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Author(s): Bruce Taylor ; Bruce Kubu ; Lorie Fridell ; Carter Rees ; Tom Jordan ; Jason Cheney

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Chuck Wexler
Executive Director



EXECUTIVE SUMMARY

**The Cop Crunch:
Identifying Strategies for Dealing with the Recruiting and Hiring Crisis in Law
Enforcement***

December 30, 2005

PERF Project Staff:

Bruce Taylor, Ph.D., Research Director
Bruce Kubu, Senior Associate
Lorie Fridell, Ph.D., University of South Florida
Carter Rees, University of Wyoming
Tom Jordan, Ph.D., Texas A&M University - Texarkana
Jason Cheney, Research Assistant

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EXECUTIVE SUMMARY

The processes of recruitment and selection are key to developing agencies with high quality personnel and to producing agencies that are representative of their communities in terms of race and gender. The headlines reveal, however, that many departments are having major problems with recruitment and hiring. And, although warnings were sounded in the 1980s and 1990s (see e.g. comments made by Shannon, 1984; Sanders et al., 1995; Bowers, 1990), the “cop crunch” based on anecdotal evidence appears to have hit many agencies very hard and very quickly. The challenge of recruiting and hiring quality personnel has emerged as a critical problem facing law enforcement nationwide. It threatens to undermine the ability of law enforcement to protect our nation’s citizens and to reverse important gains in our efforts to increase the representation on our forces of racial/ethnic minorities and women. In response to this potential problem, PERF conducted this project, with NIJ funding, to examine the nature and extent of the “cop crunch” and identify department-level policies/practices that facilitate the recruiting and hiring of quality personnel, and that facilitate the recruiting and hiring of quality women and minorities.

Methods

The current project utilized a two-part methodology involving a national survey and follow-up phone interviews. We also used extant data sources.

Through a *national survey* of just under 1,000 agencies we collected information on the nature and extent of the apparent recruitment/hiring problem and identified how various agency-level factors (e.g., recruitment efforts, pre-employment standards, selection procedures) and jurisdiction-level factors (e.g., median income, percent minority population, unemployment rate) impacted on the ability to hire and the ability to hire women and racial/ethnic minorities. PERF selected a stratified, random sample of law enforcement agencies from around the country. To ensure that the sample was representative of the population of law enforcement agencies, the population was divided into strata based upon agency size, agency type, and geography. The survey was sent to the executives of law enforcement agencies throughout the United States (unweighted N=2,138). A stratified, random sampling design was utilized to select agencies based upon the type of agency (municipal, county, State Police) and the size of the population served (less than 10,000 population, 10,001 to 49,999 population, 50,000 and greater). All regions of the US were represented in this sample. The surveys were initially mailed in early September 2002. This initial mailing was followed up with another wave of surveys to non-respondents in early October 2002. A reminder postcard was sent in November 2002. Finally, a final reminder letter was sent to the agencies that had not responded to either of the first two survey waves, nor the reminder postcard. Of the 2,138 agency executives that received the survey, 985 submitted completed surveys resulting in a response rate of 46.1%. Our survey

response rate of 46.1% was lower than we expected. While we did conduct non-response analysis which suggested that the impact of this low response rate on our substantive results might have been minimal, this low rate is still a concern and a potential limitation of this study.

The survey also allowed us to characterize recruitment and hiring activities nationwide and to identify innovative practices that facilitate hiring generally and the hiring of women and racial/ethnic minorities, in particular. This survey included key questions related to recruitment and selection developed by Strawbridge and Strawbridge (1990) and was sent, not only to a stratified random sample of 2,138 agencies, but also to the 72 agencies previously surveyed in 1990 and again in 1994 (Langworthy et al., 1995). The survey of these 72 agencies produced a third wave of data for the large agencies previously studied.

Phone interviews with a subset of agencies provided information on comprehensive and effective recruitment/hiring programs within agencies and on specific innovative strategies. Specifically, the survey data was used to identify 60 agencies that (1) are effective in recruiting and hiring generally, (2) are effective in recruiting and/or hiring women and/or racial/ethnic minorities, and/or (3) report innovative policies or strategies that promote hiring. Staff interviewed by phone relevant personnel in the 60 sites to document the characteristics of the programs or practices that are linked to hiring successes.

Extant data. Information collected from other sources (e.g., UCR, 2000 Census) regarding the department and/or jurisdiction was added to each department's survey data, including Part I offenses reported to police per officer, unemployment rate, median household income, consumer price index, percent population between 21 and 30, percent female population, percent population with bachelor's degrees, jurisdiction population and density, racial/ethnic breakdown of jurisdiction. Some of this information was used to develop the dependent measures (e.g., percent female, racial/ethnic breakdown of jurisdiction) and others served as control variables (e.g., unemployment, median household income).

FINDINGS

What emerges from our analyses first is a picture of recruitment efforts, and application/selection procedures being used by the nation's local and state law enforcement.

Recruitment efforts: Some of the key highlights from our survey relating to recruitment efforts include the scarcity of resources dedicated to recruitment. With the exception of the State Police Departments and the larger agencies with greater than 500 officers, only a small proportion of the responding agencies have a permanent

recruitment unit. The smaller agencies more typically had either one employee with recruitment responsibility or part-time recruiters. Also, most of the agencies in the sample had fairly modest budgets for recruiting outside personnel costs. Further, the majority of respondents indicated that their agency did not provide awards for those officers that referred successful applicants.

The most commonly reported recruitment methods included newspaper ads, career fairs and the Internet. These were typically done in isolation of other departments, with the majority of agencies reporting that they did not engage in joint recruitment efforts with other law enforcement agencies. Also, about half of the responding agencies use one of their own police programs as a means to recruit young people for a career with their agencies, with the larger agencies reporting greater use of this approach than the smaller agencies. The police programs most commonly utilized for this purpose across all agencies were college internships, explorer programs, and school resource officers. Across all the responding agencies, the most commonly targeted group were those with previous police experience, followed by college graduates, racial and ethnic minorities and women. The larger agencies were also more likely to target these groups than the smaller agencies.

Application procedures: Another factor related to problems potentially associated with hiring problems is the application procedures in place for hiring officers. Respondents were asked how many weeks it takes from the submission of an application to the acceptance of an offer of employment. The data indicate that, the larger the agency, the longer the process takes. The bulk of responding agencies indicated that they accept applications continuously or only when a vacancy exists, as opposed to a particular schedule (e.g., once every six months). The majority of respondents did not require that applicants or sworn officers live in the agency service area, but these agencies did typically maintain the following requirements for applicants: must be a U.S. citizen, must have a driver's license, must have a high school diploma, must meet a minimum vision requirement, may not have a criminal record, and may not have a dishonorable discharge from armed forces. The vast majority of agencies did not require individuals to submit their applications at law enforcement or other government facilities. However, most of the responding agencies did not supply applicants with study or reference materials to help them prepare for tests and other selection procedures.

Selection procedures: Our survey included an extensive number of questions on the selection procedures used by law enforcement agencies in hiring officers/deputies. One condition which could greatly affect the selection of officers is the presence of a court order or consent decree, or a specific Equal Employment Opportunity Commission (EEOC) plan affecting hiring decisions. Very few respondents indicated that their agencies were under this scrutiny, but, of those that did, a slightly higher percentage of respondents were from larger agencies, as well as the State Police agencies.

The survey also contained a question that asked respondents to specify the order in which a series of selection procedures take place. The first procedures to take place in the selection process were a civil service exam and a written entrance exam. Although the precise order may differ, the data indicates that subsequent steps include a criminal records check and a fitness/agility test, followed by the assessment center and practical tests. With some consistency, the final steps in the process often include a medical exam, a psychometric test, a psychologist interview, and a drug test. Regarding pay and benefits, the data indicate that the base starting salary for an officer/deputy generally increased as the size of the agency increased. Agencies with 501 or more officers were an exception to this, with the second lowest base starting. The vast majority of all agencies indicated that they paid their recruits a salary during training, offered a uniform allowance or provided them, paid the tuition for recruit training at an external academy/school, offered salary increases for college degrees and/or had take-home cars. Additionally, most respondents indicated that their agencies allow officers/deputies to work overtime and/or work secondary employment.

Replication of Strawbridge and Strawbridge and Descriptive Data on Attracting and Hiring Applicants: Next, we compared our survey results (2002) with those achieved earlier by Strawbridge and Strawbridge (1989 survey). During the intervening 13 years, the average number of officers per capita significantly increased. As expected, significantly more minorities and females are working in law enforcement; the proportion of white officers has declined in the PERF survey. These findings indicate that the trends discovered by Langworthy et al. (1994) have continued. Black, Hispanic, and officers of other races, as well as females, have all made noticeable gains, as white officers have dropped as a percentage of officers on average.

Despite the gloom and doom predictions from the media and among law enforcement practitioners; we did not find sufficient evidence to either support or to reject the existence of the much discussed *Cop Crunch*. We *do not* have evidence that the number of applicants for sworn officer positions in 2002 was statistically different than 1989. Although there was a substantial decrease in the mean number of applicants by 2002, the change was not statistically significant.¹ However, there were a number of agencies in our comparative study with the Strawbridge and Strawbridge (1990) data that did have fewer applicants, supporting the belief that at least some agencies are having difficulty attracting applicants and are under some form of a “crunch.” Also, Department of Justice statistics on hiring trends during this period indicate that agencies had a variety of experiences in attracting applicants, hiring applicants and retaining officers. Department of Justice statistics demonstrate that from 1996-2000, only 22% of agencies nationwide experienced a reduction in force,

¹ A major limitation of this study was the small sample size associated with our test of the “cop crunch” hypothesis. With a sample of only 32 agencies containing both 1989 and 2002 data, even large differences might not be statistically significant. Therefore, our observed drop of 1,164 applicants between 1989 and 2002 could have been statistically significant if we observed the same pattern with a larger sample.

while the majority either remained stable or grew (Bureau of Justice Statistics, 2000). Another study reveals that from 1996-1999 slightly more than 50% of agencies grew in size while the rest remained level (Koper, 2004).

Also, when examining the PERF survey data on attracting and hiring applicants, we did uncover a noticeable minority of agencies (greater than 10%) that appear to have severe shortages, that is less than 90% of their sworn positions were filled on January 2002. Although there is no distinct pattern by agency size, it is apparent that some agencies are having significant difficulty in maintaining staffing levels, with somewhat greater problems appearing with the smallest agencies and the very largest agencies. Examining the PERF survey results on recruiting success also yields a less than optimistic picture. While our data suggest that most of the agencies in our sample are able to draw sufficient applicants, the agencies with over 500 officers and state agencies have significant problems drawing sufficient qualified applicants. Agencies are also having difficulty attracting and hiring qualified female applicants across all agency size categories, and concerns still remain about the hiring of minority applicants. These data provide reasons to be concerned about the future of police staffing for many agencies as officers retire or move into a different occupation, these statistics indicate that it may be difficult to replace many of the officers. Likewise, the ability to hire female and minority officers is likely to remain difficult. People from these groups continue to apply in relatively low numbers.

There have been several positive shifts in the use of special recruiting strategies to target specific groups. In fact, the current survey confirms results achieved by Langworthy, et al. (1995) that indicated minorities and females are targeted for recruitment. Women, military veterans, four-year college graduates, and people with prior police service were all targeted by significantly more agencies in 2002 than previously. It appears that college graduates as a proportion of officers has also increased in concordance previous findings.

Next, applicant screening characteristics have not changed, with two significant exceptions. The number of agencies that require residency has significantly decreased and the number of agencies requiring a "clean criminal record" has significantly decreased. However, increases were observed with regard to drug testing. Other statistically significant differences that occurred between 1989 and 2002 included reductions in requirements for written tests, and the use of intelligence tests. Considering that agencies are concerned about attracting applicants, police salaries have not kept pace with inflation over the past 13 years. Additionally, agencies have not improved the efficiency of their screening and hiring process; it still takes nearly six months from time of application to employment.

Factors that impact the number of applicants and hiring rates for females and minorities: Concerns for diversity in recruiting and hiring have become heavily linked with efforts to enhance the applicant pool in general. Some often cited reasons for inadequacies in hiring women and minorities include decreasing numbers of

qualified applicants, and individual characteristics among recruits, such as past drug use and limited life experience (Shusta et al. 1995). Others also point to a competitive market and higher education requirements as combining to cause qualified women and minority applicants to choose private sector jobs over law enforcement (Dantzker, 2000; Decker & Huckabee, 2002). Still others point to concerns about institutional racism and policies non-supportive of women and minorities as reasons for these problems (Shusta, Levine, Harris, & Wong, 1995; Roberg, Crank, & Kuykendall, 1999).

Other macro-level factors have also been discussed in the context of gender and racial representation. A survey of large police departments indicates that a larger percentage of African American officers relates to higher percentages of African American citizens in the jurisdiction (Hochstedler & Conley, 1986). While a higher percentage of women is related to a larger department, which in turn is related to being located in a larger jurisdiction, larger departments were also more likely to have a stated strategy for recruiting women (IACP, 1998). Agency level decisions and policies related to the advertising of job openings, the requirement to pass a written exam, and the requirement of college credits may also affect gender and racial representation. (Chivers, 2001b).

Despite these previous findings, our multivariate analysis of agency-and jurisdiction-level factors revealed only one jurisdiction-level significant factor and no agency-level significant factors. That is, jurisdictions with higher percentages of the total population with a bachelor's degree were associated with a larger number of female applicants. Next we examined the total number of female hires. The main variable that significantly impacted the total number of females hired was the requirement of a college degree. When an agency requires recruits to have at-least a bachelor's degree, the number of female hires also increases. No other jurisdiction-level factors were significant, nor were any agency-level factors, significant predictors in this model.

Based on our phone interviews a number of best practices emerged in the area of recruiting women. One method cited by several agencies was direct recruiting at events geared towards women, such as women's trade shows or women's fairs. Several agencies also reported recruiting at women's fitness clubs or women's athletic events, as the women who attend these venues are likely to be physically fit and thus more inclined to consider a career in law enforcement. Several other agencies formed advisory committees to determine the most effective ways to recruit women. One respondent noted that while they do not have any formal programs in place, the agency has a commitment to increasing opportunities for female officers, so female recruits can see fellow females in positions of authority.

Next, we examined the total minority applicant model. There were two substantively meaningful agency-level predictor variables in the minority hires model. First, when an agency requires that their applicants have two years of college or 60

credit hours, the total number of minority applicants decreases. Second, when an agency requires that their applicants have a college degree or higher the total number of minority applicants increases. No other jurisdiction-level factors were significant, nor were any agency-level factors significant predictors in the minority hires model.

Based on our phone interviews a number of best practices emerged in the area of recruiting minorities. In terms of recruiting minorities, several agencies reported forming task forces and advisory groups to determine the best strategies to recruit minorities. One agency reported bringing different minority groups onto the task force, and then using a person of each group to recruit fellow minorities (e.g., a Hispanic member would go out into the Hispanic community to help find places to advertise and recruit; an Asian member would do the same for the Asian community, etc.). In a similar vein, several agencies reported partnering with minority organizations such as the NAACP to help recruit minority applicants.

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I. REVIEW OF THE LITERATURE

Our review of the literature begins with a description of the “Cop Crunch” issue. Next, we describe the efforts of law enforcement agencies in meeting the myriad goals of attracting officer candidates, hiring well-qualified candidates, and retaining officers. To follow, we examine the literature on pay, benefits, and perception of working conditions and promotional opportunities and their relationship to attracting potential recruits. Once attractive applicants have been secured, the task shifts to selecting from them the best-qualified individuals to fill sworn positions. Next, we review the literature on the selection of qualified officers, basic application requirements, and selection criteria for hiring officers. Lastly, we review work in the area of recruiting and hiring women and minority candidates.

1. The “Cop Crunch”¹

Beginning in the 1990s and escalating in tone into the early 21st century, observers of hiring patterns in law enforcement have predicted a looming “crisis,” stemming from a perceived inability to attract a sufficient number of qualified applicants to fill growing demands. A related concern receiving recent attention is a perceived difficulty in recruiting sufficient numbers of women and minority applicants to fulfill goals related to a balanced representation of the jurisdiction served. For example, Shusta, Levine, Harris, and Wong (1995) noted “a crisis developing in recruitment that will change law enforcement as it is known today.” Throughout the decade, reports in cities and towns across the United States decried both recruiting and retention problems, including a drop from 36,211 to 5,263 applicants in Chicago from 1991 to 2000, a 154% increase in resignations in New Orleans from 1999 to 2002, cancellation of the police academy in Los Angeles in 2001, and reports of lowered morale in smaller departments (Ferkenhoff, 2001; Center for Society, Law, and Justice, 2004; Butterfield, 2001; Crime Control Digest, 2003). We refer to these supposed recruiting and hiring problems as the “cop crunch.”

Much commentary attributes the “cop crunch” to macro level variables, ranging from the economy to changes in age patterns in society in general. For example, the International Association of Chiefs of Police (1998) traces the onset of hiring difficulties to the mid 1990’s when “dot.com’s” swept the country, providing for a competitive draw on qualified applicants. Similarly, Butterfield (2001) suggests that increasing numbers of experienced officers began turning down promotions for higher paying jobs in a relatively strong economy and Flynn (2000) cites the lure of private sector jobs in a booming economy as a main reason for a large surge in retirement in New York City. Charrier (2000) further suggests that competition from the private sector is not based

¹ We define the phrase “Cop Crunch” to refer to the alleged problem law enforcement agencies were having in the 1990s into the early 21st century attracting and hiring quality personnel at a rate higher than personnel were leaving agencies.

solely on better pay, but also includes more flexible hours, availability of part-time employment, choice of holidays, and some child-care arrangements. Recruiters also began to lament competition from other agencies, noting that recruits can “shop around” for a better salary (Crime Control Digest, 2003) and higher quality equipment (Baxley, n.d.). Smaller agencies have expressed concern over recruits using them as “stepping stones” to larger agencies, though experiences have varied. For example, in one small department in Maine, officers averaged three years of service, while four small agencies with low turnover rates attribute their successful retention to good salaries and benefits, officer job satisfaction, and good tax bases and stable local economies (Hoffman, 1993).

In a parallel manner, difficulties in hiring minority applicants have also been attributed to a strong economy and competition from the private sector, though concerns about institutional racism and policies non-supportive of women and minorities remain (Shusta, Levine, Harris, & Wong, 1995; Roberg, Crank, & Kuykendall, 1999). For both minorities and women, concerns about a non-supportive workplace are further divided into discrimination by co-workers who prefer the status quo to innovation and employer-level discrimination (Hochstedler & Conley, 1986; Shusta et al., 1995; Brandon & Lippman, 2000).

Although the strong economy in the 1990’s is usually cited as the most important factor in the “cop crunch,” other factors have also received attention. Many perceive that publicity over negative events, such as the torture of Louima and shooting of Diallo in New York and the Rodney King case in Los Angeles, as well as the debates over racial profiling, have suppressed applicant interest (Flynn, 2000; Cavanaugh, 2004; Hoover, 2001; Crime Control Digest, 2003). Others emphasize characteristics of the potential pool of recruits. First, demographic trends indicate that each year beginning in at least 1990, the number of high school graduates in the normal age range for recruitment will become increasingly smaller (Dempsey, 1999). Second, concerns have been raised about social and cultural influences that may affect the goodness of fit between today’s youth and law enforcement values and requirements. Individuals born between 1961 and 1981 are commonly referred to as “Generation X.” As a group, Generation X’ers are perceived as more independent-minded, less comfortable with a paramilitary hierarchy, and averse to feeling “micro-managed.” They tend to have expectations for their careers that may include changing jobs more often, finding more stimulation, challenge, and flexibility in the workplace, having more input into decisions, and striking a better balance between home and career (National Center for Women and Policing, 2000; Charrier, 2000; Brand, 1999). An issue related to the experiences of Generation X is how agencies should respond to early and minor infractions of the law, such as experimentation with illegal drugs (Brand, 1999). On the other end, problems in retaining experienced officers have also been attributed to demographic trends, including the approaching retirement age of “baby boomers” who swelled the ranks of law enforcement in earlier decades and competition from the private sector for

these “employees” who have a proven track record (Flynn, 2000; Feldman, 2000; Ingram, 2004; Hoover, 2001).

Despite the gloom and doom predictions gaining hold in the media and among law enforcement practitioners, hiring trends during this period actually indicate that agencies had a variety of experiences in growth or reduction, hiring ease and difficulty, achieving desired diversity, and successful retention. As described above, while some small agencies experienced high turnover rates, others reported generally satisfied officers who stayed. Department of Justice statistics demonstrate that from 1996-2000, 22% of agencies nationwide experienced a reduction in force, while the majority either remained stable or grew (Bureau of Justice Statistics, 2000). Another study reveals that from 1996-1999 slightly more than 50% of agencies grew in size while the rest remained level (Koper, 2004). Much variation is also reported in ethnic and gender diversity in hiring, with larger agencies typically having a larger representation of women, representation of African American officers ranging from 0 – 70% and representation of Hispanic officers ranging from 0 to 99%.² This variation in experience suggests that in addition to the macro level factors gaining widespread attention, agency level variables may also play an important role in agencies’ ability to recruit, select, hire, and retain highly qualified law enforcement personnel.

This project has examined the nature and extent of the “cop crunch” and identified department-level policies and practices that facilitate, generally, the recruiting and hiring of quality personnel, and that facilitate, in particular, the recruiting and hiring of quality women and racial/ethnic minorities. Specifically, the overall goal of the project was to identify ways that law enforcement departments can effectively fill sworn positions with quality personnel and ways to increase departmental effectiveness in recruiting and hiring quality racial/ethnic minorities and females.

The following section of the report will provide an overview of hiring for law enforcement positions, including common criteria and methods employed, key research on hiring requirements and police performance (mainly the connection between education and performance), and evidence of agency success and difficulties in fulfilling the goals of ethnic diversity and gender balance. The remainder of the report will include a descriptive summary of key survey items, an examination of issues relating to hiring and retention, and a comparison of survey results with those achieved earlier by Strawbridge and Strawbridge (1990). The report will conclude with a discussion of the most important findings from the project.

² Two jurisdictions with 98% and 99% Hispanic officers, respectively, were The Laredo Police in Webb, Texas with 345 total sworn officers and the Webb County Sheriff, also in Webb, Texas, with 148 sworn officers. The Jackson Police, in Hinds, Mississippi, had 70% African American officers with 419 total sworn officers (Bureau of Justice Statistics, 2000).

2. Law Enforcement Recruitment, Hiring, and Retention

Current hiring practices in law enforcement reflect a history of dramatic shifts in goals and emphasis over the past two centuries. The early 20th century marked a shift from a political “spoils” system to a merit-based recruiting system (Alpert, 1991). As the century progressed, the historic “heritability” of law enforcement positions through either military or law enforcement families gave way to a psychometric and behavioral approach aimed at identifying the best qualified candidates (Dantzker, 2000). During the latter half of the century, departments became motivated to avoid liability for negative behaviors (Fyfe, Greene, Walsh, & McLaren, 1997). As concern for racial and ethnic representation of the jurisdiction being served continued to grow (Hochstedler & Conley, 1986), a general movement to enhance the professional stature of police also took hold. These changes resulted in a shift in hiring from emphasis on “weeding out bad apples” to selecting good professionals. Over the same time period, women in law enforcement also moved through several phases, including duties restricted to handling female prisoners or juveniles, expanded roles accompanied by hostility and ridicule, and a move toward gender integration (Brown & Heidensohn, 2000; Doerner, 1997). Late 20th century shifts toward problem-solving and community policing have raised the bar for hiring and placed demands on sworn law enforcement personnel to bring more knowledge, more maturity, and better communication skills to the job (Holden, 1994).

Referring to anti-discrimination legislation and court decisions that have affected hiring across professions in the United States, Hogue, Black, and Sigler (1994) observe that “the result of various changes and pressures in the law enforcement environment has been a condition in which law enforcement agencies are required to make better (more critical) screening decisions at the same time that their freedom to make these decisions is being reduced.” Adding the perceived “cop crunch” to the mix, others note the dilemma of hiring standards going up while the pool of qualified applicants is believed to be going down (Doerner, 1997; Roberg, Crank, and Kuykendall, 1999). The remainder of this section will describe the efforts of law enforcement agencies and the challenges they face in meeting the myriad goals of officer recruitment, hiring, and retention.

Attracting candidates. The first step of law enforcement hiring, before selection criteria can even be applied, is getting the largest number of individuals possible to submit applications for further consideration. If agencies were disappointed in applicant turnout before the 1990’s, their complaints were not made public. Toward the end of the decade, however, increasingly more attention was paid to strategies for casting a wide net. In 2001, “American Police Beat,” the largest circulation newspaper for law enforcement, began running recruiting ads for a dozen cities for the first time (Butterfield, 2001). The need to advertise different aspects of the job to different groups, such as crime fighting for men and the helping nature of police work for women, has been suggested by Roberg, Crank, & Kuykendall (1999). Departments have experimented with TV advertising, with an earlier phase emphasizing the “warm,

lighter" side of being a police officer in Los Angeles (Feldman, 2000) and a later phase emphasizing the potential for excitement in kicking in doors and the like (see <http://www.joinlapd.com>). For print ads, strategists have suggested that the content reflect community policing roles and that they be placed in locations most easily accessible to women and minority applicants (Reuland & Stedman, 1998). For example, Campbell, Christman, and Fiegelson (2000) report that women who join high school athletic teams or attend home repair and do-it-yourself activities rate police work higher on opinion surveys and suggest targeting these locations for advertising. The National Center for Women and Policing (2000) suggests including images of women in uniform and in high-level positions. For younger recruits, targeting TV channels with talk and music shows of interest, as well as coffee shops and extreme sports events, is suggested. Roberg et al. raise the concern, however, that advertising that promotes an overly positive image of both the nature of police work and status of diversity efforts may result in officer disenchantment and frustration when discrepancies come to light after hiring. An agency in Indiana invested in a mobile advertisement by painting a recruiting bus to look like a patrol car (Crime Control Digest, 2001). Whether the push for more and better advertising has paid off is questionable; Swope (1999) reports that an expensive TV ad campaign in Louisiana did not have significant impact and a \$10 million ad campaign in New York City did not show significant improvements in numbers of applicants.

