Police Force Analysis System℠
Third Summary Report

San Jose Police Department

Use of Force Data from January 1, 2015 to December 31, 2018

By:

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Background

In January 2018 we produced the first Summary Report using data from the San Jose Police Department's Police Force Analysis System℠. That report included data from January 1, 2015 to June 30, 2017. Our second report included data from July 1, 2017 to June 30, 2018. This report adds data from July 1, 2018 to December 31, 2018. Police Strategies will continue to update the system on a regular basis.

Police Strategies LLC

Police Strategies LLC is a Washington State based company that was formed in February 2015. The company was built by law enforcement professionals, attorneys and academics with the primary goal of helping police departments use their own incident reports to make data-driven decisions and develop evidence-based best practices. The company's three partners are all former employees of the Seattle Police Department and were directly involved with the Department of Justice's pattern or practice investigation of the department in 2011 as well as the federal consent decree that followed. They wanted to take the lessons learned from that experience and provide other police departments with the tools they need to monitor use of force incidents, identify high risk behavior and evaluate the outcomes of any reforms that are implemented. The company has a partnership with the Center for the Study of Crime and Justice at Seattle University to assist in the analysis of the data.

Police Force Analysis System℠

In the summer of 2015, Police Strategies LLC launched the Police Force Analysis System℠ (PFAS). PFAS combines peer-reviewed research with state-of-the-art analytical tools to produce a powerful data visualization system that can be used by law enforcement, policy makers, academics, and the public.[1] The core of PFAS builds upon the research work of Professor Geoff

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[1] Capitola Police creates online database to track use of force stats, Santa Cruz Sentinel, August 2016.

Alpert and his Force Factor method. Force Factor analysis formed the basis of Professor Alpert's 2004 book "Understanding Police Use of Force – Officers, Subjects and Reciprocity"[2] and has been the subject of several scholarly articles.[3]

PFAS is a relational database that contains 150 fields of information extracted from law enforcement agencies' existing incident reports and officer narratives. The data is analyzed using legal algorithms that were developed from the evaluation criteria outlined in the United States Supreme Court case of *Graham v. Connor*, 490 U.S. 386 (1989). The Court adopted an objective reasonableness standard which evaluates each case based upon the information that the officer was aware of at the time the force was used and then comparing the officer's actions to what a reasonable officer would have done when faced with the same situation. PFAS uses Force Justification Analysis to determine the risk that a use of force incident would be found to be unnecessary and Force Factor Analysis to evaluate the risk that the force would be found to be excessive.
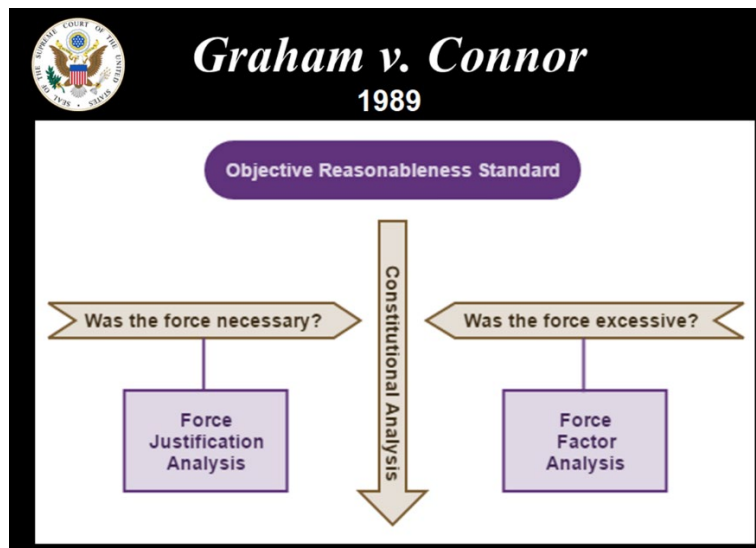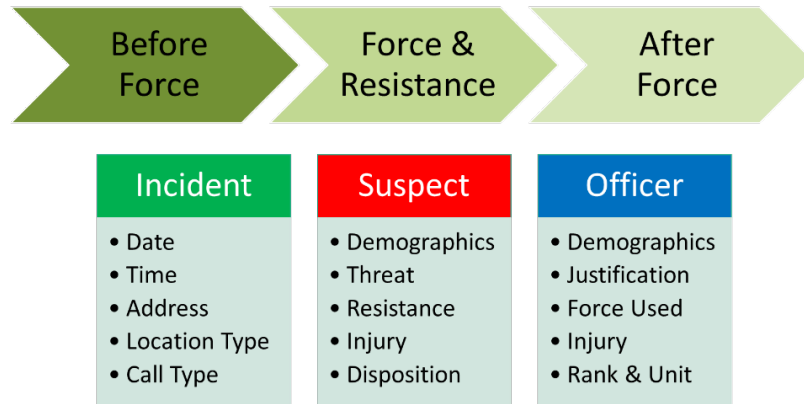

  SJPD puts use-of-force data online in pioneering move, San Jose Mercury, January 2018
[2] Understanding Police Use of Force – Officers, Subjects, and Reciprocity, Cambridge Studies in Criminology, 2004.
[3] See, e.g., Reliability of the Force Factor Method in Police Use-of-Force Research, Police Quarterly, December 2015.

PFAS examines relevant temporal data from immediately before, during and after an application of force.

Before Force	Force & Resistance	After Force

Incident	Suspect	Officer
• Date • Time • Address • Location Type • Call Type	• Demographics • Threat • Resistance • Injury • Disposition	• Demographics • Justification • Force Used • Injury • Rank & Unit

PFAS uses powerful data visualization software to display the information on dynamic dashboards. These dashboards can be used by police management to identify trends and patterns in use of force practices and detect high risk behavior of individual officers. The system can also be used to spot officers who consistently use force appropriately and effectively. Since the system can find both high risk and low risk incidents, PFAS can be used both as an Early Intervention System to correct problematic behavior as well as a training tool that highlights existing best practices.

PFAS contains several years of historical data for each agency and is designed to be updated on a regular basis. This allows the department to immediately identify trends and patterns as well as measure the impacts and outcomes of any changes that are made to policies, training, equipment or practices. For example, if a department provides crisis intervention and de-escalation training to its officers, the system will be able to evaluate whether that training has had any impact on officer behavior.

PFAS currently has use of force data from 56 law enforcement agencies in seven states involving more than 8,000 incidents and 3,000 officers who used force a total of 15,000 times. PFAS is the largest database of its kind in the nation. Although the incident reports from each of these agencies uses a different format, all the data extracted and entered into the system has been standardized which allows us to make interagency comparisons. The Police Force Analysis

Network℠ allows agencies to compare their use of force practices with other agencies in the system.

The Police Force Analysis System℠ provides comprehensive information about police use of coercive authority and permits the study of the intersection of individual and contextual factors that explain situational, temporal, and spatial variation in the distribution of police coercive authority. PFAS supports meaningful community engagement about police coercion by providing comprehensive and relevant data to address and inform community concern regarding police-citizen interactions.

Data Collection from the San Jose Police Department

SJPD provided two types of reports for coding: (1) General Offense (GO) reports and (2) electronic Force Response Reports. These reports were received as Adobe Acrobat files and Excel spreadsheets. In addition, SJPD provided electronic data on some of the incident details (date, time, address, etc.) and subject details (age, race, gender).

In February 2019 Police Strategies LLC received SJPD use of force reports from the last six months of 2018. Data entry was completed in April 2019 and then the information was processed through the system's legal algorithms. Finally, the interactive dashboards were updated. All the data entered into the system was geocoded and SJPD was able to provide shape files for the department's divisions, districts, beats and grids. This enabled us to prepare several customized dashboards that present the use of force data geographically.

The Department has contracted for ongoing updates of PFAS. The next Summary Report will be produced in mid-2019.

# Summary of San Jose PD's Police Force Analysis System℠

1) Date, Time and Location of Use of Force Incidents

Uses of force do not have a distinct seasonality with an average of 56 incidents per month. The use of force is more common in the month of May with an average of 64 incidents and less common in December and January with 50 and 48 incidents respectively. Over the last four years monthly uses of force peaked in July 2018 at 72 and was lowest in February 2017 at 34. Force occurred most often on Saturdays (121 incidents/year) and were lowest on Tuesdays and Wednesdays (79 incidents/year). Each day use of force was most common between the hours of 4pm and 2am peaking between 10pm and midnight.

Streets are the most common location for uses of force to occur (55%) followed by businesses (14%). Twenty-three percent of incidents happened inside or outside of a residence. Less than 8% of use of force incidents occurred at parks, schools, nightclubs or other locations.

