



**Missouri State Highway Patrol  
Research and Development Division**



# **Analysis of 2023 USE OF FORCE**

## **INFORMATION BRIEF**

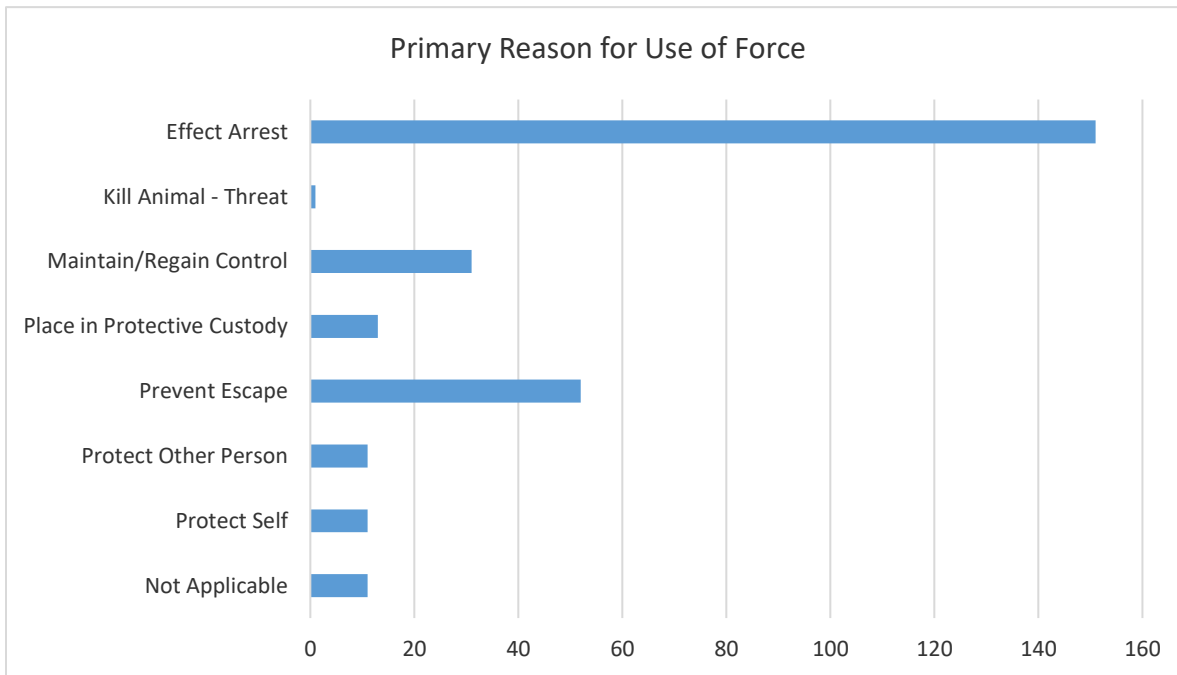
## OVERVIEW

Missouri State Highway Patrol (MSHP) use of force reporting occurs within the Automated Field Reporting (AFR) system, which ultimately culminates with the data represented herein. The Research and Development Division (RDD) analyzed information contained within use of force reports for calendar year 2023 and submits findings of that analysis in accordance with XVI-C of General Order 01-04. In 2023, MSHP members responded to 349,132 calls for service, conducted 342,786 enforcement contacts, and completed 326 use of force reports. Of the 691,918 total contacts with the public, excluding tire deflation deployments, MSHP members were involved in 196 use of force incidents. Thus, use of force reports constitutes 0.03% of MSHP interactions with the public. The percentages shown on some of the following charts may not always total 100% due to statistical rounding. Trend comparisons are generally noted for the years 2019 through 2023.

## USE OF FORCE - NON-GAMING OFFICERS

MSHP members not assigned to the Gaming Division submitted a total of 281 use of force reports in 2023, which reflects an 8.1% increase in use of force report submissions from the previous year. Of the 281 reports submitted, there were 245 use of force incidents, indicating multiple officers used force during the same incident. The 2023 numbers represented herein, do not reflect occurrences involving humane killing of an animal or the anticipated use of force through the display of Electronic Control Weapons (ECWs). The primary reasons for the use of force are listed below.

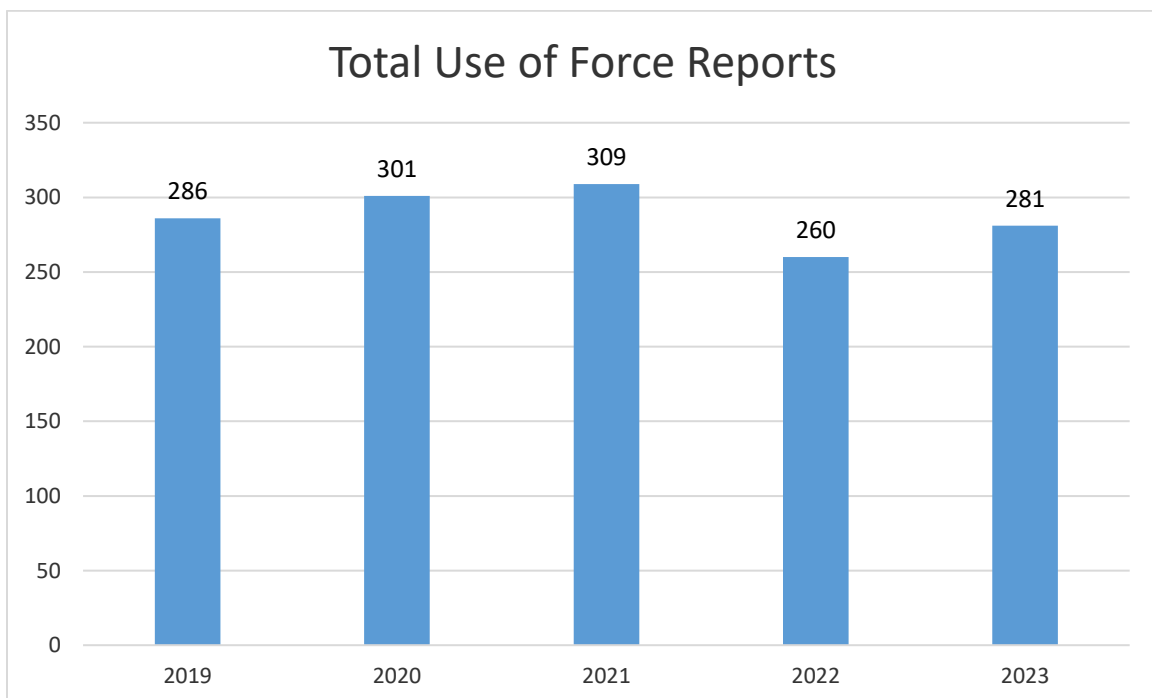
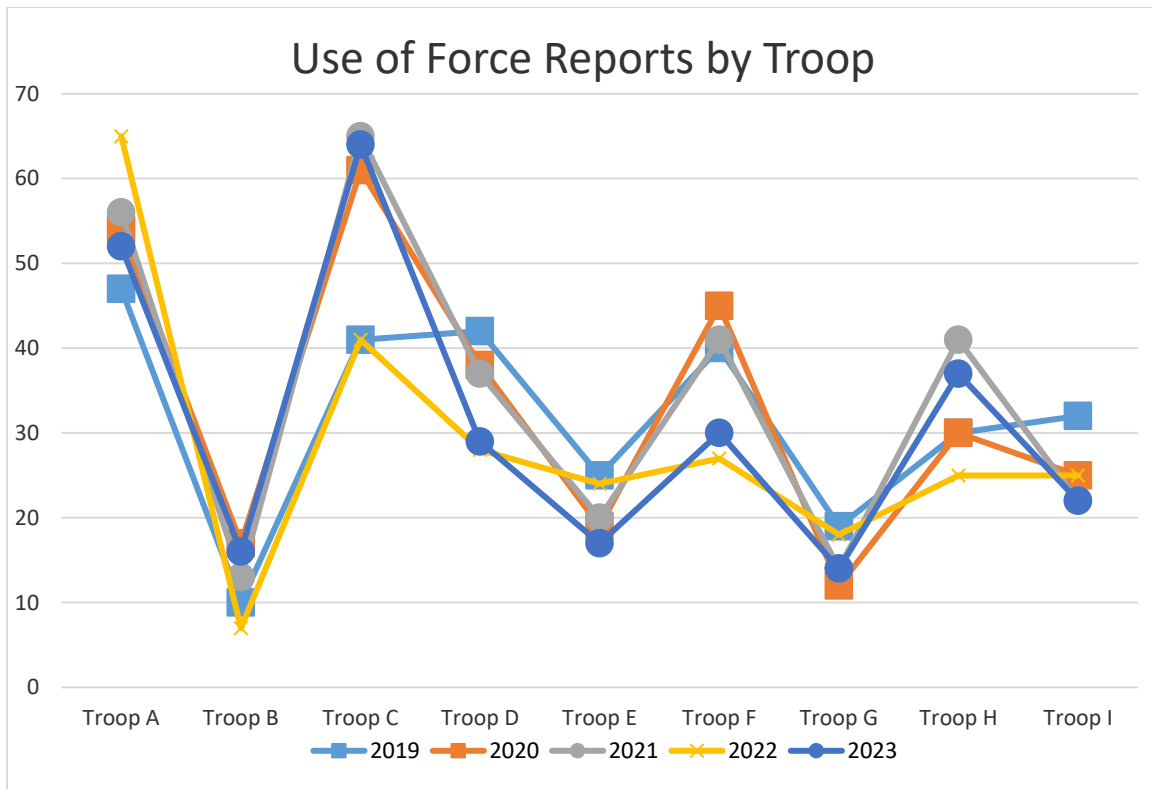
Primary Reason for Use of Force	Number of Reports
Effect Arrest	151
Kill Animal - Threat	1
Maintain/Regain Control	31
Place in Protective Custody	13
Prevent Escape	52
Protect Other Person	11
Protect Self	11
Not Applicable	11
<b>TOTAL</b>	<b>281</b>



