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**LEADING TOWARD SOLUTIONS TO AMERICA'S OVERCROWDING  
AND UNDERFUNDING ENVIRONMENTAL PRESERVATION ISSUES**

A dissertation submitted to  
Marshall University  
in partial fulfillment of  
the requirements for the degree of  
Doctor of Education  
in  
Leadership Studies  
by  
James Seth Caudill  
Approved by  
Dr. Eugenia Lambert, Committee Chairperson  
Dr. Bobbi Nicholson  
Dr. Susan Williams

Marshall University  
May 2023

## Approval of Dissertation

We, the faculty supervising the work of **James Seth Caudill**, affirm that the dissertation, ***Leading Toward Solutions to America's Overcrowding and Underfunding Environmental Preservation Issues***, meets the high academic standards for original scholarship and creative work established by the EdD Program in Leadership Studies and the College of Education and Professional Development. The work also conforms to the requirements and formatting guidelines of Marshall University. With our signatures, we approve the manuscript for publication.

*Eugenia Lambert*

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Susan Williams (Mar 13, 2023 10:30 EDT)

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Date

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## **Abstract**

This research aims to better comprehend how the environmental preservation issues of underfunding and overcrowding of America's parks, recreation areas, and environmental surroundings are solved through quality leadership. These environmental issues are national, state, and community problems. Currently, there exists a wealth of literature on the environmental problems caused by overcrowding and underfunding. Unfortunately, the successful problem-solving ideas identified throughout these works often do not connect with an element of leadership. This research helps fill this identified gap in the currently available environmental preservation resources. This mixed methods study explored the perceptions, ideas, and successful solutions exhibited by environmental preservation leaders from national parks, state parks, and localized environmental groups. Surveys were constructed to gather responses in the areas of securing the necessary resources to solve underfunding and overcrowding issues, whom their agendas were promoted toward, and what strategies increased community involvement for their cause. The findings of this study are informative and provide methods for environmental preservation groups and leaders to attack the intertwined issues of lackadaisical funding and overcrowding. In addition, any community member who wishes to help stabilize America's wonderful natural surroundings may find this study inspiring and act as a catalyst for their involvement in environmental preservation. This dissertation advances the understanding of identifying problems, the importance of building a coalition to solve the problems, and working hard until results are achieved.

“Thousands of tired, nerve-shaken, over-civilized people are beginning to find out that going to the mountains is going home; that wilderness is a necessity; and that mountain parks and reservations are useful not only as fountains of timber and irrigating rivers, but as fountains of life.”

-John Muir

## Chapter 1: Introduction

“The weight of humanity is heavy on beautiful places” (Mill, 2020). Sandy Moret, a world-class fly-fishing angler, instructor, conservationist, past president of the Everglades Protection Association, and current supporter of the Now or Neverglades conservation group, uttered these words on Andy Mill’s podcast, *Mill House*, in April 2020. When it comes to the current issues facing America’s most iconic locations, no truer words can more accurately capture the problems of America's overcrowded and woefully underfunded environment. The National Park Service (NPS) preserves America’s most treasured natural, cultural, and historic locations. Yellowstone, Zion, The Great Smokey Mountains, and the Everglades are only a snapshot of the diverse wilderness the NPS is responsible for preserving for future generations. Likewise, these issues are negatively impacting state parks and local recreation areas. In 2017, with the West Virginia budget growing tighter, and park maintenance falling behind, the Division of Natural Resources Director, Stephen McDaniel, implemented a pilot project to begin charging an entrance fee at seven of the Mountain State’s state parks and forests (Kercheval, 2017). Unfortunately, overcrowding and lack of adequate funding are not new problems, as America’s environment has experienced the repercussions of humanity’s weight as far back as the early and mid-1800s.

Solving problems does not happen by coincidence, and often, the same issues transcend generations of citizens, yearning for bold leadership to take a stance, act, and generate solutions. Between 1840 and the end of the 1870s, the construction of numerous railways across America's Midwest and western landscapes led to the expedited and expanded movement of humans. The results were the overcrowding of the environment and a lust for the senseless slaughter of bison, not based on need, but for sheer blood thirst, and enjoyment. The seemingly exhaustless herds

were devastated, and the population was driven to the brink of extinction (Allen, 1876, pp. 215-216).

In the 1880s a young wilderness lover and avid big game hunter named Theodore Roosevelt began to realize the environment could not withstand unregulated usage. He understood that vast portions of America's wilderness needed preserving in perpetuity. The catalyst of Roosevelt's call to action was the brutal devastation of America's bison herds throughout the Great Plains. He felt an obligation to act and did not accept that the wild of America and the remaining big game that inhabited these breathtaking environments would go the way of the bison.

Roosevelt's proactive leadership led him to partner with George Bird Grinnell, editor of *Forest and Stream* magazine, to create the Boone and Crockett Club in 1888 (Eliot, 1982, p. 344). The club continues its work today with the mission to promote the conservation and management of wildlife, especially big game, and its habitat, to preserve and encourage hunting, and to maintain the highest ethical standards of sportsmanship (Boone and Crockett Club, n.d.). The club has remained persistent throughout its 133-year existence as is evident by the work the club accomplished in 1952 with the hiring of a full-time game warden to protect the decimated Florida Key deer population (Schaeffer, 1988, pp.1-2). By 1957, Congress had enacted the National Key Deer Refuge as a method to stabilize their numbers. These visible acts of environmental leadership initiated by Roosevelt and the Boone and Crockett Club serve as powerful examples of motivation for today's environmental leaders.

In 1900, when an assassin's bullet ascended Roosevelt to the presidency, he used this opportunity to prioritize wilderness preservation and provided a powerful platform for concerned citizens to promote environmental preservation. In 1906, Roosevelt used the Antiquities Act to

preserve 230 million acres throughout the United States (Eliot, 1982, p. 340). It is evident, leadership matters, and organized action has the potential to solve the current overcrowding and underfunding environmental issues. Individuals such as Roosevelt, John Muir, and those involved with the Boone and Crockett Club solved many environmental problems of their time. America is overdue for a new generation of citizens to accomplish the same.

Over the last thirty years Sandy Moret has witnessed the same overcrowding issues create devastation at Florida's Tarpon, Bonefish, and Permit fishing grounds (Mill, 2020).

Overcrowding of the environment and a lack of funding to help control overfishing is an eerily similar comparison to the 1870s bison and 1950s Florida Key deer decimation. The Now or Neverglades environmental group, which is comprised of like-minded scientists, community members, and corporations, is currently attempting to spearhead these dueling problems that have pestered the environment for well over 100 years. They aim to protect and better manage Florida's current water crisis.

The group is promoting a plan that consists of a northern and southern water storage area near Lake Okeechobee and improved monitoring of estuary levels and water flow from this region of Florida. The group believes this will reduce the high salinity conditions currently negatively impacting the Everglades and Florida Bay (Now or Neverglades, 2016). The overcrowding, overfishing, and lack of money spent on their infrastructure ideas have led to an increasingly unhealthy environment for all marine life in southern Florida. If the water is not healthy, the environment, wildlife, businesses, and the community cannot flourish.

The issues of overcrowding and underfunding are intertwined. Citizens are visiting parks and enjoying America's environment for varying reasons and the infrastructure, upkeep, and workforce are not at the levels necessary to meet the demands of the volume of usage.

Another current example that illustrated these two problems working in tandem was visible at Zion National Park. In 2010, Zion welcomed 2.7 million visitors, and by 2016 the number had climbed to 4.3 million (Knighton, 2020). Parkgoers experienced increased wait times, insufficient parking spots, and frustrating experiences at one of America's most popular parks. An infrastructure solution is necessary at Zion as this visitation influx is not sustainable over the long term. Major road and parking construction projects are not feasible due to budget constraints, and an in-house solution was necessary.

Efforts to solve this problem resulted in the park establishing a shuttle system and parking arrangement with its gateway community of Springdale, Utah which is the neighboring town to Zion. Today, the parking, visitation numbers, and continued lack of funding have led to direct effects on the park. Demonstrated erosion within the park, decreased safety for visitors, and increased waiting time for shuttle service are all results of the continued existence of these problems (Timmons, 2019, p. 996). Sadly, despite the best efforts of the park and Springdale, a solution remains elusive and the goals of conservation and providing a positive visitor experience are remaining difficult to achieve due to the continued existence of overcrowding and underfunding.

Solutions to today's two-fold environmental problems of overcrowding and underfunding of America's environment are difficult to achieve. In 2010, the NPS received 2.74 billion dollars in discretionary appropriations and in 2019 received 3.22 billion (Congressional Research Service, 2019, p. 1). After inflation, this is a 1% increase in funding (Congressional Research Service, 2019, p. 1). In today's world, this is essentially a flatlined budget and exacerbates additional problems such as understaffing, infrastructure upgrades, and meeting the core objective of preserving the landscape in perpetuity.



As a nation, it is long overdue for environmental sites to receive the funding levels they deserve to adequately meet the needs of the 237 million visitors in 2020 (National Park Service, 2021). Federal and state parks across the country are facing a litany of current problems and this research will fit into the existing literature by attempting to generate solutions to the most pressing issues on the list, underfunding and overcrowding. Whether it influences parking and visitor experience at Zion National Park, issues with preserving the fly-fishing flats in Florida, or maintaining the world-class white-water rapids at West Virginia's New River Gorge National Park and Preserve, the popularity of America's natural environment is reaching new heights. As crowds increase, the intersecting issues of overcrowding and underfunding create a resounding problem for many of America's natural environments.

### **Problem Statement**

America has two resounding environmental preservation issues: Our national and state parks are overcrowded, and their preservation needs are underfunded. From 2013 through 2019, visitation to America's National Parks increased from 273.6 million to 327.5 million. The apex occurred during the 100<sup>th</sup> Anniversary celebration in 2016 with 330.9 million visitors (National Park Service, 2021). Over roughly the same time frame, NPS funding has increased by 1% (Congressional Research Service, 2019, p. 1), a figure that is more stagnant than an increase. National parks, state parks, and recreational watersheds contribute billions of dollars annually to the national economy, provide jobs for their community members, and provide recreation opportunities that promote health for the body and mind. Yet these locations remain underfunded and overcrowded, thus creating an unsustainable combination.

## **Purpose Statement**

The purpose of this study is to identify solutions to the crippling issues of the overcrowding and underfunding of America's parks and recreation areas. Throughout our history, America's public lands have faced varying threats and it persists to this day. Individuals and groups have actively worked and continue to work, to address the overlapping problems of overcrowding and underfunding. Some smaller, localized groups, however, have been successful in advocating for the protection of their local streams, rivers, and watersheds. It is critical to understand how these leaders and groups have used their voices and expertise to create solutions to reverse the current trends visible at both the state and national levels.

The preservation of America's natural environment is necessary for our enjoyment, health, history, and economy. Developing solutions to the overcrowding and underfunding issues is an important step in returning these locations to a platform of success. A variety of human activities are causing the persistent and rapid deterioration of America's natural areas (Lee-Ashley, 2019). Overcrowding and over usage are part of the human element creating this issue. As underwhelming leadership persists, and solutions remain out of reach, the risk of the issues becoming unmanageable increases over time.

## **Research Questions**

The purpose of this study is to explore resources and identify solutions to the environmental preservation issues of overcrowding and underfunding of notable national and local locations. The following questions will be researched.

1. What type(s) of coalitions have been successful in securing the resources necessary to resolve the underfunding of federal or state parks?

2. What type(s) of coalitions have been successful in securing the resources necessary to resolve the overcrowding of federal or state parks?
3. What strategies have advocates for the preservation of federal or state parks found successful?
4. To which entities do preservation leaders of federal or state parks promote their agenda?
5. What strategies have increased community involvement in environmental preservation or educational events?

### **Methods**

For this research study, a mixed methods Triangulation Design, the quantitative validating model, was utilized to better identify and understand the environmental preservation problem-solving methods undertaken by leaders within America's environmental community.

The act of mixing methods can provide strength to the study, and different kinds of data assist in understanding the complexities of the phenomenon (Creswell et al., 2003, p. 211). Mixed methods research provides a more thorough perception of the research problem than either quantitative or qualitative research alone (Creswell & Clark, 2007, p. 9). Statistics such as annual funding, maintenance backlogs, and park visitation are measurable research objectives and along with the detailed descriptions from the open-ended responses, a deeper knowledge of the research emerged.

The initial stages of the study began with an examination of the existing literature. A review of books, articles, environmental group web pages, blogs, financial reports, and visitation statistics solidified this study as a relevant and interesting topic. A digital survey was distributed containing both multiple-choice and open-ended questions. Survey research exhibits both pros and cons. Cost-effectiveness, generalization potential, and versatility are three attributes that

attract researchers to this style. The cons of survey research include validity issues, as survey questions are standardized and consistent, and the potential for surveys to lack the ability to measure the depth of the issue at hand (Adedoyin, 2020). The combination of all the above-mentioned information contributed to addressing the problems articulated in the research questions.

Currently, our world is still combatting the COVID-19 pandemic. Due to safety concerns and the present social distancing guidelines, all surveys were administered through Marshall University's Qualtrics software. The digital survey software proved invaluable while gathering information during this unprecedented health crisis.

