Salem Police Department
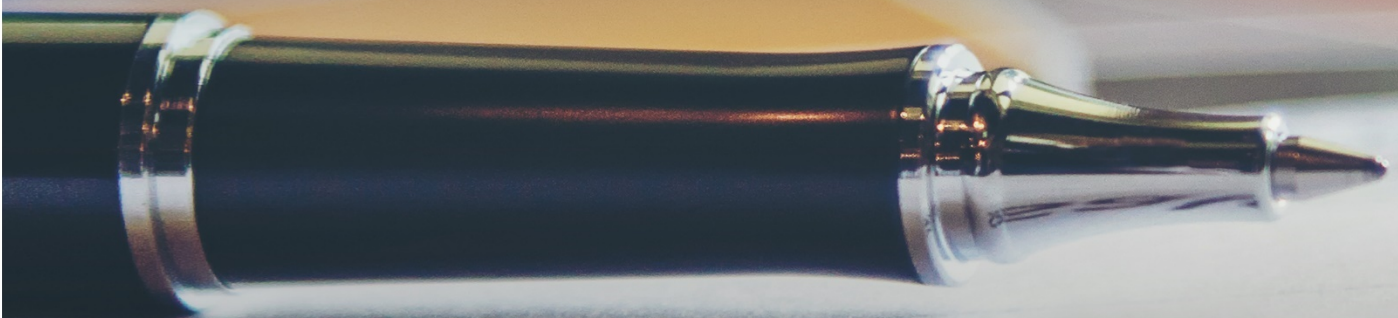
An Independent Staffing Study

FINAL REPORT

October 5, 2021

Confidential – Prepared for Use by Counsel

JENSEN HUGHES

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October 5, 2021

Trevor Womack
Chief of Police
Salem Police Department
333 East Division Street
Salem, Oregon 97301

Dear Chief Womack:

Please find attached our final report detailing the results of our independent staffing study of the Salem Police Department.

Based on our assessment, we believe the Salem Police Department needs additional personnel to meet the City of Salem's public safety needs and the expectations of city residents. These additional personnel would be needed if the Department and City choose to implement the recommendations provided in our "Independent Assessment of the Salem Police Department's Policies, Procedures and Operations" report, which we delivered to you on April 22, 2021.

This report is a confidential and proprietary work document between Hillard Heintze and the Salem Police Department. Thank you for entrusting us with this critical engagement. We look forward to discussing this report with you.

Sincerely,
Hillard Heintze, a Jensen Hughes Company

Senior Vice President and Practice Lead
Law Enforcement Consulting

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Introduction

Scope and Assignment

One our "Independent Assessment of the Salem Police Department's Policies, Procedures and Operations" report, we indicated that the Salem Police Department (SPD) must increase its staffing levels to successfully implement our recommendations and meet community expectations. The SPD requested that we supplement our assessment with a comprehensive staffing study that included an evaluation of the SPD's staffing assignments and recommended staffing considerations.

Strategic Context

In April 2021, we delivered our report detailing the results of our independent assessment of SPD policies, procedures and operations. Our assessment focused on driving "new SPD policing strategies to ensure that they align with best practices to produce better outcomes, especially for communities comprised primarily of those who are Black, Indigenous and People of Color (BIPOC); unsheltered; or experiencing behavioral health crises."[1] The City sought to ensure that the SPD and the community developed a proactive partnership to deliver policing services that best reflected the insights and voices of the community.

Our assessment recognized the SPD's strengths and identified recommendations and opportunities to implement new approaches to policing and to adopt best practices. Our findings and recommendations identified the need for robust proactive strategies to address unsheltered populations, enhance outreach to BIPOC communities, increase community engagement and develop proactive problem-solving approaches to community concerns and quality of life issues.

One of our key findings read, "if the City of Salem and SPD chooses to address the report's recommendations, the Department must increase its staffing level to succeed." The report indicated that it had been several years since the SPD authorized an increase in its staffing levels, and that the staffing issue had impacted SPD operations. As we detailed in our report, this stagnation of the SPD's staffing levels resulted in patrol officers performing key police functions, such as domestic violence investigations, juvenile crime investigations and recruiting activities, as collateral duties. Typically, these are standalone functions that are the responsibility of investigative and support service divisions rather than patrol teams. The time that patrol personnel spent on these responsibilities diminished their unobligated patrol time during which they could have engaged in multidisciplinary approaches to specific calls for service, such as calls regarding behavioral health crises, robust community policing interactions and proactive collaborations with community stakeholders. Finally, we recommended that the SPD conduct a formal staffing study to determine the number of SPD personnel required to implement the recommendations identified in our report.

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1   Final report, An Independent Assessment of the Salem Police Department's Policies, Procedures and Operations, issued by Hillard Heintze on April 22, 2021

Actions Taken

The Hillard Heintze team performed the following tasks in support of our assessment.

+ Reviewed calls for service and workload data, including overtime and benefit time, to determine long-term patrol staffing projections.

+ Reviewed and assessed patrol command, investigative, administrative and supervisory assignments for span of control and unity of command purposes against the SPD's objectives.

+ Reviewed and assessed the staffing and service demands for non-sworn SPD personnel.

+ Requested and assessed the SPD's administrative and investigative components to help ensure alignment, efficiency and effectiveness.

+ Determined how these administrative and investigative components fit into other areas of relevant divisions and whether any economies of scale exist.

+ Reviewed and assessed assignments for appropriate staffing levels and case assignments in the SPD's investigative functions, including briefly reviewing the screening process and assignment of cases for follow-up investigations to determine efficiencies and attainment of organizational goals.

+ Reviewed and assessed administrative assignments for staffing, performance, civilianization of positions and potential savings that could be realized or possible through shared services and measured these against the SPD's objectives.

+ To gain greater understanding of current SPD operations, interviewed SPD members and held discussions with detectives, supervisors and command personnel in Field Operations, Investigative Services and Support Services.

Key Findings

1. **The Salem Police Department is understaffed, particularly in its patrol and investigation divisions.**

   As indicated in our previous assessment, the Salem Police Department (SPD) must increase its number of sworn personnel if it seeks to provide basic services and respond to community needs. The SPD has 86 officers assigned to patrol functions. Based upon a workload analysis, we estimate that the SPD needs between 27 and 83 additional officers assigned to patrol, depending on the amount of time made available for discretionary activity and community engagement. This estimate assumes that the SPD will adopt more efficient work schedules. If it adheres to current schedules, the staffing estimates would increase by an additional 24 percent.

   The SPD's staffing level has adversely impacted its ability to increase outreach efforts to the BIPOC community and collaborate effectively with other entities to address the unsheltered population. The SPD has often engaged sergeants and detectives from special assignments in an overtime capacity to address the shortage of patrol personnel.

2. **Although the SPD is understaffed, its patrol division promptly responds to priority calls.**

   Although the SPD's number of patrol personal is low compared to the number of calls for service it receives, we commend that a SPD officer arrives at the scene of an incident in approximately five minutes in at least half of all priority one calls for service. Although officers are able to respond to scenes in a prompt manner, this comes at a cost of not being able to engage in proactive work to address community safety and quality-of-life issues.

3. **The SPD's patrol deployment is highly fragmented.**

   The patrol deployment includes small workgroups and six different shift start times per day. The SPD could consider reducing the number of patrol shifts and increasing the number of officers assigned (i.e., workgroup) to each shift.

4. **The number of violent crimes that occur in the City of Salem exceeds the capacity of the Violent Crimes Unit to conduct follow-up investigations.**

   Because of this, Property Crime Unit (PCU) detectives, and to some extent Special Victims Unit detectives, must assist the Violent Crimes Unit (VCU), limiting the number of property crimes investigated by the PCU. The SPD should add at least three detectives to the CIU to support violent crimes investigations and to relieve the workload on the PCU.

5. **The Support Division is adequately staffed, but the SPD can improve its performance and proactivity.**

The Records Section operations are labor intensive and provide 24-hour support as its personnel work to provide services to the SPD and other agencies in the region. It appears that a significant amount of the work relates to providing copies of crime and traffic collision reports.

Victims of crime in Salem can report an offense online and print a copy of the report, which is a good way to reduce demands on SPD officers and on records clerks. However, the system may be underutilized. For example, in Salem and many other communities, online systems indicate that individuals cannot use the system if there is a suspect, but some may believe the "suspect" to be someone they observed walking down the street the day prior, hence they opt out of filing an on-line report. A different approach is to gather more accurate suspect information in the online report and let investigators decide the next steps.

Our analysis of the most frequent type of calls for service identified certain call types that may be suitable for non-sworn personnel response.

6. **The SPD could have career civilian positions assigned to supplement or manage the Department's digital forensic and investigative technology services.**

Three detectives conduct highly technical functions, such as digital forensics and investigative technologies. The SPD assigned a detective to specialize in implementing investigative technologies and two detectives to implement digital forensics technologies. These detectives support the PCU, SVU and VCU and focus on computer forensics, digital forensics and international crimes-against-children cases. Although these tasks require knowledge of the law and digital evidentiary standards, they require significant technical background, training and certifications. A growing trend within law enforcement is to employ civilians to manage or supplement forensic and digital intelligence units without compromising the department's ability to conduct prudent investigations with integrity.

7. **Crime lab technicians report directly to the Criminal Investigations lieutenant, which leads them to miss out on opportunities to have a professional crime lab manager mentor them.**

Crime laboratories are a specialized function that require oversight from qualified supervisors. The SPD needs a professional crime lab manager to ensure the laboratory meets quality assurance standards. Additionally, a professional crime lab manager can provide appropriate oversight and mentoring of lab technicians and assist the Department in ensuring that the laboratory complies with evolving police crime laboratory standards.

Staffing Study of the Salem Police Department

Overview of Methods to Determine Police Department Staffing

In the face of increasing costs and shrinking revenues, many communities are asking how many police officers are needed to ensure public safety and most cost-effectively meet the demands placed on it. This is a fundamentally different question than how many officers does a community want or can support.

Unfortunately, law enforcement administrators have few resources to guide them in determining the precise number of officers they need. Police departments can consider multiple approaches to answering this question, ranging from the simple to the complex, each with a range of advantages, disadvantages and assumptions.

The sections that follow highlight common staffing approaches and demonstrate how agencies may develop and use a workload-based assessment of patrol staffing needs that incorporates performance objectives addressed during discretionary time. Traditionally, there have been four basic approaches to determining workforce levels: per capita, minimum staffing, authorized level and workload based. Each differs in its assumptions, ease of calculation, usefulness, validity and efficiency. We review each below to provide context for developing an evidence-based approach to police staffing.

Where possible, workload-based approaches are superior to the others because they can help provide a better and more objective way to determine staffing needs. Additionally, comprehensive assessments for patrol help answer a host of critical questions regarding resource allocation and deployment.

The Per Capita Approach

Many police agencies have used their resident population to estimate the number of officers that a community needs. The per capita method compares the number of officers with the jurisdiction's population. To determine an optimum number of officers per population (i.e., an optimum officer rate) an agency may compare its rate to that of other regional jurisdictions or to similarly sized peer agencies. Although it is difficult to determine the historical origin of, or justification for, the per capita method, it is clear that substantial variations exist among police departments.

Advantages of the per capita approach include its methodological simplicity and the ease of interpretation. The population data required to calculate this metric, such as U.S. Census figures and estimates, are readily available and regularly updated. Per capita methods that control for factors such as crime rates can allow communities to compare themselves with peer organizations. The disadvantage of this method is that it addresses only the relative quantity of police officers per population, 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 for several reasons, one being that a generally accepted benchmark for the optimum-staffing rate does not exist. Rather, considerable variation exists in the police rate depending on community's size and region, and the agency' structure and type. For example, it is generally known that police rates are substantially higher in the northeastern than in the western regions of the United States. When comparing individual jurisdictions, it is not uncommon for similar communities to have per capita rates that are substantially different.

Given the disadvantages, experts have strongly advised against using population rates for police staffing. The IACP warns, "Ratios, such as officers-per-thousand population, are totally inappropriate as a basis for staffing decisions … 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."[2]

The Minimum Staffing Approach

The minimum staffing approach requires police supervisors and command staff to estimate a sufficient number of patrol officers that the police department must deploy at any one time to maintain officer safety and provide an adequate level of protection to the public. The use of minimum staffing approaches is fairly common and generally reinforced through organizational policy and practice and collective bargaining agreements.

A jurisdiction may use a minimum staffing approach for two principal reasons.

+ Policy makers in many communities believe a police department needs a minimum number of officers to ensure public safety. This may be particularly common in small communities with relatively few citizen-generated demands for police service but where residents expect a minimum number of officers to be on duty at all times.

+ Police officers themselves may insist, often through collective bargaining, that a minimum number of officers be on duty at all times. In some communities, ordinance establishes the minimum staffing level.

There are no objective standards for setting the minimum staffing level. Agencies may consider population, call load, crime rate and other variables when establishing a minimum staffing level. Many agencies determine the minimum necessary staff level by perceived need without any factual basis in workload, presence of officers, response time, immediate availability, distance to travel, shift schedule, or other performance criteria. This may result in deploying too few officers when the workload is high and too many officers when the workload is low. The minimum staffing level is often

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2 https://www.theiacp.org/technical-assistance#:~:text=Ratios%2C%20such%20as%20officers%2Dper,body%20of%20reliable%2C%20current%20data.

higher than what the agency workload would warrant. Ironically, even when the minimum staffing is not workload based, it is not uncommon to hear police officers suggest that an increase in the agency's workload should warrant an increase in the minimum staffing level.

