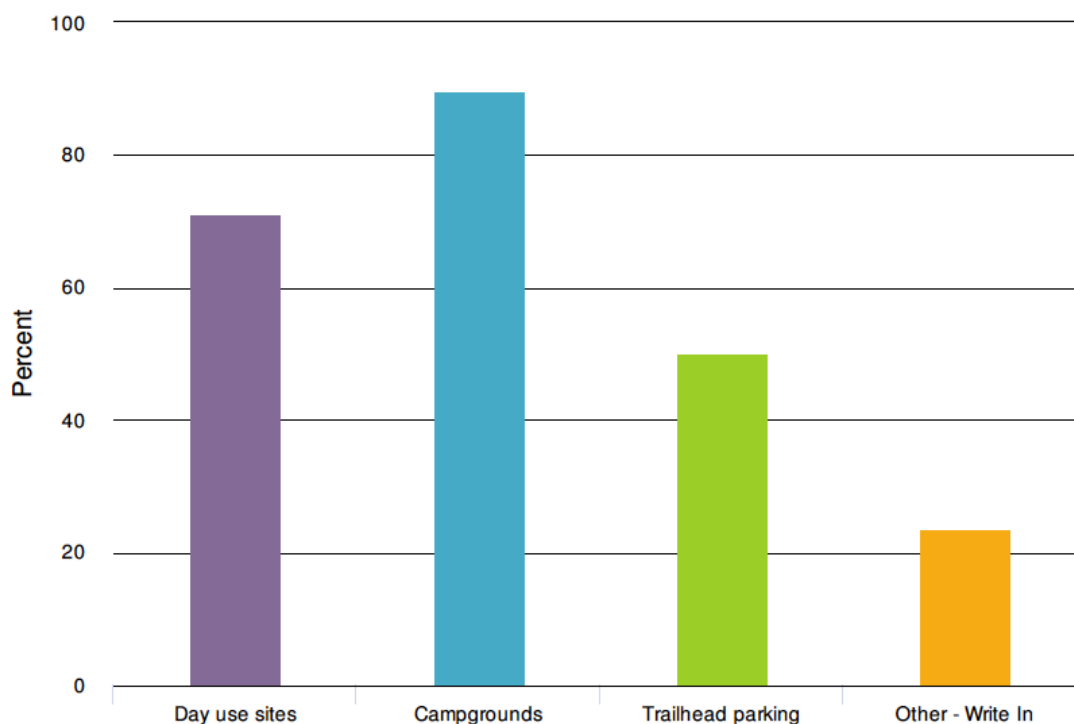
*Note: Within the Adirondack Park permits, fees, and reservations are required at some Primitive and State Land campsites, and at some front country and backcountry locations. At other backcountry or roadside sites they are free and available first-come-first served.



The majority of survey respondents (92.7%) reported **Yes**, there were use fees at sites in Adirondack Park. Only 5% of respondents reported **No** there were not use fees at sites in the Adirondack Park.

12. What types of sites require a fee? Check all that apply.

Survey respondents were asked to report what types of sites in the Adirondack Park had fees. They were given the options of *Day use sites*, *Campgrounds*, *Trailhead parking*, an open-ended response for *Other* and asked to check all that apply.



The majority of survey respondents (89.5%) reported that **Campgrounds** in the Adirondack Park had fees. Additionally, 71.1% of respondents said that **Day use sites** in the park had fees. Over 23% of respondents selected **Other**. A full list of those responses can be found in the appendices.

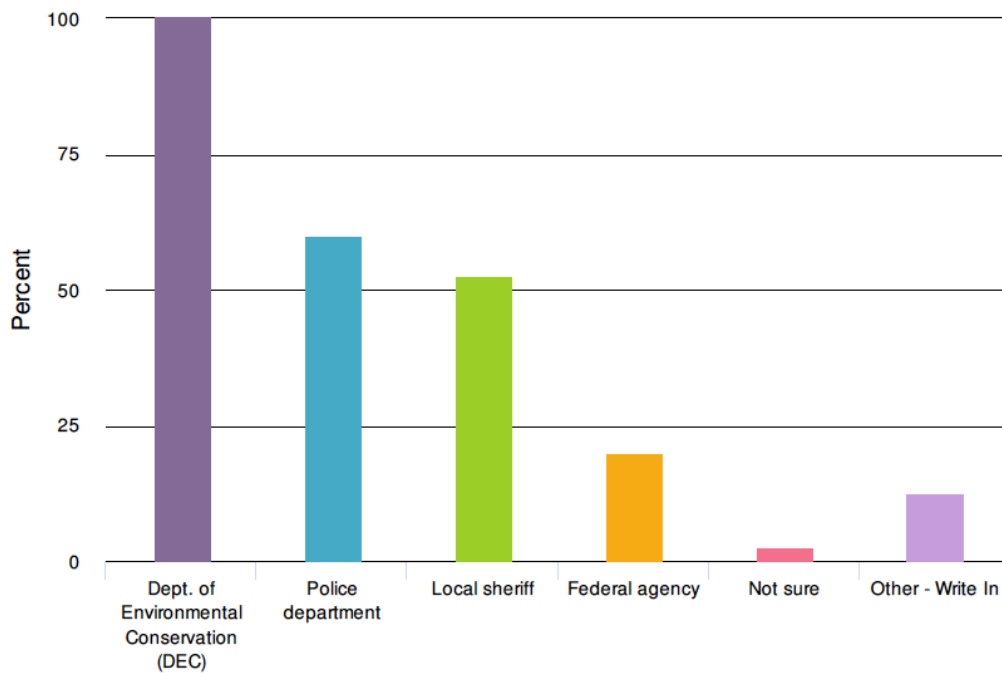
13. Is there a law enforcement presence in the Adirondack Park?

Survey respondents were asked whether or not there was a law enforcement presence in the Adirondack Park. They were able to select from *Yes*, *No* and *Not Sure*.

All of the survey respondents selected **Yes** there is a law enforcement presence in the Adirondack Park.

14. What agencies provide law enforcement on public lands in the Adirondack Park? Check all that apply.

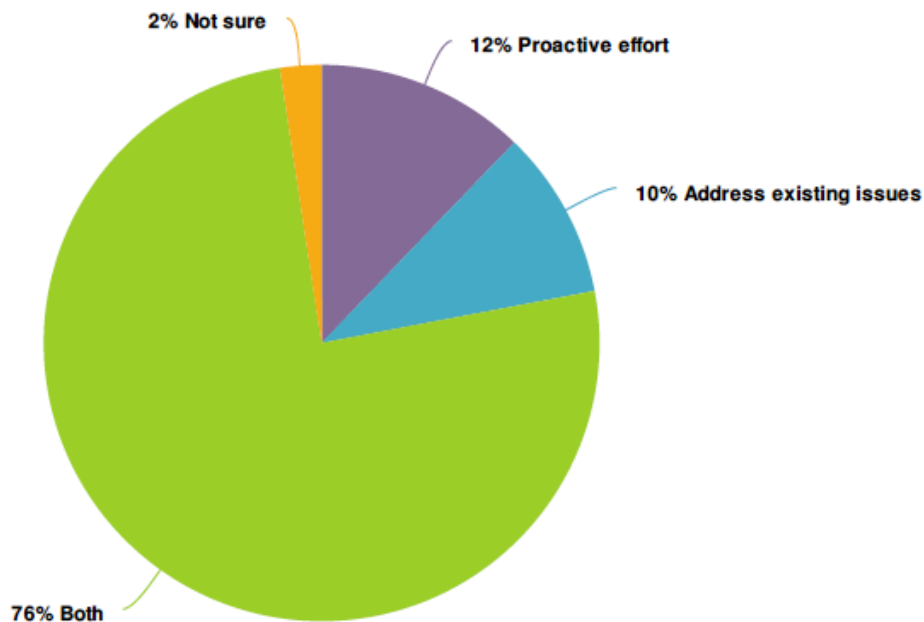
Survey respondents were asked what agencies provide law enforcement in the Adirondack Park. They were able to select all that apply from *Department of Environmental Conservation (DEC)*, *Police department*, *Local sheriff*, *Federal agency*, *Not sure* and an option for *Other* in which they could write in an agency. Respondents were able to select all the agencies that apply to the Park.



All of the survey respondents reported that the **Department of Environmental Conservation (DEC)** provides a law enforcement presence in the Adirondack Park. The majority of survey respondents also reported that a **Police department** (60%) and the **Local sheriff** (52.5%) provide law enforcement. Four out of five of the responses for *Other* were **State Police** or **State Troopers**. A full list of responses to *Other* can be found in the appendices.

15. Is developing a locally-tailored Leave No Trace program a proactive effort or is the goal to address existing recreation-related issues in the Adirondack Park?

Survey respondents were asked whether or not they believed that developing a locally-tailored Leave No Trace program is a proactive effort or going to be used to address existing issues. Respondents were given the option of selecting the Leave No Trace program is going to be used as *Proactive effort*, *Address existing issues*, *Both*, *Not Sure*, and *Other* with a write-in option.



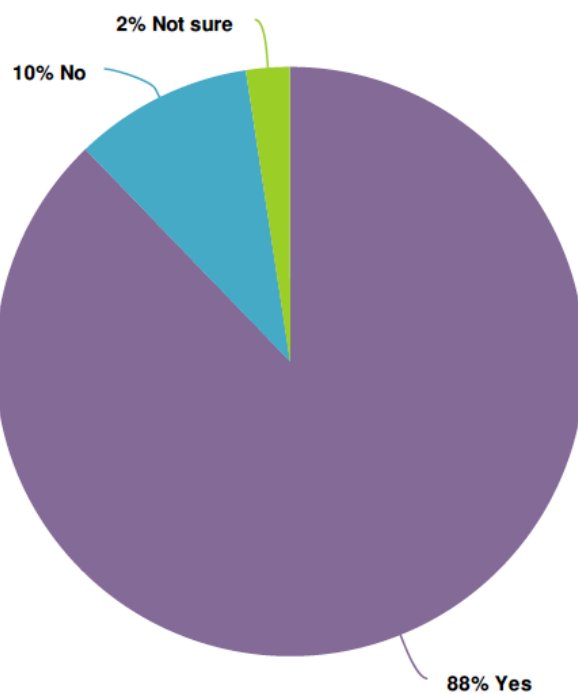
The majority of survey respondents (75.6%) believe that the development of a locally-tailored Leave No Trace program is both a *Proactive effort* and being used to *Address existing issues*. Only 2.4% reported they were *Not sure* whether it was a proactive effort or working to address existing issues. No survey respondents answered *Other*.

16. What are your goals for a Leave No Trace program for the Adirondack Park?

This question was an open-ended question in which survey respondents could write in their perceived goals for a Leave No Trace program for the Adirondack Park. Most of the reported goals were generally related to **Educating visitors about protecting the park**, **Reducing/preventing impact to the park**, and **Promotion of a consistent Leave No Trace/stewardship message**. A full list of responses can be found in the appendices.

17. Does your agency or organization have staff trained in Leave No Trace?

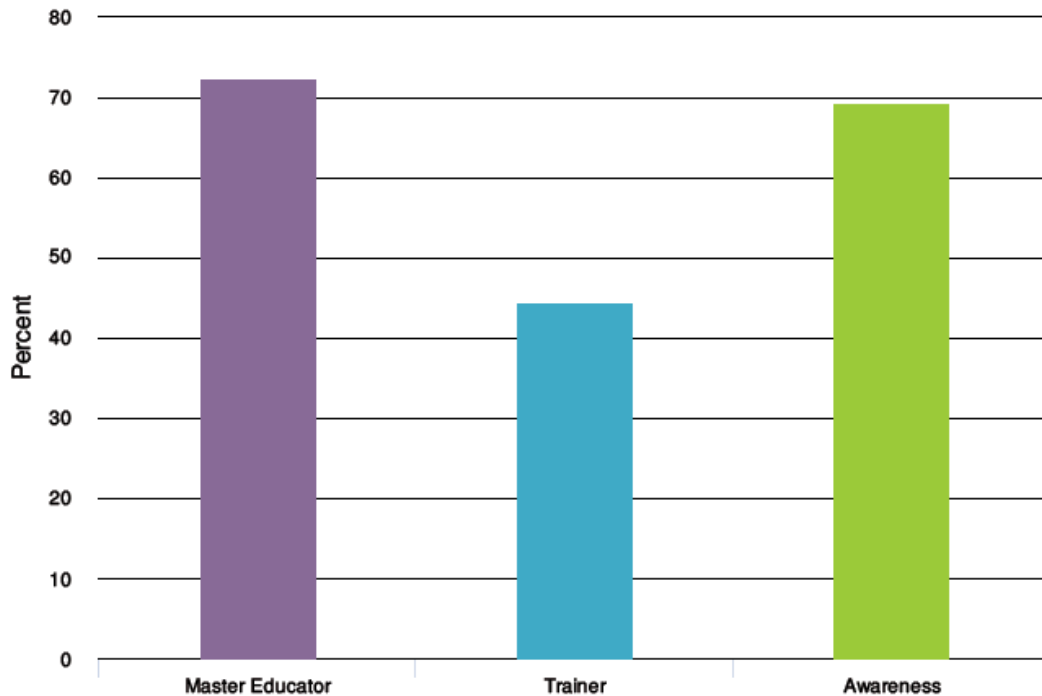
Survey respondents were asked whether or not their agency or organization had staff trained in Leave No Trace. They were given the option of selecting from *Yes*, *No*, *Not sure*, and *Other*, a write-in option.



The majority of respondents (87.8%) indicated that their agency or organization had staff who were trained in Leave No Trace. Only 9.8% reported that they did not have any trained staff. No survey respondents answered with *Other*.

18. What is the level of staff training? Check all that apply.

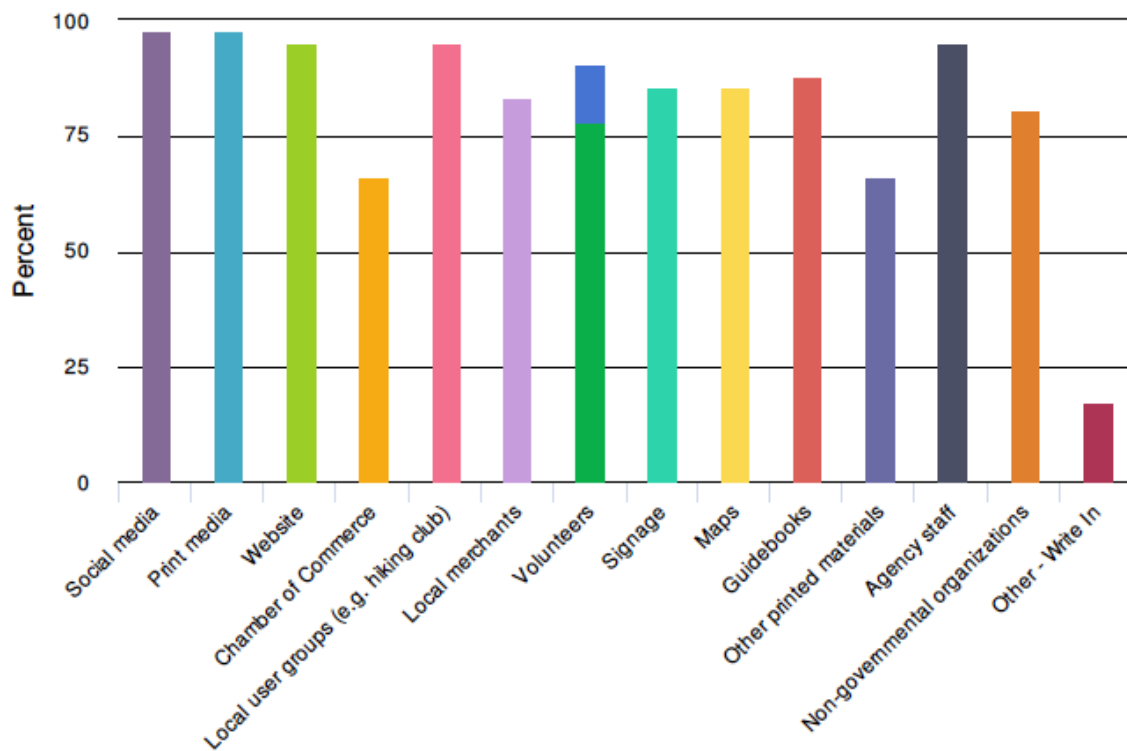
Survey respondents were asked what level of Leave No Trace training their staff have gone through. Respondents were asked to select all that applied from *Master Educator*, *Trainer* and *Awareness*.



The most common course (72.2%) that respondents reported their staff having completed was the 5-day Leave No Trace *Master Educator* course. This was followed closely by the Leave No Trace *Awareness* course with 69.4% reporting that staff from their agency had completed this level of training. Only 44.4% of respondents indicated that staff had completed the 2-day Leave No Trace *Trainer* course within their agency or organization.

19. How would you envision Leave No Trace information being disseminated to Adirondack Park visitors? Check all that apply.

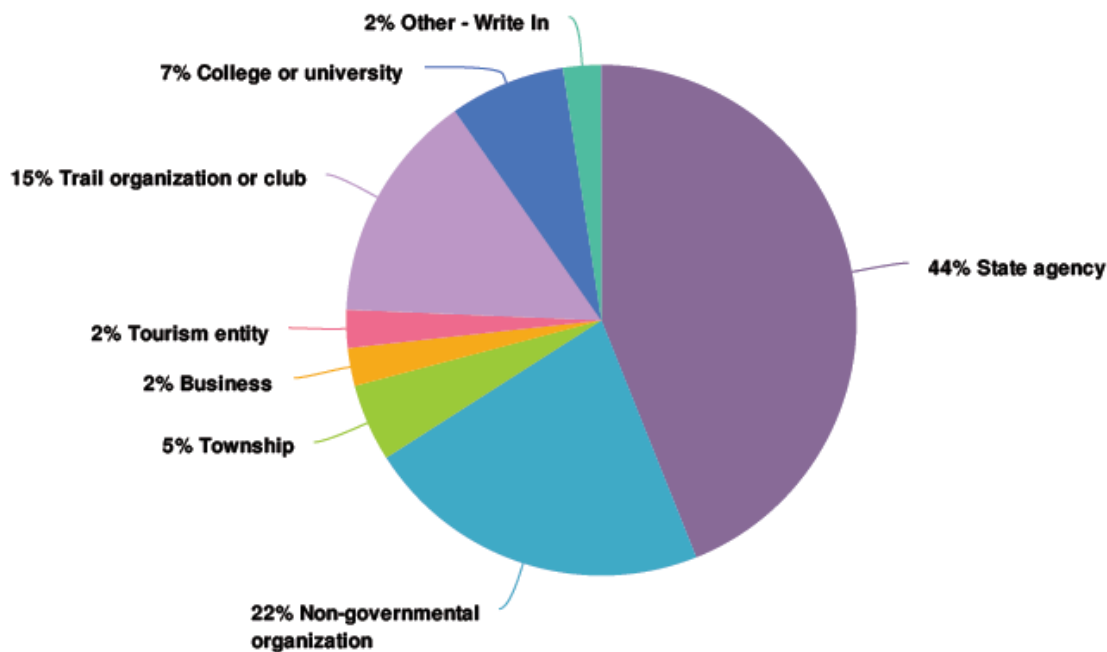
Survey respondents were asked how they envisioned that Leave No Trace would be disseminated to the visiting public. They were given 14 options including a response for *Other*. Respondents were able to check as many that applied from: *Social media, Print media, Website, Chamber of Commerce, Local user groups (e.g. hiking club) Local merchants, Volunteers, Signage, Maps, Guidebooks, Other printed materials, Agency staff, Non-governmental organizations and Other*.



Social media (97.6%) and **Print media** (97.6%) were tied as the most popular methods respondents envisioned for disseminating Leave No Trace to the public. This was followed closely by **Website** (95.1%), **Local user groups** (e.g. hiking clubs) (95.1%) and **Agency staff** (95.1%). Additionally, over 90% of respondents suggested **Volunteers** as a method for disseminating Leave No Trace information. A full list of responses can be seen in the appendices.

20. What type of agency do you work or volunteer for?

Survey respondents were asked what type of agency they work or volunteer for. They were asked to select from eight agency types including one fill-in-the-blank option for *Other*. They were able to select from *State agency*, *Non-governmental organization*, *Township*, *Business*, *Tourism entity*, *Trail organization or club* and *College or university*.



The majority of survey respondents (43.9%) reported that they work for a **State agency**. Another 22% reported working for a **Non-governmental organization** and 14.6% for a **Trail organization or club**. Only two respondents (4.8%) worked for a **Business** or **Tourism entity**.

21. Please list additional comments or feedback regarding Leave No Trace efforts in the Adirondack Park.

Survey respondents were given a blank open-response question in which they could include any comments they had about future Leave No Trace efforts in the Adirondack Park. Eleven individuals responded to this question. A full list of responses can be found in the appendices.

Discussion of Survey Results

The purpose of this survey was to collect data in regards to the needs of a locally-tailored Leave No Trace program for the Adirondack Park. This was done using questions that focus on recreation-related impacts, current methods and programs being used to address these impacts, and stakeholder beliefs about the development of a Leave No Trace program for the Adirondack Park.

Survey results revealed that many of the impacts threatening the Adirondack Park could be effectively addressed with a Leave No Trace program. The impacts reported as *Severe* included **Improper disposal of human waste**, **Trail impacts**, and impacts from

Increased visitation due to social media. Other impacts including **Parking issues** may need to be addressed with other methods, though Leave No Trace messaging could help to mitigate some of these issues.

Currently, Leave No Trace information is being utilized in varying degrees in the Adirondack Park. However, there is a significant opportunity to further incorporate Leave No Trace into many of the programs and management strategies in the Park in a more comprehensive manner. Such messaging and public outreach could be further integrated into visitor education, website information, printed educational materials, agency and volunteer training, and signage/kiosks.

Given that the Adirondack Park is open to commercial use by groups such as outfitters/guides, summer camps and other organized groups, ensuring these groups are teaching and practicing Leave No Trace while in the Park is critical for reducing impacts. Additionally, there is a law enforcement presence by the NY Department of Environmental Conservation in the Park, which is a critical component of the overall management strategy, and should function in tandem with Leave No Trace educational efforts for overall success. Using Leave No Trace to address issues that are best suited to an educational approach (for unskilled, uninformed, and careless behaviors), while reserving law enforcement efforts where needed can be an effective and efficient strategy (for illegal actions).

