

EFFECTS OF CRIME ON LAW ENFORCEMENT POLICIES AND PRACTICES:
A COMPARISON OF ENFORCEMENT STRATEGIES BETWEEN
NATIONAL PARKS AND NATIONAL FORESTS IN WASHINGTON STATE

by

Mehran Azizian

A Thesis
Submitted in partial fulfillment
of the requirements for the degree
Master of Environmental Studies
The Evergreen State College
June 2015

©2015 by Mehran Azizian. All rights reserved.

This Thesis for the Master of Environmental Studies Degree

by

Mehran Azizian

has been approved for

The Evergreen State College

by

Shangrila Wynn, Ph. D.
Member of the Faculty

Date

ABSTRACT

Effects of Crime on Law Enforcement Policies and Practices: A Comparison of Enforcement Strategies between National Parks and National Forests in Washington State

Mehran Azizian

This thesis conducted a qualitative study examining and comparing different types of criminal behavior occurring in several national parks and national forests within the state of Washington, and assessing how criminal activity affects law enforcement policy decisions amongst the National Park Service and US Forest Service. A literature review of research examining criminal activity and conservation based law enforcement officers supported the idea that increased criminal behavior due to urbanization has led conservation agencies to move law enforcement practices from resource based law enforcement to more general law enforcement practices. My research concludes that criminal behaviors vary between agencies, however both agencies experience varying degrees of changes in law enforcement practices and policies as a result of criminal activity. Results indicated that major criminal activities could effectively initiate changes in law enforcement practices within the US Forest Service and National Park Service. This study identified certain recurring themes among the responses of the law enforcement officers interviewed, such as the need for increased staffing, the use of soft enforcement as a means to mitigate criminal behavior, the implementation of new equipment such as body cameras, and the direct effects of criminal activity on law enforcement practices.

TABLE OF CONTENTS

CHAPTER 1: INTRODUCTION	1
CHAPTER 2: LITERATURE REVIEW	4
Introduction.....	4
Law Enforcement in protected/conservation areas	5
Duties	5
Challenges	6
Changes in crime and enforcement policy	7
Attitudes towards policy change	10
Crime in Urban Protected Areas vs. Rural Protected Areas.....	11
Urban challenges and prevalence	11
Rural challenges and prevalence	12
Impacts of Crime	14
Impacts to Recreationists	14
Impacts to Management	16
CHAPTER 3: METHODOLOGY	18
Site Selection Process	18
Interview Process	19
Data Analysis.....	22
CHAPTER 4: RESULTS	24
Criminal Activities	24
Frequency of Criminal Activity	26
Location of Criminal Behavior	29
Mitigating Crime in a Recreation Setting.....	30
Enforcement Type.....	32
Challenges	33
Staffing	34
Authority	35
Other.....	36
Priority for protection	37
Impacts to Recreation.....	37
Impacts to Management	39
Recent Policy Changes.....	41
Patrol Changes	41
Equipment	42
Body Cameras	43
Other Technology.....	44
Negative Changes.....	45

CHAPTER 5: DISCUSSION	46
National Parks	46
Fewer criminal behaviors exhibited	46
Impacts to management.....	47
Policy changes.....	47
National Forests	48
More criminal behaviors exhibited	48
Impacts to management.....	48
Policy changes.....	49
Similarities	49
Location of criminal activity	50
Dealing with criminal behavior.....	50
Challenges – staffing.....	51
CHAPTER 6: CONCLUSION	53
BIBLIOGRAPHY.....	56
APPENDIX A.....	61

LIST OF TABLES

Table 1: Criminal Behavior within National Parks and National Forests in WA	26
---	----

ACKNOWLEDGEMENTS

I would like to thank my thesis reader Dr. Shangrila Wynn for her help and guidance throughout this process.

I would also like to thank all of those men and women of the National Park Service and US Forest Service who participated in my thesis research, I would not have been able to complete this project without your contribution. Additionally I would like to thank those Law Enforcement Officers for the time and effort they put into protecting our natural resources, and keeping our National Parks and National Forests safe for everyone to enjoy.

CHAPTER 1: INTRODUCTION

It has been suggested that with the increase in population and rapidly increasing urbanization across the United States, the visitors and uses of national protected areas such as the national parks and national forest has been changing (Tynon and Chavez, 2006). According to the Preliminary Semiannual Uniform Crime Report (FBI, 2013), crime rates have decreased the past year across all national law enforcement agencies; there are similar trends within the state of Washington (FBI, 2013). These statistics focus primarily on urban areas and state populations. However, there is little information regarding crime rates in protected areas such as National Parks and National Forests.

Because of these changes in population and urbanization, national park and forest managers have recognized that with increased visitation, the criminal aspect of urban communities will be moving into these federally protected areas (Tynon and Chavez, 2000). Scholars and researchers have studied this change and noticed that the duties of Law Enforcement Officers (LEO's) in forest and park settings also known as Conservation Officers (CO's) have been expanding over the past couple of decades (Falcone, 2004). Over the past several years, many agencies that conduct natural resource conservation have been transitioning from specialized law enforcement practices mostly related to the enforcement of wildlife regulations or resource protection to more traditional and generalized law enforcement practices.

Previous studies on the subject of criminal behavior in protected areas have suggested the importance of conducting a multi-agency study that examines the extent of the problem of criminal activities in protected areas (Tynon and Chavez, 2000). Responding to these calls, my thesis project sought to conduct a comparison between

policies and practices in Washington's National Forests and National Parks. A comparative study is important because it could provide a better understanding of whether or not law enforcement personnel from different natural resource protection agencies are facing similar types of challenges when dealing with public safety. This thesis project will also contribute to an understanding of how crime and criminal behavior impacts natural resource protection and environmental conservation efforts.

The conceptual framework for this research topic stemmed from much of the research done by Tynon and Chavez. Their research on this subject often looked at the effects of criminal behavior on visitors and recreation as well as the changes seen in the duties of Conservation Officers, however they focused primarily on US National Forests. The authors have made repeated calls for further research efforts to focus on different natural resource agencies and to conduct comparisons between agencies.

The overarching research question for my thesis project is: How does criminal activity affect law enforcement policy within National Parks and National Forests? In order to address this question, my thesis sets out to systematically address the following specific questions directed at park officials: What types of criminal behavior and activities are happening within Washington's National Parks and National Forests? How are crimes affecting law enforcement policies and practices? And how do the crimes and law enforcement practices in National Parks and National Forests compare to one another?

This thesis will start with an overview of the relevant literature from a number of disciplines and fields of study. This includes prior research on the duties of Conservation Officers as well as research conducted on criminal behavior in National Forests and other

protected areas. Following the literature review will be a detailed explanation of the study design, how samples were selected, how data was collected and analyzed. An analysis of the results found from the research will follow, along with a discussion comparing Washington's National Parks and National Forests criminal behavior and crime policy, the similarity between the two agencies, and the differences between their law enforcement practices. This research will highlight important information gaps concerning the law enforcement personnel serving the public in Washington's national parks and forests, and may address some of the significant challenges associated with law enforcement in protected areas.

The results of this research revealed that there was a greater variety of criminal behavior occurring in national forests, but that criminal activity occurred in similar locations relative to their boundaries in both national parks and national forests. The research uncovered several other similarities between the challenges faced by LEO's, as well as the preferred and most effective law enforcement practices between both agencies. Most importantly, responses from both the National Park Service and US Forest Service strongly suggested that changes in law enforcement practices and overarching policy would occur due to major criminal activities.

CHAPTER 2: LITERATURE REVIEW

Introduction

To understand how criminal behavior impacts law enforcement practices in protected areas, it is important to know how resource agencies work to mitigate criminal activity. This is usually done through the employment of law enforcement officers (LEOs), these LEOs being employed as a part of natural resource agencies are also known as Conservation Officers (CO's) (Falcone, 2004).

The Conservation Officer is an occupation and a position that was once traditionally a mostly rural profession. Over the past few years there has been significant shift in demographics, population size, and resource use throughout the State of Washington (State of Washington, 2014; Office of Minority Affairs and Diversity, 2013). Research has suggested that the importance of this job has grown more recently, particularly due to the fact that there has been an increase in people heading to and experiencing rural and backcountry areas for recreational purposes, creating a greater need to monitor recreational activities and protect natural resources (Eliason, 2006).

This chapter is a brief synopsis of the scholarly literature on crime in the United States' protected areas. This overview begins by examining research previously conducted on law enforcement in protected areas and conservation areas, starting with research that discussed law enforcement duties of conservation officers and the challenges they face. This will be followed by a discussion of the changes in policy regarding how agencies focused on natural resource conservation are transitioning from specialized law enforcement practices mostly related to enforcement of wildlife regulations and resource protection, to more traditional and generalized law enforcement

practices. Finally there will be an examination of research conducted on the impacts of criminal behavior on recreational visitors and management decisions of natural resource agencies.

Law Enforcement in protected/conservation areas

Duties

Law enforcement officers for national parks and national forests are responsible for patrolling the nation's federally protected forests, prairies, rivers, lakes and enforcing federal natural resource and wildlife laws (Eliason, 2011). The duties of law enforcement officers in national parks and forests can range from enforcing simple camping rules, to public order laws such as disorderly conduct or domestic disputes, to environmental protection laws such as carrying out compliance checks on hunters and fishermen to determine whether they have the appropriate hunting and fishing licenses and making sure that these individuals follow the rules regarding possession limits of harvested fish and game and even dealing with major crimes such as robbery or assaults (Pendleton, 1998; Eliason, 2011).

It is important to note that LEO's in national parks and forests deal with certain situations that are unique to their branch of law enforcement and are uncommon in urban law enforcement agencies. This is because they commonly work alone and in remote and isolated areas, meaning they often do not have immediate back up from fellow law enforcement officers, and they regularly encounter individuals that are armed and frequently intoxicated from drugs and alcohol (Eliason 2003, p.131).

Challenges

According to much of the prior research conducted, many conservation officers came into the position expecting to conduct natural resource law enforcement, such as protecting resources from poachers or illegal logging, but have come to realize that they spend more than half their time conducting traditional law enforcement, or “city law enforcement”, mainly as a result of “urban spill-over” and “urban associated crimes” (Tynon et al., 2001). CO’s over the past several decades have seen an increase in aggression towards their jobs, and are often exposed to verbal threats, abuse, harassment, and physical attacks (Tynon et al, 2006). Documents gathered by the Public Employees for Environmental Responsibility (PEER) using the Freedom of Information Act showed that in 1998 there were more than 100 incidents of threats, violence, and vandalism toward federal resource protection personnel and facilities [US Forest Service (USFS) and Bureau of Land Management (BLM)] in 1998, which was more than twice the 1995 figures (Tynon et al, 2006). With an increase of population, urbanization, and visitors to forest and park lands, conservation officers would see further increases in these behaviors (Chavez and Tynon, 2000). This statement is consistent with crime statistics, which identified that as visitation increased there was a 19% increase in national park crime and a 100% increase in national forest crime from 1989 to 1992 (Tynon, Chavez, and Baur, 2010).

