Police Force Analysis System℠
Fourth Summary Report

San Jose Police Department

Use of Force Data from January 1, 2015 to December 31, 2019

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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. This is our fifth Summary Report which includes use of force data through the end of 2019. Police Strategies will continue to update the system on a quarterly basis and produce annual Summary Reports.

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.

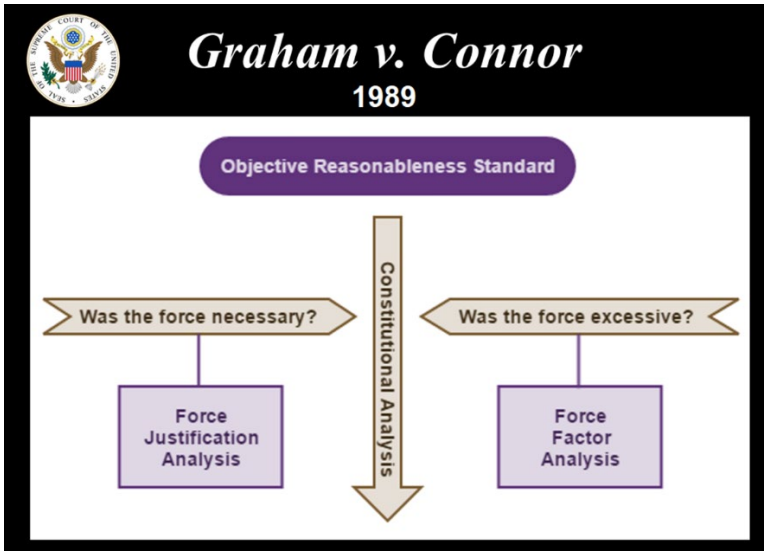
Police Force Analysis System℠

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

[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.

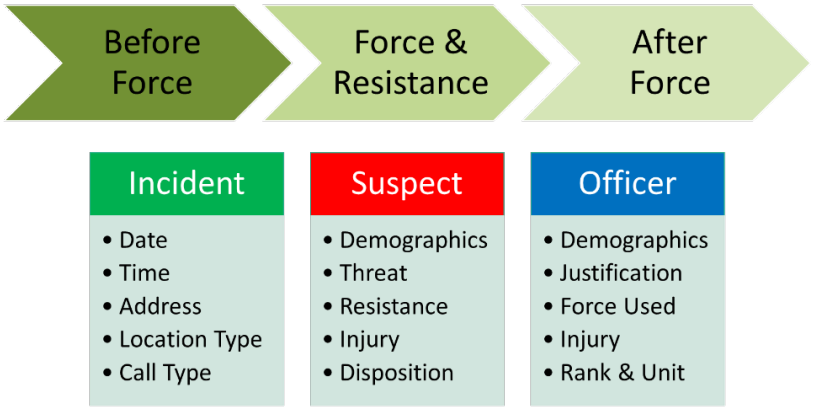


SJPD puts use-of-force data online in pioneering move, San Jose Mercury, January 2018

[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.



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 87 law enforcement agencies in seven states involving more than 10,000 incidents and 4,000 officers who used force a total of 19,000 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 January 2020 Police Strategies LLC received SJPD use of force reports from the last six months of 2019. Data entry was completed in March 2020 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 early 2021.

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

The San Jose Police Department's Police Force Analysis System℠ contains 5 years of use of force data from 2015 to 2019. The database includes detailed information on 3,311 subjects who had force used against them and the 1,033 officer who used force during the 5-year period. In 2019 there were 642 use of force incidents involving 528 officers who used force a total of 1,355 times. This report will examine the 5-year trends in uses of force and will summarize the use of force data from 2019.

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

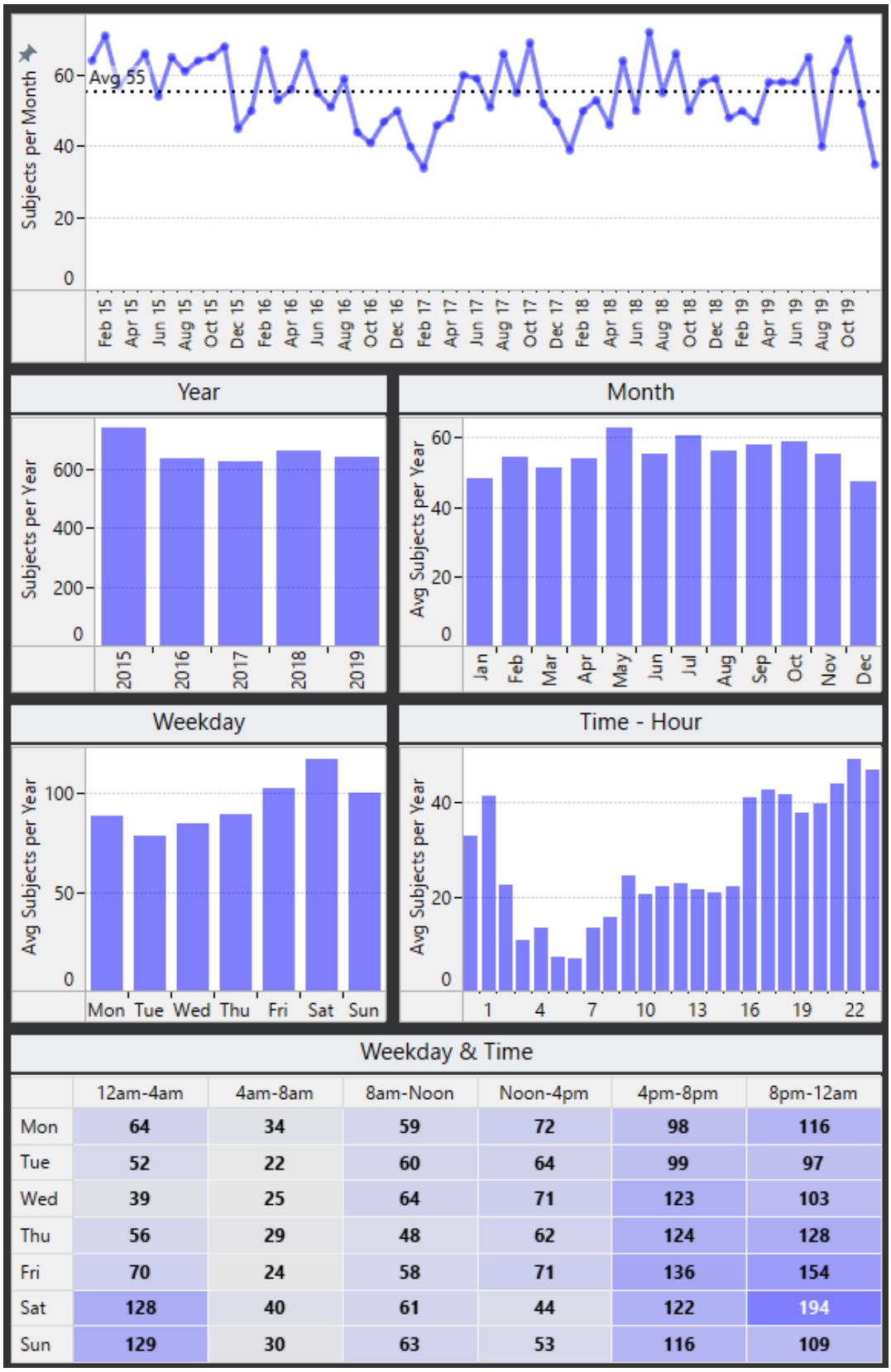
In 2019 the months with the most force incidents were October (70) and July (65) and the months with the fewest incidents were December (35) and August (40). During the week, Wednesdays had the most incidents (109) and Thursdays had the fewest (70). The peak hours for force incidents were between 4pm and 2am. Over the last 5 years 194 incidents occurred on a Saturday night between 8pm and midnight which was the highest block of time during the week.

