

Outdoor Action Leave No Trace Feather Foundation Grant Report



Great Smoky Mountains – March 2015

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Executive Summary

The Feather Foundation funding of the Outdoor Action Leave No Trace Master Educator Program has transformed the way that OA Leaders learn about, understand, and implement Leave No Trace practices within OA programs. We are exceedingly grateful to the foundation for its support. Thanks to the Feather Foundation grant, we have built a solid pool of Leave No Trace Master Educators who train OA Leaders as well as youth in the Princeton community about Leave No Trace and conservation practices. All new OA Leaders complete a two-hour Leave No Trace Awareness course and receive additional instruction during their Leader Training Trips as well as a refresher just before Frosh Trip which has significantly expanded their ability to teach these skills to over 700 incoming freshmen each year.

Outcomes

This is the fourth year of the program and we have now have trained four cohorts of Leave No Trace Master Educators for a total of 27 students, 19 of whom are still on campus (20 if you include Caroline Stone '14 who is now part of the OA staff). Additionally, one of our student coordinators, Katie Glockner, has begun the training to become a Master Educator Instructor by assisting a Lead Master Educator Instructor over spring break.

We also offered 2 two-day Leave No Trace Trainer trips during the last year, one in May and one in October. Over their two days of training from the LNT Master Educators, these students gained experience with effective teaching techniques and how to express their personal wilderness ethic. This also expanded our ranks to 13 more students who are certified to teach the LNT Awareness workshop and allowed 4 Master Educators to gain experience teaching this more advanced course.

Leave No Trace Master Educators

	First Name	Last Name	Class	Cohort	Trip
1	Caroline	Stone	Staff	1	March 2012 - Galiuros Mountains, AZ
2	Miranda	Bernard	2015	2	March 2013 - Galiuros Mountains, AZ
3	Joseph	Bolling	2015	2	March 2013 - Galiuros Mountains, AZ
4	Renata	Diaz	2015	2	March 2013 - Galiuros Mountains, AZ
5	Holt	Dwyer	2015	2	March 2013 - Galiuros Mountains, AZ
6	Brian	Reed	2015	2	March 2013 - Galiuros Mountains, AZ
7	Dawn	Wang	2015	2	March 2013 - Galiuros Mountains, AZ
8	Nic	Barton	2016	3	October 2013 - Grand Canyon, AZ
9	Avery	Forrow	2016	3	October 2013 - Grand Canyon, AZ
10	Katie	Glockner	2016	3	October 2013 - Grand Canyon, AZ
11	Manali	Gokhale	2016	3	October 2013 - Grand Canyon, AZ
12	Kenny	Hubbell	2016	3	October 2013 - Grand Canyon, AZ
13	Preston	Kemeny	2015	3	October 2013 - Grand Canyon, AZ
14	Todd	Kranenburg	2015	3	October 2013 - Grand Canyon, AZ
15	Christine	Smith	2016	3	October 2013 - Grand Canyon, AZ
16	Raj	Balaji	2017	4	March 2015- Great Smoky Mtns, NC
17	Mike	Danielczuk	2016	4	March 2015- Great Smoky Mtns, NC
18	Sumer	Parikh	2017	4	March 2015- Great Smoky Mtns, NC

19	Sami	Walter	2017	4	March 2015- Great Smoky Mtns, NC
20	Serena	Zheng	2017	4	March 2015- Great Smoky Mtns, NC

Leave No Trace Trainers

	First Name	Last Name	Class	Cohort	Trip
1	Jesse	Caldwell	2016	1	May 2014- Harriman, NY
2	Karen	Ku	2016	1	May 2014- Harriman, NY
3	Chris	Harwood	2016	1	May 2014- Harriman, NY
4	Mike	Danielczuk	2016	1	May 2014- Harriman, NY
5	Sam	Wu	2016	1	May 2014- Harriman, NY
6	Phil	Dinenis	2017	2	October 2014- Harriman, NY
7	Tom	Kloehn	2017	2	October 2014- Harriman, NY
8	Danielle	Pintz	2017	2	October 2014- Harriman, NY
9	Colter	Smith	2017	2	October 2014- Harriman, NY
10	Bill	Van Cleve	2017	2	October 2014- Harriman, NY
11	Daniel	Yang	2017	2	October 2014- Harriman, NY
12	Joe	Yates	2017	2	October 2014- Harriman, NY
13	Dennis	Yi	2017	2	October 2014- Harriman, NY

