



# 2023

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CPS RACE DATA ANALYSIS  
OF USE OF FORCE SUBJECTS

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- Use of Force Subjects
  - Methods of Force
  - Arrested subjects

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## Executive Summary

This report provides a descriptive analysis of the demographic data collected during 2023 for various forms of contact between the CPS officers and members of the public. The concepts of Disproportionality – *state of being either under-represented or over-represented* – and Disparity – *state of being unequal* – are applied.

Officers are not mandated to enter race information into reports; however, many have entered that information based on their perception. In 2019, the CPS moved to a direct data entry (DDE) by officers, and this resulted in a substantial increase in offender and victim race-data collection. Over the past five years (2019–2023), there has been no change in the completeness of data being collected. To address the missing data, particularly with Officer Contacts, a data-mining solution was developed. Many individuals have repeated interactions with the CPS over a period of time, and this data mining solution leverages that additional information.

Some charts and tables in this report will depict a group labeled as Racially Ambiguous. As a result of the data-mining solution, some individuals have conflicting race data descriptors (e.g., White in one record, but Indigenous in another). The data for those individuals has been categorized as Racially Ambiguous.

This report examines racial data associated to use of force subjects. Applying the concepts of proportionality and disparity allows the CPS to identify and monitor indicators of bias and systemic racism.

- Proportionality considers how the use of force subjects compare to a reference population. Often, census data is used as the reference population, but it can also be derived from a specific subset of police interactions – such as “all arrested individuals.”
- Disparity refers to a state of being unequal. It is used to detect unequal treatment or outcomes experienced by different groups. More specifically, it compares the outcomes between different racial groups within the subset of individuals who have been subjected to one or more force methods. A disparity test can help answer questions such as “is a Black person more or less likely to face force than a White subject.”

This analysis is based on a combination of data collected through SBOR<sup>1</sup> reporting and in the CPS records management system (RMS – Sentry). Sentry data is related to incident classification and personal information of use of force subjects.

## KEY FINDINGS

- The findings in this report align with 2023 CPS Race Data Analysis that documents over-representation of the Black and Indigenous communities.
- The use of force subject race data analysis shows that disparity does exist where police service dogs were deployed less towards Indigenous subjects.
- CEWs were deployed less towards Racialized subjects and stuns/strikes were deployed less towards Black subjects.

### ***DISAGGREGATED vs AGGREGATED DATA<sup>2</sup>***

When examining disaggregated data, race information was only available for 65% of subjects (2022: 57%). In aggregated data (compiled via data mining), race information was available for 97% of subjects in 2023 (2022: 86%). For the purposes of this report, aggregate data was used.

- In 2023, the data for 13% of subjects was Racially Ambiguous<sup>3</sup>, and for another 3% of subjects it was not collected (2022: 13%, and 14%, respectively).
- Force subjects were White (50%, 2022: 43%), Indigenous (14%, 2022: 15%), Black (11%, 2022: 9%) and Racialized (10%, 2022: 8%).

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<sup>1</sup>SBOR – Subject Behaviour/Officer Response form completed by officers for reporting use of force incidents.

<sup>2</sup>Disaggregated data in this study refers to data collected at the time the occurrence report is submitted. Race data collection is not mandatory and is often missing from SBOR reports. To correct for missing data, the analysis leverages race data from other records in the Records Management System (Sentry), by data-mining all interactions over the past five years. Data obtained in this manner is referred to as aggregate data.

<sup>3</sup> Using aggregate data derived from the data-mining approach, many individuals have different descriptions over time (e.g., White in one record, but Indigenous in another). As a result, the data for those individuals is considered racially ambiguous.

## ***FORCE SUBJECT DEMOGRAPHICS***

This section examines some of the demographic characteristics of force subjects as shown in Table 1.

- Four out of five force subjects (2023: 79%, 2022: 81%) were male.
- The average force subject was 33 years old, both in 2023 and in 2022.
- The average age of males was 34 years and of females was 33 years in 2023 (a slight increase from 29 years in 2022).
- Black and Indigenous males were of a younger average age (2023: 30 years old, 2022: 29 years old). The opposite was true for White males (2023: 36 years old, 2022: 48 years old).
- Black females had the lowest average age in all female force subjects (2023: 24 years old, 2022: 22 years old).
- The highest average age was observed in Racialized females (2023: 38 years old, 2022: 39 years old).

