Final Report

Analysis of Police Operations

Dunedin, Florida

POLICE OPERATIONS

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ICMA CONSULTING SERVICES

Submitted by and reply to:

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ICMA

Leaders at the Core of Better Communities

ICMA Background

The International City/County Management Association (ICMA) is the premier local government leadership and management organization. Since 1914, ICMA's mission has been to create excellence in local governance by developing and advocating professional local government management worldwide. ICMA provides an information clearinghouse, technical assistance, training, and professional development to more than 9,000 city, town, and county experts and other individuals throughout the world.

ICMA Consulting Services

The ICMA Consulting Services team helps communities solve critical problems by providing management consulting support to local governments. One of ICMA Consulting Services' areas of expertise is public safety services, which encompasses the following areas and beyond: organizational development, leadership and ethics, training, assessment of calls for service workload, staffing requirements analysis, designing standards and hiring guidelines for police and fire chief recruitment, police/fire consolidation, community-oriented policing, and city/county/regional mergers.

I.   Contents

II.   Introduction

ICMA was retained to conduct an analysis of the effectiveness of a relationship between the Pinellas County Sheriff's Office in the provision of police services to the city. Further, the city wishes to better understand the ramifications of having its own police department. In both cases, the city wishes to have in place processes and procedures to measure service performance. This involved provision of quantitative methods to determine the actual staffing levels within the city's fiscal constraints and the city's policies regarding levels of public safety service.

The City of Dunedin currently contracts for police services with the Pinellas County Sheriff's Department. The primary objective of this project is to present to the city an unbiased review of the positive and negative aspects of renewing its contract with the Sheriff's Department.

Additionally, the project will provide to the city recommendations regarding adjustments to the existing contract between the city and the Sheriff's Office, should the city wish to continue the contractual relationship. Further, the project will make recommendations concerning appropriate methods to determine the costs for policing services to be paid to the county. We understand that the existing formulas date back to the time of the original contract (1995) when population distribution within the county was significantly different. We will also establish and contrast the difference between the current levels of police services delivered to the city by contract and the existing levels of service provided to residents of the unincorporated areas adjacent to the city.

Based upon the information generated by this project the city's elected officials will be positioned to establish a long range strategic plan for the delivery of police services to the community.

Our analysis involved an extensive review of calls for service workload within the City of Dunedin as well as an analysis of deployment of Sheriff's Deputies within the city. Our Operations Research doctoral level analysts have extracted data from the Sheriff's Office Computer Assisted Dispatch (CAD) system and then independently sorted and analyzed this information. The result of that effort is a comprehensive report on actual workload and deployment found in the Data Analysis section of this report.

After completion of the data analysis, our Police Subject Matter Expert (SME) team of five, highly experienced, senior level, Florida law enforcement professionals met with members of the Pinellas County Dunedin Station and conducted an extensive review of the operations. Additionally, a career police legal bureau manager and

senior level police officer reviewed the existing contract between the City of Dunedin and the Pinellas County Sheriff's Office.

Throughout this lengthy and detailed review we were met with the full cooperation and assistance of the Pinellas County Sheriff Jim Coats and the members of his department. Additionally, City Manager Robert DiSpirito and the members of his staff have been extremely helpful and responsive in this effort. ICMA gratefully thanks all who contributed to this report.

III. Executive Summary

After a comprehensive review of the services provided to the City of Dunedin by the Pinellas County Sheriff's Office, it is the unanimous opinion of the members of the reviewing team that the residents of the city are receiving outstanding law enforcement services from the Sheriff's Office; that the city receives more than adequate uniform patrol staffing; that the provision of proactive services to the community is appropriate for the law enforcement issues facing the city; that the Sheriff's Office is highly leveraged in the use of technology; that the department is professionally managed and that deputies are appropriately equipped, housed and trained; and that the provision of these police services through the contractual arrangement occurs at a far lower cost to the city than operating an independent police department.

Indeed, each member of the Police Operations team, all highly experienced Florida police professionals, unanimously agreed that the Pinellas County Sheriff's Office was one of the most impressive police agencies that they had seen or reviewed through their long careers.

It is our opinion that the City of Dunedin would face a major challenge in replicating the quality of police services delivered by the PCSO, and that if it could accomplish that formidable task it would occur only after major financial commitments and only after a period of years.

ICMA and the members of this team have reviewed several sheriff's office/city contracts over the past several years. The relationship between the city and PCSO is by far the best that we have seen and believe this should serve as a model on how to deliver regional police services.

We heartily recommend that the city continue its contract with the PCSO, with the minor changes we discuss in the report.

IV.   Review of Contract

The contract between the City of Dunedin (City) and the Pinellas County Sheriff (Sheriff) appears to be a valid and binding contract, containing all the recitations necessary to accomplish its purposes. Nevertheless, some sections of the contract merit further discussion.

A.   Section 3

This section stipulates that the Sheriff shall endeavor to provide the City of Dunedin with a level of service similar to or better than that provided when the City operated a municipal police department. However, a description of the service level provided by the City is not contained in the contract, so there is no means of comparison by which to ensure that this stipulation is being met. Moreover, the section clearly states that the compensation agreed upon in the contract is for services to the City beyond the normal level of service provided by the Sheriff in the unincorporated areas of Pinellas County.

B.   Section 4

The provisions of Section 4 empower the City to give "general" direction to the Sheriff as to how, where, and what level of services are to be delivered within the City. The Sheriff is obligated to follow this direction unless it "will represent a danger to the deputies providing such service or to other employees of the Sheriff or will be violative of the law or for any other substantive reason violative of good police practices or be detrimental to the citizens of the City." This gives the City substantial control over the delivery of services within its boundaries. At the same time, it appears that the City remains sufficiently insulated from incurring any direct liability, or policy and practice liability, as a result of directions given pursuant to Section 4. Should a dispute or misunderstanding arise, the section provides that the Sheriff will meet with the city manager or city commission and attempt to resolve it. However, there is no formal dispute resolution mechanism embodied in the contract to address any disputes or misunderstandings that cannot be resolved in this manner.

C.   Sections 7 and 8

Section 7 provides that the Sheriff "will defend and pay any litigation or judgment against the City, its agents or employees, arising out of this agreement." Section 8 provides that the Sheriff is an independent contractor for the purposes of the agreement. These two sections, as written, provide powerful insulation for the City and its employees against incurring any liability resulting from any incident relating

to the provision of law enforcement services to the City by the Sheriff pursuant to the agreement.

D.   Section 11

Pursuant to this section of the contract, the city manager can require the transfer of any deputies who are providing services to the City and may approve or reject any prospective replacement personnel. This section gives the City much more control over the removal and replacement of personnel deemed unsuitable for assignment to the City than is found in many contracts for law enforcement services.

E.   Section 15

Section 15 provides that Pinellas County shall lease a portion of a City-owned building located within the City for use by the Sheriff as a district station, and that that the Sheriff shall offer, at that location, various services—for example, free fingerprinting, production of police reports and other records, and the taking of incident and other crime reports. Thus, this section provides citizens of Dunedin with a benefit that is often not found in similar contracts: a conveniently located police station that offers the types of services commonly associated with city-operated municipal police departments.

F.   Section 17

This section, which provides that the Sheriff shall be "responsible for the hiring, training, assignment discipline and dismissal of all" sworn and unsworn personnel providing services under the contract, appears to completely insulate the City from all kinds of employment-related liability risks associated with the activities listed. It also relieves the City of the considerable expenses associated with the recruitment and training of police personnel; however, the City still retains, pursuant to Section 11, the authority to require the removal of unsuitable personnel from service.

G.   Risk Management Considerations

From the perspective of liability risk management, the contract offers a number of advantages to the city. Section 7, through which the Sheriff agrees to indemnify and defend, and Section 8, which establishes the Sheriff's independent contractor status, appear to solidly insulate the city from liability resulting from incidents arising under the contract. Section 17 provides further insulation from the considerable risks associated with employment liability cases.

It is also significant that the Pinellas County Sheriff's Office (PCSO) operates a law enforcement agency that is nationally accredited by the Commission on Accreditation for Law Enforcement Agencies, Inc. (CALEA), as well as by the American Correctional Association and the National Commission on Correctional Health Care. CALEA accreditation, the result of a rigorous and expensive process, requires a law enforcement agency to meet or exceed national standards for best practices for law enforcement agencies. It is also a continuing process that requires continuing expenditures and periodic reaccreditation. Since 1988, when the PCSO achieved CALEA accreditation, the city has received a level of policing that conforms to national best practices for law enforcement agencies. Should the city decide in the future to operate a municipal police department, adherence to those standards and responsibility for the attendant expenses would most likely be required in order to avoid the risk of potentially catastrophic liability due to an incident proven to be caused by a failure to maintain those standards.

The PCSO maintains a comprehensive system for reviewing and resolving complaints against its employees; this system appears to be in conformity with all legal requirements and with commonly accepted best practices. (CALEA accreditation also indicates such conformity and ensures that it will continue.) The agency also provides information to the public as to the various means by which a complaint can be made. Operation of this system involves considerable "behind the scenes" types of expenses. Investigations of many complaints are often quite involved. Many require legal review and often involve the time of many levels of the agency.

H.   Community Policing

The PCSO maintains a community policing component out of its Patrol Operations Bureau. One of the primary locations of this bureau is the North District station, located within the City of Dunedin as provided in the contract. Community policing–oriented deputies receive special training related to their assignment.

I.   Recommendations

ICMA recommends that, when the contract is next renewed, Section 3 be amended to incorporate a description of the service level provided by the City immediately before the contractual relationship was initiated.

The team recommends that, upon renewal of the contract, Section 4 be amended to provide for a method of dispute resolution should the meeting of the Sheriff with the City Commission or City Manager, as currently described in the section, fail to

produce a resolution. One possible means for such dispute resolution could be mediation.

V.   Police Staff Operations

A.   Facility

Through an agreement with the City of Dunedin, Pinellas County leases the former Dunedin Police Department facility for $17,257.81 per month for an annual cost of $207,000 per year. The entire 11,687-square-foot facility is occupied, making the cost to the PCSO $17.72 per square foot. Although the facility is located in the city of Dunedin, it serves as the North District headquarters for 175 sworn officers, who supply police resources for the cities of Oldsmar, Safety Harbor, and unincorporated areas of North Pinellas County.

Despite being thirty-two years old, the facility was described by sheriff's staff members as one of their top facilities in the county. A tour of the facility found it to be well maintained and extremely clean, with adequate space for all functions except roll call. However, the roll call room is used to capacity only once a week.

B.   Equipment/Technology

Regarding equipment, the deputies assigned to Dunedin are well equipped with state-of-the-art weaponry and gear, and they present a very professional appearance. Upon inspection, the assigned patrol vehicles were found to be very well maintained, with most of the fleet no older than four years. The vehicles contain state-of-the-art equipment and life-saving tools. Specialized vehicles, such as for prisoner transport and special operations equipment, were extremely impressive; an electric vehicle used by community policing deputies was clean and well maintained. Deputies clearly take great pride in their assigned equipment.

The PCSO provides the city with state-of-the-industry technology. One program, the Tritech Software System, allows for the constant monitoring of units in the field and of speed conditions; it also enables officers to receive data, such as requests for service and recommended routes, inside their vehicles, thereby reducing response time to calls. Very few agencies in the United States have this global positioning system (GPS) capability. A second program, the Viper System, allows officers to input probable-cause information on wanted subjects so that other deputies who encounter these subjects can make an arrest without the originating officer who observed the criminal behavior having to be present. This system, which was developed by a PSCO employee, provides sheriff's deputies with all types of subject- and crime-related information on Dunedin subjects traveling throughout Pinellas County. Like the Tritech Software System, it is very advanced, offering a capability enjoyed by very few agencies in the United States.

Officers' patrol vehicles are also equipped with laptop computers that offer a full menu of police-related functions, essentially providing PCSO deputies with a full-service mobile office. In sum, most police and sheriff agencies would be envious of the equipment and technology tools that PCSO deputies have at their disposal.

C.   Start-up Costs for Establishing an Independent Law Enforcement Agency

The largest expense of any start-up police services operation is the cost of a facility. In Dunedin's case, the city currently has a fully functional facility, which would save it the cost of leasing a facility or constructing a new one.

As for start-up operational costs, some insight can be gleaned from details in the current contract with the PCSO as well as from information about Brevard County's Space Coast Port Authority Police Department, the newest agency currently being established in Florida. Fully equipped police vehicles cost approximately $29,000. Equipment costs per uniformed officer, including uniforms, taser, weapon, gun belt, nightstick, handcuffs, portable radio, and laptop computer, are projected to be $5,700. These two costs alone—for vehicles and equipment—amount to nearly $35,000 for each new officer. Add a starting salary of $38,000, which is inflated by a benefit factor of about 45%, or $17,000, and the adjusted base salary for an officer is roughly $55,000. This brings the total cost per starting officer to $91,000. And this does not take into account hiring supervisory or command staff personnel, which would elevate salary costs by at least 10%–20%. Therefore, if the City of Dunedin were to start up its own department with forty personnel, the same number that the PCSO has assigned to the city, it would cost in excess of $3,640,000. And if the city opted to go back to a department of the same size it had in 1995—fifty-five sworn positions—the cost per officer would jump to more than $5 million. This cost does not include civilian support personnel or daily operational costs.

VI. Police Line Operations

The City of Dunedin currently contracts all police services with the PCSO. The city had its own municipal police department—a force of fifty-five officers headed by a police chief—until 1995, when the department was disbanded for contract services. At that time, many former Dunedin officers were absorbed into the PCSO.

The majority of the contract positions are uniformed patrol special enforcement officers. The current contract between the city and the PCSO, dated September 18, 2008, calls for 41.76 sworn officer positions. A breakdown of the services contracted reveals that on any given workday, there are 15 uniformed officers on duty, supplemented by 5 special enforcement officers who work varying schedules, 1 detective sergeant, and 2 investigators. This number is supplemented by a 1.68 officer relief factor that, when added all together, produces the contracted number of 41.47 officers.

Taking these whole numbers of contract deputies and applying them to a seven-day, 24-hour operation reveals that patrol operations are broken down into three- to 8-hour shifts, with at least four officers and one supervisor on duty. The shifts—7am–3pm, 3pm–11pm, and 11pm–7am—are staggered to cover overlaps, with two officers reporting an hour early; this means that there are always four officers on duty on any given day. The 8-hour shift, which was once the standard in the United States, has been reconfigured into 10- or 12-hour shifts. With the overlap, however, there appears to be adequate coverage.

