

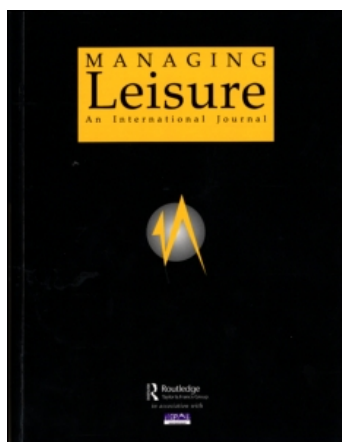
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Crime in woods: role of law enforcement officers in national forests

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This first nationwide study of US Forest Service (USFS) law enforcement officers (LEOs) examined respondents' roles in the USFS, what they perceived as their highest work priority, and what their relationship with the rest of the USFS should be. Results show that LEOs believe they have a high priority for protecting forest users and they believe that National Forest System line officers have higher priorities for protecting resources, employees, and public property. LEOs are evenly divided about whether their authority and jurisdiction are adequate for what they feel is expected or demanded of them. Results suggest a need for change in budgeting, staffing, and communicating organizational priorities. Despite these concerns, many LEOs expressed a desire to work for the public good, keep visitors safe, and protect the land base.

Keywords: USFS, law enforcement, officer perceptions, public safety, national forests, outdoor recreation

INTRODUCTION

Uses and users of national forests have been undergoing changes due to population gains and shifts toward urbanization. With those changes comes the realization that crime is a part of the national forest setting. US Forest Service (USFS) law enforcement officers (LEOs) respond to incidents ranging from natural resources law enforcement (such as timber theft) to drug cultivation and manufacture to more urban-associated crimes (e.g., arson, body dumping, domestic violence, drive-by shooting, gang activity, murder, rape and sexual assault, suicide) that threaten recreation visitors and USFS employees alike (Chavez and Tynon, 2000). In fact, LEOs spend more than half their time on 'city law enforcement,' dealing with 'urban spillover' and 'urban-associated

crimes' (Tynon, Chavez, and Kakoyannis, 2001).

ORGANIZATION AND STRUCTURE OF USFS LAW ENFORCEMENT

The USFS is a multilevel bureaucratic organization. Many staff groups report to Deputy Chiefs within the agency, while many programs have Directors, who report to the Chief. Among these direct report programs are International Programs, Civil Rights, and Law Enforcement and Investigations (LEI). LEI has staff in the Washington DC office as well as field operations in nine geographical locations, or Regions. Each Region is overseen by Special Agents in Charge (SAC). LEOs are law enforcement personnel, who report to patrol captains and

patrol commanders (PC), who in turn report to the SACs. The direct reporting configuration in which regional SACs report to the LEI in Washington is commonly referred to as 'stovepiping' by the USFS.

LEOs in National Forests

Despite the ubiquitous nature of crime, studies of crime and law enforcement in public land management agencies, like that of rural law enforcement, in general, have received little attention (Munson, 1995; Pendleton, 1996, 2000; Weisheit and Wells, 1996). Historically, this research has focused on the incidence of particular types of crimes like vandalism (Christensen and Clark, 1978), which includes graffiti and target shooting. More recently, Munson (1995) noted problems such as the dumping of garbage and toxic chemicals, vandalism, marijuana cultivation, and timber thefts. Marosi (1999) found that national forests were being used as a dumping ground for murders committed elsewhere, especially in urban-proximate forests (those within an hour's drive of a million or more people). Pendleton (1996) conducted interviews with federal LEOs at a national forest and adjacent national park, and discovered that officers noticed an increasing amount of forest and park crime in recent years. Officers' perceptions were found to be consistent with crime statistics documented at the study sites, which identified a 19% increase in national park crime and a 100% increase in national forest crime from 1989 to 1992. Few studies, however, have looked at the types of crime in relation to law enforcement efforts (Chavez, Tynon, and Knap, 2004; Pendleton, 1997, 1998). Studies of USFS LEOs, in particular, are rarer still (Harris and Brown, 1972; Heinrichs, 1982).