Understanding the methods utilized by environmental leaders to solve funding and crowding issues, studying their responses, identifying vital allies they partner with, and understanding to whom they lobby their agenda are all essential elements of the survey process. It is essential to maintain openness during the survey portion of the study. The participants need to feel comfortable with the procedures to increase the richness of their responses (McMillan, 2016, p. 230). Questions were asked in a multiple-choice and open-ended format that allowed participants to answer freely and directly while collecting both quantitative and qualitative data through their responses. The information gathered from this portion of the research was analyzed through numeric and narrative styles. At this junction, the researcher studied the responses and utilized the information to establish positive and negative solution outcomes to the problems being investigated.

### **Population or Sample**

America's environment is interconnected, and the preservation of streams, rivers, and watersheds in West Virginia is just as important as the continued protection of powerful

economic locations such as Yellowstone, Yosemite, or Zion. It is not feasible to collect data from an entire population, therefore it is necessary to select a sample (Taherdoost, 2016, p. 18).

Settling on a target population was a daunting task, but the desire was to recruit individuals to participate in the survey process who were connected or linked to the preservation of America's environment in some capacity. A non-random, purposive sample provided the study with survey participants who contributed relevant, first-hand information that cannot be obtained from other choices (Taherdoost, 2016, p. 23).

The following list outlines the sample the research study included. Each of these individuals and groups provided a unique perspective, conveyed quality information, and exhibited a personal investment in solving the underfunding and overcrowding issues that hinder America's environmental preservation. Participants from the entities listed below accomplished this goal.

1. National Park Service Employees
2. National Parks Conservation Association
3. State Park Employees
4. State Recreational Area Employees
5. West Virginia Highlands Conservancy
6. Friends of Groups

### **Limitations**

Attempting to create a flawless study, exempt from any type of weakness, creates a level of writing apprehension in the mind of the researcher. Writing apprehension, a crippling limitation, is defined as an attitudinal, emotional, and behavioral interaction which increases

anxiety and creates writing blocking (Al-Shboul & Huwari, 2015, p. 535). Establishing quality communication with the study participants helped the researcher overcome this limitation.

Non-experimental studies provide no allowance for random assignment of respondents to groups for manipulation. The utilization of self-administered questionnaires is subject to potential low response rates and an attempt to generalize responses while experiencing a low participation rate can lead to non-response errors (Coughlan, et al., 2009, p. 10).

An additional limitation exists within non-experimental research. While this research method remains popular, it does not provide a clear and unambiguous plan to report or present results (Reio, 2016, p. 676). The researcher must remain cautious of erroneous and imprecise language throughout the survey process as generalizations can hinder the study (Reio, 2016, p. 682).

Finally, issues of anonymity, confidentiality, and bias are problematic. The researcher has no way of knowing who is completing the survey or if the participant's computer or technology device has adequate cyber-protection (Fink, 2017, p. 13). In addition, this collected information faces influence by recollection bias and social desirability bias. This scenario has the potential to manipulate participant responses (McMillan, 2016, p. 247).

### **Significance Statement**

This study is significant on many levels. There is a gap within the current literature that connects solving the underfunding and overcrowding of America's environment to the leaders who accomplish such solutions. Advocacy for wilderness protection stemmed from the 1910s, yet the problems of overcrowding and underfunding currently persist. Studying these

environmental preservation issues and striving to develop solutions is the primary method to protect the natural environment across our country.

Enacting new strategies to improve funding and utilizing creative solutions to alleviate overcrowding is essential if America's most cherished and notable environmental locations are to remain preserved for future generations. The foot-traffic and park erosion study at Zion solidifies this problem as a reality. The park was being loved too much, and park leaders continue to work on solving the problem (Knighton, 2020). As ideas are generated through research and surveys, it is possible to remedy these crippling weaknesses.

Solving these environmental problems propels the possibility of many contributions to the field of study. Clean creeks, streams, and rivers are essential for personal, recreational, and economic reasons for communities throughout America. Whether it is intercoastal waterways in the Florida Keys, fly fishing on Wyoming's Yellowstone River, kayaking along the Big Sandy River in West Virginia, or simply drinking a glass of water from the kitchen sink, the interconnectedness shared by the environment, waterways, and our citizens is undeniable. The threats facing many of America's rivers create problems not only for the environment, but also for human health, safety, and survival (Kiernan, 2021). Listening to local communities and environmental activist groups can help assist in solving these environmental problems at both the local and national levels.

National and local knowledge as well as grassroots passion exist for environmental preservation. Unfortunately, solving such issues is difficult and change does not happen overnight. Research, public relations, educating the next generations, and building community coalitions are all essential elements in the problem-solving process. Connecting with the

appropriate allies exhibits strong leadership and can contribute to educating the public and helping solve the environmental problems outlined in this study.



## Chapter 2: Literature Review

Overcrowding and underfunding are two intertwined and detrimental issues facing America's environment. Parks and recreation areas depend on visitors to generate the economic impact necessary to remain viable and maintain current funding from their respective state and federal governments. Senator Angus King (I-ME) shares this concern. He states, "There's a paradox in the national parks, they're set aside as natural places to be protected forever; on the other hand, they're for public enjoyment and experience" (Paoletta, 2021, p. 3). The situation complicates both sides of the equation as current infrastructure backlogs coupled with an influx of visitation and usage have led to additional safety, economic, and preservation problems. Developing solutions that monitor the use and increase the annual budget is necessary for both state and national locations, but wholesale solutions are not a one-size fits all proposition. Many funding prioritization problems persist and have remained elusive from leaders and invested parties for decades.

The potential financial return from solving the underfunding issues of America's parks and recreation areas is a powerful motivating factor that may generate creative solutions. State and national parks promote and utilize the natural environment to propel their locations and facilities as important financial drivers for the American economy. In 2017, the NPS accounted for 306,000 jobs and contributed \$35.8 billion in economic output; visitor spending contributed \$14.4 billion in economic output (Clark et al., 2019, p. 88). In the same year, West Virginia's state parks and local recreation areas generated \$422.9 million and employed 2,997 people (National Recreation and Park Association, 2020). Why are budgets stagnant and environmental preservation and infrastructure projects backlogged if these locations are contributors to their respective local, state, and national economies?

The economics are not the only reason solving these environmental issues is necessary. In many instances, our natural surroundings are an integral part of regional history and culture. What is Appalachia without its mountains, rivers, and wildlife? What is the American southwest without the Grand Canyon? What is southern Florida without its water, marshes, and sea life? There are programs directed toward preserving the natural and identifying features of each region. Removing, misusing, and underfunding these programs not only hurt the economy but tarnish the richness of history within the area.

Leadership matters and problems will persist without individuals who take the initiative to improve. Solving today's overcrowding and funding problems requires passionate, invested leaders from both large and small communities. Environmental leaders and our citizens must take the initiative to solve these issues, create a coalition, generate funding, and take action until achieving a satisfactory result. Community members change over time, and leaders come and go, but the methodology for solving America's environmental problems has not deviated over the last one hundred twenty-five years. Thankfully, the fighting spirit for environmental preservation is still alive in America. Organizations such as the NPS, Boone and Crockett Club, Friends of Blackwater, the West Virginia Highlands Conservancy, and Now or Neverglades continue to lead the environmental preservation movement. They attack the funding and overcrowding issues that remain detrimental to environmental preservation throughout the country.

### **Existing Research**

The research will explore resources from four categories, including the history of prioritizing environmental preservation in America, today's overcrowding problems, the environmental issues created by continuous underfunding, and what actions today's

environmental leaders take to solve these two devastating issues. An examination of the existing research is below.

### **A History of Environmental Problems**

Regardless of the problem one is attempting to solve, understanding the history of the issue is an appropriate place to begin the investigation. Studying the long history of an overcrowded and underfunded natural environment in the United States of America is no exception. J.A. Allen's "The North American Bison and Its Extermination" confirms overcrowding the environment was an issue as far back as the mid-1800s. J.L. Eliot's "Roosevelt Country: T.R.'s Wilderness Legacy" captures Roosevelt's realization that it was necessary to partner with community members and organizations to improve preservation standards. The result was the Boone & Crockett Club, which continues to monitor hunting sportsmanship and champion environmental causes to this day. These are real, relevant historical examples that leaders must learn from and utilize if today's issues are to be solved.

Theodore Roosevelt's ascension to the Presidency in 1900 and his ability to utilize the Antiquities Act of 1906 were two important historical events for the cause of environmental preservation. His upbringing, the events he witnessed, and a dash of coincidence all drove his love for nature. The influences of Roosevelt's early life resulted in a love for ornithology. Later in life, while traversing the Dakota Badlands, he witnessed the American bison being driven to near extinction. His sense of remorse was another powerful influencer. Roosevelt's friendship with famed conservationist John Muir flourished during the infamous 1903 camping trip at Yosemite and was another critical moment in the environmental preservation story.

Roosevelt was a leader ahead of his time. In a letter to Muir, he wrote, "I do not want anyone with me but you, and I want to drop politics absolutely for four days and just be out in

the open with you” (Angulo, 2019). This type of action from a sitting American President exudes leadership. Roosevelt understood nature, its importance, and the necessity for its preservation. He did not fear anyone who objected to the preservation of nature being the cornerstone of his political agenda.

Roosevelt’s love for the environment proved a powerful guiding force during his push for environmental preservation policies during his political career in both New York and Washington D.C. In fact, as Governor of New York, his unrelenting quest for altruistic legislation regarding the protection of natural resources frustrated state politicians to the point where they wanted Roosevelt out of the state (Meine, 2001, p. 829). The solution was to use their connections to get Roosevelt on the National Republican ticket with William McKinley. The New York politicians were successful, but the assassination of President McKinley catapulted Roosevelt into the White House. Much to the dismay and consternation of the New York political scene, Roosevelt now owned the most powerful platform in the world. He could now set into motion his environmental preservation agenda on a scale that no one could imagine.

Douglas Brinkley’s, *The Wilderness Warrior: Theodore Roosevelt and the Crusade for America*, establishes Roosevelt’s youth as the time he developed the environmental philosophies he would later carry into the White House. Brinkley examines the lasting imprint Theodore’s uncle, Robert, left on him during his youth. Robert, known today as a great fishery conservationist, provided environmental, wilderness, and biological experiences for Teddy as a child. As Teddy grew, his memories left a lasting imprint on his outlook and philosophies toward life. Roosevelt’s love for nature would only grow over time and eventually included a passion for the protection of non-game birds. Brinkley asserts that many of Roosevelt’s national wildlife refuges, parks, and forests were preserved through the lens of an ornithologist. It is no surprise

that President Theodore Roosevelt remains an environmental icon. A strong case exists that without Roosevelt's leadership and action America's environment would be in much worse shape than what we experience today.

The events between 1830 and 1930 are important historical references for solving today's overcrowding and underfunding issues. In addition, understanding the timeline of events, the leaders involved, and the contributions made to environmental causes are important motivational factors for our modern-day citizens to build and improve upon. Several of these resources were outlined in the introduction of this study and are not dismissed as irrelevant events of yesteryear. The passion for environmental preservation that existed within Roosevelt, Muir, and the public at the turn of the twentieth century still exists in America. Unfortunately, these environmental issues persist, but new stewards continue to carry the torch lit many years ago.

Few would argue that Ken Burns and his colleague, Dayton Duncan, are one of the greatest documentary tandems in American history. Burns' production company is Florentine Films. Topics chosen by the company are interesting to society. Burns' 2009 film, *The National Parks: America's Best Idea*, brought a new understanding of the importance of environmental preservation to millions of Americans. The film and accompanying book discussed the initial funding and infrastructure issues the NPS faced in its infancy. In addition, patrons overcrowded the parks at alarming rates and created many of the same environmental problems we witness today. From Roosevelt to Burns, the citizens, researchers, historians, and nature experts have concluded these issues are real, detrimental, and need addressing by leaders in communities both large and small.

## Overcrowding

When Congress created the NPS in 1916, they set out to accomplish two goals. First, to preserve the scenery, natural beauty, historical objects, and wildlife within the environment. Second, to provide for the enjoyment of those things by current and future generations (Timmons, 2019, p. 986). Currently, overcrowding is making it increasingly difficult to achieve the established goals of environmental protection and enjoyment for all.

At first glance, increased visitation, usage, and travel to America’s National Parks seem positive trends, but the reality is we love our parks to death. Between 2015 and 2017, the parks have seen an eleven percent increase in annual visitations (Timmons, 2019, p. 986). The overcrowding at certain park locations is turning “America’s Best Idea” into an administrative nightmare (Timmons, 2019, p. 986). NPS visitation remained at a total of over 300 million visits through the 2019 calendar year until a decline to 237 million in 2020 (National Park Service, 2021). Based on visitation trends, one may predict, without the COVID-19 pandemic, this decline would not have occurred. Generating solutions to overcrowding at high-traffic locations such as the Great Smokey Mountains, Yellowstone, and Zion is an essential element to better protecting America’s environment.

