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## **Correlations between Outdoor Recreation and Environmental Awareness in Participants with Various Ages, Cultures, and Abilities**

Jackie Murphy

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Correlations between Outdoor Recreation and Environmental Awareness in Participants with  
Various Ages, Cultures, and Abilities

by

Jackie Murphy

A capstone project submitted in partial fulfillment of the requirement for the degree of Master of  
Arts in Education: Natural Science and Environmental Education

Hamline University

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## CHAPTER ONE

### **Introduction**

*How can outdoor recreational organizations boost environmental awareness among various participants using Leave No Trace principles in a way that is accessible to all ages, cultures, and abilities?* This capstone analyzes a variety of different outdoor recreation outlets for the degree to which they effectively communicated Leave No Trace principles. Outlets include a gear company, rafting guide, paddling organization, and scuba instructor turned business owner. With each outlet, the age, background, and gender of ‘typical’ participants are evaluated, and methods to reach non-typical participants are considered. This capstone examines the ways in which companies and organizations educate participants on sustainable practices as they enjoy their leisure activities. An analysis of different outlets and programs indicates that outdoor recreation companies are most successful at inspiring people to adopt sustainable practices when participants are educated on such practices while engaging in outdoor activities that they enjoy.

Through this capstone exploration, my end goal is to create a space for organizations to learn from in order to boost their environmental education outreach within the outdoor recreation, informal, setting. The goal is to create media that take different outdoor recreation outlets and share the principles of Leave No Trace that is accessible to all ages, cultures, and abilities. The fact that many people enjoy spending time outdoors for leisure presents an important opportunity for environmental education outreach.

### **Background**

My career path to education was not linear. I began my college career as a Hotel and Restaurant Management major with a dream of starting a bakery with a philosophy modeled after

that of the shoe company, Toms. If you buy a pair of Toms shoes, the company pledges to also donate a pair to a person in need. After my first year as a Hotel and Restaurant Management major, I realized that maybe, since the goal was to open a bakery, I should learn to bake, right? Right! After one brainstorming session with my parents, we found ourselves on a tour at the Art Institute in Phoenix, only a short drive away from my childhood home. Of course, we were big fans, and later that day, I was signed up to start culinary school in three short weeks! As we toured, we learned there were multiple campuses around the US. I had always dreamed of leaving Arizona and saw this as an opportunity, so I decided to enroll at the culinary school in Denver, Colorado.

### ***Learning to Bake***

All moved in, beginning classes, I was having a lot of fun! Culinary school was like a movie. We called the instructor “Chef,” we wore our uniforms when we were in the kitchen, and I had my own knives that I took from class to class. Once the honeymoon period was over, I began to think about the reason why I wanted to open a bakery in the first place: to help people change their situations for the better. The more time I spent in culinary school, the more I felt that the industry was more competitive than collaborative and communal. After one short semester, I dropped out. Making the decision was quick. As soon as I said I was dropping out, a weight lifted off my chest. My days in the kitchen were a lot of fun, but I was not finding the purpose that I ultimately hoped for in a career.

### ***Exploring my Options***

I took my knife skills, along with my knowledge about stocks and soups, and moved back home. On the drive home, I had no idea what was going to happen next. I started to reflect on my first year as a student at Northern Arizona University. I thought back to a first-year seminar class



that I had taken only months ago. The class required all students to volunteer with children in some capacity. I was assigned to the Garden Club at a local elementary school. Every week, my students would come running from their classrooms to meet me in the garden after school, ready to get their hands dirty planting new seeds and tending the crops. As we prepped the soil for cilantro and plucked carrots from the earth, many students would share stories about their experiences gardening at home. In turn, I would share my own. Over the course of the semester, we celebrated victories, such as “*Check out how much basil we’ve grown!*” We learned from our mistakes: “*Why did our forget-me-nots die?*”

### ***Education***

With that, it hit me: education! I signed up for the Introduction to Education class at the local community college for a semester and finally felt like this was the path for me. Inspired by the ways in which Garden Club generated such enthusiasm in the students who participated, I took two outdoor and environmental education classes the following semester and was exposed to the many ways in which educators can use the environment to bring concepts to life, be it by having students write poems about trees, graph the growth of deer populations, compose songs about conservation, or even create their own self-portraits out of pinecones. The more I learned, the more certain I became in my choice to pursue teaching opportunities that would allow me to incorporate environmental education into my classroom curriculum.

After graduating from Northern Arizona University with a degree in Elementary Education, I went on to serve as a long-term substitute at a school in Vail, Colorado. Engulfed in the Rocky Mountains sat this beautiful log cabin of a school. One of the school’s principle focuses was exploring and nurturing the beautiful surrounding landscape. Students in sixth grade and older would start the year with a backpacking trip. Through this trip, they would grow as a

class as well as learn about different aspects of backcountry survival and safe environmental practices. At this moment in time, I knew I loved teaching, and even more, I realized I loved being a part of sharing the beauty of our Earth with people.

### ***Taking Environmental Education into the Classroom – or Should I Say, Outside***

Flash forward to the present, and I now live in Portsmouth, New Hampshire, and am in my third year of teaching. For two years, I served as a middle school science teacher, and now, I am the Director of Student Activities and teach middle school STEM. After my first year teaching science at the middle school level, I knew I wanted to do more. As a science teacher, I often took classes outside and planned lessons involving hands-on activities in nature. One of my favorite days as a middle school science teacher was taking the entire middle school student body off campus for conservation day in lieu of classes. I invited a guest speaker from a local organization that spreads awareness about human impact on local marine life. We then walked to the beach to conduct a beach clean-up. In the afternoon, I prepped a station activity in which students reflected on what they had learned and experienced that morning. The stations included activities such as an art project relating the experience to the Catholic faith and a news report of their findings to share with the school community.

### ***My Passion Grows***

Not only did my passion for teaching about the environment grow as I spent more time with students, but my own passion to get lost in the outdoors also skyrocketed. As I grew more interested in the outdoors, I discovered a community of people with the same passions. I took a handful of classes at REI to learn about mountain biking, snowshoeing, and hiking. I learned that I love surrounding myself with a like-minded group of outdoor enthusiasts. When taking classes led by outdoor recreation companies, they typically start and end the lessons by sharing Leave

No Trace principles. They share how to enjoy the outdoors respectfully so people can continue to join the fun for years to come.

