

**Data Analysis Report
Police Department
Tucson, Arizona
December 2015**



POLICE OPERATIONS

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C E N T E R F O R P U B L I C S A F E T Y M A N A G E M E N T

CPSM

Center for Public Safety Management, LLC

**475 K Street, NW, Suite 702
Washington, DC 20001
www.cpsm.us
716-969-1360**

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Thomas Wieczorek is the Director of the Center for Public Safety Management. Leonard Matarese serves as the Director of Research & Program Development. Dr. Dov Chelst is the Director of Quantitative Analysis.

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Introduction

This is the preliminary data analysis report on police patrol operations conducted by the Center for Public Safety Management, LLC (CPSM) for the Tucson, Arizona, Police Department. This analysis focuses on three principal areas of department operations: workload, deployment, and response times. These three areas are related almost exclusively to patrol operations, which constitute a significant portion of the police department's personnel and financial commitment.

All information in this preliminary report was developed directly from the data collected by the Tucson Police Department. The purposes of this report are to provide the city of Tucson with CPSM's preliminary findings and to allow the police department to review and bring to our attention any dispatch information that may be inconsistent with other internal records of the agency.

The majority of the first section of the report, concluding with Table 7, uses call data for the period of one year, from July 1, 2014, to June 30, 2015. For the detailed workload and response-time analysis, we focus on two four-week sample periods. The first period is from July 7 through August 3, 2014, or summer, and the second period is from March 1 through March 28, 2015, or winter.

Workload Analysis

When we analyze a set of dispatch records, we go through a series of steps:

1. We first process the data to improve accuracy. For example, we remove duplicate patrol units recorded on a single event as well as records that do not indicate an actual activity. We also remove incomplete data, as found in situations where there is not enough time-stamp information to evaluate the record.
2. At this point, we have a series of records that we call "events." We identify these events in three ways:
 - We distinguish between patrol and nonpatrol units.
 - We assign a category to each event based upon its description.
 - We indicate whether the call is "zero time on scene" (i.e., patrol units spent less than 30 seconds on scene), "police-initiated," or "other-initiated."
3. We then remove all records that do not involve a patrol unit to get a total number of patrol-related events.
4. At important points during our analysis, we focus on a smaller group of events designed to represent actual calls for service. This excludes events with no officer time spent on scene.

By going through these steps, we first identify a total number of records, then limit ourselves to patrol events, and finally focus on calls for service.

As with similar cases around the country, we encountered a number of issues when analyzing the dispatch data from Tucson. We made assumptions and decisions to address these issues.

- About 4,300 events (1 percent) involved patrol units spending zero time on scene.
- The computer-aided dispatch (CAD) system used 281 different event descriptions, which we condensed to 11 categories for our tables and 8 categories for our figures (shown in Chart 1). Table 21 in the appendix shows how each call description was categorized.

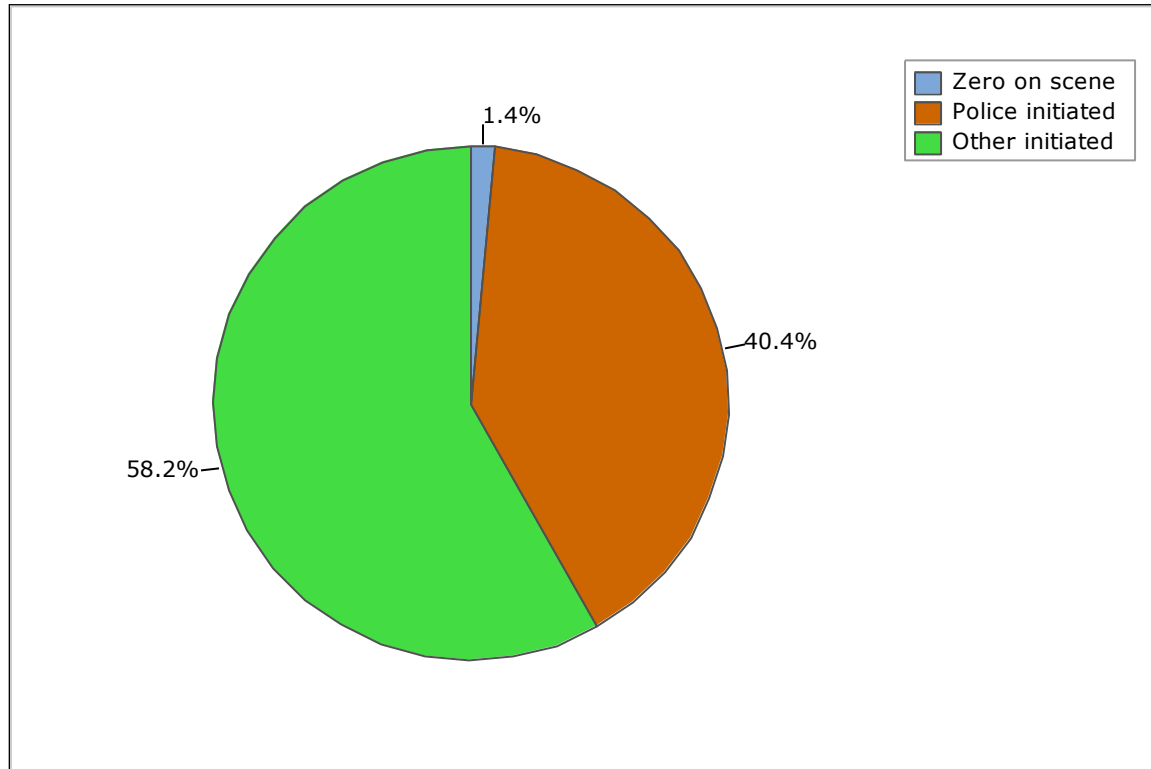
Between July 1, 2014, and June 30, 2015, the communications center recorded approximately 299,036 events that were assigned call numbers and which included an adequate record of a responding patrol unit as either the primary or secondary unit. This means the department reported an average of 819 patrol-related events per day, approximately 1 percent of which (11.8 per day) had fewer than 30 seconds spent on the call.

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

CHART 1: Event Descriptions for Tables and Figures

Table Category	Figure Category
Alarm	Alarm
Assist other agency	Assist
Field interview	Field interview
Check/investigation	Investigations
Follow up	
Suspicious person/vehicle	
Crime—persons	Person crime
Disturbance	
Crime—property	Property crime
Traffic call for service	Traffic call for service
Traffic stop	Traffic stop

FIGURE 1: Percentage Events per Day, by Initiator



Note: Percentages are based on a total of 299,036 events.

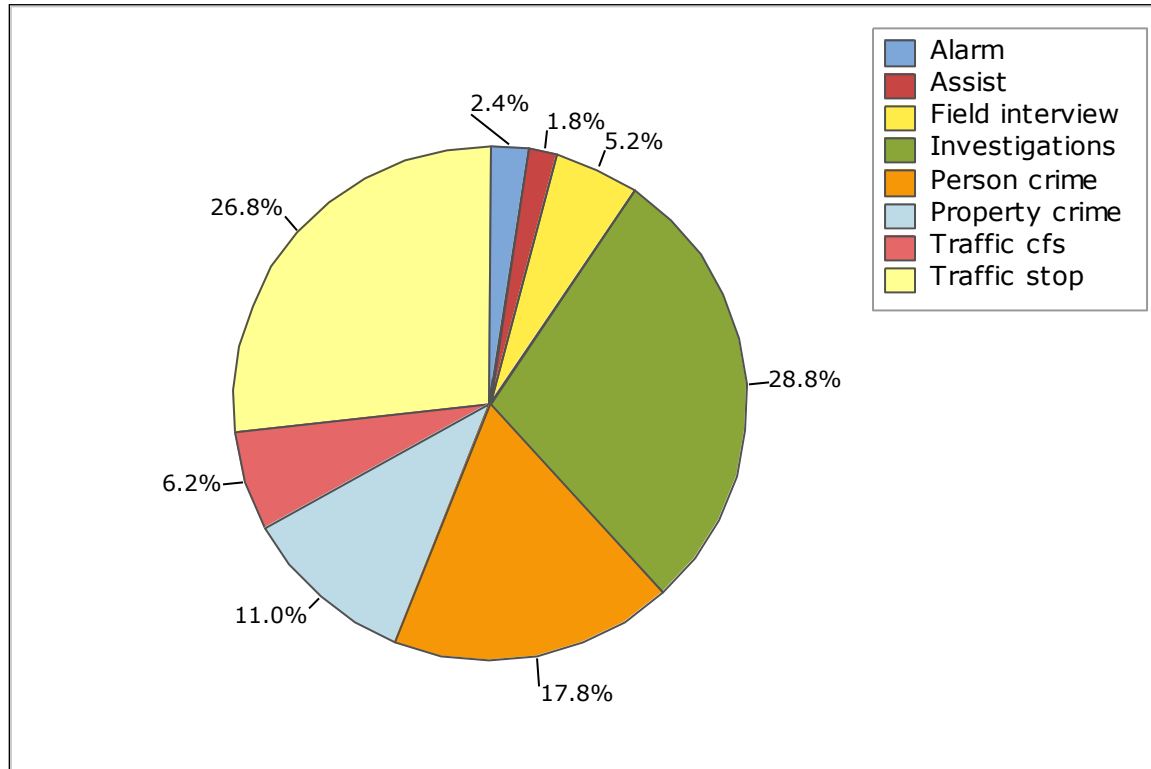
TABLE 1: Events per Day, by Initiator

Initiator	Total Events	Events per Day
Zero on scene	4,306	11.8
Police-initiated	120,731	330.8
Other-initiated	173,999	476.7
Total	299,036	819.3

Observations:

- 1 percent of the events had zero time on scene.
- 40 percent of all events were police-initiated.
- 58 percent of all events were other-initiated.
- On average, there were 819 events per day, or 34.1 per hour.

FIGURE 2: Percentage Calls per Day, by Category



Note: The figure combines categories in the following table according to the description in Chart 1.

TABLE 2: Calls per Day, by Category

Category	Total Calls	Calls per Day
Alarm	7,059	19.3
Assist other agency	5,450	14.9
Check/investigation	67,474	184.9
Crime–persons	43,440	119.0
Crime–property	32,320	88.5
Disturbance	8,946	24.5
Field interview	15,372	42.1
Follow up	2,670	7.3
Suspicious person/vehicle	14,601	40.0
Traffic call for service	18,299	50.1
Traffic stop	79,099	216.7
Total	294,730	807.5

Note: Calls with zero time on scene were removed.

Observations:

- On average, there were 807.5 calls per day, or 33.6 per hour.
- The top four categories (investigations, traffic stop, person crime, and property crime) accounted for 84 percent of calls:
 - 29 percent of calls were investigations.
 - 27 percent of calls were traffic stops.
 - 18 percent of calls were person crimes.
 - 11 percent of calls were property crimes.

FIGURE 3: Calls per Day, by Initiator and Months

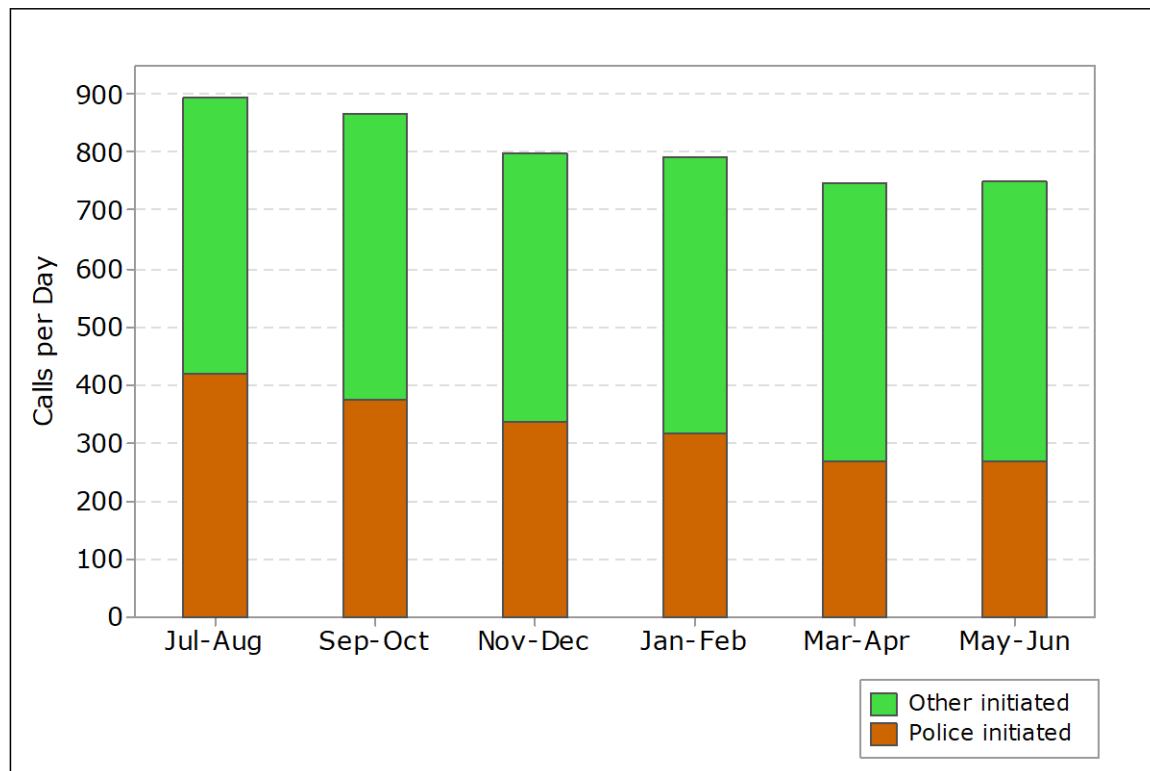


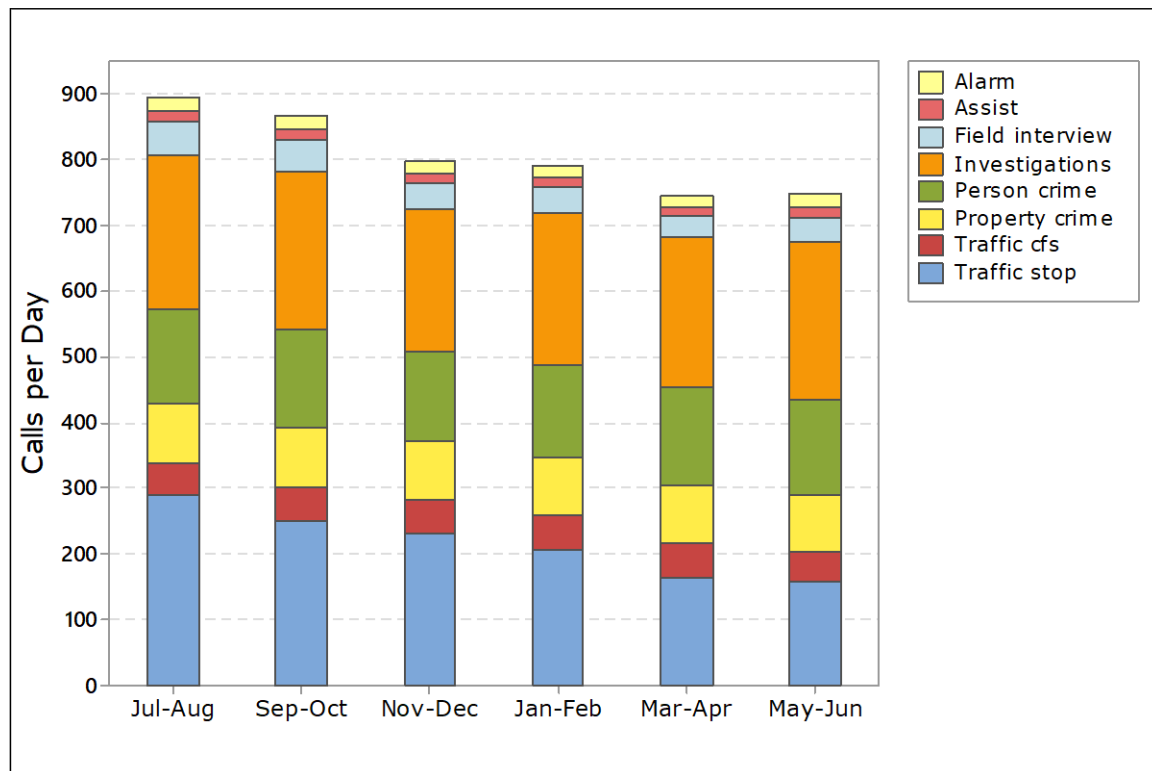
TABLE 3: Calls per Day, by Initiator and Months

Initiator	Jul-Aug	Sep-Oct	Nov-Dec	Jan-Feb	Mar-Apr	May-Jun
Police initiated	418.8	373.8	338.3	315.5	266.9	269.5
Other initiated	476.7	491.9	459.3	474.5	478.7	479.1
Total	895.6	865.7	797.6	790.0	745.5	748.5

Observations:

- The number of calls per day was lowest in March-April and May-June.
- The number of calls per day was highest in July-August.
- The months with the most calls had 20 percent more calls than the months with the fewest calls.
- July-August had the most police-initiated calls, with 57 percent more than the period of March-April and May-June, which had the fewest.
- September-October had the most other-initiated calls, with 7 percent more than the period of November-December, which had the fewest.

FIGURE 4: Calls per Day, by Category and Months



Note: The figure combines categories in the following table according to the description in Chart 1.

TABLE 4: Calls per Day, by Category and Months

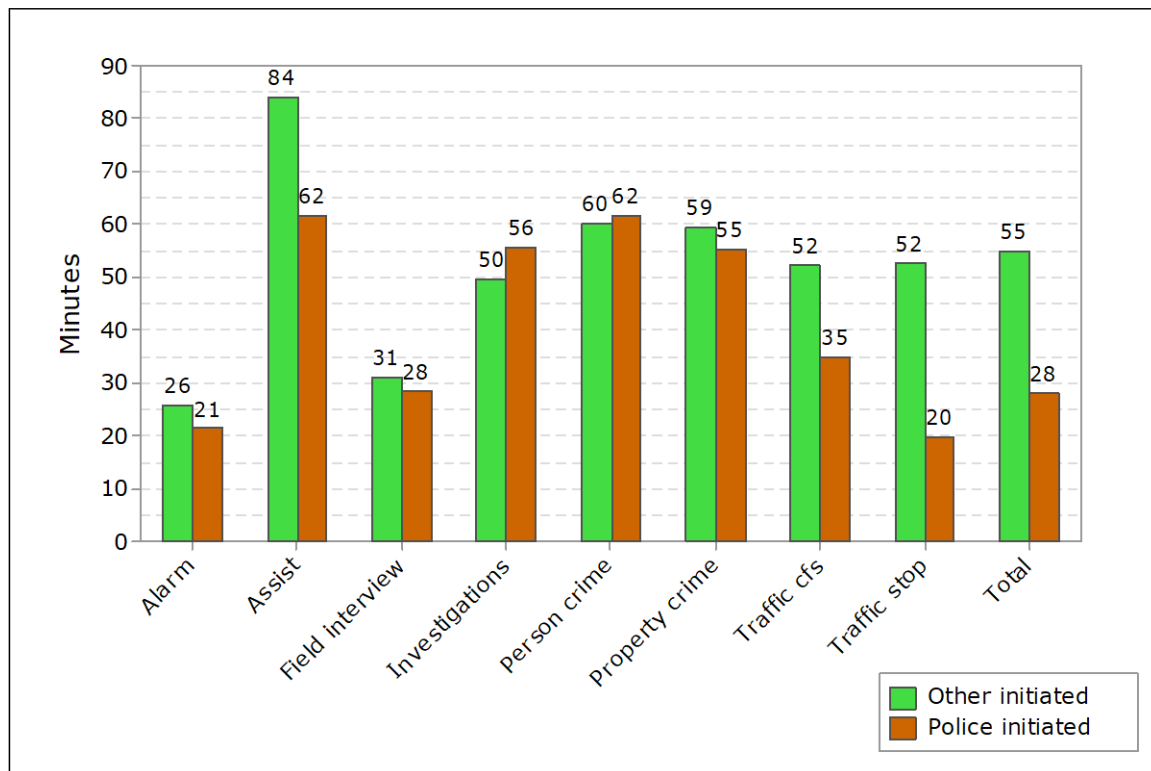
Category	Jul-Aug	Sep-Oct	Nov-Dec	Jan-Feb	Mar-Apr	May-Jun
Alarm	22.0	19.1	19.7	18.1	17.2	19.9
Agency assist	14.6	15.0	14.5	15.7	14.5	15.3
Check/investigation	187.1	193.4	169.0	184.6	182.4	192.7
Crime—persons	122.0	123.1	112.9	113.8	122.3	119.8
Crime—property	90.5	91.9	86.6	87.5	88.3	86.4
Disturbance	20.9	24.3	25.0	26.1	26.5	24.3
Field interview	53.9	49.8	38.3	38.2	33.4	38.7
Follow up	7.6	7.2	6.8	7.0	7.1	8.2
Suspicious person/vehicle	39.7	40.7	40.5	40.6	38.3	40.3
Traffic call for service	49.4	51.5	52.2	51.9	49.7	46.2
Traffic stop	288.1	249.8	232.0	206.6	165.5	156.8
Total	895.6	865.7	797.6	790.0	745.5	748.5

Note: Calculations were limited to calls rather than events.

Observations:

- The top four categories (investigations, traffic stop, person crime, and property crime) averaged between 84 and 85 percent of calls throughout the year:
 - Investigations averaged between 216.3 and 241.2 calls per day throughout the year.
 - Traffic stops averaged between 156.8 and 288.1 calls per day throughout the year.
 - Person crime calls averaged between 137.9 and 148.9 calls per day throughout the year.
 - Property crime calls averaged between 86.4 and 91.9 calls per day throughout the year.
 - Person crime calls accounted for 16 to 20 percent of total calls and property crime calls accounted for 10 to 12 percent of total calls.

FIGURE 5: Average Occupied Times, by Category and Initiator



Note: The figure combines categories using weighted averages from the following table according to the description in Chart 1. For this graph we removed 301 calls with inaccurate busy times.

TABLE 5: Primary Unit's Average Occupied Times, by Category and Initiator

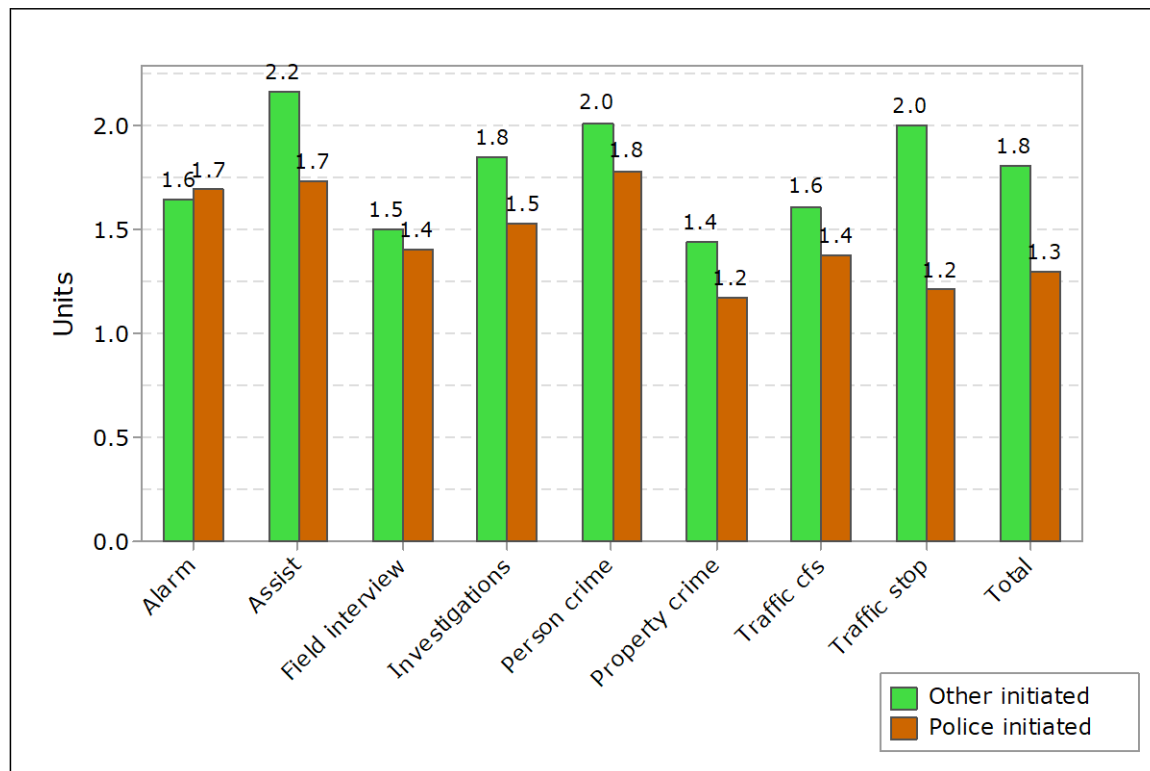
Category	Police-Initiated		Other-Initiated	
	Total Calls	Minutes	Total Calls	Minutes
Alarm	55	21.4	7,004	25.6
Assist other agency	182	61.6	5,249	83.8
Check/investigation	17,852	56.3	49,521	52.0
Crime—persons	1,081	64.5	42,280	67.4
Crime—property	3,150	55.2	29,147	59.2
Disturbance	160	41.4	8,786	25.9
Field Interview	15,349	28.2	8	30.9
Follow up	237	43.7	2,430	44.2
Suspicious person/vehicle	555	39.4	14,026	42.4
Traffic call for service	2,924	34.8	15,356	52.1
Traffic stop	79,075	19.6	2	52.5
Total	120,620	28.1	173,809	54.7

Note: The information in Figure 5 and Table 5 is limited to calls and excludes all events that show zero time on scene. A unit's occupied time is measured as the time from when the call was received until the unit becomes available again. The times shown are the average occupied minutes per call for the primary unit, rather than the total occupied minutes for all units assigned to a call. Observations below refer to times shown within the figure rather than the table.

Observations:

- A unit's average time spent on a call ranged from 20 to 84 minutes overall.
- The longest average times were for other-initiated assist calls.
- The average time spent on person crime calls was 60 minutes for other-initiated calls and 62 minutes for police-initiated calls.
- The average time spent on property crime calls was 59 minutes for other-initiated calls and 55 minutes for police-initiated calls.