The development of a locally-tailored Leave No Trace program is viewed as both a proactive effort as well one intended to address impacts already found in the Park. The survey results indicated that Leave No Trace information should be incorporated into social media, print media, and agency or organization websites. The effort should also strive to educate volunteers and stakeholder staff about Leave No Trace skills and ethics, and how to communicate these effectively to park recreationists. This type of locally-tailored program should educate recreational users about protecting the Park and provide information on how to reduce impacts. Using Leave No Trace information across all agencies and organizations will lead to greater consistency and continual reinforcement of salient messages to Park visitors and residents alike.

Understanding and Managing Visitors – Literature Review

Introduction

Contemporary managers of lands used by the public for recreation face countless and complex management challenges. From external threats such as development to increasing recreational use, many land managers must strike a balance between resource protection and the provision of recreational opportunities. Within the Adirondack Park, legal mandates clearly put the protection of resources as the primary goal. However, resource degradation due to inappropriate visitor behavior continues to be a significant concern for managers. Though numerous parks and protected areas have a recreation mandate, resource degradation due to inappropriate visitor behavior continues to be a significant concern for managers (Leung & Marion, 2000; Taff, Newman, Bright, & Vagias, 2011; Vagias & Powell, 2010). In light of the fact that minimal recreational use can cause substantial impacts, especially since most impacts are cumulative over time, land managers must utilize an array of tactics to reduce these impacts (Hammit, Cole, & Monz, 2015; Leung & Marion, 2000; Marion, Leung, Eagleston & Burroughs, 2016).

Often, land managers deal with resource and social impacts through two primary strategies: indirect strategies such as education and/or direct strategies such as enforcement (Hendee & Dawson, 2002; Martin, Marsolais, & Roloff, 2009). Direct management approaches, including fines, regulations or site management, tend to be expensive and possibly limit visitors' sense of freedom (Marion & Reid, 2007). However, indirect management approaches such as visitor education have become a standard and effective method used to minimize high-impact behaviors of outdoor enthusiasts in parks and protected areas (Hammit & Cole, 1998; Hendee & Dawson, 2002; Manning, 1999, 2003; Marion & Reid, 2001). Education is most effective at mitigating certain types of behavior, and as such, is most effective as part of a larger comprehensive strategy, including staff, infrastructure, and, for some impacts, direct management.

Education and Information

Many land managers, and the general public, often view indirect management techniques as a light-handed approach for addressing depreciative behavior in parks and protected areas. Based on an extensive review of the literature, Manning (1999) suggested that the use of education and information to address certain behaviors is effective, favorably viewed by visitors, and is often more cost effective than direct measures such as law enforcement.

Visitor education efforts often draw on one of two pertinent models of persuasion: the *central route to persuasion* and the *peripheral route to persuasion* (Roggenbuck, 1992). The conceptual basis for these two distinct models of persuasion is The Elaboration Likelihood Model (see Petty et al., 1992). The overall effectiveness of persuasion is largely dependent on the type of impact, the type of behavior, and the motivations for the behavior in question (Roggenbuck, 1992). Park and protected area managers often utilize the central

route to persuasion, which, “relies on visitor attention, consideration, and internalization of the message” (Marion & Reid, 2007, p. 11). The central route to persuasion’s effectiveness is due to the visitor processing the information by filtering it through prior knowledge and experience to evaluate the information (or arguments) presented in the message. Once a particular message is internalized by the visitor, and meshed with the visitor’s belief structure, long-term behavioral change is possible (Marion & Reid, 2007).

Alternatively, the peripheral route to persuasion generally relies on the source of the information rather than the quality or relevance of the information itself. As noted by Roggenbuck (1992), “the recipient pays more attention to ‘who said it’ than to ‘what was said’” (p. 195) in the context of the peripheral route to persuasion. While this can be an effective strategy in the right context (e.g. park ranger talks at a visitor center), this route to persuasion has limited effectiveness in creating long-term behavior change (Marion & Reid, 2007).

McGuire (1985) provides a model (Figure 1) for information processing that offers a theoretical basis for programs designed to change behavior, which is particularly well suited for parks and protected areas. As illustrated the process of persuasion begins when a visitor is exposed to an educational message, which is followed by processing and comprehension of the information. The next step, and perhaps the most critical in the process, is the yielding step, which involves the visitor accepting the message and then altering his or her attitude accordingly (Marion & Reid, 2007). The model further assumes that once a visitor has yielded to the message and a change in attitude has occurred, that the changed attitude will be retained in the visitor’s memory thus guiding future behavior. Therefore, if the goal of a “persuasion-based” program is to create long-term behavioral change in park and protected area visitors, the central route to persuasion is likely the most effective strategy (Petty et al., 1992).

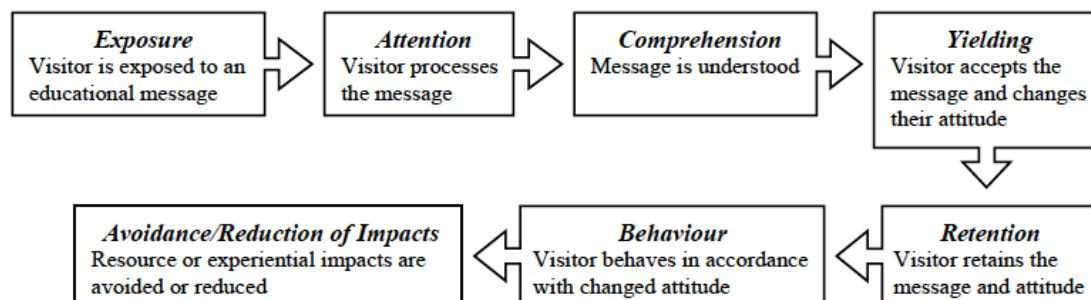


Figure 1. Information-processing model of persuasion and behavior change (adapted from McGuire, 1985)

Despite the notion that behavior change in park and protected area visitors may not directly result from simply attaining new knowledge, both Marion and Reid (2007) and Manning (2003) have concluded that robust visitor education can be effective in changing the behavior of protected area visitors. Although education can be effective in changing behavior, the overall level of effectiveness varies by strategy (Vagias, 2009). One strategy that has merit is the use of multiple media to deliver educational messages rather than

relying on any single medium (Manning, 2003). According to Ham (2007), making any meaningful difference in visitor behavior requires presenting strong, relevant themes that provoke a visitor to internalize the themes. This in turn impacts attitudes, which can then impact visitor behavior (Ajzen, 1991; Ham & Krumpal, 1996).

Efficacy of Visitor Education

Many land managers recognize that recreation-related resource impacts are not malicious by nature. Rather, they generally stem from a lack of knowledge of the consequences of such actions, and a lack of knowledge of appropriate minimum impact behaviors and techniques (Bradley, 1979; Marion & Reid, 2007). Visitor education that is designed to persuade visitors to adopt minimum-impact practices is viewed by managers as a less heavy-handed approach to managing resource impacts (Manning, 1999; Roggenbuck, 1992), and is generally preferred by park and protected area visitors rather than more direct management approaches (Hendee & Dawson, 2002; Park, Manning, Marion, Lawson, & Jacobi, 2008).

According to Roggenbuck (1992), problem behaviors of park and protected area visitors can be classified into five different types as shown in Figure 2. As illustrated in the figure, certain types of problems are more apt to be effectively addressed by education than others. For two of the behaviors, illegal and unavoidable, Roggenbuck (1992) asserts that education will have little to no effect on curbing the undesirable actions. However, behaviors identified as careless, unskilled and uninformed have varying potential (from *moderate* to *very high*) of effectively being influenced by education efforts. The level of effectiveness of various communication efforts largely depends on the kind of impact, the specific depreciative behavior involved, and the specific motivation for engaging in the behavior.

Type of Problem	Example	Potential effectiveness of information/ education
Illegal actions	Theft of Indian artifacts; use of wilderness by motorized off-road vehicles	Low
Careless actions	Littering; shouting	Moderate
Unskilled actions	Selecting improper campsite; building improper campfire	High
Uninformed actions	Using dead snags for firewood; camping in sight or sound of another group	Very high
Unavoidable actions	Disposing of human waste; trampling ground cover vegetation at campsite	Low

Figure 2. Typology of problem behaviors (adapted from Roggenbuck, 1992)

Other factors of efficacy include message rational, message delivery, and source credibility (Marion & Reid, 2007). Christensen and Cole (2000) found that protected area visitors were more likely to be persuaded to change behavior by ecological rationales than by social

ones. In terms of message delivery, timing of messages is a critical factor for maximizing efficacy (Roggenbuck, 1992). This suggests that managers should strive to time the delivery of educational messages to reach recreationists early in the trip-planning process for maximum effectiveness (Marion & Reid, 2007). Lastly, the credibility of the message source is another fundamental key to the success of any educational effort. Message sources viewed by visitors as credible, such as a park ranger, tend to be more effective (Oliver, Roggenbuck, & Watson, 1985).

In many parks and protected areas, educational initiatives are an essential component of an overall management strategy for ensuring protection of recreational resources. As noted by Marion and Reid (2007), there is sufficient evidence that the majority of commonly used visitor education methods can affect visitor knowledge, attitudes, and behavior. Similarly, Manning (2003) concluded that education can ultimately be effective in modifying park and protected area visitors' attitudes. Lastly, Marion and Reid (2007) state that, "It is clear that visitor education can be an effective management strategy for addressing visitor impacts to protected area resources" (p. 18).

Depreciative Behaviors

It is clear from both published literature, and the firsthand experience of park and protected area managers, that recreational activity in natural areas creates some level of ecological and social impact. Yet, many visitors are simply not aware of how their individual behavior contributes to the problem. Researchers have posited that one plausible explanation of depreciative behavior is the result of failure to comply with social norms. Widner-Ward and Roggenbuck (2003) proposed a taxonomy of causes of various depreciative behaviors, consisting of six representative violations:

1. *Unintentional*: "I was unaware I was doing something wrong."
2. *Uninformed*: "I did not know feeding wildlife could damage their health."
3. *Releasor-cue*: "I saw someone else urinate in the park, so it seems ok to me."
4. *Responsibility-denial*: "It may be wrong to litter, but what I dropped on the ground won't really matter."
5. *Status-conforming*: "All my friends tag buildings."
6. *Willful violations*: Destruction of property, breaking laws, open drug use, etc.

Evidence suggests that these various causes can be linked and may be additive in nature. For example, a visitor may have seen an instance where another visitor did not pick up after their pet. As such, that visitor then does not pay attention to his or her pet on the next park visit and leaves pet waste behind even though he or she had a poop bag with them at the time. Additionally, the visitor may not know that pet waste is a significant ecological and social problem. As this example demonstrates, there can be combinations of causes that lead to depreciative behaviors over time.

Visitor Perceptions of Impacts

Some past studies have indicated that park and protected area visitors and managers often differ in their perception of both the type and level of recreation-related impact. Additionally, these two groups also differ in their assessment or interpretation of impacts, either positively or negatively (Farrell et al., 2001; Kim et al., 2003; White et al., 2001). These differing perceptions, evaluations, and interpretations can lead to conflict and misunderstanding of park and protected area managers' priorities and strategies aimed at addressing impacts (Dorwart et al., 2004). According to Manning (1999), it is critical for managers to objectively and systematically gather data from visitors about what defines a high-quality or satisfying recreational experience. As such, managers should strive to understand visitor perceptions and attempt to resolve agency perceptions with those of visitors. This can lead to adoption and implementation of management strategies that a majority of visitors can ultimately support.

While public support for management is not a goal in and of itself, strategies with little to no support from recreationists will require an investment in enforcement to be successful. Moreover, as demonstrated through studies, management strategies that are accompanied by clear educational messaging as to the ease of the requested change and the efficacy of desired outcome can be more successful at achieving the management outcome (Lawhon et al., 2013; 2017). In the Adirondack Park, the implementation of the Bear Resistant Food Canister regulation in the High Peaks is a clear example of a management strategy accompanied by a clear educational message that has been largely supported by a majority of visitors. Again, within the Adirondack Park, since recreation is a secondary concern for the Forest Preserve, visitor support for management may be desirable but is not legally mandated.

Manning et al. (2004) present the following for addressing visitor perceptions of recreation-related impacts:

1. Involve visitors in decisions about acceptable levels of recreation-related resource and social impacts;
2. Visitors may be willing to accept some restrictions on visitor use designed to minimize resource and social impacts (if they are involved in the process); and
3. Understand that it is not feasible to eliminate all resource and social impacts linked to recreation.

Some researchers have explored the relationship between visitor-based standards of quality and existing conditions in parks and protected areas. One such study conducted by Laven et al. (2005) revealed that visitor-based standards of quality are often unrelated to existing conditions, indicating that visitors don't "see" what managers see on the ground. Additionally, the research suggests that standards of quality based on existing conditions may continually contribute to status quo or possibly diminished resource and social conditions over time given the fact that conditions tend to worsen incrementally with increased use. In other words, visitors partake in recreational activities for enjoyment of a

particular area yet don't realize that their activity may be concurrently diminishing the very qualities of the area that drew them there to begin with.

Lastly, visitor assessment of whether a resource or social impact is acceptable or not is often dependent on the specific types of recreation a particular area is managed to offer, the objectives of various user groups, and the overall resource management objectives of the agency. Furthermore, the actual level of recreation-related impact may be viewed differently by a visitor depending on the type of recreation setting. For example, a visitor in a forested natural area may deem litter more inappropriate than in an urban park with a less natural setting (Hammitt and Cole, 1998).

Messaging and Signage

In many parks and protected areas, signs are a regularly utilized tool for managing visitor use and impact (Winter, 2005; Park et al., 2008). For cash-strapped agencies, particularly those that may be insufficiently staffed, implementing signage is often a first choice for communicating rules, regulations, and information to visitors. Given visitors' preference for indirect management strategies, signs are generally more appealing to many protected area visitors than more direct strategies such as enforcement of rules or other restrictions on visitor freedoms (Chavez, Winter, & Baas, 1993; Winter et al., 2000). As a result, signs are a key method utilized by park and protected area managers for garnering desired visitor behavior.

When considering the implementation of signage to address a particular issue, managers must evaluate both the type of message (Duncan and Martin, 2002) and the actual placement of signs (McCool and Cole, 2000). In the past decade, the use of theory-driven approaches to message design has become a more prominent strategy for creating effective messages for visitors to parks and protected areas (Vagias, 2014; Widner-Ward and Roggenbuck, 2003).

Signs designed to inform, warn, or prohibit visitors are one of the most common methods used to reduce depreciative or noncompliant behavior in visitors. There are four primary message types utilized:

1. *Plea* – "Please pick up after your pet."
2. *Sanction* – "Dogs are not allowed off leash. Violators subject to \$250 fine."
3. *Prohibition* – "Alcohol and/or open containers prohibited."
4. *Interpretive* – "Area closed for revegetation to protect ground nesting birds."

Numerous studies have evaluated the efficacy of messages on signs, and most research has indicated that any signage is better than none at reducing inappropriate, impactful, or depreciative behavior (Cole, 1998; Duncan and Martin, 2002). Some studies have focused on the effectiveness of certain types of messages, specifically interpretation and sanction messages (Duncan and Martin, 2002; Johnson and Swearingen, 1992). Research findings suggest that these types of messages have had mixed success in achieving compliance.

Factors that can influence success include visitor demographics, visitor motivations, recreational setting, and visitation levels.

Research indicates that the placement of signs can increase effectiveness, and that those signs placed at or near a problem area tend to be most effective. In such situations, the sign functions as a contextual restriction or unanticipated intervention, and can have an educational effect on visitors (Slater, 1992). In some settings, sanction messages have been demonstrated to be effective for certain behaviors such as hiking off-trail or collecting of artifacts (Martin, 1992; Johnson and Swearingen, 1992). Yet the effectiveness of such messaging types in urban settings has received far less focus by researchers. However, in many urban settings, there is often a tendency to avoid direct management strategies in favor of education or interpretation presented via signage.

Placement of signs at entry points to parks and protected areas is a routine practice. The use of this technique assumes that visitors will take time to read, process, and understand posted information. Yet, a wide variety of factors impede this process. Limited timeframes, information overload, competing interest or messages, frequent distractions, non-captive audiences, and a desire to proceed to the activity all can diminish efficacy (Cole, 1998; McCool and Cole, 2000; Orams, 1997). According to Cole (1998), the average time a visitor will spend on a sign is 3.1 – 9.7 seconds, and it has been noted that visitors can become easily confused if a particular sign contains more than one discrete message. An additional consideration is the idea that too many signs in an area can create “sign pollution,” and can lead to negative effects on visitor experience given the potential disruption in the overall sense of discovery and exploration (Roggenbuck, 1992). These findings indicate that signs at entry points may not be useful in all cases. Furthermore, such signs should be brief, and only contain a single message whenever possible to aid in visitor comprehension. Research conducted by Cialdini et al. (2006) explored four different types of normative messages for reducing off-trail hiking. Tested messages included:

- *Injunctive*: what ought to be
- *Descriptive*: what currently is
- *Prescriptive*: positively phrased, “do this”
- *Proscriptive*: negatively phrased, “don’t do this”

Findings indicated that the *injunctive-proscriptive* message was most effective at attaining the desired behavior. In other words, telling visitors what ought to be occurring, and telling them not to engage in a specific depreciative behavior was shown to be most effective in this study. However, the researchers did indicate that this type of message is most effective when a particular behavior is desired soon after message exposure, and that such messages may not be effective at ensuring long-term behavior change. Building on this work, Winter (2006) noted that if managers are interested in providing high quality recreational experiences, then they must be mindful when deciding to use negatively (proscriptive) messages, as such messages can have an unintended negative effect on visitor experience. Therefore, a balanced approach to messaging is warranted in most cases.

Recent studies have demonstrated that perceived effectiveness of Leave No Trace practices is a meaningful predictor of future Leave No Trace behavioral intent. As such, park and protected area managers should consider focusing educational efforts on how Leave No Trace practices effectively minimize impacts to the landscape. Though some studies have found that this knowledge is not a significant predictor of future behavioral intent, park visitors do need to be made aware of the recommended Leave No Trace practices in parks and protected areas. However, and perhaps more importantly, park visitors need to better understand why certain Leave No Trace practices are recommended, and why those practices are effective at reducing impacts. Findings from this research suggest that education efforts specifically focused on the *perceived effectiveness* of Leave No Trace practices may be more effective at modifying visitor behavior in order to minimize recreation-related impact in parks than messages that don't contain this information (Lawhon et al., 2013; 2017).

Barriers to Compliance

Some research has explored barriers to compliance with posted information, rules, and regulations. While the existing literature does not examine all possible barriers, specific factors unique to parks and protected areas have been investigated. Miller, Borrie, and Harding (2001) hypothesized the following explanations for non-compliance:

- Cognitive failure in the form of faulty decision-making
- Unsuccessful attitude shift when presented with new information
- Ingrained negative, depreciative, or impactful behaviors
- A functional inability to carry out desired or appropriate behaviors
- Various normative influences and social pressures from peers

Additionally, work by Borrie and Harding (2002) found that in situations where available information is not the limiting factor to compliance, there are other, similar factors at play:

1. Lack of awareness of a problem
2. Peer group pressure
3. Lack of an underlying outdoor ethic
4. Routine (habitual) behavior
5. Lack of ability to perform desired behavior

These authors concluded that when visitors are exposed to multiple messages they can experience cognitive overload, which can limit recall of specific messages regarding management objectives or recommended behaviors designed to minimize impact. Perhaps the most salient finding in this work was the idea that routine or habitual behavior is particularly difficult, if not impossible, to address, alter, or influence with on-site communication through signage.

Leave No Trace

Leave No Trace is the most prevalent minimum-impact educational program in use in parks and protected areas in the U.S. (Marion, 2014). The overarching intent of the program is to educate outdoor enthusiasts about the nature of their recreation-related impact as well as teach them techniques for minimizing the impact (Harmon, 1997; Leave No Trace Center for Outdoor Ethics, 2016a; Marion & Reid, 2007). Leave No Trace is particularly appealing to land managers because it offers a more light-handed approach to visitor management as opposed to more heavy-handed management strategies (Lawhon et al., 2013). The foundation of the program is the Seven Principles (Figure 3), which are used on protected area signage, maps, and websites and interpretive information.

Seven Principles of Leave No Trace

1. Plan Ahead and Prepare
2. Travel and Camp on Durable Surfaces
3. Dispose of Waste Properly
4. Leave What You Find
5. Minimize Campfire Impacts
6. Respect Wildlife
7. Be Considerate of Other Visitors

Figure 3. The Leave No Trace Principles (Leave No Trace Center for Outdoor Ethics, 2016b).

Leave No Trace concepts date back to the 1960s when the USDA Forest Service began encouraging visitors to “pack it in, pack it out.” These early efforts were modeled on the successful Smokey the Bear anti-forest fire campaign and eventually morphed the initial minimum impact camping messages. As recreation continued to increase throughout the 1970s and 1980s, it became clear that a more comprehensive educational approach to managing visitor impacts in the backcountry was necessary. As such, the USDA Forest Service created numerous partnerships in the 1990s to cooperatively promote a science-based approach to minimum impact recreation. This effort resulted in the development of several publications focused on responsible outdoor recreation practices, and ultimately led to the creation of the 501(c)(3) Leave No Trace Center for Outdoor Ethics (the Center).

The initial focus of Leave No Trace was on impacts in wilderness areas but has expanded to include other types of parks and protected areas. (Marion, 2014; Marion & Reid, 2001). Currently, the Center has a primary focus on frontcountry area visitors, and has created numerous Leave No Trace educational resources addressing recreational pursuits common to these areas including day hiking, picnicking, camping in developed campsites, dog walking, biking, running, and others (Leave No Trace Center for Outdoor Ethics, 2015; Marion, 2014).

Attitude Theory

Previous research has established that attitudes often have a significant influence on a specific, discrete behavior (Ajzen, 2001; Fishbein & Manfredo, 1992; Ham & Krumpe, 1996). Attitudes are generally described as an individual's evaluation of, and dispositional response to, a particular object, including behavior. Once a person's evaluation of an object has occurred, an associative attitude about that object can be retained in memory and influence future behavior (Ajzen & Fishbein, 2000; Fishbein & Ajzen, 2010). Leave No Trace behavior is therefore theoretically influenced in part by attitudes toward specific Leave No Trace guidelines and recommended practices. If attitudes directly influence behavioral intention, and attitudes can be changed, then park managers may alter visitor behavior by specifically targeting the salient attitude that is determining behavior (Ham, 2007; Ham & Krumpe, 1996). Understanding visitor attitudes related to Leave No Trace is critical in order to craft effective educational messages that have the potential to reduce deprecative behavior in parks and protected areas.