Charrier (2000) suggests that use of the internet may be especially important for applicants from "Generation X," and in May 2002, officials in New York City attributed a jump in the number of applicants from the year before to a new system allowing recruits to sign up over the internet (Baker, 2002). Use of the internet reduced recruiting costs from \$10 million to \$2 million but raised the question of whether this easier process attracts more impulsive and less serious applicants, so that actual turnout for test sessions is lower. About 25% of those who signed up through the internet were from out of state or outside the country (Baker, 2002). Other jurisdictions have also targeted recruits from outside their jurisdictions; recently, Los Angeles recruited in Chicago, Chicago recruited in Wisconsin, and other agencies have targeted cities with high unemployment rates (Wilson & Gregory, 2000; Crime Control Digest, 2001; Dantzker, 2000). Internet recruiting procedures have been used to reach potential applicants in Greece, Finland, and Mexico (Wilson & Gregory, 2000).

Structural changes within and between agencies have also been suggested to enhance recruiting efforts. Strategies include maintaining a recruiting department or committee that remains in effect year round and directs activities around a specific recruiting plan (National Center for Women and Policing, 2003). In 2002, the Police Commissioner in New York City assigned the Assistant Chief to supervise recruiting and report directly to the Chief (Baker, 2002) consistent with general recommendations that recruiting be made an agency priority and staffed with high quality personnel (Carter & Radelet, 1999). Several agencies have begun to pool their resources to lower the cost of recruiting and share in the benefits of a regional applicant pool (Carter & Radelet,

1999). For example, a dozen departments outside of Omaha, Nebraska recently pooled together for a common entrance exam (Swope, 1999). In New Orleans, a Blue Ribbon Commission was formed to establish a partnership among all departments or agencies involved in the selection process for the Police Department to improve communication among them and to develop a coordinated mental health evaluation program (Osofsky, Dralle, & Greenleaf, 2001). Agencies that pool resources are expected to save money, develop a larger pool of applicants, compete better with private industry, test more often, and reduce the total length of time it takes from application to hiring (Shusta, Levine, Harris, & Wong, 1993).

Additional innovations in reaching potential recruits include agency-sponsored explorer programs for youth, some beginning as early as the fifth grade (Reuland & Stedman, 1998). One department in California sponsored "academies" in local high school and middle schools in which parents and students agreed to 50 hours of community service, exemplary citizenship, and maintenance of academic standards. Students wore uniforms and learned law enforcement techniques and physical fitness. The program was designed to reflect gender and ethnic proportions from the community. [not clearly stated] Most students involved in the program did not go on to become police officers, and ironically, may have appeared even more attractive to the private sector because of their academy experience. Even with the small number of resulting recruits, however, the Chief opined that traditional methods of recruiting those few successful candidates would have cost more than what was invested in the academies (Francis, 2001). Perhaps a more commonly used strategy is to turn inward, providing bonuses and other incentives, such as compensatory time to current officers for bringing in new recruits (Hoover, 2001; Eisenberg & Scott, 2000). The agency's civilian workforce has also been targeted as a source for potential recruits, especially women (National Center for Women and Policing, 2003).

Pay, Benefits, and Perception of Working Conditions and Promotional Opportunities. Examples abound of efforts to make law enforcement positions more attractive to potential recruits. One small agency offered flexible schedules with more vacation and the possibility of another part-time job (Hoffman, 1993), while the city of Tacoma experimented with six days off in a row and Los Angeles moved to a condensed work schedule (Butterfield, 2001). An Arizona agency offered a take home car program (Nislow, 1999). Perhaps most important among these efforts is increased pay and benefits. Baker (2002) notes widespread complaints by unions of low salaries and several observers cite low starting pay as among the biggest recruiting concerns (Brandon & Lippman, 2000; Crime Control Digest, 2001). Dantzker (2000) suggests that competition with the private sector resulted in increases in starting pay as early as 1997 and relatively low pay may be the primary reason "cop crunch" concerns have been attributed to a strong economy and competitive private sector.³

³ Interestingly, while agencies complain that budget constraints on salaries negatively affect recruitment, the trend over the same period was to spend larger amounts of money on the up-front recruiting effort. New York City estimated that each new officer cost \$500,000 when expenses through the officer's

Perceptions of working conditions and promotional opportunities are also perceived to affect recruitment, and as discussed above, these concerns may be especially relevant to “Generation X’ers” (Charrier, 2000). Charrier suggests that to make entry-level positions desirable, departments need to emphasize the variety of tasks available at the officer level, such as SWAT and community-oriented roles. Others counter that the opportunities need to be realistically portrayed in order to avoid later disillusionment. Doerner (1997) points out that there is actually little upward mobility in police ranks and that the hierarchy is shaped like a pyramid with very few actually reaching top ranks. Most patrol officers will retire in the same position, so that increasing job requirements without corresponding changes in roles may result in a “skill slack,” further contributing to low morale and increased job dissatisfaction. Perhaps in contrast to newer trends in advertising, DeCicco (2000) suggests a “realistic assessment” of working conditions as long periods of boredom punctuated by moments of excitement or terror, so that adrenaline rushes play an important role. Also included in the reality of police work are difficult hours, risk of false accusations, mundane activities, working alone since single-officer patrol became more prevalent, and the use of suspension without pay as discipline (Hoover, 2001). Working conditions may contribute to the cop crunch by affecting retention efforts as well. For instance, among Memphis PD officers, lack of promotional opportunity was the most frequently cited reason for dissatisfaction (Sparger & Ciacopassi, 1983).

Selection of Qualified Officers. Once an agency or group of agencies has succeeded in attracting applicants, the task shifts to selecting from them the best-qualified individuals to fill sworn positions. The relationship of the number of applicants to those who qualify for positions is often a major factor in the quality of the personnel actually employed (Roberg, Crank, & Kuykendall, 1999). The work of an officer is complex, potentially dangerous, physically demanding, emotionally stressful, and requires above-average intelligence to complete academy training, understand and apply a complex matrix of laws, and solve problems created by crime (Ash, Slora, & Britton, 1990). Community policing standards, in particular, have resulted in more rigorous expectations for officers because of their emphasis on problem-solving and effective communication skills (Booth, 1995). Higher professional standards in general and community policing concerns in particular have resulted in a shift from eliminating the most problematic recruits to identifying the most highly qualified individuals, who will emphasize service over adventure (Carter & Radelet, 1999). During strong economic times, with high competition from the private sector, it is tempting for agencies to shift again from “how high should the bar be set” to “how low can we set the bar” and still recruit acceptable officers (Cavanaugh, 2004). Police managers, who

probationary period were included (DeCicco, 2000). The cost to fill 270 vacancies on the California Highway Patrol is an estimated \$28 million (Ingram, 2004). The nationwide cost of recruitment, not including training, is \$3 billion. Seattle alone estimates that it spends \$200,000 per year on recruiting (Scandlen, 2000).

live with the results of recruiting, have complained that too much emphasis has been placed on acquiring a large applicant pool at the expense of quality applicants who have prepared for this type of career (DeCicco, 2000).

In their attempts to meet these competing demands, most agencies use a "multiple hurdles" approach which presents the applicant with the need to pass several successive criteria (Cavanaugh, 2004). Hiring procedures from 40 years ago provide an essentially accurate blueprint for what many departments do today: written exam, background investigation, medical check, polygraph, psychological interview, and oral board (Doerner, 1997). The most common elements of initial screening are (and have been) age, vision, height and weight, physical agility, residency, education, background, and medical and psychological conditions (Roberg, Crank, & Kuykendall, 1999). A survey of the 26 largest police departments and 36 state agencies indicates four types of paper-and-pencil instruments are most commonly used: cognitive, personality, interest, and biographical data (Ash, Slora, & Britton, 1990). Modifications and innovations are also appearing, however. In a small Wisconsin agency, the applicant joins a group discussion to elicit information on interpersonal and communication skills, provides a written documentation of a video recording to indicate capacity for "situational response," gives an oral presentation on an assigned topic with limited preparation time, and provides an "observational response," by analyzing a crime scene or prepared room to demonstrate information-gathering and problem-solving skills (DeCicco, 2000). As indicated by this example, innovations in selection often involve job simulation exercises and situational testing (Reuland & Stedman, 1998; Hogue, Black, Sigler, 1994). Early research shows that this "assessment center" approach to selection is more likely to predict performance after one year of service, but not during the officer's probationary period (Bromley, 1996).

Basic Application Requirements. Residing between agency efforts to cast a wide recruiting net and narrowing hiring to the most qualified officers is the list of basic application requirements. These include age, height and weight, and minimum education. Some agencies also include residency requirements. After a trend of raising the minimum age for new recruits, that corresponded with raising education requirements to post-secondary education, a report in 1993 supported these efforts by showing that officers recruited at a younger age were more likely to develop discipline problems over the course of their career (Chivers, 2000). As the decade progressed, however, agencies changed age requirements to increase the pool of eligible applicants. For example, New York City reduced the minimum age from 22 to 21, attributing the decision to a "drop in applicants" (Chivers, 2000; Crime Control Digest, 2001). The Chicago PD lowered its minimum age from 23 to 21 (Decker & Huckabee, 2000; Ferkenhoff, 2001). Agencies have also turned to age requirements on the other end of the continuum. The Chattanooga PD proposed to lift the maximum age of new recruits, which had been at 39, in order to tap retired military officers. The maximum age had already been lifted from 31 to 39, and a significant number of new recruits were from the new age range (Law Enforcement News, 2003). In West Virginia, recruiters

considered reducing retirement age from 55 to 50 as a way to make the law enforcement career more attractive to new recruits.

After a long history of standardized, minimum height requirements, agencies began to face challenges that these requirements had an adverse impact on women, people of Asian descent, and Latinos. Questions also arose as to whether isolated height requirements were actually related to performance. Newer trends are to consider height in relation to weight or to emphasize health measures, such as cardiovascular capacity, body fat, agility, strength, and flexibility (Roberg, Crank, & Kuykendall, 1999).

As of 2001, about one-third of officers nationwide had a college degree, and about 18% of agencies required some higher education. But only .5% required more than two years post-secondary education. Educational requirements have received at least as much attention as any other hiring requirement. Most observers abide by the basic premise that college-educated officers are more professional, more tolerant, more understanding, less prejudiced, and have a deeper understanding of social and psychological human processes. Less explicit, but likely playing a role, is the belief that higher education instills greater moral fiber and molds a more ethical and just person (Doerner, 1997). Bernstein (2001) asserts that college-educated officers are less likely to abuse their powers. Evidence on the effects of education on police officer performance is mixed. Some studies have shown that police officers are more likely to have authoritarian traits (related to more concrete and rigid thinking) but that college-educated officers are less so. Education has been found to be significantly related to academy performance (Aamodt & Fink, 2001). An earlier study had found that formal education predicted fewer problems, such as accidents, use of force, and disciplinary investigations, but was also negatively associated with awards and commendations (Cascio, 1977). College-educated officers missed fewer days of work (Daniel, 1982). Officers with a four-year college degree had fewer complaints, but no difference with less educated officers in rule violations (Kappeler, Sapp, & Carter, 1992). More recently, non-college educated officers were found to use arrest over other options more frequently, but no differences were found in likelihood of firing weapons. Officers with higher education were no more likely to be promoted, though they may have had higher expectations for promotion (Doerner, 1997). Decker and Huckabee (2002) suggest that increasing educational requirements would eliminate 75% of new recruits who fail to complete the probationary period successfully. Based on a comprehensive review of the literature relating college education to police officer performance, Jordan (1993) concludes that "the totality of research does not demonstrate that education is profoundly related to individual officer performance." Jordan also found no definitive results linking college education to rates of officer satisfaction.

Changes in educational requirements, like changes in minimum age requirements, have been targeted by some agencies as a mechanism for broadening the applicant pool. In Oregon, for example, police departments considered reducing

the education requirement from four years to two years, with the hope that the change would expand the pool of minority applicants and help fill vacancies. Another suggestion was to allow officers to finish their education within a certain number of years of being hired (Bernstein, 2001). In New Jersey, agencies permitted two years of military service as a substitute for four years of college (Eisenberg & Scott, 2004).

Residency requirements, believed to enhance officer commitment through ties to the community, also play a role in ethnic representation of the jurisdiction served. When New York City proposed to drop the residency requirement to increase its pool of applicants, critics predicted the change would negatively affect hiring of African American officers because of high recruiting of white males from the suburbs (Chivers 2001a). A hybrid approach has been suggested, whereby residency must be achieved within a certain time after being hired (Dantzker, 2000).

Selection Criteria. The basic application requirements described above are the minimum criteria that an applicant must meet before further screening. Some of the screening steps used by departments are an intelligence test, polygraph test, medical check, written exam, background investigation, psychological test, psychological interview, oral board.

Cognitive ability, also referred to as intelligence, can be considered one of the old stand-bys in police hiring. Alpert (1991) describes cognitive ability as a "necessary, but not sufficient indicator" of aptitude for police work. Almost all jurisdictions use some form of cognitive ability testing (Ash, Slora, & Britton, 1990). Higher cognitive ability scores among recruits have been found to predict better academy performance, on-the-job performance, supervisors' ratings, advancement, and lack of performance problems (Azen, Snibbe, & Montgomery, 1973; Boehm, Honey, & Kohls, 1983; Brandon & Lippman, 2000; Davis & Rostow, 2003; Dayan, Kasten, & Fox, 2002; Finnegan, 1976; Ford & Kraiger, 1993).

Other psychological or behavioral tests used in selecting qualified officers usually relate to personality, clinical issues, and interests. A majority of jurisdictions use some type of personality testing, most commonly the Minnesota Multiphasic Personality Inventory (MMPI or MMPI II), a broad-based questionnaire, presented in a true-false format, that taps into a multitude of personality traits as well as mental health problems (Ash, Slora, & Britton, 1990). MMPI scores have been found to predict on-the-job performance (Azen, Snibbe, & Montgomery, 1973), but no relationship has been found between corruption-type violations and personality testing (Boes, Chandler, & Tim, 1997). Imwald (1988) further found that personality measures did not improve predictions of officer performance over baseline accuracy. Interest inventories are used by only a small minority of departments (Ash, Slora, & Britton, 1990), although one instrument, the Kuder Interest Survey, was found in one study to predict on-the-job performance (Azen, Snibbe, & Montgomery, 1973).

Many agencies turned to physical agility or physical fitness requirements when height and weight requirements tended to exclude more women than men. Physical agility test scores predicted higher performance ratings, supervisor ratings of control of conflict, and supervisor ratings on specific physical abilities (Arvey, Landon, Nutting, & Maxwell, 1992).

Gathering biographical and other background information on recruits has been identified as both an important task in selection, the most time-consuming and most likely to cause a bottleneck and associated delays in the hiring process. About one-third of agencies use formal bio-data instruments (Ash, Slora, & Britton, 1990), while a basic background check is cited as a primary screening technique (Hogue, Black, & Sigler, 1994). In Odessa, Texas, the background check, considered crucial, took 103 days, while all other application procedures could be completed in 13 days (Taylor, Moersch, & Franklin, 2003). An emerging controversial issue, especially as "Generation X'ers" are added to the mix, is tolerance for minor infractions, such as experimental use of illegal drugs. A growing tendency to tolerate some history of drug use or other minor criminal activity has been noted (Baxley, n.d.). The Baltimore County Police Department recently found that 50% of applicants had experimented with drugs; the agency continued its policy of automatic rejection for those who had used hallucinogens or sold drugs. In Fairfax County, Virginia, compromise was also reached; use of marijuana fewer than 20 times was allowed, while use of any drugs within 12 months of the application led to rejection. The Metro-Dade police department in Miami allowed one-time use and some juvenile experimentation, but did not allow any use of heroin, LSD, mescaline, opium, cocaine, or barbiturates. At the federal level, the FBI bars drug use except experimental use of marijuana, though those who have been rehabilitated may be considered under certain conditions. Publication of specific drug use limitations raises the possibility that applicants will learn what to admit and deny during their application process (Roberg, Crank, & Kuykendall, 1999). As of 2001, New York City was allowing other past minor criminal infractions, such as evading subway fares (Jones, 2001)

3. Recruiting and Hiring Diverse Candidates

As becomes clear from the foregoing discussion, concerns for diversity in recruiting and hiring have become inextricably entwined with efforts to enhance the applicant pool in general, and at the same time, have forced agencies to hone their recruiting procedures to relate more specifically to job performance. Perceived reasons for slowness in meeting diversity objectives track the perceived reasons for the general "cop crunch." For example, Shusta, Levine, Harris, and Wong (1995) attribute declines in minority hiring in the 1980s to departments having made earlier gains and then losing ground when minority workers found jobs in non-law enforcement occupations. They further note that downsizing usually takes place on a "last hired" basis so that growth for minority recruits is slower in an unstable economy. As of 2000, agencies reported various levels of success in hiring of both women and minorities, but a large

percentage of departments were still reporting relatively small percentages of officers from these groups. Forty-one percent of agencies had 11-20% female officers, while only 8% were over 40% female (two of those agencies were in Louisiana). As of 2000, 8% of New York State Troopers were women (Campbell, Christman, & Fiegelson, 2000). While the overall rates remain low, women in policing nationwide have increased from 2% in 1972 to 14% in 1999 (Lord & Friday, 2003). Almost half of agencies in 2000 reported 0-5% African American officers and almost 60% had 0-5% Hispanic officers. Only 13% had over 20% African American officers and only 14% had over 20% Hispanic officers (Bureau of Justice Statistics, 2000). Again, although overall rates are low, the trend has been in the direction of increased representation. Between 1987 and 1997, racial minorities grew from 14.6% to 21.5% of sworn officers (Eisenberg & Scott, 2000). Proportions of African American officers may be lower, however, in more specialized positions; for example in New York City in 2001, 9 out of 465 captains were African American and one in 59 officers in the Aviation unit were African American. (Chivers, 2001a). Kenney and McNamara (1999) also note that gains for African Americans in supervisory positions may be slower than in general hiring.

Two main approaches are observed in the literature to explain shortcomings in meeting diversity-related goals. Pursuant to one line of thought, women and minorities are perceived as able and invited to join law enforcement ranks, but then are barred by obstacles that either discourage or discriminate against them. Another possibility, one that many agencies assert, is that agencies want to hire more women and minority officers but are unable to find sufficient recruits to meet their recruitment goals (e.g., Hochstedler & Conley, 1986). Supporting the first approach, Shusta et al. make several observations about recent practices, including failures in senior management to send the "diversity message" down the line, processes by which informal networking efforts are not open to outsiders so that agencies continue to hire from among their own, a tendency of recruiters to look in the wrong places, and the possibility of negative judgments to be inaccurately based on culturally-defined communication differences. Perhaps more supportive of the second approach, a 1987 survey of agencies found that the most frequently cited reasons for low minority hiring were decreasing numbers of qualified applicants, inability to offer competitive compensation, and individual characteristics among recruits, such as past drug use and limited life experience (Shusta et al. 1995). Others also point to a competitive market and higher education requirements as combining to cause qualified women and minority applicants to choose private sector jobs over law enforcement (Dantzker, 2000; Decker & Huckabee, 2002). Once in place, under-representation may be self-reinforcing as women and minority individuals come to see law enforcement as hostile to their interests, further leading them to find employment elsewhere (Kenney & McNamara, 1999). Especially for women, lack of role models in their communities is perceived as a potential barrier to selection of law enforcement as a career (Milgram, 2002). Lord and Friday (2003) found that more female applicants than males cited shift work and unusual hours as barriers.

Other macro-level factors besides the economy have also been discussed in the context of gender and racial representation. A survey of large police departments indicates that a larger percentage of African American officers is related to a higher percentage of African American citizens in the jurisdiction (Hochstedler & Conley, 1986). In the 1980s, three cities with the highest percent African American officers had African American mayors and all had recently had African American police chiefs. In contrast, two other cities, Cleveland and Newark, both with large African American populations and African American mayors are reported to do poorly in African American police representation (Walker, 1985). By survey, African American individuals are more likely to find the prospect of a career in law enforcement unattractive and to have a poorer image of police than other groups; African Americans were less likely to think their neighbors respected the police and were more likely than whites to think police treated minorities unfairly (Kaminski, 1993).

Yet, some evidence suggests that agency level decisions and policies may also affect minority hiring. In New York City, recent use of the internet in the application process resulted in an applicant pool with 60% minority applicants, who, on average, had more college credits than white applicants (Baker, 2002). Survey results indicate that one of the two biggest hurdles to hiring is passing the written exam, which may have a disparate impact on individuals for whom English is a second language. This poses a particular dilemma for minority hiring because bilingual recruits are of special interest for these purposes (Brandon & Lippman, 2000). While a higher percentage of women is related to a larger department, which in turn is related to being located in a larger jurisdiction, larger departments were also more likely to have a stated strategy for recruiting women (IACP, 1998). A comparison of two large cities, Boston and New York, emphasizes the impact of choices made by the agencies. Boston's percent of African American officers nearly matches the percent in the jurisdiction, while New York City has been criticized for its lack of representation of the jurisdiction. Boston accepts high school graduates, while New York requires college credits; Boston requires residence in the City, while New York does not; and Boston interpreted its civil service law to permit hiring of applicants with special skills regardless of exam scores (so long as they passed the exam), resulting in increased hiring of Creole speaking officers of Haitian descent (Chivers, 2001b).

Purposes of the Current Study

Evidence of agencies' responses to the perceived cop crunch in the late 20th century tend to be anecdotal, derived from news reports of specific agencies' changes in specific policies in an attempt to enhance their applicant pool or retain already hired officers. In contrast, several years before the heightened perception of an ongoing cop crunch, researchers provided a more systematic and comprehensive overview of agencies' policies and practices regarding recruitment, application, and selection. In 1989, Strawbridge and Strawbridge published "A Networking Guide to Recruitment, Selection, and Probationary Training of Police officers in Major Police Departments of

the United States of America.” This report set forth recruitment and hiring practices of 72 departments in America’s largest cities. The Police Section of the Academy of Criminal Justice Sciences “adopted” the survey used by the Strawbridges and re-administered it in 1994 to 60 of the original 72 departments (Langworthy, Hughes, & Sanders, 1995). These authors suggested that the same or very similar survey be re-administered in 1998 to further enhance understanding of the patterns of stability and change in police hiring policies from 1989 to 1994. The need for a comprehensive survey of departments’ practices has become even more crucial since the onset of the “cop crunch” and the myriad agency responses.

Overall, a picture emerges of relative stability in recruiting, application policies, and hiring procedures over a five year period late in the 20th century but before widespread attention was paid to the possibility of a crunch in the ability to hire sufficient numbers of qualified cops. One aspect of the research presented in this report, is our measurement of the extent to which agencies have been able to hire overall and hire minorities and females, in particular. That is, we assess the existence of the “cop crunch.” More importantly, however, we report here the effects of agency practices and jurisdiction characteristics on the ability to attract applicants, ability to attract minority and female applicants, and ability to hire recruits, including minority and female recruits. Practices in those jurisdictions successfully meeting recruiting goals will be identified and described. Finally, our data provide a third wave of panel data measuring agency recruiting and hiring practices.

II. Methods

The current project utilized a two-part methodology involving a national survey and follow-up phone interviews.

Through a *national survey* of just under 1,000 agencies we collected information on the nature and extent of the apparent recruitment/hiring problem and identified how various agency-level factors (e.g., recruitment efforts, pre-employment standards, selection procedures) and jurisdiction-level factors (e.g., median income, percent minority population, unemployment rate) impacted on the ability to hire and the ability to hire women and racial/ethnic minorities. The survey also allowed us to characterize recruitment and hiring activities nationwide and to identify innovative practices that facilitate hiring generally and the hiring of women and racial/ethnic minorities, in particular. This survey included key questions related to recruitment and selection developed by Strawbridge and Strawbridge (1990) and was sent, not only to a stratified random sample of 2,138 agencies, but also to the 72 agencies previously surveyed in 1990 and again in 1994 (Langworthy et al., 1995). The survey of these 72 agencies produced a third wave of data for the large agencies previously studied.

Phone interviews with a subset of agencies provided information on comprehensive and effective recruitment/hiring programs within agencies and on

specific innovative strategies. Specifically, the survey data was used⁴ to identify 60 agencies that (1) are effective in recruiting and hiring generally, (2) are effective in recruiting and/or hiring women and/or racial/ethnic minorities, and/or (3) report innovative policies or strategies that promote hiring. Staff interviewed by phone relevant personnel in the 60 sites to document the characteristics of the programs or practices that are linked to hiring successes.

1. National Survey

PERF selected a stratified, random sample of law enforcement agencies from around the country. To ensure that the sample was representative of the population of law enforcement agencies, the population was divided into strata based upon agency size, agency type, and geography. The following procedures were used for selecting the sample.