Nearly two-thirds of use of force incidents arose from a dispatched call for service while 27% were the result of an officer-initiated stop.
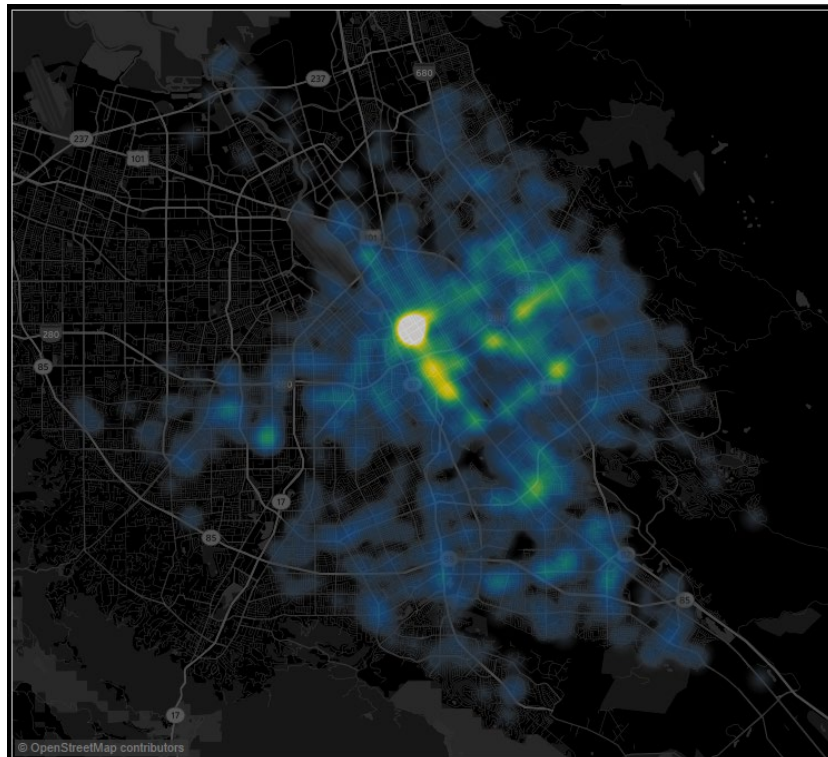
The most common call type for force incidents was for a violent crime (33%) followed by a traffic stop or infraction (17%) and property crimes (17%).
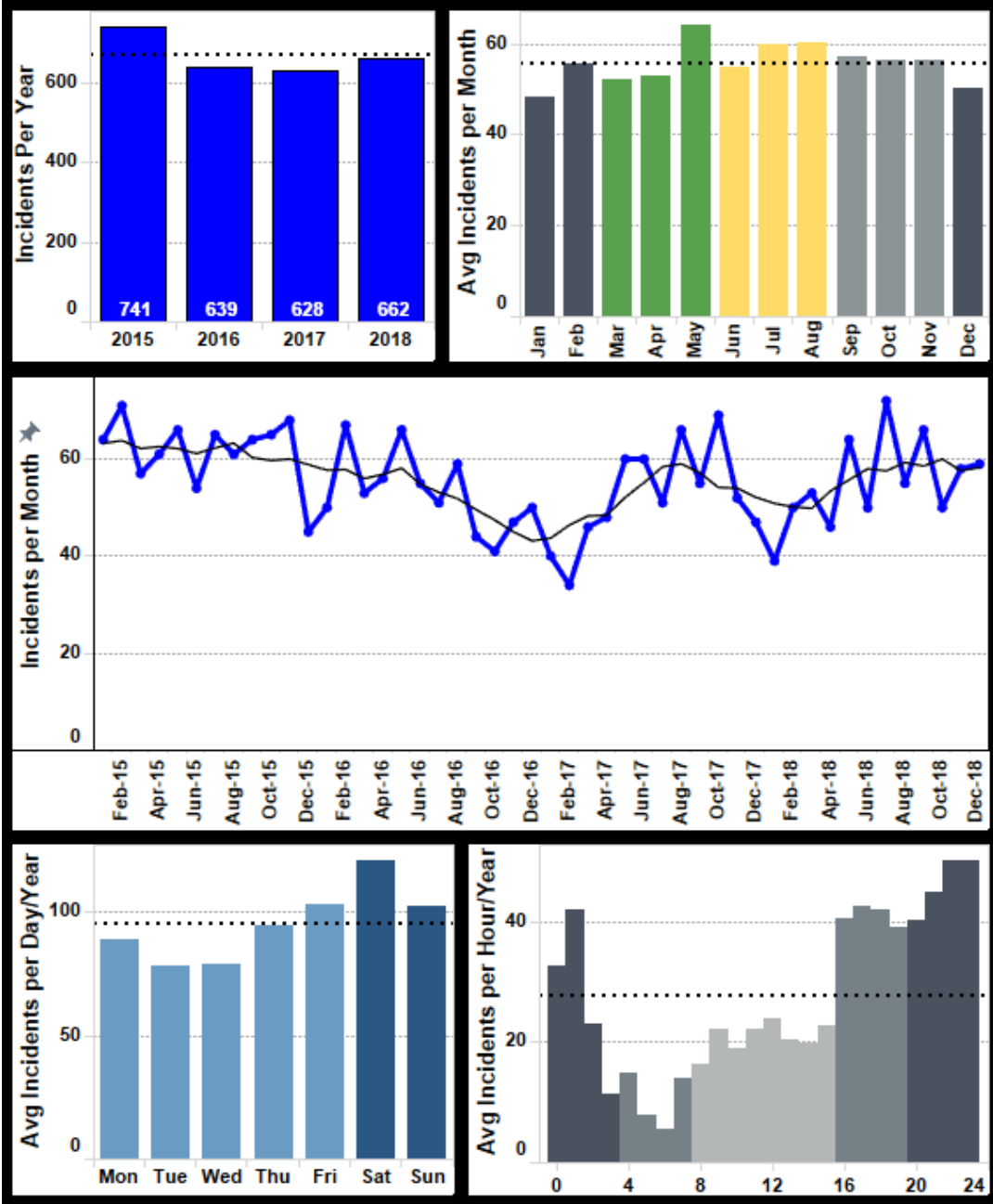
Use of Force Incident Locations
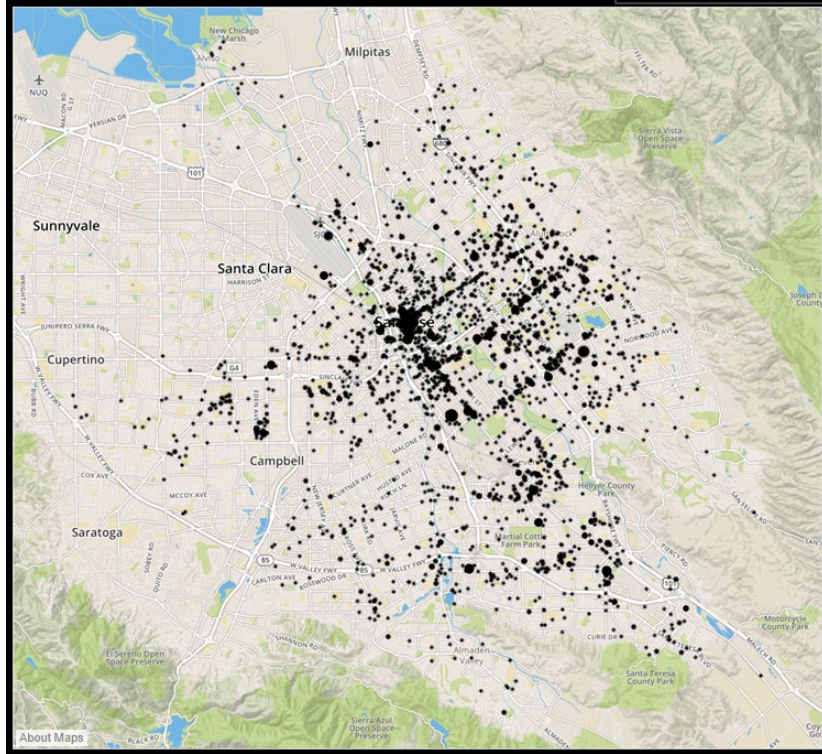
Use of Force Heat Map

2) Force Frequency

Over the last four years 904 San Jose PD officers have used force 4,975 times in 2,670 separate incidents. On average there are 668 use of force incidents each year.

Two officers used force 41 times each over the four-year period and they were involved in 3.1% of all the force incidents. Eight officers used force between 30 and 34 times. Altogether these 10 officers made up 1.1% of the officers who used force but accounted for 6.8% of all uses of force. There were 354 officers who only used force once or twice during the last four years.

On average about 50% of the officers in the department use force in any given year. These officers use force 2.5 times annually. The top 10% of officers who use force are responsible for 27% of the total uses of force by the department.

For every 10,000 residents in San Jose, the department uses force 6.2 times. About 4% of all arrests results in a use of force.

3) Force Justification

The Force Justification Score is based upon the four Graham Factors: (1) seriousness of the crime being investigated; (2) the level of threat to the officer or others; (3) the level of resistance; and (4) whether the subject fled from the officer. Low Justification Scores are indicative of incidents where subjects were not committing serious crimes, did not pose a significant threat to the officer or others, did not present a high level of resistance and did not flee.

Over the last four years, 16% of San Jose's use of force incidents had low Force Justification scores (<6). The average justification score was 9.4 on a scale of 0 to 20 which is above average for other departments. For each of the four Graham factors, San Jose scored highest in the resistance level and the crime level categories and lowest in the threat level category. This indicates that when San Jose officers use force, they are facing more serious crimes and higher levels of resistance, but subjects are less likely to present an immediate threat to the officers or others.

Eight percent of incidents received the highest justification score of 20. Most of these cases involved assaults on the officers before the officer made the decision to use force.

In the last four years 442 officers were involved in at least one incident with a low Force Justification score and 188 of these officers were involved in more than one low Force Justification incident. One officer was involved in 11 incidents and another officer was involved in 9 incidents.

Low Force Justification incidents were more likely to have the following characteristics than cases with higher Force Justification scores:

- Subject was female (23%)
- The most serious charge referred for prosecution was a drug crime (29%)

Average Force Justification Scores were lower for women than men. Native American subjects had higher Force Justification scores than other racial groups. Average Force Justification scores declined with the subjects' age. Older subjects had lower Force Justification scores than younger subjects.

Officers were much less likely to use weapons during a low Force Justification incident and were less likely to use physical strikes as well.

4) Force Factor

The Force Factor Score is based upon the proportionality of force to resistance and scores range from -6 to +6. A negative score means that the subject's resistance level was higher than the officers' force level. A medium Force Factor Score is between 0 and +2. This is the range where most officers can gain control of a subject by using force that is at least proportional to the level of resistance or slightly above. A Force Factor of +3 or above is considered a high score. This does not mean that the force was excessive, but these incidents do present a higher risk to the department.

Over the last four years 7% of incidents had a high Force Factor score (+3 or above). There were 59 incidents that had a +4 Force Factor and no incidents had a score of +5 or +6. There were 167 officers who were involved in at least one high Force Factor incident and 45

of those officers were involved in multiple incidents over the four-year period. One K-9 officer was involved in 10 high Force Factor incidents. Canine bites often result in a high Force Factor score because the subject is usually hiding from officers (Level 2 passive resistance) when they are bitten by the by the K-9 (Level 6 less lethal weapon force). Another officer had 7 high Force Factor incidents. This officer was involved in 26 force incidents and relied mostly on the use of weapons - OC (58%), impact weapons (12%) and projectile weapons (12%). The routine use of weapons will result in higher than average Force Factor scores.