What little we do know about LEOs in protected areas comes from studies of state game wardens (Forsyth, 1993a, 1993b, 1994;

Kessler, 2005; Palmer and Bryant, 1985) and National Park Service (NPS) rangers (Meadows and Soden, 1988; Philley and McCool, 1981; Wynveen, Bixler, and Hammitt, 2005). For example, Tuler and Golding (2002) concluded that the NPS needs more rangers, while Snizek and others (1985) in their comparative study of rangers (their generic term for several occupational specialties concerned with preservation and management of natural resources) in the USFS, NPS, and the Division of Forestry and Division of Parks of the Department of Conservation, and Economic Development of the Commonwealth of Virginia, found that law enforcement duties impact the work attitudes and dispositions. They also noted similarities that existed between rangers and more traditional law enforcement personnel in their handling of law violators. Other researchers have examined stress inherent with the isolation and vulnerability of the job (Oliver and Meier, 2006; Sherblom, Keranen, and Withers, 2002; Walsh and Donovan, 1984) and job satisfaction (Eliason, 2006).

PURPOSE OF THE STUDY

This study was a response to a federal initiative for performance-based measures. As a consequence of budget cuts and competing demands for federal dollars, the USFS must demonstrate its accountability to the US Congress, the Office of Management and Budget, the Government Accountability Office, and the general public. The LEI also desired recognition for the benefits that accrue to visitors, employees, and cooperators. They wanted to 'tell their story.' They believe that 'locking up the bad guys and writing tickets' does not adequately address the benefits LEI provides.

The purpose of this paper is to contribute to the literature by reporting on findings from the first nationwide USFS study of LEOs. The study was an extension of qualitative

work, previously conducted by the authors as well as the desire by LEI in the Washington Office to hear directly from their employees. The major variables of interest for the nationwide study were

1. the perceived level of change in reported criminal activity,
2. perceptions about successful law enforcement on forest lands, and
3. constraints for law enforcement.

This paper reports on the perceptions, attitudes, and priority issues facing USFS LEOs. The research focused on discovering how USFS LEOs are responding to their role as law enforcement professionals in both the organizational environment of the USFS and the physical environment, which is largely dispersed and rural.

Notably, while the number of crimes in national forests and grasslands doubled in the five-year period between 1996 and 2001, the number of USFS officers and investigators remained almost unchanged (Bureau of Census, 2002; Reaves, 2006). A direct consequence of increasing crime occurrence is that LEOs are subject to increased danger on the job. Despite the nonurban nature of USFS land, LEOs are increasingly confronting urban-style crimes, yet little is known about their perceptions and attitudes, or about their priorities in this challenging, and changing, work environment.

METHODS

An email survey was administered to USFS LEOs in 2005 according to Dillman's Tailored Design Method (Dillman, 2000). An endorsement letter from the LEI director enlisted the cooperation and participation of all 404 LEOs across the United States. The survey instrument consisted of 46 questions, both closed- and open-ended, eliciting information from LEO respondents about their respective administrative unit over a one-year period of time. This paper reports on

LEOs' perceptions and attitudes about work priorities, their roles within the USFS organization, the level of understanding and support LEOs receive from their supervisors, and the LEO perspective on the adequacy of their authority and jurisdiction.

Data analysis

Of the 404 questionnaires sent via email, 294 were completed and returned, for a response rate of 73%. A nonresponse bias check conducted with randomly selected nonrespondents revealed no significant differences between respondents and nonrespondents on key variables.

Narrative data from open-ended questions were analyzed for common themes and con-signed to categories consistent with accepted qualitative methodologies (Strauss and Corbin, 1990). Emergent categories (Bogdan and Biklen, 1992; Henderson, 1991) were subjected to a constant comparative technique (Glaser and Strauss, 1967) in order to establish and maintain unique category boundaries. We worked back and forth between the data and the categories to 'verify the meaningfulness and accuracy of the categories and the placement of data in categories' (Patton, 1990, p. 403) until all of the data were categorized and category saturation occurred.

RESULTS

LEO Typology

Most LEO respondents were male ($n = 294$, 83%) and the respondents were predominantly Caucasian ($n = 294$, 74%). Others self-identified as Hispanic/Latino (5%), multi-racial (5%), Indian/Native American (4%), Black (2%), or Asian (1%). While their mean age was 42.9 years ($SD = 9.03$), ages were bimodally distributed. Around 40% of LEOs were 30–39 years of age and 31% were 50–59 years. Years of school completed averaged 15.1 years ($n = 255$; $SD = 1.78$) and

half held an academic degree related to their work in law enforcement ($n = 294$, 50%). LEOs had been in law enforcement on an average of 14 years ($SD = 7.11$), and half had worked as a LEO for the USFS for ten years or less ($n = 290$, 50%). At the time of the survey, respondents had been at their duty station for an average of eight years ($SD = 6.34$). The LEOs who responded to the survey bring years of experience that lend credence to their perceptions about their job and place in the USFS.