Sampling Frame. Two sources were used for identifying the sample frame. These two sources were combined to produce the most comprehensive and current list of law enforcement agencies nationwide. The first source was the Law Enforcement Sector (LES) portion of the 1999 Justice Agency List developed by the Governments Division of the United States Bureau of the Census.⁵ The second source was the 2000 edition of the National Directory of Law Enforcement Administrators (NDLEA), published by the National Chiefs and Sheriffs Information Bureau. Each of these lists has its advantages and disadvantages. All law enforcement agencies are required to cooperate with the census and therefore the LES provides the most comprehensive list of all police agencies. A second advantage of the LES is that it includes each agency's unique Federal FIPS identification number. This unique identifier makes it possible to easily merge the LES data with other federal data (e.g., census data of various types). The NDLEA survey is not as comprehensive as the LES but has the advantages of 1) providing more information for each agency, such as the name and address of the current chief executive, and 2) being updated on an annual basis. The final sampling frame consisted of a combination of these two lists, providing the most comprehensive and current list of law enforcement agencies in the country.

Sampling Procedures. All state law enforcement agencies were selected. Within the municipal agencies and within the county agencies, the sampling frame was divided into strata based on region of the country (Northeast, South, Midwest, and West) and

⁴ Two additional agencies came to our attention through newspaper articles that indicated that they were engaged in interesting recruitment efforts. The two agencies were the Chicago Police Department and the Burlington, Vermont, Police Department.

⁵ This list represents the most complete and exhaustive enumeration of law enforcement agencies available and is more comprehensive than the list of agencies maintained by the Uniform Crime Reporting program of the Federal Bureau of Investigation. The Bureau of Justice Statistics uses this list for drawing its sample for the periodic survey of Law Enforcement Management and Administrative Statistics (LEMAS).

jurisdiction size (under 10,000, 10,000 to 49,999, and 50,000 and greater). Within each region stratified, random samples of both county and municipal agencies were selected using the following approach: forty percent of the agencies serving jurisdictions with populations of 50,000 or more were included in the sample; agencies serving populations between 10,000 and 49,999 were selected at a 20 percent rate; agencies serving populations under 10,000 were selected at a rate of 5 percent. This sampling strategy yielded over 1,500 agencies in the law enforcement sample.

Non-response Analysis. It was surmised that understaffing could affect an agency's ability to participate in the current survey. Put another way, we became concerned that the non-responding agencies could differ from responding agencies in at least one important way—non-responding agencies might be understaffed and this could have impacted their ability and desire to participate in the survey. In order to examine this issue, a random sample of 50 non-responding agencies were selected and surveyed on their staffing levels as of January 1, 2002 (reasonably close to the survey date); 29 agencies responded to our request. The results of this analysis revealed that the level of staffing does not appear to have affected an agency's willingness and ability to participate in the current survey. Twenty-two of these non-respondents (76%) had 95% of their sworn positions filled on January 1, 2002, as compared to 72% of respondents. Eighty-nine percent of both groups had at least 90% of their sworn positions filled on that date. A similar analysis of the proportion of civilian positions filled on that date came to a similar conclusion. While we would have liked to have drawn a larger sample of non-responding agencies, the participants in this sub-study provide some evidence that there is unlikely to be bias in the sample based on lack of staffing.

Limitations. As with most studies, there are limitations of the research that could impact the interpretation of the results. First, while not as high as usual PERF performance on previous and recent surveys, but acceptable by industry standards, the survey response rate (46.1%) was lower than expected. While we did conduct non-response analysis (see above), there is no way to tell for sure if there were other substantive differences between the two groups given the fairly small sample size for this analysis and the limited data collection for the non-respondents (i.e., these agencies were only asked about their staffing levels). Second, the responses that were received often had incomplete data on the dependent hiring and applicant variables. Finally, as with any study done at the agency-level, our research team did not have complete control over the agency personnel that completed the survey on behalf of the organization. While all of the surveys were mailed to the chief executive of the agency and instructions were provided on the completing of the surveys, different personnel completed the survey. In some of the smaller agencies the chief or command level staff might have completed the surveys. However, in the larger agencies this task was delegated to other staff. Despite these concerns, we found it reassuring that no major measurable substantive differences emerged in our analyses of key outcome measures

based on the agency personnel completing the survey. Despite these limitations, we still believe the data are of value.

Survey Instrument. The Recruitment and Hiring survey was developed by PERF to examine the nature and extent of the “cop crunch” and identify department-level policies and practices that facilitate, generally, the recruiting and hiring of quality personnel, and that facilitate, in particular, the recruiting and hiring of quality women and racial/ethnic minorities. The instrument contained both open- and close-ended questions. The survey is included in Appendix A.

Creating and validating the instrument—a critical process—occurred in three phases. In the first phase, project staff identified and outlined the constructs for independent and dependent measures and developed draft survey questions to measure those constructs. Some of the items in the survey replicated those developed by Strawbridge and Strawbridge, 1990.

For the second phase of survey development, PERF convened three Survey Focus Groups comprised of police practitioners to review the draft instrument. Each of the three senior researchers held one group in his/her geographic area and included in this group senior level administrative personnel (e.g., chiefs, assistant chiefs) and personnel from research/planning and recruiting/selection units. These groups met for one-day sessions to review and provide feedback on the instrument.

After the feedback of the Focus Groups was incorporated into a second draft, PERF pre-tested the instrument with 15 PERF member agencies. The pre-test respondents were asked to complete the survey and provide feedback on the instrument itself. We, then, conducted an interview with each respondent to get his/her input and all survey responses were analyzed and examined for patterns for potential problems. The Focus Group members and selected pretest respondents reviewed the final draft before administration to the general and supplemental samples.

Content. Survey questions were developed that characterized the extent to which agencies are able to fill their sworn positions and hire women and racial/ethnic minorities. These data were not only used to provide an overall characterization of the problem, but also to produce the dependent measures required to examine the agency and jurisdiction factors that appear to impact on success in recruitment and hiring. Critical to the development process was the input received during stages two and three from representatives of our target respondents. Below we describe the key variables relevant to examining the extent to which law enforcement agencies are able to fill their sworn positions, and hire women and racial/ethnic minorities.

- *Ability to Attract Applicants.* This variable was calculated as the mean ratio of applicants to vacant positions for the years 1997, 1998, and 1999.

- *Ability to Attract Qualified Applicants.* This variable was calculated as the mean ratio of applicants who passed all screening measures to vacant positions in each year.
- *Ability to Fill Sworn Positions.* Ability to fill sworn positions was calculated as the average across the three years of the percentages of open sworn positions filled.
- Variables analogous to the ones above--*ability to attract applicants, ability to attract qualified applicants, and ability to fill sworn positions*--were calculated for the subgroups of women and racial/ethnic minorities. Additionally, "proportional representation" variables were developed that reflect recruitment and hiring success of these subgroups relative to their representations in the jurisdiction populations. That is, a variable reflecting ability to recruit females was calculated for each agency as the ratio of the percentage of the applicants which are female across three years to the percentage of females in the jurisdiction as set forth in the 2000 Census. Additional proportional representation variables developed for females included: *ability to attract qualified females*, and *ability to fill sworn positions with females*. The same proportional representation variables were developed for racial/ethnic minorities (measured as African American, Hispanic and other). (These equations are based on those used by Walker, 1983, 1985, 1989, 1999.)

Secondary data. Information collected from other sources (e.g., UCR, 2000 Census) regarding the department and/or jurisdiction was added to each department's survey data, including Part I offenses reported to police per officer, unemployment rate, median household income, consumer price index, percent population between 21 and 30, percent female population, percent population with bachelor's degrees, jurisdiction population and density, racial/ethnic breakdown of jurisdiction. Some of this information was used to develop the dependent measures (e.g., percent female, racial/ethnic breakdown of jurisdiction) and others served as control variables (e.g., unemployment, median household income).

2. Phone Interviews

The results from the survey provided critically important aggregate-level data on the factors associated with recruitment/hiring successes. Also needed, however, was more in-depth information on effective and innovative strategies. PERF used interviews of agency personnel to collect this more in-depth information from individual agencies. Specifically, we used the survey data⁶ to identify agencies that (1) are effective in recruiting and/or hiring generally, (2) are effective in recruiting and/or hiring women and/or racial/ethnic minorities, and/or (3) report innovative policies or strategies. We reviewed agency values on all dependent measures to identify candidates for groups #1

⁶ As mentioned previously, we also included two agencies on the basis of information gleaned from newspaper articles.

and #2. We identified agencies that show high values on measures of ability to recruit, ability to hire and ability to recruit/hire women and/or racial/ethnic minorities. We used the open-ended items soliciting information on “innovative” strategies to identify group #3.

III. RESULTS

The Recruitment and Hiring surveys were sent to the executives of law enforcement agencies throughout the United States (unweighted N=2,138). A stratified, random sampling design was utilized to select agencies based upon the type of agency (municipal, county, State Police) and the size of the population served (less than 10,000 population, 10,001 to 49,999 population, 50,000 and greater). All regions⁷ of the US were represented in this sample. The surveys were initially mailed in early September 2002. This initial mailing was followed up with another wave of surveys to non-respondents in early October 2002. A reminder postcard was sent in November 2002. Finally, a final reminder letter was sent to the agencies that had not responded to either of the first two survey waves, nor the reminder postcard. Of the 2,138 agency executives that received the survey, 985 submitted completed surveys resulting in a response rate of 46.1%. The table below contains a distribution of agencies by number of sworn officers, as well as State Police agencies (weighted percentages and unweighted sample sizes are included). (See Methods section for analysis of differences between respondents and non-respondents.)

Breakdown of agencies, weighted percentage and unweighted sample size

<u>Category</u>	<u>Weighted Percentage</u>	<u>Unweighted N</u>
1-20 Officers	59.8	253
21-50 Officers	22.1	254
51-100 Officers	7.9	128
101-500 Officers	7.1	165
501+ Officers	2.4	52
State Police agencies	.7	41

1. Descriptive Statistics

As mentioned above, the survey instrument included both closed- and open-ended questions. Respondents were asked to answer questions on various topics, including: recruitment tools, application processes, hiring practices, pay/benefits, and the impact of 9/11 on recruitment efforts. This section of the report will highlight some of the findings of the survey by examining the responses of agencies of different sizes (those with 1-20 officers, 21-50 officers, 51-100 officers, 101-500 officers, and 501 or

⁷ The stratification procedure utilized the same regional breakdowns as used by the FBI in the Uniform Crime Report (UCR).

more officers) and types (e.g., State Police agencies). (Tables for each of the questions discussed below are included in Appendix B.)

Department Background Information

Survey respondents were asked to indicate the venue in which new officers/deputies received recruit training. The majority of municipal and county agencies with 500 or fewer officers indicated that recruits were sent to regional training academies (see Exhibit 1, Appendix B). However, the largest municipal and county agencies (those with 501 officers or more), as well as State Police agencies, indicated that they most frequently utilized an in-house, agency run training academy.

Survey respondents were also asked if a collective bargaining unit represented employees at the officers/deputy rank. Municipal and county agencies with 21-50 employees were most likely to have such an arrangement in their agency (64.9 percent), (see Exhibit 2, Appendix B), while agencies employing 1-20 officers/deputies were least likely (36.1 percent) to have a collective bargaining unit in place. For agencies with 51-100 employees, 55.9 percent reported having a collective bargaining unit, 59.2 percent of the agencies employing 101-500 officers/deputies had a collective bargaining unit, and 55.2 percent of agencies with 500 or more employees reported having a collective bargaining unit in place. Among State Police agencies, the majority (52.5 percent) reported having a collective bargaining unit in place for employees at the officer/deputy rank.

Many agencies do not allow newly hired officers with previous law enforcement experience to join their ranks at levels other than the entry level position (officer/patrolman). However, lateral entry is often a tool used to recruit employees from other law enforcement agencies whereby a recruit's previous law enforcement experience is considered for the purposes of determining the rank at which the individual is hired. Respondents were asked if their agency allowed lateral entry at the officer/deputy rank. For municipal and county agencies, this was most likely to be permitted in agencies employing more than 500 officers/deputies (62.1 percent of agencies in this category allowed lateral entry), (see Exhibit 3, Appendix B), and least likely to occur in those agencies employing 20 officers/deputies or less (46.5 percent). Almost 55 percent (54.5 percent) of agencies with 21-50 employees, 58 percent of agencies with 51-100 employees, and 54.4 percent of agencies with 100-500 employees allowed lateral entry. Among State Police agencies, only 19.5 percent allowed lateral entry at the officer/deputy rank.

Respondents were next asked to complete a chart, indicating the one agency (police agency, city/county/state personnel or HR, civil service commission or some other agency) that has primary responsibility for certain functions relating to the recruitment and selection of new officer/deputy recruits. The following is a breakdown of each function (see Exhibit 4, Appendix B):

Deciding to Start Application Process. The majority of all agencies, irrespective of their size as measured by the number of sworn officers, including all State Police agencies, indicated that it was the police agency that had primary responsibility for deciding to start the application process.

Advertising for Applicants. With regards to agencies with 1-20 officers, 21-50 officers, and 501 or more officers, as well as State Police agencies, the plurality of agencies indicated that the police agency had primary responsibility for advertising for applicants. For those agencies with 51-100 officers and 101-500 officers, the majority of agencies indicated that city/county/state personnel or human resources was responsible for these decisions.

Recruiting Potential Applicants. With regard to the majority of all agencies of all sizes, as well as State Police agencies, the police agency was deemed responsible for recruiting potential applicants.

Accepting and Processing Applicants. The majority of all respondents, irrespective of agency size or type (State Police) indicated that it was the police agency that had responsibility for accepting and processing applicants.

Administering Written Tests. The majority of respondents from agencies with 1-20 officers, as well as State Police agencies, indicated that the police agency was responsible for administering written tests, while a plurality of respondents from agencies with 21-50 officers and 101-500 officers responded similarly. The plurality of respondents from agencies with 51-100 officers and the majority of respondents from agencies with 501 or more officers indicated that city/county/state personnel or human resources was responsible for this function.

Administering Other Selection Steps. The vast majority of all respondents indicated that the police agency was responsible for this particular function.

Making Final Hiring Decisions. Most respondents indicated that the police agency was responsible for making all final hiring decisions.

Survey respondents were asked if their agency required new sworn employees to sign a contract or agreement obligating them to work a minimum number of years with their agency. Only 15.3% of all agencies surveyed require this type of agreement (see Exhibit 5, Appendix B). For agencies that had such a requirement, the length of time for which recruits were obligated to work ranged from 24 months (agencies with 501 or more officers) to a high of approximately 29 months (agencies with 1-20 officers, 21-50 officers, and State Police agencies).

Recruitment Efforts

Next, respondents were asked to indicate various recruiting methods or tools that are used by their agency in four geographical areas (locally, in-state, regionally, and nationally). Recruiting methods included such things as the use of television, radio, newspaper, magazines/journals, career fairs, mass mailings, and other efforts to recruit new officers. The most commonly reported methods used for recruitment included newspaper ads, career fairs and the Internet (see Exhibit 6, Appendix B), and these methods were utilized locally, in-state, and regionally, but not often nationally (except for those agencies with 501 or more officers).

Respondents were asked to indicate if their agency provided awards for those officers that referred successful applicants. The majority indicated they do not provide such an award (see Exhibit 7, Appendix B). For those agencies replying in the affirmative, they were asked if this award was a cash award, or some other type of reward ("other"). In terms of cash awards, municipal/county agencies with 101-500 officers were most likely to offer this (11.5 percent), and those with 20 or less officers were least likely to do this (0 percent). Approximately 7 percent (7.3 percent) of State Police agencies utilized a cash award to give to those officers that referred successful applicants. In terms of some other type of reward, almost one quarter (23.6 percent) of agencies with 500 or more officers offered this, as did 3 percent of agencies with 101-500 officers, 4.2 percent of agencies with 51-100 officers, 0.7 percent of agencies with 21-50 officers, and 1.1 percent of agencies with 1-20 officers. Slightly over 17 percent (17.1 percent) of state agencies offered some other type of award. The most common types of non-cash awards included the following: time off with/without pay, award recognition, and dinner/gift.

Respondents were asked how often their agency engages in joint recruitment efforts with other law enforcement agencies. The majority of agencies reported that their agencies never did this (see Exhibit 8, Appendix B). Only a small percentage of agencies reported occasionally engaging in joint recruitment efforts with other agencies.

Respondents were then asked if they used targeted recruitment strategies for a variety of populations, including women, college graduates, people with previous police experience, people who speak a foreign language, military veterans, racial and ethnic minorities, the physically disabled, and "other." Overall, it appears that recruitment strategies are commonly targeting those with previous police experience, racial and ethnic minorities, college graduates, and women (see Exhibit 9, Appendix B). Survey results yielded the following conclusions:

- For municipal/county agencies with 1-20 officers, recruitment strategies most frequently targeted those with previous police experience (37.5%)

- For municipal/county agencies with 21-50 officers, recruitment strategies most frequently targeted those with previous police experience (29.8%), college graduates (21.1%), and racial and ethnic minorities (20.2%).
- For municipal/county agencies with 51-100 officers, recruitment strategies most frequently targeted those with previous police experience (36.5%), racial and ethnic minorities (33.3%), college graduates (31.8%), and women (26.6%).
- For municipal/county with 101-500 officers, recruitment strategies most frequently targeted racial and ethnic minorities (59.8%), college graduates (51.1%), women (47.7%), those with previous police experience (43.1%), military veterans (37.9%), and those that can speak a foreign language (27.1%).
- For municipal/county agencies with over 500 officers, recruitment strategies most frequently targeted racial and ethnic minorities (74.3%), women (66.2%), college graduates (62.8%), military veterans (54.1%), those with previous police experience (52.7%), and those that can speak a foreign language (33.8%).
- For State Police agencies, recruitment strategies most frequently targeted women (90.2%), racial and ethnic minorities (87.8%), military veterans (63.4%), college graduates (56.1%), those with previous police experience (46.3%), and those that can speak a foreign language (24.4%).

Respondents were asked if they use any of their police programs as a means to recruit young people for a career with their agencies. Approximately 33.9 percent of municipal/county agencies with 1-20 officers, 58.1 percent of municipal/county agencies with 21-50 officers, 76.6 percent of municipal/county agencies with 51-100 officers, 89.9 percent of municipal/county agencies with 101-500 officers, 83.1 percent of municipal/county agencies with more than 500 officers, and 80 percent of State Police agencies answered in the affirmative (see Exhibit 10, Appendix B). Those that answered yes were also asked to indicate all the programs they used to recruit young people. The police programs most commonly utilized for this purpose across all agencies were college internships, explorer programs, and school resource officers.

Survey respondents were asked how their agency uses personnel in the recruitment process, specifically, if their agency had a formal program with part-time recruiters, one employee with recruitment responsibility, or a recruitment unit with permanent assignments. Unsurprisingly, the smaller agencies (500 or fewer officers) tended to have either part-time recruiters or recruitment units with one employee (see Exhibit 11, Appendix B), while the larger agencies, including State Police agencies, had recruitment units with multiple employees permanently assigned to it.

The survey also asked, for those agencies that had a recruitment unit with employees permanently assigned to it, how many sworn and/or civilian employees were

assigned to the unit? In terms of sworn recruiters, municipal/county agencies with 1-20 officers had a mean of 1.44 recruiters (see Exhibit 12, Appendix B), those with 21-50 officers had a mean of 8.29⁸ recruiters, those with 51-100 officers had a mean of 2.25 recruiters, those with 101-500 officers had a mean of 3.3 recruiters, and agencies with over 500 officers had a mean of 6.79 recruiters. State law enforcement agencies had a mean of 6.25 recruiters. With the exception of one anomaly (agencies with 21-50 officers), the larger agencies, as well as State Police agencies, had more sworn recruiters than did the smaller agencies.

Regarding civilian recruiters, municipal/county agencies with 1-20 officers had a mean of 1.78 recruiters, those with 21-50 officers had a mean of 2.71 recruiters, those with 51-100 officers had a mean of 0.75 recruiters, those with 101-500 officers had a mean of 0.77 recruiters, and agencies with over 500 officers had a mean of 1.5 recruiters. State law enforcement agencies had a mean of 2.33 recruiters.

The survey also asked respondents' current annual recruiting budgets aside from personnel costs. Again, the data show that larger agencies and State Police agencies have larger annual recruiting budgets. The mean recruiting budgets for municipal/county agencies with 1-20 officers, 21-50 officers, 51-100 officers, 101-500 officers, 501 or more officers, and State Police agencies were \$686.43, \$1,345.91, \$2,121.82, \$9,689.81, \$61,656.17, and \$67,134.24, respectively (see Exhibit 13, Appendix B).

Application Procedures

Respondents were then asked a series of questions concerning their application procedures. First, respondents were asked if their agency required that applicants or sworn officers live in the agency service area. The majority of all respondents did not have such a requirement (see Exhibit 14, Appendix B). Those agencies maintaining such a requirement ranged from 19 percent (agencies with 101-500 officers) to 85 percent (State Police agencies). For the vast majority of agencies that maintained this requirement, residency was to be established after hiring (see Exhibit 15, Appendix B).

Respondents were asked to indicate the requirements for individuals that wanted to have their application for an officer/deputy position considered. The majority of all agencies, irrespective of their size as measured by the number of sworn officers, including all State Police agencies, maintained the following requirements for officer/deputy applicants (see Exhibit 16, Appendix B): must be a U.S. citizen; must have a driver's license; must have a high school diploma; must meet a minimum vision requirement; may not have a criminal record; and, may not have a dishonorable discharge from armed forces. A majority of agencies with 1-20 officers, 21-50 officers, 51-100 officers, 101-500 officers, and a plurality of agencies with 501 or more officers,

⁸ Anecdotally, many of the smaller agencies indicated that all of their sworn officers act as recruiters. This may help to explain this apparent anomaly.

as well as State Police agencies, also required that applicants may not have a criminal record. Additionally, the majority of agencies with 21-50 officers, 101-500 officers, 501 or more officers, and State Police agencies maintained age requirements. For agencies that maintained such requirements, the mean minimum age was approximately 20 years old (see Exhibit 17, Appendix B), while the mean maximum age ranged from 38.49 years old to 68.72 years old. A minority of agencies maintained height and weight requirements for applicants.

Next, respondents were asked if their agency required individuals to complete their application at a law enforcement or other government facility. The vast majority of agencies did not require individuals to submit their applications at such facilities (see Exhibit 18, Appendix B). Agencies that responded in this manner were then asked if the applicant could complete an application off-site and return it in person, return it by mail or fax, and/or complete the application online. The majority of agencies allowed individuals to complete applications off-site and return it in-person, by mail or fax. Aside from the 41.7% of State Police agencies that allowed individuals to complete an application on-line, a minority of other agencies maintained such processes.

The survey also contained a question asking respondents if their agency supplies applicants with study or reference materials to help them prepare for tests and other selection procedures. The majority of respondents answered in the negative (see Exhibit 19, Appendix B). Those respondents that did provide applicants with study or reference materials were asked if every applicant receives a study package or just those that requested such materials. Although only a few of the agencies provide these materials, of those that did, more gave them out to all applicants, as opposed to those that requested them.

Respondents were asked how often their jurisdiction accepts applications in a given year. The majority of agencies, irrespective of department size or type, indicated that they accept applications continuously or only when a vacancy exists (see Exhibit 20, Appendix B). Very few agencies accept applications according to any of the following schedules: once every two weeks; once a month; once every three months; once every four months; once every six months (semi-annually); once a year (annually); or less than once a year.

Another question asked respondents to specify how often their jurisdiction provides the opportunity for applicants to take a written employment test. Many of the respondents indicated that their agency does not give written tests (see Exhibit 21, Appendix B). Of those that did, a substantial percentage indicated that applicants are allowed to take a written employment test only when a vacancy exists. Some agencies also provided the opportunity for written tests once every six months or once a year (annually).

The survey also asked the respondents to indicate how long their agencies maintain a list of qualified applicants. A substantial majority of all agencies maintain this list for a definitive number of months (see Exhibit 22, Appendix B), although some respondents indicated that their agencies kept this list until it was exhausted and smaller number until the academy class is filled. Of the agencies that keep this list for a definitive number of months, the length of time this list is kept ranged from one (agencies with 1-20 officers and 51-100 officers) to 96 months (agencies with 501 or more officers) with a mean range of 12.55 (agencies with 1-20 officers) to 16.33 (State Police agencies) months.

Respondents were asked, typically, for new applicants, how many weeks it takes from the submission of an application to the acceptance of an offer of employment.⁹ The data indicate that, the larger the agency, the longer the process takes (see Exhibit 23, Appendix B). With regard to agencies with 1-20 officers, the process takes an average of 7.84 weeks, while it takes an average of 17 weeks for agencies with 501 officers or more. The State Police agencies' application process took an average of 30.08 weeks from start (submit an application) to finish (employment offer).

Selection Procedures

Respondents were asked about their selection procedures. One question asked respondents if their agency is currently (at the time of the survey) under a court order or consent decree, or a specific Equal Employment Opportunity Commission (EEOC) plan affecting hiring decisions, or any combination of these. The vast majority of all agencies indicated that they were not subject to such an order, decree, or EEOC plan (see Exhibit 24, Appendix B). Very few respondents indicated that their agencies were under this scrutiny, but, of those that did, a slightly higher percentage of respondents were from larger agencies (agencies 101-500 officers and those with 501 or more officers), as well as the State Police agencies.