The following table depicts use of force reports per location (troops) for calendar years 2019 through 2023. The totals include tire deflation device deployments and vehicular use of force occurrences.

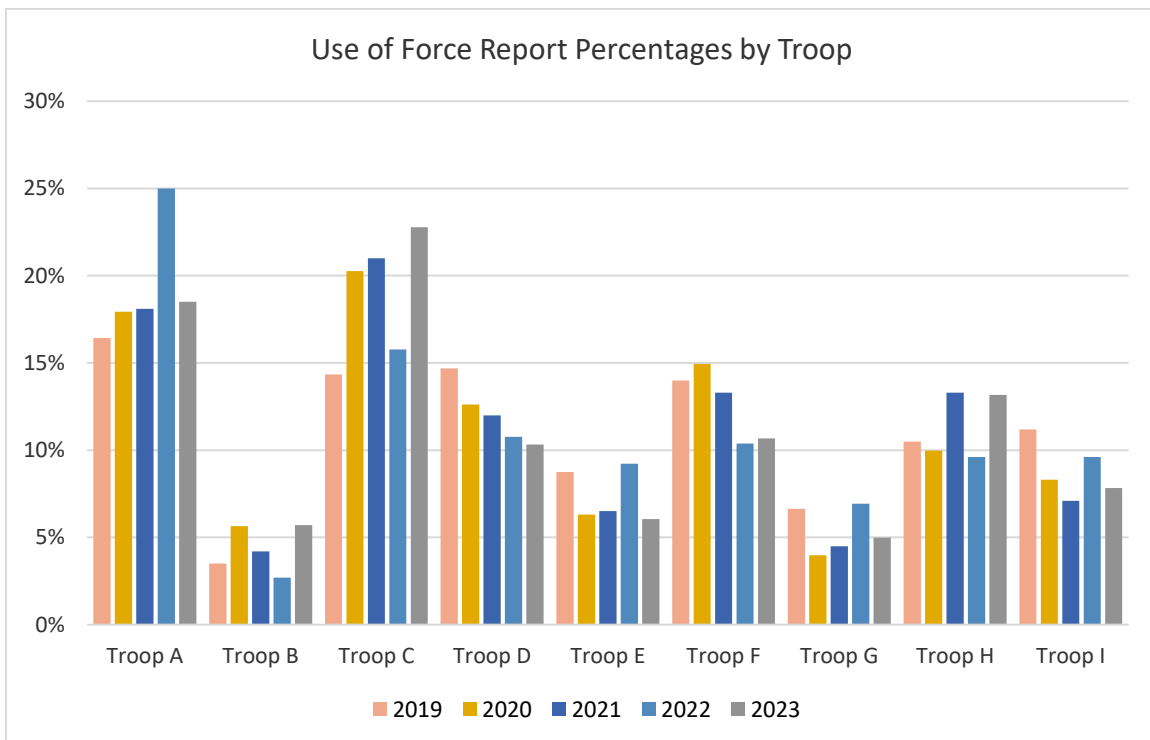
Use of Force Reports by Troop					
	2019	2020	2021	2022	2023
Troop A	47	54	56	65	52
Troop B	10	17	13	7	16
Troop C	41	61	65	41	64
Troop D	42	38	37	28	29
Troop E	25	19	20	24	17
Troop F	40	45	41	27	30
Troop G	19	12	14	18	14
Troop H	30	30	41	25	37
Troop I	32	25	22	25	22
<b>TOTAL</b>	<b>286</b>	<b>301</b>	<b>309</b>	<b>260</b>	<b>281</b>

The accompanying graphs provide representation of yearly statewide use of force occurrences.



The table and accompanying chart on the next page illustrate the percentage of use of force reports within each troop for the period 2019 through 2023.

Use of Force Report Percentages by Troop					
Chart 4	2019	2020	2021	2022	2023
Troop A	16.4%	17.4%	18.1%	25.0%	18.5%
Troop B	3.5%	5.7%	4.2%	2.7%	5.7%
Troop C	14.3%	20.4%	21.0%	15.8%	22.8%
Troop D	14.7%	12.7%	12.0%	10.8%	10.3%
Troop E	8.7%	6.4%	6.5%	9.2%	6.0%
Troop F	14.0%	15.1%	13.3%	10.4%	10.7%
Troop G	6.6%	4.0%	4.5%	6.9%	5.0%
Troop H	10.5%	10.0%	13.3%	9.6%	13.2%
Troop I	11.2%	8.4%	7.1%	9.6%	7.8%



## USE OF FORCE - EFFECTIVENESS

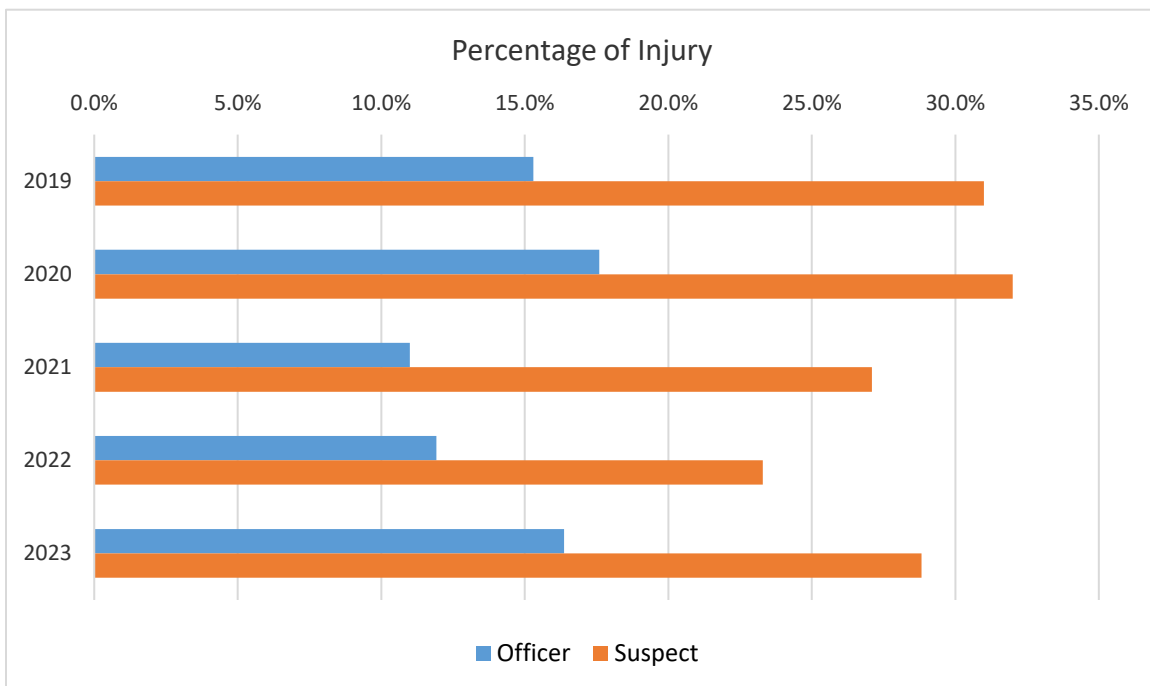
The effectiveness of the force employed by Patrol officers to arrest suspects averaged 92.2% over the past five years. The chart below illustrates the percentage of individuals successfully taken into custody following incidents where force was used to apprehend resisting suspects. The effectiveness of force methods employed by officers in 2023 was 91.7%.

