Police Force Analysis System℠
Eighth Summary Report

San Jose Police Department

Use of Force Data from January 1, 2015 to December 31, 2023

Bob Scales, J.D.
Police Strategies LLC
bob@policestrategies.com
www.policestrategies.com

April 2024

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 Eighth Summary Report which includes use of force data through the end of 2023. 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.

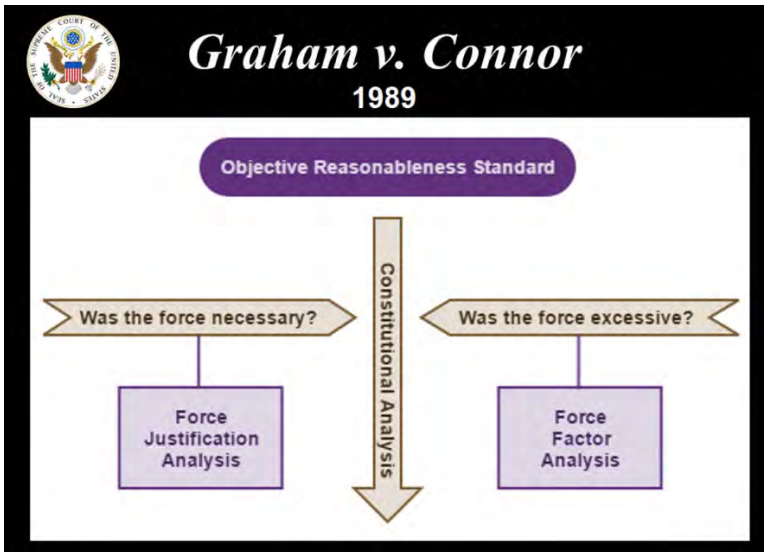
Police Force Analysis System℠

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 more than ninety law enforcement agencies in eight states involving about 15,000 incidents and 5,000 officers who used force more than 25,000 times. PFAS is the largest database of its kind in the nation. Although the incident reports from each of these agencies use 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 2023 Police Strategies LLC received SJPD use of force reports from the last three months of 2023. Data entry was completed in March 2023 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 2024.

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

The San Jose Police Department's Police Force Analysis System℠ contains nine years of use of force data from 2015 to 2023. The database includes detailed information on 5,586 subjects who had force used against them and the 1,369 officers who used force during the nine-year period. In 2023 there were 548 use of force incidents involving 484 officers who used force a total of 1,164 times. This report will examine the nine-year trends in uses of force and will summarize the use of force data from 2023. In our Sixth Summary Report we noted that there were 179 use of force incidents in May and June of 2020 that were related to the protests over the murder of George Floyd in Minneapolis. Those incidents were analyzed in that prior report and will not be examined again in this report. When measuring long-term patterns and trends in use of force practices by San Jose PD officers, the 179 protest related incidents from 2020 were excluded since these were driven by factors outside the Department and are not necessarily reflective of Department's policies, practices, and training.

The annual number of use of force incidents fell by 37% from 2015 to 2021 (741 incidents to 467 incidents). Between 2021 and 2022 the annual number of use of force incidents rose by 16% from 467 to 544. From 2022 to 2023 the number of force incidents rose by only 4.

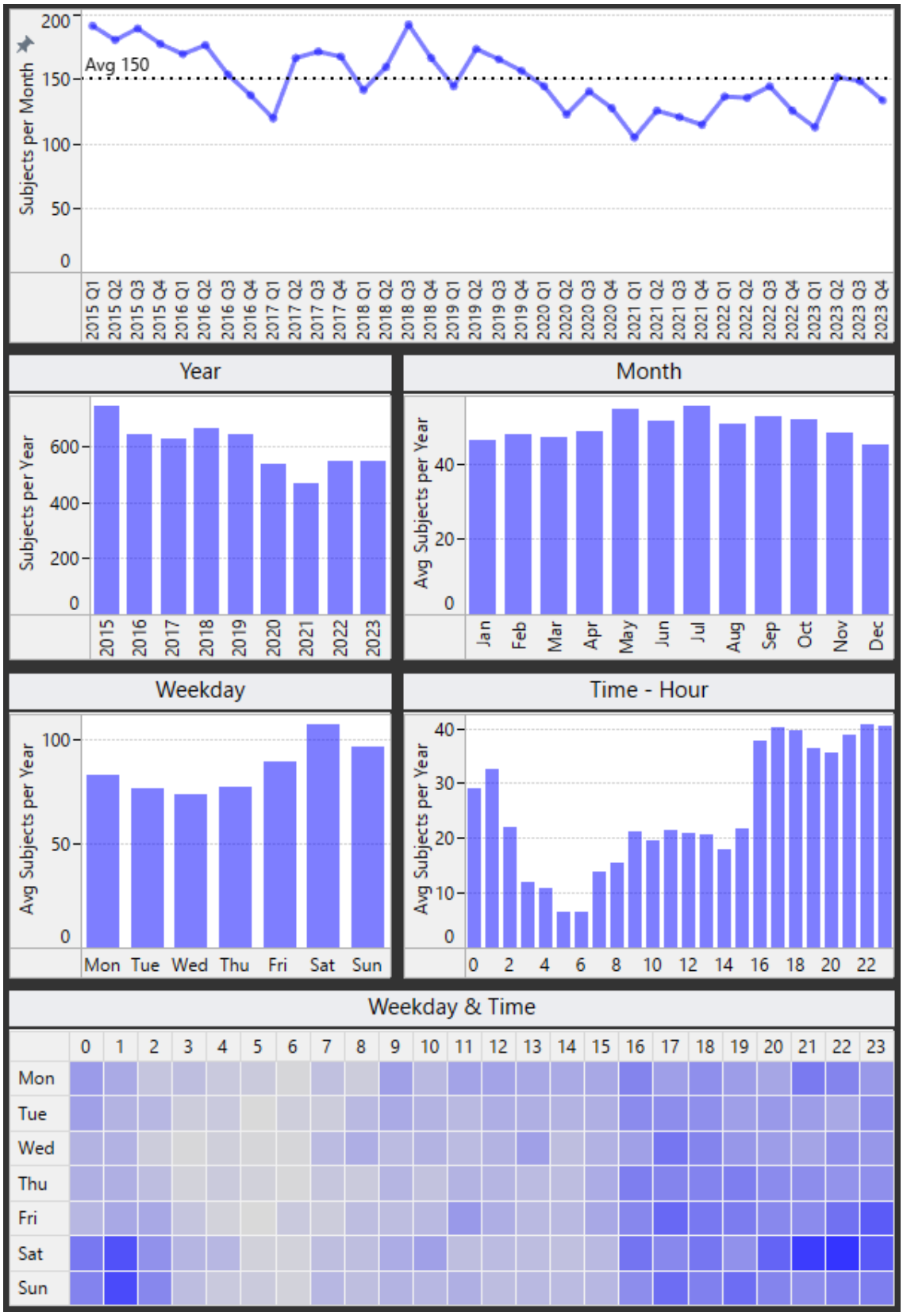
1) Date, Time, and Location of Use of Force Incidents

In 2023, July had the most force incidents (62) and February had the fewest incidents (32). During the week, Sundays had the most incidents (99) and Fridays had the fewest incidents (60). The peak hour for force incidents was between 5pm and 6pm (53).

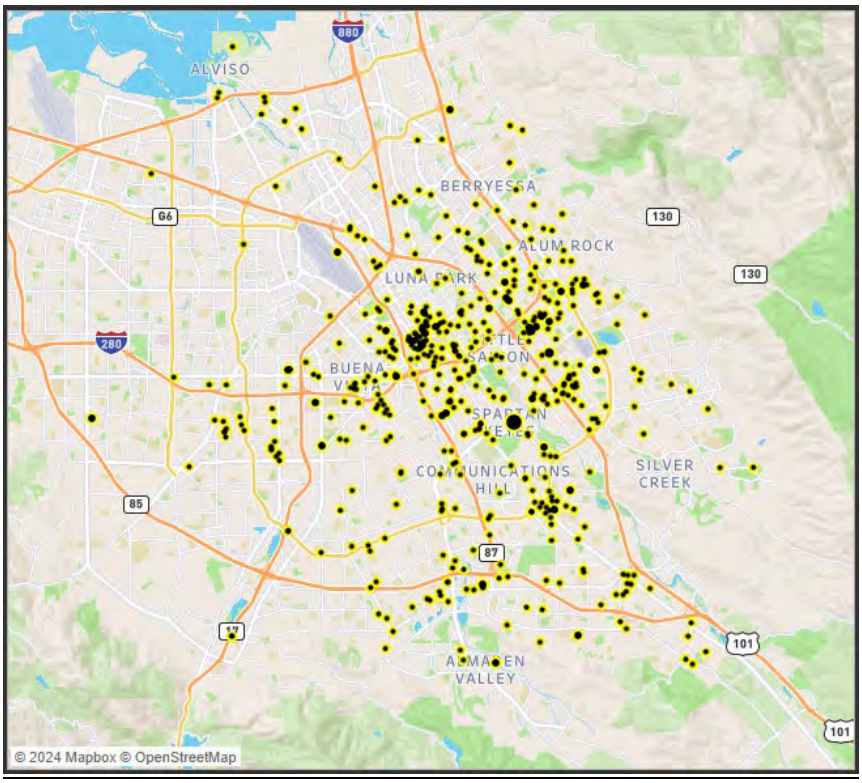
Between 2021 and 2022 Foothill Division's share of the City's use of force incidents increased from 24% to 30% and remained at 30% in 2023. Incidents in Western Division declined from 31% in 2020 to 26% in 2023. The percentage of incidents in Central and Southern Divisions remained stable between 2020 and 2023. In 2023 Foothill Division had the most force incidents (133) while Southern Division had the fewest (85). For the first time in the last nine years in 2023 Charles District had the most force incidents of all the Districts (50). Over the last five years use of force incidents increased in Charles, Tom, and Mary Districts and fell in Lincoln, Edward, and X-Ray Districts.

In 2023 the most use of force incidents (8) occurred on Sunday December 3, 2023. The longest period with no force incidents was between January 29, 2023 and February 3, 2023.

