



INFRASTRUCTURE, SAFETY, AND ENVIRONMENT

THE ARTS
CHILD POLICY
CIVIL JUSTICE
EDUCATION
ENERGY AND ENVIRONMENT
HEALTH AND HEALTH CARE
INTERNATIONAL AFFAIRS
NATIONAL SECURITY
POPULATION AND AGING
PUBLIC SAFETY
SCIENCE AND TECHNOLOGY
SUBSTANCE ABUSE
TERRORISM AND
HOMELAND SECURITY
TRANSPORTATION AND
INFRASTRUCTURE
WORKFORCE AND WORKPLACE

This PDF document was made available from www.rand.org as a public service of the RAND Corporation.

[Jump down to document](#) ▼

The RAND Corporation is a nonprofit research organization providing objective analysis and effective solutions that address the challenges facing the public and private sectors around the world.

Support RAND

[Purchase this document](#)

[Browse Books & Publications](#)

[Make a charitable contribution](#)

For More Information

Visit RAND at www.rand.org

Explore [RAND Infrastructure, Safety, and Environment](#)

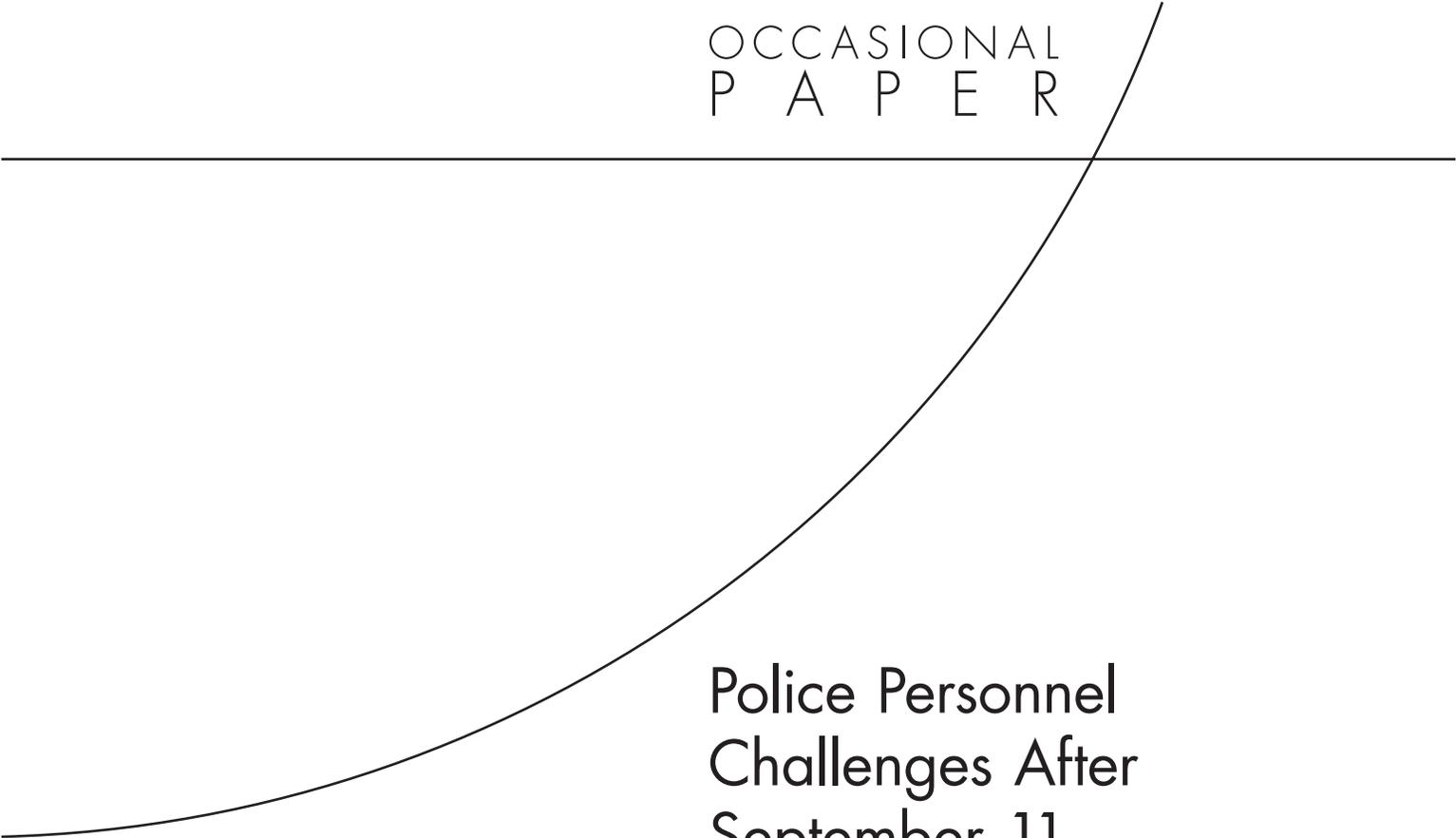
View [document details](#)

Limited Electronic Distribution Rights

This document and trademark(s) contained herein are protected by law as indicated in a notice appearing later in this work. This electronic representation of RAND intellectual property is provided for non-commercial use only. Permission is required from RAND to reproduce, or reuse in another form, any of our research documents for commercial use.

This product is part of the RAND Corporation occasional paper series. RAND occasional papers may include an informed perspective on a timely policy issue, a discussion of new research methodologies, essays, a paper presented at a conference, a conference summary, or a summary of work in progress. All RAND occasional papers undergo rigorous peer review to ensure that they meet high standards for research quality and objectivity.

OCCASIONAL
P A P E R



Police Personnel Challenges After September 11

Anticipating Expanded Duties
and a Changing Labor Pool

Barbara Raymond, Laura J. Hickman,
Laura Miller, Jennifer S. Wong

Approved for public release; distribution unlimited



INFRASTRUCTURE, SAFETY, AND ENVIRONMENT

The research described in this report results from the RAND Corporation's continuing program of self-initiated research. Support for such research is provided, in part, by donors and by the independent research and development provisions of RAND's contracts for the operation of its U.S. Department of Defense federally funded research and development centers.

Library of Congress Cataloging-in-Publication Data

Police personnel challenges after September 11 : anticipating expanded duties and a changing labor pool /
Barbara Raymond ... [et al.]
p. cm.
"OP-154."
Includes bibliographical references.
ISBN 0-8330-3850-8 (pbk. : alk. paper)
1. Police—Recruiting—United States. 2. Police administration—United States. I. Raymond, Barbara.

HV8141.P584 2005
363.2'2'0973—dc22

2005024192

The RAND Corporation is a nonprofit research organization providing objective analysis and effective solutions that address the challenges facing the public and private sectors around the world. RAND's publications do not necessarily reflect the opinions of its research clients and sponsors.

RAND® is a registered trademark.

© Copyright 2005 RAND Corporation

All rights reserved. No part of this book may be reproduced in any form by any electronic or mechanical means (including photocopying, recording, or information storage and retrieval) without permission in writing from RAND.

Published 2005 by the RAND Corporation
1776 Main Street, P.O. Box 2138, Santa Monica, CA 90407-2138
1200 South Hayes Street, Arlington, VA 22202-5050
201 North Craig Street, Suite 202, Pittsburgh, PA 15213-1516
RAND URL: <http://www.rand.org/>
To order RAND documents or to obtain additional information, contact
Distribution Services: Telephone: (310) 451-7002;
Fax: (310) 451-6915; Email: order@rand.org

Preface

This occasional paper results from the RAND Corporation's continuing program of self-initiated research. Support for such research is provided, in part, by donors and by the independent research and development provisions of RAND's contracts for the operation of its U.S. Department of Defense federally funded research and development centers.

This paper should be of interest to law enforcement agency administrators and policymakers at all levels of government. Its focus is primarily on personnel planning of local law enforcement agencies, but its lessons and recommendations can apply to state and federal law enforcement, as well as intelligence and immigration enforcement agencies.

This document is a publication in the RAND occasional paper series. These publications include essays, conference papers, and working papers, and provide informed perspectives on timely policy issues and discussions of research directions. Occasional papers provide RAND researchers a means of communicating to a targeted audience, and are formally peer reviewed. They are not intended to represent an in-depth investigation or thorough analysis of specific issues of public policy. Instead, they are intended to call attention to emerging issues and help frame discussion around these issues.

This research was conducted under the auspices of the Safety and Justice Program within RAND Infrastructure, Safety, and Environment (ISE). Safety and Justice Program research addresses occupational safety; transportation safety; food safety; and public safety, including violence, policing, corrections, substance abuse, and public integrity.

RAND is a nonprofit institution that helps improve policy and decisionmaking through research and analysis. RAND's publications do not necessarily reflect the opinions or policies of its research sponsors. Comments are welcome and may be addressed to Barbara Raymond, RAND Corporation, 1776 Main Street, P.O. Box 2138, Santa Monica, CA 90407-2138 or Barbara_Raymond@rand.org. For more information on the Safety and Justice Program within ISE, contact Andrew Morral, Director, Safety and Justice Program, RAND Corporation, 1200 South Hayes Street, Arlington, VA 22202-5050 or Andrew_Morral@rand.org. More information about RAND is available at www.rand.org.

Contents

Prefaceiii
Figures	vii
Summary	ix
Acknowledgments	xiii
Abbreviations	xv
SECTION 1	
Introduction	1
Background	1
Objective and Approach	1
Organization of the Document	3
SECTION 2	
Changing Demands for Police Services	5
Population Pressures on Traditional Police Services	5
Community Policing	6
Homeland Security	7
Examples of How the Long Beach Police Department Has Adapted to New Service Demands	8
Department Responses	8
SECTION 3	
A Shifting Supply of Qualified and Interested Candidates	11
Growing Need for Police Forces to “Look” More Like the Communities They Serve	12
The Changing Nature of the Recruiting Pool	12
Competition for Personnel from Other Fields	14
Efforts by the Long Beach Police Department to Increase Supply	16
Department Responses	16
SECTION 4	
How the Military Experience Might Apply to Police Departments	19
The Military Personnel Planning Process	19
Adapting the Process for a Local Police Environment	20
Labor Supply Lessons from the Military Experience	24

SECTION 5

Conclusion29

References33

Figures

1. Demographic Trends May Restrict the Recruiting Pool	13
2. Potentially Increasing Competition for Suitable Candidates.....	15
3. The Military Takes a Strategic Approach to Determine Personnel Needs	20
4. A Needs Assessment for Police Services Drives the Approach	22

Summary

Police officers are a unique set of public servants, vested with the public trust and, if necessary, the authority to use force against the citizenry to maintain order and enforce societal laws. The police function is an important contribution to the functioning of democratic societies.¹ Over the past century, policing has evolved into a high-profile, professional, 24-hour, 365-day public service. Today, police administrators assume an array of responsibilities, including public safety, community relations, law enforcement, human resource management, and information and fiscal management.²

Serving on the front lines, personnel are a police department's most important and most valuable resource. Police work relies upon the judgment of officers and their ability to determine the appropriate response to a given situation. Citizens' interactions with individual police officers are a primary factor in shaping their perceptions of the quality of their local police department. Indeed, research indicates that informal contacts with the police can improve citizens' perceptions of police job performance even when negative factors such as crime and disorder are present in their communities.³

With personnel playing this critical role, the process of personnel selection, training, monitoring, and support is key to a successful police department. Good police management is therefore essentially good personnel management.⁴ Every police manager and supervisor shares in the responsibility for recruiting, developing, and retaining high-quality individuals. Illustrating this important responsibility, the International Association of Chiefs of Police has called staffing a priority issue for 21st-century policing.⁵

Police departments today face many issues in recruiting and retaining high-quality employees. Changes in local communities and homeland security concerns are affecting the nature of policing, and agencies are struggling to predict the future need for services. At the same time, agencies are trying to anticipate what the potential labor pool will be. Because of the localized nature of policing, law enforcement agencies vary greatly in the development of recruitment and retention strategies with few systematic models to guide police managers' efforts. We describe these issues in more detail below.