The most common Force Factor Score was +1 (42%) followed by 0 (26%). These numbers indicate that most officers in the department behave very consistently when faced with a given level of resistance and they tend to use the minimal amount of force necessary to gain compliance.

Most of the high Force Factor incidents involved the use of a weapon (82%). ECDs and projectile weapons were used in half of the high Force Factor incidents followed by canines (14%) and OC (12%).

When high levels of force are used against lower levels of resistance the subjects are controlled much faster with lower injury rates for officers but higher injury rates for subjects.

	Force Factor		
	Low (-1 to -2)	Medium (0 to +2)	High (+3 to +4)
Subject brought under control within 1 or 2 Force Sequences	23%	27%	63%
Subject Injury Rate	53%	57%	71%
Officer Injury Rate	19%	21%	4%
Weapon Used by Officer	25%	34%	82%

5) Force Tactics

Of the 2,670 use of force incidents that occurred over the last four years, 64% involved physical force only, 12% involved only the use of a weapon(s) by officers and 24% involved both physical force and the use of a weapon.
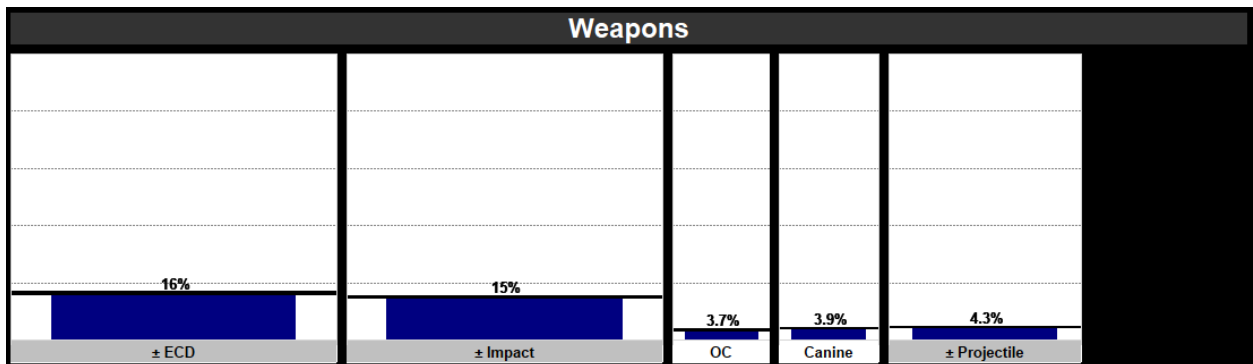
Of the physical tactics that were used, grabbing/pulling/holding was the most common (77%) followed by takedowns (59%).
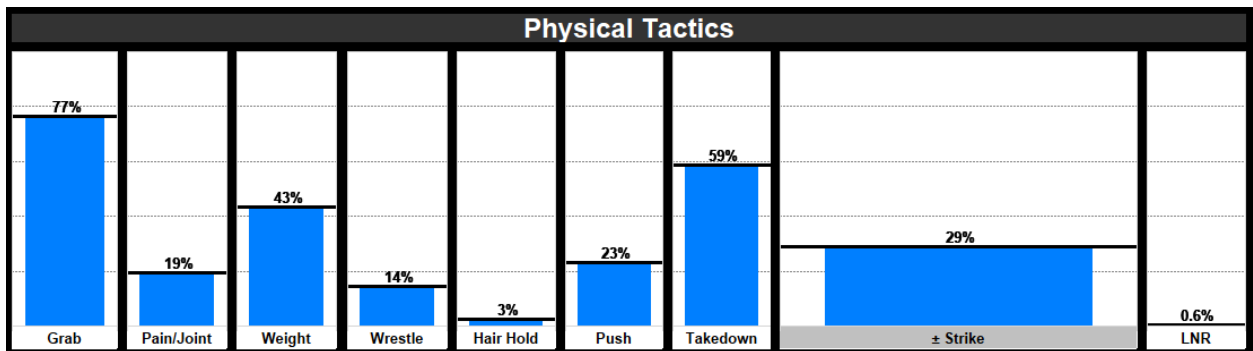
ECDs (16%) and impact weapons (15%) were the most common weapons used by officers. Firearm incidents were not included in the database.

In the last four years, 305 officers deployed their ECDs 529 times. Most deployments involved the use of the probe 77% and drive-stun mode was used 12% of the time. In 12% of deployments both probe and drive stun were used. The ECD was fully effective 54% of the time and in 31% of deployments it had no effect. There were two officers who deployed their ECDs 7 times during the four-year period and three officers who deployed the weapon 6 times.

Over the last four years officers have used 4,975 physical force tactics and weapons. The four-year trends for physical force show that the use of strikes has been declining while officers are wrestling with subjects and using their body weight to hold subjects down more often.
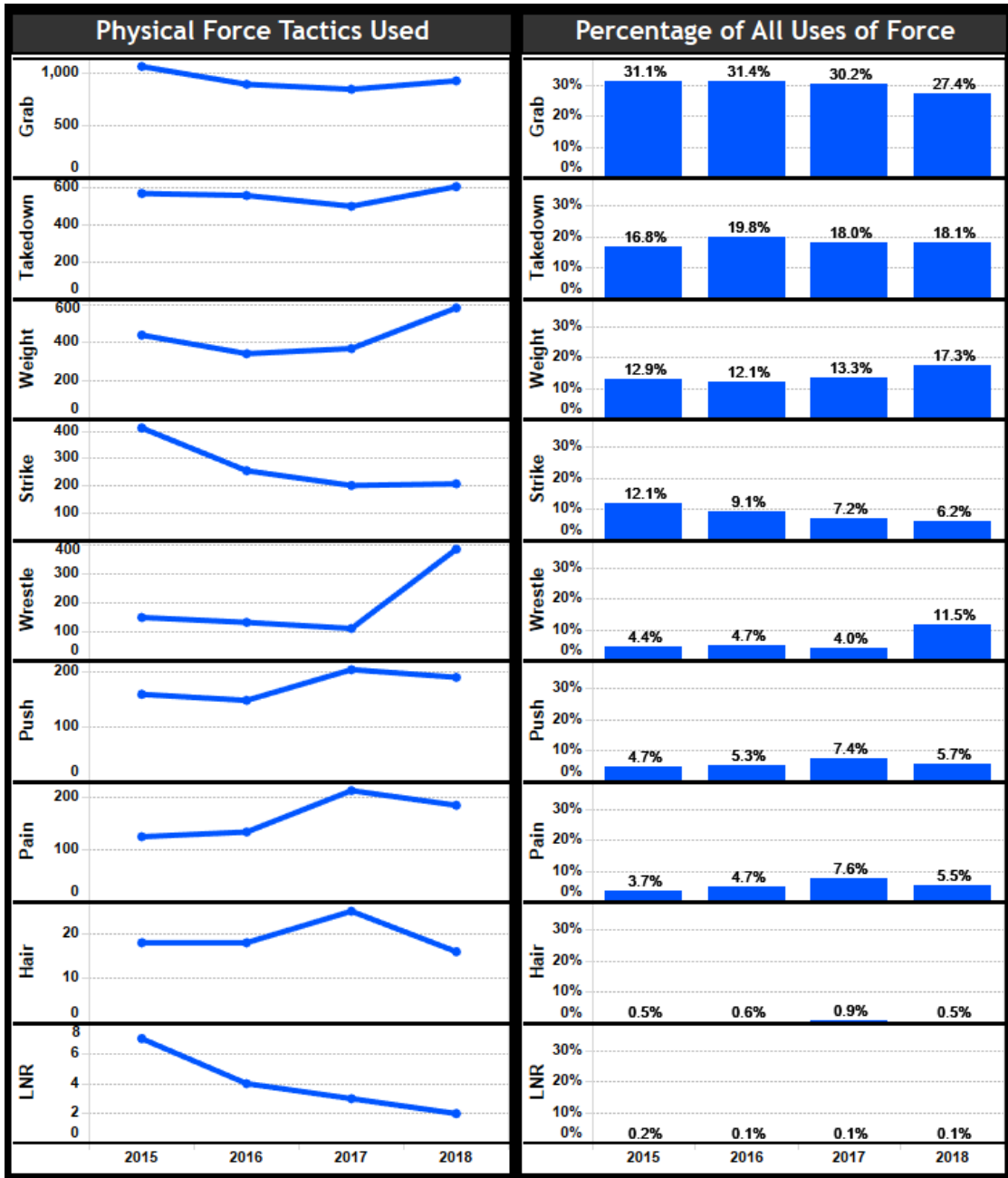
The use of ECDs remained steady until 2018 when it dropped to 3.5% of all force tactics used. The use of impact weapons had declined steadily over the last four years from 5.8% to 2.9%. Similarly, the use of projectile weapons and OC has fallen to only 0.4%. The use of canines remained relatively stable from year to year.
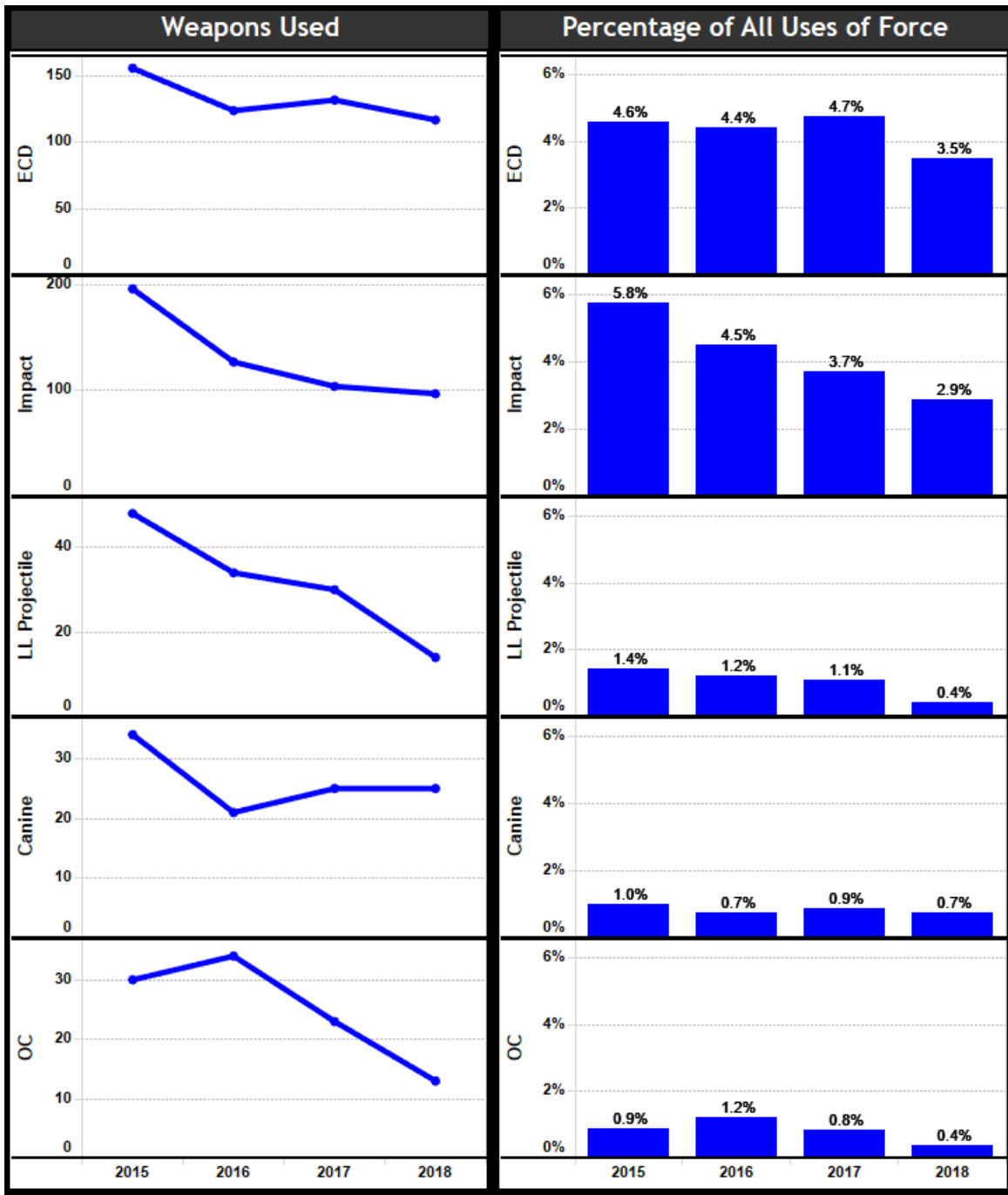
6) Subjects