The survey also contained a question that asked respondents to specify the order in which a series of selection procedures take place. The selection process included the following procedures: written entrance exam; medical examination; psychometric test;

⁹ We do not assume here that a long timeline between application and a hiring decision is problematic. Although we do not have to data to support this assertion, we believe that the extent to which an agency explains its process and it's timelines to applicants, and the degree to which it actively keeps those applicants informed is much more important than the duration of time itself. Interestingly, except for the smallest agencies, the majority of those responding to the general survey report accepting applications continuously. It may be that accepting continuous applications is by necessity running the risk that the time between initial application and a hiring decision will be lengthened.

psychologist interview; voice stress analyzer; civil service exam; interview board; background check; handwriting analysis; polygraph test; personal interview; criminal records check; reference letters; fitness/agility test; intelligence test; drug test; practical test; and assessment center. Irrespective of agency size (e.g., number of officers) or type (e.g., State Police), the first procedures to take place in the selection process were a civil service exam and a written entrance exam (see Exhibit 25, Appendix B). There was less agreement about which steps occur next. Although the precise order may differ, the data indicates that subsequent steps include a criminal records check and a fitness/agility test, followed by the assessment center and practical tests. With some consistency, the last steps in the process often include a medical exam, a psychometric test, a psychologist interview, and a drug test.

Respondents were asked if their agency uses special entry conditions (e.g., added preference points/credit) in the selection process. The majority of agencies did not utilize special entry conditions (ranging from 91 percent of municipal/county agencies with 1-20 officers to 56.4 percent of State Police agencies that did not have these conditions), (see Exhibit 26, Appendix B). For those agencies that did use special entry conditions in the selection process, the population group to which these conditions were applied most frequently were veterans and most often with regard to waiting list preference (see Exhibit 27, Appendix B). Those with previous police experience were also listed with some frequency with regards to receiving higher pay or allowance, as well as waiting list preference. Some respondents indicated that their agencies offer "other" special entry conditions. The population group most frequently listed as receiving "other" special conditions was military veterans followed by those with previous police experience, college graduates, women and ethnic minorities. Most commonly, "other" special conditions involved the addition of preference points to an applicant's hiring score.

Respondents were asked to specify those criteria that would eliminate a candidate from consideration for employment. Such criteria included the following: a misdemeanor conviction; a serious misdemeanor conviction involving moral turpitude or honesty; a felony arrest; a felony conviction; a felony arrest within the past two years; any prior drug use; any substance abuse arrest; a substance abuse arrest within the past two years; any substance abuse conviction; currently suspended driver's license; excessive points on driver's license with two years; and termination from a law enforcement agency. Irrespective of agency size and type (e.g., State Police), the most commonly identified criteria that would eliminate a candidate from consideration were any felony conviction, serious misdemeanor conviction involving moral turpitude or honesty, and having a currently suspended driver's license (see Exhibit 28, Appendix B).

Next, respondents were asked if the applicant pays for any part of the application or selection process. The vast majority of agencies indicated that they do not require the applicant to pay for any part of the application or selection process (see Exhibit 29, Appendix B). Anywhere from 14.8 percent (agencies with 1-20 officers) to

25.7 percent (agencies with 21-50 officers) did require applicants to pay for some parts of this process. The average amount required to be paid by applicants varied from a mean of \$30.00 (State Police agencies) to \$271.10 (agencies with 1-20 officers). Most commonly, applicants were required to pay for things such as written test fees, application fees, and civil service exam fees.

Pay and Benefits

Respondents were then asked a series of questions concerning pay and benefits. First, respondents were asked to indicate the base starting salary for an officer/deputy who has graduated from a training academy. The data indicate that the base starting salary for an officer/deputy generally increased as the size of the agency increased with a mean base starting salary range of \$26,926.93 (agencies with 1-20 officers) to \$34,279.98 (agencies with 101-500 officers), (see Exhibit 30, Appendix B). Agencies with 501 or more officers were an exception to this, however. These agencies had the second lowest base starting salary (\$31,684.00). State Police agencies were near the higher end with a mean base starting salary of \$33,720.85.

Respondents were also asked their agency's starting fringe benefit rate for an officer/deputy that graduated from a training academy. The starting fringe benefit rate varied by size of agency but generally increased as the size of the agency increased. The starting fringe benefit rate ranged from an average of 23.07 percent for agencies with 1-20 to 29.57 percent for agencies with 501 or more officers (see Exhibit 31-A, Appendix B). Respondents were, then, asked how they would compare their agency's fringe rates with nearby law enforcement agencies (that is, if they considered their fringe rates below average, average, or above average in comparison of nearby law enforcement agencies). The vast majority of agencies considered their starting fringe benefit rate to be either average or above average when compared to nearby law enforcement agencies (Appendix 31-B).

Respondents were also asked to indicate the base annual pay (before deductions) for an officer/deputy with five years of service in their agency. According to the data, the base annual pay for an officer/deputy with five years of service in their agency increased as the size of the agency increased with a mean range of \$32,152.76 (agencies with 1-20 officers) to \$44,644.89 (agencies with 501 or more officers), (see Exhibit 32, Appendix B). State law enforcement agencies reported a mean base annual pay of \$41,991.10.

Respondents were asked to indicate any incentives or bonuses offered to recruits or officers/deputies. Incentives and bonuses included the following response options: employment or signing bonus; agency pays tuition for recruit training at an external academy/school; recruit paid a salary during recruit training; recruit receives an academy graduation bonus; reimbursement for college courses; salary increases for college degrees; scheduling preferences for those taking college courses; take-home

car; health club membership or reimbursement; housing allowance or mortgage discount programs; uniform allowance or uniforms provided by agency; job sharing or split shifts. The vast majority of all agencies indicated that they paid the recruit a salary during training and offered a uniform allowance or provided them (see Exhibit 33, Appendix B). A large percentage of agencies also paid the tuition for recruit training at an external academy/school, offered salary increases for college degrees and/or had take-home cars.

Next, survey respondents were asked if their agency had a mandatory retirement age for officers/deputies. The majority of agencies surveyed did not have a mandatory retirement age (from a high of 88.3 percent of municipal/county agencies with 1-20 officers to a low of 51.2 percent of state law enforcement agencies), (see Exhibit 34, Appendix B). For those agencies that had such a requirement, the mean mandatory retirement age ranged from 60.35 years old (State Police agencies) to 65.62 years old (agencies with 51-100 officers).

Next, respondents were asked what, if any, limit their agency placed on the maximum number of overtime hours an officer/deputy could work. The overwhelming majority of all agencies placed no limits on the number of days or hours an officer/deputy can work at a second job or other employment (see Exhibit 35, Appendix B). Where restrictions were placed, they more frequently restricted the number of hours to be worked per day. The maximum number of overtime hours an officer/deputy is allowed to work per day ranged from a mean of 9.83 hours (agencies with 501 or more officers) to 13.25 hours (State Police agencies). The maximum number of overtime hours per pay period that an officer may work ranged from a mean of 19.13 hours (agencies with 1-20 officers) to 41.5 hours (agencies with 501 or more officers).

Then, respondents were asked to indicate if their agency allows officers/deputies to work secondary or other employment. The vast majority of respondents indicated that their agencies allow officers/deputies to work secondary or other employment (see Exhibit 36, Appendix B). Agencies that answered in the affirmative were asked what, if any, limit their agency placed on the maximum number of hours an officer/deputy can work at a second job or other employment. The majority of agencies with 1-20 officers, 21-50 officers, 51-100 officers, and 101-500 officers, as well as State Police agencies reported having no limit to the number of hours per pay period or per day an officer/deputy can work at such employment. However, the majority of agencies with 501 or more officers reported placing limits on the number of hours per pay period (mean of 39.56 hours) or per day (mean of 8.89 hours) that an officer/deputy could work on secondary or other employment.

2. Findings from a 2002 Replication of the Strawbridge and Strawbridge¹⁰ Police Recruiting Survey

Analysis of trends in recruiting and hiring practices in 62 large departments

As noted earlier, a supplementary sample was used to gather data on recruiting and screening trends. In 1989, Strawbridge and Strawbridge (1990) completed a survey of 80 local police departments with 500 or more sworn officers to provide an overview of recruiting, screening, and training practices in larger agencies. In 1994, a cooperative effort between the Academy of Criminal Justice Sciences, the Ohio Peace Officer Training Academy, and the University of Cincinnati enhanced that earlier work by fielding a second survey of those agencies (Langworthy, et al., 1995). Forty-one of the original sample cases were chosen in the random sample for this project. The additional 31 agencies from the Strawbridge and Strawbridge sample were also sent the survey instrument. These 72 agencies received the same instructions as the random sample, except they received letters of introduction that also reminded the reader that their agency had participated in the earlier waves.

Of the 80 original agencies surveyed, Strawbridge and Strawbridge (1990) received 72 responses. Langworthy, et al. (1995) surveyed those 72 agencies and received 60 responses. The 2002 PERF survey received 62 responses for an 86% response rate. Table C.1 (see Appendix C) indicates the agencies that responded to the 1994 and 2002 surveys.

We were unable to obtain the Langworthy, et al. (1995) data. However, we were able to obtain much of the original Strawbridge and Strawbridge (1990) data on recruiting practices. The data obtained appeared to be in its original coded form but there was no documentation or codebook to guide its interpretation. Using a copy of the Langworthy, et al. survey and their published results as guides, many of the variables needed for comparison with the 2002 data were validated as usable although some data cleaning and recoding were necessary. No data from the 1995 project were available¹¹. Because the sample respondents do not match from wave to wave, care must be used in interpreting apparent changes based solely on each survey's aggregate statistics. The analyses presented here reports results from agencies who were respondents for both the 1989 and 2002 surveys. Differences in means were tested for statistical significance using the repeated measures t-test. Changes in percent were

¹⁰ Peter Strawbridge and Diedre Strawbridge (1990) *A Networking Guide to Recruitment, Selection, and Probationary Training of Police Officers in Major Departments of the United States*. New York: John Jay College of Criminal Justice.; Unpublished Report. Robert Langworthy, Thomas Hughes, and Beth Sanders (1995) *Law Enforcement Recruitment, Selection and Training: A Survey of Major Police Departments in the U.S.*

¹¹ The authors would like to thank Thomas Hughes for providing the 1989 data. Further efforts are being made to recover more of the 1989 data and all of the lost 1994 data for use in future analyses.

tested with the chi-square test of independence using the 1989 counts as the expected values and 2002 counts as observed values.

Agency characteristics are reported in Table C.2 (see Appendix C). As expected, the average population grew substantially in the intervening 13 years. Although geographic area data were not collected in 2002, the increase in average population is likely to be due to a combination of population growth and land annexation. Both the average number of officers and the officers per capita increased. Although the number of officers had a proportionally larger increase, it was not statistically significant while the number of officers per capita increase was statistically significant. Reviewing the data on number of officers, it was apparent that large outliers were inflating the standard error of the mean. Using only agencies with fewer than 10,000 officers in 1989 indicated a statistically significant average increase (n=52, Table C.2, note D). Civilianization, measured as the percentage of employees that are civilians, remained stable.

As expected, significantly more minorities and females are working in law enforcement in respondent agencies while the proportion of white officers has declined. This illustrates the trend observed by Langworthy, et al. (1995) has continued. Black, Hispanic, and officers of other races, as well as females, have all made noticeable gains as white officers have dropped from 75% to 66% of officers on average. Although it appears that college graduates as a proportion of officers has also increased, confidence in this trend was not substantiated based on the small number of respondents, but is in concordance with a modest trend observed elsewhere (Hickman and Reaves, 2003; Carter, et al. 1989.).

The number of hours in a standard work week, the mean mandatory retirement age (where relevant), and the mean required years of service for retirement all remained stable. Average pay for a five-year veteran patrol officer rose 39% between 1989 and 2002. This represents a significant increase in dollars, but an amount that did not keep pace with the national rate of inflation of 45% for the same period¹² (U.S. Department of Labor, 2005).

Recruiting and Screening

Only 32 agencies provided usable data on the number of applicants for sworn officer positions in 2002 (Table C.3, see Appendix C). Although there was a substantial decrease in the mean number of applicants in that set of agencies (3,113 applicants in 1989 compared to 1,949 applicants in 2002), the change was not statistically significant.¹³ A Wilcoxon Signed Ranks test¹⁴ of the difference in the number of agencies

¹² Based on the national Consumer Price Index.

¹³ A major limitation of this study was the small sample size associated with our test of the "cop crunch" hypothesis. With a sample of only 32 agencies containing both 1989 and 2002 data, even large differences might not be statistically significant. Therefore, our observed drop of 1,164 applicants

whose number of applicants increased (n=11) compared to those that decreased (n=20; there was one tie) failed to reject the hypothesis of no change. It is worth noting that both the number of applicants dropped, and the percentage of applicants hired also fell – albeit not significantly. If this pattern is indicative of a broader trend, it may indicate a form of the Cop Crunch that could not be discerned from the 2002 cross-section alone. That is, a noticeable reduction in applicants has occurred. And while agencies are still capable of filling positions based on the minimum standards, it is creating hardships for using higher entry standards.

Examining advertising strategies (Table C.4, see Appendix C) uncovers only one significant change. Radio was used less often in 2002 than in 1989. The order of prevalence of methods remains almost unchanged as a majority of agencies continue to advertise via newspapers, radio, television, and posters. Of the six advertising categories, four decreased in use. Potentially, this marks a shift toward more targeted forms of advertising and recruiting.

Table C.5 (see Appendix C) demonstrates several positive shifts in the use of special recruiting strategies to target specific groups. Women, military veterans, four-year college graduates, and people with prior police service were all targeted by significantly more agencies in 2002.

Applicant screening characteristics have not changed, with two significant exceptions (Table C.6, see Appendix C). The number of agencies that require residency has decreased from 36.1% to 19.7%. Also, only 33.3% of agencies require a “clean criminal record” compared to 51.7% in 1989. The ambiguity of the term “clean criminal record” makes it uncertain that it is interpreted the same way by different respondents over time and across agencies. However, this pattern does fit with anecdotal evidence that screening standards relating to prior drug use, arrests, and convictions have been lowered in many agencies.

Table C.7 (see Appendix C) lists selection procedures of interest in 1989 and indicates that only a few substantial changes have occurred. Of particular note was a large increase in drug testing, a substantial decrease in intelligence testing, and a significant decrease in use of written exams.

between 1989 and 2002 could have been statistically significant if we observed the same pattern with a larger sample.

¹⁴ The Wilcoxon Signed Ranks test is a non-parametric alternative to the paired Student's t-test, and used whenever the assumptions that underlie the t-test cannot be satisfied. Unlike a parametric statistical test, this test makes no assumptions about the frequency distributions of the variables being assessed.

3. PERF 1999-2002 descriptive data on attracting and hiring applicants

While the previous section relied on data from Strawbridge and Strawbridge's work (1990), this section uses the results from PERF's survey work alone (see earlier description of PERF survey). This section provides a descriptive look at the data on attracting and hiring applicants, and is followed by a multivariate examination (see section 4) of the factors that predict some of the key variables described in this section.

Proportions of Sworn Positions Filled

This section characterizes the extent to which agencies are able to fill their sworn positions from 1999 to 2002. An agency size variable was created using the authorized number of officers reported by agencies in the survey. Table D.1 (see Appendix D) presents the proportion of sworn positions filled by agency size and year. Using the explore function, to retrieve mean proportions by agency size group, we observed no significant change from 1999-2002 by agency size groups in filling positions. There is possibly a decrease of 1% in a couple of categories; no change in two other categories; and an increase in the final category. Smaller agencies may be slightly more successful with staffing, but the difference is minute, approximately 2% from the smallest agency category to the largest.

A similar exploration of the proportions of sworn positions filled was done by region of the country (see Table D.2 in Appendix D). No significant variation across regions within years or across years within regions was noted.

Although on average, agencies seem to have little trouble keeping their sworn positions filled (average percentage of sworn positions filled is around 96%), there is a noticeable minority of agencies (greater than 10%) that appear to have severe shortages, that is less than 90% of their sworn positions were filled on Jan 2002. Taking all agencies in aggregate (in 2002), 89 of 843 or 10.6% report staffing levels of less than 90%. Although there is no distinct pattern by agency size (see Table D.3 in Appendix D), it is apparent that some agencies are having significant difficulty in maintaining staffing levels. The problem appears to be most evident in the smallest agencies responding and the largest agencies responding. In our final year of data (2002), 15% of 237 small agencies and 16% of the 75 large agencies have less than 90% of their sworn positions filled (see Table D.3 in Appendix D).

Means and Medians for Recruiting Success Measures

This section reports estimates of the population based on weighted data. It represents agencies that reported complete data for all of the relevant variables (authorized strength and actual strength for 1999-2002, applicants, qualified applicants, and hires by race and sex for 1999-2001), and for which jurisdiction census data was available. The agencies represented in Table D.4 (see Appendix D) represent those agencies with an estimated hiring need of at least one officer from 1999 to 2001.

Hiring Success¹⁵

When comparing the success measures, all agencies are able to draw sufficient applicants and it appears that most small and medium sized agencies have sufficient qualified applicants (see Table D.4 in Appendix D). However, the agencies with over 500 officers, and state agencies have significant problems drawing sufficient qualified applicants. On average large agencies drew approximately seven applicants for each position it would fill. That figure was over eight for state agencies. However, only a fraction of those applicants passed all of the agencies qualifications for hiring in those two categories and there was less than one qualified applicant per available position.

The majority of larger mid-sized agency groups (51-100, 101-500 officers) had sufficient qualified applicants (medians = 1.76 and 1.31 respectively) but still failed to hire sufficient officers to meet the estimated need, although they were relatively more successful than the state and large agencies. Only the small agency groups on average hired sufficient officers to meet their needs. Each of the two small agency categories reported a median of one hire for each position available.

Hiring Females and Minorities

Agencies are still having difficulty attracting and hiring qualified female applicants across all agency size categories (see Table D.4 in Appendix D). Over 50% of the smallest agencies (1-20 officers) report no female applicants and no minority applicants (median = 0). Median ratios of female hires varies from 0 to 0.11; for minority hires the median varies from 0 to 0.15. The larger agencies (101-500, and over 500) had the most success in hiring females and minorities reporting medians of 11% and 10% of hires respectively for females and medians of 15% and 14% of hires were minorities respectively.

Using a Proportional Representation Index (PRI) allows us to compare the success of agencies in recruiting females and minorities relative to their representation in the jurisdiction. A score of 1.00 would indicate a 1:1 ratio for the proportion of female or minority recruits to their proportion in the population. Female recruits are very underrepresented in the applicant, qualified applicant, and hiree categories. The smallest agency category has the lowest median PRI at 0.00. The median PRI scores increase by agency size group to the largest at 0.28, with state agencies in the middle at 0.18. If agencies were generally and largely successfully hiring females that were merely qualified in preference to men who were qualified; we would expect to see the median PRI of female hires to be larger than the PRI of qualified females. These aggregate data give no indication that female candidates are receiving this kind of treatment. In all agency groups except one, the median PRI of female hires is lower than the median PRI for qualified females.

¹⁵ This section reports on the median values specified in the first three rows of Table X.

Minority recruits are better represented in the applicant, qualified applicant, and hiree categories than female recruits. The smallest agency category has the lowest median PRI at 0.00. The median PRI scores also increase by agency size group to the largest at 0.79, with state agencies in the middle at 0.53. Once again, if agencies were generally and largely successfully hiring minorities that were merely qualified in preference to non-minorities who were qualified; we would expect to see the median PRI of minority hires to be larger than the PRI of qualified minorities. This does not seem to be the case, in all agency groups except two (101-500 and state agencies), the median PRI of minority hires is lower than the median PRI for qualified minorities.

These data do not provide the individual level data that is needed to explore why females and minorities apply and or accept police officer jobs. However, the multivariate analysis section that follows attempts to provide a better understanding of those agency level factors that improve recruiting success for females and minorities.

4. Negative Binomial Models for Female Applicants, Female Hires, Minority Applicants, and Minority Hires

The data analyzed here come from above described surveys completed by a random sample of all law enforcement agencies in the United States. The response to the survey was lower than expected. Furthermore, the responses which were received often had incomplete data on the dependent hiring and applicant variables. As a result, each of the female and minority dependent variables of interest was sharply skewed to the right. The extreme skew found in this data could also be contributed to the fact that law enforcement officers tend to be white males.

The original proposal called for the use of OLS regression¹⁶ to model the effects of several variables on the dependent variables female applicants, female hires, minority applicants and minority hires. OLS assumes normally distributed residuals. This assumption was checked for each of the dependent variables and it was found that it did not hold. A common method used to "normalize" skewed data is to apply a logarithmic transformation to the dependent variable. In this case a constant (1) was also added to the dependent variables prior to the transformation because of the possibility of the dependent variable taking on a meaningful value of 0. Normality was

¹⁶ OLS stands for Ordinary Least Squares, the standard linear regression procedure. OLS regression is a statistical technique for determining a relationship between a random/dependent variable and one or more independent variables that is used to predict the value of the random/dependent variable. The relationship is expressed as an equation for a line or curve in which any coefficient of the independent variable in the equation has been determined from a sample population. OLS is a mathematical optimization technique that attempts to find a "best fit" to a set of data by attempting to minimize the sum of the squares of the ordinate differences (called *residuals*) between the fitted function and the data.

not achieved using the *ln + constant* transformation. OLS regression was thus deemed inappropriate for modeling the data.

To model the distribution of female applicants, female hires, minority applicants, and minority hires, the negative binomial regression¹⁷, an extension of the Poisson model, was used. The negative binomial regression model assumes that the dependent variable is a count of a phenomenon and overdispersion is present. Overdispersion is encountered when the conditional variance of the dependent variable is greater than the conditional mean. The negative binomial model is effective for data that is concentrated around zero as is the case with the aforementioned dependent variables. Negative binomial models also allow for what is called an exposure variable. The inclusion of an exposure variables allows the researcher to take into account the population that was "at risk" of the event happening to them. In the case of the total minority and female applications the population at risk was the corresponding female or minority population of the jurisdiction. In the case of the minority and female hire models the population at risk was the female and minority applicants within each jurisdiction.

Total Female Applications

The following model is based upon the average number of female applications for 1999-2001. Descriptive statistics for the variables included in the equation are found in Table 1. The variable Female Applications Average (FMAPAVG) is a rounded average count of female applications for 1999-2001. This variable computes an average for each agency if that agency reported valid counts for 1999, 2000, and 2001. FMAPAVG is then rounded to the nearest whole number to create Female Applications Average Rounded (FMAPAVRN). It was hypothesized that the following variables would be significant predictors of the total female applications an agency received. Starting base salary for an academy graduate (STARTPAY), Annual recruiting budget for the agency (BUDGET), Use of special recruiting strategies aimed at women (WOMEN), Requirement of two years of college or 60 credit hours (SOMECOLL), Requirement of a bachelors degree or higher (COLLDEG), Percentage of the total population with a bachelor's degree (BACHDEG), Use of special entry conditions for females (FEMPREF), and Jurisdiction unemployment rate for 16+ years old (UNEMP_T). The exposure variable used was the total number of females ages 21 to 29 in the jurisdiction

¹⁷ Negative binomial regression is a form of analysis common in event history analysis and other research involving rare events where assumptions of a normally distributed dependent variable do not apply. Negative binomial regression models were developed specifically for the kind of skewed distribution of data we are working with to answer this particular research question. This kind of highly skewed distribution seriously violates the normality assumption of OLS regression (even with log or other data transformations) and requires a negative binomial regression model.

(FEM21to29). Cases in which the average female applications were over 2 standard deviations from the mean were dropped¹⁸.

Table 1

Variable	Variable Label	N	Mean	SD	Min	Max
FMAPAVRN	Female Applications Average Rounded	267	29.70	103.57	0.00	1,015.00
STARTPAY	Starting base salary for an academy graduate	267	30,503.10	7,305.22	12,000.00	55,776.00
BUDGET	Annual recruiting budget for the agency	267	10,031.10	64,380.87	0.00	978,000.00
WOMEN	Use of special recruiting strategies aimed at women	267	0.36	0.48	0.00	1.00
SOMECOLL	Requirement of two years of college or 60 credit hours	267	0.16	0.37	0.00	1.00
COLLDEG	Requirement of a bachelors degree or higher	267	0.03	0.16	0.00	1.00
BACHDEG	Percentage of the total population with a bachelor's degree	267	0.22	0.13	0.01	0.82
UNEMP_T	Jurisdiction unemployment rate for 16+ years old	267	3.42	1.67	0.00	14.93
FEMPREF	Use of special entry conditions for females	267	0.07	0.26	0.00	1.00

As indicated in Table 2 BACHDEG (Percentage of the total population with a bachelor's degree) and BUDGET (Annual recruiting budget for the agency) are the only significant predictors in the model, alpha = .05.

Table 2

Variable	Variable Label	b	z	P-value	exp(b)
STARTPAY	Starting base salary for an academy graduate	0.0000	1.5600	0.1180	1.0000
BUDGET	Annual recruiting budget for the agency	0.0000	2.0000	0.0460	1.0000
WOMEN	Use of special recruiting strategies aimed at women	0.0029	0.0100	0.9900	1.0029
SOMECOLL	Requirement of two years of college or 60 credit hours	-0.2445	-0.8700	0.3860	0.7831
COLLDEG	Requirement of a bachelors degree or higher	-0.1397	-0.2400	0.8140	0.8696
BACHDEG	Percentage of total population with a bachelor's degree	2.4055	2.2800	0.0230	11.0836
UNEMP_T	Jurisdiction unemployment rate for 16+ years old	0.1017	1.3900	0.1640	1.1070
FEMPREF	Use of special entry conditions for females	-0.2538	-0.6800	0.4950	0.7759

¹⁸ The statistical rule of thumb for what is defined as an outlier is two standard deviations from the mean. The goal of statistics is to represent group behavior; therefore these cases were removed from the analysis. These cases were the Chicago PD and East Orange PD, NJ.