The nature of policing has broadened to a more diverse range of missions requiring a complex set of skills from officers. Population shifts, particularly those that result in greater

¹ Goldstein, 1987.

² Geller and Stephens, 2003.

³ Maxson, 2003.

⁴ Goldstein, 1987.

⁵ International Association of Chiefs of Police, 1999.

cultural diversity, create demand for police officers who have the ability to work with different types of people. The adoption of the community policing model requires departments to be more representative of and responsive to the communities served. Departments are increasingly called upon to conduct systematic problem solving to address root causes of crime problems rather than simply respond to calls for service. New technologies can increase the capabilities of departments, but also require departments to add technology training to an already long list of officer training requirements.

In addition, responsibilities for law enforcement agencies at all levels are changing in the wake of the September 11, 2001, terrorist attacks. A new homeland security mission increases the demand for local police in many jurisdictions in the country. In some ways, homeland security needs draw on traditional police skills, such as guarding places and people. But this new mission brings much greater attention to duties such as serving on joint intelligence task forces and training to execute emergency preparedness plans. Thus, many police managers see this role as requiring increased staffing.

In short, the expanded responsibilities for local police require an expanded set of police skills, and perhaps a different type of officer.

The population from which police agencies recruit has also changed in the past several decades. Some trends may restrict the potential labor pool while others may increase it. Factors decreasing the size of the potential labor pool have to do with changes among American youth, such as higher levels of indebtedness (a factor traditionally considered in police screening), poor physical fitness, and prior drug use. Moreover, while data are not yet available to assess this issue, it is reasonable to expect that competition may be increasing from other organizations for similar recruits to meet growing demands for individuals to perform homeland security work and overseas military operations. The national military response to terrorism also influences the availability of existing police officers to meet traditional and new police missions, particularly in small and rural police departments where the “call-up” for military service of even one or two officers who serve in the National Guard or Reserves can have a noticeable impact.

Even if a police department fully understood its future personnel needs and could identify adequate numbers of appropriate personnel to fill the needs, its ability to meet force management objectives is often complicated by budgetary difficulties at the local, state, and federal level. For example, the economic condition of a city can quickly fluctuate and police departments may have to make unplanned cuts, including reducing the authorized number of recruit slots. Federal grants are sometimes available to hire new police officers, but these grants expire and cities cannot always take on the increased cost for the new officers. Such difficulties can constrain the department’s ability to recruit new officers to cover the range of local, state, and national missions requested of them.

Despite the critical nature of police as a national resource and the substantial challenges faced by law enforcement agencies in adequately staffing and training their ranks, few resources are devoted to analyzing police recruitment and retention in a long-range and strategic manner. Most of the focus is on short-range and tactical planning. This focus can be traced to the nature of local governments, which operate on annual or biannual budgets, respond to emergent events, and adjust according to the local economic and political climate. Because personnel and equipment costs consume the majority of police department budgets, local agencies can make little investment in planning and analysis functions.

The present study is an effort to identify planning tools that might be adapted by police agencies to address some of the recruiting and retention challenges they face. In this effort, we sought to identify other large, analogous institutions whose force planning strategies could potentially benefit police. There are several types of organizations that hold lessons in this area.

One entity that clearly fits this role is the U.S. military. Police and military organizations have similar organizational structures and draw from the same labor pool. These organizations have similar career patterns; they recruit people with little relevant job training, provide intensive initial entry training, and specific job-related training on the job and throughout the career. Both expect to retain a portion of their force for a 20-year (military) to 30-year career, which is followed by a retirement and pension earlier than is available in most civilian occupations. In both cases, budgets are externally controlled and allocations can change and be influenced by politics and public images. Finally, both police departments and military units are being asked to take on new and different missions.

Of course, local policing and military organizations differ substantially in some areas as well. Military personnel are not unionized and do not benefit from the protections that unions afford; neither can they quit work at any time, due to multiyear service obligations. Police officers can work near their homes and stay in the same city their entire careers. Military service can involve frequent relocation. Police officers may also frequently change the type of police work they do within the department, whereas military services members are not as free to rotate through different work roles. There are also important differences between police and military organizations in the types of missions they fulfill, the communities in which they work, and the legal guidelines and rules of engagement under which they operate.

For the purposes of personnel planning, however, the military experience might offer lessons that could be adapted and used to benefit police departments. The military has a centralized planning structure and a long history of available funding to study both demand- and supply-side personnel trends. Armed service organizations are able to think in the longer term, continually adapting force management plans that estimate future demand for the size, seniority, and skill mix of military personnel, and analyzing how best to “grow” the kind of force they need. While these features are much different than the type of planning infrastructure that is available to local law enforcement, there may be opportunities for local law enforcement to adapt the knowledge generated by the military’s substantial investment in personnel planning.

The military services use a strategic approach to assess potential future demand for personnel. Based on perceptions of external threats or potential challenges to “national interests,” defense planners make decisions about future force size and mix, strategy and doctrine, and equipment acquisition needs.

Military force management planning begins by developing an articulation of anticipated future demand for military personnel, ties that projection to a request for resources, and ultimately operationalizes the projection through specific force shaping.

The prospect of thinking strategically about personnel management holds great value for local police. It is less critical that the predictions be highly accurate. The exercise of carefully thinking through the issues can aid decisionmakers in making difficult decisions regarding service priorities and resource allocation. Through this process, police personnel planning could be linked to a city’s or county’s strategic plan, which could lead to integrated

activities and likely economies of scale. Police managers could strengthen relationships with legislative and executive planners, leading to increased support for budget requests.

While the primary responsibility for personnel management falls on local leadership, some of the implementation challenges for personnel planning could be relieved by addressing them at a higher level. Two factors push toward this possibility: (1) Law enforcement agencies are increasingly being asked to take on duties that fall within the homeland security arena; and (2) there are economies of scale that would accrue by thinking about police personnel trends and needs at a larger level than could occur at the individual departmental level. A clear argument can be made for national leadership on police personnel management.

In the effort to fulfill the homeland security mission, agencies would benefit from more coordinated planning at the national level, perhaps by the Department of Homeland Security (DHS). Similarly to the way the Department of Defense (DoD) offers strategic planning for our national military, DHS could offer strategic planning for our nation's first line of defense against terrorism: police departments. Other federal agencies that might provide leadership could include the Department of Justice Community Oriented Policing Services (COPS) Office or the Bureau of Justice Assistance. Federal agencies could spearhead the development of labor pool analysis tools and conceptual frameworks that could be used by local agencies. At a minimum, centralization of data would bring many benefits for police personnel analysis.

The field of policing is facing a unique moment in time. There is considerable flux in both demand for police services and supply of qualified personnel. There is a compelling need to reconceptualize local police as a national resource and for the federal government to take a larger role in the planning and development of this resource.

Acknowledgments

We would like to thank Jack Riley, Andrew Morral, and Paul Steinberg for supporting this study, helping to conceptualize the issue, and contributing to the organization of the report. We would also like to thank Steve Baeck for editorial guidance and Mary Sue Watson, Holly Johnson, and Linda Walgamott for administrative and research assistance.

We are also grateful for the support and insights offered by Long Beach Police Department Chief of Police Anthony Batts, Deputy Chief Timothy Jackman, and Dr. Kendall Price. We also offer our appreciation to the personnel of the Long Beach Police Department who made this study possible by sharing their time, thoughts, and experiences with us.

Beth Asch provided expert guidance on the military personnel comparison and valuable feedback on early drafts of this report. Reviews by Michael S. Scott and David Loughran helped us clarify, frame, and more effectively elaborate our findings.

Abbreviations

BJS	Bureau of Justice Statistics
CLEAR Act	Clear Law Enforcement Alien Removal Act
COPS	Community Oriented Policing Services
DARE	Drug Abuse Resistance Education
DHS	U.S. Department of Homeland Security
DoD	Department of Defense
FBI	Federal Bureau of Investigation
LBPD	Long Beach Police Department
LEMAS	Law Enforcement Management Analysis Survey
NMS	National Military Strategy
POST	Peace Officer Standards and Training
PROS	Patrol Resource Optimization System
PT	Physical training
SWAT	Special Weapons and Tactics
TSA	Transportation Security Administration
WMD	Weapons of mass destruction
YATS	Youth Attitude Tracking Survey

Introduction

Background

Police officers are a unique set of public servants, vested with the public trust and, if necessary, the authority to use force against the citizenry to maintain order and enforce societal laws. Serving on the front lines, personnel are a police department's most important and most valuable resource. With personnel playing this critical role, the process of personnel selection, training, monitoring, and support is key to a successful police department. Every police manager and supervisor shares in the responsibility for recruiting, developing, and retaining high-quality individuals.

Despite the critical nature of police as a national resource and the substantial challenges faced by law enforcement agencies in adequately staffing and training their ranks, few resources are devoted to analyzing police recruitment and retention in a long-range and strategic manner. Because personnel and equipment costs consume the majority of police department budgets, local agencies can make little investment in planning and analysis functions.

As an initial step toward addressing the planning and analysis gap for local law enforcement agencies, the present study is an effort to identify potential planning tools that might be adapted to address some of the recruiting and retention challenges faced by police agencies. In this effort, we sought to identify other large, analogous institutions that might offer lessons in this area. One entity that fits this role is the U.S. military. Police and military organizations have similar organizational structures and draw candidates from the same labor pool. For the purposes of personnel planning, the military experience might offer lessons that could be adapted and used to benefit police departments.

Objective and Approach

In this paper, we look in detail at the issues law enforcement agencies face on both the demand and supply side, the current approaches some are using to deal with these issues, and how tools and approaches used by the military might apply. Drawing upon RAND's extensive work in military personnel management, we identify key lessons that could help local police departments address their personnel needs. The military's experience in long-term planning and tracking national trends in youth attitudes, demographics, and employment may help law enforcement agencies better prepare for the personnel needs they

are likely to face (the demand side of personnel planning) and achieve greater success in minimizing personnel shortages (the supply side of personnel planning).

To ground our analysis in current law enforcement personnel practices, we selected the Long Beach Police Department (LBPd) in California as an example case. LBPd is a large metropolitan police department facing officer recruitment and retention challenges in the face of increased homeland security–related demands. The city of Long Beach (population 487,100) is located in Los Angeles County (population 10 million) and borders Orange County (population 3 million), which characterizes it as a large city in an extremely large metropolitan area. Long Beach is an ethnically diverse city; approximately one-third of residents are Caucasian and one-third are Hispanic or Latino. The city’s immigrant communities include one of the largest Cambodian populations outside of Cambodia.

LBPd has 975 sworn officers and 484 civilian personnel.¹ (One-third of police officers in the United States work for departments with more than 1,000 sworn employees and nearly two-thirds work for agencies with 100 or more officers.²) LBPd provides service to Long Beach Transit, Long Beach Unified School District, and Long Beach City College. Further, LBPd is somewhat uniquely situated in also providing dedicated officers to the Long Beach Airport and the Port of Long Beach, the second busiest international seaport in the United States. The city has been significantly affected by the increased demands of homeland security since September 11, 2001. This experience and the great diversity of the city serve as illustrations of current and future issues that may be faced by similarly situated departments across the country.