**Table 1**

*National Park Service Visitation Statistics*

Year	Number of Recreation Visits
2000	285,891,275
2001	279,873,926
2002	227,299,880
2003	266,230,290
2004	276,908,337

2005	273,488,751
2006	272,623,980
2007	275,581,547
2008	274,852,949
2009	285,579,941
2010	281,303,769
2011	278,939,216
2012	282,765,682
2013	273,630,895
2014	292,800,082
2015	307,247,252
2016	330,971,689
2017	330,882,751
2018	318,211,833
2019	327,516,619
2020	237,064,332

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Adapted from (Recreation Visits by Year,) by the National Park Service, 2020,

<https://www.nps.gov/aboutus/visitation-numbers.htm>

Throughout 2020, the COVID-19 pandemic led to a decline in travel to America’s National Parks and general domestic travel. As the nation moved into 2021, and the perception of a post-pandemic life began to take shape, many domestic travel restrictions were lifted. As a result, Americans once again flocked to National Parks in record numbers throughout the spring and summer seasons of 2021 (New York Times, 2021). Popular sites such as Yellowstone

and Grand Teton set monthly visitation records and many additional sites continue to anticipate and prepare for the busiest upcoming years of their history (New York Times, 2021). The easing of COVID-19 restrictions has resulted in a 15% visitor increase at Utah's Arches National Park, a 30% increase at Canyonlands National Park, and a 115% increase at Tennessee's Great Smoky Mountains National Park (Baker, 2021). After a brief, pandemic prompted visitation decline, it is evident the park system is straining to accommodate the volume of visitors who yearn for the outdoors, after spending most of the past 18 months predominantly indoors (Paoletta, 2021).

“There's a lot of pent-up demand from Americans spending the last year at home” (Eavis, 2021). This demand has directly led to the growing popularity of road trips and has made them a staple within the American travel industry (AAA, 2021, p. 20). As travelers begin exploring the country, scenic destinations are at the top of their travel itinerary. The desire for people to explore the outdoors is an excellent method of dealing with the stir-crazed symptoms of cabin fever. Cabin fever is a bug best quashed by escaping the confines of your home to discover the natural environment you never knew existed (AAA, 2021, p. 20). Travelers are using America's environment as a method to cope with the cabin fever that set in throughout the COVID-19 pandemic. Hiking, biking, and mountain climbing are only a few activities that visitors partake in at environmental destinations as they crisscross America during their exploration.

A second factor in the uptick in visitations is the mindset of U.S. citizens being wary of traveling abroad due to the COVID-19 pandemic. Restrictions continue to exist throughout the globe and these guidelines are keeping American citizens at home. The quality outdoor environment locations within the United States provide an accessible outlet and are contributing to the increased visitation rates (Iacurci, 2021). In 2020, the National Parks Conservation Association reported, Utah State University professors Wayne Freimund and Zach Miller, began



utilizing cameras and trail cams to monitor and study the movement, flow, overcrowding, and spacing of park patrons at Arches, Glacier, and Acadia National Parks (Fox, 2021). The professors are quoted, “We’re trying to adapt those tools to look at recreation and tourism, where do people end up going?” (Fox, 2021). Understanding where crowds create bottlenecks within the park and which natural features attract the highest volume of visitors are important details while attempting to solve the issues created by overcrowding and protect the park’s most cherished sites.

In a somewhat peculiar dynamic, the COVID-19 pandemic is responsible for both the decline in 2020 visitations and the increase in 2021 visitations. The built-up stresses, mandates, and lockdowns led to a growing desire to travel, explore, and regain enjoyment in life. As guidelines were loosened in 2021, citizens across America traded being homebound for experiences in the great outdoors.

Yellowstone National Park Superintendent, Cameron Sholly, is attempting to generate meaningful solutions through his voice and leadership. Sholly is a proponent of creating more National Parks. He believes there are too many people concentrated in too few places (Paoletta, 2021). Upgrading locations such as New Mexico’s Valles Caldera National Preserve, California’s Mojave National Preserve, and Idaho’s Crater of the Moon National Monument and Preserve are great options to help alleviate crowding at locations such as Yellowstone, Zion, Grand Canyon, and Yosemite (Paoletta, 2021). In essence, Sholly’s solution would provide system upgrades, not a situation where the NPS would be adding additional units to the existing stretched budget.

Stephen Weiler, an economist at Colorado State University, believes there is credibility with Sholly’s potential solution. On December 27, 2020, West Virginia’s New River Gorge was

redesignated as a National Park and Preserve. A spokesman for the park estimates a 24% increase in visitation between December 2020 and August 2021 (Paoletta, 2021). These new visitors may now be choosing to visit the Mountain State because of the increased status, in addition, these travelers may have altered their scheduled arrangements in route to parks in Ohio, Kentucky, or Tennessee. As Sholly and Weiler suggest, establishing upgrades to locations in New Mexico, California, and Idaho could assist in decreasing a portion of the current crowds in some of the American west's most visited parks and recreation areas. Unfortunately, this idea does create an element of concern. In West Virginia, the park is currently able to withstand this increase and the New River Gorge is not receiving additional federal funding due to the improved status (Paoletta, 2021). Will this remain feasible if visitation increases to 40% or 50%?

A second suggested solution from Sholly is increasing visitor management at the busiest sites. Reservations are required at Yosemite and Rocky Mountain National Parks and Zion has proposed lottery tickets for Angels Landing, a popular hiking attraction (Paoletta, 2021). In July 2021, Maine's Acadia National Park instituted a reservation system to reduce overcrowding at the top of Cadillac Mountain where visitors flock to enjoy sunrises (New York Times, 2021). Visitation management is a solution already in practice at various sites, and Weiler believes the rationing of access will become standardized in more park locations over time (Paoletta, 2021).

Sholly's ideas are practical and have the potential to be implemented in a cost-efficient manner, but the unprecedented number of visitors in 2021 and the expectations of this continued surge into 2022 will require additional ideas and potential solutions to combat the overcrowding problem. Michael Childress, a historian at Colorado State University and a National Park expert, suggests two interesting solutions as well. First, he supports required bookings for trips to all the most visited National Parks (Baker, 2021). This form of visitation management would give the

park control of who visits and when they visit. This solution would prove a powerful tool, but many access issues and negative publicity may be a result of this action. Second, Childress feels, “We the People,” must change our expectations of what we can visit and our experience once we arrive (Baker, 2021). For a nation that was thrown into hysteria at the suggestion of wearing a cloth mask during a life-threatening, global-altering pandemic, this idea appears difficult to institute and not as achievable as other potential solutions.

An example of an ecological disaster brought on solely by overcrowding is visible at California's Yosemite National Park where the shallow root systems have become damaged due to visitors gaining access too close to the trees. Raised walkways were installed, but visitors continue to drive and park and congregate around the trees, which allows the problem to persist (Baker, 2021). Overcrowding has deteriorated landscapes and brought increased litter, noise, and pollution. The potential for human-animal encounters is ever-present. Even though all these environmental detriments are present, the Yosemite example illuminates, the strain on the trees, rivers, streams, rock formations, and all other natural surroundings is a major threat (Baker, 2021).

Recently, West Virginia’s New River Gorge was upgraded from a National River to a National Park and Preserve. There is no denying, the New River Gorge was deserving of this prestigious accolade, but potential pitfalls exist. A 2018 study that researched eight national monuments that were redesignated national parks found an average visitation rate increase of 21% (Steelhammer, 2018). The uptick in visitation may bring the environmental detriments associated with overcrowding to the Mountain State. In many ways, West Virginia is a hidden wilderness and environmental gem. The scenic beauty, low population, and slow-paced life are desirable commodities that help combat the current fast-paced, technology-inundated world.

West Virginia's secret may be out, as the media coverage of the New River Gorge, and all its wonderful assets, has increased since its redesignation.

Richard Grant, a member of the Freelance Council of the Society of American Travel Writers, is quoted in an interview with West Virginia MetroNews as stating, "The people are just so friendly, the food is great, and the scenery is a big surprise. Nobody had any idea that West Virginia's this pretty. The National Park designation is going to give you so much publicity around the world" (Jenkins, 2021).

A second travel publication echoes Grant's sentiments through the comments of Senator Shelley Moore Capito. She and fellow West Virginia Senator Joe Manchin were instrumental in getting the legislation through Congress that upgraded the New River Gorge. Capito is quoted as saying:

The gorge also offers a spiritual aspect and a solitary kind of quiet. People are coming here from places that are busy and congested, and I think they appreciate that quiet.

When you get down into the gorge, you are removed from what is going on in modern America. And it is very unspoiled. We call West Virginia wild and wonderful, and this certainly is. (Morgan, 2021, para. 6)

This quote captures the essence of why environmental preservation is essential. The economic aspect is important, but there is a spiritual and calming peace that resides in the mountains. John Muir felt this in California, and many West Virginians feel this connection and tranquility the natural environment provides. The prestige of National Park status is an undeniable accomplishment, and both Senators deserve recognition for their efforts, but too much coverage, publicity, and showcasing could bring the overcrowding problems experienced at other destinations to the West Virginia mountains.

Media coverage, especially social media, is a powerful and manipulative variable that influences the decisions of others. One such decision is the desire to travel and experience America's natural environment and beauty. People post pictures of themselves at beautiful locations, and this creates a desire in their Facebook, Instagram, and Pinterest followers to pack up and travel (Hewitt, 2019). Social media has created a new, seemingly unstoppable platform for modern society to share their experiences with a snap and click. For better or worse, social media is here to stay and it will contribute to the promotion of America's beauty and the wonderful experiences people are enjoying while exploring the natural surroundings our country offers.

The promotion of our environment needs closely monitored as the oversaturation of media coverage creates the potential for overcrowding issues. This is critically important for West Virginia as one of the state's weaknesses is infrastructure. Roads, lodging, and parking will rapidly become an issue if vacationers begin herding to the New River in droves. This thought was confirmed by Grant, in his interview with MetroNews, as he stated:

The area doesn't have the infrastructure of The Great Smokey Mountains or Branson, Missouri, but it has things those areas don't have. You can't beat what you offer for natural resources in sheer beauty, for hiking, waterfalls, all of the adventure activities, they're all here. (Jenkins, 2021, para. 4)

West Virginia simply cannot accommodate the millions of visitors that some NPS sites attract on an annual basis. Without purposefully curtailing the promotion of the New River Gorge, it is possible the increase of media and social media coverage, over time, may create similar overcrowding issues other environmental areas are experiencing.

The existing research and literature have established and confirmed overcrowding as a major threat to America's environment and the National Park Service. Issues such as littering, vandalism, deteriorating visitor enjoyment, the safety of guests, and the erosion of natural features due to increased foot traffic are all results of overcrowding (Hewitt, 2019). How will this generation of citizens and environmental leaders deal with this problem? Increasing the park fees at select parks, incorporating a reservation system for visitors, charging foreign visitors a higher entrance fee, regulating the number of tour buses entering the park, and implementing shuttle systems are all overcrowding solutions currently being discussed by the NPS (Hewitt, 2019). It is difficult to imagine implementing some of these restrictions, but the protection of the environment is the top priority. Profits, traditions, and emotions cannot hinder the priority of preservation. It will take difficult decisions and unpopular changes to reverse the overcrowding problems many of America's natural environment destinations are experiencing.

### **Underfunding**

Over the years, local parks and environmental recreational areas have contributed immensely to the community, state, and national economies. As recent as 2017, these environmental-based locations provided \$166.4 billion to the economy, \$87 billion in GDP growth, and accounted for 1.125 million jobs that paid salaries, wages, and offered benefits packages (National Recreation and Park Association, 2020, pp. 2-4). West Virginia was no exception, as the Mountain State's natural surroundings generated \$422.9 million of economic activity and employed nearly 3,000 workers (National Recreation and Park Association, 2020, p. 6). In addition, economic research concludes that homes located near parklands have higher property values (National Recreation and Park Association, 2020, p. 8). The positive economic attributes that a properly funded and maintained environment provides a community are

statistical facts. It is time for all levels of government to increase the annual budget for environmental projects that will further strengthen an already strong economic driver.

As the environment continues to prove its economic viability, we must ask ourselves an important question. Why are necessary improvement projects backlogged at such alarming levels? This is a puzzling reality that has reached a level of concern that our elected officials can no longer ignore. The recent exponential increase in visitation has put additional wear and tear on the aging infrastructure of the NPS and local destinations. Locations across the country require maintenance work on roads, bridges, sewer systems, visitor centers, trails, bathrooms, campgrounds, and lodging facilities (Loris, 2020, p. 2). One does not need a vivid imagination to realize the removal of dead trees from forest floors and water preservation projects are also needed across America. In California alone, there are estimates of 100 million dead trees throughout the forests (Stephens et al., 2018, p. 77). While all these trees are not on the forest floor, the unmaintained, downed trees act as kindling for annual wildfires.

In Texas, the Lone Star Chapter of the Sierra Club has been involved with the Sam Houston National Forest tree mulching project since November of 2021. The plan is to mulch hardwood and pine trees five inches in diameter and less to reduce vegetation and decrease smoke output during prescribed burns in certain forest compartments within Sam Houston National Forest. The project also increased growth opportunities for native grasses instead of small trees (Mannchen, 2021). The Sierra Club's involvement and leadership on this issue achieved multiple environmental and financial goals. This example identified the importance of collaboration, creating allies, and the efficient use of finances to promote environmental preservation.