What is noteworthy about this contract is that the City of Dunedin provides the headquarters for the North District Sheriff's Office, so there is a steady stream of officers through the city. Without this arrangement and location, one might question whether four officers could adequately cover a ten-square-mile jurisdiction with about 38,000 residents, especially if the officers are called over the bridge to Honeymoon Island, which would limit an officer's ability to respond in a timely manner. However, with more than 175 officers assigned to the district and regularly providing backup and response to high-priority calls, coverage to the city and response times appear to be more than adequate.

Moreover, the City of Dunedin shares in the benefit of on-duty police lieutenants who are responsible for all units in the North District; however, it pays only about 10% of the total costs of these positions. The city also benefits from an assigned full-time captain's position: the North District commander, whose duty post is the police facility in Dunedin. Yet the city pays no costs for this position, even though the majority of the workday for that position is spent within the city. The captain is available to respond to all city requests and commission inquiries. Finally, the city has contracted with the PCSO for 500 hours of off-duty employment at off-duty

rates instead of at overtime rates, which is a substantial savings to the city; this provision ensures additional coverage for the numerous special events that the city holds.

VII. Criminal Investigations Operations

The North District office of the Pinellas County Sheriff's Office (PCSO), which serves the City of Dunedin, is located within a city-owned office complex, which also houses other municipal offices. The space was formerly occupied by the Dunedin City Police Department. The office for the criminal investigations unit seems to be functional, with adequate space for equipment and working space for the investigators.

A. Management Team

The PCSO's North District station is managed by a captain who supervises the district's operations. As well as being district commander, the captain acts as the chief of police for the city, regularly communicating with the city manager and other city officials and also attending city commission meetings. In addition there is a lieutenant who assists in the management and supervision of the office's day-to-day administrative operations, and there are additional supervisors who manage patrol operations.

B. Criminal Investigation Unit

The PCSO currently assigns two full-time investigators to handle all property crimes reported within the Dunedin city limits. The purpose of this arrangement is to ensure that these crimes receive the attention they require. The investigators who were interviewed indicated that they can respond in a timely manner. They also indicated that they are familiar with crime trends and known offenders, can cultivate information services, and, most importantly, can develop positive relationships with business owners and residents. A review of the 2007–2009 criminal activity reports makes apparent that the two investigators have handled their assignments very well. The case assignments are reasonable, and no additional personnel are currently needed.

All other non-property crimes reported within the City of Dunedin are handled by the PCSO's criminal investigation unit at the North District station, which is staffed by one sergeant, one corporal, and five investigators. The investigators who work on city crimes share a common work space with those who work on crimes outside the city—an arrangement that enhances information sharing and ultimately the ability to solve multijurisdictional offenses. In the event of major crimes or protracted investigations, resources from other PCSO districts may be needed. These resources, including investigators, uniformed deputies, technical support, communications, crime scene personnel, and other field operations personnel, are readily available for long- or short-term situations.

C. Crime Scene Investigations

Crime scene investigations are handled exclusively by the PCSO. However, there are no crime scene facilities or investigators assigned to the PCSO's North District Office. Responses to crime scenes within the City of Dunedin come from the Crime Scene Investigation Unit at the central office in Largo, which serves the entire county.

The PCSO provides high-quality crime scene services, such as evidence gathering, evidence analysis, evidence storage, and court presentation. If the City of Dunedin decides to create its own police department, the contracting of crime scene investigative service should be given strong consideration.

D. Evidence and Property

Most evidence and property gathered by the PCSO is retained in the North District station in Dunedin. In some cases, evidence gathered by crime scene personnel may be held with the Crime Scene Investigation Unit. This arrangement works very well.

E. Professional Connection to the City of Dunedin

During the tour of the facility, interviews with deputies, and interviews with district office managers, all of the sheriff's employees exhibited a strong connection with the city. They are very proud of the city and of the quality of life that it offers. The deputies interviewed recognize the importance of their presence in the community.

F. Summary

The PCSO clearly provides excellent service to the City of Dunedin. It employs best practices with a great deal of pride and professionalism.

VIII. Ethics / Training Issues

Current practices of the PCSO were assessed as to the office's level of commitment to strengthening the ethics component of its in-service training activities. Additional focus was directed toward both tactical and operational training and the development of problem-solving capabilities among those assigned to the City of Dunedin.

To gain insight into the value of the services that the PCSO provides to the city as well as the spirit with which those services are provided, the ICMA team sought answers to the following three questions: Is there a level of mutual respect for the needs of both the municipality and the PCSO? Is the provider sensitive to the needs of the client? Are the services delivered with a clear understanding of community policing and with a focus on the needs of the elected officials, the city manager, and the citizens each represents?

An affirmative answer to each of these questions will lead to three follow-up questions: What is the extent, level, and quality of internal in-service training, external training, and high-liability training that promotes the accomplishment of relevant services and tasks? Are the training components laced with ethical and value-centered methodologies to ensure high-quality performance among deputies assigned to the City of Dunedin? If a new agency were to be established, what would a "best practices" approach to training amend, extend, duplicate, or eliminate from the training currently provided?

To answer these questions and define the environment in which services are currently being delivered team members interviewed staff, reviewed relevant data, and performed an on-site assessment of collective and individual training as administered to PCSO's employees.

A.   Command and Operational Staff

Team members met with the command and operational staff. Of those in the current chain of command, several have served a number of years in Dunedin while others, having served in a lesser capacity elsewhere, were subsequently promoted and reassigned to Dunedin. Their relationships and attitudes, both expressed and implied, offer a candid glimpse into the manner and quality of the service delivery system and its facilitators.

There is ample evidence that those providing the services to Dunedin are happy to do so. Structured and casual interviews with multiple ranks within the certified

employees, as well as impromptu conversations with civilian staff, revealed a spirit of selflessness as well as a vision of Dunedin as both a desirable assignment and an opportunity to practice their craft. This attitude is underscored by scheduled monthly meetings with the mayor and regular meetings with the city manager's staff, schedules permitting.

B.   Training

Training is accomplished through several diverse methods, such as computer-aided instruction, scenario-based exercises, and role play; other training programs are currently under development. However, well-trained staff cannot be successful, either as individuals or as an organization, unless the skill sets that have been learned are applied in a professional, tactical, and yet humanistic fashion. To determine the best-practices approach to establishing a new agency, we felt it necessary to establish whether the current provider has embraced best practices in its current contractual arrangement.

The level of service that the PCSO offers the City of Dunedin is based on the city's population (38,000), its assigned contracted personnel, and whatever additional staffing is needed to provide occasional or ancillary assistance via patrol and/or support services. The amount and quality of training given those assigned to the city must therefore be consistent with that of staff who provide supplemental assistance; otherwise, any differences can diminish the value of the PCSO's services to the city, as would be evidenced by citizen complaints, perceived deputy misconduct, or service delivery failures. Each of those outcomes is unacceptable when providing client-centered services.

An advisory board comprising a cross-section of the agency reviews, suggests, critiques, amends, and implements training programming in the PCSO.

C.   In-service training.

Currently each deputy, whether assigned to the City of Dunedin or to the county in general, receives two in-service training sessions per year—one of 24 hours and another of 16 hours. A review of the Training Division's computerized records system, which is extensive and accessible, validated the level, extent, and quality of the diverse training disciplines, topics, and delivery methods. The list of courses, with their hours and frequency, is coordinated with employee scheduling to ensure that the same training is available to each employee, wherever he or she is assigned. Some training, such as for annual recertification, is administered online and scored so as to comply with the Criminal Justice Standards and Training Commission (CJSTC) guidelines and mandates.

The competency areas include application of Florida statutes, communication (verbal and nonverbal), ethics, human relations, interpersonal skills, problem solving, and professionalism. The online curriculum offers such topics as crisis intervention, stress and mental health, four levels of discriminatory profiling, four levels of domestic violence, ethics awareness, and human diversity.

Once the two in-service training sessions have been completed and the online component has been satisfied, law enforcement certified employees are given scenario-based training, role-playing exercises, tactical driving instruction (8 hours), and instruction in firearms use toward qualification (8 hours). This part of the training also includes the use-of-force continuum—that is, how much force can or should be used under various circumstances—as well as the ethical decision making needed to differentiate appropriate from inappropriate outcomes.

Supervisory and administrative personnel have a supplemental or alternative training regimen of up to 24 hours; this may include such topics as the Family Medical Leave Act, budget development, innovation and management, and policing in a political environment to meet or exceed citizen expectations. Currently the PCSO is finalizing curriculum for a mid-management program that is scheduled for delivery in April 2010.

Voluntary courses of instruction are available for employees to improve their current skill levels, supplement those levels, or develop skill sets consistent with their career paths or organizational needs.

D.   External Training

Specialized training external to the agency is also available, often orchestrated by supervisory or command personnel. Such training is directed at those who must either maintain current skill levels or seek new skills and aptitudes in areas for which instruction is not readily available internally—for example, homicide training, crime scene training, and crime prevention through environmental design (CPTED). An additional specialized curriculum is often available through the Regional Community Policing Institute (RCPI).

E.   Ethics Training

The CJSTC offers variations of ethics training depending on the experience of the students and the status of their certification. Cadets receive eight hours of ethics and decision-based applications. The commission's Specialized Course 1134,

currently under review, is an eight-hour refresher training that is mandated once every four years. Topics include

- The difference between ethical and unethical behavior (two hours)
- A continuum of compromise (three hours)
- Florida laws and rules of officer ethics (one hour)
- Dealing with ethical dilemmas/managing your ethics (two hours).

With ethical decision making and performance also interlaced with the scenario-based training and role-playing exercises, all evidence points to deputies receiving the appropriate levels of specific ethical training as required by the CJSTC.

F.   Recommendations

The answers to the three initial questions posed in the beginning of this section are clearly affirmative. Both the services provided and the quality of those services exceeds acceptable standards established by the CJSTC and a litany of other agencies that require only the minimum level of acceptability or compliance. Further, the PCSO's depth of commitment to its training system and the system's ease of use make training available and accessible to all employees.

If a new agency were to be established, what would a "best practices" approach to training amend, extend, duplicate or eliminate? The PCSO shows an extraordinary commitment to training that is not universally found. In addition, its tracking of employee progress, record keeping, and planning far exceed the norm. It has an admirable system of training coupled with the capital improvements and facilities needed to implement successful programming and "hands-on," real-time training. Thus, a new agency would do well indeed to duplicate the system and commitment found in the PCSO. While it is not required of a new agency to provide training to the extent seen during our site visits, once such training is available, it is difficult to recommend less. It would also be worthwhile to imagine the liability of doing less once training has reached the level of excellence witnessed here.

IX. Data Analysis

A. Introduction

This is the data analysis report on police operations for Dunedin, Florida, conducted by ICMA Consulting Services. This report focuses its analysis on three main areas: workload, deployment, and response times. These three areas are almost exclusively related to patrol operations, which constitute a significant portion of the sheriff's office's personnel and financial commitment to Dunedin. All information in this preliminary report was developed directly from data recorded in the sheriff's office's dispatch center.

The majority of the first section of the report, concluding with Table 9, uses the call and activity data for the entire year (June 2008 to July 2009). For the detailed workload analysis and the response time analysis, we have used two 4-week sample periods. The first period was the month of February 2009 (February 1 to February 28), or *winter*, and the second period was the month of August 2008 (August 1 to August 28), or *summer*.

B.   Workload Analysis

Data management and accuracy is crucial and always needs to be reviewed on a regular basis. As we have found in similar cases around the country, we encountered a number of issues when analyzing the data supplied by the sheriff's office, and we made assumptions and decisions to address them. We describe these issues, assumptions, and decisions below.

A small but significant percentage of calls involving patrol units had zero time on scene (2.1 percent).

The computer software generates a large number of call codes. This led to 147 different call descriptions, which we reduced to 15 categories for our tables and 9 categories for our figures.

A small proportion of calls (2.5 percent or 740 calls for the year) were missing arrival times. For these, we could not calculate a valid response time or on-scene time.

Our study team has often worked with many of these problems with call-for-service data in previous studies. To identify calls that were canceled en route, we assumed zero time on scene to account for a significant portion of them. Any call with an on-scene time of less than 30 seconds was labeled *zero on scene*. There was no information stored within the dispatch records' source field to distinguish between patrol-initiated and other-initiated calls. We used response times to classify calls as other-initiated or police-initiated.

Before describing the workload analysis, we briefly review the data received. In the period from July 2008 to June 2009, there were approximately 30,000 calls for service (with accompanying unit information). Of the total, approximately 29,300 included a patrol unit either as the primary responder or as a secondary unit. When focusing on our 4-week periods, we analyzed 1,993 (patrol-related) calls in February 2009 and 2,583 calls in August 2008. In addition, when analyzing workloads and response times, we ignored calls with incorrect or missing time data. The inaccuracies included elapsed times that either were negative or exceeded 8 hours. For the entire year, this excluded less than 140 calls (less than 0.5 percent) from our analysis.

In the period from July 2008 to June 2009, the sheriff's office reported 80 calls for service per day. As mentioned, about 2.1 percent of these calls (1.7 per day) show no deputy time spent on the call.

In the following pages we show two types of data: activity and workload. The activity levels are measured by the average number of calls per day, broken down by the type and origin of the calls and categorized by the nature of the calls (e.g., crime, traffic). Workloads are measured in average work-hours per day.

We routinely use up to 17 call categories for tables and 10 categories for our graphs. We show our categories chart on the next page. The categories that were not used in this specific report are shown in italics.