In addition to the Master Educators and Trainers who have benefitted from advanced training, the LNT program has reached hundreds of other students on campus. In the 2014-2015 Academic Year, the Master Educators and Trainers have trained 133 leaders-in-training to the LNT Awareness level, the largest number of leaders since the Master Educator program began.

Additionally, the 208 returning trip leaders, who had already been trained to the LNT Awareness level, participated in a 1-hour refresher workshop before Frosh Trip. These 208 leaders impacted the backcountry experiences of 712 freshmen, most of whom had little to no previous outdoor experience.

March 2014 – March 2015	Students
Frosh Trip 2014 LNT Refreshers	208
Fall 2015 Leader Training	52
Winter 2015 Leader Training	21
Spring 2015 Leader Training	60
Total Leaders Trained	341
Freshmen Participants Frosh Trip 2014	712
Total Students trained in some level of LNT	1,053

New Initiatives

This year, we began a new partnership with Landmark Learning in Western North Carolina for our Master Educator course. The OA budget shortfall in 2014 limited OA's ability to augment the Feather Foundation grant for this year. Thus, we identified a Master Educator vendor on the East Coast and a closer national park: Landmark Learning and the Great Smoky Mountains.

Landmark Learning introduced several new practices to this Master Educator Course. In particular, the last day of the trip was spent interacting with the public at Oconaluftee Visitor Center. This allowed the newly trained Master Educators to experience sharing their knowledge in the “real world” and start to think more broadly about how to use their new training.

Over the past four years, the LNT program has fully established itself and now is now generating significant interest among the broader pool of OA Leaders. That is evidenced by the two successful two-day Leave No Trace Trainer trips we have offered since last May increasing the skills and appreciation for the minimal impact among the OA Leader pool. Additionally, we piloted a new idea during Frosh Trip 2014: offering a LNT Trainer Frosh Trip, led by two Master Educators, as a trip option for a group of incoming freshmen. This was a good pilot since it allowed us to experiment with balancing the Frosh Trip orientation discussions with LNT discussions, something we will continue to develop for this fall. The freshmen certainly came away with a greater appreciation for LNT.

The successful school outreach programs that began in spring 2014 have been waiting until the end of a long winter for the gardening clubs to begin meeting again. We initiated a new relationship with a Cub Scout troop in Central New Jersey. Four Master Educators taught the kids’ version of an Awareness Workshop to the troop to assist them toward earning an Outdoor Ethics Awareness Award.

We have begun conversations with academic departments that conduct field work including Geosciences and Ecology and Evolutionary Biology. Those departments send dozens of students into pristine areas in order to study various aspects of the environment, but offer no formal training on how to minimize their impact. As soon as the departments finalize their plans for the summer season, we will be back in contact to plan a specific training.

Expenses

The expenses for this year’s program were for the Master Educator course with Landmark Learning during Spring Break 2015, and the two Trainer trips led by OA leaders (May and October 2014). The Feather Foundation grant covered the tuition and ground transportation costs, while student fees covered the food and airfare (when applicable).

Master Educator Course Expenses		LNT Trainer Trip Expenses	
Landmark Learning Tuition (5 students)	\$2,449.75	Ground Transportation	\$900
Airfare (6 tickets)	\$1,266.90	Food	\$200
Rental Cars	\$1,255.20	Student Fees	-\$325
Food	\$200		
Incidental Expenses	\$120		
Student Fees	-\$1000		
Subtotal	\$4,291.85	Subtotal	\$775
Total			\$5,066.85

Student Reports

Sami Walter '17



Sami enjoys the view of the valley

I didn't really know what to expect coming on this trip. I figured it would be like all of the other Outdoor Action trips that I had been on before. I had gone through the Leave No Trace awareness workshop with OA, but honestly couldn't recall much. I had my own opinions and wilderness ethics, but this Leave No Trace Master Educator course led me to think more thoroughly, deeply, and critically about my own beliefs, as well as be introduced to other perspectives from Jon (the Master

Educator Instructor from Landmark Learning) and the other students.