Some previous investigations have utilized knowledge of minimum-impact practices as a measure of Leave No Trace efficacy. While some relationship does exist, a primary shortcoming of focusing on knowledge is that the assumption of a linear relationship between environmental knowledge and pro-environmental behavior is questionable (Hungerford & Volk, 1990; Hwang, 2000; Manning, 2003; Petty, McMichael, & Brannon, 1992). In other words, increasing knowledge about environmental impact does not necessarily equate to a change in an individual's behavior.

Recently, social scientists have begun exploring the influence that values, beliefs, attitudes, and other factors play in determining the behavior of outdoor enthusiasts within the context of Leave No Trace, based largely upon behavioral theory (Vagias et al., 2012; 2014). Additionally, recent research has started examining the perceptions of frontcountry visitors with respect to behavioral theory and Leave No Trace (Taff et al., 2011; Taff et al., 2014). This is an important consideration in Leave No Trace-related research given the theoretical foundations that suggest attitudes are one of the important influences on behavior (Ajzen, 1991).

Implications for Management – Key findings from the literature

- Messages on signs should be brief and contain as few messages as possible.
- Consider the use of *injunctive-proscriptive* messages near problem areas.
- Utilize messages that make visitors aware of the consequences of their actions.
- Direct contact with/from agency personnel may be more effective than other communication strategies.
- Visitors are often unwilling to see themselves as part of the problem, so managers should find ways to increase attribution of resource damage to visitor actions.
- Managers should work to reconcile their own perceptions of resource and social impacts with those of visitors, which may be different (vastly so in some cases).
- Messages should illustrate ideal situations, behaviors, and resource conditions.

- Communication with visitors should provide clear linkage between visitor behavior and resource and social impacts.
- Depending on the specific problem, messages should emphasize individual responsibility for specific impacts.

Conclusion

Despite the fact that countless parks and protected areas have a recreation mandate, resource degradation due to inappropriate visitor behavior continues to be a significant concern for managers (Leung & Marion, 2000; Taff et al., 2011; Vagias & Powell, 2010). For many protected area managers, education is an essential component of overall management efforts for ensuring protection of recreational resources. Leave No Trace is the most prevalent minimum-impact education program in use in parks and protected areas in the U.S., due primarily to its light-handed approach to visitor management (Vagias & Powell, 2010). As noted by Marion and Reid (2007), there is sufficient evidence indicating that visitor education can affect visitor knowledge, attitudes, and behavior.

Leave No Trace Program Implementation – 2020 and Beyond

The Adirondack Park faces challenges, both in terms of increasing visitor impacts and available resources to address current and future impacts. However, the DEC and its partners are well poised to minimize, mitigate, or eliminate specific recreation-related impacts found in the Park by implementing effective Leave No Trace education programs as a key component of a comprehensive management plan that includes additional components (such as staff, infrastructure, and limits). Development of such a plan could be modeled on the Interagency Council on Visitor Use's Visitor Use Management Framework, a planning process created to provide cohesive guidance for managing visitor use. The Park enjoys a strong support base from the region, over 100 partners and friends' groups, and active recreational user groups that could play a vital role in educating Park visitors about Leave No Trace. By simply leveraging the numerous agencies, partners, and individuals involved, much can be accomplished in terms of creating a community of responsible park and natural area visitors.

There are many possibilities for program implementation, which hinge on available financial and staffing resources. However, the two basic strategies, either of which would likely be effective, include:

1. **Targeted implementation of educational programs and stewardship initiatives in chosen sites within the Adirondack Park.** These select sites could be thought of as "pilot sites" where educational information could be tested in either high-use areas, areas with sensitive environments, or areas with significant impacts. When using the pilot site approach, Leave No Trace information can be tested for its effectiveness and can subsequently be enhanced to increase its efficacy. Another benefit of this approach is that it allows managers and partners to work at a manageable pace in terms of implementation, thereby enabling them to "cherry pick" the strategies that work best. These strategies can then be used in other parts of the Park until the entire Park has consistent information and effective messaging.
2. **Parkwide rollout of the Leave No Trace education program.** While likely a more effective strategy because of its comprehensive nature, it is potentially unrealistic due to resource, staffing, and other constraints. Based on other programs of this kind, the Center has found that full-scale program implementation that saturates an area tends to achieve management objectives in a shorter timeframe. However, this kind of effort is generally more intensive and requires a concerted, coordinated effort on the part of all partners. Furthermore, given the complexity and diversity of the Adirondack Park, it is quite likely that Leave No Trace efforts will be more effective at some sites and less effective at others. The reasons for this include site type, location, visitor type, amenities, user type, and visitation trends.

A targeted roll-out may be the most effective strategy for the Adirondack Park. Leveraging the affinity for specific areas of the Park such as the High Peaks, and implementing a targeted Leave No Trace effort in those and other similar areas, would likely provide a successful starting point for promoting sustainable and responsible use and enjoyment of

the entire Park over time. While Leave No Trace continues to be effective in all park types from urban to wilderness, the Center recommends selection of a location or suite of locations where Leave No Trace can be most effective in a particular area. For example, Leave No Trace education can be utilized effectively in the High Peaks to keep visitors on designated trails but may not experience the same initial success in Old Forge if used to educate snowmobilers about proper disposal of human waste. In other words, deploy Leave No Trace efforts where the likelihood of initial success is greatest, which will provide a springboard from which future efforts can propagate and succeed.

The following items need to be addressed in order to implement an effective Leave No Trace education program in the Adirondack Park:

1. Agree on overall goals for the educational program prior to implementation.
2. Determine implementation strategy – full-scale rollout or a targeted, pilot site model.
3. If the pilot site model is selected, the initial pilot sites need to be selected based on predetermined criteria.
4. Determine specific management concerns to be targeted. While it may seem like an opportunity to address multiple concerns for an area, the Center recommends choosing 1-3 discrete issues of highest concern to be the primary focus during the initial rollout of educational efforts.
5. Utilize existing Leave No Trace messages and/or language to address specific management concerns. Language will likely need to be locally-tailored to better resonate with residents and visitors alike.
6. Develop additional language (in consultation with the Center) as necessary for addressing other concerns for which targeted language may not be available.
7. Determine whether or not managers, key staff, partners, or volunteers will need Leave No Trace training prior to implementation of educational efforts.
8. Determine outreach methods (possibilities listed below).
9. Define the timeline for implementation strategy.
10. If baseline data exist for chosen sites where educational efforts will be implemented, such data could be utilized to assess changes (at predetermined intervals) in social or resource conditions after educational efforts have been put in place.
11. Create list of specific and realistic metrics for measuring effectiveness of educational efforts.
12. If research to gauge the efficacy of outreach efforts is desired, details of such research will need to be finalized prior to education program implementation.

Recommendations for Managing Recreation-related Impacts in the Adirondack Park and Building a Culture of Wildlands Stewardship

I. Management & Planning Recommendations

- A. Need for comprehensive park planning – Due to its size and complexity, there is an inherent challenge in trying to have a parkwide comprehensive plan. However, such an effort would benefit the long-term stewardship and sustainability of the Park. In order to have a successful parkwide visitor education program, DEC managers and partners must have a solid implementation plan. To the extent possible, key stakeholders should be aligned and have a common goal to effectively reach park visitors with critical information. Given national trends in recreation participation growth, increased recreational use of the Park is highly likely in the future, and a comprehensive Park plan (including an outreach and education plan) is imperative.
- B. Utilize an established planning framework – Adirondack Park managers and partners could greatly benefit from working through a formal visitor use management planning process for the Park. This would allow for a better understanding of the carrying capacity of the Park as well as help to define complementary visitor experience opportunities and desired future resource conditions. There are numerous planning frameworks that could be utilized, and include:
- Visitor Use Management Framework: <http://visitorusemanagement.nps.gov/> (the most contemporary and robust):
 - Limits of Acceptable Change: <http://www.fs.usda.gov/detail/dbnf/home/?cid=stelprdb5346360>
 - Visitor Experience and Resource Protection: <http://winapps.umn.edu/winapps/media2/leopold/pubs/320F.pdf>

The use of any one of these (or similar) planning frameworks would greatly aid Park managers and partners in determining and attaining a specific desired future condition for the Park, and would be valuable for long-range strategic planning efforts.

- C. Build Leave No Trace into management plans – Consider building Leave No Trace into the Adirondack Park master planning documents, and Park project plans. Many federal and state land management agencies have built Leave No Trace (and stewardship concepts) into their long-range plans. See: https://www.nps.gov/acad/learn/management/upload/schoodic_gmpa.pdf Some municipal land management agencies have done this as well, including the City of Boulder, Colorado – Open Space and Mountain Parks Department: <https://www-static.bouldercolorado.gov/docs/osmpmp-final-1->

[201910221147.pdf? ga=2.225274716.794717831.1574112296-111660396.1574112296](#); and [Travis County Parks: https://www.traviscountytexas.gov/images/tnr/Docs/parks/2_parks_master_plan.pdf](#) (Texas).

- D. Codify Leave No Trace as guiding management principles – Consider drafting a formal resolution for the Adirondack Park pertaining to Leave No Trace. Some municipalities around the country have undertaken this kind of initiative with success. One example is the San Juan Islands in Washington State (mix of county, state, and federal lands). The municipality passed such a Leave No Trace resolution, which is leading to greater awareness and adoption of Leave No Trace, and ultimately a reduction in recreation-related impacts. See appendix I
- E. Ensure adequate staffing for Park management agencies – A perennial challenge for park and protected areas is adequate staffing. Local, state, and federal agencies all face this issue. When agencies are understaffed, parks and protected areas often suffer from avoidable impacts, many of which may be directly related to recreation and use. Though volunteers can fill the roles of some agency personnel, a well-funded and adequately staffed agency will generally be better suited to meet the growing demands on public outdoor spaces such as the Adirondack Park. Clearly there is a fiscal implication to adding staff which must be sorted out to ensure the necessary staffing resources are in place.
- F. Permit system for high use areas – Though not an appropriate option for every location, permit systems, when well thought out, well designed, and soundly implemented, can serve an important function in parks and protected areas. Depending on the nature of the resource in question, permitting use can benefit the natural resources and the visitor experience. Additionally, a permit system allows for an educational touch point with visitors before they depart on their trip. Many parks and protected areas have existing permit systems in place such as Great Smoky Mountains National Park. According to the National Park Service, visitors benefit from the system in several ways: *“Through a combination of education and enforcement, park rangers assigned exclusively to the backcountry are expected to lead to better compliance with regulations and Leave No Trace ethics. Increased compliance with regulations and Leave No Trace also helps protect and preserve resources, such as wildlife, that most visitors highly value. All backcountry users stand to benefit from the changes [to the permit system in the park]. In addition, by making all sites reservation-only, the new reservation system will have the capability to notify permit holders of site closures, safety issues and other emergency conditions via email and text messaging prior to beginning their trip.”* See this [example: https://www.nps.gov/grsm/learn/management/bc-reservation-permit-faq.htm](#). See [here: https://visitorusemanagement.nps.gov/Content/documents/highres_VUM_Framework_Edition_1_IVUMC.pdf](#) for more information on the implementation and use of permit systems.

- G. Revise group use permitting system – Though there is a current system in place for the issuance of group use permits, it could be enhanced to be more efficient, provide a robust educational opportunity for the group prior to their visit, and could yield valuable group use data for DEC and its partners. Understanding and managing group use should be a priority for the Park as groups seeking permits offer many benefits including: educational and regulatory touch points with specific groups that use the Park; ability to collect reliable data on group use; and an opportunity to monitor resource conditions at sites used by groups.
- H. When providing alternatives to the High Peaks, ensure such areas are capable of handling the increased visitation – A well-utilized strategy by land managers is to direct visitors to other areas of a park or protected area that offer similar visitor experiences, challenges, or natural environments. One of the difficult issues with this strategy is ensuring such alternative areas are capable of handling the increased impacts associated with recreation. In the case of the Adirondack Park, some current suggested alternatives appear to be under resourced to accommodate the additional influx of visitors. Lack of parking spaces, limited availability of toilet facilities, trails not designed for heavy use, and a significant lack of visitor education are a sampling of the current problems faced by many of the suggested alternatives. Other parks have successfully used this strategy by conducting assessments of potential alternatives to ensure they can in fact cope with additional recreational use prior to offering them to the public. Consider cataloging existing recommended alternatives to determine if infrastructure or educational programming are lacking. Identified gaps should be remedied and addressed to the extent possible. Areas being considered as new alternatives should be assessed for overall suitability before locations go public.
- I. Build on successful management efforts – The DEC and its partners have demonstrated success with several efforts in the Park to minimize recreation-related impacts, e.g. implementation of the bear canister regulations for the High Peaks, check stations designed to minimize the spread of invasive species through the movement of firewood and boats, etc. Such efforts could be further enhanced and built upon for continued success in order to effectively minimize and mitigate visitor impacts in the Park. This is particularly salient now as reinvention of the wheel is time consuming, resource intensive, and often impractical, whereas building on existing successful efforts can be far more efficient, effective, and timely.

II. Research & Monitoring Recommendations

- A. Baseline and ongoing monitoring data is essential for park management – Adirondack Park managers and partners would benefit from obtaining baseline data on current resource conditions in the Park. There are numerous methodologies, from simple to complex, for gathering baseline data. Baseline data could be collected by relatively simple photo documentation, GPS data, or other means. However, there are more complex methods for gathering robust baseline data if desired. Regardless,

such data is extremely useful for monitoring change in conditions over time, and can serve as an effective metric for guiding management efforts. See [Visitor Use Management:
https://visitorusemanagement.nps.gov/Content/documents/highres_trifold Monitoring Guidebook Primer Edition One IVUMC.pdf](https://visitorusemanagement.nps.gov/Content/documents/highres_trifold_Monitoring_Guidebook_Primer_Edition_One_IVUMC.pdf)

- B. Collect data on visitor numbers – Implementation of a system for capturing baseline Park visitation on an annual basis would greatly benefit overall management efforts. An understanding of visitation numbers, patterns, seasonal variation, and visitor type would augment educational outreach efforts by allowing for a targeted approach. Additionally, having information on annual visitation, including peak visitation, would allow for better management of the inevitable spikes in visitor use throughout the year. There are numerous [visitor count methodologies:](http://agrilifecdn.tamu.edu/cromptonrpts/files/2011/06/3_2_5.pdf) http://agrilifecdn.tamu.edu/cromptonrpts/files/2011/06/3_2_5.pdf and http://www.fs.fed.us/ne/newtown_square/publications/technical_reports/pdfs/2004/317papers/kaczynski317.pdf, which can be tailored to a particular park system, or an individual park.
- C. Gain an empirical understanding of visitor perceptions – As recreation in the Park is promoted, and correspondingly increases over time due to a variety of factors (marketing, social media, promotion, etc.), it would be useful for the managers and partners to determine what visitor perceptions are with regard to the level of impact found in the Park. Do visitors feel that the Park is “being loved to death?” Or do they feel the Park provides high-quality recreational experiences? An understanding of baseline visitor perceptions of the Park allows for the implementation of appropriate management and educational strategies, which can help ensure the [predetermined future condition:](https://www.researchgate.net/publication/287234314_Studies_in_Outdoor_Recreation_Search_and_Research_for_Satisfaction) [https://www.researchgate.net/publication/287234314 Studies in Outdoor Recreation Search and Research for Satisfaction](https://www.researchgate.net/publication/287234314_Studies_in_Outdoor_Recreation_Search_and_Research_for_Satisfaction) of the Park.
- D. Use citizen science to gather current impact data throughout the Park – Data collected via citizen scientists could be used to generate visual representations of impacts such as heat maps (for information on heat maps see: https://en.wikipedia.org/wiki/Heat_map) of impact to allow for a more strategic approach to improving education for specific impact issues. This could facilitate a fundamental shift from being reactive to being proactive. Such an effort could be yet another ‘challenge’ event to gather meaningful data for the Park. The program could offer recognition similar to other Park challenges. Alternatively, this kind of program could be initially administered by a graduate student to assess the efficacy and viability of such an effort.
- E. Consider reinvigorating Adirondack All-Taxa Biodiversity Inventory or other ‘bio blitz’ events to engage citizen scientists and gather valuable data in a central repository – Both public and private entities have been successfully utilizing bio blitzes for a number of years to engage the public in the protection of parks and protected areas. From National Geographic, “A *BioBlitz* is an event that focuses on

finding and identifying as many species as possible in a specific area over a short period of time. At a BioBlitz, scientists, families, students, teachers, and other community members work together to get a snapshot of an area's biodiversity. These events can happen in most any geography—urban, rural, or suburban—in areas as small as a backyard or as large as a country. Smartphone technologies and apps such as iNaturalist make collecting photographs and biological information about living things easy as part of a BioBlitz. High quality data uploaded to iNaturalist become part of the Global Biodiversity Information Facility, an open source database used by scientists and policy makers around the world.” The National Park Service has also been utilizing these events with great success. See: <https://www.nps.gov/subjects/biodiversity/national-parks-bioblitz.htm> <http://www.birds.cornell.edu/citscitoolkit/projects/cfab/adirondackatbi/>

- F. Map all locations where there are currently stewards in the Park – Such a mapping exercise will allow for the accurate identification of where on-the-ground stewards are located, and therefore where gaps exist. Identification of caretakers and stewards at summits, visitor centers, trailheads, etc. will provide a more meaningful picture of current ‘boots on the ground,’ and will allow for real-time programmatic enhancements, better deployment of existing resources, and identification of areas not currently served by on-the-ground stewards. Should new areas in need of an on-site steward be identified, this information could be leveraged to engage new individuals or groups interested in stewardship of the Park.

III. Tourism & Marketing Recommendations

- A. Establish partnership with I Love NY, ROOST, and other tourism entities – 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 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 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. Tourism entities have significant influence on public lands visitation throughout the US, and the Adirondack Park is a prime example of a park that could greatly benefit from having strong partnerships with the tourism industry. When potential visitors are reached via tourism partners

in the trip anticipation phase, they are likely to be better informed and prepared for a visit to the Park. Colorado was the first state in the US to create a specific, focused partnership between the Colorado Tourism Office (CTO) and the Leave No Trace Center for Outdoor Ethics. For information on this partnership see the following:

- <https://www.colorado.com/articles/leave-no-trace-care-colorado>
- https://www.colorado.com/sites/default/files/CO_LNTBrochure_8.pdf
- <https://www.colorado.com/videos/care-colorado>
- <https://industry.colorado.com/care-colorado-principles-toolkit#>
- https://industry.colorado.com/sites/default/files/BB_Stewardship.pdf
- <https://www.colorado.com/news/colorado-tourism-office-and-leave-no-trace-center-outdoor-ethics-join-ground-breaking>

- B. Leverage the unique nature of the Park to drive stewardship – The Adirondack Park is incredibly unique in the world of parks and protected areas, e.g. size, management, large Wilderness areas, Forever Wild protection, patchwork of public/private land, open to many uses (consumptive, non-consumptive, motorized, non-motorized, etc.), incredible history, etc. As such, these individual attributes or the unique nature of the Park as a whole should be utilized as a leverage point for not only encouraging but actively driving stewardship efforts in the Park. Many units of the National Park Service utilize a similar strategy when working to encourage stewardship. See [examples from Yellowstone National Park: https://www.nps.gov/yell/planyourvisit/index.htm](https://www.nps.gov/yell/planyourvisit/index.htm) (the world's first national park). In this NPS-created video, the Park Service specifically notes the attributes of the Park that set it apart from all others, and explicitly address the notion that park visitors should not only enjoy the park but learn about it and do something to care for it. The Adirondack Park should employ a similar strategy given that the Park is truly one-of-a-kind.
- C. Develop and widely advertise an Adirondack Stewardship Pledge – Stewardship pledges have become more common over the past several years. They're being utilized for not only parks and protected areas but also for special destinations. The use of pledges is a type of social marketing that is intended to influence behavior. The Adirondack Park could likely benefit from a park-specific pledge. Such an initiative could have numerous benefits: engage the public, provide information on responsible enjoyment of the park, encourage and foster on-the-ground stewardship, promote and educate visitors about Leave No Trace, and could generate a larger following on social media channels. See examples of existing pledges that could be replicated:

- <https://palaupledge.com>
- <https://www.inspiredbyiceland.com/icelandicpledge>
- <https://www.aspenchamber.org/pledge>
- <https://www.pledgewild.com> – this is an excellent example of a group of mountain towns in the western US coming together to promote responsible tourism.
- <https://www.nps.gov/zion/planyourvisit/zion-pledge.htm>
- <https://www.nps.gov/yell/planyourvisit/yellowstonepledge.htm>
- <https://www.nps.gov/romo/planyourvisit/rockypledge.htm>
- <https://www.nps.gov/grca/getinvolved/grand-canyon-pledge.htm>
- <https://www.wmf.org/sustainable-tourism-pledge>

See also recent articles on the use of pledges:

- <https://www.adventuretravelnews.com/success-of-responsible-tourism-pledges-falls-on-destinations-not-travelers>
- <https://www.fastcompany.com/90379126/6-american-cities-ask-for-responsible-tourism-pledge>

- D. Assess current cross-border marketing and advertising aimed at Canadians – Given the significant number of Canadian visitors to the High Peaks region it would be advised to consider both exploring current cross-border marketing efforts and developing (or enhancing) a plan for better reaching these visitors before they come to the Park. Determining the current information sources these visitors use to plan their visits would be useful and could be accomplished via internet research or on-site visitor surveys. Having an understanding of the various options for reaching this community of Park visitors would allow for more effective and timely communication and marketing regarding responsible enjoyment of the Adirondacks.
- E. Continue to work with opinion leaders in the region – A strategy that has been effective in shedding light on recreation-related impacts for many municipal, state, and national parks and protected areas is the engagement and enlistment of local or regional “opinion leaders” to help bring attention and action to a problem. If DEC or its partners can identify a suite of opinion leaders, e.g. the leader of a well-known hiking group or club, leading members of popular Adirondack Challenges, or

corporate or governmental entities including such influential figures/entities, this can help generate broad support and awareness for the Park.