A second example centered around natural infrastructure preservation, specifically forest health, is the lobbying of the Boone and Crockett Club. The Boone and Crockett Club was a leading voice in ensuring that an additional \$8 billion was included for natural infrastructure projects within recent environmental legislation at the federal level (Boone and Crockett Club, 2021). The allocation of this funding is for forest resiliency projects, forestry management, and the creation of defensible forest spaces to reduce the threat of wildfires in moderate and high-risk areas (Boone and Crockett Club, 2021). Specifically, this organization used their knowledge, of the forest, forest floor, and wildfire devastation to promote their agenda to Senators Manchin (D-WV), Barrasso (R-WY), and Daines (R-MT) to generate this important additional funding (Boone and Crockett Club, 2021). These are two recent and powerful examples of pushing an agenda, creating allies, and using increased funding to achieve solutions to problems with forest maintenance and promoting environmental preservation.

It is quite stunning that a segment of our national economy that generates this caliber of usage and economic success would not be rewarded more easily with budget increases to improve the failing infrastructure and preserve the natural surroundings which attract visitors from across the globe. The federal government is bureaucratic, slow at correcting problems, and exudes disorganization (Loris, 2020, p. 8). In addition, the incentives for politicians do not always align with what is most needed at a given time. For instance, it may be more politically beneficial to support other projects as opposed to preserving a stream, forest maintenance, or repairing an access road (Loris, 2020, p. 3).

All maintenance projects are not created equal, and stipulations exist on how government funding can be spent on given projects. Cyclical maintenance is routine, regularly scheduled maintenance. Deferred maintenance refers to repairs that were not performed when the issue was



in its infancy and continues to pose problems (Loris, 2020, p. 2). Problems persist and transition from the cyclical to deferred list. They become more detrimental to the environment, increase safety concerns for visitors, and become more expensive to fix in the long run. Representative Rob Bishop (R-UT) sums up the issue with maintenance backlogs by stating, “It’s fun and sexy to add a new unit to the Park Service, it’s not fun or sexy to talk about fixing a sewer system” (Watkins, 2020, p. 3). The failure of politicians to prioritize projects and appropriately distribute the American budget is a central problem of the underfunding and preservation issues America’s environment faces.

It is no surprise the largest project backlogs are with the NPS. The system is enormous, and the current funding backlog is nearly \$12 billion (Loris, 2020, p. 1). Members of Congress have proposed many ideas to thwart this abysmal funding situation that they are greatly responsible for creating. One recent idea is the creation of the National Parks and Public Land Legacy Restoration Fund, which was introduced as part of the Great American Outdoors Act (Loris, 2020, p. 1).

In this scenario, “The fund would use revenues collected from energy production on federal lands and authorize the NPS director to identify high-priority projects to reduce the backlog” (Loris, 2020, p. 1). It is uplifting to seeing our elected officials identify the backlog as an issue, but problems exist with this proposal. Creating a new, mandatory program would allow Congress to raid the fund for purposes that have nothing to do with its original intent (Loris, 2020, p. 2). In the past, America has experienced this with Congress on many occasions. Our elected officials often have trouble keeping their hands away from funding set aside for specific purposes. The desire to finance pet projects in their home district to maintain votes, power, and egos, often clouds their judgment.

Additional ideas from Congress include giving park directors more authority on prioritizing projects, allowing these directors to use existing money from the Land and Water Conservation Fund (LWCF) for environmental projects, selling some federal land, setting park entrance fees, and increasing opportunities for concessions and vendors within the parks (Loris, 2020, p. 2). The Property and Environment Research Center (PERC) recognizes the dire reality of the situation and created a list of potential solutions. Prioritizing current maintenance over adding new units to the system, allowing the parks to keep a higher percentage of money spent inside their facility, contract services where feasible, and prioritizing access roads were the top funding issue solutions (Watkins, 2020, pp. 6-8).

Underfunding issues are not only present on the national level. In West Virginia, the state park system generates \$248 million in annual economic significance, and from that amount, \$189 million contributes directly to local economic activity (Caplinger, 2019). For a small, rural state such as West Virginia, this is an important segment of the local community and state economy. Unfortunately, like the national underfunding of environmental preservation projects, the same is true at the state level. In 2018, West Virginia Governor, Jim Justice, and the West Virginia Legislature issued \$60 million in bonds to address the \$100 million environmental infrastructure backlog throughout the state (Caplinger, 2019). Although the recreation opportunities our natural environment provides are economically successful, without budget assistance from the state, backlogs continue to increase. The 2018 funding increase is a quality first step for projects on a smaller scale, but more funding is needed to rehabilitate West Virginia's environment to the desired level of local communities. This will not take place unless the state leaders and elected officials prioritize the spending for these initiatives.

While several of these potential funding solutions create additional concern, there is a \$12 billion problem. All ideas need consideration and debate as part of the problem-solving process. It is discouraging America finds itself in this position and the characters with the most influence to achieve meaningful change reside in Washington D.C. America's confidence and trust are waning in our elected official's ability and desire to solve the smallest of problems, let alone one with a price tag of this magnitude. Therefore, it is up to local citizens to advocate and lead for environmental preservation within their respective communities.

### **Current Environmental Leadership**

While much of this study, and literature review, centers on the NPS, federal spending, and nationally renowned environmental locations, local environment leaders are striving for change as well. America's environment is interconnected through forests, creeks, streams, rivers, trails, and the activities that take place within these locations. Blackwater Falls, Cranberry Glades, and West Virginia's wetlands will never receive the funding, promotion, and prestige as Yellowstone, but does that make them less important? The issues of underfunding and overcrowding are negatively impacting local areas in similar ways as the larger, more publicized locations. There are many knowledgeable environmental organizations involved, invested, and vocal regarding the problems underfunding and overcrowding are creating in their community and region. Their passion and love for the cause lead the researcher to believe their stances will continue and the interests of the wilderness are in capable hands at the local level.

One active and well-known advocacy group, based in Thomas, West Virginia, is the Friends of Blackwater (FOB). FOB is involved in numerous environmental initiatives, including efforts to solve environmental funding and overcrowding problems. A cornerstone initiative for FOB is the protection of forests and waterways. Recently, a weakening of the National

Environmental Policy Act (NEPA) will provide loosened restrictions on publicly owned timber harvesting. Clear-cutting the scenery that attracts visitors to experience West Virginia is not a smart economic plan for small communities. Hikers, campers, fishermen, and naturalists enjoy clean mountain springs and wooded forests. Through public involvement, monitoring, and pressure, the FOB strives to preserve thousands of acres in West Virginia's backcountry, rare habitats, and natural waters (Friends of Blackwater, 2020).

A second local advocacy group striving to curtail the overcrowding problem is the West Virginia Highlands Conservancy. For decades, ATVs and off-road vehicles have been popular recreation outlets in West Virginia, as well as many other rural areas across the nation. West Virginia's efforts to promote this activity remain persistent and have led to devastating consequences for portions of the natural environment (Thomas, 2021, p. 1). The over usage and overcrowding of ATVs in such areas have damaged vegetation, wildlife, water quality, air quality, soil, and the foundation of streams, creeks, and riverbeds (Thomas, 2021, p. 4).

In addition, ATVs damage property values and there exists a continuous need for environmental repair and restoration where these machines continually travel and leave a path of destruction in their wake (Thomas, 2021, p. 1). The West Virginia Highlands Conservancy has attempted to lobby government officials to bring this environmental overcrowding issue to their attention. It is difficult to change a well-entrenched activity, that is very much a part of West Virginia culture and attitude. While solutions to this problem remain elusive the group continues to advocate, gather information, report the environmental damage, and voice their concerns to the community and government.

A third local, and successful advocacy group is the Now or Neverglades campaign. While the group is relatively new, its existence is necessary due to decisions made by Florida politicians in the early 1900s. Southwest Florida is a unique portion of America's environment. Its water, marshlands, vegetation, sea life, and wildlife are the reason people travel, vacation, spend money, and move to the state. The foundation of Florida's environmental and economic success is based on the quality and movement of water. Now or Neverglades has taken on a difficult task and is attempting to solve the water problem that has plagued this region of Florida for decades.

The genesis of the problem occurred in 1905 when Florida politicians decided to re-route Everglade's water to dry-up marshlands for farming and other economic development ideas (Chinnis, 2017). Canals, dikes, dams, levees, and drainage systems were created, in the name of flood control, and the Everglades' natural state was decreased by 50 percent (Chinnis, 2017). By the end of the 1950s agricultural interests were still protected, and this established water movement continued. In total, 2 billion gallons of water were re-routed for this project and the environmental devastation is too extensive to estimate (Chinnis, 2017). The problem became worse when the population of the area exponentially grew and the overcrowding of both land and water activities became the new norm.

Currently, southwest Florida is among the fastest growing portion of the state with nearly 1.4 million residents in the five-county area (University of Florida, 2020). This is nearly the entire population of West Virginia living in five Florida counties. Now or Neverglades has realized the continued re-routing of water throughout the state, while the population of their five counties continues to grow, cannot sustain itself for the long-term. The loss of native grasses, fish, birds, and animals coupled with the addition of agri-runoff,

paved the way for the explosion of algae growth the region is riddled with today. In 2016, its levels were so extensive, the water was termed “Mean Green” (Chinnis, 2017).

The algae growth occurs when the flood-prone Lake Okeechobee overflow water is discharged and funneled out by the Caloosahatchee River to Pine Island Sound and the Saint Lucie River. Here, water is supplied to the Indian River Lagoon. This water is overloaded with nutrients, reduced salinity, and feeds the algae (Chinnis, 2017). A cycle that Now or Neverglades is attempting to solve for the sake of their environment, economy, and basic everyday needs. The advocacy group realizes the solution lies with their local government officials. Now or Neverglades is advocating for a new reservoir south of Lake Okeechobee to properly store, clean, and distribute fresh water. Without it, this devastating cycle will continue.

The reduced natural water flow, increased population, and increased tourists who desire fishing excursions, need the natural salinity the haphazard developers destroyed in the mid-century. Exacerbating the problem even further, are the modern plumbing projects that are affecting estuaries on both the west and east coasts of Florida and Florida Bay (Chinnis, 2017). The snowball effect of these projects and the population growth of Florida has also led to public drinking water problems for nearly one-third of the state (Chinnis, 2017). Without the continued lobbying and petitioning of the Florida government, this environmental issue will go unsolved. Now or Neverglades understands this problem began over one hundred years ago and is a combination of human overreach, greed, and overcrowding. Their efforts have led to thousands of signatures, a strong coalition, fruitful discussions, the passing of meaningful legislation, and the hope that a solution is obtainable for their home region.

### **Chapter 3: Methods**

The purpose of this mixed methods study was to better comprehend how the environmental preservation issues of underfunding and overcrowding of the environment can be solved through effective leadership. The study investigated the problems associated with underfunding and overcrowding and the strategies current leaders are implementing as part of the problem-solving process. This chapter provides the methodology engaged in this study and includes an overview, research questions, research design, participant sample, survey instrument, data collection, and data analysis processes.

#### **Overview**

The initial step of any study is the identification of a relevant problem or issue that warrants investigation. Studying the issues that underfunding and overcrowding are causing America's natural environment deserves this attention and research. Solving these problems will not spontaneously occur; it requires leadership from invested individuals who desire solutions. The existing literature identified and confirmed that both issues are problems plaguing the environment in locations across America. The literature, however, minimally addressed the important role leadership principles had in solving these problems. Survey participation from those who work in the environmental sector, reading their ideas regarding potential solutions, and accurately reporting the gathered information contributes to what we know about these environmental problems.

## **Research Questions**

The goal of this study was to identify environmental problems resulting from the underfunding and overcrowding at the state and national parks across America and look at the leadership strategies that proved successful. The following research questions guided the study:

1. What type(s) of coalitions have been successful in securing the resources necessary to resolve the underfunding of federal or state parks?
2. What type(s) of coalitions have been successful in securing the resources necessary to resolve the overcrowding of federal or state parks?
3. What strategies have advocates for the preservation of federal or state parks found successful?
4. To which entities do preservation leaders of federal or state parks promote their agenda?
5. What strategies have increased community involvement in environmental preservation or educational events?

## **Research Design**

Quantitative research emphasizes measuring something and attempts to study questions based on how many, how much, or to what extent (Rahman, 2017, p. 105). Categorical data such as annual funding, maintenance backlogs, and park visitation are measurable research objectives that were answered via multiple choice questions on the survey, and represent the specific information necessary to answer the proposed research questions in this study.

Qualitative analysis consists of textual data and discovers the how and why of the descriptions and explanations from participants (Maxwell & Loomis, 2003, pp. 252-253). Qualitative analysis was achieved through open-ended questions on the survey. The emphasis



and details provided in the personal descriptions of the participant responses offered insight and a more comprehensive view of the study.

Mixed methods research “involves collecting, interpreting, and reporting both qualitative and quantitative data” (Dawadi et al., 2021, p. 26). Its chief foundation is that the use of both qualitative and quantitative methods in a study provides a better comprehension of the research problem than using either approach alone (Creswell & Clark, 2007 p. 5). The emphasis and details provided in the personal descriptions of the participant responses offered insight and a more comprehensive view of the study. Thus, mixed method research brought a more complete analysis and greater value to the study (Bryman, 2006, p. 111).

This mixed methods study addressed underfunding and overcrowding in America’s parks and recreation areas, and examined strategies proving successful today. This study utilized a Triangulation Design, incorporating the validating quantitative model. The quantitative and qualitative data were collected simultaneously with one instrument and analyzed independently (Creswell & Clark, 2007, p. 65). According to Morse (1991), “The purpose of simultaneous triangulation is to obtain different but complementary data on the same topic” (p. 122). The researcher then compared the numeric results with the open-ended responses from the survey and used the qualitative findings to expand the quantitative data (Creswell & Clark, 2007, p. 84). The results were merged for a meaningful interpretation at the end of the study.