To more fully understand some of the post–September 11 personnel needs and duties of police departments, we conducted two dozen semi-structured, exploratory interviews with men and women in recruitment, screening, training, and human resources in LBPd. Interviewees also included members of the community-oriented public safety unit, the new counterterrorism unit, and the new unit on homeland security. In addition, we observed police duties through “ride-alongs” with police officers during three different shifts, patrolling different sectors of the city. We observed the Special Weapons and Tactics (SWAT) team preparing and conducting a raid, and also observed activity in the call dispatch center that coordinates the activity of patrol officers.

Our semi-structured interview questions included whether policing has changed during the officers’ tenures (particularly pre– and post–September 11), what are the primary demands on their time and what skills are needed to meet them, quality and characteristics of fellow officers, their perspectives on the various positions they have held within the LBPd, and their perspective on the current methods of recruiting and retaining officers.

In the report, we use the results of these interviews with LBPd personnel as illustrations of police department personnel needs and management approaches in the current homeland security environment.

¹ Communication with Long Beach Police command staff; in 1999, 89 percent of LBPd officers were male and 11 percent female; 71 percent were Caucasian, 16 percent Hispanic, 7 percent African American, and 1 percent Asian American (Bureau of Justice Statistics, 2003).

² Bureau of Justice Statistics, 2003.

Organization of the Document

In Section 2, we examine some of the evolving demands placed on police departments. In Section 3, we assess the types of challenges to staffing that local law enforcement agencies currently face. Next, we discuss some of the personnel management strategies the military has employed that may have some application for local law enforcement agencies (Section 4). Finally, Section 5 provides a discussion of the challenges of implementing military approaches in the local law enforcement environment, and provides some recommendations for further development of the work in this area.

Changing Demands for Police Services

Public expectations of the roles and responsibilities of police agencies have evolved beyond traditional crime fighting into community policing activities, and are currently evolving from the local level to a role in national homeland security. In this section, we examine these changes and their implications for local police agencies.

Population Pressures on Traditional Police Services

The most conspicuous function of police agencies is to respond to reported crime. Law enforcement agencies have historically been organized around preventive patrol, routine incident response, criminal investigation, and support services.¹ In addition to crime control and crime prevention responsibilities, police also enforce traffic, parking, and vice laws; generally maintain order (such as crowd control, quieting barking dogs, responding to disturbances caused by disorderly individuals, and responding to calls to intervene in disputes); and conduct nuisance abatement (to include violations of municipal and county laws on littering, loitering, unlawful use of water, and negligent yard care). A simple increase in overall population or changes in the population distribution within a jurisdiction can put increasing demands on police departments for crime fighting as well as crime prevention and noncrime services.

While imperfect, demographic trends probably provide the best sense of future directions in crime. One important demographic characteristic is the age structure of the population. The relationship between age and crime is so well documented that it has been described as a “basic fact of crime,” a very strong statement for any social science.² Younger persons commit more crime than older persons. Participation in crime peaks in the middle teenage years to the early twenties and gradually declines as people age.

The relationship between crime and urbanization is also strong, and is regarded as another “truism” in the study of criminal behavior.³ Less than 5 percent of index crimes reported to police occur outside cities and metropolitan areas.⁴ A 1997 report to Congress

¹ Scott, 2000.

² Braithwaite, 1989.

³ Ibid.

⁴ Index crimes are standardized into serious and nonserious offenses. Part I crimes comprise serious felonies and Part II crimes comprise nonserious felonies and misdemeanors (Ousey, 2000).

noted that half of all homicides occur in the 63 largest cities in the nation, although these cities are home to only 16 percent of the U.S. population.⁵

Nevertheless, the relationship between urbanism and crime is complex. Much research indicates that crime rates of cities are not equally distributed across boundaries or population. For example, many studies indicate that more than half of all calls to police can be generated from fewer than 10 percent of city addresses.⁶

Demographic and urbanization trends also have implications for other types of police work. The revitalization of a downtown, new large-scale apartment complexes or housing areas, new convention centers or tourist attractions, or construction of a new airport or interstate freeway all signal a likely increase in demands for police to manage traffic, parking, crowds, public disturbances, and the like, as well as a shift in the types of people police are likely to serve. Agencies seek to understand the specific conditions that generate increased crime, such as concentration and conditions that lead to risky places.

Community Policing

In addition to providing core police services, over the past 15–20 years the concept of “community policing” has been embraced by departments across the country. The U.S. Department of Justice describes community policing in the following way:

Community policing focuses on crime and social disorder through the delivery of police services that includes aspects of traditional law enforcement, as well as prevention, problem solving, community engagement, and partnerships. The community policing model balances reactive responses to calls for service with proactive problem solving centered on the causes of crime and disorder. Community policing requires police and citizens to join together as partners in the course of both identifying and effectively addressing these issues.⁷

Community policing is now a core operational strategy for many departments across the country and has come to encompass many initiatives beyond controlling crime.⁸ A 2000 Bureau of Justice Statistics (BJS) survey found that 90 percent of municipal police officers in the United States were employed by agencies with some type of community policing plan, and 75 percent of all such officers worked for agencies in which new recruits were trained in community policing and/or problem solving.⁹ To effectively implement a community policing or problem-oriented approach, police officers require more technical skills, and greater language and cultural awareness. In addition to new tasks for the organization, new skills may be required of individual police officers, such as a greater focus on interpersonal skills, negotiation, and problem-solving ability. Community policing also requires time for proactive police work. The International Association of Chiefs of Police recommends allocating 40

⁵ Sherman, 1997.

⁶ Sherman, Gartin, and Buerger, 1989; Eck, 1997; Sherman and Weisburd, 1995; Sherman and Rogan, 1995.

⁷ U.S. Department of Justice, 2004.

⁸ Scott, 2000.

⁹ Bureau of Justice Statistics, 2003.

percent of an officer's available time to proactive police work. This allocation of time requires reallocation of staff and possibly other reorganization measures.

A Long Beach police sergeant explained problem solving as a change from reactive policing (which addresses only the symptoms of social problems) to careful examination of root causes. These causes are then addressed, ideally with the cooperation of community members and other city agencies. Community policing, he says, emphasizes community participation in public safety and holistic long-term solutions, "which can't be done by giving out a couple tickets or making a couple arrests." In addition to institutionalizing a problem-solving ethos within the police department, the City of Long Beach has moved toward a community government approach with their Community Oriented Public Safety program.

Homeland Security

One obvious area influencing demand for police is in the expanding duties placed on law enforcement agencies by homeland security concerns since the September 11 terrorist attacks. Critical infrastructure protection is largely the responsibility of local police and governments. In the immediate aftermath of the terrorist attacks, many police agencies redirected police officers from neighborhood patrol to guard public buildings.¹⁰ Some law enforcement agencies, including LBPB, continue to divert officers in this way. In addition, some agencies with specific vulnerabilities added new units altogether, such as the Long Beach port unit, which is equipped with three patrol boats. Increases in funding from the federal level to account for these services have been slow in arriving to local jurisdictions.

While terrorist events may have a low probability of occurring, they can have very serious consequences if they do. Therefore, police departments engage in threat assessment in their communities. LBPB, for example, has analyzed the risks posed by terrorists at the local airport and seaport facilities.

In addition, local police are becoming increasingly involved in intelligence gathering and processing. This is a logical step because police officers substantially outnumber the agents available through the Federal Bureau of Investigation (FBI) to collect domestic intelligence. Moreover, police are uniquely situated to serve this homeland security role because of their daily observation of and interaction with local communities. This role, however, requires an investment by police departments such as reassigning personnel previously engaged in more traditional police work.¹¹ Case in point: LBPB shifted detectives from a white-collar crime unit to a new counterterrorism unit.

Immigration enforcement is another domain in which local police are increasingly facing pressures to expand their role. Congress recently considered the Clear Law Enforcement for Alien Removal (CLEAR) Act. The CLEAR Act would have granted state and local police agencies the authority to enforce immigration laws. While that bill stalled in the 108th Congress, officers across the country are engaging in immigration enforcement activities that they previously did not handle and in at least one jurisdiction are being cross-deputized to

¹⁰ Geller and Stephens, 2003.

¹¹ Ibid.

perform tasks previously restricted to U.S. Immigrations and Customs Enforcement agents.¹² Some police agencies are resisting allowing their officers to serve in this role, but the issue becomes particularly salient in jurisdictions located near international borders or major seaports.

All told, police agencies are now expected to support federal authorities in seaport, airport, and other infrastructure security; support increased security measures enacted in response to the nation's terrorism alert level; become increasingly involved in immigration law enforcement; and respond to increased training demands both within and across agencies. These additional duties are not equally distributed among law enforcement agencies; rather, they are disproportionately felt by those in large metropolitan areas and in areas including or adjacent to critical or high-profile infrastructure (such as dams, nuclear facilities, and pipelines).

Examples of How the Long Beach Police Department Has Adapted to New Service Demands

- Created counterterrorism unit
- Created terrorist liaison officers
- Reassigned officers to assess and protect critical infrastructure, such as the port, airport, and water treatment facilities
- Sent officers to train in new skills, such as WMD response, and signs of terrorism
- Established port police equipped with small boats
- Redistributed officers to respond to areas with high population growth
- Increased visibility and response times by switching most officers from two- to one-person patrol cars
- Reduced staffing on lower-priority programs such as Drug Abuse Resistance Education (DARE) and Community Reactions Division
- Reduced staffing on narcotics division
- Reduced foot patrols
- Requested additional resources to cover additional demand, both from the city for local needs, and from the government for national needs

Department Responses

Ideally, local police departments would periodically assess the demands they have experienced as well as those they anticipate. That assessment could then be used to acquire and allocate resources according to a comprehensive strategy with both short-term and long-term goals. Too often, however, resource constraints and historical precedents drive planning in law enforcement agencies. For the most part, departments must focus on meeting tactical,

¹² The Los Angeles County Board of Supervisors approved a memorandum of understanding to cross-deputize Los Angeles County Sheriff's Department deputies with Immigration and Customs Enforcement authorities on January 25, 2005. See Raymond et al., 2004.

day-to-day demands rather than devote much attention to planning for the strategic, longer-term demands.

Police agencies typically rely on some form of workforce planning approach. That is, they focus on internal personnel needs and, more specifically, on patrol allocation. Patrol allocation models use data, such as calls for service and response time, to determine how many officers are needed during particular days of the week and times of the day to meet response time, public visibility, and department or other policy criteria (such as number of officers required to respond to certain types of calls). Typically, models provide estimates of patrol personnel needs for immediate or short-term future projections. They focus only on patrol officers (and sometimes on their direct supervisors) and not on other positions within the department (such as detectives, special units, or support services). Variations of these models have been used for decades and have become more sophisticated over time.¹³ LBPD uses, as do many agencies across the country, the Patrol Resource Optimization System (PROS) to configure patrol beats and determine the number of officers and vehicles that should be assigned to respond to calls for police service.

The current patrol allocation approach helps local agencies set priority neighborhoods and respond to calls for service. Due to its focus on patrol, however, this approach fails to similarly capture the demands of community policing and homeland security on the department as a whole. This approach is not sufficient to address the big-picture strategic needs of force management.

Perhaps most critical today is that no paradigm exists for how to systematically manage a police department to respond both to local needs and to unprecedented national requirements issued under the Department of Homeland Security. These new demands are unpredictable, frequently changing, and unsupported by any long-term commitments of funding and training. Thus far, most departments have been improvising as the national threat level rises and falls, as terrorist activity in their communities has been suspected, and as grants and other government funding emerges and dissipates. The uncertainty of the national commitments and local control of department resource allocation makes police personnel management a complex and difficult task.