Minimum staffing levels are sometimes set so high that it results in increasing demands for police overtime. When staffing falls below the minimum standard, police managers typically must hire back officers on overtime to satisfy the minimum staff requirement. It is not uncommon for some agencies to hire back officers nearly every day due to officers taking time off for sick leave, vacations or other reasons. Some agencies use a narrow definition of available staffing. For example, agencies may hire back to fill a vacancy in patrol, even though a number of other officers are on the street, including those in traffic and school resource units, as well as supervisors. Inefficiency increases when there are minimum staffing levels on overlapping shifts, leading to a higher number of officers on duty at a time that may not coincide with workload demand.

Most police officers, given a choice, would prefer to have more officers on the street, lending credence to a minimum-staffing model. Nevertheless, increasing the minimum staffing level will not, by itself, improve agency performance or necessarily increase officer safety. In fact, officers hired back to work extra shifts are likely to be fatigued, which increases the risk of injury to themselves or others. Minimum staffing can reduce the extent to which an agency can be nimble and flexibly deploy officers based on changing workload demands.

For some agencies, the minimum staffing level may become, by default, the perceived optimal staffing level. In these situations, agencies often use the minimum level as a method to decide, for example, whether an officer can take a day off. Others build work schedules to ensure that the minimum level is on duty. In these situations, the agency bases staffing decisions on meeting the minimum level rather than optimizing the available resources to meet workload demand.

The Authorized Level Approach

The authorized level approach uses budget allocations to specify the number of officers that the police department may allocate. Although a formal staffing assessment may determine the authorized level, resource availability and political decision-making often drive the decision. The authorized level does not typically reflect any identifiable criteria, such as demand for service, community expectations or efficiency analyses, but may instead reflect an incremental budgeting process.

The authorized level can become an artificial benchmark for need, creating the misperception among police leadership, line staff and the community that the agency is understaffed and overworked if the actual number of officers does not meet the authorized level. Additionally, unless an agency staffs above the authorized level, fluctuations in recruitment, selection, training and attrition may lead to the actual staffing levels falling below authorized levels

Because the police departments and cities often derive the authorized level independently of workload considerations, an agency may be able to meet workforce demand with fewer officers than authorized. When officials bemoan the department is operating below authorized strength, causing the perception of being understaffed, it can diminish morale and productivity and make it appear that the community is not adequately funding public safety.

The Workload-based Approach

A more comprehensive attempt to determining appropriate workforce levels considers actual police workload. Workload-based approaches derive staffing indicators from the demand for service. What differentiates this approach is its requirement to analyze and determine staffing needs systematically based on actual workload demand, while accounting for service-style preferences and other agency features and characteristics. The workload approach estimates police departments' future staffing needs by modeling their levels of current activity.[3]

Conducting a workload analysis can assist in determining the need for additional resources or relocating existing resources by time and location, assessing individual and group performance and productivity, and detecting workload trends that may illustrate changing activity levels and conditions. Furthermore, police departments can perform a workload analysis at every level of the department and for all key functions, although it is more difficult to assess workload for some units than others. The workload-based approach to staffing's importance is evidenced by the Commission on Accreditation for Law Enforcement Agencies (CALEA) codifying it as a standard (16.1.2): "The agency allocates personnel to, and distributes them within, all organizational components in accordance with documented workload assessments conducted at least once every three years."

Learning how to conduct a workload-based assessment may be challenging for police administrators. Typical workload models are complicated and require intensive calculations. They also require decisions on a wide array of issues that are difficult for officials and communities to make (e.g., how frequently streets should be patrolled) and do not uniformly account for discretionary activities (e.g., time for community policing, other officer-initiated activities).

Even with their shortcomings, allocation models based on actual workload and performance objectives are preferable to other methods that might not account for environmental and agency-specific variables. Agencies could benefit from a more popularized workload-based methodology of staffing analysis that is easy to learn and comprehend, is employed by administrators, and, importantly, helps effectively manage discretionary time. Agencies should not use a single metric or benchmark as a sole basis for determining its staffing level. Rather, agencies should consider metrics in light of professional expertise that can place them in an appropriate practical context.

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3 Wilson, Jeremy M., and Alexander Weiss. 2014. *A Performance-Based Approach to Police Staffing and Allocation.* Washington, DC: Office of Community Oriented Policing Services.

A step-by-step approach for conducting a workload-based assessment should include the following:

1. **Examining the distribution of calls for service by hour, day and month.** Calls for service can differ by the hour of the day, the day of the week, and the month of the year. Peak call times can also differ by agency. Knowing when peak call times occur can help agencies determine when they must have their highest levels of staff on duty.

2. **Examining the nature of calls for service.** Reviewing the nature of calls can help agencies better understand the work that their officers are doing. The types of police work required can vary by area within a single jurisdiction and require agencies to staff differing areas accordingly.

3. **Estimating time consumed on calls for service.** Determining how long a call takes, from initial response to final paper work, is key to determining the minimum number of officers needed for a shift. This is most straightforward when a single officer handles the call and completes resulting administrative demands (e.g., reports, arrests) before clearing it.

4. **Calculating agency shift-relief factor.** The shift-relief factor shows the relationship between the maximum number of days that an officer can work and the number they actually work. Knowing the relief factor is necessary to estimating the number of officers that an agency should assign to a shift to ensure that the appropriate number of officers is working each day.

5. **Establishing performance objectives.** This encompasses determining what fraction of an officer's shift they should devote to calls for service and to other activities. For example, an agency might build a staffing model in which officers spend half of their shift on citizen-generated calls and half on discretionary activities.

6. **Providing staffing estimates.** Staffing needs will, as noted earlier, vary by time of day, day of week and month of year, among other variables. Agencies should distribute their officers accordingly. For example, a shift with only half the number of calls than another shift will require half the number of officers. These numbers may also vary by the type of calls, and the time and officers they require, in each shift. For example, one large urban agency assigns two officers to each unit in its evening shift, affecting the number of officers needed for units to respond to calls. Another agency responds to the same type of calls in different ways in different shifts (e.g., sending a unit in some shifts, but requesting citizens file a report in person at a station during others).

1. Patrol Deployment

We now turn our attention to the work of the SPD Patrol Division. We begin by looking at community-generated calls for service (i.e., calls for a request for police services that the SPD receives and dispatches an officer or officers). We included data from 2019 and 2020 to understand better the impact of the Covid-19 pandemic on police activity.

In 2019, the SPD responded to 88,547 dispatched calls for service. This equates to 243 calls on average per day, or 10 calls per hour on average. In 2020, the SPD responded to 73,195 calls for service, which is a 17 percent reduction. This equates to about 200 calls per day, or eight per hour on average.

Figures 1 and 2 illustrate the distribution of calls for service by hour of day for 2019 and 2020. Peak demand times are mid-afternoon for both years. The shape of the distribution is similar for both years.

Figure 1: CFS by Hour 2019
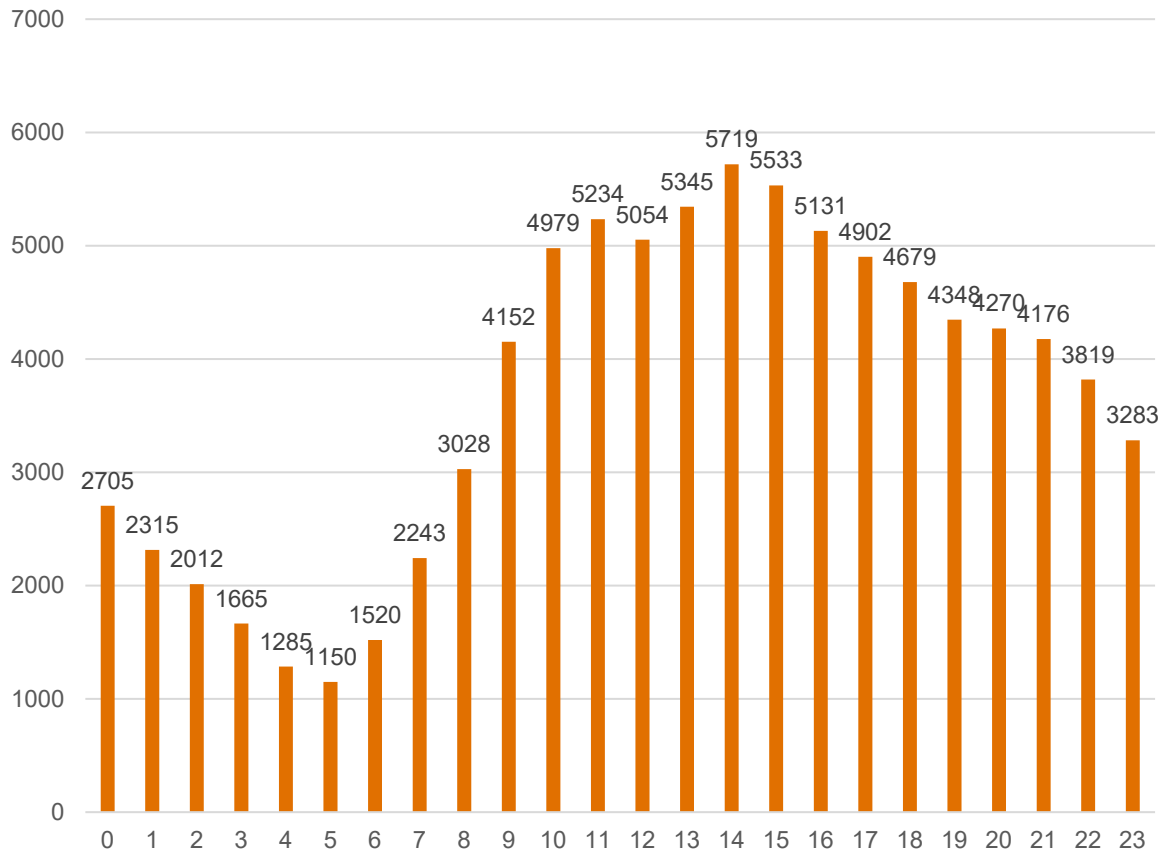
Figure 2: CFS by Hour of Day 2020
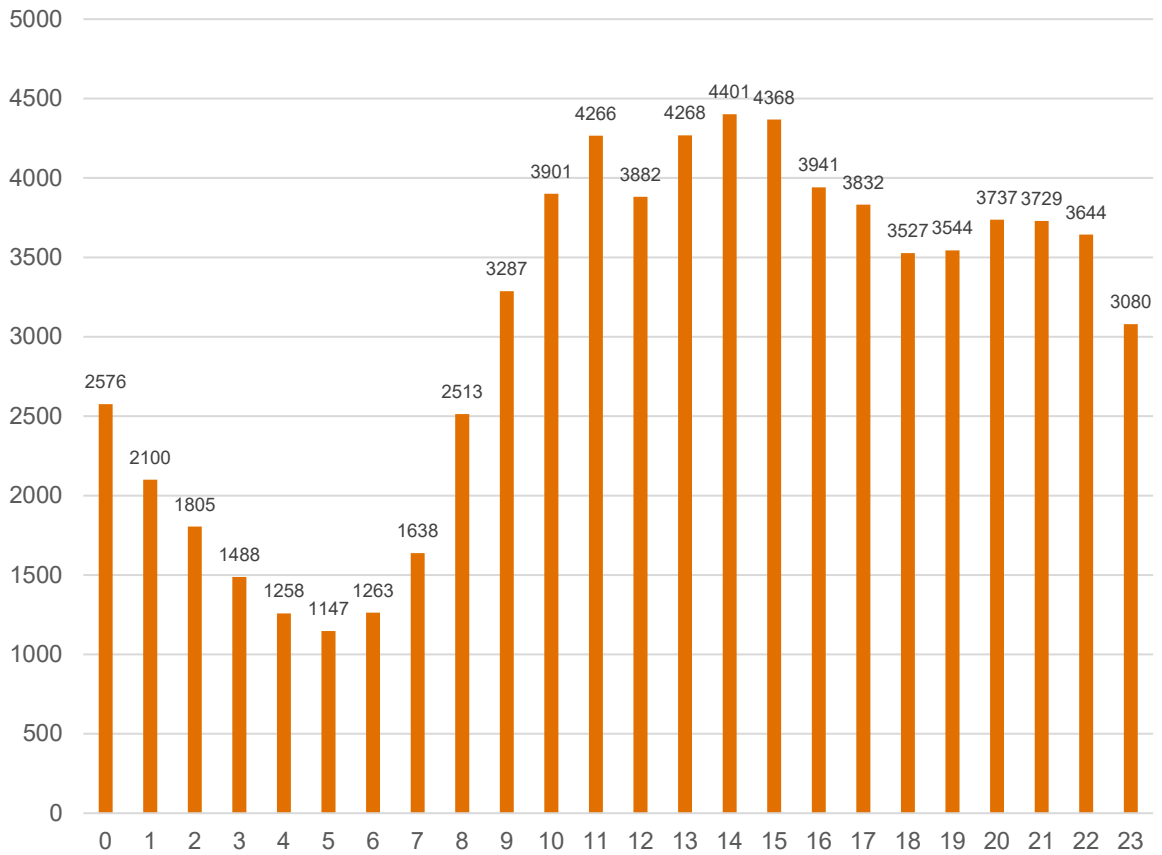
Figures 3 and 4 illustrate the distribution of calls per month for 2019 and 2020. The relatively small variation by month is interesting, as many agencies see a significant increase in demand during the summer. Also of note are the relatively small number of calls in November and December 2020.