FIGURE 6: Number of Responding Units, by Initiator and Category

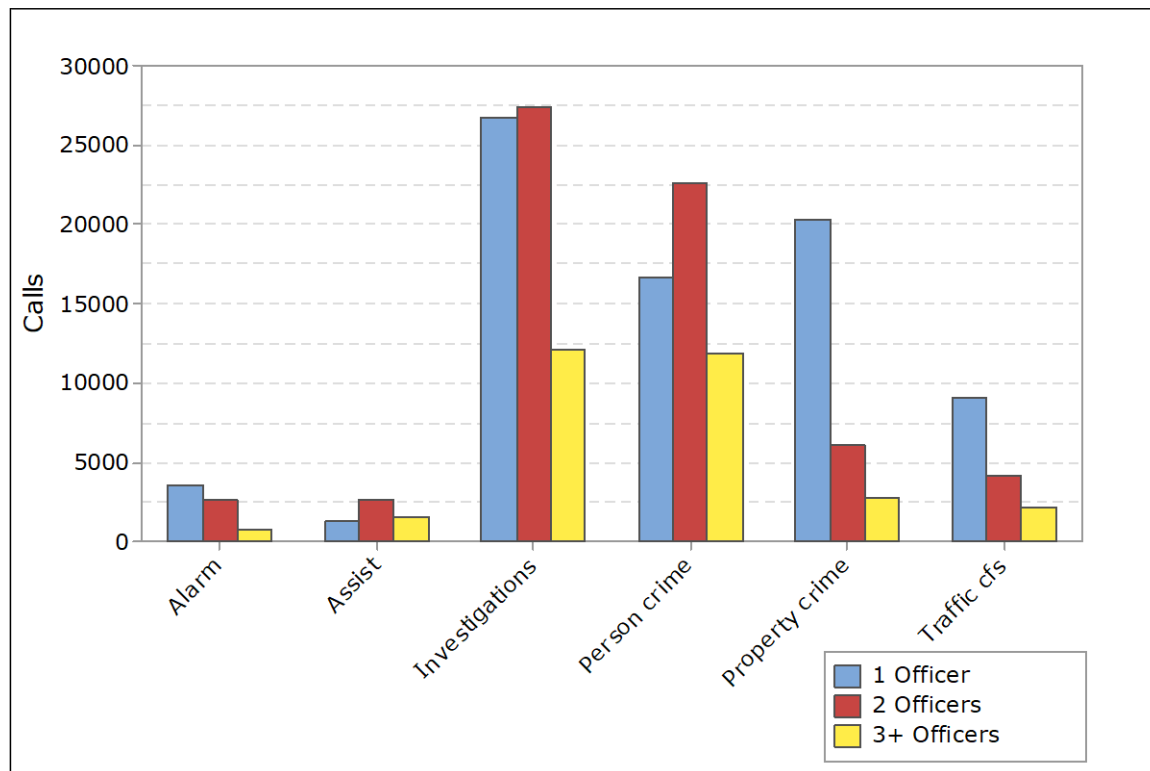


Note: The figure combines categories using weighted averages from the following table according to the description in Chart 1.

TABLE 6: Average Number of Responding Units, by Initiator and Category

Category	Police-Initiated		Other-Initiated	
	Average	Total Calls	Average	Total Calls
Alarm	1.7	55	1.6	7,004
Agency assist	1.7	184	2.2	5,266
Check/investigation	1.5	17,916	1.9	49,558
Crime–persons	1.9	1,081	2.1	42,359
Crime–property	1.2	3,155	1.4	29,165
Disturbance	1.3	160	1.5	8,786
Field interview	1.4	15,364	1.5	8
Follow up	1.3	237	1.3	2,433
Suspicious person/vehicle	1.3	556	1.9	14,045
Traffic call for service	1.4	2,926	1.6	15,373
Traffic stop	1.2	79,097	2.0	2
Total	1.3	120,731	1.8	173,999

FIGURE 7: Number of Responding Units, by Category, Other-initiated Calls



Note: The figure combines categories using weighted averages from the following table according to the description in Chart 1. The 'Field interview' and 'Traffic stop' categories were excluded because they had very few other-initiated calls.

TABLE 7: Number of Responding Units, by Category, Other-initiated Calls

Category	Responding units		
	One	Two	Three or more
Alarm	3,583	2,607	814
Assist other agency	1,202	2,585	1,479
Check/investigation	19,572	20,966	9,020
Crime–persons	11,090	20,125	11,144
Crime–property	20,323	6,022	2,820
Disturbance	5,569	2,452	765
Field interview	5	2	1
Follow up	1,943	368	122
Suspicious person/vehicle	5,150	5,994	2,901
Traffic call for service	9,038	4,172	2,163
Traffic stop	1	0	1
Total	77,476	65,293	31,230

Observations:

- The overall mean number of responding units was 1.3 for police-initiated calls and 1.8 for other-initiated calls.
- The mean number of responding units was as high as 2.2 for assist calls that were other-initiated.
- 45 percent of other-initiated calls involved one responding unit.
- 38 percent of other-initiated calls involved two responding units.
- 18 percent of other-initiated calls involved three or more responding units.
- The largest group of calls with three or more responding units involved investigations (including suspicious incidents).

FIGURE 8: Percentage Calls and Work Hours, by Category, Summer 2014

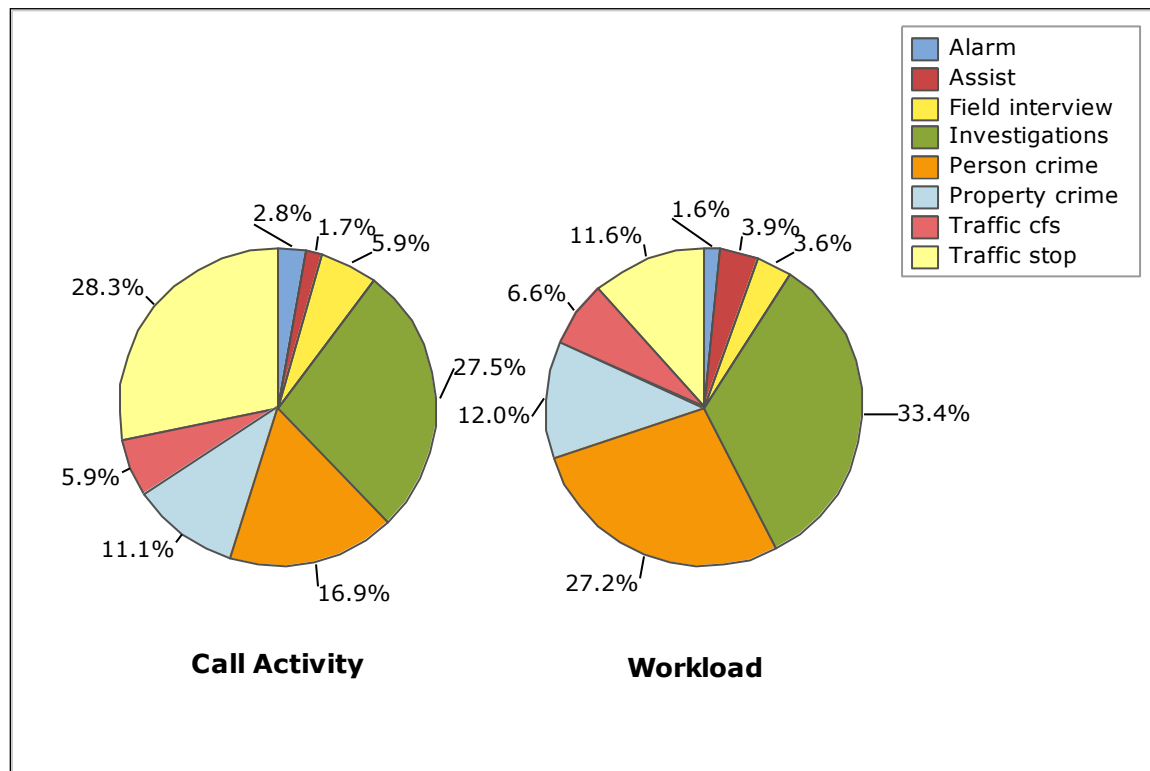


TABLE 8: Calls and Work Hours per Day, by Category, Summer 2014

Category	Per Day	
	Calls	Work Hours
Alarm	23.4	14.8
Assist	14.7	36.2
Field interview	49.5	33.5
Investigations	233.0	307.9
Person crime	143.0	251.1
Property crime	93.6	111.0
Traffic call for service	49.5	60.9
Traffic stop	239.4	107.0
Total	846.3	922.4

Observations:

- Total calls averaged 846 per day, or 35.3 per hour.
- Total workload averaged 922 hours per day, meaning that on average 38.4 officers per hour were busy responding to calls.
- Investigations calls constituted 28 percent of calls and 33 percent of workload.
- Traffic stop calls constituted 28 percent of calls and 12 percent of workload.
- Person crime calls constituted 17 percent of calls and 27 percent of workload.
- Property crime calls constituted 11 percent of calls and 12 percent of workload.
- These top four categories constituted 84 percent of calls and 84 percent of workload.
- It is rare for an agency's work-hours to exceed its number of calls. This implies that an average call requires more than an hour of work when all personnel are considered.

FIGURE 9: Percentage Calls and Work Hours, by Category, Winter 2015

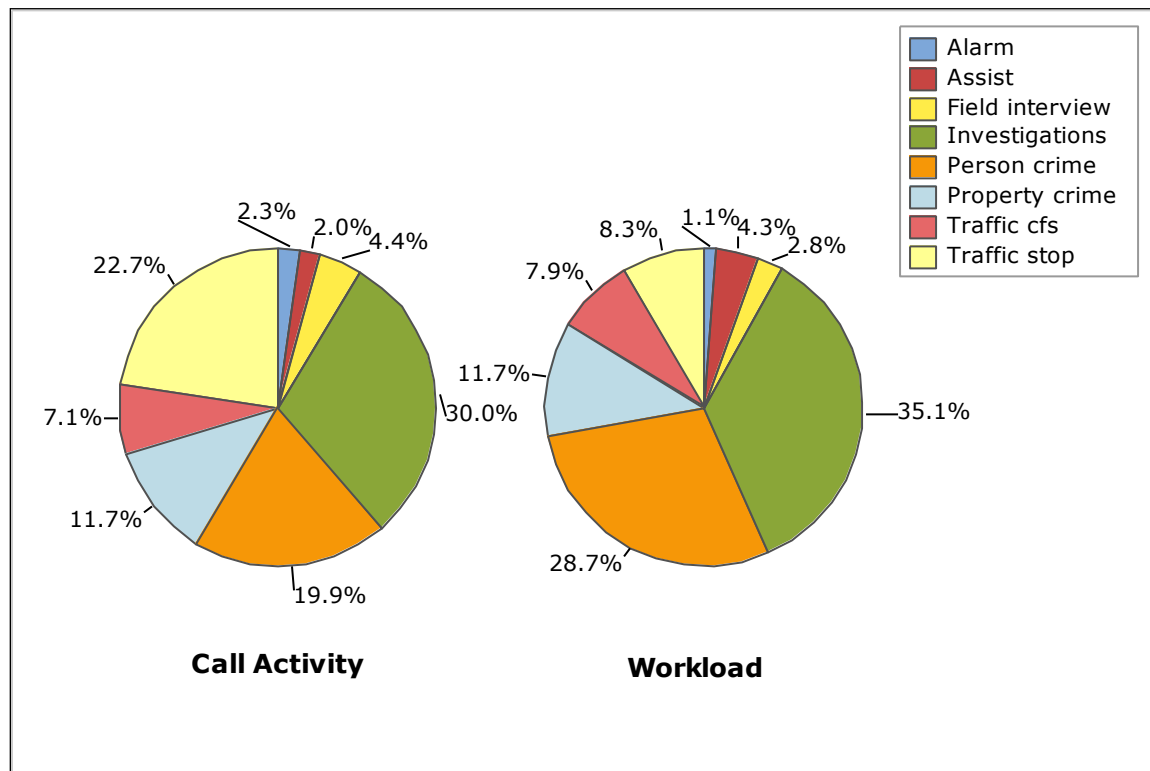


TABLE 9: Calls and Work Hours per Day, by Category, Winter 2015

Category	Per Day	
	Calls	Work Hours
Alarm	17.2	10.1
Assist	15.0	38.2
Field interview	33.0	24.5
Investigations	225.5	311.8
Person crime	149.1	255.1
Property crime	87.7	104.0
Traffic call for service	53.4	70.1
Traffic stop	170.3	73.7
Total	751.3	887.5

Note: Workload calculations focused on calls rather than events.

Observations:

- The average number of calls per day was higher in summer than in winter.
- The average daily workload was higher in summer than in winter.
- Total calls averaged 751 per day, or 31.3 per hour.
- Total workload averaged 887 hours per day, meaning that on average 37.0 officers per hour were busy responding to calls.
- Investigations calls constituted 30 percent of calls and 35 percent of workload.
- Traffic stop calls constituted 23 percent of calls and 8 percent of workload.
- Person crime calls constituted 20 percent of calls and 29 percent of workload.
- Property crime calls constituted 12 percent of calls and 12 percent of workload.
- These top four categories constituted 84 percent of calls and 84 percent of workload.

Noncall Activities

In the period from July 2014 to June 2015, the dispatch center also recorded activities that were not assigned a call number. We focused on those activities that involved a patrol unit. We also limited our analysis to noncall activities that occurred during shifts during which the same patrol unit was also responding to calls for service.

There were a few problems with the data provided, and we made certain assumptions and decisions to address these issues:

- We excluded activities that lasted fewer than 30 seconds. These are irrelevant and contribute little to the overall workload.
- Another portion of activities lasted more than eight hours. As an activity is unlikely to last more than eight hours; thus, we assumed that these records were inaccurate.
- After these exclusions, 197,868 activities remained.

In this section, we describe an activity's average duration, and report on the variation of noncall activities by month, day of week, and time of day. In the next section, we include these activities in the overall workload when comparing the total workload against available personnel in February and August.

The noncall activity codes have been categorized into 'Patrol Activity', 'Directed Patrol,' and 'Administrative' categories, as specified in Table 22 in the appendix.

TABLE 10: Average Occupied Times, by Category

Category	Minutes	Activities
Administrative	35.1	106,391
Directed patrol	51.7	6,125
Patrol activity	29.7	85,352
Total	33.3	197,868

Observations:

- Administrative tasks constituted 54 percent of the total noncall activities for the year, followed by noncall patrol activities, which constituted 43 percent of the total for the year.

FIGURE 10: Activities per Day, by Month

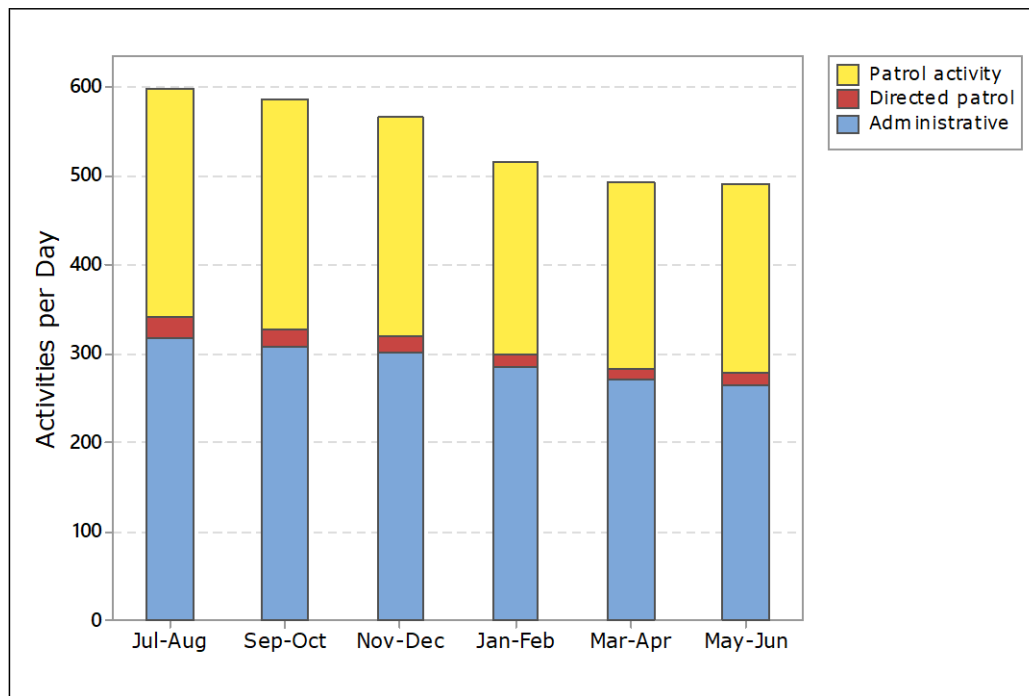


TABLE 11: Activities per Day, by Month

Months	Activities per Day			
	Administrative	Directed Patrol	Patrol Activity	Total
July-August	318.3	23.8	256.7	598.8
September-October	307.6	20.1	259.1	586.7
November-December	301.2	18.5	245.5	565.1
January-February	285.0	13.2	216.6	514.7
March-April	271.2	11.3	211.0	493.5
May-June	265.0	13.6	213.3	491.9
Yearly Average	291.4	16.7	233.7	541.8

Observations:

- The average number of noncall activities per day ranged between 492 and 599 throughout the year, with the highest average in July-August and the lowest average in May-June.
- Administrative activities were consistently between 52 and 55 percent of total noncall activities throughout the year.

FIGURE 11: Activities per Day, by Day of Week

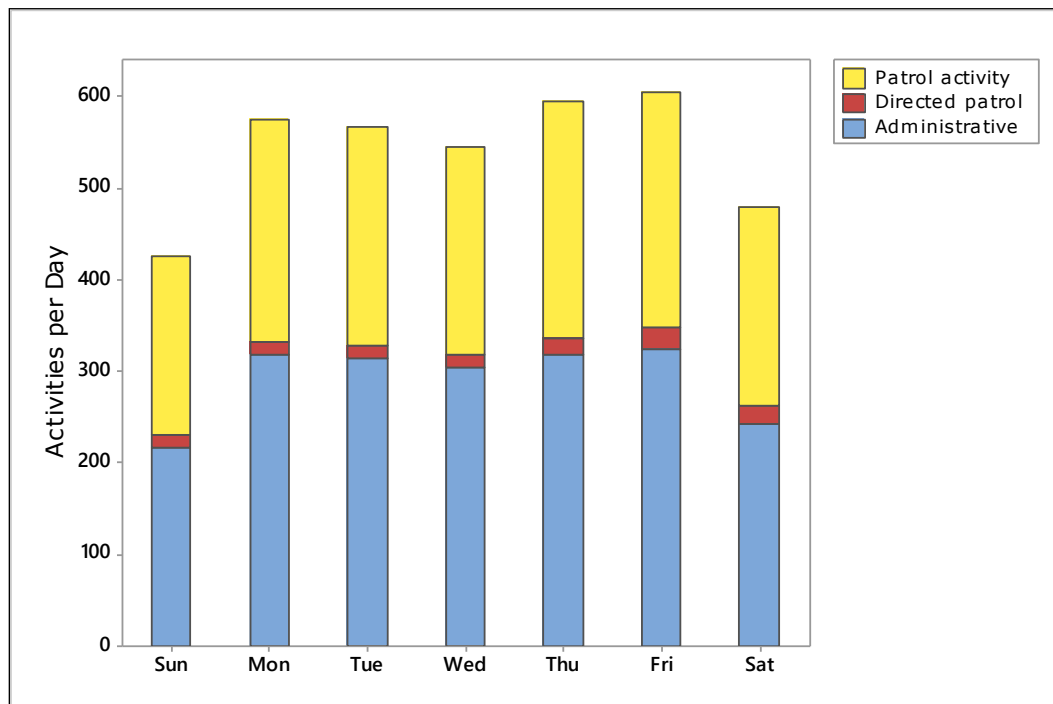


TABLE 12: Activities per Day, by Day of Week

Day of Week	Activities per Day			
	Administrative	Directed Patrol	Patrol Activity	Total
Sunday	217.1	13.4	194.9	425.4
Monday	317.7	14.5	242.5	574.6
Tuesday	313.6	15.2	239.1	567.9
Wednesday	304.2	13.8	228.5	546.4
Thursday	319.5	17.7	258.1	595.3
Friday	324.1	23.9	256.8	604.8
Saturday	243.7	19.0	217.0	479.7
Weekly Average	291.4	16.8	308.2	616.4

Observations:

- Overall, the number of noncall activities was higher during the week than on weekends.
- On average, administrative activities were between 51 and 56 percent of noncall activities and patrol activities were between 42 and 46 percent of noncall activities on each day of the week.

FIGURE 12: Activities per Hour, by Hour of Day

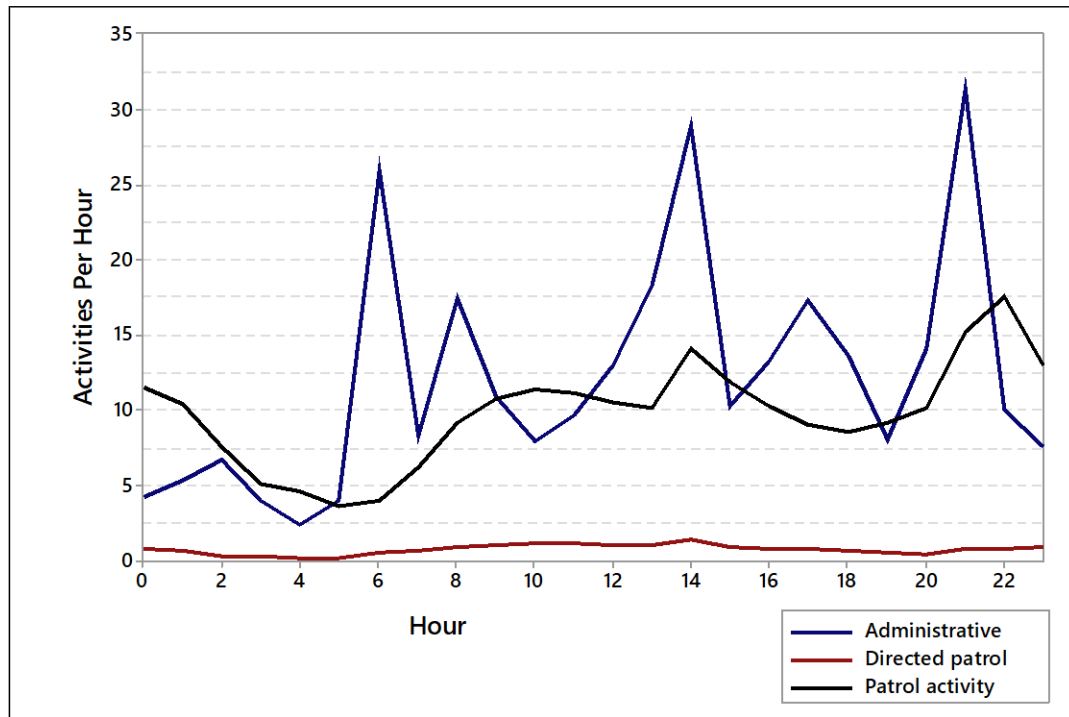


TABLE 13: Activities per Hour, by Hour of Day

Hour	Activities per Hour			
	Administrative	Directed Patrol	Patrol Activity	Total
0	4.2	0.8	11.4	16.4
1	5.3	0.6	10.3	16.3
2	6.6	0.3	7.5	14.3
3	4.0	0.2	5.1	9.2
4	2.4	0.1	4.6	7.1
5	4.0	0.1	3.6	7.7
6	25.9	0.5	4.0	30.5
7	8.2	0.6	6.2	15.0
8	17.4	0.9	9.1	27.4
9	10.9	1.0	10.7	22.6
10	7.9	1.1	11.3	20.2
11	9.6	1.1	11.1	21.9
12	13.0	1.0	10.5	24.4
13	18.3	1.0	10.1	29.4
14	28.8	1.3	14.0	44.1
15	10.2	0.9	11.8	22.9
16	13.2	0.7	10.2	24.1
17	17.2	0.7	9.0	26.8
18	13.5	0.6	8.5	22.6
19	8.0	0.5	9.1	17.5
20	14.1	0.4	10.1	24.6
21	31.3	0.7	15.2	47.2
22	10.0	0.8	17.5	28.3
23	7.5	0.9	13.0	21.4
Total	291.5	16.8	233.8	542.1

Observations:

- The number of activities per hour was highest between 9:00 p.m. and 10:00 p.m. Sixty-six percent of the activities during that hour were administrative activities.
- Administrative activities peaked at three times throughout the day between 6:00 a.m. and 7:00 a.m., between 2:00 p.m. and 3:00 p.m., and between 9:00 p.m. and 10:00 p.m.

Deployment

For this study, we examined deployment information for four weeks in summer (July 7 through August 3, 2014) and four weeks in winter (March 1 through 28, 2015). The police department's main patrol force includes patrol officers, lead patrol officers (LPOs), and sergeants. In addition, the department uses community service officers (CSOs), bike patrol, telephone reporting units, walking patrol, and bravo units.

The Tucson Police Department's patrol force is scheduled starting at numerous times in 10-hour shifts that always start at the beginning of an hour; shift start times vary depending upon division and day of week. Scheduled start times include between 5:00 a.m. and 9:00 a.m., 11:00 a.m., noon, 2:00 p.m., between 4:00 p.m. and 6:00 p.m., 9:00 p.m., and 10:00 p.m. *The most common shift start times are 6:00 a.m., 2:00 p.m. and 9:00 p.m.*

The police department's main patrol force deployed an average of 70.7 officers per hour during the 24-hour day in summer and deployed an average of 67.5 officers per hour during the 24-hour day in winter. When additional units are included (CSOs, etc.), the department averaged 82.2 officers per hour during the 24-hour day in summer and 75.6 officers per hour during the 24-hour day in winter.

In this section, we describe the deployment and workload in distinct steps, distinguishing between summer and winter and between weekdays (Monday through Friday) and weekends (Saturday and Sunday).

- First, we focus on patrol deployment alone.
- Next, we compare deployment against workload based on other-initiated calls for service.
- Then, we compare deployment against "main" workload, which includes police-initiated calls.
- Finally, we compare "all" workload, which includes out-of-service and directed patrol activities.

Comments follow each set of four figures, with separate discussions for summer and winter.