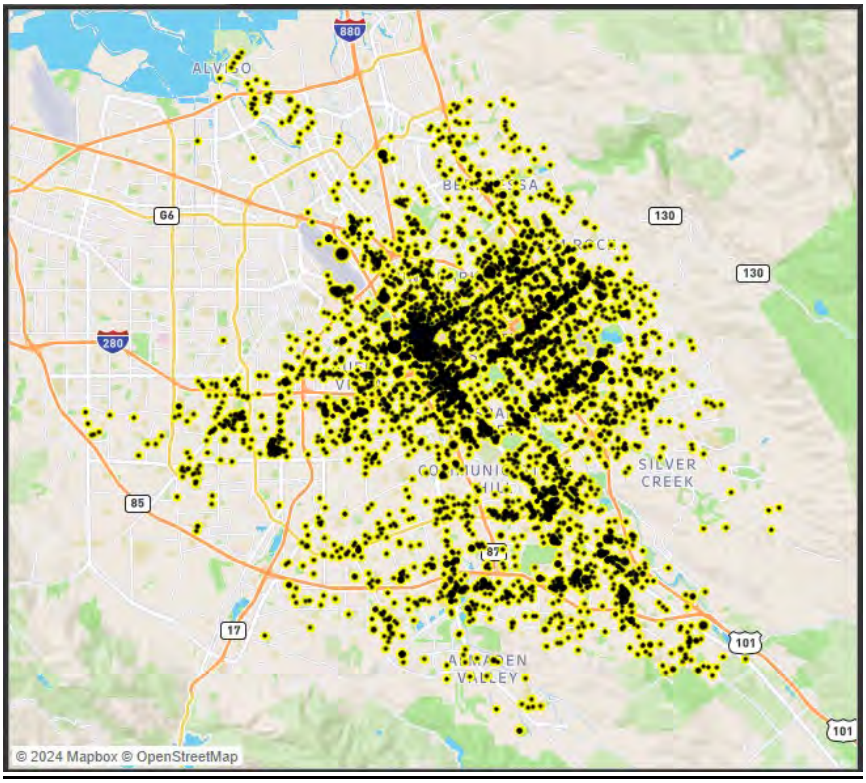
Use of Force Incidents – 2015 to 2023



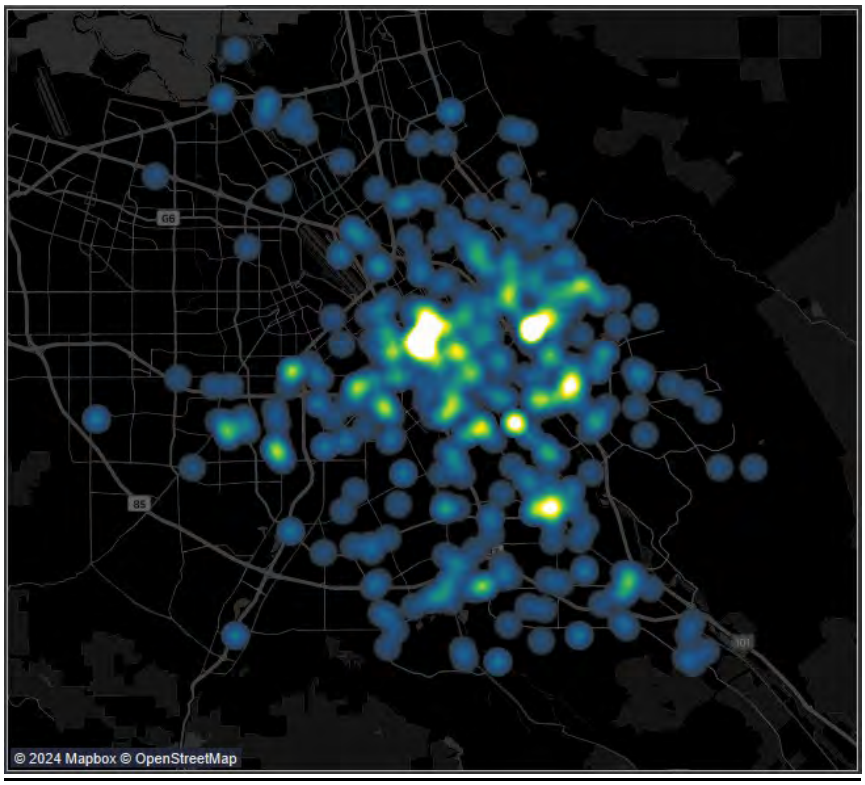
Use of Force Incident Locations – 2023



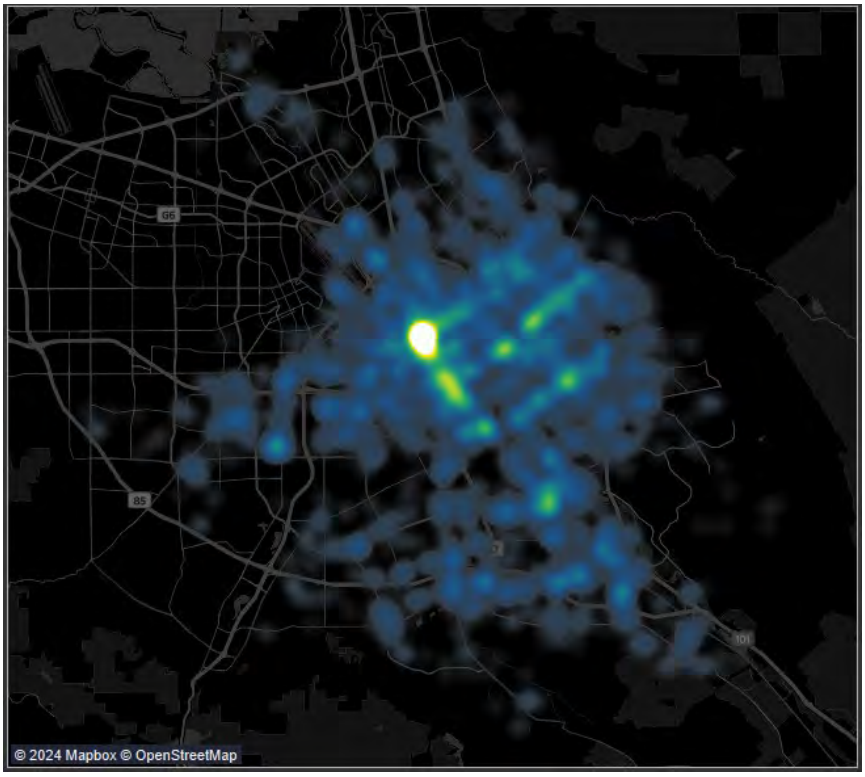
Use of Force Incident Locations – 2015 to 2022



Use of Force Heat Map - 2023



Use of Force Heat Map – 2015 to 2022



2) Reason for Contact

Compared to prior years, in 2023 the reason for the initial contact was more likely to be a dispatched call for service (69%) or an assist the officer or agency (11%) and less likely to be an officer-initiated stop (20%)

In 2023 the reason for the initial contact was similar to prior years.

3) Force Frequency

In 2023 there were 548 use of force incidents involving 484 officers who used force a total of 1,164 times. One officer used force 15 times. There were four officers who used force between 11 and 13 times each, 53 officers who used force between 5 and 9 times each, 104 officers who used force 3 or 4 times, 116 officers who used force twice, and 206 officers who only used force once. The top 10% of officers made up 29% of all force used by the Department.

Uses of force are linked to arrests. About 4% of all arrests result in a use of force because the subject resists arrest by failing to comply, fleeing, or threatening or assaulting the officers or others.

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 2023, 9% of San Jose's use of force incidents had low Force Justification scores (<6). The average justification score was 10.9 on a scale of 0 to 20. For each of the four Graham factors, the average crime score was higher in 2023 than prior years (3.5 vs. 3.1) and the average threat score was also higher (1.7 vs. 1.5). This indicates that subjects were more

threatening to officers and were committing more serious crimes in 2023 than in prior years. Subjects were also more likely to flee from officers in 2023 than in previous years.

Nine percent of force incidents received the highest justification score of 20 which is higher than the 8% average for the prior eight years. Most of these cases involved assaults on the officers before the officer made the decision to use force.

In 2023 there were 83 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. Six officers were involved in two low Force Justification incidents each while one officer had 4 incidents and another officer had 8 incidents.

In 2023 Female subjects had similar Force Justification scores (10.9) to Males (11.0). Asian subjects had the highest average Force Justification score (12.5) while White subjects had the lowest average score (9.6). By subject age, average Force Justification scores were lowest for ages 18-49 (10.9) and were highest for juvenile subjects (12.3). By body mass index, average Force Justification scores were lowest for subjects who were underweight (10.3) and were highest for normal subjects (11.5).

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 2023 8% of force incidents had a high Force Factor score (+3 or above). There were 14 incidents that had a +4 Force Factor, and 30 incidents had a +3 Force Factor. No incidents had a Force Factor score of +5 or +6 in 2023. There were 43 officers involved in the 44 high

Force Factor incidents in 2023. One officers was involved in 8 high Force Factor incidents and 5 officers were involved in two or three high Force Factor incidents each.

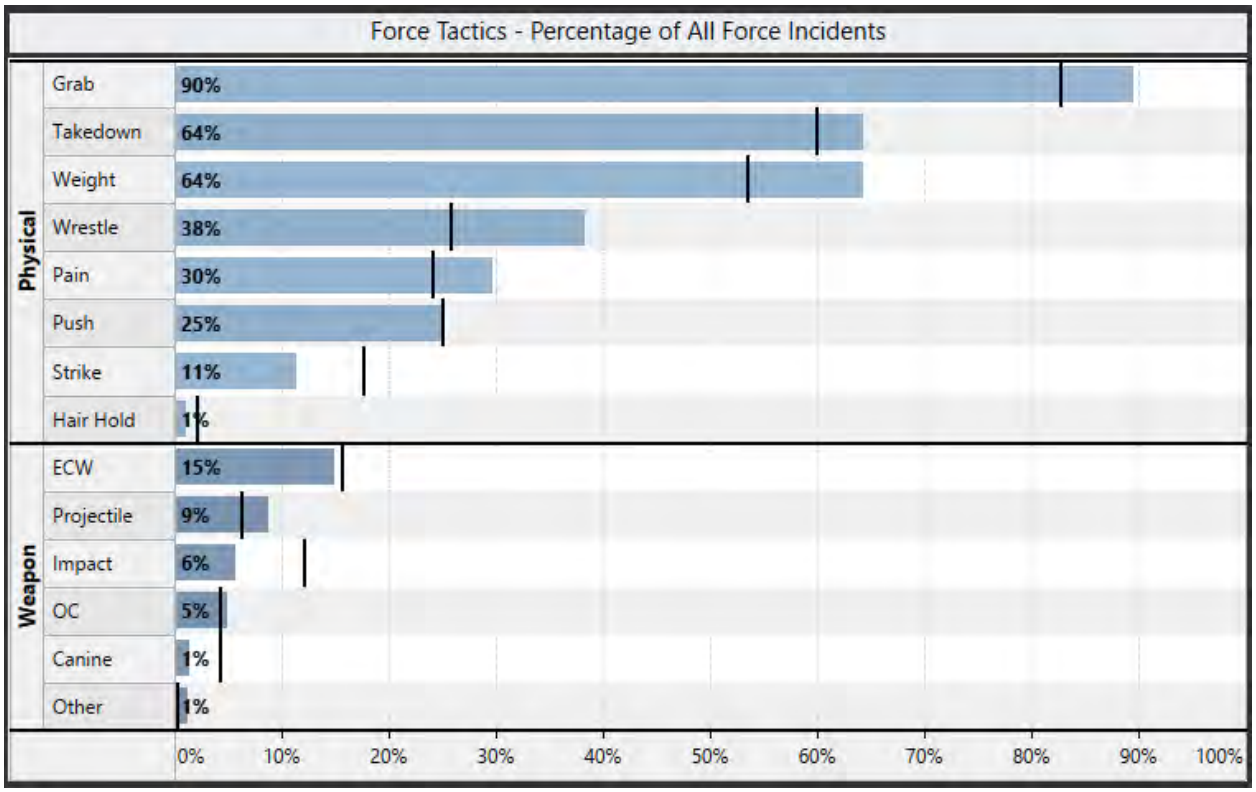
Projectile weapons were involved in a 41% of the high Force Factor incidents while electronic control weapons were involved in 20% of cases and OC was used in 11% of incidents. Canines and impact weapons each made up less than 10% of high Force Factor incidents.