This led me to my research question: *How can outdoor recreational organizations boost their environmental education outreach using Leave No Trace principles in a way that is accessible to all ages, cultures, and abilities?* While the goal of outdoor recreation companies is to get people outside, harm can be done to the environment if sustainable practices are not enforced. Instead, if organizations focus on preparing participants with best practices for interacting with the environment and presenting these practices in an accessible way, these organizations can minimize harm to the environment while exposing more people to its joys. Hopefully, these experiences have a ripple effect on the everyday lives of participants, encouraging them to make small changes each day that ultimately add up to a great positive impact on our environment.

### ***To the Classroom and Beyond***

Since being a part of this Master's program, I have been given the opportunity to see many different areas in which outdoor education and enrichment are being offered around the world. I was lucky enough to be able to take part in two different experiences that shaped the goal of my capstone project. Of course, *everyone* loves online learning, but my Mexico and Minnesota eco and agro-tourism experiences have, without a doubt, been the most impactful experiences I have enjoyed at Hamline.

### ***Mexico***

In January 2022, I signed up for a whale excursion to Baja, Mexico. Originally from Arizona, the thought of being surrounded by whales terrified me, but one of the reasons I signed up for Hamline was because the university collaborates with Ecology Project International.

Ecology Project International (EPI) is an organization that focuses on science-based expeditions for students and teachers. The organization has a handful of destinations where expeditions are led. They partner with local researchers near the destination so students and teachers can participate in real research that is being done locally. One key staple of the organization is teaching climate science. They take students to beautiful destinations that are at the forefront of climate change effects and share the challenges that the area is experiencing. By doing so, they educate participants on ways they can return to their own communities and become climate change fighters.

I knew my time with Hamline was limited as the Master's program is only two years, so as soon as I learned about the trip, I had to take advantage of the opportunity! Before this experience, I had never been out of the country, studied abroad, or experienced ecotourism firsthand. I experienced many “firsts” along the way, including snorkeling, camping on the beach, and participating in active research. Each morning, we would begin together at breakfast and share how we were doing, relay our favorite parts of the day before, and then talk about what we learned and how we would use that knowledge when we get back to our homes. Over the ten days I shared with the women on the trip, I learned about their backgrounds and future aspirations, which I found incredibly inspiring.

Not only did I fall in love with our campsite on Isla Santa Margarita, but I also fell in love with the learning community that was built and established on that beach. I want to do all that I can to recreate that environment for others. We shared a connection, spent six days camping, ate all our meals together, and experienced laughter, tears, fear, and bravery, all of which created an indescribable experience.

This experience has inspired me to want to create similar experiences for others in which participants have fun, are challenged physically and emotionally, and connect with the environment. Like a parent trying to sneak vegetables into a child's meal, teaching others about the environment is good for them, even if they do not realize it yet themselves!

### ***Minnesota Eco and Agro-Tourism Experience***

My time in Sandstone, Minnesota on a Hamline trip also proved formative for my career aspirations. I took a sustainable foods class at the Osprey Wilds Environmental Learning Center. I knew what I was getting into—I was not kayaking, biking, or playing outdoors. Instead, I was going to be spending four days exploring farms and actively engaging in environmental education. Over the course of this trip, I traveled to different farms to hear from the farmers themselves about all the systems they had in place to be more sustainable. Hearing from the experts who truly practiced what they preached inspired me. I am a twenty-seven-year-old female with minimal experience in the outdoors, and I realize that I have much to learn from those who have spent their careers engaging in outdoor recreational activities that lead to positive environmental change.

### **Rationale**

Making environmental information easily accessible is key. If organizations that provide outdoor recreational experiences incorporate educational aspects into their programs, participants will learn about environmental practices without having to separately seek out the information. Making information readily accessible, and digestible, and providing multiple opportunities for participants to do good for the Earth will also allow more buy-in from the consumer.

### ***My Plan***

I plan to create a podcast series to highlight some outdoor recreation companies and people in the industry's hard work in informing participants about sustainable practices. Through these conversations, I hope to share messages and ideas with other people in the industry. The podcasts will focus on how different companies are making environmental health a guiding principle in what they do and encouraging participants to act when outdoors. I intend to interview people who engage in outdoor activities in an intentionally sustainable manner. My hope is that these podcasts become a guide for companies and individuals to best engage in the outdoors while showing an appreciation for all that Mother Nature has to offer. My podcast will highlight how sustainability practices and outdoor recreation can go hand and hand.

### ***Social Context***

The “outdoorsy” personality type has become trendy, and in some ways, elitist. Being able to share outdoor recreation practices and information in a digestible manner for all will not only increase participants in the outdoors but also increase the amount of environmentally engaged participants in the outdoors. It is important to acknowledge the different tiers of outdoor recreation participants (from always having the right gear to not even knowing that specific gear exists for a certain activity). A podcast is engaging, thought-provoking, and accessible, therefore serving as a means to reach people regardless of whether they have been mountain biking since they were four years old or are just learning to bike at the age of fifty-seven.

Experiences and activities are what draw participants in. The goal is to take the opportunities that outdoor recreation companies create and capitalize on the environmental education information that they share. The podcasts will inspire listeners to take the activities and develop a better understanding of their impact on Mother Nature.

## Summary

This capstone presents an opportunity to create a forum that shares best practices from experts for people who engage in outdoor recreation as a leisure activity. Individuals and organizations can listen to experts as they work to develop their own set of environmental practices to, in turn, share with their own communities. Through incorporating social context, experiences and activities, and takeaway projects, participants will be able to begin to develop sustainable practices as they engage in outdoor recreation activities that foster a sense of responsibility to the ground beneath them.

As I work to investigate the outdoor industry and current best practices for informing participants, I aim to find an effective avenue for implementing environmental education in the outdoor recreation setting. Since simple phrases such as *climate change*, *eco-friendly*, and *sustainability* have become polarizing words in this day and age, teaching best practices in the backcountry can often be challenging. Since the outdoors is for all, it creates a unique space to reach participants who are uninterested in hearing certain topics in traditional settings. With that in mind, I have decided to create a podcast that features experts in different areas of the outdoor industry to speak to: *How outdoor recreational organizations boost their environmental education outreach using Leave No Trace which is accessible to all ages, cultures, and abilities?*

In the following chapters, an analysis of literature exploring the current understanding of environmental education practices in outdoor recreation settings will set the stage for the project. Reviewing where Leave No Trace principles began and how organizations are using similar language has helped unify a multitude of sports being able to follow similar rules while in the outdoors. In Chapter Three, a methodology will be outlined along with a rationale for each step.