Effectiveness of Force Used					
2019	2020	2021	2022	2023	Average
93.4%	91.7%	92.3%	91.8%	91.7%	92.2%

## USE OF FORCE – OFFICER AND SUSPECT INJURY RATES

Roughly twelve percent (16.4%) of Patrol officers using force were injured during use of force incidents in 2023. No Patrol officer was killed in 2023 because of force used by an assailant. The suspect injury rate in 2023 was 28.8% with a five-year average of 28.4% injury rate. In 2023, no suspects were killed during use of force incidents.

Percentages of Injury During Use of Force Incidents						
	2019	2020	2021	2022	2023	Average
Officer	15.3%	17.6%	11.0%	11.9%	16.4%*	14.4%
Suspect	31.0%	32.0%	27.1%	23.3%	28.8%	28.4%



\*Note: This number was originally reported to be 12.1%, but during our review process we noticed a typo in our calculation where the denominator was supposed to be 281 (the number of officers involved in use of force incidents), but it was accidentally typed as 381.

## OTHER FACTORS

### ***BODY ARMOR***

General Order 41-02 mandates the wearing of ballistic vests by uniformed officers assigned to enforcement activities. In 2023, 32 officers reported that wearing a ballistic vest did aid in the prevention or reduction of injury during use of force incidents.

### ***MEMBER CHARACTERISTICS***

The average age of officers involved in use of force incidents during 2023 was 33.5 years old, while the average years of service was 8.3 years. These numbers have remained consistent over the past five years.

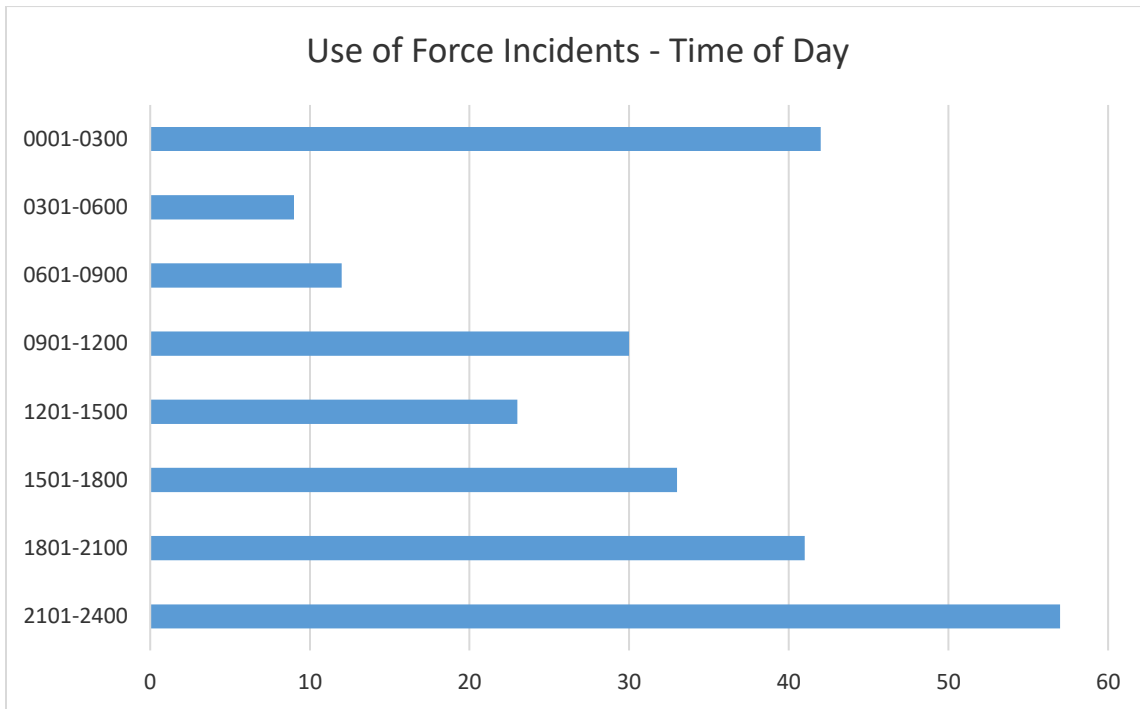
### ***INCIDENTS BY TIME OF DAY, DAY OF WEEK, MONTH***

The following sections analyze use of force incidents by time of day, day of week, and month of the year. In two 2023 incidents, MSHP members indicated different times on their reports. Thus, the total number of incidents in the following charts may be greater than the 245 unique incidents that occurred in 2023.

### ***INCIDENTS BY TIME OF DAY***

During 2023, use of force incidents were most likely to occur during the 2101 to 2400 time-period. The least amount of force incidents occurred during the 0301 to 0600 time-period.

Use of Force Incidents – Time of Day*								
Time of Day	0001-0300	0301-0600	0601-0900	0901-1200	1201-1500	1501-1800	1801-2100	2101-2400
2023	42	9	12	30	23	33	41	57
2022	43	6	11	27	39	32	35	46
2021	50	14	17	25	30	31	46	57
2020	51	9	16	26	30	35	53	46
2019	41	9	11	18	31	41	40	64

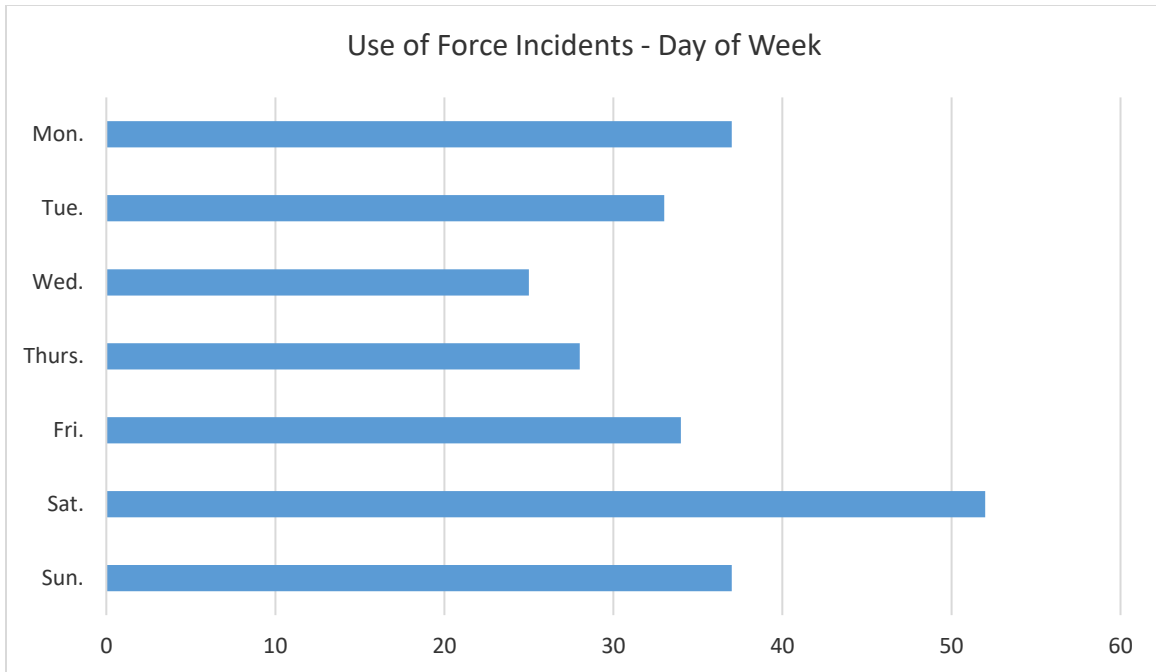


### ***INCIDENTS BY DAY OF WEEK***

Analysis of 2023 use of force incidents, which occurred throughout the week revealed most incidents took place on Saturdays. The least amount of force incidents occurred on Wednesdays.