Interpretations of BUDGET (Annual recruiting budget for the agency) and BACHDEG (Percentage of the total population with a bachelor's degree) come from the exponentiation of their beta coefficients. The exp(b) value of 1 associated with BUDGET means that a one dollar increase in the recruiting budget results in a 0% increase in the number of total female applicants. Equivalently this means a dollar increase in an agency's recruiting budget increases the total number of female applicants by a factor of 1. This is an interesting finding in that the variable is significant but substantively meaningless. However, statistical significance does not guarantee substantive or clinical significance. The value of exp(b) for BACHDEG indicates that a 1 percent increase in the proportion of bachelor's degrees in the overall population increases the total female applicants by a factor of 11.08 or by 10 times on average. This also is a finding which should be interpreted with caution given the sampling issues with the data and the non-response issues on the dependent variables.

Total Female Hires

The dependent variable used to model the total female hires was an average across three years computed in the same manner as the total female applications variable. The same independent variables used in the total female applications model were used in this model. The descriptives for the dependent and independent variables are found in Table 3. Cases in which the average female hires were over 2 standard deviations from the mean were dropped¹⁹. The exposure variable used the total number of females ages 21 to 29 in the jurisdiction (FEM21to29).

Table 3

Variable	Variable Label	N	Mean	SD	Min	Max
FMHRAVRN	Total female hires average rounded	240	2.56	4.72	0	30
STARTPAY	Starting base salary for an academy graduate	240	32,614.71	6,794.92	15,080	56,362
BUDGET	Annual recruiting budget for the agency	240	9,128.37	26,924.31	0	350,000
WOMEN	Use of special recruiting strategies aimed at women	240	0.44	0.5	0	1
SOMECOLL	Requirement of two years of college or 60 credit hours	240	0.2	0.4	0	1
COLLDEG	Requirement of a bachelor's degree or higher	240	0.03	0.17	0	1
BACHDEG	Percentage of the total population with a bachelor's degree	240	0.24	0.11	0.04	0.69
UNEMP_T	Jurisdiction unemployment rate for 16+ years old	240	3.54	1.56	0.63	14.93
FEMPREF	Use of special entry conditions for females	240	0.1	0.29	0	1

¹⁹ These were the Miami Beach Police Department, Broward County Sheriffs Office, Baltimore City Police Department, Detroit Police Department, Chicago Police Department, and the Honolulu Police Department.

As indicated in Table 4 there are two significant predictors of female hires: STARTPAY (starting base salary for an academy graduate) and COLLDEG (requirement of a bachelors degree or higher), alpha = .05. However, STARTPAY (starting base salary for an academy graduate) has the same interpretation issue encountered in the female applications model. It is statistically significant but has no substantive meaning. The coefficient associated with the COLLDEG variable tells us that when an agency requires recruits to have at-least a bachelor's degree the number of female hires increases by a factor of 2.84 or by 184%.

Table 4

Variable	Variable Label	b	Z	P-value	exp(b)
STARTPAY	Starting base salary for an academy graduate	-0.00004	-2.212	0.027	1
BUDGET	Annual recruiting budget for the agency	0	-0.525	0.6	1
WOMEN	Use of special recruiting strategies aimed at women	-0.04558	-0.207	0.836	0.9554
SOMECOLL	Requirement of two years of college or 60 credit hours	-0.22419	-0.84	0.401	0.7992
COLLDEG	Requirement of a bachelors degree or higher	1.04381	2.049	0.04	2.84
BACHDEG	Percentage of the total population with a bachelor's degree	1.17345	1.123	0.262	3.2331
UNEMP_T	Jurisdiction unemployment rate for 16+ years old	-0.07333	-0.878	0.38	0.9293
FEMPREF	Use of special entry conditions for females	-0.03201	-0.092	0.927	0.9685

Total Minority Applications

The dependent variable in the total minority applicant model was an average across three years computed in the same manner as the total female applications variable. The same independent variables used in the total applications model were used in this model except WOMEN FEMPREF were dropped and the inclusion of Use of special recruiting strategies aimed at minorities (MINORITY) and Use of special entry conditions for minorities (MINPREF). The descriptives for the dependent and independent variables are found in Table 5. Cases in which the average minority applicants were over 2 standard deviations from the mean were dropped²⁰. The exposure variable used was MINPOP1 (the total minority population in the jurisdiction).

²⁰ These were the Prince Georges County PD, Broward County Sheriffs Office, San Antonio PD, Miami Beach Police Department, Boston Police Department, Baltimore Police Department, Chicago Police Department, Las Vegas Police Department, Rochester Police Department (New York), Pennsylvania State Police, and the Albuquerque Police Department.

Table 5

Variable	Variable Label	N	Mean	SD	Min	Max
MIAPAVRN	Total minority applicants average rounded	260	16.49	47.18	0.00	300.00
MINORITY	Use of special recruiting strategies aimed at minorities	260	0.37	0.48	0.00	1.00
MINPREF	Use of special entry conditions for minorities	260	0.04	0.19	0.00	1.00
STARTPAY	Starting base salary for an academy graduate	260	30,361.99	7,330.91	12,000.00	55,776.00
BUDGET	Annual recruiting budget for the agency	260	4,752.73	12,464.60	0.00	100,000.00
SOMECOLL	Requirement of two years of college or 60 credit hours	260	0.17	0.37	0.00	1.00
COLLDEG	Requirement of a bachelors degree or higher	260	0.03	0.16	0.00	1.00
BACHDEG	Percentage of the total population with a bachelor's degree	260	0.22	0.13	0.01	0.82
UNEMP_T	Jurisdiction unemployment rate for 16+ years old	260	3.41	1.70	0.00	14.93

As indicated in Table 6 the only significant predictor of minority hires is STARTPAY (Starting base salary for an academy graduate), $\alpha = .05$. However, it has the same interpretation issue encountered in the female applications model. STARTPAY (Starting base salary for an academy graduate) is statistically significant but has no substantive meaning.

Table 6

Variable	Variable Labels	b	Z	P-value	exp(b)
MINORITY	Use of special recruiting strategies aimed at minorities	-0.3428	-1.4480	0.1480	0.7098
MINPREF	Use of special entry conditions for minorities	-1.0916	-1.8400	0.0660	0.3357
STARTPAY	Starting base salary for an academy graduate	0.0000	2.0750	0.0380	1.0000
BUDGET	Annual recruiting budget for the agency	0.0000	0.8120	0.4170	1.0000
SOMECOLL	Requirement of two years of college or 60 credit hours	-0.4537	-1.4890	0.1360	0.6353
COLLDEG	Requirement of a bachelors degree or higher	0.2667	0.4650	0.6420	1.3056
BACHDEG	% of the total population with a bachelor's degree	1.5368	1.5250	0.1270	4.6496
UNEMP_T	Jurisdiction unemployment rate for 16+ years old	0.0870	1.0640	0.2870	1.0909

Total Minority Hires

The dependent variable used to model the total minority hires was an average across three years computed in the same manner as the total female applications variable. The same independent variables used in the total minority applications model were used in this model. The descriptives for the dependent and independent variables are found in Table 7. Cases in which the average minority hires were over 2 standard

deviations from the mean were dropped²¹. The exposure variable used was MINPOP1 (the total minority population in the jurisdiction).

Table 7

Variable	Variable Label	N	Mean	SD	Min	Max
MIHRAVRN	Total minority hires average rounded	208	2.76	6.54	0	56
MINORITY	Use of special recruiting strategies aimed at minorities	208	0.56	0.5	0	1
MINPREF	Use of special entry conditions for minorities	208	0.06	0.23	0	1
STARTPAY	Starting base salary for an academy graduate	208	32927	6556	19000	56362
BUDGET	Annual recruiting budget for the agency	208	14629	72961	0	978000
SOMECOLL	Requirement of two years of college or 60 credit hours	208	0.21	0.41	0	1
COLLDEG	Requirement of a bachelors degree or higher	208	0.03	0.18	0	1
BACHDEG	Percentage of the total population with a bachelor's degree	208	0.25	0.11	0.04	0.69
UNEMP_T	Jurisdiction unemployment rate for 16+ years old	208	3.57	1.39	0.63	9.46

As indicated in Table 8 the significant predictors of minority hires are BUDGET (Annual recruiting budget for the agency), SOMECOLL (Requirement of two years of college or 60 credit hours), and COLLDEG (Requirement of a bachelors degree or higher), alpha = .05. However, BUDGET (Annual recruiting budget for the agency) has the same interpretation issue encountered with the variable STARTPAY in the minority applications model. BUDGET (Annual recruiting budget for the agency) is statistically significant but has no substantive meaning. The exp(b) value associated with the SOMECOLL variable indicates that when an agency requires that their applicants have two years of college or 60 credit hours, the total number of minority applicants decreases by a factor of .47 or by 53%. The exp(b) value associated with the COLLDEG variable indicates that when an agency requires that their applicants have a college degree or higher the total number of minority applicants increases by a factor of 4, or 300%.

Table 8

Variable	Variable Label	b	Z	P-value	exp(b)
MINORITY	Use of special recruiting strategies aimed at minorities	-0.225	-0.872	0.383	0.7985
MINPREF	Use of special entry conditions for minorities	-0.46966	-0.939	0.348	0.6252
STARTPAY	Starting base salary for an academy graduate	-0.00002	-1.269	0.205	1
BUDGET	Annual recruiting budget for the agency	0	4.597	0	1
SOMECOLL	Requirement of two years of college or 60 credit hours	-0.75267	-2.411	0.016	0.4711
COLLDEG	Requirement of a bachelors degree or higher	1.38805	2.612	0.009	4.007
BACHDEG	Percentage of the total population with a bachelor's degree	-0.64146	-0.576	0.565	0.5265
UNEMP_T	Jurisdiction unemployment rate for 16+ years old	0.06157	0.675	0.5	1.0635

²¹ These were the Chicago Police Department, Honolulu Police Department and the Detroit Police Department.

5. Phone Interviews with Agencies Pertaining to Effective Practices in Recruitment and Retention

Agency Application, Recruiting and Screening Techniques

General recruiting techniques: Agencies reported that they use a host of innovative and unique techniques to recruit qualified candidates. With the private sector, now more than ever, providing competition for highly skilled candidates, today's law enforcement agencies find that they must be more proactive in seeking out officers and not simply wait for qualified candidates to come to them via the civil service. Phone respondents reported a number of techniques used to seek out candidates.

For instance, the Torrance Police Department set up a recruiting booth at a hockey game between the Los Angeles Kings and the Anaheim Mighty Ducks. The booth featured a continuously running video about the police department, and police officers were present to answer questions from applicants. The idea here was to target recruitment efforts towards those that are attracted to sports and market the physical elements of policing.

Other agencies take a strategic approach to determining how their recruitment efforts should take shape. The O'Fallon Police Department is part of a consortium of four nearby departments. As a group, these five agencies travel to college career fairs, distribute flyers to all colleges within a three-state radius, and have established a recruiting website together to help find recruits. In this way, smaller agencies are able to pool their efforts in a regional initiative to find quality recruits. The Mobile Police Department has a strategic committee that is tasked with coming up with new ideas for recruiting. This committee, comprised of two captains, three lieutenants, a corporal, and a strategic planner for the University of Alabama, meets twice a month to assess the department's recruiting strategy. Discussion focuses on what is working, what strategies need to be adjusted, and what needs to be done for the future. By doing so, the department achieves two things: they are able to sustain recruitment efforts by constantly focusing attention on hiring, and they are able to identify ineffective strategies and replace them with ones that have more merit.

The Alaska State Troopers (AST) group focuses their screening efforts on military personnel. Recruiters visit a military base once a month to talk to those getting out of the military and ask them to consider a career in law enforcement. The AST also mails military candidates a suggested physical fitness regime prior to enrolling in the academy. Finally, AST participates in the Army PAYS (Partnership for Youth Success) program. When a soldier chooses their Military Occupational Specialty, and it is one that would qualify them to be a trooper, they can join AST if they are qualified and if there's an opening once they've completed three years of service with the Army.

General screening and application techniques: Agencies also reported that they have utilized a number of creative ways to screen quality applicants. Several agencies help applicants with the physical requirements, which might disqualify an otherwise capable applicant. For example, the Wichita Kansas Police Department provides all recruits with a brochure detailing their physical agility test and course to encourage applicants to practice before the test to increase the pass rate. The San Antonio Police Department offers a physical fitness workshop that helps prepare applicants for the physical agility test (and the department also offers a workshop on the written test).

Other agencies find it easier to find quality applicants if they arrange to work around the schedules of busy applicants. The Baltimore Police Department offers off-site testing and expedited application processing for all applicants. On Tuesdays, the department offers the candidate test in the evenings, for those who can't make it during normal work hours. Every Saturday, testing for the physical agility section of the recruiting process is held for those whose schedules won't permit them to come in during the week. They also make special arrangements for anyone who cannot perform any aspect of the hiring process during normal hours. In this manner, quality recruits are not lost or discouraged from applying because their work schedules do not give them the flexibility to apply to be an officer.

Working with youth

The Port Gibson Police Department in Mississippi was unique in agencies surveyed in that it had a long-range strategy to identify and recruit officers. The department actually starts grooming future police officers in elementary school. Officers go to the elementary schools and mentor students by educating children about the duties of being a police officer and encourage students to abide by the law. This multifaceted approach offers several low-cost benefits to law enforcement and the community: it promotes positive interaction between law enforcement and youth at an early age; it helps garner interest in policing as a career by planting the seed in young minds early on in life; and it instructs youth on good citizenship. Such a program could readily be performed in school districts with School Resource Officers/Deputies. Departments without these personnel in place could still benefit by having officers spend a few hours a month to interact with schoolchildren in order to groom potential recruits and to build stronger perceptions of law enforcement by youth.

Online recruiting ideas

With today's increasingly tech-savvy youth, departments of all sizes should give serious consideration to creating a website and having a page dedicated to recruitment. Such a site should contain all pertinent information, such as minimum requirements, testing dates, physical fitness test requirements, academy information, and other necessary information. As an example, the Philadelphia Police Department has a very organized and detailed recruitment page that gives prospective applicants the

information they are looking for in an easy to navigate format.

http://www.ppdonline.org/career/career_jobdesc.php

One innovative web recruiting idea comes from the United Kingdom. A website (<http://www.policecouldyou.co.uk/default.asp?action=article&ID=1>) has been established that provides comprehensive information on becoming a police officer and provides links to individual police agencies (regional, metropolitan, and specialized, such as transit police), explains the roles that police play, gives descriptions of all police ranks and duties (including administrative functions such as dispatch and crime analysis) as well as an up to date list of agencies with vacancies. Animated mock policing scenarios are even on the website for prospective recruits to determine if the applicant would be interested in policing. Such a website could be readily applicable for recruitment on a regional level (covering municipal policing as well as the county sheriff's office, corrections, transit police, harbor police, bailiff/court personnel, etc.) so that each agency is able to coordinate their recruitment efforts and collectively recruit uniformly qualified personnel.

Specialized Application, Recruitment and Screening Techniques: Women and Minorities

Many law enforcement agencies have come to realize that there is no "one size fits all" approach to recruitment, and have consequently decided to tailor their recruitment message to the desired audience. Specifically, as departments begin to diversify, they come to realize that traditional recruiting strategies may not work when attempting to recruit women and minorities. Issues such as potential mistrust of the police (minorities) and concerns about "making it" in a traditional masculine environment (women) were addressed so that they could attract talented and qualified applicants from diverse backgrounds. Below, we discuss phone respondents' efforts to recruit women and minorities.

Recruiting techniques for women applicants: Several agencies interviewed recruited at events and venues of particular interest to women. The Wichita Police Department attends a women's fair at the local civic center. At the fair, female officers talk to possible female recruits and answer any questions they have. The Alaska State Troopers visits the Alaska Women's Show once a year to recruit and they advertise on websites that are strictly for jobs for women, such as the National Center for Women in Policing website and womentechworld.org. The Prescott Valley Police Department sends recruiters to the Female Police Executive Association in Arizona.

Athletic events and activities of a physical nature are a top recruiting locale for several agencies interviewed. The Wichita Police Department places recruitment posters in and around women's fitness clubs in order to attract physically fit recruits. The Virginia State Police recruits at women's collegiate athletic events. Each division of the VSP has a full-time recruiter who visits colleges in their territory and goes to athletic

events. Since the women targeted are athletes, the VSP's philosophy is that they might be more inclined to pursue a physical career like policing. VSP recruiters also believe it is a good program for the men being recruited on campus, because they are used to seeing women on the playing field.

Several agencies reported utilizing advisory committees to discuss the best way to attract women. The Las Vegas Metropolitan Police Department formed a Sheriff's Recruitment Council for Women that determines the best places to advertise positions for women recruits and assists with overall recruitment strategies directed towards women. The Nebraska State Patrol has coordinated a group of women citizens and officers to brainstorm on new and innovative ways to attract women to the police department.

The Baltimore Police Department is unique in that it did not report having a formal recruitment effort directed at women in place, but is able to foster an environment that is conducive to successful recruiting by using its female officers to garner interest in the department and serve as mentors. Officers go out and speak with females to generate interest in becoming an officer. Many women they encounter have fears of being out on the street, so the officers relate their own personal experiences with them and engage in mentoring and counseling. During the education and training sections of the recruitment process, more mentoring occurs. The department has more females now than ever before (550 as of the interview date) and many of them are in command positions, which is an inspiration to women officers and applicants. So while there is no set, formal program in place to aggressively target and hire women, the department has an agency-wide commitment to make female officers feel welcome.

Screening techniques for women applicants: The Alaska State Troopers have a program (on hold as of November 2004, the date of the interview) in place where the AST would obtain guest passes at a local gym that were given to (primarily) female applicants. They could go to the gym on Mondays, Wednesdays and Fridays from 3-4:30 pm and go over the academy fitness requirements and work out with AST personnel. After 4:30, the trooper conducting the class left, and applicants had the gym to themselves. While the program was open to all applicants, AST staff believes the program was of considerable benefit to females: applicants had a sense of camaraderie, and they could ask questions of the trooper in charge and generally received extra attention.

Online resources for attracting female officers: Agencies may wish to consider a separate page on their website (if applicable) that targets female applicants.

- The Mobile Police Department utilizes such a web page (as of this writing at <http://www.cityofmobile.org/html/departments/police/ladies.html>) that is designed to answer questions of prospective female officers and allay

any concerns that they have. It highlights women in command positions, has a “meet the women of the MPD subpage,” and has a question and answer section.

- The National Institute for Women in Trades, Technology, and Science has a page on their website (as of this writing http://www.iwitts.com/html/recruiting_women_officers_-_fa.html) that offers techniques and strategies to attract women to careers in policing. This website offers a fact sheet on their website for agencies wishing to increase the numbers of females in their ranks.
- Similarly, the LAPD has a “Women in the LAPD” page on their website (as of this writing at <http://www.lapdonline.org/portal/jointheteam.php>, and then click on the “Women in the APD” link) that highlights female LAPD command and administrative staff, and offers further links for preparing for a career with the LAPD.

Helpful tips for recruiting women officers: Based on our interviews a couple of key ideas emerged for recruiting women officers. First, female officers could be prominently displayed on recruitment brochures and posters. Next, female officers could also be involved in outreach efforts such as job fairs, so that female candidates can ask questions and get answers from that officer’s own experience and perspective.

Recruiting techniques for minority applicants: The Chicago Police Department has received the support of clergy in the city to assist in recruiting minority applicants as well as rebuilding trust between the police and minority communities. The department believes that having clergy inform their parishioners about careers in law enforcement reach an audience with strong moral and ethical convictions. The department solicited the assistance of approximately 2,000 clergy members in order to fill vacancies. In addition to recruiting, clergy will assist applicants through the entire hiring process (such as helping them prepare for the entrance exam and getting them into shape for the department’s physical requirements). Clergy are willing participants with the police, and believe that their efforts will lead to a more diverse department. Such a program could be of benefit for those seeking to employ more minorities in a jurisdiction where there has been previous negative interaction between police and the minority community: clergy, who are in a position of trust and respect, can help allay any concerns and skepticism about the police.

The Wichita Police Department sends recruiters out to cultural functions such as the local Cinco de Mayo festival and the Martin Luther King, Jr. celebrations to attract minorities to police work. Officers are at hand to answer questions and offer advice to possible applicants.

Several agencies report forming task forces and advisory groups to guide their outreach to minority applicants. The Wichita Police Department has a Community

Recruiting Committee in which members of the community meet with the Chief and Deputy Chief. The community tries to recruit minorities within their neighborhoods for the police department. The Nebraska State Patrol has designated a group of minorities made up of community members and police officers and is tasked with developing new ideas to attract minorities to the department. The Las Vegas Metropolitan Police Department has formed the "Sheriff's Recruitment Council for Minorities" which helps find minority recruits and identifies the most successful places to recruit minorities. Hispanic members of the council help to recruit Hispanics by finding places to advertise and recruit. African-American and Asian members do the same for their respective communities. Similarly, the Burlington Police Department utilizes community consultants to go into ethnic areas of the city to recruit minority citizens. For example, one community consultant asked members at his mosque to look for people that would be interested in law enforcement careers.

Agencies also reported partnering with local minority organizations to assist in recruiting. The Albuquerque Police Department has partnered with the NAACP and the Latin American Committee (LAC), and has also moved a recruiting station into a largely minority area in order to generate more recruits. The Waukesha Police Department also engages minority organizations to help recruit qualified minority applicants.

The Hillsborough County Sheriff's Office has an innovative partnership with the Tampa Housing Authority (THA) to recruit minorities. The department, with the assistance of the THA, recruit at subsidized, low income housing. The THA pays for job fairs at the THA office as well as recruitment advertising.

The Alaska State Troopers actively recruits in the smaller, more rural areas of the state, as these frequently have Native (minority) citizens, and most police work in these areas is handled by the AST as opposed to city police. The AST is trying to make outreach to every village in the state.

Helpful tips for recruiting minority officers: Based on our interviews a couple of key ideas emerged for recruiting minority officers. First, minority officers could be prominently displayed on recruitment brochures and posters. Next, minority officers should also be involved in outreach efforts such as job fairs, so that minority candidates can ask questions and get answers from that officer's own experience and perspective.

IV. DISCUSSION AND CONCLUSION

Headlines in the media and law enforcement periodicals in the late 1990s and continuing into the early 21st century warned of a hiring crisis in law enforcement—referred to by some as the "cop crunch." A related concern receiving attention during

that time frame was a perceived difficulty in recruiting women and minority applicants. These are significant problems which could undermine the ability of law enforcement to protect our nation's citizens and to reverse important gains in efforts to increase the representation on police forces of minorities and women.

In response to this potential problem, PERF conducted this project, with NIJ funding, to examine the nature and extent of the "cop crunch" and identify department-level policies/practices that facilitate the recruiting and hiring of quality personnel, and that facilitate the recruiting and hiring of quality women and minorities. We collected two sources of data: a national survey and follow-up phone interviews. We conducted a national survey of law enforcement agencies to examine the extent to which law enforcement agencies are able to fill their sworn positions and hire women and minorities. We also used the national survey to identify and examine the agency-level factors and jurisdiction-level factors that impact hiring rates and the rates at which minorities and women are hired. As pointed out earlier, our low survey response rate of 46.1% was lower than we expected. While we did conduct non-response analysis which suggested that the impact of this low response rate on our substantive results might have been minimal, this low rate is still a concern and a potential limitation of this study. Additionally, we conducted phone interviews with a subset of agencies to examine, in more depth, effective recruitment/hiring programs within agencies and on specific innovative strategies.

What emerges from our analyses first is a picture of recruitment efforts, and application/selection procedures being used by the nation's local and state law enforcement.

Recruitment efforts: Some of the key highlights from our survey relating to recruitment efforts include the scarcity of resources dedicated to recruitment. With the exception of the State Police Departments and the larger agencies with greater than 500 officers, only a small proportion of the responding agencies have a permanent recruitment unit. The smaller agencies more typically had either one employee with recruitment responsibility or part-time recruiters. Also, most of the agencies in the sample had fairly modest budgets for recruiting outside personnel costs. Further, the majority of respondents indicated that their agency did not provide awards for those officers that referred successful applicants.

The most commonly reported recruitment methods included newspaper ads, career fairs and the Internet. These were typically done in isolation of other departments, with the majority of agencies reporting that they did not engage in joint recruitment efforts with other law enforcement agencies. Also, about half of the responding agencies use one of their own police programs as a means to recruit young people for a career with their agencies, with the larger agencies reporting greater use of this approach than the smaller agencies. The police programs most commonly utilized for this purpose across all agencies were college internships, explorer programs,

and school resource officers. Across all the responding agencies, the most commonly targeted group were those with previous police experience, followed by college graduates, racial and ethnic minorities and women. The larger agencies were also more likely to target these groups than the smaller agencies.

Application procedures: Another factor potentially associated with hiring problems is the application procedures in place for hiring officers. Respondents were asked how many weeks it takes from the submission of an application to the acceptance of an offer of employment. The data indicate that, the larger the agency, the longer the process takes. The bulk of responding agencies indicated that they accept applications continuously or only when a vacancy exists, as opposed to a particular schedule (e.g., once every six months). The majority of respondents did not require that applicants or sworn officers live in the agency service area, but these agencies did typically maintain the following requirements for applicants: must be a U.S. citizen, must have a driver's license, must have a high school diploma, must meet a minimum vision requirement, may not have a criminal record, and may not have a dishonorable discharge from armed forces. The vast majority of agencies did not require individuals to submit their applications at law enforcement or other government facilities. However, most of the responding agencies did not supply applicants with study or reference materials to help them prepare for tests and other selection procedures.

