MARICOPA COUNTY SHERIFF'S OFFICE

Traffic Stops Quarterly Report 10

2022 Searches

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Traffic Stop Quarterly Report: Searches

March 2023

This study was developed and conducted by the Maricopa County Sheriff's Office (MCSO) Traffic Stop Analysis Unit and Research and Reporting Unit. Developed methodology was approved by the Court Monitoring Team and Parties on January 2, 2022. This report is intended to meet requirements of Paragraph 65 of the First Order, as Traffic Stop Quarterly Report for Quarter 1, 2023.

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Executive Summary

MCSO evaluates searches of vehicles and drivers in both the Traffic Stop Annual Report (TSAR) and the Traffic Stop Monthly Report (TSMR) to identify racial/ethnic disparity in discretionary searches. MCSO conducted this research to identify search incidents, the types of searches that occurred, and whether coding searches as discretionary/non-discretionary was reliable and valid. Non-discretionary searches are excluded from the Monitor approved analyses in the TSAR and TSMR because they are required by MCSO policy and not subject to a deputy's decision-making.

To explore these questions, MCSO tabulated all search activity recorded in Vehicle Stop Contact Forms (VSCF), what types of searches were conducted, and how the searches were coded as discretionary or non-discretionary by the syntax used in the TSAR and TSMR. MCSO also identified racial/ethnic disparity for all search types, whether they were considered discretionary or non-discretionary. The completed research allowed MCSO to identify potential changes to syntax in the TSAR and TSMR by identifying searches misidentified as discretionary or non-discretionary.

MCSO deputies initiated a total of 19,797 traffic stops in 2022. Of these, 490 stops had at least one search of a driver, passenger, or vehicle. The key takeaways from these stops are as follows.

- MCSO searched a driver, passenger, or vehicle during 2.48 percent of traffic stops in 2022.
  - o Drivers were searched during 1.57 percent of all traffic stops in 2022.
  - o Passengers were searched during 0.13 percent of all traffic stops in 2022.
  - o Vehicles were searched during 1.42 percent of all traffic stops in 2022.
  - o Of all stops with searches, approximately 20 percent included a discretionary search of the driver, and/or vehicle.
- MCSO reviewed BWC videos from 60 traffic events and identified TSAR/TSMR coding errors for discretionary/non-discretionary searches for 24 stops.
- Driver searches incident to arrests and inventory searches of vehicles were the most common types of searches conducted by MCSO deputies. Searches of these types are considered non-discretionary.
- MCSO identified racial/ethnic disparity for both discretionary and non-discretionary searches.

Based on findings from this research, MCSO proposed actions to address shortcomings in the search data used in the TSAR/TSMR. These included:

- Revise the VSCF options for searches of both vehicle and persons (drivers and passengers). Currently, all search options are available for drivers, passengers, and vehicles. Table 11 provides a listing of the revised search options in the VSCF.
- Revise the current TSMR and TSAR data coding algorithms to correctly identify searches as discretionary/non-discretionary.

- Direct TSAU liaison's sergeants to attend district roll call meetings to communicate findings from this research and reiterate any changes made to the VSCF.

- Recode the 24 stops identified incorrectly as discretionary/non-discretionary by the TSAR/TSMR syntax into the appropriate category.

- Provide additional training for deputies on how to document searches on the VSCF.

- Clarify MCSO's expectations on the appropriate way to document pat downs prior to DUI investigations.

- Confer with Monitoring Team and Parties about the reclassifications of searches as non-discretionary for plain view searches and search warrant issuances for biological samples (DUI).

- An MCSO Command staff group will convene to examine search types and policy requirements to identify if any changes to search policy can be made that may mitigate the disparities observed without compromising officer safety and the mission of the office.

Introduction

This quarterly report analyzed all searches conducted by MCSO during 2022. MCSO utilizes incidence of deputy searches during traffic stops as a benchmark for identifying racial/ethnic disparity in both the Traffic Stop Annual Report (TSAR) and the Traffic Stop Monthly Report (TSMR). The report aims to clarify what types of searches are being conducted by MCSO deputies during traffic stops and whether the criteria used in the syntax of the TSAR and TSMR to identify searches as discretionary and non-discretionary is accurate in practice.