Use of Force Incidents – Day of Week							
Day of Week	Mon.	Tue.	Wed.	Thurs.	Fri.	Sat.	Sun.
2023	37	33	25	28	34	52	37
2022	31	23	26	31	36	50	41
2021	39	38	28	35	46	40	43
2020	46	33	39	35	36	41	36
2019	26	37	25	33	36	56	42

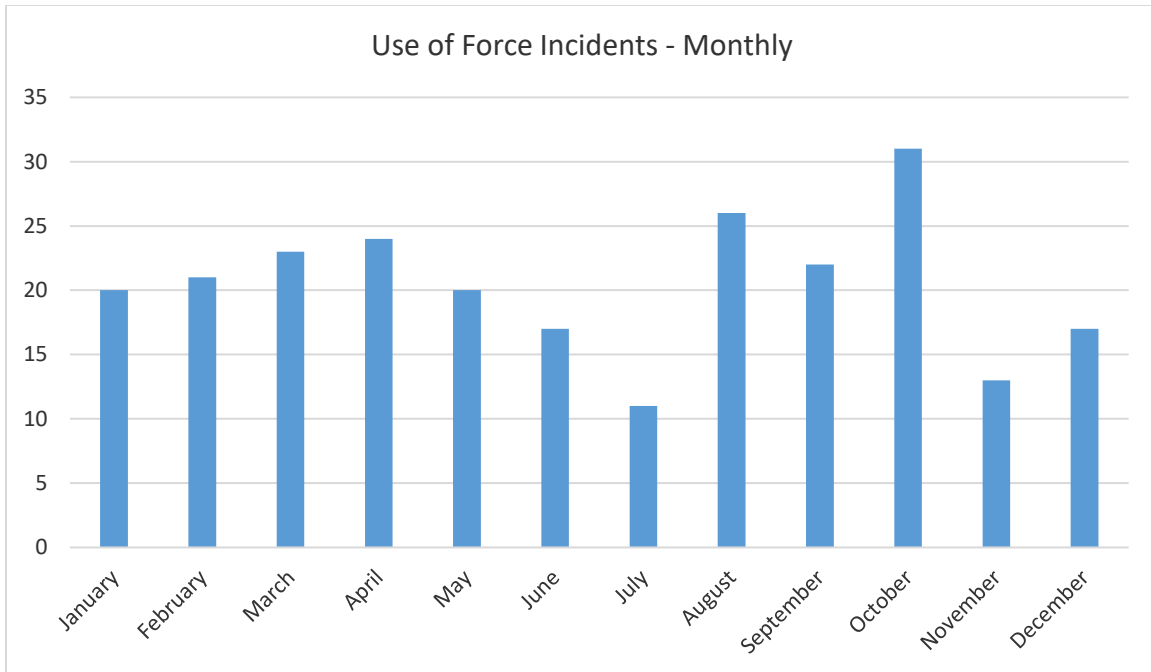




### ***INCIDENTS BY MONTH***

Analysis of 2023 use of force incidents reported by month did not reveal a seasonal trend. As the table below shows, October (31) and August (26) had the highest number of incidents. July (11) and November (13) with the fewest incidents.

Use of Force Incidents – Monthly					
Month	2019	2020	2021	2022	2023
January	16	24	26	18	20
February	25	16	23	13	21
March	22	26	32	26	23
April	24	20	24	21	24
May	17	24	26	25	20
June	13	19	16	20	17
July	28	28	19	22	11
August	22	28	27	23	26
September	18	21	22	11	22
October	24	16	17	15	31
November	19	23	18	21	13
December	27	16	18	23	17

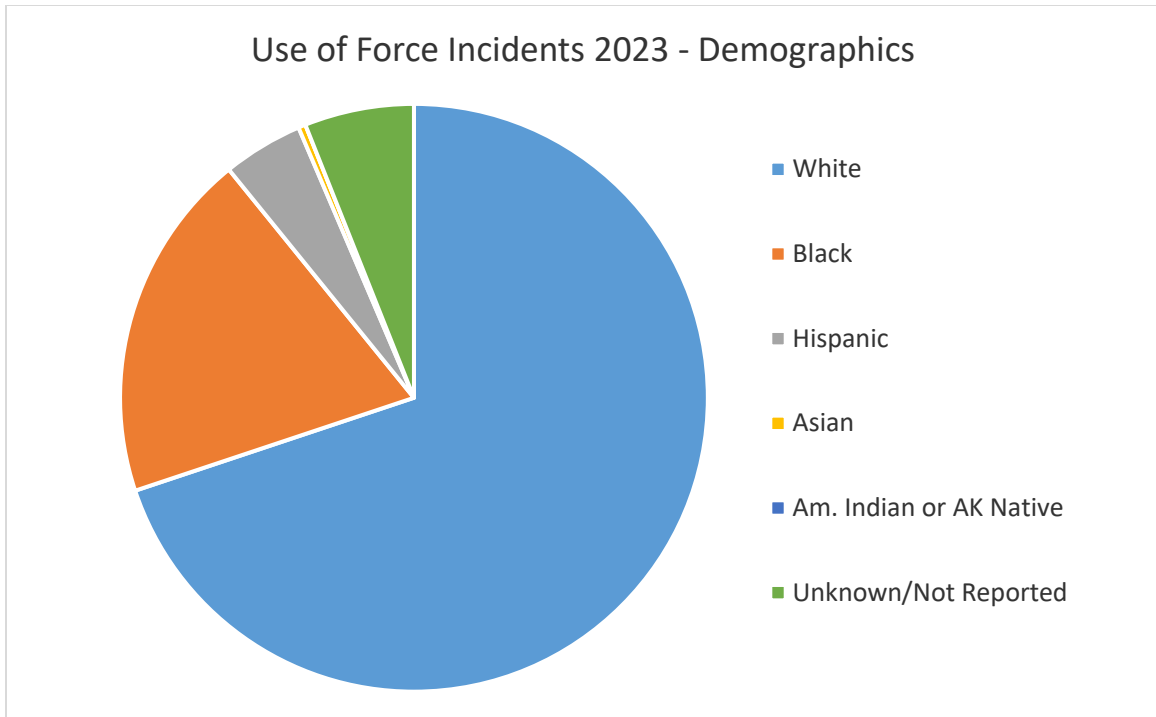


## ACTIVITIES AND TRENDS

### DEMOGRAPHICS

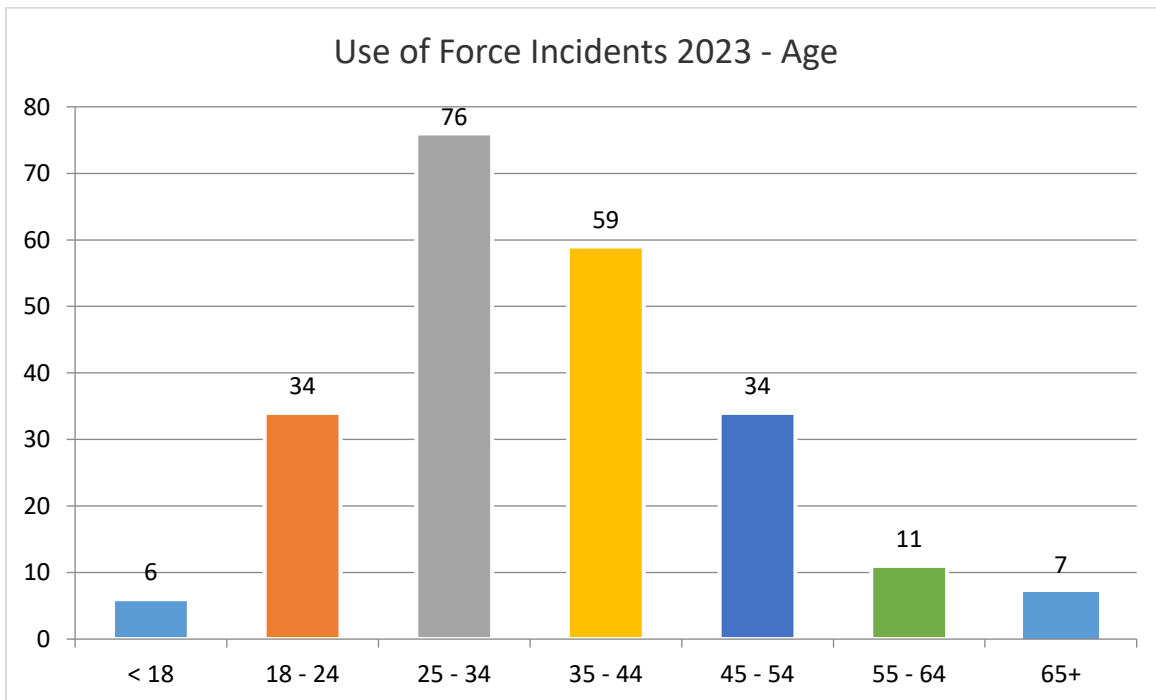
MSHP use of force suspects for this reporting period were analyzed to determine demographic trends. The below table and accompanying graphs on the next few pages illustrate combined annual demographic comparisons by race, age, and gender for applicable agency use of force incidents reported during 2023. The statewide demographics were taken from the July 1, 2022, population estimates from the U.S. Census Bureau.