Parks and forests in the western United States average around 378,000 acres, this leaves law enforcement officers to patrol these vast areas alone and often in places where they are out of radio contact or lack cell phone service (Tynon et al., 2001). This presents further challenges; often this type of geographical isolation leads to crimes going unseen

or often not reported, meaning crime numbers may be even higher (Chavez and Tynon 2000). While the number of crimes on national forest lands doubled over a 5-year period, the number of USFS law enforcement officers has primarily left unchanged (Tynon et al., 2001).

With cuts to funding, National Parks and National forests are limited when it comes to resources. These cuts especially affect law enforcement resources, which are already overburdened due to limited staffing (Chavez and Tynon, 2007). Conditions such as law enforcement officers being understaffed and working in geographically isolated areas presents a significant barrier to effectively control criminal activities in National Parks and Forests, and may increase the dangers LEOs generally experience as a part of the job, affecting crime mitigation efforts (Tynon et al., 2001).

To make up for this challenge, federal natural resource managers utilize various agreements with county sheriffs' offices, city police, highway patrols, and fish and game officers (Tynon, 2006). In more recent years, National Park and Forest Service LEOs have been increasing the use of canine units for control in more difficult situations, and when necessary they often call upon the support of Special Weapons and Tactics teams, drug task force members, or the border patrol (Tynon, 2006).

Changes in crime and enforcement policy

Over the past several decades, the public's awareness of crime in federal parks and forests has increased. With an increase of crimes such as assault, theft, and drug use happening in the parks and forests, the duties of law enforcement rangers and conservation officers have moved from natural resource protection to incorporate the

protection of visitors (Chavez & Tynon, 2000). Research has suggested that the additional duties conservation officers now have in regards to “urban law enforcement” has changed how conservation officers view their relationship with park visitors. Literature suggests that conservation officers, like their urban police counterparts, are faced with the ‘us vs. them’ mentality, the idea of ‘officers vs. visitors’, creating a divide between visitors and conservation officers (Chavez & Tynon, 2000).

Traditionally, LEOs in national protected areas used what was called “soft enforcement” (Wynveen, 2007). Soft enforcement works to use education and persuasion to reduce crime, opposed to issuing tickets and citations, or placing people under arrest (Pendleton, 1998). “Soft enforcement” campaigns generally work as a preventative means to reduce criminal behavior through community relations. The soft enforcement approach specifically is aimed to alter visitor behavior “through physical design”, by encouraging visitor cooperation (Wynveen, 2007).

However, research has dictated that federal conservation agencies have been moving law enforcement practices towards “hard enforcement”, which is primarily based on methods such as ticketing, arrests, and/or stern warnings (Pendleton, 1998). Hard enforcement practices are those that are generally seen by the public as the standard law enforcement practices of city police departments, yet can be considered necessary because of the increase of crime and violations of laws and regulations within national parks and forests (Wynveen, 2007).

Other research suggests that one reason that certain conservation officers such as fish and wildlife officers can no longer maintain a specialized role of conservation enforcement is because of incorporation of government conservation enforcement

agencies into larger multi-purpose bureaucracies, for example departments of natural resources or environmental protection (Falcone, 2004).

While a not concern for federal agencies, many state agencies have experienced the merging of multiple resource protection departments into a singular and more wide-ranging departments of natural resources, which has “placed an increasingly heavier burden on conservation police departments and demands a wider range of tasks and responsibilities” (Falcone, 2004, p.56). Falcone states that numerous organizational changes and added responsibilities that conservation officers face without additional funding, will cause the consolidated agencies and their law enforcement branches to be overburdened organizations that are uncertain about their primary organizational mission (Falcone, 2004). Research explained by evolving into “full service policing agencies” officers must handle a variety of tasks (Falcone, 2004). For example, these changes can see a move of conservation officer’s responsibilities shifting from,

“The protection of natural resources from those who illegally harvest wildlife and fish, damage or destroy waterways and land, and disregard environmental laws, rules, and regulations, or increasing traditional duties such as patrolling during the hunting and fishing seasons, examining licenses, and checking for possession limits, providing hunter, angler, and water safety programs, conducting firearms and boating safety educational programs, educating the public regarding our natural resources, to now providing assistance to other police and law enforcement agencies, apprehending criminal suspects, including escaped convicts, conducting searches for missing persons; enforcing state vehicle codes and snowmobile laws” (Falcone, 2004, p.62).

While the broadened duties of conservation officers are compatible with natural resource protection agencies, the issue seems to be that conservation officers have become more generalist law enforcement officers (Falcone, 2004). The expansion of duties now has conservation officers involved with behaviors and tactics associated with

general law enforcement, such as sting and undercover operations deliberately intended to aggressively enforce criminal law, opposed to the sole enforcement of natural resource and wildlife codes (Falcone, 2004).

Attitudes towards policy change

Studies that have been conducted on conservation officer attitudes and job satisfaction have shown that LEOS working for natural resource agencies love their jobs for a variety of reasons. CO's have stated that they value the variety, diversity, and freedom their job provides. Previous studies mention that they appreciate that their job allows them to work outdoors and interact with visitors in the parks and forests (Eliason, 2006). However, in recent years there has been a shift in focus within these natural conservation organizations, which included a move "away from the independence and competence of the individual" and toward a change in agency policies that focus on its status as a government agency and the job of the conservation officer primarily as a law enforcement officer (Eliason, 2006). For example, job performance became based on the number of warnings and citations issued, which developed to an "organizational product" used to gauge the effectiveness of the officer (Eliason, 2006).

In the study conducted by Patten (2010), the attitude associated with a change of enforcement policy to implement "community oriented policing" as opposed to the traditional enforcement methods used for natural resource protection was researched. Research has shown that the senior conservation officers generally had a more negative attitude in policy change, whereas junior officers showed a more positive attitude regarding the change towards "community oriented policing" or "urban law

enforcement”. Research has shown that the length of a conservation officer’s career has a negative correlation with the acceptance of “community oriented policing” (Patten, 2010). The research determined that the senior officers had already been trained and focused on natural resource protection/policing, and being trained for “community oriented policing” forced them to learn different law enforcement training skills towards the end of their careers (Patten, 2010).

The change in law enforcement policy alters the definition of responsibilities of a conservation officer, which can in turn frustrate veteran officers that were used to a consistent understanding of the job’s duties and their position as a “traditional conservation officer” (Patten, 2010). Yet, law enforcement officers in federally protected areas retain a clear understanding and opinion of what their priorities are regarding their role as conservation officers. Research showed that Forest Service law enforcement officers felt that protecting visitors and employees were their primary priority, followed by protecting the forest resources, and other public property. It was clear that the officers placed the majority of their efforts on the protection of human resources, yet still understanding their responsibility to protecting natural resources (Tynon, 2010). The research conducted on this subject has done a good job looking at how CO’s feel about changes in duties, but has not necessarily looked at how effective these changes are in regards to mitigating criminal activity in protected areas.

Crime in Urban Protected Areas vs. Rural Protected Areas

Urban challenges and prevalence

Research has found that urban-proximate national forests, forests within an hour drive of an area consisting of 1 million or more people, were being used as dumping

grounds for murders that were happening in other areas (Chavez and Tynon, 2000). Many different types of criminal activity have been found to be present in many urban proximate national forests. Research has made the implication that because urban residents have become used to criminal activity, such as gang violence, they are not bothered by criminal behavior in ways that other visitors may be (Chavez and Tynon 2000). While that claim does have some merit, as larger urban centers are likely to have more criminal activity due strictly to population density, the authors do not seem to provide a detailed explanation on the makeup of “urban residents” and why “other visitors” are more likely to be bothered by criminal behavior, further descriptions would allow for a better understanding of claims made in the research.

Another challenge that urban proximate parks and forests generally face is that unlike city law enforcement officers, who generally have quicker access to “backup” or assistance due to the number of LEO’s and proximity to one another, parks and forests that are in close proximity to urban areas lack the personnel and equipment often necessary to do their job efficiently, and is commonly described as the greatest challenge for CO’s (Tynon et al, 2010). Research repeatedly has suggested that conservation officers see funding shortfalls having a major negative affect on being able to successfully accomplish their duties with the increase of urban criminal activities moving into federally protected lands (Tynon et al, 2010).

Rural challenges and prevalence

According to prior research, one of the greatest challenges for the rural parks and forests is illegal forestry activities that negatively affect rural livelihoods (Kaimowitz,

2003). The US Forest Service often works with nearby logging communities to regulate the management and use of forests to maintain that their valuable functions are upheld over time, and that benefits are shared equally (Kaimowitz, 2003).

Illegal forestry negatively impacts rural livelihoods, as well as causing a detriment to the natural resources. For this reason, agencies such as the US Forest Service (USFS) and the National Park Service (NPS) are becoming increasingly concerned about this issue (Kaimowitz, 2003). Not only do illegal forestry activities harm natural resources, as well as rural livelihoods, but enforcing existing forestry laws can be problematic, due to illegal forestry operations being found after they occur, making it difficult to apprehend the culprits (Kaimowitz, 2003). This factor of illegal forestry also creates negative environmental and ecological impacts, effectively undermining the Conservation Officer's goal of protecting the natural resources, which some rural areas depend on.

Research conducted by Tynon and Chavez in 2000 found that rural forests experienced more criminal behavior associated with "extremist or nontraditional groups", such as satanic cults and white power groups, than in urban approximate forests. Both rural and urban forests experience some criminal behavior, however rural forests saw more instances of "domestic terrorism", which were described as activities where visitors and federal resource managers were subjected to politically motivated intimidation, was one of the top priorities for management (Tynon, 2000). While National Forests in rural areas face "urban criminal activities" such as arson, thefts, and vandalism, many other criminal behaviors have been new or increasing, for example domestic violence, body dumping, and murder (Tynon, 2000).

Impacts of Crime

Impacts to Recreationists

Research by the American Recreation Coalition found that in 2002 over 214 Million people visited National Forests, at the time numbers were expected to increase as the population increased while the acreage of public land available for recreation remains somewhat constant (Brooks, 2006). National Park and National Forest managers felt that recreational users were generally unaffected or unaware of urban associated crime. Forest managers have stated, “urban crime activities don’t seem to bother recreationists” and “we had a gang stabbing in a parking lot and the next day we had the same amount of people come out,” (Chavez and Tynon, 2000, p. 406). The assumption made by the quoted forest manager is that visitors were aware of the gang stabbing and still made the decision to visit the following day. However, it is very unlikely that visitors know about violent incidents that occur in national parks and forests unless publicized.