In 2023 the most common Force Factor Score was +1 (43%) followed by 0 (26%) and +2 (14%). 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. In 2023 the percentage of low Force Factor incidents was 9% compared to 7% in prior years. This indicates that in 2023 a higher percentage of officers who were being assaulted were able to control the subject without using weapons or aggressive physical tactics.

6) Force Tactics

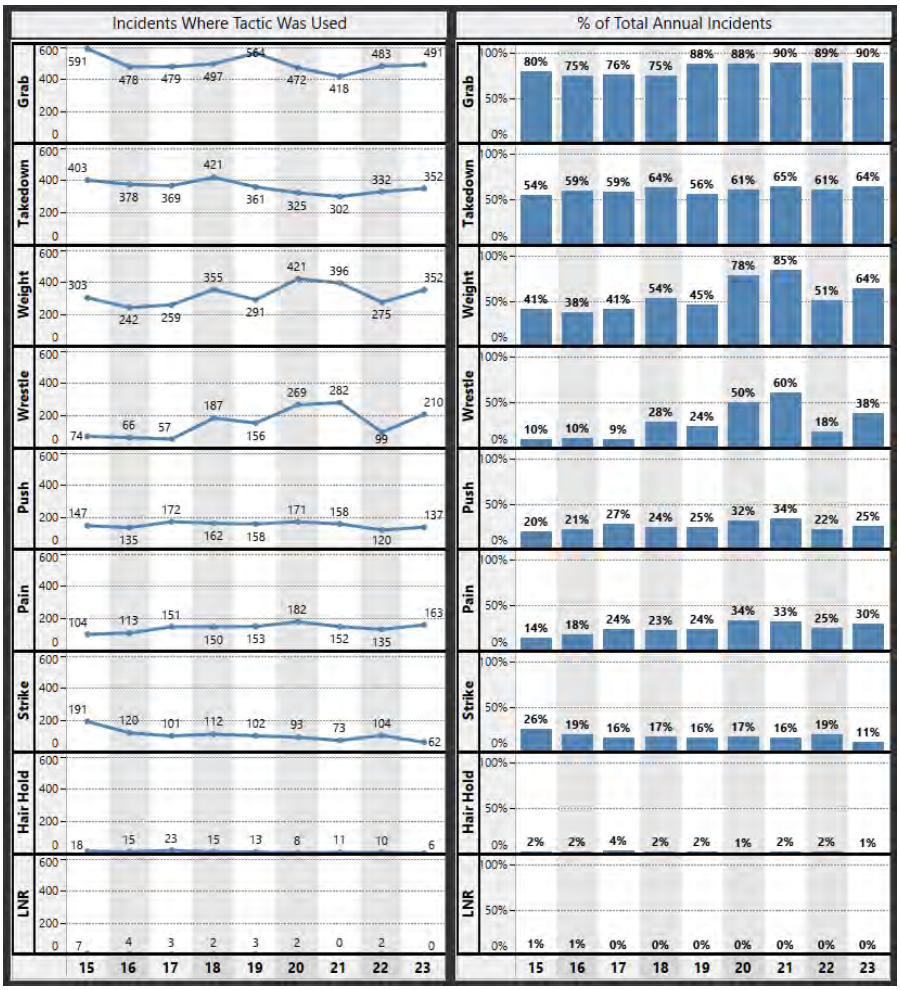
Of the 548 use of force incidents that occurred in 2023, 70% involved physical force only, 10% involved only the use of weapons by officers and 20% involved both physical force and the use of a weapon. Officers were more likely to use physical force only in 2023 than in prior years (70% vs 66%) and were less likely to use weapons (30% vs. 34%).

Compared to prior years, officers were less likely to use strikes, hair holds, impact weapons and canines in 2023. In 2023 officers were more likely to use takedowns, weight, wrestling, pain compliance and projectile weapons than in prior years.



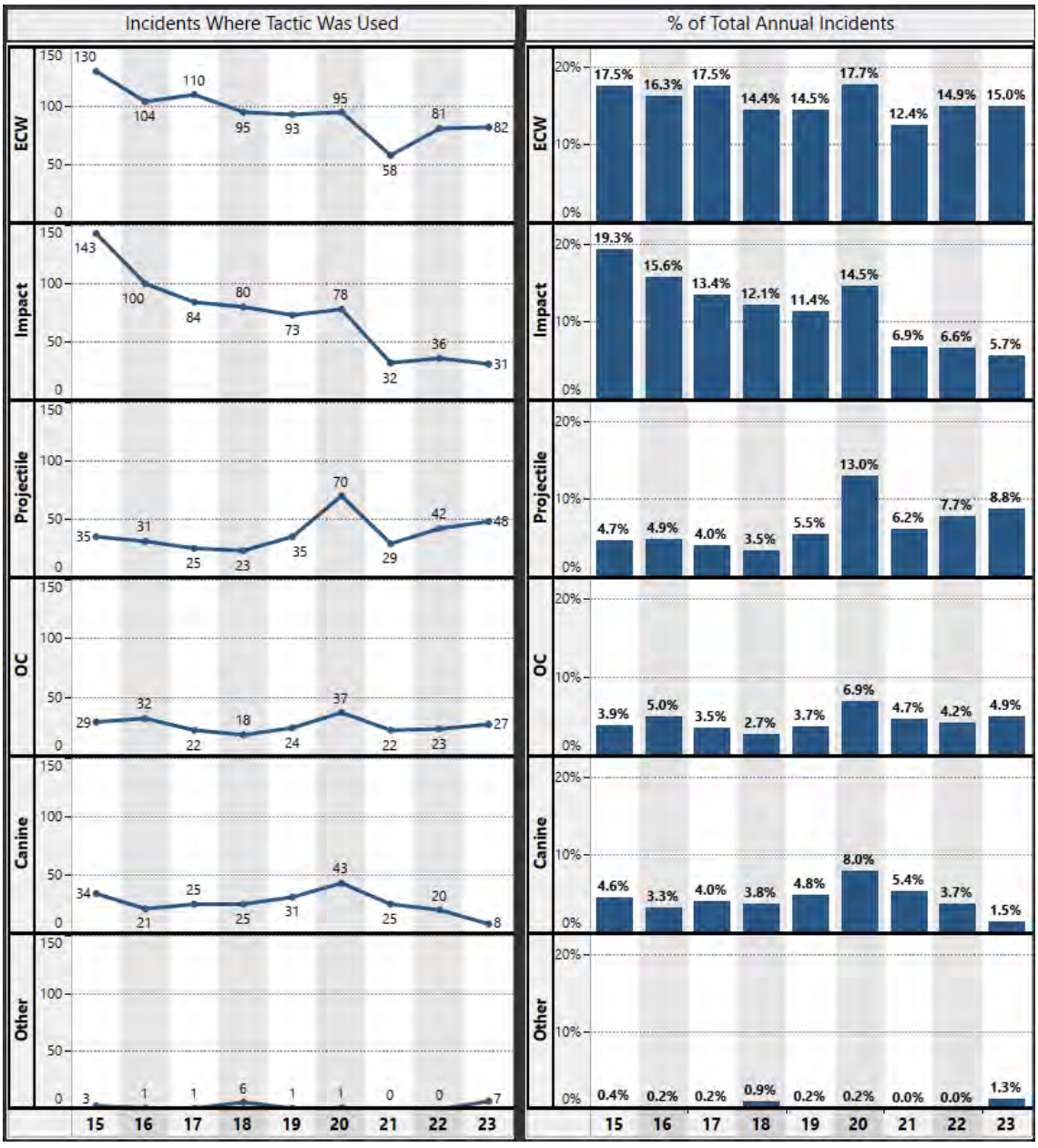
Over the last nine years (excluding the 2020 protest related incidents) officers have used 28,767 individual physical force tactics and weapons during 5,407 incidents. Between 2022 and 2023 there was a significant decline in neck restraints, strikes and hairholds. Wrestling was the only physical force tactic that was used significantly more frequently in 2023 than in 2022.

	Percentage of All Force Incidents		
Physical Force Tactic	2022	2023	Change
Wrestle	18.2%	38.3%	111%
Using Weight	50.6%	64.2%	27%
Pain Complaince	24.8%	29.7%	20%
Push	22.1%	25.0%	13%
Takedown	61.0%	64.2%	5%
Grab/Pull	88.8%	89.6%	1%
Hairhold	1.8%	1.1%	-40%
Strikes	19.1%	11.3%	-41%
LNR	0.4%	0.0%	-100%



The use of canines dropped in 2023 to the lowest level in the last nine years. Between 2022 and 2023 the use of pepper spray and projectile weapons increased by more than 10%.