The subject demographic groups that are most commonly found in the Department's use of force incidents have the following characteristics:

Race	Gender	Age	Residence	Number of Subjects	Percentage of Force Incidents
Hispanic	Male	18-29	San Jose	494	18.6%
Hispanic	Male	30-49	San Jose	366	13.7%
Hispanic	Male	30-49	Transient	103	3.9%
White	Male	30-49	San Jose	99	3.7%
All Other Demographic Groups				1,608	60.2%
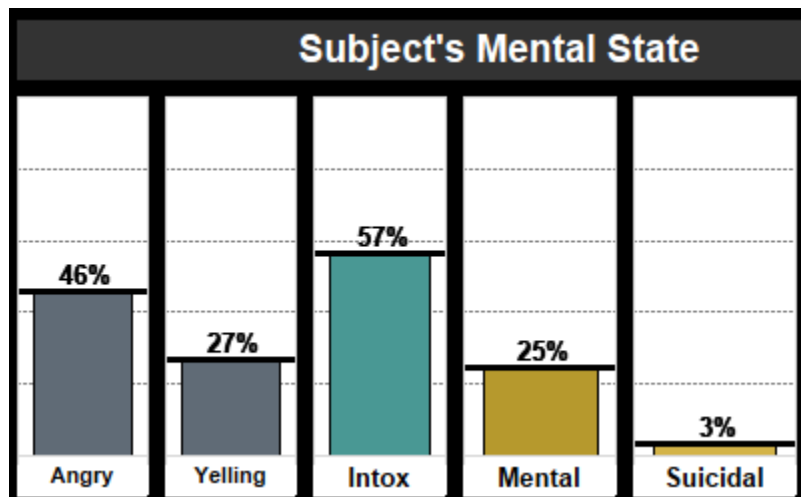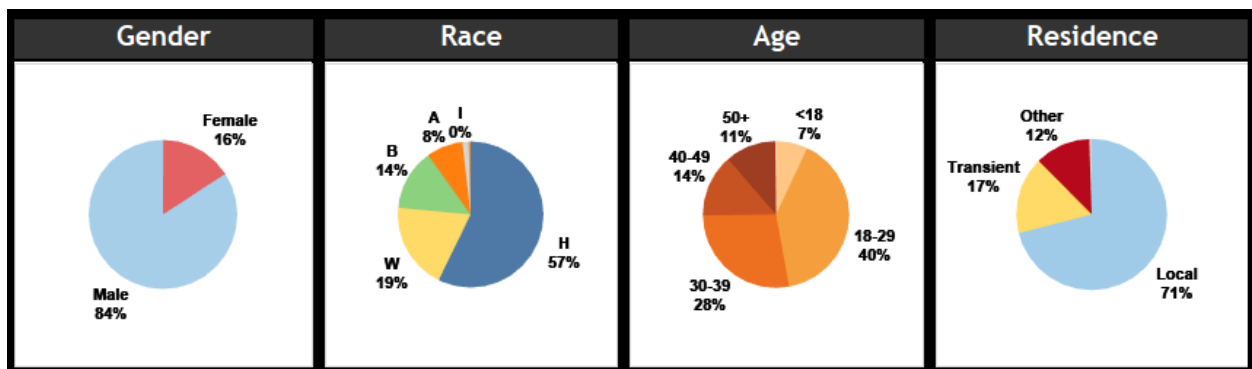
The following table shows how the subjects from San Jose PD compare with subjects from the other 55 agencies in the Police Force Analysis Network℠.

Subject Characteristic	Percentage of Incidents*	Interagency Average	Interagency Comparison
Female	16%	17%	Average
Non-White	81%	31%	High
Juvenile	7%	6%	Average
Over Age 50	11%	9%	Average
Transient	17%	6%	High
Resident of Another Jurisdiction	12%	29%	Below Average
Under the Influence of Alcohol or Drugs	57%	46%	Above Average
Mental Health Issue	25%	17%	Above Average
Suicidal	3%	8%	Below Average
*For comparative purposes, missing data is excluded from the percentages.			

One in four subjects fled from the officer, while 12% possessed some type of weapon. Thirty-two subjects were armed with a firearm and four of them pointed their weapon at officers.

Most subjects engaged in some type of physical resistance (86%) while 102 subjects used a weapon against the officer. Four percent of subjects were only passively resisting when force was used against them.

7) Disparity Analysis

While census data of the residential population is sometimes used as a benchmark for a disparity analysis, it does not provide an adequate measure to assess the possible impacts of bias by police officers. There are many factors that could affect the demographic disparities between uses of force and the population that have nothing to do with officer bias such as crime rates, compliance rates, possession of weapons, poverty rates, deployment strategies, etc.

A better benchmark for measuring demographic disparities in police uses of force is arrest data.[4] Almost every use of force incident is associated with an arrest. All things being equal, we would expect to see the same proportion of subject characteristics for those who are arrested as those who have force used against them. If there is a demographic disparity observed between the use of force data and the arrest data, this disparity could be caused by differential subject behavior (i.e. one subject group is more or less likely to resist arrest than other groups) or differential officer behavior (i.e. officers are more or less prone to use force against one subject group than other groups) or a combination of differential behavior from both subjects and officers.

Arrest data from the San Jose Police Department from 2017 and 2018 was examined and compared to the use of force data collected by the Police Force Analysis System. Arrest data was broken down by gender, race and age and the use of force data was organized into the same categories as the arrest data.[5] We also gathered population demographic data from the US Census Bureau and other sources.

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[4] A recent report from the University of Texas at San Antonio and the University of Cincinnati used this methodology to examine racial disparities between uses of force and arrests using data from the from the Tulsa Police Department.
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[5] The arrest data provided by the Department was broken down into only four racial/ethnic groups (Hispanic, Black, White and Other). Based on the more detailed racial breakdown of use of force data, we would predict that the "Other" group is comprised most of Asian arrestees and would also include Native Americans, Pacific Islanders and other racial categories.

In 2018 the estimated total population of the City of San Jose was 1,045,000. During the two-year period from 2018 to 2019 the Department made 32,741 arrests and used force against 1,290 subjects. The annual arrest rate per thousand population was 16 and the use of force rate per 100 arrests was 3.9%. The following tables provide the gender, race and age composition of the estimated population of San Jose in 2018 and the demographic composition of all arrestees and subjects who had force used against them in 2017 and 2018:

Gender	Population	Arrests	Uses of Force
Male	50.3%	77.5%	82.2%
Female	49.7%	22.5%	17.8%

Race	Population	Arrests	Uses of Force
Other	42.0%	10.4%	9.4%
Hispanic	31.2%	55.3%	54.9%
White	23.6%	20.8%	21.4%
Black	3.2%	13.5%	14.3%

Age	Population	Arrests	Uses of Force
<18	26.4%	7.5%	8.4%
18-24	9.9%	17.9%	21.4%
25-29	9.0%	15.4%	16.5%
30-39	17.7%	27.3%	28.5%
40-49	14.9%	17.3%	14.3%
50-59	10.6%	11.5%	8.7%
60+	11.5%	3.2%	2.2%

A Disparity Index was calculated for both arrests and uses of force. The Arrest Disparity Index is the percentage of arrests of a demographic subgroup compared to that group's percentage in the overall population. The Use of Force Disparity Index is the percentage of uses of force of a demographic subgroup compared to that group's proportion of overall arrests. A disparity index of 1 means that there is no disparity between the two variables. A disparity index of less than 1 means that the group appears less frequently than would be expected while a disparity index greater than once means that the group appears more frequently than expected.