Selection procedures: Our survey included an extensive number of questions on the selection procedures used by law enforcement agencies in hiring officers/deputies. One condition which could greatly affect the selection of officers is the presence of a court order or consent decree, or a specific Equal Employment Opportunity Commission (EEOC) plan affecting hiring decisions. Very few respondents indicated that their agencies were under this scrutiny, but, of those that did, a slightly higher percentage of respondents were from larger agencies, as well as the State Police agencies.

The survey also contained a question that asked respondents to specify the order in which a series of selection procedures take place. The first procedures to take place in the selection process were a civil service exam and a written entrance exam. Although the precise order may differ, the data indicates that subsequent steps include a criminal records check and a fitness/agility test, followed by the assessment center and practical tests. With some consistency, the final steps in the process often include a medical exam, a psychometric test, a psychologist interview, and a drug test. Regarding pay and benefits, the data indicate that the base starting salary for an officer/deputy generally increased as the size of the agency increased. Agencies with 501 or more officers were an exception to this, with the second lowest base starting. The vast majority of all agencies indicated that they paid their recruits a salary during training, offered a uniform allowance or provided them, paid the tuition for recruit training at an external academy/school, offered salary increases for college degrees

and/or had take-home cars. Additionally, most respondents indicated that their agencies allow officers/deputies to work overtime and/or work secondary employment.

Replication of Strawbridge and Strawbridge: Next, we compared our survey results (2002) with those achieved earlier by Strawbridge and Strawbridge (1989 survey). During the intervening 13 years, the average number of officers per capita significantly increased. As expected, significantly more minorities and females are working in law enforcement; the proportion of white officers has declined in the PERF survey. These findings indicate that the trends discovered by Langworthy et al. (1994) have continued. Black, Hispanic, and officers of other races, as well as females, have all made noticeable gains, as white officers have dropped as a percentage of officers on average.

With regard to the hypothesized *cop crunch*, we did not find sufficient evidence to either support or to reject the existence of the much discussed Cop Crunch. That is, we *do not* have evidence that the number of applicants for sworn officer positions in 2002 was statistically different than 1989. Although there was a substantial decrease in the mean number of applicants by 2002, the change was not statistically significant. However, there were a number of reporting agencies that did have fewer applicants, supporting the belief that at least some agencies are having difficulty attracting applicants and are under some form of a "crunch." Also, Department of Justice statistics on hiring trends during this period indicate that agencies had a variety of experiences in attracting applicants, hiring applicants and retaining officers. Department of Justice statistics demonstrate that from 1996-2000, only 22% of agencies nationwide experienced a reduction in force, while the majority either remained stable or grew (Bureau of Justice Statistics, 2000). Another study reveals that from 1996-1999 slightly more than 50% of agencies grew in size while the rest remained level (Koper, 2004).

There have been several positive shifts in the use of special recruiting strategies to target specific groups. In fact, the current survey confirms results achieved by Langworthy, et al. (1995) that indicated minorities and females are targeted for recruitment. Women, military veterans, four-year college graduates, and people with prior police service were all targeted by significantly more agencies in 2002 than previously. It appears that college graduates as a proportion of officers has also increased in concordance previous findings.

Next, applicant screening characteristics have not changed, with two significant exceptions. The number of agencies that require residency has significantly decreased and the number of agencies requiring a "clean criminal record" has significantly decreased. However, increases were observed with regard to drug testing. Other statistically significant differences that occurred between 1989 and 2002 included reductions in requirements for written tests, and the use of intelligence tests. Considering that agencies are concerned about attracting applicants, police salaries

have not kept pace with inflation over the past 13 years. Additionally, agencies have not improved the efficiency of their screening and hiring process; it still takes nearly six months from time of application to employment.

Descriptive data on attracting and hiring applicants

Next, we described the PERF survey data on attracting and hiring applicants. Most agencies seem to have little trouble keeping their sworn positions filled (average percentage of sworn positions filled is around 96%). We observed no significant change from 1999-2002 by agency size groups in filling positions. Also, no significant variation was observed in filling positions across regions. However, we did uncover a noticeable minority of agencies (greater than 10%) that appear to have severe shortages, that is less than 90% of their sworn positions were filled on January 2002. Although there is no distinct pattern by agency size, it is apparent that some agencies are having significant difficulty in maintaining staffing levels, with somewhat greater problems appearing with the smallest agencies and the very largest agencies.

Our data suggest that all agencies in our sample are able to draw sufficient applicants and it appears that most small and medium sized agencies have sufficient qualified applicants. However, the agencies with over 500 officers, and state agencies have significant problems drawing sufficient qualified applicants. Only the small agency groups on average hired sufficient officers to meet their needs. Agencies are also having difficulty attracting and hiring qualified female applicants across all agency size categories. Female recruits are very underrepresented in the applicant, qualified applicant, and hiree categories. The larger agencies (101-500, and over 500) had the most success in hiring females. These aggregate data give no indication that qualified female candidates are receiving any kind of special consideration in the hiring process.

Minority recruits are better represented in the applicant, qualified applicant, and hiree categories than female recruits. The larger agencies (101-500, and over 500) had the most success in hiring minorities. Also, our data give no indication that qualified minor candidates are receiving any kind of special consideration in the hiring process. While these are the overall patterns, they should not necessarily be interpreted to mean that agencies are not attempting to diversify their personnel by giving preferential treatment to females and minorities since individual agencies certainly may be. Also, the same social pressures that limit the number of female and minority applicants are likely to disproportionately reduce the number of females and minorities who subsequently accept an offer of employment.

Factors that impact the number of applicants and hiring rates for females and minorities: Concerns for diversity in recruiting and hiring have become heavily linked with efforts to enhance the applicant pool in general. Some often cited reasons for inadequacies in hiring women and minorities include decreasing numbers of qualified applicants, and individual characteristics among recruits, such as past drug use and limited life experience (Shusta et al. 1995). Others also point to a competitive market and higher education requirements as combining to cause qualified women and

minority applicants to choose private sector jobs over law enforcement (Dantzker, 2000; Decker & Huckabee, 2002). Still others point to concerns about institutional racism and policies non-supportive of women and minorities as reasons for these problems (Shusta, Levine, Harris, & Wong, 1995; Roberg, Crank, & Kuykendall, 1999).

Other macro-level factors have also been discussed in the context of gender and racial representation. A survey of large police departments indicates that a larger percentage of African American officers relates to higher percentages of African American citizens in the jurisdiction (Hochstedler & Conley, 1986). While a higher percentage of women is related to a larger department, which in turn is related to being located in a larger jurisdiction, larger departments were also more likely to have a stated strategy for recruiting women (IACP, 1998). Agency level decisions and policies related to the advertising of job openings, the requirement to pass a written exam, and the requirement of college credits may also affect gender and racial representation. (Chivers, 2001b).

Despite these previous findings, our multivariate analysis of agency-and jurisdiction-level factors revealed only one jurisdiction-level significant factor and no agency-level significant factors. That is, jurisdictions with higher percentages of the total population with a bachelor's degree were associated with a larger number of female applicants. Next we examined the total number of female hires. The main variable that significantly impacted the total number of females hired was the requirement of a college degree. When an agency requires recruits to have at-least a bachelor's degree, the number of female hires also increases. No other jurisdiction-level factors were significant, nor were any agency-level factors, significant predictors in this model.

Based on our phone interviews a number of promising practices emerged in the area of recruiting women. One method cited by several agencies was direct recruiting at events geared towards women, such as women's trade shows or women's fairs. Several agencies also reported recruiting at women's fitness clubs or women's athletic events, as the women who attend these venues are likely to be physically fit and thus more inclined to consider a career in law enforcement. Several other agencies formed advisory committees to determine the most effective ways to recruit women. One respondent noted that while they do not have any formal programs in place, the agency has a commitment to increasing opportunities for female officers, so female recruits can see fellow females in positions of authority.

Next, we examined the total minority applicant model. There were two substantively meaningful agency-level predictor variables in the minority hires model. First, when an agency requires that their applicants have two years of college or 60 credit hours, the total number of minority applicants decreases. Second, when an agency requires that their applicants have a college degree or higher the total number

of minority applicants increases. No other jurisdiction-level factors were significant, nor were any agency-level factors significant predictors in the minority hires model.

Based on our phone interviews a number of promising practices emerged in the area of recruiting minorities. In terms of recruiting minorities, several agencies reported forming task forces and advisory groups to determine the best strategies to recruit minorities. One agency reported bringing different minority groups onto the task force, and then using a person of each group to recruit fellow minorities (e.g., a Hispanic member would go out into the Hispanic community to help find places to advertise and recruit; an Asian member would do the same for the Asian community, etc.). In a similar vein, several agencies reported partnering with minority organizations such as the NAACP to help recruit minority applicants.

Concluding comments: Despite the gloom and doom predictions from the media and among law enforcement practitioners; we did not find sufficient evidence to either support or to reject the existence of the much discussed *Cop Crunch*.²² However, there were a number of agencies in our comparative study with the Strawbridge and Strawbridge (1990) data that did have fewer applicants, supporting the belief that at least some agencies are having difficulty attracting applicants. Also, when examining the PERF survey data on attracting and hiring applicants, we did uncover a noticeable minority of agencies (greater than 10%) that appear to have severe shortages, that is less than 90% of their sworn positions were filled on January 2002. Although there is no distinct pattern by agency size, it is apparent that some agencies are having significant difficulty in maintaining staffing levels, with somewhat greater problems appearing with the smallest agencies and the very largest agencies. Examining the PERF survey results on recruiting success also yields a less than optimistic picture. While our data suggest that most of the agencies in our sample are able to draw sufficient applicants, the agencies with over 500 officers and state agencies have significant problems drawing sufficient qualified applicants. Agencies are also having difficulty attracting and hiring qualified female applicants across all agency size categories, and concerns still remain about the hiring of minority applicants. These data provide reasons to be concerned about the future of police staffing for many agencies as officers retire or move into a different occupation, these statistics indicate that it may be difficult to replace many of the officers. Likewise, the ability to hire female and minority officers is likely to remain difficult. People from these groups continue to apply in relatively low numbers.

Other trends of note related to increases in the proportion of officers with college degrees, some changes in advertising strategies (e.g., less reliance on radio

²² A major limitation of this study was the small sample size associated with our test of the “cop crunch” hypothesis. With a sample of only 32 agencies containing both 1989 and 2002 data, even large differences might not be statistically significant. Therefore, our observed drop of 1,164 applicants between 1989 and 2002 could have been statistically significant if we observed the same pattern with a larger sample.

advertising), and only a few changes were found in applicant screening (i.e., more lenient policies in regards to residency requirements and “clean” criminal records) over the 13-year period between the 1989 and 2002 surveys. Of concern, is that police salaries have not kept pace with inflation over this 13-year period. Additionally, agencies have not improved the efficiency of their screening and hiring process; it still takes nearly six months from time of application to employment. This small sample provides some evidence that agencies have made changes to their recruiting and hiring processes, but they probably have not aggressively changed their practices, pay, or benefits to the extent necessary to meet the hiring challenge posed by the current human resource environment.

Over the past few decades, law enforcement agencies have placed a higher premium on increasing the diversity of their ranks by increasing their efforts to attract qualified minority and female applicants. The results of the current study appear to indicate that agencies, to varying degrees, have been successful in this endeavor. When we compared our survey results (2002) with those achieved earlier by Strawbridge and Strawbridge (1989 survey), we uncovered that significantly more minorities and females are working in law enforcement and that the proportion of white officers has declined. These changes may be due to the recruitment strategies targeted at attracting women and minorities reported in this study. In addition to women and minorities, military veterans, four-year college graduates, and people with prior police service were all targeted by significantly more agencies in 2002 than previously.

With regard to predicting the number of female applicants, our models only uncovered one substantively important variable. That is, when an agency requires recruits to have at least a bachelor’s degree, the number of female hires increases. This could be due to the recruitment strategies discussed above that target females and college graduates. In other words, agencies are successfully attracting applicants that are being targeted. With regard to minority hires, our models uncovered that requiring an applicant to have two years of college or 60 credits decreases the total number of minority applicants. However, requiring a bachelor’s degree or higher increases the total number of minority applicants. This possibly suggests that agencies are recruiting college educated minorities more vigorously than they are recruiting those with only some college. It could be that those applicants with some college choose other career paths, thereby explaining the change in direction of the two college variables (some college and college graduate). Those with some college may find greater opportunities in other fields which place greater value to someone with some college experience. Perhaps those with some college experience find better opportunities to complete their college degrees in these other fields.

Overall, while this study includes some positive evidence regarding the recruitment of women and minorities, there is still much to be accomplished. For example, based on our interview results, agencies should consider taking a strategic approach by either pooling resources with other agencies in order to find qualified

recruits, or forming a strategic committee to determine new recruiting methods. Agencies might also seek out venues that are physical in nature (such as setting up an information booth at a sporting event) to market policing, as these people might be more willing to seek out a highly physical career. On the other end of the extreme, for future planning, agencies can visit young students to talk about the elements of being a police officer. This could help create a positive image for officers. Agencies can also proactively help applicants meet the screening requirements and testing standards for becoming an officer. Agencies need to consider using some of these and other promising practices if they hope to recruit and maintain a viable work force well into the future.

Also, while we believe our research provides some interesting data on police recruitment and hiring a number of questions still remain for future research. For example, our three significant findings pertaining to women and minority recruitment and hiring and the relationship to college degree requirements would be potential topics for further investigation. It is unclear if these relationships would hold in a larger sample and we need to learn about the mechanism by which they operate. Also, some of the areas that we uncovered through our qualitative interviews on promising practices could become areas for rigorous outcome evaluations, including collecting data from the standpoint of the successful applicant (e.g., what attracted him or her to the agency? How important were various elements of the recruitment process, such as print ads, personal contacts, Internet resources, career fairs, and so forth.) Also, the large majority of departments struggle with efforts to recruit minority and female applicants. Research aimed at identifying and verifying strategies that lead to larger numbers and percentages of female and minority applicants would be exceptionally valuable. Future research should also consider asking agency respondents about their perceptions of problems recruiting and hiring officers. Our project did not look at perceptions, but instead analyzed survey items related to the ability to hire. Future research can compare factual reports from an agency (e.g. ratio of applicants to vacant positions) to the perceptions of the agency on the existence of a cop crunch. At least the possibility exists that that within some agencies, the perception of a cop crunch has no or little foundation in actual recruiting experience.

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Appendix A
Recruitment and Hiring Survey



RECRUITMENT AND HIRING

BACKGROUND INFORMATION

1. How many hours are in a regular workweek for your patrol officers/deputies?

 Hours

2. How long are the shifts that your patrol officers/deputies work (e.g., 8 hours, 8.5 hours, 10 hours, 12 hours)?

 . Hours

3. Do your patrol officers/deputies work permanent shifts, rotating shifts, or some combination of permanent and rotating shifts?

- Permanent shifts Rotating shifts Combination shifts

4. Please select the one approach that best describes how your agency's new officers/deputies receive recruit training.

- We train recruits in our in-house, agency-run training academy
- We send recruits to a regional training academy
- We send recruits to another agency's training academy
- We require recruits to obtain training on their own prior to joining our agency
- Police Corps
- Other:

5. Does a collective bargaining unit represent your employees at the officer/deputy rank?

- No
 Yes

6. Does your agency allow lateral entry at the officer/deputy rank?

- No
 Yes

7. Please complete the following chart by indicating the one agency that has primary responsibility for the following functions relating to the recruitment and selection of new officer/deputy recruits.

	Police Agency	City/County/State Personnel or HR	Civil Service Commission	Other
Deciding to start application process	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Advertising for applicants	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Recruiting potential applicants	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Accepting and processing applicants	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Administering written tests	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Administering other selection steps	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Making final hiring decisions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

RECRUITMENT AND HIRING

8. Does your agency require new sworn employees to sign a contract or agreement obligating them to work a minimum number of years with the agency?

- No
- Yes → Number of months required to work:

Questions 9, 10, 11, and 12 require information for several years. Because some agencies track this information by calendar year and some track it by fiscal year, we are providing you the option of using either the calendar year or the fiscal year. Please review the questions and indicate whether you will provide information for the calendar or fiscal years.

Calendar years Fiscal years → When does your fiscal year begin? /

9. Please complete the following chart for full-time sworn employees as of January 1, 2002, or the beginning of your current fiscal year.

	Male	Female
White, not of Hispanic origin	 , 	 ,
Black, not of Hispanic origin	 , 	 ,
Hispanic origin, any race	 , 	 ,
American Indian or Alaskan Native	 , 	 ,
Asian or Pacific Islander	 , 	 ,
Other: 	 , 	 ,

10. As of January 1, 2002, or the beginning of your current fiscal year, how many sworn officers had at least a four-year (B.A., B.S., or higher) college degree?

, Officers/Deputies

11. Please complete the following chart on your agency's authorized and actual strength for full-time sworn and full-time civilian employees for the current and three preceding fiscal years or the calendar years listed below.

	Jan. 1, 2002	Jan. 1, 2001	Jan. 1, 2000	Jan. 1, 1999
Authorized Sworn Strength	 , 	 , 	 , 	 ,
Actual Sworn Strength	 , 	 , 	 , 	 ,
Authorized Civilian Strength	 , 	 , 	 , 	 ,
Actual Civilian Strength	 , 	 , 	 , 	 ,

RECRUITMENT AND HIRING

12. This question asks you to provide information on individuals who, during the past three years, (1) applied to your agency, (2) successfully passed all selection criteria, and (3) were hired as sworn officers/deputies. Please complete the following chart for sworn applicants during calendar years 1999, 2000 and 2001 or during the three preceding fiscal years.

Total Sworn Applicants

	2001			2000			1999		
White Males									
White Females									
Minority Males									
Minority Females									

Sworn Applicants Successfully Passing All Selection Criteria (eligible for offer of employment)

	2001			2000			1999		
White Males									
White Females									
Minority Males									
Minority Females									

Sworn Applicants Hired

	2001			2000			1999		
White Males									
White Females									
Minority Males									
Minority Females									

RECRUITMENT AND HIRING

RECRUITMENT EFFORTS

13. Please check all the recruiting methods or tools that are used by your agency in each geographical area indicated.

	Locally	In-state	Regionally	Nationally
Television	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Radio	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Newspaper	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Magazines/Journals	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Career Fairs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Mass Mailings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Posters	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Community Events	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
College Events	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
High School Events	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Military Installations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Open Houses	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Walk-in Office	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Internet	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Billboards	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

14. Does your agency provide some type of award for those employees that refer successful applicants? (Check all that apply.)

No

Cash award

Other:

15. How often does your agency engage in joint recruitment efforts with other law enforcement agencies?

Never

Occasionally

Regularly

16. Check any groups for which your agency uses targeted recruitment strategies.

Women

College graduates (B.A., B.S., or higher)

People with previous police experience

People who speak a foreign language

Military veterans

Racial/Ethnic Minorities

Physically disabled

Other:

This department does not use any targeted recruitment strategies

RECRUITMENT AND HIRING

17. Does your agency use any of its police programs as a means to recruit young people for a career with your agency?

No

Yes → 17a. If "Yes," please check all that you use to recruit.

College Internships

Mentoring or Role Model

Cadets

Explorer Program

School Resource Officer

Police Athletic League

Other:

18. Which of the following best describes how your agency uses personnel in the recruitment process?

We have a formal program in which officers/deputies serve as part-time recruiters

We have one employee (sworn or civilian) whose primary responsibility is recruitment

We have a recruitment unit with employees permanently assigned to it

→ 18a. How many employees are assigned to the unit?

Sworn

--	--	--

Civilian

--	--	--

19. Other than personnel costs, what is the current annual recruiting budget for the agency?

\$

--	--	--

,

--	--	--

APPLICATION PROCEDURES

20. Does your agency require that applicants or sworn officers live in the agency service area?

No

Yes → 20a. If "Yes," when must residency be established?

Before applying for employment

Before hire

Within a set time after being hired

RECRUITMENT AND HIRING

21. From the list below, check all items that are requirements for individuals who want to have their application for an officer/deputy position considered by your agency.

- Must be a U.S. Citizen
- Must live within the Agency's service area
- Must have a driver's license
- Must have a clean driver's license
- Must have a high school diploma
- Must have completed two years (or 60 credits) of college courses
- Must have a B.A., B.S., or higher degree
- Must meet a minimum vision requirement
- Must be non-smoker
- May not have a criminal record
- May not have dishonorable discharge from armed forces
- Must have already graduated from a certified police academy
- Must be in set age range: Minimum Maximum
- Must be in set height range: Minimum (in inches) Maximum (in inches)
- Must be in set weight range: Minimum Maximum
- Other:

22. Does your agency require individuals to complete their application package at a law enforcement or other government facility?

- Yes (go to question 23)
- No → 22a. If "No," check all options that exist for completing an application package.
 - May complete an application off-site and return it in-person
 - May complete an application off-site and return it by mail or fax
 - May complete an application on-line

23. Does your agency supply applicants with study or reference materials to help them prepare for tests and other selection procedures?

- No
- Yes, every applicant receives a study package
- Yes, but only to those applicants who request a study package

RECRUITMENT AND HIRING

24. Within a given calendar year, how often does your jurisdiction accept applications? (Check the response that most closely reflects your schedule.)

- Accept applications continuously
- Once every two weeks
- Once a month
- Once every three months
- Once every four months
- Once every six months (semi-annually)
- Once a year (annually)
- Less than once a year
- Only when a vacancy exists

25. Within a given calendar year, how often does your jurisdiction provide the opportunity for applicants to take a written employment test? (Check the response that most closely reflects your schedule.)

- Give written exam on walk-in basis
- Once every two weeks
- Once a month
- Once every three months
- Once every four months
- Once every six months (semi-annually)
- Once a year (annually)
- Less than once a year
- Only when a vacancy exists
- Not applicable - we do not give written tests

26. If your agency maintains a list of qualified applicants, for how long does it remain valid?

- Months
- Until it is exhausted
- Only until the academy class is filled

27. Typically, for new applicants, how many weeks does it take from the submission of an application to the acceptance of an offer of employment?

 Weeks

SELECTION PROCEDURES

28. Is your agency currently operating under a court order or consent decree, or a specific EEOC plan affecting hiring decisions? (Check all that apply.)

- No
- Yes, court order/consent decree
- Yes, EEOC Plan

RECRUITMENT AND HIRING

29. From the following list of selection procedures, please number the items in the order in which they take place for candidates applying to be officer/deputy recruits. For example, if a "Personal Interview" is the first step in your process, place the number "1" next to it. (If your agency does not use an item, mark it "00.")

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30. Does your agency use special entry conditions (e.g., added preference points/credit) in the selection process?

- No (please skip to question 32)
- Yes (please answer question 31)

31. In the following table, check all the special entry conditions that apply to members of the following five groups.

	Military Veterans	Previous Police	College Graduate	Women	Ethnic Minorities
Lower education standards	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lower fitness standards	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Exam exemptions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Set quota selected	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Faster promotion possible	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Higher pay or allowance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Preferred in waiting list	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pre-entry training to help attain entry standard	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other: 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

RECRUITMENT AND HIRING

[]

32. Please check all items that would eliminate a candidate.

- Any misdemeanor conviction
- Serious misdemeanor conviction involving moral turpitude or honesty
- Any felony arrest
- Any felony conviction
- A felony arrest within the past 2 years
- Any prior drug use
- Any substance abuse arrest
- A substance abuse arrest within the past 2 years
- Any substance abuse conviction
- Currently suspended driver's license
- Excessive points on driver's license within the past 2 years
- Termination from a law enforcement agency
- Other: []

33. Does the applicant pay for any part of the application or selection process?

- No
- Yes → If "Yes," what parts and how much do they pay?

[] \$ [] , [] [] []
[] \$ [] , [] [] []

34. Please describe any innovative strategies or programs that your agency uses to recruit applicants or to target minority and/or women applicants, in particular.

[]

PAY AND BENEFITS

35. What is the base starting salary for an officer/deputy who has graduated from a training academy?

\$ [] [] , [] [] [] []

RECRUITMENT AND HIRING

36. What is the starting fringe benefit rate for an officer/deputy who has graduated from a training academy?
(Please express the rate as a percentage of the starting salary.)

%

- 36a. How would you compare your agency's fringe benefits with nearby law enforcement agencies?

Below average Average Above average

37. What is the base annual pay (before deductions) for an officer/deputy with five years of service in your agency?

\$,

38. From the list below, please indicate whether your agency offers any of these incentives or bonuses to any recruits or officers/deputies.

- Employment or "signing" bonus \$,
- Agency pays tuition for recruit training at an external academy/school
- Recruit paid a salary during recruit training \$,
- Recruit receives an academy graduation bonus \$,
- Reimbursement for college courses
- Salary increases for college degrees
- Scheduling preferences for those taking college courses
- Take-home car
- Health club membership or reimbursement
- Housing allowance or mortgage discount programs
- Uniform allowance or uniforms provided by agency
- Job sharing or split shifts
- Other incentives or bonuses:
- Other incentives or bonuses:
- We DO NOT offer any incentives or bonuses

39. Does your agency have a mandatory retirement age for officers/deputies?

- No
- Yes → What is the age?

40. Please provide information on your agency's full-service retirement/pension.

Required years of service for full retirement

Minimum age for full retirement

% of earnings in first eligible year of full retirement %

RECRUITMENT AND HIRING

41. What, if any, limit does your agency place on the maximum number of overtime hours an officer/deputy can work?

No limit

Hours per pay period

--	--

Hours per day

--	--

42. Does your agency allow officers/deputies to work secondary or other employment?

No

Yes



42a. What, if any, limit does your agency place on the maximum number of hours an officer/deputy can work at a second job or other employment?