In 2019 more than half of all force incidents occurred in the Western and Central Divisions which had about 181 incidents each. Southern and Foothill Divisions made up about 43% of incidents split nearly equally between them. Between 2018 and 2019 the number of force incidents in Central Division increased by 29% while incidents fell in the three other Divisions (Southern down 20%, Foothill down 12%, Western down 6%).

For the first time in the last 5 years, Edward District had the most incidents of force and tied with Lincoln District with 89 incidents each. Together these two Districts made up 28% of all force used by the Department in 2019. Edward District had been on a downward trend from 2015 to 2018 but then jumped by 46% in 2019. Most of the District's increase was found in Beat E2. The incidents in Charles District have been declining steadily over the last 5 years falling by 42%. Mary and William Districts have also been declining falling by 45% and 61% respectively over the last 5 years.

The number of force incidents occurring in parks increased from 14 in 2018 to 35 in 2019.

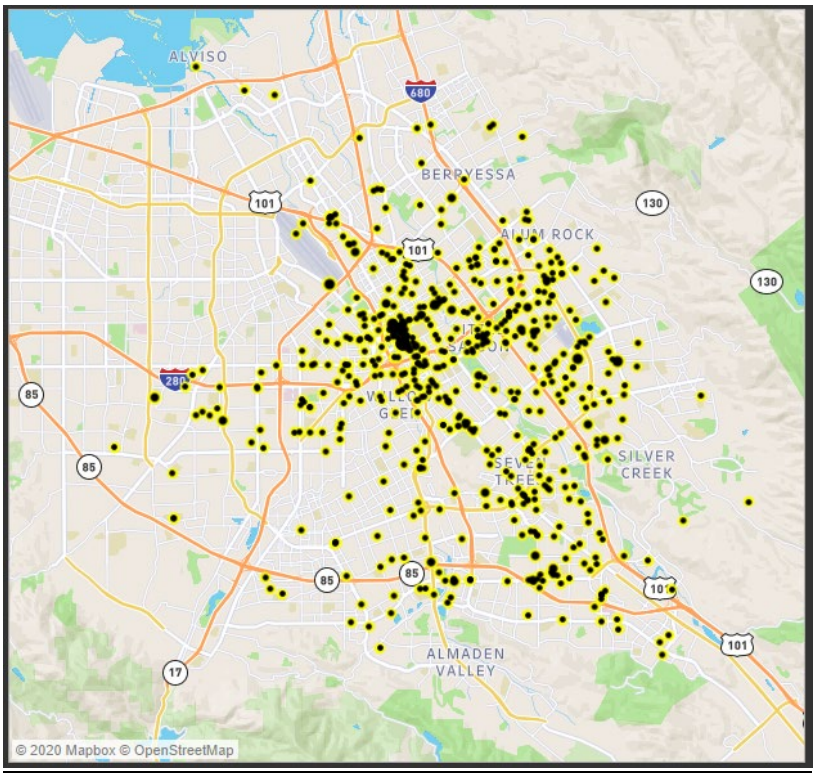
Use of Force Incidents – 2015 to 2019



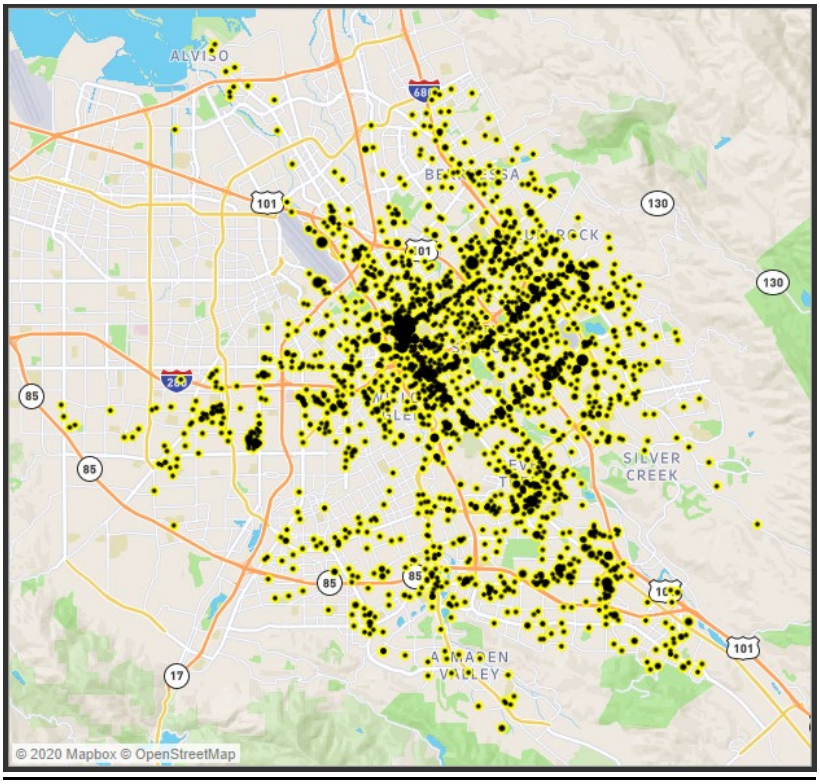
Weekday & Time

	12am-4am	4am-8am	8am-Noon	Noon-4pm	4pm-8pm	8pm-12am
Mon	64	34	59	72	98	116
Tue	52	22	60	64	99	97
Wed	39	25	64	71	123	103
Thu	56	29	48	62	124	128
Fri	70	24	58	71	136	154
Sat	128	40	61	44	122	194
Sun	129	30	63	53	116	109