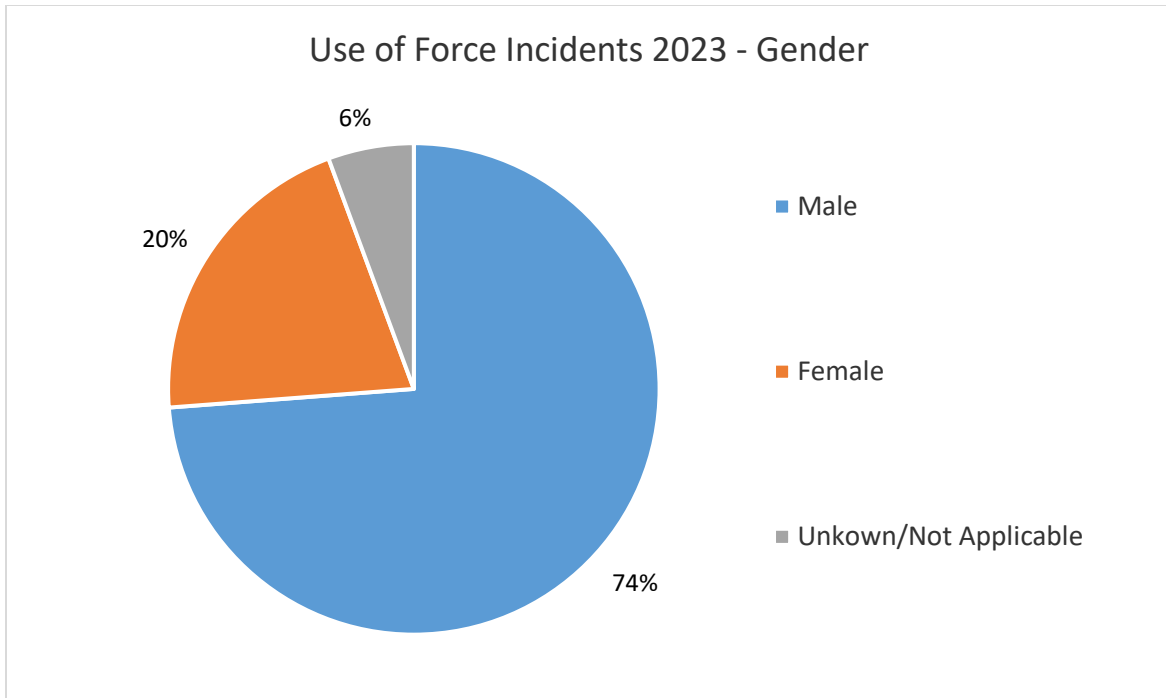
Use of Force Suspects – Demographics			
Race Category	Suspects	Percentage	Statewide Demographics
White	173	69.8%	79.5%
Black	48	19.4%	10.8%
Hispanic	11	4.4%	3.9%
Asian	1	0.4%	2.1%
Am. Indian or AK Native	0	0.0%	0.3%
Unknown/Not Reported	15	6.0%	--



#### **AGE AND GENDER**

In 2023 there were 21 unknown ages and 14 unknown/not applicable genders, this is largely because MSHP considers tire deflation device deployments as a use of force and not every deployment is successful or results in an arrest.

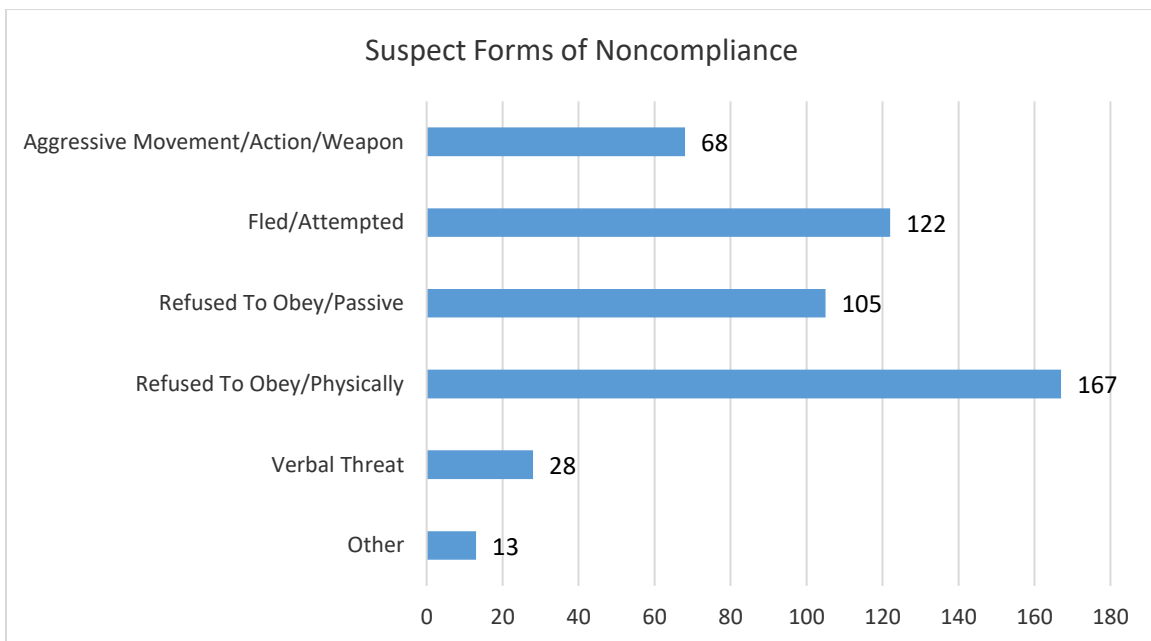




\*Age and gender information have been added after the initial publishing of this report in order to fully comply with CALEA standards.

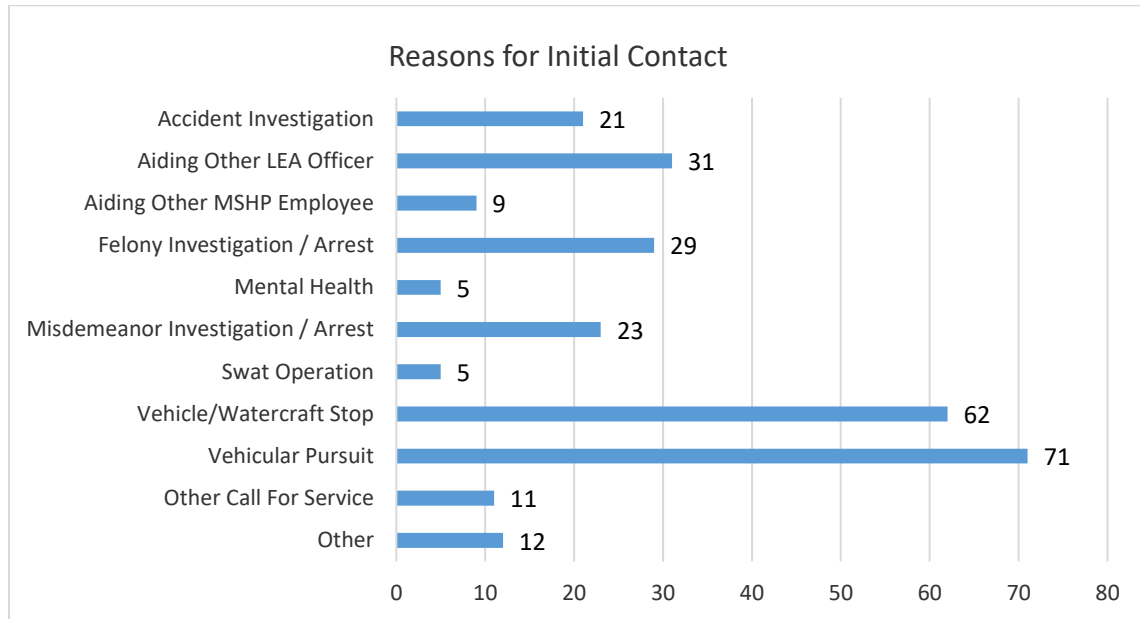
### ***SUSPECT NONCOMPLIANCE***

The 281 use of force reports by road officers included 503 collective forms of resistance by suspects. It is important to note officers can indicate multiple forms of resistance for each suspect involved in a use of force incident.



