



## JOHN AVALOS

### **Resolution: Establishing a Multidisciplinary Process for Determining Police Staffing**

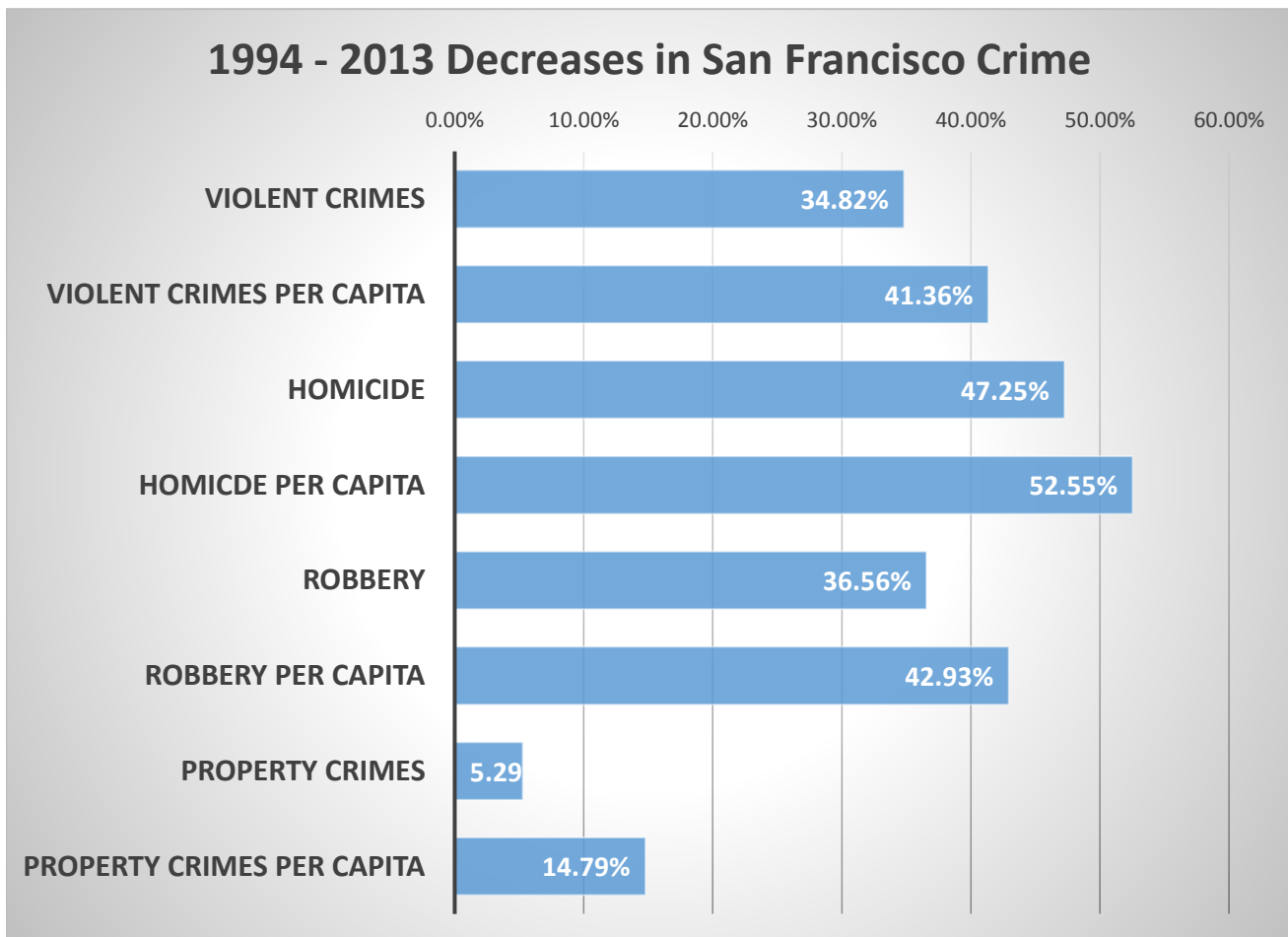
Supporting documents for Resolution introduced by Supervisor John Avalos on June 23, 2015:

Page 2	1994 - 2013 Decreases in San Francisco Crime (Source: State of California Department of Justice, Criminal Justice Statistics Center)
Pages 3 - 6	"ORGANIZATIONAL ASSESSMENT OF THE SAN FRANCISCO POLICE DEPARTMENT: A TECHNICAL REPORT," Police Executive Research Forum (PERF)
Pages 7 - 10	"City Services Benchmarking: Police Staffing," Office of the Controller
Page 11	"Patrol Staffing and Deployment Study," International Association of Chiefs of Police
Pages 12 - 13	"A Performance-Based Approach to Police Staffing and Allocation," Department of Justice's Office of Community Oriented Policing Services (COPS) and the Michigan State University School of Criminal Justice
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## 1994 - 2013 Decreases in San Francisco Crime

	1994	2013	94-13 decrease
<b>Violent crimes</b>	10837	7064	34.82%
<b>Violent crimes per capita</b>	1459.9	856.1	41.36%
<b>Homicide</b>	91	48	47.25%
<b>Homicide per capita</b>	12.3	5.8	52.55%
<b>Robbery</b>	6624	4202	36.56%
<b>Robbery per capita</b>	892.3	509.3	42.93%
<b>Property crimes</b>	51023	48324	5.29%
<b>Property crimes per capita</b>	6873.5	5856.7	14.79%

