



Police Force Analysis SystemSM Seventh Summary Report

King County Sheriff's Office

Use-of-Force Data from January 1, 2014 to December 31, 2023

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Background

In 2017 we produced the First Summary Report using data from the King County Sheriff's Office's Police Force Analysis SystemSM. That report included data from 2014 to 2016. This is our Seventh Summary Report which includes use-of-force data through the end of 2023. Police Strategies will continue to update the system on an annual 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.

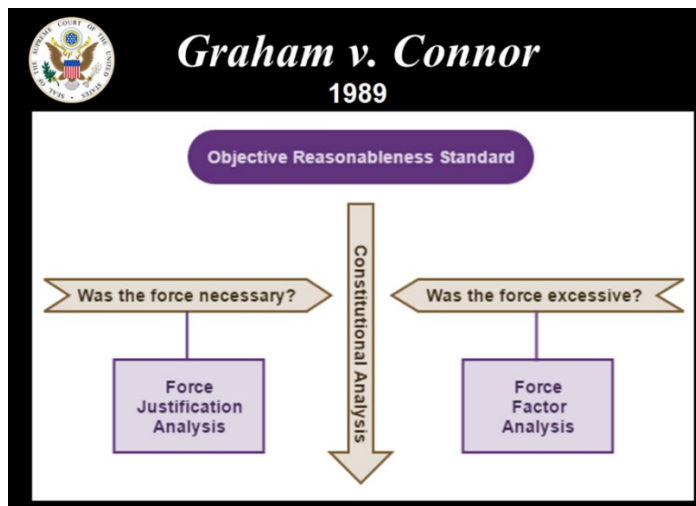
Police Force Analysis SystemSM

In the summer of 2015, Police Strategies LLC launched the Police Force Analysis SystemSM (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.](#)
[KCSO puts use-of-force data online in pioneering move, KCSO Mercury, January 2018](#)

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

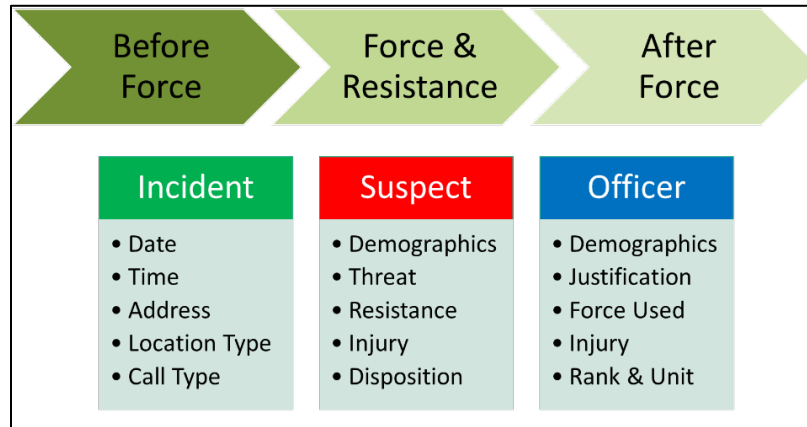
PFAS is a relational database that contains 150 fields of information extracted from law enforcement agencies’ existing incident reports and officer narratives. The data is analyzed using legal algorithms that were developed from the evaluation criteria outlined in the United States Supreme Court case 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.



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 94 law enforcement agencies in eight states involving about 25,000 incidents and 10,000 officers who used force more than 35,000 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 NetworkSM allows agencies to compare their use-of-force practices with other agencies in the system.

The Police Force Analysis SystemSM 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 King County Sheriff's Office

KCSO provided the following data for coding: (1) Raw data from the IAPro system; (2) BlueTeam reports; and (3) incident reports with officer narratives. These reports were received as Word and Adobe Acrobat files.

In July 2024 Police Strategies LLC received KCSO use-of-force reports from 2023. Data entry was completed in September 2024 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 also geocoded.

The Department has contracted for ongoing updates of PFAS. The next Summary Report will be produced in mid-2025.

Summary of KCSO's Police Force Analysis SystemSM

The King County Sheriff's Office's Police Force Analysis SystemSM contains ten years of use-of-force data from 2014 to 2023. The database includes detailed information on 1,635 subjects who had force used against them and the 730 officers who used force during the 10-year period. In 2023 there were 148 use-of-force incidents involving 185 officers who used force a total of 324 times. This report will examine the 10-year trends in uses of force and will summarize the use-of-force data from 2023.

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

In 2023, the month with the most force incidents was August with 20 incidents, and the month with the fewest incidents was July with 4 incidents. During the week, Tuesdays had the most incidents (31), and Thursdays had the fewest (14). The peak hour for force incidents was between 11p.m. and midnight (13 incidents).