FIGURE 13: Deployed Officers, Weekdays, Summer 2014

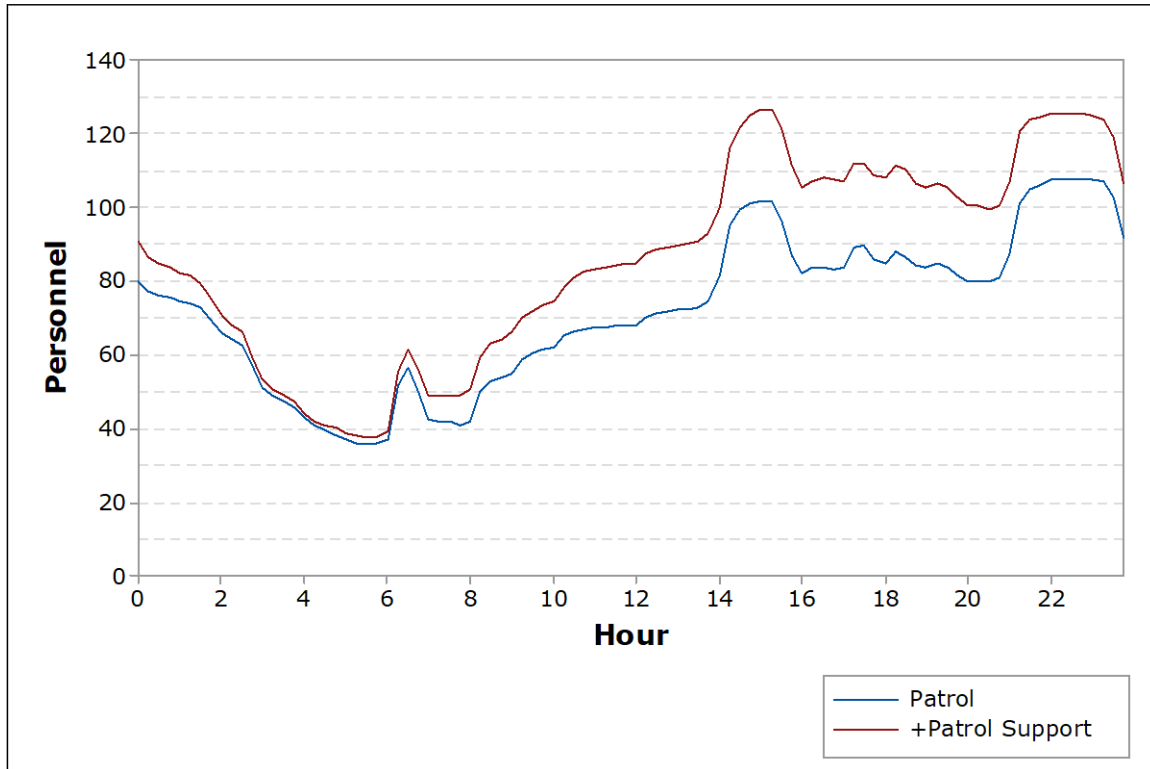


FIGURE 14: Deployed Officers, Weekends, Summer 2014

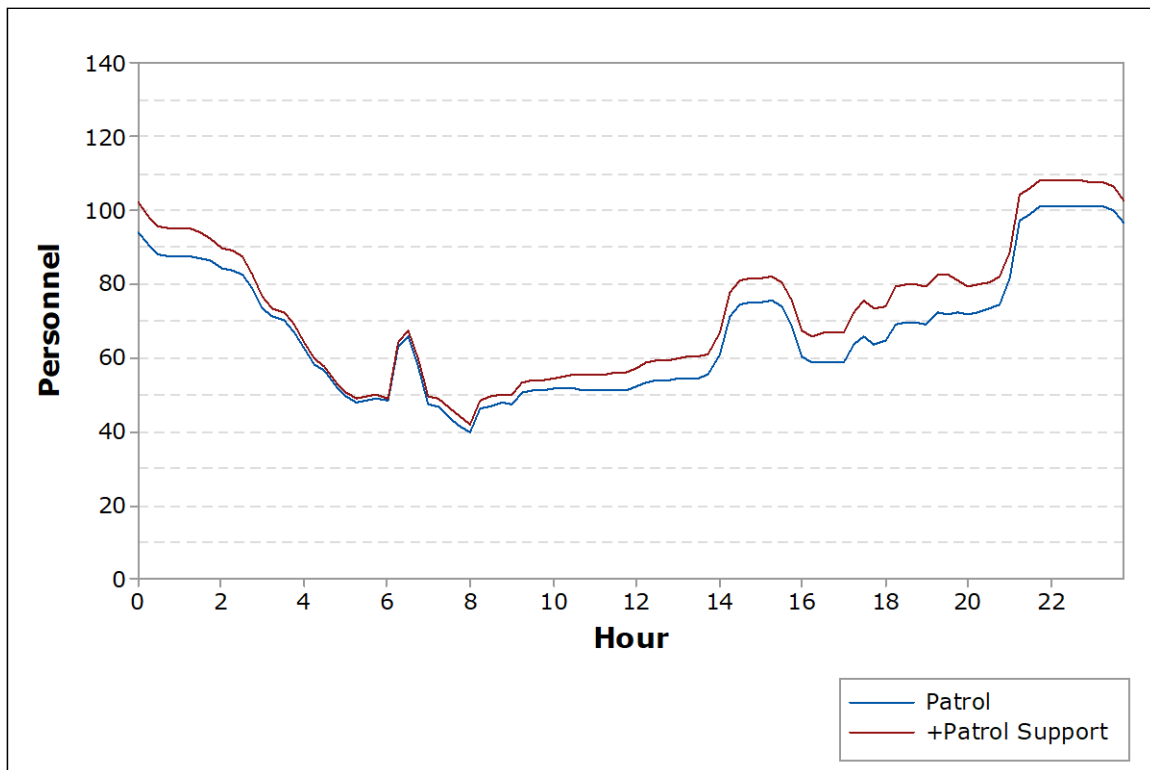


FIGURE 15: Deployed Officers, Weekdays, Winter 2015

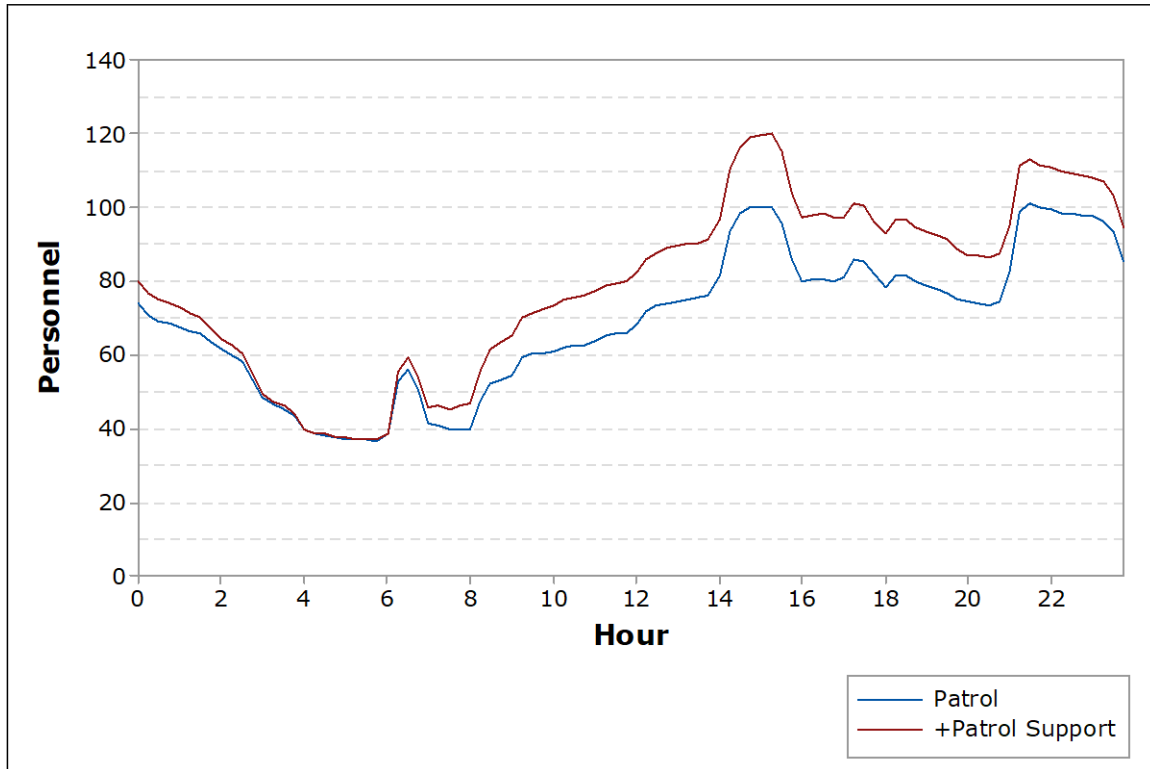
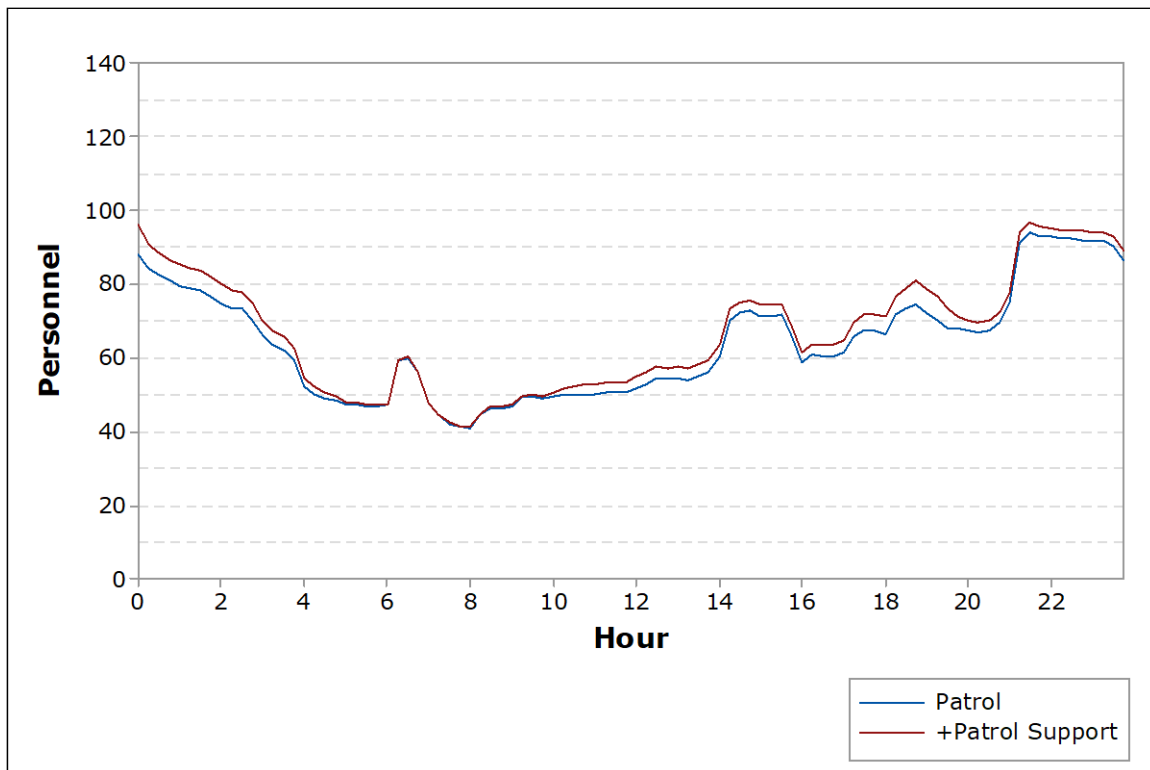


FIGURE 16: Deployed Officers, Weekends, Winter 2015



Observations:

- For summer:
 - The average deployment was 86.0 officers per hour during the week and 72.8 officers per hour on the weekend.
 - Average deployment varied from 37.5 to 126.3 officers per hour on weekdays and 42.0 to 108.0 officers per hour on weekends.
- For winter:
 - The average deployment was 79.0 officers per hour during the week and 66.9 officers per hour on the weekend.
 - Average deployment varied from 36.9 to 119.9 officers per hour on weekdays and 41.1 to 96.4 officers per hour on weekends.

FIGURE 17: Deployment and Other-Initiated Workload, Weekdays, Summer 2014

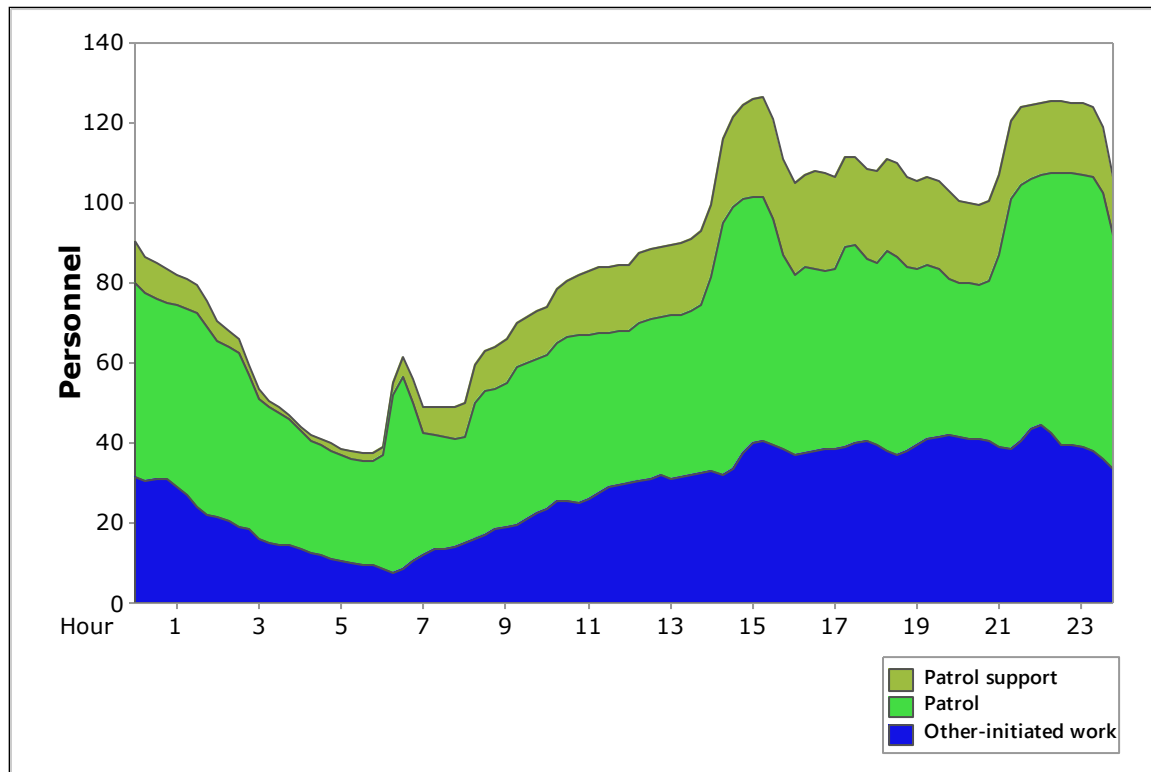


FIGURE 18: Deployment and Other-Initiated Workload, Weekends, Summer 2014

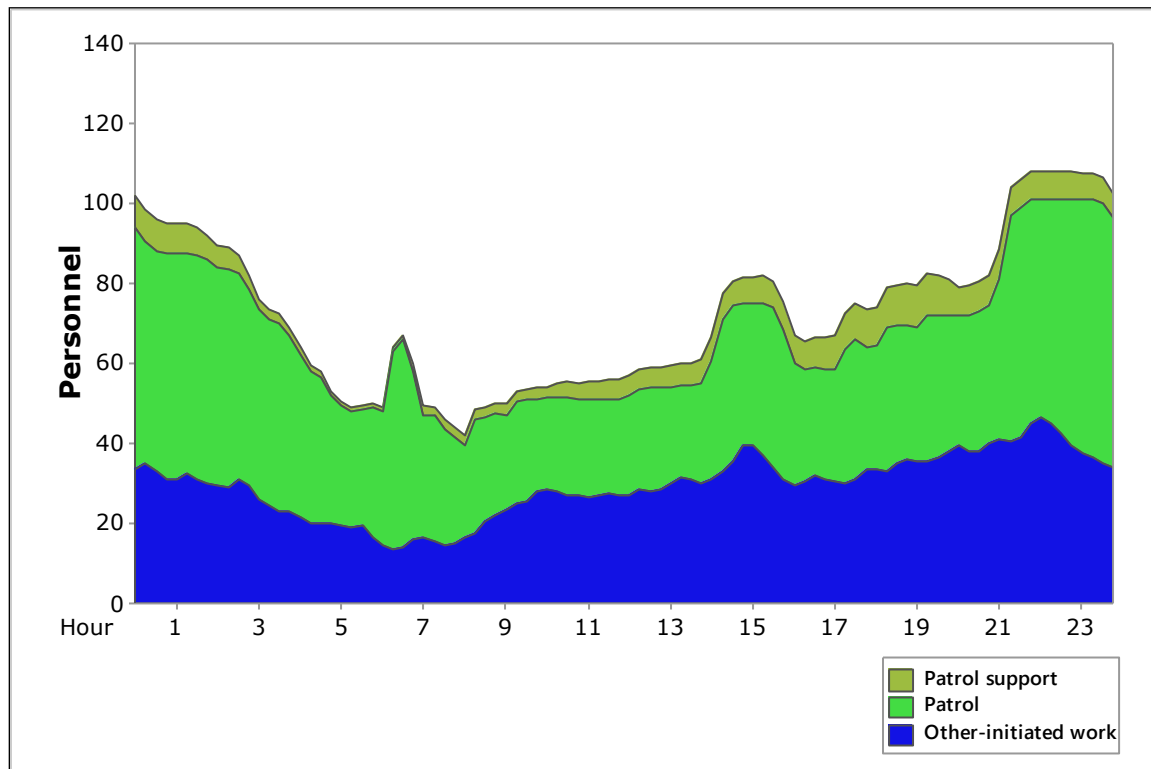


FIGURE 19: Deployment and Other-Initiated Workload, Weekdays, Winter 2015

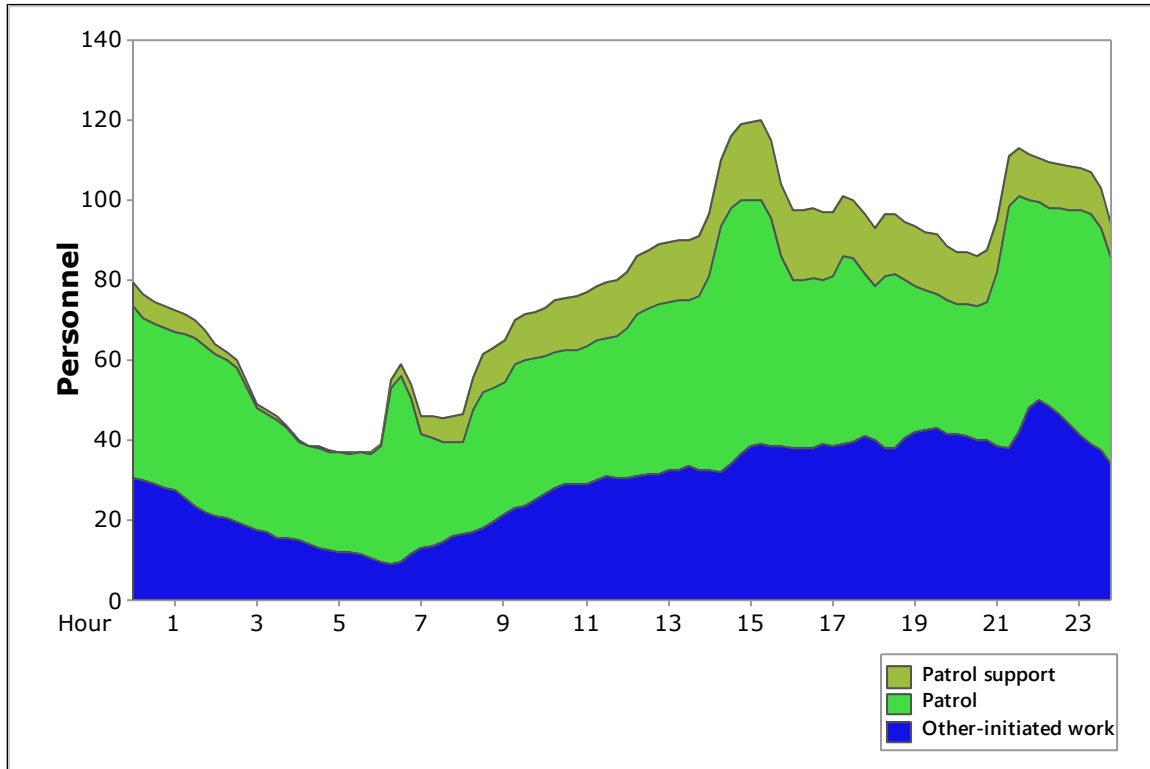
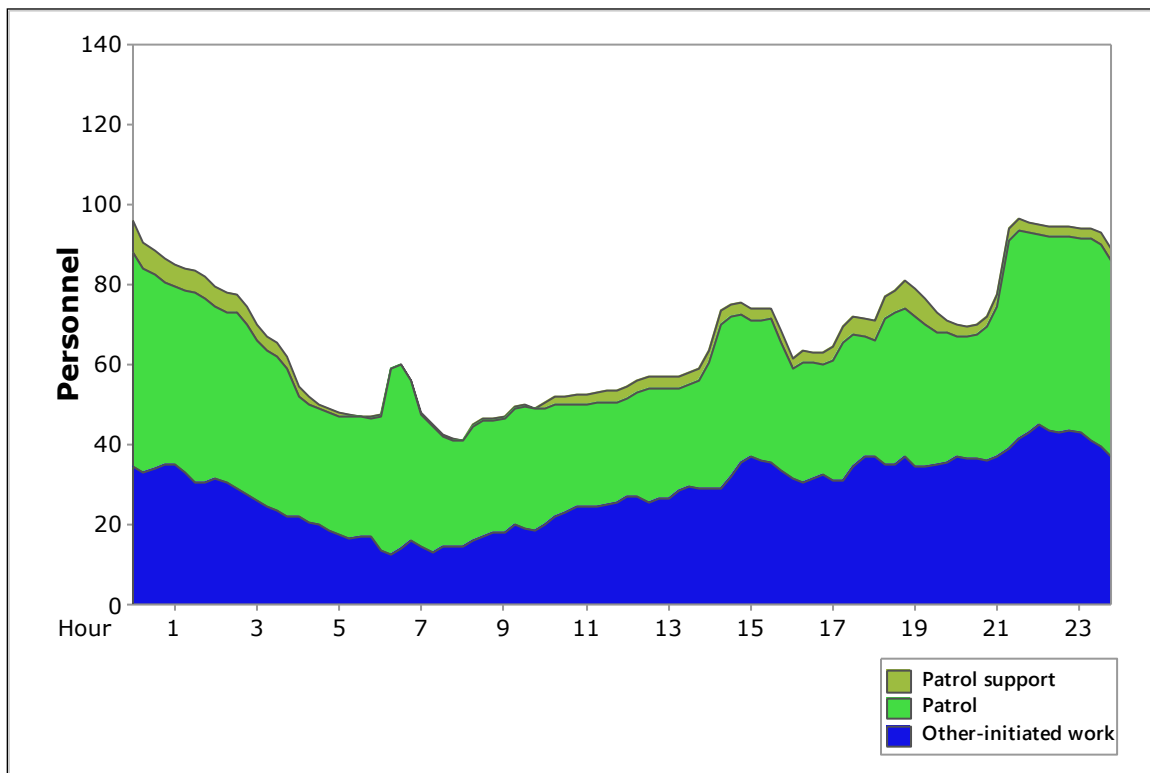


FIGURE 20: Deployment and Other-Initiated Workload, Weekends, Winter 2015



Observations:

- For summer:
 - Average other-initiated workload was 28.2 officers per hour during the week and 29.5 officers per hour on weekends.
 - This was approximately 33 percent of hourly deployment during the week and 41 percent of hourly deployment on weekends.
 - During the week, workload reached a maximum of 41 percent of deployment between 7:45 p.m. and 8:15 p.m.
 - On weekends, workload reached a maximum of 52 percent of deployment between 9:45 a.m. and 10:15 a.m. and between 1:15 p.m. and 1:30 p.m.
- For winter:
 - Average other-initiated workload was 29.2 officers per hour during the week and 28.6 officers per hour on weekends.
 - This was approximately 37 percent of hourly deployment during the week and 43 percent of hourly deployment on weekends.
 - During the week, workload reached a maximum of 47 percent of deployment between 7:30 p.m. and 8:00 p.m.
 - On weekends, workload reached a maximum of 53 percent of deployment between 6:00 p.m. and 6:15 p.m. and between 8:00 p.m. and 8:30 p.m.