It may be that this issue affects mid- to large-sized departments more significantly than it does departments with fewer than 50 sworn personnel. No data are available on how many agencies participate in systematic force planning.

Tools do exist that describe the distribution of police officers across police agencies. The Bureau of Justice Statistics regularly conducts the Law Enforcement Management Analysis Survey (LEMAS) and the FBI collects and reports annual data on numbers and types of police officers. However, there is no generally accepted, scientifically validated formula to determine the appropriate number of sworn police officers for a city.

¹³ See, for example, Levine and McEwen, 1985; Chaiken and Dormont, 1976.

A Shifting Supply of Qualified and Interested Candidates

In 1999, more than half of small police agencies and two-thirds of large ones reported difficulties in filling vacancies because of a lack of qualified applicants.¹ Many police administrators experience particular difficulty in attracting nontraditional candidates, including women and minorities. Further exacerbating recruitment needs is a predicted coming wave of retirements. Some departments estimate personnel losses as great as one-third of the sworn workforce as baby boomers reach retirement age.² Indeed, of the 720 officers that the Los Angeles Police Department plans to hire this year, only 370 will be additional officers, after accounting for attrition.³ Finally, actually placing a new officer on the street is a lengthy process. Long Beach Police estimate that it takes roughly three years to recruit, hire, and train a new, fully qualified sworn officer. Clearly, the ability to plan long-range for recruitment needs is critical for police agencies.

At the same time that service demands placed upon police departments change, the interests and qualifications of the traditional labor pool from which police officers are recruited are shifting. Some trends may benefit police departments such as increased college attendance among American youth or a desire to engage in public service combined with hesitancy about military deployments. Yet there are other factors that may contribute to a gap between police need for personnel and the number of candidates available to fill this need.

Communities often desire a police force that is more ethnically representative of the neighborhoods they serve; thus candidates from diverse backgrounds must be sought out and recruited.⁴ Some demographic trends may make it harder to identify and recruit a new target population that is both interested and qualified in terms of physical fitness and able to satisfy “moral” requirements. Departments also may be facing growing competition from other agencies seeking candidates qualified and interested in law enforcement and security work.

In this section, we detail three areas that warrant attention from police personnel planners. Certainly there are additional factors that influence the supply of candidates. These include the regional and local unemployment rates, wages and benefits available, the popular image of the police, and state certification standards that may impede or facilitate entry into departments or movement between departments. While some trends are moving in

¹ Koper, Maguire, and Moore, 2001.

² These estimates are difficult to document and are derived from conversations that the writers have had with police administrators in departments across the country.

³ Barrett and Orlov, 2005.

⁴ International Association of Chiefs of Police, 1999.

directions that may increase supply of candidates, the areas discussed below may restrict supply.

Growing Need for Police Forces to “Look” More Like the Communities They Serve

As noted above, changing demographics have implications in predicting the demand for police services. Population diversification also has supply-side consequences, if law enforcement agencies wish to successfully recruit personnel that reflect the growing diversity of their communities.

An examination of the ranks of the more than 17,000 police forces across the nation shows that departments are already evolving to look more like the populations they serve. Although sworn police officers across departments are still predominantly white males, rates of racial and ethnic minorities and females have increased over the past few years. In 2000, racial and ethnic minorities comprised 22.7 percent of full-time sworn personnel, up from 17.0 percent in 1990.⁵ Females comprised 10.6 percent of officers in 2000, up from 8.1 percent in 1990.⁶ The proportions of both minorities and females among sworn personnel are larger in larger cities than in cities with smaller populations.

The Bureau of Justice Statistics calls attention to the growing diversity of the nation’s law enforcement agencies:

Between 1990 and 2000, the number of female sworn personnel increased by 59 percent to 46,659 (or 10.6 percent of the nation’s 440,920 full-time sworn personnel in local police agencies). In the same ten-year period, the number of African American and Hispanic sworn personnel rose by 61 percent to 99,591 officers (22.6 percent of full-time sworn personnel). Other minority groups (including Asians, Pacific Islanders, American Indians, and Alaska Natives) jumped 150 percent in their representation among sworn officers (the total of 11,800 reflects 2.7 percent of all full-time sworn personnel).⁷

While police forces across the nation are beginning to look more like the communities they serve, police departments will need to continue to foster this process. Fortunately, this trend increases the size of the potential labor pool by seeking out ethnic, racial, gender, and sexual orientation diversity.

The Changing Nature of the Recruiting Pool

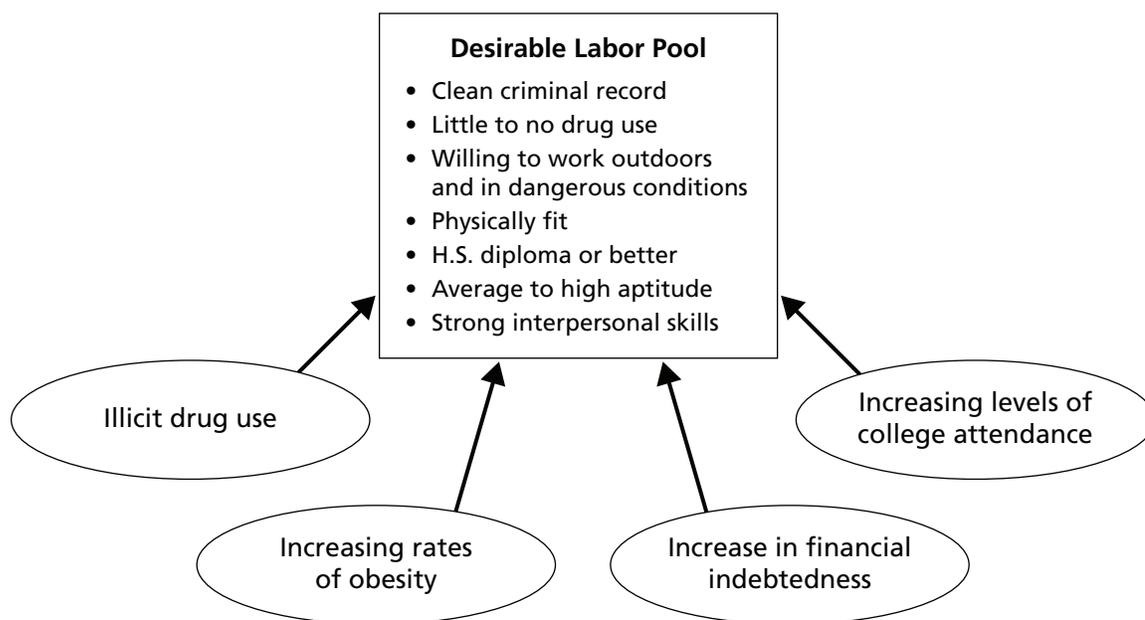
Other demographic factors are shrinking the pool of qualified applicants, such as trends in health and fitness, criminal activity and drug use, and higher education. Studies have identified a number of youth trends that hamper law enforcement recruitment (see Figure 1):

⁵ Bureau of Justice Statistics, 2003. In contrast, in FY02, 33 percent of military accessions ages 18–24 were racial or ethnic minorities.

⁶ Bureau of Justice Statistics, 2003.

⁷ Ibid.

Figure 1
Demographic Trends May Restrict the Recruiting Pool



RAND OP154-1

- *Drug Use*: Drug use appears to be stabilizing among youth rather than increasing, but experimentation with illicit drugs remains a common practice among American youth: approximately half of all 12th graders report having smoked marijuana.⁸ Police departments require applicants to answer questions about personal use of illicit drugs. In our interview with the officer in charge of recruiting for the LBPD, use of marijuana once or twice is typically overlooked, but reported habitual use or experimentation with harder drugs is usually grounds for rejecting an applicant. This is consistent with the practices of many police agencies.
- *Obesity*: Obesity in the U.S. population has been rising steadily over the past two decades, with severe obesity increasing the most quickly (from 1 in 200 adults more than 100 pounds overweight in 1986 to 1 in 50 in 2000).⁹ Obesity plays a major role in disability at all ages and affects an individual's ability to meet fitness standards required for entry into policing.¹⁰ Particularly alarming for police recruiting purposes are the rates of overweight and obese youth. Over the past three decades, the childhood obesity rate has more than doubled for adolescents ages 12–19, and has more than tripled for children ages 6–11. In 1999–2000, 15.5 percent of adolescents ages 12–19 were overweight, compared with 10.5 percent in 1988–1994. Approximately nine million children over age 6 are considered obese.¹¹

⁸ Johnston et al., 2004.

⁹ Sturm et al., 2004.

¹⁰ Ibid.

¹¹ Institute of Medicine of the National Academies, 2004; Flegal et al., 2002.

- *Indebtedness*: A study based on the Survey of Consumer Finances data from 1992 to 2001 (a triennial Federal Reserve survey) reports that Americans 18–24 years old demonstrated a 104 percent rise in credit card debt over the time period, to an average of \$2,985 (in 2001 dollars), and that the average indebted youth spends nearly 30 percent of his or her income on debt payments.¹² Many police departments, LBPD included, consider significant outstanding debt as a possible disqualifier for applicants, interpreting debt as a sign of poor judgment, and a potential motivator for corruption. It is not clear how police will adapt to this growth in indebtedness. While the increasing number of people with significant debt might lessen the social stigma, and correspondingly the vulnerability to corruption, it may also be the case that new federal limitations on bankruptcy eligibility could raise the risk of corruption from indebtedness.
- *College Attendance*: Levels of college attendance are increasing. Although 15 percent of departments now make partial college attendance an entry requirement, college attendance is not only a competing activity to police academy enrollment, but also allows graduates access to a broader range of employment options that compete with policing careers.¹³ There has been a dramatic growth in college enrollment and educational attainment during the 20th century, including over the past few decades.¹⁴ The 1990s in particular witnessed an increase in the percentage of adults who expect to complete four years of college, a trend even more pronounced in women than in men when examining actual completion. An increase in college attendance may also benefit police departments by raising the quality of potential recruits, especially if college attendance does not adversely impact youth interest in serving in law enforcement.

Such trends in the population can have significant consequences for law enforcement recruitment, given the current selection criteria for police officers. Police officers must pass through rigorous physical, mental, and moral judgment screening, and trends such as those described hold negative implications for recruiting.

Competition for Personnel from Other Fields

The events of September 11, 2001, produced an outpouring of support and appreciation for firefighters and police officers as heroic public servants. It is reasonable to expect that this public support would increase the appeal of law enforcement as a career choice. Moreover, the attacks on the United States have served as a catalyst for youth to enter more service-oriented careers, and may give police work in particular a new sense of importance or prestige. Even as these effects might be positive for police recruiting, police departments may also have to compete for high-quality recruits that are in high demand by other government agencies with a role in national security and the growing number of private security contractors (as shown in Figure 2).

¹² Ibid; Draut and Silva, 2004.