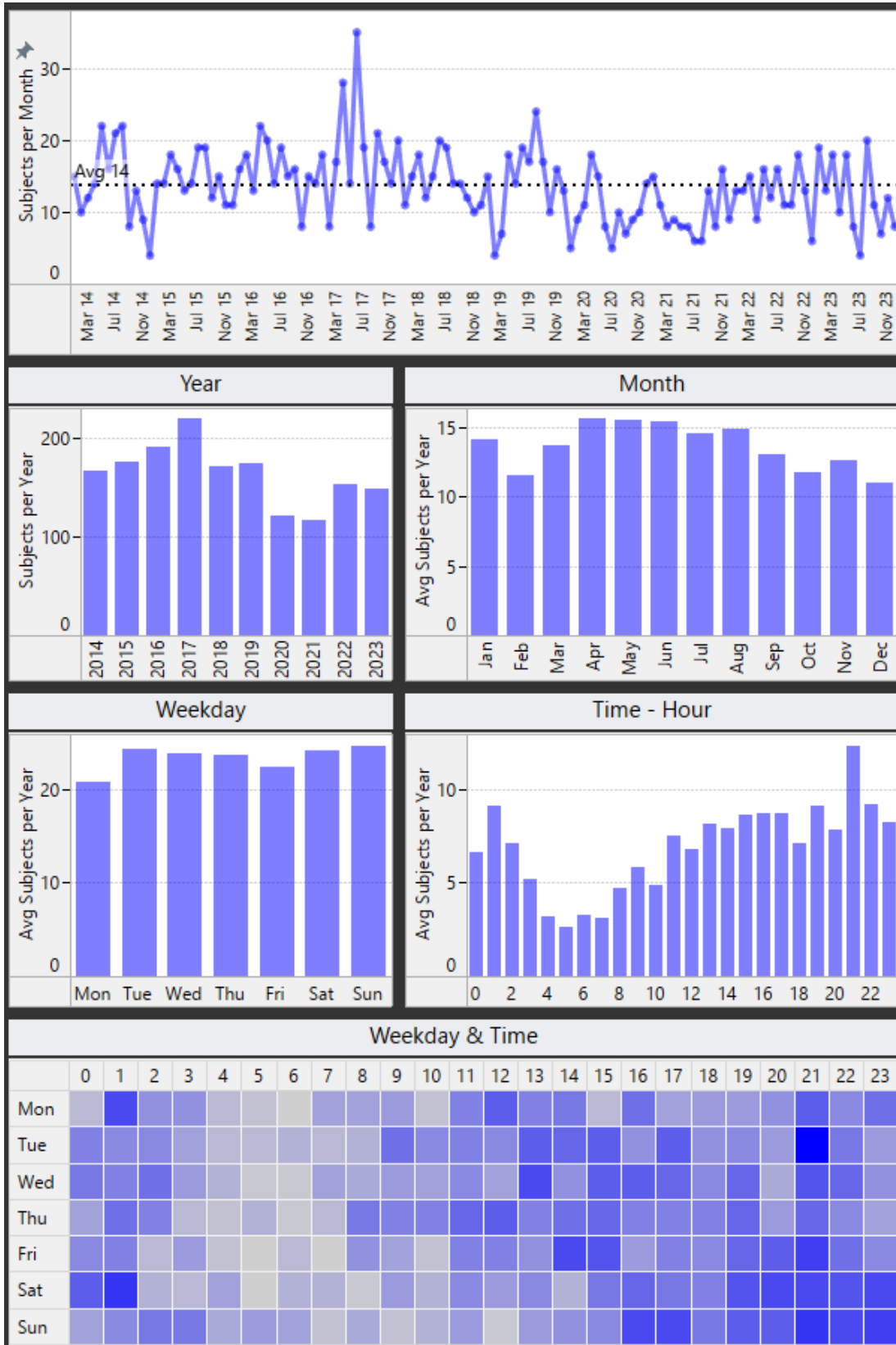
Forty-nine percent of all force incidents in 2023 occurred on the street, 20% occurred inside or outside a home, and 26% occurred at a business.

From 2014 to 2017, the number of force incidents rose from 166 to 219, and then fell to 117 incidents by 2021 before rising to 153 incidents in 2022. In 2023, there were 5 fewer incidents than the prior year, which was a decrease of 3%. It appears that the pandemic in 2020 and 2021 may have reduced the number of contacts and arrests, which resulted in fewer uses of force. While the use-of-force numbers increased in 2022 and 2023, they are still lower than any year prior to the pandemic.