The Role of LEOs within the USFS

LEO respondents were asked to rank, from 1 to 4, what they perceived as their highest work priority. Then, LEOs rank ordered what they believed was the highest priority for the USFS line officer (i.e., forest supervisor or district ranger) with whom they most commonly interacted. Table 1 shows a comparison of two priority rankings. For the most part, LEOs believe that they have the same priorities as USFS line officers, although LEOs believe that they have a higher priority for protecting forest users. LEOs believe that USFS line officers have higher priorities for protecting resources, employees, and public property.

This belief is supported by analysis results using the mean priority rankings for LEOs and what LEOs perceived as USFS line officers' highest work priority. The mean priority rankings were significantly different for all four work priorities (Table 2). The effect sizes ranged from $r = 0.38$ to 0.85 and suggest 'typical' to 'substantial' (Vaske, Gliner, and Morgan, 2002) or 'medium' to 'large' (Cohen, 1988) relationships between LEO priorities and what LEOs perceived as USFS line officers' highest work priority.

LEOs were asked several questions about their role as law enforcement professionals. Because this study was largely exploratory, many of the questions were open-ended. In an open-ended question about what LEI's

relationship with the rest of the USFS should be, 85% ($n = 294$) of LEOs offered a response (Table 3). Qualitative analysis resulted in three distinct response categories.

1. The majority of LEO respondents (57%, $n = 169$) said that the relationship should be characterized by collaboration and teamwork. Typical remarks in this response category were that LEOs should provide resource managers assistance in managing national forests; they should be active, effective partners in serving the public; they should work as a team to solve problems, protect visitors, and protect the resource; and they should be more integrated. Other remarks were that LEOs should be considered as part of the whole instead of the stepchild; LEOs should be more open instead of 'us against them;' and LEOs should be considered an important part of the USFS.
2. Far fewer LEO respondents (12%, $n = 35$) wrote that they should remain a separate entity (e.g., stovepiped). Examples from respondents in this category were [we should] keep the function separate from the rest of the agency; keep USFS employees as a customer base; LEOs are a support function; LEI was stovepiped for a reason; LEI's relationship should remain segregated; there must be a separation; and LEI should be more removed from the USFS as an agency.
3. Finally, 10% ($n = 29$) of LEO respondents said they should serve a protection role. Representative comments were [we should be the] protector of USFS resource, people, employees, and visitors; LEOs need to provide adequate law enforcement presence on public land to deter crime and enforce it when necessary; LEOs need to protect USFS employees.

Table 1 Comparison of Priority Rankings Between LEOs and USFS Line Officers

Reported ranking of LEOs compared to perceived USFS line officers' ranking ^a			
	Higher priority for LEO	Same priority	Lower priority for LEO
Protecting forest users	40	49	11
Protecting resources	15	50	36
Protecting USFS employees	20	54	26
Protecting public property	9	72	18

^aCell entries are percentages (%).

In another open-ended question, LEO respondents were asked where they believe LEI fits within the USFS organization and 85% ($n = 294$) of LEOs offered a response. Qualitative analysis of responses revealed six, rank ordered categories (Table 3). Of those who offered a response

1. Around 22% ($n = 64$) suggested 'we are equal partners.' Examples of responses in this category were that LEOs work with every aspect of the USFS; LEOs are part of the organization; LEOs fit right in with the managers; and LEI is one of the tools within the organization and is part of the mission of land management.
2. A nearly equal proportion of respondents suggested the opposite, that LEOs are outsiders (21%, $n = 63$). Examples in this category were that LEOs are used as a last resort and viewed as a necessary evil; LEOs are the ugly stepchild, bottom of the barrel, USFS puts up with us because they have to; and LEOs are the 'black sheep' because [supervisors] do not have control of us ('black sheep' is a colloquialism meaning someone who does not fit in well with their group counterparts).
3. Fewer respondents said LEOs serve a protection role (10%, $n = 30$). Typical remarks in this category were that LEOs enforce USFS regulations; [they]

advise USFS employees regarding law enforcement actions; and LEOs are key for making sure people and resources are protected.