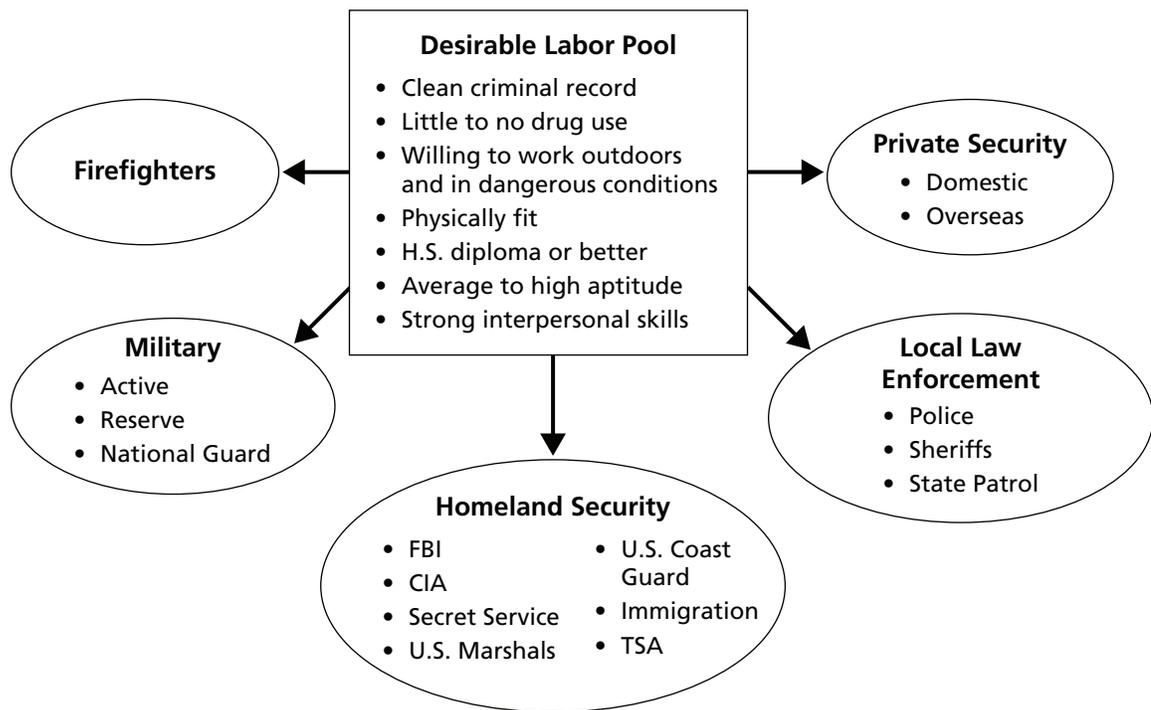
¹³ Bureau of Justice Statistics, 2003.

¹⁴ Sackett and Mavor, 2003.

For recruiting purposes, police agencies seek individuals who have clean criminal records, little or no previous drug use, are willing to work outdoors and in dangerous situations, are healthy and physically fit, have a high school diploma or more, who are of average to high aptitude, and who can communicate effectively with many different types of people. Competition arises because individuals with these characteristics are also in high demand by fire departments; military, federal law enforcement, and homeland security agencies; and private corporations. Starting base salaries for police officers range from \$20,900 in jurisdictions with fewer than 2,500 residents to more than \$34,000 in those with a population of 50,000 to 499,999.¹⁵ Entry-level police officers started at an average salary of about \$31,700 during 2000. The salary and stability of police employment is often cited as a significant motivator among new recruits. While this salary may be attractive to many college graduates as well as to individuals with high school diplomas, it may also be considerably less than the salary offered to potential police candidates by competing entities. Agencies providing national and homeland security, in particular, may offer more lucrative pay packages.

Local police agencies also compete against each other for recruits. While military services do the same, research has shown that there is some “rising of the tide”—i.e., that awareness generated by one service spills over to another, and that recruits consider it all “the

Figure 2
Potentially Increasing Competition for Suitable Candidates



RAND OP154-2

¹⁵ Bureau of Justice Statistics, 2003.

military.” It is not clear that the same would be true of local police. Instead, it seems likely that the competition and recruiting inefficiencies are more acute in policing. Departments in large cities are sometimes concerned that their combination of lower pay and higher risk cause them to lose good candidates to departments in neighboring suburbs where the pay may be higher and the risk lower. Currently, Long Beach Police is planning for a hiring boom in the Los Angeles Police and Sheriff’s Departments, which have each recently announced plans to hire significant numbers of sworn officers. As referenced earlier, the City of Los Angeles secured funds to hire 720 officers beginning July 1, 2005.¹⁶ LBPB anticipates stiff competition for the same labor pool.

Efforts by the Long Beach Police Department to Increase Supply

- Shifted to one-officer cars on most patrols
- Civilianized certain positions
- Increased volunteer program from a few to (a goal of) 100 within a year
- Recruited retirees to help with duties such as applicant background checks
- Recruited nontraditional sources (from, e.g., the lesbian and gay community, immigrant communities, cities outside the region)
- Assembled a diverse recruiting team and produced recruitment advertisements appealing to a diverse audience
- Adapted physical entrance requirements (e.g., dummy lift) while maintaining standards
- Provided English-language reading tutorials
- Offered family orientation day to increase academy retention
- Provided extra assistance for those who need physical training (PT) help (which measurably helps retain women candidates)

Department Responses

Many departments are aware of the recruitment and retention issues they face and are working to increase the supply of qualified applicants or to extend the labor base in other ways. It seems easier to identify labor supply issues than to forecast future demand for services. Still, efforts tend to be focused on immediate needs and are not coordinated to focus on a longer-term strategic view. Below, we discuss some examples of how police departments are attempting to cope with personnel shortages.

Reassess Standards to Ensure They Are Realistic and Relevant

Law enforcement agencies have rigorous standards for recruiting and have begun to examine those standards to make sure they are realistic and relevant given current trends. Common recruit screening methods include criminal record checks, background investigations, personal interviews, medical exams, psychological evaluations, drug tests, physical agility tests, written aptitude checks, and credit history checks. From a legal standpoint, two issues are of

¹⁶ Barrett and Orlov, 2005.

central importance in setting standards: the job relatedness of the testing or requirements, and employment discrimination. According to the Equal Employment Opportunity Commission, if a department has a selection standard that results in the rejection of a greater percentage of women than men, or a greater percentage of African Americans than whites, an “adverse impact” has occurred. When an adverse impact is documented, the fairness of the test can be challenged, requiring departments to ensure that the screens are relevant for job performance.¹⁷

One example of reassessing standards is LBPB’s adaptation of one physical standard at the recruit academy. They decided to discontinue the “dummy lift,” which requires recruits to lift a weighted dummy onto a waist-high platform after a rescue drag. LBPB determined that otherwise qualified women were failing to meet this particular standard and leadership chose not to lose these candidates over a requirement deemed not imperative for good police work.

Prepare Underqualified Yet Desirable Candidates So They Can Meet Standards

Another way to help ensure that applicants meet standards is to prepare them before testing takes place. The LBPB offers a pre-Academy fitness program for recruits to help them build strength and endurance prior to physical abilities testing. In addition, a workshop is offered to applicants to help them prepare for the video scenarios test, and tutorials are available to help with reading comprehension.

Civilianize Certain Positions

In the past, police department staff consisted primarily of sworn personnel. Civilian employees are now relatively common in police departments, although the extent to which departments use civilian personnel is discretionary and varies considerably.

Civilians may serve as clerks, administrative assistants, dispatchers, technicians, and parking enforcement personnel, as well as in some highly specialized positions such as legal advisors/counsel, psychologists, researchers, accountants, crime scene technicians, and information technology specialists. Civilians may also perform para-police functions as cadets or community service officers.¹⁸ A key consideration before converting a sworn position to a civilian position is the impact on sworn officers in the department, as well as the impacts on cost (civilians are usually less expensive), expertise, collective bargaining agreements, and legality.

Use Retired Officers

The supply of qualified workers can be increased through the use of retired officers. Retirement plans in police departments typically involve the retirement of officers at relatively young ages, when they are still mentally and physically capable of working for many more years. Many officers retire from the police force and go on to other part-time or full-time positions. The age of retirement for LBPB is 50, at which point most officers retire at 80–90 percent of their salary rate. Retirees in LBPB are currently used for background investigations.

¹⁷ Geller and Stephens, 2003.

¹⁸ Ibid.

Use Volunteers

Police department volunteers can help with both civilian and sworn duties, and, if well managed, can serve as major resources for departments. Potential volunteer duties are wide-ranging; examples include patrol, fingerprinting, parking enforcement, parade duty, special events, community outreach, office work, canvassing for information on missing persons, photography, and coaching for the Police Athletic League. Volunteer programs can be funded through federal grants such as the DHS's Citizen Corps Program.¹⁹ As with the use of paid civilian personnel, departments have to take similar factors into account when considering filling sworn duties with volunteers.

LSPD uses six types of volunteers. Some of these volunteers serve to ease the workload of police officers and civilian personnel, while others engage in additional, complementary duties that the department would not otherwise have the resources to address.

Use Reservists

Police reservists are another valuable resource for understaffed and/or financially constrained departments. In LSPD, reservists are required to work unpaid for 20 hours per month. Many reservists are dedicated to their duties, as they are hoping for future acceptance to the Academy for formal police training. Reservist duties can include all those of volunteers, as well as expanded roles requiring more formal training. For example, LSPD reservists were activated after the 1992 Los Angeles riots, and at ports and the airport after the September 11, 2001, terrorist attacks.

¹⁹ Kolb, 2005.

How the Military Experience Might Apply to Police Departments

The military confronts many of the same demand- and supply-side issues that local police agencies face. In this section we discuss how the military's methods of analyzing personnel planning needs might be applied to local law enforcement. We have surveyed the force management literature and have also drawn upon RAND's extensive research on military force planning and management. Unlike local police agencies, the military has had the budget allocation, analytic infrastructure, and federal requirement to think long term and strategically about the types of people it needs to acquire, and the best ways to attract, develop, and retain these recruits. Some of the military's strategies could be adapted by local (city and county) police departments as well as by state and federal law enforcement agencies. We will first discuss the military's process for analyzing supply and demand to determine personnel needs. Next, we will discuss how this process might be adapted for law enforcement agencies. Finally, we will present some specific strategies utilized by the military to address supply-side issues.

The Military Personnel Planning Process

Although the military services have different approaches to assessing potential future demands for personnel, they share a strategic approach, recognizing that articulating the demand for personnel is part of a larger planning process. Based on perceptions of external threats or potential challenges to "national interests," defense planners make decisions about future force size and mix, strategy and doctrine, and equipment acquisition needs.

The National Military Strategy (NMS) sets forth the vision of the Secretary of Defense and Chair of the Joint Chiefs of Staff for future missions and capabilities. Military force structure (size) and shape (skills and organizational structure) are developed based on the specified and implied missions in the NMS. Recruiting needs are then derived from a calculation of current force size minus projected losses and attrition.¹ Of particular interest with this approach is that it explicitly links "up front" demand-side concerns with the supply-side concerns that appear "down the line."

This process is not directly applicable to police departments. The military is a different organization in at least two important ways. The scale is different, with the full-time military force at about 1.4 million. While full-time police officers in the country number approximately 7 million, they are distributed across hundreds of individual, unaffiliated

¹ Sackett and Mavor, 2003.

agencies. Also, the military actively seeks to lose a certain portion of its junior members through attrition, as leadership positions up the hierarchy are far less numerous than entry-level positions. In contrast, police officers are civil servants and are typically encouraged to stay with an agency for the duration of their careers. Despite these structural differences, the personnel planning process developed in the military context can serve local police needs.

A schematic of the military personnel planning process is shown in Figure 3.²

As shown in Figure 3, military force management planning begins by developing an articulation of anticipated future demand for military personnel, ties that projection to a request for resources, and ultimately operationalizes the projection through specific force shaping.