IV. Social Media Recommendations

- A. Establish and follow a comprehensive social media strategy for the Park – It is clear that social media plays a role in driving visitation to public lands. Additionally, social media has the power to influence behavior of outdoor enthusiasts. When harnessed, social media can be an excellent tool for engaging tens of thousands or even millions of people. However, in the absence of coordinated social media effort, effectiveness is likely limited. There are numerous advantages to having a social media strategy, which include: a) a strategy for social media provides clear direction for efforts, especially for such a large park; b) a strategy will allow for assessing the metrics of social media efforts and will also allow for better reporting and improvements over time; c) a strategy allows for greater efficiency in utilizing and managing social media; d) a strategy can ensure ongoing, continuous, and consistent activity on various social platforms to keep content fresh, relevant, and coordinated; e) a strategy can allow for loftier and more effective campaigns or specific activations; and, lastly; f) a strategy will keep social media on track as it should contain information and procedures for posting, replying to the audience, dealing with questions, addressing adulation or negative comments, and responding to complaints. Such a strategy for the Park must be broad in scope, and should be as inclusive as possible to engage many partners to participate thereby providing a level of consistent social media throughout the Park.
- B. Partner with social media influencers – Social media is only as good as the follower base of any particular user (agency, NGO, club, individual, etc.). *Social influencer marketing* is a tactic that is heavily used today by many, and is simply “leveraging the follower base of influencers” for specific purposes – sales, donations, support, volunteerism, etc. The use of marketing through social media influencers has many benefits: it is considered a light-handed approach that doesn’t feel aggressive to the end user like some traditional marketing efforts; influencers meticulously build and curate their follower base so often social influencers are viewed as a credible source; social influencer marketing can, over time, lift Search Engine Optimization (SEO); lastly, social influencer marketing can foster meaningful online exchanges that can engage many in a topic of specific interest. Identifying and collaborating with social influencers in New York and the broader Adirondack region to champion Leave No Trace and/or stewardship efforts in the Park could be an effectual strategy for building a stronger sustainability culture for the Adirondacks.
- C. Consider the use of social media as a monitoring tool – Some land managers are now monitoring social media feeds and platforms daily to draw real-time data from social posts. Often the recreating public is aware of issues before the land manager, and social media has become an important tool for managers. Examples of issues that managers are being made aware of via social channels include human-wildlife

conflict, dangerous wildlife, dangerous trail conditions, user conflict, accidents, and wildfire.

V. Partnerships & Coordination Recommendations

- A. Create (or reinvigorate) an Adirondack Park Wildlands Stewardship Committee – The creation of an Adirondack Park Wildlands Stewardship Committee would greatly benefit Leave No Trace efforts in the Park. A committee that has park-wide representation, not just the High Peaks or hikers, would be an effective way to better coordinate marketing, social media, outreach, education, and training for the Park. Such a committee should include non-motorized users such as hikers, climbers, paddlers, anglers, mountain bikers, trail runners, skiers, etc. as well as motorized users (e.g. snowmobilers, boaters, ATV riders, etc.) and others such as hunters that utilize the public and private lands of the Park. Furthermore, a committee of this kind would be well served by having NGO representation, agency representation, and representatives from the municipalities within the Park. Consider a subcommittee structure – education, social media, citizen science, research, training, etc. The overarching purpose of such a committee would be to drive stewardship efforts in the Park in a coordinated and organized fashion, and would allow for the identification of specific success metrics as visitation to the Park continues to increase.
- B. Examine existing DEC partnerships to enhance stewardship efforts – The DEC currently has many partnership agreements with myriad entities in the Park. Some of these existing partnerships involve the use and dissemination of Leave No Trace to Park visitors. However, there are likely opportunities that have yet to be identified by DEC and all of its partners for better promoting responsible enjoyment of the Park. To the extent possible, the DEC should review current partnerships and identify opportunities for providing minimum impact information to the populations the various partners respectively serve. The more existing partnerships can be leveraged in a mutually beneficial way to promote a consistent stewardship message, the more people that can be reached over time.
- C. Work more closely with the NY Governor's Office to promote responsible recreation in the Park – Given the NY Governor's interest in the Adirondack Park, his office should be engaged to help promote responsible enjoyment of the Park. Every message coming from the Governor's Office about the Park should include a message about wildlands stewardship and Leave No Trace. As the chief executive of the state, the Governor has a tremendous opportunity to reach millions of people in order to help protect the Adirondacks. Consideration should be given to inviting the Governor to the Park for a tour of areas where recreation-related impact is most significant so he and his staff can see firsthand the challenges faced by DEC and its partners in the Park. Greater awareness of the issues faced by the Park could be the spark that leads to increased funding, attention, and resources for the Park. Given

the significance of the Park as an economic driver for the state, this should be a high priority if the Park is to be enjoyed in perpetuity.

VI. Group Use & Adirondack ‘Challenges’ Recommendations

- A. Require (or strongly recommend) inclusion of Leave No Trace in every Park challenge – All challenges (46ers, Cranberry Lake 50, Fire Tower Challenge, Saranac Lake 6er, etc.) that currently take place in the Park should be required to include Leave No Trace information for challenge participants. Web-based information as well as the specific inclusion of Leave No Trace into such challenges should be strongly recommended and/or required. These challenges are operating on public lands and have a responsibility to minimize the impact of participation. Furthermore, many challenge participants may be drawn to the Park for other types of recreation and educating all participants across all challenges could further the Leave No Trace ethic in the Park. In a review of more than ten Adirondack challenge websites, it was found that virtually no Leave No Trace information exists on the websites. Each of these challenges has a significant opportunity to reach thousands if not millions of Park visitors over time. As such, this represents an immediate opportunity for visitor education.
- B. Create Leave No Trace guidelines for challenges – The Leave No Trace Center for Outdoor Ethics routinely works with partners to create tailored Leave No Trace messaging and curriculum. Such an effort could be easily undertaken to ensure that all challenges in the Park have the necessary information to promote responsible enjoyment of the Park. The information could be featured on each challenges’ website, and could even be made part of the challenge itself.
- C. All “Challenge” events/programs in the Park should actively promote Leave No Trace – Not only should challenges be required (or strongly recommended) to include Leave No Trace on their websites but they should actively be promoting Leave No Trace as part of their public outreach and marketing. As it currently exists in the Park, this is a significant missed opportunity to reach many people.
- D. Conduct a survey of challenge takers – Challenge takers would have to participate in a short survey before they could receive their recognition (e.g. patch, certificate, etc.) to gather data on why they’re taking the challenge, what their motivation is, if they are specifically goal-focused, etc. With this data, specific messaging could be developed to better resonate with challenge participants regarding their role in taking care of the Park.
- E. Implement a group notification system – Consider the implementation of a group notification system such as the one utilized by the Appalachian Mountain Club (AMC) in the White Mountains and the Mahoosuc Range. The AMC implemented this system to better manage the high overnight use of sites. From the AMC, *“To better manage these public wildlands so that all hikers continue to experience an uncivilized*

forest, we must receive pre-notification from large groups concerning which sites they plan to use. Proper use of the Group Notification System helps to prevent multiple groups from converging at a campsite on a given night and exceeding site capacity. This simple action helps us work together to lessen impacts on these beautiful areas, minimize overcrowding, and increase everyone's enjoyment of the backcountry. However, this notification is not a formal reservation. All sites are managed on a first-come, first-served basis. We hope that use of the Group Notification System will prevent the need for a more formalized reservation system, which would mean more regulations and fees. Your compliance helps us protect the resources we all value!" For more information on this system, see: <https://www.outdoors.org/lodging-camping/lodging-camping-campsites/campsites-notification> Such a system in the Adirondack Park could be a very effective way to manage group use without having to move to a formal reservation system. Furthermore, the data collected through this type of system could be valuable for predicting trends in group use, tracking group use, monitoring impacts, and addressing issues resulting from group use in the Park.

VII. Outreach & Education Recommendations

- A. Create a consistent, cohesive educational plan for the Park – Compared to other lands used by the public for recreation, the Adirondack Park currently appears to be receiving a similar amount of recreation-related resource and social impact. Level of existing impact is important because timing is key to implementing successful visitor education programs. The sooner a program is implemented, the better off the Park will be in the future, i.e. when possible, having an education program in place prior to (or concurrent with) the opening of the new trails (e.g. new Mt. Van Hoevenberg trail) or other recreational amenities (e.g. Frontier Town) will help ensure effectiveness of outreach and educational efforts. It is often easier to deal with problems in a nascent stage rather than trying to address deeply-rooted resource or social impacts. As such, the Center strongly recommends the immediate implementation of comprehensive Leave No Trace educational efforts Parkwide to begin minimizing and mitigating existing and future impacts.
- B. Catalog existing rules, regulations, and educational messages in the Park – Currently, the lists of rules and regulations are not readily visible or consistent on kiosks throughout the Park, and Leave No Trace-type information is essentially non-existent in much Park-related literature. This is a relatively easy fix, but something that should be remedied over time in order to consistently promote responsible and sustainable enjoyment of the Park. One way to address this would be for an intern or graduate student to document existing messages (regulatory and educational) being used in the Park to better understand the gaps in overall messaging. From there a plan could be created to foster consistency across the Park.

- C. Ensure consistency of signage – Some of the more important signage currently found in the Park should be made more prominent and consistent across the Park. When signage does not have an official look or feel, it can lead to non-compliance. Make all signage as permanent as possible. Generally speaking, more permanent signage has a more authentic, authoritative, and legitimate feel. Visit for more information on [visitor perceptions of signs: https://www.researchgate.net/profile/Yu-Fai-Leung/publication/260165571-Frontcountry-visitor-informationeducation-programs-Are-there-lessons-for-wilderness-links/0a85e5367ce676a965000000.pdf](https://www.researchgate.net/profile/Yu-Fai-Leung/publication/260165571-Frontcountry-visitor-informationeducation-programs-Are-there-lessons-for-wilderness-links/0a85e5367ce676a965000000.pdf)
- D. Identify and capitalize on missed opportunities to reach Park visitors – While there are active visitor education efforts in many parts of the Park, there are also many more opportunities that have yet to be capitalized on. From agencies, to locations such as the VIC (Paul Smith’s College), to the various Challenges in the park, as well as locations like the I-87 exit 17 rest stop, and information on shuttle vehicles, there are many potential opportunities to better educate Park visitors on enjoying the Adirondacks responsibly. Furthermore, there are numerous publications that should be engaged in this effort as they reach many visitors of all types in the Park. A cursory review of possibilities includes:
- NY State Camping Guide
 - Town of Webb Trail System map
 - I Love NY Roadmap
 - Frontier Town literature, e.g. “Equestrian Opportunities Near Frontier Town”
 - Old Forge Summer Fun Guide
 - Adirondack Sports
 - All Adirondack-focused I Love NY Guides – Capital Saratoga Region, Season to Season visitor guide, I Love NY Travel Guide, I Love NY New York State Travel Highlights, etc.
 - VIC Summer Programs Guide
 - Adirondacks Fishing Guide
 - Adirondacks Paddling Guide
 - DEC – Your NYS Camping Adventure (good information but call it “Leave No Trace”)
 - Old Forge Snowmobile Trail Map
 - All DEC day use and campground maps, e.g. Limekiln Lake, Alger Island, Nicks Lake, Fish Creek Pond, etc.
 - www.ReserveAmerica.com for campground reservations

An intern at one of the colleges or universities in or near the Park, an agency or NGO intern, or even a dedicated volunteer could undertake such a project. Knowing what opportunities exists, that are not currently being capitalized on, will allow for a targeted and strategic effort to maximize and utilize all available outreach opportunities.

- E. PSAR education efforts – According to the DEC there are accurate statistics on the number of search and rescue operations (SAR) that occur in the Park. Given the increase in SAR in the past few years there appears to be a need (and an opportunity) to develop a Preventative Search and Rescue (PSAR) educational effort and/or program with the goal of reaching park visitors about being prepared and staying safe *before* they venture into the backcountry of the Park. Such a program would need to be coordinated across the Park, and could involve a wide variety of partners that could all promote a single PSAR message. See example of successful PSAR efforts at Grand Canyon National Park:

- https://www.nps.gov/articles/parkscience33-1_99-107_malcolm_heinrich_3864.htm
- https://www.nps.gov/grca/learn/photosmultimedia/hike_smart-01.htm

For research on the topic, see:

Malcolm, C., Hannah, H., & Pearce, E. (2014). Effectiveness of preventative search and rescue: illness and injury prevention and fiscal impact. *Wilderness & Environmental Medicine*, 25(3), 355-356.

Collins, Ethan G. and Pettengill, Peter R. (2019). Analysis of Search and Rescue Incidents in the Adirondack State Park from 2015-2016. *Adirondack Journal of Environmental Studies*, 23, 49-59

- F. Replicate successful existing outreach efforts – There are numerous existing outreach efforts in the Park (e.g. HPIC at ADK, summer invasive species/boat inspection stewards, fire tower stewards, etc.) that could be replicated over time. Given the documented effectiveness of these kinds of efforts, it would be beneficial and more efficient to enhance and expand on proven outreach models rather than to create new ones out of whole cloth. Furthermore, it may initially be easier to raise the necessary funds to replicate efforts that have generate desired outcomes rather than fund untested education and outreach mechanisms.
- G. Tailor DEC website to what visitors are searching for most – While there are good resources on the DEC's current website, a review utilizing Google Analytics or a third-party auditor of the most visited pages would allow for the agency to better tailor the website to current Park visitors. Once the DEC has a better understanding of what website pages visitors are searching for or viewing, that information can then be located (or relocated) to more accessible locations on the website. Making the most searched for information better available and more easily located would greatly benefit visitors to the DEC website when searching for information on responsible and sustainable enjoyment of the Park.

- H. Search Engine Optimization – When searching the internet for information on the Adirondack Park, the most prominent websites are largely tourism-focused websites (this is a significant marketing/outreach opportunity) and the DEC website isn't found until the second page of a Google search. As such, the DEC should work with search engine optimization (SEO) experts to enhance the searchability of the DEC's website given the agency's role in the management and protection of the Park. Based on a cursory review of some of the Park-related websites that are found via Google, very few provide information on responsible enjoyment (i.e. Leave No Trace) of the Park, and none were found that detailed the rules and regulations for the Park. Search engine optimization could help remedy this situation and make the DEC's website a prominent and easily-accessed source of information for the Park.
- I. Create a singular website for the High Peaks – Because of the intense and growing use of the High Peaks, DEC and its partners in the High Peaks should consider a single website for the area that could serve as the comprehensive and definitive information source for those wishing to visit. Such a site could be in both English and French to accommodate visitors from both the US and Canada. There are currently numerous websites that provide information about the High Peaks which creates inconsistencies from one site to the next. A quick search on www.networksolutions.com reveals that potential URLs such as www.adkpeaks.org (or .net), www.nyhighpeaks.org (or .net) and www.adkhighpeaks.org (or .net) are all currently available. Having one website dedicated to this special region of the Park would be an excellent way to help ensure that visitors to the High Peaks could have access to accurate and timely information to the area.
- J. Publicize existing shuttle services – There are some shuttle services in the Park that have been implemented to remedy the myriad parking issues managers and partners are currently dealing with in the Adirondacks. While well intentioned, such services are virtually useless unless Park visitors know about the services. The DEC and its partners should catalog all existing shuttle services and widely promote them and the benefits they provide. All visitors should be encouraged to use these services to benefit the Park and the experience it is intended to provide. For research on shuttle services in parks and protected areas, see:
- <https://www.sciencedirect.com/science/article/pii/S0966692313000525>
 - <https://search.informit.com.au/documentSummary;dn=684539079697772;res=IELBUS>
 - <https://link.springer.com/article/10.1007/s00267-006-0061-9>
- K. Catalog the top 50 (or 100) educational opportunities in the Park – Consider utilizing an intern or student (undergraduate or graduate) to identify and catalog the top 50–100 educational opportunities in the Park that are not currently being utilized. From outfitter and guide services to retailers to hotel and lodging to

restaurants and bars, there are many potential opportunities for reaching visitors that have yet to be taken advantage of. However, without a better understanding of the opportunities that exist it will be challenging to create a plan for ensuring the dissemination of consistent Leave No Trace or other park information through such outlets.

- L. Ensure Leave No Trace is part of relevant college orientation programs, courses, and outing programs – There are numerous colleges and universities that provide a variety of programming in the Park offering meaningful opportunities to reach students (and staff) with Leave No Trace information for the Park. DEC and its partners should reach out to all known colleges and universities that operate in the Park in some capacity to ensure they are providing Leave No Trace to their participants before and during any visit.

VIII. Training Recommendations

- A. Specific training for DEC staff and rangers – Consider sending DEC Forest Ranger, ECOs, and Lands and Forests staff to targeted training on proper use of the *Authority of the Resource Technique*, a proven method for effectively interacting with Park visitors about Leave No Trace and similar stewardship concepts. This training is often coupled with *Effective Communication* training, which is designed for staff and volunteers who routinely interface with Park visitors. This particular training module is generally a 4-hour training but can be tailored to a particular audience for maximum effectiveness. Contact the Center for additional details. More information on the Authority of the Resource technique can be found [here: https://lnt.org/sites/default/files/ART_Wallace_Original.pdf](https://lnt.org/sites/default/files/ART_Wallace_Original.pdf)
- B. Entities operating under a Volunteer Service Agreement (VSA) should be trained in Leave No Trace – Any entity operating on state lands as a volunteer with DEC has the opportunity to provide Leave No Trace education, whether it is explicitly in their mission (such as Front Country Stewards) or not (such as volunteer trail crews). Organizers could be required to have Leave No Trace Awareness training (a 1-day or shorter formal Leave No Trace training) at a minimum. The Leave No Trace Center offers a FREE online Leave No Trace Awareness Course that participants could take. Upon successful completion, participants receive a certificate of completion, which could be submitted as part of the VSA application or renewal application.
- C. Summer camp staff should be trained in Leave No Trace – There are countless summer camps (both day and resident) in the Adirondack Park. Camps represent a tremendous opportunity to reach both camp staff and youth with Leave No Trace in an outdoor context. The Leave No Trace Center has a robust suite of camp-focused educational curriculum and programs that are effective at increasing Leave No Trace knowledge in camp participants as well as influencing youth behavior to better align with Leave No Trace in the outdoors. For more information, see:

- <https://lnt.org/our-work/youth-education/>
- <https://lnt.org/our-work/youth-education/accreditation/>
- <https://lnt.org/our-work/youth-education/youth-educator-library/>
- <https://lnt.org/our-work/youth-education/things-to-do/>

D. Make Leave No Trace a required component of NY Guide Licensure – Currently there are approximately 2,500 licensed guides in New York, which represents a tremendous opportunity to educate a professional community about Leave No Trace that has a significant reach in the Adirondack Park. Outfitter and guide services often cater to beginners or novices who are interested in learning new outdoor activities. As such, guides are teaching specific skills and Leave No Trace should be one of those skills that is imparted to every individual or group that is served by a NY DEC Licensed Guide. Furthermore, all NY Guides should be required to have Leave No Trace Awareness training (a 1-day or shorter formal Leave No Trace training) at a minimum. The Leave No Trace Center offers a FREE online Leave No Trace Awareness Course that all guides could take. Upon successful completion, participant receive a certificate. That certificate of completion could be submitted as part of the guide license application or the renewal application. Lastly, the NY Guide exam could easily incorporate Leave No Trace to ensure that all licensed guides are aware of how to minimize the impact of their guiding service and pass along the information to their clients. See [Leave No Trace online course: https://lnt.org/get-involved/training-courses/online-awareness-course/](https://lnt.org/get-involved/training-courses/online-awareness-course/)

IX. Dept. of Environmental Conservation Recommendations

- A. DEC work with media/outdoor industry media – DEC has a tremendous opportunity to expand its outreach and engagement with outdoor industry media entities that are promoting the Adirondack Park. These kinds of influencers can play a key role in promoting responsible enjoyment of the Park. An internet search reveals numerous media outlets that are heavily promoting the Park yet provide little to no information on responsible enjoyment of the areas they're promoting. A few examples include: www.lonelyplanet.com; www.visittheusa.com; www.tripadvisor.com; www.alltrails.com; www.outside.com; www.backpacker.com; www.wikipedia.com; www.adirondackexplorer.com; www.outdoorproject.com, as well as many others.
- B. Include Leave No Trace in the DEC Ranger Academy – The DEC's Environmental Conservation Police Officer and Forest Ranger Basic Training academy should include a robust Leave No Trace component. Given the role of ECOs and Forest Rangers in the protection of the Park, interaction with the public is a key part of the scope of work for these crucial staff. Ensuring that ECOs and Rangers are equipped

with Leave No Trace will allow them to pass along critical information to outdoor enthusiasts they interface with throughout the course of their duties. Research has shown that visitors to public lands often first learn about Leave No Trace from a ranger. As such, it is imperative that DEC field staff are well-versed in Leave No Trace skills and ethics.

- C. Create a DEC Junior Ranger Program – Consider the development of an Adirondack Park Junior Ranger Program that contains a Leave No Trace component. Such programs are widely utilized by the federal land management agencies, and by some state agencies as well. Generally, these programs are structured to engage youth ages 5 – 15 but some encourage participation of adults of any age as well. The majority of these kinds of programs include Leave No Trace activities and associated educational opportunities. The National Park Service has an excellent [Jr. Ranger program: https://www.nps.gov/kids/junior-rangers.htm](https://www.nps.gov/kids/junior-rangers.htm) that has been very successful in America's national parks. Two other examples, one from [Texas State Parks: https://tpwd.texas.gov/spdest/programs/jr_ranger/](https://tpwd.texas.gov/spdest/programs/jr_ranger/) and the other from [California State Parks: http://kids.parks.ca.gov/?page_id=22783](http://kids.parks.ca.gov/?page_id=22783). These kinds of programs are easy to replicate, do an excellent job of engaging youth, and have added benefits such as parental involvement (and subsequent learning). This type of program could be rolled out Parkwide in the Adirondacks, and could help foster the next generation of Park stewards.
- D. Enforcement of existing regulations – DEC managers should explore options for greater enforcement of rules and regulations in the Park. If the applicable rules and regulations cannot be enforced adequately, managers will have to rely solely on voluntary compliance, which has been shown to be low for some issues. Additionally, DEC could consider developing a matrix for organizing those impacts in the Park that are best suited to law enforcement and those that could effectively be addressed through educational efforts. Such a matrix would allow DEC staff to be judicious with its resources, and foster a more targeted approach to managing, mitigating, and minimizing impacts in the Park through both education and law enforcement.