***Table 1: Use of Force Subjects Average Age & Gender***

Race	Male		Female		Unknown	
	2023	2022	2023	2022	2023	2022
Black	30	29	24	22		
Indigenous	30	29	30	29	17	
Racialized	32	39	38	39		
White	36	48	34	31		
Racially Ambiguous	30	32	33	29		
Unknown/Never Collected	31	44	38			34

Table 2 examines racial disproportionality by comparing the gender and race of force subjects to the population of Calgary (2021 Federal census). Compared to their census population,

- Indigenous females and males are over-represented, almost 7 times & 4 times respectively.
- Black males were 2 times over-represented.
- Racialized males and females were under-represented, 3 times and 10 times respectively.

**Table 2: Disproportionality of Use of Force Subjects by Gender**

Race	Male		Female	
	2023	2022	2023	2022
Black	2.39	1.86	1.20	1.46
Indigenous	4.14	4.77	6.83	6.78
Racialized	0.32	0.21	0.10	0.05
White	0.92	0.80	0.89	0.65

**FORCE SUBJECTS AND FORCE METHOD CATEGORIES**

For this section of the analysis, individual force methods were grouped into two categories:

- Physical methods – includes stuns/strikes, dynamic takedowns, Lateral Vascular Neck Restraint®, leg restraints, spit masks, restraint rings, and other physical methods
- Intermediate methods – includes batons, OC spray, CEW, PSD, ARWEN® and firearms<sup>4</sup>.

<sup>4</sup> OC Spray refers to oleoresin capsicum spray, CEW refers to conducted energy weapon, PSD to police service dog contacts, and ARWEN® refers to less lethal weapon deployment.

**Table 3: Use of Force Subject Count by Method of Force**

Race	PHYSICAL METHODS				INTERMEDIATE METHODS			
	2023		2022		2023		2022	
	Count	Portion	Count	Portion	Count	Portion	Count	Portion
Black	65	11%	40	8%	36	11%	21	8%
Indigenous	85	14%	81	17%	47	14%	33	13%
Racialized	61	10%	32	7%	27	8%	12	5%
White	296	49%	198	41%	166	51%	121	47%
Racially Ambiguous	76	13%	62	13%	42	13%	31	12%
Unknown/Never Collected	18	3%	68	14%	8	3%	40	15%
<b>TOTAL COUNT</b>	<b>601</b>		<b>481</b>		<b>326</b>		<b>258</b>	

Physical Methods group includes the use of stuns/strikes, dynamic takedowns, LVNR®, leg restraints, spit masks, restraint rings and other physical methods

Intermediate Methods group includes the use of batons, OC spray, CEWs, PSDs, ARWEN® and firearms.

Disproportionality and disparity in relation to physical and intermediate methods are examined in Table 4 and show:

- Both force method categories, physical and intermediate, were distributed proportionately to the subject population across racial categories.
- There was no noticeable disparity for physical methods in 2023 nor in 2022.
- Results for the intermediate category indicate these methods were used somewhat less frequently on Black and Indigenous subjects in 2022, and on Racialized subjects in both years as compared to White subjects.

**Table 4: Disproportionality & Disparity by Use of Force Method<sup>5</sup>**

Race	DISPROPORTIONALITY				DISPARITY			
	PHYSICAL METHODS		INTERMED. METHODS		PHYSICAL METHODS		INTERMED. METHODS	
	2023	2022	2023	2022	2023	2022	2023	2022
Black	1.02	0.90	1.05	0.92	1.03	0.93	1.02	0.83
Indigenous	1.01	1.11	1.03	0.83	1.01	1.15	1.00	0.75
Racialized	1.04	1.08	0.85	0.72	1.05	1.12	0.83	0.65
White	1.00	0.97	1.03	1.10				
Racially Ambiguous	0.99	1.04	1.01	0.96	0.99	1.08	0.98	0.87

<span style="display:inline-block; width:15px; height:15px; background-color:#1a3d4d; margin-right:5px;"></span> less than 0.5	<span style="display:inline-block; width:15px; height:15px; background-color:#2e75b6; margin-right:5px;"></span> 0.5 - 1.0	<span style="display:inline-block; width:15px; height:15px; background-color:#4db6ac; margin-right:5px;"></span> 1.0 - 1.5	<span style="display:inline-block; width:15px; height:15px; background-color:#00838f; margin-right:5px;"></span> 1.5 - 2.0	<span style="display:inline-block; width:15px; height:15px; background-color:#808080; margin-right:5px;"></span> 2.0 and more
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**INDIVIDUAL FORCE METHODS**

Most individual methods of force have annual counts too small for statistical analysis. As such, only four methods were selected for an analysis of disparity: stuns/strikes, dynamic takedown, CEW (overall), and PSD contacts. This analysis specifically tests for differences in the deployment of individual force methods across racial groups. It can help answer questions such as “are Indigenous people more or less likely to be the subject of a PSD contact as compared to White subjects?”. The analysis found these four methods of force were deployed relatively equally amongst subjects of all racial groups.