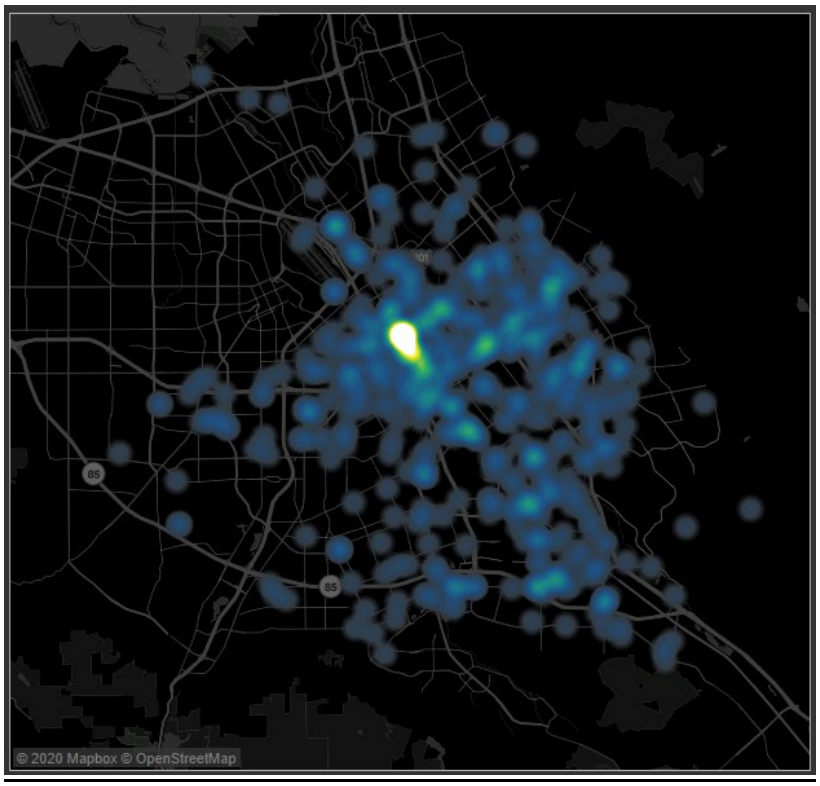
Use of Force Incident Locations – 2019



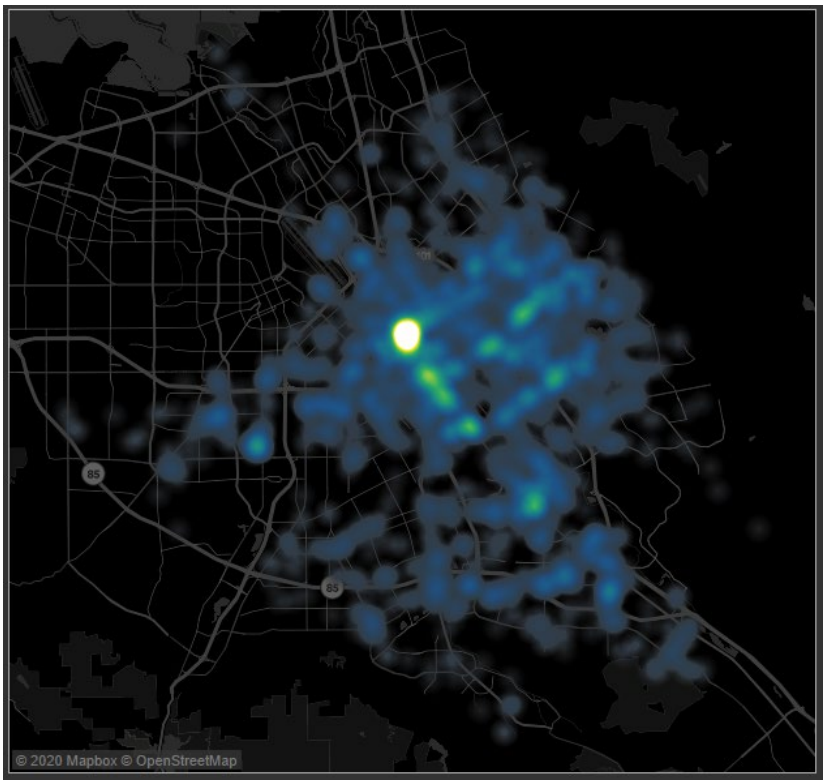
Use of Force Incident Locations – 2015 to 2018



Use of Force Heat Map - 2019



Use of Force Heat Map – 2015 to 2018



2) Reason for Contact

Over the last 5 years a greater percentage of officers who used force were responding to dispatched calls rather than responding to assist other officers. In 2015 22% of officers using force were assisting other officers who had made initial contact with the subject. By 2019 the percentage of assisting officers using force had fallen to 16%. This trend suggests that officers who are dispatched to a call or make an officer-initiated contact are now more likely to use force rather than waiting for additional backup officers. Another possible cause of this trend is that more officers are now being dispatched initially to calls where force eventually occurs. In 2015 22% of all force incidents occurred when 4 or more officers were present. By 2019 34% of force incidents had 4 or more officers present. Having more officers present at an incident also results in more officers using force. In 2015 20% of incidents involved 3 or more officers using force against one subject. By 2019 27% of force incidents involved 3 or more officers.

The number of uses of force related to a warrant arrest increased from 22 in 2018 to 40 in 2019 while force related to welfare checks fell from 70 to 50.

3) Force Frequency

In 2019 there were 642 use of force incidents involving 528 officers who used force a total of 1,355 times. There was one officer who used force 15 times, five officers who used force 10 to 12 times each, fourteen officers who used force 7 to 9 times, forty-eight officers who used force 5 or 6 times, 136 officers who used force 3 or 4 times, 127 officers who used force twice and 197 officers who only used force once. The top 10% of officers made up 27% of all force used by the Department.

4) 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.

In 2019, 14% of San Jose's use of force incidents had low Force Justification scores (<6). The average justification score was 10.1 on a scale of 0 to 20. 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 and flight level categories. 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 or flee from the officers.

Forty 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 2019 there were 147 officers who were involved in at least one incident with a low Force Justification score. Most officers were only involved in one low Force Justification incident each. Two officers were involved in five low Force Justification incidents, three officers were involved in three incidents, and 18 officers were involved in two incidents.

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

- Subject was White (24%) or Asian (12%)
- Subject was between the ages of 30 and 39 (42%)
- Subject was under the influence of alcohol or drugs (72%) or had mental health issues (36%)
- The most serious charge referred for prosecution was a drug crime (17%)
- Subject was held for a mental health evaluation (11%)

Average Force Justification Scores were lower for women than men. Black and Hispanic subjects had a lower average Force Justification score than White subjects while Asian subjects had the highest average score. Average Force Justification scores declined with the subjects' age. Older subjects had lower Force Justification scores than younger subjects.

Officers were less likely to use ECWs, impact weapons, projectile weapons and OC and more likely to use canines during a low Force Justification incident. Officers were more likely to resolve a low Force Justification incident by using physical force only (80%).

5) 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.

In 2019 only 4.8% of force incidents had a high Force Factor score (+3 or above). There were six incidents that had a +4 Force Factor and no incidents had a score of +5 or +6. There were 38 officers involved in the 31 high Force Factor incidents and six of those officers were involved in two high Force Factor incidents each. No officer was involved in more than two high Force Factor incidents. Canines were involved in a quarter of the high Force Factor incidents while projectile weapons, OC and ECWs were involved in about one-fifth of the cases. Impact weapons made up only 6% of the 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).

The most common Force Factor Score was +1 (41%) followed by 0 (30%). 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.