FIGURE 21: Deployment and Main Workload, Weekdays, Summer 2014

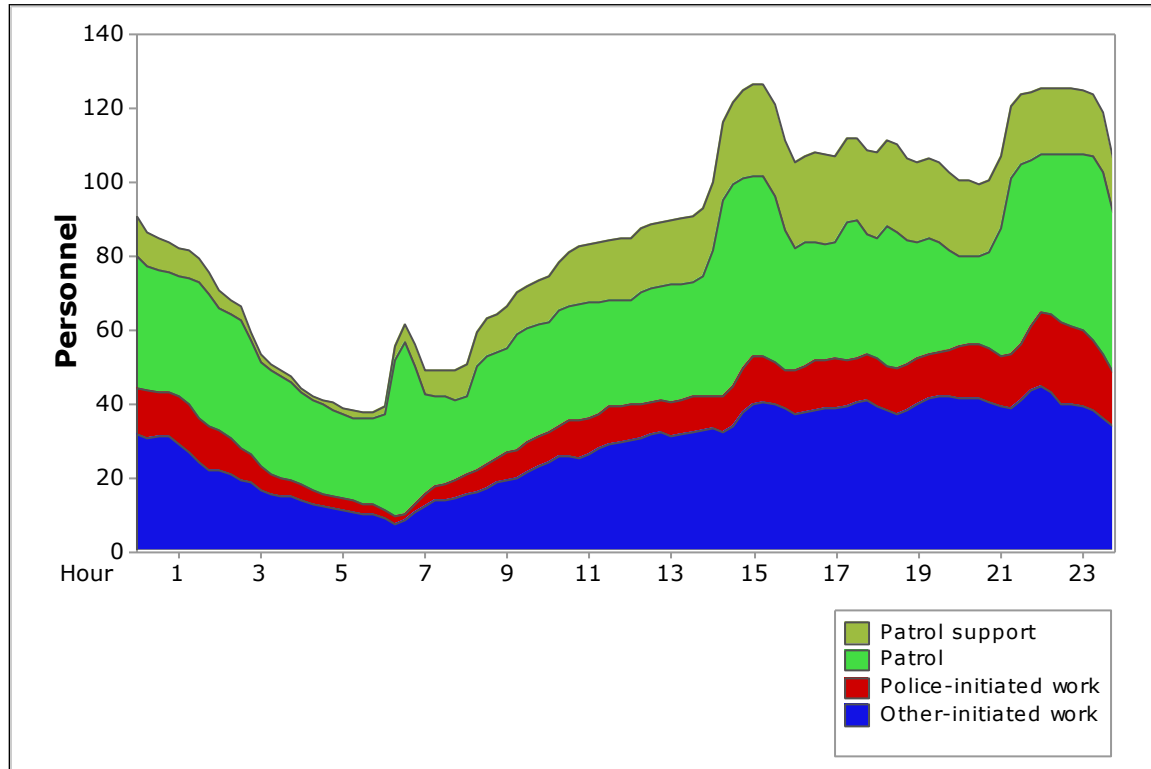


FIGURE 22: Deployment and Main Workload, Weekends, Summer 2014

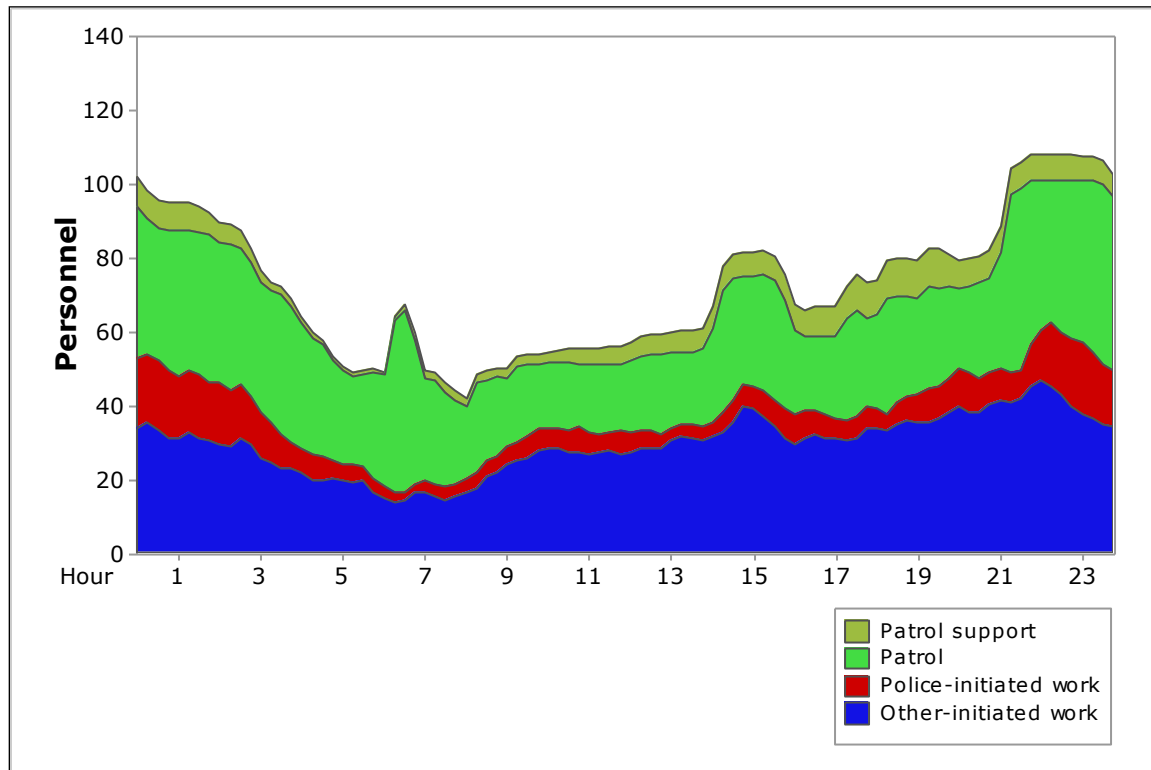


FIGURE 23: Deployment and Main Workload, Weekdays, Winter 2015

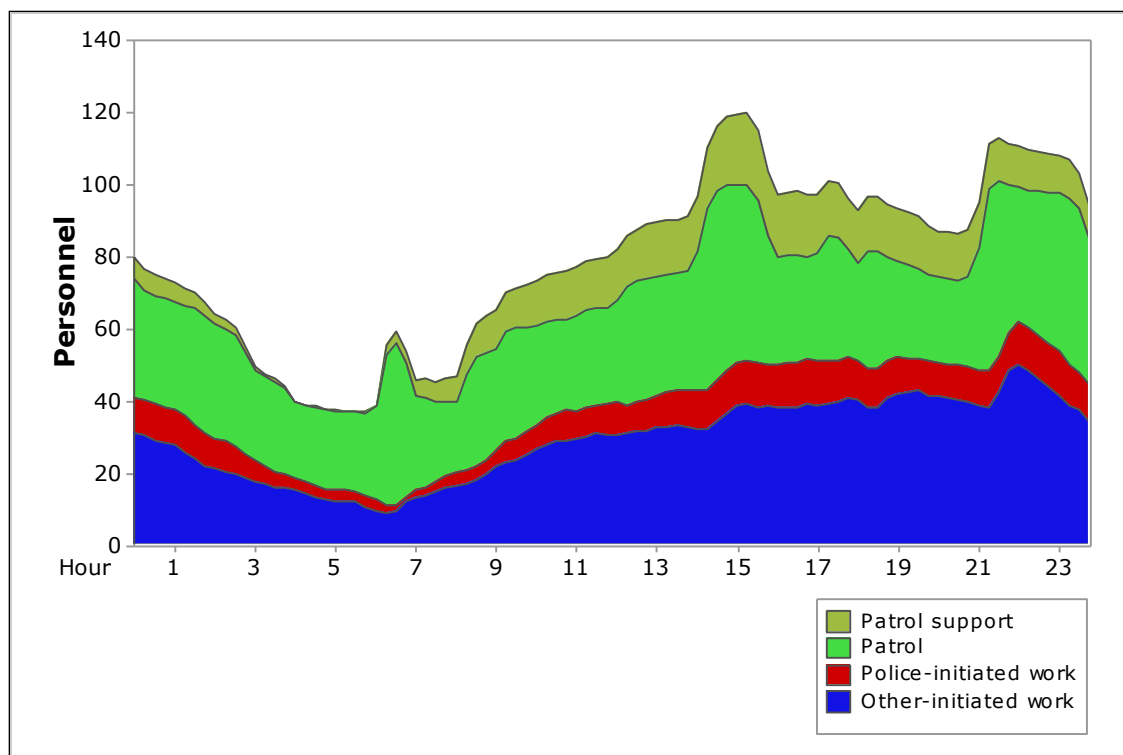
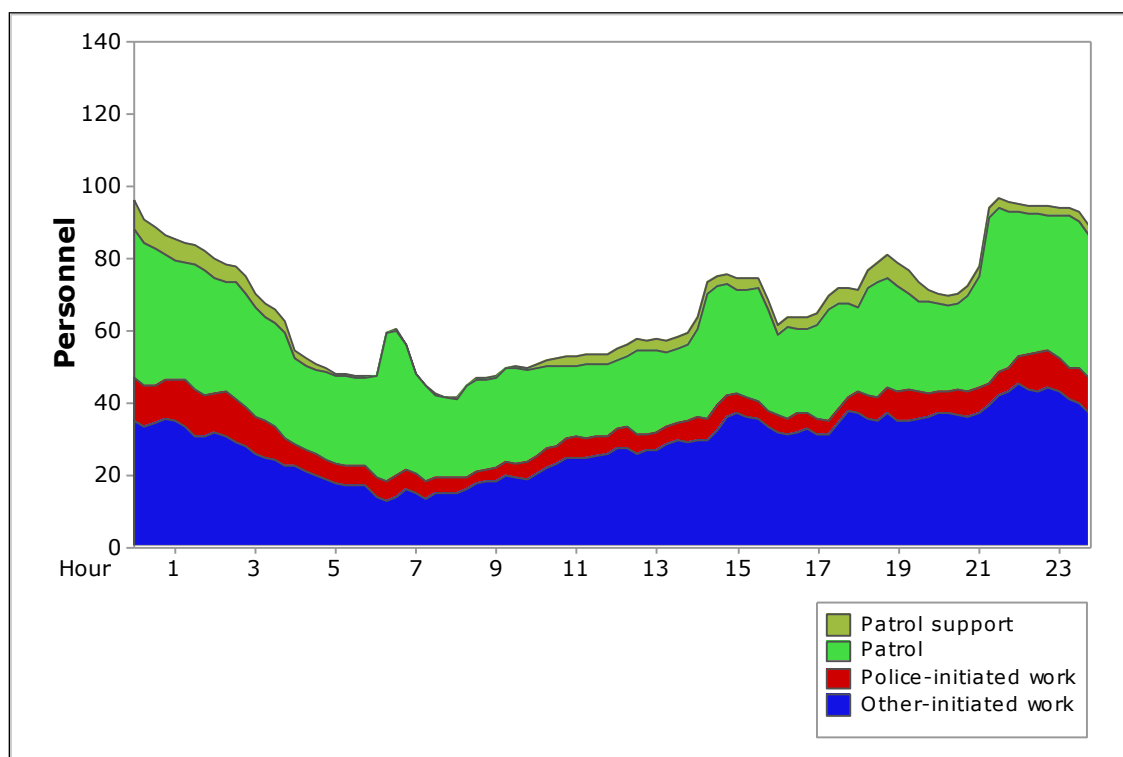


FIGURE 24: Deployment and Main Workload, Weekends, Winter 2015



Note: Figures 21 to 24 show deployment along with workload from other-initiated and police-initiated calls.

Observations:

- For summer:
 - Average workload was 38.4 officers per hour during the week and 37.7 officers per hour on weekends.
 - This was approximately 45 percent of hourly deployment during the week and 52 percent of hourly deployment on weekends.
 - During the week, workload reached a maximum of 56 percent of deployment between 8:15 p.m. and 8:45 p.m.
 - On weekends, workload reached a maximum of 63 percent of deployment between 9:45 a.m. and 10:15 a.m. and between 8:00 p.m. and 8:15 p.m.
- For winter:
 - Average workload was 37.4 officers per hour during the week and 35.2 officers per hour on weekends.
 - This was approximately 47 percent of hourly deployment during the week and 53 percent of hourly deployment on weekends.
 - During the week, workload reached a maximum of 58 percent of deployment between 7:45 p.m. and 8:15 p.m.
 - On weekends, workload reached a maximum of 62 percent of deployment between 8:00 p.m. and 8:30 p.m.

FIGURE 25: Deployment and All Workload, Weekdays, Summer 2014

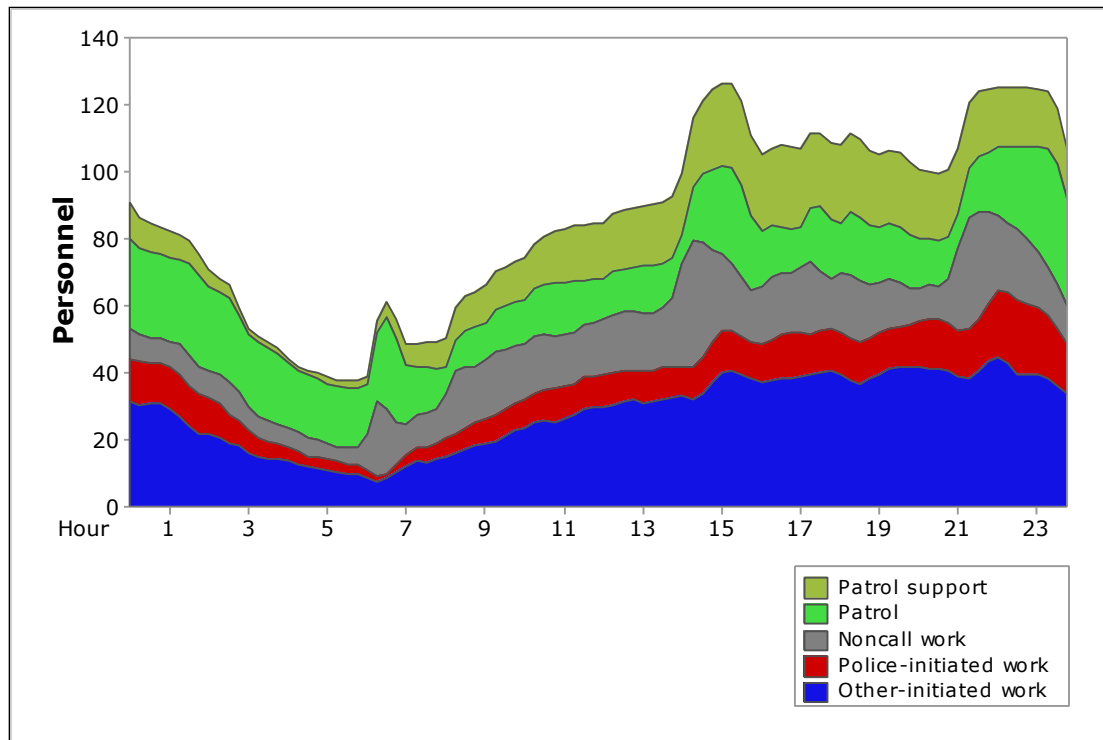


FIGURE 26: Deployment and All Workload, Weekends, Summer 2014

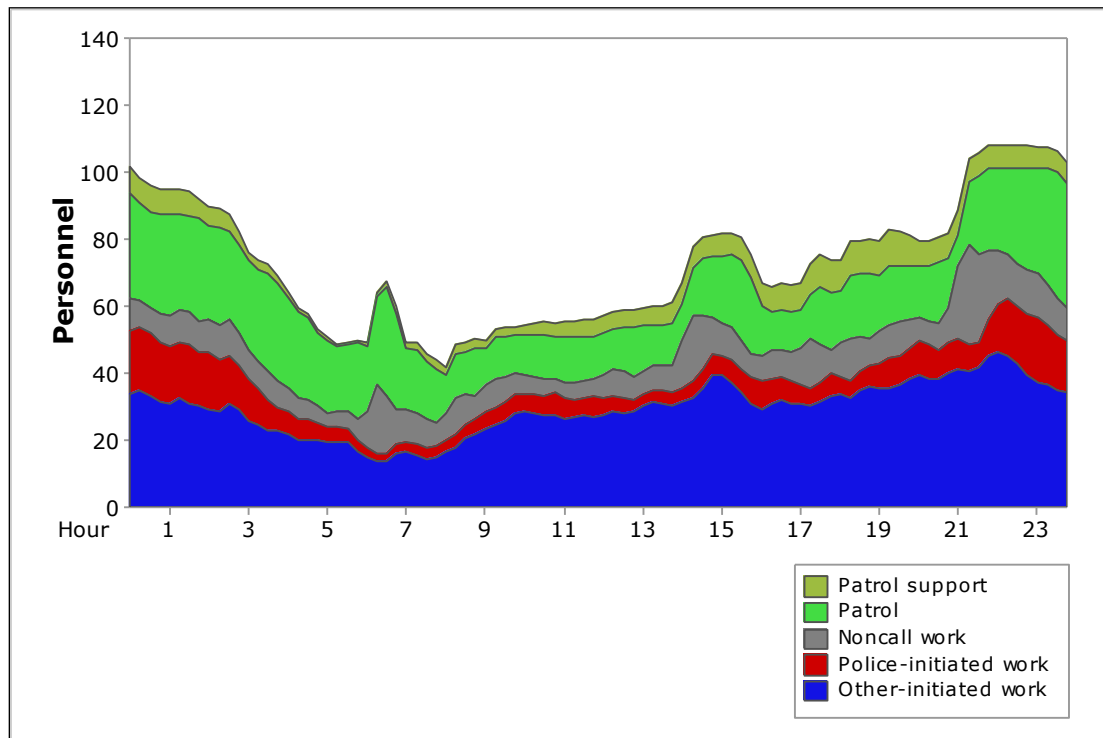


FIGURE 27: Deployment and All Workload, Weekdays, Winter 2015

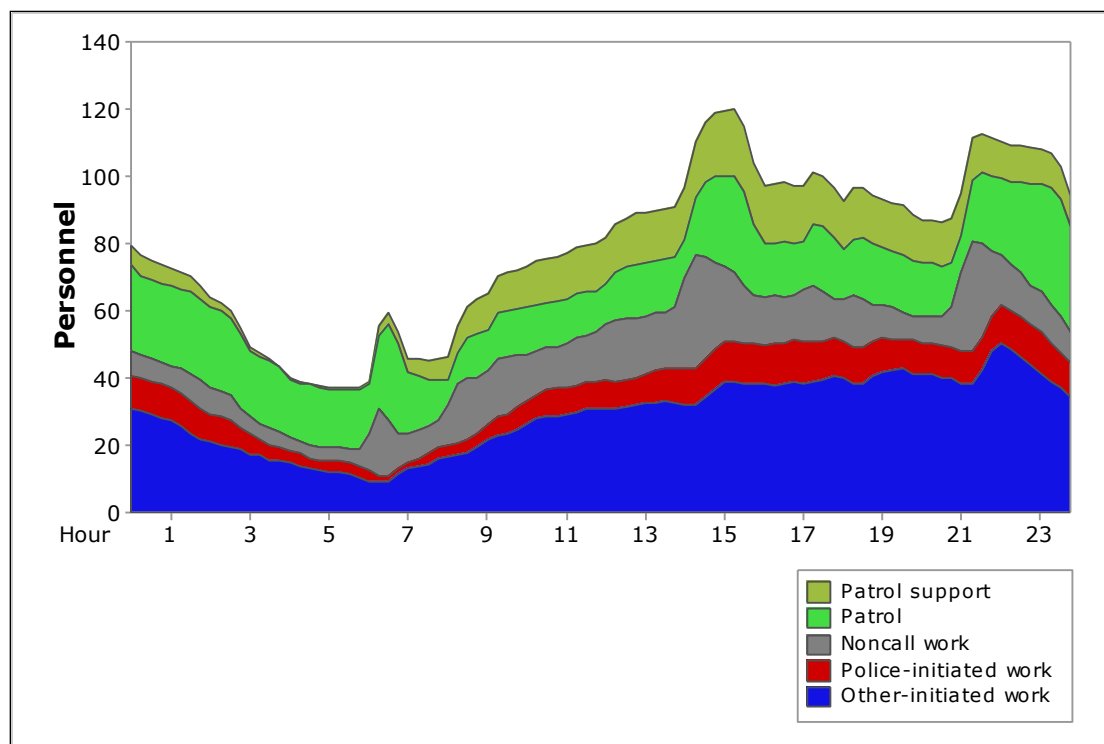
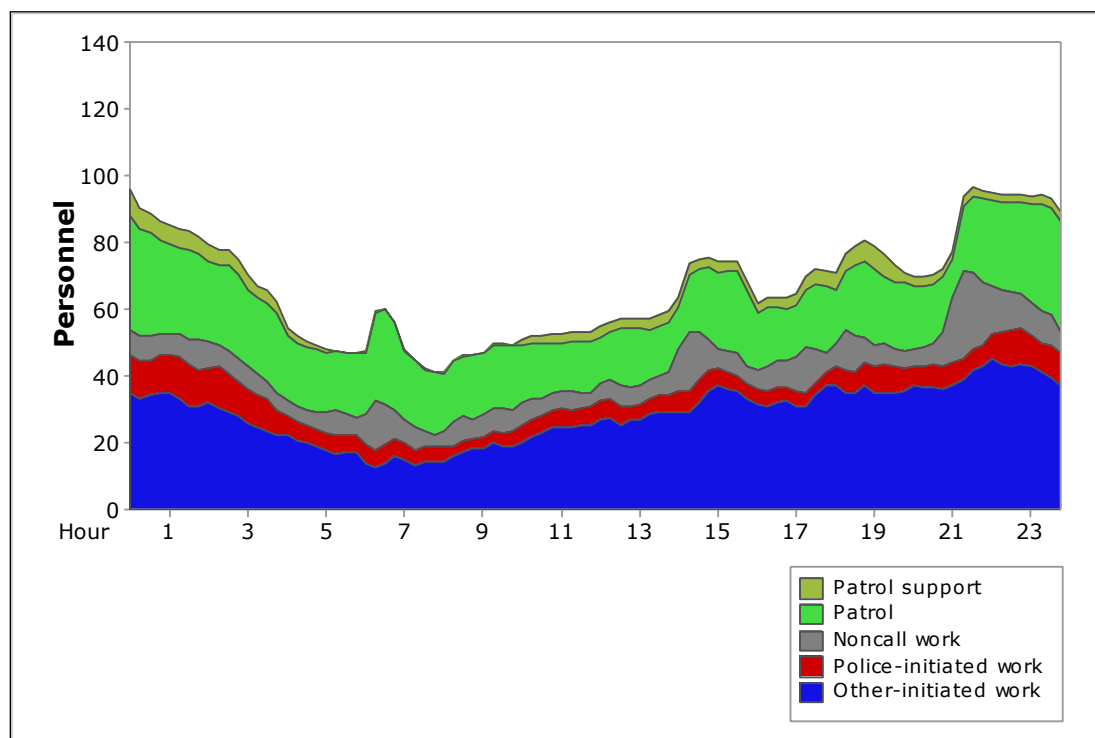


FIGURE 28: Deployment and All Workload, Weekends, Winter 2015



Note: Figures 25 to 28 show deployment along with all workload from other-initiated calls, police-initiated calls, directed patrol activities, and out-of-service (call and noncall) activities.

Observations:

- For summer:
 - Average workload was 53.6 officers per hour during the week and 47.4 officers per hour on weekends.
 - This was approximately 62 percent of hourly deployment during the week and 65 percent of hourly deployment on weekends.
 - During the week, workload reached a maximum of 73 percent of deployment between 2:00 p.m. and 2:15 p.m. and between 9:00 p.m. and 9:15 p.m.
 - On weekends, workload reached a maximum of 82 percent of deployment between 9:00 p.m. and 9:15 p.m.
- For winter:
 - Average workload was 50.2 officers per hour during the week and 43.2 officers per hour on weekends.
 - This was approximately 64 percent of hourly deployment during the week and 65 percent of hourly deployment on weekends.
 - During the week, workload reached a maximum of 76 percent of deployment between 9:00 p.m. and 9:15 p.m.
 - On weekends, workload reached a maximum of 82 percent of deployment between 9:00 p.m. and 9:15 p.m.

Response Times

We analyzed the response times, separating the duration into dispatch and travel time, to determine whether response times varied by priority. Response time is measured as the difference between when a call is received and when the first unit arrives on scene. This is further divided into dispatch delay and travel time. Dispatch delay is the time between when a call is received and when the first unit is dispatched. Travel time is the remaining time until the first unit arrives on scene.

For the entire year, we began with 294,730 calls. We limited our analysis to 158,430 calls after excluding police-initiated calls, calls lacking valid arrival times, calls with an agreed response indicator, and calls assigned to the call-back groups. In addition, we excluded calls whose response time exceeded eight hours. Finally, when calculating averages, any call whose response time exceeded three hours was treated as three hours in duration.

A priority code is assigned to calls by the department, with 1 as the highest priority. Table 14 shows average response times by priority, with an additional line for injury accidents. Figure 29 focuses on calls whose police response was labeled as “high.” All calls coded as “10-52” were included in the “injury accidents” category.

Call priorities are occasionally upgraded or downgraded. Table 15 shows average response times by priority after excluding calls where the priority was changed.

TABLE 14: Average Dispatch, Travel, and Response Times, by Priority

Priority	Dispatch	Travel	Response	Total Calls
1	2.6	3.9	6.5	2,431
2	7.0	7.8	14.8	41,624
3	20.3	8.9	29.2	63,423
4	86.7	11.4	98.1	49,325
5-9	20.0	4.3	24.3	1,627
All	37.2	9.3	46.5	158,430
Injury accidents	7.3	7.9	15.3	3,440

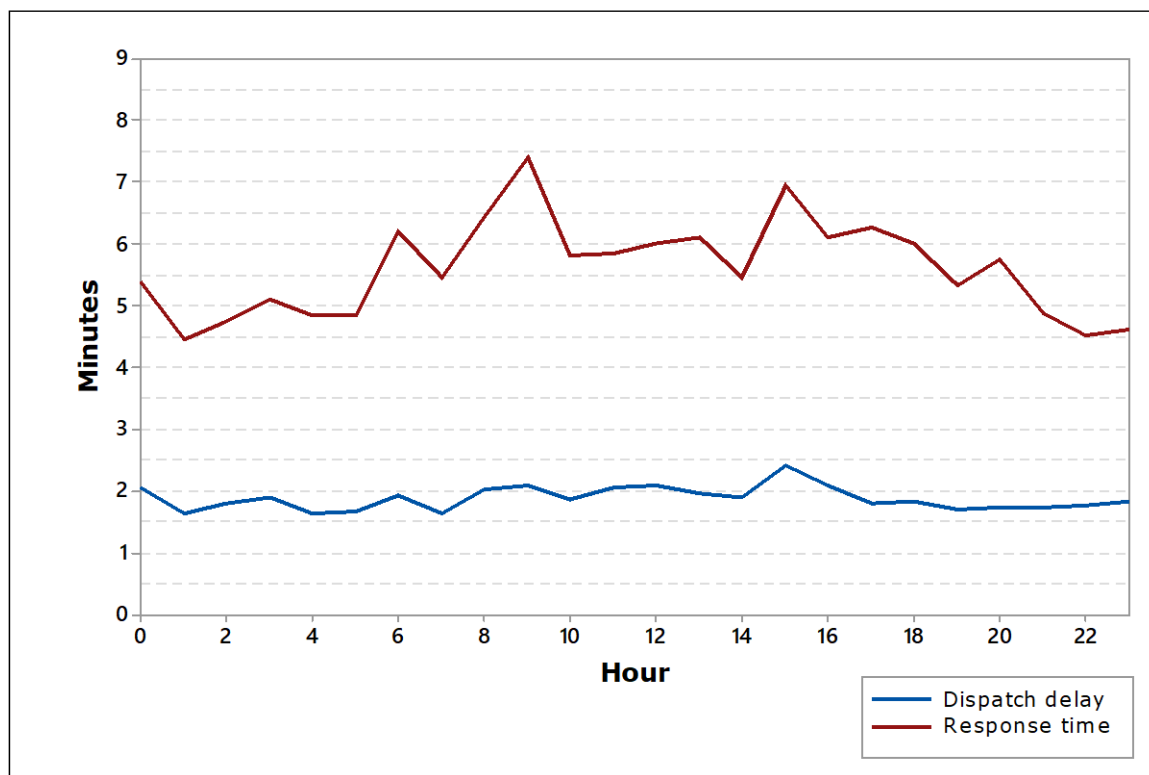
Note: The total average is weighted according to the number of calls within each priority level.

TABLE 15: Average Dispatch, Travel, and Response Times, by Priority, Excluding Revised Priorities

Priority	Dispatch	Travel	Response	Total Calls
1	1.9	3.7	5.6	1,900
2	5.9	7.7	13.7	37,163
3	18.9	8.8	27.8	57,927
4	86.7	11.2	98.0	46,292
5-9	19.6	4.2	23.8	1,603
All	37.0	9.2	46.2	144,885

Note: The total average is weighted according to the number of calls within each priority level.

FIGURE 29: Average Response Times and Dispatch Delays for High-Priority Calls, by Hour, Excluding Revised Priorities



Observations:

- High-priority calls had an average response time of 6.4 minutes, lower than the overall average of 31.1 minutes for all calls. The average response time for high-priority calls was 5.5 minutes when calls with revised priorities were excluded.
- Average dispatch delay was 1.9 minutes for high-priority calls, compared to 46.2 minutes overall.
- Average response time for accidents with injury was 15.3 minutes, with a dispatch delay of 7.3 minutes.
- For high-priority calls, the longest response times were between 9:00 a.m. and 10:00 a.m., with an average of 7.4 minutes.
- For high-priority calls, the shortest response times were between 1:00 a.m. and 2:00 a.m., with an average of 4.4 minutes.

FIGURE 30: Average Dispatch Delays by Priority and Hour, Excluding Revised Priorities

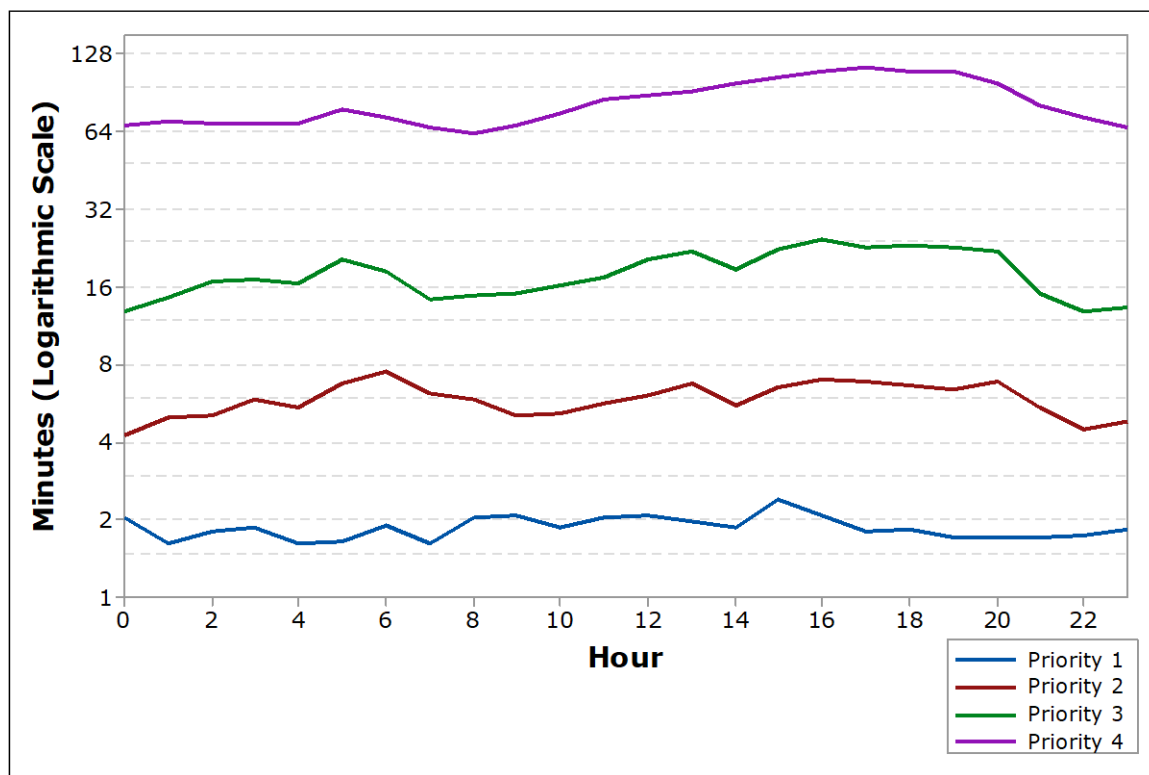


TABLE 16: Average Dispatch, Travel, and Response Times, by Priority, Excluding Revised Priorities

Priority	Dispatch Delay		Number of Calls
	Average	90th Percentile	
1	1.9	3.0	1,900
2	5.9	13.0	37,163
3	18.9	49.0	57,927
4	86.7	271.8	46,292

Observations:

- High-priority calls had short dispatch delays, with an average of 1.9 minutes and a 90th percentile value of 3.0 minutes.
- Low-priority calls had long dispatch delays, with an average of 86.7 minutes (approximately 1.5 hours) and a 90th percentile value of 271.8 minutes, or approximately 4.5 hours.

