Visitor Use Management: How the Timed Entry Permit Reservation System at Parks and Protected Areas Influence the Perception of Sustainable Recreation and Impact Visitor Motivations

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Abstract

Parks and protected areas across the United States have undergone substantial change in recent years, specifically pertaining to visitation trends and patterns. National parks have endured rapid growth in park visitation and popular attractions within park boundaries now experience a high visitor concentration and traffic. As visitation within national parks increases, there is a high probability that visitor-related impacts, such as vegetation trampling, wildlife disturbance, soil erosion, and intra-visitor conflict, are also likely to increase. Visitors are more likely to feel crowded and rushed, and ultimately label their park experience as low or poor quality. Through the use of Visitor Use Management techniques, informed by acceptable thresholds, park and recreation managers have the ability to implement strategies to promote sustainable recreation and ultimately protect parks and protected areas for future visitors. The purpose of this study is to discover the relationship between Visitor Use Management techniques, sustainable recreation, and visitor motivations.

Keywords: Sustainable recreation, Visitor Use Management, Normative Theory, thresholds

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CHAPTER ONE: INTRODUCTION

Overview

In recent years, park and recreation managers at various parks and protected areas in the United States have tried multiple techniques to manage the flow of visitors while protecting natural resources at popular tourist locations (National Park Service, 2022). While difficult, maintaining balance is a necessary critical task to sustain park health, enhance the visitor experience, and further influence recreational motivations. Rocky Mountain National Park (RMNP), located in Estes Park, Colorado, is one of the most popular national parks in the United States and, with over 4.6 million visitors in 2019 and an overall visitor increase of 42% in the last seven years, it is overrun with visitor crowding and congestion. As visitation within parks and protected areas continues increases, there is a high probability that visitor-related impacts, such as vegetation trampling, wildlife disturbance, soil erosion, and intra-visitor conflict, are also likely to increase (Blacketer et al., 2021). The high traffic and large volume of people within the park has led to negative recreational experiences for park visitors as they are left feeling like their park and protected area experience was rushed (2021). Additionally, the overcrowding experienced at parks and protected areas has resulted in negative impacts to resource protection as well as operational capacity (National Park Service, 2022).

Background

The Coronavirus-2019 pandemic was a challenge for the recreation and tourism industries and changed the way they operated (Higgins-Desbiolles, 2021). Outdoor leisure and recreation was recognized as an essential factor to an individual's well-being and resulted in the influx of visitors at parks and protected areas during the pandemic (Collins et al., 2022). The flooding of recreationalists at national parks and public lands left park and recreation managers

overwhelmed while struggling with implementing standards to protect natural resources and wildlife, meet visitor needs, and ensure visitors had positive park experiences, all the while adhering to governmental social distancing rules. The demand for outdoor recreation opportunities skyrocketed and recreation managers were required to determine methods to satisfy visitor needs (Collins et al., 2022).

The effects of the Coronoavirus-2019 pandemic on parks and protected areas highlighted the need for sustainable recreation (Collins et al., 2022). Sustainable recreation is the idea of conducting outdoor activities in a way that minimizes the environmental impact on a park or protected area to prevent the destruction of natural resources and to limit the human footprint left in nature. Sustainable recreation has become a more acceptable concept to park and recreation managers; However, incorporating sustainable recreation practices proves difficult as the balance between recreation trends and environmental protection is not easily maintained (Collins et al., 2022).

One approach park and recreation managers use promoting sustainable recreation is through the application of the Visitor Use Management framework (Collins et al., 2022). The Visitor Use Management framework was developed providing guidelines to organizations for managing the public use of parks and protected areas. Visitor Use Management includes the implementation of policies to address visitor use and experiences, as well as resource protection. Park and recreation managers must be proactive with visitor use management techniques to maximize benefit for visitor experiences, while mitigating destruction to natural resources within a park or protected area (Collins et al., 2022).

In order to maintain a healthy balance between sustainable recreation and Visitor Use Management, a park and recreation manager must understand visitor motivations and perceptions

of the park or protected area, as well as understand the visitor threshold for an acceptable experience (Blacketer et al., 2018). Through the use of Normative Theory, a sociological theory, park and recreation managers can gain an understanding of what conditions influence a person to visit to parks and protected areas. Normative Theory suggests recreationalists have shared beliefs about recreational experiences, referred to as "norms". A recreationalist's norms might include beliefs of acceptable park and trail conditions, and crowd levels. Within each norm is a threshold, or the minimal acceptable level of a condition related to an experience, such as the maximum number of people at an attraction for a person to have a good experience at a park or protected area (Blacketer et al., 2018).

One Visitor Use Management technique park and recreation managers implemented for managing visitor traffic within parks and protected areas is through the implementation of the Timed Entry Permit reservation system for entrance into highly visited protected areas (National Park Service, 2022). The Timed Entry Permit reservation system was implemented at RMNP in the 2020-2021 season, then again in 2022 with minor changes.

Park visitors were required to purchase a Timed Entry Permit as well as pay park entrance fees, unless a service reservation was purchased, such as a camping, horseback riding, or a commercial or guided tour (National Park Service, 2022). The Timed Entry Permit reservations for RMNP was in effect during the peak season, from the end of May to mid-October. While the Timed Entry Permit costs only $2, permit holders were to enter RMNP during their two-hour entrance window. Roughly 25% to 30% of available permits were available for purchase at 5 p.m. the evening before. All permits were available for purchase online only and could be reserved approximately 30 days prior to visiting RMNP. Park and

recreation managers encourage visitors to plan a visit to RMNP well in advance avoiding the risk of park entrance complications (National Park Service, 2022).

Situation to Self

Nature provides an escape for many people. It offers a place for people to be surrounded by beautiful and unique landscapes, wildlife, and fresh air. Parks and protected areas have witnessed significant visitor growth in recent years and because of this, negative visitor-related impacts can be seen. As a frequent visitor to various parks and protected areas, I have seen numerous accounts of careless activity within park boundaries that ultimately shows disrespect to park and recreation managers that work diligently to protect the park and visitor experience, to other park visitors, such as not cleaning up after pets and degrading the environment, and to the park itself, by disregarding closure signs and climbing on rock formations. This research study will delve into the impact of Visitor Use Management and discover how it might influence sustainable recreation and impact a person's decision to visit certain parks. Park and recreation managers will be able to use the information found in this study and apply practices to keep their park or protected area beautiful and visitors happy.

The philosophical assumptions that I am espousing are driven by personal values towards the research topic and the pragmatism paradigm will guide this study as Normative Theory best fits this research required for accurate results. My ontological assumption for this study suggests readers will be provided with the perspectives of visitors of parks and protected areas and their experiences with Timed Entry Permits. The study will showcase viewpoints of the participants through personal experiences and phrases to provide readers honest understanding of the underlying motivations of hikers and the motivation for participation in sustainable recreation.

My epistemological assumption suggests that this research study is based on my interests

and personal recreational pursuits in outdoor recreation, leisure sports, environmental sustainability, and parks and protected areas. This study, while of personal interest, will examine the perspectives of others without influence from my thoughts, feelings, and any interjections regarding Timed Entry Permits, sustainable recreation, and motivations. As the researcher, my strategy is to remain neutral and separate myself from the study and study participants.

As I consider rhetorical assumptions, the language used while conducting research will be informal and adjusted to match the language of the participants. Qualitative research is commonly written in the first person and this research study will reflect my perspective as the researcher. Finally, my axiological assumption suggests that due to personal interest on the research topic, I acknowledge that my values may create research bias. My personal values may influence the discussion provided in this study as I have my own thoughts and opinions regarding personal experiences with Timed Entry Permits, sustainable recreation, and damage and overcrowding at parks and protected areas.

Problem Statement

The requirement of purchasing a pass for entrance into parks and protected areas has an impact on individuals that plan to visit a park with the Time Entry Permit reservation system implemented, to include multi-day tourists, day trippers, and locals that previously utilized park trails in their daily routine (Buhay, 2021). Park passes are in higher demand due to the increasing visitation trends at parks and protected areas. Prior to the implementation of the Timed Entry Permit reservation system at RMNP, the national park had experienced an increase in visitation since 2019. Coupled with the outbreak of the Coronavirus-2019 pandemic and social distancing requirements, outdoor recreation activities surged within the park. Environmental degradation

due to visitor overuse at RMNP included trail soil erosion and congested roadways which resulted in an overwhelmed park staff (Buhay, 2021).

Following the outbreak of the Coronavirus-2019 pandemic and social distancing requirements, outdoor recreation activities within parks and protected areas surged (National Park Service, 2021). During the pandemic, 237 million visitors sought refuge at America's national parks in 2020, which represents an overall visitation decrease of 28% from 2019. The decrease in visitation rates was largely due to temporary park closures and restrictions implemented in response to the Coronavirus-2019 pandemic. Despite the overall visitation decrease, 15 national parks experienced record visitation rates in 2020, with three parks experiencing more than 10 million visitors in 2020: Blue Ridge Parkway, Golden Gate National Recreation Area, and Great Smoky Mountains National Park (National Park Service, 2021).

Park and recreation managers have recognized the distinctly protected natural environment was at risk (Buhay, 2021). In order to protect the natural resources at parks and protected areas, park and recreation managers made decisions to limit visitation and implement requirements, which positively influenced sustainable recreation through understanding both the environment at risk and the motivations of park visitors. A significant body of literature pertaining to sustainable recreation and motivations for participation in recreational activities exists; However, there appears to be little research specific to the Timed Entry Permit reservation system, the overall impact incurred by park visitors, and how the system influences decisions to visit a park or protected area. The research proposed for this study will be conducted to answer the following research question: How does the Timed Entry Permit reservation system at parks and protected areas influence visitor perceptions of sustainable recreation and impact visitor motivations?

Purpose Statement

The purpose of this normative research study is to discover how a visitor's perception of Timed Entry Permits impacts visitation motivations and influences the perception of sustainable recreation at parks and protected areas. At this stage in the research, the influence of Timed Entry Permits on the perceptions of sustainable recreation and visitor motivations will be generally defined as how the implementation of the Timed Permit Entry reservation system impacts a person's decision to visit a park or protected area and to discover how this Visitor Use Management technique influences the perceptions of sustainable recreation. The theory guiding this study is Normative Theory as it will describe the acceptable visitation thresholds for park and protected areas that influence the visitor experience and motivations to partake in sustainable recreation (Manning & Krymkowski, 2010).

Significance of the Study

This research study seeks to discover the relationship between Visitor Use Management techniques, sustainable recreation, and visitor motivations at various parks and protected areas within the United States. By conducting research of this nature, park and recreation managers will be provided with vital information necessary for decision making to improve protection of the environment while maintaining excellent visitor experiences. Research conducted at this level will not only add to the body of knowledge currently available on sustainable recreation and visitor motivations but will incorporate the study of visitor motivations based on recent Visitor Use Management techniques implemented at parks and protected areas. The findings of this study will contribute knowledge for park and recreation managers who seek to implement Visitor Use Management techniques to promote sustainable recreation, while helping them to gain an understanding of how Visitor Use Management techniques influence visitor motivations.

Research Questions

The central research question for this study is: How does the Timed Entry Permit reservation system at parks and protected areas influence the perceptions of sustainable recreation and impact visitor motivations? There are five sub-questions: (1) How does the perception of overcrowding at parks and protected areas influence a person's motivation to visit? (2) What are visitor's reflections on their experiences with Timed Entry Permits? (3) How have Time Entry Permits influenced hiker motivation to participate in sustainable recreation? (4) What environmentally degrading factors deter people from visiting a park or protected area, and (5) What norms are identified as the prominent factors for a great visitor experience at parks and protected areas?

Definitions

1. *Sustainable Recreation* – The idea of conducting outdoor activities in a way that minimizes the environmental impact on a park or protected area to prevent the destruction of natural resources and to limit the human footprint left in nature (Collins et al., 2022).
2. *Visitor Use Management* – The Visitor Use Management framework was developed to provide guidelines to organizations for managing the public use on parks and protected areas, to include the implementation of policies to address visitor use and experiences, as well as resource protection (Collins et al., 2022).
3. *Normative Theory* – A sociological theory in which park and recreation managers can use to gain an understanding of what conditions influence recreationists visit to parks and protected areas (Blacketer et al., 2018).

4. *Norms* –Norms are shared beliefs about experiences as suggested by Normative Theory (Blacketer et al., 2018).
5. *Threshold* – A threshold is the minimal acceptable level of a condition related to an experience or norm (Blacketer et al., 2018).

Summary

Parks and protected areas have endured rapid growth and have subsequently experienced drastic changes in recent years, specifically as it relates to visitation trends. With the ever-increasing interest in visiting parks and protected areas, the fragile environments are likely to face visitor-related impacts such as vegetation trampling, soil erosion, and wildlife disturbances, as well as conflicts with visitors. Without the implementation of Visitor Use Management methods, the visitor experience will likely degrade due to congestion, overcrowding, and a sense of being rushed through the area, resulting in a poor visitor experience. Park and recreation managers use of Normative Theory can gain greater understanding of acceptable thresholds to better understand visitor motivations and can properly implement Visitor Use Management techniques. Such techniques are critical for the protection of natural resources, ensuring visitors have a positive park experience, and promoting sustainable recreation.