When we examine arrests by gender, we find that males are 54% more likely to be arrested than we would expect based on their percentage of the population while females are 55% less likely to be arrested. When arrests by race are examined, we find that Whites and Other races are underrepresented in the arrests while Hispanics and Blacks are overrepresented. We also find disparities by age. Adults between the ages of 18 and 39 are more than 50% more likely to be arrested than their population numbers would suggest while juvenile and adults over 60 are over 70% less likely to be arrested. The arrest disparities observed for gender and age are supported by criminal behavior research – males are more likely to commit crimes than females and the peak age range for criminal behavior is between 18 and 24.

When we compare uses of force and arrests, we see much less disparity. Males are only 6% more likely to have force used against them than we would expect based on their arrest numbers, and females are 21% less likely. Juvenile arrestees are much more likely to have force used against them than arrestees over 40 and the 18 to 24 age group has the highest disparity. While there were large arrest disparities by race, there is virtually no racial disparity when uses of force are compared to arrests.

Based on the available data, we cannot reach any definitive conclusions as to the cause of observed demographic disparities. However, the lack of any significant racial disparities between uses of force and arrests suggests that resistive behavior is similar across racial groups and officers do not treat subjects differently based solely on the subject's race.

Disparity Index

Arrest and Use of Force Data from 2017-2018

Gender	Arrests / Population	Uses of Force / Arrests
Male	1.54	1.06
Female	0.45	0.79
Race		
Other	0.25	0.90
Hispanic	1.77	0.99
White	0.88	1.03
Black	4.17	1.06
Age		
<18	0.28	1.12
18-24	1.80	1.20
25-29	1.71	1.07
30-39	1.54	1.05
40-49	1.16	0.82
50-59	1.09	0.75
60+	0.27	0.69

8) Injuries

In the last four years there were 407 officers who were injured a total of 696 times. Fourteen officers were injured between 5 and 9 times. Most officer injuries involved a minor scrape (46%) or a cut (27%), but 12 officers suffered a fracture. Officers received more than half of their injuries on their hands or arms.

Fourteen percent of force applications by officers resulted in an injury to the officer who used force. Officers were more likely to get injured when they used a lateral neck restraint (56% injured) or wrestled with a subject (28% injured) and were least likely to get injured when they used a canine (3% injured) or OC (11% injured).

Of the officers who were injured, 12% were treated by EMTs and 18% were treated at a hospital.

Over the last four years 1,536 subjects that had force used against them were injured (58% of all incidents). Of the subjects who were injured, most of the injuries were minor: complain only (17%), ECD probe (9%), scrape (35%) or cut (24%). Ninety-three subjects were bitten by a canine, 52 subjects suffered a fracture or broken tooth and 7 subjects lost consciousness. Subjects received about half of their injuries on their head and 37% of injuries were on the hands or arms.

Subjects were most likely to receive an injury during a canine application (100% injured) or the use of an ECD (82% injured), OC (81% injured), or an impact weapon (77% injured). Of all the physical force techniques used the following were most likely to injure the subject: lateral neck restraint (88% Injured), strikes (75% injured) and wrestling with the subject (74% injured).

Of the all the subjects who were injured, 14% were treated by EMTs only and 61% were treated at a hospital.
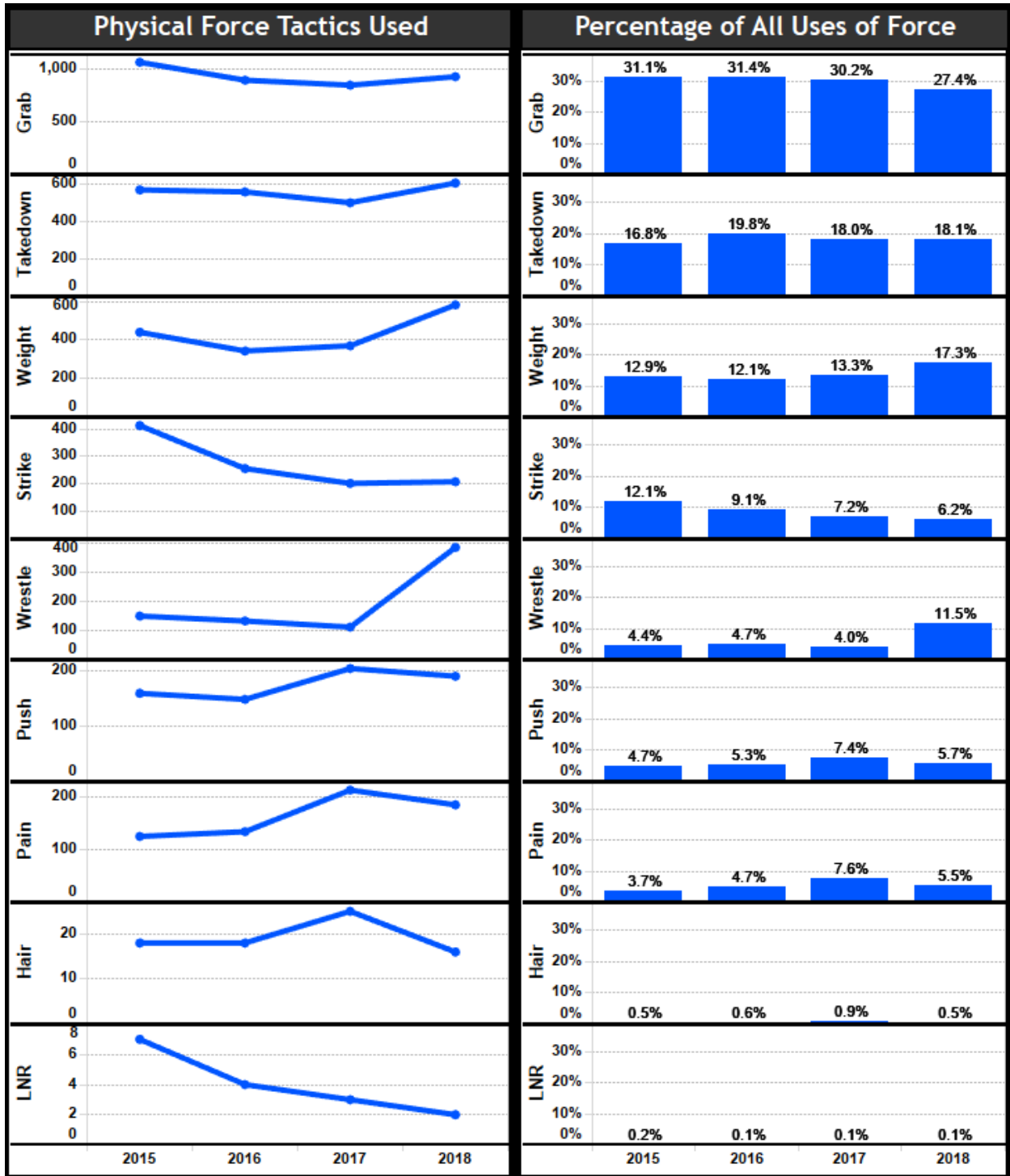
9) Trends

Over the period from 2015 to 2018 the following force trends were observed:
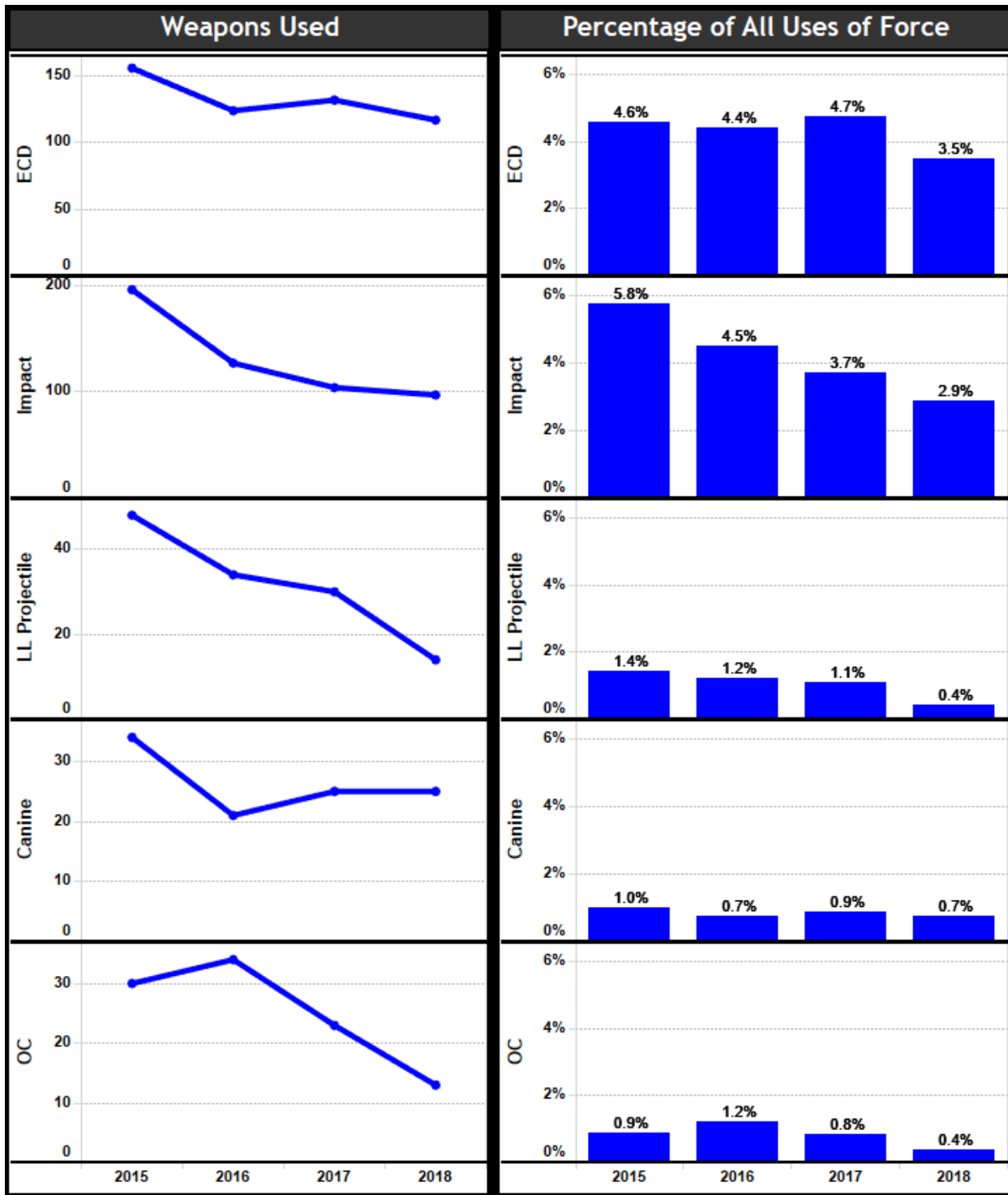
- The annual number of use of force incidents dropped by 14% from 2015 to 2016 and then remained stable for the next two years.