Source: State of California Department of Justice, Criminal Justice Statistics Center  
<https://oag.ca.gov/crime/cjsc/stats/crimes-clearances>



**ORGANIZATIONAL ASSESSMENT OF  
THE SAN FRANCISCO POLICE DEPARTMENT:  
A TECHNICAL REPORT**

**FINAL REPORT**

December 2008



The Police Executive Research Forum  
1120 Connecticut Avenue NW, Suite 930  
Washington, DC 20036

**An Organizational Assessment of the  
San Francisco Police Department: A Technical Report  
Final Report    December 2008**

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**Table 10. Population and Size of Comparable Police Departments**

<b>Agency</b>	<b>Service population</b>	<b>Sworn personnel</b>	<b>Percent of total force</b>	<b>Civilian personnel</b>	<b>Percent of total force</b>
<b>San Francisco (target 1)</b>	798,680	1,839	79.8%	466.5	20.2%
<b>San Francisco (target 2)</b>	798,680	1,992	81.0%	466.5	19.0%
<b>San Francisco (target 3)</b>	798,680	2,123	82.0%	466.5	18.0%
<b>San Francisco (target 4)</b>	798,680	2,254	82.9%	466.5	17.1%
<b>Jacksonville, FL</b>	797,350	1,639	57.1%	1,232	42.9%
<b>Indianapolis</b>	797,268	1,605	85.2%	278	14.8%
<b>Charlotte-Mecklenburg, NC</b>	733,291	1,515	75.1%	503	24.9%
<b>Austin</b>	716,817	1,418	71.1%	577	28.9%
<b>Boston</b>	591,855	2,170	77.2%	640	22.8%
<b>Milwaukee</b>	572,938	1,936	73.1%	713	26.9%
<b>Baltimore</b>	624,237	2,963	80.4%	721	19.6%
<b>Oakland, CA</b>	396,541	722	65.2%	386	34.8%
<b>Portland, OR</b>	538,133	989	78.6%	270	21.4%
<b>San Diego</b>	1,261,196	1,924	71.9%	751	28.1%
<b>San Jose</b>	934,553	1,396	78.3%	388	21.7%
<b>Seattle</b>	585,118	1,273	71.7%	502	28.3%

Source: State of California's Department of Finance; PERF survey/research

How San Francisco compares will depend on the sector patrol staffing level chosen by the department and the city. Civilian staffing recommendations for San Francisco, even with the suggested increases would place it third lowest in number of civilian employees.

The next sections of the report detail recommended staffing unit by unit, and recommended structural alterations.

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of 67 percent, set a target to reduce call-for-service time to 50 percent. West Palm Beach FL set a target at 45 percent.

The target for patrol staffing should balance the work that needs to be performed against the resources a jurisdiction has available for patrol services. A target of 35 percent for CFS time may be desirable, but more officers will be required than if the target is 50 percent.

How a city wants its patrol officer time used is an important policy decision. Local demographics, crime and disorder problems, and policing style all have an impact on the demands on patrol officer time. Police and city leaders in one jurisdiction may regard the patrol function as primarily composed of response to citizen calls for service, self-initiated activities to deter and discover criminal activities (through traffic stops, pedestrian checks, and building checks), and a certain amount of administrative activity. Another jurisdiction may want its patrol officers to be heavily involved in community policing and problem-solving activities, such as getting to know the people and conditions in the district, attending community meetings to listen to neighborhood concerns, conducting analysis to develop plans to address community crime and disorder problems, and leveraging local government services to improve the quality of life in the city's neighborhoods.

Increasingly, cities want patrol officers to have time to address crime and disorder problems discovered through the CompStat process. Intelligence-led, or information-driven, policing approaches mean that prompt analysis of crime and disorder problems takes place and the problems are quickly addressed. Although special units may play a role in these efforts, patrol officer self-initiated time may also be directed to CompStat-identified "hot spots."

Some cities have their patrol officers spend some portion of their time conducting follow-up investigations of reported crimes. In this approach, patrol officers carry an investigative caseload. Thus, not all crime reports are sent to detectives for follow-up investigation.

**San Francisco Calls-for-Service Time Targets:** PERF's plan for determining a call-for-service time target in San Francisco is based on interviews with community members, city leaders and members of the police department, on the department's Vision for policing San Francisco, and on experience in other agencies.

PERF offers four different options for the department, with different targets for various types of workloads, based on the degree to which the city wants its patrol officers to be involved in community policing and problem-solving, in addition to the traditional goals of responding to calls for service and engaging in more limited self-initiated activities.

Each Target details the number of sector officers needed in each district. Staffing requirements gradually increase, with the lowest levels of staffing required for Target 1 and the highest levels of staffing required for Target 4.

**Target 1** – Patrol time is devoted primarily to calls for service response and the traditional, limited types of self-initiated activity, with support for community policing activities conducted *almost exclusively* by officers not assigned to sector patrol.