Table categories	Figure categories
Accidents	Traffic
Traffic enforcement	
Alarm	Investigations
Check/investigation	
Animal calls	General non-criminal
Miscellaneous	
Assist other agency	Assist other agency
Crime—persons	Crime
Crime—property	
Directed patrol	Directed patrol
Disturbance	Suspicious incident
Suspicious person/vehicle	
Juvenile	Juvenile
Out of service—administrative	*Out of service*
Out of service—personal	
Prisoner—arrest	Arrest
Prisoner—transport	

Figure 1. Percentage Calls per Day, by Initiator
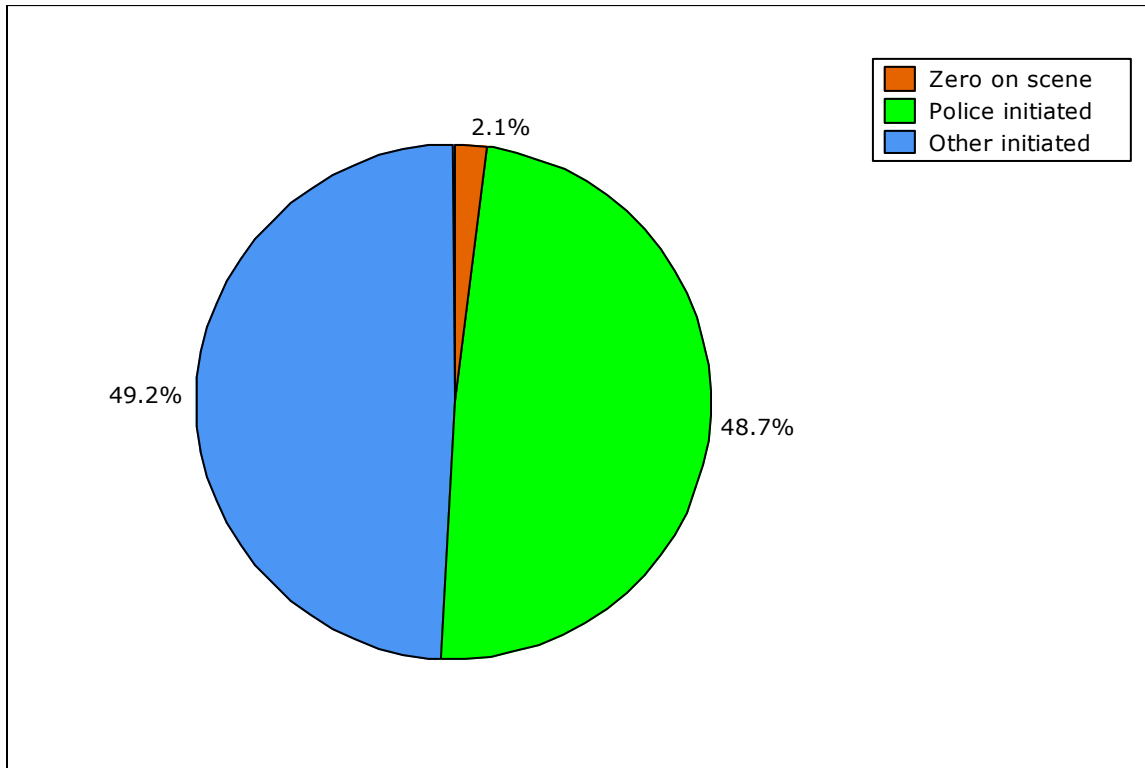
Note. Percentages are based on a total of 29,276 calls.

Table 1. Calls per Day by, Initiator

Initiator	Total calls	Calls per day
Zero on scene	616	1.7
Police initiated	14,266	39.1
Other initiated	14,394	39.4
Total	29,276	80.2

Observations:

- 2.1 percent of the calls involved zero on-scene time and are included in these numbers as well as the next figure and table. Later, we will exclude calls with zero on-scene time.
- About half of the data records were police-initiated activities: 39 per day, or about 49 percent of all activities.
- There were a total of 80 calls per day, or 3.3 per hour.

Figure 2. Percentage Calls per Day, by Category
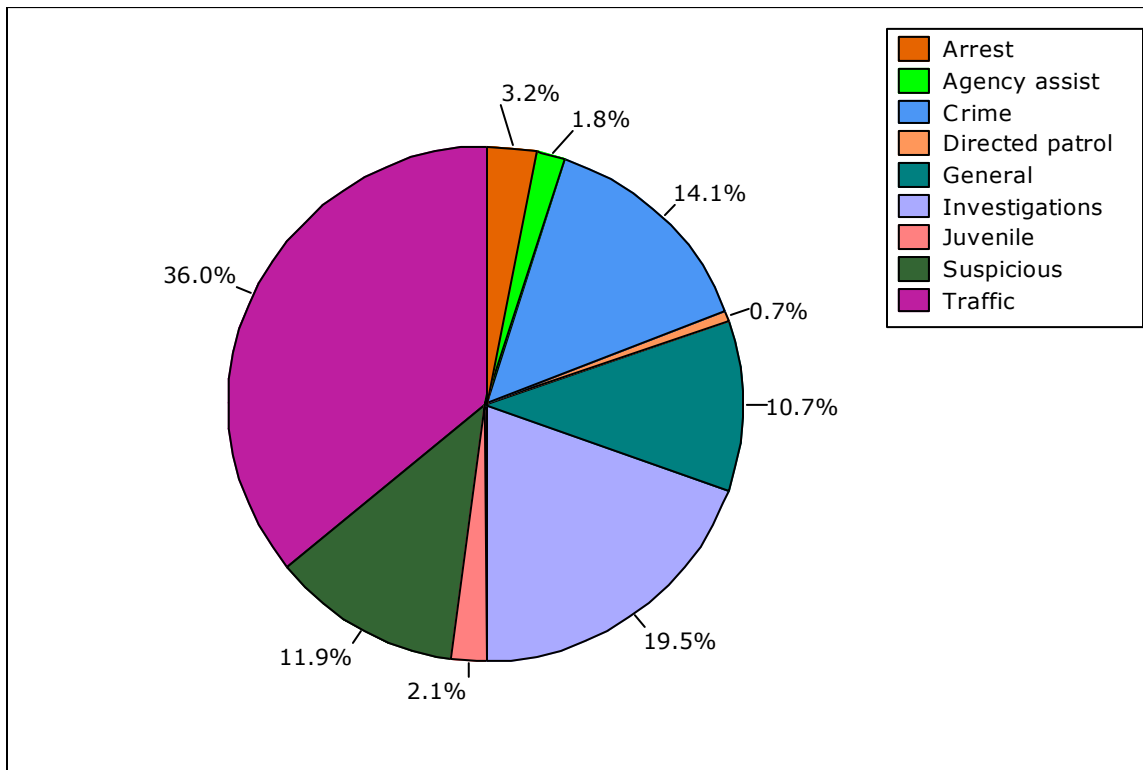
Table 2. Calls per Day, by Category

Category	Total calls	Calls per day
Accidents	860	2.4
Alarm	1,368	3.7
Animal calls	336	0.9
Assist other agency	536	1.5
Check/investigation	4,337	11.9
Crime—persons	1,580	4.3
Crime—property	2,535	6.9
Directed patrol	204	0.6
Disturbance	1,206	3.3
Juvenile	626	1.7
Miscellaneous	2,804	7.7
Prisoner—arrest	315	0.9
Prisoner-transport	619	1.7
Suspicious person/vehicle	2,270	6.2
Traffic enforcement	9,679	26.5
Total	29,275	80.2

Note. One call lacked a call description.

Observations:

- Two categories (investigations and traffic) accounted for almost 56 percent of activities.
- Only 0.7 percent of calls were directed patrol calls (such as residential patrols and business patrols)
- 36 percent of calls were traffic related.
- 11.9 percent of calls involved suspicious incidents such as suspicious persons and/or vehicles.
- 14.1 percent of calls involved crimes.

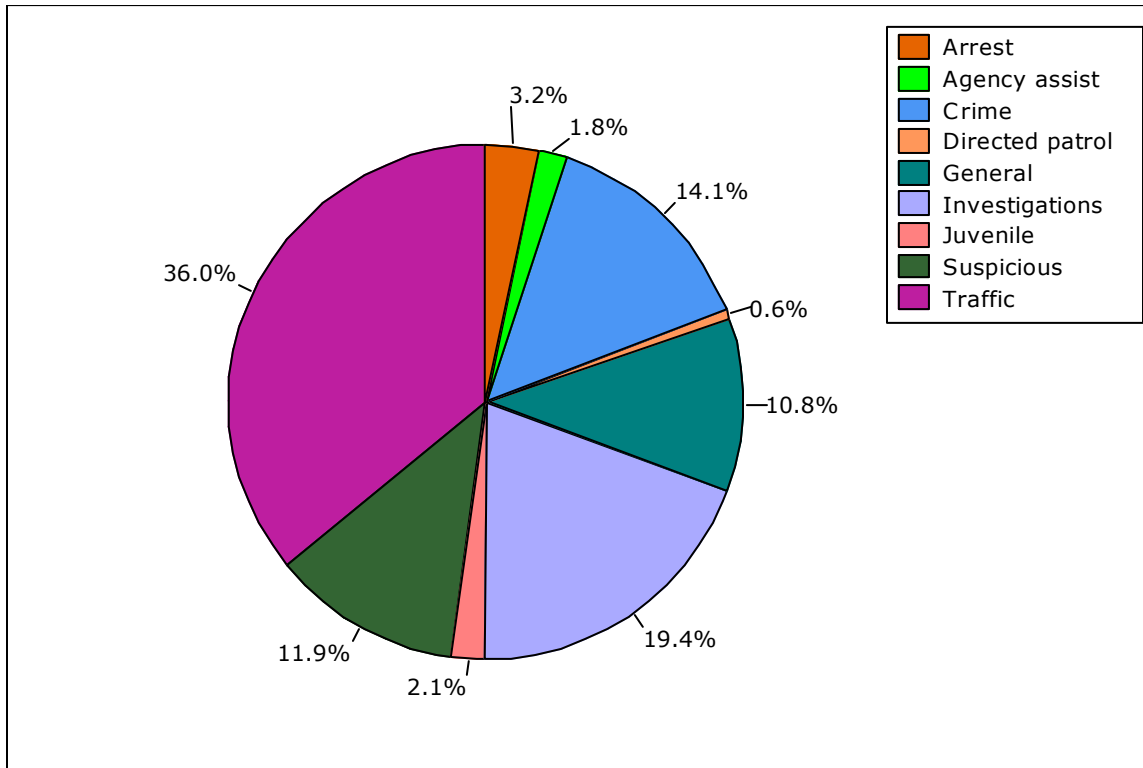**Figure 3. Percentage Calls per Day, (time on scene) by Category**

Table 3. Calls per Day (time on scene), by Category

Category	Total calls	Calls per day
Accidents	969	2.3
Alarm	1,350	3.7
Animal calls	329	0.9
Assist other agency	529	1.4
Check/investigation	4,212	11.5
Crime—persons	1,559	4.3
Crime—property	2,473	6.8
Directed patrol	176	0.5
Disturbance	1,185	3.2
Juvenile	615	1.7
Miscellaneous	2,775	7.6
Prisoner—arrest	312	0.9
Prisoner-transport	618	1.7
Suspicious person/vehicle	2,221	6.1
Traffic enforcement	9,461	25.9
Total	28,659	79

Observations:

- When zero-on-scene calls were excluded, there were 79 calls per day, or 3.3 per hour.
- Percentages of calls for most categories changed very little.

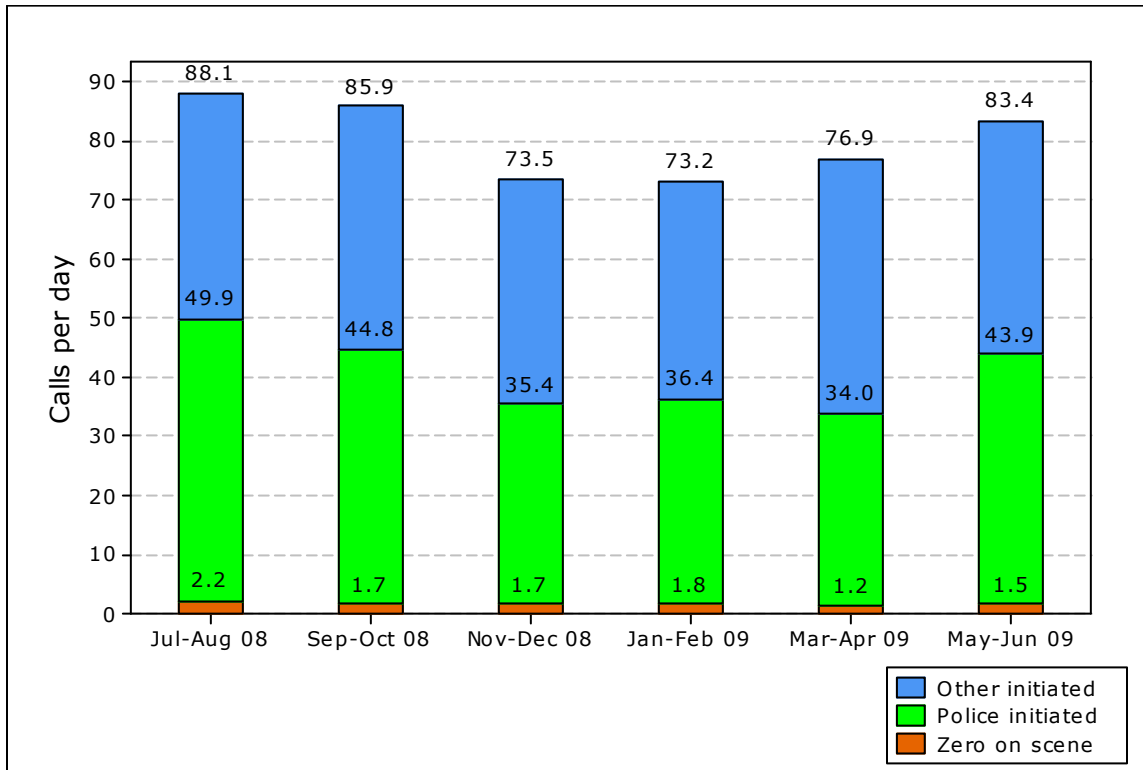**Figure 4. Calls per Day, by Initiator and by Months**

Table 4. Calls per Day, by Initiator and by Months

Initiator	July-	Sep.-	Nov.-	Jan.-	March-	May-
Zero on scene	2.2	1.7	1.7	1.8	1.2	1.5
Police initiated	47.7	43.1	33.8	34.6	32.8	42.3
Other initiated	38.2	41.0	38.1	36.8	42.9	39.5
Total	88.1	85.9	73.5	73.2	76.9	83.4

Observations:

- The number of calls was smallest from January 2009 to February 2009.

- The number of calls was the largest from July 2008 to August 2008.

- The largest monthly call totals were 20 percent more than the smallest.

- When focusing on police-initiated calls, we noticed that the period from July 2008 to August 2008 had 46 percent more of these calls than the period from March to April 2008.