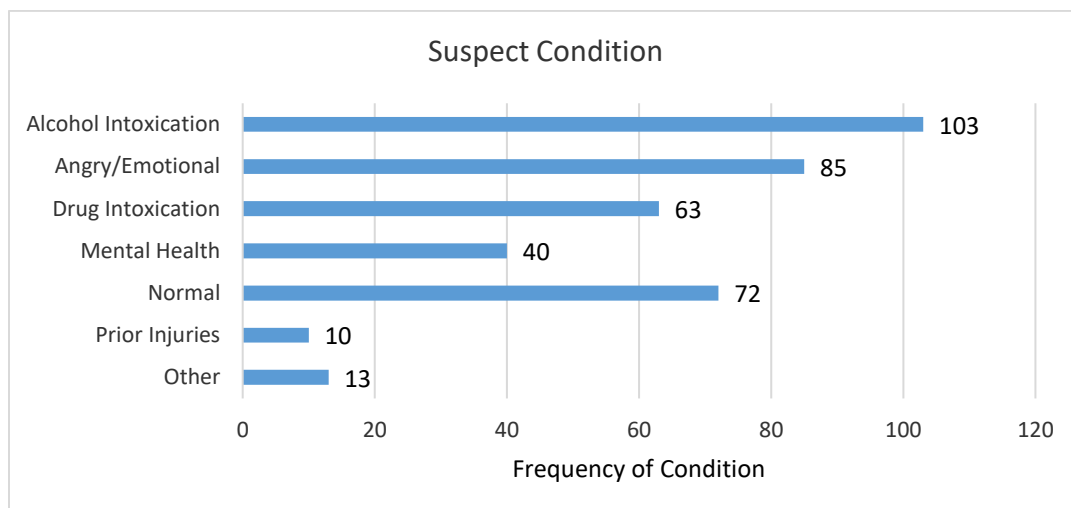
## REASONS FOR INITIAL CONTACT

During 2023, vehicular pursuits were a leading reason for initial contact when a use of force incident occurred (25.4%) coupled with vehicle stops (22.2%).



## SUSPECT CHARACTERISTICS AND CONDITIONS

For 2023, the average reported height and weight of suspects was 68.9 inches and 178.0 pounds. Force was used against two juveniles in 2023 (reflecting 0.9% of all use of force incidents). The 281 use of force reports by road officers included 386 collective conditions exhibited by suspects. It is important to note that suspects may exhibit multiple conditions.

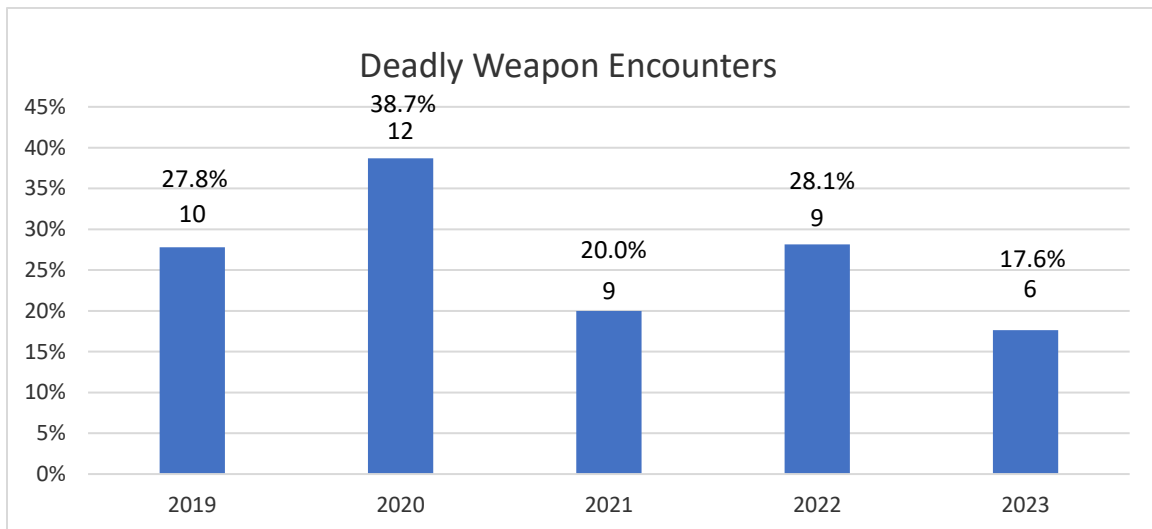


Multiple suspects were encountered in 8.5% of all force encounters occurring in 2023.

### ***SUSPECT WEAPON USAGE***

Consistent with previous years, most officers were confronted by unarmed suspects. Suspects applied one or multiple types of force against officers in 84 incidents during 2023. Suspects used their hands and feet 67.2% of the time and their knees/elbows/body 11.5% of the time.

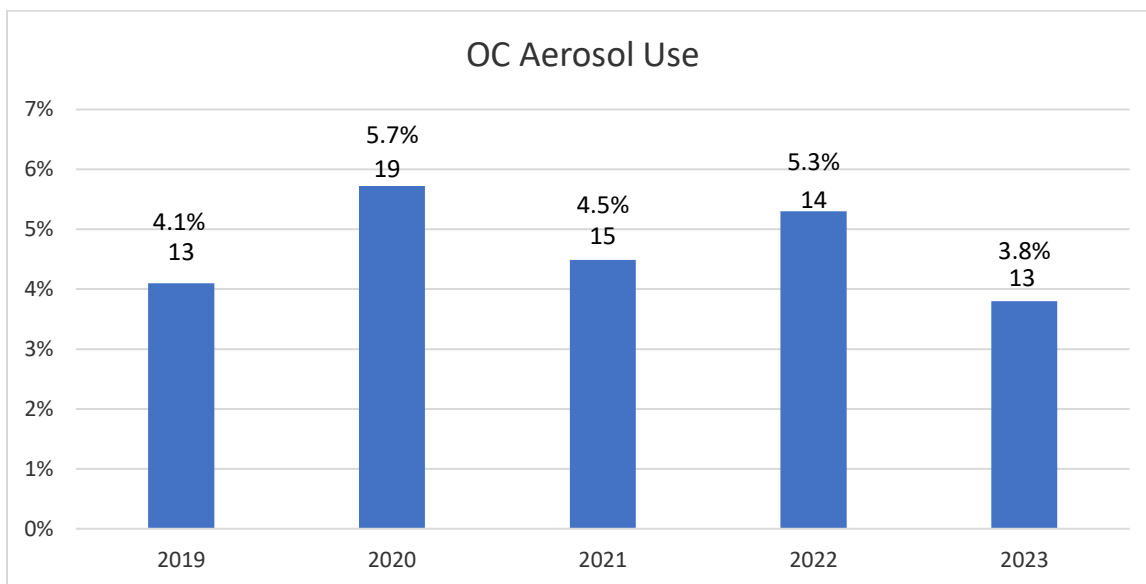
During 2023, there were nine motor vehicle incidents (6.9%) used as a weapon by suspects. In addition, in 2023, 6 of the 34 suspects (17.6%) who possessed edged weapons or firearms used them as a weapon. The chart below illustrates deadly weapon use for the past five years.