Chapter Four will conclude the project and describe which parts have been omitted from the scope.



## CHAPTER TWO

### Literature Review

#### Introduction

In this chapter, an evaluation of literature related to my research question: *How can outdoor recreational organizations boost their environmental education outreach using Leave No Trace principles in a way that is accessible to all ages, cultures, and abilities?* The literature review explores environmental principles and their implementation by recreational organizations to educate the participants. There is a multitude of environmental practices and principles that inform different policies and practices in our world. The environmental principles highlighted in this capstone are called *Leave No Trace (LNT)*. As stated on the Leave No Trace website the principles refer to a set of outdoor ethics promoting conservation in the outdoors. Once LNT is defined, the literature review will address the likelihood of participants following these principles as well as the accessibility of the recreational sport itself.

This chapter focuses on how participants are able to partake in different recreational activities as well as how LNT is shared. The Chapter looks into how to gain other participants that are not typical in certain recreational sports and how organizations can spread relevant environmental education information further. Finally, I will how different outdoor recreation organizations share key environmental information with their participants. I research if there are any goals in sharing environmental education and look into the accessibility of those goals for participants from the past, present, or future.

#### ***Defining Environmental Principles through Leave No Trace (LNT)***

Outdoor recreation activities such as hiking, biking, camping, or skiing, became popular in the latter part of the 20th century and into the 21st century. Since then, interest in exploring

nature through a variety of leisure activities has increased steadily as books, films, and social media depict and promote the positive effects of being outdoors on physical and mental health. (Sharp et al., 2020). Increased interest in the outdoors creates an increased use of outdoor areas, creating a need to reduce the overall impacts of visitation and use to conserve the natural environment and, therefore, preserve positive visitor experience. The visitor experience would be the draw to get people outdoors. If people are educated about their role in preserving the visitor experience, they may be likely to care about the world around them. Indeed, the more they are exposed to the beauty of the natural world, the more likely they may go out of their way to take positive actions to better the environment around them.

Common physical impacts from human activity in nature include erosion, compactions, trampling, and impacts on wildlife (Leung & Marion, 2000). Even simple off-trail walking leads to the trampling of precious plant species. These plant species may be critical to supporting a thriving ecosystem. As certain areas become more high-use, they are at higher risk of being impacted negatively by humans. Thus, as people increasingly enjoy the outdoors for leisure and recreation, they must do so in an increasingly sustainable way.

***Leave No Trace (Leave No Trace Center for Outdoor Ethics, 2021):***

Leave No Trace was incorporated as a 501(c)(3), nonprofit organization in 1994, though the Leave No Trace concept is over a half-century old. Care, responsibility, and stewardship for the outdoors is not a new idea. Many Native American and Indigenous cultures teach and embody stewardship values, and have done so for eons (“History of LNT” 2022). These ideas were formalized in the 1990s because of increased participation in outdoor recreation.

A program was started in 1987 called “no trace” for backpackers and wilderness travel. In 1990, a pamphlet titled “Leave No Trace Land Ethics” was published by the U.S. Forest

Service, National Park Service, and Bureau of Land Management. This led to the creation of the National Outdoor Leadership School (NOLS). The NOLS was tasked with developing hands-on, science-based, minimum-impact education training for non-motorized recreational activities. Then, in 1993, an Outdoor Recreation Summit with land management agencies, NGOs, and members of the outdoor industry met in Washington, DC to form an independent Leave No Trace organization (“History of LNT” 2022). Since then, LNT has cooperated with a diverse set of organizations such as federal land management agencies, outdoor industry corporations, nonprofit environmental and outdoor organizations, and youth-serving groups. (“History of LNT” 2022).

### ***Seven Principles***

Leave No Trace (LNT) has created a framework of seven principles to help educate everyday participants on the best practices when in the outdoors. The seven principles are commonly used in the outdoor industry but are not static and have been adapted so they can be applied anywhere from local parks to the Grand Canyon.

LNT programs encourage visitors to consider the environmental and social consequences of their actions, promoting enhanced ethics and a self-directed modification of personal behavior (Marion, 2007). The Leave No Trace Educational Review Committee (Marion, 2007), composed of land managers, scientists, and practitioners, develops, refines, and approves practices and messaging to ensure validity and consistency. The LNT messages emphasize the development of judgment and context-specific decision-making over forced adherence to rigid practices, therefore making LNT an approachable outdoor ethics guide for people of all ages, cultures, and abilities.

In conclusion, LNT includes the following seven principles: plan ahead and prepare, travel and camp on durable surfaces, dispose of waste properly, leave what you find, minimize campfire impacts, respect wildlife, and be considerate of other visitors. The role of a land manager is to share this information and hold visitors accountable for following the code of conduct and lessening their impact while enjoying the outdoors.

### **Environmental Responsibility**

Protected areas that adopt LNT have protected area managers who help enforce the practices. These are people who spread information about the parks and guide people using the spaces to enjoy the outdoors while respecting the environment. A principle challenge for protected area managers is to eliminate avoidable impacts, such as litter, tree damage, or noisy and rude behavior, and minimize unavoidable impacts, such as trampled vegetation and wildlife disturbance (Sharp et al., 2020). Having access to certain parts of protected land enables people to knowingly or unknowingly leave impacts on the land. Land managers must work to create awareness and enforce proper environmental use, focusing on limiting avoidable impacts from visitors. Land managers can enforce a wide variety of educational principles through indirect management or direct management (Sharp, Maples, J. N., & Gerlaugh, K., 2020).

### ***Direct and Indirect Management Methods***

Direct management and indirect management are the two methods for limiting environmental impact and both have unique benefits. Direct management refers to actions such as permit systems or closing trails. Indirect management, by contrast, is less intrusive and more cost-effective for parks and organizations. LNT is an example of an indirect approach to help aid in better outdoor ethics from participants (Sharp et al., 2020). Harmon's (1997) research states:

Although direct management can sometimes regulate visitor behavior more rapidly than indirect management techniques, such approaches have limitations (e.g., decreases visitor choice and decision-making freedom; may require considerable resources; can cause conflict, controversy, and backlash) and should be applied after indirect strategies that compel visitors to make appropriate behavioral decisions have been exhausted. (p. 2)

More often than not, visitor behaviors are unintentional and a result of unskilled, uninformed, or careless actions (Manning, 2011). Visitor education designed to persuade visitors to adopt low-impact practices is considered a more appropriate, light-handed, and indirect management response to reduce resource impacts or improve visitor experiences (Manning, 1999; Roggenbuck, 1992). Behaviors such as walking off trail and trampling precious vegetation, not storing trash properly so that it flies away, or picking a flower off its stem are examples of unintentional visitor behavior.

