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AN INVESTIGATION INTO POLICING OF PENNSYLVANIA'S NATURAL RESOURCES

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ABSTRACT

The field of law enforcement is marked with complexity. Policing within the context of natural resource management is no exception. Relatively little is known about park rangers, whose historical functions were to protect natural resources. Foundational research on the National Park Service suggests that these specialized agents may actually play a larger role in the law enforcement field than previously acknowledged. This study uses Pennsylvania as a model to gain a deeper understanding of the complexities imbedded within law enforcement of natural resources. Historical backgrounds of three main state agencies (the Department of Conservation of Natural Resources, the Pennsylvania Fish and Boat Commission, and the Pennsylvania Game Commission) are examined. Breadth of legal authority as well as variations in training requirements and reporting of crime data are explored.

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Chapter 1

Exploring the Field

Parks may seem like a place where one can find serenity; in reality the apparently placid landscapes are not impervious to crime. The agencies charged with managing and protecting natural resources must balance law enforcement efforts with their duties as environmental stewards. Rangers are the agents responsible for this dual role. Their efforts have been recognized since at least the beginning of the 20th century.¹ In 1916, the Secretary of War questioned the existence of the United States Park Police, an agency that polices federal parks in the Washington DC area.¹ The main argument of the defense stated that if regular law enforcement agencies were charged with policing in the natural resource field, an emphasis would be placed on major crime, and the natural resources would not be properly protected.¹ Even though it may seem more efficient to have centralized law enforcement agencies, the diverse functions that they must perform requires diversification.

Law enforcement in general in the United States is complex and decentralized. The lack of a centralized police force contributes to the complicated nature of the system. Multiple agencies at the federal level perform law enforcement duties.² A 2008 Bureau of Justice Statistics census of federal law enforcement officers points out that without including offices of inspectors general, there are 24 federal law enforcement agencies employing 250 or more full-time agents with police powers (arrest and firearm authority).² Table 1 describes the complexity of the law enforcement field at the federal level using information from the Bureau of Justice Statistics 2008 report.

Table 1. List and size of federal agencies with law enforcement officers

Agency	Number of full-time officers
U.S Customs and Border Protection	36,863
Federal Bureau of Prisons	16,835
Federal Bureau of Investigation	12,760
U.S. Immigration and Customs Enforcement	12,446
U.S. Secret Service	5,213
Administrative Office of the U.S. Courts*	4,696
Drug Enforcement Administration	4,308
U.S. Marshals Service	3,313
Veterans Health Administration	3,128
Internal Revenue Service, Criminal Investigation	2,636
Bureau of Alcohol, Tobacco, Firearms and Explosives	2,541
U.S. Postal Inspection Service	2,288
U.S. Capitol Police	1,637
National Park Service-Rangers	1,404
Bureau of Diplomatic Security	1,049
Pentagon Force Protection Agency	725
U.S. Forest Service	644
U.S. Fish and Wildlife Service	598
National Park Service- U.S. Park Police	547
National Nuclear Security Administration	363
U.S. Mint Police	316
Amtrak Police	305
Bureau of Indian Affairs	277
Bureau of Land Management	255
*Limited to federal probation officers employed in federal judicial districts that allow officers to carry firearms.	

This table demonstrates that there are a multitude of federal law enforcement agencies of substantial size. Furthermore, state and local decentralization significantly increases the complexity of the law enforcement field. According to a 2008 Bureau of Justice Statistics census report, there are 17,985 agencies at the state and local levels.³ Table 2 uses data from that report to describe the complexities of agencies at these levels.

Table 2. Description and size of state and local agencies with law enforcement officers

Type of agency	Agencies	Number of sworn full-time employees
<i>All agencies</i>	17,985	765,246
Local police	12,501	461,063
Sheriff's office	3,063	182,979
Primary state	50	60,772
Special jurisdiction	1,733	56,968
Constable/marshal	638	3,464

It should be noted that the information in Table 2 “excludes agencies employing less than one full-time officer or the equivalent in part-time officers”.³ Given the fact that some local law enforcement agencies do operate with only one full-time officer further complicates the field.

This complex structure prevalent throughout the levels of law enforcement also pervades in the natural resource field. The duties of rangers are not clearly defined across all jurisdictional levels throughout the United States. Federal, state, and local officials each serve some function in law enforcement of natural resources. The duties and training associated with each level and individual position vary, making this a rather complex field. This paper provides an assemblage of information so that natural resource law enforcement can be better understood. First, this study discusses overall descriptions of various agencies employing rangers and explores their historical functions. This is a relatively understudied field, with the little literature that exists on the topic focusing on the National Park Service. This study uses this federal agency to introduce the main concepts of the field. In order to obtain depth on the subject, however, Pennsylvania is used as a model government entity with complex components to its law enforcement of natural resources. This state level investigation includes the three main state agencies involved with natural resource protection: the Department of Conservation and Natural Resources (DCNR), the Pennsylvania Fish and Boat Commission (PFBC), and the Pennsylvania Game Commission (PGC). Law enforcement of natural resources is also addressed at the local level with an exploration of the county park system. This study aims to understand the mission and scope of each of

these agencies as well as their statutory authority. Additionally, training requirements for law enforcement agents in the natural resource agencies will be explored. Lastly, crime data and systems for reporting it will be analyzed.

As previously stated, this paper uses Pennsylvania as a model to understand the complexities within this field. It is likely that other states share some of Pennsylvania's complexities although they may be organized differently. Interestingly, Pennsylvania is the only state to have separate agencies for wildlife management.⁴ In all 49 other states, the efforts of a game commission and a fish and boat commission are consolidated.⁴ This distinction captures the immense variations within the field of law enforcement of natural resources. In November of 2003, the Legislative Budget and Finance Committee released a report examining the feasibility of combining Pennsylvania's Game Commission and Fish and Boat Commission.⁵ This same Commission released an update to that report in March of 2014. The fact that this merging process has been in the discussion and development stages for over ten years suggests the difficulty of altering the infrastructure established in Pennsylvania's natural resource management agencies including law enforcement of those resources. This study will illuminate the variations in statutory authority, required training, and crime reporting between these agencies as an explanation for why a fundamental change to this institution would be difficult.

Chapter 2

Investigating Federal and State Agencies

The National Park Service

The challenges faced by natural resources agencies are magnified on a larger scale at the federal level. A discussion of the National Park Service (NPS) provides a vital framework for the state level analysis. Delving into the historical foundations of the National Park Service provides a base for understanding the purpose of the agents with law enforcement duties. After understanding which positions hold law enforcement powers, their statutory authority and training requirements will be explored.

All of the agencies in this field must deal with competing objectives. Maintaining a balance between wildlife protection and visitor satisfaction is arguably the biggest challenge. The root of this duality in responsibility lies within the purpose for establishing parks. National Parks were created for not only protection of natural resources but also for public use and enjoyment.⁶ The historical duties of the National Park Service rangers included protecting wildlife, extinguishing fires, and helping tourists.⁶ Their traditional priorities were *resource management* and *visitor protection*, but relatively recently, their role transformed into *resource protection* and *visitor management*.⁶ This is a seemingly insignificant difference, however it significantly affected the field. In 1989, Soden and Hester explored the professional implications of the recent expansion of rangers' law enforcement responsibilities. Since law enforcement duties were only recently added at the time of this 1989 report, it is likely that there would be initial blowback from the rangers simply because of the unfamiliar change.⁷ The study found that most rangers supported the addition but that certain individual characteristics resulted in different attitudes.⁷

For example, older rangers who had been serving in the NPS for longer were found to be less likely to support the new role.⁷ Also, some individuals who exhibited high professional commitment were shown to be less supportive of their new roles, suggesting backlash to change in their chosen careers.⁷ These differing opinions demonstrate the significance of the role adaptation of the ranger position.

The paradox of a juxtaposition of crime and leisure challenges society to find the best way to patrol its parks.⁸ Policing within a leisure context may differ greatly from typical urban policing. Understanding the nuances of law enforcement of natural resources is a relatively understudied field, however some literature on enforcement policies explores the topic.⁹ Soft enforcement, which “encourages compliance through informal methods of education, prevention and community relations” is more likely than traditional hard enforcement (“arrests, citations, and stern warnings”) to ensure visitors’ park experiences are enjoyable.⁹ However, there has also been emerging evidence that these agencies are shifting toward hard enforcement.⁹ Beyond visitor satisfaction, types and frequencies of crimes that occur may influence the policing style that an agency emphasizes.⁹ For example, if rangers face violent crimes quite often, it is possible that they will incorporate more traditional, hard enforcement tactics in order to address the severity of the crimes; however, if rangers are only confronted with non-violent, less serious crimes, it is likely that soft enforcement methods will be sufficient to solve the issues and also minimize the dissatisfaction of park visitors. Furthermore, desired policing styles may influence the type of training that rangers should receive.⁹ Rangers that utilize hard enforcement policies may need to be trained differently than rangers that emphasize soft enforcement.

The historic duties of National Park Rangers, including protecting wildlife, putting out wildfires, and to a lesser extent, assisting tourists who found themselves in difficult situations, probably demanded a softer policing style that emphasized educational encounters and interpretation over issuing citations.⁶ As visitor numbers to National Parks rapidly increased during the late 1960’s, crime rates were following the same trend.¹⁰ Crimes against property increased from “just over 2,000 in 1966 to nearly 6,000 in 1970” and “drug offenses rose from 10 in 1966 to 563 in 1970.”¹⁰ During this transition period, law enforcement

began to play a more significant role in the Park Rangers' duties.¹⁰ This may be a reason for the recent trend toward a stronger law enforcement presence with harder policing styles in National Parks.