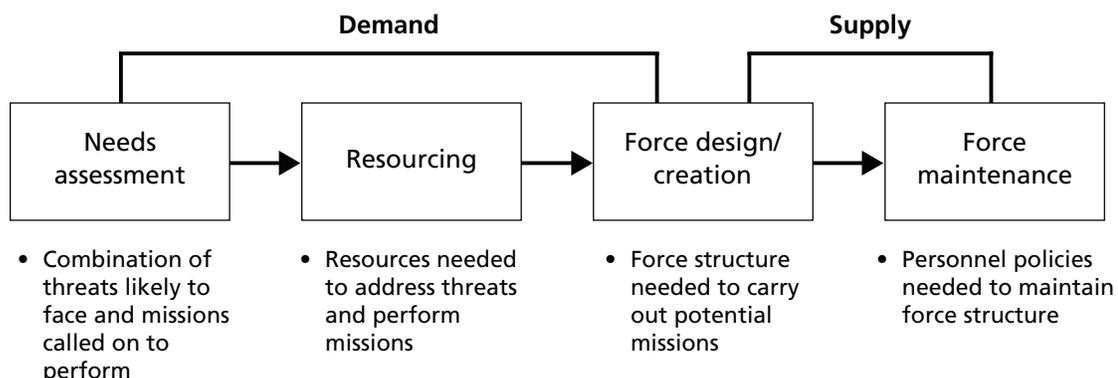
Of course, the process described here represents ideal planning conditions, and many unanticipated issues may emerge that can affect personnel needs. Recent news reports indicate the limitations to even highly sophisticated planning and recruiting processes as the services, particularly the Army, struggle to make their current recruitment goals.

Adapting the Process for a Local Police Environment

Local police departments are not able to engage in the same level of sophisticated strategic personnel planning as the military. However, there are several ways in which local departments can benefit from the use of this approach. One is from a national-level planning effort and another could be at a state- and/or regional-level effort.

With local law enforcement called upon to serve a perhaps unprecedented role in homeland security, it seems critical that local police be viewed as a national resource. From this perspective, the federal government should have a role in determining the present and future need for local police (in general but in particular areas as well) and comparing that to

Figure 3
The Military Takes a Strategic Approach to Determine Personnel Needs



RAND OP154-3

² Szayna et al., unpublished.

the size of the present and future potential labor pool. Since local police departments are incredibly diverse in such matters as size, community concerns, and recruiting success, a national-level planning effort would be no small undertaking. Still, there is value in at least broad assessment of demand and supply needs from a national perspective. This assessment could be used to help direct resources to local communities as well as undertake efforts to increase the size of the available labor pool, as needed.

At the state or regional level, strategic planning could draw upon models used in the national-level assessment but be more focused on specific state or regional concerns. Even so, the assessment of supply and demand would likely be quite broad. Like those made at the national level, projections made at the state and/or regional level might not have direct applicability to all departments.

The most local utility would come out of strategic planning at the individual police department level. This can be a challenge for departments without analytic budgets or resources but could be utilized in at least some form by all departments. For example, departments could regularly sketch out which services they expect to continue to provide in the future and whether any changes are anticipated in the need for service (e.g., traditional crime control with increasing or decreasing trends), what services might be new or expanded (e.g., changes in homeland security duties), and what skills are needed and the types of people (including volunteers, retirees, and trainees) who might possess those skills. Such an assessment could be linked to police resourcing, force creation and design, and force maintenance.

In what follows, we describe how the four-step military personnel planning process could be adapted for local law enforcement. We present each step in the context of an individual agency, but each could be less specifically focused and adapted for general projections at the national and state/regional level.

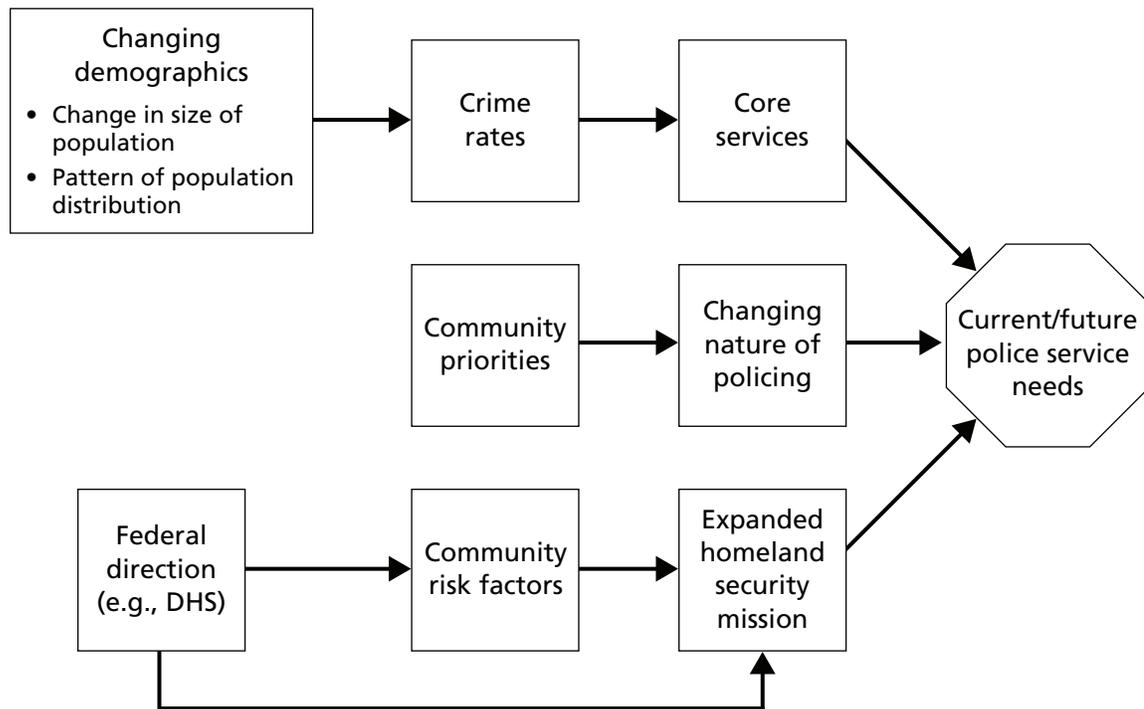
Needs Assessment: Determining the Demand

In applying the needs assessment step, law enforcement agencies would consider the more strategic demand-side issues that drive the type of police force required. Many police departments practice some form of the latter three steps of the military process, but a needs assessment followed by a coordinated effort represents a new undertaking for most departments.

Military needs assessments involve some combination of the threats the country is likely to face and the missions it is currently performing and will be called upon to perform. While the military is nationally and internationally focused, police departments are locally focused on the neighborhoods and communities they serve. Despite the difference in scope, the goal is the same in both cases: general guidelines that outline the range of activities for which the agencies are expected to prepare. In other words, the needs assessment leads to the specification of a set of potential duties, prioritized in some fashion.

In the military context, the first step in planning for and acquiring necessary personnel is to determine the types of missions that are anticipated. In the 1990s, the military had to adapt to an unprecedented level of demand for deployment to urban-based operations and to “operations other than war,” yet maintain its ability to carry out classic combat missions. Similarly, local police departments have had to adopt more community policing functions, as well as undertake a role in homeland security.

Figure 4
A Needs Assessment for Police Services Drives the Approach



RAND OP154-4

Figure 4 corresponds to the areas identified in Section 2 as important drivers of demand for police services. This conceptual framework represents areas external to the organization that are undergoing changes and in turn may necessitate new or different police services. This framework is neither definitive nor comprehensive.

Core services in policing, i.e., traditional crime fighting and crime prevention activities, are driven by crime trends within the community, which are in turn largely affected by demographic trends such as increases or decreases in the population and changes in the nature of the population. The changing nature of policing may include community policing or other philosophies that also create changes in the types of police services provided. Feeding this are community expectations for the composition, competencies, and activities of the local police force. In contrast to these first two drivers, which are local in nature, changes in police activities due to homeland security needs are largely driven by federal concerns.

Police Resourcing: Identifying and Prioritizing Resources to Meet Demand

Once police service need is articulated, the next steps in the process describe how these needs will be met. In the resourcing step, the budgeting process is primarily considered. This includes the portion of funds devoted to police spending, the pattern of spending (increasing or decreasing), and the general allocation of resources within the police budget. While decisions in this step follow naturally from the needs assessment, resource allocation is also informed by a host of political, economic, and bureaucratic considerations that are independent of the needs assessment. Political and fiscal philosophies have considerable impact on police service delivery, as do collective bargaining agreements and historical

precedents.³ However, one of the key advantages of utilizing a military-like process that begins with a needs assessment is that it makes the process more transparent and justifies budget requests with evidence. At the same time, it is important to note that budgets are finite and identified needs will likely exceed the available resources.

In addition to budget considerations, police agencies should systematically and routinely ask basic questions about whether their current operations are effectively achieving desired goals. This sort of problem-oriented analysis may reveal police agencies to be doing activities that are failing to achieve the desired objectives. Agencies would then seek more effective and efficient ways to achieve the objectives, which may involve not only resources but also revised strategy and tactics.

Police Force Design and Creation: Where Demand and Supply Converge

Once the need and resources are reconciled, the specifics of the police force design can be determined. Force design refers to how the personnel will be organized and how the skill requirements will be met. Police force creation refers to the process of moving from the present force mix toward the ideal force mix. In this step, a police department develops specific blueprints on how to achieve the needed capabilities. In addition to defining the type of personnel needed, the blueprint would address equipment, facilities, new training needs, and any other needed organizational changes. Specifically, the department would outline how many and what kinds of specialized units will be created or removed, and ideal representations of such features as race, gender, sworn/civilian, and desirable skill sets. For instance, a department may identify a need for an organized crime unit, more bilingual officers, or more officer training in weapons of mass destruction response.

Police Force Maintenance: Tapping Supply to Create the Needed Force Mix

In this step, police departments implement their force staffing needs. Based on the planning blueprint developed in the previous step, the police department would implement policies about the number of personnel required, the type of education and training expected of entry-level personnel, and the desirable leadership qualities, including promotion criteria. The range of personnel policies would be considered, including recruitment, retention, compensation, promotion, family benefits, and race and gender policies. An organization should examine the full range of its personnel policies to ensure that they match and support organizational goals; e.g., do physical fitness standards or nonflexible rotating shift work negatively affect recruiting or retention and, if so, are such policies revisable or even needed? Here too, administrative processes would be examined to align with organizational goals and ensure relevance and efficiency.

The appropriate composition of the police force will be subject to continuous re-evaluations, and conclusions about the right mix rely on many factors. One important consideration is the ideological beliefs of the community and their views on proper police duties. Attitudes toward police will vary over time and among different communities. This evolving relationship will affect the entire personnel planning process from needs assessment through force maintenance.

³ Seventy-two percent of police personnel are covered by collective bargaining agreements (see Bureau of Justice Statistics, 2003). Staffing ratios are traditionally higher in the Northeast and Midwest than in the West and Southwest. See Federal Bureau of Investigation (2003) for breakdowns by geographic region of staffing per 1,000 inhabitants.

Most police departments have some familiarity with their personnel needs in the short term, and seek to devise solutions to address current problems. But a systematic personnel planning process has several key advantages: providing the public and funding sources with a realistic understanding of how resource decisions are made, developing a longer-term view of personnel behavior that allows for accession and training of people to meet future neighborhood demands, and creating a more logical and efficient assignment of personnel and resources based on departmental priorities.

Labor Supply Lessons from the Military Experience

The Department of Defense maintains offices dedicated to observing patterns in military personnel employment (who stays in service, when people tend to leave, etc.) and to predicting future personnel needs based on projected missions, current personnel needs, and the likely behavior of current service members. As discussed above, based on the determined demand for personnel in the short and long term, the military considers the supply of potential new recruits and strategies for retaining valued members of its workforce. There are a number of lessons for local law enforcement that can be drawn from the military's approach. In the next two sections, we discuss these lessons relevant to recruiting and to retention.