Figure 3: CFS by Month 2019
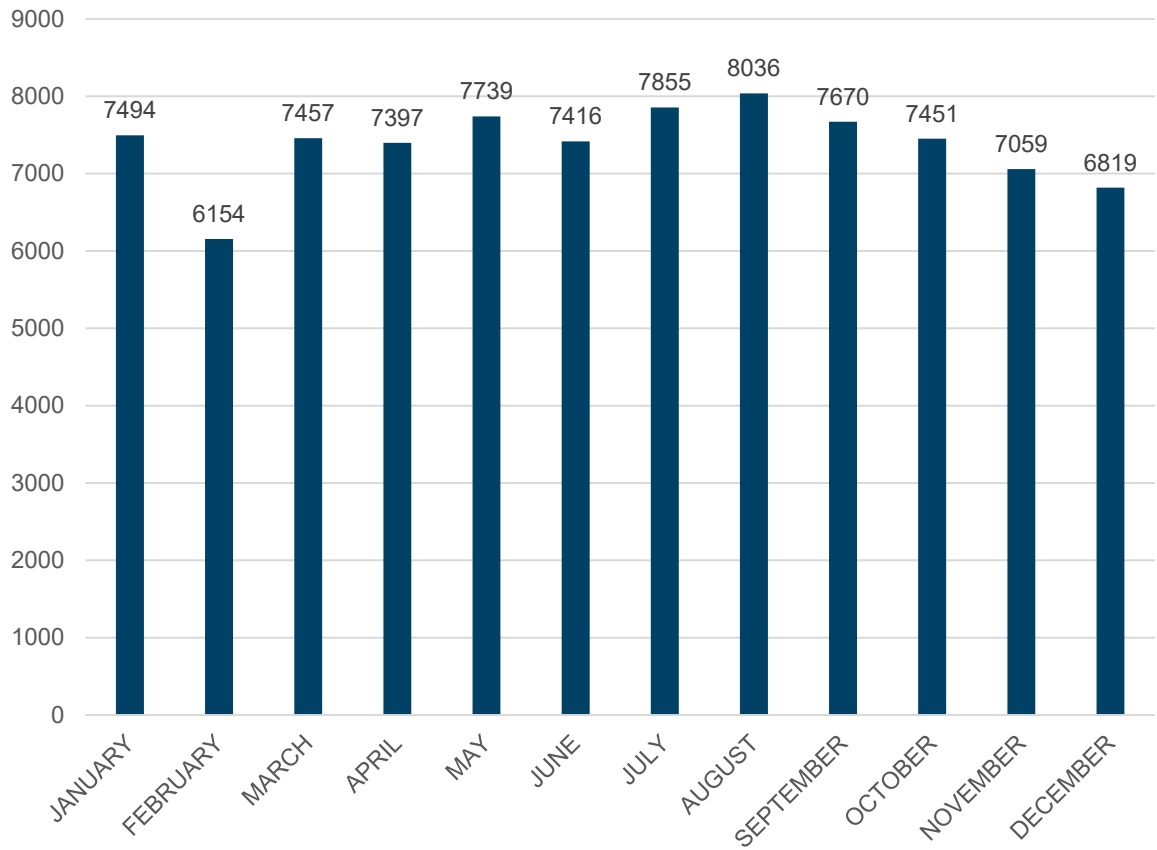
Figure 4: CFS by Month 2020
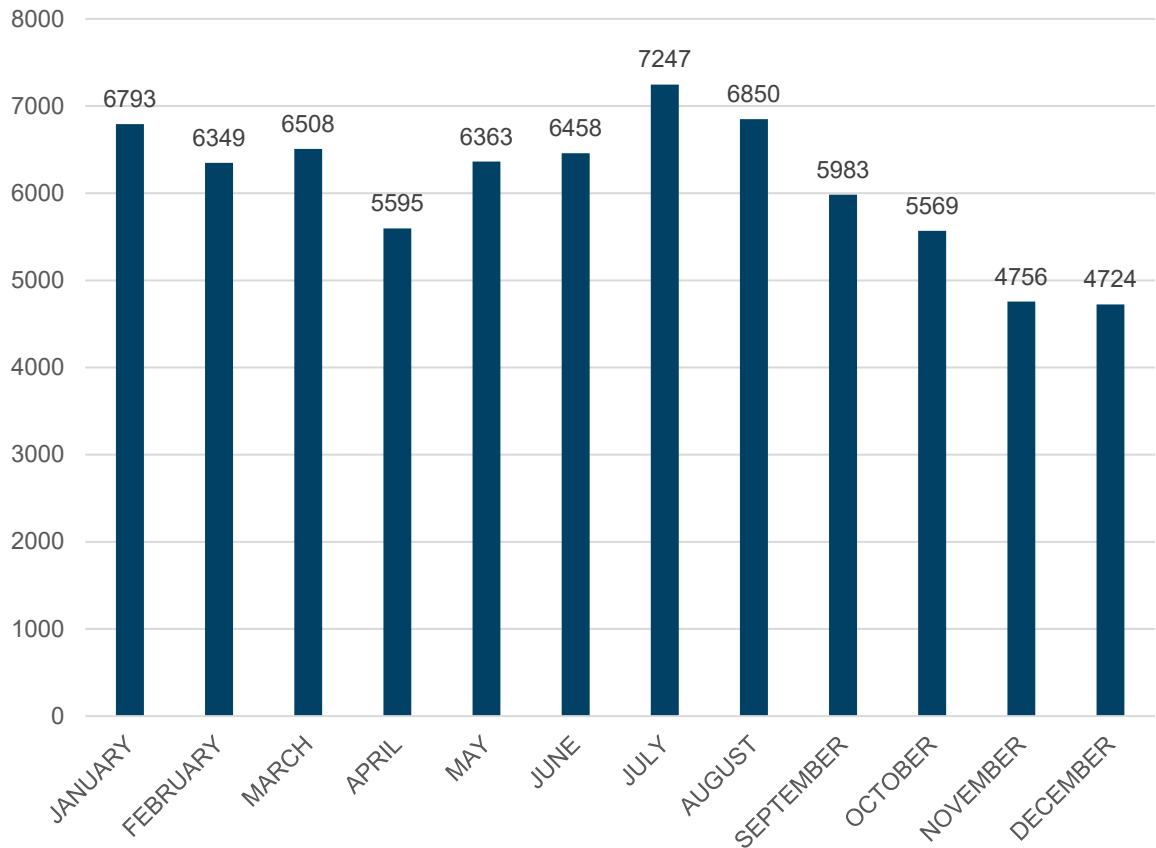
In the distribution of calls by day of week (Figures 5 and 6), it is somewhat unusual to find fewer calls on Saturday than on weekdays, but this may reflect that many people work in Salem but live in another community, thus reducing the weekend population.

Figure 5: CFS by Day of Week 2019
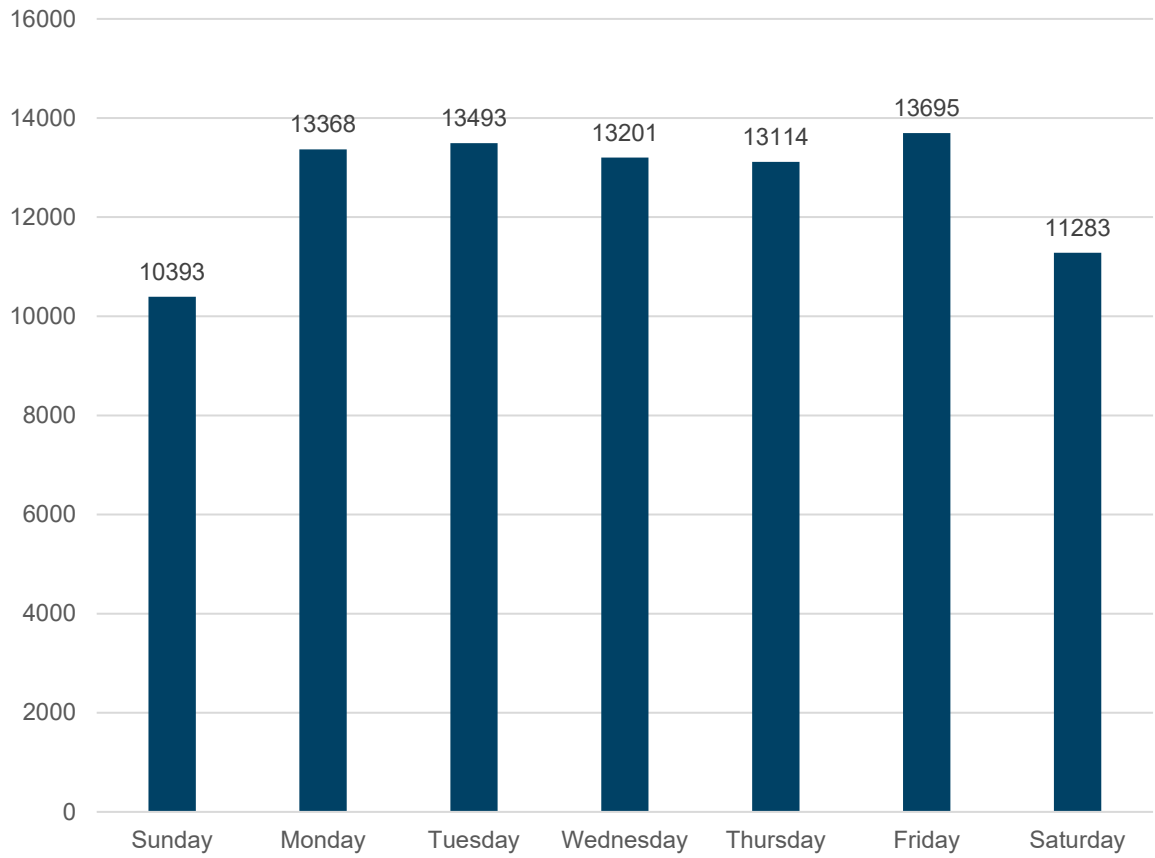
Figure 6: CFS by Day of Week 2020
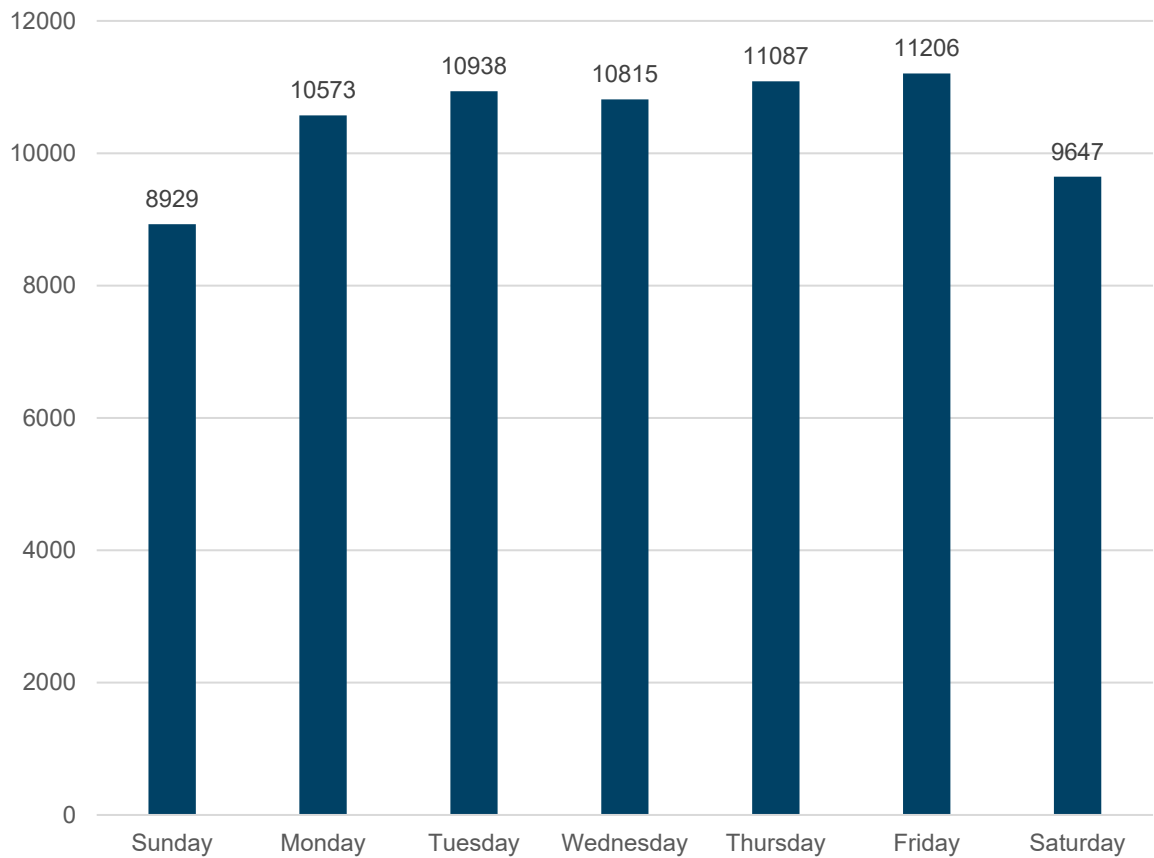
Figures 7 and 8 show the number of calls in each police district. There are two important points to observe in the district data.