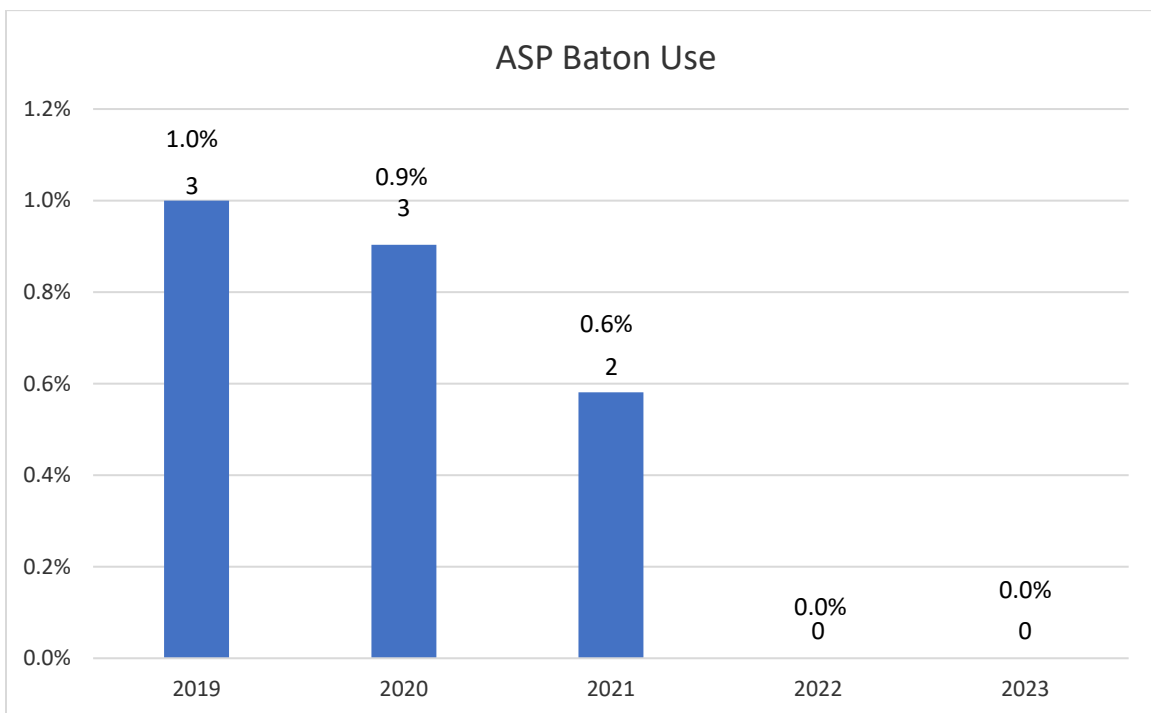
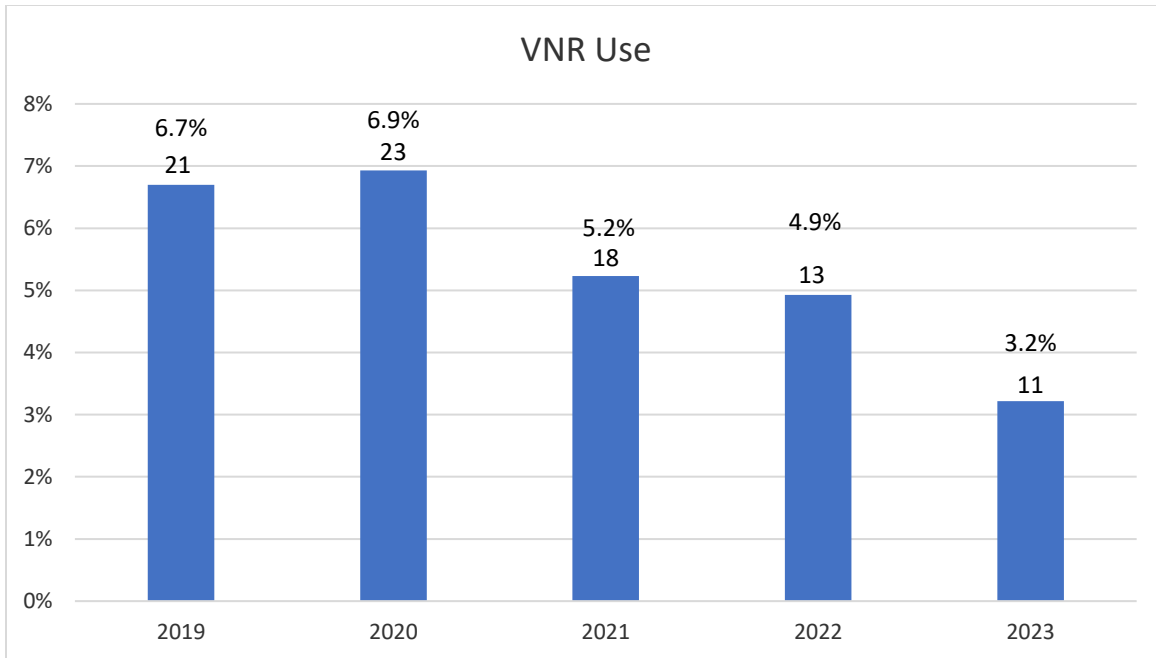


### **METHOD OF FORCE USED BY MSHP OFFICERS**

The most common force application used by officers during 2023 was bodily force, primarily through the process of grasping, wrestling, or pushing a suspect with their hands, feet, knee, elbow, and/or body; accounting for 57.9% of the use of force methods reported. Officers also used a control hold in 20.2% of the use of force methods reported, and pain-compliance holds in 3.5% of 2023 use of force methods. It is important to note officers can select more than one use of force method when reporting occurrences.

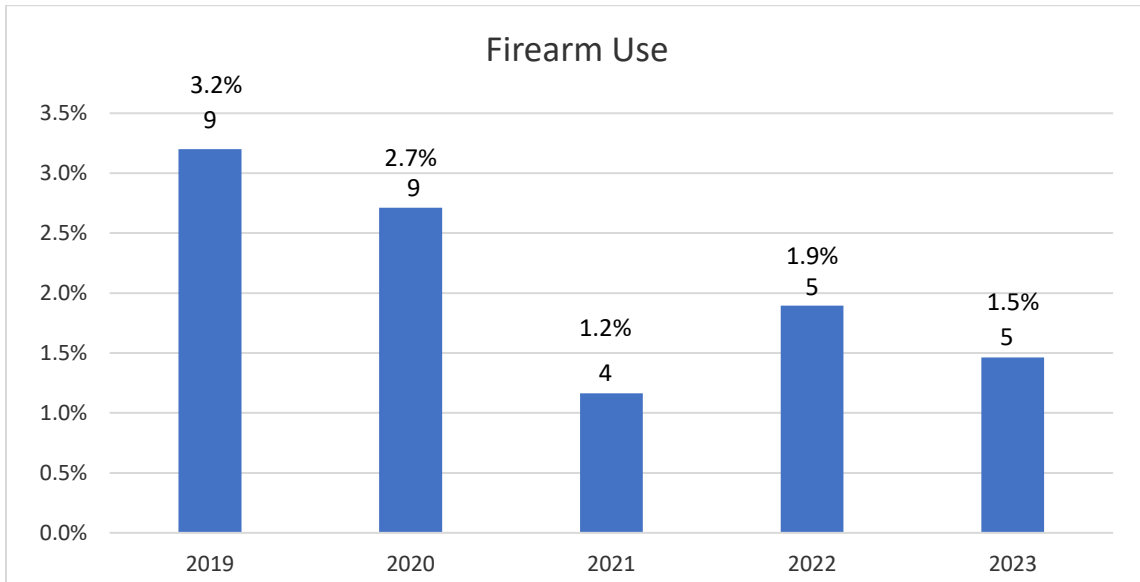
Use of oleoresin capicum (OC) aerosol during 2023 accounted for 3.8% of use of force methods. The vascular neck restraint was used in 3.2% of all use of force methods during 2023. Finally, the ASP baton was not used at all as a force method in 2023.



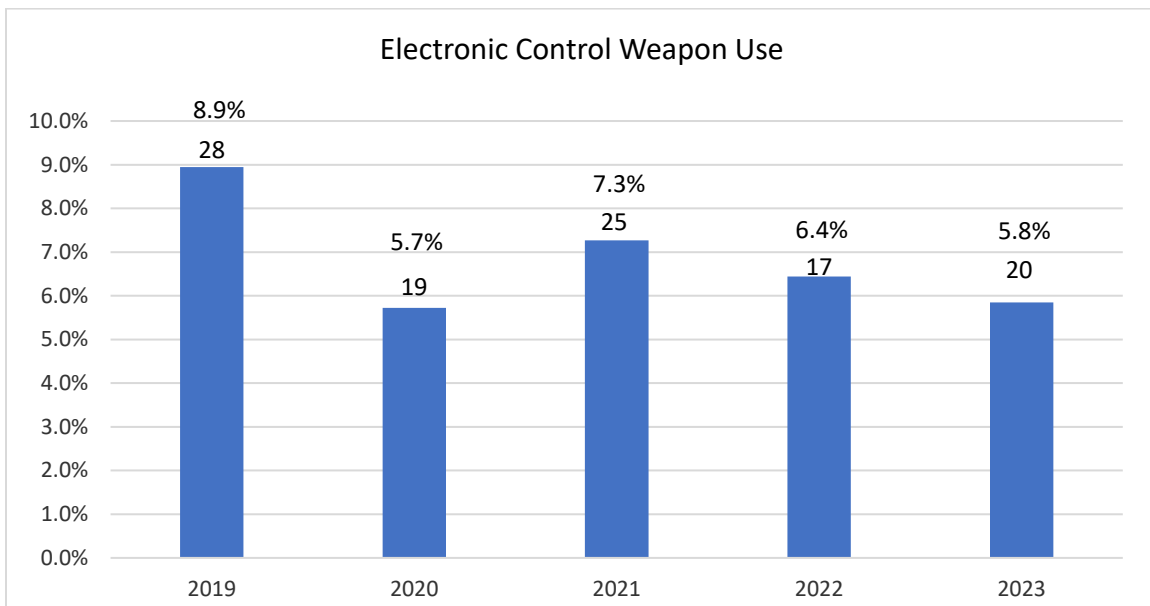




Officers used their firearms against suspects five times during 2023. The graph below depicts firearm discharges as a percentage of methods of force used against offenders by MSHP officers.