- The peak months for other-initiated calls were March and April 2009 with almost 43 per day.
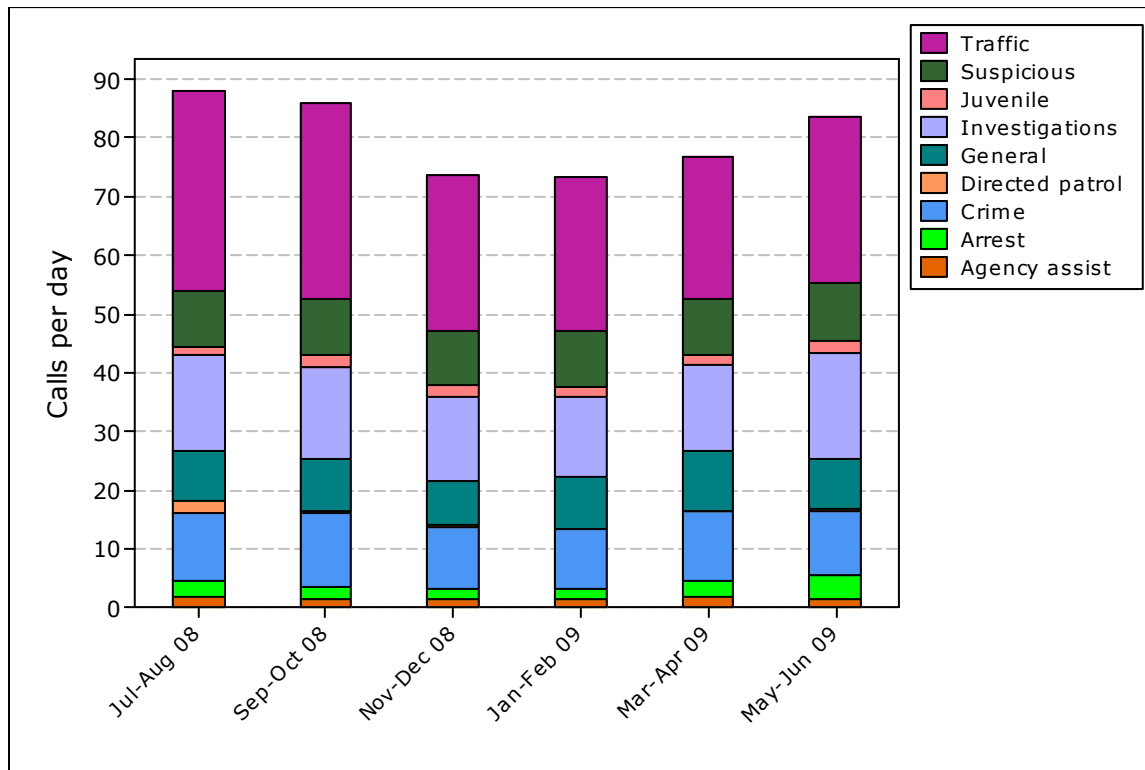
Figure 5. Calls per Day, by Category and by Months

Table 5. Calls per Day, by Category and by Months

Category	July-	Sep.-	Nov.-	Jan-	March	May-
Accidents	2.1	2.6	2.1	2.3	2.6	2.3
Alarm	3.0	3.0	4.0	3.7	3.8	4.1
Animal calls	0.8	0.8	0.9	1.0	1.0	1.0
Assist other agency	1.7	1.5	1.5	1.3	1.5	1.3
Check/investigation	13.6	11.9	10.6	10.1	10.9	14.1
Crime-persons	4.3	4.7	3.9	3.8	4.9	4.4
Crime-property	7.5	8.0	6.7	6.2	6.8	6.4
Directed patrol	1.8	0.4	0.3	0.2	0.2	0.4
Disturbance	2.8	3.2	3.4	3.4	3.7	3.3
Juvenile	1.4	2.0	1.8	1.5	1.9	1.8
Miscellaneous	7.6	7.9	6.4	7.6	9.0	7.5
Prisoner-arrest	0.6	0.5	0.4	0.6	1.0	2.0
Prisoner-transport	2.1	1.4	1.2	1.3	2.0	2.1
Suspicious person/vehicle	6.6	6.4	5.7	6.4	5.6	6.6
Traffic enforcement	32.1	30.8	24.5	23.7	21.8	25.9
Total	88.1	85.9	73.5	73.2	76.9	83.4

Observations:

- Traffic-related calls, followed by investigations, were the most common types of calls throughout the period from July 2008 to June 2009.
- Traffic-related calls averaged between 24 and 34 per day throughout the year.
- Investigations (checks and alarms) averaged between 14 and 18 calls per day throughout the year.
- Together, investigations and traffic-related calls (enforcements and accidents) were consistently between 51 and 58 percent of all calls.
- Crime calls varied between 10.0 and 12.7 per day throughout the year, representing between 13 and 15 percent of total calls.

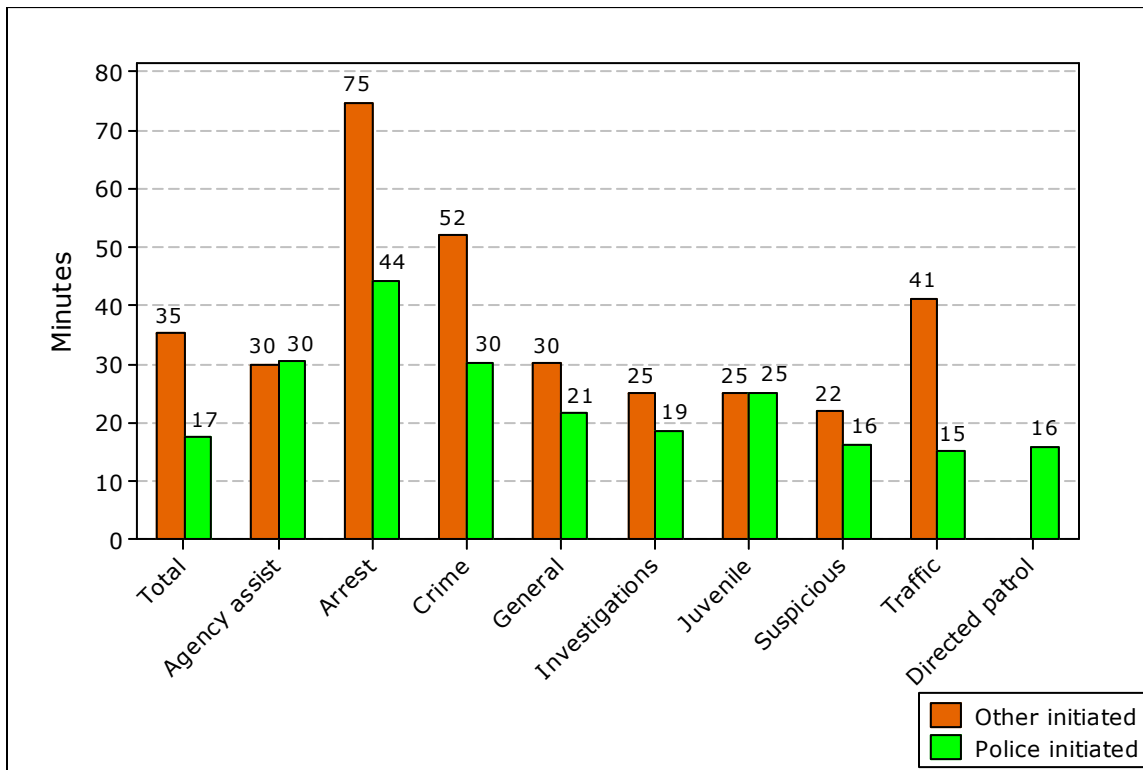**Figure 6. Average Busy Times, by Category and Initiator**

Table 6. Primary Unit's Average Busy Times, by Category and Initiator

Category	Police initiated		Other initiated	
	Total calls	Minutes	Total calls	Minutes
Accidents	197	49.6	647	57.4
Alarm	21	13.4	1,329	13.5
Animal calls	26	24.4	303	23.9
Assist other agency	152	30.4	377	29.9
Check/investigation	1,860	18.6	2,352	31.4
Crime—persons	137	35.8	1,422	54.4
Crime—property	655	29.1	1,818	49.9
Directed patrol	176	15.8	0.0	0.0
Disturbance	45	26.5	1,140	22.7
Juvenile	99	25.0	516	24.9
Miscellaneous	360	21.2	2,415	30.8
Prisoner—arrest	241	36.9	71	54.1
Prisoner-transport	68	70.4	550	77.4
Suspicious person/vehicle	1,306	15.9	915	21.0
Traffic enforcement	8,922	14.1	539	21.5
Total	14,265	17.4	14,394	35.1

Note. Figure 6 and Table 6 exclude zero-on-scene calls.

Observations:

- A unit's busy time is measured as the time from when it is dispatched until it becomes available.
- The times shown above are the average busy times per call for the primary unit, rather than the total busy time for all units assigned to a call.
- A category's average time spent on a call ranged from 13 to 77 minutes overall.
- The longest average times spent were for agency assist, arrest, and crime calls.
- Police-initiated traffic calls averaged 15 minutes per call, whereas other-initiated traffic calls averaged 41 minutes.
- Crime calls averaged 30 minutes for police-initiated calls and 52 minutes for other-initiated calls.

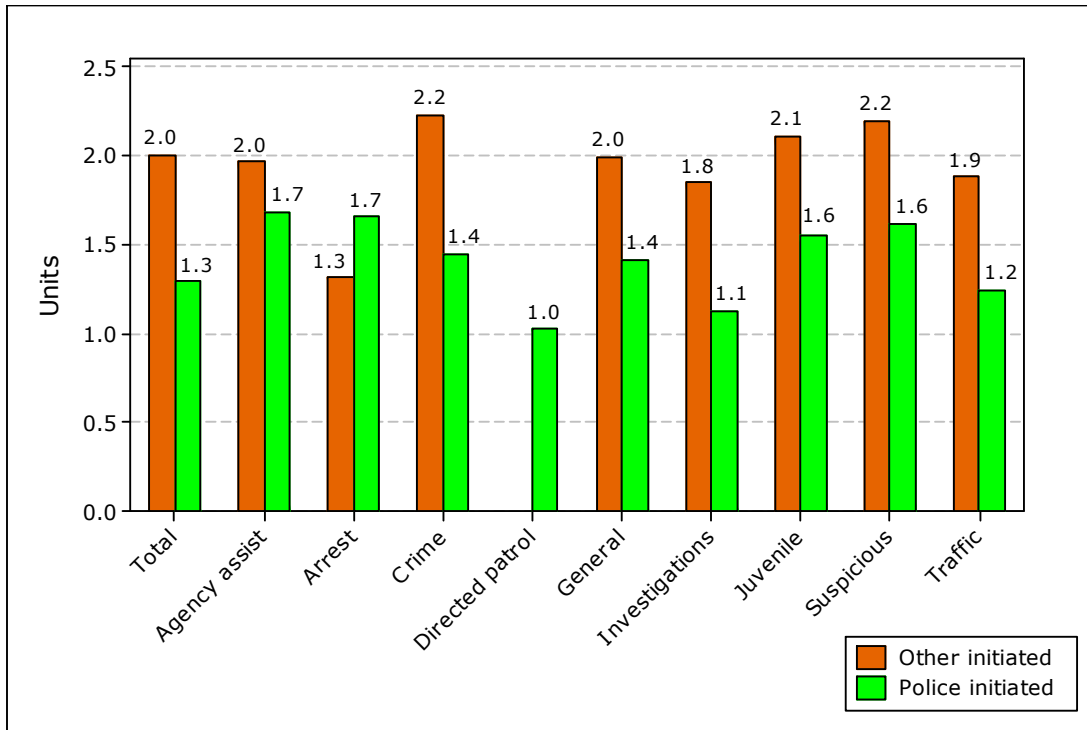**Figure 7. Mean Number of Responding Units, by Initiator and Category**

Table 7. Mean Number of Responding Units, by Initiator and Category

	Police initiated		Other initiated	
Category	Average	Total Calls	Average	Total Calls
Accidents	1.9	197	2.1	647
Alarm	1.5	21	1.8	1,329
Animal calls	1.1	26	1.4	303
Assist other agency	1.7	152	2.0	377
Check/investigation	1.1	1,860	1.9	2,352
Crime-persons	2.0	137	2.7	1,422
Crime-property	1.3	655	1.8	1,818
Directed patrol	1.0	176	N/A	0
Disturbance	2.1	45	2.2	1,140
Juvenile	1.6	99	2.1	516
Miscellaneous	1.4	360	2.1	2,415
Prisoner-arrest	1.8	241	2.9	71
Prisoner-transport	1.0	68	1.1	550
Suspicious person/vehicle	1.6	1,306	2.2	915
Traffic enforcement	1.2	8,922	1.6	539
Total	1.3	14,266	2.0	14,394

Figure 8. Number of Responding Units, by Category
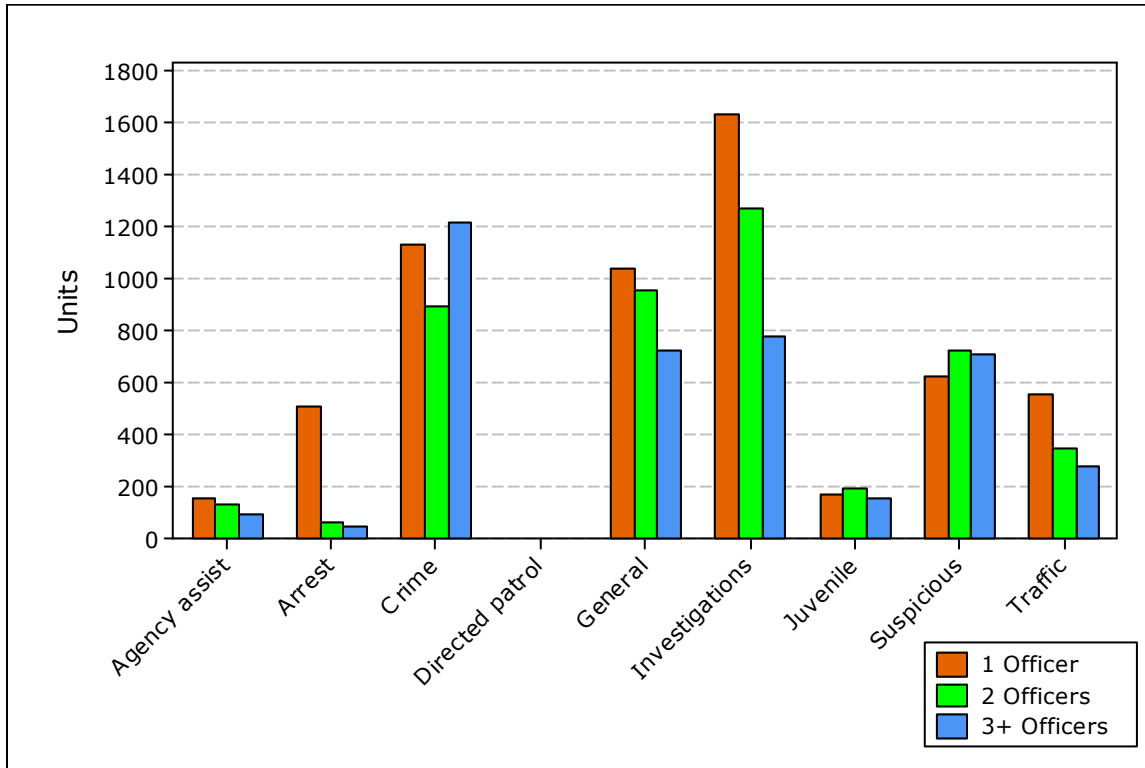
Table 8. Number of Responding Units, by Category

Category	Responding units		
	One	Two	Three or more
Accidents	238	201	208
Alarm	589	519	221
Animal calls	196	89	18
Assist other agency	157	128	92
Check/investigation	1,043	752	557
Crime—persons	224	388	810
Crime—property	908	505	405
Directed patrol	0	0	0
Disturbance	363	401	376
Juvenile	167	192	157
Miscellaneous	842	867	706
Prisoner—arrest	5	24	42
Prisoner-transport	504	41	5
Suspicious person/vehicle	260	324	331
Traffic enforcement	319	149	71
Total	5,815	4,580	3,999

Note. Figure 8 and Table 8 include only other-initiated calls.