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district. Sector patrol officers, under Target 2, would have time to make additional household or business contacts to get to know people in their sectors and to attend some community meetings. Consequently, this target recommends that more time be available for such activity by reducing the time spent on calls for service response. It also recommends that a target be set to have officers answer a larger majority (90 percent) of their district's calls for service so that they become increasingly familiar with the people and conditions in the areas they work.

**Target 3** – Patrol time is used for CFS response and SI activity, with substantial involvement of sector officers in community policing and problem solving, especially during “prime time” community policing hours from 11:00 a.m. through 9:00 p.m. Monday through Thursday. These prime time hours allow officers to attend community meetings, work with community organizations, meet with business people, and contact other governmental agencies.

- District sector officers should handle 95% of the calls for service workload in their assigned district.
- District sector officers should average no more than 35% of their available time on calls for service, especially during community policing prime time.
- District sector officers should have sufficient time to average 40% of their time on self-initiated activities, which should include substantial time committed to community engagement.
- District sector officers should average no more than 70% of their time on calls for service during peak hours, and the 70% time commitment should be no longer than four hours in duration.

**Target 4** – Patrol time is used for CFS response, SI activity, with heavy involvement of sector officers in community policing and problem solving, especially during “prime time” community policing hours from 11:00 a.m. through 9:00 p.m. Monday through Thursday. These prime time hours allow officers to attend community meetings, work with community organizations, meet with business people, and contact other governmental agencies.

- District sector officers should handle 95% of the calls for service workload in their assigned district.
- District sector officers should average no more than 30% of their available time on calls for service, especially during community policing prime time.
- District sector officers should have sufficient time to average 40% of their time on self-initiated activities, which should include substantial time committed to community engagement.
- District sector officers should average no more than 65% of their time on calls for service during peak hours, and the 65% time commitment should be no longer than four hours in duration.

Both the third and fourth targets envision that sector officers handle almost all of the work in their district so that they have as complete a picture as possible of their district's crime and

**CITY & COUNTY OF SAN FRANCISCO**

**Office of the Controller**

City Services Auditor, City Performance

# City Services Benchmarking: Police Staffing

**June 10, 2015**



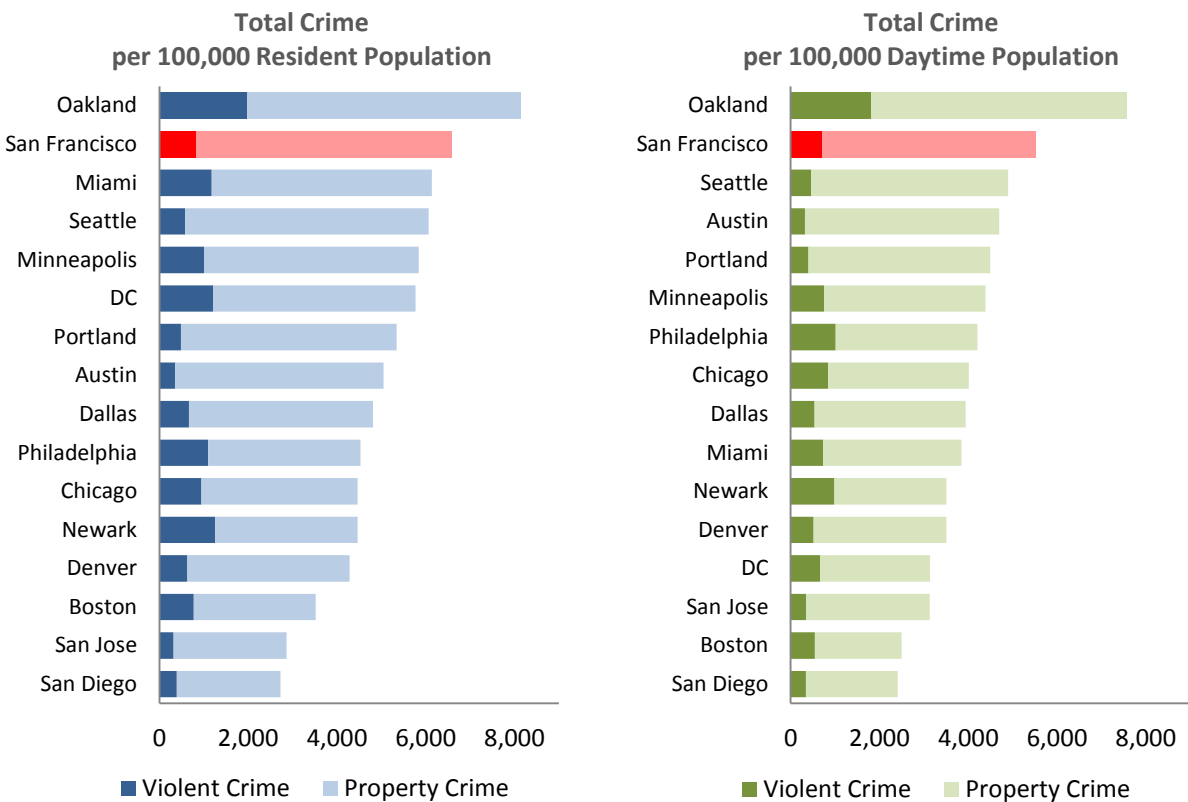
SFBoS-7

## San Francisco has the second highest overall crime and is second highest in property crime among the peer group

### *Violent and property crime per 100,000 residents and daytime population*

San Francisco’s total crime per 100,000 residents and daytime population is second highest, among peers. Oakland has the highest total crime rates for both resident and daytime population. Total crime per 100,000 residents was calculated by taking the total amount of crime reported in UCR and dividing it by the resident and daytime populations and multiplying it by 100,000. Violent crime and property crime were calculated using the same method.