	Percentage of All Force Incidents		
Physical Force Tactic	2022	2023	Change
Pepper Spray	4.2%	4.9%	17%
Projectile Weapon	7.7%	8.8%	13%
Electronic Control Weapon	14.9%	15.0%	0%
Impact Weapon	6.6%	5.7%	-15%
Canine	3.7%	1.5%	-60%



7) Subjects

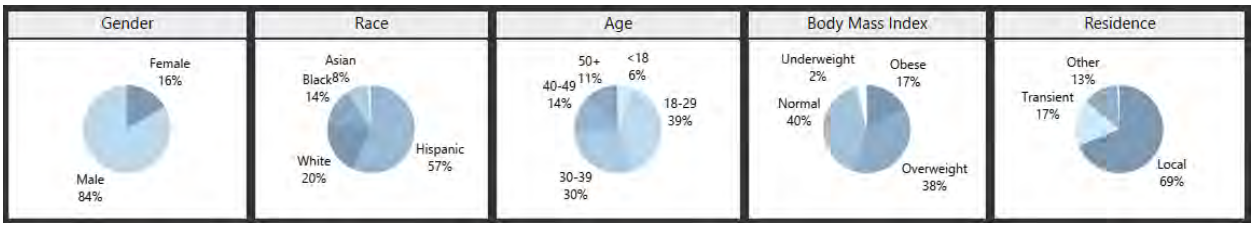
Between 2015 and 2022 there were four demographic groups (gender, race, and age) that made up 64% of all use of force subjects. In 2023 the total percentage of these four demographic groups was similar to prior years.

Most Common Characteristics of Use of Force Subjects 2015 - 2022				
Gender	**Race**	**Age**	**Number of Subjects**	**Percentage of Force Incidents**
Male	Hispanic	18-39	1,751	36%
Male	White	18-39	486	10%
Male	Hispanic	40+	495	10%
Male	Black	18-39	365	8%
All Other Demographic Groups			1,762	36%

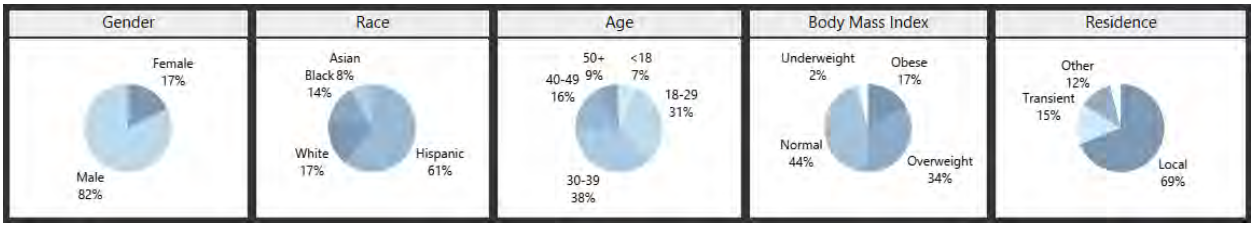
Most Common Characteristics of Use of Force Subjects 2023				
Gender	**Race**	**Age**	**Number of Subjects**	**Percentage of Force Incidents**
Male	Hispanic	18-39	194	35%
Male	White	18-39	57	10%
Male	Hispanic	40+	58	11%
Male	Black	18-39	42	8%
All Other Demographic Groups			197	36%

Compared to the prior eight years, use of force subjects in 2023 were less likely to be White (17%) or 18 to 29 (31%) and were more likely to be Hispanic (61%) or 30 to 39 (38%).

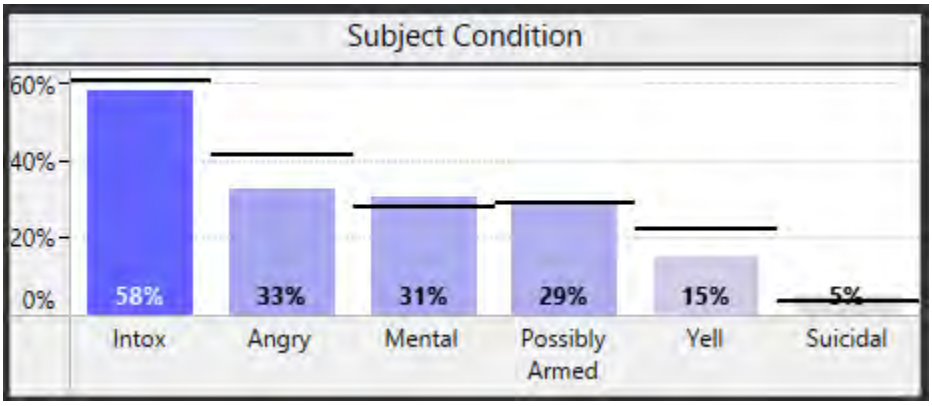
Use of Force Subject Characteristics - 2015 to 2022



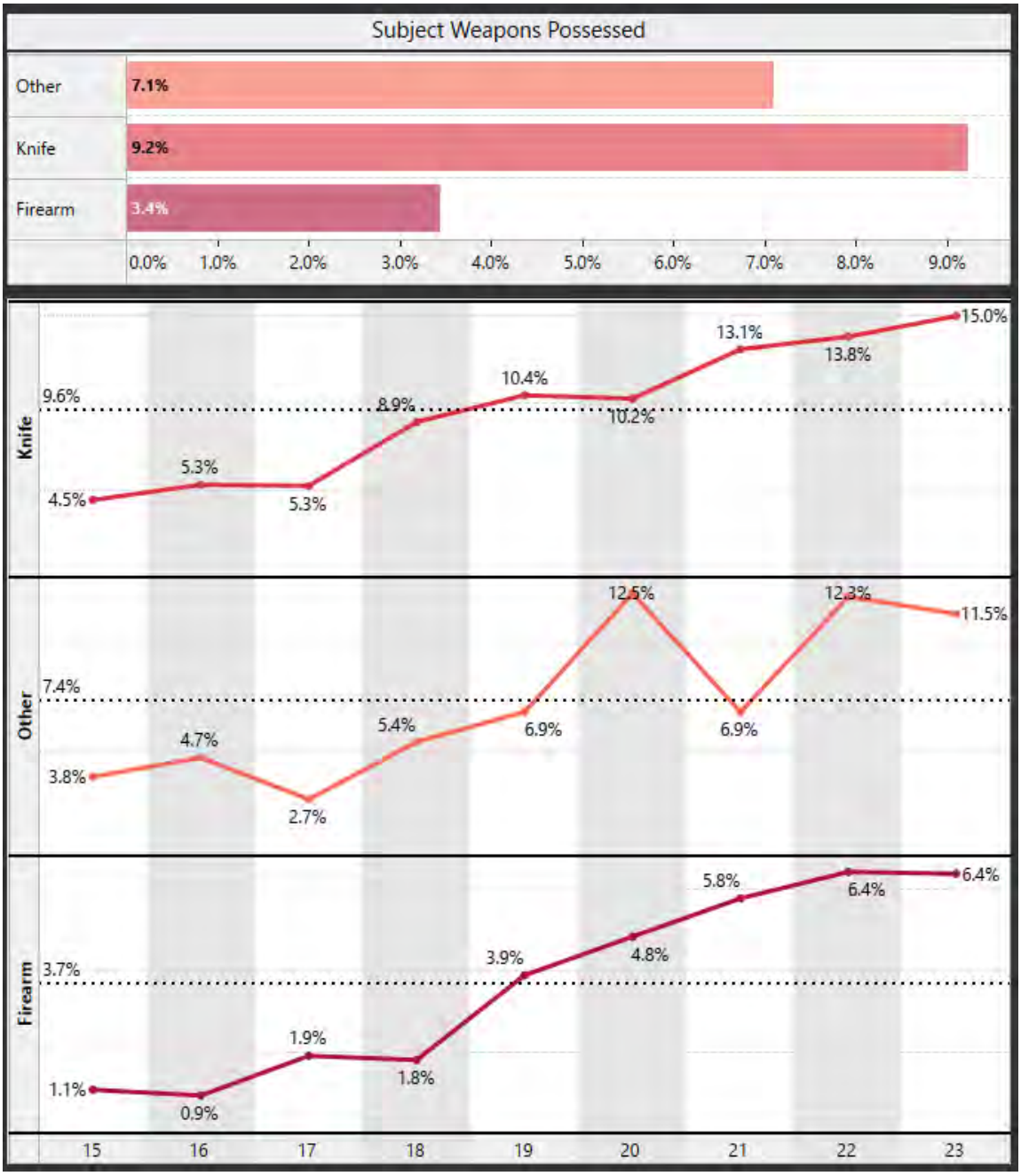
Use of Force Subject Characteristics - 2023



Compared to prior years, use of force subjects in 2023 were less likely to be angry (33% vs. 42%) or yelling (15% vs. 23%) and were slightly more likely to have mental health problems (31% vs. 28%) or be suicidal (5% vs. 3%).

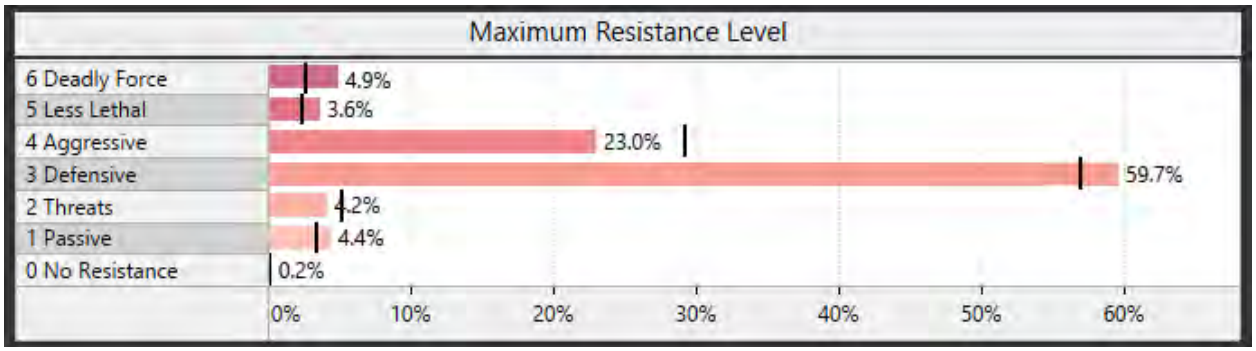


A higher percentage of subjects possessed a knife (15%) or a firearm (6.4%) in 2023 than in any prior year.