4. Around 5% ($n = 16$) suggested that LEOs are well-integrated.
5. Around 3% ($n = 8$) suggested that LEOs are educators of the public and the USFS.
6. Around 3% ($n = 10$) responded that LEOs are forgotten/misunderstood.

LEOs were asked if the USFS line officers with whom they most commonly interact in their area know and understand what LEOs do, and if LEOs feel supported. Qualitative analysis resulted in both positive and negative response categories (Table 4). On the positive side, a high proportion of LEOs (47%, $n = 137$) said they had good relations and rapport with their USFS line officer (e.g., USFS line officers definitely understand the LEO role in the organization and the LEO function to support the USFS in their management roles; our line officers have attended law enforcement training for managers, and all have been on ride-alongs; they understand what LEOs do and they know the program; they understand our job and how it helps them; they are highly supportive of most of my enforcement actions and are willing to defend them to the public).

Others noted that LEOs provided information to enhance USFS line officer understanding (10%, $n = 30$). For example, LEOs

Table 2 Mean Priority Rankings for LEOs and USFS Line Officers

	LEOs ranking ^a	Perceived USFS line officers' ranking ^a	<i>t</i> -value*	Effect size (<i>r</i>)
Protecting forest users				
Higher priority for LEO	1.5	3.1	19.69	.38
Same priority	1.8	1.8	—	—
Lower priority for LEO	2.6	1.3	11.19	.70
Protecting resources				
Higher priority for LEO	1.9	3.3	12.55	.75
Same priority	2.8	2.8	—	—
Lower priority for LEO	3.2	1.7	20.92	.45
Protecting USFS employees				
Higher priority for LEO	1.3	2.7	13.87	.49
Same priority	1.5	1.5	—	—
Lower priority for LEO	2.7	1.4	18.06	.79
Protecting public property				
Higher priority for LEO	2.8	3.9	15.98	.85
Same priority	3.7	3.7	—	—
Lower priority for LEO	3.9	2.4	14.81	.56

^aCell entries are means on scale of 1 = 'highest priority' to 4 = 'lowest priority.'

*All *t*-values are significant at $p < 0.001$.

have to make an effort to make USFS line officers understand and feel communication is the key. Around 3% ($n = 8$) suggested that LEOs made frequent contacts.

Fewer LEOs overall offered negative responses, which fell into three distinct categories. Most of the negative responses were about USFS line officers not understanding the complexity/hazards of the LEOs' job (14%, $n = 40$). For example, most of the line officers do not believe that the LEO job extends beyond protecting the resources; they do not seem to acknowledge the hours LEOs work, the people LEOs deal with, or the authorities and jurisdictional problems LEOs are stuck with; and there is a low correlation to what LEOs do and what they think LEOs do.

Far fewer LEOs noted that USFS line officers do not want information or details (7%, $n = 20$) or that USFS line

officers need training and ride-alongs (5%, $n = 15$).

Most LEO respondents felt supported by LEI line officers (74%, $n = 218$). The majority (65%, $n = 192$) also felt supported by USFS line officers, and most (79%, $n = 233$) felt supported by local USFS employees.

LEOs were almost evenly divided on whether their authority and jurisdiction was adequate for what they feel was expected or demanded of them internally and externally; 47% said they had adequate authority and jurisdiction, while 52% said they did not. Of those LEOs who answered no, 64% offered explanations. Their comments were grouped into three categories of responses:

1. Having to depend on others (40%). Some examples of having to depend on others include: LEOs need to call the

Table 3 Rank-Ordered Responses to Open-ended Survey Questions

What LEO relationship with the rest of the USFS should be ($n = 294$):	
57%:	it should be characterized by collaboration and teamwork
12%:	they should remain a separate entity
10%:	they should serve a protection role
Where LEOs believe they fit within the USFS organization ($n = 294$):	
22%:	we're equal partners
21%:	LEOs are outsiders
10%:	LEOs serve a protection role
5%:	LEOs are well-integrated
3%:	LEOs are educators of the public and the USFS
3%:	LEOs are forgotten/misunderstood

Sheriff to handle state crimes; US Attorney's Office does not always support LEOs and fails to issue warrants or take cases to court; LEOs lack concurrent jurisdiction from one region to another; LEOs have to wait for a trooper to come to the scene [and that] is a problem; LEOs have no state authority.