There has been a debate over whether these officers should be, “[protecting] the animals from the people or the people from the animals.”¹⁰ Rangers are required to compromise between their two commitments of people and resources (animals) as well as balance an appropriate policing style. Historically, Park Rangers were required to be multifaceted employees providing education or interpretation to visitors but also protecting the natural resources.⁶ Today distinct positions have been made for the different duties of Park Rangers. For example, the National Park Service employs interpretive park rangers (Park Ranger-Interpretation) for interacting with and educating guests, but hires separate employees to perform the law enforcement duties (Park Ranger-Protection).^{11, 12} The difference between these two duties (interpretation and law enforcement) provides the opportunity to have both roles performed at a higher level than if one position encompassed both tasks. Training for each position can be focused and a high level of expertise can be achieved. Given that rangers used to provide both functions, the relatively recent distinction made between the two types of rangers may cause some confusion for the public. Visitors may expect performance of both duties by any ranger they encounter. Although public opinion of these positions is outside of the scope of this paper, it presents an interesting question to the field of law enforcement of natural resources. The job description of a Protection Park Ranger emphasizes patrolling, issuing warning and citations, but also includes learning about “park resources to conduct informal interpretation as well as provide timely and accurate information” to visitors with whom they willing “extensive contact.”¹¹ Protection Park Rangers “enforce all federal rules and regulations from the United States Code of Federal Regulations Title 36, Parks, Forests, and Public Property, United States Code Title 18, Crimes and Criminal Procedure, and all applicable [state] laws.”¹³

Furthermore, the National Park Service must consider other agencies in the field of law enforcement of natural resources. Since this study is emphasizing the agencies present in Pennsylvania, this discussion of additional federal agencies will be limited to those that are present in this state. The two

additional federal agencies with jurisdiction in Pennsylvania are the US Fish and Wildlife Service (USFWS) and US Forest Service. Within the Office of Law Enforcement of the Fish and Wildlife Service, Special Agents and Wildlife Inspectors are responsible for federal wildlife laws including importing/trading endangered species, and various environmental specific laws like the Migratory Bird Treaty Act for example, which protects migratory birds by prohibiting or in some cases regulating the hunting, shipment, sale, and purchase of migratory bird species.^{14, 15} Wildlife Inspectors' main duty is trade.¹⁴ They are positioned at major international airports. Finally, uniformed Law Enforcement Officers and Special Agents police National Forest System lands as part of the US Forest Service.¹⁶ Clearly, there are various agents working within this complex field. Interagency collaboration must be necessary for efficient and effective protection of natural resources.

The complexities introduced by the federal field of law enforcement of natural resources are also evident in the model of Pennsylvania. Agencies at the state and local levels face similar issues of conflicting objectives between conservation and visitor use. The Pennsylvania model will also include variations statutory authority, training requirements, and crime reporting. These agencies will now be discussed individually.

The Pennsylvania Model

Three main agencies with duties pertaining to natural resources exist at the state level in Pennsylvania. The Department of Conservation and Natural Resources (DCNR) focuses on the land while the Pennsylvania Fish and Boat Commission's (PBFC) primary concern is of aquatic resources, and the Pennsylvania Game Commission (PGC) is charged with managing the state's wildlife resources. Although each one focuses its efforts on different resources, all natural resource agencies face the pressures of multiple objectives as well as the duties of protection and law enforcement. In addition to the state agencies, some counties have established park systems at the local level, however, significant

variation exists among these systems. This section not only explores the mission of each agency but also compares the duties and statutory authority of the positions within each agency.

The Department of Conservation and Natural Resources

The functions of the Department of Conservation and Natural Resources (DCNR) are “maintaining and preserving the 120 state parks; managing the 2.2 million acres of state forest land; providing information on the state's ecological and geologic resources; and establishing community conservation partnerships with grants and technical assistance to benefit rivers, trails, greenways, local parks and recreation, regional heritage parks, open space and natural areas.”¹⁷ It is divided into two bureaus- State Parks and Forestry. Each bureau contains an agent with law enforcement duties. Within this agency, only one of the positions is referred to as a ranger; the second position is labeled as an officer. The DNCR Rangers within the Bureau of State Parks possess a wider range of law enforcement powers than State Forest Officers within the Bureau of Forestry, who have limited authority.¹⁷

The nature of DCNR Ranger work involves public safety (includes administering of first aid and surveying the grounds for safety hazards) as well as promotion of recreation in state parks and forests by assisting visitors by answering their questions.¹⁸ DCNR Rangers’ statutory authority gives them power to enforce the Commonwealth’s Crimes Code and Vehicle Code as well as fish and game crimes.¹⁸ They also investigate crimes, often in cooperation with the local and State Police, the PGC and the PFBC.¹⁸

The emphasis for DCNR Rangers is public contact and education; only around 10% of a Ranger’s duties focus on law enforcement.¹⁹ A “Pocket Ranger” mobile phone application (app) created by the DCNR emphasizes the public assistance role of Rangers. The app allows visitors to “search for park and forest locations; activities and events; get directions; share photos and even make a reservation.”²⁰ The free version allows users to “receive news, alerts, and location-based weather updates; access park information such as hours of operation; view maps of facilities, trails and campgrounds; learn about state

park or forest history; get directions; get contact information; access online reservations.”²⁰ If this position were more heavily law enforcement oriented, perhaps the app would include a way to report criminal incidents or include a list of State Park rules. To complicate the public’s expectations of DCNR Rangers, there is also another position with a similar title. A Park Ranger 1 has no law enforcement powers but wears the same uniform as DCNR Rangers.¹⁹ The only differences apparent to the public are that a Park Ranger 1 does not wear a badge or an equipment belt, and can only issue courtesy notices to park visitors that carry no legal weight.¹⁹ Both Park Rangers have a lot of contact with the public so it is possible that confusion between these two positions impacts the effectiveness of both types of rangers. The public may expect certain services from one type of ranger when these services are actually performed by the other type of ranger.

State Forest Officers are primarily foresters with some law enforcement powers.¹⁹ They lack the powers of arrest but are able to issue citations for all-terrain vehicle (ATV) and snow mobile laws of the Vehicle code.¹⁹ This position generally requires a background in forest or parks and recreation management, timber sales, or some other wildlife related field.¹⁹

The Pennsylvania Fish and Boat Commission

The Pennsylvania Fish and Boat Commission’s (PFBC) mission is to “protect, conserve, and enhance the Commonwealth’s aquatic resources and provide fishing and boating opportunities.”²¹ Organizationally, the Fish and Boat Commission is divided into three main branches, the Office of Field Operations, the Office of Administration and the Executive Office of which the Bureau of Law Enforcement exists.²¹ The Bureau of Law Enforcement within the PFBC employs Waterways Conservation Officers (WaCO) to protect the state’s aquatic resources. These officers patrol an assigned district in search of violators of the law, which they then confront.²² They may “issue verbal warnings and citations, [as well as] make physical arrests.”²² They are responsible for investigating crimes and also

conduct public education. Waterways Conservation Officers (WaCO) “primarily enforce fishing, boating, and environmental laws and regulations” however, they are authorized to “enforce wildlife, Bureau of State Parks, Bureau of Forestry, and PA Crimes Code statutes.”²² Additionally, this agency employs Deputy Waterways Conservation Officers (DWaCO) who perform similar duties but to a limited extent. This is a volunteer position. Deputy Waterways Conservation Officers only enforce fish, boat, game, and forestry laws.²³

The primary income of the PFBC comes from fishing license sales.²³ This presents WaCOs with a precarious balance between fisherman satisfaction and law enforcement. WaCOs may therefore, lean toward writing warnings over issuing citations and revoking licenses. Without satisfied license holders, the PFBC will lose its main source of funding. It is not uncommon for a WaCO to encounter a citizen who is violating several laws (for example, failing to possess personal flotation devices on board or expired registration); however, the officer may only issue a citation for some of these infractions.²³ Waterways Conservation Officers utilize their discretion in every case just like other law enforcement officers, however, knowing the reliance of the agency on fishermen may influence WaCOs to lean towards softer enforcement as previously discussed.

The Pennsylvania Game Commission

Pennsylvania is the only state with separate agencies for game management and fish and boat regulation.⁴ This distinction foreshadows a complex bureaucracy that influences the ability of the Pennsylvania Game Commission (PGC) to pursue its mission. Goals of the agency have adapted over time, but they have never been simple or easily achieved. The history of the Pennsylvania Game Commission must be explored in order to understand how it strives to achieve its diverse goals, given its fundamental limitations.

The Pennsylvania Game Commission (PGC) was created in 1895 by the general assembly.⁴ The Commission's focus was meant to be on the protection of game species for recreation opportunity. The framework of the agency's existence, Title 34 (Game and Wildlife code), establishes the boundaries within which the PGC must operate.⁴ Its mission is to manage for current and future generations by protecting, propagating, managing, preserving, and enforcing the laws.⁴ Historically, the agency's priority was law enforcement, however, it has recently evolved into its management role.

Law enforcement duties belong to Cadet and Deputy Wildlife Conservation Officers (WiCO) from the Enforcement Division within the Bureau of Wildlife Protection in the PGC.²⁴ Similar to the organization of the Fish and Boat Commission, the Game Commission has a separate Bureau of Wildlife Protection. There is a subsection for the enforcement division within that bureau.²⁴ This structure suggests that law enforcement is emphasized to a similar degree in the Game Commission as this function is in the Fish and Boat Commission.

Similar to the Pennsylvania Fish and Boat Commission, the Pennsylvania Game Commission is fundamentally limited in the fact that it must be self-sustaining and raise its own operation funds. The majority of these funds come from hunting licenses and fees.⁴ This holds the Commission to its historical purpose of game species protection and more recently the management of those species. Given that the majority of the agency's funding comes from the hunting population, it strives to serve the interests of these stakeholders.⁴ This may be impacting how Wildlife Conservation Officers enforce the law. Officers are required to balance this dual role.²⁵

Statutory Authority Summary

Table 1 below summarizes the statutory authority of relevant agents that are charged with law enforcement in the natural resource field. It is followed by Table 2, which describes the laws being enforced by the agents.