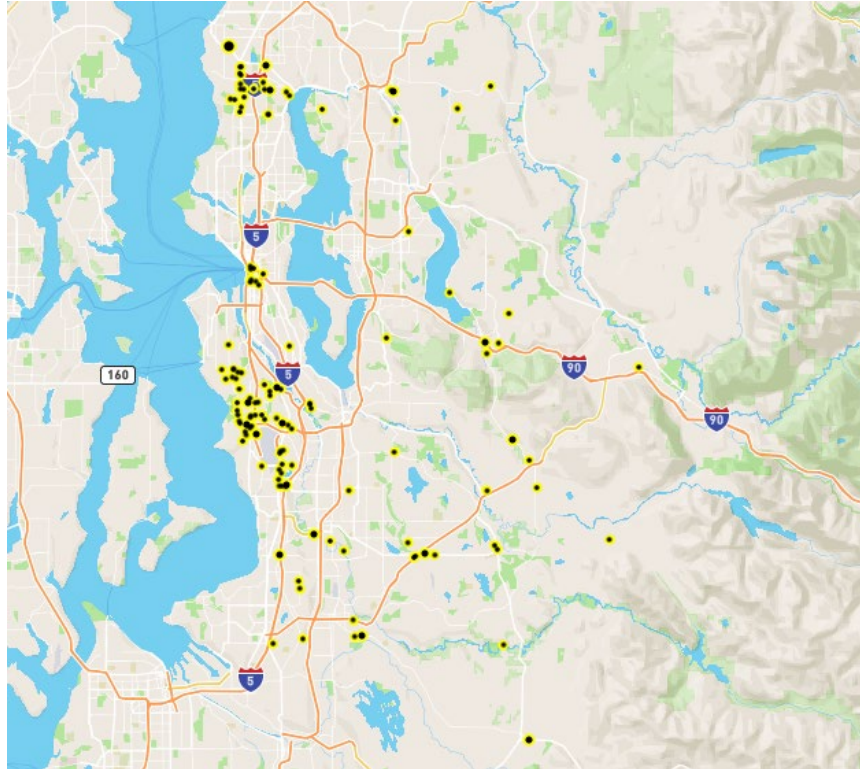
Over the last ten years, the average annual number of force incidents was 164. There was an average of 41 force incidents per quarter and 14 incidents per month. There was no day that had more than four use-of-force incidents.

In 2023, the longest time period with no use-of-force incidents was between July 8, 2023 and July 21, 2023. Two days had four incidents each (March 14, 2023 and August 15, 2023).