MCSO identifies searches as discretionary or non-discretionary for analysis in the TSAR and TSMR. Non-discretionary searches are searches performed by deputies because they are required by MCSO policy. Non-discretionary searches include searches that are incident to arrest (e.g., the driver is arrested and subsequently searched) and inventory searches that are incident to vehicle tow. Non-discretionary searches are not included in the TSAR and TSMR analyses of search activity because they are dictated by policy[1] and not subject to a deputy's decision-making.

Discretionary searches are searches of the driver or vehicle that occur because a deputy has decided a search is prudent, given the circumstances of the stop. These types of searches include Terry Frisk, Auto Exception, Plain View, Protective Sweep, Consent Search, and Search Warrant searches. Stops with discretionary searches of drivers or vehicles are analyzed in the TSAR and TSMR to determine whether MCSO or individual deputies evidence racial/ethnic disparity in search activity, respectively.

Traffic stops with discretionary searches are relatively rare. However, since the first TSAR was published in 2016, MCSO has found disparities in discretionary search activity in each of its Traffic Stop Annual Reports.[2] The identified disparities, as reported in each of the last four TSAR reports, are available in Table 1 below.[3] As is noted in Table 1, different TSAR reports provide different levels of specificity and estimates regarding both the percent of stops reporting discretionary searches and the disparity between White drivers and other racial/ethnic groups.

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[1] MCSO Policy GJ-3 identifies all types of searches and their legal definitions.

[2] In 2020, MCSO identified an error in the coding of searches used in the TSAR analyses, impacting interpretation of findings from previous TSAR reports conducted by CNA. Specifically, searches that were conducted as inventory searches incident to tow had been coded as discretionary searches when they were not. Since the data were corrected, beginning with the TSAR 6, MCSO has continued to identify disparities in search rates for various racial/ethnic groups.

[3] Estimates from TSAR reports 1-3 were not provided in those reports as the method for evaluating searches differed from that currently used by MCSO to identify racial/ethnic disparity in searches (propensity score matching).

Table 1: Reported Incidence of Searches During Traffic Stops in TSAR Reports

	Percentage Stops with Searches	Percentage Stops with Discretionary Searches	White & Hispanic Disparity (percent difference)	White & African American Disparity (percent difference)	White & Minority Disparity (percent difference)
TSAR 7	3.24%	0.69%	0.67*	0.53	0.46*
TSAR 6	3.10%	1.12%	0.9*	1.1	1.0*
TSAR 5	2.32	1.51%	2*	1*	1*
TSAR 4	5.4%	4.2%	3*	2*	3*

*$p<0.05$

This is the first systematic exploration of search activity, as previous TSQRs have focused on TSAR and TSMR benchmarks of citations and warnings (TSQR 6), arrests (TSQR 7), and stop lengths (TSQR 3 and 4).[4] However, since December 2021, MCSO has conducted a monthly inspection of searches and approximately 90 percent of traffic stops with searches (in 2022) were subject to inspection.[5] These inspections have consistently found that deputies accurately record details of search activity between 94 and 100 percent of the time. Given this accuracy, MCSO sought to determine whether stops with multiple types of searches indicated are analyzed correctly in the TSMR and TSAR based on the determination of stops as discretionary or non-discretionary.

This research has two main purposes. The first is to determine whether stops that involve multiple types of searches (i.e., consent search and inventory search) are correctly coded as discretionary/non-discretionary for analysis in the TSAR and TSMR. In other words, MCSO wished to validate the search measure currently used in the TSAR and TSMR as intended by MCSO, the Monitoring Team, and Parties. Second, MCSO wanted to understand the extent of all search activity conducted during traffic stops by clarifying how many and what types of searches occur during MCSO traffic stops.

Methods

To investigate search activity, this research utilized data from all traffic stops conducted by MCSO in 2022. These are the same data used in the 2022 TSAR 8 report and were obtained through the TraCS database. In 2022, MCSO deputies made 19,797 traffic stops. Search information collected during traffic stops includes whether a search of the vehicle, passenger, or driver occurred and what type of search was conducted.[6] Deputies are required to indicate on the VSCF (Vehicle Stop Contact Form) when a search is conducted during a traffic stop and what type of search was conducted. When multiple searches and/or multiple types of searches are conducted, deputies indicate applicable search types of drivers, passengers, or vehicles.

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[4] All quarterly reports can be accessed at https://www.mcsobio.org/traffic-stop-data
[5] Inspections of search activity can be accessed at https://www.mcsobio.org/copy-of-2021-audits-inspections
[6] Searches of passengers are not analyzed in the TSAR or TSMR.