Tapping the Supply: Suggestions from Military Approaches to Recruiting

To best focus their recruiting efforts, the Department of Defense regularly collects and analyzes youth demographic data and trends. This allows the military to more accurately predict the potential size of the available labor pool. These sorts of data could be very useful for understanding the available labor pool for law enforcement as well. Knowledge of an upcoming shortage of qualified youths and/or those potentially interested youths, for example, could help police departments set more realistic recruitment goals, identify undertapped populations, increase efforts to retain existing staff, and explore staffing alternatives such as extending the established retirement age or shifting certain duties to non-sworn employees, civilians, volunteers, or retirees.

In the military, the recruitment of diverse officers is aided by programs that help otherwise qualified applicants meet the academic standards. Ethnic minorities in particular are more likely to come from poorer and lower-quality school systems than their white peers, and thus may have the ability to meet academic standards but not have had the opportunity to develop that ability. The Army, Navy, and Air Force each have preparatory schools for officer candidates who show potential to make good leaders, but whose underdeveloped abilities in one or more academic areas prevent them from competing for application to one of the military service academies. These schools provide intensive academic instruction, along with some introduction into military life. Successful graduates are admitted to the military service academies. Such programs have the benefit of providing the military with more high-quality personnel, who are accepted by their peers for having met all of the same standards, regardless of gender, race, or socioeconomic class origin.

Some local police departments implement a similar concept through Explorer, cadet, and vocational school programs that help to better prepare young people for future careers in policing. Departments can also coordinate with high schools or community colleges to provide preparatory courses that would enable candidates to succeed in admissions tests and in

the academic components of the academy (and later in police work). Similarly, physical education programs might be provided in advance of regular academy training as preparation for the physical component of the academy. Such programs would presumably reduce the number of out-of-shape candidates who are injured or drop out. Again, if police academies do not have the resources to conduct this advanced training themselves, they might certify a range of physical education classes at a local community college as appropriate or even required for candidates facing fitness challenges.

Identifying qualified candidates is one recruiting challenge; finding willing applicants is another. The Youth Attitude Tracking Survey (YATS) was used by the Department of Defense annually from 1975 until 1999 to measure youth interest in military service. The survey was administered to up to 10,000 16–24-year-olds without prior military service. A RAND study in 2001 followed up with respondents to the fiscal year 1985–1994 YATS surveys and found a “strong, statistically significant relationship between propensity and enlistment.”⁴ Increases and declines in propensity to enlist have been analyzed, with results showing the rates are affected by such factors as wars (propensity rose during the first Gulf War period), change in funds devoted to recruitment advertising, and racial composition of the youth population.⁵ Based on analyses of trends in youth interest for military service, the services can make decisions about raising or lowering entrance requirements, advertising budgets, and which populations to target with more aggressive marketing. For instance, driven by the information that by 2010, 80–85 percent of high-aptitude recruits (as measured by Armed Forces Qualification Test scores) expect to attend college, the Army is attempting to improve recruiting penetration in the college market.⁶ Because of immediate recruiting concerns, the services have supplemented this ongoing interest assessment process with new direct marketing research conducted by a private company.⁷

For use by local police departments, an ongoing youth survey of propensity to serve in policing is not likely to be feasible, but an alternative would be, ideally, a national survey of youth that would allow local or regional analysis of youth responses. At the local level, police departments could tap into the findings of national surveys to keep abreast of trends in youth interest in law enforcement and the characteristics of those most interested. The results would aid departments in directing their local and regional recruiting resources. Moreover, these results would allow departments to tailor employment packages to best match the current priorities of the potential labor pool. For example, for young women, “making a contribution to society” tends to rank higher as a life goal than “having lots of money,” but those two are reversed for young men. Women are also more likely than men to prefer to live close to parents and relatives versus “getting away from this area of the country.”⁸ These sorts of findings could assist recruiters in highlighting job features and opportunities that might most interest potential candidates.

⁴ Orvis and Asch, 2001.

⁵ Ibid.

⁶ Orvis and Nichiporuk, unpublished.

⁷ Mazzetti, 2005.

⁸ Sackett and Mavor, 2003.

One model for the development of such a national survey could be a joint effort of the Department of Defense, the Department of Homeland Security, and the Department of Justice. The survey could assess the characteristics of and level of interest in military and law enforcement careers (local as well as state and federal). It might also include interest in intelligence and immigration enforcement careers (such as through the Central Intelligence Agency and the U.S. Immigration and Customs Enforcement). Such a national youth survey would be an extremely useful investment because it would serve the mutual goals of a host of local, state, and federal government agencies all generally pursuing the same pool of potential recruits. Moreover, it could be used to identify mutual or unique recruiting concerns that may unnecessarily limit interest, such as outdated or inaccurate views of what the work entails. For example, youths' perceptions of military and law enforcement careers are typically drawn from television, movies, and news coverage. These can lead to substantial misunderstandings of these roles, and survey results could aid in identifying how career education information could best be designed and delivered.

Depending on an assessment of the options, the military may adjust recruiting tactics or offer its current workforce incentives to stay, leave, or change jobs. Part of this force management process includes considering how long it takes to "grow" people to certain job proficiency levels or management/leadership levels.

Increasing Retention: Suggestions from Military Approaches to Personnel Management

Reducing the departure of quality personnel already trained and experienced in their jobs not only eases the pressure to recruit new personnel, but also improves the ability of the police departments to perform their responsibilities. There are certain practices used by the military that might be of benefit to local law enforcement to strengthen their retention efforts. We discuss some of those strategies in this section.

Perhaps the military's most important tool in planning for personnel retention is its extensive database of service member characteristics and employment actions, which allows it to more accurately predict absences, attrition, overages, retention, and gaps that will need to be filled through recruiting, promotion, and/or cross-training. Using these data, a recent RAND report found that one significant factor in the attrition of first-term soldiers was the length of time they waited in the Delayed Entry Program between signing up and being trained.⁹ If law enforcement agencies collected these sorts of data and found similar patterns, such findings could be used to inform policy changes. For example, such a finding discovered at the local level could lead to a change in departments (such as LBPD) that offer entry into the police academy only once a year. Perhaps by offering two separate entry points per year, they would reduce the amount of waiting time in which successful applicants might be lured away by other opportunities.

The establishment of a personnel database for local police agencies, or analysis of an existing one, could allow agencies to develop over time an understanding of employee behavior patterns such as predictable losses in personnel availability due to illness/injury, pregnancy/maternity leave, military Reserve or Guard duty, and attrition. By relating employee characteristics with employee behavior, agencies can better assess where assignment policies or support services might need to be altered to prevent the loss of personnel. For example, people might be more likely to leave the force in a certain life or career stage or after

⁹ Buddin, 2005.

serving a certain amount of time in the same unit or neighborhood or types of task. A strategic approach to personnel management might take these factors into account, and adjust assignment policy so that (a) people tend to serve certain intense, demanding positions for shorter periods of time than other positions, (b) the more intense types of units receive extra personnel, or (c) personnel receive additional compensation or support to counteract the negative aspects of an assignment. Regularly and systematically analyzing personnel data can also help identify whether any groups are harder to retain, such as people from certain minority groups, and thus spur efforts to discover and address reasons behind any disproportionate turnover.

Another tool the military frequently employs is survey and focus group research on service member attitudes, job satisfaction, and intentions to either leave the military or make it a career. This type of feedback loop, again, helps the military predict losses and personnel needs, and address problematic personnel policies or practices that might be driving out desirable personnel. At the level of military units, commanders frequently employ climate surveys to identify problems, successful programs, and suggestions for change. Local law enforcement agencies could develop such a feedback loop for themselves. If the size of the department is too small to allow for truly anonymous surveys, an outside consultant might be hired to conduct focus groups (if appropriate) or anonymous surveys to provide honest feedback about employee job satisfaction, career intentions, and ways the departments could better develop and retain a professional force.

In addition to these, the military uses other techniques to increase retention, including those listed below. Some of these are currently utilized by some police agencies.

- Offer bonuses to reenlist personnel with critical skills or those in understaffed fields or locations;
- Increase pay/add special pays (i.e., bonuses for serving in hostile/dangerous areas, or bonuses for specialized skills such as piloting or linguistic skills);¹⁰
- Offer schooling in exchange for a service commitment or for those individuals particularly desirable to retain;
- Promote faster the staff that are most desirable to retain or when experiencing irregular losses at higher pay grades (higher pay and prestige serve as motivators and increase satisfaction);
- Offer assignments in return for commitments (e.g., being stationed in a more desirable geographical location or in a particular unit in exchange for a commitment to a longer term of service);
- Offer early retirement packages when top heavy/needing to downsize;¹¹
- Use lateral movement when one force is overstaffed and another is understaffed (e.g., the so-called “Blue to Green” program allows service members in the Air Force and Navy to move into the Army without losing rank, seniority for pay and benefits, or

¹⁰ Special pays that some police agencies use include tuition reimbursement, education incentives, merit pays, shift differentials, special skills pay, and hazardous duty pay.

¹¹ Large-scale layoffs or hiring can create disruptions and problems for police agencies and communities and must be approached with care.

- years toward pension; and they may even gain additional skills through cross-training);¹²
- Institute family support programs to ease the strain on the family caused by the demands of military life.

This last item (institution of family support programs) might be particularly useful to address the strains of a patrol schedule, or for departments that are understaffed and regularly require long hours from existing staff. To ameliorate the stress placed on families by the long and unpredictable hours required of its members, frequent relocations, and placing its personnel in harm's way, the military responds with a number of benefits and programs to support spouses and children of service members, including on-site child care, help hotlines, orientations to military demands and benefits, support and information networks, family separation pay, classes and activities for dependents, preference for on-post civilian employment, and educational benefits. Albeit to a lesser degree, police work can also place a strain on the family due to long hours, shift work, physical danger, and unpredictable schedules due to the timing of events, court dates, and other nonroutine demands. Departments may wish to consider the role of the family in their ability to retain some of their officers, and think about ways to ease strain on the families or more heavily compensate those in positions with long, erratic, and graveyard hours and/or assignments that are particularly dangerous.

¹² Police could undertake more systematic lateral programs, potentially even cooperating with other city, county, or state law enforcement agencies.

Conclusion

As the demand for police services continues to evolve in the post–September 11 environment, personnel planning is likely to continue to pose challenges to local departments. To best respond, law enforcement agencies should adopt a long-term view that employs a strategic approach to anticipating both demand for service and supply of qualified and interested applicants. The military routinely faces similar personnel challenges and makes extensive use of force management tools to predict and manage personnel demand and supply. Some of these tools can be adapted for use by local police departments.

Perhaps the key lesson from the military for personnel management is in its strategic, long-term thinking. To forecast demand, the military starts at the broadest level and, through a multistep process, links that back explicitly to a specific personnel mix, adjusting for the anticipated supply of qualified and interested candidates. The prospect of thinking strategically about personnel management holds great value for local police. It is less critical that the predictions be highly accurate. The exercise of carefully thinking through the issues can prompt decisionmakers to shape discussion of and make difficult decisions regarding service priorities and resource allocation. Through this process, police personnel planning could be linked to a city’s or county’s strategic plan, which could lead to integrated activities and likely economies of scale. Police managers could strengthen relationships with legislative and executive planners, leading to increased support for budget requests. Justification for budget requests would simultaneously be enhanced, as requests would be based upon data-driven needs, and city/county planners would have actively participated in the process.

In this paper we have laid out a general framework for local police personnel planning efforts. The next step is to pilot test this conceptual framework. In particular, the needs assessment step should be refined for implementation by a local law enforcement agency. On the supply side, systematic data collection is needed to understand the scope and nature of recruiting and retention issues.