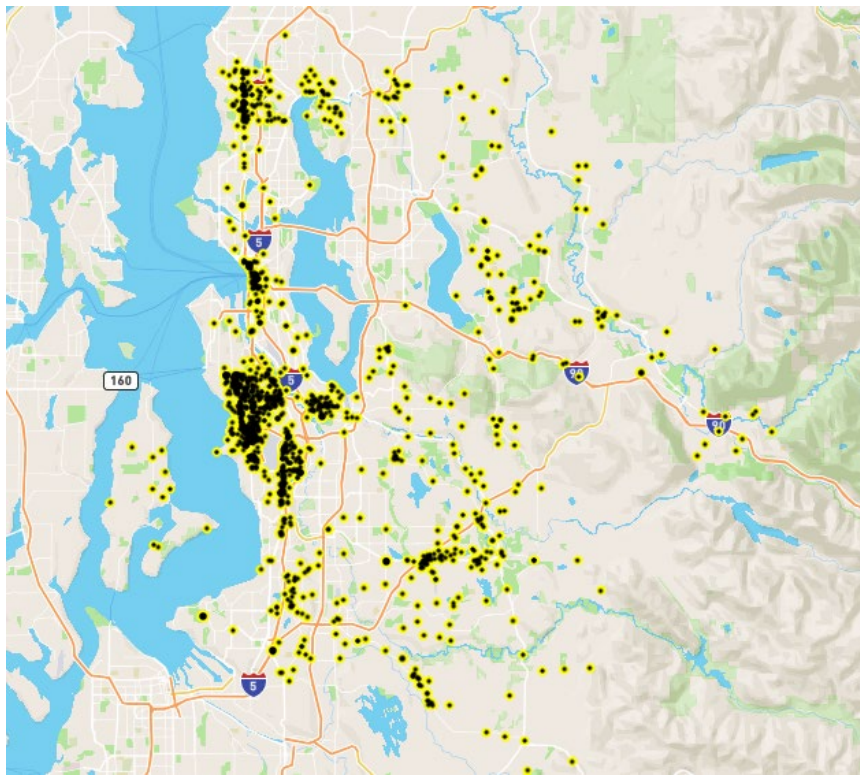
Use-of-Force Incidents – 2014 to 2023



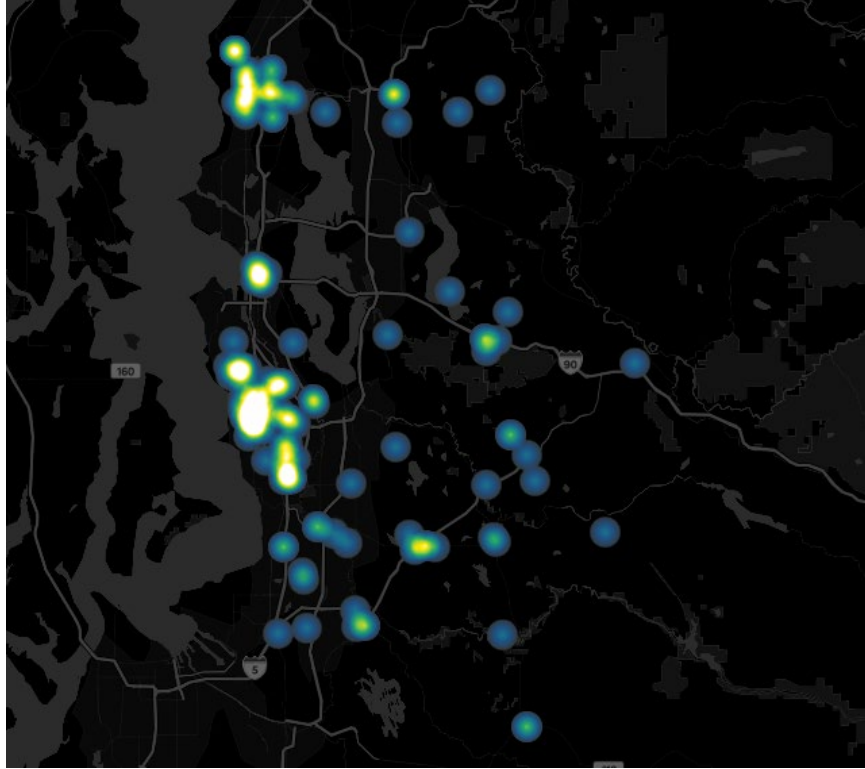
Use-of-Force Incident Locations – 2023



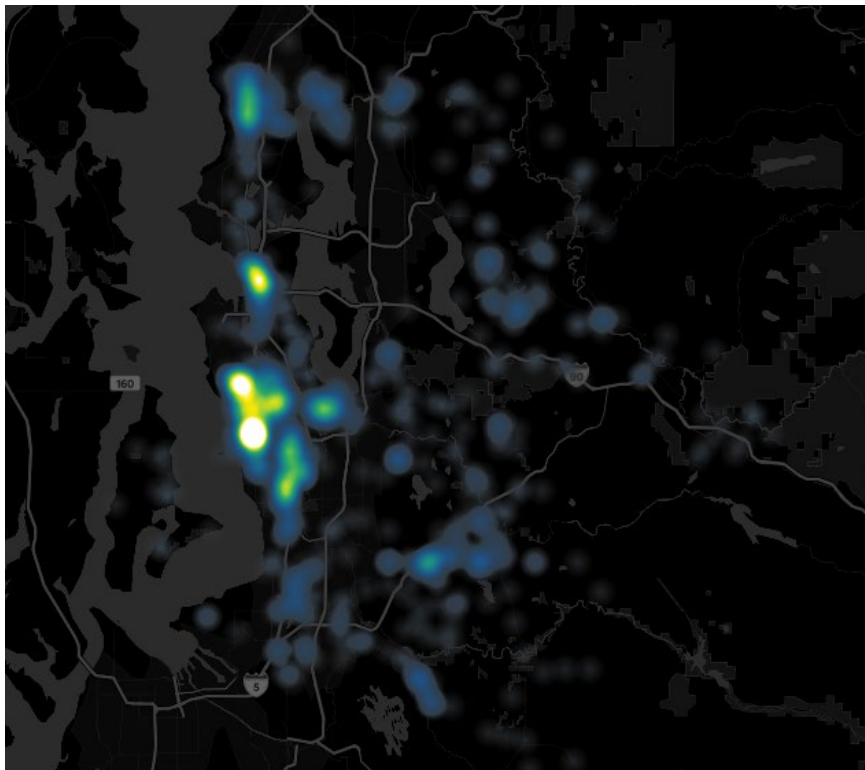
Use-of-Force Incident Locations – 2014 to 2022



Use-of-Force Heat Map – 2023



Use-of-Force Heat Map – 2014 to 2022



2) Reason for Contact

Over the last ten years, 64% of officers who used force were responding to a dispatched call for service. Twenty-five percent of officers were making an officer-initiated contact, and 11% of officers were responding to assist other officers.

Between 2018 and 2021, there has been a trend towards more officers being present on scene when force was used. In 2018, 18% of all force incidents had four or more officers on scene when force was used, and that percentage rose to 53% by 2021 before falling to 30% in 2022. In 2023, 47% of force incidents had four or more officers on scene. With more officers on scene, more officers were also involved in the use-of-force incidents. In 2018, 54% of use-of-force incidents involved only one officer using force, and this fell to 15% by 2021 before rising to 41% in 2023.

Over the last ten years, the most common original call types for force incidents were violent crimes (28%) and property crimes (27%). There were 215 incidents related to a traffic stop, 172 assault calls and 153 burglary calls.

3) Force Frequency

In 2023, there were 148 use-of-force incidents involving 185 officers who used force a total of 324 times. One officer used force 9 times. There were six officers who used force 5 or 6 times each, twenty-seven officers who used force 3 or 4 times, 41 officers who used force twice, and 110 officers who 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 2023, 7% of the Department's use-of-force incidents had low Force Justification Scores (<6). The average Force Justification Score was 12.6 on a scale of 0 to 20, which was higher than the average for prior years (10.5). All the four Graham factors were higher in 2023 than in prior years, except for resistance levels. This indicates that subjects involved in force incidents in 2023 were more likely to be involved in violent crimes, were more likely to flee, and more likely to threaten officers than subjects from prior years but were less likely to have high levels of resistance.

In 2023, there were 24 incidents that received the highest justification score of 20. These incidents involved an assault on the officer before the officer made the decision to use force.

In 2023, there were 17 officers who were involved in at least one incident with a low Force Justification Score. No officer was involved in more than one low Force Justification incident.

In 2023, the average Force Justification Score was higher for women (13.9) than men (12.2). Asian subjects had the highest average Force Justification score (18.7), and Black subjects had the lowest average score (11.4). Average Force Justification Scores were lowest for subjects over 50 (10.4) and were highest for juvenile subjects (15.6).