Types of searches indicated in the VSCF include Automobile Exception, Consent Search, Incident to Arrest, Inventory Search, Plain View, Protective Sweep, Terry Frisk, and Warrant Searches.[7]

To identify traffic stops where more than one search occurred, MCSO tabulated the "Search options" variable for driver, passenger, and vehicle fields from the TraCS data and confirmed multiple search stops with individual search fields (i.e., variables *DrvrSearchOptions*, *PsgrSearchOptions*, *VehicleSearchOptions*). These fields indicate the search type for drivers, passengers, and vehicles. Traffic stops with more than one search type in any search option field were selected for Body Worn Camera (BWC) reviews. In total, 56 stops were identified where deputies indicated they had more than one search type for a driver, passenger, or vehicle.[8] Three of these stops were excluded from the review as they were part of current Professional Standards Bureau investigations.[9] By investigating search activity during some of the most complicated traffic stops, MCSO could determine how well the coding strategies work in practice for searches during traffic stops.

Once stops with multiple search types were identified, MCSO staff from the Traffic Stop Analysis Unit (TSAU) reviewed BWC footage to determine the types of searches during the stop. A double-blind review of each video was completed by two different reviewers who had no knowledge of what searches were documented before their review. In addition to identifying what types of searches occurred during the stops, reviewers also indicated whether discretionary searches preceded non-discretionary searches (e.g., a consent search preceding an inventory search that was incident to tow). If there was no agreement between reviewers regarding the searches during the stop, BWC footage was reviewed a third time by a different reviewer to decide what types of searches occurred.

Once all stops were reviewed, data were entered into a spreadsheet for analysis. Analysis occurred in four stages. First, MCSO compared the two reviews for each stop to determine the level of agreement between the reviewers' evaluation of the stop and assigned third reviews for stops where reviewers disagreed. Second, MCSO tabulated all search activity as reported in the TraCS database for the year, identifying frequencies of search types for drivers, passengers, and vehicles. Third, MCSO compared rates of different types of searches, recorded in TraCS by race/ethnicity, utilizing racial/ethnic categories of White, Hispanic, African American, and Minority.[10] Fourth, reviewers' determination of the discretionary/non-discretionary nature of the stops were compared to the coding of stops used in the TSAR and TSMR. This was done to determine if the algorithm correctly coded stops as discretionary or non-discretionary.

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[7] Additional types of searches are available in the VSCF but were excluded from the analysis here because they did not occur in the data in 2022. These searches are Special Needs Exception, Emergency Aid Exigent Circumstances, and Community Caretaker.

[8] Traffic stops where multiple searches were conducted, but only one search option per field (*DrvrSearchOptions*, *PsgrSearchOptions*, *VehicleSearchOptions*) was selected were initially excluded from review. For example, if a deputy performs a consent search of a driver coupled with an inventory search of a vehicle it is coded as a discretionary search in the TSAR and TSMR. Whereas a search of a driver that is incident to arrest and an inventory search of a vehicle is coded as non-discretionary.

[9] Seven additional stops were reviewed following completion of the research because they were identified as searches that were coded as discretionary, even though the only search options selected were a search of a driver incident to arrest and a search of an automobile incident to arrest (indicators of a non-discretionary search). These reviews were not blind reviews but rather reviews to confirm the selection of the search options and were thus excluded from the main analysis of stops presented in this report. These stops are discussed more in length below.

[10] Racial/ethnic categories reflect those used in the TSAR. Minority drivers include drivers identified by the deputy as Hispanic, African American, Asian, and Native American.

Cohen's Kappa was used to calculate inter-rater agreement for individual search types. Agreement between the initial reviewers was high for all individual search types. As Table 2 illustrates, agreement on specific types of searches was as low as 73.58 percent for Plain View searches of vehicles and as high as 100 percent for Protective Sweeps of vehicles.[11] While Table 3 is informative regarding the coding of individual search types observed in the BWC footage, collectively in 43 percent of stops (N=23) reviewers were not in agreement. A third review was conducted to reconcile the coding of these searches. The third review was considered the "tie-breaker" of disagreement and was used as comparison data when comparing deputy inputs in the VSCF.