X. Infrastructure Recommendations

- A. Technological/infrastructure solutions – DEC and its partners will need to further explore which kind of infrastructure and facilities are, or will be, necessary to provide the intended visitor experience. This infrastructure can be used as an effective management tool, e.g. parking areas can be designed to limit visitation based on number of parking spaces, high-traffic areas can be hardened to minimize trampling effects, campsites can be built to contain and minimize impacts, etc. Though education is effective, technical solutions such as infrastructure, are necessary and appropriate at times to manage high visitor use and recreation-related impacts. More information can be found [here: https://www.researchgate.net/profile/Jeffrey_Marion/publication/242240482_Ma](https://www.researchgate.net/profile/Jeffrey_Marion/publication/242240482_Ma)

[Managing Visitor Impacts in Parks A Multi-Method Study of the Effectiveness of Alternative Management Practices/links/02e7e53a037ba53d93000000/Managing-Visitor-Impacts-in-Parks-A-Multi-Method-Study-of-the-Effectiveness-of-Alternative-Management-Practices.pdf](#)

- B. Consider establishing actual visitor center(s) for the Park – Though a few “visitor centers” exist in the Park, there is not a formal visitor center (or suite of visitor centers) that offers a one-stop-shop for Park visitors. Federal and state land managers routinely utilize visitor centers to interact with visitors, provide education, interpretation, guest services, and resources (books, maps, equipment, etc.). DEC and its partners should evaluate the need for a single visitor center (or perhaps multiple) for the Park. NYSDOT data shows that the majority of visitors access the Park through a few key entry points, which makes the idea of formal visitor centers potentially more feasible. Given that there is no single entry point for the Park, coupled with the fact that the Park has a porous boundary, an assessment should determine the feasibility of truly utilizing such facilities for education and outreach purposes among other things.

Additional Recommended Methods and Tactics for Educating Adirondack Park Visitors

- Brochures – Distribute at visitor centers and natural areas or individual pilot sites – tailored Leave No Trace educational information that could be distributed at trailheads, manager and partner offices, or other recreation sites, the Chambers of Commerce or tourism partners in the Park and surrounding communities, other governmental offices, local outdoor retail shops, through NGO partners, the Adirondack Mountain Club, the Adirondack Council, other key partners and stakeholders, and at other venues throughout the Park.
- Trailhead/Park Signage – When done correctly, signage can be an effective tool for disseminating information to Park users. The information contained on signs would need to be consistent with other outreach methods, and would provide locally relevant information. Placement of signage and kiosk can be an important factor (the Center can provide more information on this depending on local variables, constraints, and impacts). Given the vast and dispersed nature of the Park, and potential staff limitations, signs can be an effective management strategy for providing Leave No Trace information as well as rules, regulations, and other area-specific information. One key is the need to have *consistent* signage throughout the Park in order to best reach visitors repeatedly with stewardship messages.
- Information on Park Maps – Locally-tailored to cover the entire Park or even specific parts of the Park. Information could be further tailored to a specific activity or user group.
- Website – Consistent information across the manager/partner spectrum, possibly including a link to the Leave No Trace website so visitors can get even more information if they so desire, can be a critical educational tool. Web-based information should be the most up-to-date given the ease and relative low cost of updating. Consider having a specific Leave No Trace section of agency and partner websites similar to what most national parks, many state parks, and numerous municipalities have:

<https://www.nps.gov/olym/planyourvisit/wilderness-leave-no-trace.htm>;
<https://austintexas.gov/leavenotrace>;
<https://dnr.maryland.gov/publiclands/Pages/lnt.aspx>; and
<http://stateparks.mt.gov/protect-and-respect/leaveNoTrace.html>

- Continue to coordinate Public Service Announcements – A new topic each week/month/season/year – “Tips for Leaving No Trace in the Adirondack Park.” PSAs could be distributed through a variety of outlets – agency and partner websites, local print and digital media, regional media, NGOs, social media, etc.
- Staff Training – Provide training for appropriate agency and partner staff – from the 1-hour Leave No Trace Awareness Workshop to the 2-day Leave No Trace Trainer Course,

to the 5-day Leave No Trace Master Educator Course (the Adirondack Mountain Club is an approved Master Educator Course Provider). Allow staff and key partners the opportunity to learn more about Leave No Trace, the science behind it, and how to effectively teach it. Such training could be a critical component of the overall Leave No Trace efforts in the Park.

- Training for key partners, volunteers, or interested individuals – Leave No Trace Training could be provided by agency/partner staff or other appropriate volunteers for the general public, volunteer groups, school groups, etc. This kind of training could engage existing Park supporters, and further build stronger stewardship efforts for the Park.
- Interpretive Walks/Presentations/Ranger Talks – These could be offered by DEC or partners on a weekly or monthly basis to teach locals, Park users, and tourists about the unique resources found in the Park at key locations, such as campgrounds and other DEC facilities. These educational methods offer turnkey opportunities for disseminating information about ways to minimize recreational impacts. These educational sessions help build a sense of “ownership” and foster stewardship in Park visitors and supporters. Consider building Leave No Trace into existing programs of this kind already being offered by DEC and other partners.
- Volunteer Programs – Programs such as *Adopt-a-Park* or *Friends of the High Peaks* could be very useful in this effort (assuming similar programs exist or can be created). Training (both Leave No Trace and Authority of the Resource) for volunteers is key so that they can effectively interact with park users regarding Leave No Trace at parking areas, trailheads, and at destinations. Currently, training requirements are mostly left to the organization holding the Volunteer Service Agreement (VSA). DEC could require all organizations holding VSAs to provide Leave No Trace training, either in person or via the FREE online Awareness Workshop.

Volunteer programs could be a very effective way to help manage visitor use, and provide meaningful public outreach and education. Research and best practice has demonstrated that volunteers can often make very worthwhile and lasting public contacts, given that their personal attachment to a particular park or natural area is on display when interacting with the recreating public rather than uniformed agency personnel. There is a great deal of strategy to ensuring that volunteers can be effectively utilized in parks and protected areas without compromising their personal safety. Additionally, volunteers must be deployed in areas that are more likely to benefit from such a presence, i.e. areas with recreation-related impacts such as pet waste, off-trail travel, wildlife feeding, etc. rather than those where illegal activities comprise the greatest management concerns.

- Interpretive Signage – Signage could be placed at strategic locations in and around the Park to educate users about the areas they are recreating in, the ecosystem function, and ways to protect such areas by using Leave No Trace skills and techniques, e.g.

signage in riparian areas, historical features, critical wildlife habitat, sensitive plant habitat, etc. Research has shown that visitors are often more apt to protect what they understand. Such interpretive signage, when deployed in the right circumstance, can accomplish both raising awareness and imparting an effective stewardship message.

- Supplementary Outreach Methods:

- ❖ An Adirondack Park-specific ethics reference card could be produced and distributed to Park visitors. These cards generally contain approximately 500 words of text, highlighting the key issues in an area, and specific techniques for minimizing impact in the area. The Center has utilized such cards for over 20 years with great success. They are relatively inexpensive (~\$0.20 per card), visitors generally like the cards, and they are often kept as either a keepsake/memento or an educational tool. The NYS DEC has previously had a standard language, but specifically Forest Ranger branded ethics card, which it distributed to the public. See appendix II
- ❖ An Adirondack Park app for smart phone users could be created that would give pertinent Park information as well as relevant Leave No Trace information tailored to the Park.
- ❖ Information could be posted on the back of restroom stall doors – captive audience.

Benefits of Using Leave No Trace for the Adirondack Park

- Through effective Leave No Trace education, recreation-related resource and social impacts can be avoided, minimized, or mitigated.
- By creating a culture of stewardship and responsible recreation, there could be an overall increase in visitor satisfaction with the Park, which could lead to greater support for conservation of the Adirondack Park.
- An effective Leave No Trace education program could lead to a reduction in maintenance needs for Park amenities such as trails, campsites, campgrounds, shelters, etc.
- Locally-tailored Leave No Trace messaging and information would meet the recreation and resource needs of the Adirondack Park and/or individual locations if desired.
- Tapping into an existing, well-established program can conserve both staff and financial resources, as much of the work has already been done by the Center for Outdoor Ethics.
- The work undertaken in the Adirondack Park would be promoted nationally as a model for other recreational resources of this kind.
- The Adirondack Park (and its managers and partners) would be directly linked with the premier, nationally recognized outdoor skills and ethics education program.

Potential Research

Because Leave No Trace is research-based, the Center strives to incorporate research components into appropriate projects or initiatives to assess the effectiveness of educational efforts and/or changes in resource conditions. Research can be undertaken in a variety of ways from simple questionnaires or online surveys to more in-depth, scientific research conducted by master's students or doctoral candidates in conjunction with a university or college. These types of empirical studies generally result in peer-reviewed, publishable research, and add to the body of park and protected area management literature.

Recently the Center has been using an approach to explore Leave No Trace-related behaviors of interest which has primarily consisted of visitor observation coupled with survey data. This methodology asks study participants what they *would* do while also observing what they *actually* do in a park context. Through a multi-method, experimental design including unobtrusive observation, and paired visitor survey data collection, this type of study methodology can examine attitudes, norms, perceptions, and motivations that lead to various behaviors in parks and protected areas. It also provides opportunities to explore the efficacy of indirect and direct management strategies for reducing recreation-related impacts and garnering appropriate behavior by park visitors.

Sample Methodologies

For methodologies that involve paired surveys with behavioral observation, specific study objectives often include the following:

1. Exploration of current practices, educational strategies, and messages surrounding specific behaviors of interest through direct observation and/or visitor surveys;
2. The deployment of a series of educational and/or regulatory treatments/control to randomly selected problem areas in select locations using a stratified sampling strategy (e.g., attempting distributed stratification by AM/PM, weekday/weekend, treatment, location, paired sampling/observation only sampling) over a set time period (e.g. one-month period), to determine which treatment is most effective at reducing impacts from the specific behavior(s) of interest;
3. The pairing of observed visitors' responses to treatments/control with survey data from those same observed individuals or parties for comparative analysis of observed and reported behavior.

Other social science methods utilized by the Center and its academic collaborators include on-site, researcher-administrated visitor surveys. When using visitor surveys to explore specific park and protected area topics of interest, there are generally four primary study objectives: 1) To gain an understanding of visitors' attitudes, perceptions, and motivations toward specific issues, impacts, or behaviors through theoretically-based visitor surveys;

2) To catalog the quantity or quality of impact at selected sites in parks and protected areas; 3) To develop an integrated understanding of the relationship between patterns of impact and/or behaviors of interest and the influences of social and managerial constructs on these patterns; 4) To advance educational and management recommendations for reducing the social and ecological impacts of recreation through direct and/or indirect management actions.

Research Could Answer the Following Questions

- Could effective Leave No Trace education provide a direct and measurable reduction in both biophysical resource impacts and social impacts in the Adirondack Park?
- Could effective Leave No Trace education provide a reduction in necessary facilities maintenance in the Adirondack Park?
- Could effective Leave No Trace education result in a reduction in avoidable search and rescue operations in the Adirondack Park?
- Could effective Leave No Trace education increase visitor satisfaction with outdoor recreation experiences in the Adirondack Park?
- Could effective Leave No Trace education lead to an improvement in the biophysical resource and social conditions in the Adirondack Park?

At a minimum, it would be beneficial to gather any possible baseline data through a compilation of anecdotal evidence, photo documentation, GPS data, surveys, citizen science, or other means. The more information Adirondack Park managers and partners have prior to program implementation, the better the overall effectiveness of education efforts can be measured, documented, and enhanced over time.

For a comprehensive overview of the Center's research, visit:

<https://lnt.org/research-resources/leave-no-trace-focused-research-2011-2018/>

Model Leave No Trace Language to Address Issues

The following sample language (in various forms) has been successfully used in numerous locations across the U.S., including Park City, UT; Washington DC; Little Rock, AR; Boulder, CO; Boise, ID; Las Vegas, NV; Kennesaw, GA; Phoenix, AZ; Philadelphia, PA; Madison, WI; Golden, CO; etc., and could serve as a starting point to develop the most relevant and effective messages that are consistent with existing rules and regulations found the Adirondack Park. Understandably, this language will need to sync with existing Park rules, regulations, and specific management objectives in order to be relevant and effective.

Pet waste:

Pick Up Poop – Phew! Dog poop stinks, is not natural to Forest Park and others can step in it. Pack a pick-up bag or grab one at the trailhead and always pick up your dog's poop—wherever it may be.

Dog poop is a health hazard. It also increases the nitrogen in the soil in Forest Park, giving weeds an advantage over the native plants that have naturally evolved in Forest Park. Dog poop can also contribute to water pollution in the unique riparian areas found in Forest Park. Thanks for bagging your dog's poop, but remember, the job's not done until you drop it in the trashcan. Please do your part to keep Forest Park dog poop free.

Pet management:

Manage Your Dog – Keeping your dog in control keeps people, other dogs, livestock and wildlife safe. Others may not appreciate your dog's company; if not sure, ask before allowing your dog to approach them. Please do not let your dog approach others unless invited. Dogs must be on leash at all times in Forest Park unless you're in an off-leash area. In areas where leashes aren't required, keep your dog nearby and under control. Be aware - check signs and follow area regulations.

Keep track of your pets while you're recreating in Forest Park. A pet under control lessens the chance for harm to your dog from other dogs or wildlife. Please do not let your dog approach or chase wildlife. Chased or harassed wildlife change their feeding patterns and exert more energy, which can result in poor health or even death.

Respect adjacent private property by not allowing your dog to wander from designated trails or off-leash areas. Remember, unless you're in an off-leash area, pets must be on leash in Forest Park. Please do your part to manage your dog.

User conflict:

Share our Trails – We all enjoy Forest Park in different ways. Pay attention, expect to encounter others, slow down and be courteous - offer a friendly greeting. Those traveling faster should slow down for other users. Downhill riders, hikers and runners should always yield to all other users.

Bikers, because of their mobility, should always yield to hikers and horseback riders. The best choice when yielding is to stop, then step off the trail onto a durable surface (rock, sand, etc.) and remain until others pass. If you continue to hike or ride off trail when yielding, you trample trailside vegetation and create multiple trails where one is usually best.

We all know how great outdoor experiences can be. One discourteous person can ruin an outing. Expect and respect others. Make room for others. Control your speed. Pass with care and let others know you're passing. Be courteous and we'll all have a better time.

Litter:

Trash Your Trash – Please pick up all trash–yours and others'. Even biodegradable materials, such as orange peels, apple cores and food scraps take months to break down and attract scavengers that can harm native wildlife.

Trash is unsightly and ruins everyone's outdoor experience. Studies have shown that trash attracts scavenging birds and animals that drive away or kill native birds. Let's all do our part to take care of Forest Park by picking up all trash.

Protection of riparian areas:

Protect Our Water OR Keep Our Water Healthy – Forest Park is home to many unique resources including riparian areas – the green vegetated areas on each side of streams and creeks. Both people and animals are drawn to water, especially in forested environments like those found in Forest Park.

Riparian areas are vital to the health and diversity of plants and animals in Forest Park. These areas are often the sole habitat for many plant and animal species that need wet conditions. Riparian areas supply food and cover for animals; provide a buffer, which acts as a filter to help prevent water contamination; reduce the risk of flooding; and help reduce streambank erosion. Do your part to help protect this critical resource by staying on trails, only accessing the water at designated access points, keeping litter, human and pet waste out of the water, and not trampling streamside vegetation. Please help protect our water.

Off-trail travel:

Stick to Trails – Staying on trails protects wildlife and their homes. Shortcutting trails causes erosion and damages trailside plants. Please walk and ride on designated trails only. Contact [insert appropriate contact or web link] for trail information and maps.

Studies have shown that when we trample vegetation on the side of the trail, there is a greater chance weeds will replace native plants. In this environment, native plants take months to recover from trampling damage.

Avoid areas that are unmarked, closed for revegetation or signed as sensitive. Respect private property by staying on designated trails. We can all have fun in Forest Park by sticking to the trail.

Collecting and/or removing natural objects:

Leave It As You Find It – Picking flowers, collecting rocks or taking other natural objects might not seem like a big deal, but it means that others won't have a chance to enjoy them. Taking one or two flowers or plants, even if they seem plentiful, is not OK. We all enjoy flowers and fruit, but picking them reduces seeds, which can mean fewer plants next year. Wildlife depend on these plants for food. Remember, there are a lot of us enjoying Forest Park, so we all need to be extra careful—please do your part to protect Forest Park's resources by leaving them as you find them.

Other Examples of Site-specific Language in Use:

From Boise, Idaho – Ridge to Rivers Partnership

Manage Your Dog

Leashes are required by law in the Boise City Reserves. These are the natural open spaces managed by Boise City Parks and Recreation. Check the trailhead sign boards for more information. Elsewhere in the foothills, allowing your dog to approach people uninvited and to run far and wide invites conflicts with other users. Be smart- control your dog at all times.

Enjoy Off-Leash Trails

Certain trails have been designated for off-leash use, but **only** when a dog is deemed to be under control. This means dogs must be within 30' of owner and return when called; they must **not** approach or harass people, pets or wildlife. Does your dog meet this test? If not, then leashes are still required.

Pick up Poop

Dog waste smells, people can step in it and it can contribute to water pollution. It is easy to pick up waste by bringing a bag or grabbing one at the trailhead. You can help by looking out for #2. Remember, the job's not done 'till the bags in the can.

Leave No Trace

Reduce impacts to the land by keeping your dog on the trail, avoid allowing them to dig for rodents and make sure they do not chase wildlife, especially wintering big game.

Share the Trails

Not everyone loves your dog like you do. Respect other trail enthusiasts and keep control of your dog at all times. Leash up at trailhead parking areas and other congested spots. Yelling for your dog destroys the quiet that many are seeking.

Protect your pet – Stick to Trails

Encounters with predators, rattlesnakes, ticks and cheat grass are more likely off trail. Bring water for you and your dog. Access to creeks can increase erosion.

Enjoying off leash trails is a privilege earned by respectful and responsible use. Your dog, the wildlife, the land and your fellow trail enthusiasts will all benefit from your responsible actions. This information is provided as part of an ongoing effort to encourage shared use and an enjoyable trail experience.

From Park City, Utah – Snyderville Basin Special Recreation District

Leave No Trace on Basin Rec Space. The Snyderville Basin recreation space provides a safe haven for native plants and animals and a welcome break from our busy lives. By recreating wisely, we can minimize our impact on wildlife and their homes and fellow visitors, while enjoying our outdoor experience even more. With thousands of people visiting Basin Recreation Space, the less impact we each make, the longer we will enjoy what we have. Please do your part to Leave No Trace on Basin Rec Space.

Manage Your Dog – Keeping your dog in control keeps people, other dogs, livestock and wildlife safe. Others may not appreciate your dog's company; if not sure, ask before allowing your dog to approach them. Please do not let your dog approach others unless invited. Dogs must be on leash in the Basin unless you're in an off-leash area. In areas where leashes aren't required keep your dog nearby and under control. Be aware - check signs and follow area regulations.

Keep track of your pets while you're recreating in the Basin. A pet under control lessens the chance for harm to your dog from other dogs or wildlife. Please do not let your dog approach or chase wildlife. Chased or harassed wildlife change their feeding patterns and exert more energy, which can result in poor health or even death.

Respect private property in the Basin by not allowing your dog to wander from designated trails or off-leash areas. Remember, unless you're in an off-leash area, pets must be on leash in the Basin. Please do your part to manage your dog.

Pick Up Poop – Phew! Dog poop stinks, is not natural to the Basin and others can step in it. Pack a pick-up bag or grab one at the trailhead and always pick up your dog's poop—wherever it's left.

Dog poop is a health hazard. It also increases the nitrogen in the soil around the trail, giving the advantage to weeds over the native plants that have naturally evolved in the Basin. Dog poop can also contribute to water pollution in the unique riparian areas found in the Basin. Thanks for bagging your dog's poop, but remember, the job's not done until you drop it in the trash can. Please do your part to keep Basin Recreation Space dog poop free.

Stick to Trails – Staying on trails protects wildlife and their homes. Shortcutting trails causes erosion and damages trailside plants. Please walk and ride on designated trails only. Contact the Snyderville Basin Recreation office for trail information and maps.

Studies have shown that when we trample vegetation on the side of the trail, there is a greater chance weeds will replace native plants. In this environment, native plants take years to recover from trampling damage.

Avoid areas that are unmarked, closed for revegetation or signed as sensitive. Also, most Basin trails pass through private land. We are fortunate that landowners in the Basin are willing to allow trails on their property. Respect private property by staying on designated trails. We can all have fun on natural Basin Recreation space while sticking to trails.

Share our Trails – We all enjoy Basin Recreation Space in different ways. Pay attention, expect to encounter others, slow down and be courteous - offer a friendly greeting. Those traveling faster should slow down for other users. Downhill riders should always yield to all other users.

Bikers, because of their mobility, should always yield to hikers and horseback riders. The best choice when yielding is to stop, then step off the trail onto a durable surface (rock, sand, etc.) and remain until others pass. If you continue to hike or ride off trail when yielding, you trample trailside vegetation and create multiple trails where one is usually best.

We all know how great outdoor experiences can be. One discourteous person can ruin an outing. Expect and respect others. Make room for others. Control your speed. Pass with care and let others know you're passing. Be courteous and we'll all have a better time.

Trash Your Trash – Please pick up all trash–yours and others'. Even biodegradable materials, such as orange peels, apple cores and food scraps take years to break down and attract scavengers that can harm native wildlife. Trash is unsightly and ruins everyone's outdoor experience. Studies have shown that trash attracts scavenging birds and animals that drive away or kill native birds. Let's all do our part to take care of Basin Recreation Space by picking up all trash.

Leave It As You Find It – Picking flowers, collecting rocks or taking arrowheads might not seem like a big deal, but it means that others won't have a chance to enjoy them. Taking one or two flowers or plants, even if they seem plentiful, is not OK. We all enjoy flowers and fruit, but picking them reduces seeds, which can mean fewer plants next year. Wildlife depend on these plants for food. Remember, there are a lot of us enjoying Basin Recreation Space, so we all need to be extra careful–please do your part to protect Basin resources by leaving them as you find them.