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, there were 24 incidents that had a high Force Factor Score (+3 or above). The most common Force Factor Score was +1 (28%), followed by 0 (25%) and +2 (21%). These numbers indicate that most officers in the department behave 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, there were 24 officers who were involved in at least one incident with a high Force Factor Score. One officer was involved in three high Force Factor incidents, and one officer was involved in two incidents.

In 2023, the average Force Factor Score was higher for women (1.0) than men (0.7). White subjects had the highest average Force Factor score (0.9), and Native American subjects had the lowest average score (-1.3). Average Force Factor scores were lowest for subjects 18 to 29 (0.6) and were highest for juvenile subjects (1.0).

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.

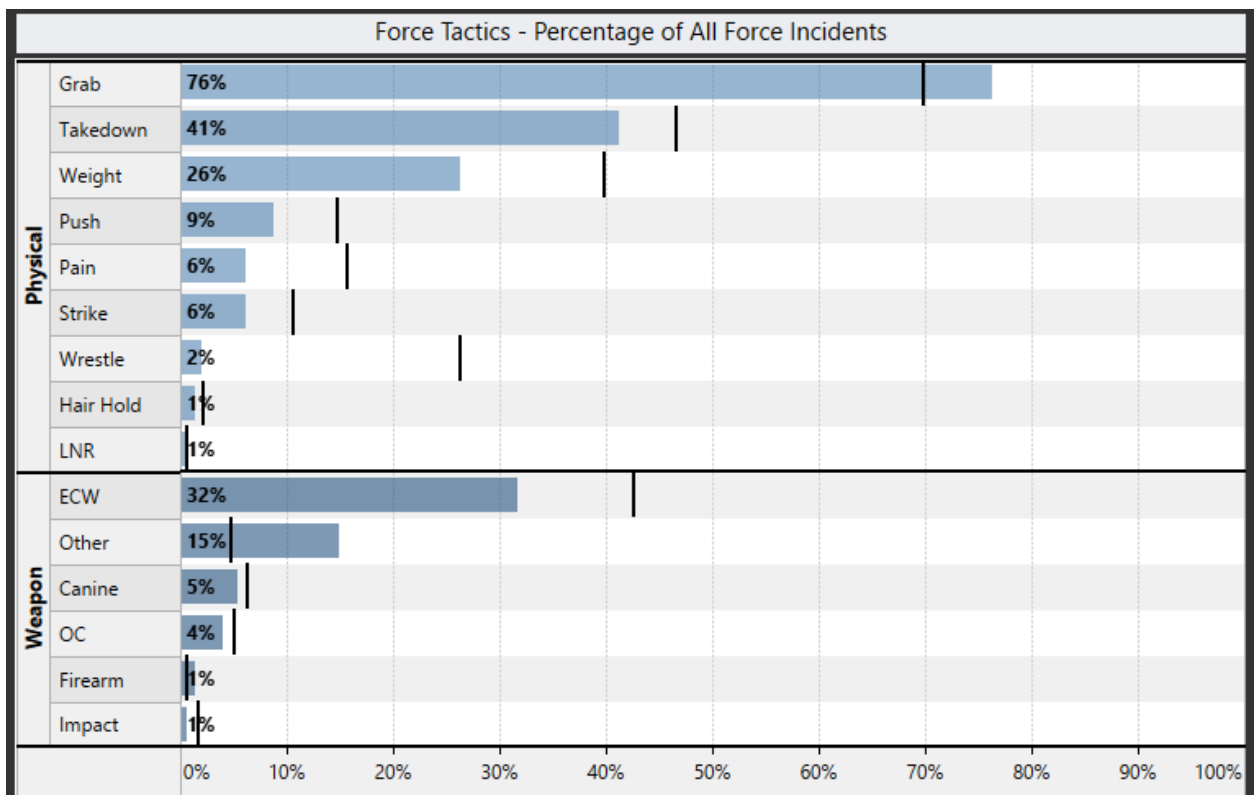
	Force Factor – 2014 to 2023		
	Low (-1 to -3)	Medium (0 to +2)	High (+3 to +5)
Subject brought under control within 1 or 2 Force Sequences	34%	23%	64%
Subject Injury Rate	65%	72%	71%
Officer Injury Rate	27%	23%	4%
Weapon Used by Officer	52%	54%	91%

6) Force Tactics

Of the 148 use-of-force incidents that occurred in 2023, 47% involved physical force only, 18% involved only the use of weapons by officers, and 35% involved both physical force and the use of a weapon.

Compared to prior years, officers were more likely to use grabbing in 2023. In 2023, officers were less likely to use Electronic Control Weapons (ECW) and were more likely to use vehicle Pursuit Intervention Technique (PIT) maneuvers than in prior years.