Table 2: Initial Inter-rater Agreement on BWC Reviews

	Driver	Passenger	Vehicle
Automobile Exception	--	--	83.02%***
Consent Search	90.57%***	100.00%***	96.23%***
Incident to Arrest	96.23%***	98.11%***	--
Inventory Search	--	--	90.57%***
Plain View	98.11%***	98.11%***	75.47%**
Protective Sweep	--	--	100.00%***
Terry Frisk	86.79%***	88.68%**	--
Search Warrant	98.11%***	100.00%†	100.00%†

**p<0.01; ***p<0.001; †Significance could not be determined

Reviewers also identified whether a person or vehicle was searched prior to an arrest as opposed to after an arrest (e.g., incident to arrest), or whether a vehicle was towed from the scene, to identify if the searches conducted were discretionary or non-discretionary. Agreement among reviewers determining whether search was non-discretionary or discretionary was very high, at 98.11 percent (p<0.05). The one-stop where there was no agreement between reviewers was reviewed a third time to determine the discretionary nature of the stop.

Findings from these analyses are reported in the next section.

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[11] Note that no measure of agreement is provided for certain comparisons as reviewers were trained to not select that option (e.g., inventory searches of drivers). Significance could not be calculated for search types that did not occur (e.g., search warrant searches of vehicles or passengers).

Findings

During 2022, MCSO executed a search of a driver, passenger, and/or vehicle during 490 (2.48%) traffic stops. Table 3 below provides a tabulation of the types of searches applied during these stops based on TraCS data.[12] In 2022, deputies indicated a total of 310 stops where a search of a driver occurred. Deputies were most likely to perform a search of drivers as incident to arrest (N=280). Thus, 90 percent of stops where a search of the driver was made included a non-discretionary search (incident to arrest). Deputies indicated multiple driver search types for twenty-one stops (e.g., a consent search and an incident to arrest search).

Of the 19,797 traffic stops conducted in 2022, there were 6,890 stops of drivers with passengers. As only 35% of traffic stops had passengers present, searches of passengers were rare in 2022. Deputies searched passengers during twenty-six stops in 2022. Like driver searches, searches that were incident to arrest were the most common type of search conducted on passengers, with 16 stops (62%) indicated as non-discretionary searches. During two of the 26 stops, deputies indicated multiple search types of passengers.

Searches of vehicles were conducted during 334 traffic stops in 2022. The most common vehicle search was an inventory search (N=282), a non-discretionary search conducted when a vehicle is towed from the scene. Approximately 84 percent of vehicle searches were searches of this type. During thirty-eight stops, deputies indicated multiple search types for vehicles.

Table 3 below compares search types applied to drivers, passengers, and vehicles as a percentage of overall stops performed by MCSO. In total, drivers were searched during 1.57 percent of all traffic stops, passengers were searched in 0.13 percent of all traffic stops, and vehicles were searched during 1.42 percent of traffic stops. As is clear from Table 3, non-discretionary searches of drivers or passengers, those that are incident to arrest or inventory searches of vehicles, were the most common types of searches performed by MCSO deputies in 2022. All other types of searches each occurred in less than 0.20 percent of MCSO traffic stops.

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[12] Note that because a driver, passenger, or vehicle can have multiple search types selected, columns in Table 3 exceed the total number of stops where a search occurred.

Table 3: Incidence of Search Types during 2022 Traffic Stops, TraCS Data

	Driver	Passenger	Vehicle
Automobile Exception	1	1	16
	<0.01%	<0.01%	0.08%
Consent Search	32	4	25
	0.16%	0.02%	0.13%
Incident to Arrest	280	16	38
	1.41%	0.08%	0.04%
Inventory Search	8	0	282
	0.04%	0.00%	1.42%
Plain View	2	2	13
	0.01%	0.01%	0.07%
Protective Sweep	3	0	1
	0.02%	0.00%	<0.01%
Terry Frisk	4	6	0
	0.02%	0.03%	0.00%
Search Warrant	3	0	0
	0.02%	0.00%	0.00%
Multiple Searches	21	2	38
	0.11%	0.01%	0.19%
Total Stops with Searches	310	26	334
	1.57%	0.13%	1.42%

Table 4 below provides search counts and rates for drivers by type of search and race/ethnicity. Independent samples t-tests for the difference in proportions were used to determine the statistical difference in search rates for African American, Hispanic, and Minority drivers. For all statistical comparisons, the reference group was White drivers. Note that in the TSAR and TSMR, all discretionary search types are combined to determine racial/ethnic differences in search rates. Inventory searches and searches incident to arrest are considered non-discretionary and not analyzed in the TSAR and TSMR.