Observations:

- The overall mean number of responding units was 1.3 for police-initiated calls and 2.0 for other-initiated calls.
- The mean number of responding units reached as high as 2.7 units, for other-initiated calls involving crimes against persons and 2.9 units for prisoner arrests.
- Other-initiated calls were most likely to involve one responding unit (40 percent).
- 28 percent of all other-initiated calls involved three or more units.
- The largest group of calls with three or more responding units involved crimes, followed by investigations.

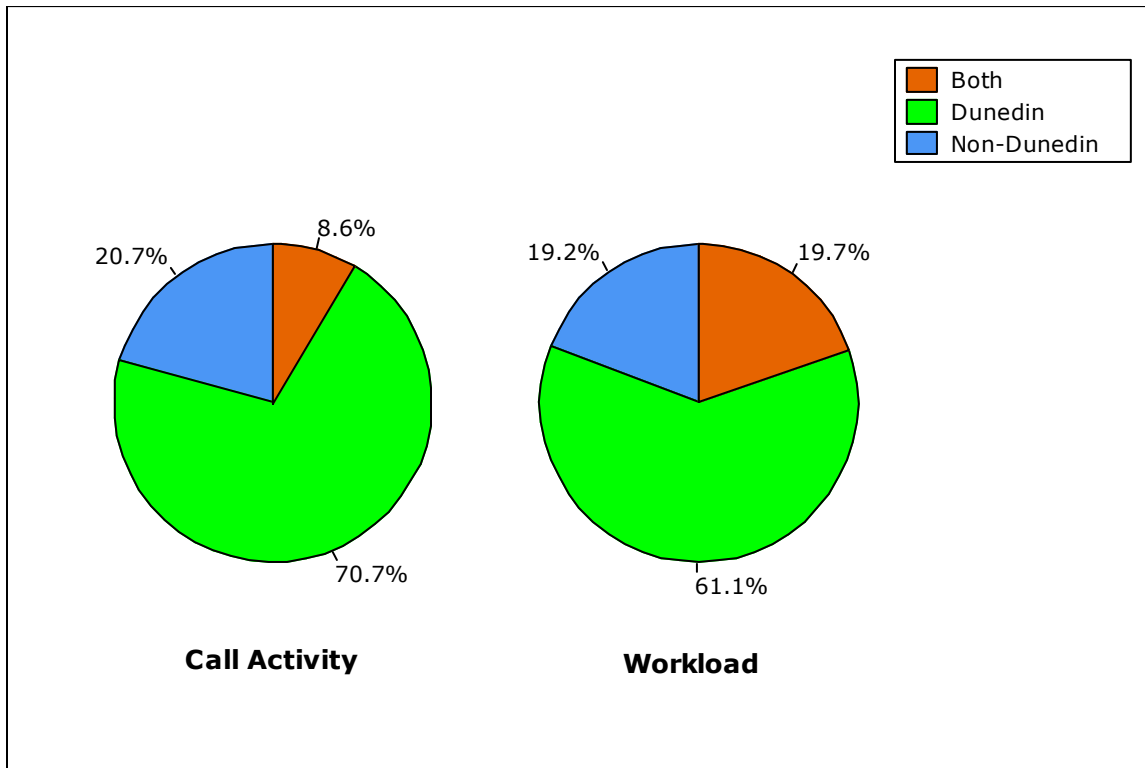**Figure 9. Percentage Calls and Work-hours per Day, by Contract**

Table 9. Calls and Work-hours per Day, by Contract

| Contract	Calls per Day	Work-Hours
Both	6.7	10.0
Dunedin	55.5	31.1
Non-Dunedin	16.3	9.8
Total	78.5	51.0

Observations:

Calls were divided by the type of responding patrol units:

- Dunedin – only units contracted to the City of Dunedin
- Non-Dunedin – only units not contracted to Dunedin
- Both – calls involving units of both types

- 71 percent of calls within Dunedin were handled solely by the contracted patrol units, which totaled 61 percent of the workload.

Figure 10. Percentage Calls and Work-hours per Day, by Category, in February 2009
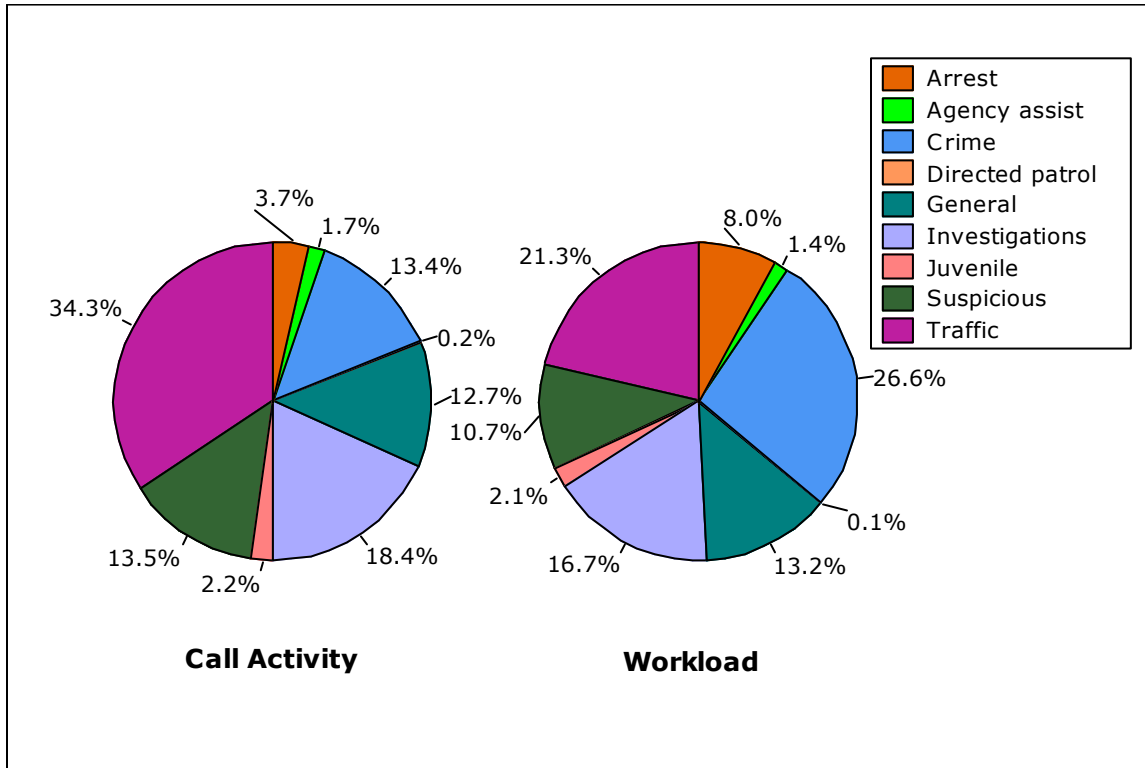
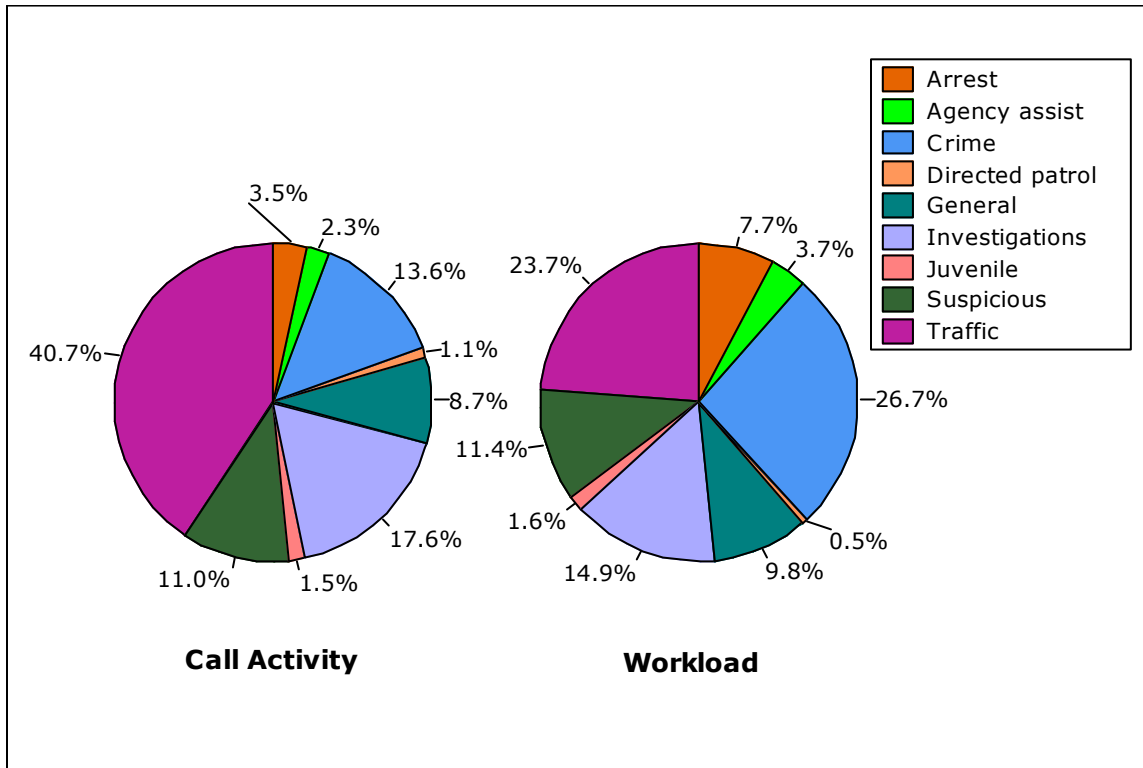*Note*. Calculations include only nonzero-on-scene calls.

Table 10. Calls and Work-hours per Day, by Category, in February 2009

	Per day	
Category	Calls	Work-hours
Arrest	2.6	3.8
Assist other agency	1.2	0.7
Crime	9.4	12.7
Directed patrol	0.1	0.0
General non-criminal	8.8	6.3
Investigations	12.9	8.0
Juvenile	1.5	1.0
Suspicious incident	9.4	5.1
Traffic	23.9	10.2
Total	69.7	47.8

Observations:

- Total calls were 70 per day, or 2.9 per hour.
- Total workload was 48 work-hours per day. This meant that an average of 2.0 personnel per hour were busy handling calls.
- Traffic-related events constituted 34 percent of calls and 21 percent of workload.
- Investigations were 18 percent of calls and 17 percent of workload.
- Crimes constituted 13 percent of calls but 27 percent of workload.

Figure 11. Percentage Calls and Work-hours per Day, by Category, in August 2008

Note. Calculations include only nonzero-on-scene calls.

Table 11. Calls and Work-hours per Day, by Category, in August 2008

	Per day	
Category	Calls	Work-hours
Arrest	3.1	4.1
Assist other agency	2.1	2.0
Crime	12.3	14.1
Directed patrol	1.0	0.3
General non-criminal	7.9	5.2
Investigations	15.9	7.9
Juvenile	1.4	0.8
Suspicious incident	9.9	6.0
Traffic	36.7	12.5
Total	90.3	52.9

Observations:

- In August, the total calls and workload were higher than in February.
- Total calls were 90 per day, or 3.8 per hour, which was 29 percent higher than the number of calls in February.
- Total workload was 53 work-hours per day, or 2.2 personnel per hour, which was 11 percent higher than the workload in February.
- Traffic-related events constituted 41 percent of calls and 24 percent of workload.
- The relative percentages of calls and workload for the other large categories in August were similar to those in February.

H.C. Deployment

The Sheriff's Office operates primarily with three 8-hour shifts with staggered starting times from 7 a.m. to 8 a.m., 3 p.m. to 4 p.m., and 11 p.m. to midnight. Along with regular patrol deputies, we included community policing units that also perform some patrol-related duties. Within the patrol unit, we included both deputies and supervisors. In other words, we included within our analysis all deputies and supervisors from the rank of sergeant and below. Within Dunedin, the sheriff's office deployed an average of 6.1 and 5.6 patrol deputies, respectively, during the 24-hour day in February 2009 and August 2008. When including the additional units, the sheriff's office deployed an average of 7.6 and 7.2 deputies during the 24-hour day in February 2009 and August 2008, respectively. There was only limited variability in deployment by season and between weekends and weekdays. There was a significant variability by time of day.