+ There is significant variation by district. The SPD is aware of this imbalance and attempts to adjust when possible.

+ There were significant changes in 2020. For example, District 7, the downtown district, had significantly fewer calls in 2020 than in 2019.

Figure 7: CFS by District 2019
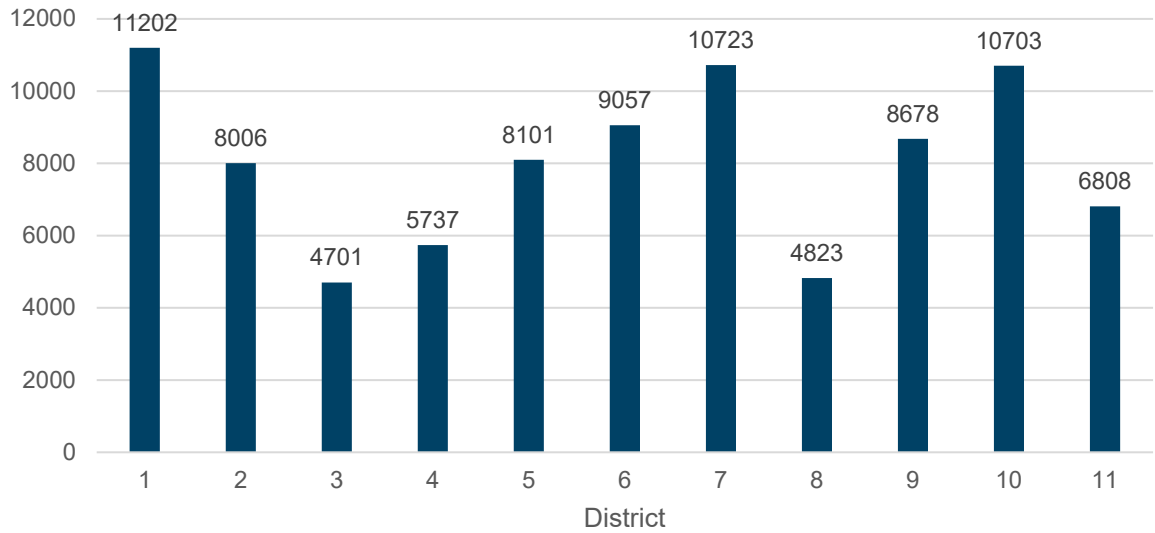
Figure 8: CFS by District 2020
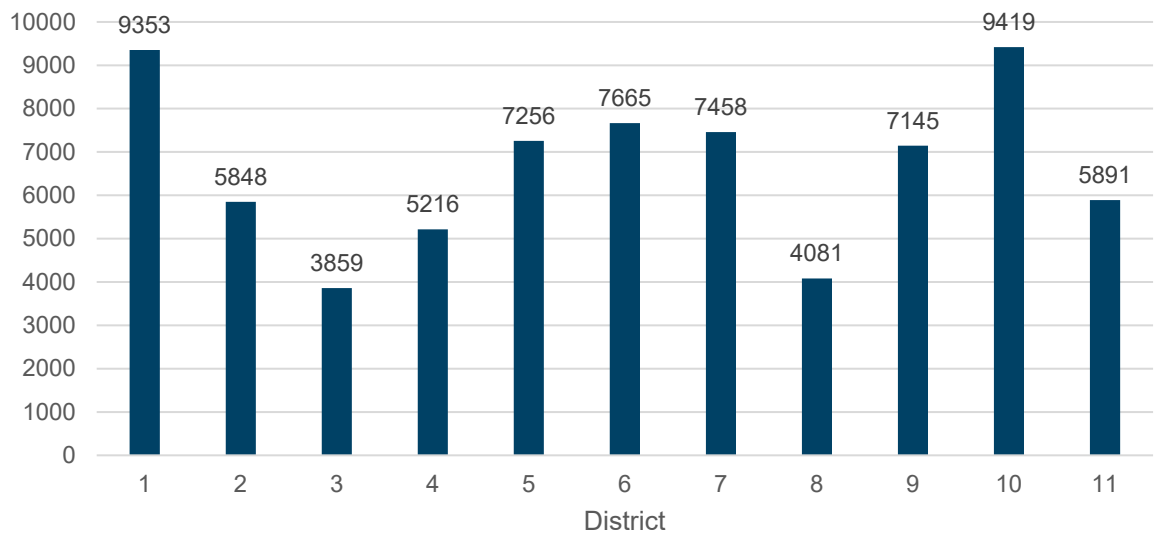
Figures 9 and 10 show the percentage of calls that resulted in the preparation of a police report. This is an important factor in staffing because preparation of a report will generally result in more time spent on a call, either at the scene or at a subsequent time. In many agencies, rather than prepare a report, the agency captures a record of the incident in the computer-aided-dispatch (CAD) record. The percentage of calls resulting in a report dropped significantly from 2019 to 2020 (39 percent to 30 percent). This reduction was due in part to a policy decision by the SPD to reduce the time spent clearing calls. Although the number of reports was reduced, supervisors are still required to approve the disposition of calls that did not result in a report. It is important that the SPD carefully monitor this measure to ensure that calls that should result in a report actually do so.

Figure 9: CFS Report Prepared 2019
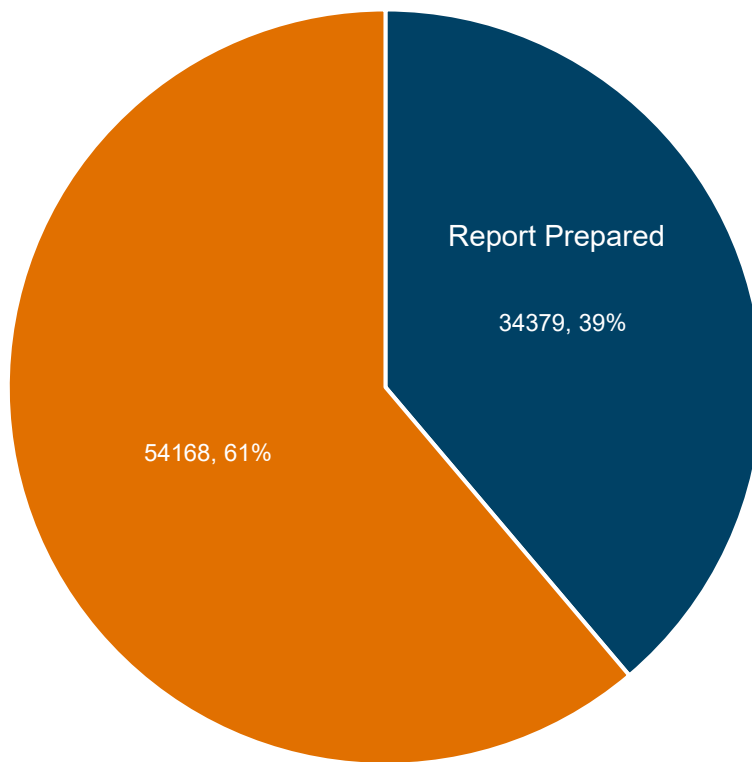
Figure 10: CFS Report Prepared 2020

Report Prepared

22107, 30%

51088, 70%
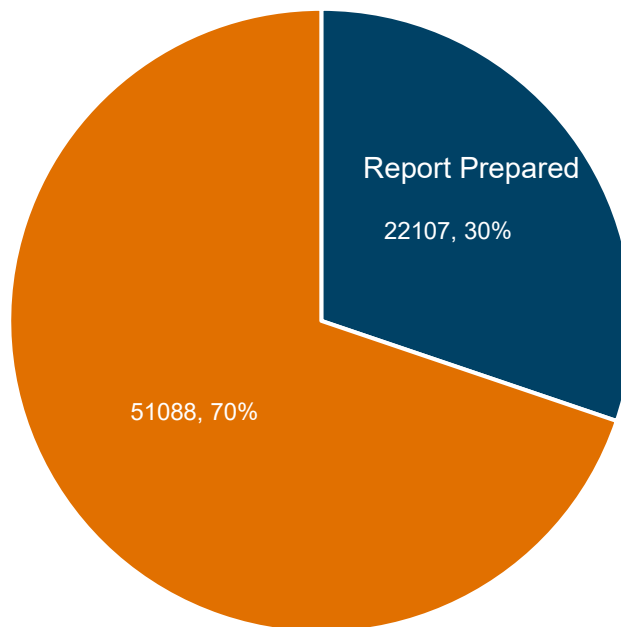
Table 1 shows the most frequent call for service types in 2020. The SPD has many opportunities to manage its demand for services and reduce the need to dispatch police officers. For example:

+ Non-sworn staff could address more of the following call categories:

    − Vehicle tows
    − Ordinance violations
    − Traffic hazard
    − Property-damage-only traffic crashes
    − Graffiti
    − Found property
    − Animal calls

+ Phone or on-line reporting could handle some calls, such as:

    − Auto and other thefts
    − Criminal mischief

+ The SPF could look for ways to reduce its response to false alarms,[4] 911 hang-up calls and shoplifters.

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4 Opportunities for Police Cost Savings Without Sacrificing Service Quality: Reducing False Alarms. Philip S. Schaenman, Aaron Horvath, Harry P. Hatry, The Urban Institute, January 2013

Table 1: Most Frequent Call Types

Type	Number
Citizen Contact	4,333
Domestic Disturbance	3,596
Vehicle Tow	3,172
Ordinance Violation	3,127
Emotional Disturbed Person	2,740
Alarms	2,570
Driving Hazard ATL	2,287
Noise Complaint	2,246
Disturbance	2,078
Traffic Hazard	1,988
Attempt to Locate	1,964
Stolen Vehicle	1,914
Crash	1,772
Theft	1,480
Graffiti	1,194
Shoplift	1,075
Civil Matter	949
Harassment	923
Found Property	805
Misc. Crime	769
911 Hang Up	748
Hit-and-Run	742
Criminal Mischief	696
Animal	590
Shots Fired	535

The SPD uses a system to classify calls by priority. The policy defines Priority 1, 2 and 3 calls as follows:

+ **PRIORITY-1 Immediate Dispatch**: Immediate and serious threat exists to person or to the public safety, which requires immediate action by the nearest available police unit.

+ **PRIORITY-2 Immediate Dispatch**: Situation exists where a potential threat to persons or to public safety is probable.

+ **PRIORITY-3 Immediate Response**: Immediate police action is likely to prevent a more serious situation from developing and to prevent the loss or destruction of property.

This typology is informative but relies heavily on the dispatcher's judgement to determine the threat's nature and seriousness. Some agencies rely more on the type of call as the basis for prioritization.

Table 2 shows the number of calls by priority for 2019 and 2020. Under SPD policy, about 40 percent of calls would require either immediate dispatch or immediate response.[5] This seems high, particularly given recent research that suggests fewer than 10 percent of calls involve violent crime in U.S. cities.[6]

Table 2 CFS by Priority 2019 and 2020

PRIORITY	2019	2020
1	5,299	4,213
2	3,648	2,353
3	24,528	23,339
4	44,107	35,964
5	3,255	1974

SPD CAD data captures the number of officers assigned to each call. The SPD should view this data cautiously for a number of reasons:

+ On occasion, an officer is dispatched to a call and another officer might volunteer to take it. It is possible that both officers are included in the record, even though only one attended.

+ Sometimes multiple officers are dispatched, and the first arriving officer indicates that the additional officers are not necessary.

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5 Priority 4 and 5 do not require an immediate response
6 https://www.nytimes.com/2020/06/19/upshot/unrest-police-time-violent-crime.html

+ In some circumstances, officers "self-assign" (i.e., even though they were not dispatched, they go to the scene). Table 3 illustrates this data.

Despite these caveats, we can observe an interesting pattern in this data. In 2019, the number of calls requiring one officer was 1.6 times the number requiring two officers. However, in 2020, the number of calls requiring one officer was essentially the same as those requiring two. Given that the nature of calls changed little from year to year, this difference in the number of officers dispatched must represent a change in dispatch policy. The SPD should continue to monitor this to ensure that multiple officers are not being assigned to calls where only one is needed.

Table 3: Number of Officers Assigned to Calls, 2019 and 2020

Officers Assigned	2019	2020
0	4,502	3,561
1	40,274	24,391
2	25,151	24,297
3	10,615	12,075
4	4,196	4,797
5	1,704	1,977
6	788	852
7	476	466
8	286	279
9	165	173
10	123	105

We examine four time parameters regarding response time data:

+ The time from when a call is created in the CAD system until a unit is dispatched (i.e., queue)

+ The time from dispatch to arrival (i.e., travel time)

+ Time from arrival to when the last officer leaves (i.e., on-scene time)

+ Time from dispatch to close (i.e., total officer committed time).

We provide times for all calls, Priority 1 and Priority 2 calls. We also provide the average time and median times (50th percentile). Table 4 shows the results for 2020.