Statistically significant differences in search types were found in several search categories. Specifically, Hispanic and Minority drivers were each more likely to have a consent search or a search incident to arrest when compared to White drivers. Hispanic drivers were more likely to have a plain view search indicated during their stop than their White counterparts. However, only two plain view searches of Hispanic drivers were indicated by deputies, compared to no plain view searches of White drivers. Finally, both Hispanic and Minority drivers were more likely to be searched, regardless of the type(s) of search. The reader should note that the "Total Stops with Driver Searches" category includes both discretionary and non-discretionary searches.

Table 4: Search Rates for Drivers, by Search Type and Driver Race/Ethnicity, TraCS Data

	White	African American	Hispanic	Minority
Automobile Exception	0	0	1	1
	0.00%	0.00%	0.02%	0.01%
Consent Search	12	1	18***	20**
	0.09%	0.07%	0.38%	0.29%
Incident to Arrest	137	27	103***	143***
	1.07%	1.89%	2.17%	2.05%
Inventory Search	4	1	2	4
	0.03%	0.06%	0.04%	0.05%
Plain View	0	0	2*	2
	0.00%	0.00%	0.04%	0.03%
Protective Sweep	1	0	2	2
	<0.01%	0.00%	0.04%	(0.03%)
Terry Frisk	2	0	2	2
	0.02%	0.00%	0.04%	0.03%
Search Warrant	2	0	1	1
	0.02%	0.00%	0.02%	0.03%
Multiple Searches	11	1	8	10
	0.09%	0.07%	0.17%	0.14%
Total Stops with Driver Searches	146	28	122***	164***
	1.14%	1.96%	2.57%	2.35%

*p<0.05; **p<0.01; ***p<0.001
Rates are calculated using the overall number of stops per race/ethnicity.

Table 5 below provides search counts and rates for vehicles, by type of search and race/ethnicity. Independent samples t-tests for the difference in proportions were used to determine whether the differences between White drivers and other racial/ethnic groups were statistically significant. Findings indicate that African American drivers were more likely to have a vehicle search incident to arrest or any vehicle search than their White counterparts.

Hispanic drivers were more likely than White drivers to have an automobile exception search, an inventory search, or a plain view search of their vehicle. Hispanic drivers were also more likely to have multiple search options applied to a vehicle, and were more likely to have any search, when compared to their White counterparts.

Minority drivers, as a group, were more likely to have their vehicles searched via automobile exception, incident to arrest, or inventory search. Further, minority drivers were more likely to have their vehicle searched, and multiple search options selected on their vehicle search, when compared to White drivers. Note that the "Total Stops with Vehicle Searches" category includes both discretionary and non-discretionary searches.

Table 5: Search Rates for Vehicles, by Search Type and Driver Race/Ethnicity, TraCS Data

	White	African American	Hispanic	Minority
Automobile Exception	5	2	9**	11**
	0.04%	0.14%	0.19%	0.16%
Consent Search	13	2	10	12
	0.10%	0.14%	0.21%	0.28%
Incident to Arrest	18	6*	12	20*
	0.14%	0.42%	0.25%	0.29%
Inventory Search	81	17*	171***	201***
	0.63%	1.19%	3.60%	2.88%
Plain View	6	0	7*	7
	0.04%	0.00%	0.14%	0.10%
Protective Sweep	0	0	1	1
	0.00%	0.00%	0.02%	0.01%
Terry Frisk	2	0	0	0
	0.02%	0.00%	0.00%	0.00%
Search Warrant	0	0	0	0
	0.00%	0.00%	0.00%	0.03%
Multiple Searches	16	4	17**	22*
	0.12%	0.28%	0.36%	0.32%
Total Stops with Vehicle Searches	107	23*	190***	227***
	0.83%	1.61%	4.00%	3.25%

*p<0.05; **p<0.01; ***p<0.001
Rates are calculated using the overall number of stops per race/ethnicity.