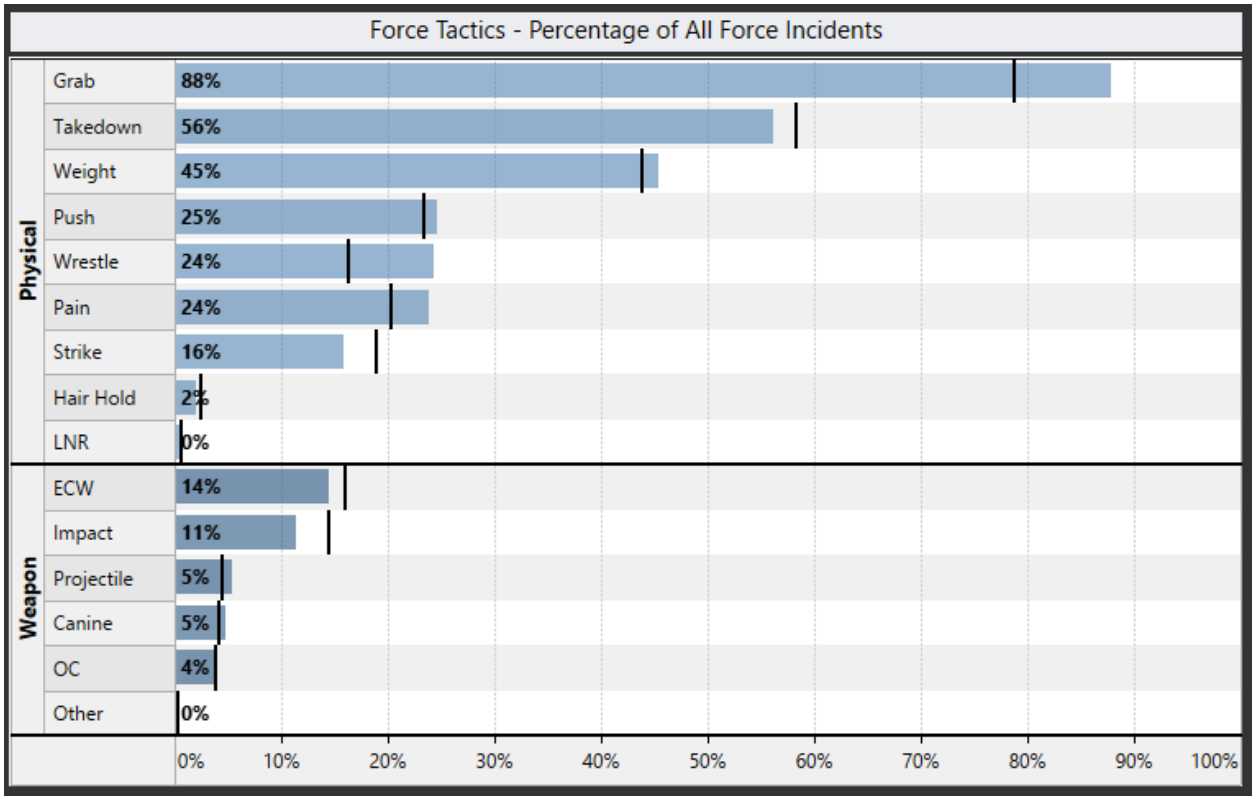
When high levels of force are used against lower levels of resistance the subjects are controlled much faster with lower injury rates for officers but higher injury rates and more severe injuries for subjects.

	Force Factor – 2015 to 2019		
	Low (-1 to -3)	Medium (0 to +2)	High (+3 to +4)
Subject brought under control within 1 or 2 Force Sequences	18%	24%	63%
Subject Injury Rate	54%	58%	71%
Subject Injury Severity	2.2	2.3	2.6
Officer Injury Rate	13%	15%	4%
Officer Injury Severity	2.4	2.1	2.2
Weapon Used by Officer	21%	32%	83%

6) Force Tactics

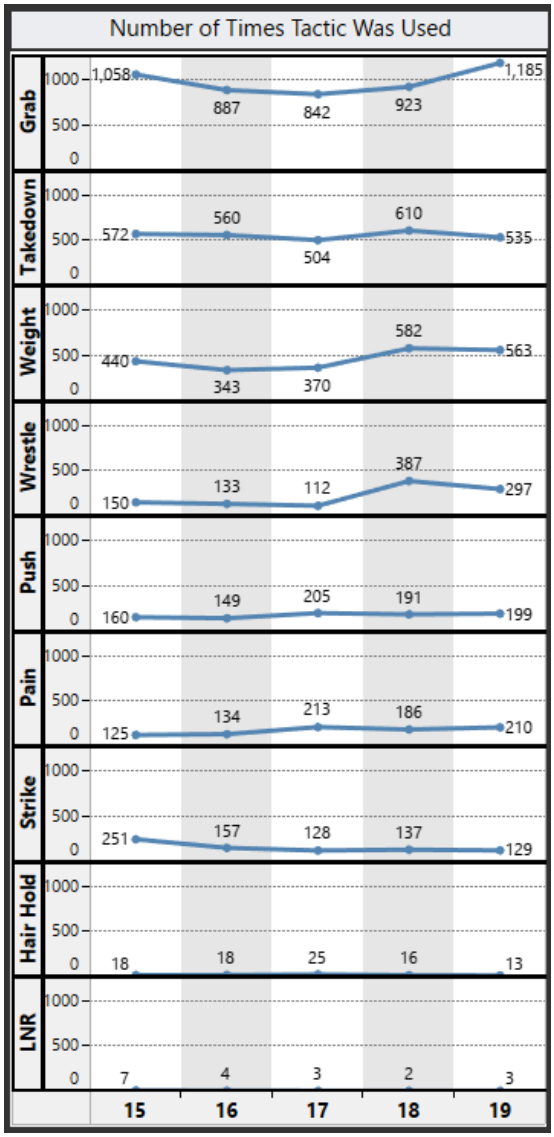
Of the 642 use of force incidents that occurred in 2019, 67% involved physical force only, 10% involved only the use of weapons by officers and 22% involved both physical force and the use of a weapon.

Compared to prior years, officers were less likely to use strikes and takedowns and more likely to use lower level force techniques (grabbing, pulling, pain compliance, joint manipulation, and using weight to hold subject down). In 2019 officers were more likely to get into protracted physical struggles with subjects (coded as "Wrestle"). This is due to the fact that in 2019 officers were less likely to use weapons and higher-level force techniques than in prior years. Officers were less likely to use impact weapons and Electronic Control Weapons (ECW) in 2019 than in prior years.



Over the last five years officers have used 15,446 individual physical force tactics and weapons during 3,311 incidents. The long-term trends for physical force show that the use of strikes has declined from 251 uses in 2015 to 129 by 2019. In 2015 officers wrestled with subjects 150 times and then in 2018 it increased sharply in 2018 to 387 times before falling to 297 in 2019. The use of pain compliance and joint manipulation nearly doubled between 2015 and 2019.

Over the last 5 years the use of impact weapons has declined by 53% while the use of ECWs has fallen by 28%. Projectile weapons, canines and OC are used less frequently than impact weapons and ECWs and their usage rate has remained stable over the last 5 years.



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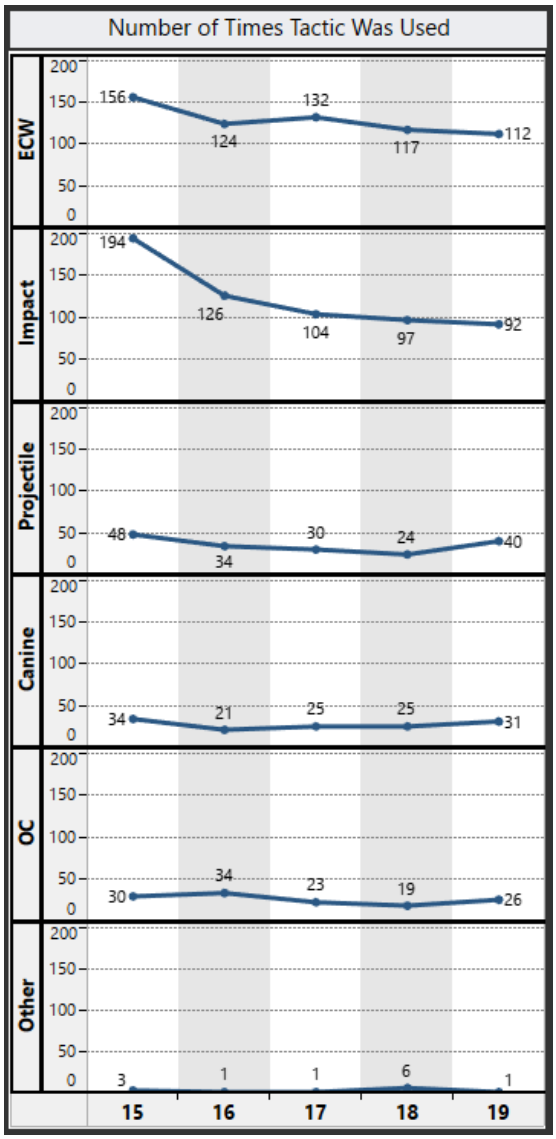