I really enjoyed our discussion of "Leave what you find" as well as talking about what are the "worst" actions in relation to Leave No Trace. We talked about the various reasons to leave what you find, such as its role in nature: it could be protecting the land from erosion or from the wind. Jon told a story about coming upon stalks two feet high in a stream. Of course it looks unnatural, but they decided to leave them, rationalizing that someone may have done this for spiritual reasons and it would get knocked down when the creek rose anyway. It was interesting to discuss not only what to leave in nature, but also what unnatural things to leave, and to take into account all potential impacts and timescales.

Raj Balaji '17

Having been on five Outdoor-Action-sponsored backpacking trips so far, I am relatively confident in saying that the Leave No Trace Master Educator trip is one of the most empowering and impactful opportunities offered to Outdoor Action leaders. I mean this in several ways, which I hope to explain now.

To begin with, the skills and techniques I perfected on this trip have the most potential to help minimize Outdoor Action's broader environmental impact. Annually, the program is responsible for sending approximately 1000 college students into the wilderness, a vast majority of whom have never set foot in the backcountry before. Represented in this group are several hundred potential traces left in the nation's supposedly pristine environments. These first-time backpackers, rock-climbers, and canoers typically would not litter based on malicious intent. Instead, their decisions might be a matter of innocent and wholly preventable ignorance. The efforts of Leave No Trace trainers in the Outdoor Action program is solely responsible for ensuring that Princeton University does not ruin national forests from

Virginia up to Vermont. Proper training of leaders ensures that each group of 8-12 minimizes its impact. I intend to aid in this process.

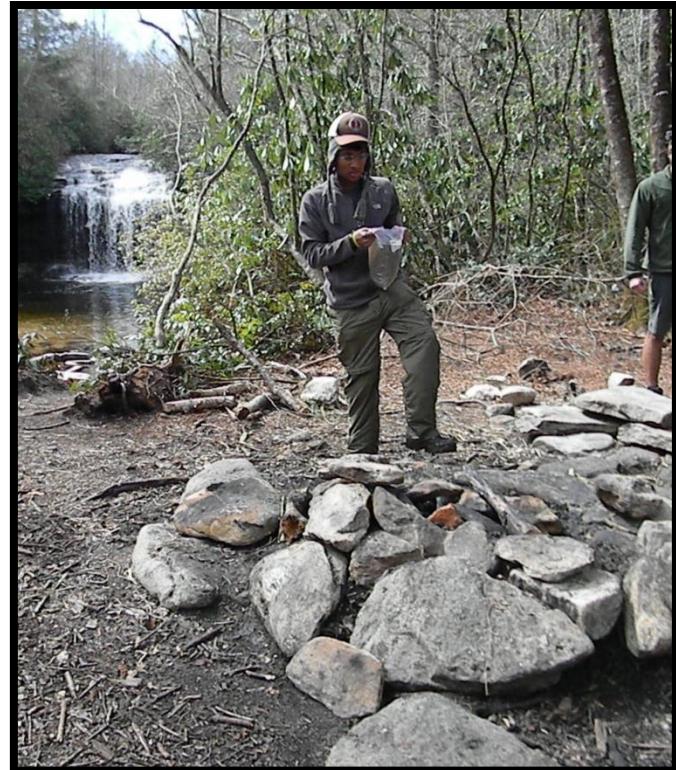
Raj puts out a smoldering fire that the group came across.

On a more personal level, I feel that the personal development I have undergone over the course of this week in Western North Carolina will manifest itself in more than just proper outdoorsmanship. A large focus of the course was teaching styles, techniques, and methods. Hence, any situation in which I need to condense and convey knowledge of some kind is a scenario in which the material I learned through the Leave No Trace Master Educator course can be put into practice.