National Forest managers explained that drug related crime, such as marijuana cultivation or meth manufacturing, was also not a great factor effecting recreational users or park visitation. Forest managers stated, “Probably recreationists don’t know about it [drugs] and even if they did, they don’t pay much attention to it” and “drug activities are not a huge issue for most of the recreating public” (Chavez and Tynon, 2000, p. 406). Other explanations from forest managers on the topic of crime impacting recreationists include, “People are usually unaware of drug activities, it does not even get into the media here” (Chavez and Tynon, 2000, p. 406).

Research has previously shown Forest Service law enforcement officers believe that recreational users of the National Parks and Forests are often unaware or unaffected

by crime and violence, for this reason it is believed that criminal behavior has little impact on recreational use. Forest managers have noticed however, that there were several rare, minimal, impacts to recreational users. Forest Service stated, “People get excited when they see someone in camouflage, and they get anxious about paint ballers, but we don’t get but maybe ten calls per year.” (Chavez and Tynon, 2000, p. 406).

According to research illegal activities such as illegal shooting within park or forest boundaries can cause some visitors to leave or avoid certain recreation areas, yet the research available provides little to no information on how much of an impact it has. Managers have said “Sounds of gunshots get people worried, but I don’t think it keeps them from coming back” and “We think some people have been displaced, but we don’t know how many.” (Chavez and Tynon, 2000, p. 406). Several forest managers mentioned, “Whether people report gunshots or not depends on where they live” and “If there is a shooting near an area with [minorities], then there is little reaction. If one occurs near a trailhead where whites are, then there is more reaction.” (Chavez and Tynon, 2000, p. 406). While the research conducted by Chavez and Tynon that examined urbanization and criminal behavior in national forests does not state that minorities are less affected by criminal activity or are more likely involved in criminal behavior, one can potentially misinterpret some of the above quotes. Research that has examined demographic shifts and social inequality in wild land recreation areas, and has found that it is generally the Caucasian visitors that have easier access to national parks and national forests who are more likely to violate park laws and policies, as well as committing criminal acts such as homicides, hate crimes, rape, robberies, and thefts in wilderness areas (Taylor, 2000).

Impacts to Management

Research conducted by Tynon and Chavez examining crime in National Forests, showed that “Criminal activities and domestic terrorism activities were one of the top five management issues” at all of their sites (Chavez and Tynon, 2000). One manager said, “Public safety is a big issue. We consider smuggling to be a traditional use of this forest. It is an extreme threat to recreationists” (Chavez and Tynon, 2000, p.406). Other forest and park officials have stated that the undocumented immigrants and armed defense groups were a top priority, followed by assaults and urban associated crimes. Many forest managers believed that the increased crime rates in federal protected areas were due to urban spillover (Chavez and Tynon, 2000). Research has suggested that increased urbanization may be the major cause for increased criminal behaviors within national parks and forests. It is not necessarily clear, but the idea of urbanization mentioned in prior research seems to be focusing more on increased development and population growth, not necessarily demographic shifts among park and forest visitors.

There is some research that has provided the demographics of offenders in Florida wildlife refuges, with the majority being white males (Crow, Shelley, Stretesky, 2013). Otherwise, there is little information available regarding the demographics of those participating in criminal activity in national parks and forests.

However, there is a sufficient amount of research regarding increased population’s affect on recreation areas. According to research conducted on recreational use of protected areas, growing urban population centers that are located nearby National Forests contributes to increased visitation and leads to “hot spots” for conflict (Brooks and Champ, 2006). Researchers noted that in 2002, the National Forests had around 214

million visitors, and expect that number to increase considerably as the population continues to grow (Brooks and Champ, 2006). Wing and Tynon also conducted a spatial analysis on crime in national forests, which mentioned, “Results at a regional scale showed crime densities concentrated in forests adjacent to population centers and transportation corridors.” (Wing and Tynon, 2006, p.293).

Many forest managers mentioned that the increased occurrence of criminal behavior and “domestic terrorism” has increased the costs to management. Actions such as the installation of large gates, locks on buildings, anti-graffiti material, and the use of more metal and concrete have negatively impacted monetary resources (Chavez and Tynon, 2000). Managers have stated that the increase in visitors and lack of resources severely impacts the ability to manage the resources, often with visitors showing “little or no respect for the uniform or the weapon” (Chavez and Tynon, 2000, p.406). The difficulty with these issues can be seen by the fact that according to one manager, “most employees know about the problems and won’t camp on the forest because of the reputation of associated illegal behavior” (Chavez and Tynon, 2000, p.406).

Much of the research has explained what problems management faces when it comes to criminal activity in national forests, yet there is limited information on how criminal behavior actively affects law enforcement practices and what actions law enforcement officers in national parks and forests take to mitigate criminal behavior in protected areas.

CHAPTER 3: METHODOLOGY

The purpose of this study was to identify, from the perspective of law enforcement officials, the extent of criminal activity occurring within Washington's National Parks and Forests and how criminal behavior affects law enforcement practices. To do this, I took a qualitative approach by conducting interviews with law enforcement officials from several national parks and national forests within the state of Washington. With limited research on the topic of criminal behavior in these areas and the importance of natural resources protection, the increase of knowledge on federal resource protection agencies are essential. This analysis of crime management in national parks and national forests is of utility for both agencies and policymakers and can be used to address the problems of criminal activity and potentially improve the working environment for law enforcement officials employed by the National Park Service and US Forest Service, thus enhancing the effectiveness of crime prevention among these organizations.

Site Selection Process

My fieldwork included five sites overall, with 3 National Parks and 2 National Forests. For my research I interviewed officials from Mt. Rainier National Park, Olympic National Park, San Juan Island National Historical Park and Gifford Pinchot National Forest, and Okanogan – Wenatchee National Forest. These Parks were chosen because they are 3 of the 4 National Parks in Washington and were closest in proximity to Olympia, the National forests chosen were selected because they are adjacent to the National Parks within Washington and share a border. This is the case for all National Forests with the exception of San Juan Island, which does not have an adjacent national

forest. The interviews were conducted at park headquarters, ranger district offices, forest service regional offices, a forest service law enforcement training conference, and one interview was conducted off site at a coffee shop.

Interview Process

For this qualitative study I felt that to better understand the prevalence of criminal behavior in National Parks and National Forests and how these activities impact law enforcement strategies and policies, was by conducting face-to-face interviews with selected law enforcement officials in March and April of 2015. These officials included patrol captains, chief law enforcement rangers, district rangers, law enforcement officers, and park superintendents, from national parks and national forests within the state of Washington.

To set up my interviews I called the information centers of each national park and forest's in my study, at the beginning of February 2015, to gather the contact information of each Chief Law Enforcement Ranger or Forest Law Enforcement Patrol Captain. I then called and emailed each person in charge of Law Enforcement to inform him or her of the purpose of my study and to garner his or her interest. Throughout the month of February I was able to schedule interview dates to meet with Law Enforcement officials to discuss my thesis topic and conduct the interviews to gather data. A Patrol Captain from the US Forest Service also invited me to a Law Enforcement Training conference in Clackamas, OR to network with other forest service law enforcement officials, and those under his command after the conference had ended. If I was unable to reach any intended interviewees I then contacted park and forest law enforcement officers I had previous contact with from personal experience. I met with each park and forest official

individually, with the exception of my interview with Law Enforcement Rangers from Mt. Rainier National Park, where I met with two interviewees at once, and conducted a focus group. Overall I had conducted interviews with 10 national park and forest officials, 5 from the National Park Service, and 5 from the US Forest Service. The interviews consisted of one Chief Law Enforcement Ranger, one Park Superintendent, three US Park Rangers (law enforcement), two Forest Service Patrol Captains, and three Forest Service Law Enforcement Officers.

I chose to conduct interviews for this research project because through the interview process I would be able to gather data that other methods would have been unable to fill effectively (Hay, 2000). The interview process allowed me to collect a range of opinion and experiences from various park and forest officials, while providing insights into potentially differing or consenting opinions on issues regarding criminal activity and crime prevention in national forests and parks within the state of Washington. The use of the interview process also allowed me to gather information about certain law enforcement policies, tactics, methods, and other information I was unaware of through the use of follow-up questions, or by asking the interviewees to expand on their responses to the questions asked, where methods such as a survey would not have allowed me to do so.

I conducted structured interviews using a scripted guide consisting of 11 open-ended questions to ensure consistency amongst the interviews. I recorded each interview with a digital audio recorder and had each of the conversations transcribed with the use of Microsoft Word. The average interview time was 15-30 minutes. All conversations were voluntary, and I assured confidentiality to all participants.

For my questions used during the interview process, I used a list of criminal behaviors used by Tynon and Chavez in their article published in 2000 titled “Triage Law Enforcement: Societal Impacts on National Forests in the West”, which examined criminal behavior in national forests. This list divided criminal activities and domestic terrorism activities into the following categories based on interviewee comments: urban-associated crime (arson, body dumping, domestic violence, drive-by shooting, gang activity, murder, rape/sexual assault, shooting in inappropriate ways or areas, suicides, and thefts), assaults (criminal damage, threats against personnel, and threats against property), drug activity (armed defense of crops, booby traps, marijuana cultivation, methamphetamine (meth) chemical dumps, meth labs, and meth manufacture), extremist and nontraditional groups (EarthFirst!, militias / supremacy groups, motorcycle groups, property rights groups, satanic cults, survivalists, white power groups, and wise use groups), and other (armed defense of forest products, dumping of chemicals, dumping of household waste and landscape materials, homeless people living in inappropriate areas, and trespass by undocumented immigrants). Using this list I asked each interviewee whether or not their park or forest unit has or has not experienced these criminal activities.

Other questions I asked were also used for later research conducted by Tynon and Chavez in their article published in 2006 titled, “Crime in National Forests: A Call for Research” where the authors asked: “First, how much crime is occurring on national forests, and how can the effects of crime and violence best be measured? Second, how is crime spatially distributed across national forests? Third, what actions are effective in mitigating crime in a recreation setting and what should we adopt for a successful crime-

stopping arsenal? Finally, how do crime and violence affect recreation behavior and decision making?” These questions were slightly reworded to be relevant to both National Parks and National Forests and be more applicable as interview questions (Tynon and Chavez, 2006, p.155).