- The average Force Factor and Force Justification Scores remained very stable over the four-year period and were in the average range of other agencies.

- In 2018 the average number of Force Sequences rose to 4.2 which is in the high range. This means that it is taking longer for officers to control subjects which could lead to greater risk of injury for officers and subjects.

- The rate of active resistance by subjects fell by 17% over the last four years and the subject's use of deadly force against the officer fell from 3.4% to 0.3%.

- Officers are moving away from less lethal weapons and are using more physical force to control subjects. Incidents involving a less lethal weapon fell from 40% to 31%.

- The average annual number of force incidents per officer has fallen steadily from 2.9 to 2.3.

- More incidents occurred on the street in 2018 (60%) than prior years (53%)

- The subject's use of deadly force fell from 3.4% to 0.3%

- Incidents where the subject attempted to flee increase from 10% to 17%, but subjects fleeing on foot or by vehicle fell from 29% to 27%.

- In 2018, subjects that had mental health issues (29%) or were suicidal (5%) were at the highest rate during the last 4 years.

Subject/Incident Characteristic	2015	2018	Change
Subject Possessed a Knife	4%	9%	+125%
Juvenile Subject	5%	10%	+100%
Subject was Possibly Armed	18%	33%	+83%
Subject was Suicidal	3%	5%	+67%
White Subject	16%	22%	+38%
Subject had Mental Health Issue	22%	29%	+32%
Female Subject	14%	17%	+21%
Force Occurred on the Street	53%	60%	+13%
Hispanic Subject	64%	54%	-16%
Subject Assaulted Officer During Force	40%	31%	-23%
Original Call was for Traffic, Liquor or Infraction	21%	16%	-24%

10)   Force Tactics Trends

Between January 2015 and December 2018 there were 904 officers who used force a total of 4,975 times. In general, officers are moving away from less lethal weapons and higher levels of force and are resolving more incidents with lower levels of physical force. In 2015 57% of all tactics used involved low levels of physical force but by 2018 low level force had increased to 68%. Between 2015 and 2018 the use of less lethal weapons fell from 40% of all incidents to 31%. As a percentage of all force tactics used, physical strikes have been declining, while using weight to hold down a subject and wrestling have been increasing. The use of takedowns has remained constant. From 2015 to 2018 the use of impact weapons has been cut in half from 5.8% to 2.9% and the use of projectile weapons has fallen from 1.4% to 0.4%. In 2018 the use of Electronic Control Devices fell from about 4.5% to 3.5%. Canine use has remained steady at under 1% while the OC rate was cut in half in 2018 to 0.4%

Physical Force Tactics Used

Percentage of All Uses of Force

	2015	2016	2017	2018
Grab	31.1%	31.4%	30.2%	27.4%
Takedown	16.8%	19.8%	18.0%	18.1%
Weight	12.9%	12.1%	13.3%	17.3%
Strike	12.1%	9.1%	7.2%	6.2%
Wrestle	4.4%	4.7%	4.0%	11.5%
Push	4.7%	5.3%	7.4%	5.7%
Pain	3.7%	4.7%	7.6%	5.5%
Hair	0.5%	0.6%	0.9%	0.5%
LNR	0.2%	0.1%	0.1%	0.1%

Weapons Used

Percentage of All Uses of Force

11) Geographic Analysis

In 2015 Foothill, Western and Central Divisions each had about 200 incidents involving a use of force while the Southern Division only had 130 incidents. In 2016 the total number of use of force incidents decreased by 102 but the geographic distribution remained similar with Southern having the fewest incidents (120) and the other three Divisions with about 170 incidents each. In 2017 the total number incidents decreased by only 10 but the geographic distribution changed dramatically. The Western Division had 204 incidents while the other three Divisions had about 140 incidents each. In 2018 the geographic pattern of force changed again. For the first time in the last four years, the number of incidents in the Southern Division (167 incidents) exceeded both the Foothill Division (162 incidents) and the Central Division (141 incidents).

The number of use of force incidents in the Southern Division had been climbing steadily since the first quarter of 2017 but dropped dramatically in the fourth quarter of 2018. Central and Foothill Divisions fell from their highs in 2015 and 2016 and have maintained a lower level in 2017 and 2018. Western has consistently had the highest annual number of force incidents over the last four years.

Since 2015 Lincoln District has consistently had the highest number of force incidents and now comprises about 15% of all uses of force in the City. Charles and Edward Districts have the next highest numbers of force incidents, but their numbers have been declining since 2015. From 2016 to 2018 use of force incidents in Yellow and Tom Districts more than doubled. In 2017 X-Ray District had the second highest number of use of force incidents but it fell to 5th place in 2018.

Uses of force that result from an officer-initiated stop (onview) have consistently been lower in the Southern Division compared to the other three Divisions. Central Division has the

highest percentage of uses of force resulting from an onview 34% while 75% of uses of force in the Southern Division come from dispatched calls.

By 2018 the subject flight rates and average subject threat levels were similar across all four Divisions. Lincoln and Frank Districts had the highest average subject threat levels while Robert and Tom Districts had the lowest. Subjects in King and Victor Districts were the most likely to flee from officers (37%).

Southern Division officers have consistently spent more time interacting with subjects before using force, and this may be due to the fact that a higher percentage of their force incidents come from dispatched calls that they are investigating rather than officer onviews.

In 2018 the average Justification Scores were similar among the four Divisions, but Western Division had a higher average Force Factor Score than the other Divisions. The average Force Factor Score has been increasing in Western Division since 2016.

Officers were more likely to be injured in the Central Division while Western and Foothill Divisions had higher subject injury rates.

ECD use has been declining in all Divisions except for Southern where it increased to 20% of all force incidents in 2018. Impact weapon use has fallen in all Divisions with the greatest decline in Central (9% of force incidents in 2018). Takedowns are used most often in Foothill and Central Divisions (68% of force incidents), while strikes have been declining in all Divisions and are lowest in Southern Division (19% of force incidents).

Over the last four years the percentage of female subjects has increased in Western, Foothill and Central Divisions and by 2018 18% of all uses of force involved a female subject. The average age of subject has remained steady except in Foothill Division where it has increased

from 29 in 2015 to 33 in 2018. Subjects with mental health problems have increased in all Divisions and by 2018 were highest in Central and Southern Divisions (33% of force incidents).

The percentage of Hispanic subjects has fallen over the last four years in Foothill and Central Divisions and has increased in Southern Division. The number of White subjects has increased in Southern and Western Divisions, while other racial groups have remained relatively consistent from year to year. The number of Asian subjects in Foothill Division increased from 10 to 25 between 2017 and 2018. Hispanics made up the largest portion of subjects in every District except for Yellow and Tom where White subjects were most common.

12) Long-Term Use of Force Trends

The last use of force report created by SJPD used data from 2007 and presented about 20 data fields taken from the Force Response Reports. While not all this data is directly comparable with the data contained in PFAS, we were able to make direct comparisons with the data taken from the Force Response Reports in recent years. The following is a comparison of the data contained in the San Jose Police Department's 2007 Force Response Report and the Department's use of force data from 2015, 2016 and 2017 contained in the Police Force Analysis System℠.

a) Arrests and Uses of Force

From 2007 to 2018 the number of annual arrests made by SJPD fell by 50% from 35,998 arrests to 17,906 arrests. At the same time the number of uses of force fell by 43% from 1,156 in 2007 to 662 in 2018. In 2007 the use of force rate (uses of force per 100 arrests) was 3.2%. The rate rose to 4.2% in 2016 before falling back to 3.7% by 2018. Between 2015 and 2018 the use of force rate has remained stable at an average of 3.9%. When the department makes fewer arrests, officers will focus on more serious incidents particularly those involving violent crimes and weapons offenses. Subjects involved in these types of crimes tend to be less compliant generating a higher use of force rate. Therefore, some of the increase in the

department's use of force rate since 2007 is a product of an increasing percentage of violent crimes in overall arrests (17.5% in 2015 to 21.5% in 2017).