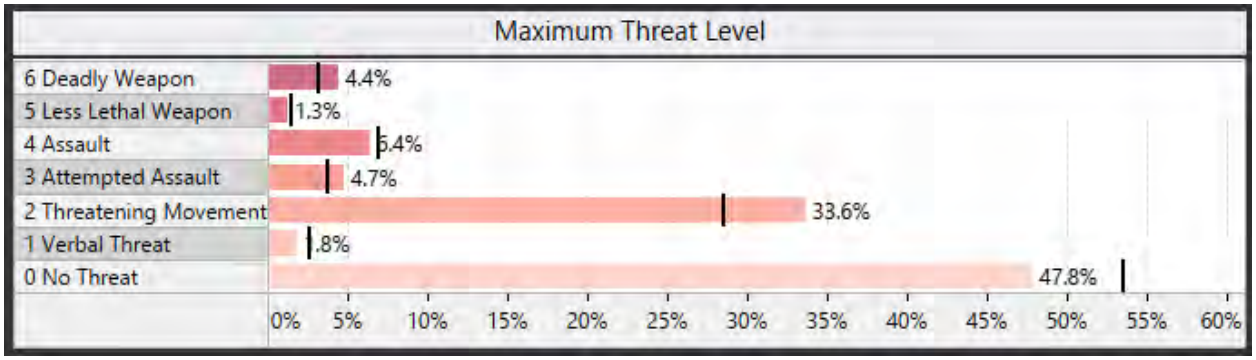
Compared to the previous eight years, officers in 2023 were more likely to encounter deadly force resistance (4.9%) and less lethal weapon resistance (3.6%) and less likely to encounter aggressive physical resistance (23%).

Subject Maximum Resistance Level - 2023



In 2023 officers perceived some type of threatening subject behavior in 52% of use of force incidents which is higher than the 46% from prior years. Officers were more likely to perceive a deadly threat or threatening movement in 2023 than in prior years.

Subject Maximum Threat Level - 2023



8) Injuries

In 2023 there were 152 officers who were injured a total of 194 times. One officer was injured four times, eight officers were injured 3 times each, and twenty-four officers were injured twice. Most of the injuries involved a bruise or scrape (46%), a minor cut (19%) or a complaint of pain only (31%). Four officers received chemical or bodily fluid contamination and two officers had a fracture or broken tooth. One officer received a gun or knife wound.

Seventy-three percent of injured officers received injuries to their arms or legs and 23 officers received an injury to the head.

Seventeen percent of force applications by officers resulted in an injury to the officer who used force which is similar to prior years. Of the 194 officer injuries in 2023, 9% were treated by EMTs and 14% were treated at a hospital.

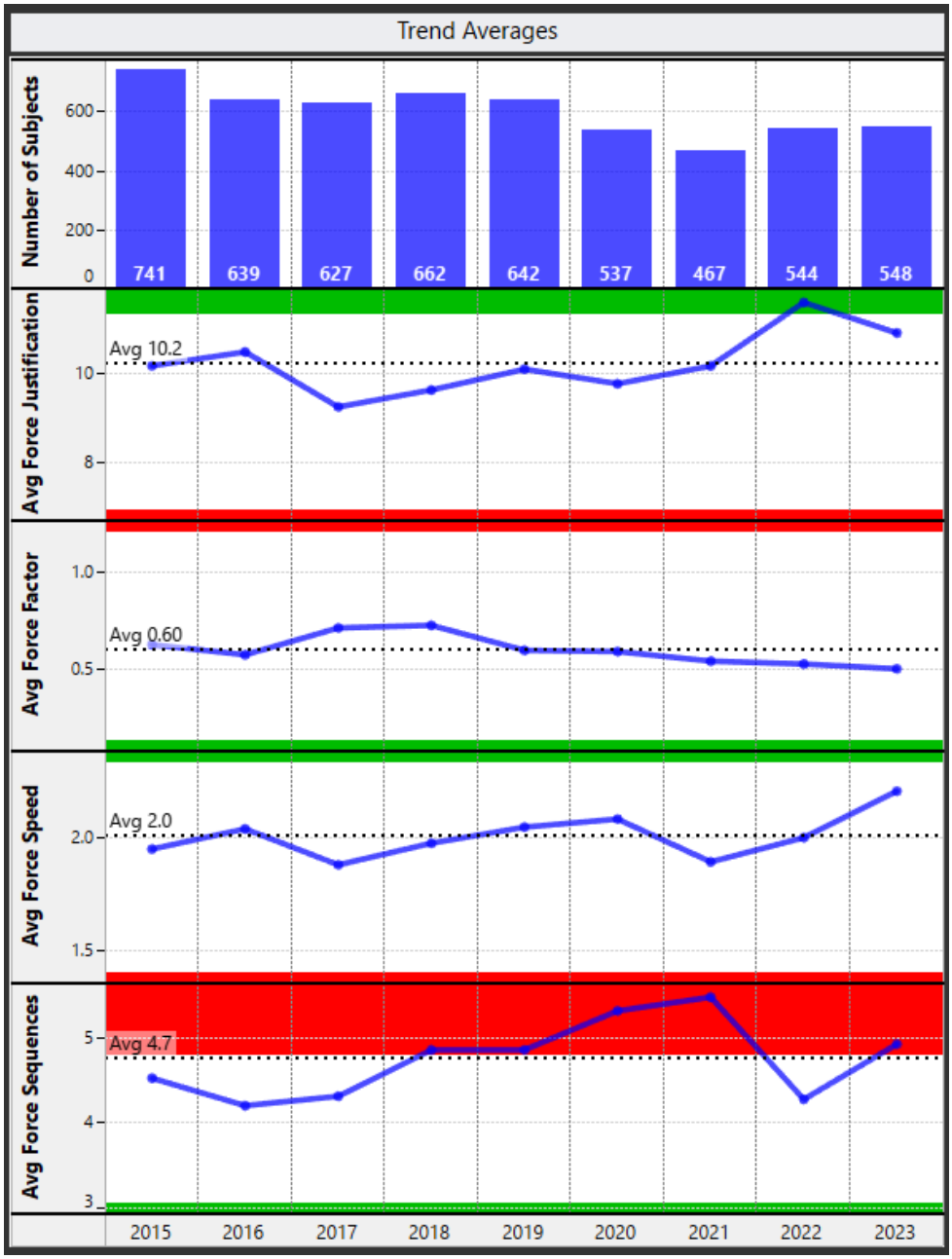
In 2023 327 subjects who had force used against them were injured (60% of all incidents). Of the subjects who were injured, most of the injuries were minor: complain of pain only (36%), ECW probe (6%), bruise/scrape (38%) or minor cut (14%). Eight subjects were bitten by a canine, nine subjects had chemical irritation, two subjects lost consciousness and three subjects suffered a fracture or broken tooth.

Sixty percent of injured subjects received injuries to their arms or legs and 40% of subjects received an injury to the head.

Of the all the subjects who were injured, 13% were treated by EMTs only and 71% were treated at a hospital.

9) Force Analysis Trends

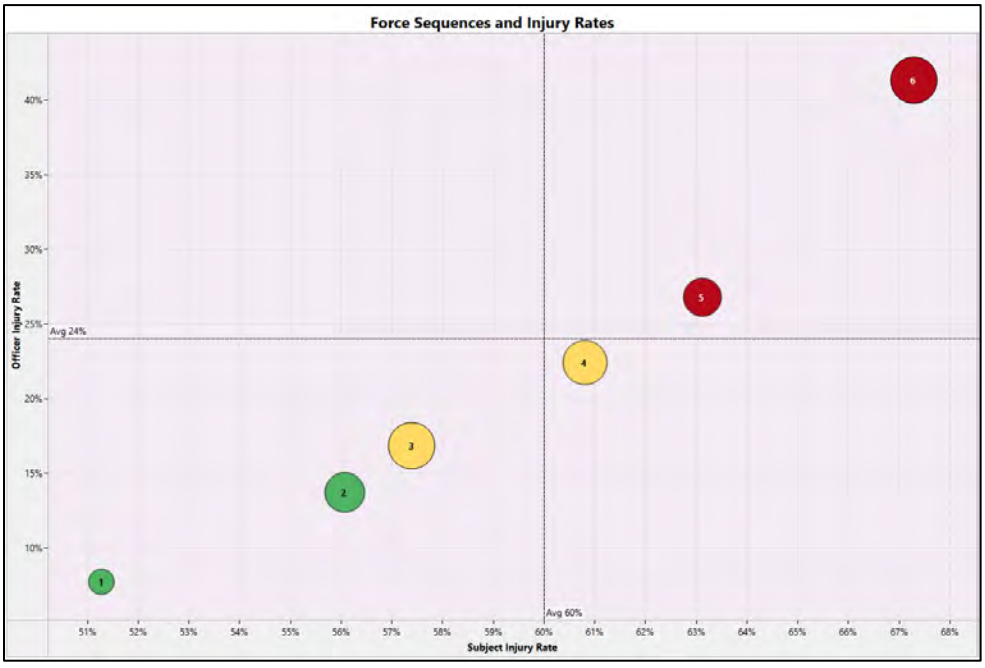
The average Force Justification scores in 2022 and 2023 were higher than all prior years. The average Force Factor scores have fallen steadily from fell from 0.7 in 2018 to 0.5 in 2023. The average Speed of Force was higher in 2023 than any prior year indicating that officers are interacting with subjects longer before using force. The average number of Force Sequences in 2023 was close to the average for the last nine years (4.7 Sequences).