I developed the rest of the questions in a way that allowed me to collect a variety of opinions and experiences amongst law enforcement officials on the effectiveness of current law enforcement practices and whether they believe criminal behavior dictates policy. Overall there were a total of eleven open-ended questions used to gather data, which can be viewed in Appendix A.

Data Analysis

After gathering my data, I transcribed the recorded audio files of my interviews into rich text format documents so I could enter the data into a qualitative analysis program. I used the program Atlas.ti to code the narrative data from the open-ended questions conducted in the interviews. This process consisted of analyzing the data for common themes and then coding the responses and placing them into different categories, consistent with both manifest and latent content analysis practices (Hay, 2000).

Manifest coding involved assessing the surface content of the data by providing counts of instances for the designated categories (Hay, 2000). Latent coding required determining certain themes of the transcribed interviews (Hay, 2000). The process of coding of the data involved several different coding categories. First, each interview was coded separately; this allowed me to identify the interviewee, their position, and the agency and unit they worked for. Then, the responses the interviewees provided were

coded based on each interview question, using latent coding. During this process there were nine major codes. These major codes were: Challenges, Crime Location, Criminal Behavior, Effects to Management, Effects to Recreation, Enforcement Type, Mitigating Crime, Policy Changes, and Priority. Depending on their answer, the text was then coded again and placed in the appropriate subcategory based on their response. This portion of coding consisted of the manifest coding method. During this aspect of the coding process there were only two categories, which required the use of sub-categorization amongst the responses.

The primary category “Challenges” had two sub-categories “Funding/Staffing” and “Authority/Jurisdiction”, the primary category “Policy Changes” had five subcategories “Body Cameras”, “Equipment”, “Negative Changes”, “Patrol Changes”, and “Technology”. While many of the sub-categories under “Policy Changes” could have technically fallen under the same category, there were enough responses within each sub-category to justify the use of multiple sub-categories.

After categorizing my data I was able to make comparisons between the responses of the interviewees based on their agencies, and whether they were in supervisory or non-supervisory roles, which allowed me to see if there were any significant trends that would emerge from their answers. To do this I used the “Quotations by Code” feature on Atlas.Ti, which provided me with a list of all the coded responses separated by the major categories described earlier. This allowed me to examine all of the labeled and coded responses and compare them against one another to determine any emerging trends amongst the answers.

CHAPTER 4: RESULTS

By conducting face-to-face interviews, the forest and park officials that participated in this research project were able to express their opinions and experiences on criminal activity and its effects on policy and practices. This process allowed me to assess the experiences of different levels of law enforcement officials throughout selected US Forest Service and National Park Service units within the state of Washington, to determine whether there was a major difference in criminal behavior, and the influence it has on law enforcement strategies. Through the course of this study I uncovered several trends when it came to how crime affects law enforcement practices, and what LEO's from these units in Washington feel would make their job more effective.

Criminal Activities

Using the list of criminal activities based on Tynon and Chavez's 2000 article "Triage Law Enforcement: Societal Impacts on National Forests in the West", I was able to determine what types of criminal activities are occurring within National Parks and National Forests in the state of Washington. Each interviewee mentioned whether or not their land management unit had experienced these criminal behaviors during their time working there. Results indicated that criminal behavior Tynon and Chavez determined to be "urban associated crimes" were most common among both National Parks and National Forests. The criminal behaviors listed under "Assaults", were seen almost by all interviewees. According to the results of the interviews, "Drug Activity" was a less common criminal behavior encountered by the interviewees. Amongst the "Extremist and Non-traditional Groups", the majority of the interviewees encountered motorcycle groups

and survivalist groups during their careers with their current land management units. The results of the interview revealed that all interviewees had encountered the dumping of household products and homeless people, when experiencing criminal behavior associated with the “Other” category, with the other criminal behaviors being less common.

CRIMINAL ACTIVITY WITHIN NATIONAL PARKS AND NATIONAL FORESTS IN WA										
	National Parks					National Forest				
Interviewee	1	2	3	4	5	6	7	8	9	10
Urban Associated Crime										
Arson		X	X	X			X	X		X
Domestic violence	X	X	X	X		X	X	X	X	X
Thefts	X	X	X	X	X	X	X	X	X	X
Gang activity	X	X	X	X			X		X	X
Body dumping	X	X	X	X		X		X	X	
Shooting	X	X	X	X		X	X	X	X	X
Suicide/Murder/Rape/Sexual assault	X	X	X	X	X	X	X	X	X	X
Drive-by-shooting			X	X					X	
Assaults										
Criminal damage of property	X	X	X	X	X	X	X	X	X	X
Threats to personnel	X	X	X	X	X	X	X	X	X	X
Threats against property	X	X	X	X		X	X	X		X
Drug Activity										
Marijuana cultivation	DK					X	X	X	X	X
Meth labs	X		X	X			X	X	X	
Meth chemical dump			X	X		X	X	X	X	
Armed defense of crops						X	X		X	X
Booby traps								X		X
Extremist and Non Traditional Groups										
Satanic cults						X		X		X
White power groups	X			X			X	X	X	
Eco-terrorist groups	X	X				X	X	X		
Motorcycle groups		X	X	X		X	X	X	X	
Survivalists	X	X				X	X	X	X	X
Militias/Supremacy groups	X	X				X		X	X	
Property rights groups	X					X	X	X	X	X

Other										
Dumping of household products	X	X	X	X	X	X	X	X	X	X
Dumping of industrial chemicals	X		X			X		X	X	X
Homeless people	X	X	X	X	X	X	X	X	X	X
Trespass by undocumented immigrants	DK		X	X		X	X	X	X	X
Armed defense of forest products	DK					X	X		X	
Totals										
Criminal behaviors occurring	18	16	18	18	6	22	22	24	23	19
Criminal behaviors NOT occurring	7	12	10	10	22	6	6	4	5	9
Don't Know	3	0	0	0	0	0	0	0	0	0

Table 1: Criminal Behavior within National Parks and National Forests in WA

Frequency of Criminal Activity

LEO's felt that it was difficult to determine how often crime was occurring on their land management units. There seemed to be a variety of opinions on the volume of criminal behavior. Several US Forest Service LEO's believed that there was more criminal activity going on than they as an agency were able to deal with. The following responses effectively represent this idea. According to one Forest Service Patrol Captain, "There is more crime enforcement work than we are staffed to manage." Other officers indicated similar sentiments, stating, "Upward of tens of thousands of dollars a day and that is as of [sic] forest products, damage to natural resources, damage to properties." It was stated that amount of criminal behavior occurring was constantly changing, "So we have depending on what season it is you know it drives the impact of what types of crime or what types of enforcement activity my officers may be engaged in."

However several of the other interviewees felt that while crime was occurring, there was a only low level of criminal activity taking place within their park or forest

relative to the number of visitors, primarily those working for the National Park Service. A supervisory Forest Service LEO did claim that, “There is an occasional criminal element”. Yet, the majority of responses that claimed there was a low level of criminal activity occurring came from National Park Service officials. A few representative quotes are as follows.

According to a National Park Service Chief Law Enforcement Ranger, serious criminal activity was relatively low in their park unit over the course of a year, especially when compared to the number of crimes that occur in an urban setting.

We are dealing with speeding is daily ongoing all the way to homicide, rapes things like that, it is infrequent but certainly occur here I would say on the sexual assault side we probably seen on order of one or two sexual crimes a year which in a normal urban setting or city setting really is not bad at all.

One Mt. Rainier National Park Law Enforcement ranger stated that, while Mt. Rainier is a park that experiences a large number of visitors, there are limited occurrences of serious criminal offenses, but does experience a high number of smaller violations.

I think Mt. Rainier is a low volume park for serious crimes, serious felonies, serious misdemeanors, and crimes against person. It is a high volume crime for petty offense, resource violation, vandalism, and violation of park regulations. But we do have the occasional serious crimes.

The Superintendent for one National Park stated that there was little to no serious crime that occurred on within their park unit, and that most of the criminal activities were minor infractions.

Serious crime is almost non existent and law enforcement staff that we have here are dealing primarily with minor infractions like off leash dogs and enforcing the park hours and stuff like that.

One issue that caught my attention was that several of the LEO's interviewed from both agencies felt that there is no adequate means of measuring the volume of criminal activity occurring in the national parks and forests. According to the National Park Service Chief Law Enforcement Ranger interviewed, it is difficult to gather an accurate picture of the actual number of crimes occurring within their park unit, especially because there may be criminal activities occurring without their knowledge.

It is hard to put a specific number on how much crime is occurring here...the crime we know is occurring is very different than the crime that probably is actually occurring. We do not really have, at least from what I see in this park, a way to gauge criminality other than the numbers of case report we take there, is really no hard data.

Several US Forest Service LEO's expressed similar sentiments. One Forest Service LEO mentioned that it was not possible to know all of the criminal activities occurring within their unit because there were not enough officers, which made it difficult to accurately measure criminal activity, as seen in this quote, "It is unknowable because there is not enough of us to know. We do not know how to measure the amount of crime."

This was interesting, as previous research had mentioned the use of Law Enforcement and Investigations Attainment Reporting System (LEIMARS) as a means to measure criminal activity, however it was mentioned only twice throughout all the interviews conducted.

Location of Criminal Behavior

The interviews did support previous research regarding criminal activity that claimed crime in protected areas was commonly occurring nearer to urban areas. Some interviewees provided limited responses but still acknowledged there were areas within their land management units that were more likely to experience criminal behavior. The most common response was that areas of the national forests or national parks that were located closer to populated areas saw increased criminal activity.

One US Forest Service Patrol Captain stated, “Yes so anything that has what I would call urban interface the closer you are in an urban center, or even small town or community the more proximate types of crime there”. Another USFS Patrol Captain claimed, “So we are in the Portland/Vancouver area and on the edges of the forest, the crime especially dumps, and shooting, things of that sort are definitely more concentrated in those areas”. Similarly, the National Park Service Chief Law Enforcement Ranger interviewed, mentioned that the areas deeper in the unit and farther from urban areas generally experiences less criminal activity, “The difference is the farther you move into the interior of the interior of the park into the wilderness setting the less chance of criminal activity you are going to experience”.

However, there were two responses that touched on the idea that areas which were accessible but more remote, were likely to be areas to experience criminal behavior, one National Park Service LEO stated, “The easiest generalization to make is that the parts of the park that are accessible without going through entrance stations have the highest level of crime and they experience I think more serious crime,” while one US Forest Service LEO said, “Yes I think it is congregated around certain areas specially around places that

are common for, places that have larger undeveloped camping areas where they can have cars available where they can camp”, while these quote states that criminal activity is likely to occur in areas further from urban centers, it is likely to occur in an area that can be easily accessed by vehicles.