Protect Our Water – The Snyderville Basin is home to many unique resources including riparian areas – the green vegetated areas on each side of streams and creeks. Both people and animals are drawn to water, especially in semi-arid environments like those found in the Basin.

Riparian areas are vital to the health and diversity of plant and animal life in the Basin. These areas are often the sole habitat for many plant and animal species that need wet

conditions. Research has shown that over 75% of animal species in arid regions need riparian habitat during some portion of their life cycle. Riparian areas supply food and cover for animals; provide a buffer, which acts as a filter to help prevent water contamination; reduce the risk of flooding; and help reduce streambank erosion.

Do your part to help protect this critical resource by staying on trails, only accessing the water at designated access points, keeping litter, human and pet waste out of the water, and not trampling streamside vegetation. Please help protect our water.

Examples of Signage, Brochures, and Digital Media





Leashed Dogs Welcome



Pets are permitted, but must be leashed at all times to keep people, pets, and wildlife safe.
Please use the bags provided to pick up your pet's waste and take it with you. Dog waste is a health hazard for people, wildlife, and plants.

Thank You!





Natural Lands Trust

Crow's Nest

PRESERVE



Welcome

Crow's Nest Preserve is part of a "nature network" that Natural Lands Trust is building across the region—in interconnected waters of healthy fields and forests, clean watersheds and open lands for people to enjoy. You can help create this "nature network". Find out how at www.natlands.org.



Crow's Nest Preserve
610-286-7955

Natural Lands Trust
Main Office
10311 Fallowers Mill Road
Media, PA 19063
610-353-5587
preserve@natlands.org
www.natlands.org

Please contact us to learn how you can help protect and manage special places like this one.

Preserve boundary	Farm Field Trails yellow markers
Forest	Hopewell Trail red markers
Open areas	Horse-Shoe Trail
Creek Trail, Chief's Grove and Deep Woods white markers	Unmarked service trails and field edges

Funding for acquisition of this preserve has been provided by the Pennsylvania Department of Conservation and Natural Resources Recreational Land Trust Program and the Preservation Partnership Program, Commitment of Chester County, PA. (Credit to Harris, Korte L., Marston, Andrew B., Cleveland)



Enjoy and Protect

Join your fellow preserve visitors in helping to protect this special resource!

PRESERVE IS OPEN SUNRISE TO SUNSET ONLY

STICK TO TRAILS

Staying on trails protects wildlife and their homes. Shortcutting trails causes erosion and damages trailside plants. Please walk and ride on designated trails only.



TRASH YOUR TRASH

Please pack out all trash—yours and others'. Even biodegradable materials such as apple cores and orange peels take years to break down and attract scavengers that can harm native wildlife. Trash is ugly and ruins everyone's outdoor experience.



FOOT TRAFFIC ONLY

No motorized vehicles or mountain bikes, please. Such vehicles can be destructive to plants and wildlife and disrupt the quiet experience others are here to enjoy.

Be a Good Neighbor

There are a number of private residences within and adjoining the Preserve. Please respect our neighbors' privacy.

Leash Your Dog

Dogs are permitted, but must be leashed at all times. Having your dog on a leash protects wildlife and helps to ensure the safety and comfort of your pet as well as other preserve visitors.

Pick up Poop

Dog waste is a health hazard for people, wildlife and plants. Please bag your pet's waste and take it with you.

Leave It as You Find It

Please leave all plants, flowers, animals, rocks and artifacts for all visitors to enjoy. Do not enter research areas.

Horseback Riding

Is permitted on designated trails under good conditions. Please ride to and from the preserve, we cannot accommodate horse trailers.

Deer Hunting

Is permitted by special permit only.

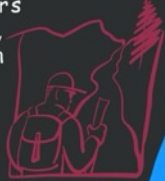
No Alcoholic Beverages



Animas River Trail and Leave No Trace

Stick To Trail

Please stay on designated trails. Give plants and wild animals their place in the outdoors. Creating new trails scars the landscape, causes erosion and intrudes on wildlife habitats.



Did You Know?

Fewer Birds nest near trails and survival of young birds is less near a trail.

Trash Your Trash

Please take out all trash - yours and other's. Trash is unsightly and ruins everyone's outdoor experience. Trash attracts scavengers that drive away or kill native birds.



Did You Know?

Even biodegradable materials, such as orange peels and apple cores, take years to break down.

Manage Your Dog

Keeping your dog in control keeps people, dogs and wildlife safe. Being dog-responsible means using a pick-up bag and always picking up your dog's poop - wherever it is left. It also means keeping you dog on leash as required.



Did You Know?

Dog poop does not add nutrients to the soil. Actually, it increases the nitrogen in the soil making it hard for native plants to survive.

Share Our River Trail

Respect others. We all enjoy the outdoors in different ways. Pay attention, expect to encounter others and be courteous. Yield to all.



Did You Know?

Both river runners and anglers are responsible for avoiding contact with each other.

Respect Private Property

Respect "No Trespassing" signs. If property boundaries are unclear, do not disturb the area. Treat another's property as you would treat your own.



Did You Know?

Unposted private property surrounds the Animas River Trail.

Poster Design by Amy Wiersching















ARE YOU COLO-READY?

With a little preparation, a spirit of adventure, and a soft spot for nature and the past, you'll be on the trail to exploring Colorado like a local.



LEAVE NO TRACE - CARE FOR COLORADO PRINCIPLES

01 KNOW BEFORE YOU GO

- This land really is your land. Our state and federal agencies manage 42 percent of Colorado's majestic landscapes, and our cities and counties maintain even more. Learn about and respect the spaces we all own, share and sing about.
- Stay back from the park. Find your way to less-visited and off-peak destinations to minimize down time and maximize your connection with special places.
- Bring along reusable water bottles or hot drink tumblers to limit waste and stay hydrated in our dry climate.

02 STICK TO TRAILS

- With 39,000 marked trails and 13,000 designated campsites, there's no need to venture beyond. By sticking to these areas and camping at least 200 feet from lakes, rivers and streams, you're helping natural areas stay natural.
- Even though shortcuts can be tempting, please don't take them. A few extra strides on the path will protect plants and the homes of the true locals.

03 LEAVE IT AS YOU FIND IT

- Leave plants, rocks and historical items as you find them so others experience the joy of discovery.
- Any of our 750 different species of wildflowers will live forever in a photo. Snap away, but only with a camera.
- Colorado is beautiful all on its own. Building structures or campsites on public land isn't cool. Keep it pristine for everyone to enjoy.
- Treat all living things with respect. Caving or hacking plants and trees may kill or disfigure them.

04 TRASH THE TRASH

- Pick it up, pack it out. Or pick it up to leave a place better than you found it. Put litter, even crumbs, peels and cores in your nearest waste/recycling bin.
- Wash yourself, your dog or whatever else needs cleaning at least 200 feet from waterways, and use biodegradable soap. A bubble bath is no treat for fish.

05 BE CAREFUL WITH FIRE

- Colorado's low humidity has perks, but can create dry, dangerous conditions. Keep campfires small and manageable to avoid sparking wildfires.
- When putting out a fire, water it until you can handle the embers. Never let a fire burn unattended.
- Use care when smoking in Colorado's dry climate. Always put cigarettes out completely, and don't leave your bottle behind.

06 KEEP WILDLIFE WILD

- Colorado is home to tens of thousands of furry, scaly and feathered creatures. To keep them - and you - safe, don't approach them.
- It is not adorable to feed wild animals. You could alter natural behaviors, exposing them to predators or even euthanasia.
- Keep your furry buddies leashed when enjoying dog-friendly trails, and pack out their waste. All the way to a trashcan.

07 SHARE OUR TRAILS & PARKS

- Chances are you're not out in nature to people watch, so try out the less-trodden paths and sites.
- Silence your cell phone before stepping into nature, and speak softly without using the speaker function.
- Be considerate when passing others on the trails and yield to the uphill hiker and biker - they need the momentum.
- Listen to nature. Keep your voice and music soft so all can enjoy the peace of Colorado.

Illustration by: Steve Givens for Outdoor Edge

ARE YOU COLO-READY?

With a little preparation, a spirit of adventure, and a soft spot for nature and the past, you'll be on the trail to exploring Colorado like a local.



COLORADO PACKING LIST

"DRESS IN LAYERS!" ARE WORDS TO LIVE BY. Our dramatic elevation changes mean we can ski in the mountains and then drop a few thousand feet to bike or drink a craft brew on a sunny patio.

SUMMER PACKING MUSTS:

01

SUNSCREEN, LIP BALM, A HAT & SUNGLASSES. Remember, you may be a mile or more closer to the sun, and much of Colorado gets 300 days of sunshine every year.

02

BATHING SUIT & FLIP-FLOPS/SANDALS. You don't want to miss out on taking a plunge into a natural hot spring, a rafting adventure, or a pristine creek or waterfall.

03

REFILLABLE WATER BOTTLE OR HYDRATION SYSTEM (such as a CamelBak). Start drinking water as soon you arrive in our dry, elevated climate. And don't stop.

04

RAIN JACKET. The atmospheric conditions that bring winter snow make for sudden afternoon showers in the summer, especially on our loftiest peaks.

05

HIKING BOOTS OR OTHER STURDY, ATHLETIC SHOES. You never know when you're going to want to answer the call of a beautiful trail.

06

LIGHTWEIGHT FLEECE OR VEST. Even on our hottest days, temps are chiller after sunset, especially at higher elevations.

07

DAY PACK. This is standard gear in Colorado to carry all of the above.

08

JEANS OR HIKING PANTS. Rules, denim is acceptable attire nearly everywhere, but hiking pants or leggings are great for a day out exploring our wilds.

IN WINTER, BRING ALL OF THE ABOVE, WITH A FEW ADDITIONS:

01

BEANIE. Keep one handy for under your ski helmet, a night by the fire or even a wintry dip in a natural hot spring. Even guys wear the ones with pomps.

02

WINTER COAT. Dress like a local in anything from puffy down to a snow-ready, water-resistant parka.

03

SNOW GEAR. A thermal layer and warm, waterproof boots, snow pants, and gloves are essential if you're planning to play in the powder.

04

SUN-SHIELDING ITEMS. Nothing like an intense goggles tan on your face to make you value sunscreen, no matter the season.

ACT LIKE A LOCAL

OK, NOW YOU'RE DRESSED LIKE A LOCAL. HERE'S WHAT YOU NEED TO PASS FOR ONE.



LEARN THE LINGO!

FOURTEENER

This is what we call those peaks that rise more than 14,000 feet above sea level. We've got 58 of them, more than any other state in the continental U.S. Handy hikers aim to "bag" - or summit - all of them.

FRONT RANGE

The Rocky Mountain range most visible from Colorado's most populous cities - Denver, Colorado Springs, Fort Collins and Boulder - and from much of the eastern region near these mountains is known as the Front Range as well.

CONTINENTAL DIVIDE

Also known as "the Divide," this ridge runs along the crests of the Rocky Mountains north to south. Rivers and streams west of the Divide flow to the Pacific Ocean, and east of the Divide to the Gulf of Mexico.

WESTERN SLOPE

This region refers to all of Colorado west of the Continental Divide. It's home to the Grand Mesa, the largest flat-topped mountain in the world (near Grand Junction).

CENTENNIAL STATE

Colorado's official nickname refers to the year it earned statehood. That happened in 1876, the centennial anniversary of the United States' declaration of independence.

5280

Denver is the Mile High City because it sits 5,280 feet (or one mile) above sea level. To be precise, the 13th step of the Colorado State Capitol Building or the line of purple seats in Coors Field will put you exactly at 5280. (Pronounced: fifty-two eighty)

FOUR CORNERS

The point where Colorado, New Mexico, Arizona and Utah come together at one point in our extreme southwest corner, 40 miles from the Colorado city of Cortez.

HIGH COUNTRY

A fancy way to say "the mountains," uttered mostly by local weathercasters.

THE TUNNEL

If you are headed to or from the High Country on I-70, you'll likely pass through the 1.7-mile Eisenhower/Johnson Memorial Tunnel. Since 1973, the tunnels have provided easy passage across the Continental Divide.

POWDER DAY

Powder days follow snowy nights. That fresh snowfall means the conditions are set for skiing and boarding that feels like you're floating down the slopes on air. Our deep, dry, fluffy powder is also good for cushioning the occasional fall.

MUD SEASON

This glorious harbinger of spring is typically slated on the calendar for late April or May. It occurs when winter's snow starts to melt and rivers swell, making for amazing fishing, thrilling whitewater rafting and great High Country lodging deals.

DENVER SHORTHAND

LODO

Short for Lower Downtown, Denver's lively, walkable, historic downtown.

LOHI

Short for Lower Highlands, a neighborhood full of exceptional food and drink with outstanding views of downtown Denver.

RINO

Short for River North, a hip cultural and food scene emerging in Denver's former warehouse district.

ALTITUDE Denver is the Mile High City, and many popular destinations are even higher altitudes. Staying hydrated and adjusting for a day or two before embarking on a strenuous endeavor is the best way to make sure being high up doesn't get you down.

ALCOHOL It has more impact at altitude, so take it easy until you get your mountain legs.

CELL COVERAGE You won't have any trouble staying connected when you're in a town, but once you head out on a trail, then, drop or lack of signal, that could change. Let others know where you are and finish posting your pics before you head off the grid.

SPARSE SERVICES If you want a hip, rustic, or services for the next 50 miles, believe it.

FOOD PACKS, ROAD TRIPS & OTHER ESCAPADES pack more food, water and cold-weather gear than you expect to need so you won't be caught unprepared.

BEAR-PROOF TRASHCANS If you want to lose your trash and the lid won't budge, you're probably encountering a bear-proof trash can. Look for instructions on the can - there's usually a lever or button to push that's too tricky for hairy paw to manage.



ARE YOU COLO-READY?

DUDE RANCH EDITION

With a little preparation, a spirit of adventure, and a soft spot for nature and the past, you'll be on the trail to exploring Colorado like a local.



LEAVE NO TRACE – CARE FOR COLORADO PRINCIPLES

01 KNOW BEFORE YOU GO

- This land really is your land. Our state and federal agencies manage 42 percent of Colorado's majestic landscape, and our cities and counties maintain even more. Learn about and respect the spaces we all own, share and sing about.
- Stay back from the pack. Find your way to less-visited and off-park destinations to minimize down time and maximize your connection with special places.
- Bring along reusable water bottles or hot drink tumblers to limit waste and stay hydrated in our dry climate.

02 STICK TO TRAILS

- With 39,000 marked trails and 13,000 designated campsites, there's no need to venture beyond. By sticking to these areas and camping at least 200 feet from lakes, rivers and streams, you're helping natural areas stay natural.
- Even though shortcuts can be tempting, please don't take them. A few extra strides on the path will protect plants and the homes of the true locals.

03 LEAVE IT AS YOU FIND IT

- Leave plants, rocks and historical items as you find them so others experience the joy of discovery.
- Any of our 350 different species of wildflowers will live forever in a photo. Snap away, but only with a camera.
- Colorado is beautiful all on its own. Building structures or campsites on public land isn't cool. Keep it pristine for everyone to enjoy.
- Treat all living things with respect. Carving or hacking plants and trees may kill or disfigure them.

Leave No Trace Center for Outdoor Ethics

04 TRASH THE TRASH

- Pack it in, pack it out. Or pick it up to leave a place better than you found it. Put litter, even crumbs, peels and cores in your nearest waste-holding bin.
- Wash yourself, your dog or whatever else needs cleaning at least 200 feet from waterways, and use biodegradable soap. A bubble bath is no treat for fish.

05 BE CAREFUL WITH FIRE

- Colorado's low humidity has perks, but can create dry, dangerous conditions. Keep campfires small and manageable to avoid sparking wildfires.
- When putting out a fire, water it until you can handle the embers. Never let a fire burn unattended.
- Use care when smoking in Colorado's dry climate. Always put cigarettes out completely, and don't leave your butts behind.
- Always check for local fire restrictions.

06 KEEP WILDLIFE WILD

- Colorado is home to tens of thousands of furry, scaly and feathered creatures. To keep them – and you – safe, don't approach them.
- It is not adorable to feed wild animals. You could alter natural behaviors, exposing them to predators or even euthanasia.
- Keep your furry buddies leashed when enjoying dog-friendly trails, and pack out their waste. All the way to a trashcan.

07 SHARE OUR TRAILS & PARKS

- Chances are you're not out in nature to people-watch, so try not to be the less-than-keen path and site.
- Silence your cell phone before stepping into nature, and speak softly without using the speaker function.
- Be considerate when passing others on the trails and yield to the uphill hiker and biker – they need the momentum.
- Listen to nature. Keep your voice and music soft so all can enjoy the peace of Colorado.

ARE YOU COLO-READY?

DUDE RANCH EDITION

With a little preparation, a spirit of adventure, and a soft spot for nature and the past, you'll be riding the trails of a Colorado Dude Ranch and exploring Colorado like a local before you know it.



COLORADO PACKING LIST

"DRESS IN LAYERS!" ARE WORDS TO LIVE BY. Our dramatic elevation changes mean we can ski in the mountains and then drop a few thousand feet to bike or drink a craft brew on a sunny patio.

DUDE RANCH PACKING MUSTS:

- 01 SUNSCREEN, UP BALM, A HAT & SUNGLASSES**
Remember, you may be a mile or more closer to the sun, and much of Colorado gets 300 days of sunshine every year.
- 02 BATHING SUIT & FLIP-FLOPS/SANDALS**
You don't want to miss out on taking a plunge into a natural hot spring, a rafting adventure, or a pristine creek or waterfall.
- 03 REFILLABLE WATER BOTTLE OR HYDRATION SYSTEM**
(such as a CamelBak). Start drinking water as soon you arrive in our dry, elevated climate. And don't stop.
- 04 RAIN JACKET**
The atmospheric conditions that bring winter snow make for sudden afternoon showers in the summer, especially on our highest peaks.
- 05 HIKING BOOTS OR OTHER STURDY, ATHLETIC SHOES**
You never know when you're going to want to answer the call of a beautiful trail.
- 06 LIGHTWEIGHT FLEECE OR VEST**
Even in our hottest days, temps are chillier after sunset, especially at higher elevations.
- 07 DAY PACK**
This is standard gear in Colorado to carry all of the above.
- 08 JEANS OR HIKING PANTS**
Italia, denim is acceptable attire nearly everywhere, but hiking pants or leggings are great for a day out exploring our wilds.

COWBOY GEAR, (IF YOU'VE GOT IT!):

- 01 COWBOY HAT**
You're not fit for ride" if the sun is in your eyes. A wide-brimmed hat will solve that problem and get your sense of adventure a Wild West kickstart.
- 02 COWBOY BOOTS**
Flat soles are better for riding horses than hiking shoes and boots with tread. Plus, Western boots' height protects against thorns and other irritants.
- 03 BUTTON-UP SHIRTS**
You're bound feel like a true cowboy or gal, not to mention the sleeves can protect you from the sun and new branches, and warm you in the evenings.
- 04 A CAMERA**
Although we recommend guests do their best to enjoy their natural surroundings without phones or gadgets you'll want to capture family fun and breathtaking sunsets.

ACT LIKE A LOCAL

OK, NOW YOU'RE DRESSED LIKE A LOCAL. HERE'S WHAT YOU NEED TO PASS FOR ONE.

LEARN THE LINGO!

- BUCKAROO**
Just another word for a young cowboy or cowgirl.
- WRANGLER**
The cowboy or gal who handles the animals – and will help teach you how to ride and rope during your stay.
- CORRAL**
A pen where livestock is kept when not in the stables.
- MARE VS. GELDING VS. MUSTANG**
A mare is a female horse, a gelding is a male horse and a mustang typically refers to a wild horse.
- LASSO**
A long rope with a loop at the end used for roping horses and cattle.
- HITCHING POST**
Where you tether your horse if you're done with lunch.
- FOURTEENER**
This is what we call those peaks that rise more than 14,000 feet above sea level. We've got 58 of them, more than any other state in the continental U.S. Hardy hikers aim to "bag" – or summit – all of them.
- CONTINENTAL DIVIDE**
Also known as "the Divide," this ridge runs along the crests of the Rocky Mountains north to south. Rivers and streams west of the Divide flow to the Pacific Ocean, and east of the Divide to the Gulf of Mexico.
- S280**
Denver is the Mile High City because it sits 5,280 feet (or one mile) above sea level. To be precise, the 13th step of the Colorado State Capitol Building or the line of purple seats in Coors Field will put you exactly at 5,280. (Pronounced: fifty-two eighty)
- FRONT RANGE**
The Rocky Mountain range most visible from Colorado's most populous cities – Denver, Colorado Springs, Fort Collins and Boulder – and from much of the Eastern Plains. Much of the urban region near these mountains is known as the Front Range as well.
- WESTERN SLOPE**
This region refers to all of Colorado west of the Continental Divide. It's home to the Grand Mesa, the largest flat-top mountain in the world.
- CENTENNIAL STATE**
Colorado's official nickname refers to the year it earned statehood. That happened in 1876, the centennial anniversary of the United States' declaration of independence.
- HIGH COUNTRY**
A fancy way to say "the mountains," uttered mostly by local weathercasters.
- FOUR CORNERS**
The point where Colorado, New Mexico, Arizona and Utah come together at one point in our extreme southwest corner, 40 miles from the Colorado city of Cortez.
- THE TUNNEL**
If you're headed to or from the High Country on I-70, you'll likely pass through the 1.7-mile Eisenhower/Johnson Memorial Tunnel. Since 1973, the tunnels have provided easy passage across the Continental Divide.
- HUD SEASON**
This glorious harbinger of spring is typically slated on the calendar for late April or May. It occurs when winter's snow starts to melt and rivers swell, making for amazing fishing, thrilling whitewater rafting and great High Country lodging deals.

- ALTITUDE** Denver is the Mile High City, and many popular destinations are even higher altitude. Stay hydrated and adjusting for a day or two before embarking on a strenuous adventure is the best way to make sure being high up doesn't get you down.
- ALCOHOL** It has more impact at altitude, so take it easy until you get your mountain legs.
- BE BEAR-AWARE** We are in the Rocky Mountains, home to many bears, so make sure you don't leave food out on your cabin porches at night, and always keep your campfire and overnight pack trips and other camp activities and plenty of distraction, allowing guests to unwind and truly experience ranch life.
- CELL COVERAGE** Dude ranches don't have much in the way of cell service – but we do have plenty of horseback riding, trap shooting, hiking, fly fishing, campfire and overnight pack trips and other camp activities and plenty of distraction, allowing guests to unwind and truly experience ranch life.
- FOR HIKERS & OTHER EXCURSIONS** Most ranches pre-pack meals and have necessary hiking items available for guided and independent adventures. Be sure to let a ranch staff member know which direction you are hiking and when you anticipate to return.