Force Tactics Used in 2023

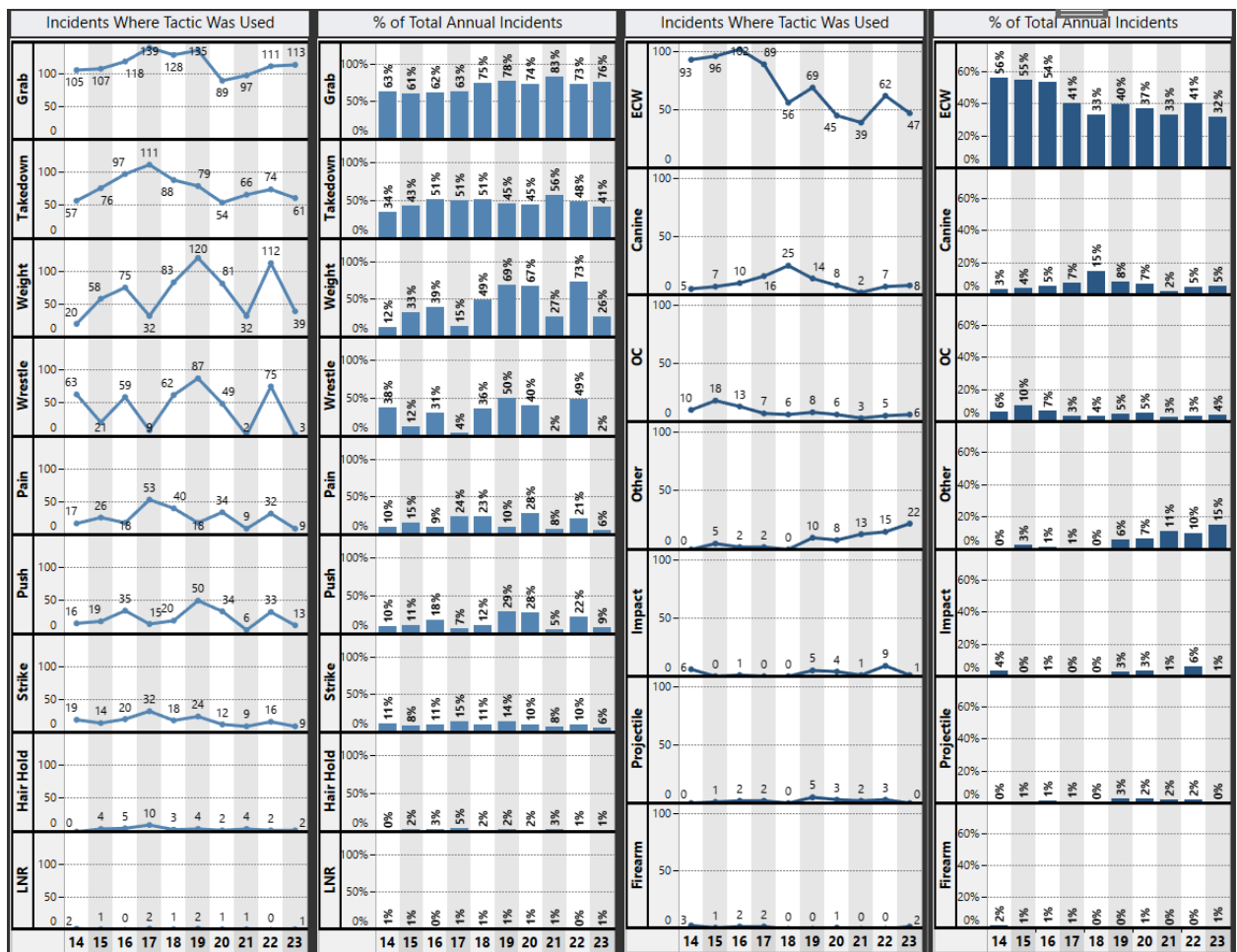


Over the last ten years, officers have used 7,363 individual physical force tactics and weapons during 1,635 incidents.

In 2021 and 2023, it appears that officers were less likely to have protracted physical struggles with subjects since wrestling, pain compliance, using weight, and pushing were rarely used. The use of physical strikes was lower in 2023 than in any prior year.

ECW use has declined from 56% in 2014 to 32% in 2023. The use of canines rose from 3% in 2014 to 15% in 2018 before falling to 1.7% in 2021. In 2023 canine use was 5% of all force incidents. OC use has fallen from a high of 10% in 2015 to 4% in 2023.

Vehicle PIT maneuvers have increased from zero in 2018 to 22 in 2023. This may be the result of increased reporting of the tactic rather than an increase in the use of the tactic.



Subjects

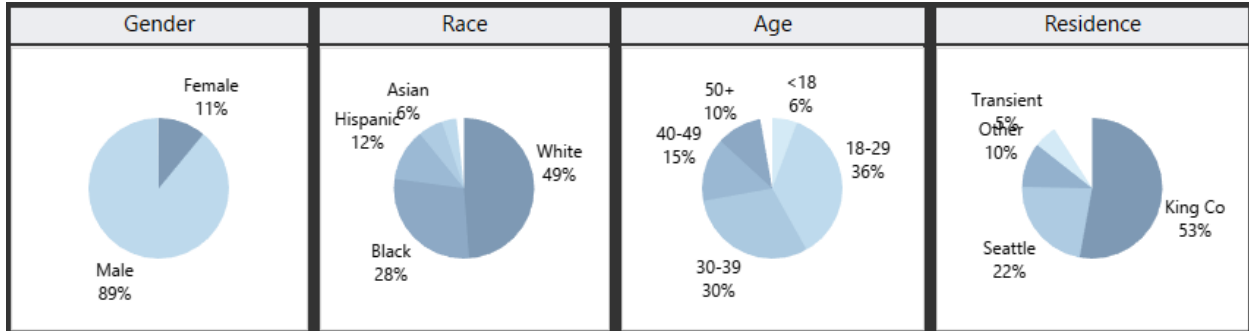
Between 2014 and 2022, there were three demographic groups (gender, race, and age) that made up 59% of all use-of-force subjects. White males between 18 and 39 made up 28% of all force subjects, Black males between 18 and 39 made up 18% of all subjects and White males over 40 made up 13% of subjects. In 2023, these three demographic groups made up 54% of use-of-force subjects.