Mitigating Crime in a Recreation Setting

There were two main views when it came to the most effective ways to mitigate criminal behavior in a recreational setting, increased patrols and increased outreach. The two views were primarily split between those in supervisory roles and those who were not. Interviewees who were in a supervisory role from both the US Forest Service and National Park Service seemed to believe that outreach and education was a more effective method when mitigating criminal behavior, compared to other methods. The Chief Law Enforcement Ranger I interviewed made it clear that outreach and education was an important aspect when working to mitigate criminal behavior

As far as criminal activity goes, in my mind in this park specifically is really about outreach...it is about working with the public, working with our partners and really communicating a little bit more of not only educational resource side of things but also addressing the victimology [sic] aspects of it when people come in to the park and identifying lack of patrolled areas, car clouts, domestic violence and things like that so outreach in these areas can be huge component of that.

One of the US Forest Service Patrol Captains interviewed, also very clearly stated that communication and outreach was the most effective way to mitigate criminal behavior.

The thing that is most effective is our messaging to the public about what dos or don'ts are because a lot of people want to have this perception the community we

live in is heavily regulated...the better we can do in communicating to the public what dos or don'ts are the more effective we are at not having to do any sort of law enforcement action...Communicating what's the problem, why are you being contacted and what is the potential violation here.

LEO's that had more years of experience also mentioned the idea of education and outreach being effective. However they suggested a combination of more active patrols and education as the most effective method to reduce criminal activity.

Visible law enforcement patrol is very effective and just making a lot of conceptual contact, informational contact so people are aware of law enforcement presents tends to push the criminal activity to where there is less law enforcement like national forests.

This quote by a National Park Service Law Enforcement Ranger is a great example of how they felt that a combination of active patrols and education was effective. The quote starts by referencing a criminological theory known as the broken windows theory, and then continues to explain that by having more active patrols this would allow them to conduct more educational contacts with visitors.

Is that once we identify that broken window being able to saturate that area and insure addressing the need for the visitors as well as the resource ensuring that there is no degradation of the infrastructure, no vandalism, no car clouting, theft of cars, things like that and by flying the flag we are able to do a little bit more sort of that community oriented policing.

On the other hand, other non-supervisory LEO's interviewed felt that having more boots on the ground, and a more physical presence was the most effective method to mitigate criminal activity. Several of the responses from LEOs from both agencies reflect the idea that an increased number of LEO's would help in mitigating criminal activity in their land management units, for example, the following statements by US Forest Service

Law Enforcement Officers indicated that they believed that having more LEO's available would help mitigate criminal behavior, "Being able to take a more practical approach, raising staffing level to where is possible to have more shifts and be able to address the problem that way", "I think what we need to do is just have more to have more people out there".

Many of the law enforcement officers in non-supervisory roles from both agencies also stated that active patrols were important to limiting criminal activity, as seen by this statement from a National Park Service Law Enforcement Ranger, "General patrol is probably one of the most common techniques used I would say. Probably one of the more effective [methods]". The following responses by US Forest Service Law Enforcement Officers also support this view, "Proactive Patrols. That is the most effective", "Patrols. Marked vehicle patrols, being seen. And I have to add on to that I think the ability to investigate."

Enforcement Type

The previous research on the subject of the duties of conservation officers suggested that CO's were not necessarily pleased with the expansion of their duties, and moving from a soft enforcement method to a hard enforcement method. One of my questions was to see what law enforcement in the National Park Service and US Forest service felt was more effective when dealing with criminal activity. The responses to this question determined that while LEO's would prefer to use a soft enforcement method, they understood there was the need for the hard enforcement aspect. However there was definitely a focus on soft enforcement from the majority of the interviewees, with the exception of one, which seemed to contradict the previous research on this subject.

The National Park Service Chief Ranger interviewed stated, “I believe in both. I believe there is a time and place for hard enforcement and there is a time and a place for soft enforcement.” Likewise, the NPS Superintendent mentioned, “I am a firm believer of hard enforcement up to a certain degree. I believe soft enforcement typically has or can go a little bit further” A Mt. Rainier Law Enforcement Ranger also claimed, “As far as natural resource management goes, our job is to encourage stewardship toward our visitors and soft enforcement is more effective than hard enforcement.”

One USFS LEO from Okanogan – Wenatchee National Forest emphasized that both are useful, but soft enforcement only worked due to the ability to use hard enforcement methods, stating, “There is a place for both of them. You cannot really have one without the other. Who would listen to me if they did not have to? It helps a lot and you can not have one without the other in my job.” However, one USFS Patrol Captain felt that a Hard Enforcement method was more effective, claiming, “You talk to somebody they remember it for five minutes, you give them warning they remember for couple of days, you give them a ticket they will remember it for a long time or couple of years or rest of their lives”

Challenges

The research pointed to two primary themes regarding challenges for LEO’s, staffing levels and authority. The responses regarding authority contradicted much of the previous literature that mentioned the additional duties given to officers in resource management agencies. In fact the responses contradicted the prior research, with the LEO’s interviewed stating they feel limited in their authority.

Staffing

When looking at the primary challenges of LEO's in Washington's national parks and national forests, responses indicated that the greatest challenge was limited staffing. This does support claims made in previous literature that understaffing and limited budgets was a challenge often faced by resource protection agencies. Several of the interviewees claimed that limited staffing was affecting crime management. These responses ranged from not having enough agency personnel in uniform, not just law enforcement officers, to provide a presence within the unit, as stated here by one USFS Patrol Captain.

Having enough manpower and the correct regulations to fulfill the mission. Like officer and people as a whole the forest service does not have enough people in the field anymore we need more uniform present out in the field

To claims that funding constraints are making it difficult to replace the number of officers even after some retire, mentioned by one NPS Chief Law Enforcement Ranger.

Our staffing has taken such a huge hit based upon the sequestrations we went through a few years ago, the government shut down and things like that. We had a lot of employees go through retirement or moving to other parks and we just have not had a budget to fill those positions

Other examples include being overwhelmed due to low staffing during times of the year that experience high levels of visitation, mentioned by NPS Law Enforcement Ranger.

During the periods of peak visitation, just managing the amount of visitation we have takes a lot of our time, so our ability to do proactive patrols and detect other crimes and violations, goes down.

This statement by one USFS Patrol Captain also demonstrates that increased numbers of visitors, and no increase in staffing levels takes a toll on law enforcement officers and makes their jobs more challenging,

I think the biggest challenge we have is staffing levels. We encourage people and invite people to come and recreate on our land unit and with people come all these social problems but yet we have not increased our staffing personal to be able to deal with social problems where we invited people to come and recreate.

Authority

Limited authority was considered a major challenge according to US Forest Service LEO's, which contradicted prior research that stated LEO's from conservation agencies did not want to see an expansion on their authority. Both supervisory and non-supervisory LEO's mentioned their authority being limited primarily to resource protection laws was one of their primary challenges. Both USFS Patrol Captains explained that their jurisdictional authority is limited causing many issues when trying to deal with criminal activity as mentioned below.

Updating our enforcement practices will help us as officers have more tools to combat the criminal activity because we have some outdated policies and outdated regulations that is causing us challenges... Based on our regulations we have to turn a lot of that stuff over to sheriff's office because our regulations do not support us doing people crime laws but we have great regulation for resource-based laws.

This is once again mentioned by another USFS Patrol Captain, explaining that their agency has a focus on resource and property crime, instead of "urban" crime and offenses dealing with people,

There is property crime and there is people crime. It seems to me there is administrative philosophy we want to limit our officers authority to deal with property interest and not give them authority like people type offenses and so we end up with a very small tool box say for disorderly conduct so we do not have very good tools to dealing with domestic violence occurring in the campground.

Non supervisory USFS LEO's felt the same way, and expressed their views that their limited authority makes it difficult to do successfully do their jobs.

Limited authority. Jurisdictional authority is limited and we do not have the right tools to write certain tickets on crimes against people we do not have any laws that prevent that or theft of personal property we do not have any statues of law to prevent that exactly.

Other

Another challenge for LEO's that was brought up were issues regarding professionalization, and working to be both educators and law enforcement at the same time, as mentioned by one USFS LEO, "The biggest challenge is to maintain standards simple enough for education of the people and policies are simple enough for public to understand." This was also clearly stated by one NPS Superintendent,

What I see to be a challenge for law enforcements in the national park is to be that the law enforcement officer are asked to be both professional law enforcement officers and to be friendly park rangers... I think it can be quiet stressful for our law enforcement staff because they have to tread that line between that culture within our agency and being vigilant law enforcement officer who are thinking defensively all the time

Priority for protection

As a part of my research I wanted to determine what CO's felt was their priority when it came to their duties. Much of the prior research focused on the fact that LEO's working for resource protection agencies chose their career paths because they wanted to protect the resources. I felt that determining whether the protection of natural resources was more important or the protection of the visitors and employees could shed some light on whether or not there was much of a difference between the views of law enforcement from the US Forest Service and the National Park Service. My results showed that there was a unanimous conclusion that the protection of people was a priority. This opinion was made clear by both agencies, as stated by one NPS Chief Law Enforcement ranger,

So really when we talk about the resources in my mind we talk about not only vegetation and the animals that reside in the park and the geology, I am also talking about the visitors and the employees. So really our goal is the protection of all that.

This view point was also made by those US Forest Service LEO's, and was clearly explained by one forest service officer,

It would be very hard for forest service and agencies not put employees and public safety first over natural resources. That being said management is deemed a lot of times natural resources is more priority than the public safety side.

Impacts to Recreation

The results regarding how criminal behavior impacts recreation seemed to coincide with some of the previous research on the topic. Responses varied suggesting that there is a minimal impact to recreationists, or that it only impacts recreationists that

may be a victim of criminal activity, or that it does often affect recreation, and some responses saying that criminal behavior has no impacts to recreation.

One NPS Law Enforcement Ranger mentioned that there is law enforcement because criminal activity can affect recreationists, claiming, “Yes. At least at some level yes, I mean you have a law enforcement community here that is dedicated to the park that is present so its very presence would imply there is.” Other interviewees explained that while crime did impact some recreationists, but only if they were the victims of a crime, otherwise it was uncommon, stating, “I would say not particularly common, it absolutely affects the visitors when they somehow associate it with it whether their cars broken into or victim of drunk driver.”

Forest Service LEO’s indicated that many people believe that being in a wilderness setting allows them to do what they want. They also mentioned that visitors often believe that being in a wilderness setting means they are not susceptible to being the victim of a crime.