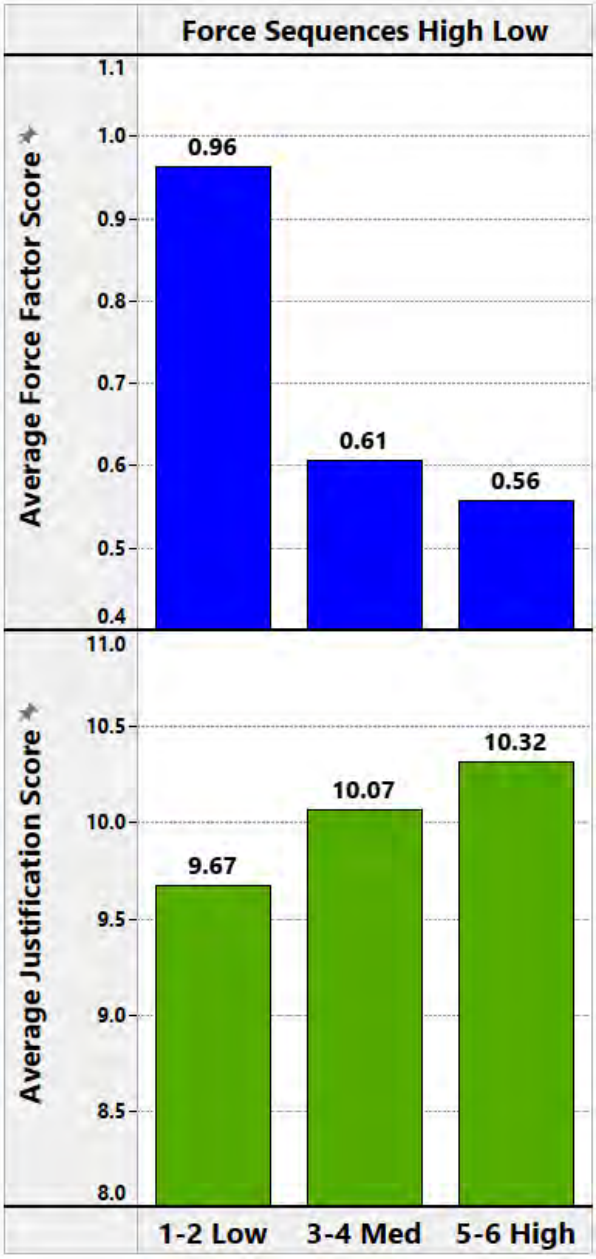
Use of force incidents are dynamic events. Officers will respond to the resistance presented by the subjects and both the resistance levels, and the force levels can both change during the incident. Each time the Force-Resistance dynamic changes a new Force Sequence is coded up to six Force Sequences. If an officer is able to control a resisting subject after only one or two Force Sequences, then the officer is using force tactics effectively. However, if the force incident continues to five or six Force Sequences that is an indication that the officer is having difficulty controlling the subject. Often a high number of Force Sequences are the result of a combination of several factors.

There is a strong correlation between Force Factor and Force Sequences. When officers use overwhelming force compared to resistance (i.e., high Force Factor), the number of Force Sequences will be lower. Conversely when subject resistance levels are higher than officer force levels (i.e., low Force Factor), the number of Force Sequences will be higher.

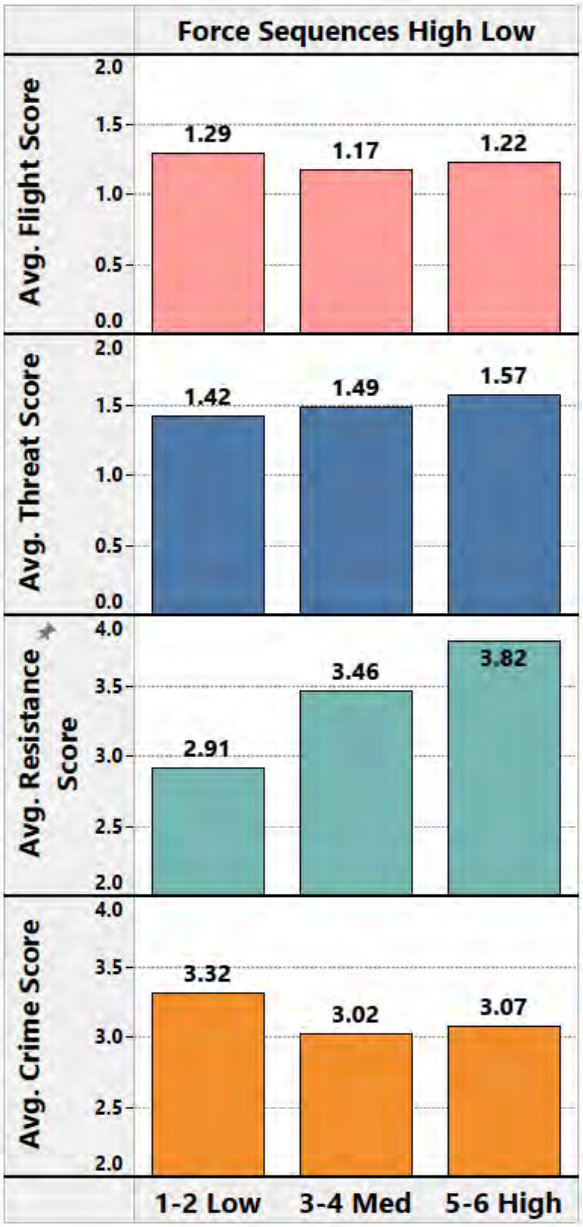
There is also a strong correlation between the number of Force Sequences and injury rates for both officers and subjects. The more Force Sequences there are the more likely it is that both the officer and the subject will be injured. Incidents that are resolved within one Force Sequence have an officer injury rate of 8% and a subject injury rate of 51%, but incidents that go to six sequences have an officer injury rate of 41% and a subject injury rate of 67%.



The following diagram shows the relationship between average Force Factor and average Force Justification scores and the number of Force Sequences. When incidents are resolved within two Force Sequences officers generally use a higher level of force compared to resistance. Incidents that have a higher Force Justification score (subject is fleeing and presenting a high level of threat and resistance and is involved in a more serious crime), are more likely to go to five or six Force Sequences.

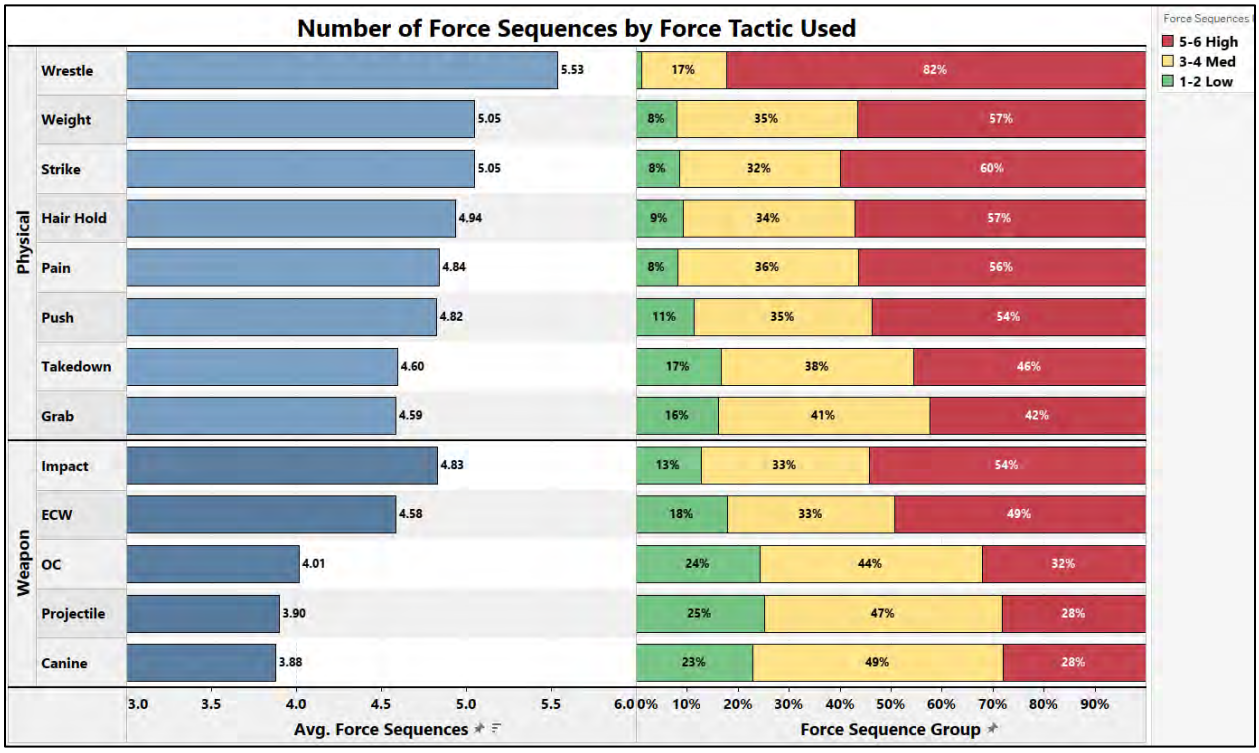


When the Force Justification scores are broken down into the four Graham factors, it appears that subject flight and subject threat factors have no correlation with the number of Force Sequences. Therefore, if a subject is fleeing or threatening the officer, these attributes do not tend to increase the number of Force Sequences. Levels of resistance are strongly correlated with Force Sequences. The higher the level of resistance the more Force Sequences will be involved. The average crime score has a negative relationship with the number of Force Sequences but only for one and two Force Sequence incidents.



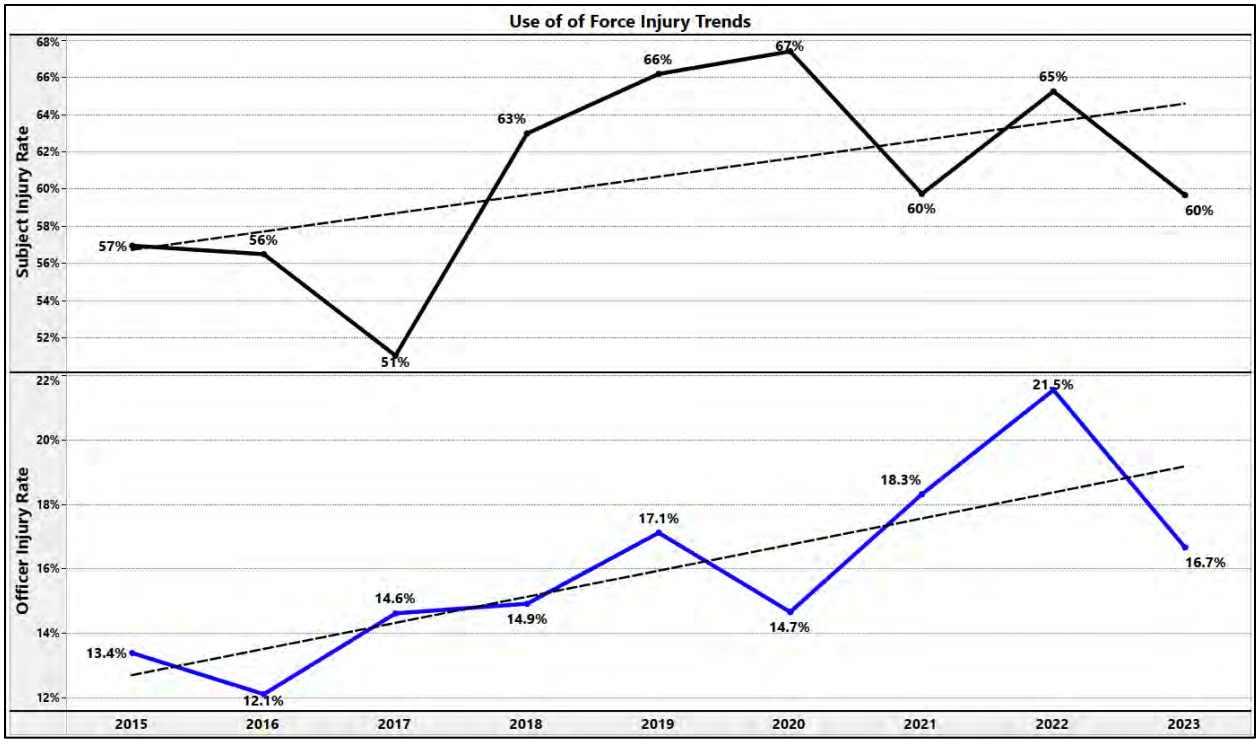
If officers initiate a force incident with overwhelming force, they will generally be able to control the subject faster than if lower levels of force are used. However, if the force level is too high it may be considered to be excessive. Therefore, an officer should choose an appropriate level of force that will control the subject as quickly as possible without using force that would be considered to be excessive. In many use of force incidents there is little time for an officer to conduct a calculation of the appropriate level of force to use and this is made even more difficult by the uncertainty of the subject's possible responses to the initiation of force.