Most Common Characteristics of Use-of-Force Subjects 2014 - 2022				
Gender	Race	Age	Number of Subjects	Percentage of Force Incidents
Male	White	18-39	419	28%
Male	Black	18-39	265	18%
Male	White	40+	198	13%
All Other Demographic Groups or Unknown			605	41%

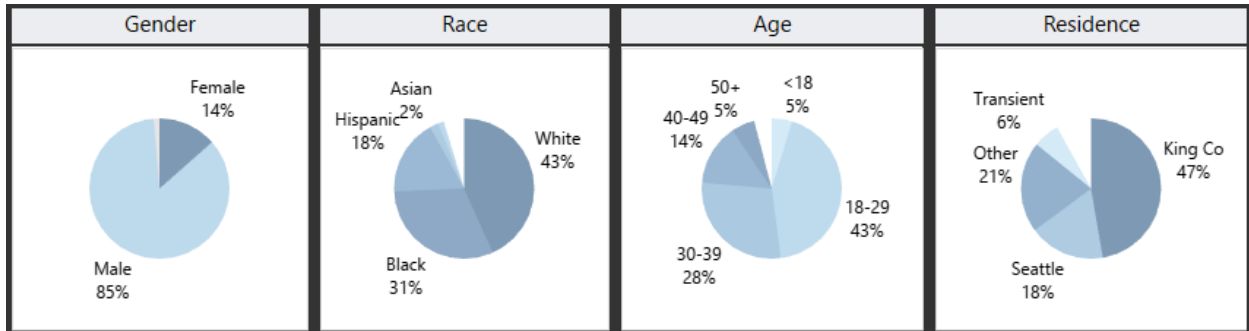
Most Common Characteristics of Use-of-Force Subjects 2023				
Gender	Race	Age	Number of Subjects	Percentage of Force Incidents
Male	White	18-39	36	24%
Male	Black	18-39	28	19%
Male	White	40+	16	11%
All Other Demographic Groups or Unknown			68	46%

In 2023, Female and Hispanic subjects, subjects between 18 and 29, and residents outside of King County were more likely to be involved in a force incident than in prior years.

Use-of-Force Subject Characteristics - 2014 to 2022

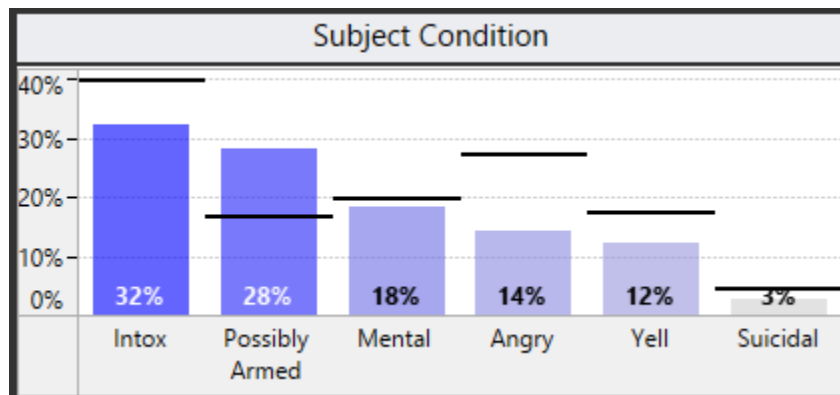


Use-of-Force Subject Characteristics - 2023



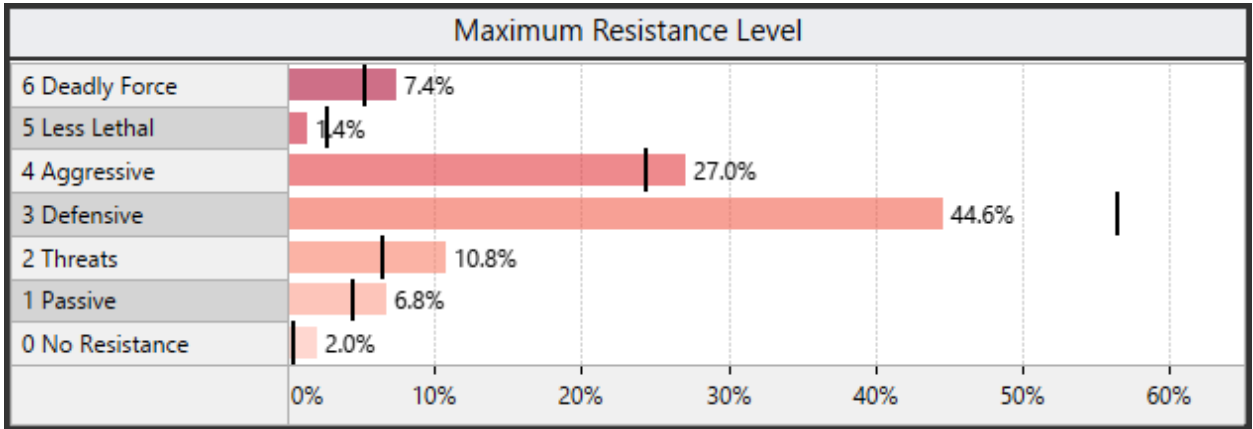
Compared to prior years, use-of-force subjects in 2023 were more likely to be possibly armed and were less likely to be under the influence of alcohol or drugs or angry.