Division Workload and Response Times

The department consists of five divisions: Operations Division South (ODS), Operations Division West (ODW), Operations Division Midtown (ODM), Operations Division East (ODE), and Operations Division Downtown (ODD). In this section, we analyze the data by division. First, we examine the proportion of total calls by division and compare response times. Then, we repeat our analysis comparing workload and available personnel, focusing on each division individually,

FIGURE 31: Percentage Calls and Work Hours, by Division

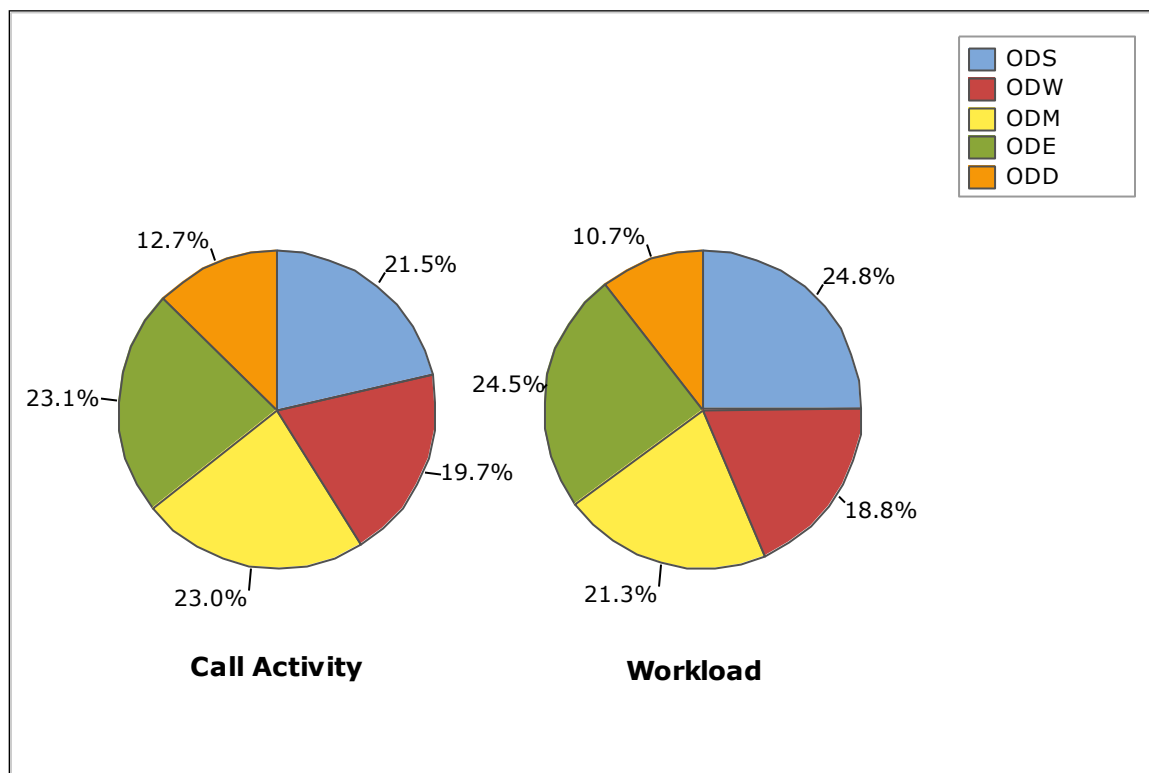


TABLE 17: Calls and Work Hours by Division

Division	Per Day		Area (Sq. Miles)	Population
	Calls	Work Hours		
ODS	173.9	224.1	52.4	121,526
ODW	158.7	169.4	22.5	83,634
ODM	186.0	192.0	31.8	103,969
ODE	186.3	221.2	118.9	184,288
ODD	102.4	96.3	10.6	34,531
Other	0.1	0.1	NA	NA
Total	807.5	903.0	236.3	527,948

TABLE 18: Average Response Times by Division and Priority

Priority	Division	Dispatch	Travel	Response	Calls	Area
1	ODS	1.8	3.8	5.6	455	52.4
	ODW	1.9	2.8	4.6	389	22.5
	ODM	1.9	4.0	5.9	494	31.8
	ODE	1.9	4.8	6.7	413	118.9
	ODD	1.9	2.3	4.2	149	10.6
	Total	1.9	3.7	5.6	1,900	236.3
2	ODS	6.8	8.0	14.8	8,544	52.4
	ODW	5.1	6.5	11.6	7,421	22.5
	ODM	6.1	7.8	13.9	8,813	31.8
	ODE	6.1	9.3	15.5	9,294	118.9
	ODD	3.9	5.1	9.1	3,091	10.6
	Total	5.9	7.7	13.7	37,163	236.3
3	ODS	23.7	9.9	33.6	11,677	52.4
	ODW	18.6	7.5	26.1	11,620	22.5
	ODM	20.1	8.9	28.9	14,000	31.8
	ODE	18.8	10.5	29.3	14,276	118.9
	ODD	8.6	5.6	14.2	6,354	10.6
	Total	18.9	8.8	27.8	57,927	236.3
4	ODS	106.8	12.4	119.2	9,921	52.4
	ODW	84.2	9.8	94.0	9,746	22.5
	ODM	94.9	11.0	106.0	10,476	31.8
	ODE	88.5	13.4	101.9	11,060	118.9
	ODD	31.8	7.4	39.3	5,089	10.6
	Total	86.7	11.2	98.0	46,292	236.3

Note: Calls with revised priorities, agreed response calls, and calls assigned to the phone response groups were not included in the calculations.

Observations:

- ODM and ODE were the divisions with the highest number of calls per day.
- ODS and ODE were the divisions with the highest daily workloads.
- ODD had the least number of calls per day and lowest daily workload.
- The average response time for priority 1 calls was below 7 minutes for all divisions.
- ODE has the largest area to cover and the longest average travel times.
- The average response time for priority 4 calls was above 90 minutes for all divisions except for ODD.
- ODS had the longest average response times for priority 4 calls with an average dispatch delay of 107 minutes.

FIGURE 32: ODS, Weekdays, Summer 2014

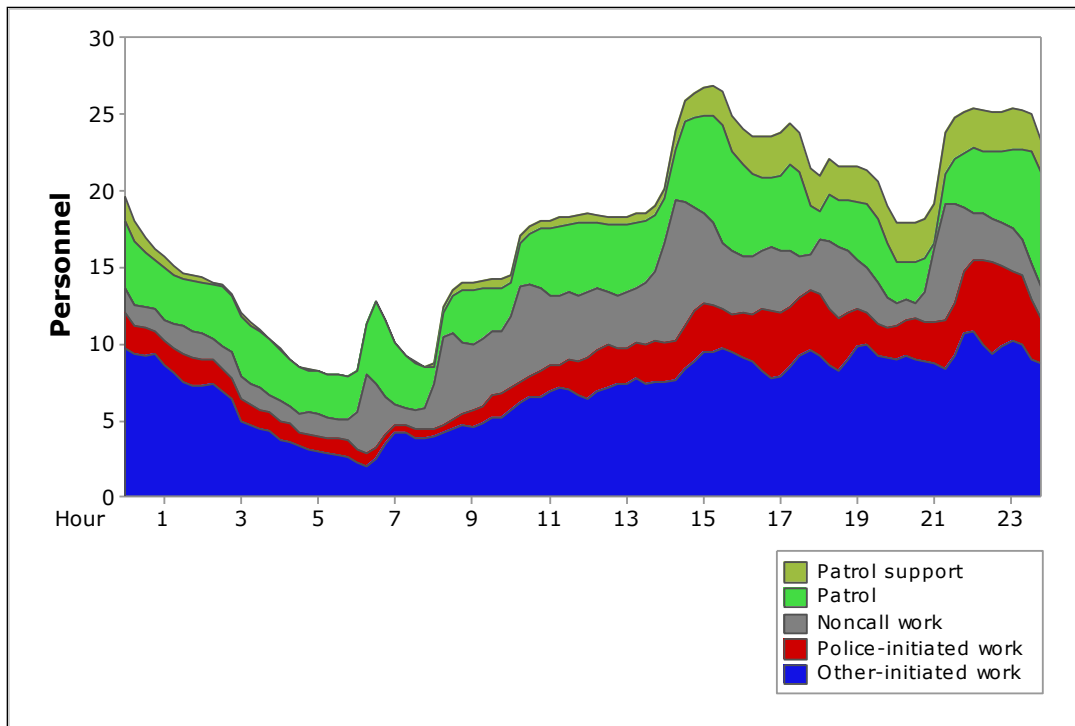


FIGURE 33: ODS, Weekends, Summer 2014

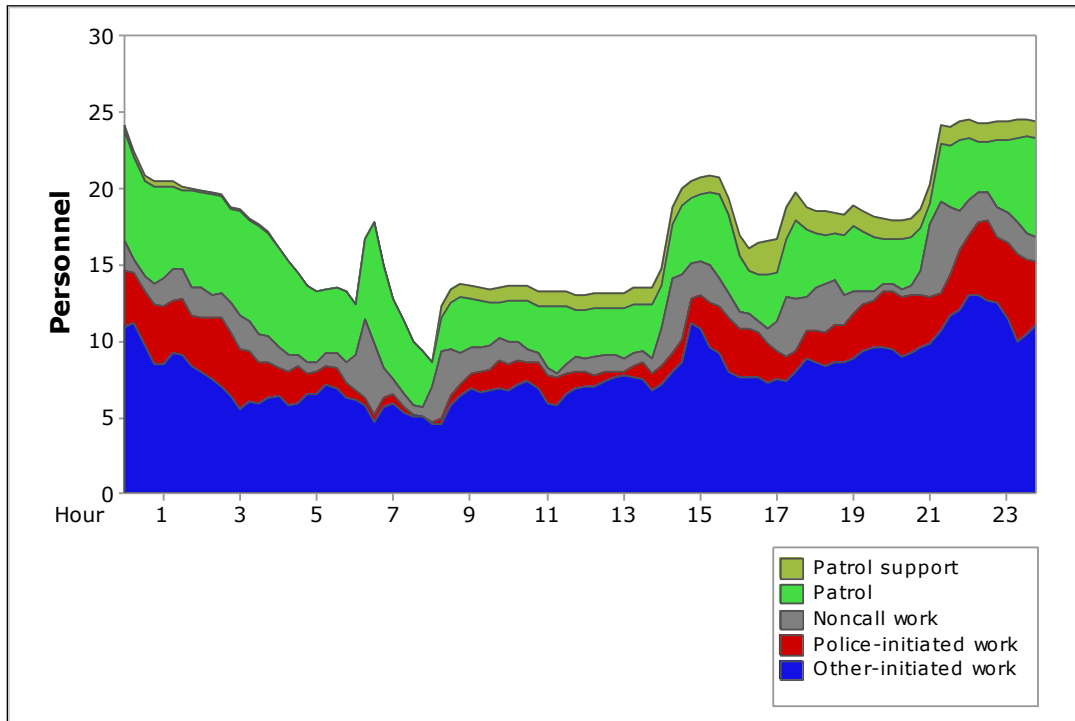


FIGURE 34: ODS, Weekdays, Winter 2015

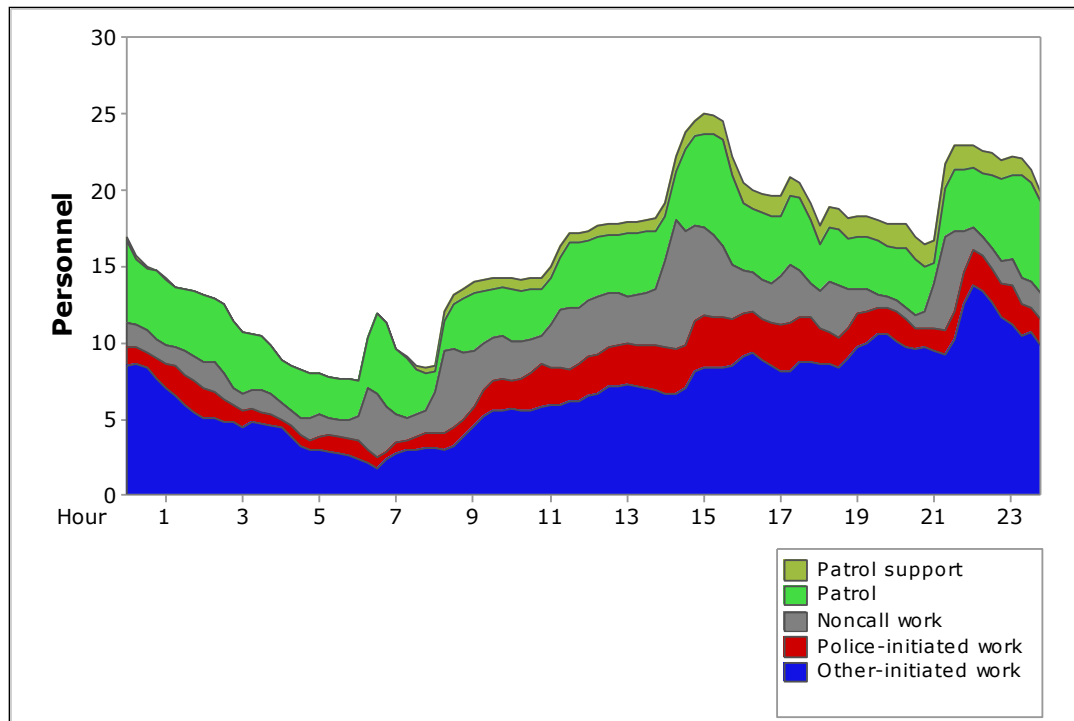
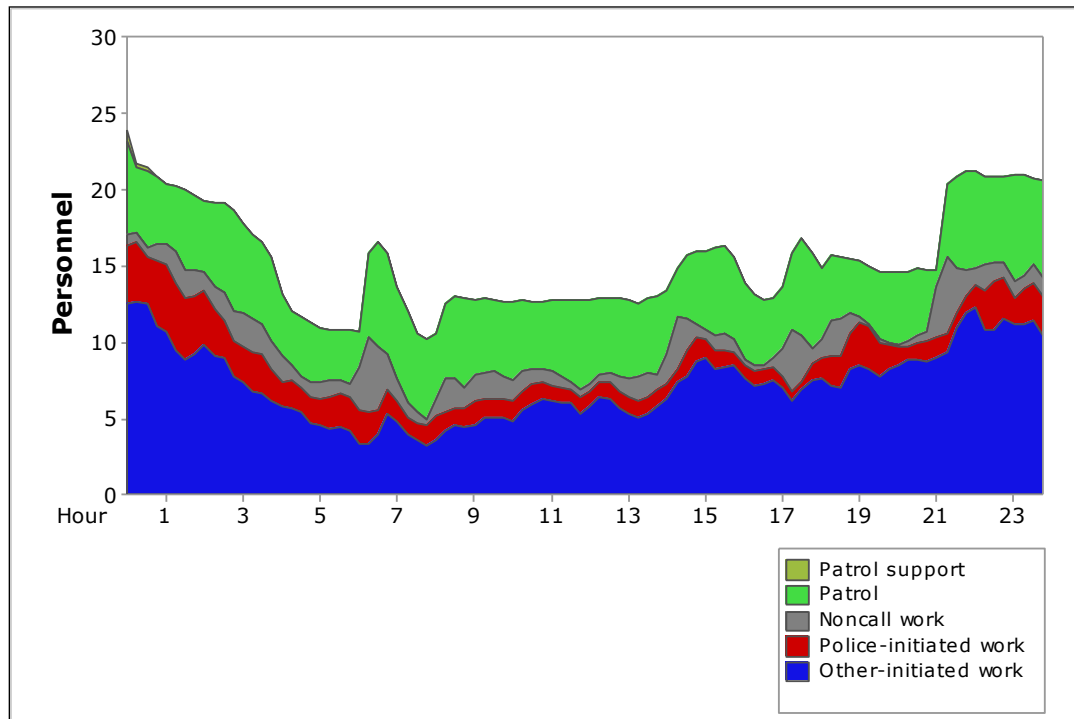


FIGURE 35: ODS, Weekends, Winter 2015



Observations:

- For summer:
 - Average workload for police-and other-initiated work was 9.3 officers per hour during the week and 10.2 officers per hour on weekends. This was approximately 53 percent of hourly deployment during the week and 59 percent of hourly deployment on weekends.
 - During the week, workload for police- and other-initiated work reached a maximum of 67 percent of deployment between 12:45 a.m. and 1:00 a.m. On weekends, workload reached a maximum of 74 percent of deployment between 8:00 p.m. and 8:15 p.m. and between 10:30 p.m. and 10:45 p.m.
 - Average workload for all events including noncall activities was 12.6 officers per hour during the week and 12.0 officers per hour on weekends. This was approximately 71 percent of hourly deployment during the week and 70 percent of hourly deployment on weekends.
 - During the week, workload for all events reached a maximum of 85 percent of deployment between 8:00 a.m. and 8:15 a.m. and between 9:00 p.m. and 9:15 p.m. On weekends, workload reached a maximum of 87 percent of deployment between 9:00 p.m. and 9:15 p.m.
 - The average deployment was 17.6 officers per hour during the week and 17.2 officers per hour on the weekend. Average deployment varied from 7.8 to 26.9 officers per hour on weekdays and 8.6 to 24.5 officers per hour on weekends.
- For winter:
 - Average workload for police- and other-initiated work was 8.7 officers per hour during the week and 9.0 officers per hour on weekends. This was approximately 54 percent of hourly deployment during the week and 59 percent of hourly deployment on weekends.
 - During the week, workload for police and other-initiated work reached a maximum of 70 percent of deployment between 10:00 p.m. and 10:30 p.m. On weekends, workload reached a maximum of 76 percent of deployment between 12:15 a.m. and 12:30 a.m.
 - Average workload for all events including noncall activities was 11.3 officers per hour during the week and 10.4 officers per hour on weekends. This was approximately 71 percent of hourly deployment during the week and 68 percent of hourly deployment on weekends.
 - During the week, workload for all events reached a maximum of 83 percent of deployment between 9:00 p.m. and 9:15 p.m. On weekends, workload reached a maximum of 92 percent of deployment between 9:00 p.m. and 9:15 p.m.
 - The average deployment was 16.0 officers per hour during the week and 15.3 officers per hour on the weekend. Average deployment varied from 7.5 to 24.9 officers per hour on weekdays and 10.1 to 23.9 officers per hour on weekends.

FIGURE 36: ODW, Weekdays, Summer 2014

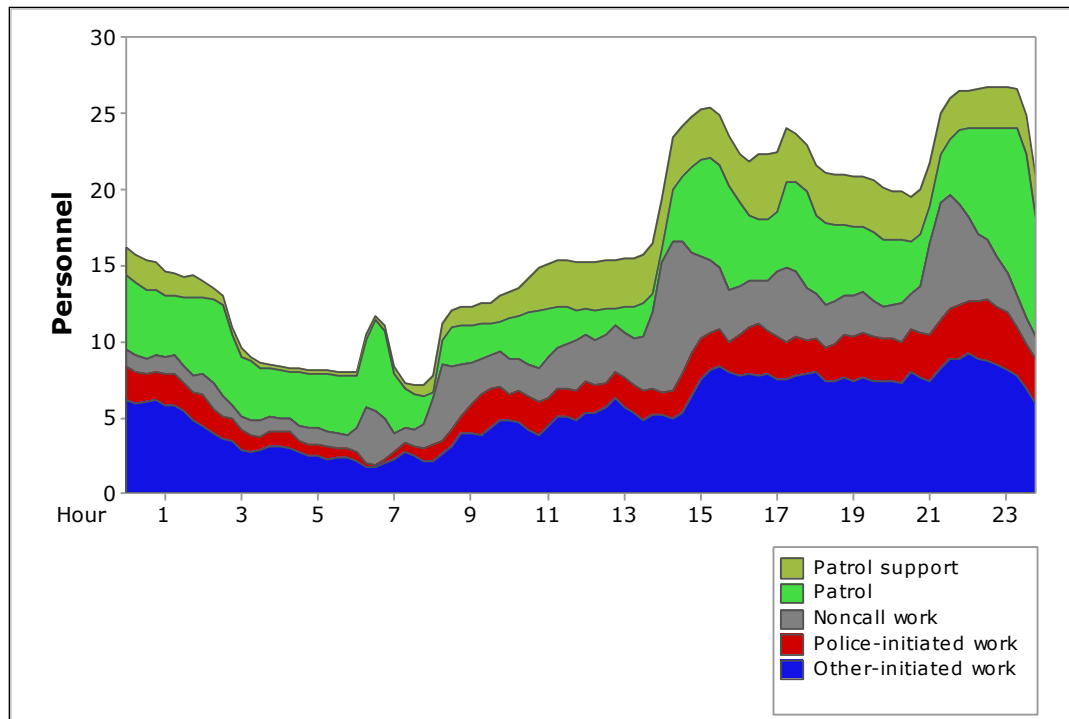


FIGURE 37: ODW, Weekends, Summer 2014

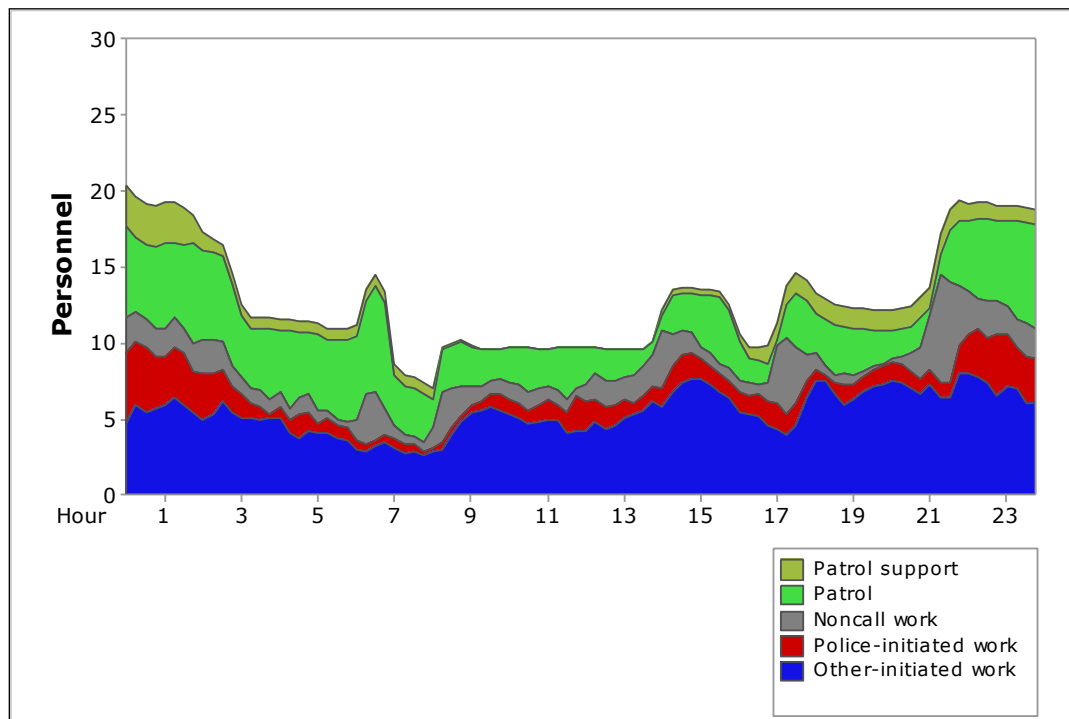


FIGURE 38: ODW, Weekdays, Winter 2015

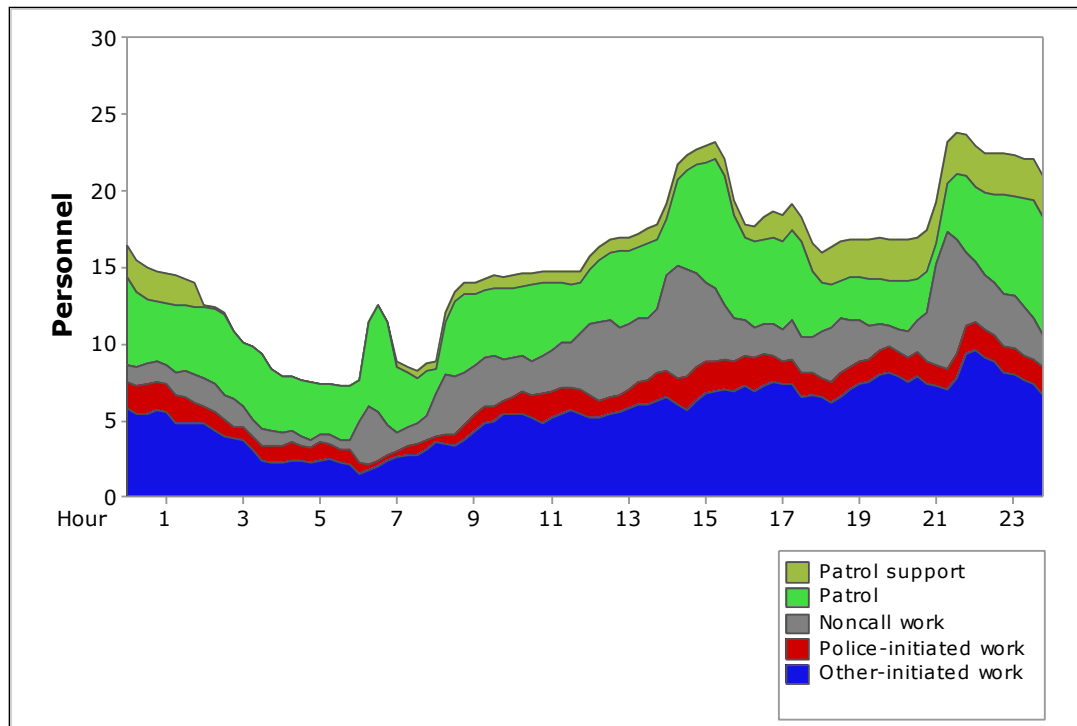
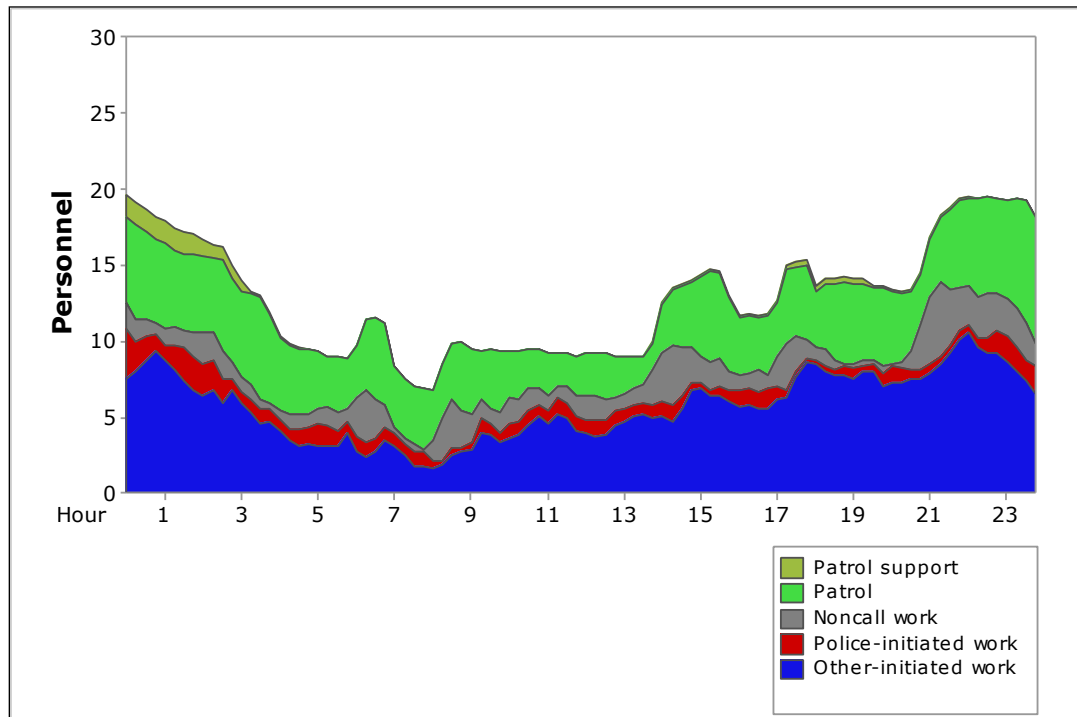


FIGURE 39: ODW, Weekends, Winter 2015



Observations:

- For summer:
 - Average workload for police- and other-initiated work was 7.4 officers per hour during the week and 6.9 officers per hour on weekends. This was approximately 45 percent of hourly deployment during the week and 53 percent of hourly deployment on weekends.
 - During the week, workload for police- and other-initiated work reached a maximum of 55 percent of deployment between 8:30 p.m. and 8:45 p.m. On weekends, workload reached a maximum of 71 percent of deployment between 1:45 p.m. and 2:00 p.m. and between 8:00 p.m. and 8:15 p.m.
 - Average workload for all events including noncall activities was 10.4 officers per hour during the week and 8.5 officers per hour on weekends. This was approximately 62 percent of hourly deployment during the week and 66 percent of hourly deployment on weekends.
 - During the week, workload for all events reached a maximum of 81 percent of deployment between 8:00 a.m. and 8:15 a.m. On weekends, workload reached a maximum of 92 percent of deployment between 1:45 p.m. and 2:00 p.m.
 - The average deployment was 16.7 officers per hour during the week and 12.9 officers per hour on the weekend. Average deployment varied from 7.0 to 26.8 officers per hour on weekdays and 7.0 to 20.4 officers per hour on weekends.
- For winter:
 - Average workload for police- and other-initiated work was 6.8 officers per hour during the week and 6.6 officers per hour on weekends. This was approximately 62 percent of hourly deployment during the week and 64 percent of hourly deployment on weekends.
 - During the week, workload for police- and other initiated calls reached a maximum of 58 percent of deployment between 7:45 p.m. and 8:00 p.m. On weekends, workload reached a maximum of 68 percent of deployment between 11:15 a.m. and 11:30 a.m.
 - Average workload for all events including noncall activities was 9.6 officers per hour during the week and 8.2 officers per hour on weekends. This was approximately 71 percent of hourly deployment during the week and 68 percent of hourly deployment on weekends.
 - During the week, workload for all events reached a maximum of 79 percent of deployment between 9:00 p.m. and 9:15 p.m. On weekends, workload reached a maximum of 82 percent of deployment between 1:45 p.m. and 2:00 p.m.
 - The average deployment was 15.4 officers per hour during the week and 12.9 officers per hour on the weekend. Average deployment varied from 7.2 to 23.8 officers per hour on weekdays and 6.8 to 19.6 officers per hour on weekends.