No limit

Hours per pay period

--	--

Hours per day

--	--

IMPACT OF EVENTS OF SEPTEMBER 11, 2001

43. Since the events of September 11, 2001, has your agency seen any increases or decreases in the:

Number of applicants for sworn positions

Decreased

No Change

Increased

Number of applicants taking tests

Decreased

No Change

Increased

Quality of applicants for sworn positions

Decreased

No Change

Increased

Indicate why you think any increases or decreases occurred.

--

RECRUITMENT AND HIRING

44. Since the events of September 11, 2001, has your agency: (Check all that apply.)

- Lost sworn personnel to military call-ups
- Lost sworn personnel to federal law enforcement
- Experienced higher-than-normal retirements among sworn personnel
- Experienced higher-than-normal attrition among sworn personnel
- Laid off sworn personnel
- Been under a hiring freeze for sworn personnel
- Been given an increase in the number of authorized sworn positions

Please explain:

45. Since the events of September 11, 2001, has your agency: (Check all that apply.)

- Assumed new functions related to counter-terrorism (e.g., security, intelligence gathering or analysis, bio-terrorism)
- Reassigned personnel to handle new functions related to counter-terrorism
- Assigned personnel to multi-agency or multi-jurisdictional task forces
- Stopped or significantly reduced certain police functions because of a need to focus on new counter-terrorism efforts
- Experienced other changes:
- Experienced no change in the type or amount of police services delivered

CONTACT INFORMATION

Person Responsible for Completing Survey

Phone number

() -

Email address

Thank you for taking the time to complete this survey!

Appendix B
Descriptive Statistics Tables

Exhibit 1. Please select the one approach that best describes how your agency's new officers/deputies receive recruit training.

	Municipal and County					State	Total
	1 to 20	21-50	51-100	101-500	501+		
In-House, Agency Run	2.3	1.9	0.6	16.7	65.3	85.4	5.2
Regional Academy	52.8	66.3	66	62.6	12	7.3	56.2
Another Agency's Academy	6.1	6.1	6.2	5.7	0	0	5.9
Recruit Obtains own Training	29.4	17.5	22.4	9.2	5.3	0	24
Police Corps	0.1	0.4	0.6	0	2	0	0.3
Other	9.3	7.8	4.1	5.7	15.3	7.3	8.5
Weighted sample size	3632	1313	482	436	150	41	6054

Exhibit 2. Does a collective bargaining unit represent your employees at the officer/deputy rank?

	Municipal and County					State	Total
	1 to 20	21-50	51-100	101-500	501+		
Yes	36.1	64.9	55.9	59.2	55.2	52.5	46.2

Exhibit 3. Does your agency allow lateral entry at the officer/deputy rank?

	Municipal and County					State	Total
	1 to 20	21-50	51-100	101-500	501+		
Yes	46.5	54.5	58	54.4	62.1	19.5	49.9

Exhibit 4. Indicate the one agency that has primary responsibility for the following functions relating to the recruitment and selection of new officer/deputy recruits.

		Municipal and County					State	Total
		1 to 20	21-50	51-100	101-500	501+		
Deciding to Start Application Process								
	Police Agency	68.4	69.6	72.9	73.6	69.6	80.5	69.5
	City/Co/State Personnel/HR	18.7	10.2	13.5	21.3	20.3	14.6	16.6
	Civil Service Commission	5.6	18.5	14.6	5.3	6.8	0	9.1
	Other	5.9	0.4	0.6	1.8	2	2.4	3.8
	Missing	1.4	1.3	0	0	2	2.5	
Advertising for applicants								
	Police Agency	63.4	48.3	32.8	45.4	76.4	80.5	56.8
	City/Co/State Personnel/HR	21	31.5	54.2	48.9	16.9	14.6	27.7
	Civil Service Commission	9.5	18.5	14.1	8	5.4	0	11.6
	Other	4.8	1.9	0.6	1.8	2	2.4	3.5
	Missing	1.3	0	0	4	0.7	2.5	
Recruiting potential applicants								
	Police Agency	77.4	81.3	69.2	83.9	89.9	80.5	78.4
	City/Co/State Personnel/HR	9.7	7.6	20.4	13.3	6.8	14.6	10.3
	Civil Service Commission	5.3	5.2	10	6.9	2	0	5.7
	Other	3.8	1.5	0.6	1.1	0	2.4	2.8
	Missing	3.8	4.4	0	0	2.1	2.5	
Accepting and processing applicants								
	Police Agency	75	62	47.4	58	67.6	65.9	68.5
	City/Co/State Personnel/HR	11.2	20.9	42.7	36.2	22.3	31.7	18
	Civil Service Commission	6.7	15.6	13.1	8.7	8.8	0	9.3
	Other	3	1.5	2.1	0.7	2	2.4	2.4
	Missing	4.1	0	0	0	0.7	0	
Administering written tests								
	Police Agency	51.6	44.6	29.2	40.2	29.1	53.7	46.9
	City/Co/State Personnel/HR	11.4	12.4	37	35.6	52.7	26.8	16.5
	Civil Service Commission	12.7	28.1	25	16.1	18.9	7.3	17.5
	Other	10.3	7.3	8.3	3	2	7.3	8.7
	Missing	14	7.7	0.5	5.1	0	4.9	
Administering other selection steps								
	Police Agency	66.9	71.7	71.3	85.6	77.7	80.5	70
	City/Co/State Personnel/HR	12.3	5.9	16.7	8.7	13.5	14.6	11
	Civil Service Commission	10.7	15.8	10.4	5.7	2	0	11.2
	Other	5.6	3.6	4.2	1.8	3.4	2.4	4.7
	Missing	4.5	3.2	0	0	3.5	2.5	
Making final hiring decisions								
	Police Agency	61.8	72.2	81.3	91.3	89.9	82.9	68.6
	City/Co/State Personnel/HR	29.5	15.2	12.1	2.3	3.4	12.2	22.3
	Civil Service Commission	0.8	7.8	3.1	5.7	3.4	0	2.9
	Other	7.8	3.7	4.2	1.8	3.4	0	6
	Missing	0.1	1.1	0	0	1.1	0	

Exhibit 5. Does your agency require new sworn employees to sign a contract or agreement obligating them to work a minimum number of years with the agency?

	Municipal and County					State	Total
	1 to 20	21-50	51-100	101-500	501+		
Yes	15.8	14.1	11.5	13.8	30.4	17.1	15.3

Exhibit 5. Minimum Number of Months Required to Work

	Municipal and County					State
	1 to 20	21-50	51-100	101-500	501+	
Minimum	12	12	12	12	12	12
Maximum	60	60	36	60	60	36
Mean	29.19	28.97	27.6	28	24	29.14
Total	568	190	55	60	45	7
Missing	5	0	5	0	0	0

Exhibit 6. Check all the recruiting methods or tools that are used by your agency in each geographical area indicated.

		Municipal and County					State	Total
		1 to 20	21-50	51-100	101-500	501+		
Television								
	Locally	4.2	7.4	9.4	33.3	52.7	29.3	8.8
	In-State	0.1	0.7	1	10.3	15.5	43.9	1.7
	Regionally	0.5	0.7	1	4.1	5.4	9.8	1.1
	Nationally	0	0.4	0	0.7	0	0	0.1
Radio								
	Locally	3.7	5.8	11	31	57.4	36.6	8.2
	In-State	1.6	1	1.7	11.5	18.9	53.7	3
	Regionally	0.1	1.1	0	4.1	10.1	26.8	1
	Nationally	0.5	0	0	0	0	0	0.3
Newspaper								
	Locally	79.9	84.2	74	72.4	87.8	41.5	79.8
	In-State	33.4	36.5	30.8	37.9	37.2	70.7	34.5
	Regionally	15.2	26.3	15.6	25.3	25.7	24.4	18.7
	Nationally	0.1	0.4	1.7	2.3	15.5	9.8	0.9
Magazines/Journals								
	Locally	4	4.1	4.8	11.5	20.3	9.8	5
	In-State	4.9	12.6	6.9	13.8	15.5	17.1	7.7
	Regionally	0.8	6.3	0.6	10.3	16.9	14.6	3.2
	Nationally	0	5	0.6	12.2	30.4	22	2.9
Career Fairs								
	Locally	10.7	33.7	55.2	70.1	69.6	43.9	25.2
	In-State	3.2	18	30.2	51.7	54.1	85.4	13.8
	Regionally	0.1	5	13.5	33.3	42.6	43.9	6
	Nationally	0	0	1	2.3	12.2	19.5	0.7
Mass Mailings								
	Locally	1.2	8.4	5.8	14.4	27	24.4	4.9
	In-State	1.9	7.4	3.7	12.6	8.8	41.5	4.5
	Regionally	1	1.9	2.1	6.9	6.8	14.6	1.9
	Nationally	0	0.7	2.1	1.8	8.8	12.2	0.8
Posters								
	Locally	6.4	10.2	11.5	27.1	57.4	34.1	10.6
	In-State	0.7	5.4	4.8	13.3	25.7	56.1	3.9
	Regionally	0.5	2.2	1.7	6.4	16.9	17.1	1.9
	Nationally	0	0	0	0.7	10.1	4.9	0.3

Community Events								
	Locally	4.9	22.4	39.1	64.4	74.3	46.3	17.7
	In-State	0.5	5.6	4.8	12.6	20.3	82.9	3.9
	Regionally	0.3	1.5	1	5.7	10.1	14.6	1.3
	Nationally	0	0	0	0.7	0	0	0
College Events								
	Locally	6.2	19.6	34.4	58	70.9	41.5	16.9
	In-State	4.9	17.2	21.4	47.1	52.7	78	13.6
	Regionally	1.7	6.1	7.3	24.8	42.6	41.5	6
	Nationally	0	0	0	2.3	12.2	14.6	0.6
High School Events								
	Locally	7.8	20.7	38.5	44.8	66.2	36.6	17.3
	In-State	0.5	1.9	0	6.4	8.8	70.7	1.9
	Regionally	1	0.4	0	0.7	0	7.3	0.8
	Nationally	0	0	0	0	0	0	0
Military Installations								
	Locally	0.1	1.5	5.8	24.1	52.7	26.8	4
	In-State	0	1	7.9	28.2	49.3	51.2	4.4
	Regionally	0	0.7	3.1	17.2	42.6	31.7	2.9
	Nationally	0	0	1	4.6	16.9	26.8	1
Open Houses								
	Locally	5.3	7.3	10	25.9	35.8	24.4	8.5
	In-State	1.2	0.4	1	5.7	3.4	36.6	1.6
	Regionally	0.1	0	0.6	1.1	0	7.3	0.3
	Nationally	0	0	0	0	0	0	0
Walk-in Office								
	Locally	51.6	46.3	51.6	69	77.7	36.6	52.2
	In-State	2.2	2.1	1	3	2	58.5	2.5
	Regionally	2.1	1	0	0	2	4.9	1.5
	Nationally	0	0	0	0.7	0	4.9	0.1
Internet								
	Locally	11	33.2	44.8	54.6	76.4	31.7	23.4
	In-State	11.2	21.3	22.9	39.1	57.4	56.1	17.8
	Regionally	5.9	15.2	13.5	33.3	39.2	36.6	11.5
	Nationally	6	26.9	31.8	57.5	74.3	78	18.5
Billboards								
	Locally	1.5	2.6	4.2	9.9	20.3	4.9	3
	In-State	0	1.5	0	3.4	6.8	12.2	0.8
	Regionally	0	0	0	0	0	4.9	0
	Nationally	0	0	0	0	0	0	0
Other								
	Locally	7.1	5	4.8	4.6	12.2	2.4	6.4
	In-State	3.8	4.4	2.7	1.8	5.4	4.9	3.8
	Regionally	0.4	2.2	1	0	3.4	2.4	0.9
	Nationally	0	2.2	0	0	3.4	0	0.6

Exhibit 7. Does your agency provide some type of award for those employees that refer successful applicants?

	Municipal and County					State	Total
	1 to 20	21-50	51-100	101-500	501+		
No	98.4	98.1	91.1	86.2	69.6	75.6	96
Cash Award	0	1.1	4.2	11.5	10.1	7.3	1.7
Other	1.1	0.7	4.2	3	23.6	17.1	2
Total*	99.5	99.9	99.5	100.5	103	100	

*Shows they could mark cash award AND other

Exhibit 8. How often does your agency engage in joint recruitment efforts with other law enforcement agencies?

	Municipal and County					State	Total
	1 to 20	21-50	51-100	101-500	501+		
Never	86.1	78.7	73.7	62.6	57.4	50	80.9
Occasionally	11	13.8	21.1	29.4	33.8	42.5	14.5
Regularly	3	7.5	5.3	8	8.8	7.5	4.7

Exhibit 9. For which groups does your agency use targeted recruitment strategies?

	Municipal and County					State	Total
	1 to 20	21-50	51-100	101-500	501+		
Women	11	17	26.6	47.7	66.2	90.2	18.1
College graduates	12.7	21.1	31.8	51.1	62.8	56.1	20.3
People with previous police experience	37.5	29.8	36.5	43.1	52.7	46.3	36.5
People who speak a foreign language	6.4	10.4	14.6	27.1	33.8	24.4	10.2
Military veterans	10.8	8.7	19.8	37.9	54.1	63.4	14.4
Racial/Ethnic minorities	7.9	20.2	33.3	59.8	74.3	87.8	18.5
Physically Disabled	0.1	0.7	0	0.7	0	2.4	0.3
Other	1.8	6.7	5.2	3	8.8	7.3	3.4

Exhibit 10. Does your agency use any of its police programs as a means to recruit young people for a career with your agency?

	Municipal and County					State	Total
	1 to 20	21-50	51-100	101-500	501+		
Yes	33.9	58.1	76.6	89.9	83.1	80	48.2

Exhibit 10. If yes, please check all that you use to recruit.

	Municipal and County					State	Total
	1 to 20	21-50	51-100	101-500	501+		
College Internships	49.9	56.9	63.2	72.6	61	50	57
Mentoring, Role Model	17.4	17.1	12.5	23.5	26.8	21.9	18
Cadets	15.3	14.5	16.7	30	40.7	28.1	18.4
Explorer Program	24.6	42.8	52.8	69.2	85.4	40.6	41.8
School Resource Officer	46.2	55	54.2	60.1	52.8	18.8	51.4
Police Athletic League	3.3	3	10.5	19.6	47.2	0	8.1
Other	20	19	19.4	13.1	24.4	18.8	18.9

Exhibit 11. Which of the following best describes how your agency uses personnel in the recruitment process?

	Municipal and County					State	Total
	1 to 20	21-50	51-100	101-500	501+		
Formal program, part-time recruiters	32.4	41.6	48.7	39.1	16.5	10.3	36.2
One employee with recruitment responsibility	63.3	54.8	48	39.7	23.1	25.6	53.4
Recruitment unit, permanent assignments	4.3	3.7	3.4	21.2	60.3	64.1	10.5

Exhibit 12. How many employees are assigned to the unit?

Sworn recruiters

	Municipal and County					State
	1 to 20	21-50	51-100	101-500	501+	
Min	1	1	0	1	1	0
Max	2	24	3	24	29	42
Mean	1.44	8.29	2.25	3.3	6.79	6.25
Total	45	18	10	75	73	25
N	45	18	10	75	70	24
Missing	0	0	0	0	3	1

Civilian recruiters

	Municipal and County					State
	1 to 20	21-50	51-100	101-500	501+	
Min	0	1	0	0	0	0
Max	4	6	2	3	5	18
Mean	1.78	2.71	0.75	0.77	1.5	2.33
Total	45	18	10	75	73	25
N	45	18	10	75	70	24
Missing	0	0	0	0	3	1

Exhibit 13. Other than personnel costs, what is the current annual recruiting budget for the agency?

	Municipal and County					State
	1 to 20	21-50	51-100	101-500	501+	
Min	0.00	0.00	0.00	0.00	0.00	0.00
Max	60,000.00	22,800.00	24,000.00	100,000.00	978,262.00	650,000.00
Mean	686.43	1,345.91	2,121.82	9,689.81	61,656.17	67,134.24
Total	3650	1350	480	435	148	41
N	2560	863	330	335	115	29
Missing	1090	488	150	100	33	12

Exhibit 14. Does your agency require that applicants or sworn officers live in the agency service area?

	Municipal and County					State	Total
	1 to 20	21-50	51-100	101-500	501+		
Yes	43	31.1	29.2	19	40.5	85.4	37.7

Exhibit 15. If yes, when must residency be established?

	Municipal and County					State	Total
	1 to 20	21-50	51-100	101-500	501+		
Before applying	5.3	4.3	31.6	12.5	13.1	3.1	7.2
Before hire	8.4	6	11	6.3	16.4	18.8	8.4
After being hired	86.3	89.7	57.4	81.3	70.5	78.1	84.4

Exhibit 16. What are requirements for individuals who want to have their application for an officer/deputy position considered by your agency?

	Municipal and County					State	Total
	1 to 20	21-50	51-100	101-500	501+		
U.S Citizen	96.4	95.6	93.1	92	91.2	92.7	95.5
Live in agency service area	19.1	14.7	16.7	7.6	23.6	19.5	17.2
Driver's license	98.1	97.2	96.3	97	91.2	95.1	97.5
Clean driver's license	55.5	38.9	39.1	39.1	52.7	39	49.2
High school diploma	91.4	85	88.5	90.1	84.5	97.6	89.5
Two years of college	11.5	19.3	22.9	22.5	15.5	29.3	15.1
College degree	0.1	1.9	2.7	3	0	4.9	0.9
Minimum vision requirement	54.7	55.6	61.5	72.9	81.1	92.7	57.6
Non-smoker	1.5	6.7	9.4	12.6	8.8	2.4	4.2
No criminal record	83.4	66.3	59.4	57.5	45.9	48.8	74.8
No dishonorable discharge	66.2	57.4	64	66.7	74.3	63.4	64.3
Graduate of certified police academy	35.6	18.5	18.8	9.9	20.3	2.4	28
Within set age range	32.6	50.4	46.4	56.3	76.4	82.9	40.7
Within set height range	0	1.3	0	0	0	0	0.3
Within set weight range	0	0.7	0	0.7	2	2.4	0.3
Other	6.1	10.4	7.9	12.6	16.9	26.8	8.1

Exhibit 17. Age follow-up

Minimum Age	Municipal and County					State
	1 to 20	21-50	51-100	101-500	501+	
Minimum	18	18	18	18	17	18
Maximum	21	21	28	23	21	22
Mean	20.3	20.09	20.39	20.52	20.33	20.56
Total	1190	680	223	245	113	34
N	1165	670	218	243	113	34
Missing	25	10	5	3	0	0

Maximum Age	Municipal and County					State
	1 to 20	21-50	51-100	101-500	501+	
Minimum	32	31	28	35	31	31
Maximum	99	65	70	70	99	70
Mean	44.24	38.49	39.06	40.45	68.72	47.79
Total	1190	680	223	245	113	34
N	565	345	90	50	45	19
Missing	625	335	133	195	68	15

Exhibit 17. Height follow-up

Minimum Height	Municipal and County					State
	1 to 20	21-50	51-100	101-500	501+	
Minimum	*	68	**	***	****	*****
Maximum	*	68	**	***	****	*****
Mean	*	68	**	***	****	*****
Total	*	18	**	***	****	*****
N	*	5	**	***	****	*****
Missing	*	13	**	***	****	*****

Maximum Height	Municipal and County					State
	1 to 20	21-50	51-100	101-500	501+	
Minimum	*	78	**	***	****	*****
Maximum	*	78	**	***	****	*****
Mean	*	78	**	***	****	*****
Total	*	18	**	***	****	*****
N	*	5	**	***	****	*****
Missing	*	13	**	***	****	*****

- *No departments with 1 to 20 personnel met the height requirement.
- **No departments with 51 to 100 personnel met the height requirement.
- ***No departments with 101 to 500 personnel met the height requirement.
- ****No departments with over 500 personnel met the height requirement.
- *****No State departments met the height requirement.

Exhibit 17. Weight follow-up

Minimum Weight	Municipal and County					State
	1 to 20	21-50	51-100	101-500	501+	
Minimum	*	Missing	**	Missing	102	117
Maximum	*	Missing	**	Missing	102	117
Mean	*	Missing	**	Missing	102	117
Total	*	10	**	3	3	1
N	*	0	**	0	3	1
Missing	*	10	**	3	0	0

Maximum Weight	Municipal and County					State
	1 to 20	21-50	51-100	101-500	501+	
Minimum	*	Missing	**	Missing	304	250
Maximum	*	Missing	**	Missing	304	250
Mean	*	Missing	**	Missing	304	250
Total	*	10	**	3	3	1
N	*	0	**	0	3	1
Missing	*	10	**	3	0	0

- *No departments with 1 to 20 personnel met the weight requirement.
- **No departments with 51 to 100 personnel met the weight requirement.

Exhibit 18. Does your agency require individuals to complete their application package at a law enforcement or other government facility?

	Municipal and County					State	Total
	1 to 20	21-50	51-100	101-500	501+		
No	96	94.9	97.2	95.8	97.9	90	95.8

Exhibit 18. If "no," check all options that exist for completing an application package.

	Municipal and County					State	Total
	1 to 20	21-50	51-100	101-500	501+		
May complete offsite, return in person	79.1	80	75.7	83.1	90.8	86.1	79.7
May complete offsite, fax/mail return	63.2	66.5	77.3	81.8	71.4	88.9	66.7
May complete on-line	1.3	13.6	16.6	23	28.6	41.7	7.6

Exhibit 19. Does your agency supply applicants with study or reference materials to help them prepare for tests and other selection procedures?

	Municipal and County					State	Total
	1 to 20	21-50	51-100	101-500	501+		
No	97.9	84	79.3	81.8	60.3	65.9	91.1
Yes, every applicant receives	1.5	14.3	14.8	14.7	26	22	7.1
Yes, applicants who request receive	0.6	1.8	5.9	3.5	13.7	12.2	1.9

Exhibit 20. Within a given calendar year, how often does your jurisdiction accept applications?

	Municipal and County					State	Total
	1 to 20	21-50	51-100	101-500	501+		
Continuously	43.6	37.2	56.1	61.9	65.8	75.6	45.2
Once every two weeks	0.1	0	0	0.7	2	0	0.2
Once a month	*	*	*	*	*	*	*
Once every three months	0	0.4	1.7	1.1	0	0	0.3
Once every four months	0	0	1.1	1.1	0	0	0.2
Once every six months	0.1	3.2	3.2	4.6	3.4	4.9	1.5
Once a year	1.4	6.9	7	10.3	6.7	9.8	3.9
Less than once a year	0.7	7.2	7	5.3	3.4	2.4	3.1
Only when a vacancy exists	54	45.1	23.9	14.9	18.8	7.3	45.7

*No departments met the Once a month requirement.

Exhibit 21. Within a given calendar year, how often does your jurisdiction provide the opportunity for applicants to take a written employment test?

	Municipal and County					State	Total
	1 to 20	21-50	51-100	101-500	501+		
Available on walk-in basis	0.6	1.9	1	4.6	6.7	9.8	1.4
Once every two weeks	0	1.1	1.7	9.8	16.8	14.6	1.6
Once a month	0	0	0	3	16.8	4.9	0.7
Once every three months	0	2.2	2.7	5.7	6.7	7.3	1.3
Once every four months	0.6	0.4	4.2	7.5	2	2.4	1.4
Once every six months	1.2	4.7	11.1	12.1	6.7	19.5	3.8
Once a year	0.8	11.2	10	13.2	10.1	14.6	5
Less than once a year	0.7	8.1	8.4	9.8	3.4	4.9	3.7
Only when a vacancy exists	42.6	47.7	37.2	15.5	5.4	19.5	40.3
Not applicable, no written tests	53.6	22.7	23.6	18.9	25.5	2.4	40.8

Exhibit 22. If your agency maintains a list of qualified applicants, for how long does it remain valid?

	Municipal and County					State	Total
	1 to 20	21-50	51-100	101-500	501+		
Months	72.0	79.4	75.3	72.9	70.5	52.8	73.9
Until it is exhausted	26.2	19.7	23.5	20.6	12.9	11.1	23.6
Only until academy class is filled	1.8	0.8	1.1	6.4	16.5	36.1	2.5

Exhibit 22. Number of months the qualified applicant list remains valid

	Municipal and County					State
	1 to 20	21-50	51-100	101-500	501+	
Minimum	1	3	1	3	6	6
Maximum	36	48	48	36	96	36
Mean	12.55	15.47	15.12	13.81	14.87	16.33
Total	2030	938	330	283	98	19
N	2010	933	330	283	98	18
Missing	0	0	0	0	0	0

Exhibit 23. Typically, for new applicants, how many weeks does it take from the submission of an application to the acceptance of an offer of employment

	Municipal and County					State
	1 to 20	21-50	51-100	101-500	501+	
Min	0	1	2	3	2	10
Max	52	82	52	52	68	77
Mean	7.84	12.07	13.21	14.91	17	30.08
Total	3650	1350	480	435	148	41
N	3095	1208	400	405	135	37
Missing	0	0	0	0	0	0

Exhibit 24. Is your agency currently operating under a court order or consent decree, or specific EEOC plan affecting hiring decisions?

	Municipal and County					State	Total
	1 to 20	21-50	51-100	101-500	501+		
No	93.1	96.2	93.4	84.4	72	84.6	92.6
Yes, Court order/consent decree	0.7	0	2.8	3.1	17.5	5.1	1.3
Yes, EEOC Plan	6.2	3.8	3.8	12.5	10.5	10.3	6.1

Exhibit 25. From the following list of selection procedures, please number the items in the order in which they take place for candidates applying to be officer/deputy recruits.