The study followed professional and ethical guidelines throughout the process. In preparation, the Marshall University Collaborative Institutional Training Institute (CITI) Program for Behavioral and Social Science Research was completed. In addition, all Institutional Review Board (IRB) ethical guidelines were followed throughout the data-gathering and reporting process. One such example of interconnecting ethics with the use of digital surveys

was not requiring the respondent's physical address. Online surveys only require email addresses and are far less likely to invade the respondents' privacy (Singh et al., 2009, p. 199). In the unlikely event that problems arose before, during, or after their participation, all participants were asked to immediately contact the researcher.

### **Sample**

A participant is someone whose past behavior, performance, traits, or characteristics provide value to the study and the participants from whom data or information is collected for the study are known as the sample (McMillan, 2016, p. 112). The researcher identified desirable participants based on their connections and involvement with environmental work and their concerns for environmental preservation.

The reason for utilizing purposeful sampling for the study was to ensure the receipt of needed information, and the non-random nature of this method usually provides a higher participation rate (McMillan, 2016, p.133). The characteristics of the style of study as well as the inclusion of park employees, environmental advocacy groups, and environmental preservationists lend a sense of credibility to the study.

The researcher did not designate a set number of participants from each environmental area or advocacy group. As individuals agreed to participate in the survey by responding to the recruitment email (Appendix B), a survey (Appendix C), including an informed consent agreement (Appendix D), was submitted to the participant via email.

### **Survey Instrument**

The data-gathering method for this study was a researcher-designed online survey (Appendix C). Participants accessed the online survey through the Qualtrics website link provided in the recruitment email (Appendix B). Improvements in the creation and distribution

of online surveys have led to a growing approval of the respondents and an increased preference by researchers as opposed to traditional paper-pencil surveys (Singh et al., 2009, p. 197). Online surveys are low cost, save time, easy to distribute, and allow data to be conveniently entered and stored (McMillan, 2016, p. 230).

The COVID-19 pandemic made research challenging because of the virus transmission risk (Mohanty, et al., 2020, p. 1). The use of the digital survey method increased safety for both the researcher and participants, which reduced the potential risk level of this study.

The survey included questions about funding and overcrowding issues, as well as strategies used to correct the problems at the participants' facility. The survey consisted of multiple-choice questions for the quantitative component and open-ended questions for the qualitative component. Open-ended questions provided the survey with additional depth and functioned as the probing element. Probing questions provide an excellent opportunity for a survey to stimulate reflective thinking, channel inquiry into the response, and provide an opportunity for the participant to respond by utilizing multiple options (Thompson-Grove, 2017). The participant surveys were returned anonymously through Qualtrics.

### **Data Analysis**

Survey responses were compiled using Qualtrics. Data from the multiple-choice questions (quantitative) relied primarily on the percentage of respondents choosing a specific answer and examined increases and decreases in funding and visitation. The open-ended questions (qualitative) were analyzed by a phenomenological process. In the attempt to solve the underfunding and overcrowding problems the environment is facing, every comment, concern, response, and potential idea expressed by the participants was valued and taken into consideration during the thematic analysis and reporting process.

## Summary

The goal of this study was to examine the environmental problems and identify solutions to the underfunding and overcrowding in federal, state, and local parks and recreation areas. These two issues compound and create many obstacles for environmental leaders who are attempting to find obtainable solutions for local, state, and national interests. The mixed methods Triangulation-validating quantitative model approach was used for this study. It was selected to corroborate the quantitative results with the experiences, ideas, knowledge, and perspectives of participants who were connected first-hand to America's environmental sector. Chapter 4 will present a breakdown of the data obtained and how they relate to the research questions that guided this study.

## **Chapter 4: Results**

This research studied the problems and successes that are a product of the underfunding and overcrowding of America's parks and recreation areas. Participants responded to questions focused on funding, overcrowding, building supportive coalitions, interacting with their local communities and the public at large, and leadership strategies that generate solutions for their unique circumstances. This chapter contains the results of the multiple-choice and open-ended survey responses.

### **Method**

A purposeful, non-random sampling approach was used to identify participants, and a 16-question online survey was created in Qualtrics and distributed to those individuals. The survey questions were designed to answer the following research questions about the above-mentioned environmental issues.

1. What type(s) of coalitions have been successful in securing the resources necessary to resolve the underfunding of federal or state parks?
2. What type(s) of coalitions have been successful in securing the resources necessary to resolve the overcrowding of federal or state parks?
3. What strategies have advocates for the preservation of federal or state parks found successful?
4. To which entities do preservation leaders of federal or state parks promote their agenda?
5. What strategies have increased community involvement in environmental preservation or educational events?

## **Process**

The study involved the use of both quantitative and qualitative elements in a single-phase online survey. Survey respondents were environmental employees, volunteers, and members of advocacy groups across 32 states. The quantitative element of the study involved the analysis of multiple-choice question responses, focused on underfunding and overcrowding patterns. The qualitative component involved a phenomenological thematic analysis of the textual data gathered via open-ended survey questions.

## **Theoretical Framework**

Phenomenology had its origins in Germany, was sustained in France by Merleau Ponty, and its growth continued in America (Lanigan, 1988, p. 7). Following the ideas of Ponty, Lanigan (1988) describes phenomenological analysis as a three-step process involving description, reduction, and interpretation. Each step progresses to the next and is a part of the whole (p. 8).

- The first step is the phenomenological description, where the intent is for the researcher to carefully read the experiences of the participants with open-mindedness, and allow patterns and themes to emerge (Sundler et al., 2019, p. 736).
- The second step in the phenomenological analysis is reduction. The researcher focuses on the meanings of the participants' words, arranges the data into themes, and identifies significant topics (Sadala & Adorno, 2002, p. 289).
- The third step is the phenomenological interpretation. Here, the researcher organizes the themes into a meaningful wholeness, which is the meaning of the phenomenon the participant experiences (Sundler et al., 2019, p. 736).

Thus, phenomenological analysis is where meanings found in the accounts of the participants' experiences are organized by themes and described in a relevant text.

### **Population and Sample**

An aggressive, national recruitment effort across all 50 states was instituted for this research study resulting in a knowledgeable and invested environmental coalition. Emails were sent to National Park Service administrators, managers, rangers, state park administrators, and members of various environmental preservation organizations from regions across the United States of America. Their expertise and desire to achieve solutions to the environmental issues of underfunding and overcrowding lend credibility to the research. In total, 107 surveys from 32 states were completed and returned. These figures are reported in Table 2.

**Table 2**

*Survey Participants by State*

State	n (Completed Surveys)	Percentage (%)
West Virginia	10	9.3
Kansas	10	9.3
North Carolina	10	9.3
Colorado	8	7.5
Kentucky	7	6.5
Washington	7	6.5
Maryland	5	4.7
Pennsylvania	5	4.7
Virginia	4	3.7
California	3	2.8

Iowa	3	2.8
Montana	3	2.8
Nebraska	3	2.8
Massachusetts	3	2.8
Utah	3	2.8
Arkansas	2	1.9
Delaware	2	1.9
Georgia	2	1.9
Indiana	2	1.9
Maine	2	1.9
Texas	2	1.9
Alaska	1	.93
Florida	1	.93
Idaho	1	.93
Michigan	1	.93
Missouri	1	.93
Nevada	1	.93
New Mexico	1	.93
South Carolina	1	.93
South Dakota	1	.93
Vermont	1	.93
Wisconsin	1	.93

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32	107	100
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## Findings

The participants were asked to respond to survey questions that were crafted to gather information and help identify answers to five research questions. The findings from the multiple-choice questions (quantitative section) were organized and reported by research question. The open-ended question responses (qualitative section) were reported by theme.

### Quantitative Findings

#### **Research Question 1: What type(s) of coalitions have been successful in securing the resources necessary to resolve the underfunding of federal or state parks?**

Two multiple choice survey questions (i.e., SQs 1 and 4) were asked to gather information on the significance of underfunding related to environmental protection and to identify the types of coalitions the environmental professionals are aligning with to lobby their agendas. SQ 1 asked about the status of funding for respondents' facilities, inquiring whether it had increased, decreased, or incurred no change. The majority of respondents reported that their funding had slightly increased (i.e., 40%) with another 23% reporting a significant increase. These responses are reflected in Table 3.

**Table 3**

#### *Participant Responses to Survey Question 1*

Response Option	n (# Responses)	Percent (%)
A: Slightly increased	43	40.19
B: Significantly increased	25	23.36
C: No change in funding	14	13.08
D: Slightly decreased	16	14.95
E: Significantly decreased	9	8.41

The results collected in Table 3 show that 63.57% of survey participants experienced some form of funding increase. Of the 107 respondents, 43, or 40.19%, reported only a slight increase in funding.

SQ 4A asked about the types of coalitions that have helped the environmental location lobby for increased funding. The majority of respondents reported that elected officials (i.e., 32.16%) and local community members (i.e., 31.58%) were important partners in generating additional funds. These responses are reflected in Table 4.

**Table 4**

*Participant Responses to Survey Question 4A*

Response Option	n (# Responses)	Percent (%)
A: Local community members	54	31.58
B: Corporate sponsors	9	5.26
C: Elected officials	55	32.16
D: Other	37	21.64
E: If "Other," please identify it in 4B	16	9.36
	171	100

SQ 4B asked for participants to identify the group they specified in the “other” category. Most responses indicated “Friends of Groups” and non-profit organizations. These descriptions are discussed in the qualitative thematic phenomenological analysis section.

**Research Question 2: What type(s) of coalitions have been successful in securing the resources necessary to resolve the overcrowding of federal or state parks?**

Three multiple-choice questions (i.e., SQs 6, 7, and 8) were used to gather information on the significance of overcrowding, deterioration of the environment and facilities, maintenance backlogs, and the issues these backlogs have created.

SQ 6 asked about the status of visitation and usage of parks and recreation areas over the last decade. The majority of respondents reported that their environmental usage had significantly increased (i.e., 85.98%). These responses are reflected in Table 5.

**Table 5**

*Participant Responses to Survey Question 6*

Response Option	n (# Responses)	Percent (%)
A: Slight increase in visitation and usage	10	9.35
B: Significant increase in visitation and usage	92	85.98
C: No change in visitation and usage	2	1.87
D: Slight decrease in visitation and usage	2	1.87
E: Significant decrease in visitation and usage	1	.93
	107	100

SQ 7 asked about the status of natural surroundings and infrastructure deterioration due to overcrowding and over-usage of the area and facilities, inquiring whether it had increased, decreased, or incurred no change. The majority of respondents (i.e., 51.46%) reported that their locations had experienced slight deterioration of natural surroundings and infrastructure. A considerable portion of the respondents (i.e., 31.07%) also reported a significant deterioration of natural surroundings and infrastructure. These responses are reflected in Table 6.

**Table 6**

*Participant Responses to Survey Question 7*

Response Option	n (# Responses)	Percent (%)
A: Slight deterioration of natural surroundings and infrastructure	53	51.46
B: Significant deterioration of natural surroundings and infrastructure	32	31.07
C: No change to the surroundings and infrastructure	11	10.68
D: Slight improvement to the natural surroundings and infrastructure	7	6.80
E: Significant improvement to the natural surroundings and infrastructure	0	0
	103	100

SQ 8 asked about the status of the maintenance backlog at the respondents' facility, inquiring whether it had increased, decreased, or incurred no change. The majority of respondents reported that their maintenance backlog had significantly increased (i.e., 51.40%) with another 29.91% reporting a slight increase. These responses are reflected in Table 7.

**Table 7**

*Participant Responses to Survey Question 8*

Response Option	n (# Responses)	Percent (%)
A: Slightly increased over time	32	29.91
B: Significantly increased over time	55	51.40
C: No change	7	6.54
D: Slightly decreased over time	10	9.35
E: Significantly decreased over time	3	2.80
	107	100

**Research Question 3: What strategies have advocates for the preservation of federal or state parks found successful?**

One multiple-choice question (i.e., SQ 12) was included to gather information on the significance and leadership tactics preservation advocates utilized to solve issues created by underfunding and overcrowding.

SQ 12 asked respondents about the status of the financial impact for their facilities based on the leadership and lobbying tactics implemented at their respective locations. SQ 12 inquired whether the strategies had increased, decreased, or incurred no change. The majority of respondents (i.e., 40.22%) reported that their funding had slightly increased with another 36.96% reporting no financial impact. These responses are reflected in Table 8.

**Table 8**

*Participant Responses to Survey Question 12*

Response Option	n (# Responses)	Percent (%)
A: Slightly positive financial impact	37	40.22
B: Significant positive financial impact	20	21.74
C: No financial impact	34	36.96
D: Slightly negative financial impact	0	0
E: Significant negative financial impact	1	1.09
	92	100

**Research Question 4: To which entities do preservation leaders of federal or state parks promote their agenda?**

SQ 10 was open-ended and asked for information about the entities to which federal and state park leaders promote their agenda. Most responses indicated “Friends of

Groups,” non-profit organizations (i.e., land trusts, park foundations), and elected officials. These descriptions are discussed in the qualitative phenomenological thematic analysis section.