Table 3. Enforcement power summary

Authority of law	NPS Park Ranger-Protection	DCNR Ranger	PGC WiCO	PFBC WaCO	DCNR State Forest Officer	PGC Deputy WiCO	PFBC Deputy WaCO
Title 18: Crimes Code and Criminal Procedure	X	X	X	X			
Title 75: Vehicle Code		X	X	Summary offenses	ATV & snow mobile		
Title 34: Game and Wildlife Code		X	X	X		X	X
Title 30: Fish and Boat Code		X	X	X			X
Title 17: State Forest and State Park Rules and Regulations		X	X		X		
CRF 36: Parks, Forest, and Public Property	X						

National Park Rangers' power is derived from the Code of Federal Regulations (CRF) Title 36- Parks, Forests, and Public Property, however they also have the authority to assimilate to the local and state laws in which National Parks exist.²⁶ Assimilation allows federal agencies to adopt state criminal laws "for areas of exclusive or concurrent federal jurisdiction if the crime is not punishable under federal law."²⁷ All of the agents with "full" law enforcement powers in the natural resource field in Pennsylvania (DCNR Rangers, PGC Wildlife Conservation Officers, and PFBC Waterways Conservation Officers) can enforce Title 18, the Pennsylvania Crimes Code and Criminal Procedure laws. This demonstrates that these officers are not restricted to the natural resource field but are actually criminal law enforcement agents as well. All of these agents also have authority to enforce Title 34 (Game and Wildlife code) and Title 30 (Fish and Boat code). These positions differ with respect to Title 75 (Pennsylvania's Vehicle code). DCNR Rangers have full authority of the Vehicle code, but Pennsylvania Game Commission

WiCOs can enforce all misdemeanors and felonies falling under the Vehicle code, and Pennsylvania Fish and Boat Commission (PFBC) Waterways Conservation Officers (WaCOs) can only enforce summary offenses. Additionally, the PFBC WaCOs are the only agents out of the three without the authority of Title 17 (State Forest and State Park laws).

As previously discussed, all three of the state agencies include an agent with less than full law enforcement authority. The Department of Conservation and Natural Resource (DCNR) State Forest Officers as well as Deputy Wildlife Conservation Officers and Deputy Waterways Conservation Officers do not have the authority to enforce the Criminal code (Title 18). These deputy positions are voluntary positions. Despite having less power than DCNR Park Rangers, DCNR State Forest Officers maintain some authority under the Vehicle code.¹⁹ These officers have power to enforce all terrain vehicle (ATV) and snow mobile laws.¹⁹ The only additional authority of State Forest Officers is Title 17 (State Forest and State Park rules and regulations). Deputy Wildlife Conservation Officers from Pennsylvania Game Commission possess the least diversity of authority out of these agents.²⁸ Their only power is derived from Title 34, the Game code. PFBC Deputy Waterways Conservation Officers on the other hand, are able to enforce both Title 34 (Game code) and Title 30 (Fish and Boat code).²⁹

Chapter 3

Investigating County Park Systems

County parks are created for various purposes including to unify county residents, to enhance the quality of life for the residents, to provide public programs to meet their leisure and recreational needs, to conserve natural resources, to encourage environmental stewardship, to stimulate the county's economy.^{30, 31, 32} County parks provide various facilities including swimming pools, campgrounds, hiking, biking, horseback riding, or snowmobile trails, sports fields, picnic areas, lakes with or without beaches, playgrounds, among many other amenities.^{32, 31, 33} This study defines county park systems as

county owned and managed parklands. County websites were the primary sources used to determine if counties operated a park system. To obtain more information, county officers were contacted. Examples of the offices include parks and recreation departments, county courthouses, and county sheriff's offices. For a complete call log, refer to Appendix A. Out of the 66 counties in Pennsylvania, 25 operate a park system. The 25 parks included in this study varied across several factors including size, law enforcement responsibility, and crime reporting.

Of the counties that operate a park system only nine have distinct agents charged with law enforcement duties within the parks. These counties are Berks, Bucks, Carbon, Chester, Delaware, Lancaster, Montgomery, Philadelphia, and York. The nomenclature used for the positions charged with law enforcement duties complicates this branch of natural resource law enforcement. Many of the counties refer to this position as Park Rangers but Carbon County's term is Enforcement Ranger, Delaware County officers are known as Park Police and in Philadelphia County the responsibilities are given to the Ranger Corps. The other 16 counties rely on various agencies to police their park systems including county police (Allegheny), the sheriff (Beaver, Bradford, Lackawanna, Washington), township police (Butler, Lackawanna, Lehigh), and state police (Bradford, Lehigh, Northampton). In some cases these counties police their parks with collaboration of more than one law enforcement agency.

In order to compare county park systems by size, acreages of the systems were calculated. Some county websites directly report the size of their county park system (Carbon, Cambria, Chester, Delaware, Indiana, Lancaster, Lehigh, Northampton, Philadelphia, Washington, and York). For other counties, the acreage for each park was found on web pages for each specific park (Allegheny, Bradford, Bucks, Butler, Dauphin, Lackawanna, Montgomery, Venango, and Westmoreland). This information for Berks and Beaver was collected through personal communication. Lastly, the acreage of Greene County's two parks was determined in two ways. Personal communications secured the information pertaining to the first park but the second county owned park's acreage was estimated using Google Earth's ruler function

to estimate the perimeter of the park to then calculate the area (in acres). The acreage of Clarion County's park was also calculated using Google Earth.

Figure 1 graphically depicts the relationship between county park system size and existence of a ranger force.

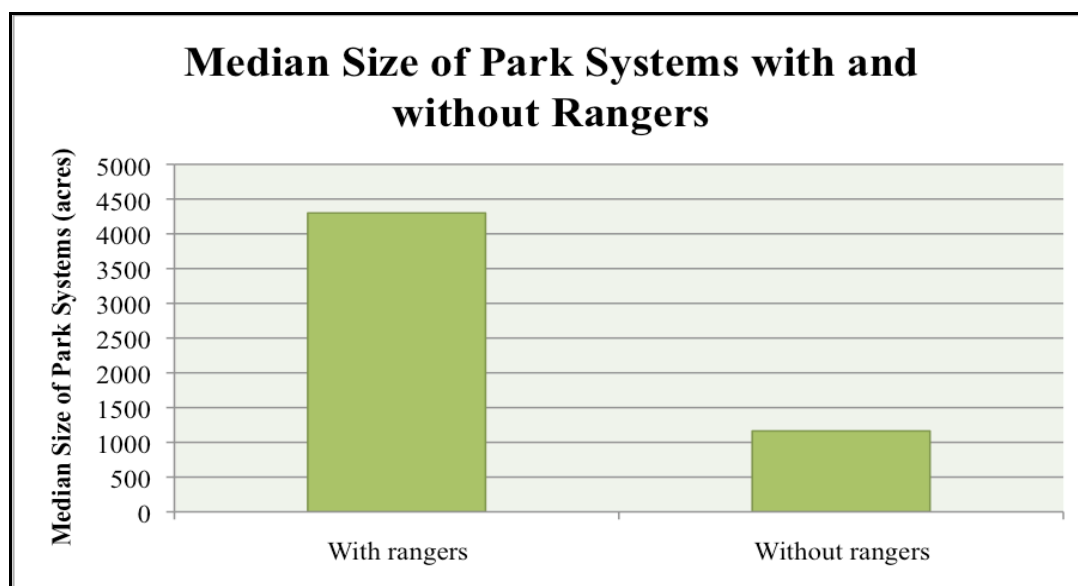


Figure 1. Median size of park systems with and without rangers

Larger park systems are seemingly more likely to have rangers than smaller parks, however, there is significant discrepancy between sizes of parks included in each category, which reduces the reliability of Figure 1. Although there are several small parks without rangers, the largest park system, Allegheny County, also does not have rangers. Additionally, given that only nine out of 25 counties with a park system have rangers, a very small sample, this analysis should be viewed critically. Table 4 below lists all of the counties with a park system in order of size (in acres) and also denotes which systems have rangers and which do not.

Table 4. Size of county park systems with indication of ranger presence

County	Size of county park system (acres)	With rangers	Without rangers
Greene	22		X
Clarion	54		X
Cambria	71		X
Columbia	173		X
Carbon	345	X	
Butler	418		X
Dauphin	523		X
Delaware	621	X	
Bradford	730		X
Berks	1,000	X	
Westmoreland	1,056		X
Lackawanna	1,272		X
Northampton	1,300		X
Lancaster	2,055	X	
Venango	2,695		X
Indiana	2,700		X
Beaver	3,020		X
York	4,300	X	
Lehigh	4,500		X
Chester	4,600	X	
Washington	5,500		X
Bucks	5,939	X	
Montgomery	6,112	X	
Philadelphia	8,900	X	
Allegheny	12,014		X

Chapter 4

Variations in Training

Pennsylvania operates standardized training certifications for law enforcement. Act 120, certifies police officers and Act 235, the Lethal Weapons Training Act, grants the authority to carry and use a lethal weapon.³⁴ Act 120 created the Municipal Police Officers' Education and Training Commission, which standardizes police officer training.³⁵ (MPOETC website). This 754-hour training curriculum includes instruction in Pennsylvania criminal law, criminal procedure, and vehicle code, as well as “antisocial behavior, professional relations, physical conditioning, human relations skills, application of force, firearms training, patrol procedures and operations, investigations, communications, handling violent and dangerous people, custody, first aid and CPR, and operation of a patrol vehicle.”^{35, 36} The Lethal Weapons course is only a 40-hour commitment and does not give the officer arrest authority.³⁷ Any “watch guard, protective patrolmen, detectives and criminal investigators” who carry and use a lethal weapon must be Act 235-certified.³⁸ These two legislative acts are not the only legal entities regulating police officer training, however, Act 120 and Act 235 will be discussed when comparing the state agencies' ranger training requirements.