So yes, it effects recreation because most of our customer base are recreation users...when they leave the urban areas and they think they are in the middle of nowhere and can do whatever they want. The victim of crimes are just as oblivious to the fact that they might be a victim of a crime out in the middle of nowhere or forest or open land environment

These responses supported some of the previous literature on the subject, that there is an impact to recreationists, however the impact of criminal activity was not so large that it prevents visitors from recreating in national parks and national forests.

Impacts to Management

The main goal of this research project was to determine if and how criminal behavior effects law enforcement management policies and practices. After interviewing with several park and forest officials, the results determined that crime does on various levels effect law enforcement decisions. The responses indicated that often the changes made include additional training and re-allocating resources. As seen in this quote by Mt. Rainier National Park Law Enforcement Ranger,

Absolutely. With something serious that will occur in the park we will have boards of review and recommendation of future actions, it will effect our training in coming years...For something less serious it will effect on how we allocate resources, as far as where patrol should go, how our people spend the day in certain places.

Additionally, this quote by one US Forest Service Patrol Captain was almost identical and further supported the idea that criminal behavior actively impacts management decisions.

Absolutely...we had to ramp up our skill sets for our employees so they could deal with confronting that threat to the forest and public land which you know it is a whole different arena that they typically were working...We have to re allocate and re-address the emerging trend and we are constantly doing that on an annual basis and also on a seasonal basis.

The other USFS Patrol Captain that was interviewed similarly mentioned that criminal activity does impact the decisions made based on how law enforcement will allocate their resources and where they will patrol, and that there is a need to increase their training and change some policies to do a better job dealing with crime.

I think strategically yes at least from the time, we find ourselves spending more time in the areas that seems to have the greater crime concentration... [I think] updating our enforcement practices will help us as officers have more tools to combat the criminal activity because we have some outdated policies and outdated regulations that is causing us challenges.

One NPS Law Enforcement Ranger mentioned that while they do believe changes to management decisions do occur, they are generally dealing with the re-allocation of resources within the park, or that changes are generally made on a larger level.

It does but I would say it happens well above the park level...On the local level, I would say mostly are not so much as response to crime as more of a response to public safety and movement of our visitors through the park.

One interviewee expressed that among other things, criminal behavior was so low, that there was a decision made to have no law enforcement officer in their land management unit:

Well that is a policy decision I made and it is based on the rather low level of crime and enforcement issues which has been based on two things... one was a shrinking park budget, and not having enough funding to pay for two law enforcement positions and having some concern about whether if it safe to have just one enforcement officer... the second part was that in a small community like this what we need in terms of policing is good community policing so emphasis on education and engagement as oppose to heavy handed law enforcement

However there were a few interviewees that felt that criminal behavior caused little to no change when it came to law enforcement policies, stating, “To an extent yes. Federal policies take for ever to change”, and, “No. The management is not oblivious to law enforcement problems but in a factual way they have been unable to address that. “

Recent Policy Changes

In order to get a better understanding of how criminal behavior creates any policy change I was interested in seeing if and how criminal activity had recently changed any law enforcement policy in the parks and forests selected for my research project. There had in fact been some policy changes, ranging from the addition of new technology and equipment to make the work of LEO's more convenient and safer, to changes in how patrols are conducted.

Most of the responses suggested that criminal activity did drive change regarding law enforcement policy. These changes were generally on the park level and dealt with additional training or the focusing patrols on certain areas within the park or forest unit. However, based on the responses the larger agency or regional policies were based around the addition of equipment and technology, as well as some major changes in patrolling techniques.

Patrol Changes

One major policy change that occurred recently at Mt. Rainier National Park, due to the murder of National Park Service Law Enforcement Ranger Margaret Anderson was explained below,

We have shifted from, well the previous management objective has been to maximize converge during the day so working two shifts and maybe a swing shift where each of those shift is by one person, and since Margaret Anderson's murder in 2012 the park had moved towards having two people on each shift, and that reduced the number of shifts we can have so we have gone to a single shift with two officers rather than two shifts with single officer.

This is the only instance of a specific event that was mentioned that depicted a change in patrol practices as a result of a major crime. Although, it was mentioned several times that LEO's actively spend more time patrolling areas that are experiencing more crime. One USFS Patrol Captain stated, "I think strategically yes at least from the time, we find ourselves spending more time in the areas that seems to have the greater crime concentration." Statements made from one NPS Law Enforcement Ranger also supported this claim, "For less serious [crime] it will effect on how we allocate recourses, as far as where patrol should go, how our people spend the day in certain places" The other USFS Patrol Captain interviewed, indicated that LEO's actively work to address criminal behaviors that are emerging, "We have to re allocate [resources] and readdress the emerging trend and we are constantly doing that on an annual basis and also on a seasonal basis."

When looking at all of the responses provided by the LEO's interviewed, they indicate that criminal activity does actively affect law enforcement practices at larger levels in which extra training is provided to the officers, as well as less significant changes such which lead to spending more time in areas that see a larger concentration of criminal activity.

Equipment

There were several mentions about how over the course of their careers there have been policy changes that affected the type of equipment used and carried. This includes equipment such as tasers, which were "well received by officers". Other mentions of policy that lead to new equipment included this statement from a National Park Law

Enforcement Ranger, discussing the addition of body armor over the course of their career.

As far as the agency policy, more and more parks recognize the park officers as law enforcement officers not as rangers so certain things like wearing a body armor has become mandatory and just in my time

Another equipment based policy change was mentioned by the NPS Chief Law Enforcement Ranger, regarding a regional change concerning the barrel length of the rifles carried in the law enforcement patrol vehicles, which may be potentially changing as a result of recent events.

One of the things I do know is going to be on the table is for example a policy of barreling on our weapons on our long guns. What R9 is going to do is to look at the reduction of the barrel length down to 10.5 inches and that has nothing to do with sort of the militarization or the military look at the weapon. It has absolutely 100% everything to do with the survivability of our officers to be able to get the weapon in a timely fashion they need. That is when the policy changes that I come across and that is very positive.

Body Cameras

The use of body cameras was mentioned several times as a recent policy change that was considered a positive change that allowed for greater transparency for the agency and acted as a protective measure for both officers and those being contacted by the officer. While being considered positive, it was mentioned that they are still a new addition and there are still some unknowns. One USFS LEO expressed that while the body cameras have been distributed there were issues with the cameras being turned on all the time.

We got a new PVR, personal video recorder which are definitely a plus but they do not automatically kicked on you have to activate them so it is one more thing you have to do before you contact somebody. Half the time it does not get turned on.

Additionally, the NPS Chief Law Enforcement Ranger interviewed mentioned that body cameras have not being issued, yet he is pushing for them to be issued in their park unit, as he feels it is a positive addition that is beneficial to both the officer and those being contacted.

One of the other sexy things going on now nationally is the discussion of body cameras... I think it is very positive. So one of the things I am pushing in this park is the adoption of that policy. We have overall body of R9 that talks about the use of body cameras and we had that with our R9 for a long time. But parks based on budgets are just now getting to a point that are supporting body cameras... So in this park I am pushing this policy a little bit more and really has it has a lot to do not with the times we are dealing with. Because of this need for transparency, while I see a huge opportunity there I think it is a great thing. It is really more for the protection of our contacts and for the protection of our officer.

One Forest Service Patrol Captain did bring up the use of body cameras and supported the addition of this equipment, and felt that the cameras were a good thing for the officers, as he stated here, "Body Cameras being issued is posIt's a good thing for officers, but there are still question marks"

Other Technology

Interviewees also mentioned the introduction of various technological devices and equipment as recent changes that they felt have made their job of dealing with criminal activity easier. One example is the introduction of WIFI in their vehicles.

That mobile ticketing system really has increased our ability to keep our officers in the field more and we have gone with WIFI for our vehicles and computers and so our officers can stay in the field longer so that tool is kind force mobile allowing us to stay in the field longer

Negative Changes

Several interviewees felt that there were not any positive changes occurring due to criminal activity, and that some of the recent changes made regarding law enforcement were actually negative. Many of the negative statements made seemed to come from law enforcement officers working with the USFS. Several of them stated, “I think two things have occurred we manage more data and information and we are bogged down in bureaucratic practices and therefore less able to have the luxury of patrolling and making public contact”, “I have not seem management improve the law enforcement picture on my district”, “I would not say that I have seen strict policy change on how we are addressing criminal behavior across the board.”

CHAPTER 5: DISCUSSION

The purpose of this study was to determine how criminal behavior effects law enforcement policy and practices in National Parks and National Forests in the state of Washington. Prior research conducted on crime and protected areas touched on the changing duties of LEO's in natural resource protection agencies due to the changing social landscape. However, none of the research examined whether criminal behavior was actually causing changes within law enforcement practices. Much of the previous research on the subject focused on single resource protection agencies such as the US Forest Service. However, researchers had called to conduct an analysis comparing crime between multiple agencies. This research project was an attempt to fill this gap.

National Parks

Fewer criminal behaviors exhibited

The results of my research based on the interviews conducted uncovered that overall, LEO's for the National Park Service seemed to experience less criminal behavior in their land management units compared to the US Forest Service in regards to Table 1. While this could be attributed to several different factors, the most notable aspect of my research was that there was less drug activity in the National Park units, but there was in fact more "urban associated crimes". It is also important to take into consideration San Juan National Historic Park is an island, and a much smaller unit compared to the others in this research project, making access to the park much more difficult which could also limit visitation. The interviews also suggested that LEO's for the National Park Service

believed their park units generally experience a lower volume of criminal activity, when compared to the responses of US Forest Service LEO's.

Impacts to management

Interview responses with the 5 National Park Service officials indicated that criminal activity does impact management decisions. While the interviews were limited in number, all of those that participated stated to some degree that decisions can be and have been made due to the lack of criminal activity, based on resource focused criminal activity, or even due to major events caused by violent criminal actions.

Policy changes

The national parks within Washington have also had definite policy changes to some of the park units as a direct result of the 2012 murder of a law enforcement ranger. These changes included altering patrolling procedures and potential changes in firearm barrel lengths. The introduction of body cameras is also being used in some parks as a means of transparency and to also protect the law enforcement officers. While these policy changes vary from a park level to regional level, the fact that these changes are being made to promote officer safety clearly indicates that the National Park Service actively makes changes to their law enforcement policy and practices due to criminal behavior.