7) Subjects

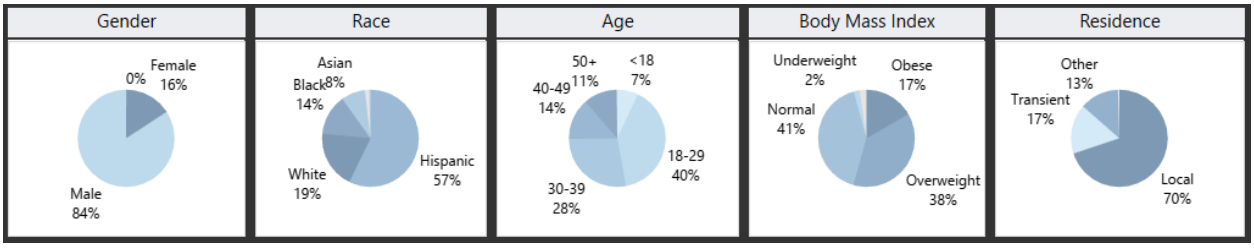
There are four demographic groups (gender, race and age) that make up about half of all use of force subjects. In 2019 Hispanic males between 40 and 49 were less common than prior years while White males 30 to 39 were more common.

Most Common Characteristics of Use of Force Subjects 2015 - 2018				
Gender	**Race**	**Age**	**Number of Subjects**	**Percentage of Force Incidents**
Male	Hispanic	18-29	618	23%
Male	Hispanic	30-39	362	14%
Male	Hispanic	40-49	153	6%
Male	White	18-29	148	6%
All Other Demographic Groups			1,388	52%

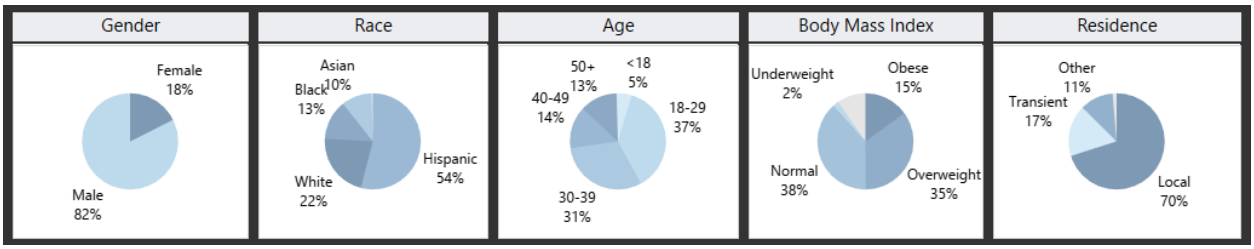
Most Common Characteristics of Use of Force Subjects 2019				
Gender	**Race**	**Age**	**Number of Subjects**	**Percentage of Force Incidents**
Male	Hispanic	18-29	122	19%
Male	Hispanic	30-39	86	13%
Male	White	30-39	42	7%
Male	White	18-29	33	5%
All Other Demographic Groups			359	56%

After climbing steadily from 2015 to 2018, the number of juvenile subjects dropped by 50% from 63 in 2018 to 30 in 2019. The proportion of Asian subjects increased by 23% from 2018 to 2019. There were no Native American subjects in 2019. From 2017 to 2019 the proportion of female subjects remained higher (18%) than in 2015 and 2016 (14%).

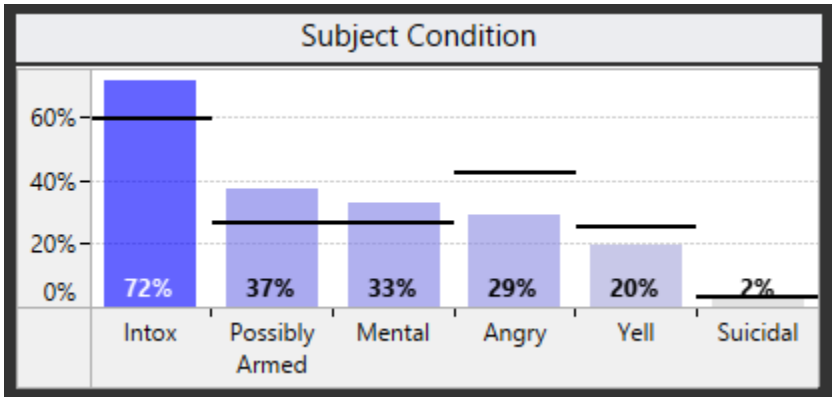
Use of Force Subject Characteristics - 2015 to 2018



Use of Force Subject Characteristics - 2019

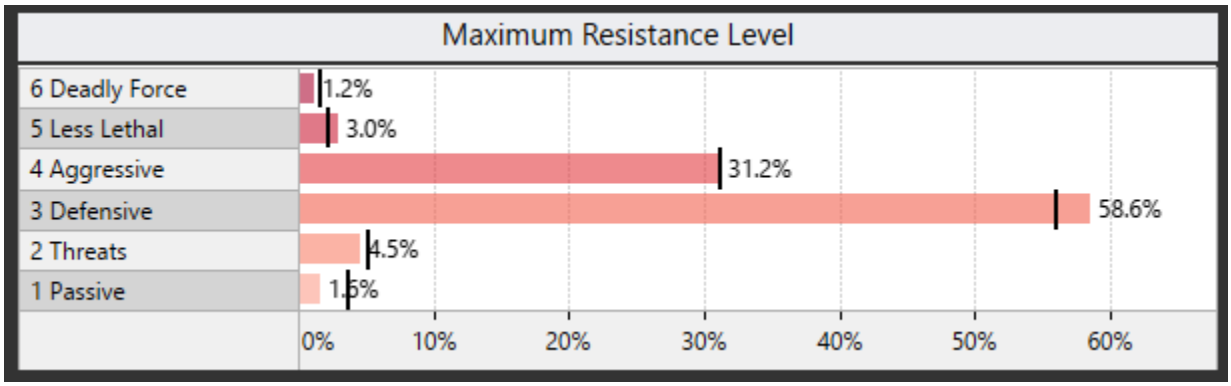


Compared to prior years, use of force subjects in 2019 were more likely to be under the influence of alcohol or drugs (72%), more likely to be possibly armed 37% and more likely to have mental health issues (33%). Subjects were less likely to be angry or yell or be suicidal.