Table 4: Response Time Measurements

All Calls	Average	Median	Priority 1 Calls	Average	Median	Priority 2 Calls	Average	Median
Call to Dispatch	0:07:38	0:00:59	Call to Dispatch	0:03:00	0:00:48	Call to Dispatch	0:01:39	0:0032
Dispatch to on scene	0:09:05	0:05:07	Dispatch to on scene	0:06:03	0:04:25	Dispatch to on scene	0:05:34	0:04:34
On scene to Close	0:46:11	0:28:27	On scene to Close	1:05:03	0:49:25	On scene to Close	0:55:45	0:37:06
Dispatch to Close	0:55:15	0:37:06	Dispatch to Close	1:11:06	0:55:49	Dispatch to Close	1:01:19	0:42:58

There are several important things to observe in this table.

+ For all calls, the queue time is about eight minutes. Given that many of these calls are not urgent, this is a good result. In fact, half of the time, a unit is dispatched within one minute.

+ Performance is also quite good for Priority 1 and 2 calls. It is not clear, however, why performance is better for Priority 2 than for Priority 1. If we look at Priority 1, half of the time, an officer is on scene in about five minutes, which is a favorable result.

+ On-scene times are typical for urban agencies.

+ Travel times are quite good.

Work Schedule and Shift Relief Factor

After examining the calls for service, we turn to the staffing estimate. A key component of that estimate is the shift relief factor (SRF). The shift relief factor tells us how many officers an agency should assign to a shift to ensure that the appropriate number is on duty. For the SPD, the shift relief factor is closely tied to the work schedule, so we begin by examining work schedules.

Police work schedules come in all shapes and sizes. Although each seems unique, we can apply a methodology to compare work schedules. The important components of a work schedule include:

+ Average work week

+ Shift length

+ Number of consecutive workdays

+ Weekend time off

+ Staffing by day of week

+ Percentage of officers on duty each day

The following figure illustrates a common work schedule.

Figure 11: Example of 5/2 Schedule

	S	M	T	W	T	F	S
1	Off	Off					
2		Off	Off				
3			Off	Off			
4				Off	Off		
5					Off	Off	
6						Off	Off
7	Off						Off
% On	71	71	71	71	71	71	71

Figure 11 illustrates a work schedule in which officers work a five-days-on/two-days-off schedule with eight-hour days. The shift has unique properties:

+ Fixed days off

+ Three groups of officers with either a full or partial weekend day off

+ Equal staffing by day of week

+ The longest on duty cycle is five days.

Importantly, every day, 71 percent of the officers are assigned to be on duty.

Figure 12 shows how SPD could build a 5/2 schedule that increases staffing on weekends. For example, to provide staffing proportional to the daily workload for a workgroup with nine officers, each officer is assigned a day off group, but groups two and three each have two officers. This allows the reduction of staffing on some days, and the increase on others. This schedule is particularly attractive to employees who want fixed days off. It works well for officers who are going to school and may be beneficial for those who assist in childcare. The disadvantage is that a substantial portion of employees never gets a weekend off.

Figure 12: 5/2 Schedule with Increased Weekend Staffing

	S	M	T	W	T	F	S
1	Off						Off
2 (2)		Off	Off				
3 (2)			Off	Off			
4				Off	Off		
5					Off	Off	
6						Off	Off
7	Off	Off					
On	7	6	5	6	7	7	7
Off	2	3	4	3	2	2	2
% On	77%	66%	55%	66%	77%	77%	77%

Ten-Hour Shifts

More than 40 years ago, several law enforcement agencies began adopting the 4/10 plan in which officers work four 10-hour shifts and have three days off each week. The plan appeals to officers because it reduces the number of days worked, the likelihood of working on a holiday, and commuting time. The plan can also appeal to agencies. Because the work schedules have an overlap period between shifts, when officers on two shifts are working, the agency can have double staffing during peak demand times. The following figure illustrates a typical 4/10 plan based on a seven-week duty cycle.

Figure 13: Example of 4/10 Work Schedule

	S	M	T	W	T	F	S
1	OFF	OFF					OFF
2	OFF	OFF	OFF				
3		OFF	OFF	OFF			
4			OFF	OFF	OFF		
5				OFF	OFF	OFF	
6					OFF	OFF	OFF
7	OFF					OFF	OFF
%	57	57	57	57	57	57	57

Compared to eight-hour shifts, the above 10-hour schedule significantly reduces the proportion of officers assigned to be on duty, dropping from 71 percent to 57 percent. This happens because the agency must use the same number of officers that it uses to provide 24-hour staffing to provide 30 hours of staffing per day. In many agencies, those additional six hours of coverage are unnecessary. Moreover, 10-hour shifts require additional police vehicles to cover overlap times, which may reduce some officers' productivity.

For example, for a department with 300 officers assigned to patrol (100 officers are assigned to each eight-hour shift), on each shift, we would expect about 71 officers (71 percent) to be assigned to duty. The department decides to implement a 4/10 plan with shift times of 0600 to 1600, 1400 to 2400, and 2200 to 0800. If it continues to assign 100 officers to each shift, we would expect that on each shift, 57 officers (57 percent) would be assigned to work. This means that except during the hours of the overlap, the agency will have fewer officers assigned to duty under the 10-hour schedule. Importantly, an agency may use the additional capacity that comes from the 10-hour plan to its advantage, but it must understand that any advantage that it experiences may be at the expense of another goal.

The SPD Patrol Division uses a 4/10 plan for patrol comprised of three shifts with staggered start times:

+ **Day Shift**: 0600 to 1600 and 0800 to 1800

+ **Afternoon Shift**: 1300 to 2300 and 1500 to 0300

+ **Night Shift**: 2000 to 0600 and 2200 to 0800

The Patrol Division has six day-off groups:

+ Saturday, Sunday and Monday

+ Sunday, Monday and Tuesday

+ Friday, Saturday and Sunday

+ Thursday, Friday and Saturday

+ Tuesday, Wednesday and Thursday

+ Wednesday, Thursday and Friday

+ Monday, Tuesday and Wednesday

Officers are assigned to a day off group for a quarter, then rotate to another group.

Figure 14 illustrates the staffing for the day shift. Of particular note is that on the peak capacity days, 61 percent of officers are assigned to work. On Saturday, staffing drops to 52 percent of available officers.

Figure 14 SPD Day Shift Schedule

# Officers	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
4	OFF	OFF					OFF
2	OFF	OFF	OFF				
4	OFF					OFF	OFF
3					OFF	OFF	OFF
3			OFF	OFF	OFF		
3				OFF	OFF	OFF	
4		OFF	OFF	OFF			
ON	13	13	14	13	14	13	12
OFF	10	10	9	10	9	10	11
%ON	57	57	61	57	61	57	52

We now examine the shift relief factor (SRF), which tells us the number of officers that an agency should assign to a shift to ensure that the appropriate number appear for duty. The formula is: SRF= Maximum hours that an employee could work / the actual number of hours they work. For 2020, SPD patrol officers used the following benefit time off. Based on this data, the average officer used 309 hours of benefit time off.[7]

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7 For 2019 the average benefit time off was 306 hours.

Table 5: Benefit Time Off 2020

Event Code	2020 Total Hours
L001 Comp Time Taken OTL	3,045.58
L009 Other Admin Leave	473
L004 Sick Leave Pay OTL	4,902.37
L008 Military Duty Leave	620
L017 Vacation Leave OTL	9,742.2
L018 Bereavement Leave	375.5
L042 Holiday Accrue Taken OTL	2,690.1
L030 Injury Leave	0
LF38 Injury Leave FMLA	1,216
LF30 OFLA Sick	0
LF33 OFLA Vacation	0
LF31 OFLA Sick Child Sick	10
LF24 OFLA Holiday	10
LF29 FMLA Sick	1,450.16
LF20 FMLA Comp Time	150.8
LF23 FMLA Holiday	146.24
LF32 FMLA Vacation	383.55
L007 Jury Duty Leave	10
LF50 Pandemic Sick Leave	1,380
Total	**26,605.5**

There are some things to consider in the benefit time off data:

+ We included 40 hours of annual training in our calculation of the shift relief factor, although for some officers, the annual total may be as high as 64 hours. This will not appreciably change the shift relief factor.. Moreover, the table does not account for officers assigned to light duty, who were still being paid but unable to work in patrol.

+ It does not include regular days off.

Table 6 shows the SRF calculation based on three different work schedules. Row 1 lists the average benefit time off. It will be the same for all three shifts. Row 2 shows the hours off associated with regular days off (e.g., 52 weeks X 16 hours for eight-hour shifts). Row 3 adds in-service training time. Row 4 shows the total time off per year.[8]

Row 5 illustrates the maximum hours possible if the employee worked every day. In Row 6, we subtract the time off from the maximum. Row 7 shows the result of the calculation.

Table 6: Calculation of Shift Relief Factor

		8 Hour Shifts	10 Hour Shifts	12 Hour Shifts
1	Average BTO	309	309	309
2	RDO	832	1,560	2,190
3	Training	40	40	40
4	Total Time Off	1,181	1,909	2,539 + 104= 2,643
5	Maximum Time	2,920	3,650	4,380
6	Hours Worked	1,739	1,741	1,737
7	SRF (MAX/ Actual)	1.7	2.1	2.5

This result means that if SPD patrol officers were working a 5/2 eight-hour schedule and the SPD wanted 10 officers to be on duty, the SPD would need to assign 17 officers to that shift (1.7 x 10). By contrast, because the SPD currently uses the 4/10 plan, the SPD would need to assign 21 officers to a shift for 10 officers to be on duty (2.1 X 10), or about 23 percent more officers. The shift relief factor for the 12-hour shift is 2.5. This seems large but it is because we only have to staff two shifts. It is nominally the same as the eight-hour schedule.

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8 In the 12-hour schedule we have to compensate because the schedule results in a 42 hour work week.

Finally, we provide the patrol staffing estimates. To use a workload-based approach, we use a two-stage process.[9]

+ We partition officer activities into two groups: community-generated and other.

+ If we know how much time community-generated work consumes, we can build a model that incorporates the other activities.

Figure 15 depicts a typical model. We assume officers spend one-third of their time on community-generated activity and two-thirds on other activity, including officer discretionary activity.

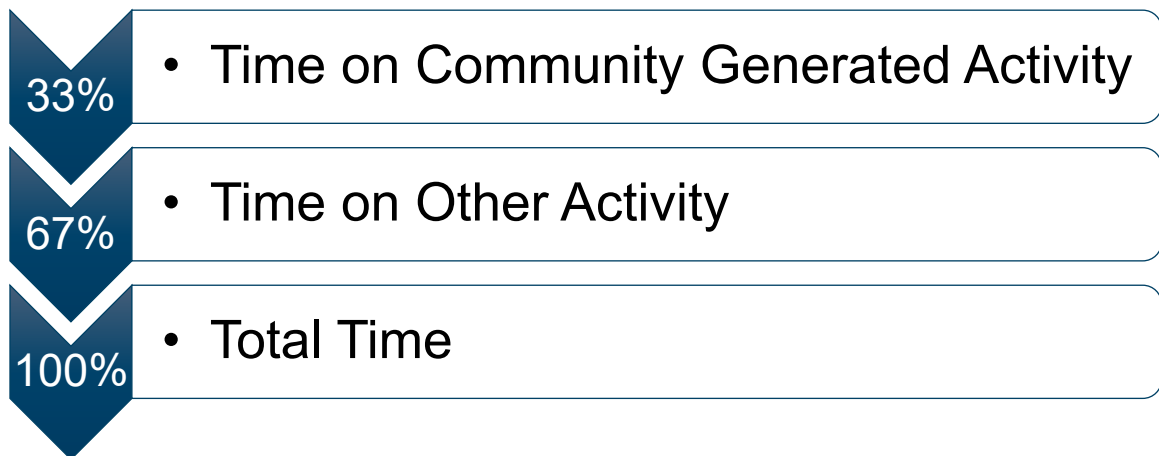*Figure 15: Model of Performance Based Allocation*

33%	• Time on Community Generated Activity
67%	• Time on Other Activity
100%	• Total Time

Table 7 illustrates the staffing estimates for the SPD Patrol Division. It is based on the following assumptions:

+ Three eight-hour shifts starting at 6 a.m., 2 p.m. and 10 p.m.

+ On the day shift and afternoon shift, 25 percent of calls have a backup unit assigned. On the midnight shift, 50 percent of calls have a backup unit assigned.

+ Average time per call (dispatch to clear) is 0.83 hours

+ Shift relief factor is 1.7

Table 7 has 12 rows. In Row 1, we divide the day into three eight-hour shifts. In Row 2, we list the number of calls for service during those periods. Row 3 shows the number of estimated calls that require a backup unit. Row 4 shows the result of adding the number of calls and the calls requiring a backup. In Row 5, we show the total time on these calls in hours.

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9 Jeremy M. Wilson and Alexander Weiss, A Performance-Based Approach to Police Staffing and Allocation, US Department of Justice, Office of Community Oriented Policing Services. https://cops.usdoj.gov/RIC/Publications/cops-p247-pub.pdf.

For Row 6, we divide the total hours by 2920, which is the number of hours an officer would work if they worked every day of the year. Row 6 tells us the number of officers required to handle the calls if they worked every day and did nothing but handle calls for service. In Row 7, we multiply Column 6 by three, which shows the number of officers that should be on duty if they spent 33 percent of their time on calls for service and 66 percent on other activity.