CHAPTER TWO: LITERATURE REVIEW

Overview

At the conclusion of this study, park and recreation managers will be better equipped to understand the effects of the Timed Entry Permit reservation system on the perception of sustainability recreational and how the implementation of the Timed Entry Permit reservation system impacts an individual's motivation to visit a park or protected area. By using the Normative Theory as the theoretical framework to conduct this study, as well as relevant scholarly journal articles in an extensive literature review, the results of this study will offer park and recreation managers an understanding of the underlying norms park visitors associate with a good outdoor recreation experience at a park or protected area, the thresholds for the minimal acceptable level of park conditions that influence decision making, such as overcrowding, and how these conditions influence a person's perception of sustainable recreation.

This chapter provides a discussion on Normative Theory and how it has informed literature on Visitor Use Management techniques and the thresholds for park visitation motivations. The literature review offers a conversation regarding research pertaining to sustainable recreation, Visitor Use Management techniques, and prior use of Normative Theory to study motivations behind park and protected area visitors. The summary of this chapter will provide park and recreation managers a focused review of current knowledge, uncertainties, and what this study seeks to identify.

Theoretical Framework

The theoretical framework for this study is Normative Theory, a sociological theory commonly used to discover the shared beliefs, or norms, amongst people and the minimal acceptable condition, or threshold, of a phenomenon that influences a person's motivations.

According to Patterson and Hammitt (1990), Normative Theory had been introduced several decades ago as the framework in recreation literature for park and recreation managers to make informed decisions regarding recreational resources. The underlying principle of Normative Theory is that society has shared beliefs and standards that dictate what is acceptable in specific settings (Patterson & Hammitt, 1990). In the outdoor recreation setting, the formulation of acceptable shared beliefs and standards creates a challenge for park and recreation managers (Manning & Krymkowski, 2010).

Normative Theory offers park and recreation managers the ability to define acceptable quality beliefs and standards that exist and guide behaviors, as well as potentially provide answers to critical questions in park and recreation management, such as the minimum acceptable park and protected area conditions, visitation experience conditions, and visitor perceptions of sustainability (Manning & Krymkowski, 2010). Proponents for Normative Theory ascertain that if shared beliefs and standards can be identified among a population, then they can be used for future recreation resource management decision making (Patterson & Hammitt, 1990).

Normative Theory research has proven valuable in the recreation and tourism industries as significant contributions have been found to answer questions regarding outdoor recreation conditions (Schultz & Svajda, 2017). Such conditions studied include measuring visitor use in parks and protected areas, crowding, and carrying capacity, as well as human behaviors and interactions, both amongst themselves and with nature. Various types of park visitors are found within parks and protected areas resulting in a variation of normative standards. Each type of visitor is motivated by their own values, beliefs, and standards. Because of this discrepancy that exists between visitor norms, measuring specific norms and acceptable thresholds may

sometimes be problematic for researchers (Schultz & Svajda, 2017).

Normative Theory has been coupled in the past with various techniques used to measure acceptable thresholds for park visitation. Jackson's Return Potential Model seeks to provide an explanation of acceptable norms within a culture through the use of structural characteristics to test the normality of a behavior. This model offers researchers the ability to establish the threshold for acceptable behaviors and acceptable conditions, as well as the ability to measure the intensity of a norm within a culture (Nesbitt, 2022).

Another method commonly used to measure acceptable thresholds in parks and protected areas is through photo elicitation. This method of data collection has been used in a variety of research studies pertaining to tourism and the tourist experience (Schultz & Svajda, 2017). Photo elicitation permits researchers to use multiple photos, each displaying a varying number of people in the same outdoor setting. The level of acceptability is then elicited from participants for each photo to gain an understanding of the condition tested, such as crowding. Both Jackson's Return Potential Model and photo elicitation are quantitative data collection measures. This study seeks to overcome the limitations provided by quantitative analysis by delving deeper into visitor experiences at parks and protected areas though a descriptive, qualitative measure that allows a person to freely express motivations, needs, and experiences (Schultz & Svajda, 2017).

Scholarly literature pertaining to Normative Theory as it relates to Visitor Use Management techniques has allowed researchers to explore standards and conditions impacting visitation motivations and trends at parks and protected areas. By gaining an understanding of the norms and associated thresholds providing for a good visitor experience, park and recreation managers will have the ability to implement techniques to manage park and protected area

sustainability. From the Return Potential Model to the use of photo elicitation, the measuring of acceptable standards and thresholds in parks and protected areas is not a novelty. This study will advance the literature on Normative Theory by applying the theory specifically to park and protected areas with the Timed Entry Permit reservation system implemented, through qualitative analysis. Minimal scholarly research has been conducted that applies Normative Theory to a specific Visitor Use Management technique.

Related Literature

Sustainable Recreation

When discussing sustainable recreation, it is important to understand that parks and protected areas are complex systems and contain many factors that link social and ecological processes (Blacketer et al., 2020). Due to the intricacy of parks and protected areas, park and recreation managers must integrate social-ecological processes to gain a deeper understanding of how such factors interact with each other. One such factor driving these processes is the ever-increasing amount of park visitors.

Blacketer et al., (2020) sought to discover the linkage between the changing ecological resources at Utah's Bonneville Salt Flats, how the changing resources influenced visitor spatial distribution within the park, and the elements that played a role in visitor motivations for visiting the park. Human activity at the Salt Flats has compromised the stability of the ecosystem: The construction of roadways fragmented the ecosystem, compacted roadbeds hindered groundwater flow, and mineral extraction displaced the necessary salts for protecting the ecosystem in the dry season. Despite such conditions, the researchers found visitor motivations for visiting the protected area remained stable. Park and recreation managers must understand the relationship

between human activity and the natural resources at risk, and ultimately seek more of a balance between the two as sustainable recreation is a mix of both elements (Blacketer et al., 2020).

As complex systems, parks and protected areas are comprised of many elements that work together and even a slight change can have a drastic effect on natural resources. Sustainable recreation seeks to mitigate human impact on the natural environment and while much research is focused on protecting vegetation and wildlife in populated areas of parks and protected areas, remote locations are also found impacted. Battaglin et al., (2018) researched the presence of bioactive contaminants in water and sediment found in the streams, rivers, and lakes in RMNP to identify the sources of contamination, contaminant profiles, and their effects on the fragile ecosystem. Bioactive contaminants, such as pharmaceuticals, hormones, and wastewater indicators, are commonly found in water and sediment samples in city, suburban, and agricultural facilities due to their proximity to landfills, wastewater treatment facilities, and runoff (Battaglin et al., 2018).

Battaglin et al. (2018) conducted thorough analysis and many bioactive contaminants were tested against collected samples. Bioactive contaminant concentrations were found to exist even in remote areas of RMNP as a result of human activity. The sources of bioactive contaminants found in RMNP likely stem from wastewater treatment facilities, flush/vault toilets and septic systems, recreational dump vehicle stations, and individual backcountry waste areas. No correlation was found that associated the presence of bioactive contaminants found in the samples with location within the park. Much like with the Bonneville Salt Flats, human activity compromises the stability of the ecosystems. Sustainable recreation can be achieved through the implementation of programs and policies, such as the “Leave No Trace” principles, that have the potential to mitigate the human impact on natural resources (Battaglin et al., 2018).

Visitor Use Management Techniques

Visitor Use Management of parks and protected areas is not an easy task for park and recreation managers to undertake (D'Antonio et al., 2020). The center of Visitor Use Management is sustainable recreation and to effectively implement Visitor Use Management techniques, park and recreation managers must understand that multiple interdisciplinary elements are involved. From natural resources and ecological systems, to social factors and climate change, managing visitor use is inherently complex and requires various resources to promote sustainable recreation while enhancing the visitor experience (D'Antonio et al., 2020).

Visitor impacts to parks and protected areas is an increasing challenge for park and recreation managers as the relationship between enhancing the visitor experience and promoting sustainable tourism is a difficult balance to maintain (Marion, 2016). The soil, vegetation, wildlife, and water resources can be protected by human activity through the implementation of Visitor Use Management techniques. Through a proactive and adaptive approach to managing park and protected visitors, the desired natural resource protection conditions and the visitor experience can be achieved and maintained.

Managing the visitor experience, providing recreational opportunities, and promoting sustainability equates to an inherently complex science as a mix of understanding social, natural, managerial, and professional factors is required. Prior to the execution of Visitor Use Management, park and recreation managers focused park visitation on numerical values and capacity within the park. Resource protection was focused on limiting the number of visitors in an area within a park or protected area, such as reducing trail usage by 20%; however, it was found that this method of managing visitor use was unlikely to produce any meaningful results. Through Visitor Use Management techniques, park and recreation managers can create

sustainable trails, campsites, and facilities in a way that limits the human footprint and impact on the surrounding natural resources. Social impacts, such as crowding, congestion, intra-visitor conflict, can be also be minimized through Visitor Use Management techniques (Marion, 2016).

The primary goal of parks and protected areas in the United States is to provide recreation and leisure opportunities for future visitors (Brownlee et al., 2022). Park and recreation managers are responsible for ensuring park resources meet the needs of the visitor, ultimately providing them with a positive experience. In order to meet this goal, park and recreation managers must monitor the number of park visitors and assess visitor behaviors. Knowing the number of people pursuing recreational activities at a specific park or protected area, and understanding visitor trends and motivations will help a park and recreation manager maintain the integrity of the natural resources and wildlife (Brownlee et al., 2022). A park and recreation manager must understand as visitation increases, so does the likelihood of visitors feeling crowded, damage to natural resources, and reporting of a low-quality park experience. These issues must be at the forefront of a park and recreation manager's priority list.

Researchers oftentimes use visual methods in order to gain an understanding of the factors that influence the park visitor experience (Brownlee et al., 2022). Through the use of multiple order photographs, researchers can discover the acceptable threshold for various conditions existing in parks and protected areas to evaluate visitor motivations. Photographs are used to help a visitor imagine the scenario with different conditions, such as various level of crowding. The information gathered during this process can help a park and recreation manager understand current and future conditions, as well as the threshold for what is deemed acceptable at parks and protected areas. Additionally, such research can provide park and recreation managers with the ability to identify when conditions are deemed unacceptable, ultimately

informing Visitor Use Management (Brownlee et al., 2022). In addition to visual methods, social media can be used to inform Visitor Use Management and has been used to measure visitor trends, spatial patterns, and the visitor experience at parks and protected areas (Smith et al., 2021).

Park and recreation managers must take responsibility to provide park and protected area visitors with positive short- and long-term benefits (Bartolome et al., 2015). When developing experiences and opportunities for a recreationist, it is important for managers to create a diverse and high-quality range of available experiences while understanding the different demands that come from different visitor groups (2015). A park visitor typically selects a park or protected area based on the park resources available to conduct recreational activity. Park and recreation managers must understand visitors and meet visitor demands by supplying facilities and experiences consistent with their interests.

The frequency and spatial patterns for visitor recreation opportunities must be explored for park and recreation managers to provide incredible experiences, while balancing it with natural resource preservation (Bartolome et al., 2015). Through the use of public participation geographic information systems (PPGIS), geospatial technology informing planning processes with public knowledge through inviting their participation, park and recreation managers can inform Visitor Use Management to monitor recreation activity locations and trends. Public participation geographic information system mapping paired with global positioning system (GPS) can be used discovering visitor spatial distribution for activities, location-specific reasons for activities and necessary improvements to enhance the visitor experience. By understanding the spatial distribution of visitors, park and recreation managers are provided with the opportunity to enhance visitor's recreational experiences (Bartolome et al., 2015).

Wildlife viewing has grown in popularity over recent years, just as visitation at parks and protected areas experienced a boom (Brownlee et al., 2021). In remote parks and protected areas, it is common for visitors to conduct their recreational activities without any park staff member contact. Because of infrequent park staff member sightings, park visitors may be less likely to follow sustainable recreation guidelines and policies. Additionally, visitors can be unaware of specific policies for conducting recreational activities in remote areas. Through the use of utilization distribution, a method that is generally used to track wildlife in remote areas, park and recreation managers are able to use the system to inform Visitor Use Management and track the locations and seasonal trends of park visitors (Brownlee et al., 2021).

In addition to Visitor Use Management informing sustainable recreation based on the protection of natural resources, it can also be used to protect cultural resources at parks and protected areas, such as Mesa Verde National Park and Grand Canyon National Park. Cultural resources, defined as material evidence of past human lives, are finite and non-renewable (Crabtree et al., 2021). Cultural resources provide different challenges for Visitor Use Management and it is important for park and recreation managers to understand the value of sustaining these resources (2021).