National Forests

More criminal behaviors exhibited

The research results revealed that based on the experiences of those interviewed, the national forests in the state of Washington experienced a greater variety of criminal behavior than those experienced in the national parks. Results suggested that the LEO's for the US Forest Service faced more "extremist and non traditional groups" and had more instances of drug activity, specifically marijuana cultivation, which was not experienced at any of the National Park Service locations. Events such as marijuana cultivation related criminal activity could potentially be due to the location of the national forests, being on the eastern part of Washington and providing a climate more conducive to marijuana cultivation. Furthermore, as mentioned by one of the forest service patrol captains, the national forests are "porous" and have more access points with no entrance gates serving as contact points to which the agency would be able to communicate with those entering the forest, this is another potential reason which may have lead to an increased variety of criminal behavior.

Impacts to management

The findings suggested that while criminal behavior does have impacts on law enforcement management decisions, however they are limited to changing law enforcement tactics rather than major policy changes. This involves primarily the reallocation of resources, whether financial or human, to deal with emerging crime trends. Based on the responses the greatest impact to crime management was the need to

increase training to allow law enforcement officers to deal with confronting the threats to the forest.

Policy changes

According to the results the forest service did not see many major policy changes due to criminal activity. Interviewees suggested that there were not many positive changes in policy on the federal level, and that change did not occur often. The results suggested the changes made were negative and generally those that lead to an increased bureaucratic process, limiting the officer's time on patrol. However, amongst the supervisory Forest Service LEO's interviewed, the introduction of new equipment and technology, such as WIFI in their vehicles, tasers, and body cameras were considered positive changes.

Similarities

When comparing the responses between those working for the National Park Service and the US Forest Service, there were several similarities when discussing criminal activity in their land management units. These similarities were seen when looking at the general location of criminal activities, what they believe is the most effective way to deal with criminal behavior, and the greatest challenges they see when it came to crime management.

Location of criminal activity

Officials interviewed from both the US Forest Service and National Park Service stated that criminal activity is primarily seen in areas of their land management units that are generally located near more populated urban areas and communities. These are often areas that are located on the outskirts of the park and forest boundaries. They also stated that areas within parks and forests that receive higher volumes of visitors are often sites with higher criminal activity. These results seem to coincide with the previous research on the subject, that areas with higher volumes of visitors are more prone to criminal behavior.

Dealing with criminal behavior

The results suggested that officials from both agencies believed that the most effective way to deal with criminal behavior was a combination of both outreach and increased patrols. According to the results, supervisors from both agencies felt that outreach was important in regards to dealing with criminal behavior along with the use of active patrols, while non-supervisory LEO's from both agencies felt that increased patrols would be a more effective means of dealing with criminal activity. These findings seem to contradict some of the previous research on this topic, as it had stated there was a push for "hard enforcement" methods amongst natural resource agencies. Yet the results of this research revealed that supervisory officials from both agencies believed that the use of "soft enforcement" methods were more effective and considered a vital tool in crime management.

Challenges – staffing

One of the most common responses between the two agencies was based on the greatest challenges law enforcement officers faced when dealing with crime in both national parks and national forests, which was staffing. Responses from both agencies and from all management levels believed that limited staffing made their jobs more difficult, and an increased number of LEO's would effectively mitigate criminal activity within the national forests and national parks.

Differences

There was one major difference in regards to law enforcement practices and policy between the National Park Service and US Forest service. This difference was the jurisdiction and authority LEO's had between the two agencies. LEO's from the US Forest Service stated multiple times that they do not have the authority to deal with human based criminal activities. The reason for this is that the US Forest Service has primarily propriety jurisdiction, where the National Park Service generally has exclusive or concurrent jurisdiction.

Because the forest service is a federal agency and the land is considered proprietary, the government agency does not take over any of the state's obligations for law enforcement. This means that state, and local law enforcement officials still handle calls for certain criminal offenses that occur within the national forest (United States Department of Homeland Security, 2015). This response from a Forest Service Patrol Captain explained the situation with their authority and jurisdiction clearly,

So because the forest service has proprietary law enforcement in Washington state naturally if you look at the base of the word proprietary is property so we got pretty good tools for protecting properties we have very poor tools for doing the public enforcement... So our officers emphasis on the property crimes even with the tools that addresses the personal crime and then we have to rely on county and state agencies to basically pick up the slack... we do not have the authority or the laws that deal with personal crimes but we do have very good rules and laws to deal with property crimes.

Whereas, for the National Park Service if the land is owned exclusively, the federal government is accountable for all law enforcement responsibilities. This means the law enforcement officers for this agency are responsible for dealing with all the investigations and cases (United States Department of Homeland Security, 2015). A National Park Service Chief Ranger explained how their jurisdiction works if the land is owned concurrently,

We have specific jurisdiction, specific jurisdiction as you know means we deal with every single issue that comes up in the park. We are enforcing all federal laws, we have an assimilated crime act that allows us to attach state laws when federal laws not on the books so we have to be able to deal with those issues completely on our own. It is not like we have the county agencies coming in and assisting us.

Other than this major difference in authority and jurisdiction, the US Forest Service and National Park Service deal with many of the same issues when regarding criminal activity. Based on the results of the interviews conducted there were no other key differences between the agencies. However, while a small sample, the results conflict with some of the prior research conducted that stated LEO's were conflicted about expansion of their duties, where in fact many of the forest service officers interviewed felt that they were limited in their authority.

CHAPTER 6: CONCLUSION

This research was an examination of how criminal activity effects law enforcement practices in National Parks and National Forests in the state of Washington. There were a total of ten interviewees from three National Parks and two National Forests in the state of Washington. Nine of the interviewees were law enforcement officials with the US Forest Service and National Park Service, and one was a park superintendent who made policy decisions for their unit. Though not every interviewee was a law enforcement officer, everyone who participated in this research analysis was able to discuss how criminal behavior affected law enforcement practices and management decisions over the course of their careers at their respective land management units.

The results of this research suggested that the national parks in the state of Washington experience fewer criminal behaviors opposed to national forests. This research also suggested criminal activity occurs more often in areas of national parks and national forests that are closer to urban population centers. According to the results, views on mitigating crime were generally split between supervisors and non-supervisory LEO's. Supervisors believed that outreach and education was a more effective method in mitigating crime, whereas non-supervisory LEO's believed that increased patrols and a greater physical presence of law enforcement were more effective.

Results also suggested that LEO's from both agencies felt that a mix of soft enforcement and hard enforcement was necessary for their job protecting natural resources and visitors. Based on the responses, the primary challenge faced by LEO's from both the US Forest Service and National Park Service according to their responses was staffing levels, and limited human resources to patrol their land management units.

Criminal behavior was not considered to be a major impact on recreationists according to the results, however it did directly impact those that were victims of criminal activity. Most importantly the results indicated that criminal activity does, on various levels, impact law enforcement decisions. The results also suggested that several policy changes have occurred due to criminal behaviors, ranging from the change or introduction of equipment used by law enforcement to patrolling tactics.

The comparative analysis between these two agencies suggested several similarities and differences. There were fewer criminal behaviors exhibited in National Park units according to those interviewed, whereas, the US Forest Service units experienced a wider variety of criminal behaviors. The National Park Service officials indicated that criminal activity contributed to policy changes made, some recently due to the 2012 murder of a US Park Ranger. While, criminal behavior did have impacts to law enforcement decisions for the US Forest Service, they were limited to changing law enforcement tactics opposed to major policy, however, when policy changes did occur they were primarily changes in equipment.

This analysis indicated that both agencies generally experience the same challenges such as problems with limited staffing. They also experience crime in similar areas relative to their unit's boundaries. This research also revealed that the approach both agencies take when working to mitigate criminal activity is also similar with a combined use of outreach and education, as well as hard law enforcement methods. Yet, there was one major difference between the two agencies, which was the jurisdiction and authority LEO's had between the two agencies.

The results of this study raised certain recurring themes among the responses of

the law enforcement officers interviewed, however due to the small sample size it is important to conduct more research on the subject of criminal activity in protected areas to gain a more in depth understanding on what types of behaviors drive policy decisions. For future research, I would suggest conducting interviews with a wider range of park and forest administrators, and potentially interviewing at a regional level. Several officers mentioned that the managers that makes the policy decisions are often aware of the changes they feel need to be made but have been unable to make any changes due to institutional inertia and a disconnect between where policy changes occur and where impacts of changes are experienced. For example one officer said, “The management is not oblivious of law enforcement problems but in a factual way they have been unable to address that,” and another stated, “Federal policies take for ever to change.” Others believed that many of the decisions are made on a higher level than at the park or forest level, “It [criminal behavior] does [effect management decisions], but I would say it happens well above the park level.” In addition to what my research has focused on, while it is a different direction to take regarding criminal activity in protected areas, I along with many other researchers believe it is also important to see research conducted on how criminal behavior impacts recreationists in national forests and national parks.

While criminal behavior was not the driving factor for the majority of park and forest management decisions, results indicated that major criminal activities can essentially initiate changes in law enforcement practices within national forests and national parks. Nonetheless, it appears that LEO’s from both the national parks and national forests within Washington believe that there are ways to mitigate criminal behavior, but are limited by their numbers, and for the Forest Service, by their authority.

BIBLIOGRAPHY

- Antolini, D. E. (2008). National Park Law in the U.S.: Conservation, Conflict, and Centennial Values. *William & Mary Environmental Law and Policy Review*, 33, 851.
- Bowker, J. M., Murphy, D., Cordell, H. K., English, D. B. K., Bergstrom, J. C., Starbuck, C. M., ... Green, G. T. (2006). Wilderness and primitive area recreation participation and consumption: an examination of demographic and spatial factors. (Vol. 38, pp. 317–326). Presented at the Journal of Agricultural and Applied Economics, Southern Agricultural Economics Association.
- Brooks, J. J., & Champ, P. A. (2006). Understanding the Wicked Nature of “Unmanaged Recreation” in Colorado’s Front Range. *Environmental Management*, 38(5), 784–798. <http://doi.org/10.1007/s00267-005-0372-2>
- Carter, J. G., & Gore, M. L. (2013). Conservation Officers: A Force Multiplier for Homeland Security. *Journal of Applied Security Research*, 8(3), 285–307. <http://doi.org/10.1080/19361610.2013.794403>
- Chavez, D. J., & Tynon, J. F. (2000). RESEARCH: Triage Law Enforcement: Societal Impacts on National Forests in the West. *Environmental Management*, 26(4), 403–407. <http://doi.org/10.1007/s002670010097>
- Chavez, D. J., Tynon, J. F., & Knap, N. E. (2004). Reducing crime and violence on public lands: case studies in the USDA Forest Service. Retrieved from <http://ir.library.oregonstate.edu/xmlui/handle/1957/26267>
- Cohen, M. A. (1992). Environmental crime and punishment: Legal/economic theory and empirical evidence on enforcement of federal environmental statutes. *Journal of Criminal Law and Criminology*, 1054–1108.
- Crow, M. S., Shelley, T. O., & Stretesky, P. B. (2013). Camouflage-Collar Crime: An Examination of Wildlife Crime and Characteristics of Offenders in Florida. *Deviant Behavior*, 34(8), 635–652. <http://doi.org/10.1080/01639625.2012.759049>
- Department of the Interior, National Park Service, & Floyd, D. M. (1999). Race, Ethnicity and Use of the National Park System. All U.S. Government Documents (Utah Regional Depository). Retrieved from <http://digitalcommons.usu.edu/govdocs/427>
- Eliason, S. L. (2006a). A dangerous job? An examination of violence against conservation officers. *The Police Journal*, 79(4), 359–370.