**Exhibit 7** Total Crime per 100,000 Resident and Daytime Population



Source: FBI UCR, U.S. Census Bureau

Exhibit 8 shows the relative ranking of peers to San Francisco for both violent and property crime per 100,000 residents and daytime population. San Francisco falls in the middle of the range for violent crime for both resident and daytime population and slightly above the national average of cities with populations greater than 350,000. San Francisco, however, is second in property crime rates for residents and daytime population, well above the national average of cities with populations greater than 350,000.



## San Francisco has a lower civilianization rate compared to the peer group

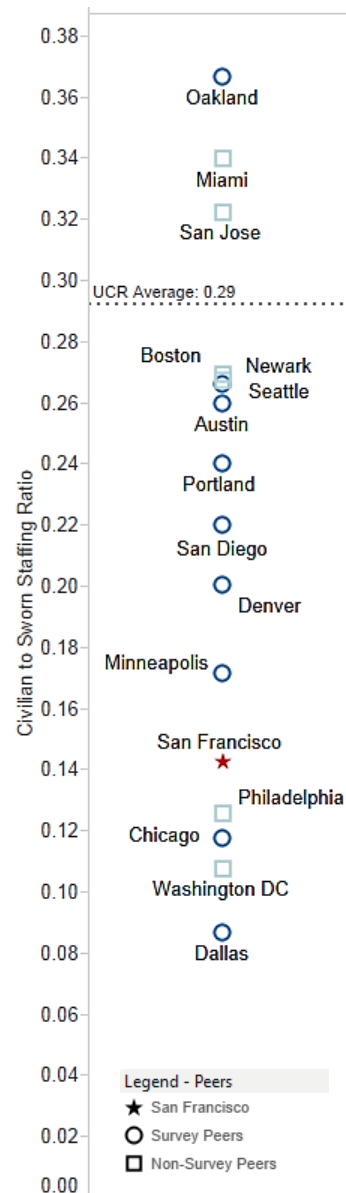
### Civilian staff ratio to sworn staff

For every sworn officer, San Francisco has 0.14 civilian staff – a civilian-to-sworn staffing ratio which is fifth lowest of the peer group and below the peer average of 0.21<sup>2</sup>. Exhibit 6 includes a UCR average for cities with a population greater than 350,000 for comparison (0.29). Peers who responded to the survey as well as those who did not are included in the chart.

Oakland has the highest civilianization rate, with 0.37 civilian staff per sworn officer. Police departments use civilian staff for non-policing, technical, and administrative tasks. A higher rate of civilianization would indicate that civilians provide more of these law enforcement support functions, freeing up sworn staff to focus on direct law enforcement activities. Police departments can also integrate civilian staff into patrol and investigations functions, representing a shift to a more thorough use of civilians and more effective use of sworn personnel for the work for which they are best suited.

Exhibit 12 was produced by dividing civilian staff by sworn staff (both as reported in the survey and reported to FBI’s UCR dataset). The vertical axis represents the number of civilian staff to every one sworn staff.

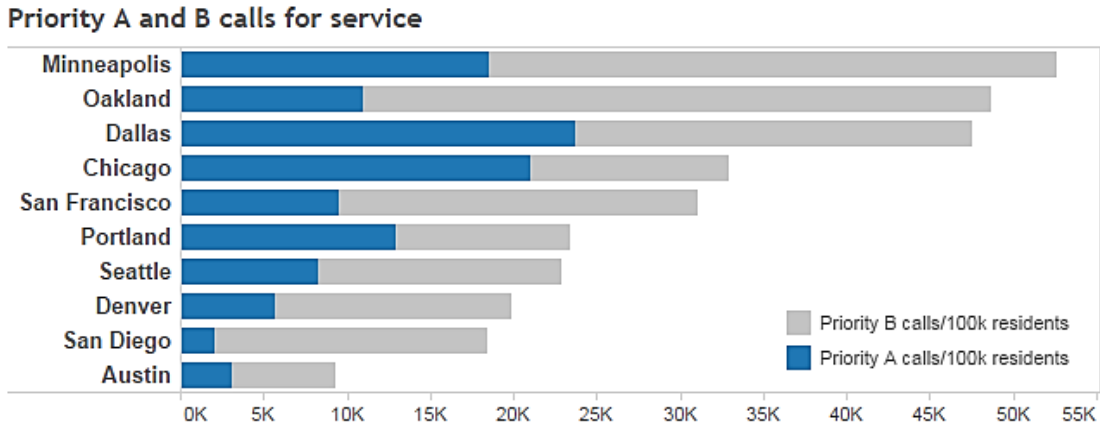
**Exhibit 12** Number of Civilian Staff per One Sworn Officer



Source: FBI UCR, Peer Survey

<sup>2</sup> San Francisco Police Department’s Airport Bureau includes a significant proportion of San Francisco’s civilian staff, 146 of SFPD’s 433 total civilian positions (34%). If Airport Bureau staff is included in this measure, San Francisco has 0.2 civilian staff per sworn officer.