Finally, in Row 8, we multiply Row 7 by 1.7, the shift relief factor. This shows us the number of officers that the SPD should assign to a shift to ensure that the appropriate number are on duty. Rows 9 through 11 illustrate the same process but under different assumptions regarding how time is allocated. These estimates are based on the assumption that officers work a 5/2 schedule with eight-hour days. However, under the current SPD schedule, these estimates would need to be increased by about 24 percent.

Table 7: SPD Staffing Estimates – 8 Hour Shifts

	Shift	0600 to 1400	1400 to 2200	2200 to 0600	
1	Shift	0600 to 1400	1400 to 2200	2200 to 0600	
2	CFS	31555	38758	18234	
3	Backup	7889	9689	9117	
4	ADJ	39444	48448	27351	
5	Hours	32739	40212	22701	
6	Units	11.2	13.8	7.8	
7	33% CFS	33.6	41.3	23.3	
8	XSRF 1.7	58	71	40	169
9	40% CFS	28	34.5	19.5	
10	XSRF	48	59	34	141
11	50% CFS	22.4	27.6	15.6	
12	XSRF	39	47	27	113

We also conducted a 12-hour shift analysis, which resulted in similar overall patrol number estimates.

Table 8: SPD Staffing Estimates - 12-Hour Shifts

1	Shift	0600-1800	1800-1600
2	CFS	52840	35707
3	Backup (25 % Day, 50% Night)	13210	17854
4	Adjusted CFS	66050	53561
5	Hours	54822	44455
6	Units (hours/4380)	12.5	10.1
7	33% CFS Time	37.5	30.3
8	X SRF 2.5	94	76
9	40% CFS Time	31.25	25.3
10	X 2.5	78	63
11	50% CFS Time	25	20.2
12	Shift	63	51

Recommendations

Based on our analysis, the Patrol Division has a significant gap in capacity. We commend the SPD and its officers for maintaining a high level of performance in spite of the personnel shortage. It is clear that the SPD should add more resources to uniformed service delivery, but that most likely will be a long-term process. Based upon a workload analysis, we estimate that the SPD needs between 27 and 83 additional officers assigned to patrol, depending on the amount of time made available for discretionary activity and community engagement. In the interim, the SPD can take a number of steps to address the staffing issues. We are aware that in recent weeks, the SPD has begun to move some officers from support positions back to patrol, and we applaud that decision. Other steps may significantly improve performance.

It is essential that the SPD begin the process of eliminating the 10-hour work schedule as it is extraordinarily inefficient. Although the SPD could easily revert to an eight-hour schedule, many agencies faced with the same situation have migrated to a 12-hour work schedule. Because we believe that the 12-hour schedule will provide significant benefit for SPD, we review its attributes below.

The most commonly used 12-hour schedule is relatively straightforward – it is a 14-day duty cycle. In the schedule below, the pattern consists of two days on / three days off, two days on / two days off, three days on / two days off. This schedule results in a 42-hour average workweek.[10] Over the two-week cycle, officers would earn four additional hours. All officers are assigned to one of two groups. This schedule makes it easier for supervisors and officers to work on the same schedule. We illustrate a typical work schedule for a shift below.

Figure 16 Example of 12 Hour Work Schedule

	Su	M	T	W	T	F	Sa
Week One	ON	ON	Off	Off	Off	ON	ON
Week Two	Off	Off	ON	ON	ON	Off	Off
% On	50	50	50	50	50	50	50

Officers have rotating days off during the duty cycle, but the pattern is repeated every two weeks. Thus, an officer could expect, for example, to have every other Sunday, Monday and Tuesday off. Officers assigned to this pattern would have every other weekend off.

At first glance, it looks like 12-hour shifts actually reduce resource availability, but the agency needs only staff two shifts per day. Staffing seven officers on 12-hour shifts is equivalent to staffing 10 officers to eight-hour shifts.

We illustrate an alternative 12-hour work schedule for each of the two work groups that may more closely conform to a schedule with fixed days off below.

Figure 17: Example of a 12 Hour Schedule with Fixed Days Off

Workgroup 1

	S	M	T	W	T	F	S
1	ON	ON	ON	OFF	OFF	OFF	OFF
2	OFF	OFF	OFF	ON	ON	ON	ON

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10 Can be modified to reduce average workweek to 40 hours.

Workgroup 2

	S	M	T	W	T	F	S
1	OFF	OFF	OFF	ON	ON	ON	ON
2	ON	ON	ON	OFF	OFF	OFF	OFF

This schedule has two platoons and a 14-day duty cycle. Officers in the first platoon work on Sunday, Monday and Tuesday of the first week and then have four days off. During the second week of the cycle, officers work on Sunday, Monday, Tuesday and Wednesday and then have three days off. The second platoon has what is nominally the opposite on and off pattern. This work schedule results in a 42-hour workweek (84 hours over two weeks). The SPD can adjust this schedule to become a 40-hour workweek by permitting officers to take two hours off each week or four hours during the two-week period. The SPD will have to manage this time off to ensure that it does not adversely affect deployment.

The Corona, California Police Department uses still another version of the 12-hour schedule that is popular among Southern California agencies. In this schedule, each officer works three 12.5-hour shifts per week and has four days off. The day on / off configuration is fixed. Depending on the number of officers assigned to each day off group, the agency can vary staffing by day of week. In this schedule, officers work 75 hours in each two-week period, so over the course of the year, the officer owes the agency 130 hours, which can be used for training or for occasions when extra staffing is required.

We illustrate this schedule below.

Figure 18: Corona, California Police Department Work Schedule

	S	M	T	W	T	F	S
1	ON	ON	ON	OFF	OFF	OFF	OFF
2	OFF	ON	ON	ON	OFF	OFF	OFF
3	OFF	OFF	ON	ON	ON	OFF	OFF
4	OFF	OFF	OFF	ON	ON	ON	OFF
5	OFF	OFF	OFF	OFF	ON	ON	ON
6	ON	OFF	OFF	OFF	OFF	ON	ON

Agencies that adopt 12-hour work schedules are particularly concerned about fatigue. The evidence on this issue is mixed. On its face, a 12-hour shift seems very long, and one could easily predict an increase in accidents and injuries related to fatigue. However, the schedule provides significant amounts of time off, and most agencies that adopted this approach have not experienced those anticipated increases. In fact, most agencies report that officers on 12-hour schedules use less sick time and have lower levels of stress and illness. Twelve-hour work schedules continue to be popular with agencies throughout the U.S. and Canada.[11]

The SPD should take the additional steps indicated below to better manage the demand for police services.

Property Damage Traffic Crashes

Property damage crashes pose a significant dilemma for law enforcement agencies.

+   They are labor intensive. In addition to the investigating officer, the scene often requires a second or third officer to control traffic.

+   Those involved in the crash often wait for the police in the trafficway, thus creating risk of subsequent injury and additional crashes.

+   When other first responders attend the crash, it can cause significant traffic backups and delays.

The SPD can handle these property damage crashes in a few different ways.

+   Work with the state legislature to redefine what is a reportable crash. For example, in Maryland and Pennsylvania, state law requires an accident investigation only if the crash requires the vehicles to be towed from the scene with exceptions including crashes involving a DUI or unlicensed drivers.

+   Encourage those involved in property damage crashes to complete forms at the police station or by phone. Agencies often use this type of strategy during storms.

+   Use nonsworn staff to investigate crashes. The SPD already uses nonsworn staff to investigate property-damage-only crashes, but the program could expand. The City of Denver, for example, recently hired 15 civilian crash investigators.[12] As SPD nonsworn investigators acquire more skill and experience, the SPD could assign them to investigate injury accidents as well.

+   Consider a novel approach, originally established in Canada, and more recently adopted in the U.S. – the collision reporting center. "In 1992, police services throughout Ontario realized that it had become unfeasible to send police to investigate every property damage collision. Citizens were waiting for hours at the side of the road for collision reports, causing congestion

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11 PDs in Minn. making switch to 12-hour work schedules. Minneapolis Star Tribune, December 30, 2017.
12 Civilian Crash Investigators Added To Denver Police Force. https://denver.cbslocal.com/2017/05/31/civilian-crash-investigators-denver-police/

and a visual distraction, leading to an increase in secondary collisions. The Government had given police services approval to no longer investigate property damage collisions. At the same time, Insurance Fraud was on the rise and would have been augmented with no verification that a collision had taken place. The Insurance Industry was alarmed by this and predicted that insurance fraud would run rampant with no police involvement or proof that a collision had even occurred. The Insurers lobbied diligently for an alternative solution."[13] In response, several agencies created collision reporting centers. After notifying police dispatch, participants could drive to a center and complete the accident report. The centers are a joint effort of the government, the police and the insurance industry. In addition to the scores of sites across Canada, there are now sites in Tucson, Arizona;[14] Gardena and Salinas, California; Hampton, Virginia; and Ogden Utah.

+ Allow traffic crashes to be reported online. The Colorado State Patrol provides a link for such reports.[15]

Nationwide, police departments respond to millions of false alarms annually at a cost that tops $1 billion. False alarms are a wasteful use of police resources and a problem that many law enforcement agencies struggle to manage. "Solving the problem of false alarms would by itself relieve 35,000 officers from providing an essentially private service."[16] Moreover, an alarm signal is not an indicator of a criminal activity. In most instances, the alarm system detects motion, including "human error, system malfunctions and abnormal conditions, most of which have little to do with crime."[17] Police departments and the municipalities that finance their needed services can realize significant savings and increase productivity by reducing this often-unproductive use of officers' time.[18]

Many communities are taking an aggressive approach to reducing response to false alarms. For example, the Milwaukee Police Department implemented the Verified Response Policy for burglar alarms in September 2004. Under this policy, the Milwaukee Police Department does not respond to the report of a burglar alarm activation that a private first responder service does not first verify. Before September 19, 2004, the Milwaukee Police Department (MPD) responded to approximately 30,000 burglar alarms per year, 97 percent of which were false. More recent yearly statistics reveal that the MPD responded to approximately 800 burglar alarms, 70 percent of which were false.

Milwaukee's ordinance states, in part, "Public Safety Ordinance #105-75-14-c-5 requires that alarm businesses provide a Private First Responder Service to respond to your activated burglary alarm to verify that a cause for the alarm exists prior to contacting the police department. If the alarm responder determines that a crime or an attempted crime has occurred or is occurring at the alarmed premise (a verified alarm), the responder will call for immediate police response."[19]

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13 https://www.accsupport.com/Home/About
14 https://www.tucsonaz.gov/newsnet/first-collision-reporting-center-opens-tucson
15 https://www.colorado.gov/pacific/csp/crash-information
16 https://popcenter.asu.edu/content/false-burglar-alarms-2nd-ed
17 Jones, Lee. (2004). "Selective Citizen Privileges." Report to Mayor and City Councils
18 Opportunities for Police Cost Savings Without Sacrificing Service Quality: Reducing False Alarms. Philip S. Schaenman, Aaron Horvath, Harry P. Hatry The Urban Institute, January 2013
19 https://city.milwaukee.gov/police/Information-Services/Burglar-Alarm-Policy

Patrol Supervision

The SPD could consider alternative models to provide supervision for patrol. At present, the patrol division is divided among three ten-hour shifts. Each shift has four squads, which are each assigned a sergeant and a corporal. Four lieutenants are assigned to patrol with responsibilities across shifts. The corporal's role is largely one of a lead worker and to serve as squad supervisor in the absence of the sergeant. In our view, this position is unnecessary. The trend in most agencies is to ensure sergeants are readily available to their subordinates and a key part of the management team. Consider the following:

> "Sergeants manage the patrol officers who are the critically important "face of the department" for most community members. Sergeants hold officers accountable, and at the same time, sergeants look after the safety and welfare of their officers. Sergeants play a key role in creating the culture of a police department. They serve as the two-way conduit of information between agency leaders and rank-and- file officers. Sergeants must spend time on the streets with their officers, to see how they perform. Sergeants often respond to critical incidents, to ensure the most effective response. And sergeants handle a wide range of administrative duties such as scheduling shifts, writing reports, and handling minor disciplinary matters."[20]

The current patrol deployment is highly fragmented. Work groups are small, and there are six shift start times each day. The SPD should consider an alternative approach to help facilitate increased supervision.
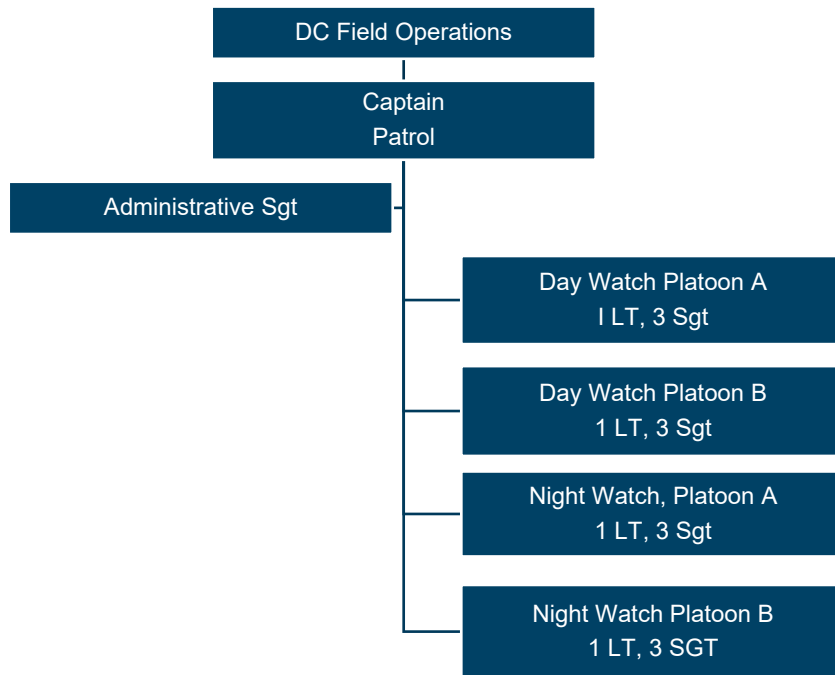
For purposes of discussion, if the SPD adopts a 12-hour work schedule, there are typically four work groups, two on the day watch and two on the night watch. If we assigned 96 officers to patrol and assumed that the shifts were staffed equally, we would have four work groups, each with 24 officers. Best practices suggest that one supervisor to eight officers is an appropriate span of control. Based on that criterion, we would assign three sergeants and a lieutenant to each group.[21]

Every officer on the team would be assigned to a sergeant, thus ensuring proper span of control and unity of command. However, if a sergeant was off duty as a result of illness or vacation, the other sergeants on the team would still be available and knowledgeable about all team members.