Site management actions, such as developing recreation sites or trails, are less direct, but they are also costly and will permanently alter the natural setting of recreational experiences (Hendee & Dawson, 2002; Stankey & Schreyer, 1987). Site management actions can also include adding bridges, paving a segment of a trail, or creating an overlook to improve land protection. Actions such as these can transform the visitor experience from one that is primitive and intimate to one that is more developed and separate from nature (Marion, 2007). Due to the different methods of land management, the project focus on indirect management through LNT due to its accessible and applicable nature to all outdoor recreation.

### ***The Outdoors For All***

In the early 1960s, the number of people participating in outdoor recreation increased dramatically (Simon & Alagona, 2009). Outdoor sports were once considered to be on the fringe

of societal activities, but as media and studies were released about the positive mental impacts of being in nature, people flocked to the outdoors (Sharp, Maples, J. N., & Gerlaugh, K. 2020). With the increased use of parks and outdoor sites came the realization that overuse can diminish the experience people are seeking in the outdoors (Morley, Chase, & Lawhon, 2008). Not only could increased interest in outdoor sites harm the visitor experience, but it would also have ecological effects including negative impacts on soil health, water, vegetation, and wildlife (Coulson, 2021).

### ***Accessibility to information and outdoor recreation***

When referencing the outdoor recreational industry, it is necessary to define outdoor recreational activities. For the purpose of this paper, outdoor recreation is broadly defined as any leisure time activity conducted outdoors. This paper looks into typical participants that are found in such settings and seek information about opportunities for different racial groups, ages, and ability levels in various activities outdoors. This paper looks further into how organizations are distributing healthy environmental information to all participants and any outreach that is being done to support environmental efforts.

### **Access to Outdoor Recreation**

#### ***Racial Populations' Participation in Outdoor Recreation***

Despite an increasingly ethnically and racially diverse population in the United States, growing evidence indicates that BIPOC populations are underrepresented in national forest visitation (Winter, 2019). Such efforts to engage underrepresented groups are reflective of agency climate contributing to the sustainability of programs and the inclusion of natural resource managing agencies as a part of communities. A multitude of studies has been done that share the benefits of outdoor recreation and nature exposure for mental, physical, and even

income-related inequalities in health (Winter, 2019). Not only does being outdoors increase health and well-being, but it also provides community and social cohesion, regardless of one's race, socioeconomic status, age, or abilities.

### ***Identified barriers***

Over the years, research primarily in the U.S. has identified many barriers to racial and ethnic BIPOC groups' wider use of recreational facilities, including differences in leisure time preferences and a lack of time, money, or access (Winter, 2019). Another area to note as a cause of disinterest in the outdoors is the lack of representation in the media for BIPOC populations using the outdoors as a means of leisure activities (Maples, et al., 2022).

A major factor found to limit participation is the lack of awareness or general lack of information about opportunities for outdoor recreation among BIPOC populations in the U.S. and other countries. Focused programming is spreading a message of outdoor recreation as a shared cultural experience among BIPOC populations to advance inclusion through various means, including the use of social media platforms, and involving representatives from members of BIPOC populations to share culturally relevant messages and experiences (Winter, 2019). Technology campaigns have begun to provide outreach to underrepresented communities, but inequitable access to computers and the internet was offered as a cautionary note in early work. However, the digital divide has been remedied to some degree given the broader adoption of smartphone use among BIPOC populations in the U.S., although traditional access through a home computer remains inequitably distributed for these same groups when compared to the white population (Winter, 2019).

### ***Ages in the Outdoors***

As research was being done on this topic, the term ‘active aging’ came up quite frequently. Active aging is the idea that the more active you are throughout the aging process, the healthier, happier, and more well-adjusted you will become. Outdoor spaces are places that promote physical activity, mental health, and social interactions to aid in the active aging process (Currie et al., 2021). Older age groups are less likely to access outdoor environments for recreational purposes than younger or middle-aged groups of people (Currie et al.). There are a number of contributing factors that explain why people spend less time on outdoor recreation activities as they age. Freeman et al. (32) found that older people’s health affected their ability to access nature. As people age, they are less able to undertake strenuous activity, resulting in a slower pace, loss of independence, and inability to do activities.

There are benefits to increasing efforts to make the outdoors accessible to the elderly. It has been found that as people become older (particularly the ‘oldest old’), their social networks decrease. Activity in the outdoors has been shown to promote social interactions. Decreased social networks can increase the experiences of loneliness and depression (Currie et al., 2021). Thus, outdoor activities could provide a means to increase social networks among the aging. Companies working on providing access to outdoor and natural spaces for the elderly will help not only promote quality of life but also increase physical and mental health benefits for people in this age group.

### ***Disabilities in the Outdoors***

There are risks that come along with doing activities outdoors. When referencing people with disabilities in the outdoors, risk management must be seriously considered. The outdoors is framed as a space that promotes well-being and resilience by providing an opportunity to test



physical and mental stamina through a variety of recreational pursuits in what can be risky environments. For people with disabilities, such spaces have historically been associated with rehabilitation rather than with pleasure or leisure pursuits (Burns et al., 2013). Lupton and Tulloch (2002) used these ideas in an empirical study of voluntary risk-taking. They concluded that risk-taking such as that afforded by leisure practices provided opportunities for self-improvement, emotional engagement, and self-control. Furthermore, risk-taking led to more opportunities and increased openness to spontaneity. Alleged fears around health and safety are being used to deny people with disabilities not just the right to participate in an activity, but also is being used to deny their own competence to determine their own risk (Burns et al., 2013). Therefore, supporting and informing people with various abilities about their access to the outdoors supports not only benefits their health and well-being but also allows participants to increase their connection to the environment around them.