With regard to Leave No Trace practices in particular, the Master Educator course raised more questions than it answered, and I believe that this is its greatest benefit. As a freshman who was introduced to Leave No Trace during the course of his own orientation canoeing/backpacking trip, I was initially under the impression that the seven principles were simply prescriptive rules defining precautions that should be taken in order to leave natural environments as enjoyable as they were when we found them. This trip allowed me the opportunity to reflect on the more philosophical motivations behind the seven principles.

From a more practical standpoint, this trip also led me to the realization that human activities are not divided into two distinct categories, one positive and one negative. Viewing actions on an “impact spectrum” and reasoning through the motivation, immediate effects, and long term impacts of actions has ultimately left me with a better ability to reason out the effects of decisions. Ultimately, scenarios I have encountered in the backcountry have always managed to defy textbook descriptions. This trip has greatly helped me develop my ability to navigate through these ambiguities by considering the deeper motivations and logical considerations behind the seven Leave No Trace Principles.

I began my involvement in the Outdoor Action program with the thought in mind that I would like to turn backpacking into a regular hobby of mine. I intend to continue practicing and preaching Leave No Trace in the many years to come, during and after my time at Princeton. Working at a visitors’ center on my last day in the Smokies offered me the chance to discuss Leave No Trace in a non-Princeton setting, and I greatly valued the opportunity. I hope to expand my involvement and broaden my impact, in order to help preserve the natural lands I have come to love.



Serena Zheng '17 (Computer Science)

I had several goals for this trip: explore the beauty of the Smoky Mountains and Western North Carolina, clarify my own understanding of Leave No Trace principles, learn how to present Leave No trace to Outdoor Action leaders and participants in a fun and engaging manner, and have fun. I am happy to say that I have achieved all of my internal goals and much more on this LNT Master Educator trip!

The landscape of Western North Carolina was the perfect backdrop for our LNT Master Educator course (and a wonderful break from suburban New Jersey). Panthertown Valley, where the backpacking portion of the course took place, had all of the beautiful natural characteristics of Western North Carolina—giant rhododendrons, plentiful waterfalls, and smoky fog on misty mornings—but it was also a very heavily impacted area with numerous social paths and fire rings at every campsite. Seeing the trace that humans had left on Panthertown Valley—especially the encroaching campsites—provided an excellent visualization of the negative consequences of human impact on the backcountry and the importance of LNT values. In contrast, the stunning grandeur of the well-maintained Great Smoky

Mountains National Park allowed us to experience the unblemished beauty of nature, a beauty worth preserving.



[Serena welcomes visitors to the Oconoluftee Visitors Center](#)

Learning about the LNT principles helped me understand all of the reasons for and methods to preserve the beauty of nature. Before the course, I was unclear as to why practicing specific LNT principles was necessary and, as a leader, could not always confidently provide answers to my Frosh when they asked why we needed to pack out our trash, dig cat holes, or broadcast dirty water. Now, I know the ethical, social, and environmental reasons we practice each LNT principle. Learning new techniques to practice LNT principles—building mound fires, new bear bagging techniques, and collecting fire wood—was another fun and productive aspect of the course.

Aside from furthering my own understanding of LNT, I was also able to learn how to teach LNT in an engaging manner as a Master Educator. My two main takeaways were 1) “Tell me, and I’ll forget. Show me, and I’ll remember. Let me do, and I’ll understand” and 2) the numerous interesting activities we did when learning about each principle (meditation, trowel relays, draw what you love, etc.). I am extremely excited to share everything I’ve learned on my Master Educator course with the OA community at Princeton and hope to help make the LNT curriculum for our Awareness Workshops for

leaders more engaging to motivate leaders to encourage their Frosh to care about minimizing their impact.