Exceptions included:

- PSD contacts were deployed less towards Indigenous subjects.
- CEWs were deployed less towards Racialized subjects in 2022.
- Stuns/strikes were deployed less towards Black subjects in 2022.

<sup>5</sup> White disparity is blank as it is the comparison category



**Table 5: Use of Force Methods Counts**

**Stuns/Strikes**

Race	2023		2022	
	count	portion	count	portion
Black	22	12%	7	5%
Indigenous	26	14%	24	17%
Racialized	19	10%	12	8%
White	94	50%	64	44%
Racially Ambiguous	21	11%	21	14%
Unknown/Never Collected	5	3%	18	12%

**Dynamic Takedown**

Race	2023		2022	
	count	portion	count	portion
Black	37	10%	28	10%
Indigenous	54	15%	48	17%
Racialized	44	12%	19	7%
White	179	48%	117	40%
Racially Ambiguous	43	12%	38	13%
Unknown/Never Collected	11	3%	40	13%

## Police Service Dog

Race	2023		2022	
	count	portion	count	portion
Black	6	12%	5	9%
Indigenous	3	6%	6	10%
Racialized	4	8%	3	5%
White	31	64%	28	48%
Racially Ambiguous	5	10%	9	16%
Unknown/Never Collected	0	0%	7	12%

## CEW – All Modes<sup>6</sup>

Race	2023		2022	
	count	portion	count	portion
Black	22	10%	13	9%
Indigenous	32	15%	18	12%
Racialized	16	7%	2	2%
White	111	52%	72	49%
Racially Ambiguous	29	14%	16	11%
Unknown/Never Collected	4	2%	25	17%

<sup>6</sup> CEW Modes include display/illumination and (contact mode/probes).

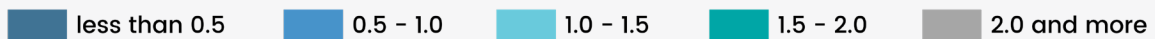
**Table 6: Use of Force Methods Disproportionality & Disparity**

**Stuns/Strikes**

Race	DISPROPORTIONALITY		DISPARITY	
	2023	2022	2023	2022
Black	1.11	0.54	1.10	0.52
Indigenous	0.99	1.07	0.98	1.04
Racialized	1.04	1.27	1.03	1.23
White	1.02	1.03		
Racially Ambiguous	0.86	1.12	0.84	1.09

**Dynamic Takedown**

Race	DISPROPORTIONALITY		DISPARITY	
	2023	2022	2023	2022
Black	0.95	1.09	0.97	1.14
Indigenous	1.05	1.08	1.07	1.13
Racialized	1.23	1.01	1.25	1.06
White	0.98	0.95		
Racially Ambiguous	0.94	1.04	0.95	1.09

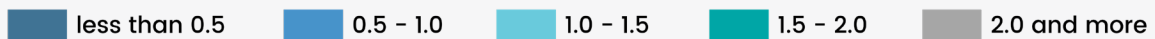


## Police Service Dog

Race	DISPROPORTIONALITY		DISPARITY	
	2023	2022	2023	2022
Black	1.16	0.97	0.91	0.85
Indigenous	0.44	0.67	0.34	0.59
Racialized	0.84	0.80	0.66	0.70
White	1.28	1.14		
Racially Ambiguous	0.78	1.28	0.61	1.13