**Research Question 5: What strategies have increased community involvement in environmental preservation or educational events?**

One multiple choice question (i.e., SQ 14) was asked to gather information on the significance, impact, and leadership roles environmental employees and community members have taken to solve underfunding and overcrowding issues.

SQ 14 asked about the status of community support related to increased funding to help solve problems related to underfunding and overcrowding. The majority of respondents (i.e., 36.54%) reported that their location had experienced a slightly positive response from community members and funding. An additional 30.77% reported community involvement had remained neutral while attempting to generate solutions.

**Table 9**

*Participant Responses to Survey Question 14*

Response Option	n (# Responses)	Percent (%)
A: Slightly positive	38	36.54
B: Significantly positive	28	26.92
C: Neutral	32	30.77
D: Slightly negative	3	2.88
E: Significantly negative	3	2.88
	104	100

## **Qualitative Findings**

For this portion of the study, open-ended questions on the survey afforded participants the opportunity to describe their problems, experiences, and successes as related to the underfunding and overcrowding at their facilities. These responses provided a wealth of information and allowed the researcher to gain a deeper insight into the opinions of the participants. Following Lanigan's (1988) method for phenomenological data analysis, the responses were compared and reduced to four themes.

Upon review of the participant responses, some patterns were identified as to why funding levels have changed, the problems this has caused, and the groups who helped secure funding. Unfortunately, the drastic inflation our country is now experiencing has essentially crippled current budgets. The insufficient financial support from local and federal legislatures has led to stagnating funds. Participant responses indicated major issues with inflation, maintenance, understaffing, and utility costs. Electricity, fuel, and water costs are all part of the day-to-day operations, and this exacerbates an already inadequate funding situation. Although all the themes were consistently interlinked to the underfunding and overcrowding issues, the four primary themes examined were maintenance, staffing, roles of coalitions, and successful leadership strategies.

### ***Maintenance***

The first, and most prevalent theme identified throughout the open-ended responses was maintenance issues. The participant responses revealed that increased visitation directly increased maintenance costs and exacerbated the need for additional funding. Common issues mentioned were inadequate parking, parking violations, increased litter, lack of garbage can

pick-up, inefficient or inoperable machinery, and the inability to complete preventative and backlogged environmental preservation and infrastructure maintenance issues.

One participant stated, “Environmental tasks and preservation take a backseat to the day-to-day operations of our facility,” while an additional respondent contributed:

Reduced funding has reduced outhouse pumping, requiring them to sometimes be locked until we secure funding, meaning reduced sanitation, less dumpsters and trash cans provided for disposal, meaning more litter. Boats, ATVs, and other vehicles are broken and are in poor condition with no funding to replace, resulting in patrolling remote parks less frequently.

The responses indicated the combination of these maintenance issues contributed to lowering the preservation of America’s environmental spaces further down the priority list. Another participant sums up the maintenance issues accurately when they stated, “We spend almost zero hours per year on preservation of anything. Our main goal is to patch up crumbling infrastructure.”

One may believe that additional funding would solve overcrowding issues, but that is far from the truth. One survey respondent explained, “We were able to complete some upgrades, but this led to an increase in the operational budget. Unfortunately, this was not included in the upgrade funding package.” A second survey respondent echoed these sentiments, “We are also seeing an increase in demand for larger RV campsites and recreational amenities at our campgrounds. Along with this comes a greater need for restrooms, shower facilities, and waste removal.” These examples illustrated the issues that underfunding and overcrowding are causing both park leadership and those allies who are attempting to resolve these problems.



A prominent maintenance issue response directly related to lackluster funding and overcrowding was failing water, sewage, drainage, and plumbing issues throughout the park infrastructure. Examples included water treatment supplies, storm drains, gutters and downspouts, restrooms, drainage ditches, and dilapidated culverts. Water is essential to lodges, cabins, welcome centers, marinas, and the overall visitor experience. One respondent stated, “The water issues became so bad we had to close our swimming pool.” This participant’s response was stunning and disappointing.

The water drainage issues created additional maintenance problems for the infrastructure of parks. Dilapidated gutters and downspouts negatively impact roofs, interior walls, windows, and structure foundations. Respondents described the lack of appropriate ditches and drainage as a factor for habitat destruction and trail erosion. The infrastructure at many environmental locations was constructed by the Civilian Conservation Corps (CCC). Water damage, coupled with the age of the facilities, is a recipe for disaster. This was confirmed, as one survey participant stated, “Specialists are needed to work on our infrastructure due to its age.” Specialized workers mean increased costs for maintenance repairs, and once again, creating additional funding issues.

The complete collapse of roads, bathrooms, roofs, trail bridges, trail stairs, electrical systems, outdoor lighting, RV hookups, and campsite pads were referenced in the responses. Whether it is the age of the infrastructure or the inability to solve the water infrastructure systems, the deterioration of America’s environmental infrastructure is prevalent based on the detailed responses from the participants.

The unacceptable number of issues combined with underfunding and overcrowding creates a scenario where preservation and maintenance issues are pitted against keeping the

doors open and meeting the minimum expectations of the public. Sadly, this equates to the continued deterioration of the safety, security, and preservation of the environment and its infrastructure for everyone.

### ***Staffing***

A second theme that emerged from the open-ended responses was staffing issues. One participant pointed out:

Staff reductions has resulted in increased workload, burnout, and high turnover inefficiencies. All work is triaged with a more responsive maintenance list, and it is growing with little funding for repairing aging and failing facilities: park roads, campgrounds, outhouses, trails, cabins, etc.

The continuation of staff reductions also contributed to a deterioration of employee morale. Thus, leading to a contentious work environment with the potential to negatively impact the visitor experience and the safety of both patrons and colleagues.

A major complaint was the issue of park employees who worked outside of their job descriptions. The respondent noted:

We are having park staff, with degrees in various earth and biological sciences, spending large percentages of their work time marketing gift stores, selling shirts, posters, coffee cups, ball caps, and board games. All in an effort to increase store revenue.

Park and environmental employees who worked out of the job description or in positions that were far below their level of education and skillset demonstrated a deterioration of the environmental coalition from within.

The self-inflicted harm of skilled workers being underutilized is a hindrance to the problem-solving process and was mentioned several times in the survey. A participant remarked, “In this agency full-time law enforcement officers are expected to do as much or more maintenance as the maintenance workers. Last year, park rangers poured approximately 300 cubic yards of concrete in a single region.” As environmental locations continue to see increased visitation and funding remains in a lull, staff working out of job description becomes a major obstacle for these facilities. Again, these inadequacies may lead to deteriorating attitudes and create a negative environment for all.

One response illustrated the vicious circle of overcrowding, underfunding, understaffing, and maintenance issues facing America’s parks and environment. The individual stated:

We have had to cut our budgets some years, hold back spending, or not have bills paid on time due to budget shortfalls. We typically cut employees hours to make up the needed money, which is just about the only way to make up the budget. We have tried other ways, but it was not enough cost savings. The reduction in staff directly effects all aspects of the park. We are not able to take care of projects, and then full-time staff has to pick up the slack of the missing employees, which means other things are not completed.

Participants described that understaffing was damaging to land management. One explanation stated, “Thousands of gallons of chemicals are sprayed to control the grasses and weeds from overtaking walking areas.” The use of harmful chemicals is a quick method that requires a few hours of employee time investment and accurately illustrated the understaffing experienced by many parks and how it is related to insufficient funding.

The deterioration of trail systems and destruction of natural habitats was another staffing issue related to maintenance problems and expressed throughout the responses. One participant expressed, “We have little or no time or funding for staff to complete land management,” and another added, “Our trails are ignored to the point where they are not passable by a sure-footed billy goat.” An additional participant explained, “The amount of user made trails all over the parks have increased. Trampling of plants, trash, and parking in areas not designated for parking makes preservation tough. Vandalism has also increased and without more personnel it is impossible to police.” Once again, specific descriptions interlink understaffing, underfunding, overcrowding, and maintenance shortcomings. This constant cycle of problems places immense burdens on environmental leaders and the current structure provides them with little chance to solve these devastating problems.

The in-depth descriptions provided by the survey participants illuminated the staffing shortfalls for this study. It is evident, the participants and their colleagues are stretched too thin and, in many instances, working out of their qualified expertise. Insufficient funds, the extreme deterioration of their facilities, and maintenance backlogs have placed a burden of near-impossible proportions on their shoulders.

### ***Roles of Coalitions***

The third theme identified was the environmental coalitions created between park employees, environmental advocacy groups, volunteers, non-profit organizations, elected officials, and “Friends of Groups.” Frustration was evident throughout the participant responses and there existed elements of pride and a determination toward investing the necessary efforts to find solutions for these problems. The open-ended survey responses identified strong, established relationships between those groups that communicate, collaborate, and problem-solve with

environmental leaders. These points were routinely cited as essential elements in the process to solve issues brought about by underfunding and overcrowding.

The three cornerstones of the environmental coalition were identified as “Friends of Groups,” non-profit organizations (i.e., land trusts, park foundations), and elected officials. These entities along with the park administrators and rangers make up the core of the environmental preservation coalition. In nearly every instance, the participants reported, the creation of a like-minded coalition improved the promotional power and the chance of creating solutions for funding and overcrowding issues.

“Friends of Groups” were the major group that surfaced in the coalition theme. These groups aided with raising revenues for the facilities to help offset some of the underfunding issues. Unsurprisingly, these groups continued to establish themselves as the initial contact to park administrators and environmental professionals for promotional or lobbying efforts. One participant stated, “Kansas State Parks has deep connections to community and family. We create that culture to assist in volunteer groups and Friends Groups. Friends Groups generate revenue to be used within the park they (the group) are located.” Another respondent added, “Direct engagement with our Friends Groups/Stewards translates into more visitor contacts and better educated visitors.” The survey well established “Friends of Groups” as an essential part of the problem-solving and communication process for America’s environmental concerns.

The “Friends of Groups” were also identified as the leaders of the lobbying efforts. Their leadership, passion for the cause, and ability to mediate between the parks and politicians secured additional funding for environmental preservation projects. Several responses identified the “Friends of Groups,” as an essential entity that kept the lines of communication open between park administrators and the elected officials who determined the annual budget.

“Friends of Groups” have been successful at various locations in securing enough funds to purchase much-needed maintenance equipment. Trucks, ATVs, lawn equipment, and emergency use supplies were only a few examples the survey participants specifically mentioned.

The “Friends of Groups” leadership was specifically noted by many respondents. One stated, “Our Friends Groups have also applied for grant funding for historical building repairs and maintenance, environmental stewardship projects, and facility improvements for ADA accommodations.” Many additional respondents echoed this sentiment as one participant reported, “They have succeeded with providing us with some essential needs that the state would not fund. For example, they purchased a UTV critical for emergency responses.”

In response to coalition groups, another participant commented, “Great successes to fund and support programming efforts and volunteer days for several years. They also purchased much-needed equipment when it is not within the budget.” The participants’ reactions commended the work of “Friends of Groups” and the importance of their contributions to the underfunding and overcrowding issues of America’s environment. The leadership, problem-solving skills, and tactful lobbying efforts make the “Friends of Groups” an indispensable member of America’s environmental preservation coalition.

A second group of entities frequently mentioned in the survey responses was non-profit organizations, park foundations, and land trusts. One participant indicated, “Non-profits assisted with projects under three thousand dollars,” while another reported, “A non-profit organization had success in maintaining some funding to meet program goals and objectives.” The survey participants consistently identified the above-mentioned groups as powerful allies for promotional issues, fundraising, creating preservation agendas, and helping environmental professionals stay abreast of issues centered around parks, recreation areas, and public lands.

Their involvement was desired by many survey respondents due to their environmental leadership, knowledge of environmental preservation, work ethic, and passion for solving relevant issues created by underfunding and overcrowding.

A third group that emerged as an important member of the coalition theme was elected officials. Although legislatures communicated with park officials, environmental advocates, and “Friends of Groups,” their problem-solving attributes were a mixed bag. Elected officials at the state and federal levels determined budgets. America’s environment is underfunded, and this led to a host of problems identified previously in the study. The survey respondents understood that elected officials are an essential part of the problem-solving process, as one participant commented, “The legislature created a Keep Colorado Wild Pass that will generate funds through license plates registrations.” Legislative programs such as this can create additional revenue in a manner deemed acceptable by the public at large and inspire new volunteers to take part and join the environmental preservation cause.

Their frustrations, however, were apparent when they discussed the slowness of action from the politicians, but successes were reported as well. One response noted, “Increases in funding has allowed for equipment replacements and building upgrades that we could not afford the prior years.” Another participant indicated, “Legislators provided community transportation funds.” Overall, respondents overwhelmingly reported they will continue to communicate with elected officials, either directly or through intermediaries, such as “Friends of Groups.”

### ***Successful Leadership Strategies***

The fourth major theme that emerged from the responses of participants was the specific strategies implemented that fostered meaningful solutions to the continued underfunding and overcrowding problems that America’s environment is currently facing. The responses provided

a deeper understanding of the types of successful fundraising efforts, the groups involved, and the leadership strategies that increased enthusiasm and involvement from community members.

The survey respondents outlined a variety of successful strategies that aided in successful outcomes for their respective parks or recreational areas. A frequently mentioned strategy was the creation of clearly written reports and relevant, defensible requests. These reports could be for small projects, large projects, or any type of project in between. Local community organizations, such as the Lions Club or Rotary Club, elected officials, and grant proposal teams were all referenced as avenues the coalitions used to generate successful fund-raising efforts.