In conclusion, everyone, regardless of their background or identity, deserves the opportunity to experience the benefits that come with outdoor recreation. Creating access programs and distributing information is key in order to informing all people of the benefits that come with outdoor recreation and how to get involved.

### **Recreation and behaviors that support LNT**

There are different activities that are considered outdoor recreation activities and information is disseminated and if a certain sport or activity has mastered its approach that should be shared and replicated. There are countless sports and activities to research, but the three that I chose—hiking, rock climbing, skiing, and snowboarding—are entry-level and more mainstream.

### ***Hiking with Leave No Trace***

Seasoned hikers may take more adventurous routes and begin to go into the backcountry, but proper leave-no-trace principles have been embedded into hiking culture. Having the LNT principles embedded into hiking culture makes hiking the easiest recreational activity to follow.

### ***Rock Climbing with Leave No Trace***

Climbing presents unique land management issues such as cliff line biome impact, bird nesting disruption, dirt compaction, and erosion (Clark & Hessel, 2015; Covy et al., 2019; Sharp et al., 2016). Climbers, aware of this knowledge, have initiated education efforts to minimize their impacts. One study from the West Virgin River rock climbing community stated that climbers overall scored generally well on LNT Principles knowledge related to specific climbing activities. The study indicates that there is a need for further discussion of why this knowledge might vary by certain demographic variables. This supports continuing programs bringing educational opportunities like these to outdoor recreation users (Clark & Hessel, 2015; Covy et al., 2019; Sharp et al., 2016). One notable aspect of LNT training among climbers today is how LNT is included alongside efforts to increase diversity in the climbing community (Maples et al., 2022).

### ***Skiing/Snowboarding with Leave No Trace***

Most skiing and snowboarding can be done at ski resorts with established companies that run lifts, lodging, and more. This paper will focus on snowboarding and skiing at a resort. With that being said, the greater resort bears responsibility for the overall impact of the activity on the mountain environment, rather than the burden falling on each individual skier or snowboarder. Participants can choose to ski and snowboard where their environmental values align with the

business, but they do not have direct say in large-scale actions that may increase environmental impacts on the mountain where the resort is located.

Ski areas use resources such as water for snowmaking, energy for operating chairlifts, and forests and wildlife habitat for recreation terrain. Impacts in these areas include air pollution from maintenance equipment, as well as erosion, habitat fragmentation, exotic species introduction, and clearcutting on ski slopes (Watson, 1985; Puntieri, 1991; Tsuyuzaki, 1994). Some ski areas have taken steps to reduce their impacts by implementing voluntary environmental programs (VEPs) to counteract what has been done in the past. In 2000, the National Ski Areas Association (NSAA) created the Sustainable Slopes Environmental Charter in partnership with the Environmental Protection Agency, Forest Service, and other agencies (Little, & Needham, 2011). The Sustainable Slopes Environmental Charter is a way for ski areas to commit to sustainable practices across their operations.

### **Summary**

This literature review outlined the Leave No Trace environmental principles as it relates to the question of *How can outdoor organizations boost their environmental education outreach using Leave No Trace principles that are accessible to all ages, cultures, and abilities?* After looking into the history of LNT and defining its principles, the paper illustrates how all people can benefit from time outdoors. In doing so, the paper addressed BIPOC populations, elderly people, and people with varied abilities. Once different participants' access to the outdoors was defined, a variety of outdoor sports and their participants' views toward LNT principles when outside were explored. This leads to the creation of media to share information regarding outdoor recreation enthusiasts' experiences in the outdoors with the use of Leave No Trace Principles.

## CHAPTER THREE

### Project Description

#### Introduction

To address the question, *How can organizations boost their environmental education outreach using LNT that are accessible to all ages, cultures, and abilities?* I have created podcast episodes featuring guests who share how they incorporate environmental education into their outdoor recreational sports programs or companies. The episodes explore different organizations' LNT principles they deem important to share as well as the methods they use. The episodes also explore different outreach programs that are designed to engage a variety of participants and increase usage of the outdoors. Increased use of outdoor spaces has a greater impact on the environment. Outdoor recreation companies are at the forefront of bridging the gap between new and seasoned outdoor participants. Sharing best practices on distribution methods of LNT principles is key to supporting the growth of outdoor recreation sports and participants.

Chapter 3 outlines a description of the project and explain the varying methods in which organizations share environmental principles with their participants. This chapter also highlights outreach programs that outdoor recreation companies have launched to spread awareness and growth of different sports.

#### Rationale

Fully outlining the podcast provided a clear direction for the conversation so that the benefits of sharing environmental practices with participants are clearly discussed for listeners. Once the outline had been finalized, a setting and audience for the project will be defined. A timeline describing how the podcast has been accomplished as well as a description of potential implementation for audience members to take action into their own hands, was then developed.

The goal of the creation of this podcast was to create an audio library for organizations to use in order to boost their environmental education outreach within the informal, outdoor recreation setting. Casual listeners will be able to peek behind the scenes at an outdoor recreation company's mission and vision. Listeners will learn from experts and hopefully take away one piece of advice to bring into their own day-to-day world to better the environment. The series should be approachable and enjoyable and inspire the audience to get outside while being environmentally cautious.

### **Project Description**

This project was a podcast series with five episodes. Each episode features a guest from an outdoor recreation company. The guest introduces the mission of their company and the ways in which they work to increase accessibility to the outdoors. A podcast is a tool for enthusiasts and various outdoor companies to listen and learn from different experts in the field. Guests featured on episodes include an owner of an environmental consulting business, a river guide, a paddling company owner, and a member of an outdoor gear company. There is a prepared series of questions and topics covered in each episode, but as the nature of a podcast goes, the more free-flowing and conversation-based, the more enjoyable and engaging for the listener. Episodes cover topics including, but not limited to, how the guest was introduced to the sport and different LNT informational outreach efforts that are being done in the sport.

### **This Way Out(Side) Podcast**

#### ***Episode One: Diving Deep into Conservation***

Episode one, *Diving Deep into Conservation*, features guest star Krista Esplelien, a scuba staff instructor with technical diver ratings, an environmental consulting business owner, and an environmental education professor at Hamline University (**see Appendix 1**). We discuss how she

fell in love with being underwater and her experience learning and leading dives in a variety of different places. She introduces me to a woman named Roberta who leads adaptive dives through her company Scuba Shack. Roberta has partnered with LifeWaters, a group that facilitates dives for people with disabilities. They are able to accommodate and adapt the sport for paraplegics, quadriplegics, amputees, and people suffering from PTSD as well as acute brain trauma. Within their facility, Scuba Shack, they offer a course called Scubility to help professional divers, dive buddies, and people with disabilities understand and take part in adaptive diving.