**Exhibit 19 Priority A and B Calls for Service per 100,000 Residents**

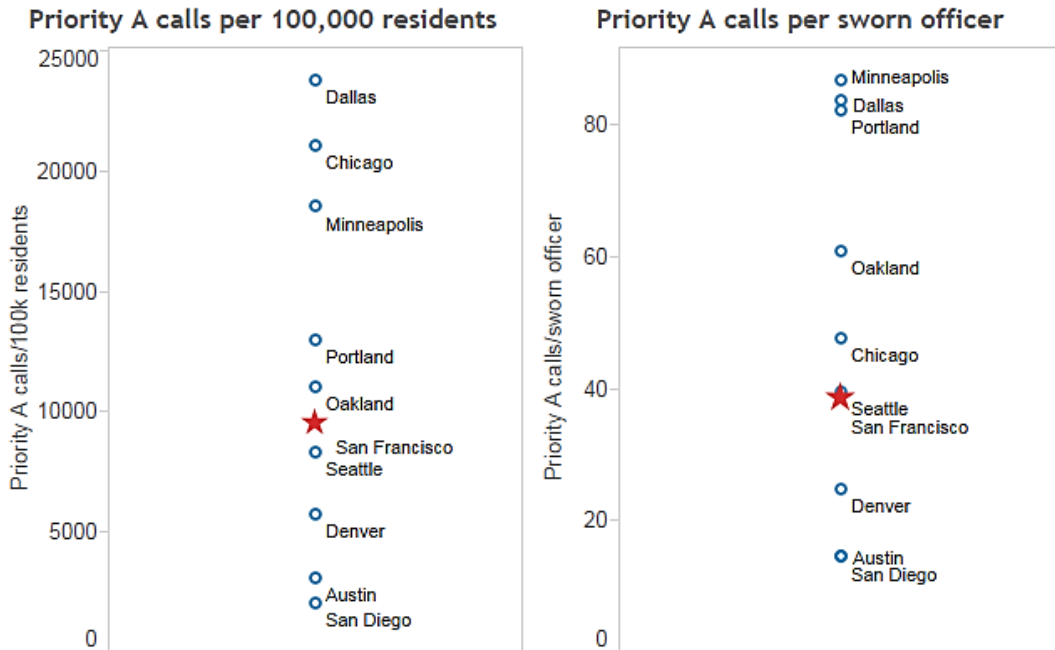


Source: U.S. Census Bureau, Peer Survey

Calls for service and number of sworn officers were reported by peers in the peer survey.

San Francisco has a slightly lower number of Priority A calls per sworn officer compared to peers. By this analysis, every sworn officer in San Francisco receives about 39 Priority A calls per year, or over three Priority A calls per month. However, not every sworn officer is assigned to patrol (e.g. some handle administrative duties); so in reality, sworn patrol officers handle more calls per year than represented in Exhibit 20.

**Exhibit 20 Priority A Calls for Service per 100,000 Residents and per Sworn Officer**



Source: U.S. Census Bureau, Peer Survey



# Perspectives

## Police Officer to Population Ratios Bureau of Justice Statistics Data

### Introduction

The IACP *Perspectives* series is intended to help local agency decision-making by providing useful information gleaned from our network of information sources. The *Perspectives* series does not present IACP positions on the topic being addressed, nor does it replace long-term research. *Perspectives* publications raise thoughtful issues regarding complex policy topics- in this case, police officer to population ratios- to inform the debate at the local level.

### Ratio Data and Agency Staffing

Before presenting BJS data, it is first important to clarify IACP’s position on police to population ratios and why they should *not* be used as a basis for agency staffing decisions. The following is a quote from IACP’s *Patrol Staffing and Deployment Study* brochure: *Ratios, such as officers-per-thousand population, are totally inappropriate as a basis for staffing decisions. Accordingly, they have no place in the IACP methodology. Defining patrol staffing allocation and deployment requirements is a complex endeavor which requires consideration of an extensive series of factors and a sizable body of reliable, current data.*

BJS ratio data presented here can be useful to local agencies in other ways, including historic perspective on staffing trends across all US law enforcement, and in conducting long term staffing trend analysis, locally, regionally and nationally.

### BJS Ratio Data

The Bureau of Justice Statistics (BJS), within the Office of Justice Programs (OJP), within the United States Department of Justice (DOJ) publishes *Local Police Departments* report every three to four years. This report contains excellent and highly reliable data on state and local police personnel throughout the U.S. One aspect of this report is the average ratio of full time officers per 1,000 residents. The most recent BJS data on this topic (2003), by size of population served follows:

Population Served	*FT Officers Per 1,000 Residents	Population Served	*FT Officers Per 1,000 Residents
250,000 or more	2.5	10,000 to 24,999	2.0
100,000 to 249,999	1.9	2,500 to 9,999	2.2
50,000 to 99,999	1.8	1,000 to 2,499	2.6
25,000 to 49,999	1.8	All Sizes	2.5

\*Average Ratio

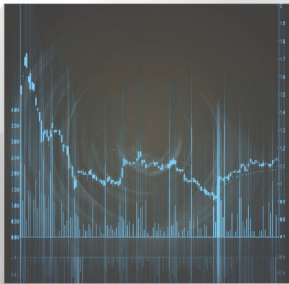
In addition to the *Local Police Departments* publication, BJS also publishes a more comprehensive report intermittently entitled *Law Enforcement Management and Administrative Statistics (year): Data for Individual State and Local Agencies with 100 or More Officers*. Both reports can be valuable to local law enforcement agencies. To learn more about the Bureau of Justice Statistics (BJS) and their statistical reports on law enforcement, visit their website: [www.ojp.usdoj.gov/bjs](http://www.ojp.usdoj.gov/bjs).