One survey respondent outlined their successful strategies as:

Providing clear and identified needs with cost estimates within written reports detailing the deferred maintenance and capital maintenance, in order to justify needs. Reporting progress annually, maintaining communications with the public, and identifying progress and completed projects across the state. This also includes sharing news releases and annual budgets.

The importance of establishing and maintaining a transparent, trustworthy relationship with the public, and elected officials, is an essential element of this plan and continues to magnify this endeavor as an essential leadership strategy within the problem-solving process.

A second popular approach identified by the survey respondents involved their respective community members. Grants applied for and received were strongly relied upon for parks across America. As the annual state and federal budgets continue to fall short, environmental leaders utilized the grant application process as an additional influx of funds to address environmental preservation issues. Respondents mentioned grants repeatedly in the open-ended portion of the survey, and one respondent summed up the importance of grants accurately and succinctly when



they stated, “A majority of our projects are grant funded. Therefore, by having members of the community and legislatures to provide letters of support, we have found success in being awarded a large amount of federal grants over time.”

A third successful strategy identified by the open-ended responses was increased interactive educational activities between the park and the community. One respondent noted, “We rely heavily on education to assist with overcrowding within our parks. Making sure everyone knows where alternative recreational opportunities are located within the park, along with ways to preserve our natural resources.” The respondents identified ranger hikes, trail steward hikes, annual seminars with park administrators, and Zoom programming as examples of how park employees connected with the community, expressed the benefits of healthy surroundings and explained the many issues facing America's environment.

Another influential strategy that connected community education and outreach, and brought awareness to the environment’s needs were partnerships with VIPs. A survey participant stated:

Inviting VIPs to our park to show them our successes and challenges, nurturing a healthy and respectful relationship with news reporters, hosting volunteer orientations to introduce and train new volunteers, and the creation and implementation of an Ambassador Program and an Intern Program.

These events exemplified leadership and act as great avenues to educate and provide the motivation some may need to become involved in volunteering or raising funds for park projects.

Participant responses provided insight into the leadership techniques that environmental employees used to combat the underfunding and overcrowding issues at their facilities. A popular leadership strategy mentioned throughout the open-ended responses was increased

visitor and community communication regarding a, “Leave No Trace,” motto campaign. This promotion proved an effective teaching opportunity for park visitors of all ages and remained an important educational pillar within environmental preservation coalitions. As mentioned earlier, many locations reported increased litter, garbage can overflow, and graffiti as major issues for the environment and visitor experience. Promoting the principles of “Leave No Trace,” is a quality leadership technique that many respondents successfully implemented.

Various other leadership strategies that proved effective in dealing with overcrowding issues, were the decisions to close trails and park facilities, and limit patron entry and parking in and near the park. Parking issues were mentioned as a profound problem by a variety of respondents and this leadership strategy proved successful at alleviating some of the stresses unnecessarily placed on the staff.

Park leadership also decided to institute increased fees throughout the park systems as a measure to deal with the pitfalls of underfunding. Several participants reported that the rise in entrance fees, food, snacks, souvenirs, and even trail fees generated additional funds for various park projects that were falling behind. While this was not a method to successfully fund projects such as cabin renovations, roofing projects, or water system upgrades, it was referenced as achieving funds for smaller projects throughout the park.

Respondents also conveyed that community members were excited to volunteer at the park for cleanup events along trail systems, lakes, streams, and rivers. Each of these hands-on events promoted the importance of a clean environment and taught such principles through involvement and leadership. Additional events which community members participated in were swimming lessons, educational wilderness walks with environmental professionals, and grant proposal writing.

The park employees and the community members who participated in these types of events exuded qualities of strong leadership. The respondents actively promoted educational programming, involved the public in financial causes, and molded community members into environmental stewards through educational principles. America's citizens expect the environment to be preserved for the enjoyment of all. Their commitment, enthusiasm, and positivity toward learning about the importance of environmental preservation and the areas where help is needed were confirmed through the survey responses.

### **Summary**

The purpose of Chapter 4 was to present the data collected and identify the ways that America's parks and recreation areas are dealing with underfunding, overcrowding, and the deterioration of the environment. During the evaluation of the multiple-choice responses, 40% of participants indicated that their environmental location had received a slight increase in funding. Additionally, 20% of the respondents indicated that their facility had received a significant increase in funding. While this appears as a positive, the increased costs in electricity, water, fuel, and damages to both structures and the environmental landscape from overcrowding, made funding increases an insignificant factor in solving large cost problems. The scale and costs of necessary projects on backlog lists far exceed the types of funding increases parks and recreational areas are currently experiencing.

The open-ended responses provided an opportunity for participants to anonymously answer openly and honestly to explain, in-depth, the how and why of their experiences. Detailed responses to the questions identified inadequate funding and overcrowding as detrimental problems directly related to environmental issues and major maintenance backlogs. The responses also uncovered coalitions providing communication efforts to secure funding through

lobbying legislatures and writing grants. The participant responses identified leadership strategies being implemented and proved successful at some environmental locations.

The decline of America's environmental preservation and the deterioration of the necessary infrastructure are negatively impacting forests, rivers, streams, shorelines, and trail systems. In turn, this is resulting in a less enjoyable user experience for all. Chapter 5 will provide a Discussion of Findings, Limitations, and Recommendations for Future Research.

## **Chapter 5: Discussion**

Chapter 5 reviews the purpose of the study and summarizes the findings for each of the research questions (RQs). The chapter reports the conclusions of the study based on participant responses and organized by research questions. In addition to the summary of data, a discussion section, limitations of the study, and recommendations for future research are included.

### **Purpose of the Study**

The purpose of this mixed methods study (i.e., Triangulation-quantitative validating and Phenomenological) was to identify possible solutions to the crippling issues underfunding and overcrowding are causing at America's parks and recreational areas. Previous research focused on identifying the problems caused by these issues. While this study does focus on the problems, an effort was made to also identify environmental entities who are exhibiting leadership characteristics to solve these matters. The study was guided by the following five research questions.

- Research Question 1: What type(s) of coalitions have been successful in securing the resources necessary to resolve the underfunding of federal or state parks?
- Research Question 2: What type(s) of coalitions have been successful in securing the resources necessary to resolve the overcrowding of federal or state parks?
- Research Question 3: What strategies have advocates for the preservation of federal or state parks found successful?
- Research Question 4: To which entities do preservation leaders of federal or state parks promote their agenda?

- Research Question 5: What strategies have increased community involvement in environmental preservation educational events?

### **Respondent Data Population and Sample**

The population for this study consisted of individuals who were, in some capacity, associated with America's environmental preservation. Survey emails were sent to National Park Service administrators, managers, rangers, state park administrators, and members of various environmental preservation organizations from regions throughout the United States of America.

The anonymous 16-question survey was completed by 107 respondents from 32 states. These participants were invested in discovering solutions for the issues that continuous underfunding and overcrowding are causing to both the environmental landscape preservation and the essential infrastructure in and around these areas. Those who participated in the survey research provided invaluable feedback that added depth and credibility to the study, and their contributions made the study successful.

### **Summary of Findings**

#### **Research Question 1: What type(s) of coalitions have been successful in securing the resources necessary to resolve the underfunding of federal or state parks?**

Research Question 1 (RQ 1) was addressed through multiple survey questions in the study. For the quantitative portion of the study, the multiple-choice survey questions which addressed RQ 1 indicated that 63% of survey participants experienced some form of funding increase. Based on the qualitative phenomenological analysis of participant responses, the findings identified a diverse range of parties involved in the environmental coalitions who worked to improve funding at their locations. They included "Friends of Groups," elected officials, local community volunteers, corporate sponsors, non-profit organizations,

environmental advocacy groups, and various park foundations. Of these, most respondents reported that “Friends of Groups,” elected officials, non-profit organizations, and local community members were important partners in generating additional funds for their respective facilities.

Respondents praised “Friends of Groups,” elected officials, and non-profits for assisting in securing additional funds. Although several groups were identified as important contributors to the environmental coalition team, one group continually stood above the rest. The various “Friends of Groups” were identified by the survey participants as a leading, engaging, driving force for environmental lobbying efforts. Their leadership and painstaking efforts kept communication lines open between park administrators, the public, and the elected officials, who ultimately control annual budgets.

Their ability to act as the middleman between parks and elected officials to secure additional monies as well as securing grants for projects was necessary to ensure the completion of certain maintenance needs at their sites. Based on the survey responses, the “Friends of Groups” leadership and investment in the environmental cause identified them as the single-most indispensable entity of the coalition. Their relentless striving for solutions to America's environmental underfunding problems led directly to financial assistance for small, but necessary maintenance work as well as securing larger grants through Federal funds.

The qualitative findings from the survey also indicated that although funding and budgets had somewhat increased, visitation had also increased. The increased visitation was directly related to the increased overhead, maintenance costs, and additional staffing needs. Thus, resulting in a continuous need for increased funding. Respondents indicated that most environmental preservation projects and improvements took a back seat to complete tasks to

keep the doors open. The cycle ensured that any funding increases were offset by the additional needs.

**Research Question 2: What type(s) of coalitions have been successful in securing the resources necessary to resolve the overcrowding of federal or state parks?**

Multiple questions within the survey addressed RQ 2. The multiple-choice survey question responses for RQ 2 established that overcrowding is a widespread issue, and the quantitative results corroborated the literature examined by the researcher. Over eighty-five percent of respondents (i.e., 85.98%) reported that the environmental usage at their prospective facility had significantly increased. At the same time, over fifty percent (i.e., 51.46%) of respondents reported that their locations had experienced slight deterioration of natural surroundings and infrastructure, while over thirty percent of respondents (i.e., 31.07%) reported a significant deterioration of natural surroundings and infrastructure.

Similar, to RQ 1, the same groups that worked to solve funding problems worked to find solutions to the overcrowding issue as well. The survey responses in the qualitative data identified “Friends of Groups,” non-profits, elected officials, and additional community volunteers as primary coalitions involved in assisting facilities to solve the problems of overcrowding.

The respondents explained that the deterioration was directly related to overcrowding. The notable maintenance improvements deemed critical included the need for more restrooms, expanded shower facilities, updated campsites to accommodate larger RVs, and additional employees to monitor self-made, unofficial trails.



Respondents reported that increased visitation caused increased litter, garbage, and parking issues. A few of the techniques which equated to success in combatting the litany of overcrowding issues were visitor pre-registration, the use of park entry check-in times, new parking guidelines, and increased entry and amenity fees within the park.

**Research Question 3: What strategies have advocates for the preservation of federal or state parks found successful?**

The survey responses for the quantitative portion of RQ 3 conveyed that 40% saw increased funding based on leadership and lobbying efforts at their facility, while an equal 40% saw no impact. The open-ended responses described some recurring leadership strategies which did lead to preservation assistance. Utilizing the “Friends of Groups” as a lobbying and communications middleman, working in tandem with both the community and politicians to write and secure grant funding, offering expanded volunteer opportunities within the park, and increasing educational events and programs were all described as important leadership strategies that achieved successful results.

**Research Question 4: To which entities do preservation leaders of federal or state parks promote their agenda?**

RQ 4 was addressed through a phenomenological qualitative analysis and indicated that strong relationships established outside of the park or recreation area were essential in the problem-solving process. Connections with community members, advocacy groups, and environmental preservation organizations all led to positive outcomes for the facilities. The establishment of an environmental preservation-centric coalition improved the outreach and the chance of creating solutions for funding and overcrowding issues.

Once again, “Friends of Groups” were the top-referenced group involved with the coalition, and their leadership was commended. Unsurprisingly, the “Friends of Groups” continued to establish themselves as the initial contact to park administrators and environmental professionals for promotional or lobbying efforts. The “Friends of Groups” were constantly undeterred and contributed to a diverse range of problems. A few examples included, but are not limited to, grant writing, historical building repairs, environmental stewardship, educational programming, trail maintenance, and ensuring ADA compliance within the park and other environmental settings were established.

The involvement of non-profit organizations, park foundations, and land trusts was also mentioned frequently by the survey respondents. Their involvement in fundraising and assistance in creating environmental preservation agendas were specifically mentioned as important leadership tasks taken on by these coalition groups. Their involvement, knowledge, and desire to assist in the problem-solving established these entities as relevant allies for environmental professionals across America.

Elected officials were also identified as an essential cog in the environmental preservation wheel. Although their problem-solving skills were sometimes referenced as slow, the importance of their involvement was not denied by the survey participants. The politicians control legislative bills and the funding which directly impacts every facet of parks, recreation areas, and all environmental and infrastructure preservation projects. While some frustration with elected officials was reported, all respondents understood that dialog with elected officials is necessary and open lines of communication will remain directly through their facility or important intermediaries such as “Friends of Groups.”

### **Research Question 5: What strategies have increased community involvement in environmental preservation or educational events?**

The survey question which addressed RQ 5 of the quantitative portion of the study asked about the significance of community involvement, leadership qualities, and participation in educational promotions. Over thirty-six percent of respondents (i.e., 36.54%) reported a slightly positive response from community member involvement. The survey also identified thirty percent of community members remained neutral toward involvement in the preservation and educational opportunities in their local environmental areas.