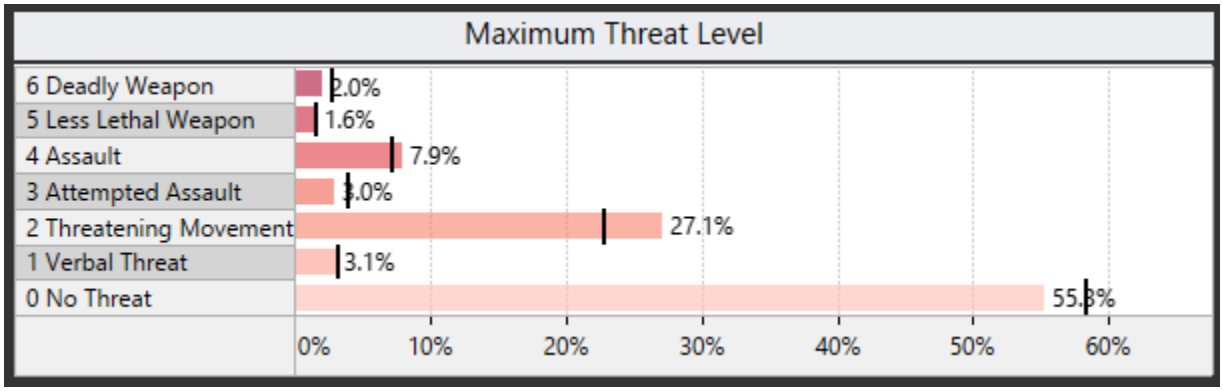
In 2019 officers were less likely to use force when the subjects were only passively resisting or threatening the officers.

Subject Maximum Resistance Level - 2019



In 2019 subjects were more likely to make furtive or threatening movements towards the officers (27%).

Subject Maximum Threat Level - 2019



8) Injuries

In 2019 there were 173 officers who were injured a total of 232 times. Thirty officers were injured twice during the year and 13 officers were injured 3 or 4 times each. Almost all the injuries involved a minor bruise or scrape (92%). Forty-nine officers received a cut and one officer had a fracture. Forty-five percent of officers were injured on their hands or arms, 23% on their feet or legs and 12% on both their arms and legs. Fifteen officers received an injury to the head.

Seventeen percent of force applications by officers resulted in an injury to the officer who used force. Of the 232 officers who were injured in 2019, 19% were treated by EMTs and 15% were treated at a hospital.

In 2019 425 subjects who had force used against them were injured (66% of all incidents). Of the subjects who were injured, most of the injuries were minor: complain only (31%), ECW probe (7%), scrape (34%) or cut (16%). Thirty subjects were bitten by a canine. Nine subjects suffered a fracture or broken tooth. No subjects lost consciousness during this period.

Subjects were most likely to receive an injury during a canine application (97% injured) or the use of an ECW (92% injured), OC (79% injured) or an impact weapon (73% injured). Of all the physical force techniques used, the following were most likely to injure the subject: lateral neck restraint (100% Injured) and strikes (81% injured).

Of the all the subjects who were injured, 17% were treated by EMTs only and 63% were treated at a hospital.

9) Trends

Over the period from 2015 to 2019 the following force trends were observed:

- The most significant change in weapon use involved impact weapons. In 2015 120 officers used impact weapons 194 times against 143 subjects. By 2019 both the number of officers using impact weapons and the frequency of use by those officers had declined. There were 79 officers who used impact weapons 92 times against 73 subjects. Impact weapon use per force incident declined from 19% in 2015 to 11% in 2019.
- The use of Electronic Control Weapons (ECW) remained stable between 2018 and 2019 after declining from 2017.
- The number of officers using projectile weapons in 2019 (39 officers) nearly doubled from 2018 (21 officers). Projectile weapons were used in 5.5% of force incidents in 2019.
- Between 14 and 27 officers in the Department use OC each year.
- Canine officers will have their dogs bite subjects between 21 and 34 times each year. On average each canine will bite three times a year.
- In 2018 there was a 245% increase in the number of times officers ended up wrestling with subjects. This large increase was probably due to lower reliance on impact weapons and ECWs. As officers shift away from weapons to physical tactics and lower levels of force, there will be more protracted struggles with subjects, and it will take longer for officers to gain control of resisting subjects.
- As a result of the move away from less lethal weapons towards lower levels of physical force over the last two years, it takes officers longer to control subjects. In 2017 34% of subjects were controlled within 2 force sequences. By 2019 only 19% of subject were controlled that quickly. By 2019 officers appeared to be using physical force techniques more effectively. In 2018 it took officers 5 or 6 force sequences to control subjects in 37% of all incidents. By 2019 that was reduced to 31%, but officers were still not able to control these subjects as quickly as when they were using more weapons.

- The shift away from less lethal weapons in recent years has not reduced subject injury rates but it has significantly reduced the severity of subject injuries. Officer injury rates have increased as weapon use has decreased. The severity of officer injuries has declined but not as much as the decline for subject injuries.
- Over the last five years both the average Force Justification Scores and the average Force Factor scores have remained fairly steady. However, the average number of Force Sequences increased significantly in 2018 and remained high in 2019. The average Force Sequences score is much higher than the other agencies in the database. This score is likely to decrease in the future as officers become more experienced at using physical force tactics.
- In 2019 there were a greater percentage of incidents with four or more officers present (34%) as well as a higher number of incidents involving 3 or more officers using force (27%).
- The percentage of subjects with mental health issues has been climbing steadily from 22% in 2015 to 33% in 2019. Similarly, the percentage of subjects who were possibly armed rose from 18% in 2015 to 37% in 2019. Officers are also recovering more weapons from subjects. In 2019, 10% of subject had a knife, 4% possessed a firearm and 7% has some type of less lethal weapon. These weapon possession rates are more than double what they were in 2015.

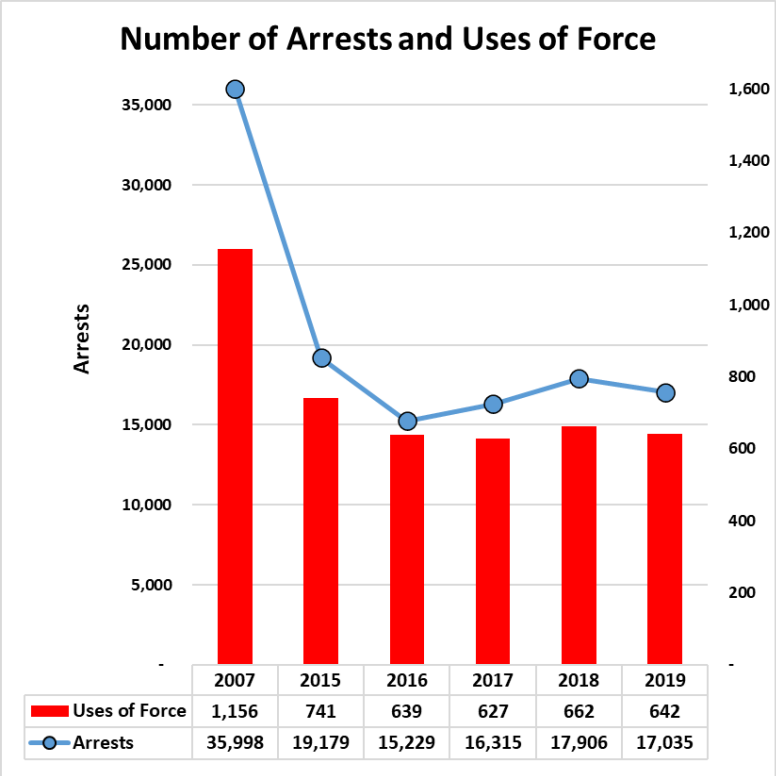
Subject/Incident Characteristic	2015	2019	Change
Subject Possessed a Firearm	1.1%	3.9%	+255%
Subject Possessed a Knife	4.5%	10%	+131%
Subject had Mental Health Issue	22%	33%	+50%
White Subject	16%	22%	+38%
Female Subject	14%	18%	+29%
Asian Subject	8.4%	10%	+23%
Subject was Under the Influence	62%	72%	+16%
Subject Resides in Another City	13%	11%	-15%
Subject Received a Cut from Force	28%	16%	-43%
Subject Only Passively Resisted	3.2%	1.6%	-50%
Subject Received a Fracture from Force	6.9%	2.1%	-70%