FIGURE 40: ODM, Weekdays, Summer 2014

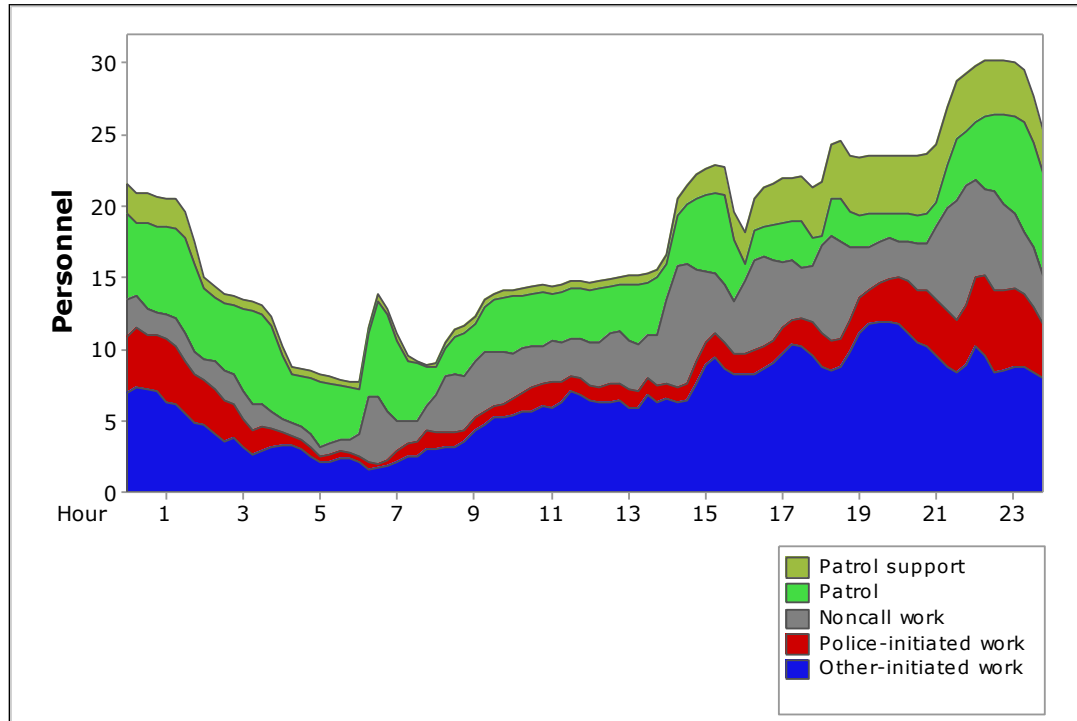


FIGURE 41: ODM, Weekends, Summer 2014

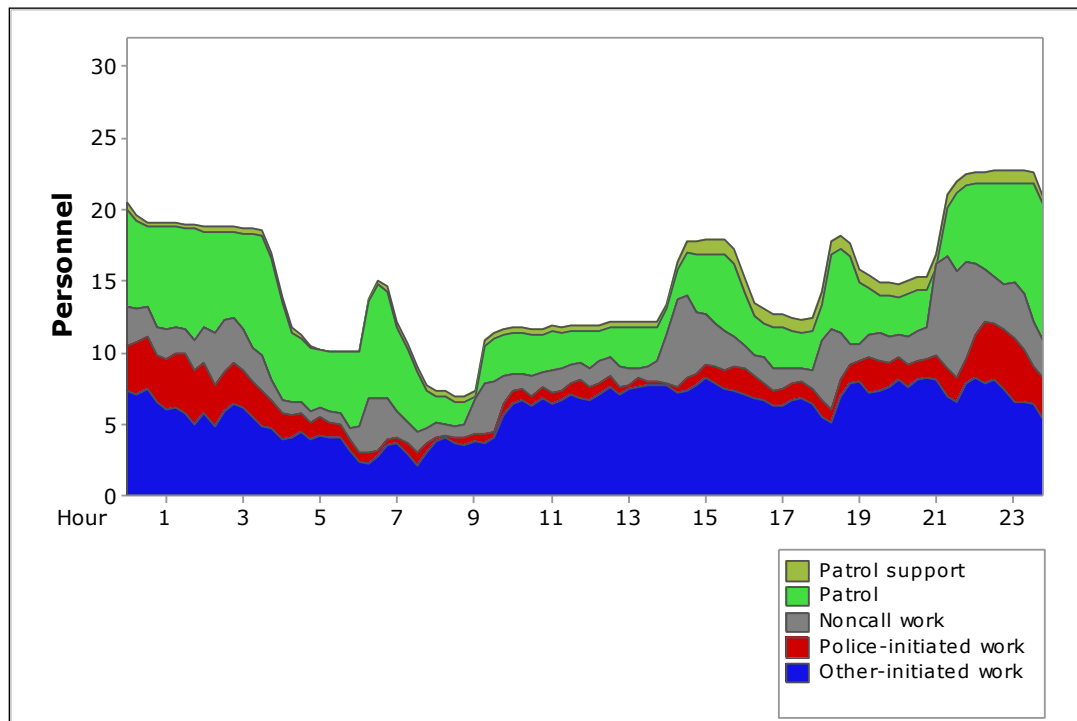


FIGURE 42: ODM, Weekdays, Winter 2015

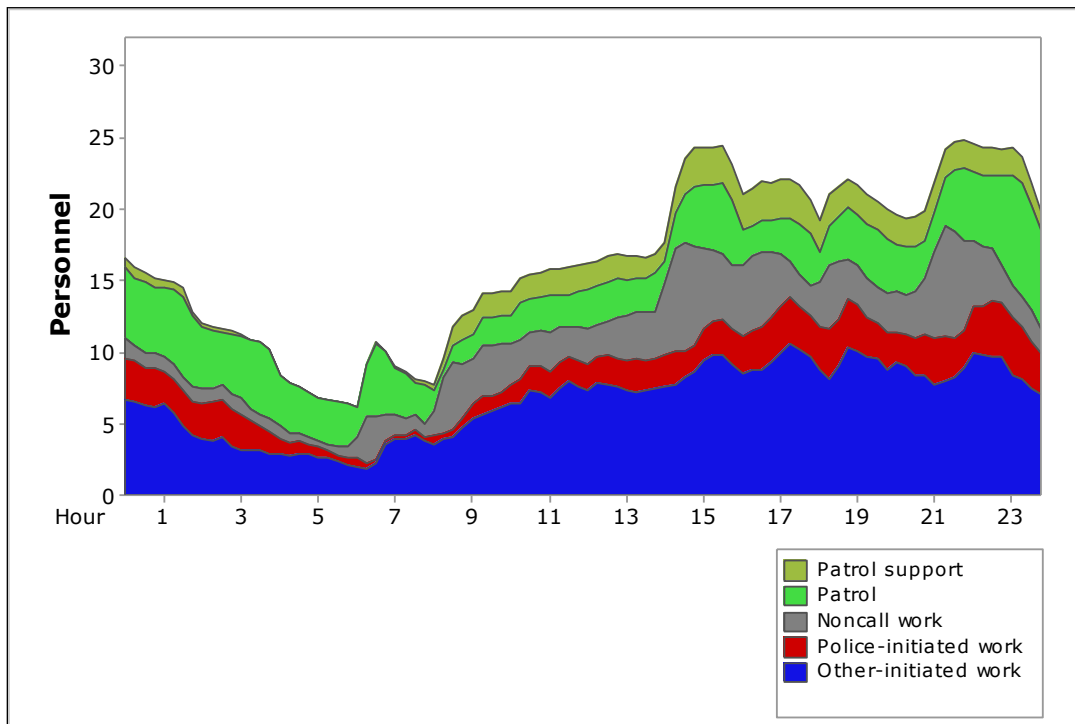
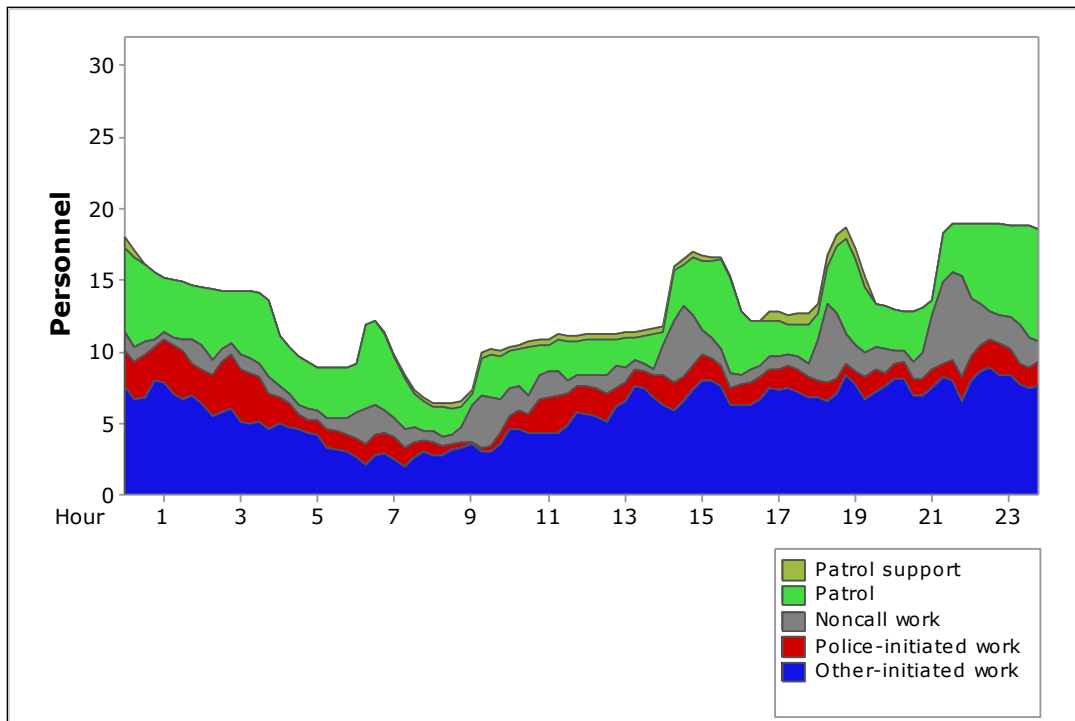


FIGURE 43: ODM, Weekends, Winter 2015



Observations:

- For summer:
 - Average workload for police- and other-initiated work was 8.5 officers per hour during the week and 7.6 officers per hour on weekends. This was approximately 48 percent of hourly deployment during the week and 51 percent of hourly deployment on weekends.
 - During the week, workload for police and other-initiated work reached a maximum of 64 percent of deployment between 7:45 p.m. and 8:15 p.m. On weekends, workload reached a maximum of 69 percent of deployment between 12:30 p.m. and 12:45 p.m.
 - Average workload for all events including noncall activities was 12.1 officers per hour during the week and 10.0 officers per hour on weekends. This was approximately 68 percent of hourly deployment during the week and 67 percent of hourly deployment on weekends.
 - During the week, workload for all events reached a maximum of 81 percent of deployment between 2:00 p.m. and 2:15 p.m. and between 4:00 p.m. and 4:15 p.m. On weekends, workload reached a maximum of 96 percent of deployment between 9:00 p.m. and 9:15 p.m.
 - The average deployment was 17.9 officers per hour during the week and 14.9 officers per hour on the weekend. Average deployment varied from 7.7 to 30.2 officers per hour on weekdays and 6.9 to 22.8 officers per hour on weekends.
- For winter:
 - Average workload for police- and other-initiated work was 8.7 officers per hour during the week and 7.5 officers per hour on weekends. This was approximately 53 percent of hourly deployment during the week and 57 percent of hourly deployment on weekends.
 - During the week, workload for police- and other-initiated work reached a maximum of 63 percent of deployment between 5:15 p.m. and 5:30 p.m. and between 6:45 p.m. and 7:00 p.m. On weekends, workload reached a maximum of 77 percent of deployment between 1:15 p.m. and 1:30 p.m.
 - Average workload for all events including noncall activities was 11.5 officers per hour during the week and 9.2 officers per hour on weekends. This was approximately 70 percent of hourly deployment during the week and on weekends.
 - During the week, workload for all events reached a maximum of 86 percent of deployment between 8:15 a.m. and 8:30 a.m. On weekends, workload reached a maximum of 92 percent of deployment between 9:00 p.m. and 9:15 p.m.
 - The average deployment was 16.4 officers per hour during the week and 13.1 officers per hour on the weekend. Average deployment varied from 6.2 to 24.8 officers per hour on weekdays and 6.4 to 19.0 officers per hour on weekends.

FIGURE 44: ODE, Weekdays, Summer 2014

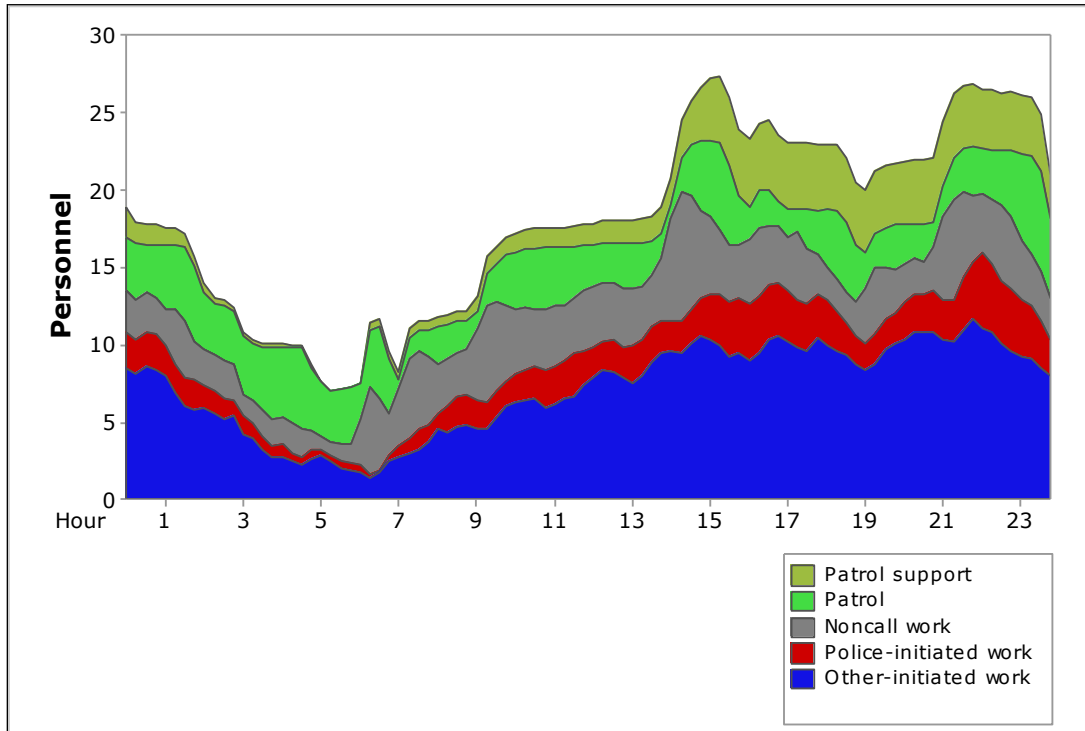


FIGURE 45: ODE, Weekends, Summer 2014

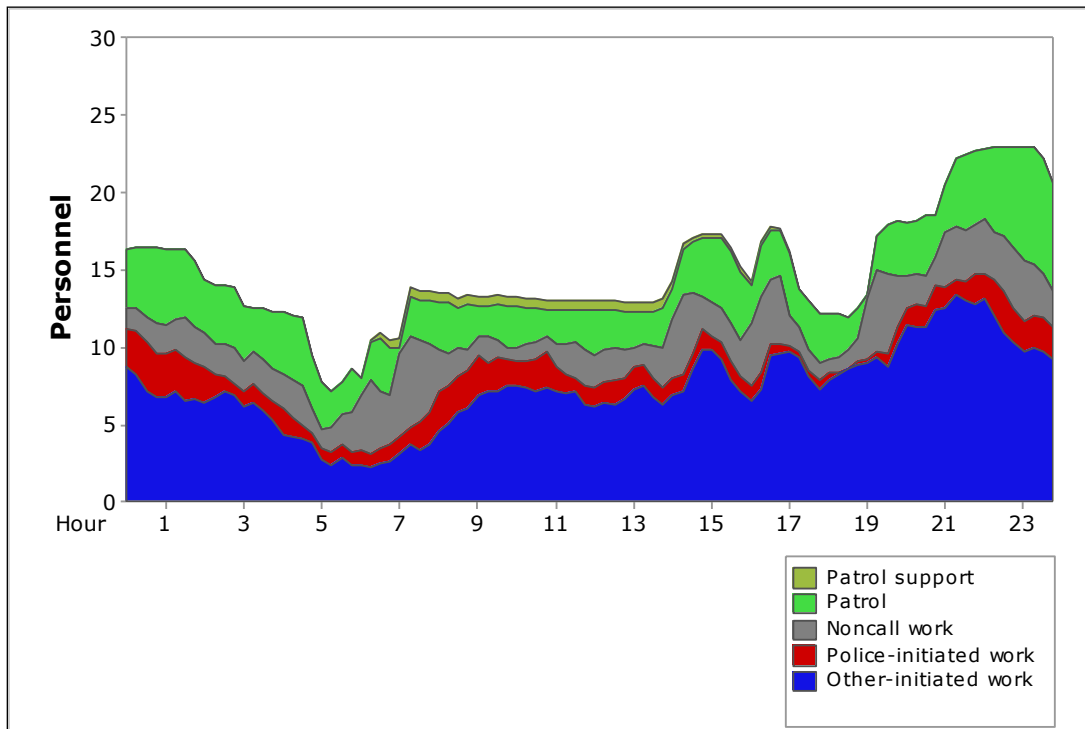


FIGURE 46: ODE, Weekdays, Winter 2015

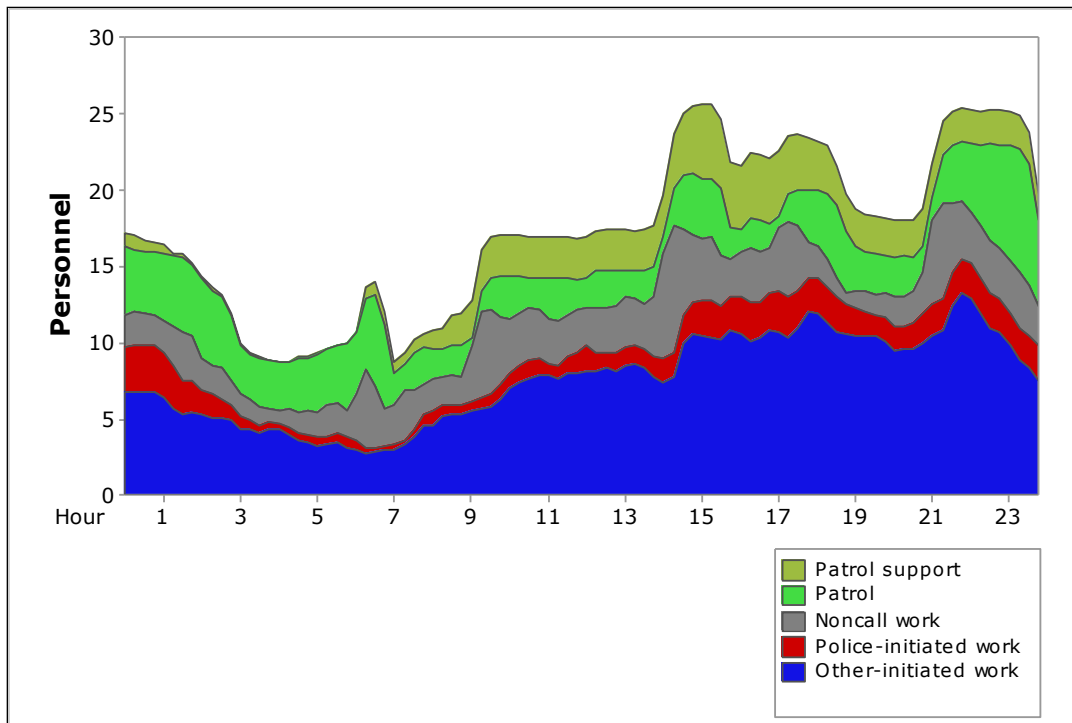
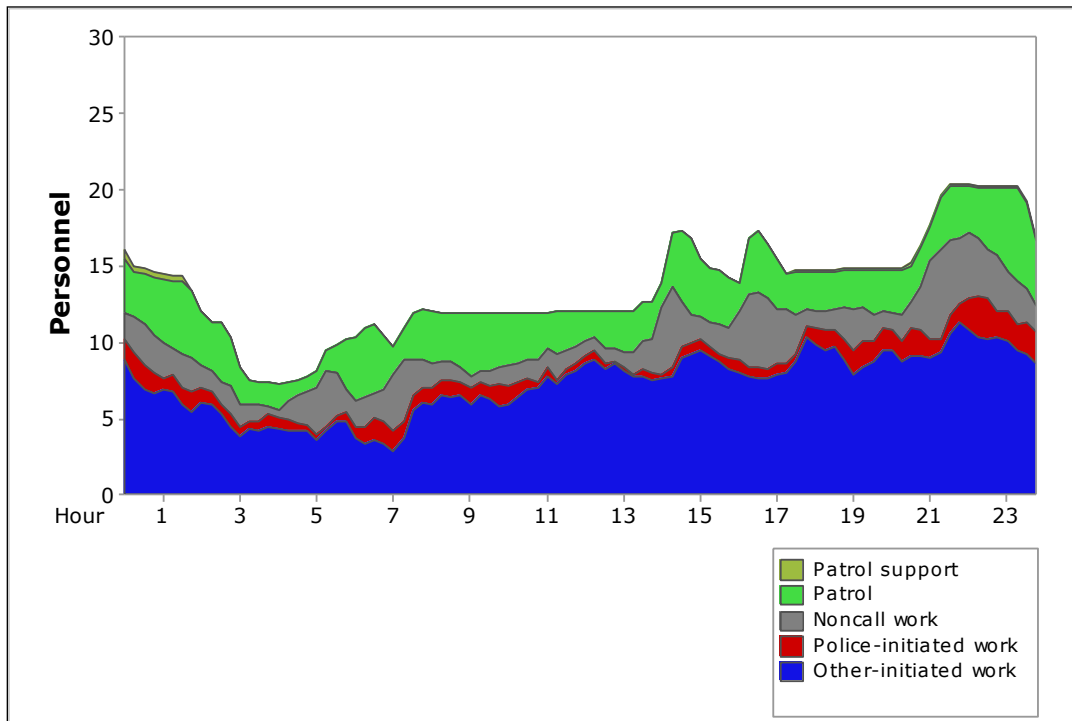


FIGURE 47: ODE, Weekends, Winter 2015



Observations:

- For summer:
 - Average workload for police- and other-initiated work was 9.1 officers per hour during the week and 8.8 officers per hour on weekends. This was approximately 51 percent of hourly deployment during the week and 59 percent of hourly deployment on weekends.
 - During the week, workload for police- and other-initiated work reached a maximum of 61 percent of deployment between 12:30 a.m. and 12:45 a.m., between 1:30 p.m. and 2:00 p.m., and between 8:15 p.m. and 8:45 p.m. On weekends, workload reached a maximum of 76 percent of deployment between 8:45 p.m. and 9:00 p.m.
 - Average workload for all events including noncall activities was 12.7 officers per hour during the week and 11.3 officers per hour on weekends. This was approximately 70 percent of hourly deployment during the week and 76 percent of hourly deployment on weekends.
 - During the week, workload for all events reached a maximum of 87 percent of deployment between 2:00 p.m. and 2:15 p.m. On weekends, workload reached a maximum of 98 percent of deployment between 7:00 p.m. and 7:15 p.m.
 - The average deployment was 18.1 officers per hour during the week and 14.9 officers per hour on the weekend. Average deployment varied from 7.0 to 27.3 officers per hour on weekdays and 7.1 to 22.9 officers per hour on weekends.
- For winter:
 - Average workload for police- and other-initiated work was 9.1 officers per hour during the week and 8.2 officers per hour on weekends. This was approximately 52 percent of hourly deployment during the week and 61 percent of hourly deployment on weekends.
 - During the week, workload for police- and other-initiated work reached a maximum of 65 percent of deployment between 7:00 p.m. and 7:30 p.m. On weekends, workload reached a maximum of 79 percent of deployment between 12:15 p.m. and 12:30 p.m.
 - Average workload for all events including noncall activities was 12.0 officers per hour during the week and 10.4 officers per hour on weekends. This was approximately 69 percent of hourly deployment during the week and 77 percent of hourly deployment on weekends.
 - During the week, workload for all events reached a maximum of 83 percent of deployment between 9:00 p.m. and 9:15 p.m. On weekends, workload reached a maximum of 88 percent of deployment between 2:00 p.m. and 2:15 p.m.
 - The average deployment was 17.3 officers per hour during the week and 13.5 officers per hour on the weekend. Average deployment varied from 8.7 to 25.6 officers per hour on weekdays and 7.2 to 20.4 officers per hour on weekends.