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# A PERFORMANCE-BASED APPROACH TO POLICE STAFFING AND ALLOCATION

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Jeremy M. Wilson and Alexander Weiss



**COPS**  
COMMUNITY ORIENTED POLICING SERVICES  
U.S. DEPARTMENT OF JUSTICE

**MICHIGAN STATE**  
**UNIVERSITY**  
SFBoS-12

## The Per Capita Approach

Many police agencies have used their resident population to estimate the number of officers a community needs (Adams 1994; Orrick 2008). The *per capita method* requires determining an optimum number of officers per person and then calculating the number of officers needed for the population of a jurisdiction (Orrick 2008). To determine an optimum number of officers per population—that is, an optimum officer rate—an agency may compare its rate to that of other regional jurisdictions or to peer agencies of similar size. Although it is difficult to determine the historical origin of or justification for the per capita method, it is clear that substantial variation exists among police departments.

Advantages of the per capita method include its methodological simplicity and ease of interpretation. The population data required to calculate this metric, such as census figures and estimates, are readily available and regularly updated. Per capita methods that control for factors such as crime rates can permit communities to compare themselves with peer organizations (Edwards 2011). The disadvantage of this method is that it only addresses the quantity of police officers needed per population and not how officers spend their time, the quality of their efforts, or community conditions, needs, and expectations. Similarly, the per capita approach cannot guide agencies on how to deploy their officers.

Agencies using the per capita method may risk a biased determination of their policing needs (Adams, Baer, Denmon, and Dettmansperger 2009; Campbell, Brann, and Williams 2003; Coleman 2010; Ervin 2007; Glendale Police Department 2009; Hale 1994; Hassell 2006; IACP 2004, 2007; Orrick 2008). There are several reasons for this. First, there is no generally accepted benchmark for the optimum staffing rate. Rather, there is considerable variation in the police rate depending on community size, region, agency structure and type. Table 3.1 on page 23, for example, shows widely varying rates by region, population of jurisdiction, and for selected large jurisdictions.

Per capita ratios do not account for the intensity of workload by jurisdiction. Crime levels and types can vary substantially among communities of similar population sizes. Per capita ratios also do not account for changes in population characteristics (such as seasonal fluctuations in tourist communities), or long-term trajectories of population growth and shrinkage.

The per capita method does not account for variations in policing style, service delivery, or response to crime (i.e., how police officers spend their time). Some police departments may choose to use non-sworn staff to perform some service functions. Others may choose a more community-oriented (with various forms of implementation) or traditional style of service delivery. Variations in how agencies choose to patrol their jurisdictions also have implications for staffing needs that are not reflected in per capita ratios.

## Determining Police Staffing & Deployment

Police agencies routinely speak about “recommended officers per 1,000 population” or a “National Standard” for staffing, or comparisons to other municipalities.

*There are no such standards. Nor are there “recommended numbers of “officer per thousand”. Nor is it useful to make comparisons with other communities.*

The International Association of Chiefs of Police (IACP) states; “Ready-made, universally applicable patrol staffing standards do not exist. Ratios, such as officers-per-thousand population, are totally inappropriate as a basis for staffing decisions.”

Joseph Brann, the first Director of the COPS Office and retired chief of police in Haywood, California wrote in “Officer’s per Thousand and other Urban Myths” appearing in ICMA’s *PM Magazine*,