URBAN PARK PRINCIPLES

1. Know Before You Go – 20.12.060 Prohibited Conduct Relating to Permits

- Learn about the areas you plan to visit. Check online and learn park rules before you go; including needed permits, access for wheeled vehicles, such as bicycles and skateboards.
- Know the parks' dog off-leash and waste removal regulations, where dogs are allowed or restricted.
- Be prepared! Remember food, water, and clothes to protect you from weather.
- Use maps to plan where you're going, especially in urban natural areas. Check them along the way so you'll stay on your route.



2. Trash Your Trash and Pick Up Poop – 20.12.090 Disposing of Rubbish

- Always bring a leash and bags to pick up your pet's waste.
- If you pack it in, pack it out. Dispose of all trash and garbage properly, including biodegradable items like citrus peels, apple cores, and nut shells.
- Use designated bathrooms when available.
- Keep water clean. Do not put soap, food, human or pet waste in wetlands, lakes, or streams.
- Locate garbage cans in the parks you visit to dispose of trash properly. If garbage cans are full, plan on taking out your trash.



3. Leave What You Find – 20.12.100 Vandalism, Protection of Park Property, and Vegetation

- Leave plants, rocks, and historical items as you find them, so others can enjoy.
- Treat all living plants with respect. Carving, hacking, or peeling plants and trees may kill them.
- Remember park vegetation, logs, and rocks are often critical habitat for urban wildlife. Please leave these items undisturbed.



PORTLAND PARKS & RECREATION

Healthy Parks, Healthy Portland



Proud Partner | LNT.org

4. Keep Wildlife Wild – 20.12.140 Animals

- Observe urban wildlife from a distance and never approach, feed, or follow them. Squirrels and birds nest in parks, even when not visible.
- Human food is unhealthy for all wildlife. Feeding them starts bad habits and alters natural behaviors.
- Protect wildlife by securely storing all of your food and trash.
- Pay attention to signs and avoid sensitive habitats.
- Control your pet. Even leashed dogs can disturb wildlife and other visitors.

5. Stick to Trails – 20.12.100 Vandalism; Protection of Park Property and Vegetation

- Walk, ride, and run on designated trails and roads to protect trailside plants and animals.
- Respect private property by paying attention to the park boundary lines and signs.
- Avoid digging trenches, attaching items to trees, or building structures in your urban park.
- Always use designated docks to launch or anchor your boat and only fish in designated areas.

6. Fires Allowed Only in Designated Areas – 20.12.110 Fires, Fireworks, and Smoking Prohibited

- Fire is allowed in designated barbeque pits in some parks. Use of fire must comply with all applicable laws.
- Possession or ignition of any fireworks in any park is never acceptable. Such possession or use is against state law.
- Portland parks are smoke free and use of tobacco in any form is prohibited.

7. Be Considerate of Others and Share Our Trails – 20.12.240 Failure To Obey Park Officer

- Be considerate when passing others on the trail in urban natural areas.
- Yield to others when using wheeled vehicles such as bicycles and skateboards.
- Always keep your pet under control to protect it, other visitors, and wildlife.
- Listen to nature. Avoid making loud noises, yelling, or amplifying music. You will see more wildlife if you are quiet.
- Be sure the fun you have outdoors does not bother anyone else. Other visitors want to enjoy the outdoors, too.

portlandparks.org

rangercallcenter@portlandoregon.gov | 503-823-1634

Indian Peaks Wilderness

WHAT IS WILDERNESS?

The Indian Peaks area became part of the National Wilderness Preservation System in 1978.

The 1964 Wilderness Act . . .

In order to assure that an increasing population, accompanied by expanding settlement and growing mechanization, does not occupy and modify all areas within the United States and its possessions, leaving no lands designated for preservation and protection in their natural condition, it is hereby declared to be the policy of the Congress to secure for the American people of present and future generations the benefits of an enduring resource of Wilderness.

The Act defines Wilderness as . . .

. . . lands designated for preservation and protection in their natural condition.



. . . an area where the earth and its community of life are untrammelled by man

. . . affected primarily by the forces of nature, with the imprint of man's work substantially unnoticeable



. . . a place that has outstanding opportunities for solitude or a primitive and unconfined type of recreation.

FOR YOUR SAFETY



Be prepared for changing and severe weather conditions. Afternoon thunder and lightening storms are common in the mountains.



Purify all water from lakes or streams before drinking. Giardia and other parasites are common in mountain water sources and can cause serious illness.



To reduce the risk of altitude sickness, avoid overexertion, slow down, and stay hydrated. Descend to lower elevations if symptoms occur.



Hypothermia (lowering body temperature) can be life threatening. Bring appropriate clothing to stay warm and dry.

What's in Your Pack?

- ☑ Extra clothing — including rain gear, warm hat, and gloves
- ☑ Food and water (plenty of water or water filter)
- ☑ Sun protection — sunglasses, hat, sunscreen
- ☑ Map and compass
- ☑ Flashlight/headlamp and extra batteries
- ☑ Pocket knife or multi-tool
- ☑ Matches/lighter/fire starter
- ☑ First Aid kit
- ☑ Duct tape
- ☑ Signaling device (whistle and mirror)
- ☑ Emergency shelter (space blanket or large plastic bag)
- ☑ Lightweight rope or cord

LEAVE NO TRACE



To Leave No Trace is a small but significant way that we can reduce our impact on the land and act on behalf of the Wilderness.

- ◆ Plan Ahead and Prepare
- ◆ Travel and Camp on Durable Surfaces
- ◆ Dispose of Waste Properly
- ◆ Leave What You Find
- ◆ Minimize Campfire Impacts (where allowed)
- ◆ Respect Wildlife
- ◆ Be Considerate of Other Visitors

www.LNT.org

Arapaho & Roosevelt National Forest
Caring for the Land and Serving People



How Much Does Your Pack Weigh?



As a Rule of Thumb:

- Pack weight should not be more than $\frac{1}{3}$ of your body weight.
- Your food weight should not be more than $\frac{1}{4}$ of your pack weight.

Plan Ahead and Prepare:

Follow Leave No Trace techniques and re-pack food items into light weight ziplock bags. Leave cans and glass bottles at home. Stay safe and carry the ten essentials:

1. Map & compass, GPS
2. Flashlight
3. Extra food
4. Water/purification
5. Extra clothing
6. Rain gear
7. Matches/fire starter
8. Sun protection
9. Pocket knife
10. First aid kit



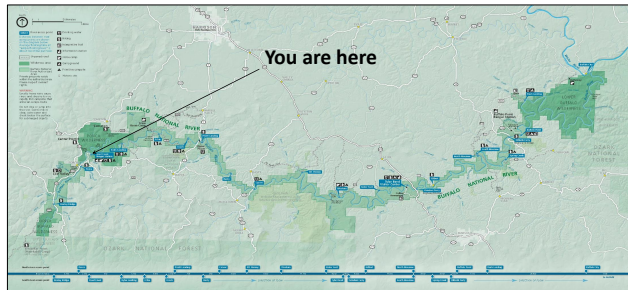
To learn more about it: www.LNT.org

Buffalo National River

U.S. Department of the Interior
National Park Service



Steel Creek Boat Launch



THE 7 PRINCIPLES of Leave No Trace

1. Plan Ahead & Prepare
2. Travel & Camp on Durable Surfaces
3. Dispose of Waste Properly
4. Leave What You Find
5. Minimize Campfire Impacts
6. Respect Wildlife
7. Be Considerate of Other Visitors



Paddle the Buffalo

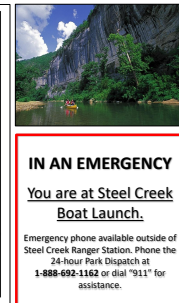
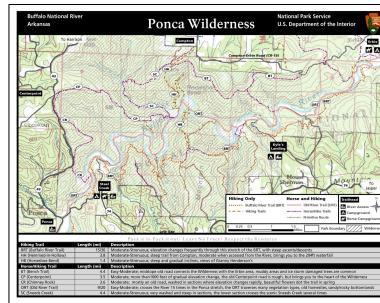
The upper river's flow is extremely weather dependent. Check with local observers for river conditions, boat rental, and shuttle service.

Buffalo Outdoor Center: 1-800-223-5514
Buffalo River Canoes: 870-466-2644
Glorious Mount: 1-800-677-8209
Lost Valley Canoe & Lodge: 870-861-5522
Riverview Motel: 870-466-2656

The Law/For Your Safety

- **PFDs (life vests) required.** For your safety, at least one wearable personal flotation device (PFD) for each occupant must be on board all vessels, including inner tubes. Children who are twelve (12) years of age or younger must wear a personal flotation device at all times while aboard any vessel. Because of hazards in the river, we recommend wearing PFDs any time while in or near the water.
- **Seatbelts required.** When operating a motor vehicle within the park, please stay on park roads and parking areas and wear seatbelts. ATV/UTV are not permitted.
- **Fasten cooler lids. Glass and Styrofoam prohibited.** To prevent items from spilling and sinking in the river while paddling, cooler lids must be fastened and all contents in your boat must be properly secured. When beverages are removed from the cooler, keep them attached to or held within a floating holder. Glass and Styrofoam containers are not permitted on the water or on gravel bars.
- **Leave cultural artifacts where you find them.** Each artifact tells a story of those who inhabited this area before us. Allow future visitors the opportunity to discover those stories in proper context by observing, taking a picture, but not disturbing artifacts.
- **Keep pets on leash.** Please keep pets on a leash no longer than 6 feet. The following trails are open to pets: Mill Creek Trail (Pruitt, Upper District); Spring Hollow, Buck Ridge, and Rock Wall Trails (Tyler Bend, Middle District); and Forest, Overlook and Campground Trails (Buffalo Point, Lower District). Always pick up after your furry friends, and please don't leave them unattended.
- **Attach and use a mesh litter bag.** To help keep this beautiful river clean, paddlers must carry and use a mesh litter bag to collect and secure trash while floating. Be prepared to pack out what you bring in.
- **RV/camper access limited.** RV/camper trailers are allowed at Fries, Ozark, Woolum, Tyler Bend, Maunee South, and Buffalo Point campgrounds. Be advised: Most access roads within park boundaries are gravel, and water hookups are available only at Buffalo Point Campground.

For more information, check out the Superintendent's Compendium online at www.nps.gov/buff.



IN AN EMERGENCY You are at Steel Creek Boat Launch.

Emergency phone available outside of Steel Creek Ranger Station. Phone the 24-hour Park Dispatch at 1-888-692-1162 or dial "911" for assistance.

Discover the Quartzville Back Country Byway



Know Before You Go...

Driving Conditions: Please drive carefully, sections of this road are narrow and winding and varies from two lanes to one lane with turnouts. Weather conditions can change to wet or icy throughout the year. Snow can close parts of the road during the winter and early spring.

Watch For: Oncoming traffic, non-motorized vehicles, pedestrians, fallen rocks, wildlife on the road, adverse road conditions, and inclement weather.

Be Prepared: The closest full-service communities with food, gas, lodging, and supplies are Detroit, Sisters, and Sweet Home. Call reception is limited in certain areas

Help Protect Public Lands... Follow Leave No Trace Principles!

- Plan Ahead & Prepare:** Know the rules and regulations for each land management agency, be ready for extreme weather and road hazards. Bring extra food, water, etc.
- Travel & Camp on Durable Surfaces:** Reduce impacts on nature, stick to durable surfaces including established trails/campsites, rock, gravel, dry grasses or snow. Camp at least 200 feet from any water source.
- Dispose of Waste Properly:** Pack out all trash, leftover food, and litter including toilet paper and diapers. Use portable toilets or provided facilities, otherwise bury human waste at least 200 feet from any water source in a hole 6 inches deep. Bathe and wash dishes at least 200 feet from any water source.
- Leave What You Find:** Examine, but do not touch cultural or historic structures and artifacts including arrowheads. Do not collect natural objects such as rocks or plants and do not cut or carve trees. The collection of any live vegetation (including seeds and roots) is not allowed on USACE or Linn County property.
- Minimize Campfire Impacts:** Use established fire rings, fire pans, or camp stoves when possible. Only use sticks from the ground that can be broken by hand, and never leave campfires unattended.
- Respect Wildlife:** View Wildlife from a distance and never approach, feed or follow them. Seal food and store out of reach. Keep pets on a leash or contained.
- Be Considerate of Other Visitors:** Respect other visitors and protect the quality of their experience. Avoid loud voices and noises. Yield to other users on the trail and avoid resting or camping on trails.

© 1999 by the Leave No Trace Center for Outdoor Ethics: www.LNT.org

For more information on rules, regulations and permits contact these local managing agency offices:



Linn County
Parks and Recreation Department
(541) 967-3917



U.S. Army Corps of Engineers
Willamette Valley Project
(541) 367-5127



Bureau of Land Management
Northwest Oregon District
(503) 375-5646



U.S. Forest Service
Detroit Ranger District (503) 854-3366
Sweet Home Ranger District (541) 367-5168



Leave No Trace
Center for Outdoor Ethics
(800) 332-4100



Please Respect Wildlife

By securing food and other scented items in your camper or vehicle overnight, you can help us protect healthy wildlife populations at Buffalo National River. Wild animals like raccoons can open coolers, bags, and jar lids without assistance. If you leave it out while away from your site, expect it to get swiped! Remember that you are a visitor in their home. We appreciate any effort you can make while visiting the park to help us keep the wildlife wild!



Conclusion

The Adirondack Park is poised to provide exceptional, world-class outdoor recreation opportunities in New York State. However, with recreation generally comes some level of biophysical and social impact, and recreational use of parks and protected areas is on the rise. In order to avoid, minimize, or mitigate these inevitable impacts, Park managers and partners need to provide and actively promote park use guidelines that are consistent with Leave No Trace. Park managers are currently in a unique position to promote responsible enjoyment of the Park given the affinity the region's residents have for the Park. Adirondack-specific Leave No Trace information conveyed to visitors can be highly effective at influencing visitor behavior and improving resource conditions, and can ultimately protect and preserve the Adirondack Park for current and future generations.

"We have a choice: we can regulate and tolerate park visitors or we can celebrate and educate them to create lifelong stewards of our shared spaces."

– Rick Potts, National Park Service

References

- Ajzen, I. (1991). The Theory of Planned Behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179-211.
- Ajzen, I. (2001). Nature and operation of attitudes. *Annual Review of Psychology*, 52(1), 27-58.
- Ajzen, I., & Fishbein, M. (2000). Attitudes and the attitude-behavior relation: Reasoned and automatic processes. *European Review of Social Psychology*, 11(1), 1-33.
- Borrie, W. T., & Harding, J. A. (2002). *Effective recreation visitor communication strategies: Rock climbers in the Bitterroot Valley, Montana*. US Dept. of Agriculture, Forest Service, Rocky Mountain Research Station.
- 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.
- Chavez, D. J., & Winter, P. L. (1993). *Imperial Sand Dunes: Visitor research case study*. US Department of the Interior, Bureau of Land Management.
- Christensen, N. A., & Cole, D. N. (2000). Leave No Trace practices: Behaviors and preferences of wilderness visitors regarding use of cookstoves and camping away from lakes. In S. F. McCool, W. T. Borrie & J. O'Loughlin (Eds.), *Proceedings - Wilderness Science in a Time of Change Conference* (Vol. RMRS-P-15-VOL-4, pp. 77-85). USDA Forest Service, Rocky Mountain Research Station.
- Cole, D. N. (1998). Written appeals for attention to low-impact messages on wilderness trailsides boards: Experimental evaluations of effectiveness. *Journal of Park and Recreation Administration*, 16(1), 65-79.
- Dorwart, C. E., Leung, Y. F., & Moore, R. (2004). Managing visitors' perceptions. *Journal of Park and Recreation Administration*, 5, 24-31.
- Duncan, G. S., & Martin, S. R. (2002). Comparing the effectiveness of interpretive and sanction messages for influencing wilderness visitors' intended behavior. *International Journal of Wilderness*, 8(2), 20-25.
- Farrell, T., Hall, T. E., & White, D. D. (2001). Wilderness campers' perception and evaluation of campsite impacts. *Journal of Leisure Research*, 33(3), 229.
- Fishbein, M., & Manfredo, M. J. (1992). A theory of behavior change. In M. J. Manfredo (Ed.), *Influencing human behavior theory and application in recreation, tourism, and natural resources management* (pp. 29-50). Champaign, IL: Sagamore Publishing.

- Fishbein, M., & Ajzen, I. (2010). *Predicting and changing behavior: The reasoned action approach*. Psychology Press.
- Ham, S. H. (2007). *Can interpretation really make a difference? Answers to four questions from cognitive and behavioral psychology*. Paper presented at the Interpreting World Heritage Conference, Vancouver, British Columbia Canada.
- Ham, S. H., & Krumpe, E. E. (1996). Identifying audiences and messages for nonformal environmental education – A theoretical framework for interpreters. *Journal of Interpretation Research*, 1(1), 11-23.
- Hammitt, W. E., & Cole, D. N. (1998). *Wildland recreation ecology and management*. New York: John Wiley & Sons.
- Hammitt, W. E., Cole, D. N., & Monz, C. A. (2015). *Wildland recreation: Ecology and management*. John Wiley & Sons.
- Harmon, W. (1997). *Leave No Trace Minimum Impact Outdoor Recreation* Helena, MT: Falcon Publishing, Inc.
- Hendee, J. C., & Dawson, C. P. (2002). *Wilderness management stewardship and protection of resources and values*. Golden, CO: WILD Foundation and Fulcrum Pub.
- Hungerford, H. R., & Volk, T. L. (1990). Changing learner behavior through environmental education. *Journal of Environmental Education*, 21(3), 8-22.
- Hwang, Y. H., Kim, S. I., & Jeng, J. M. (2000). Examining the causal relationships among selected antecedents of responsible environmental behavior. *The Journal of Environmental Education*, 31(4), 19-25.
- Kim, S. O., Lee, C. H., & Shelby, B. (2003). Utilization of photographs for determining impact indicators for trail management. *Environmental Management*, 32(2), 282-289.
- Laven, D. N., & Krymkowski, D. H. (2005). The relationship between visitor-based standards of quality and existing conditions in parks and outdoor recreation. *Leisure Sciences*, 27(2), 157-173.
- Lawhon, B., Newman, P., Taff, B. D., Vaske, J. J., Vagias, W. M., Bright, A., Lawson, S. R., & Monz, C. (2013). Factors influencing behavioral intentions for Leave No Trace behavior in Rocky Mountain National Park. *Journal of Interpretation Research* 18(1), 24 – 38.
- Lawhon, B., Taff, B. D., Newman, P., Vagias, W. M., & Newton, J. (2017). Understanding and influencing state park visitors' Leave No Trace behavioral intent. *Journal of Interpretation Research*, 22(1).

- Leave No Trace Center for Outdoor Ethics. (2015). Strategic Objectives. Retrieved from <https://lnt.org/about/what-we-are-working-now>
- Leave No Trace Center for Outdoor Ethics. (2016a). Leave No Trace Mission. Retrieved from <https://lnt.org/about>
- Leave No Trace Center for Outdoor Ethics. (2016b). Leave No Trace Principles. Retrieved from <https://lnt.org/learn/7-principles>
- Leung, Y. F., & Marion, J. L. (2000). Recreation impacts and management in wilderness: A state-of-knowledge review. In D. N. Cole, S. F. McCool, W. T. Boorie & J. O'Loughlin (Eds.), *Wilderness science in a time of change conference-Volume 5 Wilderness ecosystems, threats, and management: 1999 May 23-27; Missoula, MT. Proceedings RMSR-P-VOL-5* (pp. 23-48). Ogden, UT: USDA Forest Service, Rocky Mountain Research Station.
- Manning, R. E. (1999). *Studies in outdoor recreation search and research for satisfaction*. Oregon State University Press.
- Manning, R. E. (2003). Emerging principles for using information/education in wilderness management. *International Journal of Wilderness*, 9(1), 20-27.
- Manning, R., Lawson, S., Newman, P., Budruk, M., Valliere, W., Laven, D., & Bacon, J. (2004). Visitor perceptions of recreation-related resource impacts. *Environment impacts of ecotourism*. CAB International, Cambridge, MA, 259-272.
- Marion, J.L. (2014). *Leave No Trace in the Outdoors*. Stackpole Press
- Marion, J. L., & Reid, S. E. (2001). Development of the US Leave No Trace program: An historical perspective. In M. B. Usher (Ed.), *Enjoyment and Understanding of the National Heritage* (pp. 81-92). Edinburgh, Scotland: Scottish Natural Heritage & the Stationery Office.
- Marion, J. L., & Reid, S. E. (2007). Minimising visitor impacts to protected areas: the efficacy of low impact education programmes. *Journal of Sustainable Tourism*, 15(1), 5-27.
- Marion, J. L., Leung, Y. F., Eagleston, H., & Burroughs, K. (2016). A review and synthesis of recreation ecology research findings on visitor impacts to wilderness and protected natural areas. *Journal of Forestry*, 114(3), 352-362.
- Martin, D. C. (1992). The effect of three signs and a brochure on visitors' removal of pumice at Mount. St. Helens. *Vandalism: Research, prevention and social policy*, 121.
- Martin, S. R., Marsolais, J., & Rolloff, D. (2009). Visitor perceptions of appropriate management actions across the recreation opportunity spectrum. *Journal of Park and Recreation Administration*, 27, 56-69.