Normative Theory in Previous Research

Crowding and congestion is an issue parks and protected areas are currently facing and poses problems for outdoor recreation (Krymkowski et al., 2013). While Visitor Use Management techniques seek to resolve matters relating to sustainable recreation, Normative Theory is used to inform those techniques examining motivations behind visitor patterns and trends. Normative Theory is used by park and recreation managers locating acceptable thresholds for specific conditions influencing the visitor experience (Krymkowski et al., 2013).

Understanding the socially acceptable levels for elements regarding Visitor Use Management and visitor motivations is essential for park and recreation managers to achieve sustainability (Iretskaia et al., 2022). If low levels of acceptability exist, the park or protected area is at risk for conditions unsuitable to promote sustainable recreation. In order to assess acceptable thresholds, investigators measure factors relatable to visitor experiences, such as camp site location and crowding. Sustainable recreation is dependent on establishing thresholds which are based on judgement. The judgements are used to inform Visitor Use Management and can assist in determining when a threshold is labeled “acceptable” or “unacceptable”. Park and recreation managers can use this information to make decisions regarding sustainable recreation (Iretskaia et al., 2022).

Summary

Previous research on outdoor recreation motivations, acceptable park and protected area conditions, and the visitor experience has been conducted through the application of Normative Theory (Krymkowski et al., 2013; Patterson & Hammitt, 1990; Schultz & Svajda, 2017). Researchers have been able to use various data collection methods to discover the minimal acceptable level for numerous outdoor recreation conditions, such as use level, crowding, and carrying capacity. Research findings, based on Normative Theory, stem from motivations of specific types of visitors to the threshold for visitation motivations. While there is a significant body of research pertaining to parks and protected areas, Visitor Use Management techniques, and the Normative Theory framework, little research has been conducted on the application of the Normative Theory to a specific Visitor Use Management technique. This investigation seeks to address this gap in existing literature applying Normative Theory to the Timed Entry Permit reservation system. Employing a qualitative approach to the Normative Theory to answer the

research questions, visitor motivations, needs, and experiences can be determined and will allow park and recreation managers to gain an understanding of how the Timed Entry Permit reservation system influences visitor motivations to visit a park or protected area, what visitors deem as acceptable park conditions, and how the overall implementation of the Timed Entry Permit influences perceptions of sustainable recreation.

CHAPTER THREE: METHODS

Overview

In order to conduct this interpretative empirical phenomenological study on Visitor Use Management, the perception of sustainable recreation, and visitor motivations, gaining an understanding of visitor experiences is critical and will provide valuable information to draw conclusions. The results of this study will allow park and recreation managers to better understand how the implementation of the Timed Entry Permit reservation system influences the motivations for visiting parks and protected areas and this Visitor Use Management technique impacts the perception of sustainability. This chapter will discuss the research design, study procedures, and research analysis method that will be conducted for this research study. Each section of this chapter will provide a thorough description of what research tools will be utilized for data collection, how the qualitative data will be processed and coded for analysis, and methods that will be used for data visualization, as well as an explanation as to why these processes were selected for this study.

Design

The research approach for this study is a qualitative approach to discover the relationship between the Timed Entry Permit reservation system, the perception of sustainability, and visitor motivations. This interpretative empirical phenomenological study will be conducted using an open-ended survey research design. Necessary data required to the answer the research question can be obtained through use of a properly formatted survey disseminated to study participants. The online survey methodology will result in data collected from participants that will yield information expressing visitor experiences, motivations, and needs. Online qualitative surveys address a variety of questions resulting in rich and complex data focusing on a person's views

and experiences, and allow investigators to understanding how meaning is derived (Braun et al., 2021). The questions posed on the survey will allow participants to provide unique answers to express their view on the topic, share experiences, and potentially offer insight into new research opportunities. The survey design was selected due to the ability for participants to freely express their experiences in their own words, as well as due to time and location restraints for the researcher. Because the primary research theory to be used in this study is Normative Theory, the survey design is suitable to address the research question and will provide valuable data for park and recreation managers to better protect natural resources while ensuring a positive visitor experience and influencing sustainable recreation.

Research Questions

The central research question for this study is: How does the Timed Entry Permit reservation system at parks and protected areas influence the perceptions of sustainable recreation and impact visitor motivations? There are five sub-questions: (1) How does the perception of overcrowding at parks and protected areas influence a person's motivation to visit? (2) What are visitor's reflections on their experiences with Timed Entry Permits? (3) How have Time Entry Permits influenced visitor motivation to participate in sustainable recreation? (4) What environmentally degrading factors deter people from visiting a park or protected area, and (5) What norms are identified as the prominent factors for a great visitor experience at parks and protected areas?

Site

The investigator utilized a purposely-selected sampling of online Facebook Groups related to outdoor recreation, parks, and protected areas and addressed the research questions necessary to gain an understanding of the relationship between Visitor Use Management

techniques, the perception of sustainability, and visitor motivations at parks and protected areas. The investigator will label all Facebook Groups as “Social Media Site” protecting the identity of sites and respondents. The use of “Social Media Site” refers to the various Sites surveyed which will further provide the sample with anonymity throughout the process. Additionally, the investigator will not know which Social Media Site participants used to access the survey. The Social Media Sites used for this study were selected based on the likelihood of reaching potential study participants that have an interest in outdoor recreation, environmental sustainability, and potentially have experience with the Timed Entry Permit reservation system, according to the content found on the Social Media Sites.

To gain the best information from study participants regarding experiences with Timed Entry Permits and their overall motivations for visitation, Social Media Sites were researched and selected according to the content found on the page(s). The primary factor used for identifying a viable Social Media Site for this study was current content relating to outdoor recreation, parks and protected areas with the Timed Entry Permit reservation system implemented, parks and protected area travel pages for sharing visitor experiences, and pages related to park and trail conditions. Each selected Social Media Site has more than 10,000 members, with a posting frequency of two to ten posts per day. The Social Media Sites are both public and private outdoor enthusiast fan pages of popular parks and protected areas, and offer content related to park and protected area visitation, such as recommended trails and hiking routes, trail conditions, and photo sharing. Each Social Media Site offers a pool of potential study participants that have an interest in outdoor recreation and therefore meet the eligibility requirement for providing survey responses as this study seeks to gain knowledge on various types of park and protected area visitors, their motivations for visitation, and their experiences

with Timed Entry Permits, if applicable to the park and protected area experience.

Participants

In order to conduct the study and to receive survey responses best expressing the experiences of visitors to parks and protected areas, this investigation used the nonprobability sampling technique of Availability Sampling. Availability Sampling is employed when researchers select factors from the population based on availability, convenience of the researcher, and/or participant self-selection (Daniel, 2012). For this study, potential participants are individuals possessing access to the survey via the selected Social Media Sites and chose to participate providing responses to the survey questions.

Participation in this study required participants to be 18 years of age or older and have an interest in outdoor recreation; experience with the Timed Entry Permit reservation system was not a requirement for study participation. Participant interest in outdoor recreation and experiences with the Timed Entry Permit reservation system was determined by the participant's decision to complete the survey. Participants were requested to respond to multiple survey questions regarding outdoor recreation activities and to provide a description of their visitation experience with a park or protected area with the Timed Entry Permit reservation system implemented, if applicable. Research study information was provided in the Information Sheet (Appendix A) for participants to review prior to survey completion.

Procedures

The overarching research question presented by this investigation was answered through multiple steps to ensure study credibility, trustworthiness, and dependability. Prior to Institutional Review Board (IRB) submission, 19 survey questions were developed to best answer the research questions. A critical aspect in developing the survey questions was to phrase

questions in a way that allowed respondents to share their experiences. It was determined that by having the majority of survey questions as open-ended response questions, survey respondents could freely describe their park and protected area experiences without being restricted to pre-selected answers that multiple choice questions allow. Next, the Research Proposal was accepted by committee Fall 2023 and after incorporating feedback, the study received IRB approval. The sites were selected, as previously noted, based on the outdoor recreation content found, the frequency of posts, and the number of members found within each Site. The survey was disseminated via the predetermined Social Media Sites as a link following the IRB-approved social media message. The survey link was open and available for the Facebook Group participant responses across four consecutive weeks (November 14, 2023 – December 12, 2023). Interested Facebook Group participants would click on the link and complete the survey. Acceptable surveys required a majority of Visitor Use Management questions to have been answered.

Following the four weeks of data collection, the survey made unavailable and data analysis began. Data analysis involved reading and reviewing each survey response multiple times for each respondent. Responses were coded according to themes emerging from the data. Spreadsheet software, such as Microsoft Excel, was used to catalog themes and categories according to survey responses. At the conclusion of data analysis, the findings were presented utilizing Word Clouds via SurveyMonkey, and by extracting participant quotations depicting recurring and critical themes that arose during the study. Word Clouds were used to show the recurrence of themes according to the verbiage in participant responses. The more frequent a word or phrase is mentioned, the larger its text within the Word Cloud. Park and recreation managers should consider use of this data and analysis to implement changes to Visitor Use

Management techniques within their park or protected area to better the visitor experience and promote sustainable recreation.

The Researcher's Role

As the researcher of this study, I must clearly and thoroughly present my role in this investigation. As the "human instrument" conducting this interpretative empirical phenomenological study, my goal is to understand the motivations for visiting parks and protected areas and how the Timed Entry Permit reservation system might influence a person to visit a park or protected area, based on visitor experiences. My interest in this topic stems from my current residence in Colorado Springs, Colorado, where a multitude of parks and protected areas are within a short drive. Personal experiences with the Timed Entry Permit reservation system have brought my own assumptions to this study. For instance, while I perceive the reservation system as a minor inconvenience, I do not perceive the Timed Entry Permit reservation system as a constraint or obstacle to visitation that negatively impacts the overall visitor experience at a park or protected area.

The Timed Entry Permit reservation system forces travelers and tourists to plan their visit to a park and protected area in advance; however, I am under the impression that this enhances the visitor experience. Due to the limited number of visitors allowed in a park or protected area at specific times due to Timed Entry Permits, I perceive sustainable recreation as increasing as trail conditions, park congestion, and overcrowding improve during peak seasons.

Due to my experiences, my personal bias may influence how I interpret participant survey responses. While the topic of this study is of personal interest, bracketing will be used to mitigate any preconceptions associated with the research topic in order to provide the most accurate and trustworthy findings to readers and parks and recreation managers (Tufford &

Newman, 2012). Survey responses were retrieved from multiple Social Media Sites, therefore, increasing the anonymity of the survey respondents. My overall goal is to assist park and recreation managers in enhancing the visitor experience at parks and protected areas, while promoting sustainable recreation.

Data Collection

Data was collected through an open-ended survey created through SurveyMonkey. An open-ended survey allows study participants to express personal experiences without the constraint of a less-personal quantitative survey. The survey instrument was comprised of 19 questions (Appendix B), while 15 of the questions were directly related to Visitor Use Management, the perception of sustainability, and visitor experiences. The remaining four questions sought demographic information on survey participants.

The survey was disseminated to multiple Social Media Sites that relate to outdoor recreation, parks and protected areas, and trail conditions soliciting participant responses describing experiences with Timed Entry Permits, overall visitor experience, factors that influence motivation to visit a park or protected area, gaining understanding of the primary purpose for park and protected area visitation. Open-ended survey responses provide researchers with detailed remarks by survey participants that allow the interpretation of responses to gain an understanding of a specific phenomenon. The open-ended survey was the only data collection method employed.

Data Analysis

Data analysis for the study was a multi-step process. The first step of data analysis was to process survey responses into Microsoft Excel, based according to the survey question. Survey responses were aligned with the correlating question at the completion of step one. Step two

involved delving deep into each survey response, to gain an understanding of each response (Stuckey, 2015). While keeping the research questions in mind, reading and re-reading survey responses allowed for a storyline to develop for each respondent, ultimately guiding the data to answer the research questions (Stuckey, 2015).

Step three was the process of data coding, turning the raw qualitative data into a readable form (Linneberg & Korsgaard, 2019). The coding of qualitative data was accomplished through reading and examining participant survey responses multiple times categorizing it with a word or phrase that best summarizes the participant statement. The investigator examined the raw data multiple times, identifying emerging factors, ultimately to tell a story answering the research question(s) (2019). For this study, the process of coding the data involved using a different colored highlight in Microsoft Excel to marking words or phrases, according to categories that emerged. Because bracketing was used for this study, inductive coding provided the categories as they were emerged directly from the raw data (Linneberg & Korsgaard, 2019).

Trustworthiness

To establish trustworthiness and rigor in this study, methods to ensure credibility, dependability, transferability, and confirmability were implemented. The establishment of merit in qualitative research is necessary to recognize and document the overall value of the research, the likelihood of repeating results, and the accuracy of findings (Krefting, 1991). Qualitative research evaluation must be approached in a way different than quantitative research as many of the findings in quantitative research seek to generalize research findings from the overall population. The transcendental phenomenological approach for this study sought to accurately describe the experiences of visitors at parks and protected areas with unbiased research to provide useful information to park and recreation managers regarding Visitor Use Management

techniques, the perception of sustainability, and the visitor experience with Timed Entry Permits (1991).