Federal and State Agencies

The training of rangers plays a vital role in their ability to manage a balance between resource and visitor protection and management. Typical law enforcement training requires an extended academy experience, which can include physical training courses as well as academic classes.³⁹ Graduates from the academy then typically partake in a probationary period in the field under the supervision of a Field Training Officer (FTO) who acts as a mentor to the new agent, teaching him the realities of what he just

learned in the academy.³⁹ Park Rangers in the National Park Service follow this general law enforcement agent training projection. National Park Rangers are required to complete 24 weeks of intensive training at the Federal Law Enforcement Training Center for law enforcement rangers follow by a period of “on-the-job training under the guidance of a Field Training Officer.”^{12, 13}

The natural resource agencies in Pennsylvania demonstrate more variation in their training requirements of their main law enforcement agents. The Department of Conservation and Natural Resources Rangers as well as Pennsylvania Fish and Boat Commission (PFBC) Waterways Conservation Officers (WaCos) meet the Municipal Police Officers’ Education and Training Commission (Act 120) requirements for police officers.^{19, 23} While the PFBC and DCNR rely on Municipal Police Officers’ Education and Training Commission training academies to certify its Waterways Conservation Officers and Rangers, the Game Commission completes all of its training at its own conservation school.²⁵ This complete internal training may produce discrepancies between Game Commission officers and other natural resource law enforcement agents.

In addition to the police officer certification, PFBC Waterways Conservation Officers must also complete an additional 31-week training period at the agency’s own school.²² This includes 19 weeks of classroom training by the Commission at the H. R. Stackhouse School of Fisheries Conservation and Watercraft Safety in Centre County, Pa., and 12 weeks of supervised field training.²² Specifically, the training includes “fish and boat laws and regulations, ... safety, ... management, ... conservation, ... [and] weapons use, physical training and public relations.”²² Deputy WaCOs, however, only receive 5 non-consecutive weekends of intensive training in addition to becoming lethal weapons certified.²⁹

Similarly, DCNR Rangers must complete a Ranger Trainee program before coming a full Ranger. This “structured and informal training” process prepares the ranger by in-the-field work.⁴⁰

Furthermore, the Pennsylvania Game Commission Wildlife Conservation Officers must graduate from the Game Commission’s Ross Leffler School of Conservation, “America’s first game protector and warden school.”²⁴ An extensive, 50-week training program is required for these positions. The first 40

weeks include curriculum covering bureau operations and topics relevant to the PGC.⁴¹ Similar to the Pennsylvania Fish and Boat Commission’s Waterways Conservation Officer training, the Game Commission’s Wildlife Conservation Officers then complete a 10-week session of “supervised field assignments.”⁴¹ Deputy Wildlife Conservation Officers must accumulate “20 hours of ride-along time with a Wildlife Conservation Officer prior to [completing the] entrance exam.”²⁸ This is a volunteer position yet Deputy Wildlife Conservation Officers must complete 75 hours of training at the Game Commission’s Conservation school as well as 80 hours of field training with a WiCO.²⁸ A summary of training requirements for these three state agencies demonstrates the variations in training requirements for each law enforcement position.

Table 5. Estimated training requirements (time) of state and federal agents

Position	Total Estimated Training Time
PGC Wildlife Conservation Officer	50 weeks
National Park Service Ranger	32 weeks
PFBC Waterways Conservation Officer	31 weeks
DCNR Park Ranger	19 weeks + undetermined field training
PGC Deputy Wildlife Conservation Officer	22 weeks
PFBC Deputy Waterways Conservation Officer	3 weeks

These values were determined by summing weekly training requirements provided by the agencies as well as calculating weekly estimates from hourly training requirements. Eight hours a day for five days per week was used to standardize the conversion from hourly training requirements to weekly equivalents. The 22 weeks of estimated training time for Deputy Wildlife Conservation Officers includes 20 hours of pre-academy ride-along training as well as post-academy field training. There are varying levels of training required for officers in the field of law enforcement of natural resources. This variation continues in the county park system.

County Park Systems

The nine counties with enforcement agents within their park system differ with respect to training requirements. Comparisons are made in reference to the same training requirements discussed for the state agencies, Act 120- the police officer certification, and Act 235-the security officer training. Recall that the police officer certification requires 754 hours of training while the security officer training, otherwise referred to as lethal weapons certification, only requires 40 hours of training.^{35,37} Table 4 shows the county park systems with rangers ranked by size and the training requirements of their rangers.

Table 6. County park system sizes with indications of ranger presence

County	Size of county park system (acres)	Police officer certification	Security officer training	No law enforcement training
Carbon	345		X	
Delaware	621	X		
Berks	1,000			X
Lancaster	2,055		X	
York	4,300		X	
Chester	4,600		X	
Bucks	5,939	X		
Montgomery	6,112			X
Philadelphia	8,900			X

Although Delaware County is listed under Act 120, only some of the rangers in Delaware County are Act 120-certified.⁴² Their ranger force also includes non-certified rangers without any law enforcement powers. This table demonstrates that there is no clear relationship to between park system size and rangers training requirements. Given that there are only nine counties with rangers, analyses of this small sample are limited. There are only two county parks require police officer (Act 120) certification, four counties require security officer training (Act 235 certification), and three counties only require various safety certifications of their rangers.

Chapter 5

Variations in Reporting and Crime Trends

Crime reporting has increasingly become one of the duties of law enforcement agents. The different agencies do not report in the same manner. Both the federal government and the state of Pennsylvania maintain uniform crime statistics. These programs are designed to track crime within their given jurisdictions. Reporting for some agencies is not mandatory so data in this uniform crime reports (UCR) may not be wholly accurate. Another limitation is that the federal UCR only collects crime data for a limited number of offenses. This finite list includes “violent crime offenses (murder and nonnegligent manslaughter, forcible rape, robbery, and aggravated assault) and property crime offenses (burglary, larceny-theft, motor vehicle theft, and arson).”⁴³ This presents a challenge to this study because the agencies of interest traditional function focuses on infringements specific to natural resources. Many of the issues that rangers deal with are not crimes that would be recorded in the UCR. Crime data from the agencies of interest proved to be particularly difficult to obtain due to variations in reporting across the organizations. This loss of data may have negative implications. Data tracking may illuminate recurring problems. Without proper monitoring of crime statistics, agencies may be inefficiently dealing with the same consistent problems or possibly wasting resources.

The Department of Conservation and Natural Resources

The DCNR does not have a mandated reporting system so most State Parks do not report their crime data. This policy may also explain the irregularity of data from year to year in the Federal UCR. Table 11 (Offenses Known to Law Enforcement, by State by State, Tribal, and Other Agencies) from 2006-2012 was consulted for this study.⁴⁴ The Bureau of Forestry and the Bureau of State Parks both appear in the UCR to some extent between 2006 and 2012. One State Forest, Moshannon, reported to the

UCR in 2011, however, no criminal incidents were known to have occurred in the Forest that year. The Bureau of Forestry reported crime data from each county to the UCR in 2010 and 2011. The only offense reported by the Bureau in both years was arson. There were 141 cases reported in 2010 and 74 in 2011. Although Forest Officers have limited law enforcement authority their main focus is suppressing wildfires.⁴⁵ This explains why arson is the only offense to appear in the UCR from State Forests and the Bureau of Forestry. An agency named, State Park Police, appears several times in the UCR. This term has not yet been discussed in this paper, suggesting it is not an actual entity. Determining its affiliation proved to be quite difficult. It is possible that the Federal UCR uses the term State Park Police in reference to DCNR Rangers because Park Police is a familiar term among federal agencies. This agency is not affiliated with the United States Park Police.⁴⁶ The human resources department of the DCNR was consulted to determine which agency might be reporting under the name of “State Park Police.”⁴⁷ The DCNR has not had a position with this name for at least over 20 years.⁴⁷ Although the precise affiliation of the “State Park Police” could not be determined, it is highly likely that the data reported under this name comes from the DCNR since it pertains to Pennsylvania State Parks. This information describes only five of the state’s 120 parks. This is a strong indication of the department’s lack of reporting policy. Information from Ohiopyle, Pine Grove Furnace, Presque Isle, Prince Gallitzin, and Pymatuning was reported in 2012. In others years only one or two parks appear in the UCR (Pine Grove Furnace: 2009-2012; Pymatuning: 2006-2012). Crimes known to the police are in general quite low for four out of these five parks with the exceptional park being Pymatuning. The limited records from these four State Parks only provide enough data for summary analyses. Prince Gallitzin reported zero known crimes in 2011 and 2012. Between the years of 2010 and 2012, Pine Grove Furnace only reported a total of 11 offenses. These included five property crimes, four larceny-theft offenses, one burglary, and one arson offense. Ohiopyle only reported 10 property crimes and 10 larceny-theft offenses in 2012. In 2012, Presque Isle reported 42 property crimes and 42 larceny-theft offenses.

Pymatuning is the only State Park to report frequently enough to support further analyses. Similar to the other four parks discussed, the two most prevalent crimes are property crimes and larceny-theft offenses. The UCR “defines larceny-theft as the unlawful taking, carrying, leading, or riding away of property from the possession or construction possession of another.”⁴⁸ The UCR publishes aggregate data for property crimes, in which larceny-theft is included. Given this overlapping definition as well as the highly congruent figures, it is likely that the crimes described as property crimes are the same offenses as those listed as larceny-theft. This concurrent pattern between property crime and larceny-theft data is seen in other jurisdictions as well, they will be explored in further detail. Over the six years that crimes occurring in Pymatuning were reported, 125 property crimes and 123 larceny-theft offenses were reported. These two crimes comprise 99% of the offenses reported by this State Park. The remaining 1% is made up of one aggravated assault, one violent crime, and two burglaries. Given that these two crimes dominate the total offenses, they serve as an accurate description of the overall crime rate for Pymatuning State Park. Figure 3 below shows the number of offenses reported at this park throughout time.