Krista Esplelien shares her journey combining her love of scuba with the environment to create her environmental consulting business, Environs. Through her work with Environs, she travels to different lakes in Minnesota to search for invasive species. She is able to offer specialized scuba dives in lakes to search for early detection of invasive species. She shared how her clients, people who live/own various lake properties on various Minnesota lakes, are already looking to lessen their impact when they reach out to her for help. In this episode, we also talk about an outreach program in Minnesota called Starry Trek. Starry Trek is a statewide event focused on searching for one of Minnesota's newest aquatic invasive species, starry stonewort (Minnesota Aquatic Invasive Species Research Center (MAISRC)).

### ***Episode Two: Making Waves in Outreach***

In episode two, I am joined by Courtney Devours, a rafting guide from Wilderness Inquiry (**see Appendix 1**). We focus our conversation on the mission of Wilderness Inquiry: to give access to local waterways to all people. She talks about her time leading the Canoemobile, a floating classroom. The Canoemobile travels to major cities all over the U.S. to bring students to their local waterways. They travel around the country so that a diverse array of students have the chance to experience an outdoor field trip right in their backyard. These experiences change

waterways into places of recreation, learning, and community-building. From San Francisco to the Bronx, Canoemobile serves more than 30,000 youth and adults of all backgrounds and abilities each year (Wilderness Inquiry, 2023).

We discuss how Wilderness Inquiry is taking large strides in creating access to recreational water opportunities. She speaks about an event in San Francisco that was put on by the Environmental Traveling Companion to get a whole paddling company for people with varying abilities on their local waterways. She spoke about all the different adaptive equipment they carry with them to each location as well as the specialized gear that was at that event. She talked about how even at their campgrounds at the Apostle Islands in Minnesota, they still aim to make camping accessible for all. For example, they built boardwalks to help support people in wheelchairs.

Courtney Deavours also shares about the Gateway to Adventure program which is for people with high-need disabilities. The program provides one-to-one support to get people out on the water. It was interesting to hear all the different experiences that Courtney led and to hear how Wilderness Inquiry shares with people how they have access to waterways right in their own backyard.

### ***Episode Three: Trailblazing in Sustainability***

In this episode, I am joined by Theresa McKenney, Director of Sustainability at NEMO Equipment (see **Appendix 1**). We learn about her journey to NEMO and how she became the Director of Sustainability. She shares how NEMO is trying to pave the way in not only innovation but sustainable development. Speaking about how they are launching a handful of new campaigns and products to support their mission.

Theresa shared that on the NEMO website, they have a library of videos of how to use their gear to help spread the word of proper use. The goal of this library is to engage newcomers to the sport to bridge the gap between the newcomers and the seasoned veterans.

#### ***Episode Four: Adventure Education in Action***

In episode four, I am joined by Karlie Weavers, a jack of all trades when it comes to leading expeditions in the outdoors (**see Appendix 1**). We focus the conversation on the mission of SOAR, an adventure education boarding school for children with ADHD and other learning disabilities. She talks about her role within SOAR where she was a field guide for groups of eight students over the course of five years.

The SOAR program combined small class sizes with outdoor experiential education experience to support the needs of students with different abilities. She speaks about how the goal of the program is to have students be confident in their skills of planning and running their own expedition once the year is over. Students come to SOAR with a variety of different outdoor experiences, and through the course of the program, the majority of the students changed their minds and impressions of the outdoors to a positive light.

The school also focuses on community engagement when they are not on an expedition. This leads to students practicing LNT principles in the real world. Students are encouraged to volunteer in the local river and trash clean-ups, work in food pantries, and more. Students are not only learning how to enjoy the outdoors but they are being taught how to play in the outdoors safely while using LNT.

#### **Participants and Setting**

The podcast focuses on outdoor businesses and how they are supporting their participants' safe recreation in the outdoors. Although the podcast series was designed for



outdoor recreation enthusiasts, the hope is that it will be shared with people who do not often go outside and play. The podcasts are approachable for beginners and relatable and informative for experts. They share how there is a variety of accessible outdoor recreation opportunities that support the health of the environment.

The project is intended to reach environmentally conscious people who are also active in or interested in outdoor recreation. Since the podcast will feature different sports, ideally that will attract members from a multitude of outdoor recreation communities. The goal to open the door to a wider audience would be to reach more people in the hopes of creating more well-rounded, environmentally conscious outdoor recreation community members.

The age requirements to explore the outdoors are limitless. A podcast is a means of disseminating information in a manner that is approachable and digestible to all, no matter the age. The podcasts feature a wide variety of guests in an attempt to appeal to different groups, no matter their age, race, or ability levels in the outdoors. The podcasts provide all with a baseline of information to share with a variety of audience members.

The setting in which people will be able to access this information will be wherever they want it to be – which is the beauty of a podcast. Whether they decide to listen on a walk with their dog, as they clean their house, or as they are rock climbing, the accessibility to podcasts is very high. Using the Spotify platform allows listeners to access from any smartphone or internet-available device whether they are a subscriber or not. Spotify allows access with additional ads to those who are not subscribers.

### ***Timeline***

The planning period for this project began in January of 2023. At the beginning of this project, the overarching goal was to share environmental education with all people who enjoy the

outdoors. Once a podcast was determined to be the method for communicating information, it became clear that this project could reach outdoor recreation participants and expert outdoor explorers alike.

In order to best define environmental practices and outreach programs for outdoor recreation participants, research has been conducted and synthesized into questions for companies to better understand how they take the love and passion for what they do and share it with their customers. In other words, the podcast episodes ask the guest speakers to consider questions that speak to how their company is working to make their outdoor play sustainable into the future.

Sharing and listening to the podcast has no ideal timeline for completion. With a podcast series, audience members may choose to only listen to some of the episodes that most interest them. With that being said, podcast episodes can be released as interviews are completed. As the episodes are released, efforts will also have to be taken to raise awareness of the podcasts via the website.