	Municipal and County					State
	1 to 20	21-50	51-100	101-500	501+	
Written Entrance Exam	1.92	1.58	1.39	1.45	1.22	1.27
Medical Exam	5.88	6.89	7.07	7.94	7.76	6.6
Psychometric Test	6.38	6.77	7.23	6.81	6.81	5.38
Psychologist Interview	6.22	6.84	7.38	7.43	7.7	6.78
Voice Stress Analyzer	4.17	6.2	6.13	6	6.5	6
Civil Service Exam	1.75	1.2	1.15	1.37	1.16	1
Interview Board	4.05	4.03	3.99	4.64	5.19	3.62
Background Check	3.32	4.16	4.24	4.7	4.86	4.4
Handwriting Analysis	5.29	3.8	4.5	3.29*		**
Polygraph Test	5.92	5.99	5.94	5.62	5.67	4.48
Personal Interview	3.48	4.87	5.08	4.72	4.21	4.8
Criminal Records Check	3.07	3.86	3.93	3.98	4.11	3.78
Reference Letters	3.72	4.92	5.21	5.57	5.84	5.07
Fitness/Agility Test	4.38	3.65	3.34	3.05	3.29	2.71
Intelligence Test	5.34	6.31	7	5.48	7.38	4
Drug Test	6.38	7.68	7.71	8.07	7.93	7.31
Practical Test	5.61	3.34	3.22	4	2	***
Assessment Center	3.95	3.71	2.67	2.89	7	****

*No departments with more than 500 personnel listed Handwriting Analysis as a selection procedure.

**No State departments listed Handwriting Analysis as a selection procedure.

***No State departments listed Practical Test as a selection procedure.

****No State departments listed Assessment Center as a selection procedure.

Exhibit 26. Does your agency use special entry conditions (e.g., added preference points/credit) in the selection process?

	Municipal and County					State	Total
	1 to 20	21-50	51-100	101-500	501+		
No	91	71.7	72.8	58.6	57.1	56.4	82
Yes	9	28.3	27.2	41.4	42.9	43.6	18

Exhibit 27.

Military Vets	Municipal and County					State
	1 to 20	21-50	51-100	101-500	501+	
Lower education standards	3.1	4.2	3.9	10.2	4.9	5.9
Lower fitness standards	1.6	0	0	0	0	0
Exam exemptions	1.6	4.2	3.9	4.5	0	5.9
Set quota	0	0	0	2.9	0	0
Faster promotion possible	0	1.4	2.3	4.5	8.3	5.9
Higher pay/allowance	0	0	0	1.7	4.9	0
Preferred in waiting list	25	33.3	21.9	40	8.3	29.4
Pre-entry training to attain entry	7.8	0	0	2.9	4.9	0
Other special entry	32.8	39.6	33.6	31.4	25	52.9

Previous Police	Municipal and County					State
	1 to 20	21-50	51-100	101-500	501+	
Lower education standards	3.1	4.2	10.2	4.5	8.3	5.9
Lower fitness standards	0	0	0	1.7	0	0
Exam exemptions	7.8	5.6	7.8	13.1	8.3	0
Set quota	1.6	0	0	0	0	0
Faster promotion possible	1.6	5	0	4.5	0	0
Higher pay/allowance	21.9	16.7	25.8	22.9	25	5.9
Preferred in waiting list	20.3	20.2	14.1	18.8	4.9	5.9
Pre-entry training to attain entry	1.6	1.4	0	2.9	0	0
Other special entry	9.4	12.5	10.2	2.9	0	5.9

Exhibit 27.

College Grads	Municipal and County					State
	1 to 20	21-50	51-100	101-500	501+	
Lower education standards	3.1	1.4	0	0	0	0
Lower fitness standards	0	0	0	0	0	0
Exam exemptions	0	0	0	0	0	0
Set quota	1.6	0	0	0	0	0
Faster promotion possible	7.8	2.8	7.8	2.9	13.1	5.9
Higher pay/allowance	15.6	16.1	7.8	10.2	25	11.8
Preferred in waiting list	12.5	6.9	7.8	5.7	0	11.8
Pre-entry training to attain entry	0	0	0	2.9	0	0
Other special entry	3.1	13.9	7.8	1.7	8.3	5.9

Women	Municipal and County					State
	1 to 20	21-50	51-100	101-500	501+	
Lower education standards	0	0	3.9	1.7	0	0
Lower fitness standards	1.6	8.3	3.9	1.7	8.3	0
Exam exemptions	0	0	3.9	0	0	0
Set quota	0	0	3.9	0	4.9	0
Faster promotion possible	0	0	3.9	0	0	0
Higher pay/allowance	0	0	3.9	0	0	0
Preferred in waiting list	6.3	1.4	7.8	7.4	4.9	5.9
Pre-entry training to attain entry	0	0	3.9	2.9	4.9	0
Other special entry	1.6	2.8	11.7	1.7	0	0

Exhibit 27.

Ethnic Minorities	Municipal and County					State
	1 to 20	21-50	51-100	101-500	501+	
Lower education standards	0	0	0	1.7	0	0
Lower fitness standards	0	0	0	0	0	0
Exam exemptions	1.6	0	0	0	0	0
Set quota	0	0	0	2.9	8.3	0
Faster promotion possible	0	0	0	0	0	0
Higher pay/allowance	0	1.4	0	0	0	0
Preferred in waiting list	6.3	1.4	7.8	5.7	4.9	5.9
Pre-entry training to attain entry	1.6	0	0	2.9	4.9	0
Other special entry	1.6	2.8	7.8	1.7	0	0

Exhibit 28. Please check all items that would eliminate a candidate.

	Municipal and County					State
	1 to 20	21-50	51-100	101-500	501+	
Any Misd. Conviction	16.8	12.2	14.1	4.6	5.4	4.9
Serious Misd. Conviction, Morals	91.7	96.8	93.8	93.1	87.8	85.4
Any Felony Arrest	82.3	70.7	56.3	56.3	39.2	46.3
Any Felony Conviction	97.5	98.5	96.9	97	94.6	95.1
Any Felony Arrest, Past 2 Years	69.6	65.7	53.1	62.6	49.3	39
Any Prior Drug Use	45.4	30.2	16.2	14.9	23.6	9.8
Any Substance Abuse Arrest	75.3	66.3	53.6	46.6	32.4	26.8
A Substance Abuse Arrest, Past 2 Years	71.8	70.9	62.5	70.1	57.4	53.7
Any Substance Abuse Conviction	84.4	75.2	70.8	60.9	50.7	41.5
Currently Suspended Drivers' License	92.2	93.3	96.3	93.1	89.9	87.8
Excessive Points on Drivers' License, Past 2 Years	53.9	56.5	65.6	64.9	66.2	65.9
Termination from a Law Enforcement Agency	50.4	50.6	42.7	44.8	52.7	29.3
Other Elimination Criteria	4.4	5.8	12.5	12.2	22.3	26.8

Exhibit 29. Does the applicant pay for any part of the application or selection process?

	Municipal and County					State	Total
	1 to 20	21-50	51-100	101-500	501+		
No	85.2	74.3	80.1	77	84.5	82.9	81.8
Yes	14.8	25.7	19.9	23	15.5	17.1	18.2

Exhibit 29.

	Municipal and County					State
	1 to 20	21-50	51-100	101-500	501+	
Minimum	10	1	10	5	6	25
Maximum	3500	2340	810	500	150	35
Mean	271.1	74.05	53.14	81.28	52.5	30
N	503	330	93	98	20	5

Exhibit 30. What is the base starting salary for an officer/deputy who has graduated from a training academy?

	Municipal and County					State
	1 to 20	21-50	51-100	101-500	501+	
Minimum	12000	17680	20000	21996	18000	25272
Maximum	53892	60333	60816	57456	56362	46597
Mean	26926.93	32567.3	32623.88	34279.98	31684	33720.85
N	3415	1273	450	413	140	40
Missing	0	0	0	0	0	0

Exhibit 31a. What is the starting fringe benefit rate for an officer/deputy who has graduated from a training academy?

	Municipal and County					State
	1 to 20	21-50	51-100	101-500	501+	
Minimum	0	0	0	0	0	0
Maximum	99	90	61	58	75	55
Mean	23.07	25.16	27.53	26.18	29.57	24.5
N	2093	998	338	315	75	26

Exhibit 31b. How would you compare your agency's fringe benefits with nearby enforcement agencies?

	Municipal and County					State	Total
	1 to 20	21-50	51-100	101-500	501+		
Below Average	28.3	9	15.3	7.8	31.8	13.8	21.4
Average	58	69.5	50.8	57.4	45.5	41.4	59.6
Above Average	13.7	21.6	33.9	34.7	22.7	44.8	19

Exhibit 32. What is the base annual pay (before deductions) for an officer/deputy with five years of service in your agency?

	Municipal and County					State
	1 to 20	21-50	51-100	101-500	501+	
Minimum	12500	19760	23440	25501	26422	28534
Maximum	71992	77000	74632	67800	69540	70846
Mean	32152.76	42490.71	42521.18	43627.92	44644.89	41991.1
N	3363	1268	450	395	110	39

Exhibit 33. From the list below, please indicate whether your agency offers any of these incentives or bonuses to any recruits or officers/deputies.

	Municipal and County					State	Total
	1 to 20	21-50	51-100	101-500	501+		
Signing Bonus	0.1	1.1	0.6	4.1	3.4	0	0.8
Agency Pays Training Tuition	25.4	38.3	47.9	44.8	6.8	2.4	30.8
Recruit Paid Academy Salary	39.9	70.5	76	79.3	70.9	92.7	53.5
Recruit Receives Grad Bonus	3.8	5.4	4.8	3	5.4	9.8	4.3
Reimbursement for College Courses	14.4	47.8	50	58	54.1	31.7	28.8
Salary Increases for College Degree	11.8	35.2	39.1	45.4	42.6	19.5	22.3
Scheduling Preferences for College	8.1	9.3	10	9.2	2	7.3	8.4
Take Home Car	34.9	29.6	31.3	46	32.4	82.9	34.5
Health Club Membership/Reimb.	7	15.9	11	12.6	6.8	9.8	9.7
Housing Allowance, Mortgage Discount	1.4	0.7	1	4.1	5.4	4.9	1.5
Uniform Provision or Allowance	82.7	88.1	91.1	95.9	94.6	97.6	85.9
Job Sharing or Split Shifts	3	1.9	2.7	1.8	3.4	0	2.6
Other	20.8	30.1	29.1	35.6	32.5	48.8	25

Exhibit 33. Employment or Signing Bonus Dollar Amount

	Municipal and County					State
	1 to 20	21-50	51-100	101-500	501+	
Minimum	*	**	***	750	500	0
Maximum	*	**	***	5000	1275	0
Mean	*	**	***	1821.43	887.5	0
Total	*	**	***			0
N	*	**	***	18	5	0
Missing	*	**	***			0

*No departments with 1-20 personnel listed an employment or signing bonus dollar amount.

**No departments with 21-50 personnel listed an employment of signing bonus dollar amount.

***No departments with 51-100 personnel listed an employment or signing bonus dollar amount.

Exhibit 33. Salary Amount Paid During Recruit Training

	Municipal and County					State
	1 to 20	21-50	51-100	101-500	501+	
Minimum	1172	585	661	647	500	2000
Maximum	41800	48700	45274	49000	57000	36432
Mean	22123	29095.83	29605.13	28859.72	30745.43	25847.8
N	620	458	200	208	70	25

Exhibit 33. Academy Graduation Bonus Dollar Amount

	Municipal and County					State
	1 to 20	21-50	51-100	101-500	501+	
Minimum	50	127	26500	300	1000	1603
Maximum	19500	23500	30500	31340	1000	41910
Mean	15610	4854.5	29166.67	7107.8	1000	20127
N	25	30	8	13	5	4

Exhibit 34. Does your agency have a mandatory retirement age for officers/deputies?

	Municipal and County					State	Total
	1 to 20	21-50	51-100	101-500	501+		
No	88.3	79.5	80.3	87.2	82.8	51.2	85.3
Yes	11.7	20.5	19.7	12.8	17.2	48.8	14.7

Exhibit 34. Mandatory Retirement Age

	Municipal and County					State
	1 to 20	21-50	51-100	101-500	501+	
Minimum	50	60	60	55	55	55
Maximum	70	70	70	70	70	70
Mean	63.95	64.98	65.62	65.5	64.7	60.35
N	395	260	93	50	25	20

Exhibit 35. What, if any, limit does your agency place on the maximum number of OT hours an officer/deputy can work?

	Municipal and County					State	Total
	1 to 20	21-50	51-100	101-500	501+		
No limit	86.6	74.3	82	71.8	74.6	67.6	82.1
Hours per pay period	6.4	4.2	2.2	7.8	14.5	8.1	5.9
Hours per day	7	21.5	15.8	20.4	10.9	24.3	12

Exhibit 35. Max Hours Per Pay Period

	Municipal and County					State
	1 to 20	21-50	51-100	101-500	501+	
Minimum	0	8	40	11	20	28
Maximum	90	30	40	60	64	28
Mean	19.13	20.89	40	34.67	41.5	28
N	200	23	5	30	20	1

Exhibit 35. Max Hours Per Day

	Municipal and County					State
	1 to 20	21-50	51-100	101-500	501+	
Minimum	4	4	2	4	4	8
Maximum	16	18	18	17	17	16
Mean	11.88	11.24	11.56	12.41	9.83	13.25
N	205	263	68	73	15	8

Exhibit 36. Does your agency allow officers/deputies to work secondary or other employment?

	Municipal and County					State	Total
	1 to 20	21-50	51-100	101-500	501+		
No	7.7	3.7	2.1	0.7	13.5	0	5.9
Yes	92.3	96.3	97.9	99.3	86.5	100	94.1

Exhibit 36. What, if any, limit does your agency place on the maximum number of hours an officer/deputy can work at a second job or other employment?

	Municipal and County					State	Total
	1 to 20	21-50	51-100	101-500	501+		
No Limit	81.8	76	72.3	53.9	28.9	79.4	76.6
Hours per pay period	11.7	13.7	19.6	34.9	50.9	5.9	15.2
Hours per day	6.5	10.3	8.1	11.2	20.2	14.7	8.2

Exhibit 36. Maximum Number of Hours Per Pay Period for Second Job

	Municipal and County					State
	1 to 20	21-50	51-100	101-500	501+	
Minimum	8	10	16	15	15	20
Maximum	48	80	72	70	80	48
Mean	24.24	31.82	34.36	35.75	39.56	29
N	413	195	98	133	63	4

Exhibit 36. Maximum Number of Hours per Day for Second Job

	Municipal and County					State
	1 to 20	21-50	51-100	101-500	501+	
Minimum	3	4	0	4	4	5
Maximum	16	16	18	16	16	12
Mean	7.27	8.34	8.91	9.79	8.89	8.25
N	248	145	28	48	23	4

Appendix C
Strawbridge and Langworthy Tables

Table C.1 – Supplemental Sample from Strawbridge and Strawbridge, 1990

A,B	Albuquerque, NM	B	Minneapolis, MN
A,B	Atlanta, GA	A,B	Montgomery Co., MD
	Austin, TX	B	Nashville, TN
B	Baltimore, MD	A,B	Nassau County, NY
A,B	Baltimore County, MD	B	New Orleans, LA
A,B	Baton Rouge, LA	A,B	New York City, NY
A,B	Birmingham, AL	A,B	Newark, NJ
A,B	Boston, MA	A,B	Norfolk, VA
A	Buffalo, NY	A,B	Oakland, CA
A,B	Charlotte, NC	A,B	Oklahoma City, OK
B	Chicago, IL	B	Omaha, NE
A,B	Cincinnati, OH		Palm Beach Sheriff, FL
A,B	Cleveland, OH	A,B	Philadelphia, PA
A,B	Columbus, OH	A,B	Phoenix, AZ
B	Metro-Dade, FL	A,B	Pinellas Co. Sheriff, FL
B	Dallas, TX		Pittsburgh, PA
B	Dekalb, GA	A,B	Portland, OR
B	Denver, CO	B	Prince George's Co. MD
A,B	Detroit, MI	A,B	Richmond VA
A,B	El Paso, TX	A,B	Rochester, NY
A,B	Ft. Worth, TX	A,B	Sacramento County, CA
A,B	Hillsborough Co. Sheriff, FL	A,B	San Antonio, TX
A,B	Houston, TX	B	San Diego, CA
A	Indianapolis, IN	B	San Diego County, CA
A,B	Jacksonville Sheriff, FL	A,B	San Francisco, CA
A,B	Jersey City, NJ	A,B	San Jose, CA
A,B	Kansas City MO	B	Seattle, WA
	King County ,WA	A,B	St. Louis, MO
A,B	Las Vegas, NV	A	Suffolk County, NY
A,B	Long Beach, CA	A	Tampa, FL
A,B	Los Angeles, CA	A,B	Toledo, OH
A,B	Los Angeles Co. Sheriff, CA	A	Tucson, AZ
B	Louisville, KY	A,B	Tulsa, OK
A,B	Memphis, TN	A,B	Virginia Beach, VA
A	Miami, FL	B	Washington, DC
A,B	Milwaukee, WI	A,B	Yonkers, NY

^AResponded to the 1994 Survey (Langworthy, et al., 1995)

^BResponded to the 2002 Survey

Table C.2 -- Agency Characteristics^A				
	1989	2002	Change	n ^B
Mean Population of Jurisdiction ^C	778.3	1006.6	228.4*	71
Mean Number of Full-time Officers	2124.6	2640.1	515.5 ^D	54
Mean Number of Officers per 100,000 citizens	243.4	268.5	25.1*	54
Percent White	74.9%	66.0%	-8.9%*	50
Percent Black	16.1%	20.9%	4.9%*	50
Percent Hispanic	7.4%	11.1%	3.7%*	47
Percent Other Race/Ethnicity	1.5%	2.4%	1.0%*	48
Percent Female	11.1%	14.5%	3.4%*	45
Percent College Graduates	25.5%	31.3%	5.8%	13
Percent Civilian Employees	24.2%	23.5%	-0.7%	51
Mean Officer Pay After 5 Years ^C	34.5	48.0	13.5*	53
Mean Hours per standard work week	40.3	42.3	2.0	57
Mean Mandatory Retirement Age	64.3	63.7	-0.6	18
Mean Years of Service for Pension	24.1	23.6	-0.4	53
<p>^A The analysis and reported statistics are for only those cases that reported 2002 data and 1989 data.</p> <p>^BNumber of cases vary by year and variable.</p> <p>^CIn Thousands.</p> <p>^Dt-score was not significant. Wilcoxon Signed Ranks test found a significant difference between the number of agencies that added officers (n=46) compared to those with fewer officers (n=8). Using only agencies with fewer than 10,000 officers in 1989 returned the following results. 1989: 1494.7, 2002: 1720.6, change: 225.9, p<.05, n=52.</p> <p>*2002 value is different from that reported for 1989, p<.05</p>				

Table C.3 -- Agency Applicants^A				
	1989	2002	Change	n ^B
Mean Number of Applicants	3113.25	1949.9	-1163.3	32
Mean Percent of Successful applicants	16.1	9.2	-6.9	31
Mean Number of Weeks to Acceptance	22.6	24.0	1.4	45
<p>^A The analysis and reported statistics are for only those cases that reported 2002 data and 1989 data.</p> <p>^BNumber of cases vary by year and variable.</p> <p>*2002 value is different from that reported for 1989, p<.05</p>				

	1989	2002	Change	n ^B
Newspapers	88.3%	83.3%	-5.0%	60
Radio	81.7%	70.0%	-11.7%*	60
Television	70.0%	66.7%	-3.3%	60
Posters	58.3%	65.0%	6.7%	60
Journals/Magazines	38.3%	28.3%	-10.0%	60
Mass Mailing	31.7%	33.3%	1.6%	60

^A The analysis and reported statistics are for only those cases that reported 2002 data and 1989 data.
^BNumber of cases vary by year and variable.
*2002 value is different from that reported for 1989, p<.05

	1989	2002	change	n
Women	57.6%	76.3%	18.7%*	59
Minorities	81.3%	79.7%	-1.6%	59
Military Veterans	42.4%	66.1%	23.7%*	59
College Graduates (4 Year)	40.7%	61.0%	20.3%*	59
Prior Police Service	28.8%	52.5%	23.7%*	59
Handicapped Individuals	3.4%	3.4%	0.0%	59

^A The analysis and reported statistics are for only those cases that reported 2002 data and 1989 data.
*2002 value is different from that reported for 1989, p<.05

	1989	2002	change	n ^B
U.S. Citizenship	91.7%	95.0%	3.3%	60
Clean Criminal Record	51.7%	33.3%	-18.4%*	60
Residency Requirement	36.1%	19.7%	-16.4%*	61
Minimum Height	5.1%	3.4%	-1.7%	59
60 college credit hours	8.3%	15.0%	6.7%	60
Bachelors Degree	0.0%	1.7%	1.7%	60

^A The analysis and reported statistics are for only those cases that reported 2002 data and 1989 data.
^BNumber of cases vary by year and variable.
*2002 value is different from that reported for 1989, p<.05

	1989	2002	change	n ^B
Written Exam	98.3%	71.2%	-27.1%*	59
Medical Exam	98.3%	98.3%	0.0%	58
Psychometric Test	58.9%	50.0%	-8.9%	56
Psychological Interview	82.8%	93.1%	10.3%*	58
Practical Test	7.1%	3.6%	-3.5%	56
Interview ^C	94.7%	91.2%	-3.5%	57
Background Check	100.0%	98.3%	-1.7%	58
Handwriting Analysis	8.8%	5.3%	-3.5%	57
Polygraph	68.4%	64.9%	-3.5%	57
Written References	59.6%	61.4%	1.8%	57
Fitness Test	86.2%	87.9%	1.7%	58
Intelligence Test	82.1%	8.9%	-73.2%*	56
Drug Test	22.4%	86.2%	63.8%*	58

^A The analysis and reported statistics are for only those cases that reported 2002 data and 1989 data.

^BNumber of cases vary by year and variable.

^CThe 2002 survey replaced the 1989 question about a “police interview” with two questions. Results reported here combine responses for “personal interview” and “interview board”.

*2002 value is different from that reported for 1989, $p < .05$

Appendix D
PERF 1999-2002 descriptive data on attracting and hiring applicants

Table D.1: Proportions of Sworn Positions Filled by Agency Size Group & Year				
Agency Size	2002	2001	2000	1999
1-20	.97	.97	.97	.98
21-50	.97	.97	.97	.97
51-100	.96	.96	.96	.97
101-500	.96	.96	.96	.96
500+	.96	.95	.95	.95

Table D.2: Proportions of Sworn Positions Filled by Region & Year				
Region	2002	2001	2000	1999
North East	.97	.97	.97	.97
South	.96	.96	.96	.96
MidWest	.97	.97	.98	.97
West	.96	.96	.96	.96

Table D.3: Proportion of agencies with less than 90% of sworn positions filled	
Agency Size	2002
1-20	15%
21-50	7.4%
51-100	11.5%
101-500	5.5%
500+	16%

Table D.4: Estimated Means and Medians of Recruiting Success Measures (weighted data)

	Agency Size in Numbers of Officers											
	1-20		21-50		51-100		101-500		>= 501		State agencies	
	Mean	Med'n	Mean	Med'n	Mean	Med'n	Mean	Med'n	Mean	Med'n	Mean	Med'n
Applicants/position	4.96	2.37	14.36	7.28	14.51	8.12	13.65	9.51	7.50	6.70	8.90	8.48
Qualified	2.51	1.00	5.45	2.83	3.63	1.76	3.26	1.31	0.89	0.84	0.79	0.70
applicants/ position												
Ratio of Hires / positions	1.06	1.00	1.16	1.00	1.08	0.83	0.91	0.79	0.72	0.68	0.60	0.62
Female applicants/position	0.48	0.00	2.03	0.75	1.70	1.00	1.96	1.00	1.30	1.12	1.15	0.86
Qualified female applicants / position	0.24	0.00	0.74	0.17	0.42	0.13	0.52	0.20	0.14	0.12	0.08	0.04
Ratio of female hires / positions	0.09	.000	0.15	0.07	0.11	0.07	0.13	0.11	0.12	0.10	0.06	0.04
Minority applicants/ position	0.49	0.00	1.30	0.20	2.76	0.64	3.86	1.91	3.09	1.69	1.63	0.91
Qualified minority applicants / position	0.40	0.00	0.40	0.09	0.46	0.15	0.74	0.25	0.22	0.16	0.08	0.05
Ratio of minority hires / positions	0.12	0.00	0.10	0.00	0.10	0.06	0.21	0.15	0.20	0.14	0.06	0.05
PRI female applicants	0.13	0.00	0.24	0.18	0.24	0.24	0.25	0.22	0.30	0.29	0.21	0.20
PRI Qualified females	0.14	0.00	0.23	0.17	0.20	0.19	0.31	0.26	0.29	0.29	0.18	0.19
PRI female hires	0.14	0.00	0.25	0.14	0.19	0.17	0.28	0.26	0.29	0.28	0.17	0.18
PRI Minority Applicants	0.49	0.00	0.68	0.25	1.15	0.68	0.97	0.90	1.35	1.06	0.93	0.94
PRI Qualified minorities	4.20	0.00	0.59	0.13	0.96	0.63	0.89	0.66	0.93	0.70	0.56	0.50
PRI minority hires	4.59	0.00	0.57	0.00	0.77	0.27	0.95	0.79	0.85	0.64	0.53	0.53