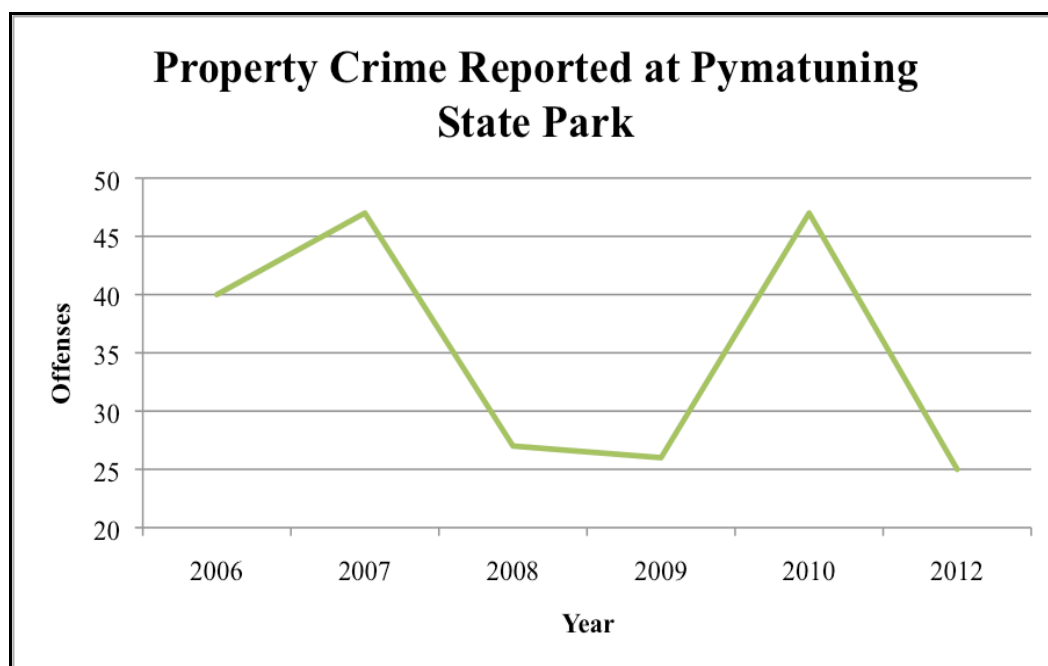


Figure 2. Property crime offenses reported at Pymatuning State Park

The Pennsylvania Fish and Boat Commission

The Pennsylvania Commission on Crime and Delinquency (PCCD) confirmed that Pennsylvania's Uniform Crime Report (UCR) does not distinguish data from individual reporting agencies.⁴⁹ This prevented separation of data from each agency of interest, to analyze just the crimes reported by the Pennsylvania Fish and Boat Commission (PFBC), for example. Additionally, the Pennsylvania UCR does not include fish and game relevant crimes like poaching.⁴⁹ Similar to the FBI's UCR, the Pennsylvania UCR includes offense data for violent crimes (murder, forcible rape, robbery, and aggravated assault) as well as property offenses (burglary, larceny-theft, motor vehicle theft, and arson).⁵⁰ In addition, the state UCR records data for offenses of vandalism, drunkenness, disorderly conduct, liquor law violations, DUI, and drug abuse.⁵⁰ With all of these crimes outside of the traditional scope of the agencies of interest (DCNR, PFBC, and PGC), even if separation of the data by agency were possible, it would be difficult to discern actual crime rates from the agencies since many of their incidents are focused around these specialized laws. Fingerprint processing may provide an indirect way to determine which crimes are reported by these agencies. According to the PCCD, "in serious cases where criminal statutes are violated (assault on a PGC Wildlife Conservation Officer or a PFBC Waterways Conservation Officer, vandalism, fraud, ... etc.) ... the officers apprehend the offender and have the offender fingerprinted prior to turnover to local law enforcement."⁴⁹ Future research could utilize this fingerprint compliance data as a proxy for crimes that PGC and PFBC Wildlife and Waterways Conservation Officers encounter.

Similar to the DCNR, the PFBC has not historically reported consistently to the Federal UCR. The PFBC reported their crimes to the Federal UCR in 2011 and 2012. WaCOs did not any of the UCR-tracked crimes in 2011. In 2012, one property crime and one larceny-theft were reported. This agency used to publish summary crime statistics in its annual reports but recently this information has received less attention in these documents.⁵¹ Analysis of data collected through a Right to Know request to the

PFBC proved to be difficult because of the disproportionate emphasis on fish and boat code specific crimes.⁴⁹ Moreover, there was little consistency in the data released in the annual reports across the years of interest (2008-2013). Figure 5 shows the total number of warnings pertaining to fishing and boating violations issued by WaCOs between 2008 and 2013 (excluding 2012).

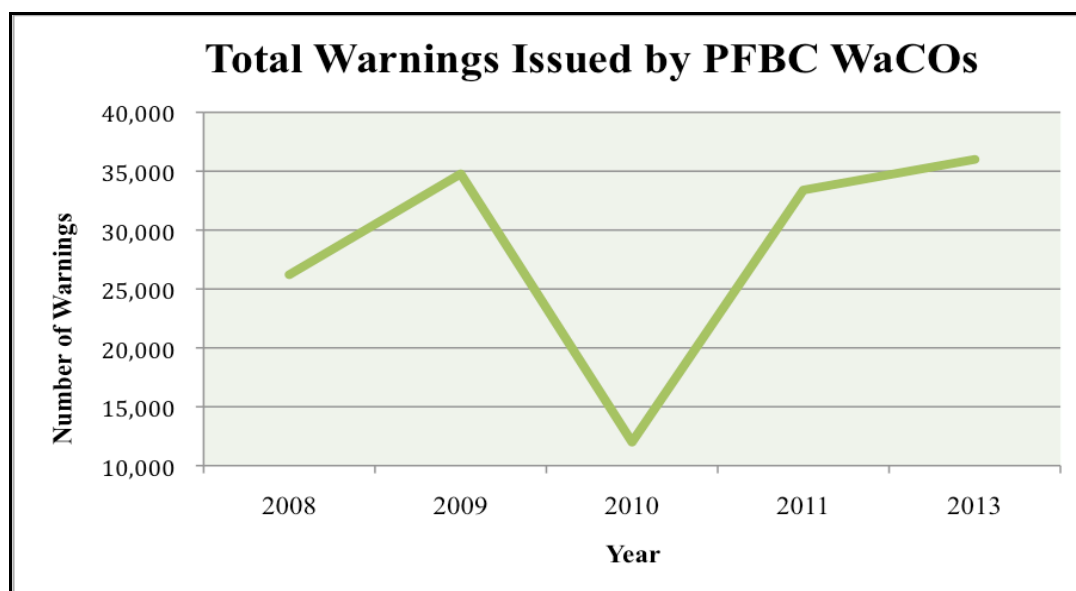


Figure 3. Total warnings pertaining to fishing and boating violations

The number of warnings issued by WaCOs was relatively constant with a big exception in 2010 when the numbers of warnings issues dropped significantly. Unfortunately, because this data only pertains to fishing and boating violations, it cannot be directly compared to the number of warnings issued by PGC WiCOs. The two agencies are deliberately specialized, however, so this type of discrepancy should be expected.

The most prevalent offense in 2011, 2012, and 2013 was disorderly conduct.⁴⁰ Actual number of offenses could not be analyzed due to insufficient information provided by the Right to Know request.⁵¹ The fact that the main offense falls under the Crimes code rather than fish and game laws suggests that the role of Waterways Conservation Officers is expanding beyond their traditional specialized natural resource scope. In 2011 the most common offenses pertaining to fish laws were general boating regulations (1,661 offenses), fishing license infringements (1,263 offenses), control of property (512

offenses), littering (385 offenses), special fishing regulations and equipment infringements (319 offenses).⁵¹

The Pennsylvania Game Commission

As previously mentioned, data from the Pennsylvania Game Commission (PGC) cannot be separated from the Pennsylvania UCR.⁴⁹ Similar to the Pennsylvania Fish and Boat Commission, the PGC publishes law enforcement summaries in its annual reports. Much more information could be obtained from PGC annual reports than those of the PFBC. Figure 6 depicts the total number of warnings issued (including infractions from entire scope of WiCO authority) by Wildlife Conservation Officers between 2001 and 2011.^{52, 53, 54, 55, 56, 57, 58, 59}

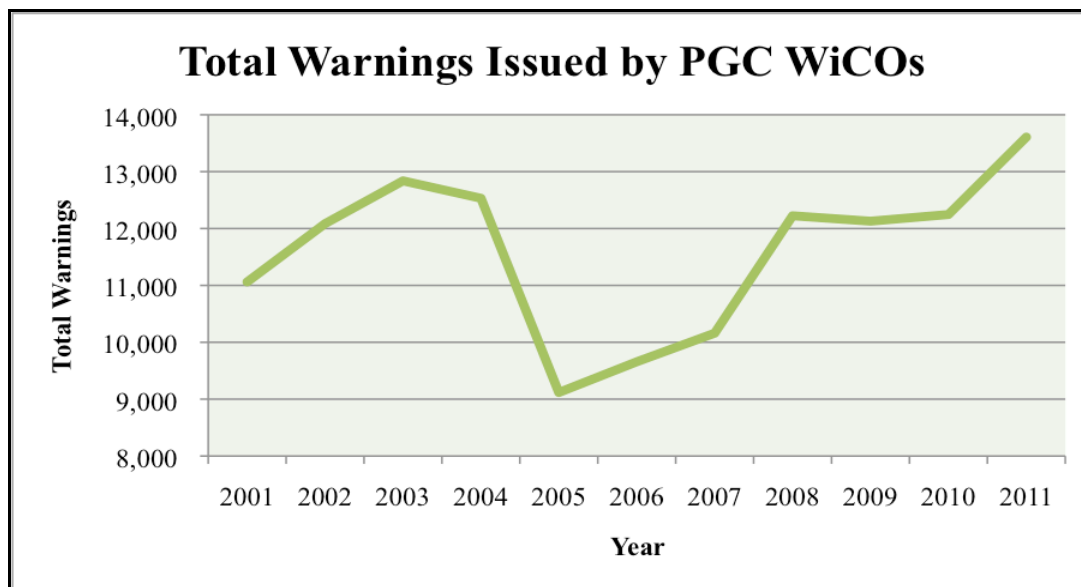


Figure 4. Total warnings issued by PGC WiCOs

There was a decline in number of warnings issued between the years of 2005 and 2007. There appears to be an increasing trend of warnings issued. This could be due to the fact that WiCOs are encountering more infringements of the law. It could also suggest that WiCOs are writing more warnings for offenses they would have simply given verbal warnings for in the past. The types of crimes that these warnings

pertain to is not known, however, they could include infringements of any law of which WiCOs have authority (traditional law enforcement crimes as well as natural resource law crimes).