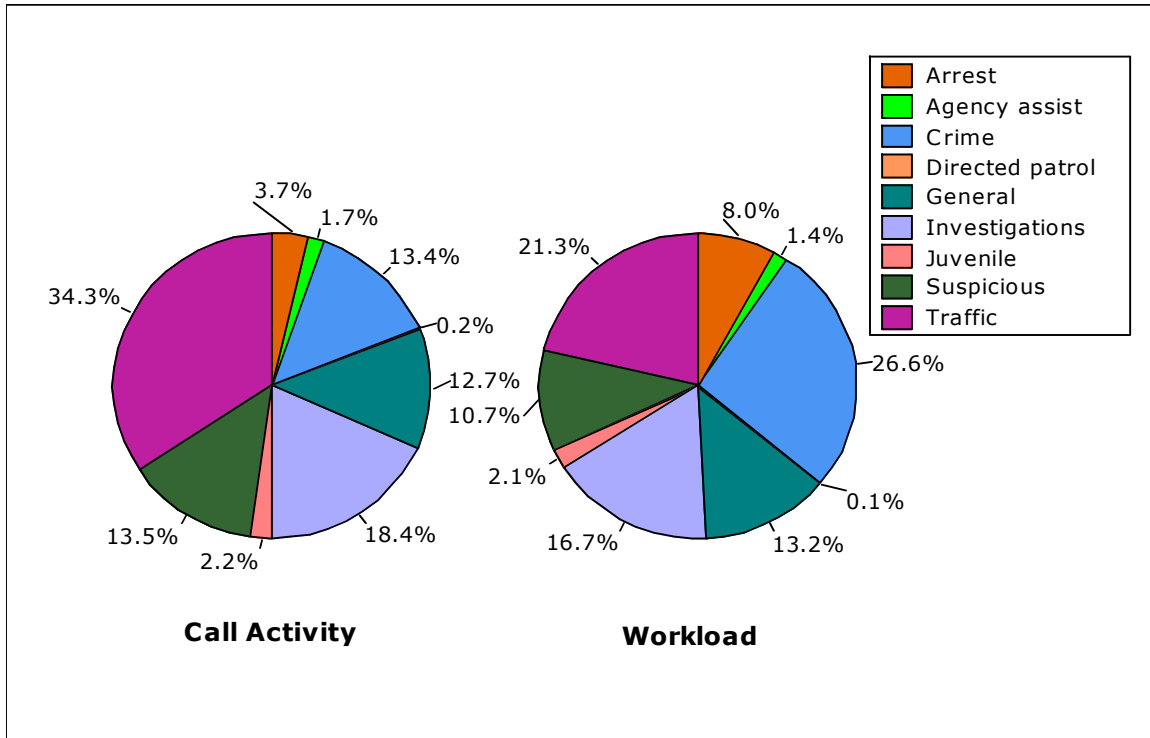
“A key resource is discretionary patrol time, or the time available for officers to make self-initiated stops, advise a victim in how to prevent the next crime, or call property owners, neighbors, or local agencies to report problems or request assistance. Understanding discretionary time, and how it is used, is vital. Yet most departments do not compile such data effectively. To be sure, this is not easy to do and, in some departments’ may require improvements in management information systems.”

Staffing decisions, particularly in patrol, must be made based upon actual workload and very few police agencies have the capability of conducting that analysis. Once an analysis of the actual workload is made, then a determination can be made as to the amount of discretionary patrol time should exist, consistent with the community’s ability to fund.

ICMA’s team of doctoral level experts in Operations Research in Public Safety have created in **The ICMA Patrol Workload & Deployment Analysis System** the ability to produce detailed information on workload even in those agencies without sophisticated management information systems. Using the raw data extracted from the police department’s CAD system our team converts calls for service into police services workload and then effectively graphs workload reflecting seasonally, weekday / weekend and time of day variables. Using this information the police department can contrast actual workload with deployment and identify the amount of discretionary patrol time available (as well as time commitments to other police activities).

Police service workload differentiates from calls for service in that calls for service are a number reflecting the incidents recorded. Workload is a time measurement recording the actual amount of police time required to handle calls for service from inception to completion. Various types of police service calls require differing amounts of time (and thus affect staffing requirements). As such, call volume (number of calls) as a percentage of total number of calls could be significantly different than workload in a specific area as a percentage of total workload. The graph following sample graph demonstrates this difference in units.

## Calls for Service vs. Workload



ICMA has found that the most effective way to manage operations, including public safety, is to decisions based upon the interpretation and analysis of data and information.

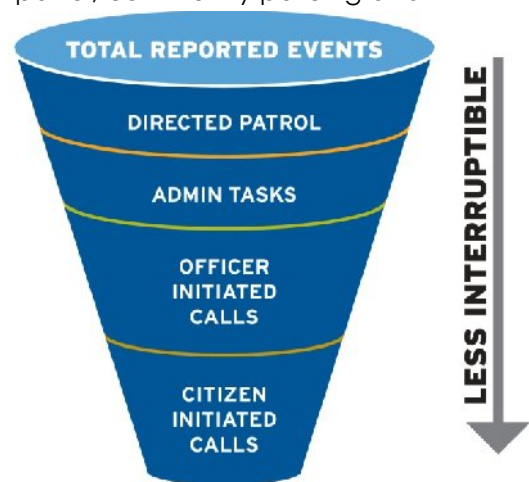
To achieve this, a data analysis of police department workload, staffing and deployment will be conducted. By objectively looking at the availability of deployed hours and comparing those to the hours necessary to conduct operations, staffing expansion and/or reductions can be determined and projected. Additionally the time necessary to conduct proactive police activities (such as directed patrol, community policing and selected traffic enforcement) will be reviewed to provide the city with a meaningful methodology to determine appropriate costing allocation models.

Further, we will review existing deployment, particularly of the patrol force, to determine appropriate staffing levels throughout the day with particular attention to the size and number of patrol zones or beats.

Understanding the difference between the various types of police department events and the staffing implications is critical to determining actual deployment needs.

### Data Analysis

This portion of the study will look at the total deployed hours of the police department with a comparison to the time being spent to currently provide services. The analysis will



review response times both cumulative as well as average for all services. In addition, a documentation request will be issued to the police department outlining information needed for a full operational review.