We illustrate the model below.

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20 Promoting Excellence in First-Line Supervision:
New Approaches to Selection, Training, and Leadership Development
October 2018. Police Executive Research Forum.
21 Given that there are eight lieutenants assigned to patrol, there may be opportunities to convert these positions.

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┌─────────────────────────────┐
│      DC Field Operations     │
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│           Captain            │
│           Patrol             │
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              ├───│     Day Watch Platoon A      │
              │   │         I LT, 3 Sgt          │
              │   └─────────────────────────────┘
              │   ┌─────────────────────────────┐
              ├───│     Day Watch Platoon B      │
              │   │         1 LT, 3 Sgt          │
              │   └─────────────────────────────┘
              │   ┌─────────────────────────────┐
              ├───│     Night Watch, Platoon A   │
              │   │         1 LT, 3 Sgt          │
              │   └─────────────────────────────┘
              │   ┌─────────────────────────────┐
              └───│     Night Watch Platoon B    │
                  │         1 LT, 3 SGT          │
                  └─────────────────────────────┘
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Community Service Officers

The SPD deploys nonsworn community service officers in a number of capacities. It is our understanding, however, that these positions are part time. Given the many calls for service that someone other than a sworn officer could handle, and the shortage of sworn officers in patrol, we recommend that the SPD expand the CSO program and convert at least some of those positions to full-time. One approach would include assigning CSOs to the reception area. They could handle a number of service requests, thus reducing the need to summon an officer to the station. Moreover, the CSOs could help to reduce some of the work of the records technicians.

2. Community Response Section

A police lieutenant directs the Community Response Section, which consists of three units:

+ Traffic Control Unit

+ Behavioral Health Unit

+ Community Action Unit[22]

Traffic Control Unit

The Traffic Control Unit (TCU) is staffed by one sergeant, one corporal, and five police officers. The TCU has three key areas of responsibility:

+ Enforcing traffic laws.

+ Investigating serious injury and fatal crashes.

+ Managing the drone program for the SPD.

Because the officers work on police motorcycles, they do not work after dark. They also do not work on weekends. They will, however, respond to a serious crash after their normal shifts. In most cases, the entire team responds to a serious crash. The team also provides assistance in mapping crime scenes handled by the SPD and other agencies.

The Patrol Division is largely responsible for investigating those crashes not handled by the TCU. The SPD has a grant for Oregon Department of Transportation (ODOT) to support DUI enforcement, but officers assigned to patrol do most of the work.

Behavioral Health Unit

The SPD participates in a grant-funded regional approach to collaborating with mental professionals to address relevant calls for service. The unit operates from 0800 until midnight, seven days per week, and officers respond to approximately 3,000 calls per year. Law enforcement agencies nationwide have adopted this approach to very favorable results.[23]

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22 The Problem Oriented Policing Unit and Downtown Enforcement Team (DET) were recently eliminated, and its members were reassigned to the newly created Community Action Unit.
23 Call police for a woman who is changing clothes in an alley? A new program in Denver sends mental health professionals instead. The program leads to better outcomes and saves police officers' time.
https://www.denverpost.com/2020/09/06/denver-star-program-mental-health-police/

Community Action Unit

The Community Action Unit is organized around a contract to provide safety and security with the Salem Area Mass Transit District (SAMTD). The unit has expanded its role to focus on public safety in downtown and the entire Salem community, particularly addressing issues like code enforcement and homelessness. The team also responds to calls in District Seven.

Recommendations

The TCU appears to be in need of significant reorganization. The SPD cannot expect to have much success with a traffic unit that only works during the day and on weekdays. Moreover, no program is in place to identify high-hazard locations or conduct any type of traffic analyses. It is important to provide high-level reconstructions of fatal crashes, but we understand only about 10 of these occur per year, many while TCU members are off duty.

The SPD should consider what it seeks to accomplish in its traffic safety program. It can build a data-driven approach that targets high-accident locations and violations, but much of that work would likely be completed by patrol officers. If the SPD believes it is necessary to maintain a team to investigate serious crashes, it should deploy the officers in cars rather than motorcycles and change their coverage until 2 a.m. or 3 a.m. It is unclear why one or two officers could not handle many of these crashes. Finally, although the drones are a useful tool in accident reconstruction, the management of the program is arguably better placed with crime scene technicians.

The Community Action Unit appears to represent an effective application of problem-solving and community engagement strategies. This approach should be applied throughout the community as resources are increased.

3. Support Division

The Support Division is managed by a deputy chief, and a lieutenant directs the Technical Services Section, which is a major sub-component. The Support Division is undergoing some reorganization; however, the principal units as of August 2021 are illustrated below.

Figure 19: Support Division Functions
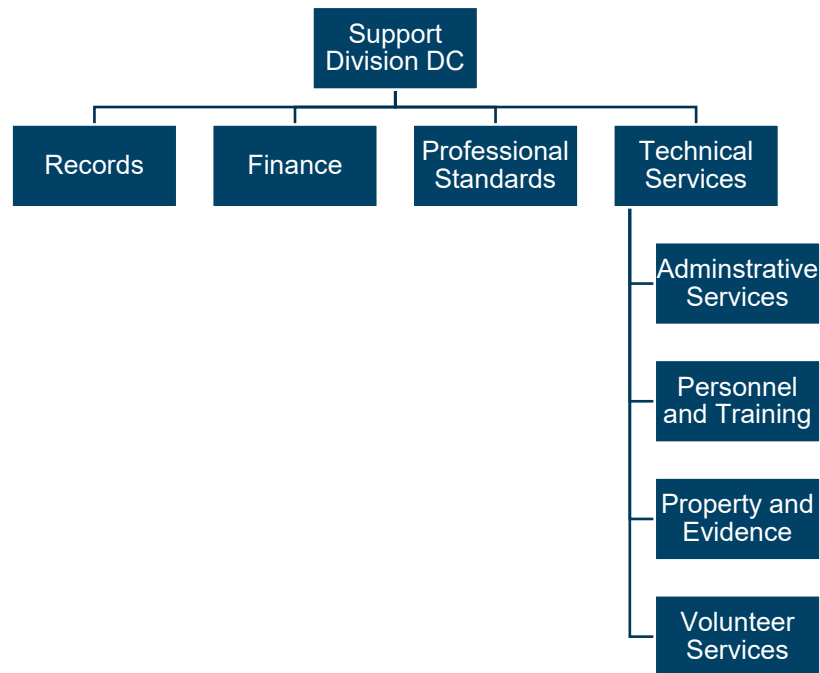
Based on our review, the Support Division appears to be adequately staffed. However, if the SPD is to address the significant understaffing issues, especially in patrol, it will need increased staff to work on recruitment and hiring, as well as training. In addition, the SPD can take some steps to improve performance and proactivity.

The Records Section is labor intensive and provides 24/7 support. It provides services to the SPD and other agencies in the region. It appears that a significant amount of its work relates to providing copies of crime and traffic crash reports. Victims of crime in Salem can report an offense online and print a copy of the report. This is a good way to reduce both demands on police officers and on records clerks. However, this system may be underutilized.

For example, in Salem and many other communities, online systems may not be used if a victim has a suspect in mind. However, to a victim, the "suspect" might be someone they saw merely walking down the street, so opt not to report using the web-based tool. A different approach is to gather more specific and accurate suspect information in the online report and let investigators decide the next steps. Below are examples of the questions on an online reporting system which the SPD could consider:[24]

+ Can a suspect be named? If not, have you previously seen the suspect before?

+ Is there a witness to the crime?

+ Can you or a witness identify the suspect if seen again?

+ Can you or a witness identify the suspect's vehicle if seen again?

As indicated, assigning a CSO or light duty officer to the SPD reception area might increase productivity. It would free up the records staff, and some matters could be handled without calling an officer off patrol.

It is our understanding that the Crime Analysis Unit is being moved to the Investigation Division. This may be of little consequence, but it should be clear that the role of crime analysis should be greater than supporting investigations. In a data-driven agency the role of crime analysis includes:

+ **Tactical Analysis**: An analytical process that provides information used to assist operations personnel (patrol and investigative officers) in identifying specific and immediate crime trends, patterns, series, sprees and hotspots, providing investigative leads, and clearing cases. Analysis includes associating criminal activity by method of the crime, time, date, location, suspect, vehicle, and other types of information.

+ **Strategic Analysis**: Concerned with long-range problems and projections of long-term increases or decreases in crime (crime trends). Strategic analysis also includes the preparation of crime statistical summaries, resource acquisition, and allocation studies.

+ **Administrative Analysis**: Focuses on provision of economic, geographic, or social information to administration.

+ **Intelligence Analysis**: Aids in determination of who's doing what with whom by its focus on the relationship between persons and organizations involved in illegal and usually conspiratorial activities.[25]

Finally, after reorganization, very few sworn personnel will be in the Administration Division. Because of this, it may be possible to appoint a non-sworn director to lead the division, thus freeing up sworn senior staff for more appropriate assignments.

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24 http://www.skokiepolice.org/file-a-police-report-online.html#
25 https://roseville.ca.us/cms/One.aspx?portalId=7964922&pageId=8981886

4. Criminal Investigations Section

The SPD Criminal Investigations Section (CIS) includes the Violent Crimes Unit, Special Victims Unit, Property Crimes Unit and Crime Lab Unit. CIS also includes detectives assigned to Digital Forensics and Investigative Technologies. The SPD reorganized the Criminal Investigations Section in 2021 to, among other things, separate the Persons Crime Unit into two separate units – Violent Crimes and Special Victims.

One Lieutenant, with the support of a Staff Assistant, manages the Criminal Investigations Section. Except for the Crime lab, a sergeant, who reports to the lieutenant, leads each of the units. The Property and Violent Crimes Units each have a corporal who reports to the respective sergeant. Crime lab personnel report directly to the CIS lieutenant. The lieutenant, sergeants, lab techs and staff assistant work five days per week with eight-hour schedules. The corporals and detectives working for the individual units generally work four days per week with 10-hour schedules. They are on either a Monday through Thursday or Tuesday through Friday work schedule.

All CIS unit sergeants assign cases on a rotational "next-in-line" basis that they may adjust based on caseload and investigative expertise. Unit sergeants designate a detective or team of detectives to an on-call schedule to provide on-scene responses to homicides, deaths and other major incidents as determined by a unit sergeant.

Screening

Although SPD Directive 10.01 indicates that patrol officers conduct all preliminary investigations, certain crimes require immediate notification of CIS supervisors. These crimes include but are not limited to all unattended deaths, felony sex crimes and other major crimes including burglary, robbery and Measure 11[26] assaults when a suspect is in custody. The CIS is responsible for the review of all felony cases. The sergeant or a corporal decides which cases meet unit guidelines for follow-up assignments. SPD Standard Operating Procedure (SOP) 5.0 Case Assignment and Management provides unit sergeants and corporals guidance and criteria for prioritizing cases for assignment, follow up and the handling of cases not assigned.

Several factors guide the decision to assign a case for investigation and follow up, including the solvability of the case, seriousness of the crime or injury, impact on reducing crime and fear within the community, and whether the crime is classified as a misdemeanor or felony. CIS unit supervisors prefer to assign cases based on a detective's expertise investigating certain types of crimes; however, they make most assignments to detectives based on their caseloads and availability.

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26 Oregon voters approved Ballot Measure 11 in November 1994 to apply mandatory minimum prison sentences to certain crimes against persons committed on or after April 1, 1995 with no possibility for any reduction in sentence, such as for good behavior. For more information see https://www.multco.us/dcj-juvenile/common-laws/measure-11.

Violent Crimes Unit

A sergeant leads the Violent Crimes Unit (VCU), which is staffed by a corporal and four detectives. The VCU also includes a detective assigned as a polygraph examiner. The VCU investigates all homicides, suspicious deaths, officer-involved uses of deadly force, in-custody deaths, kidnapping cases, and any cases in which deadly force was directed at an officer. VCU also conducts follow-up investigations for missing person's cases. The VCU sergeants may, at their discretion, assign detectives cases involving robberies, assaults and any Measure 11 crimes. In addition, after the county district attorney's determination, the investigation of officer-involved shootings and criminal internal investigations for other agencies may be conducted by VCU.