- McCool, S. F., & Cole, D. N. (2000). Communicating minimum impact behavior with trailside bulletin boards: Visitor characteristics associated with effectiveness. *USDA Forest Service Proceedings RMRS-P-15-Vol-4*, pp. 208-216.
- Miller, T., Borrie, W., & Harding, J. (2001). Basic knowledge of factors that limit the practice of low-impact behaviors. Draft report on file at: US Department of Agriculture, Forest Service, Rocky Mountain Research Station, Aldo Leopold Wilderness Research Institute, Missoula, MT: University of Montana.
- Oliver, S. S., Roggenbuck, J. W., & Watson, A. E. (1985). Education to reduce impacts in forest campgrounds. *Journal of Forestry*, 83(4), 234-236.
- Orams, M. B. (1997). The effectiveness of environmental education: Can we turn tourists into 'Greenies'? *Progress in Tourism and Hospitality Research*, 3, 295-306.
- 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 and Recreation Administration*, 26(1), 97-121.
- Petty, R. E., McMichael, S., & Brannon, L. A. (1992). The elaboration likelihood model of persuasion: Applications in recreation and tourism. In M. J. Manfredo (Ed.), *Influencing human behavior theory and application in recreation, tourism, and natural resources management* (pp. 77-101). Champaign, IL: Sagamore Publishing.
- Roggenbuck, J. W. (1992). Use of persuasion to reduce resource impacts and visitor conflicts. In M. J. Manfredo (Ed.), *Influencing human behavior theory and application in recreation, tourism, and natural resources management* (pp. 149-208). Champaign, IL: Sagamore Publishing.
- Slater, M. (1992). Mass communication research: Lessons for persuasive communication. *Influencing human behavior*. Champaign, IL: Sagamore Publishing, Inc.
- Taff, D., Newman, P., Bright, A., & Vagias, W. (2011). Day-user beliefs regarding Leave No Trace in Rocky Mountain National Park. *Journal of Outdoor Recreation, Education, and Leadership*, 3(2), 112-115.
- Taff, B. D., Newman, P., Vagias, W. M., & Lawhon, B. (2014). Comparing day-users' and overnight visitors' attitudes concerning leave no trace. *Journal of Outdoor Recreation, Education, and Leadership*, 6(2), 133-146.
- White, D. D., Hall, T. E., & Farrell, T. A. (2001). Influence of ecological impacts and other campsite characteristics on wilderness visitors' campsite choices. *Journal of Park & Recreation Administration*, 19(2).

- Widner-Ward, C., & Roggenbuck, J. (2003). Understanding park visitors' response to interventions to reduce petrified wood theft. *Journal of Interpretation Research*, 8, 67-82.
- Winter, P. L. (2006). The impact of normative message types on off-trail hiking. *Journal of Interpretation Research*, 11(1), 35-52.
- Winter, P. L., Sagarin, B. J., Rhoads, K., Barrett, D. W., & Cialdini, R. B. (2000). Choosing to encourage or discourage: Perceived effectiveness of prescriptive versus proscriptive messages. *Environmental Management*, 26(6), 589-594.
- Vagias, W. M., & Powell, R. B. (2010). Backcountry visitors Leave No Trace attitudes. *International Journal of Wilderness*, 16(3), 21-27.
- Vagias, W. M., Powell, R., Moore, D., & Wright, B. (2012). Development, psychometric qualities, and cross-validation of the Leave No Trace Attitudinal Inventory and Measure (LNT AIM). *Journal of Leisure Research*, 44(2) 234-256.
- Vagias, W. M., Powell, R. B., Moore, D. D., & Wright, B. A. (2014). Predicting behavioral intentions to comply with recommended Leave No Trace practices. *Leisure Sciences*, 36(5), 439-457.

Appendices

Appendix A – Leave No Trace Ethics Card Examples


3x5" recycled plastic card containing locally-tailored Leave No Trace information. Generous flexibility with this resource.




2016
National Park Service
CENTENNIAL

The National Park Service and the Leave No Trace Center for Outdoor Ethics have partnered for over two decades to ensure that every person who visits a park has the opportunity to learn about and put Leave No Trace into action.

Leave No Trace protects the outdoors by teaching people to enjoy trails, parks and open space responsibly. Visit www.LNT.org to learn more about Leave No Trace in Every Park, the Center's new national campaign to ensure that parks continue to thrive because people understand what it means to take care of them: #InEveryPark





Leave No Trace™

Celebrate 100 years of the National Park Service by practicing these Leave No Trace principles:

Know Before You Go

- Be prepared! Learn about the areas you plan to visit. Bring food, water, a map, and clothes to protect you from cold, heat and rain.

Stick to Trails & Overnight Right

- Walk or ride on designated trails to protect trailside plants.
- Camp only in established or designated sites to avoid damaging vegetation.

Trash Your Trash

- Pack it in, pack it out! Put litter – even crumbs, peels or cores – in garbage bags and carry it home. Recycle whenever possible.
- Use bathrooms or outhouses when available. If not available, bury human waste in a small hole, 6-8 inches deep and 100 big steps from any water.
- Keep water clean. Do not put soap, food, human or pet waste in any water source.

Leave It As You Find It

- Leave plants, rocks and historical items as you find them for others to enjoy.
- Inspect and clean equipment between trips to stop the spread of invasive species.

Be Careful With Fire

- Check local campfire and firewood regulations. Use existing fire rings, keep fires small, and avoid burning trash or food.
- Make sure your fire is completely out before you leave.

Keep Wildlife Wild

- Observe wildlife from a distance and never approach, feed or follow them.
- Properly store all food, trash and other smellable items.

Share Our Trails

- Be considerate when passing others on the trail.
- Be sure the fun you have outdoors does not bother anyone else.

© Leave No Trace Center for Outdoor Ethics.
For more information about Leave No Trace or to get involved: www.LNT.org



Leave No Trace™

LEAVE NO TRACE *Frontcountry*

KNOW BEFORE YOU GO

- Be prepared! Remember food and water, and clothes to protect you from cold, heat and rain.
- Use maps to plan where you're going. Check them along the way so you'll stay on course and won't get lost.
- Remember to bring a leash for your pet and plastic bags to pick up your pet's waste.
- Learn about the areas you plan to visit. Read books, check online and talk to people before you go. The more you know, the more fun you'll have.



STICK TO TRAILS AND CAMP OVERNIGHT RIGHT

- Walk and ride on designated trails to protect trailside plants.
- Avoid stepping on flowers or small trees. Once damaged, they may not grow back.
- Respect private property by staying on designated trails.
- Camp only on existing or designated campsites to avoid damaging vegetation.
- Good campsites are found, not made. Don't dig trenches or build structures in your campsite.



TRASH YOUR TRASH AND PICK UP POOP

- Pack it in. Pack it out. Put litter – even crumbs, peels and cores – in garbage bags and carry it home.
- Use bathrooms or outhouses when available. If not available, bury human waste in a small hole 6 • 8 inches deep and 200 feet or 70 big steps from water.
- Use a plastic bag to pack out your pet's poop to a garbage can.
- Keep water clean. Do not put soap, food, human or pet waste in lakes or streams.

For more information and materials:
1.800.332.4100 or www.LNT.org
© Leave No Trace Center For Outdoor Ethics





LEAVE IT AS YOU FIND IT

- Leave plants, rocks and historical items as you find them so others can enjoy them.
- Treat living plants with respect. Carving, hacking or peeling plants may kill them.

BE CAREFUL WITH FIRE

- Use a camp stove for cooking. Stoves are easier to cook on and create less impact than a fire.
- If you want to have a campfire, be sure it's permitted and safe to build a fire in the area you're visiting. Use only existing fire rings to protect the ground from heat. Keep your fire small.
- Remember, a campfire isn't a garbage can. Pack out all trash and food.
- Before gathering any firewood, check local regulations.
- Don't bring firewood from home. It may be contaminated with tree-killing insects or diseases. Instead, buy local wood near your destination or gather it onsite if allowed.
- Burn all wood completely to ash and be sure the fire is completely out and cold before you leave.



KEEP WILDLIFE WILD

- Observe wildlife from a distance and never approach, feed or follow them.
- Human food is unhealthy for all wildlife and feeding them starts bad habits.
- Protect wildlife and your food by securely storing your meals and trash.

SHARE OUR TRAILS AND MANAGE YOUR PET

- Be considerate when passing others on the trail.
- Keep your pet under control to protect it, other visitors and wildlife.
- Listen to nature. Avoid making loud noises or yelling. You will see more wildlife if you are quiet.
- Be sure the fun you have outdoors does not bother anyone else. Remember, other visitors are there to enjoy the outdoors too.



Appendix B – Leave No Trace Resolution – San Juan Islands, WA

RESOLUTION NO. 45 -2014

RESOLUTION DESIGNATING SAN JUAN COUNTY AS A VOLUNTARY “LEAVE NO TRACE” AREA AND ADOPTING THE “LEAVE NO TRACE” GUIDING PRINCIPLES AND ETHIC TO SUPPORT STEWARDSHIP OF THE SAN JUAN ISLANDS

- A. A defining characteristic of San Juan County is the natural environment, both terrestrial and marine; and
- B. Protecting the natural environment is beneficial for all people, whether residing in or visiting San Juan County; and
- C. Outdoor recreation and leisure activities provide substantial economic value to the community and will benefit from conservation efforts; and
- D. Preserving habitats, scenic beauty, and biological diversity contributes to a high quality of life for islanders, wildlife, and visitors; and
- E. Impacts to wildlife and the natural environment from outdoor activities and recreational use can degrade the natural values important to the community; and
- F. Integrating an ethic of stewardship through education and business practices is important to reduce human impacts to the natural environment; and
- G. The *Leave No Trace Center for Outdoor Ethics*, a not-for-profit organization, has partnered with San Juan County and other state and federal agencies to provide information and programs supporting stewardship of the San Juan Islands natural environment; and
- H. The seven principles of “*Leave No Trace*” are:
 - 1. Plan Ahead and Prepare
 - 2. Travel and Camp on Durable Surfaces
 - 3. Dispose of Waste Properly
 - 4. Leave What You Find
 - 5. Minimize Campfire Impacts
 - 6. Respect Wildlife
 - 7. Be Considerate of Other Visitors

The member-driven *Leave No Trace Center for Outdoor Ethics* teaches people how to enjoy the outdoors responsibly. This copyrighted information has been reprinted with permission from the Leave No Trace Center for Outdoor Ethics: www.LNT.org; and

- I. San Juan County has established a history of supporting stewardship to bring about natural and economic benefits, as expressed in the adoption of Resolution No. 8-2004 Designating San Juan County as a Voluntary Marine Stewardship Area

THEREFORE BE IT RESOLVED that the County Council hereby designates San Juan County, State of Washington, as a Voluntary Leave No Trace Area to facilitate the protection and preservation of our natural environment for all people, current and future generations;

BE IT FURTHER RESOLVED that the County Council adopts the "Leave No Trace" guiding principles and ethic to further the intention of this resolution to establish a culture of stewardship in all people residing in and visiting San Juan County.

ADOPTED this 7TH day of OCTOBER 2014.

ATTEST: Clerk of the Council

COUNTY COUNCIL
SAN JUAN COUNTY, WASHINGTON

Ingrid Gabriel 10.7.2014
Ingrid Gabriel, Clerk Date

Rick Hughes
Rick Hughes, Chair
District 2

REVIEWED BY COUNTY MANAGER

Michael J. Thomas 10/7/14
Michael J. Thomas Date

Bob Jarman
Bob Jarman, Vice-Chair
District 1

RANDALL K. GAYLORD
APPROVED AS TO FORM ONLY

By: [Signature] 10/6/14
Date

Jamie Stephens
Jamie Stephens, Member
District 3

Appendix C – What are the 3-5 most pressing issues on the lands you manage?

(Numbers indicate the number of responses for particular type of answer)

- Overuse/high volume of use/crowding/overcrowding (14)
- Promotional efforts directing people to the region
- Trail impacts/degradation/deterioration/erosion (16)
- Parking issues (13)
- Education of Users/hikers (8)
- Improper disposal of Human waste (6)
- Human/pet waste (2)
- Lack of DEC Environmental Education Center
- wilderness (small “w”) ethic incorporation into the minds and behaviors of people using the resources
- Lack of staff and money for proper trail maintenance (3)
- Overcrowding/high use in popular areas/on certain trails and summits (12)
- Underprepared hikers/hiker preparedness (8)
- Online and Social Media (2)
- Trail design and management (5)
- Lack of staffing (Field Staff, Rangers, DEC staff, maintenance (8)
- Lack of safety, educational and Leave No Trace info (6)
- Illegal ATV/UTV/snowmobile use (4)
- Transportation barriers (2)
- Loss of wilderness character/solitude (2)
- Hiking lists such as the 46 highest peaks, Saranac Sixers, etc.
- Users leaving behind garbage (2)
- Invasive species (6)
- Resources dedicated to trail development & maintenance (2)
- Having Leave No Trace messages make a difference on the ground
- ebikes
- Misuse/abuse of resources (2)
- Shoreline development
- Income-related barriers
- Improper food storage/Bear encounters (4)
- Resource protection (3)
- Vegetation damage (2)
- Lawsuits from environmental non-profits (2)
- Lack of Infrastructure by the frugal State
- Irregular rules
- Non-Leave No Trace use
- Access and Planning for Wildlands
- Trail improvements
- Lack of data on use/visitation
- Tree cutting (2)

- Recreation on State land is viewed as an income for local towns/businesses
- Poorly advertised access
- User safety
- User conflicts
- Protect lake fronts and waterways
- Trails directly from the communities
- Lack of outreach and inclusion of POC
- Traffic congestion
- Land management agencies not adequately supported to fulfill their mission
- Planning
- Protecting tourism
- Campfire impacts
- Limitations of article XIV
- Ability of DEC land managers (not Forest Rangers) to manage Forest Preserve units properly, for the long term, in a sustainable manner
- Lack of the concept "Carrying Capacity" by all involved
- 6,970 miles of roads/roads with easy access to wildlands (2)
- Lack of money & staff

Appendix D – Are there other recreation-related impacts in the Adirondack Park not listed above?

- Higher amounts of visitors & recreation-related impacts diminish wilderness/user experience.
- Trampling of alpine vegetation, tourist removal of vegetation/rocks/etc., noise and light pollution within wilderness areas, lack of education measures, improper disposal of food, negative human-wildlife interactions, spread of aquatic and terrestrial invasive species
- Comprehensive planning is totally lacking
- A general lack of preparation is a big contributing factor.
- N/A (3)
- Hunting and trapping reduce certain animal populations (bobcat, coyote, fox, and bear).
- Overuse of specific areas/trails
- Loss of solitude on the trails and summits due to overcrowding Loss of wilderness ethic
- Organizations choosing to not fight for full Wilderness Areas, which prevent the excessive motorization of the northeast's remaining wild spaces. More roads = higher use. Also, more magical Wilderness Areas in other places would help draw visitation to local gems, not solely to the High Peaks, the Presidentials, and Baxter. Increasing public land conservation is an issue.
- Probably but they are limited in comparison
- Crowding in Wilderness is a significant social impact that degrades Wilderness values.

- Noise and impact on solitude Light pollution
- Trailhead access, specifically parking and safety; trail erosion
- Damage to less accessible campsites. e.g., nails in trees on Lower Saranac Lake Islands campground.

Appendix E – How familiar are you with the typical Adirondack Park visitor?

- Adirondack Park visitors are too diverse of a group to say there is a "typical" one
- I am in a educational setting so I know our student population well
- I don't know of a "typical" Adirondack Park visitor - I know what activities are popular and where visitors travel from, but I don't know of a "typical" Adirondack visitor out of the 12.4 million people visiting the Park each year

Appendix F – What are the main objectives for your volunteer program?

- Engage students in stewardship of public lands. This includes, but is not limited to, campsite and trail monitoring, trail maintenance, and technical report writing.
- infrastructure work
- education, information, conservation
- Stewardship of natural resources and recreational facilities such as trails
- Trail work
- Maintenance, stewardship
- To protect New York's alpine habitat through education, trail work and research.
- Trail work and construction.
- Trail Maintenance Backcountry Water Monitoring for Invasive Species Trailhead and Summit Responsible Recreation Education
- more than 250 volunteer agreements
- Trail Maintenance & Construction
- Resource protection, education, free labor
- Volunteer Stewardship Agreements are used to engage volunteers in activities on the Forest Preserve/Conservation Easements that provide a net benefit to the person/organization doing work and the DEC/State of New York. Example: a snowmobile club maintaining a public trail.
- Assist with all of the tasks, such as trail maintenance and visitor education, that are falling by the wayside due to a lack of staff.
- resource maintenance
- Educate the public on how to recreate responsibly To understand and appreciate the importance of stewardship of wild places
- Stewardship and education
- Stewardship and maintenance of trails and lean-tos. Also public outreach in parking lots and on summits. Volunteers also survey ponds for invasive species.
- Educate the public at trailheads, summits, and parking lots on Leave No Trace and regulations

- Promote the conservation, preservation, and responsible recreational use of the NYS Forest Preserve, while developing a lifelong connection to the wild lands you enjoy.
- trail maintenance
- Assist with maintenance of facilities and public outreach
- Stewardship and protection of natural resources
- Trail work
- Mostly for trail projects, some resource protection
- Involve public in stewardship; help take care of facilities
- Help people learn of places to paddle, hike, bike etc. and the importance of the 10 essentials and Leave No Trace
- facilities maintenance

Appendix G – What types of sites require a fee? Check all that apply.

- If on ADK property
- Marcy Shuttle
- ORDA facilities
- Payment for shuttle services to access public lands
- Private Land access
- Privately owned businesses such as Ausable Chasm, and High Falls Gorge
- historical sites
- private sites
- shuttle ride

Appendix H – What agencies provide law enforcement on public lands in the Adirondack Park?

- State Police
- Federal laws still apply on public lands & public lands exist by virtue of federal and state law... What does "law enforcement" mean in this context?
- State Troopers

Appendix I – What are your goals for a Leave No Trace program for the lands you manage?

- To educate visitors on how to have safe, positive experiences while ensuring appropriate stewardship and use of all Adirondack Park lands, including state lands, to protect our natural resources
- Leave No Trace should reach every visitor to preserve lands in the Adirondack Park
 - Leave No Trace signage should be large and clearly visible at forest preserve entrances/trailheads
 - Leave No Trace education should take a proactive approach and make use of online channels to educate visitors
- Reduce ecological and social impacts from park visitors.

- long term planning, sustainable trail rerouting and rebuilding, permit system for educational programs
- I would like to see hikers who are informed and prepared, and who respect all aspects of both the public and private lands in the Park.
- To help visitors enjoy their experience To help visitors understand the impacts their actions may have
- To increase education and awareness from both visitors and locals that recreational activities leave an impact on the Adirondack Park. To increase recreational preparedness, and increase responsible recreation.
- Educate users before they begin their hike. An educated user will ultimately create significantly less impacts.
- To help educate hikers in order to mitigate impact on the resource and as part of a preparedness effort
- Increased user awareness and an improvement in user behavior and being a good neighbor.
- Education of users to protect the environment and themselves
- Leave No Trace at every trailhead.
- Make people understand that they are part-owners of the ADK park, and that they are being neglectful to a resource that belongs to them.
- To Protect the Natural Resources Preserve Social Experience
- It would be great to the average user to understand and follow the 7 Leave No Trace principle
- It should be consistent with the national program. It should reduce some current use impacts. It should reduce the number of incidents that result in backcountry search and rescue.
- Consistent messaging
- Park wide branding, More Preventive Search and Rescue (PSAR)
- Educate people about the Adirondack Park - why it is special, different, and more protected than most other landscapes. Also how stewardship of the public land in the Park is managed by DEC. 2. Incorporating and embedding the Leave No Trace principles into the minds and behaviors of the people who visit the Park, so that it actually makes a difference on the ground. Creating an ethic in the Park that is holistic and understood by all.
- Reduce visitor impacts, steer visitors away from the more popular/overused sites to other areas
- public outreach
- To inform visitors before they arrive and while they are recreating in the Park.
- Leave No Trace specific information, dedicated stewards with high quality training, and better signage disseminated across the park.
- To educate visitors and ultimately reduce user impacts
- To minimize recreation impacts throughout the park, increase the quality of recreation experiences, and improve public safety.
- Consistent signage and messaging from all agencies, organizations, and businesses that operate on state lands.

- Every visitor should know about Leave No Trace before, while, and after visiting!
- Increase Awareness to help people in the future
- managing waste cutting down on trail erosion impact on other visitors
- Comprehensive integration of Leave No Trace principles at every level of management and visitor engagement.
- Effective education of visitors/users so that they engage in specific practices that ensure their recreational impact is minimal
- Reducing impacts to natural resources and preserving the overall Adirondack recreational experience; improving access and visitor safety; encouraging better visitor management practices and more buy-in from the DEC; getting people out on the land in a responsible way and encouraging stewardship
- Better Trails
- Provide a more consistent educational message for the recreational user
- Reduce the impacts of recreationists on the natural resources of the Park
- The ultimate outcome is to change visitor behavior. I believe we have to be more specific than the Leave No Trace principles. We have to be specific re the behaviors we want/need.
- impact behavior of users to lessen impact of recreational activities

Appendix J – How would you envision Leave No Trace information being disseminated to Adirondack Park visitors? Check all that apply.

- Highway Rest Areas and Visitor Centers
- Kiosks, that should be mandatory at every trailhead
- NOLS
- Schools
- Schools – statewide
- Town of Keene Front Country Stewards
- Local businesses

Appendix K – Please list additional feedback or comments or feedback regarding Leave No Trace efforts in the Adirondack Park.

- Scientific assessments of user behavior and knowledge of Leave No Trace principles. Leave No Trace signage and outreach efforts should make use of known psychological principles to ensure maximum participation in Leave No Trace practices.
- Leave No Trace needs to be paired with other management tools. 100 people on a summit with Leave No Trace training may have less impact than a larger number of un-trained individuals. But it is still 100 people on a summit.
- Doing a lot but so much more can be done park wide!
- This has been a continuous problem since the advent of State ownership of land. With an increase in population, increase in a push for tourism (namely through social media), and a "me first" attitude that pervades society today, degradation of

State lands has become more evident. I feel that a grass roots movement by the public, giving them a feeling of ownership of the lands being trashed, would be the best way to incorporate change.

- Thank-you for the opportunity to take part in this survey
- Let's do more of these types of outreach, thanks
- The ADK has done a lot in this front. It is time for other ORGS and AGENCIES to take better advantage of Leave No Trace information.
- Keep doing the great work you're doing to bring Leave No Trace information to every Park and every Kid! Thank you!
- Leave No Trace is an excellent tool we can use to promote wise use of resources. It doesn't limit any group but gives them a reason and action to help the places they use
- As I said above, we must target behaviors and that is a labor-intensive job.
- I support the effort