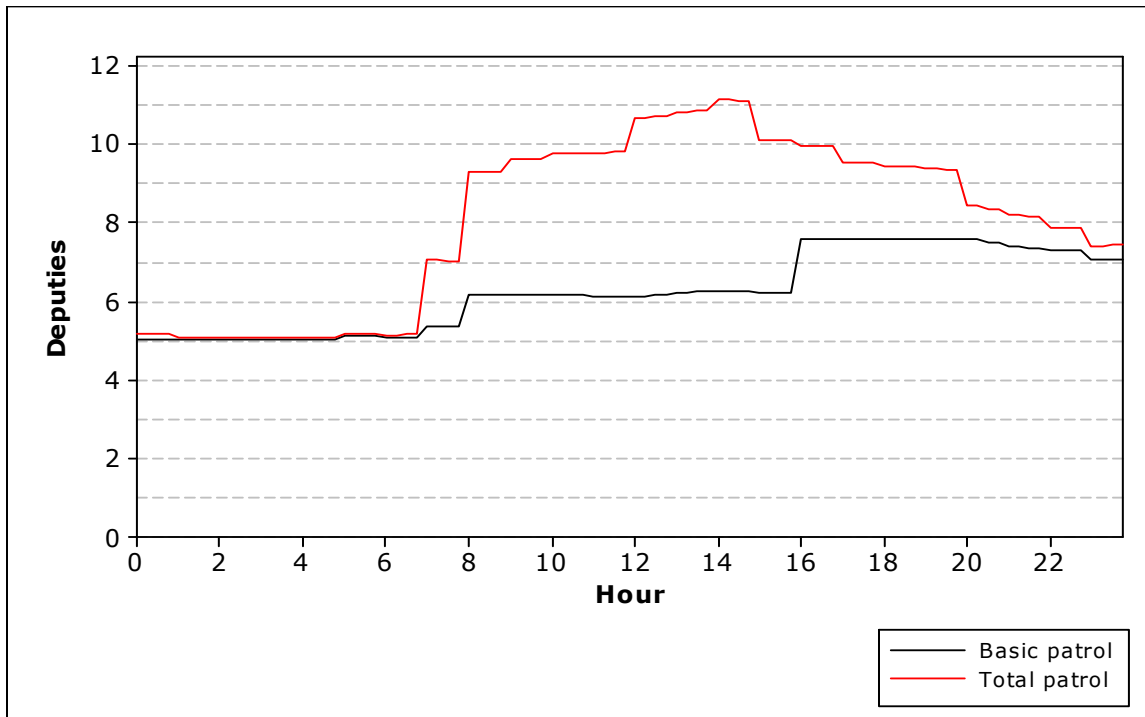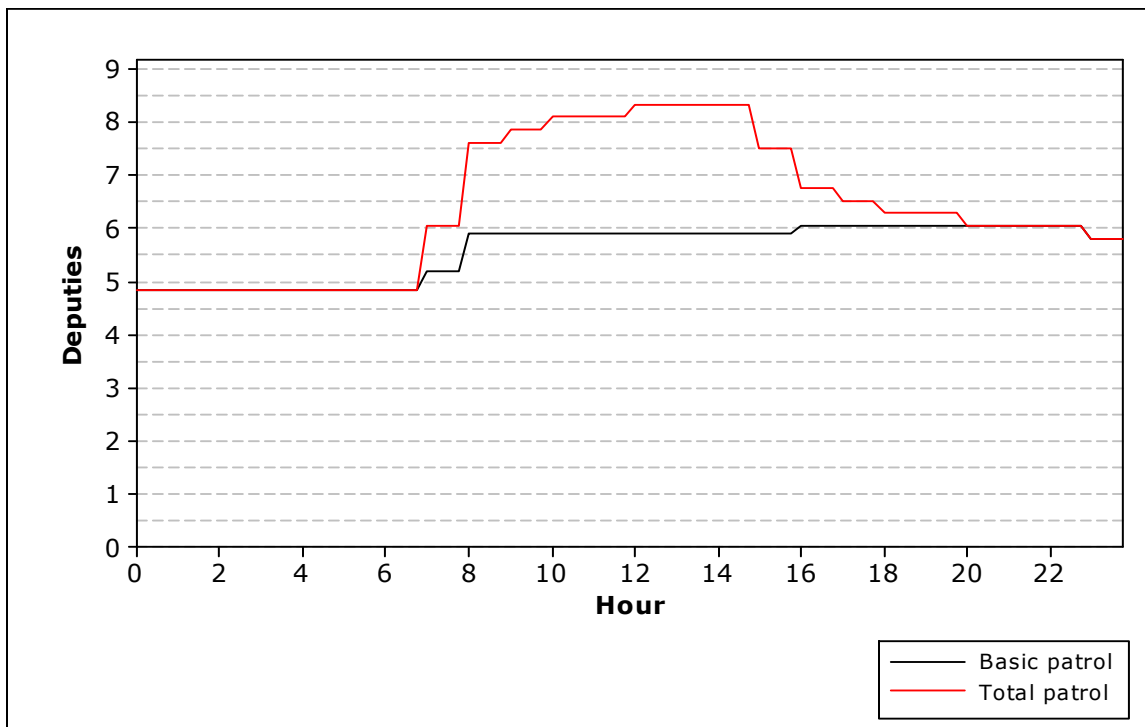**Figure 12. Deployed Deputies – Weekdays, in February 2009**

Figure 13. Deployed Deputies – Weekends, in February 2009

Observations:

- In February, the average patrol deployment was approximately 6.2 patrol deputies during the week and 5.6 patrol deputies on weekends.
- During the week, deployment reached as high as 7.6 deputies during the evening shift and dropped to as low as 5.0 deputies during the midnight shift.
- On the weekends, deployment reached as high as 6.0 deputies during the evening shift and dropped to as low as 4.8 deputies during the midnight shift.
- When additional units (e.g., community policing) were added, the average deployment rose during the week by 1.9 deputies, and reached a maximum of 11.2 deputies during the day shift.
- On the weekends, peak deployment was less than 8.5 deputies.

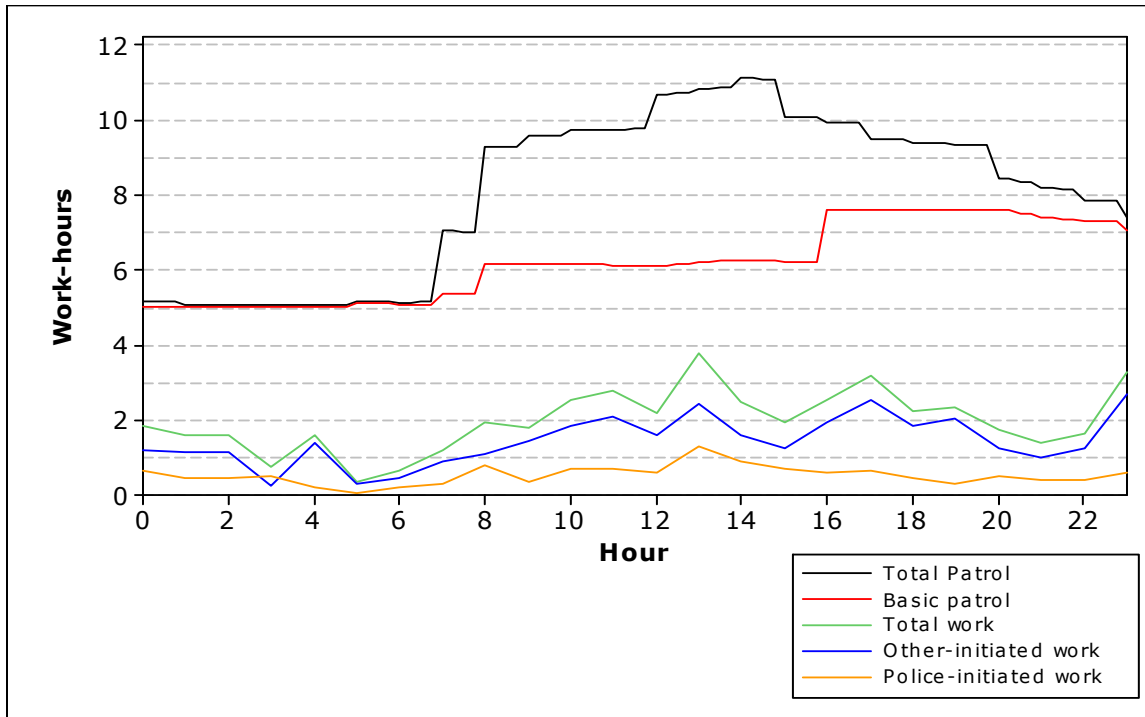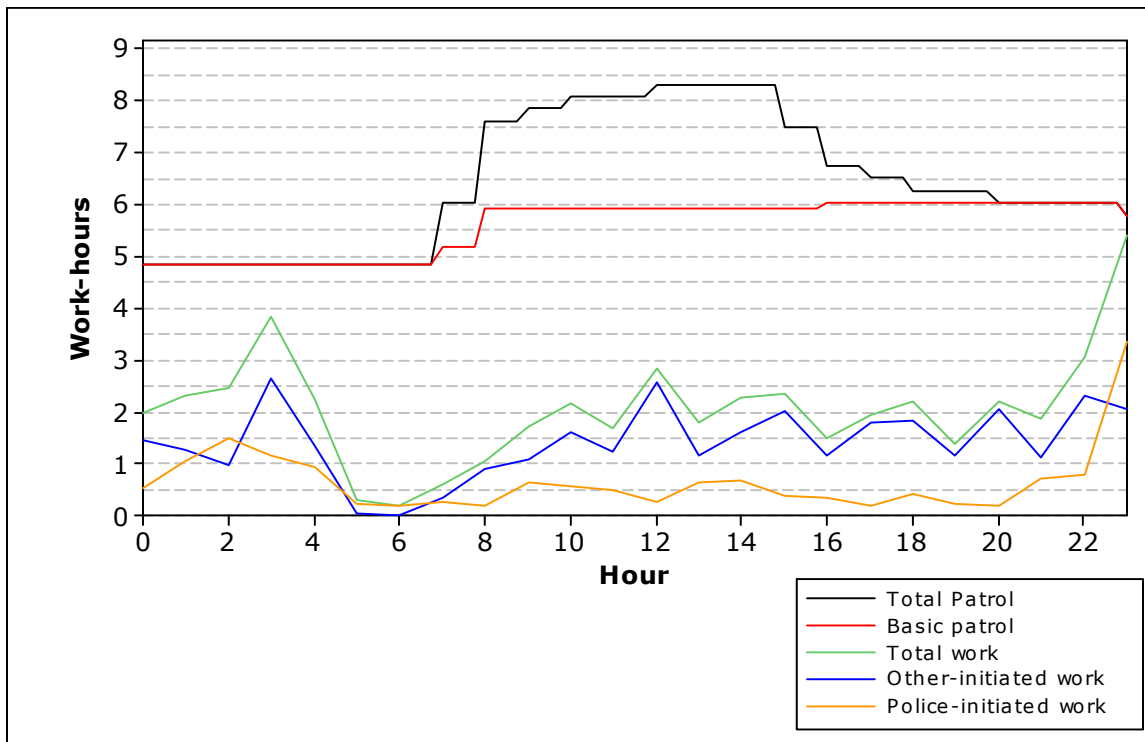**Figure 14. Deployment and Workload – Weekdays, February 2009**

Figure 15. Deployment and Workload – Weekends, February 2009

Observations:

During the week, patrol workload averaged 2.0 personnel per hour.

This was 24 percent of deployment, meaning that patrol deputies spent 24 percent of their time on patrol-related activities.

During the week, patrol workload dropped to as low as 7 percent of deployment between 5 a.m. and 6 a.m. It was as high as 44 percent of deployment between 11 p.m. and midnight.

On the weekends, patrol workload averaged 2.1 personnel per hour, which was 32 percent of deployment.

On the weekends, the patrol workload dropped to as low as 4 percent of deployment between 6 a.m. and 7 a.m. and reached as high as 93 percent of deployment between 11 p.m. and midnight. This was the result of a significant increase in police-initiated calls, which accounted for more than half of this work.

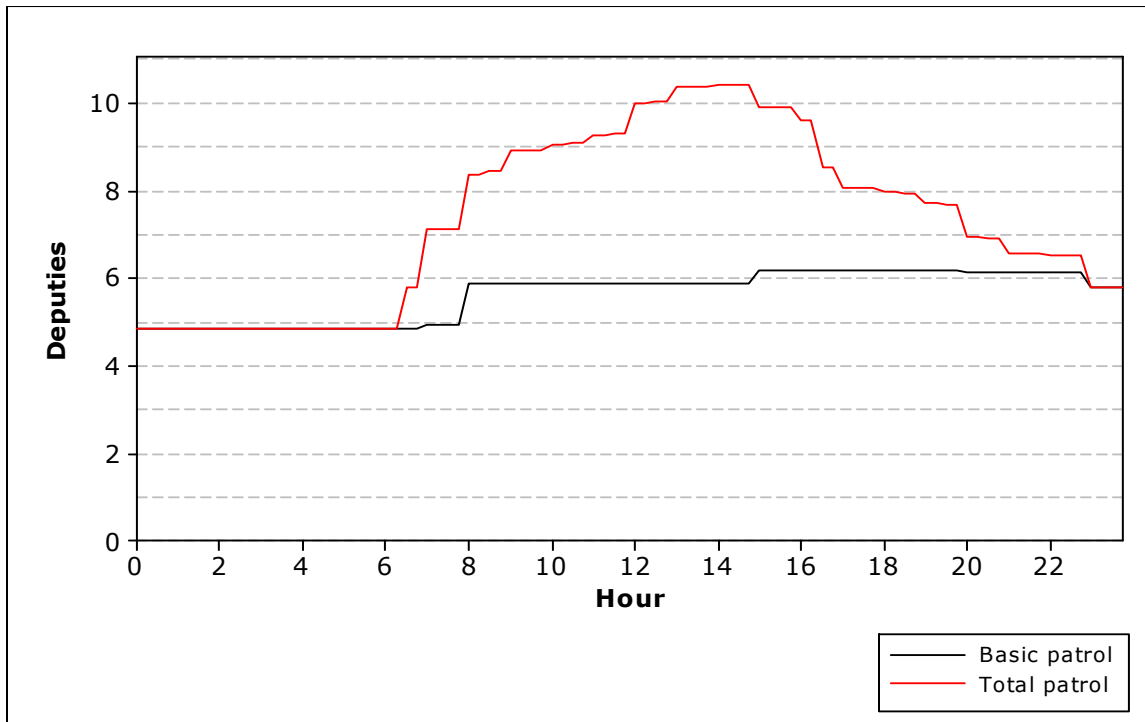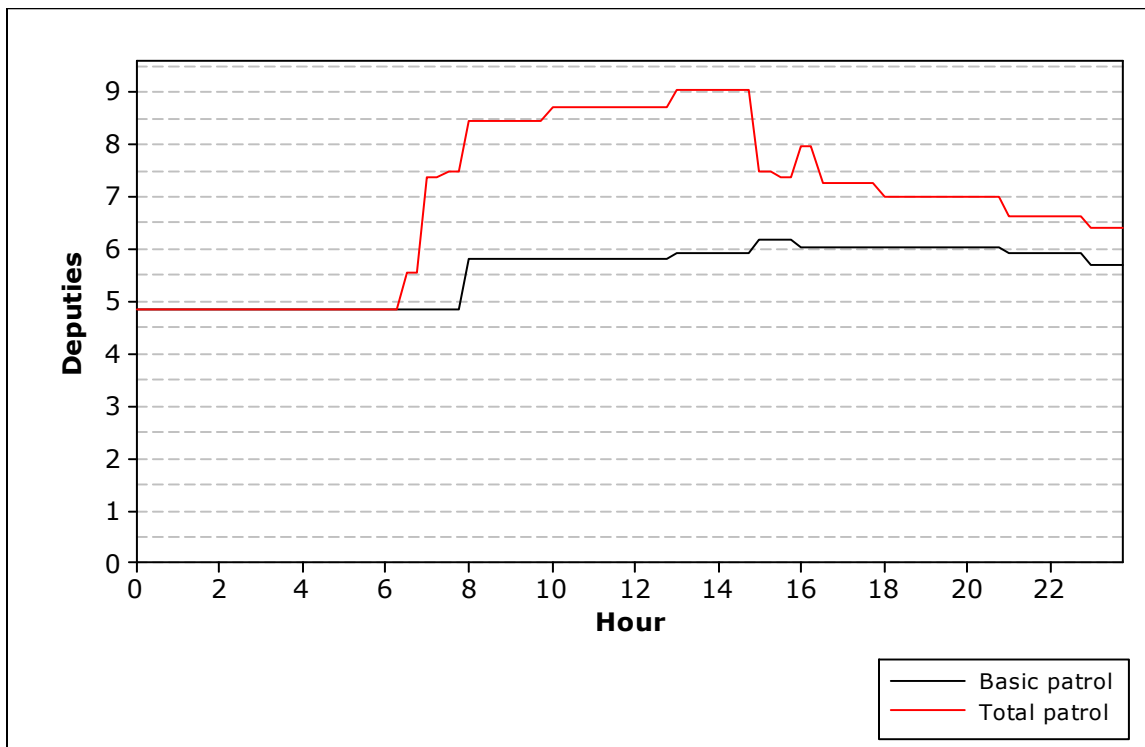**Figure 16. Deployed Deputies – Weekdays, August 2008**

Figure 17. Deployed Deputies – Weekends, August 2008

Observations:

- The number of deputies deployed was higher in February than in August.
- There was an average of 5.6 deputies deployed during both the weekdays and weekends in August.
- Basic deployment varied between 6.2 deputies during the evening shift and 4.8 deputies during the midnight shift on weekdays and on weekends.
- When additional (community policing) units were added, the deployment rose in February.
- Total deployment reached a maximum of 10.4 deputies during the week and 9.1 deputies on weekends.