### ***Assessment***

In order to define the project's success, an optional survey was conducted before podcast episodes are released to customers at local outdoor recreation companies about their knowledge of environmental practices. The survey contained a wide variety of broad and then more sport-specific questions to get a baseline of knowledge regarding best practices when in the outdoors.

After releasing episodes, a survey will be attached to the show notes for listeners to complete after each episode. The questions will vary just like the first survey but will also ask the user to indicate how many podcast episodes they have listened to. The data collected from these

surveys will determine the success of this project. Another purpose of this survey was to gauge how much information the listener took in relation to the different LNT practices that were shared in the various podcast episodes.

### **Summary**

The goal of this project is to create accessible information for all types of people to get outdoors responsibly. The more people play outside, the happier and healthier they will become. That being said, with more people engaging in the outdoors, there is a greater risk of potential harm to the environment. With that in mind, it is necessary to encourage people to get outside *responsibly*.

Through a variety of podcast episodes, I was able to discuss how conservation, outreach, and gear companies are trying to support bettering our environment by informing participants. The guests I spoke with in the outdoor industry shared how they place Leave No Trace principles in their companies and feed the information to their participants.

Fully understanding the scope of the project will be outlined in Chapter Four. It will evaluate the success of the project as well as some reflections on the process and outcomes. This final chapter will also explore ways that this project could be improved or expanded upon in the future.

## CHAPTER FOUR

### Conclusion

#### Introduction

The paper starts with sharing the background and inspiration that led to the creation of this capstone while summarizing the moments in my life that guided me to enroll in the Natural Science and Environmental Education program at Hamline University. Once enrolled, I shared experiences that were unique to Hamline that continued to push me out of my comfort zone and helped me to explore environmental education firsthand. With every environmental education experience, I was excited for the next one. I left the experiences feeling fulfilled and having formed new bonds with people from different backgrounds with various experiences in the outdoors. I realized that a common theme from the experiences was connections: connection to the environment and to the people that had shared these experiences. With the theme of connection in mind, I decided to explore the connection between outdoor recreation and environmental awareness. I define outdoor recreation as a leisure activity that is done outside in a variety of ways. Assuming that a leisure activity is done because a person enjoys it, the thought is to combine these activities with tidbits of knowledge about LNT to support greater environmental awareness.

Since the outdoors is for all, a major goal of this project is to spread awareness of the benefits and ease with which anyone can enjoy the outdoors. To some, the outdoors is seemingly inaccessible due to a variety of reasons, such as physical barriers, or lack of knowledge. The project supports newcomers while also providing seasoned outdoors enthusiasts with best practices when outdoors. The platform in which the project is being produced is accessible on any device that can connect to the internet, making the information readily available to all. The

goal of the project is to allow people to essentially listen in on conversations about how people get outdoors and how they do so with the environment in mind.

### **Overview**

The deliverable of this capstone project is an audio media, long interview format podcast that answers the question: *How can outdoor recreational organizations boost environmental awareness among various participants using Leave No Trace principles in a way that is accessible to all ages, cultures, and abilities?* The podcast provides experts in different areas of the outdoor industry to speak about how they are creating a more accessible outdoors through various outreach efforts as well as providing a variety of equipment to support people with different abilities. In creating a more accessible outdoors, these experts are able to spread environmental awareness to more people in the form of LNT principles. The end goal of this project is to encourage everyone to get outdoors, but do so with environmental awareness.

### **Lessons learned**

Thinking about my experience at Hamline has reminded me of my first backpacking trip and all the prep, planning, and recovery that came with it. Starting the planning and prep work for the trip consisted of making a list regarding food, gear, and equipment. During these stages of planning for the trip, I was filled with excitement and fear. I was constantly absorbing information about the terrain, best environmental and technical practices, and checking the weather leading up to the departure date. Once we got in the vans and made our way to the trailhead, there was no turning back, I was in it for the next seven days. Feet on the ground, looking at the desert ahead, I remember making sure to gather all the needed supplies out of the van while asking myself a variety of questions: *Did I bring everything I needed? Are those rain clouds? Did I apply enough sunscreen?*

With the hope that I was adequately prepared came the next seven days in the backcountry, which included climbing up mountains, traveling through dried river beds, and navigating through fields of Cholla Cacti. Each day came with the highs and lows of navigating a region of the backcountry that was unfamiliar with no set trails. Finally, the last day came and we only had six miles to travel on flat ground. This last day was arguably the most emotional day because the walk was flat and lacked rigor but with each step, we were closer and closer to the completion of our goal of six days in the backcountry. Once we made it back to the vans, I felt feelings of accomplishment, fulfillment, and connection to the environment. Once I was back home and settled, I started to yearn for more and continued my backpacking and outdoor exploration.

I have noticed similarities between that experience with my overall journey at Hamline. My backpacking trip took much planning and prep work, just like the completion of my degree has taken hours of coursework. My coursework has been filled with information regarding environmental education and all the areas it can be used. Each class shares a variety of topics and potential project ideas that have filled me with excitement and fear about the requirements in order to complete the degree.

To deepen the comparison, I spent days in the hard work of backpacking, just like I have spent months in the hard work of completing my capstone project. I would compare the hard climbs of the trip to the days that passed writing and researching this project. Finally getting to the top of the mountain left me feeling relieved. The completion of each chapter of my project has given me similar satisfaction. There were also some days where we spent most of the day feeling lost, unable to identify our location and seemingly getting farther away from the predicted campsite. I have felt lost in a different way, at times, during the revision process. More

than once, I looked back at my research question and questioned whether I should have gone in a different direction or taken a different approach. Although I considered adjustments, I ultimately decided to stick to a path. The completion of this chapter is like the final day of the backpacking trip. As I sit here writing, I can see the end in sight.

### **Revisiting the literature review**

Looking through the literature review, my project was impacted by a variety of authors and concepts that shaped the creation of the podcast. Most notable is the concept of Leave No Trace. The creation of LNT allowed a variety of people in the outdoor industry to implement these tools in different outdoor recreation sports. Connecting the outdoor recreation industry and the use of LNT supported the research in answering the research question: *How can outdoor recreational organizations boost environmental awareness among various participants using Leave No Trace principles in a way that is accessible to all ages, cultures, and abilities?*

### ***Environmental Responsibility***

The biggest takeaway when researching the impact of environmental responsibility amongst outdoor enthusiasts revolves around the implementation of LNT and making the principles accessible to all. When studies were released in the early 1960s about the benefits of various outdoor recreation activities to physical and mental health, the use of public and outdoor spaces increased (Simon & Alagona, 2009). The increased populations in the outdoors led to an increased human-caused impact on the environment.