Credibility

The trustworthiness aspect of credibility seeks to answer the truth of the data or the interpretation of participant views by the researchers (Cope, 2014). Credibility establishes the researcher's confidence and the accuracy of the findings. This aspect of trustworthiness in qualitative research is often enhanced by the researcher sharing the experiences during the investigation with study participants to verify findings (2014). Qualitative research studies are deemed credible when findings provide accurate descriptions of the human experiences and are recognized by individuals sharing similar experiences (Cope, 2014; Krefting, 1991).

This study established credibility obtaining visitor experiences through survey responses. It must be noted every visitor has had differing experiences at parks and protected areas, to include the motivations to visit, the overall experiences at a park and protected area, and the perception of sustainability. Due to the variations in responses returned by study participants, multiple realities exist regarding Visitor Use Management techniques, visitor motivations, and the perception of sustainability. In this study, credibility was achieved utilizing direct quotes from survey responses describing visitor experiences at parks and protected areas. The use of verbatim quotations had a critical role aiding the researcher in deriving conclusions. Quotations represent qualitative evidence (Corden & Sainsbury, 2006).

Dependability and Confirmability

The trustworthiness aspects of dependability and confirmability considers the consistency of the data (Krefting, 1991). Much like reliability in quantitative studies, dependability and confirmability are used to ensure findings would be similar if the study was replicated with

similar participants and conditions (Cope, 2014; Krefting, 1991). In qualitative research, the aspects of dependability and confirmability seek to achieve similar results according to participant responses avoiding any extraneous impact due to researcher bias or perspective (Cope, 2014).

Much like with the trustworthiness aspect of credibility, dependability and confirmability were sought through direct quotes from survey responses (Corden & Sainsbury, 2006). The use of direct quotes presented the variations of experiences gained from study participants. By using direct quotes, the researcher was led to deeper insights into visitor motivations and the Visitor Use Management experience, ultimately describing the range of experiences visitors have encountered (Corden & Sainsbury, 2006).

Transferability

The trustworthiness aspect of transferability considers whether or not the investigation could be applied in other contexts, settings, or with other groups (Krefting, 1991). While quantitative research seeks transferability through the generalization of findings, the generalization of findings is not applicable to qualitative research as the uniqueness of experiences found in qualitative research cannot be generalized (1991). Qualitative research is considered transferable if study findings present meaning to individuals uninvolved in the study (Cope, 2014). If a reader can apply investigation truths to their own personal experiences, then the study meets the criterion to be considered transferable. The researcher provided sufficient descriptions of data collection methods and data analysis, and ensured reporting of detailed findings were completely transferable (Krefting, 1991). By providing detailed finding, transferability can be applied to new research through comparison with the original study (1991).

Ethical Considerations

Ethical considerations or implications regarding the investigation are data storage, data usage, and anonymity. Regarding data storage, survey responses gained for this study are maintained on a locked, password protected computer. The researcher is the only individual to have access to the data. The data collected will only be used only for this investigation, and will be discarded after three years, according to IRB standards. Survey responses are anonymous; however, if there is any identifiable information gained in survey responses, participant pseudonyms will be used if the identifiable information is critical to the study and cannot be removed. For the Social Media Sites used in this study, there is no way for the researcher to know from which Social Media Site a participant accessed the survey.

This research study was developed in accordance with the basic ethical principles of Respect for Persons, Beneficence, and Justice, as described in the Belmont Report (National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research, 1979).

Respect for Persons requires each participant to be treated as an autonomous agent. In accordance with this principle, the researcher refrained from interfering with the participants opinions and choices, and did not withhold any necessary information preventing the participants from sound judgements. Under the principle of Beneficence, no harm became of any participant. This study sought to maximize the well-being of participants, minimizing negative impacts or emotions. Considering the principle of Justice, each participant received benefits though societal contribution. This study adds to the current scholarly literature available on Visitor Use Management techniques and critical to this study are participant views and experiences. At the conclusion of this research study, park and recreation managers will be able to better the visitor

experience at parks and protected areas while promoting sustainable recreation (National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research, 1979).

CHAPTER FOUR: FINDINGS

Overview

The Timed Entry Permit reservation system was implemented in various parks and protected areas across the United States in recent years to lessen the negative impact to the visitor experience within the park or protected area and to the natural environment. This study was conducted to better understand the visitor experience with the Timed Entry Permit reservation system, the visitor perception of environmental sustainability, and to discover how the Visitor Use Management technique influences visitation motivations. This chapter will discuss the survey results that were analyzed for theme development based on the codes that emerged through each open-ended survey response. Additionally, the sections of this chapter will provide a description of participant responses in the form of codes, supported by participant quotes, for each research question presented on the survey. Before concluding the chapter, the research questions will be answered according to the themes emerging during data analysis.

Participants

The survey was disseminated to the pre-determined Social Media Sites and remained open across four consecutive weeks (November 14, 2023 – December 12, 2023). During that timeframe, 18 people acknowledged anonymous participation in this investigation and shared experiences with the Timed Entry Permit reservation system, providing information about how the Visitor Use Management technique influences visitation motivation and perception of environmental sustainability. The responses provided allowed the researcher to gain vital insights into how the Timed Entry Permit reservation system has influenced recreational motivations within a park or protected area with the reservation system implemented.

Demographic information gained from study participants was gender, age bracket, ethnicity, and education level. Information about Timed Entry Permit reservation system usage and park location was also gained. Of the 18 study participants, 11 identified as female, six identified as male, and one participant preferred not to answer. In regards to the age bracket in number of years old, six study participants were in the 25–34 age bracket, two were in the 35–44 age bracket, one was in the 45–54 age bracket, five in the 55–64 age bracket, and four were in the over 65 years bracket. Considering ethnicity, 14 study participants identified as "White", two identified as "Hispanic or Latino", one selected "Other", and one preferred not to answer. All survey respondents had college experience. The highest level of education amongst study participants was one doctoral degree, while two study participants had attended some college, but did not earn a degree. Two study participants had an Associates or two-year degree. Seven study participants earned a Bachelor's or four-year degree. Six study participants had a Master's degree.

Concerning participant experience with the Timed Entry Permit reservation system, 16 study participants had visited a park or protected area that had the Timed Entry Permit reservation system implemented; two study participants had not visited a park or protected area with the reservation system requirement. For those study participants that had visited a park or protected area with the Timed Entry Permit reservation system implemented, seven participants visited Rocky Mountain National Park, four participants visited Arches National Park, two visited Maroon Bells Scenic Area, one visited the Manitou Springs Incline, one visited Acadia National Park, and one visited Rocky Mountain National Park, Arches National Park, and Glacier National Park. Recreational activities conducted during park or protected area visitation were hiking, running, sightseeing, photography, and camping. Each study participant provided

valuable insights into experiences had at parks and protected areas with the Timed Entry Permit reservation system requirement.

Results

The open-ended qualitative survey was disseminated to the pre-determined Social Media Sites selected according to the content found on the Social Media Site relating to outdoor recreation, parks and protected areas with the Timed Entry Permit reservation system implemented, travel pages for parks and protected areas, and pages related to park and trail conditions. The survey was open for completion across four consecutive weeks, resulting in responses from 18 anonymous participants. After the survey was closed, data analysis began, resulting in the emergence of six themes according participant responses to the 15 Visitor Use Management-related questions.

Theme Development

Each survey response was read and reread multiple times to fully gain an understanding of experiences by each study participant. Survey responses were interpreted into the researcher's own words, then separated into codes, according to the content of the interpretation (Stuckey, 2015; Linneberg & Korsgaard, 2019). Six themes emerged from participant experiences: (1) the Timed Entry Permit reservation system's influence on visitation motivation; (2) concerns about Timed Entry Permits; (3) the expectations and reality of Timed Entry Permits; (4) the Timed Entry Permit's influence on the perception of environmental sustainability; (5) the park or protected area experience; and (6) the concerns about overcrowding and congestion at parks and protected areas. An accurate portrayal of study participant experiences was gained through the use of direct quotations obtained from survey responses.

1. Influence on Visitation Motivation

The first theme found to emerge from participant responses was the influence the Timed Entry Permit had on motivation to visit a park or protected area with the reservation system requirement. Multiple perspectives were gained on the overall influence the Timed Entry Permit reservation system had on the decision to visit a park or protected area that uses the Timed Entry Permit reservation system and were coded as either a positive influence on visitation, a negative influence on visitation, or had minimal influence on visitation.

Positive Influence on Visitation. For some survey respondents, the Timed Entry Permit reservation system was interpreted as a positive influence on visitation as annotated by the following participant response: "Reserving an entrance time during peak visiting months makes it easier for me to plan a trip and ensure that the park is less crowded during my visit, making the experience more enjoyable and ultimately making the decision to go more appealing". Multiple respondents enjoy the qualities the Timed Entry Permit reservation system offers visitors, such as the ability to plan visitation in advance, guaranteed access to the park or protected area, and better parking options, with fewer people crowding highly sought locations.

The Timed Entry Permit reservation system allows visitors to secure a time slot for park or protected area entrance during peak times. One survey respondent described the necessity of the Timed Entry Permit reservation system to guarantee access to parks or protected areas that require a long-distance drive for visitation: "National parks are usually a long drive and I would hate to drive hours and not get in or have to wait to get in". The Timed Entry Permit reservation system limits visitation during peak times with the objective of preserving the natural environment and positively influences park or protected area visitation motivation because a visitor "…want[s] to enjoy trails without damaging the environment, and limiting people limits damage".

Negative Influence on Visitation. For other survey respondents, the Timed Entry Permit reservation system was interpreted as a negative influence on visitation as described by the following participant responses: “If it is a quick hike, why would I attempt to fight on a very busy weekend for a single pass? It is not worth it” and “It is easier to go somewhere else that doesn't require the reservation. It's really hard sometimes to plan in advance”. The primary factors found to drive the negative perspective of the Timed Entry Permit reservation system was the necessity and difficulty of planning visitation in advance. The process of making a reservation was viewed as a hassle and not worth the effort it takes to make a reservation. Additionally, according to multiple survey respondents, planning in advance and the need for a Timed Entry Permit “…puts a damper on the spontaneity aspect” of visiting a park or protected area. Survey respondents that were found to be negatively influenced to visit a park or protected area view the Timed Entry Permit reservation system as “…another barrier and obstacle” to visitation.

Minimal Influence on Visitation. When considering the Timed Entry Permit’s influence on visitor motivations, some respondents were neither positively nor negatively influenced to visit a park or protected area with the reservation system implemented. For these respondents, Timed Entry Permit requirement simply influenced visitors to alter the way they participated in recreational activities within a park or protected area with the requirement imposed. According to multiple survey respondents, Timed Entry Permit did not influence the motivation to visit a park or protected area, but instead influenced recreational activity planning.

Data revealed avoiding the Timed Entry Permit requirement and entering the park or protected area outside permit requirement timeframe, respondents’ visitation motivation was minimally influenced. In particular, two respondents described: “Usually I plan to arrive before

or after the reserved entry time window" and "I planned to come when the entry program was not in effect". One respondent described how the Timed Entry Permit reservation system does not impact their motivation to visit a park or protected area: "It doesn't change my motivation to visit, it just influences my travel and arrival planning. Merely a logistical challenge".

Data further revealed multiple respondents shared the Timed Entry Permit reservation had no influence on visitation as they had a set visitation plan as best described by one respondent: "We were going to visit no matter what". Survey respondents in which the Timed Entry Permit reservation system had minimal visitation influence were found to either regularly plan visitation in advance, avoid the Timed Entry Permit requirement, or do not allow the requirement to hinder visitation plans.

2. Concerns About Timed Entry Permits

The second theme to emerge from participant responses were concerns regarding the Timed Entry Permit reservation system at parks and protected areas with the reservation system implemented. Concerns described by subjects included the need for advanced planning, desired time slot unavailability, an additional cost incurred, unawareness of Timed Entry Permit requirements, and website difficulties with unclear reservation instructions. An additional theme emerged in which participants were concerned with how the Timed Entry Permit reservation system negatively impacted park or protected area employees. The negative impact observed by respondents involved disgruntled visitors misdirecting anger towards park and protected area personnel.

Advanced Planning Required. A common concern that emerged from participant responses was the requirement for park and protected area visitors to plan advanced visitation. Multiple respondents found it "…difficult to plan so far ahead". One respondent described a

concern with the need for advanced planning detracting from the opportunity for another person to enjoy the park or protected area if travel plans must be cancelled or are ruined: “If life ends up interfering with your meticulously planned travel plans, you run the risk of losing your reservation while hindering some other group from being able to enjoy the locale”.

While some respondents noted planning a visitation in advance, they often research entry requirements ahead of time and make a reservation for high-demand locations within a park or protected area. In support, one survey respondent detailed: “[It is] not difficult to get a [time] slot, but [it] does require advance planning to get the earliest/most in demand time slots”. The Timed Entry Permit reservation system creates a system with limited access to a park or protected area during peak visitation hours. Due to this limited access, advanced planning is an integral part of park and protected area visitation experience and influences a person’s overall visit motivation.