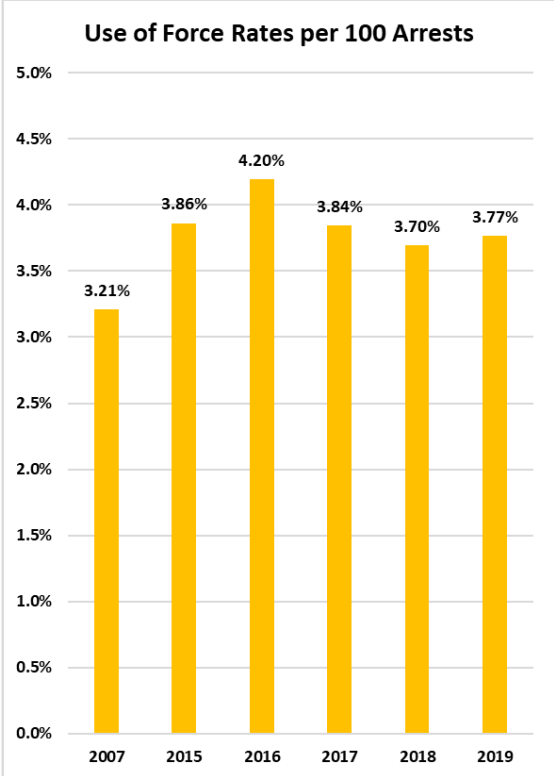
10) Long-Term Use of Force Trends

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 can examine overall trends in the total number of force incidents and the use of force rates per arrest and calls for service.

a) Arrests and Uses of Force

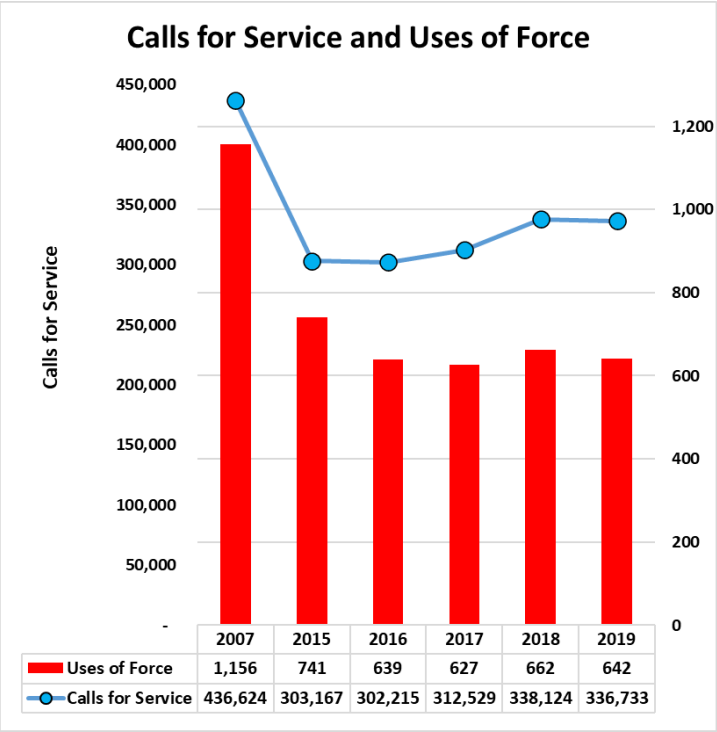
From 2007 to 2019 the number of annual arrests made by SJPD fell by 53% from 35,998 arrests to 17,035 arrests. During this same time period the number of uses of force fell by 44% from 1,156 in 2007 to 642 in 2019. From 2015 to 2019 the use of force rate per 100 arrests has been very stable ranging between 4.20% in 2016 to 3.70% in 2018.

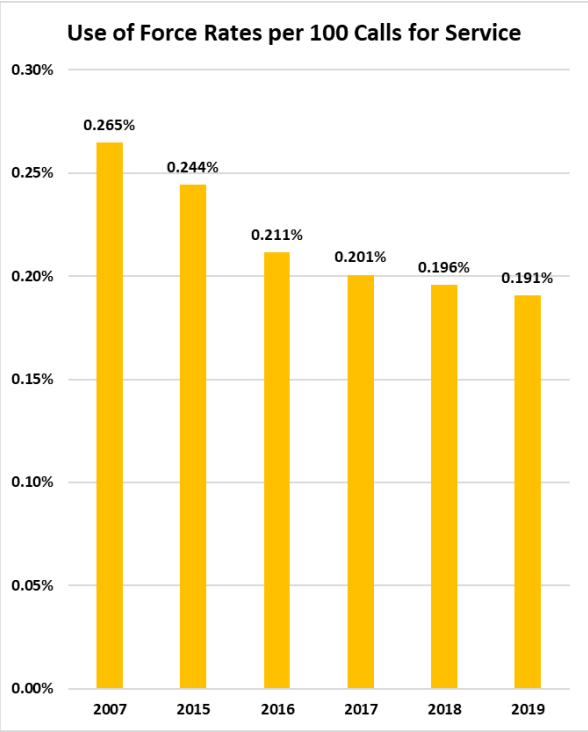




b) Calls for Service and Uses of Force

From 2007 to 2019 the number of annual calls for service to SJPD fell by 23% from 436,624 calls to 336,733 calls. During this same time period the number of uses of force fell by 44% from 1,156 in 2007 to 642 in 2019. Since 2007 the use of force rate (uses of force per 100 calls for service) has declined steadily from 0.265% in 2007 to 0.191% in 2019.





11) Disparity Analysis for Subject Demographics

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 any 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, 2018 and 2019 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

[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.
https://bloximages.newyork1.vip.townnews.com/tulsaworld.com/content/tncms/assets/v3/editorial/6/48/64860d34-4fe8-5c06-bc0f-92e7a85acab3/5e60500e75e7e.pdf.pdf

the same demographic categories as the arrest data.[5] We also gathered population demographic data from the US Census Bureau and other sources.

In 2018 the estimated total population of the City of San Jose was 1,045,000. During the three-year period from 2017 to 2019 the Department made 51,256 arrests and used force against 1,931 subjects. The annual arrest rate per thousand population was 16 and the use of force rate per 100 arrests was 3.8%. 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 between 2017 and 2019:

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%	10.7%	9.7%
Hispanic	31.2%	55.3%	54.1%
White	23.6%	20.4%	22.0%
Black	3.2%	13.6%	14.2%

Age	Population	Arrests	Uses of Force
<18	26.4%	6.8%	7.2%
18-24	9.9%	17.2%	20.5%
25-29	9.0%	15.4%	17.3%
30-39	17.7%	27.8%	29.3%
40-49	14.9%	17.7%	14.3%
50-59	10.6%	11.8%	9.3%
60+	11.5%	3.2%	2.1%

[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.