FIGURE 48: ODD, Weekdays, Summer 2014

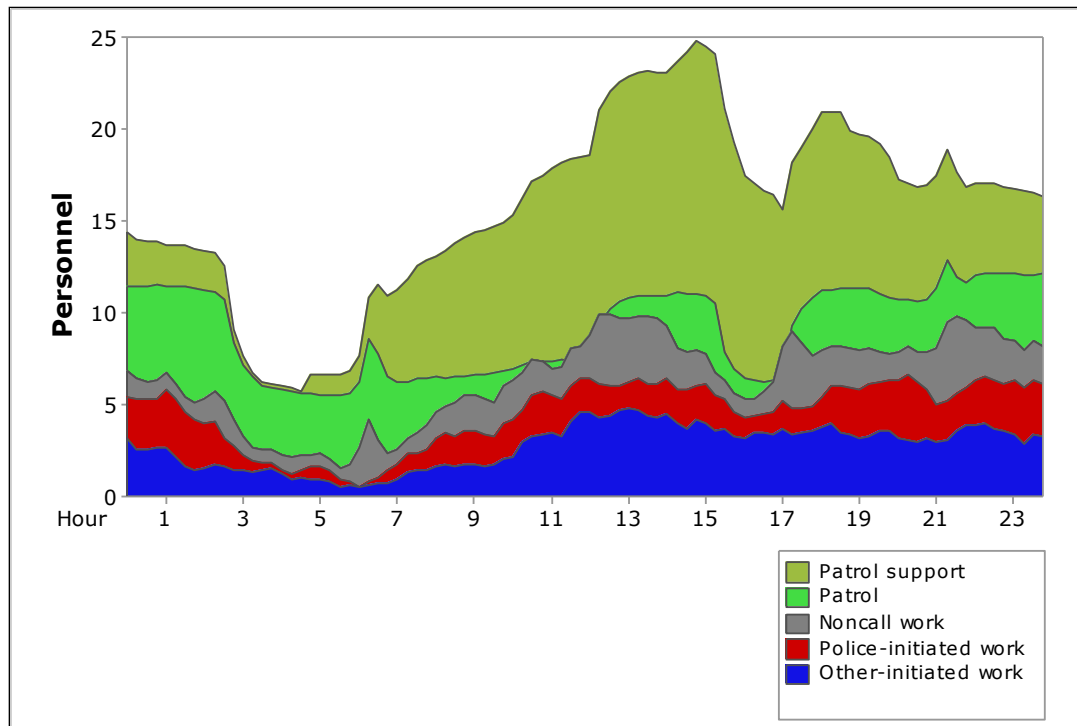


FIGURE 49: ODD, Weekends, Summer 2014

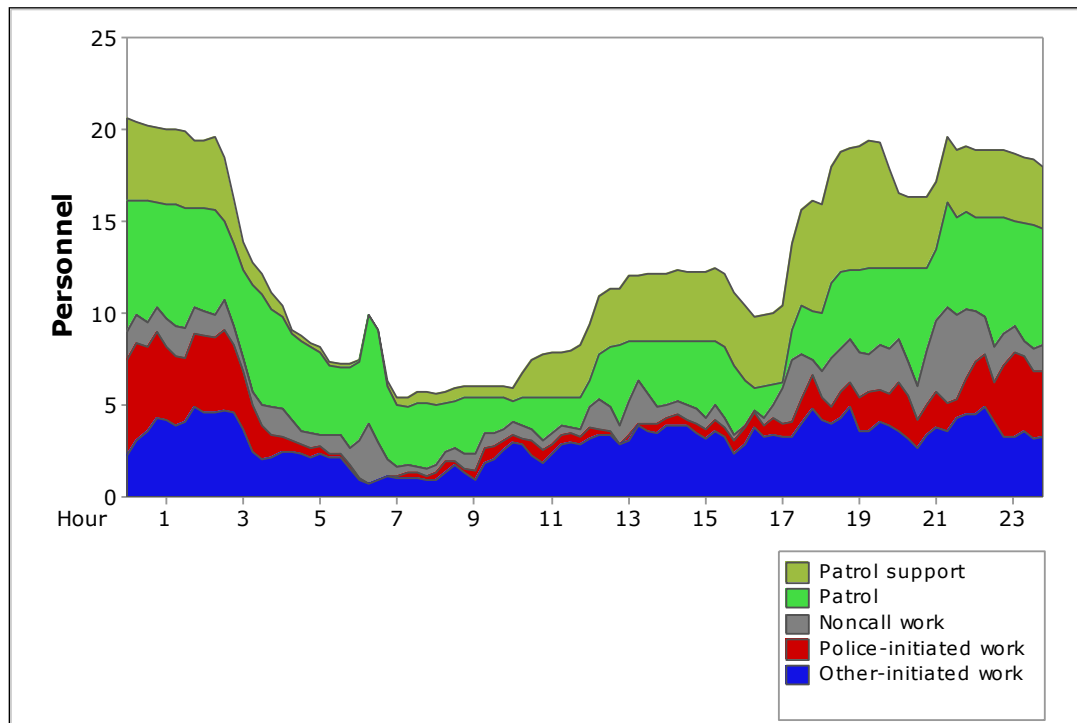


FIGURE 50: ODD, Weekdays, Winter 2015

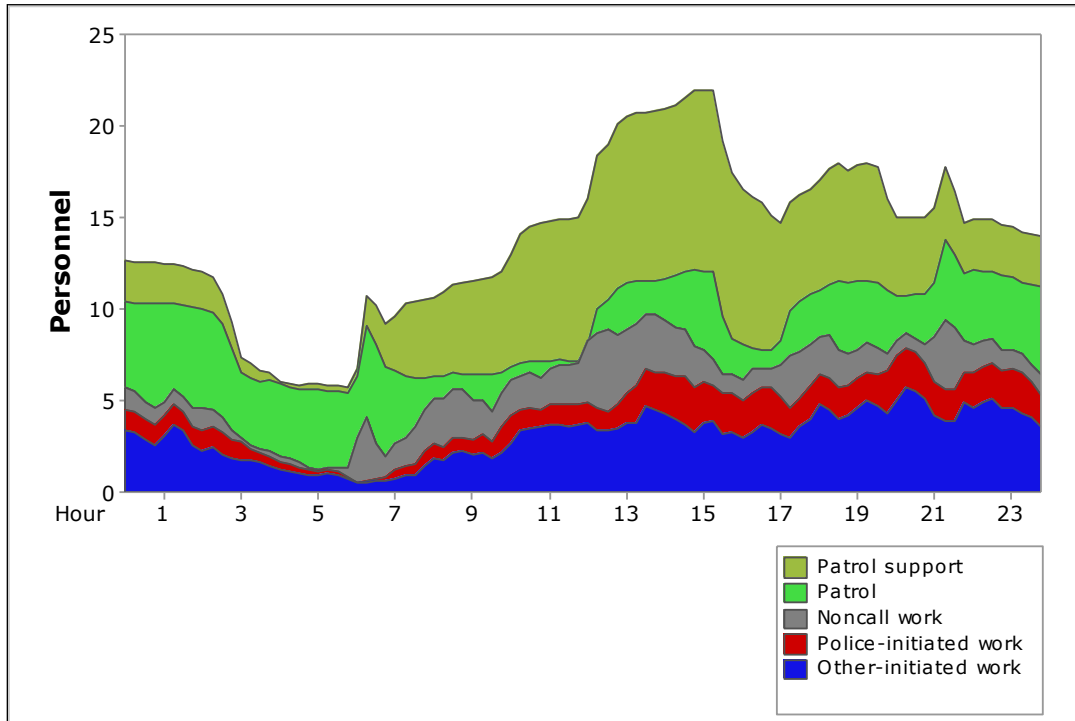
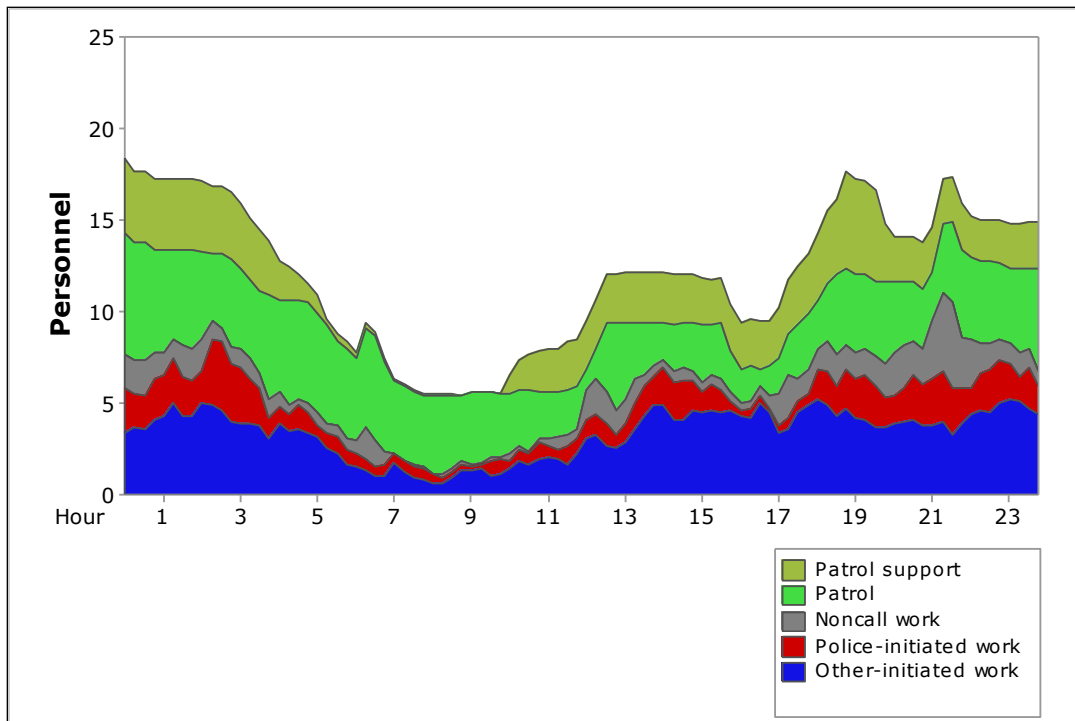


FIGURE 51: ODD, Weekends, Winter 2015



Observations:

- For summer:
 - Average workload for police- and other-initiated work was 4.5 officers per hour during the week and on weekends. This was approximately 29 percent of hourly deployment during the week and 35 percent of hourly deployment on weekends.
 - During the week, workload for police- and other-initiated work reached a maximum of 43 percent of deployment between 1:00 a.m. and 1:15 a.m. On weekends, workload reached a maximum of 57 percent of deployment between 10:00 a.m. and 10:15 a.m.
 - Average workload for all events including noncall activities was 6.4 officers per hour during the week and 5.9 officers per hour on weekends. This was approximately 41 percent of hourly deployment during the week and 46 percent of hourly deployment on weekends.
 - During the week, workload for all events reached a maximum of 57 percent of deployment between 9:45 p.m. and 10:00 p.m. On weekends, workload reached a maximum of 69 percent of deployment between 10:00 a.m. and 10:15 a.m.
 - The average deployment was 15.7 officers per hour during the week and 12.9 officers per hour on the weekend. Average deployment varied from 5.7 to 24.8 officers per hour on weekdays and 5.4 to 20.6 officers per hour on weekends.
- For winter:
 - Average workload for police- and other-initiated work was 4.4 officers per hour during the week and 4.8 officers per hour on weekends. This was approximately 32 percent of hourly deployment during the week and 39 percent of hourly deployment on weekends.
 - During the week, workload for police- and other-initiated work reached a maximum of 52 percent of deployment between 8:15 p.m. and 8:30 p.m. On weekends, workload reached a maximum of 57 percent of deployment between 2:00 p.m. and 2:15 p.m. and between 4:30 p.m. and 4:45 p.m.
 - Average workload for all events including noncall activities was 6.1 officers per hour during the week and 5.8 officers per hour on weekends. This was approximately 44 percent of hourly deployment during the week and 48 percent of hourly deployment on weekends.
 - During the week, workload for all events reached a maximum of 58 percent of deployment between 8:15 p.m. and 8:30 p.m. On weekends, workload reached a maximum of 65 percent of deployment between 9:00 p.m. and 9:15 p.m.
 - The average deployment was 13.9 officers per hour during the week and 12.1 officers per hour on the weekend. Average deployment varied from 5.8 to 21.9 officers per hour on weekdays and 5.4 to 18.4 officers per hour on weekends.

Traffic Units

Between July 1, 2014, and June 30, 2015, the communications center recorded 28,054 events with call numbers assigned to traffic/motor units. We don't show calls measured per day, as the traffic division operates quite differently depending upon the time of day and day of week. For example, 94 percent of calls associated with traffic/motor units occurred on weekdays, with only 2 percent of calls on Sundays and 4 percent on Saturdays. In addition, 85 percent of calls associated with traffic/motor units occurred between 6:00 a.m. and 6:00 p.m.

During this period, the dispatch center recorded activities assigned to traffic units that were not assigned a call number. After excluding activities that lasted less than 30 seconds and more than eight hours, 8,584 noncall activities remained.

This section gives an overview of the number of calls, noncall activities, deployment, and workload for traffic/motor units. We include graphs for weekdays and weekends, but comments are limited to weekdays.

TABLE 19: Traffic Unit Calls by Category

Call Category	Annual Count	Percent
Traffic Stop	26,160	93.7
Traffic call for service	1,063	3.8
Other	705	2.5
Total	27,928	100.0
Noncall Category		
Administrative	5,186	60.4
Directed patrol	1,700	19.8
Patrol activity	1,698	19.8
Total	8,584	100.0

Observations:

- Traffic stops accounted for 94 percent of calls.
- Administrative tasks accounted for 60 percent of noncall events.

FIGURE 52: Traffic, Weekdays, Summer 2014

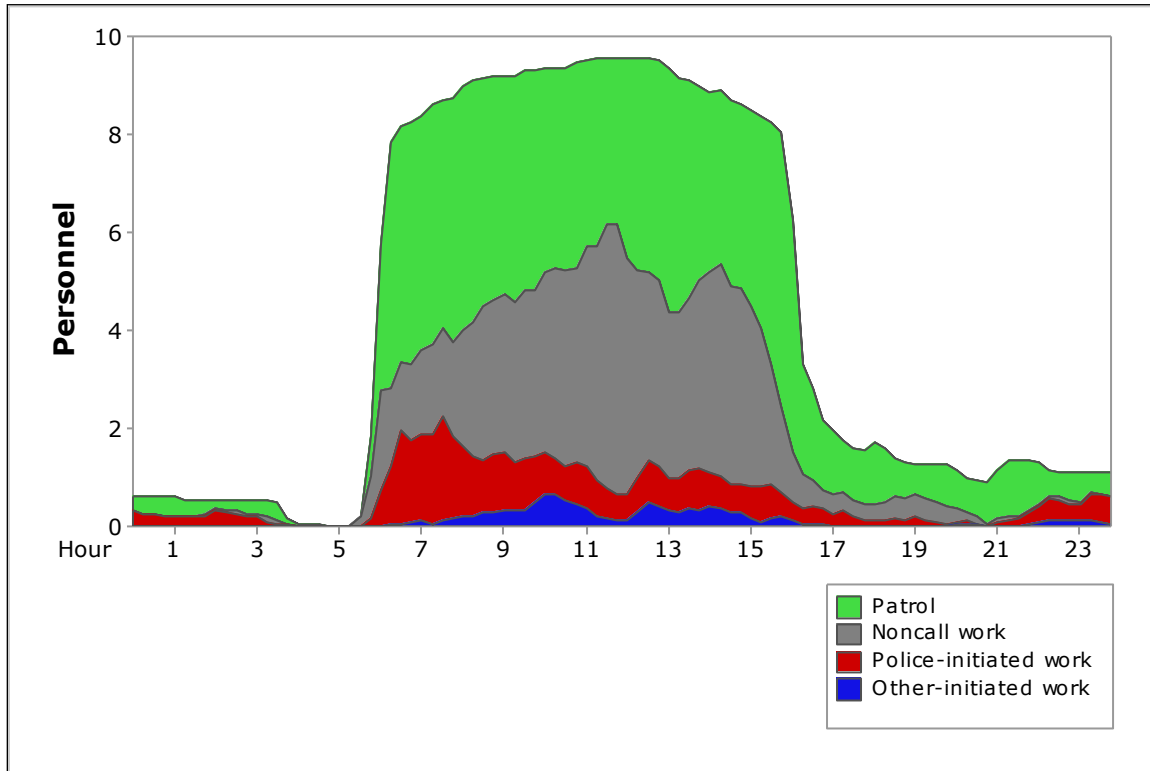


FIGURE 53: Traffic, Weekends, Summer 2014

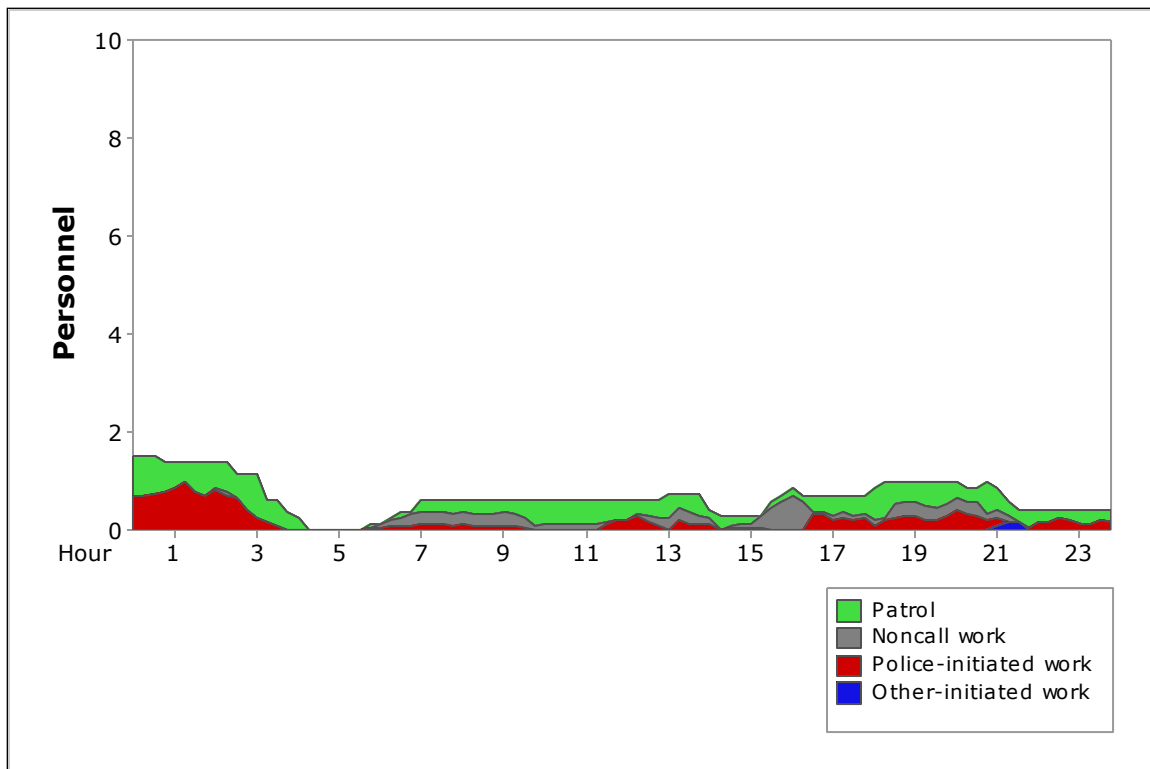


FIGURE 54: Traffic, Weekdays, Winter 2015

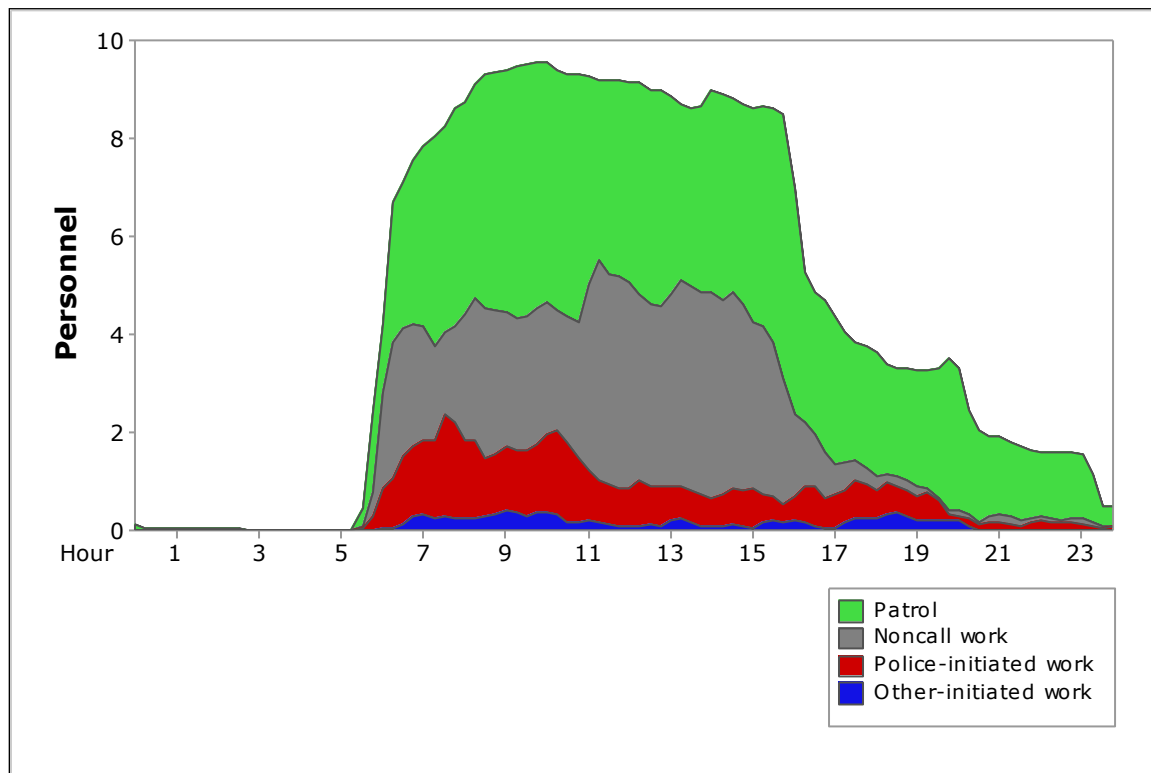
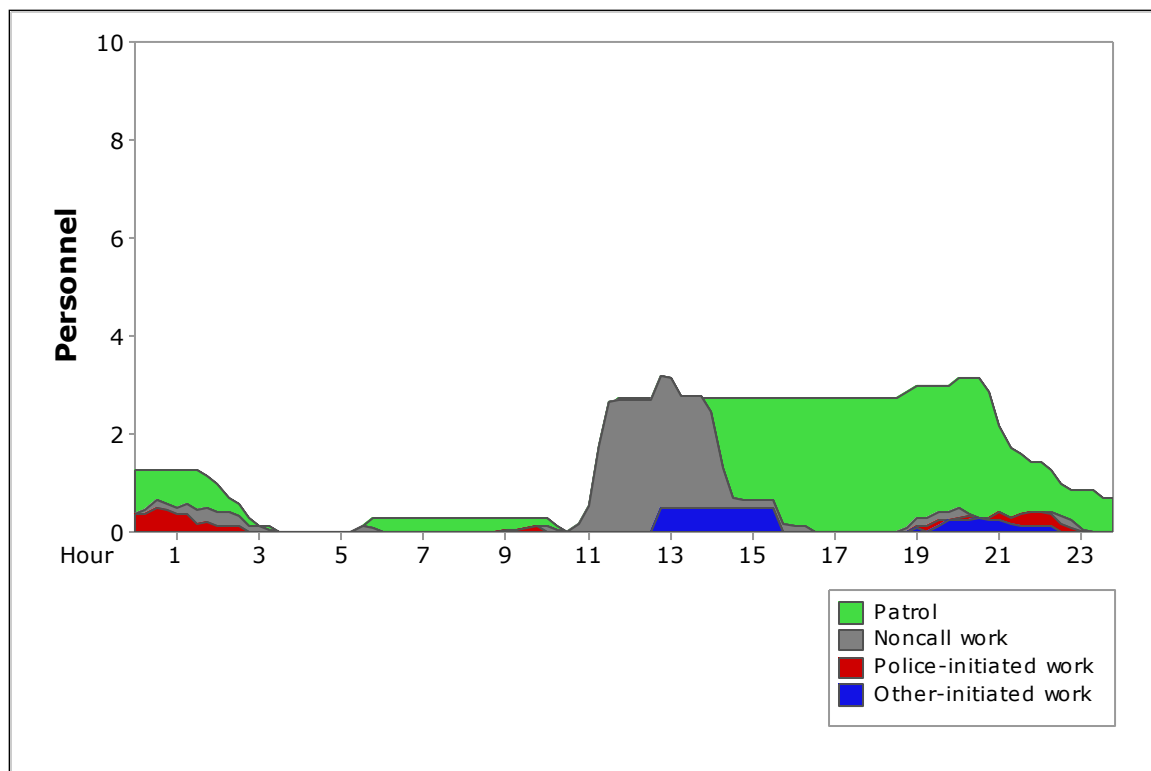


FIGURE 55: Traffic, Weekends, Winter 2015



Observations:

- Comments refer only to weekdays between the hours of 6:00 a.m. and 5:00 p.m. At other times of day, there were fewer than two traffic/motor units on average in summer and fewer than four traffic/motor units on average in winter.
- For summer:
 - The department averaged 8.4 units per hour.
 - Average workload for police and other-initiated work was 1.2 officers per hour, which was approximately 14 percent of hourly deployment.
 - Average total workload (including noncall activities) was 4.2 officers per hour, which was approximately 50 percent of hourly deployment.
 - Workload for all events reached a maximum of 65 percent of deployment between 11:30 a.m. and noon.
- For winter:
 - The department averaged 8.4 units per hour.
 - Average workload for police- and other-initiated work was 1.2 officers per hour, which was approximately 15 percent of hourly deployment.
 - Average total workload (including noncall activities) was 4.2 officers per hour, which was approximately 51 percent of hourly deployment.
 - Workload for all events reached a maximum of 67 percent of deployment between 6:00 a.m. and 6:15 a.m. For the rest of the day, workload reached a maximum of 60 percent of deployment between 11:15 a.m. and 11:30 a.m.