## CEW - All Modes

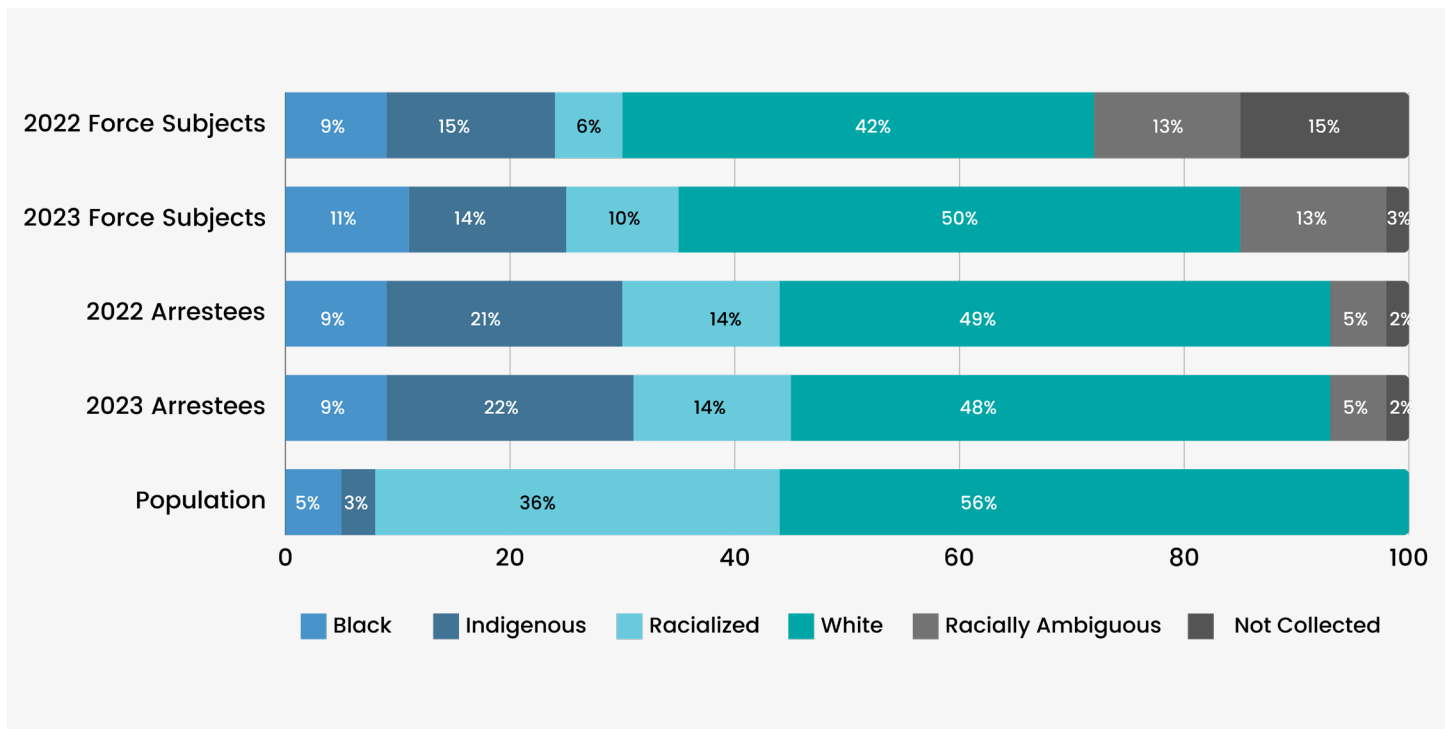
Race	DISPROPORTIONALITY		DISPARITY	
	2023	2022	2023	2022
Black	0.97	1.00	0.93	0.86
Indigenous	1.07	0.80	1.02	0.69
Racialized	0.77	0.21	0.73	0.18
White	1.05	1.16		
Racially Ambiguous	1.09	0.88	1.04	0.76



## **FORCE SUBJECTS AND ARRESTEE POPULATION**

Three quarters 75%, (636) of the 2023 subjects who experienced force were arrested and an additional 13% (111) of subjects were apprehended. 67% (566) of force subjects were charged with an offence.

Figure 1 below shows use of force subjects portrayed against two reference populations: all arrested individuals during the same year and 2021 census data for Calgary. The individual racial categories align closely between force subjects and arrestees, suggesting a correlation. Indigenous and Racialized subjects are under-represented compared to the arrestee population, which implies force may be used towards them less than what would be proportionate when compared to their portion of the arrestee population.”



The calls for service (CFS) where a force subject was apprehended consist mostly of CFS involving mental health, disturbances, domestics, suspicious persons/vehicles, and checks on welfare. This category shows an over-representation of White subjects.

The CFS where a force subject was arrested show large volumes of suspicious persons/vehicles, domestics, and disturbances, followed by assaults and thefts. No disparity was found between the racial groups.

CFS where the force subject was charged are domestics, disturbances, suspicious, assault and theft. These also show no disparity between the the groups.

# NEXT STEPS

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This report is the first CPS examination of race data pertaining to use of force. Its findings are based on officer perception of subject race data and the data categorization is limited by the Calgary Police Service's records management system (Sentry) data. Limitations also relate to the census data, which is a point-in-time count and does not consider the number of people who have interactions with CPS officers but do not live in Calgary. The findings here align with other CPS race data analysis that documents over-representation of the Black and Indigenous communities. The use of force analysis shows that disparity does exist where PSD were deployed less towards Indigenous subjects, CEWs were deployed less towards Racialized subjects and stuns/strikes were deployed less towards Black subjects - these findings will be explored further to better understand why.

This analysis provides insight and is the starting point for examining internal processes, policies and behaviours. In addition, it is also a starting point for engagement with the community to develop understanding, collaboration and change.



# CALGARY POLICE SERVICE