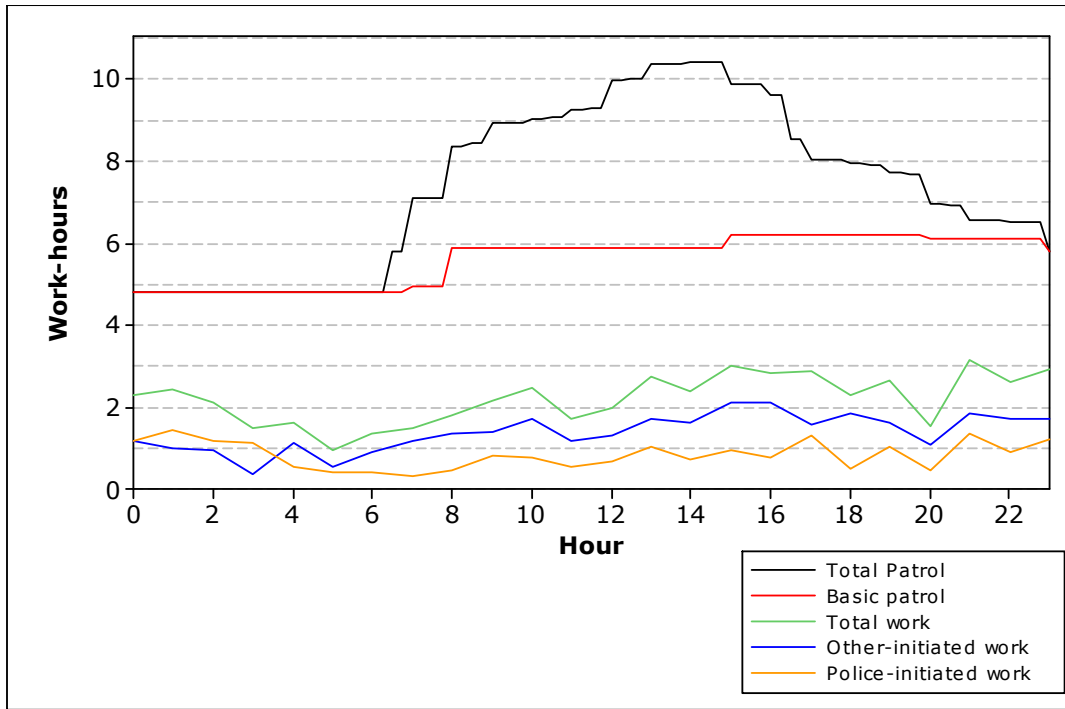**Figure 18. Deployment and Workload – Weekdays, August 2008**

Figure 19. Deployment and Workload – Weekends, August 2008
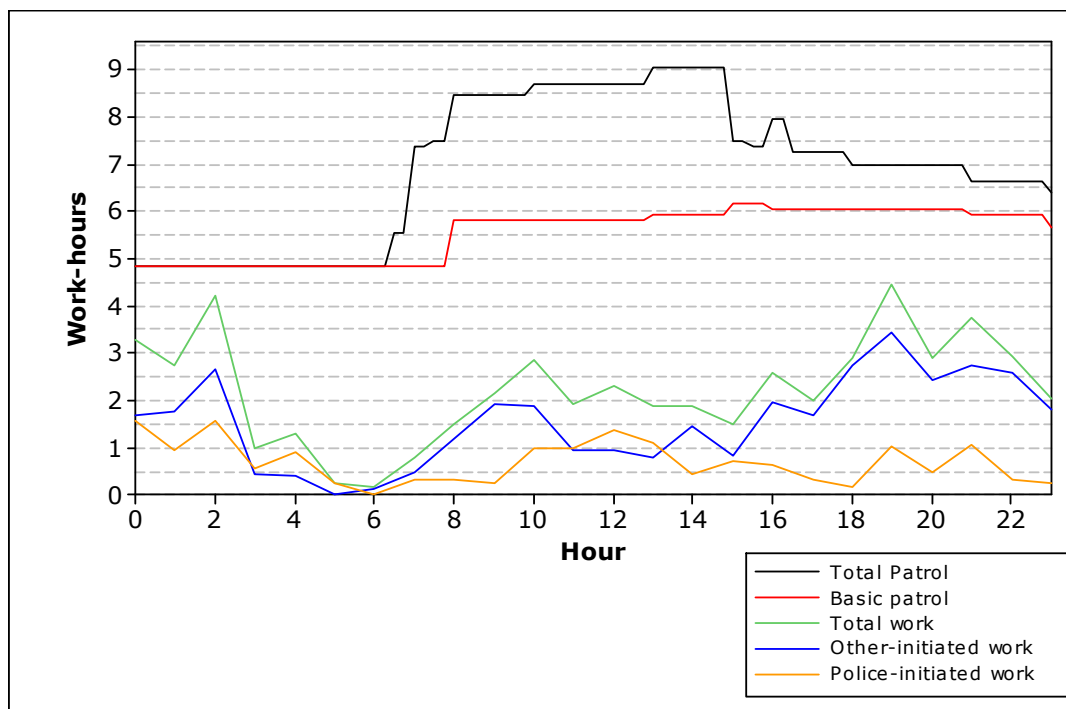
Observations:

- During the week, patrol workload averaged 2.2 personnel per hour.
- This was 30 percent of total deployment, meaning that patrol deputies spent 30 percent of their time on patrol-related activities.
- During the week, patrol workload dropped as low as 18 percent of total deployment between 11 a.m. and noon, and rose as high as 50 percent of total deployment between 1 a.m. and 2 a.m.
- On the weekends, average workload was 2.2 personnel per hour, which was 32 percent of total deployment.
- On the weekends, the patrol workload dropped as low as 3 percent of total deployment between 6 a.m. and 7 a.m., and rose as high as 87 percent of total deployment between 2 a.m. and 3 a.m.

~~I.~~D.   Response Times

We analyzed the response times to various types of calls, separating the duration into dispatch and travel times. We begin the discussion with statistics that include all calls combined. Later, we report on the much lower response times for high-priority calls. We analyzed several types of calls to determine whether response times varied by call type. To better understand the response-time issue, the study team calculated the cumulative distribution function (CDF) of response time for three types of calls. We calculated the dispatch delay, travel time, and the total response time.

Before presenting the specific figures and tables, we summarize all of the observations. We started with 1,993 and 2,583 calls for February 2009 and August 2008, respectively. We limited our analysis to calls that were other-initiated that showed actual time on scene. We also encountered some calls without arrival times that we were forced to exclude from our analysis due to lack of information. This left 980 calls in February 2009 and 1,062 calls in August 2008.

Our initial analysis does not distinguish calls based upon their priority. It does examine the difference in response by time of day and compare summer and winter periods. After the overall statistics, we present an analysis based on the priority codes provided within the data. We focus on high-priority calls for the entire year. The response times for these are significantly shorter.

Response time is measured as the difference between the time a call is received and the time the first unit arrived on scene. This is separated into dispatch delay and travel time. Dispatch delay is the time from which a call is received until a unit is dispatched. Travel time is the time from which a unit is dispatched until a unit arrives.

Figure 20. Average Response Time, by Hour of Day, for February 2009 and August 2008

February average: 8.80 minutes
August average: 8.49 minutes
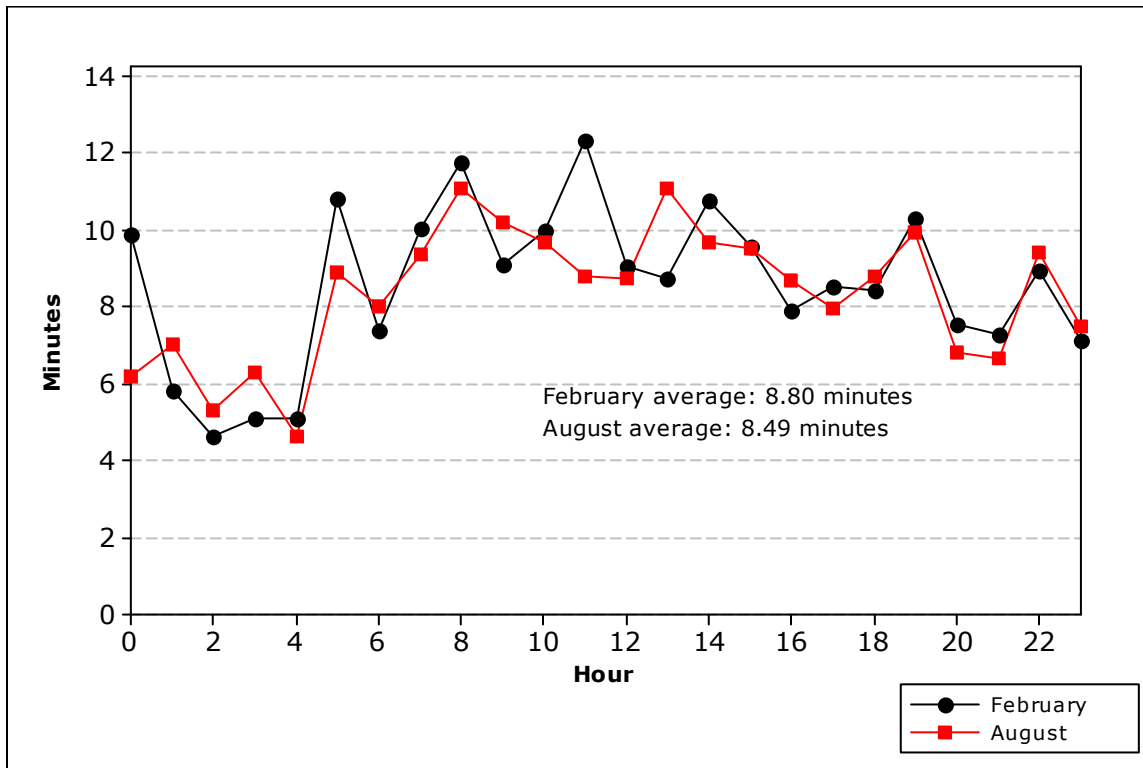
Observations:

Average response times varied significantly by hour of day.

- The overall average was slightly higher in February 2009 than in August 2008.
- In February, the longest response times were between 11 a.m. and noon, with an average of 12.3 minutes.
- In February, the shortest response times were between 2 a.m. and 3 a.m., with an average of 4.7 minutes.
- In August, the longest response times were between 8 a.m. and 9 a.m. and between 1 p.m. and 2 p.m., with an average of 11.1 minutes.
- In August, the shortest response times were between 4 a.m. and 5 a.m., with an average of 4.6 minutes.