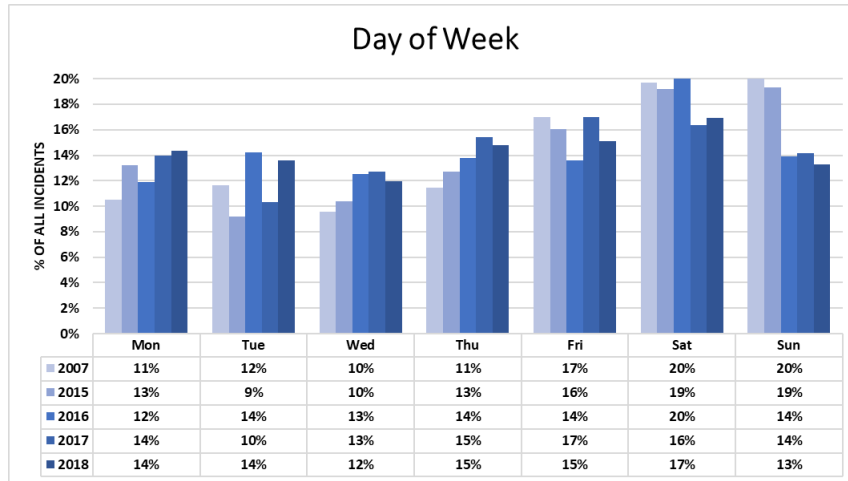## b) Calls for Service and Uses of Force
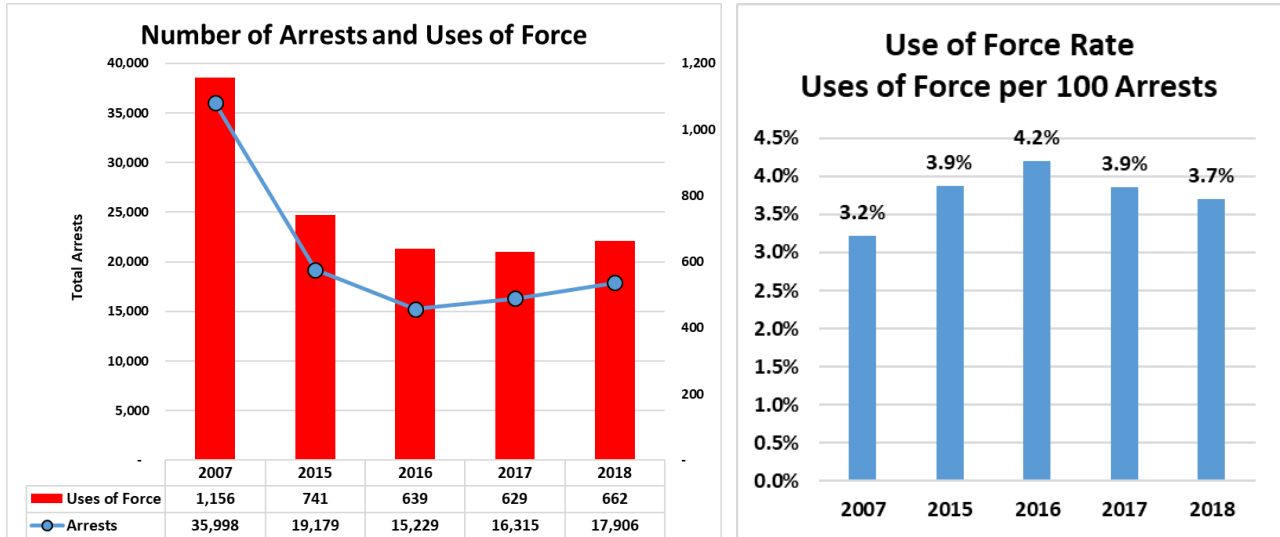
From 2007 to 2018 the number of annual calls for service to SJPD fell by 23% from 436,624 calls to 338,124 calls. At the same time the number of uses of force fell by 43% from 1,156 in 2007 to 662 in 2018. In 2007 the use of force rate (uses of force per 100 calls for service) was 0.265% and by 2018 it had fallen to 0.196%.
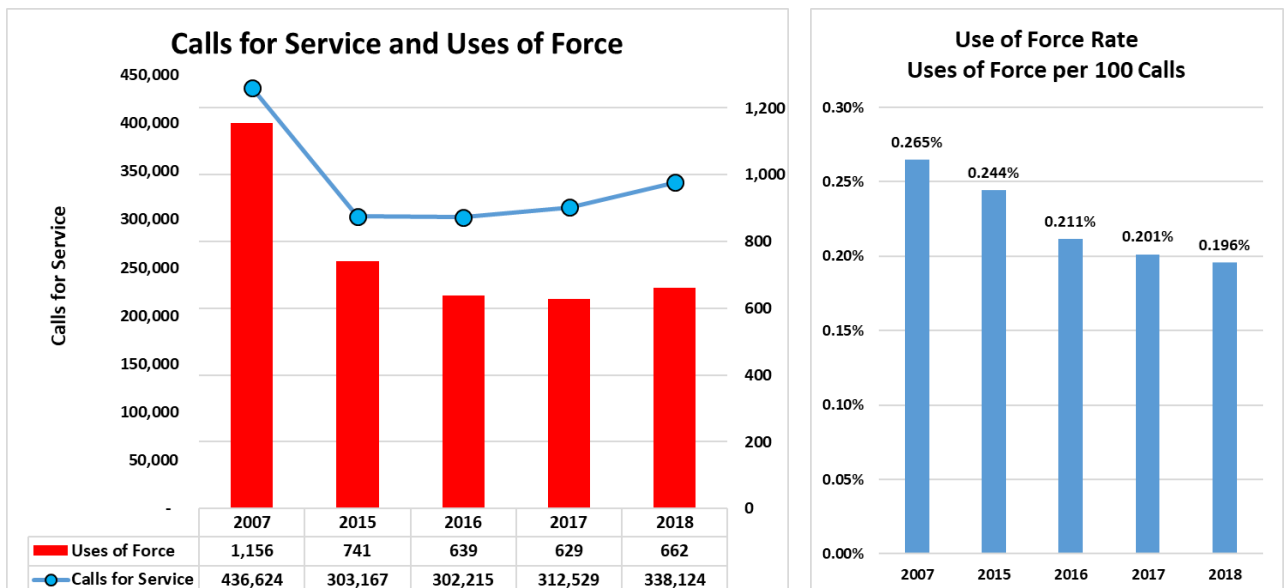
c) Day of the Week

Over the last 11 years the proportion of use of force incidents occurring on the weekends has declined from 40% to 30%. Most of this decline has shifted to the Mondays to Thursday time period.

Day of Week

	Mon	Tue	Wed	Thu	Fri	Sat	Sun
2007	11%	12%	10%	11%	17%	20%	20%
2015	13%	9%	10%	13%	16%	19%	19%
2016	12%	14%	13%	14%	14%	20%	14%
2017	14%	10%	13%	15%	17%	16%	14%
2018	14%	14%	12%	15%	15%	17%	13%

d) Time of Day

Between 2007 and 2018 the most significant change in the time of day that force incidents occur was from 12am to 4am. In 2007 nearly one-third of all force incidents occurred during this time period, but by 2018 this was down to 13% of all incidents. During this same period use of force was becoming more and more common during the day between the hours of 8am and 8pm.

Time of Day

	12am-4am	4am-8am	8am-12pm	12pm-4pm	4pm-8pm	8pm-12am
2007	32%	5%	7%	11%	20%	25%
2015	21%	7%	10%	11%	23%	29%
2016	14%	7%	13%	13%	24%	29%
2017	18%	5%	11%	14%	27%	25%
2018	13%	7%	14%	15%	24%	27%
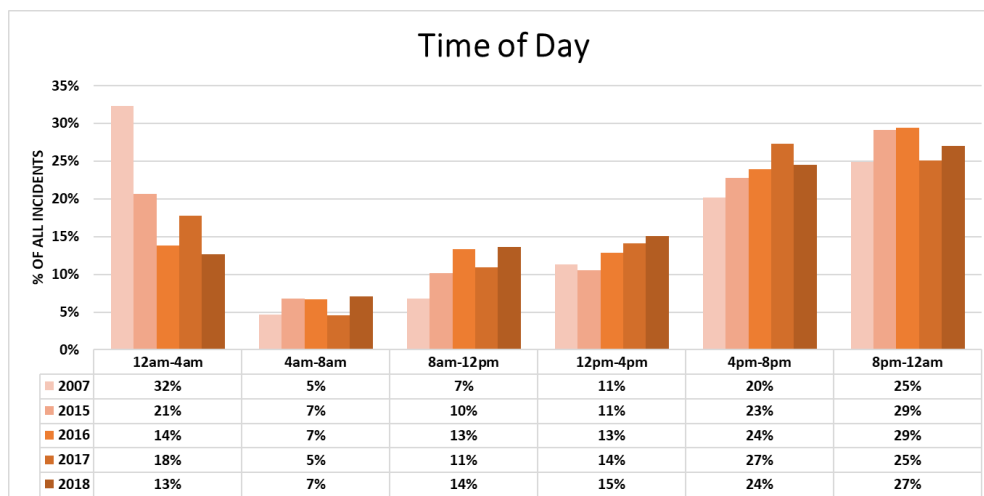
e) Gender of Subjects

The gender of subjects involved in force incidents has changed in the last two years. The percentage of female subjects has increased from 12.7% to 17.4% in 2018.

Gender of Subjects

	Male	Female
2007	87.3%	12.7%
2015	86.0%	14.0%
2016	86.4%	13.6%
2017	81.7%	18.3%
2018	82.6%	17.4%
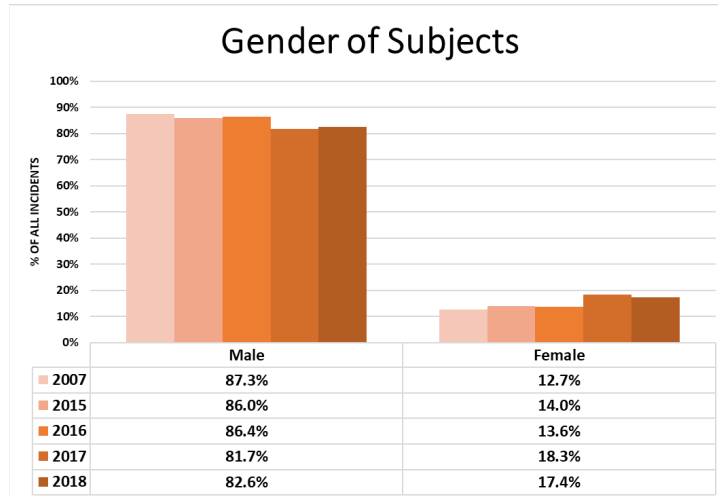
f) Age of Subjects