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. Arrestees between the ages of 18 to 24 have the highest disparity and are 19% more likely to have force used against them than we would expect based upon their proportion of arrests. Arrestees over age 40 are the least likely to have force used against them. While there were large arrest disparities by race, there is virtually no racial disparity when uses of force are compared to arrests. White subjects were the most overrepresented in uses of force and Black subjects were slightly more likely to have force used against them at 4% above the arrest proportion.

Hispanics and Other racial groups were slightly underrepresented in the use of force numbers compared to their arrest numbers.

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

Population, Arrest and Use of Force Data from 2017-2019

Gender	Arrests / Population	Uses of Force / Arrests
Male	1.54	1.06
Female	0.45	0.79
Race		
Other	0.25	0.91
Hispanic	1.77	0.98
White	0.86	1.08
Black	4.25	1.04
Age		
<18	0.26	1.06
18-24	1.74	1.19
25-29	1.71	1.12
30-39	1.57	1.05
40-49	1.19	0.81
50-59	1.11	0.79
60+	0.28	0.66

When we examine the racial disparity index on an annual basis some distinct trends emerge. In 2015 White subjects were the most underrepresented in the proportion of uses of force compared to arrests. White subjects first became overrepresented in 2017 and by 2019 they were the most overrepresented racial group at 11% above expected levels. By contrast, Black subjects were the most overrepresented racial group in 2016, but by 2019 they were slightly underrepresented by 2%. Hispanic subjects were the most overrepresented racial group in 2015, but by 2017 they were slightly underrepresented by 2% and remained at that level through 2019. Other racial groups were mostly underrepresented in their proportion of uses of force for the last five years, but they were overrepresented in 2016 by 4%.

Racial Disparity Index
Uses of Force / Arrests

Race	2015	2016	2017	2018	2019
White	0.82	0.82	1.07	1.06	1.11
Black	0.91	1.19	1.13	1.03	0.98
Hispanic	1.11	1.02	0.98	0.98	0.98
Other	0.86	1.04	0.81	0.96	0.95

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 information from other agencies in the system through the Police Force Analysis Network℠ (PFAN). PFAN currently has use of force data from 87 law enforcement agencies in seven states with more than 10,000 incidents involving 4,000 officers who used force 19,000 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.

This report is designed 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.

Since use of force characteristics can vary from year to year, the comparative data includes all available data for each agency. For San Jose PD, the comparative data includes all 3,311 use of force incidents from 2015 to 2019.

12) 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. Graham v. Connor - Force Justification and Force Factor Scores – 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. Force Speed and Duration – The speed of the officer's decision to use force as well as the duration of the force incident are both measured. The faster the force incident occurs the less opportunity there is for de-escalation. The longer a force incident lasts the greater the risk of injury to both officers and subjects.
4. Injury Rates – Higher injury rates pose risks to the health and safety of officers and subjects and are more likely to generate complaints and lawsuits.

The following risk rankings are based upon a comparison with the 87 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	0.64	Average
🔴	Force Frequency	Use of force rate per 100 calls for service	0.20%	High
🟡	Force Frequency	Use of force rate per 100 arrests	4.0%	Average
🟡	Force Frequency	Percentage of officers in the department using force annually	51%	Average
🟡	Force Concentration	Average annual uses of force per officer using force	2.6	Above Average
🟡	Graham v Connor	Percentage of incidents with low Force Justification Scores	16%	Average
🟡	Graham v Connor	Percentage of incidents with high Force Factor Scores	6.7%	Average
🟡	Graham v Connor	Percentage of incidents with both low Justification and high Force Factor scores	2.3%	Average
🟡	Force Duration	Percentage of incidents with 5 or 6 Force Sequences	29%	Average
🟡	Force Duration	Percentage of incidents where the Speed of Force was immediate	45%	Average
🟡	Injury	Subject total injury rate	59%	Above Average
🟡	Injury	Subject severity of injuries	2.3	Average
🟡	Injury	Subject medical treatment rate	77%	Above Average
🟡	Injury	Officer injury rate	14%	Above Average
🟡	Injury	Officer severity of injuries	2.1	Average

San Jose PD was within one standard deviation of the mean for 14 of the 15 risk metrics. The Department was one standard deviation above the mean for the use of force rate per 100 calls for service.

The San Jose PD officers who use force each year tend to use force more often than officers from other agencies in the Network. In San Jose both officers and subjects are more likely to be injured than those from other agencies, but the severity of those injuries is similar to other agencies.

13) Force Tactics Comparisons

PFAN contains data on all the physical force tactics and weapons that officers use. The system allows department wide usage rates to be compared across agencies. The following tables list the usage rates for weapons and physical tactics by San Jose officers and then compares that with the averages from other agencies. San Jose PD officers are less likely to use ECWs and more likely to use impact weapons and projectile weapons than officers from other agencies. San Jose PD officers use physical force techniques at similar rates to officers from other agencies.

Weapon	San Jose PD Percentage of Incidents Used	Interagency Average	Interagency Comparison
Electronic Control Weapon	16%	25%	Below Average
Canine Bite	4.1%	2.7%	Average
Pepper Spray	3.8%	2.5%	Average
Impact Weapon	14%	2.3%	High
Projectile Weapon	4.5%	0.6%	High

Physical Tactic	San Jose PD Percentage of Incidents Used	Interagency Average	Interagency Comparison
Grab/Hold/Pull	79%	80%	Average
Takedown	58%	53%	Average
Used Weight	44%	28%	Above Average
Pain Compliance	20%	24%	Average
Wrestle	16%	18%	Average
Push	23%	17%	Average
Strike	19%	11%	Above Average
Hair Hold	2.5%	3.2%	Average
Lateral Neck Restraint	0.6%	2.1%	Average

All Force Tactics Used	San Jose PD Percentage of Incidents Used	Interagency Average	Interagency Comparison
Only Physical Tactics Used	65%	68%	Average
Both Physical Tactics and Weapons Used	23%	23%	Average
Only Weapons Used	12%	9%	Average

14) Subject Injury Rate Comparisons

Compared to other agencies, San Jose PD has a high rate of subjects who complain of pain or injury, but no visible injury is observed.

Minor Injury	Subjects Injured	Interagency Average	Interagency Comparison
Complaint Only	11%	3%	High
ECD Probe	5%	9%	Below Average
Bruise or Scrape	21%	12%	Above Average
Cut or Bleeding	13%	10%	Average
Chemical	2.5%	1.1%	Above Average

Serious Injury	Subjects Injured	Interagency Average	Interagency Comparison
Canine Bite	3.7%	2.2%	Above Average
Unconscious	0.2%	0.6%	Above Average
Fracture (including teeth)	1.8%	0.6%	Above Average

15) 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 agencies. 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	Only one officer used force
The reason for the contact was a violent crime	The reason for the contact was a welfare check
The most serious crime charged was a violent crime	No charges were referred for prosecution
Subject was a transient	Subject was a non-resident
Subject was under the influence or had mental health issues	Subject was suicidal