Time Slot Availability and Additional Cost. The next concerns to emerge from survey responses was time slot availability and additional expenses incurred for Timed Entry Permit reservations. The concerns about time slot availability were often found in conjunction with the concern of advance visitation planning. The most in-demand time slots are the quickest to be reserved; visitors are required to be proactive in making Timed Entry Permit reservations to receive an in-demand time slot. Visitors must be proactive in knowing when Timed Entry Permit reservations become available for purchase. This foreknowledge is best described by one survey respondent: “When I need to plan to make a Timed Entry reservation, I have to be aware of when the time slots become available for any desired date months, weeks, days ahead of the desired date(s)”. Respondents expressed time slot unavailability concerns or only inconvenient time slots remaining available that do not meet their park or protected area visitation requirements. One

respondent was "…afraid of the time slots being sold out for the time period visited" while another respondent expressed that "[There are] no [Timed Entry] spots available for spur of the moment activities".

In addition to paying park or protected area entrance fees, the Timed Entry Permit reservation system enforces an additional cost on visitors. The requirement for purchasing an entrance fee has impacted the experience of multiple park and protected area visitors. One survey respondent shared a recent experience compared to time when Timed Entry Permits were not in effect: "Camping in parks and protected areas used to be first come, first served in my youth. Now you need to reserve spots (oftentimes with a payment) ahead of time". Another respondent stated that the "Extra cost" associated with the Timed Permit Reservation system was one of their primary concerns. While the cost of Timed Entry Permit reservations are inexpensive (Recreation.gov, 2014), one survey respondent expressed preferences on where the money from the reservation system went: "I wish the park system didn't have to use a vendor that charges extra to make the reservation…because I'd rather give that money to the park".

Unaware of Requirement. In some experiences described by survey respondents, park and protected area visitors were often found unaware of the Timed Entry Permit reservation requirement. One survey respondent "Did not know of the requirement" while another respondent was "Unaware of the requirement beforehand".

Other survey respondents conducted research of the park or protected area prior to visitation and therefore learned of the Timed Entry Permit requirement: "Just plan in advance and do your research". If a park or protected area visitor is unaware of the Timed Entry Permit requirement, it can negatively influence the visitation experience by restricting entrance into the

park or protected area, unpreparedness for an additional cost, and possibly causing undue stress in an otherwise peaceful natural environment.

Unclear Instructions, Website Difficulties, and Mistreatment of Park Employees. The final concerns found regarding the Timed Entry Permit reservation system were unclear instructions on how the Timed Entry Permit operated, technical difficulties with the reservation website, and the mistreatment of park or protected area employees by park visitors. One respondent indicated that the instructions on how the Timed Entry Permits operated and failed to specify the directions on how to enter the park with a timed entry reservation: "[There are] unclear instructions about if the entry pass gives you a special access lane or if you have to still wait in line behind cars that didn't get a pass in advance". The unclear directions can cause visitors to experience stress prior to entrance into the park or protected area, thus influencing the overall visitation experience.

Website and system difficulty concerns found to emerge through survey respondents' experiences. Timed Entry Permit reservations are secured online via a specific park or protected area website. One respondent was unaware of how to make a Timed Entry Permit reservation and described their experience: "I really don't know how to use the system. I am 68 years old and not used to it. My daughter helps me get the reservation". The same respondent indicated that their concern lies with the website and the ability to make a reservation for their desired time slot: "I don't understand the system and I prefer to go to the park later in the morning—not early". Additionally, another respondent described the Timed Entry Permit reservation website as not "…super intuitive to find where you needed to go…" and that use of the website could be "…hard for non-tech savvy people or older people".

The final concern to emerge was the potential mistreatment of park or protected area employees. One respondent had limited feedback per the Timed Entry Permit reservation system, yet expressed concern for the employees. In their survey response, they annotated a primary concern for park or protected area employees who interact with disgruntled visitors: “I have no concerns except for the employees that deal with angry people that did not look up anything in advance”. The respondent’s concern was interpreted as park or protected area visitor anger directed at the employees due to the visitor’s lack of reserving a Timed Entry Permit in advance.

Figure 1 below is a word cloud representing study participants’ primary concerns about the Timed Entry Permit reservation system. Based on participant responses and depicted by Figure 1, it can be seen that study participants are concerned about planning their visitation in advance as “Plan” was mentioned seven times, and “Advance” and “Ahead” were mentioned three – four times each. Additionally, it can be seen that there were concerns regarding available time slots, as “Time slot” was mentioned often.

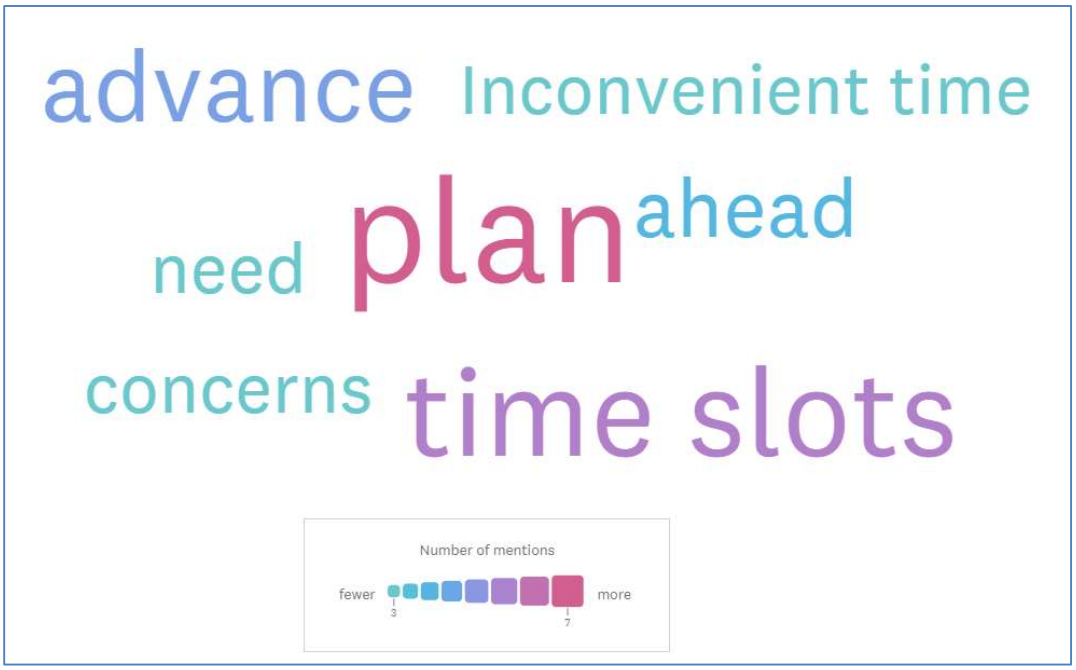

Figure 1: A word cloud depicting study participants’ primary concerns about the Timed Entry Permit reservation system. Based on the number of times a word or phrase was mentioned in survey responses, the larger or smaller the word is in the word cloud. The text color depicts a scale for the number of times each word was mentioned in responses. Figure 1 was created by SurveyMonkey based on the researcher’s data.

3. Expectation vs. Reality of Timed Entry Permits

The next theme to emerge from participant responses were the expectations and the reality of the experiences with the Timed Entry Permit reservation system at parks and protected areas with the reservation system implemented. The expectations of a park or protected area with the entry requirement included better parking, fewer people, and better interactions amongst visitors. The reality of visitor expectations was both positive and negative visitation experiences, based on entrance wait times, the number of people found within the park, and available parking conditions.

Expectations of Timed Entry Permits. In response to survey questions regarding expected factors to be seen at a park or protected area with the Timed Entry Permit reservation system implemented, the majority of respondents expect to see fewer people in the park, have more parking availability, and overall better park conditions, such as cleaner park facilities and better maintenance of the natural environment as described by multiple respondents: "[I expect] fewer people, better conditions, better parking" and " I expect that…a reservation system…[will] maintain the health of the environment". Other respondents described factors such as the limitation of vehicles within the park equates to less idling vehicles and lessens traffic conditions, creates more parking availability, and allows park managers to better control the flow visitors.

One respondent noted pertaining to expectations that with the Timed Entry Permit limiting the number of vehicles and visitors within the park, they anticipated "Better park amenities, like cleaner restrooms due to reduced use". Another respondent hoped for "Less crowding around the 'Picture Perfect' spots", and with less crowding in a park, "…visitors

[have] the ability to truly take in the park's natural beauty". For a park or protected area to lessen traffic congestion within the park, one respondent noted an expectation of an in-park transit option, such as a shuttle bus to transport people from parking lots located outside park or protected area boundaries.

Reality of Timed Entry Permits. In response to survey questions regarding participants' overall experience with the Timed Entry Permit reservation system, experiences had been both positive and negative. Park and protected area visitors that had an overall positive park or protected area experience described their experience as "Good" and "Thought [that the Timed Entry Permit reservation system] was a good idea since the park stated that before the reservation system, the park was being overrun and the pollution was killing trees".

One respondent residing near the park or protected area visited offered their experience with and without the Timed Entry Permit system in place: "I actually like it when the reservation system is in place…the whole experience is better than the horrible congestion when the system isn't in place". Another visitor described their visitation as much calmer with the Timed Entry Permit reservation system and yet another respondent found "There were plenty of places to explore without running into crowds of people".

Multiple respondents had a positive experience with entrance wait times and lines, with one respondent stating that "…wait times to get in the park were lower due to the limited amount of people allowed in at any specific time". Respondents possessing a positive experience with the Timed Entry Permit reservation system were found to enjoy their time at the park or protected area. This enjoyment can be witnessed by two respondents "I utilized the reservation system every weekend with Rocky Mountain National Park…I have no problems with the reservation system and have enjoyed my time at the park" and "We had an enjoyable 2 1/2 days

in Arches. We went in the first day after the 4 pm entry open to hike up to Delicate Arch to photograph the sunset. The other two days we had timed entry for 8 am".

Some parks and protected area visitors described their overall experience as negative. Respondents that had a negative experience described factors such as long entrance lines, long wait times, no parking availability despite the reservation system, and overcrowding as likely causes of the negative experience. A single respondent described visitation experience as "[Getting] to the park early, [waiting] in a long line of cars and then [hoping] to find a place to park. [The] park [is] still very crowded". Another respondent described the experience as a "9 out of 10, but only because I still had to wait in line behind cars that didn't know Timed Entry [Permit] was required". Lastly, another respondent described park or protected area entrance as a "Quick check-in typically, but more crowded than anticipated".

4. Perception of Environmental Sustainability

The next theme to emerge from participant responses was the influence of the Timed Entry Permit reservation system on the visitor perception of environmental sustainability. Multiple perspectives were gained in response to participant views on environmental sustainability and the Timed Entry Permit reservation system. Participant responses were interpreted and coded as either a positive influence or a minimal influence on perception.

Based on participant responses, environmentally degrading factors found that would prevent visitation to a park or protected area include overcrowding, litter, parking in undesignated areas, unmaintained roads and trails, poor visitor behaviors, disturbing wildlife, pet waste not disposed of or incorrectly disposed of, visitors being disrespectful of others, and visitors being disrespectful of the environment. One respondent described overcrowding as an

environmentally degrading factor, negatively influencing their motivation for visitation: “Crowds might make me think twice”.

Considering environmentally degrading factors, a respondent described their perception of environmental degradation caused by overcrowding: “Overcrowding leads to people parking in areas they should not park, which results in damage to the vegetation”. A park or protected area’s natural features are diminished by human interactions, resulting in people being deterred from visiting: “Dog waste and litter would prevent me from going to a park as it detracts from the park's natural beauty”. Figure 2 is a word cloud depicting participant responses pertaining to environmentally degrading factors that would deter or prevent their motivation to visit a park or protected area.