The research led to looking into how different land management practices in public outdoor spaces vary from indirect and direct management. Direct management refers to actions such as permit systems or closing trails. (Sharp et al., 2020). This is an extreme land management practice. By contrast, indirect management is less intrusive and more cost-effective

for parks and organizations. LNT is an example of an indirect approach to help aid in better outdoor ethics from participants (Sharp et al., 2020).

### ***Access to Outdoor Recreation***

Seeking to answer the second part of the research question about access regardless of age, culture, and ability, I researched outdoor use in a variety of populations. Seeking to understand the outdoor recreation use in different cultures, research regarding barriers to racial and ethnic BIPOC groups stated that differences in leisure time preferences, and a lack of time, money, or access (Winter, 2019) resulted in less outdoor recreation use among BIPOC populations. Another area to note as a cause of disinterest in the outdoors is the lack of representation in the media for BIPOC populations using the outdoors as a means of leisure activities (Maples et al., 2022).

Researching different ages in the outdoors, I stumbled upon the idea of active aging, which referenced that the more active you are throughout the aging process, the healthier, happier, and more well-adjusted you will become. Outdoor spaces are places that promote physical activity, mental health, and social interactions to aid in the active aging process (Currie, Colley, K., & Irvine, K. N., 2021). This information led to a consideration of the different limitations or dangers that elderly people may face when going outdoors.

In addition to considering making the outdoors accessible to the aging, this capstone also explored how to increase access to people with disabilities. For people with disabilities, outdoor spaces have historically been associated with rehabilitation rather than with pleasure or leisure pursuits (Burns et al., 2013). As such, some of the podcasts created in this capstone highlight what different organizations are doing and creating in order for people of various abilities to enjoy outdoor recreation activities.



### ***Recreation and behaviors that support LNT***

There are endless ways to play outdoors. This project aims to combine the love of the outdoor sport with supporting a positive environmental impact. Through the literature review, there is research regarding a variety of sports and their attitudes toward LNT. Whether you are hiking, climbing, or skiing down a mountain, you are leaving an impact on the environmental space you are using. Adhering to LNT helps to lessen the impact of these activities on the natural world.

Looking into sports that have a potentially high-risk impact on the environment, rock climbing was top of the list. The sport can leave a large environmental impact. One study done in the West Virgin River rock climbing community stated that climbers overall scored generally well on LNT Principles knowledge specific to climbing activities. However, this study indicated that there is a need for further discussion as to why this knowledge might vary by certain demographic variables.

Research has also been conducted related to the environmental impact of major ski and snowboard resorts. While the resort company needs to take responsibility for sustainability, there are also steps that individuals can take to reduce their impact. Skiers and snowboards should adhere to the rules and regulations of the resort while also skiing or snowboarding on mountains that promote positive environmental principles.

### **Impact**

Since the goal of the project is to spread information to newcomers and seasoned outdoor enthusiasts, the impact is yet to be measured. The hope is that the companies featured in each podcast would share the content with those who regularly participate in the sport along with those who are new to it. In addition to measuring the project's success by analyzing the number

of podcast listeners, success can also be measured based on whether companies sharing the podcast observe an increased adherence to LNT practices among participants.

### **Limitations**

The biggest limitation of this project is the lack of ability to control the circulation of the podcast. Since podcasts are informal in nature, sharing through word of mouth is the best way podcasts are discovered. Creating material to be available (**see Appendix 2**) in a variety of places that are related to either the podcast guests or the outdoor industry, in general, would spread awareness. Adding a QR code in order for people to scan and move on at their own pace will allow for quick access to people's personal devices in order for them to listen to the podcast.

Time constraints on the Hamline completion process were another limitation. It took time trying to define my project and then best represent it in a podcast with appropriate guests. Finding an agreeable time for guests to jump on Zoom for a taping was a major challenge. Trying to merge my personal, work, and school schedule with other working professionals was no easy feat. With that came many cancellations and reschedules. Since guests work in the outdoor industry, March and April are seasons in which people are getting ready for the summer when a lot of guiding and outdoor recreation occurs. Trying to find a time when our availabilities matched up proved difficult.

### **Future research and episodes**

There is more to be researched related to the correlation between outdoor recreation and environmental awareness. Future research could look into other outdoor recreation sports and companies that speak about the outdoors. In addition to exploring certain sports, further podcasts could elaborate on outreach programs for varied participants and how they are receiving LNT while in the outdoors. This project only covered culture, ability, and age in regard to access to the

outdoors. Future research in regard to access to outdoor recreation could focus on but is not limited to youth, LGBTQIA+, and other countries' outdoor practices. With further research, more podcast episodes could be added.

## **Conclusion**

In conclusion, this chapter shares the journey of how the project came to be, from the beginning stages of Hamline University coursework to the completion of the project. The chapter shares the high highs and the low lows that came along with the writing process, which included getting lost along the way but then finding my way back to the completion of the project.

Patience and flexibility were required to navigate conflicting schedules with podcast guests.

This chapter provided a reflection on the literature review that was the backbone of the project. The research helped guide how to structure the interviews with podcast guests. The podcasts explored the connection between outdoor recreation and environmental awareness, therefore leading to the creation of an informal, accessible media that can be spread easily to share how people are getting outdoors in a variety of ways and practicing LNT while doing so. The podcast was designed to get people outside while keeping the environmental crisis at the forefront of the conversations. The goal is to get us *out* of the environmental crisis as well as *outside*.

## APPENDIX 1

[Podcast website with links to the podcast episodes:](#)

Episode 0: What's Going On?

Episode 1: Diving Deep into Conservation

Episode 2: Making Waves in Outreach

Episode 3: Trailblazing into Sustainability

Episode 4: Adventure Education in Action

## APPENDIX 2

CHECK OUT:



**THIS WAY  
OUT(SIDE)**

PODCAST



LEARN FROM EXPERTS IN THE  
OUTDOOR INDUSTRY AND HOW  
THEY ARE TRYING TO CREATE A  
MORE ACCISIBLE OUTDOORS  
WHILE SUPPORTING THE BEST  
INTEREST OF THE ENVIRONMENT.

SCAN HERE!



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