The proportion of subjects under age 20 that were involved in force incidents has decreased from 17.8% in 2007 to 13.3% in 2018. Subjects over 60 has risen from 0.8% to 2.4%. For the last four years the average age of all subjects has remained steady at around 32 years.
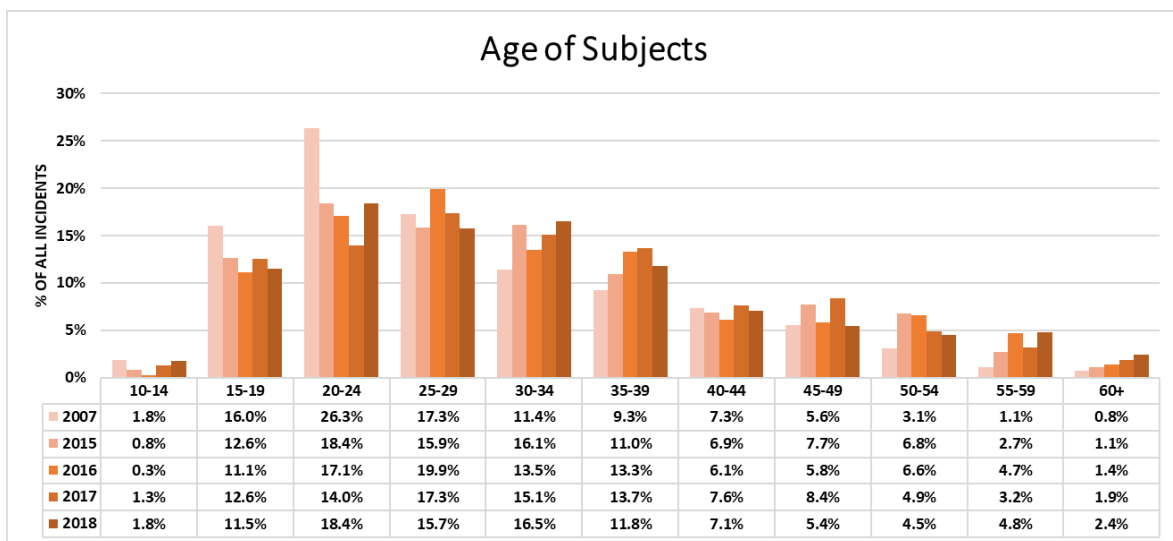
Age of Subjects

	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60+
2007	1.8%	16.0%	26.3%	17.3%	11.4%	9.3%	7.3%	5.6%	3.1%	1.1%	0.8%
2015	0.8%	12.6%	18.4%	15.9%	16.1%	11.0%	6.9%	7.7%	6.8%	2.7%	1.1%
2016	0.3%	11.1%	17.1%	19.9%	13.5%	13.3%	6.1%	5.8%	6.6%	4.7%	1.4%
2017	1.3%	12.6%	14.0%	17.3%	15.1%	13.7%	7.6%	8.4%	4.9%	3.2%	1.9%
2018	1.8%	11.5%	18.4%	15.7%	16.5%	11.8%	7.1%	5.4%	4.5%	4.8%	2.4%

Interagency Comparative Analysis Using the
Police Force Analysis Network℠

As a contributor of data to the Police Force Analysis System℠, San Jose PD also has access to data from other agencies in the system through the Police Force Analysis Network℠ (PFAN). PFAN currently has use of force data from 56 law enforcement agencies in seven states with more than 8,000 incidents involving 3,000 officers who used force 15,000 times. This is the largest database of its kind in the nation. Although the incident reports from each of these agencies uses a different format, all the data extracted and entered into the system has been standardized which allows us to make meaningful interagency comparisons. The Police Force Analysis Network℠ allows agencies to compare their use of force practices with other agencies in the system.

San Jose PD now has four years of historical data in the system. For purposes of the interagency comparisons we used average annualized numbers from the last three years.

This report is deigned to alert the Department of potentially high-risk areas that may need improvement as well as areas where the Department is performing with low levels of risk. A high-risk score does not necessarily mean that there is a problem that needs to be addressed and for that reason this report does not recommend any specific corrective actions. Instead the annual use of force reports and comparative dashboards will allow the Department to focus more attention on higher risk areas and determine whether any adjustments to policies, procedures or training are warranted. Similarly, a low risk score does not mean that there are no issues that need to be addressed. Departments are encouraged to continue to conduct individual force reviews and use the dashboard systems to supplement and enhance those reviews to identify issues that might not otherwise be uncovered. The system will also help to highlight those areas where the Department is performing well and will help to maintain those performance levels.

1. **Risk Factor Comparisons**

   PFAN provides a comprehensive comparative risk analysis of relevant factors involved in use of force incidents. The primary risk areas are:

   1. Frequency of Force – The more uses of force an agency has the greater the risk of injuries, complaints and lawsuits resulting from these incidents.
   2. Force Justification and Force Factor – Force incidents with low Force Justification Scores are at higher risk of being found to be unnecessary while incidents with high Force Factor scores are at higher risk of being found to be excessive.
   3. Speed of Force and Force Sequences – The faster an officer decides to use force, the higher the risk that the force may be unnecessary. The more force sequences it takes an officer to control a subject, the higher the risk that both the officer and the subject will be injured.
   4. Injury Rates – Higher injury rates pose risks to the health and safety of officers and subjects and are more likely to result in complaints and lawsuits.

The following risk rankings are based upon a comparison with the 56 agencies currently in the Police Force Analysis Network℠. Lower Risk scores are more than one standard deviation below the mean. Higher Risk scores are more than one standard deviation above the mean. Medium Risk scores are within one standard deviation of the mean.

🔴 Higher Risk

🟡 Medium Risk

🟢 Lower Risk

Risk Level	Risk Type	Metric	Value	Interagency Comparison
🟡	Force Frequency	Uses of force per 1,000 population	0.62	Below Average
🟡	Force Frequency	Uses of force per 100 arrests	3.9	Average
🟡	Force Frequency	Percentage of officers in the department using force annually	50%	Above Average
🟡	Force Concentration	Average annual uses of force per officer using force	2.5	Above Average
🟡	Force Concentration	Percentage of force incidents involving the top 10% of officers	27%	Below Average
🟡	Graham v Connor	Percentage of incidents with low Justification Scores	16%	Below Average
🟡	Graham v Connor	Percentage of incidents with high Force Factor Scores	7.1%	Above Average
🟡	Graham v Connor	Percentage of incidents with both low Justification and high Force Factor scores	2.5%	Above Average
🟡	Force Duration	Percentage of incidents with 5 or 6 Force Sequences	29%	Above Average
🟡	Force Duration	Percentage of incidents where the Speed of Force was immediate	45%	Average
🟡	Injury	Subject total injury rate	58%	Above Average
🟡	Injury	Subject serious injury rate	6%	Average
🟡	Injury	Subject medical treatment rate	44%	Above Average
🟡	Injury	Officer injury rate	20%	Above Average

San Jose PD was within one standard deviation of the mean for every risk metric and did not have any areas of higher risk compared with other agencies. While the Department has above average risk in 8 of the 14 metrics it is not a statistical outlier among the 56 agencies.

2. Force Tactics Comparisons

PFAN contains data on all the force tactics and weapons that officers use. The system allows department wide usage rates to be compared across agencies. The following table lists the usage rates for weapons and physical tactics by San Jose PD officers and then compares these rates with the averages from other agencies. San Jose PD officers use impact weapons and projectile weapons more frequently than officers from other agencies in the system. For physical tactics San Jose PD officers use strikes and pushing more frequently than officers from other agencies.

Weapon	Percentage of Incidents Used	Interagency Average	Interagency Comparison
Electronic Control Device	16%	26%	Below Average
Impact Weapon	15%	2.7%	High
Projectile Weapon	4.3%	0.7%	High
Canine Bite	3.9%	3.7%	Average
Pepper Spray	3.7%	2.7%	Average

Physical Tactic	Percentage of Incidents Used	Interagency Average	Interagency Comparison
Grab/Hold/Pull	77%	72%	Average
Takedown	59%	55%	Average
Used Weight	43%	26%	Above Average
Strike	29%	14%	High
Push	23%	12%	High
Pain Compliance	19%	22%	Average
Wrestle	14%	19%	Average
Hair Hold	2.7%	3.6%	Average
Lateral Neck Restraint	0.6%	2.7%	Below Average

All Force Tactics Used	Percentage of Incidents Used	Interagency Average	Interagency Comparison
Only Physical Tactics Used	64%	64%	Average
Both Physical Tactics and Weapons Used	24%	26%	Average
Only Weapons Used	12%	10%	Average

3. Subject Injury Rate Comparisons

SJPD is above average for all types of subject injuries except for canine bites and loss of consciousness. Compared to other jurisdictions, subjects from San Jose are three times more likely to complain of an injury or pain after a force incident when no visible injury is present. While San Jose PD's fracture rate has declined in recent years, it is still higher than the average for other agencies.

Minor Injury	Subjects Injured	Interagency Average	Interagency Comparison
Complaint Only	10%	3%	High
ECD Probe	5%	11%	Below Average
Bruise or Scrape	20%	13%	Above Average
Cut or Bleeding	14%	12%	Average
Chemical	2.8%	1.4%	Average

Serious Injury	Subjects Injured	Interagency Average	Interagency Comparison
Canine Bite	3.5%	3.1%	Average
Unconscious	0.26%	0.75%	Below Average
Fracture (including teeth)	2.0%	0.78%	Above Average

4. Other Force Characteristics

For most of the criteria measured by the Force Analysis Network℠, San Jose PD is within the average range of the other agencies. The following table lists those force characteristics which are significantly different in San Jose compared with the other jurisdictions. These are simply descriptive measures and are not necessarily associated with increased risk.

Characteristics of Force Incidents that are **More Common** in San Jose than Other Jurisdictions	Characteristics of Force Incidents that are **Less Common** in San Jose than Other Jurisdictions
Three or more officers were present when force was used	Only one officer was present when force was used
Three or more officers used force against the same subject	Only one officer used force
The reason for the contact was a violent crime or a traffic stop	The reason for the contact was a welfare check or a warrant
The most serious crime referred was a violent crime or a drug crime	No crime was referred for prosecution
The force incident took 5 or 6 sequences before the subject was under control	The force incident took 3 or 4 sequences before the subject was under control
Subject was under the influence of alcohol or drugs and/or had mental health issues	Subject was suicidal
Subject was a resident of San Jose or a transient	Subject was a not a resident of the jurisdiction
Subject was non-white	Subject was white
Subject made a threatening movement	Subject made a verbal threat to the officer
Subject was armed with an improvised weapon	Subject was armed with a firearm