Crime Scene Units

Between July 1, 2014, and June 30, 2015, the communications center recorded 3,180 events with call numbers assigned to crime scene units. When measured daily, the department reported an average of 8.7 events per day, approximately 3 percent of which (0.3 per day) had fewer than 30 seconds spent on the call.

During this period, the dispatch center recorded activities assigned to crime scene units that were not assigned a call number. After excluding activities that lasted less than 30 seconds and more than eight hours, 4,294 noncall activities remained.

This section gives an overview of the number of calls, noncall activities, deployment, and workload for crime scene units.

TABLE 20: Crime Scene Calls by Category

Call Category	Annual Count	Per Day	Percent
Check/investigation	3,054	8.4	99.1
Other	29	0.1	0.9
Total	3,083	8.4	100.0
Noncall Category		0.0	
Administrative	4,084	11.2	95.1
Directed patrol	34	0.1	0.8
Patrol activity	176	0.5	4.1
Total	4,294	11.8	100.0

Observations:

- The number of noncall activities handled by crime scene units exceeded the number of calls handled by these units. It should be noted that the calls included in the overall number only includes calls falling under the categories retained for this analysis.
- Ninety-nine percent of the calls handled by crime scene units were check/investigation calls.
- Ninety-five percent of the noncall activities were administrative activities. Code '69' ("Misc. administrative activity") accounted for approximately 94 percent of these administrative calls.

FIGURE 56: Crime Scene, Weekdays, Summer 2014

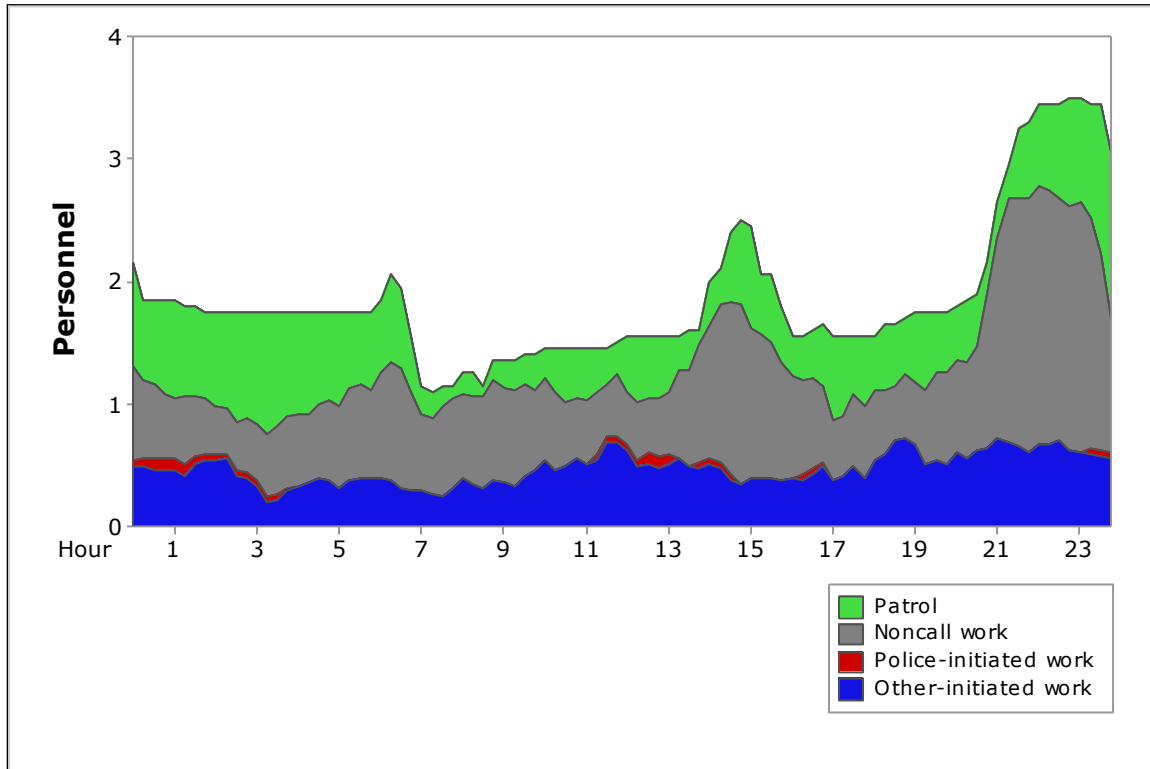


FIGURE 57: Crime Scene, Weekends, Summer 2014

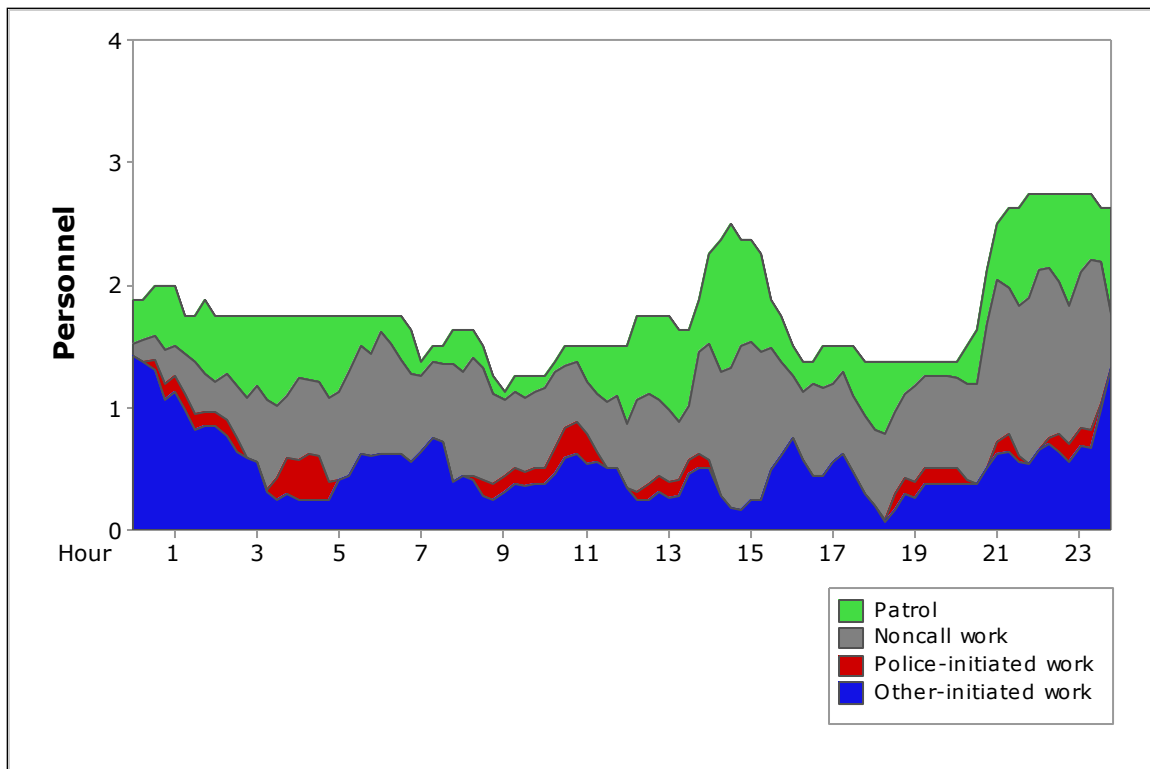


FIGURE 58: Crime Scene, Weekdays, Winter 2015

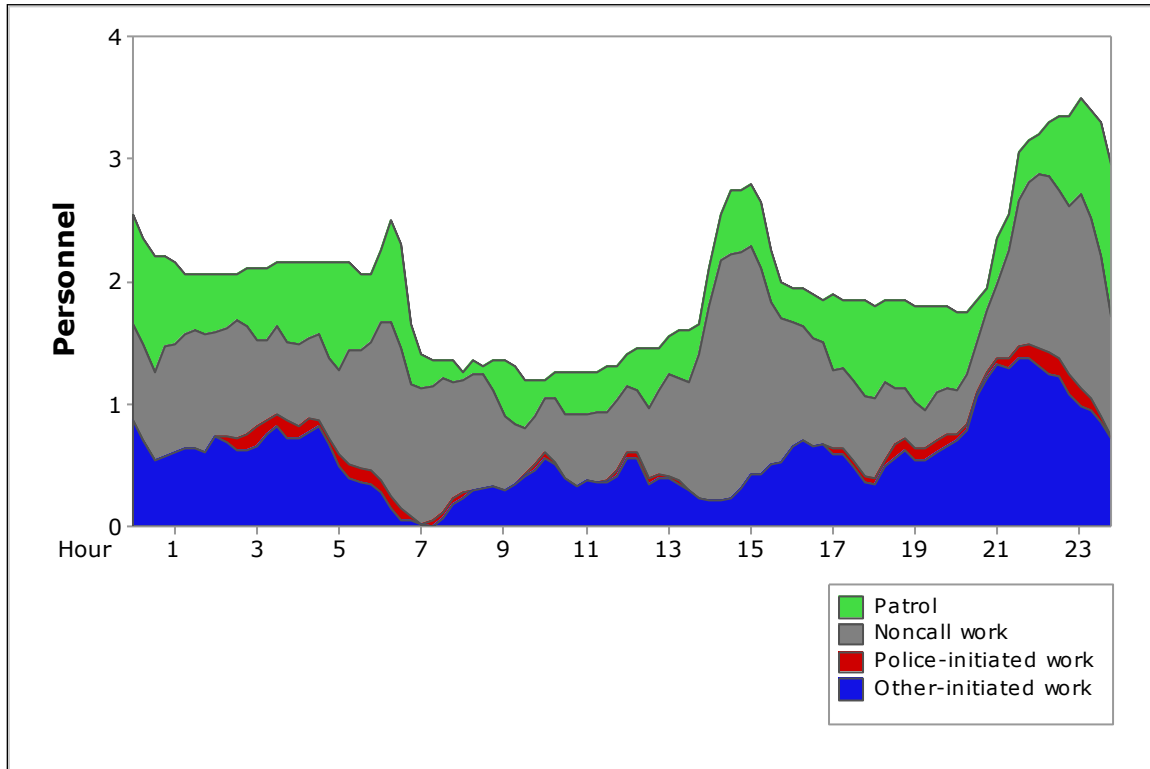
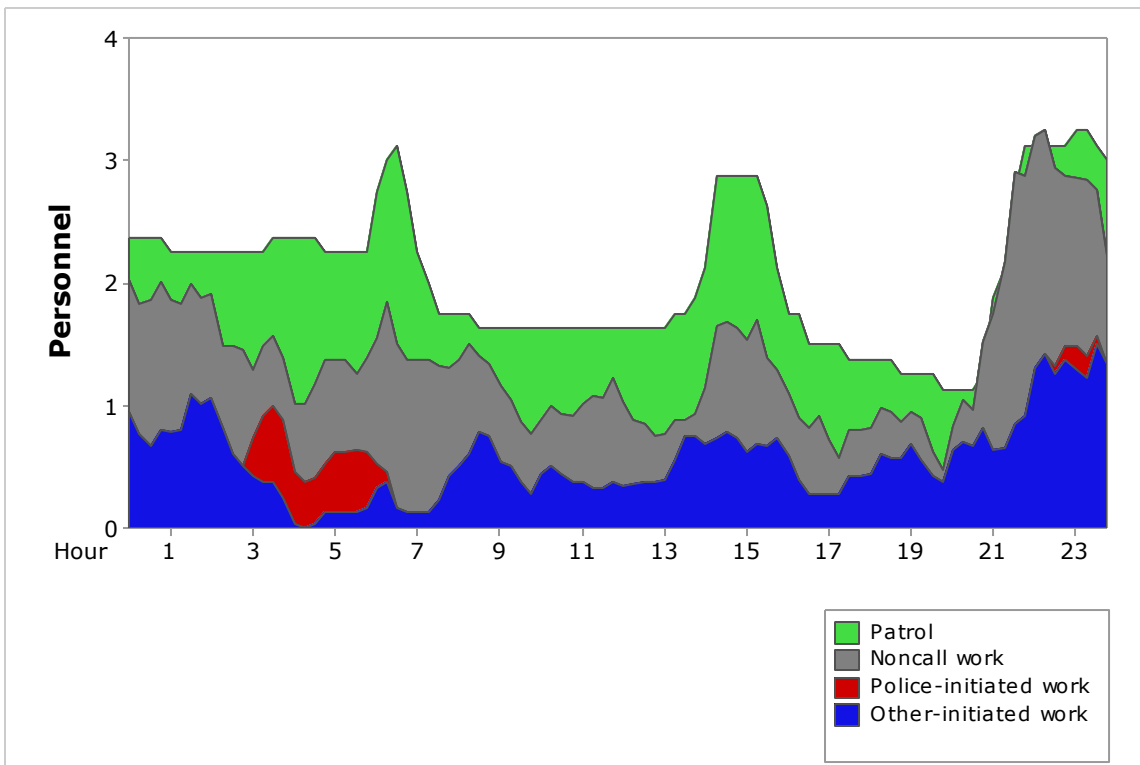


FIGURE 59: Crime Scene, Weekends, Winter 2015



Observations:

- For summer:
 - Average workload for all events including noncall activities was 1.3 officers per hour during the week and on weekends.
 - This was approximately 71 percent of hourly deployment during the week and 75 percent of hourly deployment on weekends.
 - During the week, workload reached a maximum of 93 percent of deployment between 1:45 p.m. and 2:00 p.m.
 - On weekends, workload reached a maximum of 95 percent of deployment between 9:00 a.m. and 9:15 a.m.
- For winter:
 - Average workload was 1.5 officers per hour during the week and 1.4 officers per hour on weekends.
 - This was approximately 75 percent of hourly deployment during the week and 66 percent of hourly deployment on weekends.
 - During the week, workload reached a maximum of 96 percent of deployment between 8:00 a.m. and 8:15 a.m. and between 8:30 a.m. and 8:45 a.m.
 - On weekends, workload reached a maximum of 114 percent of deployment between 8:45 p.m. and 9:00 p.m.

Appendix A – Call Description Classification

Call descriptions for the department's calls for service from July 1, 2014, to June 30, 2015, were classified within the following categories.

TABLE 21: Call Descriptions, by Category

Call Description	Table Category	Figure Category
ARMORY	Alarm	Alarm
BANK43		
DURESS		
DURESSUNK		
EPIC		
IMPCOD		
IMPOPEN		
IMPOUND		
IMPSIG		
LIFELINE		
NONALA		
PANIC		
PANICUNK		
SILENT		
VEHALA		
VERALA		
10-70A	Assist other agency	Assist
10-72A		
10-84BP		
10-84D		
10-84F		
AGNAST		
CPSASST		
DEEP_FREEZE		
DELMSG		
EMGMSG		
GASLK		
HAZMAT		
LSCOW		
LSDOG		
LSHORSE		
MACASST		

Call Description	Table Category	Figure Category
MEDREJ		
MP		
OD		
OVERDOSE		
REQ_TPD		
REQTPD		
RRARMS		
WRSDWN		
80	Field interview	Field interview
81		
10-80		
10-81		
911	Check/investigation	Investigations
10-34		
10-47		
10-48		
10-72		
10-47E		
10-47H		
10-47I		
10-47J		
10-47L		
10-47R		
10-47S		
10-48H		
10-48I		
10-48L		
10-48R		
10-48S		
10-70B		
10-70R		
10-70V		
911PP		
ABDLIN		
ABDVEH		
ANIMAL		
ARREST		
ARSON		

Call Description	Table Category	Figure Category
ATSUIC		
BOMB		
BRKDOG		
CITCOD		
CKWELF		
CRIMESCENE		
CRUELTY		
CTORD		
CTORDH		
CTORDOVR		
CURFEW		
DOA		
DOA_HOSP		
DROWN		
ESCAPE		
EXPLOS		
FD		
FDCHLD		
FDGUN		
FDPERS		
FDPROP		
HAZARD		
HWM		
JUNK		
LARC		
LIQUOR		
LSTCHD		
LSTPRH		
LSTPRP		
MANDWN		
MANGUN		
MISPER		
MNWGUN		
NARC		
OPNDR		
OPNLIN		
OPNWIN		
OTHER		

Call Description	Table Category	Figure Category	
OVERDUEH			
OVRDUE			
PA			
PHCALLH			
PREPEA			
PROST			
PUBAST			
SHOTHD			
SKATEB			
SUICDL			
SUICDLW			
SUICID			
SUSPH			
TRBCUS			
UNKTRB			
UNWANT			
UPOM			
VICDOG			
WANTPR			
WARRANT			
WLKAWY			
WPNVIO			
10-16			Follow-up
ADINFO			
EVIDEN			
FOLWUP			
INFO			
INFOH			
OTHERH			
SEXKIT			
TRANSPORT			
10-40	Suspicious person/vehicle		
STALK			
SUSACT			
SUSPER			
SUSVEH			
UNKHAZ			
10-43	Crime—persons	Person crime	

Call Description	Table Category	Figure Category
10-44		
10-31		
10-31B		
10-31O		
10-31W		
10-43A		
10-43AL		
10-43B		
10-43R		
10-44A		
ABUSE		
ABUSEC		
ABUSEL		
AGASLT		
ARMROB		
ASLTH		
ASLTV		
ASSAULT		
CARJAC		
CUSTH		
CUSTIN		
DOC		
DRIVEBY		
EXPOSE		
FIGHT		
FIGHTB		
FIGHTG		
FIGHTW		
FITEB		
GUN		
HARASH		
HARASS		
HWYROB		
KIDNAP		
KNIFE		
LASER		
MOLEST		
NEGLECT		

Call Description	Table Category	Figure Category
PREDAB		
RAGE		
RAGEH		
SEXOFF		
SEXOFFH		
SHOOT		
SHOOTVC		
SHOTFD		
SPURS		
STAB		
STRARM		
SXOFFH		
THREAT		
THREATD		
THREATO		
THREATS		
THRETH		
Oct-33	Disturbance	
Oct-41		
DIP		
FRCRAK		
FRWORK		
LDMUSC		
LDNOIS		
LDPRTY		
NBRPRB		
PANHAN		
UIP		
611	Crime-property	Property crime
10-35		
10-36		
10-37		
10-42		
10-35A		
10-35C		
10-35H		
10-35L		
10-36A		

Call Description	Table Category	Figure Category
10-36C		
10-36H		
10-36N		
10-42H		
BIKEH		
COUNFT		
EMBEZ		
EMBEZH		
EMBEZV		
EMBVEH		
FDBIKE		
FLRPAY		
FRAUD		
FRAUDH		
GTA		
GTAATT		
GTAH		
GTAL		
GTAREC		
ILLDUM		
PLATE		
PLATEH		
PURSNT		
TILTAP		
TRESP		
10-50	Traffic call for service	Traffic call for service
10-52		
10-55		
10-50A		
10-50BLK		
10-50H		
10-50U		
10-52B		
10-52MC		
10-52OVER		
10-52P		
10-55S		
52BLDG		

Call Description	Table Category	Figure Category
52POLE		
52TREE		
52WALL		
CHREST		
HR1050		
HR1052		
HR50H		
ILLPRK		
PC		
POINT		
RACVEH		
REKDRV		
STLVEH		
SV		
TI		
TPURS		
TRFHAZ		
TRFLIT		
BT	Traffic stop	Traffic stop
PT		
T		

TABLE 22: Noncall activity Classification

Activity Type	Category
10	Administrative
21	
45	
46	
66	
67	
68	
69	
ADMN	
C7	
EQ	
VM	
P102	Directed patrol
P103	
P105	
P201	
P202	
P203	
P204	
P205	
P302	
P304	
P309	
P401	
P402	
P403	
P404	
P405	
P407	
P501	
P502	
P503	
P504	
P509	
P511	
P512	
P514	
P515	

Activity Type	Category
P800	
P900	
P910	
P911	
P920	
P925	
P930	
P940	
P955	
P960	
P990	
P995	
SA	
SD	
30	Patrol activity
60	
62	
64	
65	
GD	

Appendix B: Uniform Crime Report Information

This section presents information obtained from Uniform Crime Reports (UCR) collected by the Federal Bureau of Investigation (FBI), Tucson PD, and the Arizona Department of Public Safety. The table and figures include the most recent information that is publicly available at the local, state, and national level. This includes crime reports for 2005 through 2014 along with clearance rates for 2014.

TABLE 23: Reported Crime Rates in 2014, by City

City	State	Population	Crime rates		
			Violent	Property	Total
Casa Grande	AZ	50,207	478.0	3575.2	4053.2
Chandler	AZ	252,369	184.7	2,236.0	2,420.7
Gilbert	AZ	235,430	88.8	1,475.2	1,564.0
Glendale	AZ	237,517	358.7	4,816.1	5,174.8
Mesa	AZ	462,092	458.6	2,800.3	3,258.9
Peoria	AZ	164,722	148.1	2,002.8	2,150.9
Phoenix	AZ	1,529,852	571.9	3,724.4	4,296.2
Scottsdale	AZ	222,213	162.9	2,389.6	2,552.5
Surprise	AZ	125,049	109.6	1,678.5	1,788.1
Tempe	AZ	169,812	470.5	4,737.0	5,207.5
Tucson	AZ	529,962	650.2	5,963.6	6,613.9
Arizona		6,731,484	399.9	3,197.5	3,597.4
National		318,857,056	365.5	2,596.1	2,961.6

Note: Rates are shown as crimes per 100,000 people.

FIGURE 60: Tucson PD Violent and Property Crime Rates, by Year

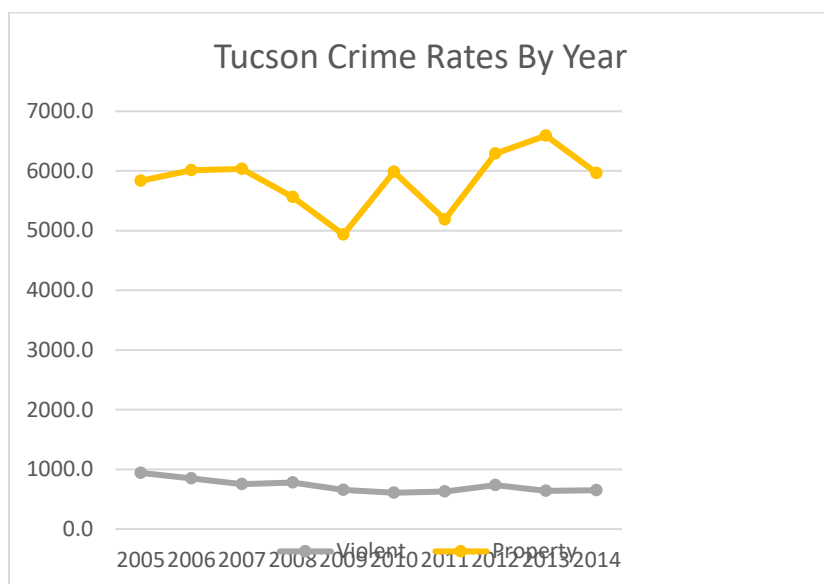


FIGURE 61: Reported Municipal and State Crime Rates, by Year

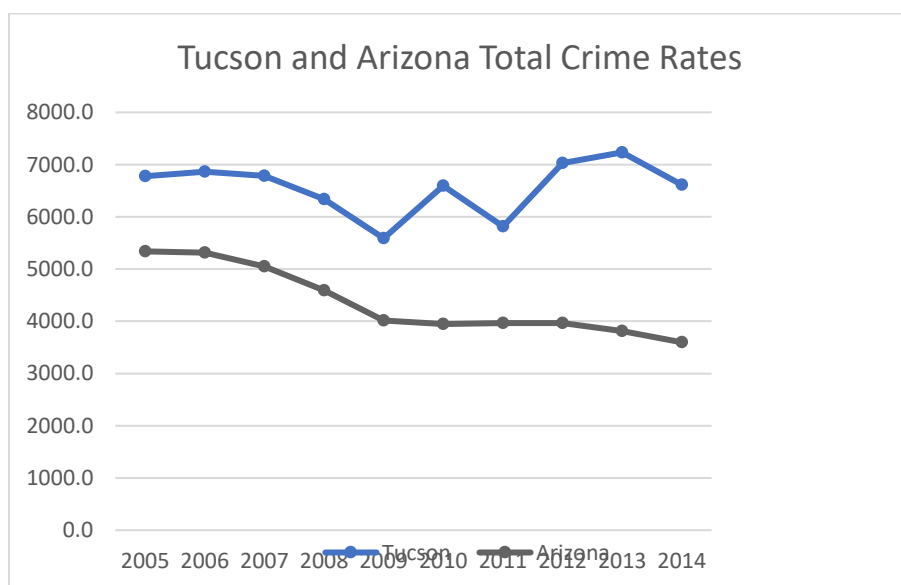


TABLE 24: Reported Municipal, State, and National Crime Rates, by Year

Year	Tucson				Arizona				National			
	Population	Violent	Property	Total	Population	Violent	Property	Total	Population	Violent	Property	Total
2005	536,267	941.5	5,836.5	6,778.0	5,953,007	512.0	4,827.0	5,339.0	296,507,061	469.0	3,431.5	3,900.5
2006	539,228	849.7	6,012.7	6,862.4	6,166,318	542.6	4,774.1	5,316.7	299,398,484	479.3	3,346.6	3,825.9
2007	544,700	753.6	6,031.6	6,785.2	6,338,755	518.0	4,532.6	5,050.6	301,621,157	471.8	3,276.4	3,748.2
2008	547,080	777.8	5,560.2	6,338.0	6,500,180	485.6	4,102.2	4,587.8	304,059,724	458.6	3,214.6	3,673.2
2009	543,454	655.3	4,934.4	5,589.6	6,595,778	426.5	3,589.0	4,015.5	307,006,550	431.9	3,041.3	3,473.2
2010	547,495	608.6	5,986.9	6,595.5	6,413,158	413.6	3,536.5	3,950.1	309,330,219	404.5	2,945.9	3,350.4
2011	546,630	629.5	5,186.0	5,815.5	6,467,315	414.2	3,554.7	3,968.9	311,587,816	387.1	2,905.4	3,292.5
2012	523,471	735.5	6,292.6	7,028.1	6,553,255	428.9	3,539.2	3,968.1	313,914,040	386.9	2,859.2	3,246.1
2013	524,646	641.8	6,592.4	7,234.2	6,626,24	416.5	3,399.1	3,815.6	316,128,839	367.9	2,730.7	3,098.6
2014	529,962	650.2	5,963.6	6,613.9	6,731,484	399.9	3,197.5	3,597.4	318,857,056	365.5	2,596.1	2,961.6

Note: Rates are shown as crimes per 100,000 people.

TABLE 25: Reported Tucson PD Clearance Rates in 2014

Crime	Tucson			Arizona			National		
	Crimes	Clearances	Rate (%)	Crimes	Clearances	Rate (%)	Crimes	Clearances	Rate (%)
Murder & manslaughter	37	26	70.3	276	202	73.2	12,879	8,310	64.5
Rape	399	28	7.0	2,445	555	22.7	99,765	38,500	38.6
Robbery	988	180	18.2	6,031	1,597	26.5	297,819	88,200	29.6
Aggravated assault	2,022	740	36.6	15,009	7,923	52.8	674,693	380,000	56.3
Burglary	4,247	183	4.3	40,151	3,715	9.3	1,573,560	214,000	13.6
Larceny	25,535	4,288	16.8	145,678	33,936	23.3	5,302,190	1,220,000	23.0
Vehicle theft	1,823	98	5.4	15,814	1,690	10.7	639,762	81,900	12.8
Arson	138	32	23.2	1,275	301	23.6	39,174	8,555	21.8

Note: At the national level, only clearance rates are publicly available. National clearances have been rounded to three significant figures for each crime type to correspond with the accuracy of the associated rates.