The open-ended responses identified park cleanup events along trails, lakes, streams, and rivers as important events for volunteer involvement. These community outreach opportunities are essential to the promotion and education of the "Leave No Trace" principles for environmental preservation. Of those community members who did volunteer, the respondents reported high levels of enthusiasm and an eagerness to learn and clean up their parklands. The survey respondents also identified swimming lessons, wilderness walks, and grant proposal seminars as additional events that promoted environmental education and conservation in which the community participated.

Leadership matters, and the community members who participated in the environmental education and promotional events listed above, exuded qualities of strong leadership. The respondents described these individuals as those who actively promoted programming, financial concerns, and preservation principles. RQ 5 confirmed that many American citizens desire improved funding, preservation, and education of the nation's parks and recreation areas. The involvement, passion, and leadership in environmental preservation and educational outreach are important elements of the environmental coalition moving forward.

## Discussion

Previous research on this subject has mainly centered on the wealth of literature and peer-reviewed articles which identify the problems that insufficient funding and overcrowding create. Unfortunately, the successful problem-solving ideas and the leadership that forges these ideas into reality are oftentimes omitted. This study helps fill the gap with the research of generating ideas, enacting those ideas, and striving for solutions to these two environmental preservation issues. By analyzing the survey responses, and infusing the leadership element into the conversation, the topic becomes a powerful dynamic within the problem-solving narrative.

The research questions utilized in this study gathered information related to the problems created by the underfunding and overcrowding of America's environment and the leadership strategies that are mitigating these issues. Throughout the study, "Friends of Groups" were easily identified as environmental leaders and problem solvers. Countless survey respondents mentioned these groups as irreplaceable catalysts that volunteered at parks, participated in outreach, and acted as the "middleman" for funding negotiations between park administrators and elected officials.

Recently, the Monongahela National Forest, in West Virginia, received \$7 million through the Great American Outdoors Act for deferred maintenance (Lawrence, 2022). A litany of projects scheduled for completion with these funds mirrors the concerns identified throughout the study. The Cranberry Wilderness and Dolly Sods area will receive a bridge replacement over the Williams River and Red Creek respectively. Culvert replacement projects for Shavers Fork and the Marlinton/White Sulphur District Habitat are also on the project list. In addition, trail maintenance projects will be completed at the Tea Creek Mountain Public Access Area in Grant, Greenbrier, Pocahontas, Randolph, and Tucker Counties (Lawrence, 2022).

The completion of these environmental preservation projects, along with the additional funds provided by the legislation, would not have come to fruition without the concern, involvement, and environmental leadership of “Friends of Groups” throughout the nation. Their ability to identify issues, promote solutions, and secure funding, is directly correlated to problem-solving and establishes “Friends of Groups” as leaders within the environmental preservation coalition.

Park leadership must continue to use their voices to strengthen their relationships with “Friends of Groups” and ensure this line of communication remains open and productive. The leadership provided by park administrators, park rangers, “Friends of Groups,” non-profit organizations, and elected officials make up the core of the environmental leadership and preservation coalition. Their ability to continue to identify problems, develop plans to solve these problems, and obtain the funding to correct the problems is essential in eliminating the issues created by the underfunding and overcrowding of America’s environment.

### **Limitations**

After the survey was completed, several limitations were identified. First, anonymous surveys do not provide an opportunity for follow-up questions to obtain additional feedback. In this survey, it was difficult for the researcher to determine if the respondent submitted a legitimate complaint or simply vented frustration. The ability to initiate follow-up, probing questions would provide the researcher with a more thorough understanding of the issues at hand and potential solutions.

Second, anonymous surveys created a collection of responses from a wide array of parks and recreational areas. Parks of different sizes, budgets, and visitation statistics created wide ranges of responses that pertained to these issues. Generalizations of problems and potential

solutions were visible; however, it was difficult to apply blanket solutions to parks with drastically different budgets and standards.

Third, it was not possible to establish peer park pods throughout the survey. The ability to create survey groups for state parks, national parks, Friends of Groups, volunteers, land trusts, and environmental advocacy corporations would have provided the researcher with an opportunity to develop more precise solutions for each of the invested entities. Overall, the survey anonymity led to blanket solutions instead of precise, improvement plans for the underfunding and overcrowding issues that plague America's environment and its future preservation.

### **Recommendations for Future Research**

Upon completion of the study, several recommendations will aid in the future development of this research. First, it became evident throughout the study, "Friends of Groups," were an essential cohort in every phase of the environmental preservation discussion. These groups acted as volunteers for trail cleanup and repair, the "middleman" in funding negotiations between park administrators and elected officials, and promoted ethical environmental principles, such as "Leave No Trace," throughout every imaginable outlet. Future research must include interviews with "Friends of Groups." Their leadership is evident and a deeper understanding of their principles, strategies, and successes deserves more attention.

Second, the researcher would benefit in the future by conducting on-site tours of state parks, national parks, recreational areas, and other locations where environmental preservation is taking place. A physical presence will provide a first-hand look at the varying preservation issues the respondents mentioned as well as see the successes. The ability to visit and photograph both

the problem areas and the locations where solutions have been achieved will provide a stronger voice for moving these issues higher on the priority list.

Third, an extension of the survey will add value to the continued research. The survey provided a wealth of information and unexpected ideas for the study. A newly developed survey with additional questions has the potential to increase the probability of problem-solving. A modified survey may also provide an opportunity to widen the participant outreach and spark a deeper interest in solving the underfunding and overcrowding issues America's environment continues to experience.

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## Appendices

### Appendix A: Institutional Review Board Approval Letter



www.marshall.edu

Office of Research Integrity  
Institutional Review Board  
One John Marshall Drive  
Huntington, WV 25755

FWA 00002704

IRB1 #00002205  
IRB2 #00003206

March 4, 2022

Eugenia Lambert, Ed.D.  
Leadership Studies, COEPD

RE: IRBNet ID# 1878314-1  
At: Marshall University Institutional Review Board #2 (Social/Behavioral)

Dear Dr. Lambert:

**Protocol Title:** [1878314-1] Leading Toward Solutions to America's Overcrowding and Underfunding Environmental Preservation Issues

**Site Location:** MU  
**Submission Type:** New Project APPROVED  
**Review Type:** Exempt Review

In accordance with 45CFR46.104(d)(2), the above study was granted Exempted approval today by the Marshall University Institutional Review Board #2 (Social/Behavioral) Designee. No further submission (or closure) is required for an Exempt study unless there is an amendment to the study. All amendments must be submitted and approved by the IRB Chair/Designee.

This study is for student James Seth Caudill.

if you have any questions, please contact the Marshall University Institutional Review Board #2 (Social/Behavioral) Coordinator Lindsey Taylor at (304) 696-6322 or l.taylor@marshall.edu. Please include your study title and reference number in all correspondence with this office.

Sincerely,

A handwritten signature in cursive script, appearing to read 'Bruce F. Day'.

Bruce F. Day, ThD, CIP  
Director, Office of Research Integrity



## Appendix B: Participant Recruitment Email

Dear (Participant Name):

My name is Seth Caudill, and I am a doctoral candidate in the Marshall University Education/Leadership Studies program. I am conducting research on the environmental issues created by continuous underfunding and overcrowding at state parks, national parks, forests, recreational areas, etc. The purpose of this study is to better comprehend how these environmental issues can be solved through quality leadership. In addition, the study investigates current strategies leaders are implementing or considering implementing as part of the problem-solving process. The study's desire is to better understand these problems, examine current efforts, collect data, and generate potential solutions.

The survey consists of 16 questions and should take 10 minutes to complete. Please do not accidentally submit a blank survey by clicking the green arrow at the bottom. That button is to submit.

My study requires 100 survey participants who are connected, knowledgeable, and invested in achieving solutions to the above-mentioned problems. You may access the Qualtrics survey [here](https://marshall.az1.qualtrics.com/jfe/form/SV_26vMnbgvS8Wdgjk)

[https://marshall.az1.qualtrics.com/jfe/form/SV\\_26vMnbgvS8Wdgjk](https://marshall.az1.qualtrics.com/jfe/form/SV_26vMnbgvS8Wdgjk)

I welcome your participation in my doctoral study and the opportunity to have you participate in the fully online survey. The survey is completely anonymous, voluntary, and you may leave any question blank that you deem necessary. Completing the online survey indicates your consent for the answers you supply and allows your responses to be included in the study. By completing and returning this survey, you are also confirming that you are 18 years of age or older.

A copy of the approved Marshall University participant consent for this study is attached to this email for your records.

Please share or forward this recruitment email and a survey link to any colleague, community member, or environmental leader you feel would fit within the study parameters and would be interested in participating.

If you have any questions, concerns, or comments about the study, you may contact me at 304-412-0244 or Dr. Eugenia Lambert at 304-746-8959.

Thank you for your time and I look forward to your participation.

Sincerely,

Seth Caudill

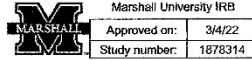
## Appendix C: Survey Questions

1. Over the last decade has funding for your facility:
  - A. Slightly increased
  - B. Significantly increased
  - C. No change in funding
  - D. Slightly decreased
  - E. Significantly decreased
2. What reasons are responsible for the funding change over this time?
3. If these changes have led to a decrease in funding, what problems has this placed on the environmental preservation agenda?
- 4A. What types of coalitions have helped the facility lobby for increased funding?
  - A. Local community members
  - B. Corporate sponsors
  - C. Elected officials
  - D. Other
  - E. If "Other," please identify
- 4B. If the response to Question 4A was "Other," please identify here:
5. What type of success has this coalition had in generating additional funding?
6. Over the last decade at your facility, have you witnessed:
  - A. A slight increase in visitation and usage
  - B. A significant increase in visitation and usage
  - C. No change in visitation and usage
  - D. A slight decrease in visitation and usage
  - E. A significant decrease in visitation and usage
7. If visitation and usage have increased, has this led to
  - A. Slight deterioration of the natural surroundings and infrastructure
  - B. Significant deterioration of the natural surroundings and infrastructure
  - C. No change to the surroundings and infrastructure
  - D. Slight improvement to the natural surroundings and infrastructure
  - E. Significant improvement to the natural surroundings and infrastructure

8. Has the maintenance backlog at your facility:
- A. Slightly increased over time
  - B. Significantly increased over time
  - C. No change
  - D. Slightly decreased over time
  - E. Significantly decreased over time
9. If your maintenance backlog has increased over time, what types of environmental preservation and infrastructure problems has this caused?
10. What individuals have you or your advocacy group lobbied for additional funding?
11. What lobbying methods have proven successful in achieving additional funding for preservation or maintenance projects?
12. Have your lobbying methods resulted in:
- A. Slightly positive financial impact
  - B. Significant positive financial impact
  - C. No financial impact
  - D. Slightly negative financial impact
  - E. Significant negative financial impact
13. Can you elaborate on the leadership strategies that your facility has implemented to successfully deal with underfunding and overcrowding issues facing the environment you work with?
14. Has community support for increased funding and visitation/usage measures been:
- A. Slightly positive
  - B. Significantly positive
  - C. Neutral
  - D. Slightly negative
  - E. Significantly negative

15. What leadership strategies have increased community involvement and support with preservation and overcrowding issues?
16. What leadership strategies have decreased community involvement and support for preservation and overcrowding issues?

## Appendix D: Informed Consent



### Leading Toward Solutions to America's Overcrowding and Underfunding Environmental Issues

#### Participant Consent

You are invited to participate in a research project entitled "*Leading Toward Solutions to America's Overcrowding and Underfunding Environmental Issues*." The study is designed to analyze and to better comprehend how the environmental preservation issues of underfunding and overcrowding of the environment can be solved through effective leadership. To that end, the study will investigate strategies current leaders are implementing or considering to implement as part of the problem-solving process.

The study is being conducted by Dr. Eugenia Lambert and Seth Caudill, a doctoral student from Marshall University. This research is being conducted as part of the dissertation requirements for Seth Caudill and has been approved by the Marshall University Institutional Review Board (IRB).

A minimum of 100 participants is necessary for the study and your opinions, insight, and expertise is greatly desired and needed. The survey is comprised of less than 20 multiple choice and open-ended questions and will be delivered through Qualtrics. It will take less than 20 minutes to complete, your replies will be anonymous, and please do not put your name anywhere on the form.

There are no known risks involved with this study. Participation is completely voluntary and there will be no penalty or loss of benefits if you choose to not participate in this research study or to withdraw. If you choose not to participate you may leave the survey site at your convenience. You may choose to not answer any question by simply leaving it blank.

Upon completion of the survey, you can delete your browsing history. In addition, your IP address will not be collected during this research. Your responses will remain anonymous and no one will be able to identify you as a participant. Completing the online survey indicates your consent for the answers you supply and allows your responses to be included into the study.

If you have any questions pertaining to the study, you may contact Seth Caudill at 304-412-0244 or Dr. Eugenia Lambert at 304-746-8959. If you have any questions concerning your rights as a research participant you may contact the Marshall University Office of Research Integrity at 304-696-4303.

By completing this survey and returning it you are also confirming that you are **18** years of age or older. Thank you for sharing your expertise, knowledge, and information. Please keep this page for your records.

Sincerely,

Seth Caudill, EdD Candidate, Co-Investigator  
Dr. Eugenia Lambert, Dissertation Chair, Principal Investigator