Figure 7 shows a different trend for total citations issued.

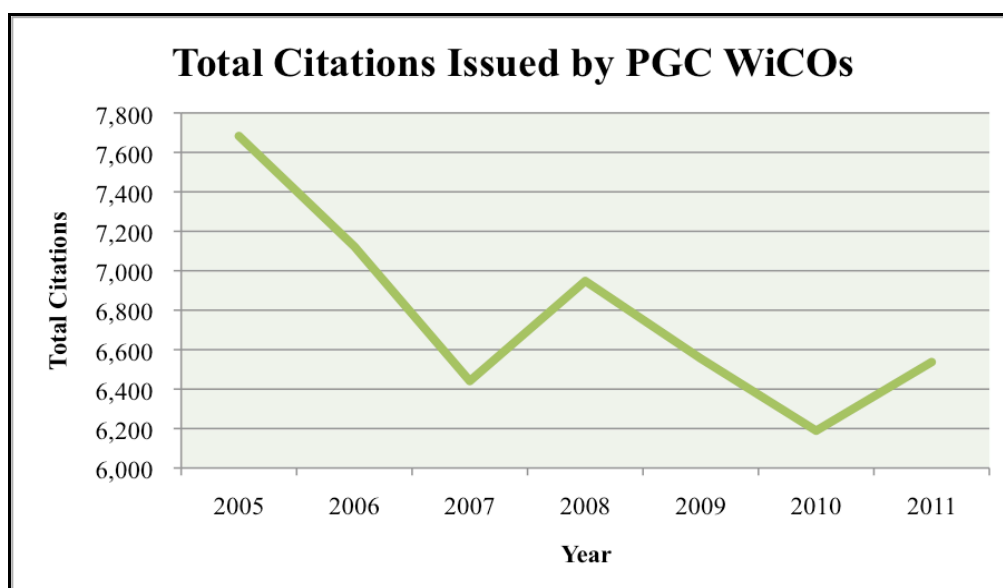


Figure 5. Total citations issued by PGC WiCOs

In contrast to the recent increase in number of warnings issued, the total citations issued by PGC WiCOs has been decreasing in recent history. The number of citations issued in 2011, however, increased. This relatively downward trend of citations in comparison to the upward trend of warnings suggests that WiCOs are more likely to issue warnings over citations which correlates with the necessity to maintain satisfied hunters in order to ensure an income for the agency. Alternatively, these relationships could simply be a reflection of prevalence of crimes of a certain severity. Perhaps less serious crimes (that deserve only warnings) occur more frequently than other serious crimes that require citations.

Unlawful taking or possessions of game or wildlife is the most common offense prosecuted by WiCOs. The number of prosecutions for this offense can be seen in Figure 8.

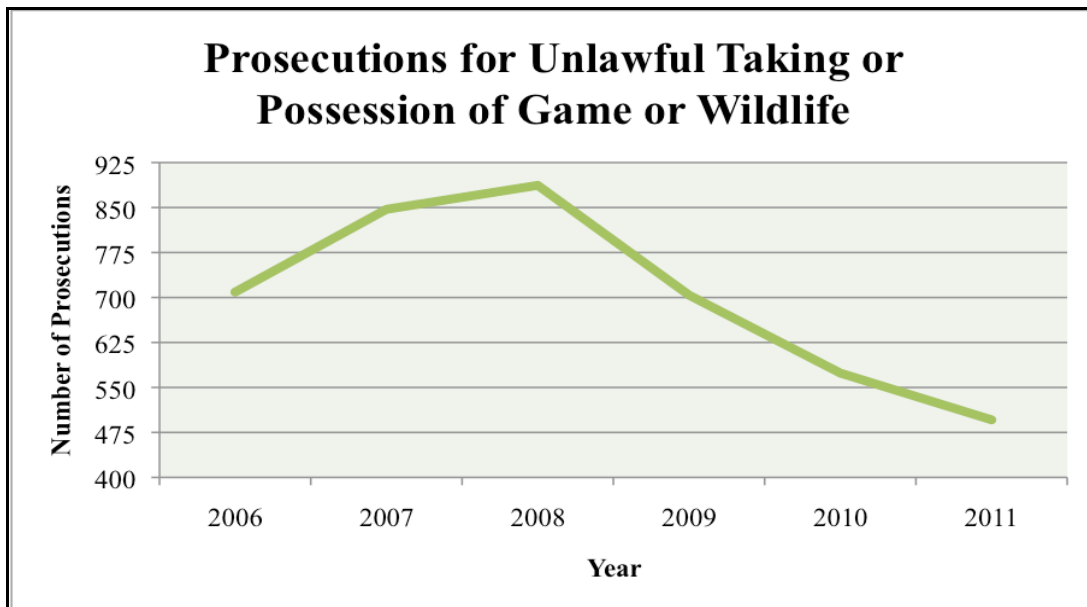


Figure 6. Prosecutions for unlawful taking or possession of game or wildlife

Despite increasing prosecutions from 2006 to 2008, prosecutions for this offense have been steadily declining since 2008. Other prevalent offenses dealt with by the PGC include possession of a loaded firearm in a motorized vehicle, operating vehicles on State Game Lands in areas closed to travel (primarily ATV offenses), hunting or taking wildlife through use of bait or enticement, and casting a light after 11p.m. The PGC annual report law enforcement summaries focused on the specialized crimes that WiCOs enforce. The lack of information pertaining to traditional crime makes it difficult to ascertain the extent to which WiCOs have expanded their policing scope beyond their specialized natural resource laws.

County Park Systems

There is a significant degree of variation in reporting practices within the county park system. Two counties with park systems report their crimes to the Federal UCR (Westmoreland and Delaware). Westmoreland County operates a 1,056-acre parks system and does not have a ranger police force, yet crime reports are available in the Federal UCR in 2006 as well as 2009 through 2012 for this jurisdiction. The total number of crimes reported by the Westmoreland County Park system can be seen in Figure 9.

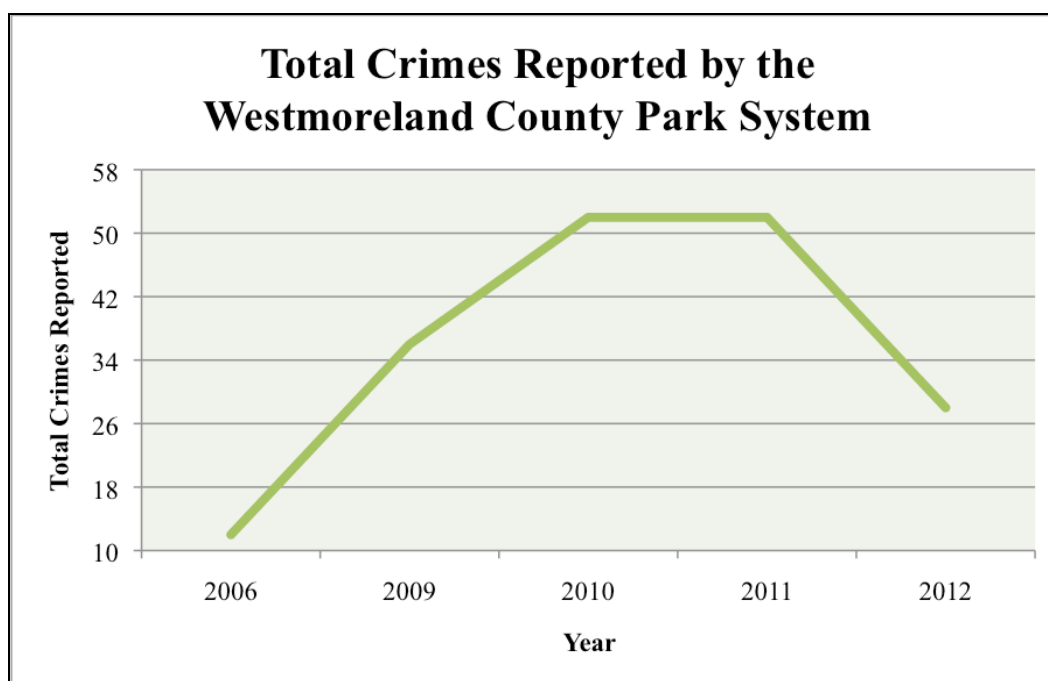


Figure 7. Total crimes reported by the Westmoreland County Park System

Although data from 2007 and 2008 is missing, it appears that crimes known to the police were increasing until 2010, when they leveled out and have since been decreasing since 2011. During the time period for which data is available, the most frequent crimes were property crime (88 offenses) and larceny-theft (86 offenses). As discussed before, it is likely that the 86 larceny thefts make up the majority of the 88 property crimes since the former is a type of the latter. Additional crimes known to the police were two cases of violent crime, two cases of burglary, and two cases of aggravated assault.

The Delaware County park system reported to the UCR from 2007-2012. The number of total crimes reported by the Delaware County Park system does not follow the same trend as those reported in Westmoreland County. Figure 10 shows the total crimes reported by Delaware County Parks.