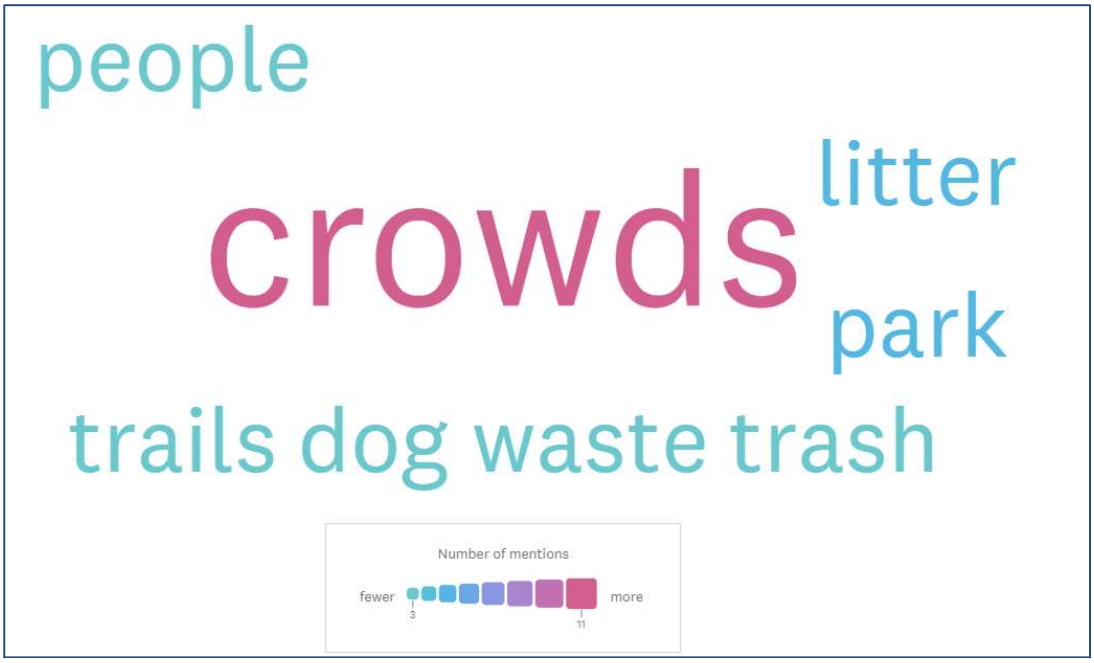

Figure 2: A word cloud representing study participant responses in regards to the environmentally degrading factors that would prevent park or protected area visitation. Figure 2 was created by SurveyMonkey based on the researcher’s data.

Positive Influence on Perception. For some survey respondents, the Timed Entry Permit reservation system positively influences visitor’s perceptions of environmental sustainability. Multiple respondents described perceptions of environmental sustainability and provided input

reflecting on the Timed Entry Permit reservation system protecting the natural beauty of park and protected areas. One respondent described the need and support for Timed Entry Permits as "Our National Parks are being "loved" to death by too many people. We support timed entry".

Research has shown people enjoy spending their time recreating at parks and protected areas, resulting in environmental degradation (Marion, 2016). Three respondents described the Timed Entry Permit reservation system as a "Positive step for the environment" that "…helps lessen park degradation by humans", and ultimately "Improves the environmental protection due to less crowding". Two other respondents stated "Less people at once leads to less problems" in terms of environmental degradation and "Regulating the flow of arrivals seems to be less stressful to the park's personnel and natural resources", ultimately perceiving that the Timed Entry Permit not only assists the natural environment, but aids park and recreation managers dealing with conflicts. The Timed Entry Permit reservation system is perceived to keep visitors accountable for their actions, as described by one respondent: "Statistically, if more people are in one area at a time, it is more likely that someone will litter or not pick up dog waste. Timed Entry [Permits] will ensure that less people in attendance at one time thereby reducing the chance someone will litter". The Timed Entry Permit requirement was found to make visitors "…hopeful that the people who do use the system will treat the parks better".

Minimal Influence on Perception. For other survey respondents, the Timed Entry Permit reservation system had minimal influence on the perception of environmental sustainability at parks and protected areas with the reservation system implemented. One respondent described their experience with the Timed Entry Permit reservation and the overall influence the system had on views of environmentally sustainability as "I don't see that it does [influence my perception of environmental sustainability]". The respondent described "Still a lot

of people" at the park or protected area to perceive a difference in environmental sustainability practices. Two additional respondents stated what they know and see of environmental sustainability has not been influenced by the implementation of the Timed Entry Permit reservation system.

5. The Park or Protected Area Experience

The next theme to emerge from survey participants was regarding the park or protected area experience. Included in this theme are the desirable factors for a great experience, the influence of the Timed Entry Permit on recreational activities, and the behaviors of other visitors. Survey respondents provided multiple perspectives for each theme that emerged in regards to the park or protected area experience.

Desirable Factors for a Great Experience. In order to gain an understanding of the factors that would enhance a person's park or protected area visit, survey respondents provided lists of desired experience while visiting a park or protected area. While majority of factors described are impacted by human beings, there are several in which a park or recreation manager has no control of, such as the weather, the locations of the sunrise and sunset, and the location of wildlife. To make a great experience in a park or protected area, one respondent stated that easy park entrance, fewer crowds, and available parking is key: "I could get into a park and see the things I wanted to see without crowds and easy parking".

Further considering factors influencing a robust experience, a respondent desired "Clean and well designated walkways, signs reminding people to not litter, pick up after their animals, and rules to not mess with the wildlife". Multiple respondents identified less crowds, pet waste, and litter would make for a great experience. Respondents also noted quietude during a visit, in-park transit to trailheads, and for drivers to understand the rules of the road when driving in

unfamiliar landscapes: “Quiet trails, beautiful weather, transit access to trailheads, drivers knowing how to drive in the mountains and not making [bad] decisions”. Two respondents stated that additional public toilets at trailheads would make for a more enjoyable park experience. It was found that survey respondents desire easy entrance into the park or protected area, fewer people on the trails, more park signage with rules and regulations, quietude, visitors to clean up after their pets, more public park facilities such as toilets and water fountains, and in-park transit options.

The Timed Entry Permit Requirement’s Influence on Recreational Activities. To develop an understanding of the influence of the Timed Entry Permit reservation system on how visitors conduct recreational activities within a park or protected area, respondents described the overall impact the reservation requirement had on their recreational experiences. Many respondents stated a required adjustment to the timing of their recreational activity according to the time slot reservation availability. One such respondent provided the following statement: “[The Timed Entry Permit reservation system] has helped me schedule my hikes properly and allows me to give my family/friends a better time frame to expect me”. Reserving a time slot allows a person to plan recreational activity accordingly and provides visitors with a set time and location for safety purposes.

Lastly, trails and park facilities have fewer people than prior to the reservation system as noted by a respondent: “Park services and amenities including trails and trailhead areas do not appear to be as overwhelmed as before”. One respondent stated that a Timed Entry Permit “Helps prepare more of a curated experience” by ultimately making a visitor plan in advance park or protected area experiences.

Differing perspectives were discovered in participant responses regarding the tempo of their park or protected area visit. Once such respondent did not feel rushed: “There were less people on the trails during my visit at Arches National Park, this definitely enhanced the experience as I did not feel rushed or feel like I was in anyone's way while hiking”. Another respondent felt as though they did not have enough time in the park or protected area: “I do feel a sense of being rushed. Both getting there on time and while there”. In order to visit some in-demand locations, one respondent “…booked a tour for Bear Lake in Rocky Mountain National Park, since those passes were harder to get”. It was revealed the Timed Entry Permit does influence the way people conduct recreational activities within a park or protected area, whether according to the time slot available, the need to reserve a tour to visit more highly sought after locations, or as a safety precaution.

Behaviors of Other Visitors. The behaviors of other visitors within a park or protected area were found to influence the visitor experience. Study participants were asked multiple questions regarding the behaviors of other visitors preferred and behaviors they disliked. It was found that the majority of participants prefer other park visitors to be respectful toward fellow visitors and to be equally respectful to the environment. Survey responses regarding the behavior of others included such statements as: “Keeping distant, being quiet”, “Friendly, but distant”, and “Respecting their surroundings and respecting other visitors’ privacy and space”. This data was interpreted that visitors desire to enjoy the park or protected area undisturbed by humanity and to “Be respectful of the environment and others trying to enjoy to park”.

Another behavior that was preferred by survey respondents was the following of Leave No Trace principles, in which park or protected area visitors maintain cleanliness of the natural environment by not littering, disposing pet waste properly, and by staying on the trails to

minimize human impact to the area. One respondent stated that they liked “Visitors who follow Leave No Trace [principles] and care for these spaces as much as I do”.

Some of the behaviors park and protected area visitors dislike of other visitors include conversing loudly, playing loud music, and forming large gatherings, ultimately disrupting the experience for other visitors. Many survey participants annotated that they dislike the behaviors of “People who are generally rude and do not respect nature”, the actions and behaviors that disturb and antagonize wildlife, and those that bring “Destructive behaviors, like graffiti” into a park or protected area.

Following the previous thread, a majority of survey participants were found to disapprove of environmentally degrading behaviors such as littering, not cleaning up after their pets, and smoking. Additionally, it was found that visitors who disregard park or protected area rules and regulations are disliked by multiple survey participants. Several respondents annotated that “People who can’t read the signage”, and park or protected area visitors “not paying attention to where they walk, hike, or run off trail, trampling sensitive vegetation” are greatly disliked behaviors that negatively impact the park or protected area experience. One respondent stated that they “…hate it when others disregard the rules - i.e. hiking a trail that is only available with a permit” and that “…More enforcement” of the park rules and regulations is needed to maintain the health and wellness of parks and protected areas.

6. Overcrowding and Congestion

The final theme to emerge from participant responses was regarding the Timed Entry Permit reservation system and visitor concerns regarding overcrowding and congestion within a park or protected area. The majority of survey responses reflected high concerns about overcrowding and congestion within parks or protected areas. One respondent stated to be “Very

concerned" about overcrowding and congestion, while another stated that overcrowding and congestion "…would ruin the experience". A respondent stated they "did not even want to go [to Rocky Mountain National Park] since it is so busy. [It is] not enjoyable trying to find a parking spot and then dealing with all the people". Another respondent noted the number of vehicles and people using the parks or protected areas are "Ruining the areas for future generations".

In the face of traffic congestion, dangerous traffic situations are created because "People don't seem to understand when [and] where they should be stopping". One respondent stated that the traffic congestion within parks or protected areas or too many people on the trail "…increases my anxiety levels…With overcrowding issues on the roads and trails, it becomes increasingly difficult to find the solace of solitude and serenity of nature". Other respondents fear the impact overcrowding has on the trail system and the impact on the natural environment, according to their responses: "My biggest concern is the impact on the trail system", "It's hard to see special places getting trashed", and "The noise scares away animals, the weight of people walking off-trail destroys nature, and the more people who come increases the chance of bad apples littering".

Additional concerns regarding overcrowding and congestion are tied to conducting recreational activities within a park or protected area. One respondent shared their experience with overcrowding and congestion as "Driving so far, only to battle for a parking space. Daylight can be limited, which can limit time available for hiking". Another respondent shared safety concerns regarding overcrowding at popular hiking locations as many "…underprepared hikers attempting [the hike] due to [its] popularity", ultimately creating a dangerous situation. Another respondent stated that due to overcrowding and congestion, it is "More difficult to listen for the birds and animals when the soundscape is degraded by traffic and people talking loudly",

impacting the recreational experience within a park or protected area. Additionally, “Crowded and congested areas at a national park make the visit stressful and can make visitors feel rushed”, possibly turning a great experience into a negative park or protected area experience. In order to combat overcrowding and congestion, a respondent stated that they “…support not allowing personal vehicles in a park (as in Denali and Zion), making visitors ride the shuttle buses. [This] eliminates the issue of parking and emissions damaging the environment”.

Research Question Responses

After the interpretation of study participant survey responses and coding for theme development, answers to the posed research questions were found. This qualitative study based on the experiences of visitors to parks and protected areas with the Timed Entry Permit reservation system requirement provided the researcher with varying responses to cumulate an accurate answer to each research question.

Research Question 1: How does the perception of overcrowding at parks and protected areas influence a person’s motivation to visit?

It was found that the perception of overcrowding and congestion at parks and protected areas negatively influences a person’s motivation to visit a park or protected area. The majority of respondents had high concerns about overcrowding and congestion. It was found that some study participants do not visit parks or protected areas during peak times in order to avoid overtly crowded trails and high traffic congestion for reasons of traffic safety, environmental degradation, and an overall a less than enjoyable experience. The dislike of crowded trails, unavailable parking options, the negative human impact on the environment, and added stress makes visitation at a park or protected area less than desirable.

Research Question 2: What are visitor's reflections on their experiences with Timed Entry Permits?

Visitor reflections on their experiences with Timed Entry Permits were primarily positive. It was found that park and protected area visitors are likely to have a positive experience with Timed Entry Permits when the reservation system is implemented correctly and limits the number of vehicles allowed within a park or protected area during peak times. Park and protected area visitors were found to have an overall positive view of the impact Timed Entry Permits had on the natural environment and agree with the reasoning behind the implementation of Timed Entry Permits at popular tourist locations. However, study participants have still experienced long entrance wait times, long lines, unavailable parking, and crowded trails despite the Timed Entry Permit requirement. The Timed Entry Permit reservation system website was found to be difficult to navigate for some study participants, indicating that park and recreation managers should implement changes to the website to make it more user friendly.

Research Question 3: How have Timed Entry Permits influenced visitor motivation to participate in sustainable recreation?

Timed Entry Permits were found to influence visitor motivations to participate in sustainable recreation by ensuring visitors schedule their visitation at a park or protected area. By securing a time slot at a park or protected area and adhering to the rules and regulations imposed by park and recreation managers, study participants were able to conduct recreational activities as planned. The Timed Entry Permit requirement did deter some study participants from conducting recreational activities during time in which the Timed Entry Permit was required. Those participants were found to opt to visit a park or protected area at a time when the requirement was not in effect. They chose to visit at a time when there were less crowds, more

parking availability, and overall better park or protected area conditions. The choice to avoid the Timed Entry Permit by visiting at a less popular time ultimately influenced their motivation to visit a park or protected and allowed for their participation in sustainable recreation.