- The need to deputize LEOs (30%). Examples include: LEOs could cite and release; LEOs issue citations for violations; while LEOs have deputy status, management has placed very tight strictures on how LEOs employ that status—only on USFS lands and only in a reactive backup role; LEOs need to be able to enforce driving under the influence (DUI); would like LEOs to have better State authority—DUI in particular;

LEOs need more law enforcement authority.

- Enforcing out-of-date regulations (22%). Examples include: regulations have not been updated in years and LEOs are not able to enforce certain drug and alcohol laws, trespass regulations and other aspects of the job; many offenses would be easier to deal with if the Code of Federal Regulations (CFRs) adequately addressed the issues; there are no federal regulations for the common crimes that are normally encountered by LEOs.

Priority Issues

Two open-ended questions were asked about priorities. The first asked about priority issues facing the law enforcement profession

Table 4 Rank Ordered Positive and Negative Responses to Open-Ended Question: Do the USFS Line Officers With Whom LEOs Most Commonly Interact Know and Understand What LEOs Do?

YES	
47% ($n = 137$)	LEOs had good relations and rapport with their USFS line officer
10% ($n = 30$)	LEOs provided information to enhance understanding
3% ($n = 8$)	LEOs made frequent contacts
NO	
14% ($n = 40$)	USFS line officers do not understand the complexity/hazards of LEO job
7% ($n = 20$)	USFS line officers do not want information or details
5% ($n = 15$)	USFS line officers need training and ride-alongs

in the USFS today. Responses varied and fell into several categories:

- Fiscal (50%, $n = 148$). Fiscal examples included: additional funding needed; everything revolves around the budget; lack of money; we should be spending our budgets on real needs rather than fluff; we need funding to replace officers who retire; we are doing more with fewer funds; we need to be fully funded to do the job; and we need serious help to get the budget on track.
- Safety (19%, $n = 55$). Examples included: not enough officers to cover the problems makes it dangerous; officer safety should be the main concern; we will soon be overwhelmed by the criminal element; safety should be priority one; and provide enough officers to protect the employees, public, and resources.
- Management (18%, $n = 54$). Management issues included: morale needs to be changed; there is a lack of consistency throughout the agency in administering policy; reduce micromanaging from regional and Washington offices; and we must be recognized as a vital component of the USFS mission by both the agency and the public.
- Occupational ideals (17%, $n = 50$). These responses included: getting over the last hurdle of considering ourselves police officers; add better trained officers with a background of being a law enforcement officer first; hire good LEOs with experience, education, and appearance; and ability to recruit and keep good officers.
- Natural resource protection (14%, $n = 40$). These issues were: handle increase in visitors and use; we need protection of the natural resources by better trail maintenance, fire, and thinning management; we need to stop abuse of the natural resources.
- Cooperation (5%, $n = 16$). Responses referred to regaining acceptance and cooperation from other USFS employees.

- Update rules and regulations (5%, $n = 14$). This referred to the outdated CFRs and having the authority and jurisdiction to deal with what is actually occurring on the ground.

For those who elected to respond to the second open-ended question about how the priorities of the line officer with whom they most commonly interact compare with LEI priorities, the largest number of LEOs (42%, $n = 124$) said there was general agreement between USFS line officer and LEI priorities. Examples include: I think the priorities are pretty close and work well together; the line officer's priorities become my priorities; generally they are in line with my priorities; most times they fit very well; they match up pretty good; we, basically, have the same priorities; we are on an even keel and understanding; and we are on the same page.

Two other categories of responses were less positive. Conflicting priorities (21%, $n = 62$) included: they have little or no interest in law enforcement and are often in violation of state and USFS regulations themselves; totally different priorities; and theirs is more on resources protection and less with public safety concerns. Apathy (8%, $n = 23$) included: the line officer does not have a big interest in it; they would rather do a temporary fix on things.