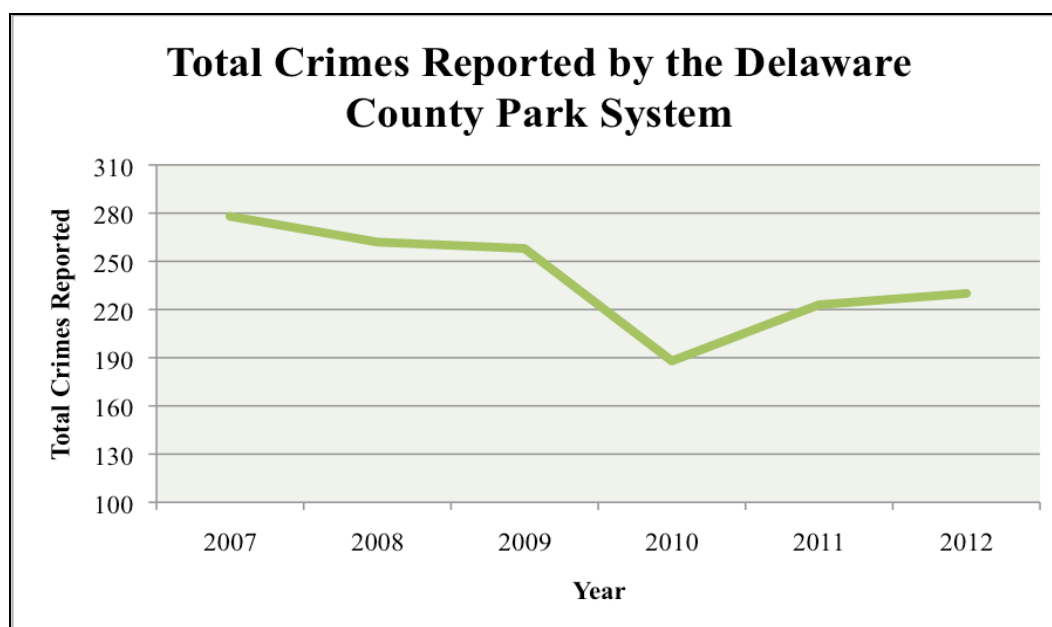


Figure 8. Total crimes reported by the Delaware County Park System

Crimes known to the police in the Delaware County Park system seemed to be decreasing from 2007 to 2010, however, they have been showing a slight increasing trend since 2010. There are many more crimes reported in Delaware County Parks than in Westmoreland. The maximum number of crimes reported in Westmoreland was 52 in 2010 and 2011, while over 180 crimes have been reported every year in the Delaware County Parks system. Delaware County matches Westmoreland with the most common crimes (property crime and larceny-theft). These two crimes comprise 92% of the offenses in the Delaware County Parks. The other 8% includes 52 aggravated assault cases, 3 forcible rapes, 1 robbery, 48 aggravated assaults, 3 burglary offenses, four motor vehicle thefts, and one case of arson.

The reporting protocols for the remaining seven counties are less well understood. Interestingly, Bucks County noted that their crime rate is so low that they therefore have no need to report their data. Montgomery County will report the crimes it deals with only if necessary for court purposes. Even

though many of the county park systems have their own “police force” they are often limited to enforcing local ordinances. This could be a contributing factor to why county park law enforcement agents are not reporting their crimes. Furthermore, most parks touched on the fact that they collaborate with or defer to other police agencies in certain cases (ie. for certain crimes). Some county parks publish law enforcement summaries in their annual reports similar to the practices of the PGC. The discrepancies across the county park system contribute to the complexity of the field of law enforcement in natural resources.

Chapter 6

Are we still lost in the woods?

Despite the fact that policing is a major topic within criminology, policing within the context of natural resource management is relatively understudied. All levels of this field (federal, state, and local agencies) are marked by complexity and exceptions. This study focused on the agencies within Pennsylvania but the intricacies of law enforcement in the natural resource field highlighted here are sure to exist in other states.

Understanding the role of rangers is a difficult task given the degree of variation that exists within the field of law enforcement of natural resources. The duties of these agents are marked with a distinct duality. Rangers must balance their efforts between interpretation and education to park consumers with law enforcement to protect not only those citizens but also the natural resources. Furthermore, Falcone (2003) suggests that these agencies exist on a continuum of law enforcement functions.⁶⁰ Historically they were specialized agencies focused on protection of natural resources but are being required to change and perform more generalist police officer duties.⁶⁰ Although inconsistencies in crime reporting hinder full insight into the transition from specialized rangers to generalized law enforcement officers, some preliminary markers, like the frequency of disorderly conduct crimes that the Pennsylvania Fish and Boat Commission reported in recent years, suggest that these roles are adapting to take on new functions beyond the boundaries of natural resource laws.

The degree to which these agencies expand may be dependent on the nature of their jurisdiction. The Department of Conservation and Natural Resources (DCNR) is responsible for policing State Parks, which are designated areas. This place-based jurisdiction may be driving DCNR Rangers toward more traditional policing to protect visitors. These rangers are most likely to be responding to the needs of visitors who report crime that they encounter. The Pennsylvania Fish and Boat Commission (PFBC) and

Game Commission (PGC), on the other hand may be less likely to expand their roles since the structure of these agencies requires Waterways Conservation Officers and Wildlife Conservation Officers to patrol in search of natural resource law infractions to protect the resources. The fact that the PFBC reported disorderly conduct as its most frequent offense challenges this theory and suggests that expansion of law enforcement duties may reach beyond place-based jurisdiction reasons.

Variation exists not only with the scope of officer authority but also in their training. Some agencies train their agents internally while others standardize their methods by using state operated training protocols. Furthermore, different agencies implement different reporting practices. This is one area, however, where most agencies in Pennsylvania converge. They each lack an organized structure for reporting crime data. Of the available crime data, property crime and larceny-theft are the most prevalent offenses reported by many of the agencies in Pennsylvania.

Much more research is needed on the issue of policing in the natural resource field. A possible dimension for future research to pursue is the relative size of these agencies. Falcone (2003) suggests that there are many fewer natural resource law enforcement agents per policing population compared to traditional police agencies.⁶⁰ Furthermore, given the diversity of agencies operating in this field, a better understanding of how they cooperate is needed. Improved reporting policies will help to clarify some of the complexities of this field. These law enforcement agencies are serving important roles within our society. Although their historic duties may have been focused on protection of natural resources, future research will likely continue to find that their functions are continuing to expand. The importance of policing in the field of natural resources has yet to be realized by society.

Appendix A

Phone Log

Date	Department
2/4/14	Cameron County Commissioners Office
2/4/14	Allegheny County Downtown Park Office
2/4/14	Allegheny County Parks Department
2/4/14	Beaver County Recreation and Tourism Department
2/4/14	Berks County Ranger Supervisor
2/4/14	Bradford County Parks Maintenance Office
2/4/14	Bucks County Chief Ranger
2/4/14	Lawrence County Planning District
2/4/14	Venango County Planning Commission
2/4/14	Potter County Planning Commission
2/4/14	Wyoming County Planning Office
2/5/14	Lehigh County Allentown Police Department
2/5/14	Carbon County Mauch Chunk Lake Park Office
2/5/14	Cambria County Director of Maintenance and Safety Park Office
2/5/14	Clarion County Park Office
2/5/14	Columbia County Columbia Park Office
2/5/14	Butler County Director of Parks and Recreation Office
2/5/14	Northampton County Sheriff's Office
2/5/14	Washington County Superintendent of Parks Office
2/5/14	PA Fish and Boat Commission Law Enforcement North Central Office
2/17/14	Bureau of Indian Affairs Eastern Regional Office
2/17/14	Berks County Parks and Recreation Office
2/18/14	Lancaster County Rangers
2/18/14	Chester County Parks and Recreation Office
2/18/14	Berks County Parks Department
2/18/14	Montgomery County Green Lane Park Office

2/18/14	Delaware County Park Police
2/18/14	Bureau of Land Management Eastern States Office
2/19/14	PA DCNR Rothrock State Forest
2/19/14	York County Chief Ranger Ford
2/19/14	Pennsylvania State Archives
2/20/14	Lackawanna County Deputy Director's Office
2/26/14	DCNR Bureau of Forestry District 5
3/4/14	PA Commission on Crime and Delinquency Statistical Analysis Center
3/19/14	Philadelphia County: Northwest district Fairmount Park and Recreation Rangers
3/26/14	Berks County Heritage Center
3/26/14	Greene County Department of Recreation
3/26/14	Pennsylvania Game Commission Training School Executive Office
3/26/14	United States Park Police DC Headquarters Public Relations Office
3/26/14	National Park Service Northeast Region
3/31/14	Penn State Justice and Safety Institute
4/2/14	DCNR Human Resources

BIBLIOGRAPHY

- ¹Mackintosh, Barry. 1989. *The United States Park Police: A History*. History Division: National Park Service. <http://www.cr.nps.gov/history/online_books/police/index.htm>. Accessed online from ParkNet on 22 March 2014.
- ²Reaves, Brian. 2012. "Federal Law Enforcement Officers, 2008" U.S Department of Justice. Bureau of Justice Statistics.
- ³Reaves, Brian. 2011. "Census of State and Local Law Enforcement Agencies, 2008" U.S Department of Justice. Bureau of Justice Statistics.
- ⁴Personal Communications. Pennsylvania Game Commission. Wildlife and Fisheries Science 447W: Wildlife Management. Lecture. 31 October 2013.
- ⁵"House Resolution 15" 2014. Pennsylvania Fish and Boat Commission. <<http://www.fish.state.pa.us/hr15.htm>>. Accessed 30 March 2014.
- ⁶Everhart, William C. 1983. *The National Park Service*. Westview Press: Boulder.
- ⁷Soden, Dennis L. and Worth H. Hester. 1989. "Law Enforcement in the National Park Service: The Ranger's Perspective" *Criminal Justice Review*.
- ⁸Pendleton, Michael R. 2000. "Leisure, Crime, and Cops: Exploring A Paradox of Our Civility" *Journal of Leisure Research*.
- ⁹Pendleton, Michael R. 1998. "Policing the Park: Understanding Soft Enforcement" *Journal of Leisure Research*.
- ¹⁰Everhart, William C. 1972. *The National Park Service*. Praeger Publishers: New York.
- ¹¹Park Ranger (Interpretation) Job Description. USAjobs.com <<https://www.usajobs.gov/GetJob/ViewDetails/361810500>>. Accessed 22 March 2014.