During most use of force incidents, officers will use multiple types of force tactics in an attempt to control the subject. The timing of the use of a force tactic will have a significant impact on the Force Sequences. A projectile weapon used in the first Force Sequence may resolve the incident quickly but, in some cases, a projectile weapon may be used as a last resort in the last Force Sequence. Given these limitations, the following diagram examines the number of Force Sequences associated with different types of force tactics.

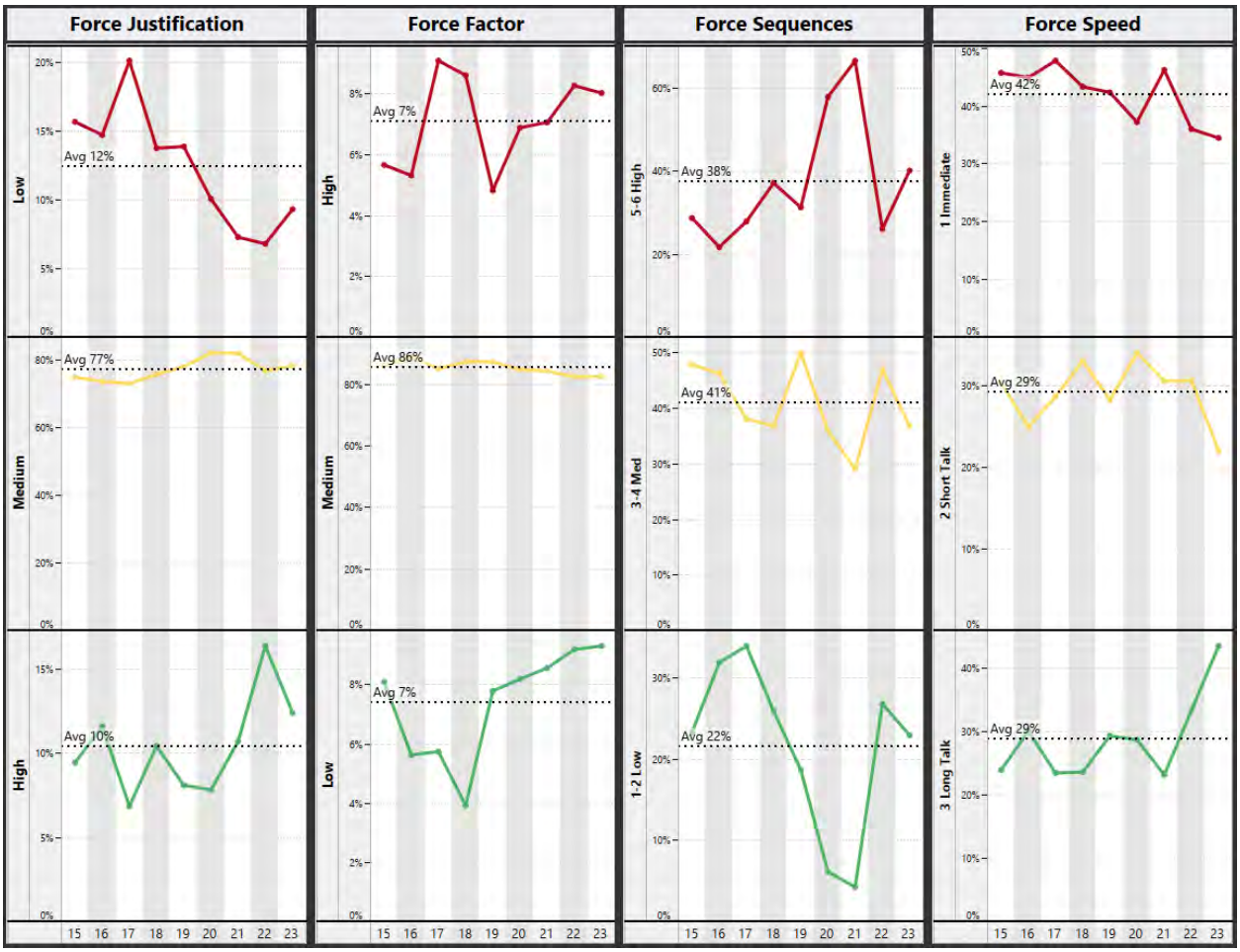


Wrestling is more of an indicator than a force tactic and is used when there is a protracted physical struggle between the officer and the subject. Wrestling is associated with a high number of Force Sequences and 82% of wrestling incidents go to five or six Force Sequences. Canines, projectile weapons, and OC are associated with incidents that have the shortest number of Force Sequences. When these weapons are used, about a quarter of incidents are resolved within one or two Force Sequences. Even though these types of weapons are more effective than other force tactics, their use may not be appropriate in many situations. More than half of incidents that involve the use of impact weapons or electronic control weapons go to five or six Force Sequences. This is because these weapons are often used as a secondary force tactic after other physical force tactics have been attempted. Takedowns appear to be the most effective physical tactic. Nearly two-thirds of incidents that involve a strike go on for five or six Force Sequences.

Over the last nine years both officer injury rates and subject injury rates have been on an upward trend, but injury rates for both fell in 2023.

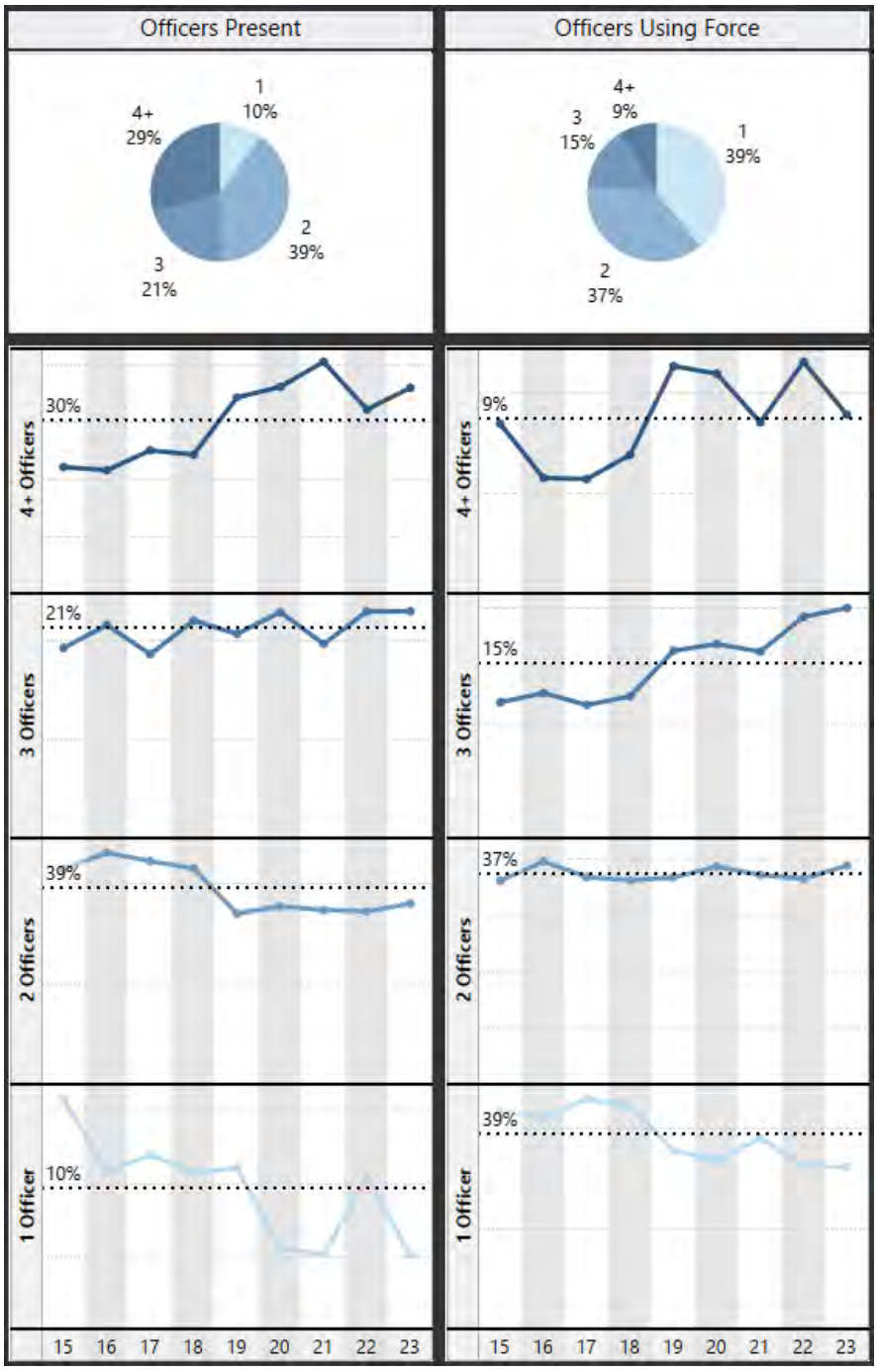


The analysis of use of force incidents can be complex since we must examine the behaviors can characteristics of both officers and subjects and all the environmental and situational factors involved. The following table provides trends for Force Justification, Force Factor, Force Sequences and Force Speed.



Since the pandemic began in 2020 the percentage of incidents involving a high Force Justification score increased from 8% to 16% by 2022 before falling to 12% in 2023. These are incidents involving a more serious crime, a higher level of threats, flight, and more significant resistance. At the beginning of the pandemic the percentage of incidents lasting five or six Force Sequences jumped from 31% in 2019 to 67% in 2021 before falling to 26% in 2022. In 2023 this percentage increased to 40%.