DISCUSSION

Law enforcement in public land management agencies has received little research attention (Munson, 1995; Pendleton, 1996, 2000; Weisheit and Wells, 1996). This paper is a partial attempt to fill this gap. And, unlike previous research, this paper reports on the perspectives of law enforcement officers within one nationwide agency. This landmark study is the first to examine law enforcement in the USFS and the first to include the perceptions of USFS law enforcement

personnel of the roles, responsibilities, and issues entailed in their jobs.

Protecting people takes priority

National forest resources, and specifically law enforcement resources, are overburdened. LEOs are understaffed (Chavez and Tynon, 2007) and work in geographical isolation (National Institute of Justice, 2004). These conditions present major barriers to effective control of criminal activities (Tynon et al., 2001), exacerbate the already inherent dangers LEOs encounter on the job, and may affect crime mitigation efforts. Cooperative law enforcement agreements with county sheriff offices, city police, highway patrols, and fish and game offices offer some help, but resources are stretched thin.

Nevertheless, LEOs are clear about their priorities and appear optimistic about their role. Results show that USFS LEOs believe that protecting forest visitors and fellow employees are their top law enforcement priorities, followed by protecting natural resources and protecting public property. Perhaps not surprisingly, LEOs clearly place the greatest emphasis on protection of human resources, though not without attention to the natural resources for which they are also responsible. The LEOs participating in this study, undoubtedly, due to training and experience as law enforcement personnel, perceived public safety as their chief responsibility. They indicate that their role is to provide an environment in which visitors and USFS employees, alike, feel safe and protected.

USFS LEOs' comments suggest that they see their role as a complex mixture of providing safety and security, while still permitting users relative freedom to enjoy their recreation experience. As trained peace officers, LEOs are required to manage a fine line between rules/law enforcement and service provision. This situation is made all the

more challenging by significant budget constraints, which LEOs commented on, the challenging nature of the work environment, as well as some perceived disagreement with immediate supervisors over some issues.

LEOs clearly see differences in their work priorities and what they perceive as the priorities of USFS line officers. Given that line officers have a broader array of responsibilities, which includes law enforcement, they are likely to be somewhat differently focused than LEOs. Line officers' efforts and energies cover many different areas, while the LEOs understand their duties to be complex, but primarily focused on public safety.

LEO comments concerning perceived disconnects between themselves and line officers, generally, refer to differences in resource allocation. Line officers are often perceived to be more concerned with other issues besides public safety, or are not aware of, or fail to understand, the challenges faced by those enforcing the law in national forests. Despite these reported differences of perception, LEOs, in general, believe that line officers share their priorities, which could broadly be described as providing an enjoyable and safe experience for visitors, while ensuring the health and integrity of the forest environment, which most USFS personnel view as their responsibility. Understanding LEOs' attitudes and perceptions concerning priorities for superior service and visitor and resource protection is vitally important for maintaining national forest resources.

LEOs are underfunded

According to the LEO respondents, in addition to the specific job priorities described above, there are several broad policy and management areas that need attention. LEO respondents indicated that the number one issue facing the law enforcement profession in the USFS today is a lack of

adequate financial resources to do their job. Even under the most favorable conditions, law enforcement is a profession that has an innately high-risk potential. Law enforcement personnel are often called upon to respond to potentially dangerous situations or circumstances. Even seemingly benign situations could just as likely present severe threat to an officer's safety and the safety of the general public.

Consequently, LEOs' ability to perform their duties, as well as to maintain their health, depend greatly upon the resources they have at their disposal. Urban law enforcement professionals commonly have 'backup' (assistance from additional officers) only minutes or seconds away in the event that a call turns unmanageable. USFS LEOs, on the other hand, as described above, are typically carrying out their duties under isolated conditions. Given that, LEOs' most common responses to resources needs are centered around a shortage of personnel and equipment.

With increasingly urban-style crime working its way into forest service lands, LEOs see funding shortfalls as detrimental for getting the job done. In order to ensure the safety of LEOs, other USFS staff, and visitors, more officers, better training, increased resources, and improved morale are all required. Less money results in fewer law enforcement personnel, and understaffed law enforcement is perceived as an obstacle for effective control of criminal activities (Tynon, et al., 2001).