Research Question 4: What environmentally degrading factors deter people from visiting a park or protected area?

Multiple environmentally degrading factors were found to deter people from visiting a park or protected area. Study participants all had similar ideas as to what constituted an "environmentally degrading factor" and there was significant overlap amongst responses. Such environmentally degrading factors were large crowds in one area, litter, pet and human waste not properly disposed of, visitors not staying on designated trails, visitors conducting recreational activities in improper locations, disturbing wildlife, parking in undesignated areas, idling vehicles, and smoking. It was found that the majority study participants would be deterred from visiting a park or protected area based on these environmentally degrading factors.

Research Question 5: What norms are identified as the prominent factors for a great visitor experience at parks and protected areas?

The prominent factors identified for a great visitor experience at parks and protected areas were found to be similar amongst study participants. For a great visitor experience, visitors expect people to be respectful of the environment and to be respectful of other visitors. It was found that visitors do not want their experience to be disturbed by disrespectful visitors and desired other visitors to refrain from being overtly loud, refrain from disturbing wildlife, follow the Leave No Trace principles, and adhere to park rules and regulations. Findings suggest that a great visitor experience is stress free and allows visitors to enjoy the natural environment undisturbed by human beings.

Central Research Question: How does the Timed Entry Permit reservation system at parks and protected areas influence the perceptions of sustainable recreation and impact visitor motivations?

To answer the overarching research question, it was found that the Timed Entry Permit reservation system at parks and protected areas influence visitor perceptions of sustainable recreation and impacts visitation motivation. According to data analysis conducted on study participant responses about sustainable recreation, it was found that the Timed Entry Permit reservation system positively influences visitors to conduct recreational activities in a way that benefits the environment. It was found that visitors who participate in recreational activities at a park or protected area with the Timed Entry Permit requirement believe in lessening environmentally degrading activities within the park or protected area. It was also found that study participants have noticed a healthy environmental change at parks and protected areas due to the implementation of Timed Entry Permits. Visitors have observed fewer people at popular locations since the requirement began, ultimately enhancing the visitor experience.

The Timed Entry Permit was found to influence visitation motivations at park or protected areas. The impact discovered was determined to be both positive and negative. On the positive side, the Timed Entry Permit was found to allow visitors to plan their visit in advance, ultimately allowing visitors to curate experience to best meet their needs. The reservation system was also found to help with personal safety, by informing family members and friends of a specific visitation time and in a specific area. It was determined visitors prefer the idea of the Timed Entry Permit reservation system and how it placed a limitation on the number of vehicles allowed in an area at a time, ultimately bettering parking options and lessening the number of people found on the trail system.

On the negative side of the motivation impact of the Timed Entry Permit reservation system, data revealed visitors miss the spontaneity of a park or protected area visit. The Timed Entry Permit system requires that visitors plan ahead thus limiting the unplanned and unscheduled visit. The Timed Entry Permit also has an additional cost associated with it, which visitors were found to dislike. Despite the limited Timed Entry Permits available, visitors found that parks and protected areas are still crowded and that a visit to an area with the reservation requirement are more of a hassle and ultimately not worth the effort. Additionally, study participants found the reservation website difficult to navigate and less user friendly for those lacking comprehension of the process to make an online reservation.

Summary

At the close of the survey, 18 study participants provided detailed survey responses that addressed the Timed Entry Permit reservation system, visitor experiences at parks and protected areas, liked and disliked behaviors at parks and protected areas, and environmental sustainability factors. Data analysis led to the development of six themes that were categorized as the Timed Entry Permit reservation system's influence on visitation motivation, concerns regarding Timed Entry Permits, visitor expectations of Timed Entry Permits, the reality of Timed Entry Permits, the visitor perception of environmental sustainability, the park or protected area experience, and concerns about overcrowding and congestion. Additionally, the five research questions posed at the beginning of this study were answered according to the findings presented by study participant responses.

CHAPTER FIVE: CONCLUSION

Overview

The overall purpose of this study was to gain a better understanding of the visitor experience with the Timed Entry Permit reservation system, determine how the Timed Entry Permit reservation system influences the visitor perception of environmental sustainability, and to discover how the Timed Entry Permit reservation system influences visitation motivations. This chapter will summarize study findings, discuss the findings in greater detail as the findings relate to previous research, the implications of the research findings in light of the relevant literature and theory, and methodological and practical implications. Additionally, this chapter will address study delimitations and limitations, as well as provide recommendations for future research on a similar topic of study.

Summary of Findings

In recent years, the Visitor Use Management technique of the Timed Entry Permit reservation system was implemented in various parks and protected areas in the United States to aid in the protection of the natural environment while enhancing the visitor experience. Through the use of an open-ended survey, critical information was received by 18 study participants regarding experiences with the Timed Entry Permit reservation system. The responses provided led to the answer of each research question posed at the beginning of this research study.

To answer the first question about how the perception of overcrowding at parks and protected areas influences a person's motivation to visit, it was found that people are negatively influenced to visit a park or protected area based on the perception of overcrowding and congestion. The perception of overcrowding at a park or protected area makes visitation less desirable for the majority of park and protected area visitors.

To answer the second research question, visitor reflections on their experiences with Timed Entry Permits are generally positive when the Visitor Use Management technique is implemented and enforced correctly. Long entrance lines and wait times, and limited parking availability despite the Timed Entry Permit requirement led to minor negative visitor experiences. Visitors have an overall positive view of the Timed Entry Permit reservation system, along with a positive outlook for the reservation system in the future.

To answer the third research question, park and protected area visitors are motivated to participant in sustainable recreation by adhering to the Timed Entry Permit requirement for scheduling an entrance time to conduct recreational activities within a park or protected area with the requirement implemented. Visitors in opposition of making a Timed Entry Permit reservation participate in sustainable recreation by visiting a park or protected area outside the time limitations of the reservation system, often during a time when fewer people were found at the park or protected area.

In response to the fourth research question, environmentally degrading factors that deter people from visiting a park or protected area are overcrowding, litter, pet and human waste disposed of improperly, visitors not using designated trails, disturbing wildlife, parking in undesignated areas, idling vehicles, and smoking. The majority of park and protected area visitors dislike visitor behaviors that degrade the environment. These behaviors were found to lessen the positive visitor experience at a park or protected area.

In response to the fifth research question, the norms identified as the prominent factors for a great visitor experience at parks and protected areas are the expectation for visitors to be respectful of the environment and to be respectful of other visitors. Park and protected area visitors do not want their visitation experience to be disturbed by people who are loud, disturb

the wildlife, do not practice the Leave No Trace principles, and do not adhere to park or protected area rules and regulations. Ultimately, park or protected area visitors want other visitors to show respect to their surroundings and not lessen the positive experience had by others.

Considering the central research question, the Timed Entry Permit reservation system positively influences visitors to practice sustainable recreation and positively influences the perception of sustainable recreation through the belief that the Timed Entry Permit requirement lessens the environmentally degrading activities conducted in a park or protected area and limits the number of vehicles allowed in an area. Additionally, the Timed Entry Permit reservation system has a positive and negative impact to visitor motivations. Some visitors like the ability to plan their park or protected area visit in advance, the safety precautions the reservation system provides, and the limitation on the number of visitors within an area during peak tourist times. Others view the Timed Entry Permit requirement as a hassle and as a restriction to visitation that limits the spontaneity of visitation. The additional cost of a Timed Entry Permit deters some visitors and the reservation system website is not user friendly, ultimately making the reservation process difficult for some visitors and negatively influencing visitation motivations.

Discussion

The purpose of this study was to use Normative Theory to identify and gain an understanding of the underlying norms visitors associate with a good outdoor recreation experience at a park or protected area. Additional factors sought to be discovered were the thresholds for the minimal acceptable level of park conditions that influence visitation motivations, and how these park conditions influence a person's perception of sustainable recreation. The findings of this study on visitor experiences with the Timed Entry Permit

reservation system, visitation motivations, and the perception of sustainable recreation were found to be related to the theorical literature discussed at the beginning of the study.

Normative Theory Framework

Normative Theory was the theoretical framework selected for this study to gain an in-depth understanding of visitor norms and the minimal acceptable thresholds of park and protected area conditions that influences a person's motivation to visit a park or protected area (Patterson & Hammitt, 1990). By defining acceptable shared beliefs and standards for park and protected area visitation, park and recreation managers can better manage park and recreation resources, aid in environmental sustainability, and enhance the visitor park and protected area experience (1990). The recreation and tourism industries has gained valuable insights into park and recreation conditions through the use of Normative Theory and has measured visitor use levels, overcrowding, and human behaviors within park and protected area boundaries (Schultz & Svajda, 2017). Due to the varying types of visitors found at parks and protected areas, it is often challenging for Normative Theory to provide set standards, as each visitor has their own values and beliefs in what their outdoor recreation experience should entail. In previous research, this discrepancy was found to be problematic in measuring norms and acceptable thresholds in parks and protected areas (2017). In this study on the Timed Entry Permit reservation system, the perception of sustainable recreation, and visitation motivations, it was found that established norms and a minimal acceptable threshold for park and protected conditions exist.

In regards to the shared beliefs, or norms, had amongst park and protected area visitors, it was found that there are common concerns regarding the Timed Entry Permit reservation system. Based on participant experiences at parks and protected areas with the Timed Entry Permit reservation system implemented, the Timed Entry Permit requirement resulted in shared

concerns regarding the need for advanced planning, time slot unavailability, an additional cost, unawareness of the Timed Entry Permit requirement, and website difficulties. Through the interpretation of actual experiences, and through the use of Normative Theory to identify commonalities amongst numerous detailed accounts, the primary concerns of the Visitor Use Management technique were identified, providing park and recreation managers with multiple problem sets that require focused measures to better the park and protected area experience with the Timed Entry Permit requirement.

The experiences described and interpreted regarding environmental sustainability resulted in the formulation of norms amongst park and protected area visitors concerning environmentally degrading factors. According to expectations of park and protected area visitors and as described by previous park and protected area visitors, it was found that the shared beliefs of environmentally degrading factors that prevent park and protected area visitation are overcrowding, litter and trash improperly disposed of, parking in undesignated areas, unmaintained roads and recreational trails, and pet and human waste incorrectly disposed of. Additionally, poor visitor behaviors, such as disturbing wildlife, being disrespectful to the environment, and being disrespectful to other visitors are shared beliefs about environmentally degradation that deter a person from visiting a park or protected area.

Park and protected area visitors also revealed shared beliefs in their expectations of a park or protected area visit with the Timed Entry Permit reservation requirement. Through Normative Theory, it was found that the shared expectations of the Timed Entry Permit reservation system are fewer people within park or protected area boundaries, parking availability, and better park conditions, to include cleaner facilities and improved maintenance of the natural environment. Additionally, park and protected area visitors have shared beliefs in

factors that make for a great experience at a park or protected area. These shared beliefs for a great experience are less crowding, less pet waste, and less litter, along with factors that are uncontrollable by park and recreation managers, such as weather and wildlife locations. According to visitor experiences, a person seeks quietude in the natural environment and wants to experience it with minimal human impact.

The Normative Theory, when applied to research on Visitor Use Management techniques allows researchers to gain an understanding of the standards and conditions that might have an impact on park and protected area visitation. This study on the Timed Entry Permit reservation system corroborates previous outdoor recreation literature using Normative Theory as the theoretical framework by using qualitative analysis to gain an in-depth account from multiple park and protected area visitors on visitation motivations and their perceptions of environmental sustainability. Minimal scholarly research has been conducted in which the Normative Theory has been applied to the Timed Entry Permit reservation system that seeks to understand underlying motivations for visitation. To fill this research gap, this study was conducted to extend the current literature on the topic of outdoor recreation, Normative Theory, and Visitor Use Management techniques. The findings of this study adds invaluable information gained from true experiences from multiple perspectives at parks and protected areas with the Timed Entry Permit reservation system implemented to the parks and recreation field of study. By utilizing actual accounts of personal experiences, this study sheds new light on the shared beliefs amongst outdoor recreation enthusiasts and their interactions with the Timed Entry Permit reservation system.

Implications

This study on the Timed Entry Permit reservation system and how it influences visitor perceptions of sustainable recreation and impacts visitation motivation provided invaluable insights according to actual visitor experiences with the Timed Entry Permit reservation system. While a multitude of research has been conducted on Visitor Use Management techniques and sustainable recreation through the application of Normative Theory, limited research was found to be based on visitor's personal experiences that incorporated the thoughts, feelings, and tone of voice into data analysis. This interpretative phenomenological qualitative research study contributes to the outdoor recreation and sport management fields of study by providing comprehensive analysis of parks and protected areas visitors, their motivations for visiting a park or protected area, and how they perceive sustainable recreation in light of the Timed Entry Permit reservation system.