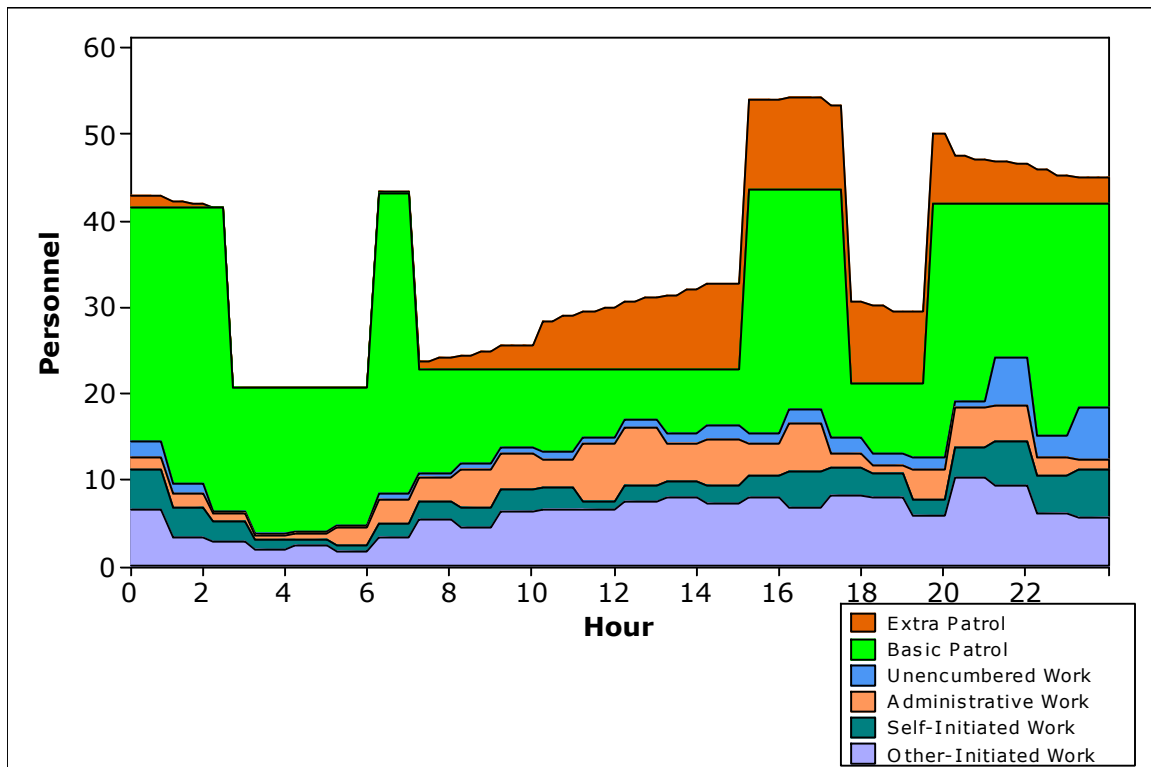
The ICMA has assembled a team of experts that are uniquely qualified to extract raw data from Computer Aided Dispatch Systems and conduct comprehensive analysis. The Team will utilize operations research methods in conducting the analysis. This approach is unique in the consulting field and was developed specifically by ICMA.

### Workload vs. deployment analysis sample

This is one of the ways we show the amount of available, non-committed patrol time compared to workload. As you can see we break out the various activities, convert them to time and then compare to available manpower. The deployment is based upon actual hours worked.

So in this example, at noon there are approximately 17 hours of work (including citizen initiated & officer initiated calls for services, including traffic) and administrative activities (meals, vehicle, reports, etc.). There are approximately 30 man hours of available resources meaning that at that hour, on average, of the 30 officers on duty 16 are busy on activities.

The area shown in green and brown is uncommitted time. This is the area where staffing decisions impact – it becomes a policy issue as to how much uncommitted time a city wants, and is willing to pay for.



For more information contact Leonard Matarese, Director of Research & Project Development, ICMA Center for Public Safety Management:  
[Lmatarese@icma.org](mailto:Lmatarese@icma.org) or 716-969-1360



## Easily determine your patrol staffing needs by using the MAPP

After a year long development and vetting process, the University of North Texas is excited to announce the availability of the Model for the Allocation of Patrol Personnel (MAPP). The MAPP is a comprehensive, web-based patrol allocation model designed to determine the number of officers that need to be assigned to patrol in order to accomplish six performance objectives:

- Answering calls for service;
- Meeting response time goals;
- Optimizing visibility in the community;
- Having a patrol unit available to immediately respond to an emergency;
- Providing officers ample time to perform self-initiated activities; and
- Allowing officers sufficient time to perform administrative activities.

The MAPP is easy to use, but it is comprehensive. It takes into account over 35 input values in determining the number of patrol officers an agency needs. The user needs to merely enter the input values and press submit; it is that easy. The input values can then be modified to determine the impact the changes have on needed patrol staffing levels. For example, the user can plan for growth by determining how a projected increase in calls for service impacts the number of patrol officers needed or how many additional patrol officers are needed to lower response times. Therefore, the MAPP can be used to determine the number of patrol officers needed today and in the future. The MAPP input values are based on answers to questions such as:

- How many calls for service, broken down by priority level, does your agency respond to in a year?
- How much time do you want to provide patrol officers to perform self-initiated activities?
- How much vacation time, sick leave, training, etc. do your patrol officers receive?
- What are your agency's response time goals?

The answers to these questions, and others, are either based on agency data or policy decisions made by police administrators. If you don't have some of the requested data, no problem. Our staff experts will work with you to find an effective alternative.