J.E. Reading the Cumulative Distribution Function (CDF) Chart

The vertical axis is the probability or percentage of calls. The horizontal axis is time of dispatch delay, travel time, or total response time. For example, approximately 80 percent of the calls in August experienced a dispatch delay of 2 minutes or less. (The 80-percent line intersects the curve approximately at the 2-minute mark.) When comparing different CDF lines, a higher graph represents a larger percentage of low values. Figure 22 shows that the travel times are nearly identical for February 2009 and August 2008.
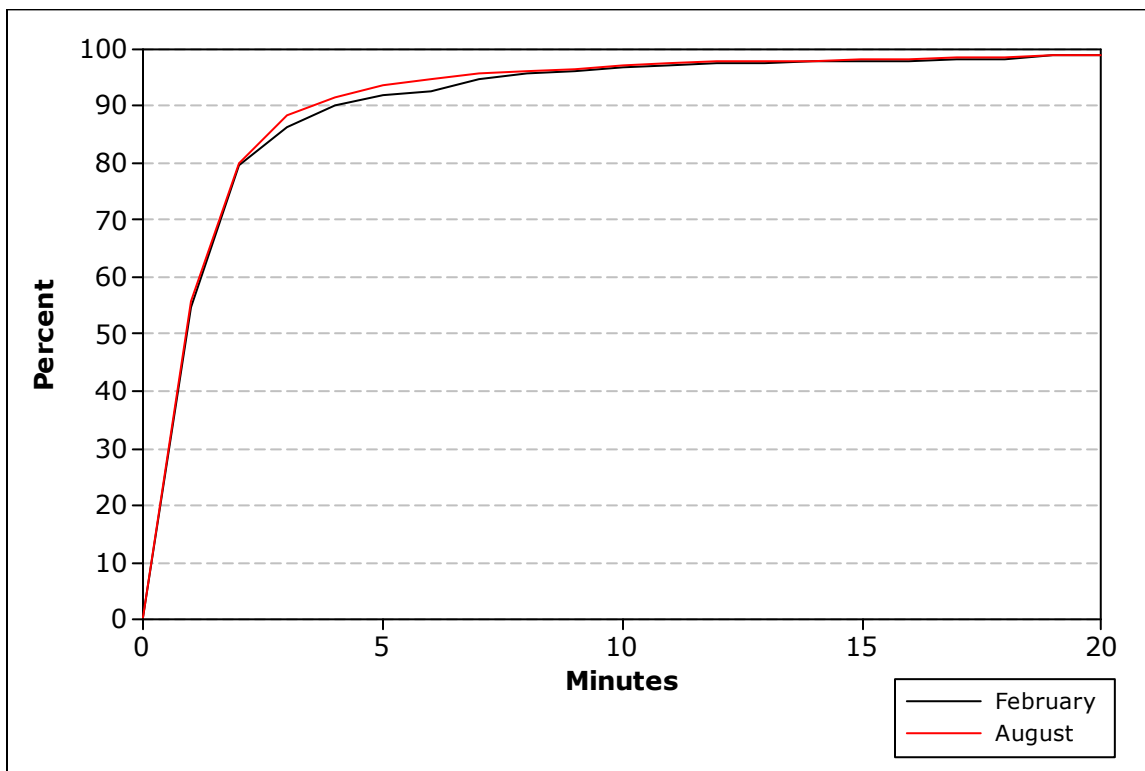
Figure 21. Dispatch Delay CDF
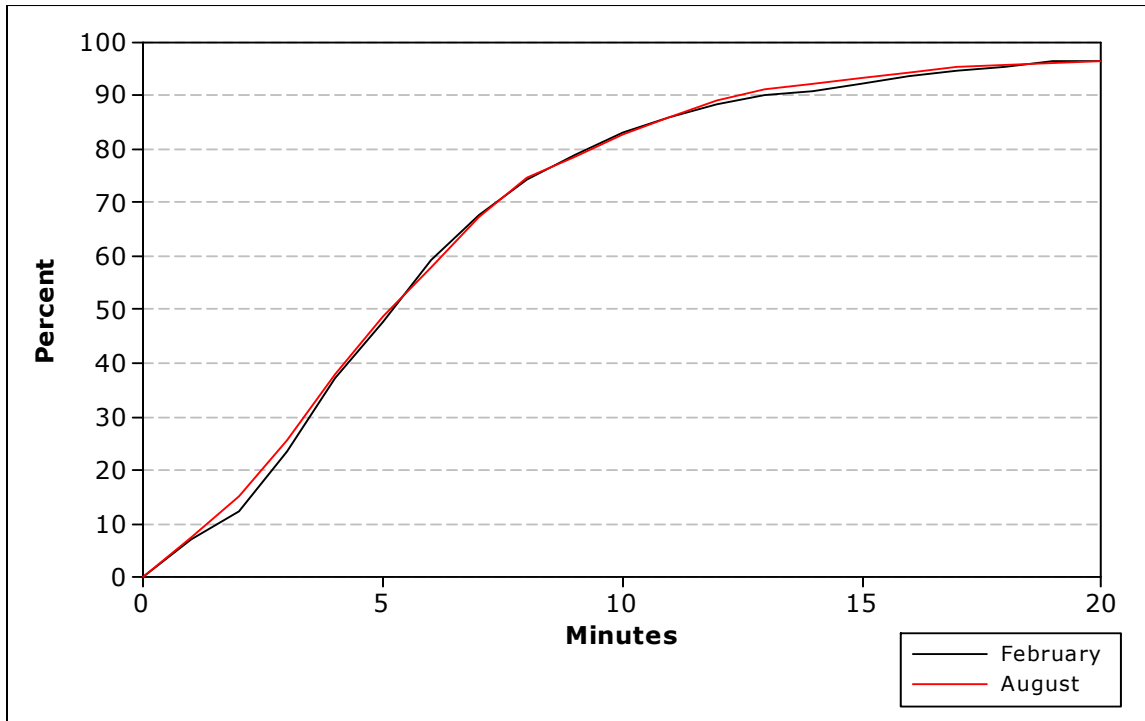
Figure 22. Travel Time CDF
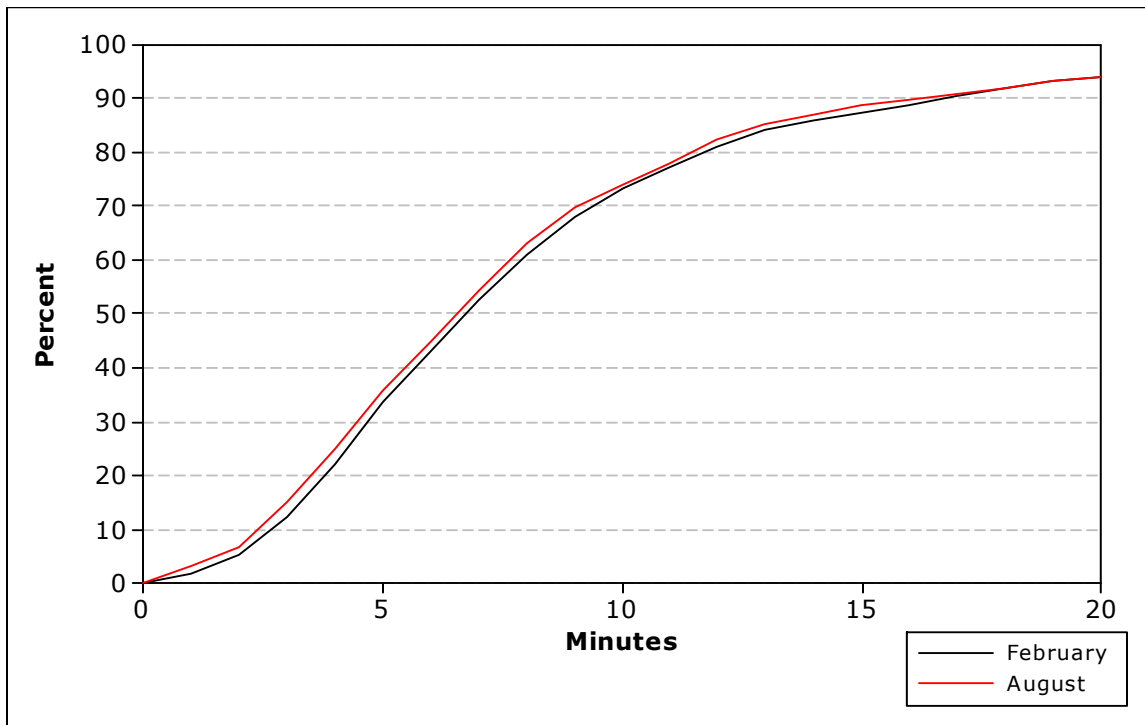

Figure 23. Response Time CDF

Figure 24. Average Response Times in February 2009
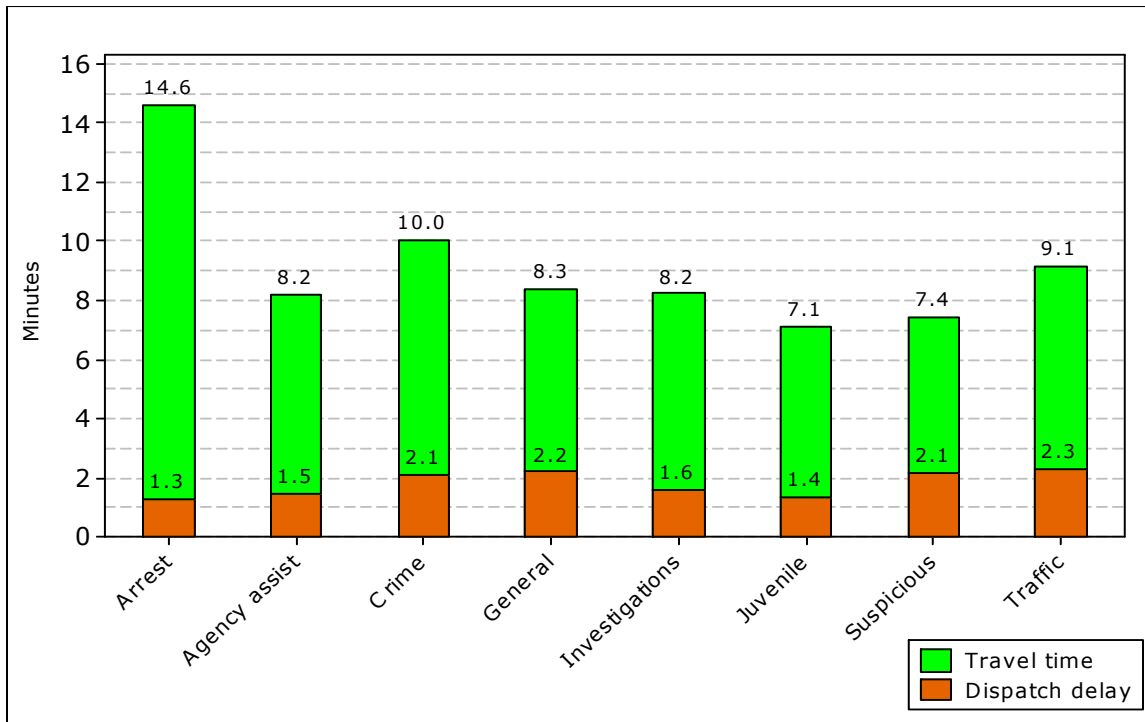
Figure 25. Average Response Times in August 2008

Table 12. Average Response Time Components by Category

Category						

Table 13. 90th Percentile Times for Components by Category

Category	February 2009			August 2008		
	Dispatch	Travel	Response	Dispatch	Travel	Response
Arrest	3.3	29.4	31.7	3.2	36.3	36.5
Agency assist	3.8	14.9	16.0	3.2	15.8	16.9
Crime	4.8	15.2	17.5	3.5	13.9	17.6
Directed patrol	0.0	0.0	0.0	0.0	0.0	0.0
General	4.8	12.9	16.2	3.0	11.7	13.9
Investigations	3.1	11.7	14.5	3.8	11.1	13.1
Juvenile	2.2	12.5	15.2	15.2	11.3	31.9
Suspicious	5.6	9.4	13.7	2.7	9.5	10.9
Traffic	6.0	12.3	17.7	5.1	14.3	16.3
Total	4.0	12.9	16.7	3.4	12.4	16.2

Observations:

Response times varied significantly by call category.

- In August, average response times were as short as 6.4 minutes (for suspicious incidents) and as long as 15.5 minutes (for arrests).
- In February, average response times were as short as 7.1 minutes (for juvenile calls) and as long as 14.6 minutes (for arrests).
- Average response times for crimes were between 9 and 10 minutes for both months.
- In August, average dispatch delays varied between 1.4 minutes (for suspicious incidents) and 3.7 minutes (for juvenile calls).

- In February, average dispatch delays varied between 1.3 minutes (for arrests) and 2.3 minutes (for traffic related calls).
- In August, 90th percentile values for response times were as short as 10.9 minutes (for suspicious incidents) and as long as 36.5 minutes (for arrests).
- In February, 90th percentile values for response times were as short as 13.7 minutes (for suspicious incidents) and as long as 31.7 minutes (for arrests).

~~K.~~F. High-Priority Calls

A descriptive priority was assigned to each call by the dispatch center. We coded these priorities as follows.

- High - Armed Emergency & High
- Medium
- Busy-Av, Low, Prisoner Transport & Supervisor

Table 14 shows average response times by priority. A separate category for accidents with injuries is also included. These averages included nonzero-on-scene other-initiated calls throughout the period from July 2008 to June 2009. There were a total of approximately 13,700 calls with valid response times.

Table 14. Average Dispatch, Travel, and Response Times, by Priority

Priority	Dispatch	Travel	Response	Total calls
1 High Priority	0.8	4.0	4.8	645
2 Medium Priority	1.4	5.3	6.8	4,742
3 Lower Priority	2.2	7.4	9.6	8,299
Weighted Average	1.9	6.5	8.4	13,686
Accidents with Injuries	1.5	4.5	6.0	135

Figure 26. Average Response Times by Hour for High-Priority Calls
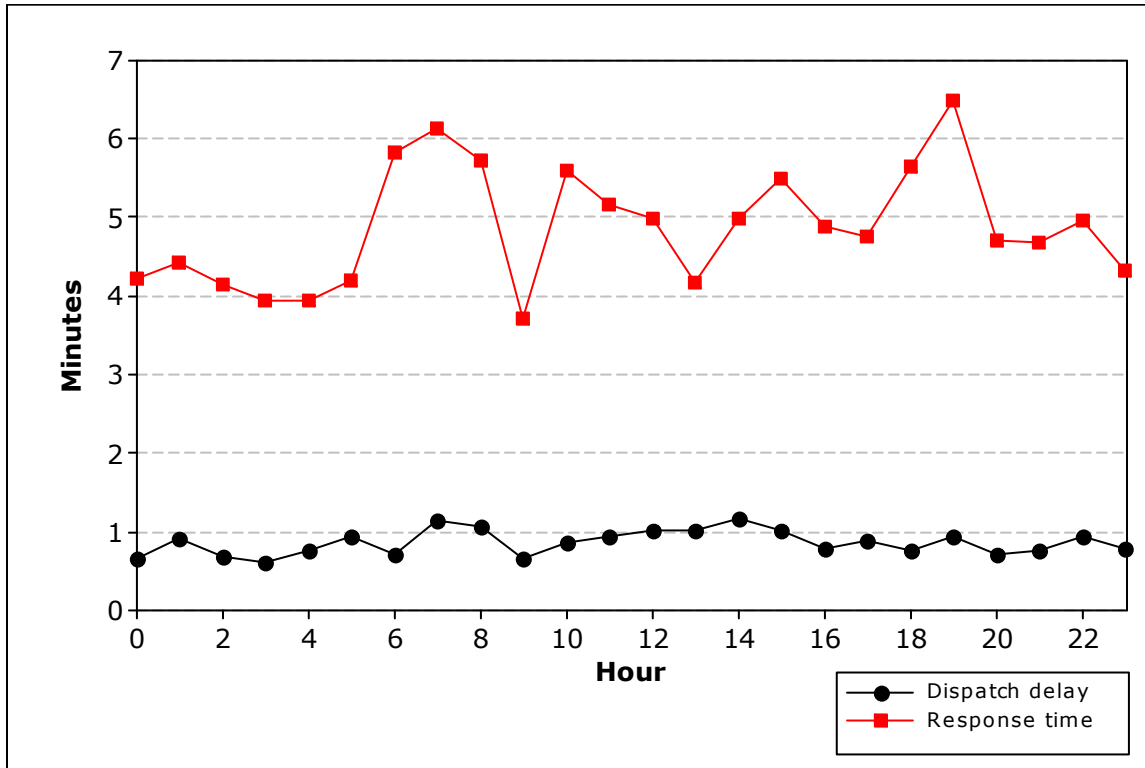
Observations:

- High-priority calls and accidents with injuries had shorter response times of 4.8 and 6.0 minutes, respectively, in comparison with the overall yearly average of 8.4 minutes.
- Average response time for high-priority calls varied by time of day, from approximately 4.0 minutes between 9 a.m. and 10 a.m. to about 6.5 minutes between 7 p.m. and 8 p.m.