Subject Condition in 2023



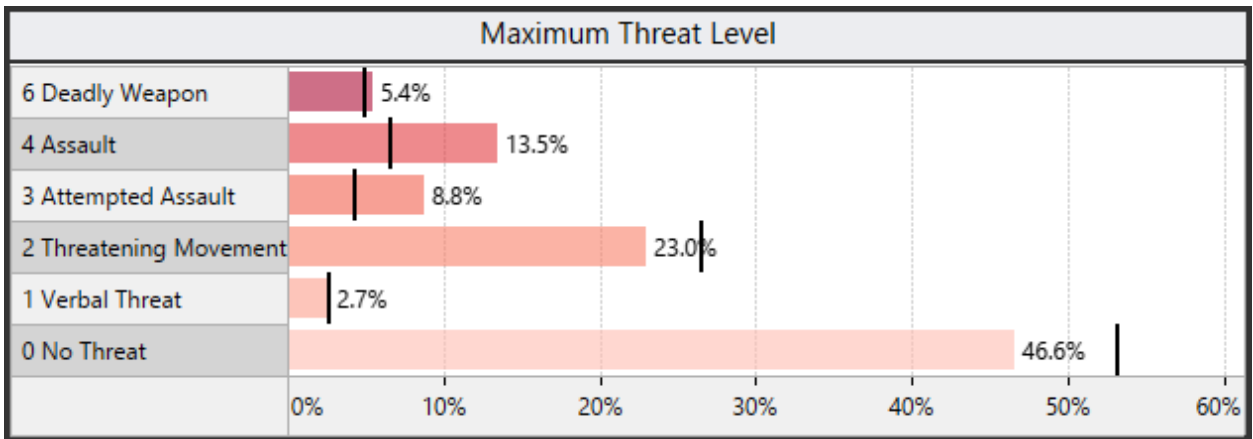
In 2023, officers were more likely to face resistance with deadly force, aggressive physical resistance, or threats than in prior years, and were less likely to face defensive resistance.

Subject Maximum Resistance Level - 2023



In 2023, subjects were more likely to attempt to assault or assault officers (22%) than in prior years (10%).

Subject Maximum Threat Level - 2023



7) Injuries

In 2023, there were 43 officers who were injured during 324 uses of force. Eight officers were injured twice during the year. Thirteen percent of force applications by officers resulted in an injury to the officer who used force. Ninety-three percent of officer injuries were minor. Twelve officers complained of pain only, 15 officers received a bruise or scrape, and 13 officers had a minor cut. One officer was contaminated with bodily fluid, one officer suffered a fracture or broken tooth, and one officer received a gunshot wound. Sixty percent of injured officers received medical treatment from EMTs or at a hospital.

In 2023, 111 subjects who had force used against them were injured (75% of all incidents). Of the subjects who were injured, 88% of the injuries were minor (complaint of pain, ECW probe, bruise/scrape, or minor cut). Seven subjects were bitten by canines, and two subjects had a fracture or broken tooth. Four subjects had chemical irritation from OC.

Seventy-eight percent of subjects who were injured or complained of injury received medical treatment. EMTs treated 56% of injured subjects and 22% were treated at a hospital.

8) Trends

Over the 10-year period from 2014 to 2023, the following force trends were observed:

- Since 2020, the average Force Justification Score has risen from 10.1 to 12.6. The year with the lowest average Force Justification Score was 2015 (8.9).
- The average annual Force Factor Scores fell from 1.2 in 2014 to 0.5 in 2020 before rising to 0.8 in 2023.
- The percentage of Female subjects averaged 12% over the last ten years, but in 2021 it jumped to 17%. In 2023, Females made up 14% of use-of-force subjects.
- The percentage of most racial groups remained stable during the last ten years, but the percentage of Hispanic subjects rose from 1.7% in 2015 to 18.4% in 2023.
- The percentage of juvenile subjects reached a high in 2018 at 8% before falling to 1% in 2021. In 2023, 5% of use-of-force incidents involved juveniles.
- Since 2017, the percentage of subjects who were possibly armed rose from 8% to 28% in 2023.
- More subjects possessed firearms in 2023 (11%) than in any prior year.
- Between 2022 and 2023, use-of-force incidents in Precinct 4 fell from 78 to 68, while incidents in Precinct 5 increased from 7 to 25.