Normative Theory and the Timed Entry Permit Reservation System

Through the application of Normative Theory to the Visitor Use Management technique of the Timed Entry Permit reservation system, it was found that norms exist amongst parks and protected area visitors in relation to the Timed Entry Permit requirement. Park and protected area visitors share similar beliefs and expectations of the Timed Entry Permit reservation system, to include the beliefs of park and protected area maintenance, less crowding, and an overall better visitation experience. It was found that norms relating to environmentally degrading factors that deter visitation motivation are overcrowding, litter, and pet waste. Additional factors that deter visitation motivation were visitors that are disrespectful to the natural environment and to other visitors.

Through the use of Normative Theory, shared beliefs were found in the overall positive perception of the Timed Entry Permit reservation system on sustainable recreation. Park and protected area visitors perceive that the Timed Entry Permit reservation system aids in sustainable recreation by changing the way visitors conduct recreational activities. By selecting an available time slot and adhering to rules and regulations, or by visiting a park or protected area outside peak visitation times, it was found that park and protected area visitors' perception of sustainable recreation are influenced by the Timed Entry Permit reservation system.

Based on the results of this study, park and recreation managers can used this study's findings to implement Visitor Use Management techniques in a way that ensures a great visitor experience. By understanding the norms amongst park and protected area visitors and those norms relate to the Timed Entry Permit reservation system, sustainable recreation, and the overall motivation for visitation, park and protected area managers and city officials can better enforce standards that require park and protected area visitors to adhere to the rules and regulations in place for environmental sustainability and natural resource protection. The results of this study offer park and recreation managers the information necessary to assist in creating a great visitor experience by implementing changes according to the norms found, such as having more on-duty park rangers during peak visitation times enforcing standards, shortening wait times in long lines, and creating a noticeable presence to deter environmentally degrading behaviors.

Delimitations and Limitations

To conduct this study, the researcher defined the boundaries of the study to focus on survey participants that had experience with the Timed Entry Permit reservation system at parks or protected areas, or on participants that had an interest in outdoor recreation. The delimitations

of this study were the requirement for participants to be over the age of 18, the selection of an interpretative empirical phenomenological study, and the dissemination of the survey online via selected Social Media Sites. The rationale for limiting and defining these factors for this study aided in securing the overall focus of the study on participant experiences with the Timed Entry Permit reservation system. Despite the delimitations and limitations found in this study, the survey responses gained reached a point of data saturation in which enough data was collected in order to answer the research questions. Any additional survey responses would fail to add new insights into the experiences had at parks and protected areas with the Timed Entry Permit reservation system implemented.

To gain valuable participant experiences from open-ended survey responses, the requirement for participants to be over the age of 18 was implemented. The researcher implemented this requirement to gain well-developed and mature description of experiences in response to the survey questions. It was important for study participants to have an understanding of the Timed Entry Permit reservation system, how the reservation impacted visitation experiences and motivations, and environmental sustainability factors. Park and protected area visitors under the age of 18 years old are more likely to visit a park or protected area with family members, in which majority of the visitation and reservation planning is completed by the parents. In addition to the need of established opinions in response to survey questions, underage participants would have required an additional waiver and parental acknowledgement for participation in the study, which was not a viable option according to the selected data collection method of an online survey.

Because valuable information regarding participant experiences was desired, an interpretative empirical phenomenological study was selected in which participant responses to

open-ended questions were interpreted and coded according to the experiences that emerged through reading and rereading each response. The aim of selecting the interpretative empirical phenomenology was to gain an essence of the experience had by park and protected area visitors and to interpret the similarities and differences of meanings amongst study participants.

The decision to disseminate the survey online via multiple Social Media Sites was based on the ability to reach potential survey respondents across the United States to gain a variety park and protected area experiences. Additionally, during the timeframe in which the survey was open for participant responses, the Timed Entry Permit reservation requirement was not in effect at multiple locations due to the timing of the year. The online survey allowed study participants to reflect on their park or protected area experiences and survey responses prior to submitting the survey. A participant was able to participate in the study on their own time without being approached by a researcher at a park or protected area at an inopportune time.

The limitations of the study that could not be controlled are related to the study participants. In regards to ethnicity, 14 of 18 study participants identified as “White”, creating a limiting factor of the study. With the majority of the participants identifying as the same ethnicity, representation of more ethnicities was not received and could change the results found by this study. Another limitation discovered during this study was the park or protected area visited. Due to the location of the researcher and the Social Media Sites to which the survey was disseminated on, the majority of parks and protected areas visited are located in or near Colorado, with outliers such as Glacier National Park in Montana and Acadia National Park in Maine. While the location of the park or protected area visited by study participants cannot be controlled by the researcher, people from similar areas might share similar views on topics

related to the environment, such as Visitor Use Management techniques and what factors are deemed to be environmentally degrading.

Recommendations for Future Research

Based on the study findings, delimitations, and limitations placed on this study, there are multiple directions for future research on Visitor Use Management techniques, the Timed Entry Permit reservation system, sustainable recreation, and visitor motivations to better help park and recreation managers better the park and protected area experience. Based on study findings, further research can be conducted on parks and protected areas to discover the reasons why people choose to participate in sustainable recreation and how their attitude towards sustainable recreation shapes their experiences. Gaining an in-depth look into visitor motivations can help park and recreation managers better direct park and protected area operations to enhance the visitor experience.

In regards to the Timed Entry Permit reservation system, a longitudinal qualitative investigation to discover how the implementation of the Visitor Use Management technique affect visitor perception of the natural environment over time and determine the perception of overcrowding within a park or protected area. Another area for future research is on different Visitor Use Management techniques, using a similar data collection method as presented in this study. By studying an alternative Visitor Use Management techniques, researchers and park managers can use the findings of the different studies to select the best method for managing visitation trends, protecting the environment, and ensuring a positive park or protected area experience for visitors.

Finally, the last area for future research is on the additional cost associated with Timed Entry Permits incurred by park and protected area visitors and how it influences visitation. By

understanding what visitors are and are not willing to pay can influence how park and recreation managers conduct business operations. In addition to research on the price of Timed Entry Permits and their influence on visitation is the payment method required for making a reservation. Research can be conducted on updating the websites for parks and protected areas for the feasibility of a one-stop shop for usability and ease of access for the park or protected area visitor. For instance, research on Quick Response (QR) codes and their ability to be used for time slot reservations and payment for Timed Entry Permits could benefit not only park and recreation managers, but could enhance the visitor experience by making a park or protected area visit slightly easier.

In response to the delimitations of this study, further research can be conducted in-person via questionnaire or interview, in which the emotions, emphasis, and overall tone of a study participant can be acknowledged and used to aid in the interpretation of responses. An additional response to the delimitations of this study is to get approval from the National Park Service or U.S. Forest Service to conduct interviews or issue questionnaires in-person at parks and protected areas with the Timed Entry Permit reservation system implemented.

In response to the limitations found by this study, further research could be conducted in different regions of the United States in order to gain more visitor perspectives on the Timed Entry Permit reservation system. Conducting this survey in different locations can also help to address the limitation of ethnicity found by this study. More representation of varying ethnicities can potentially assist in answering the research questions posed for this study, as different views on topics such as environmental sustainability, Visitor Use Management techniques, and sustainable recreation might exist and might vary from those found in Colorado.

Summary

This qualitative research study on the Timed Entry Permit reservation system provided valuable insights into the norms associated with park and protected area visitors, their perception of sustainable recreation, and how the Timed Entry Permit reservation influences their motivation to visit a park or protected area. Through in-depth analysis and interpretation of open-ended survey responses, it was found that park and protected area visitors have common beliefs about the Timed Entry Permit reservation system and how it influences sustainable recreation. It was also found that the implementation of the Timed Entry Permit reservation system influences motivations to visit a park or protected area. Factors such as fewer people, more parking availability, guaranteed access, and less harm to the environment positively influenced people to visit a park or protected area with the Timed Entry Permit requirement. However, the need for advanced planning, an additional cost, and website difficulties decreased the motivation to visitation.

In order to prevent parks and protected areas from being "…loved to death", as described by one survey respondent, park and recreation managers must understand the norms associated with park and protected area visitation. By recognizing the factors that influence visitation motivations and the shared beliefs about the Timed Entry Permit reservation system, park and recreation managers have the ability to change the way the Visitor Use Management technique is implemented, managed, and improved. Environmentally degrading factors, such as litter, pet waste, and visitors not adhering to Leave No Trace principles wreak havoc on the natural environment that park and recreation managers seek to protect. By employing additional park personnel to create a noticeable presence within a park or protected area, rules and regulations can be better enforced, ultimately making for a great visitor experience for those visitors that

follow the rules and regulations. The Timed Entry Permit reservation system has the ability to enhance the visitor experience while protecting the natural environment. By understanding desirable factors for a great visitation experience and by recognizing factors that decrease the motivation to visit a park or protected area, park and recreation managers can better implement Visitor Use Management techniques to meet visitor needs while sustaining the natural environment.

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Appendices

APPENDIX A

Information Sheet

Title of the Project: Visitor Use Management: How the Timed Entry Permit Reservation System at Parks and Protected Areas Influence the Perception of Sustainable Recreation and Impact Visitor Motivations
Principal Investigator: Cassandra Onufrak, Graduate Student, Department of Sport, Event, and Tourism Management, Liberty University

Invitation to be Part of a Research Study

You are invited to participate in a research study. To participate, you must be 18 years of age or older, and have an interest in outdoor recreation. Taking part in this research project is voluntary.

Please take time to read this entire form and ask questions before deciding whether to take part in this research.

What is the study about and why is it being done?

The purpose of the study is to discover the relationship between the Timed Entry Permit reservation system and how this Visitor Use Management technique influences the perception of sustainable recreation and impacts a person's motivations to visit a park or protected area.

What will happen if you take part in this study?

If you agree to be in this study, I will ask you to do the following:

1. Participate in an anonymous survey that will take no more than 20 minutes.

How could you or others benefit from this study?

Participants should not expect to receive a direct benefit from taking part in this study.

Benefits to society include advancing the current literature on a specific Visitor Use Management technique to assist park and recreation managers in promoting sustainable recreation while enhancing the visitor experience at parks and protected areas.

What risks might you experience from being in this study?

The expected risks from participating in this study are minimal, which means they are equal to the risks you would encounter in everyday life.

How will personal information be protected?

The records of this study will be kept private. Research records will be stored securely, and only the researcher will have access to the records.

- Participant responses will be anonymous.
- Data will be stored on a password-locked computer. After three years, all electronic records will be deleted.

How will you be compensated for being part of the study?

Participants will not be compensated for participating in this study.

Is study participation voluntary?

Participation in this study is voluntary. Your decision whether to participate will not affect your current or future relations with Liberty University. If you decide to participate, you are free to not answer any question or withdraw at any time prior to submitting the survey without affecting those relationships.

What should you do if you decide to withdraw from the study?

If you choose to withdraw from the study, please exit the survey and close your internet browser. Your responses will not be recorded or included in the study.

APPENDIX B

Survey Questions

1. Have you visited a park or protected area in which a reservation was required for entrance?
    - Yes
    - No
2. If you answered "Yes" to the first question, provide the name of the park or protected area that was visited.
3. What was the primary purpose of your visit? (Hiking, mountain biking, sightseeing, bird watching, etc.)
4. Describe how the requirement for reserving an entrance time to a park or protected area might influence your motivation to visit.
5. Why does the requirement for reserving an entrance time to a park or protected area influence your motivation to visit?
6. Describe your primary concerns about making a reservation for entrance into a park or protected area. (Example: unaware of requirement, availability, inconvenient time slots)
7. What factors do you expect to see at a park or protected area with the Timed Entry Permit reservation system implemented? (Example: fewer people, parking availability, better park conditions, etc.)
8. Describe your overall experience at a park or protected area with the Timed Entry Permit reservation system implemented.
9. Based on your experience, what environmentally degrading factors would prevent you from visiting a park or protected area? (Example: litter, dog waste, crowding, etc.)

10. Describe how the Timed Entry Permit reservation system influences your experiences while conducting recreational activities within a park or protected area?
11. Based on what you have seen at parks and protected areas, how does the Timed Entry Permit influence your perception of environmental sustainability?
12. Based on personal experiences, describe your concerns about overcrowding and congestion at a park or protected area.
13. List the factors that would make your park experience great.
14. Describe the behaviors of other park visitors that you would like.
15. Describe the behaviors of other park visitors that you would dislike.

Demographic Questions

16. Which gender do you most identify with?
    - Male
    - Female
17. Which of the following best describes your age?
    - 18-24
    - 25-34
    - 35-44
    - 45-54
    - 55-64
    - 65 and older
18. Which of the following best describes you?
    - Asian
    - Black/African American

- Hispanic/Latino
- Native American
- Native Hawaiian/Pacific Islander
- White
- Other

19. What is the highest level of education you have completed?

- Some high school, no diploma
- High school diploma or GED
- Some college, no degree
- Associate (2-year) degree
- Bachelor's (4-year) degree
- Master's degree
- Doctorate degree