Cooperative agreements offer limited support

As a partial response to LEO shortages, USFS managers employ a variety of formal and informal agreements with county sheriffs' offices, city police, highway patrols, and fish and game officers (Tynon and Chavez, 2006). Such cooperative agreements are really only a stopgap measure, though, as

other agencies, law enforcement personnel have their own jurisdictions to manage and patrol. Even with the assistance of state, county, or local city police and deputies, USFS LEOs perceive their ability to effectively patrol their areas as inadequate.

LEOs' comments suggest that they are grateful for the assistance of other agency law enforcement personnel, and would be happy to have further cooperative agreements, but such agreements are not a panacea to current challenges faced by USFS LEOs. Still, with the help of other law enforcement agencies, and tactics, LEOs are performing their duties with professionalism and distinction. USFS LEOs increasingly rely on canine units for control in heated situations and, when necessary, they count on support from drug task force members, special weapons and tactics teams, and US Immigration and Customs Enforcement (border patrol) (Tynon, et al., 2001). Law enforcement agreements between the USFS and other law enforcement entities result in several agencies policing the national forests. Dissatisfied LEO respondents noted that their mandated dependence on others was a significant irritant, and many suggested that regulations need to change.

MANAGEMENT IMPLICATIONS

The results of this preliminary research on USFS LEOs point to two important management implications. First, the identification of law enforcement issues consistent across the USFS can be used to prioritize future law enforcement efforts. Study results suggest serious implications for change in budgeting, staffing, and communicating organizational priorities. The USFS might examine current resource allocations for congruence with issues identified by this study.

It is vitally important for managers and policy makers to pay attention to the experiences and perceptions of field personnel.

Often, those most directly connected to the public and to the daily operations are those best informed about the most significant and salient challenges and opportunities occurring on site. These personnel, USFS staff and LEOs alike, are those in most immediate contact with the public. They represent the public face of the USFS. It behooves managers, from the district up to the national level, to ensure that those who are charged with providing vital public service and safety get the training, resources, and support necessary to do their job.

Second, despite self-reported shortfalls in the workplace, many LEO respondents indicated their desire to work for the public good, keep visitors safe, and protect the land base; serving visitor needs is simply a way to reach these broader goals. The results from this research clearly indicate that LEOs are committed professionals, dedicated to provide superior service to the visiting public, as well as fulfilling their responsibilities to fellow USFS personnel, and to resource protection. Regardless of the many challenges and hurdles that respondents reported in this survey, they, generally, agree that their immediate supervisors support them, and that there is agreement on the needs and priorities for law enforcement in the national forest system.

Yet, there is room for improvement. Some LEOs are experiencing alienation from others in the USFS, some feel as though they are misunderstood, and some believe there is a lack of awareness or understanding of the challenges they face. This research has highlighted important information gaps concerning the LEOs serving the public in America's national forests, and suggests that managers and policy makers would do well to devote additional time and resources for understanding and addressing some of the significant challenges associated with law enforcement in wildland settings. Further, this research strongly points to the

need for a great deal more research on crime and law enforcement issues in wildland areas, especially, concerning those who have accepted the responsibility of upholding the law under particularly vexing conditions.

FUTURE RESEARCH

The objective of this study was to report on the perceptions, attitudes, and priority issues facing USFS LEOs in the first nationwide study of these officers. Their knowledge, expertise, and institutional memory represent the best available data we have about some of the challenges LEOs face on the job.

Although beyond the scope of this paper, it would be informative to compare these results with studies of LEOs elsewhere, especially those tasked with law enforcement in similar settings. For instance, are National Park Service law enforcement personnel facing similar kinds of challenges in dealing with public safety? Crime research could be greatly enhanced by comparing law enforcement experiences and challenges across state parks, community parks, city parks, and national land. Further research efforts could focus on not only different levels of natural resource management agencies, but also compare law enforcement personnel experiences and preferences across regions. So, for example, we might ask if California State Park LEOs are encountering similar experiences as USFS LEOs in Minnesota. Longitudinal studies at specific forests or parks would provide a different perspective on USFS LEOs. Future longitudinal research would be novel not only by focusing on LEOs but also because longitudinal research is so rarely carried out in social science investigations regarding natural resource management. Future research might also examine whether the occupational culture of police work examined in urban settings (Chan, 2004; Cochran and Bromley, 2003) is shared by their LEO counterparts in the USFS.

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