Overall, the trip was more educational and more fun than I had expected. I loved seeing the landscape of Western North Carolina, getting to know all of my fellow trip participants, taking day hikes to numerous waterfalls, learning about all of the LNT principles with activities planned by our instructors and peers, and experiencing the clarifying beauty of the misty fog enveloping the Great Smoky Mountains. I am so thankful for the fantastic opportunity to camp and travel to the Smokies—this was one of the best Spring Breaks ever—and I cannot wait to share everything I've learned from this trip!

Sumer Parikh '17

I am writing this having completed the entire Master Educator course, and am truly surprised by how much I have learned. To be honest, my main motivator to go on the trip was that I find OA trips enjoyable, but, thanks to the experiences I have had on this trip, and with the prodding of leaders Jon and Katie, I realized that the seven principles of LNT are much more nuanced than one might imagine.

I think that the setting of the trip played a massive role in helping us understand the importance of LNT. We could have easily been introduced to the material and teaching techniques in the classroom, but in the backcountry, we had a more hands-on experience, and more importantly were able to appreciate the beauty and balance of the outdoors we are trying to preserve.



Serena, Raj, Mike, Sumer, Sami, and Katie enjoy a wet day hike.

I enjoyed the free afternoon on the second to last day. We drove to the Smokies and went on a 4 mile trek to a rest house. Some of the waterfalls and views that we saw were stunning. Even though

this trek was not part of the curriculum, it really helped to reinforce a lot of what we learned on the trip by seeing a well-maintained national park and nature in its purest form.

I really enjoyed the community outreach on the last day; it went a long way to show how much people care about the environment and it says a lot that they were willing to take time out of their days to listen to our lessons. This opportunity energized the group to do a good job spreading awareness on our return to Princeton.

Mike Danielczuk '17 (Electrical Engineering)

In the past few days, we've been on several interesting hikes and happened upon numerous waterfalls; on the trek to Warden's Falls, we unexpectedly happened upon Jawbone Falls, and we also had lunch at the summit of Little Green Mountain. All of these sights have made me appreciate the beauty, integrity, and harmony of the nature around me. The group has definitely bonded over the daily lessons and delicious meals.

Today, Raj gave an awesome lesson on minimizing campfire impact in which he demonstrated a mound and pan fire, then let us build a mound fire in groups to really get a good understanding of a concept many of us had previously only seen in books or videos. Serena also gave an excellent lesson on disposing of waste properly where she invited us to meditate on what we found beautiful in the



Mike and Jon manage the table on "Leave What You Find" at the Visitor's Center.

The history of Panthertown Valley itself provides a constant reminder of the struggle of preservation in the United States as a whole, but as we have hiked through we have found additional points to apply

outdoors and the effect of waste on that beauty. These lessons were inspired by the demo lessons from Katie and Jon, our leaders. In particular, Jon's previous experience and knowledge of many new, exciting activities really have helped us come to a deeper understanding while really engaging us in the lessons. For example, he taught his lesson on Respecting Wildlife by splitting us into groups and having each group hide a Thin Mint cookie from the other group. Each group then tried to access the other group's cookies as if they were bears. This activity served as a fun but powerful motivator for the lesson, and I think that ideas like these could be hugely beneficial in reshaping and refocusing the Princeton OA Leave No Trace curriculum—especially for outreach programs for Boy Scouts and nearby schools. Beyond the lessons, the backpacking part of the trip has helped to reinforce and motivate the purpose and mission of Leave No Trace.

the knowledge we have gained and debate the merits and perspectives of each principle. For example, we debated the decision to erect and maintain a shelter near the trail, and whether the lack of consistent upkeep contributed to camp creep.

Finally, we have followed what we have been learning and learning to teach—leaving each campsite better than we found it and minimizing our impact on the valley around us. For me, the trip's impact has been twofold: first, providing me with reasons and applications for principles in which I already believe. Second, it has helped me come to a new understanding about how to disseminate my beliefs and my ability to minimize impacts to others. I now feel prepared to share my knowledge and educate others just as I myself have learned how to leave no trace, such that those behind me can experience the natural beauty that I hold so dear.



Panthertown Valley, North Carolina