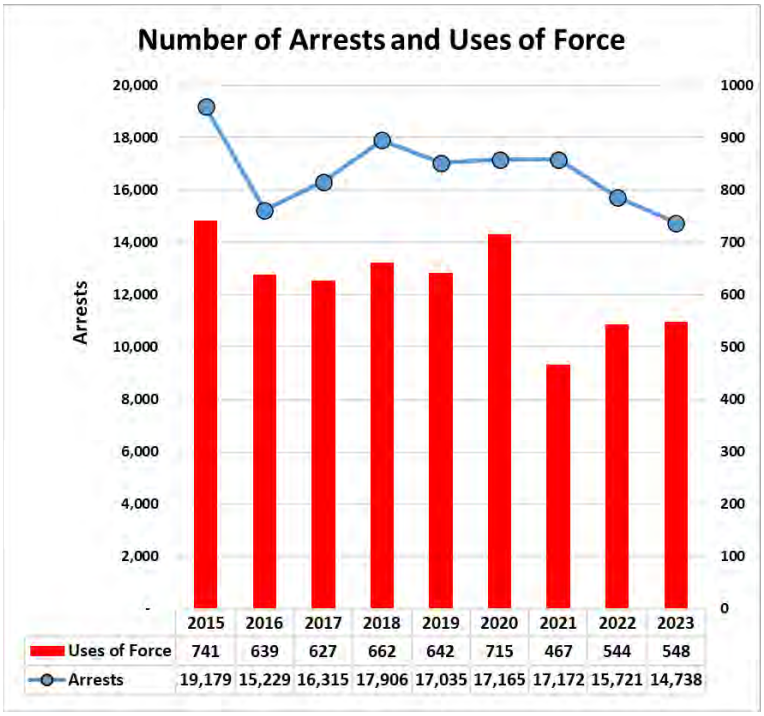
In 2023 29% of force incident involved three or more officers using force compared to an average of 24% in prior years. Incidents involving only a single officer using force fell from 46% in 2017 to 32% in 2023.

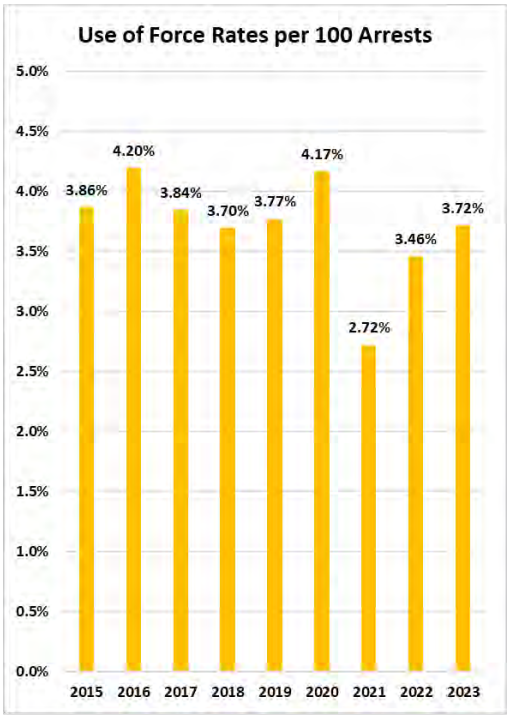


10) Long-Term Use of Force Trends

a) Arrests and Uses of Force

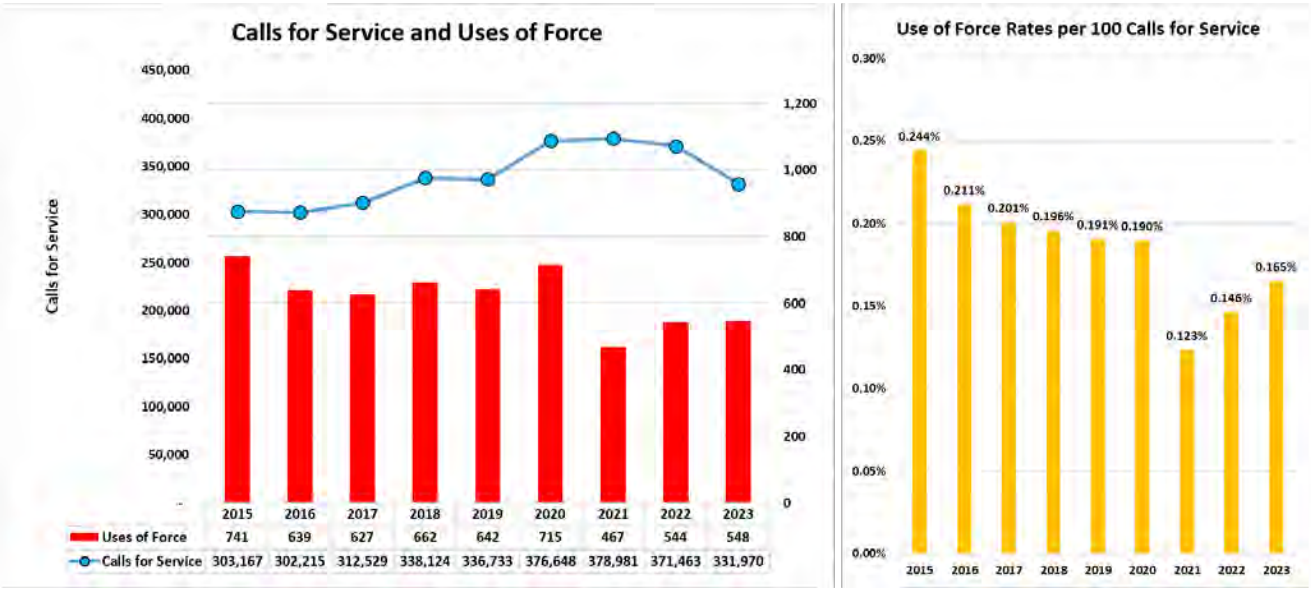
From 2015 to 2023 the number of annual arrests made by SJPD fell by 23% from 19,179 arrests to 14,738 arrests. During this same period, the number of uses of force fell by 26% from 741 in 2015 to 548 in 2023. From 2015 to 2019 the use of force rate per 100 arrests ranged between 3.7% and 4.2% before falling to 2.7% in 2020. By 2023 the use of force rate per 100 arrests rose to 3.7%. The average use of force rate per arrest for all 100 agencies using PFAS is 3.7%.





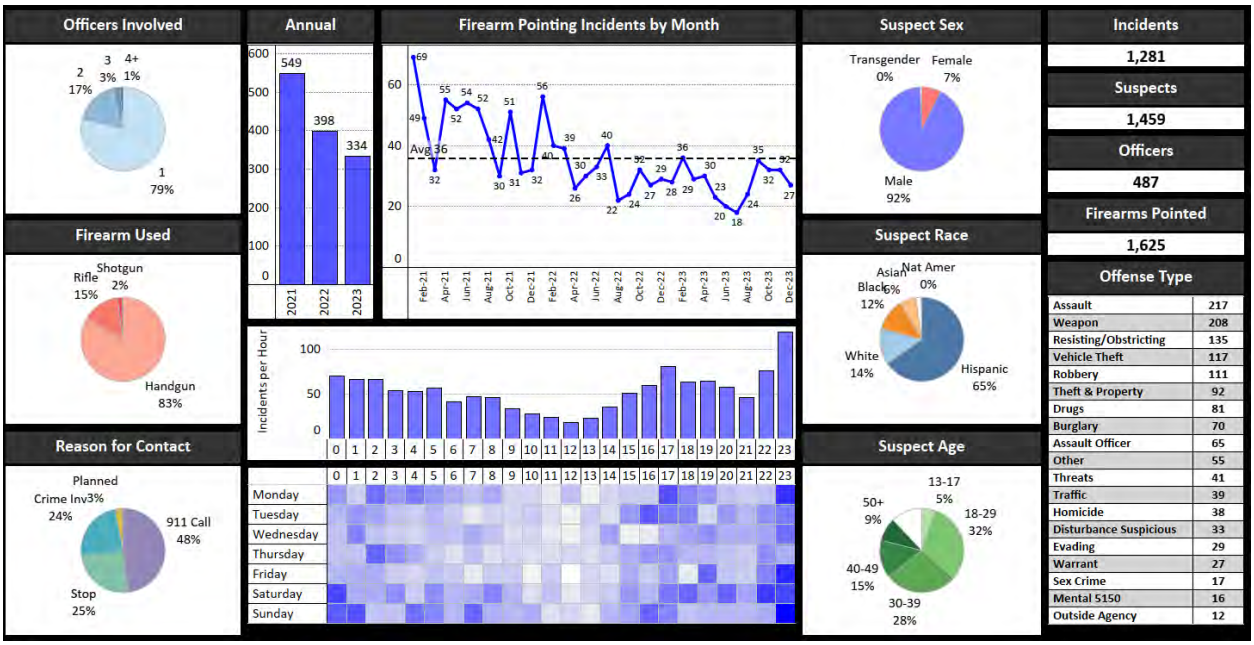
b) Calls for Service and Uses of Force

From 2015 to 2023 the number of annual calls for service to SJPD rose by 10% from 303,167 calls to 331,970 calls. During this same period, the number of uses of force fell by 26% from 741 in 2015 to 548 in 2023. From 2015 to 2019 the use of force rate per 100 calls for service ranged between 0.19% and 0.24% before falling to 0.12% in 2020. By 2023 the use of force rate per 100 calls for service rose to 0.165%. The average use of force rate per call for service for all 100 agencies using PFAS is 0.10%.



11) Firearm Pointing Incidents (Show of Force)

In 2021 San Jose PD began providing data on incidents where the only force used was the pointing of a firearm at a subject. These incidents are sometimes referred to as "show of force." Police Strategies LLC has analyzed these incidents and the following is a summary of the results.



More than three-quarters of all show of force (SOF) incidents involve only one officer who pointed his/her firearm. Fifteen percent of SOF incidents involve a rifle and 2% involve a shotgun. Almost half of SOF incidents are the result of a 911 call. Between 2021 and 2023 SOF incidents fell by 39%. The two most common offense types for SOF incidents were assaults and weapon offenses.

The most common reason for SOF was because the officer believed the subject was armed (83%). Half of SOF incidents involved a violent crime and in 46% of incidents the officer perceived some type of threat.

Between 2021 and 2023 the percentage of SOF incidents involving a violent crime increased from 26% to 47% while incidents involving a weapon decreased from 18% to 10%.