In 2023 officers used their Electronic Control Weapon (ECW) 20 times representing 5.8% of all use of force methods applied. The use of ECWs was effective 55% of the time in subduing the suspect.

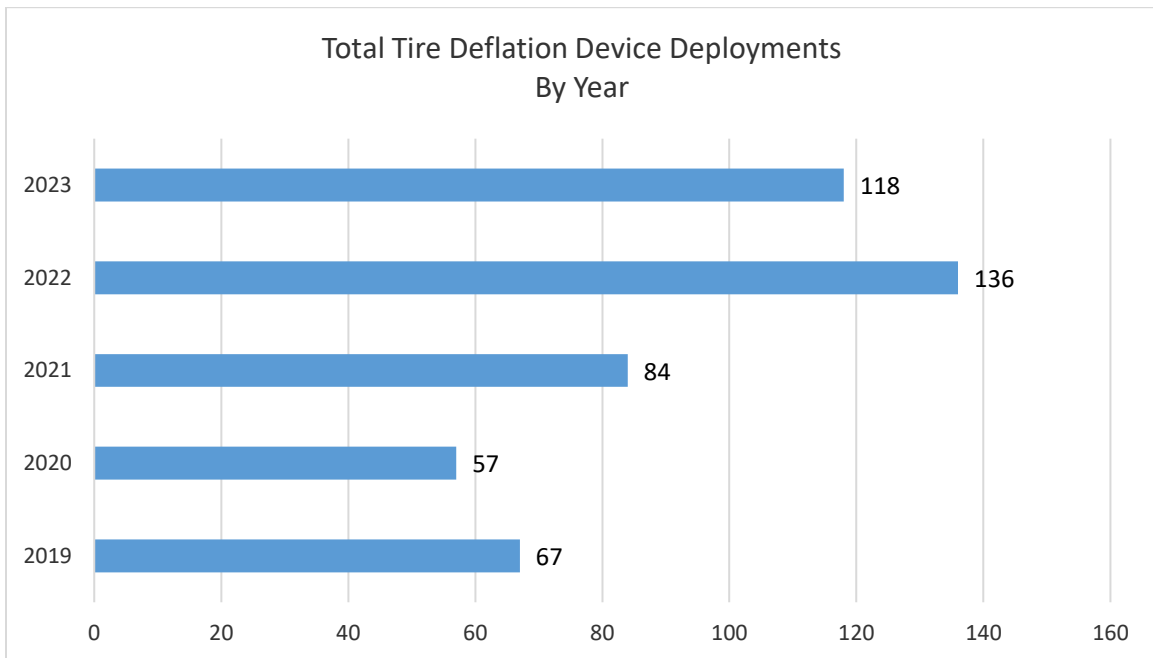
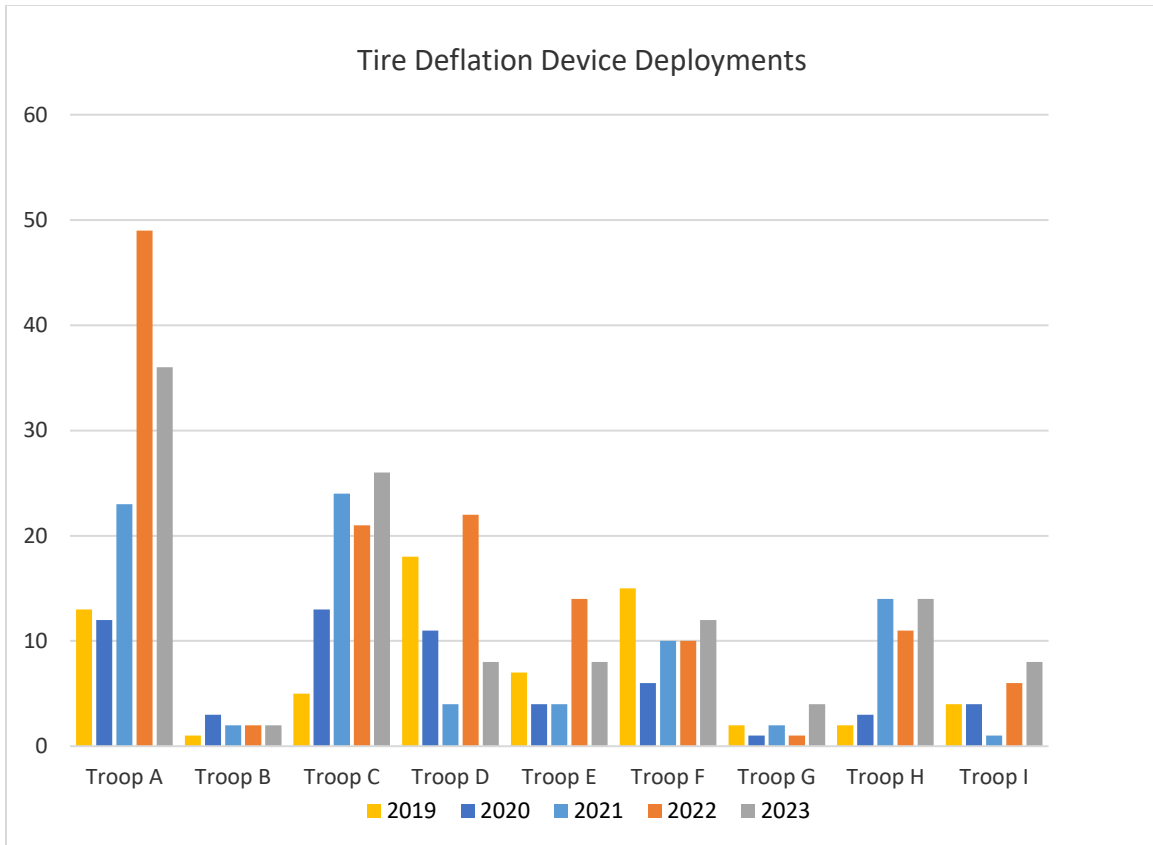


The use of force by vehicle category is utilized when a suspect vehicle is intentionally rammed or is forced to collide with a Patrol vehicle during a rolling roadblock maneuver. There were four incidents of vehicle force reported in 2023.

Use of force reports were used to document tire deflation device deployments utilized for stopping vehicles pursued by both MSHP officers and by officers from other agencies. The following table illustrates the number of tire deflation device deployments occurring during use of force incidents within each troop for the past five years. The accompanying chart and bar graphs on the next page illustrate statewide tire deflation device deployments for the same period. Please refer to the *Analysis of 2023 Pursuits* publication for information regarding tire deflation device deployments occurring during pursuits.

Tire Deflation Device Deployments					
	2019	2020	2021	2022	2023
Troop A	13	12	23	49	36
Troop B	1	3	2	2	2
Troop C	5	13	24	21	26
Troop D	18	11	4	22	8
Troop E	7	4	4	14	8
Troop F	15	6	10	10	12
Troop G	2	1	2	1	4
Troop H	2	3	14	11	14
Troop I	4	4	1	6	8
<b>TOTAL</b>	<b>67</b>	<b>57</b>	<b>84</b>	<b>136</b>	<b>118</b>

\*Beginning in 2022 we started recording ALL Tire Deflation Deployments as Use of Force deployments regardless of the report type



## USE OF FORCE - GAMING DIVISION

During 2023 members assigned to the Gaming Division completed 45 use of force reports for 37 unique incidents, an 18.2% decrease from the previous year. In 2023, three ECW deployments occurred in gaming venues.

Gaming – Use of Force Reports					
	2019	2020	2021	2022	2023
ECW Deployments	3	0	3	1	3
Gaming Overall Reports	56	34	44	55	45