- Eliason, S. L. (2006b). Factors influencing job satisfaction among state conservation officers. *Policing: An International Journal of Police Strategies & Management*, 29(1), 6–18. <http://doi.org/10.1108/13639510610648458>
- Eliason, S. L. (2007). From wildlife specialist to police generalist? The scope of nonwildlife violations encountered by conservation officers. *Southwest Journal of Criminal Justice*, 4(2), 120–132.
- Eliason, S. L. (2008). Wildlife Crime: Conservation Officers' Perceptions of Elusive Poachers. *Deviant Behavior*, 29(2), 111–128. <http://doi.org/10.1080/01639620701457808>
- Eliason, S. L. (2011a). Patrolling the peaks and the plains: an examination of big sky game wardens. *Criminal Justice Studies*, 24(4), 409–418. <http://doi.org/10.1080/1478601X.2011.626153>
- Eliason, S. L. (2011b). Policing natural resources: Issues in a conservation law enforcement agency. *Professional Issues in Criminal Justice*, 6(3), 43–58.
- Eliason, S. L. (2014). Life as a game warden: the good, the bad and the ugly. *International Journal of Police Science & Management*, 16(3), 196–204. <http://doi.org/10.1350/ijps.2014.16.3.339>
- Falcone, D. (2004). America's conservation police: agencies in transition. *Policing: An International Journal of Police Strategies & Management*, 27(1), 56–66. <http://doi.org/10.1108/13639510410519912>
- FBI Releases 2012 Crime Statistics for Washington State. (2013). Retrieved October 30, 2014, from <http://www.fbi.gov/seattle/press-releases/2013/fbi-releases-2012-crime-statistics-for-washington-state>
- Fischer, F. (2008). The Importance of Law Enforcement for Protected Areas: Don't Step Back! Be Honest – Protect! *GAIA - Ecological Perspectives for Science and Society*, 17(1), 101–103.
- Floyd, Myron. (2001). Race, Ethnicity, and Use of the National Park System. *George Wright Forum*, 18(3), 41–51.
- Gavin, M. C., Solomon, J. N., & Blank, S. G. (2010). Measuring and Monitoring Illegal Use of Natural Resources. *Conservation Biology*, 24(1), 89–100. <http://doi.org/10.1111/j.1523-1739.2009.01387.x>
- Gilbert, J. N. (2000). Crime in the national parks: An analysis of actual and perceived crime within Gettysburg national Military Park. *The Justice Professional*, 12(4), 471–485. <http://doi.org/10.1080/1478601X.2000.9959563>

- Gobster, P. H. (2002). Managing urban parks for a racially and ethnically diverse clientele. *Leisure Sciences*, 24(2), 143–159.
- Hay, I. (2000). *Qualitative Research Methods in Human Geography*. Oxford University Press.
- Hilborn, R., Arcese, P., Borner, M., Hando, J., Hopcraft, G., Loibooki, M., ... Sinclair, A. R. E. (2006). Effective Enforcement in a Conservation Area. *Science*, 314(5803), 1266.
- Kaimowitz, D. (2003). Forest law enforcement and rural livelihoods. *International Forestry Review*, 5(3), 199–210. <http://doi.org/10.1505/IFOR.5.3.199.19146>
- Keane, A., Jones, J. P. G., Edwards-Jones, G., & Milner-Gulland, E. J. (2008). The sleeping policeman: understanding issues of enforcement and compliance in conservation. *Animal Conservation*, 11(2), 75–82. <http://doi.org/10.1111/j.1469-1795.2008.00170.x>
- Lynch, J. T. (1977). Environmental Conservation Officer. *Conservationist*.
- Nie, M. (2006). Governing the Tongass: National forest conflict and political decision making. *Envtl. L.*, 36, 385.
- Office of Minority Affairs and Diversity. (2013, October 30). *Changing Demographics By Race/Ethnicity & Socioeconomic Status in Washington State*. University of Washington.
- Oliver, W. M., Meier, C., & others. (2006). “Duck cops,” “game wardens,” and “wildlife enforcement”: stress among conservation officers. *Applied Psychology in Criminal Justice*, 2(1), 1–25.
- Patten, R. (2010). Policing in the wild: the game wardens’ perspective. *Policing: An International Journal of Police Strategies & Management*, 33(1), 132–151. <http://doi.org/10.1108/13639511011020638>
- Pendleton, M. R. (1998). Policing the park: understanding soft enforcement. *Journal of Leisure Research*, 30(4), 552–571.
- Pendleton, M. R. (2000). Leisure, crime and cops: exploring a paradox of our civility. (Vol. 32, pp. 111–115). Presented at the Journal of Leisure Research.
- Phillely, M. P., & McCool, S. F. (1981). Law enforcement in the National park system: Perceptions and practices. *Leisure Sciences*, 4(3), 355–371. <http://doi.org/10.1080/01490408109512973>

- Preliminary Semiannual Uniform Crime Report, January-June 2013. (n.d.). Retrieved October 31, 2014, from <http://www.fbi.gov/about-us/cjis/ucr/crime-in-the-u.s/2013/preliminary-semiannual-uniform-crime-report-january-june-2013>
- Shelley, T. O., & Crow, M. S. (2009). The Nature and Extent of Conservation Policing: Law Enforcement Generalists or Conservation Specialists? *American Journal of Criminal Justice*, 34(1-2), 9–27. <http://doi.org/10.1007/s12103-008-9057-8>
- Solop, F. I., Hagen, K., & Ostergren, D. (2003). Ethnic and racial diversity of National Park System visitors and non-visitors. Washington, DC: National Park Service Social Science Program. Retrieved from http://www.nationalparkstraveler.com/files/Ethnic_and_Racial_Diversity_Report_12_2003.pdf
- State of Washington 2014 Population Trends. (2014, November). Forecasting & Research Division Office of Financial Management.
- Tacconi, L. (2012). *Illegal Logging: Law Enforcement, Livelihoods and the Timber Trade*. Earthscan.
- Taylor, D. E. (2000). Meeting the challenge of wild land recreation management: demographic shifts and social inequality. (Vol. 32, pp. 171–179). Presented at the *Journal of Leisure Research*.
- Tynon, J. F., & Chavez, D. J. (2006a). Adapting a Tourism Crime Typology: Classifying Outdoor Recreation Crime. *Journal of Travel Research*, 44(3), 298–307. <http://doi.org/10.1177/0047287505278986>
- Tynon, J. F., & Chavez, D. J. (2006b). Crime in National Forests: A Call for Research. *Journal of Forestry*, 104(3), 154–157.
- Tynon, J. F., Chavez, D. J., & Baur, J. W. R. (2010). Crime in woods: role of law enforcement officers in national forests. *Managing Leisure*, 15(4), 251–263. <http://doi.org/10.1080/13606719.2010.508665>
- United States Department of Homeland Security. (2015). 2015 Legal Division Student Handbook. FEDERAL LAW ENFORCEMENT TRAINING CENTERS OFFICE OF CHIEF COUNSEL. Retrieved from https://www.fletc.gov/sites/default/files/2015%20Legal%20Division%20Student%20Handbook%20-%20Web%20Version%20-%20FINAL_0.pdf
- Walby, K., & Hurl, C. (2014). Policing Urban Natures: Conservation Officer Work in Ottawa and Toronto, Canada: Policing urban natures in Ottawa and Toronto. *International Journal of Urban and Regional Research*, 38(4), 1476–1490. <http://doi.org/10.1111/1468-2427.12122>

- Walsh, W. F., & Donovan, E. J. (1984). Job stress in game conservation officers. *Journal of Police Science & Administration*, 12(3), 333–338.
- Wing, M. G., & Tynon, J. (2006). Crime Mapping and Spatial Analysis in National Forests. *Journal of Forestry*, 104(6), 293–298.
- Wing, M. G., & Tynon, J. F. (2008). Revisiting the spatial analysis of crime in National Forests. *Journal of Forestry*, 106(2), 91–99.
- Wynveen, C. J., Bixler, R. D., & Hammitt, W. E. (2007). Law Enforcement Perceptions and Changes in the United States Park Service: Urban proximity and level of enforcement practices. *Annals of Leisure Research*, 10(3-4), 532–549.
<http://doi.org/10.1080/11745398.2007.9686780>

APPENDIX A
Thesis Interview Questions

Position:

Years of Experience:

Has this land management unit experience these types of crimes:

Urban-associated crime

Arson

Domestic violence

Thefts

Gang activity

Body dumping

Shooting

Suicides Murder Rape/sexual assault

Drive-by shooting

Assaults

Criminal damage

Personnel threat

Threats against property

Drug activity

Marijuana cultivation

Meth labs

Meth chemical dump

Armed defense of crops

Booby traps

Extremist and nontraditional groups

Satanic cults

White power groups

Earth First!

Motorcycle groups

Survivalists

Militias/supremacy groups

Property rights groups

Other

Dump

- household/ landscape

Dump chemicals

Homeless people

Trespass by undocumented immigrants

Armed defense of forest products

1. How much crime is occurring on your land management unit, and how are criminal activities being measured?

2. How is crime spatially distributed across your land management unit? Does it seem like there are certain areas that seem to be more prone to criminal activity?

3. What actions are effective in mitigating crime in a recreation setting?

4. Does criminal behavior affected management practices or law enforcement policy? If so, how?

5. Has criminal activity affected recreation (visitors/visitation)? If so, is it common?

6. What are the primary challenges facing Law Enforcement in National Protected Areas?

7. Are there any recent policy changes in regards to crime management that you find to be positive or negative? If so, what was the change, what caused the change, and why is it effective or ineffective?

8. In your opinion, what is the most effective method regarding crime management in National Parks/Forests?

9. What is the priority in regards to protection? The natural resources or the human element (visitors/employees)?

10. Do you know the difference of soft enforcement and hard enforcement? If so which law enforcement method do you believe is more effective? Which method do you feel is more appropriate for natural resource management?

11. What attracted you to this job? Are you satisfied with your duties?