In the event of an officer-involved shooting involving an SPD member, a VCU detective liaisons with an external agency throughout the investigation. VCU assigns a primary and secondary detective to every homicide and all officer-involved shooting incidents wherein the SPD serves as the lead investigating agency. The sergeant assigns all other violent crimes, such as robberies, assaults and Measure 11 crimes, at their discretion and after applying the criteria set forth in SOP 5.0.

2020 crime data was not yet available during our study. In 2019, the SPD reported:

+ Six homicides

+ 132 robberies

+ 20 kidnappings

+ 357 aggravated assaults

+ 782 simple assaults[27]

In 2019, the SPD reported that it assigned 101 cases for investigation, including six homicides, 22 assaults, five attempted murders, 33 robberies and three kidnappings, among other offenses reported. In 2020, the SPD reported that it assigned 113 cases to detectives, including three homicides, 20 attempted murders, 17 assaults, three kidnappings and 31 robberies.

Property Crimes Unit

The Property Crimes Unit (PCU) is staffed by a sergeant, a corporal and four detectives. The PCU conducts follow-up investigations pertaining to property-related felonies such as burglary, theft, auto theft, identify theft, fraud and arson. Although property crimes are their regular assignment, PCU members also assist the VCU in investigating violent crimes and may respond to the scene of an officer-involved shooting and provide substantive assistance drafting VCU search warrants.

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27 https://www.oregon.gov/osp/Docs/2019%20Annual%20UCR%20Report.pdf

The PCU sergeant reviews property crime case reports routed to him by the Patrol Unit (Division) to determine whether they meet the unit's guidelines. If a case meets the financial threshold and appears to be solvable, the sergeant assigns a detective. If it does not meet the threshold, it is referred as "read only" to detectives with expertise in that given area (e.g., fraud, burglary, arson) to see if names or method of operation are familiar and could indicate pattern worthy of investigation. The Sergeant sometimes routes the case back to the referring officer for follow-up, but patrol officers often do not have sufficient available time to conduct a follow up.

In 2019, the SPD reported 616 burglaries, 4,456 thefts, 837 motor vehicle thefts, 43 arsons, and 869 cases of fraud. In 2019, the PCU assigned 854 cases to detectives, including 283 burglaries, 149 thefts, 277 motor vehicle thefts, 10 arsons, and 57 forgery or fraud cases. In 2020, the PCU assigned 423 cases to detectives, including 106 burglaries, 35 thefts, 199 motor vehicle thefts, 28 arsons, and 29 forgery or fraud cases.

The data provided to us focuses on the property crimes investigated by the PCU. However, it does not reflect the assistance the PCU provides to the VCU, such as drafting search warrants, conducting neighborhood canvasses or obtaining financial subpoenas, which negatively impact the PCU's ability to work property crimes cases. The PCU also takes on elder physical abuse cases and shooting cases in which no one was shot but there are many witnesses. PCU is providing critical investigative support to the VCU that, if sufficiently staffed, would be completed by VCU detectives. Diverting PCU resources to support the VCU negatively impacts the PCU's ability to work property crimes cases.

Special Victims Unit

A sergeant leads the Special Victims Unit (SVU), which includes six detectives for investigations, two detectives assigned to digital forensics and one detective assigned to investigative technologies. This unit focuses on sex crimes, family violence and child abuse, although detectives assigned to digital forensics and investigative technologies support the entire SPD. SVU detectives investigate all child deaths. Applying the criteria outlined in SP 5.0, at the sergeant's discretion, SVU detectives may investigate sex crimes involving adult and child victims, child physical abuse, child pornography and luring case. SVU detectives are frequently allocated to the VCU, which negatively impacts the SVU's ability to work sex-based crimes. Investigative activity associated with assisting the VCU includes responding to the scene of a homicide or other major incidents, assisting in evidence collection and preservation, and attending autopsies.

SVU detectives are active participants in numerous regional multi-disciplinary teams (MDTs) throughout the county and beyond, applying a unified cross functional team approach to the handling of crimes involving children. The county district attorney runs daily MDT meetings that last 30 to 60 minutes and all SVU detectives attend. The SVU assigned 254 cases to investigators in 2019 and 216 cases in 2020.

Computer Forensics and Investigative Technologies

Detectives assigned to computer forensics and investigative technologies focus on collecting, extracting and analyzing evidence from cell phones, computers, tablets and digital video recorders in support of the entire Department. The computer forensic detectives also support the SPD's efforts involving international crimes against children cases. In 2019 and 2020, the computer forensic detectives examined 634 devices for offenses ranging from murder to sex offenses. Twenty-nine of those cases were cases for which the SVU was assisting other agencies.

The detective assigned to investigative technologies, which is housed also in the SVU, reports directly to the CIS lieutenant. This section supports the SPD's investigative efforts through the design, build, installation and maintenance of electronic surveillance devices and technical and analytical assistance regarding cell phones, wiretaps and pen registers. This includes gathering information from vehicles, such as GPS data. The detective also runs the SPD's license plate reader (LPR) platform and assists outside agencies that do not have this expertise. The detectives assigned to digital forensics and investigative technologies require knowledge of the law and digital evidentiary standards and need to have sufficient technical background, training and certifications to perform their jobs. These detectives are subject to being rotated out of the CIS every six years.

Crime Lab

Two lab technicians report directly to the CIU lieutenant and support the entire Department. The crime lab personnel are responsible for crime scene processing (e.g., identifying, documenting, collection of evidence), evidence processing for latent prints, DNA collection, latent print analysis, test firing for bullets and cartridge cases, limited firearms functionality testing, trace evidence screening, and biological evidence screening (i.e., blood and seminal fluid). They are annexed to the property room and assist with evidence intake, including evidence from outside agencies. The lab personnel enter all firearms and casings seized by police departments outside of Portland and in the greater Salem area into the National Integrated Ballistic Information Network (NIBIN).[28] They also agreed to take on all fingerprint entries for the state outside of Portland.

Recommendations

The SPD should create a civilian supervisor position and hire a person with crime laboratory expertise to oversee the lab's process, ensure quality control and mentor the lab technicians. Additionally, the department should create a nonsworn technical position to support the digital forensics and investigative technologies functions. A nonsworn SPD member with technology skills could perform many of the duties of the digital forensics detectives and the detective assigned to the duties of investigative technologies. These technical functions should also be organized to report to the same supervisor.

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28 https://www.atf.gov/firearms/national-integrated-ballistic-information-network-nibin

Given the workload of the Criminal Investigations Unit, and although it is important to assist other agencies, the SPD should carefully review the work completed for outside agencies to ensure it does not diminish the priorities of the SPD.

Finally, the SPD should add at least three detectives to the CIU for support of violent crimes investigations and to relieve the workload on the Property Crimes Unit. They should also consider replacing positions that were recently removed from the PCU.

5. Special Operations Section

A lieutenant manages the Special Operations Section (SOS) under the direction of a deputy chief. The SOS includes the Strategic Investigations Unit (SIU), the Drug Enforcement Unit (DEU) and a Police Records Technician.

The SIU consists of a sergeant, a corporal and five detectives. The SIU detectives work four 10-hour shifts from Tuesday through Friday between 10 a.m. and 8 p.m. A Federal Bureau of Investigations (FBI) agent detailed to the SIU supports the detectives.

The DEU has two detectives, who work five eight-hour shifts from Monday through Friday between 8 a.m. and 4 p.m. Until recently, the detective assigned to investigative technology worked in the SIU; however, this detective now works in the CIS. SIU personnel indicate that although the investigative technology detective continues to support to the SIU, the SIU does not engage his services as much as it would if he was directly assigned to the unit.

The two detectives assigned to the DEU work with the federal Drug Enforcement Administration (DEA) to target high-level drug cartel investigations. Although the detectives have regular contact with SPD personnel, their primary role is to support DEA investigations. Until recently, a sergeant was assigned to the DEU. The loss of this sergeant is significant, leaving less resources available to combat drug trafficking that impacts the Salem community and to provide direct supervision of the SPD-assigned detectives' activities.

The SIU focuses on drugs, human trafficking, fugitive apprehension, gun violence and supporting other SPD units and outside law enforcement agencies. The SIU's focus is not necessarily on individual incidents, but rather reviewing cases and communicating with confidential sources to identify crime patterns and to target repeat offenders. The SIU has integrated a violent crime reduction strategy in its approach to narcotics, human trafficking and fugitive apprehension.

The SPD is working on formally entering into a Safe Streets Initiative Task Force with the FBI. Participation in this task force will provide financial resources to support existing violence reduction efforts and should lead to increased arrests and federal convictions of repeat violent offenders.

The SIU supports the VCU with respect to fugitive apprehension, surveillance, covert operations and suspect identification. The SIU also assists with crime scene security as needed. The SIU reports that it made 205 arrests in 2019 and 154 arrests in 2020.

Recommendations

Although the SOS appears to be sufficiently staffed, the SPD should monitor closely its practice of supplementing the VCU with SIU personnel to ensure that SIU can continue to focus on its mission.

Summary and Conclusions

We recognize the commendable operational and staffing strategies SPD leadership has undertaken to meet needs of the Salem community, including its efforts to shift resources between different units, adjust its investigative priorities and reorganize the department.

However, as indicated in our previously issued Final Report assessing SPD's policies, procedures and operations, and underscored in this staffing study, the SPD is understaffed in patrol and investigations operations. We analyzed the department's workload, shift deployments, and calls for service and investigative data, and we concluded that the SPD can enhance its performance by adopting a more efficient work schedule and adding sworn officers. We proposed adding at least three additional detectives to the VCU to mitigate the strain on other investigative units called to support VCU operations, particularly the PCU. Finally, we identified opportunities to enhance the SPD's use of non-sworn personnel.

We support SPD's continued discussions regarding restructuring its operations, including the potential elimination of the Corporal position and an increase in staffed Sergeants. Such efforts would help SPD provide greater first-line supervision of patrol officers by having more fully trained sergeants in the field to lead, control and direct police operations. It would also improve accountability as SPD increase its efforts to work collaboratively with the Salem community to implement multidisciplinary approaches to respond to unsheltered individuals and those experiencing behavioral health crises. Creating more sergeant positions would also increase the potential for promotions, which would address the challenges of recruiting, hiring and retaining police personnel. The SPD should consider the impact eliminating the Corporal position will have on the staffing of the VCU and PCU.

Increasing staffing levels is always difficult, given budget concerns and the challenges facing publicly funded agencies, and such staffing changes are difficult to implement overnight. For these reasons, we recommend the SPD develop a phased strategic implementation plan in partnership with the City Manager's Officer to address SPD's staffing issues in a manner that balances SPD's immediate and critical staffing needs with the ability of Salem to fund the effort.

Adopting the recommendations provided in this Staffing Analysis will position the SPD to meet existing public safety needs, develop community partnerships, enhance its relationship with the BIPOC community and enact multidisciplinary approaches to respond to Salem's unsheltered population and those experiencing behavioral health crises.

Appendix: The Hillard Heintze Project Team

Internal Project Oversight

Robert L. Davis, Senior Vice President and Practice Lead, Law Enforcement Consulting

Rob is a highly regarded and innovative national leader in policing and public safety with extensive experience assessing federal, state and local law enforcement agencies across the U.S. Rob served in a variety of capacities during his 30 years' career with the San Jose Police Department, including as the Chief of Police for seven years. During his time as chief, Rob also served as the President of the Major Cities Chiefs Association. He provided consulting services for the U.S. State Department, traveling on numerous occasions to Central and South America to provide training in community policing methods addressing gang prevention, intervention and suppression. Since retiring from San Jose, Rob has been involved in numerous assessments of police departments across the nation, including serving as the Project Director for Hillard Heintze's Department of Justice Collaborative Reform Initiative for Technical Assistance contract.

Project Management

Robert Boehmer, Esq., Vice President

Robert is an experienced facilitator, trainer and public speaker, with expertise in collaborative problem solving, community policing, partnership development and information sharing. For the past several years, he has been facilitating sessions for the Department of Homeland Security's Building Communities of Trust Initiative, focusing on developing trust among law enforcement, fusion centers and the communities they serve. As a Vice President in the Law Enforcement Consulting practice at Hillard Heintze, Robert manages complex law enforcement assessments and helps police agencies transform their organizations and adopt national best practices and industry standards central to improving accountability, transparency and community trust.

Subject Matter Experts

Dr. Alexander Weiss, Senior Staffing Expert
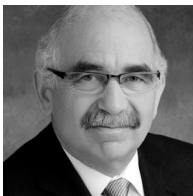
Alexander is a nationally prominent expert and specialist in public safety, law enforcement and police department operational analysis. For nine years, he was Director of the Northwestern University Center for Public Safety and Professor of Management and Strategy at the J.L. Kellogg Graduate School of Management. In addition, he has 12 years of experience with law enforcement agencies in Colorado. He has written and lectured widely on topics such as resource allocation and work scheduling, police innovation, highway safety, program evaluation and racial profiling.

Sydney Roberts, Subject-Matter Expert

Sydney brings over three decades of experience to her role as Senior Consultant at Hillard Heintze. A proven leader in police accountability, Sydney has provided insight and guidance on civil and human rights matters impacting law enforcement, including illegal search and seizure, denial of counsel and officer-involved shootings. In addition to her career in law enforcement and police reform, Sydney has built and lead diverse and inclusive high-performance teams on multi-million-dollar enterprises in public safety, compliance and community advocacy.