- ¹²Park Ranger (Protection) Job Description. USAjobs.com
<<https://www.usajobs.gov/GetJob/ViewDetails/362920500>>. Accessed 22 March 2014.
- ¹³“Visitor and Resource Protection” 2014. Wind Cave. National Park Service. U.S. Department of the Interior. <<http://www.nps.gov/wica/parkmgmt/visitor-and-resource-protection.htm>> Accessed 21 March 2014.
- ¹⁴“About Service Law Enforcement” 2013. Office of Law Enforcement. U.S. Fish and Wildlife Service. <<http://www.fws.gov/le/about-le.html>>. Accessed 21 March 2014.
- ¹⁵“Digest of Federal Resource Laws of Interest to the U.S. Fish and Wildlife Service: Migratory Bird Treaty Act of 1918” U.S. Fish and Wildlife Service.
<<http://www.fws.gov/laws/lawsdigest/migtrea.html>>. Accessed 30 March 2014.
- ¹⁶“Enforcement” USDA Forest Service Law Enforcement and Investigations. US Forest Service.
<<http://www.fs.fed.us/lei/enforcement.php>>. Accessed 25 March 2014.
- ¹⁷“Discover DCNR” The Department of Conservation and Natural Resources.
<<http://www.dcnr.state.pa.us/discoverdcnr/index.htm>>. Accessed 15 January 2014.
- ¹⁸“DCNR Ranger”. Commonwealth of Pennsylvania State Civil Service Commission.
<http://www.portal.state.pa.us/portal/http://www.portal.state.pa.us;80/portal/server.pt/gateway/PTARGS_0_118222_918002_0_0_18/2010-137_DCNR_Ranger.htm>. Accessed 22 March 2014.
- ¹⁹Personal Communications. DCNR Bureau of Forestry District 5. 26 February 2014.
- ²⁰News Release from DCNR July 11, 2011. “Smart Phone Mobile App Now Available for Pennsylvania State Parks and Forest”<<http://www.dcnr.state.pa.us/news/newsreleases/2011/0711-smartphoneapp.htm>> Accessed 2 December 2013.
- ²¹“PFBC Agency Overview” 2014. Pennsylvania Fish and Boat Commission.
<<http://fishandboat.com/aboutpf.htm>>. Accessed 15 January 2014.
- ²²“To Protect, Conserve and Enhance: A Career as a Waterways Conservation Officer” 2003. Pennsylvania Fish and Boat Commission Brochure.

- ²³Personal Communications. PA Fish and Boat Commission Law Enforcement North Central Office. 2 February 2014.
- ²⁴“About the Pennsylvania Game Commission”. 2013. The Pennsylvania Game Commission. <<http://www.portal.state.pa.us/portal/server.pt?open=514&objID=983474&mode=2>>. Accessed 15 January 2014.
- ²⁵Personal Communications. Pennsylvania Game Commission Training School Executive Office. 26 March 2014.
- ²⁶Personal Communications. National Park Service Northeast Region. 26 March 2014.
- ²⁷“Assimilative Crimes Act Law & Legal Definition” 2014. USLegal.com <<http://definitions.uslegal.com/a/assimilative-crimes-act/>>. Accessed 30 March 2014.
- ²⁸“Deputy Wildlife Conservation Officer (Volunteer Position) Pennsylvania Game Commission <<http://www.portal.state.pa.us/portal/server.pt?open=514&objID=575673&mode=2>> Accessed 31 March 2014.
- ²⁹Eichler, David 1998. “Partnerships: Deputy Waterways Conservation Officers” Pennsylvania Fish and Boat Commission. <<http://fishandboat.com/anglerboater/1998/julaug98/dwcoart.htm>>. Accessed 31 March 2014.
- ³⁰“Parks Department” Allegheny County Pennsylvania <<http://www.alleghenycounty.us/parks/index.aspx>>. Accessed 17 March 2014.
- ³¹“York County Department of Parks and Recreation” York County Pennsylvania <<https://yorkcountypa.gov/parks-recreation.html>>. Accessed 17 March 2014
- ³²“Parks & Recreation-Mission” Beaver County Pennsylvania <<http://www.beavercountypa.gov/parks-recreation-mission>>. Accessed 17 March 2014
- ³³“Parks and Recreation” Lackawanna County Pennsylvania <<http://www.lackawannacounty.org/index.php/departmentsagencies/sports-recreation/parks-and-recreation>>. Accessed 17 March 2014

³⁴Personal Communications. Penn State Justice and Safety Institute. 31 March 2014.

³⁵“Regulations for Act 120” 2014 Municipal Police Officers’ Education and Training Commission.

³⁶“Basic Police Curriculum (Amended)” 2008. Municipal Police Officers’ Education and Training Committee.

³⁷“Frequently Asked Questions” Lethal Weapons Training. Pennsylvania State Police.

<http://www.lethalweapons.state.pa.us/portal/server.pt/community/lethal_weapons_training_program/7611>. Accessed 31 March 2014.

³⁸ “Lethal Weapons Training Program” 2014. Pennsylvania State Police

<http://www.lethalweapons.state.pa.us/portal/server.pt/community/lethal_weapons_training_program/7611>. Accessed 31 March 2014.

³⁹Crime, Law and Justice 435: Policing course lecture. Howie Smith. 3 March 2014

⁴⁰“DCNR Ranger Trainee” Commonwealth of Pennsylvania State Civil Service Commission.

<http://www.portal.state.pa.us/portal/http://www.portal.state.pa.us;80/portal/server.pt/gateway/PTARGS_0_73945_913781_0_0_18/2010-132_DCNR_Ranger_Trainee.html>. Accessed 31 March 2014.

⁴¹“An Update on the Feasibility of a Combined Fish and Wildlife Commission for Pennsylvania” 2014.

Legislative Budget and Finance Commission.

⁴²Personal Communications. Delaware County Park Police. 18 February 2014

⁴³“About CIUS” Crime In the United States. Federal Bureau of Investigation. <<http://www.fbi.gov/about-us/cjis/ucr/crime-in-the-u.s/2012/crime-in-the-u.s.-2012/resource-pages/about-cius/about-cius>>. Accessed 2 April 2014.

⁴⁴“Table 11” Pennsylvania: Offenses Known to Law Enforcement by State, Tribal, and Other Agencies, 2006-2012. Uniform Crime Reports. Federal Bureau of Investigation.

⁴⁵“Bureau of Forestry Mission” Department of Conservation and Natural Resources.

<<http://www.dcnr.state.pa.us/forestry/whatwedo/index.htm>> Accessed 2 April 2014.

- ⁴⁶Personal Communications. United States Park Police DC Headquarters Public Relations Office. 26 March 2014.
- ⁴⁷Personal Communications. DCNR Human Resources. 2 April 2014.
- ⁴⁸“Larceny Theft”. 2012. Uniform Crime Report. Crime in the United States 2012. Federal Bureau of Investigation. <<http://www.fbi.gov/about-us/cjis/ucr/crime-in-the-u.s/2012/crime-in-the-u.s.-2012/property-crime/larceny-theft>>. Accessed 27 March 2014.
- ⁴⁹Personal Communications. Pennsylvania Commission on Crime and Delinquency. 5 March 2014.
- ⁵⁰“Crime in Pennsylvania Annual Uniform Crime Report” 2012. Pennsylvania Uniform Crime Reporting System.
<<http://WWW.PAUCRS.PA.GOV/UCR/Reporting/Annual/AnnualFrames.asp?year=2012>>
Accessed 2 April 2014.
- ⁵¹Personal Communications. Pennsylvania Fish and Boat Commission. 18 February 2014.
- ⁵²“Pennsylvania Game Commission Annual Report, 2009-10” 2011. Pennsylvania Game Commission.
- ⁵³“Pennsylvania Game Commission Annual Report, 2001-2002”. Pennsylvania Game Commission.
- ⁵⁴“Pennsylvania Game Commission Annual Report, 2002-2003”. Pennsylvania Game Commission.
- ⁵⁵“Pennsylvania Game Commission Annual Report, 2003-2004”. Pennsylvania Game Commission.
- ⁵⁶“Pennsylvania Game Commission Annual Report, 2004-2005”. Pennsylvania Game Commission.
- ⁵⁷“Pennsylvania Game Commission Annual Report, 2005-2006”. Pennsylvania Game Commission.
- ⁵⁸“Pennsylvania Game Commission Annual Report, 2006-2007”. Pennsylvania Game Commission.
- ⁵⁹“Pennsylvania Game Commission Annual Report, 2007-08” 2009. Pennsylvania Game Commission.
- ⁶⁰Falcone, David. 2003. “America’s conservation police: agencies in transition”. *Policing: An International Journal of Police Strategies & Management*.

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Education

- 🏛️ B.S with honors in Crime, Law, and Justice; The Pennsylvania State University, University Park, 2014
- 🏛️ Minor in French and Francophone Studies; The Pennsylvania State University, University Park, 2014
- 🏛️ Minor in Wildlife and Fisheries Science; The Pennsylvania State University, University Park, 2014
- 🏛️ Recreation, Parks and Tourism Management study abroad; The Pennsylvania State University, Fiji and Australia, 2013
- 🏛️ Tropical Field Ecology course; The Pennsylvania State University, Costa Rica, 2014

Honors and Awards

- 🏛️ Dean's List all semesters
- 🏛️ Evan Pugh Scholar Award, 2013 and 2014
- 🏛️ Student Marshal Candidate for Crime, Law and Justice, 2014

Association Memberships/Activities

- 🏛️ Member of the Liberal Arts Undergraduate Council, 2011-2014
- 🏛️ Musician in the Pennsylvania State Marching Blue Band, 2012-2014
- 🏛️ Volunteer with Global Water Brigades, 2011-2014

Professional Experience

- 🏛️ Environmental Education Intern; York County Parks, York, 2013
- 🏛️ Education Intern; The National Aquarium in Baltimore, Baltimore, 2012