There will be implementation challenges. If such wide-ranging and long-term personnel planning were an easy undertaking, local police would already be more systematically engaged in the process. Although this paper offers a conceptual framework for police agencies to adopt, the limitations of the military example should not be ignored. The police environment has several noteworthy differences from the military environment. First, the dramatically different scale of local police agencies in comparison to the national military greatly affects the resources available to address personnel planning. Second, the operating conditions are different. Police are almost always “doing” while the military, until recently, has spent more time “training to do.” This has allowed the military to have a longer planning horizon whereas police are necessarily concerned with daily operations. Third, the military employs a dedicated force planning staff that does not have operational responsibilities, while

police agencies do not have the resources for a comparable staffing structure. Fourth, the military and police agencies operate within different governmental oversight structures. Often, police have regular and active involvement with the local mayor, city (or county) council, and civilian oversight boards, while the military interacts with civilian leaders in the Department of Defense, the Executive Branch, and the Congress. Finally, police agencies often face union considerations and regulations that the military does not.

Even if a police agency were able to attempt long-term strategic force management within the various constraints of its environment, building the appropriate paradigm suitable for implementation would be a complex undertaking. It would be difficult to build a single model that would incorporate all of the relevant variables faced by the wide variety of small and large police departments across the nation. While many issues are shared, there are also many aspects unique to each department. Each agency would need a tool tailored to its particular circumstances and available resources.

While the primary responsibility for personnel management falls on local leadership, some of the implementation challenges for personnel planning could be relieved by addressing them at a higher level. As noted previously, policing is inherently local, responding to needs and concerns at a community level. There is no central policymaking entity in American policing.¹ However, there are two factors that push toward consideration at a larger level: (1) Police agencies are increasingly being asked to take on duties that fall within the homeland security arena; and (2) there are economies of scale that would accrue when thinking about police personnel trends and needs at a larger level than could occur at the individual departmental level. An argument can be made for national leadership on police personnel management.

Local law enforcement agencies are increasingly being used as a national resource even though many agencies do not have the infrastructure to plan accordingly for personnel changes. As an integral part of homeland security, agencies would benefit from more coordinated planning at the national level, perhaps by the Department of Homeland Security (DHS), which is in a better position to plan strategically for how the nation can best defend itself against terrorist threats at home. Just as the Department of Defense (DoD) offers strategic planning for our national military, DHS can offer strategic planning for our nation's first line of defense against terrorism: police departments. As part of this effort, it would be valuable to develop a mechanism to share DoD resources in a useable way with state and local law enforcement agencies.

Other federal agencies that might provide leadership could include the Department of Justice Community Oriented Policing Services (COPS) Office or the Bureau of Justice Assistance. At a minimum, centralization of data would bring many benefits in economy of scale. Federal agencies could spearhead the development of labor pool analysis tools and conceptual frameworks that could be used by local agencies. Critical to this effort could be the development of a regular survey effort that tracks the characteristics of and level of interest in military and law enforcement careers. Ongoing analyses of these data could provide vital prediction capability about the available supply of qualified and interested applicants to meet the projected demand for military and law enforcement service at all levels of government jurisdiction. It would also allow a strategic approach to target recruiting efforts most efficiently and identify where career education efforts are needed to increase potential interest by

¹ Scott, 2000.

desirable youths. These data could be collected such that regional analyses could be conducted. This would make the findings more applicable and useful to local police department planning efforts.

Congress has a role as well. In addition to supporting further research in this area, it must recognize that federal laws affect local police service demand and have personnel implications, and therefore resources should be allocated accordingly.

Another important tier of support is at the state level. State law enforcement regulation entities exist in many states (such as the Commission on Peace Officer Standards and Training [POST] in California). State-level governments operate their own law enforcement agencies, which can not only benefit from strategic planning but also can provide resources and leadership to local governments. Data analysis and planning assistance to local jurisdictions and departments could achieve the economies of scale needed to conduct high-quality trend analysis. At a state level, conceptual frameworks that fit regional needs (changing state laws, economic and demographic trends) can be developed. Finally, experimental efforts (e.g., ways to increase female recruitment and retention) can be attempted with select partner agencies.

The field of policing is facing a unique moment in time. There is considerable flux in both demand for police services and supply of qualified personnel. There is a compelling need to reconceptualize local police as a national resource and for the federal government to take a larger role in the planning and development of this resource.

References

- Barrett, Beth, and Rick Orlov, "More Cops for L.A.," *Los Angeles Daily News*, March 2, 2005. Online at <http://www.dailynews.com/Stories/0,1413,200~20954-2739480,00.html> (as of July 2, 2005).
- Braithwaite, J., *Crime, Shame, and Reintegration*, Cambridge, Mass.: Cambridge University Press, 1989.
- Buddin, R. J., *Success of First-Term Soldiers: The Effects of Recruiting Practices and Recruit Characteristics*, Santa Monica, Calif.: RAND Corporation, MG-262-A, 2005.
- Bureau of Justice Statistics, "Local Police Departments 2000," Law Enforcement Management and Administrative Statistics, Washington, D.C.: U.S. Department of Justice, Office of Justice Programs, 2003.
- Chaiken, J., and P. Dormont, *A Patrol Car Allocation Model*, Santa Monica, Calif.: RAND Corporation, P-5594, 1976.
- Draut, T., and J. Silva, "Generation Broke," *Borrowing to Make Ends Meet* (briefing paper #2), October 2004. Online at http://www.demos-usa.org/pubs/Generation_Broke.pdf (as of May 9, 2005).
- Eck, J., "Preventing Crime at Places," in L. W. Sherman, D. Gottfredson, D. MacKenzie, J. Eck, P. Reuter, and S. Bushway, eds., *Preventing Crime: What Works, What Doesn't, What's Promising?* Washington, D.C.: U.S. Department of Justice, National Institute of Justice, 1997.
- Federal Bureau of Investigation, *Crime in the United States—2003*, Washington, D.C.: U.S. Department of Justice, Federal Bureau of Investigation, 2003.
- Flegal, K. M., M. D. Carroll, C. L. Ogden, and C. L. Johnson, "Prevalence and Trends in Obesity Among U.S. Adults 1999–2000," *Journal of the American Medical Association*, Vol. 288, No. 14, 2002, pp. 1723–1727.
- Geller, W., and D. Stephens, eds., *Local Government Police Management*, 4th ed. (Municipal Management Series), Washington, D.C.: International City/County Management Association, 2003.
- Goldstein, Herman, "Toward Community-Oriented Policing: Potential, Basic Requirements and Threshold Questions," *Crime and Delinquency*, Vol. 33, No. 1, 1987, pp. 6–30.
- Institute of Medicine of the National Academies, *Childhood Obesity in the United States: Facts and Figures*, Fact Sheet September 2004. Online at <http://www.iom.edu/Object.File/Master/22/606/0.pdf> (as of July 2, 2005).
- International Association of Chiefs of Police, "Police Leadership in the 21st Century," *Recommendations from the President's First Leadership Conference*, Washington, D.C.: International Association of Chiefs of Police, 1999.

- Johnston, L. D., P. M. O'Malley, J. G. Bachman, and J. E. Schulenberg, *Monitoring the Future National Results on Adolescent Drug Use: Overview of Key Findings 2004*, Bethesda, Md.: National Institutes of Health, National Institute on Drug Abuse, No. 05-5826, 2004.
- Kolb, Nancy, "Law Enforcement Volunteerism: Leveraging Resources to Enhance Public Safety," *The Police Chief*, Washington, D.C.: International Association of Chiefs of Police, 2005.
- Koper, Christopher S., Edward R. Maguire, and Gretchen E. Moore, *Hiring and Retention Issues in Police Agencies: Readings on the Determinants of Police Strength, Hiring and Retention of Officers, and the Federal COPS Program*, Washington, D.C.: Urban Institute, 2001.
- Levine, M. J., and J. T. McEwen, *Patrol Deployment*, Washington, D.C.: U.S. Department of Justice, National Institute of Justice, 1985.
- Maxson, Cheryl, "Factors That Influence Public Opinion of the Police," *Research for Practice*, Washington, D.C.: U.S. Department of Justice, National Institute of Justice, 2003.
- Mazzetti, Mark, "Military Enlists Marketer to Get Data on Students for Recruiters," *Los Angeles Times*, June 23, 2005. Online at: <http://www.latimes.com/news/nationworld/nation/la-na-privacy23jun23,0,113005.story> (as of July 5, 2005).
- Orvis, B. R., and B. J. Asch, *Military Recruiting: Trends, Outlook, and Implications*, Santa Monica, Calif.: RAND Corporation, MR-902-A/OSD, 2001.
- Orvis, B. R., and B. Nichiporuk, *Manning the Future Force*, Santa Monica, Calif.: RAND, unpublished.
- Ousey, G. C., "Explaining Regional and Urban Variation in Crime: A Review of Research," in G. LaFree, ed., *The Nature of Crime: Continuity and Change*, Washington, D.C.: U.S. Department of Justice, National Institute of Justice, 2000, pp. 261–308.
- Raymond, B., L. J. Hickman, E. Williams, and K. J. Riley, *Identifying Deportable Aliens in the Los Angeles County Jail: Implementing the HI-CAAP Federal-Local Partnership*, Santa Monica, Calif.: RAND Corporation, WR-193-LAC [electronic resource], 2004.
- Sackett, P., and A. Mavor, eds., *Attitudes, Aptitudes, and Aspirations of American Youth: Implications for Military Recruiting*, National Research Council Committee on the Youth Population and Military Recruitment, Washington, D.C.: National Academy Press, 2003.
- Scott, M. S., *Problem-Oriented Policing: Reflections on the First 20 Years*, Department of Justice, Office of Community Oriented Policing Services, Washington, D.C., e03011022, October 2000.
- Sherman, L. W., "Communities and Crime," in L. W. Sherman, D. Gottfriedson, D. MacKenzie, J. Eck, P. Reuter, and S. Bushway, eds., *Preventing Crime: What Works, What Doesn't, What's Promising?* Washington, D.C.: U.S. Department of Justice, National Institute of Justice, 1997.
- Sherman, L. W., P. R. Gartin, and M. E. Buerger, "Hot Spots of Predatory Crime: Routine Activities and the Criminology of Place," *Criminology*, Vol. 27, 1989, pp. 27–55.
- Sherman, L. W., and D. Weisburd, "General Deterrent Effects of Police Patrol in Crime 'Hot Spots': A Randomized, Controlled Trial," *Justice Quarterly*, Vol. 12, No. 4, 1995, pp. 625–648.
- Sherman, L. W., and D. P. Rogan, "Effects of Gun Seizures on Gun Violence: 'Hot Spot' Patrol in Kansas City," *Justice Quarterly*, Vol. 12, No. 4, 1995, pp. 673–694.
- Sturm, R., J. S. Ringel, D. Lakdawalla, J. Bhattacharya, D. P. Goldman, M. D. Hurd, G. Joyce, C. W. A. Panis, and T. Andreyeva, *Obesity and Disability: The Shape of Things to Come*, Santa Monica, Calif.: RAND Corporation, RB-9043, 2004.

Szayna, Thomas S., Kevin F. McCarthy, Jerry M. Sollinger, Linda J. Demaine, Jefferson P. Marquis, and Brett D. Steele, *The Civil-Military Gap in the United States: Does It Exist, Why, and Does It Matter?* Santa Monica, Calif: RAND, unpublished.

U.S. Department of Justice, "What Is Community Policing?" COPS 2004 conference, 2004, Online at <http://www.cops.usdoj.gov/Default.asp?Item=36>, (as of May 9, 2005).