Table 6 below identifies all observed combinations of search types in 2022 traffic stop data and whether the stops are coded as discretionary/non-discretionary based on the current TSAR/TSMR algorithm. Of importance for this research, searches performed by themselves would be coded non-discretionary or discretionary (e.g., searches incident to arrest versus a consent search). However, because deputies can select multiple searches of the same entity (driver, passenger, or vehicle), the coding algorithm designates some searches as discretionary/non-discretionary with questionable logic (e.g., a consent search of a driver coupled with a search incident to arrest, coded as non-discretionary). Table 6 identifies 41 of these stops. Thirty-four of these 41 stops were included in the BWC reviews for this study because deputies selected multiple search types for either drivers, passengers, or vehicles. Abbreviations for the search types in Table 6 are as follows:

- CS-Consent Search
- IA-Incident to arrest
- PS-Protective Sweep
- TF-Terry Frisk

- AE-Automobile Exception
- PV-Plain View
- IS-Inventory Search
- SW-Search Warrant

It is notable in Table 6 that certain types of searches apply to persons or vehicles but not to the other. For example, the automobile exception and protective sweep searches should only be applied to vehicles, and incident-to-arrest searches of vehicles should occur in narrow circumstances. Additionally, some stops identify multiple search types where the question of which search came first could influence the coding of a stop as discretionary/non-discretionary. Stops with questionable discretionary/non-discretionary designations and search options are highlighted in Table 6.

Table 6: 2022 Searches During Traffic Stops and TSAR/TSMR Coding

Driver	Passenger	Vehicle	N (percent of searches)	TSAR/TSMR Coding
CS	--	--	11 (2.24%)	Discretionary
IA	--	--	125 (25.51%)	Non-Discretionary
PS	--	--	2 (0.41%)	Discretionary
TF	--	--	3 (0.61%)	Discretionary
--	IA	--	5 (1.02%)	Non-Discretionary
--	--	AE	2 (0.41)	Discretionary
--	--	CS	20 (4.08%)	Discretionary
--	--	IA	2 (0.41%)	Non-Discretionary
--	--	IS	139 (28.37%)	Non-Discretionary
--	--	PV	3 (0.61%)	Discretionary
CS, IA	--	--	7 (1.43%)	Non-Discretionary
IA, IS	--	--	1 (0.20%)	Non-Discretionary
--	--	CS, IS	1 (0.20%)	Discretionary
--	--	IA, IS	3 (0.61%)	Discretionary
--	--	IA, PV	1 (0.20%)	Discretionary
IA	IA	--	1 (0.20%)	Non-Discretionary
IA	TF	--	1 (0.20%)	Non-Discretionary
IA		AE	3 (0.61%)	Discretionary
CS	--	CS	3 (0.61%)	Discretionary
CS	--	IS	7 (1.43%)	Discretionary
IA	--	IA	7 (1.43%)	Discretionary
IA	--	IS	87 (17.76%)	Non-Discretionary
IA	--	PV	2 (0.41%)	Discretionary
PV	--	IS	1 (0.20%)	Non-Discretionary
--	TF	AE	1 (0.20%)	Discretionary
--	TF	IS	1 (0.20%)	Non-Discretionary
--	CS	IS	1 (0.20%)	Non-Discretionary
IA	--	AE, IS	3 (0.61%)	Discretionary
IA	--	AE, PV	1 (0.20 %)	Discretionary
IA	--	CS, IA	1 (0.20 %)	Discretionary
IA	--	IA, IS	15 (3.06 %)	Discretionary
IA	--	IS, PV	1 (0.20 %)	Discretionary
IA, IS	--	IS	3 (0.61 %)	Non-Discretionary
IA, PS	--	IS	1 (0.20 %)	Non-Discretionary
IA, SW	--	IS	2 (0.41 %)	Non-Discretionary
CS, IA	--	IA, PV	1 (0.20 %)	Discretionary
IA, IS	--	IA, IS	1 (0.20 %)	Discretionary
IA, PV	--	IA, PV	1 (0.20 %)	Discretionary
IA	IA	AE	1 (0.20 %)	Discretionary
IA	IA	IS	3 (0.61 %)	Non-Discretionary
IA	TF	IS	2 (0.41 %)	Non-Discretionary
CS	CS	IS	1 (0.20 %)	Discretionary
IA, TF	IA	IS	1 (0.20 %)	Non-Discretionary
CS	CS	AE, PV	1 (0.20 %)	Discretionary
IA	TF	IA, IS	1 (0.20 %)	Discretionary
IA	IA	IS, PV	1 (0.20 %)	Discretionary
IA	IA	IA, IS	2 (0.41 %)	Discretionary
IA, IS	CS	IS	1 (0.20 %)	Non-Discretionary
--	AE, IA, PV	IA	1 (0.20 %)	Discretionary
IA	--	AE, IA, PV	1 (0.20 %)	Discretionary
IA, IS, SW	--	IS	1 (0.20 %)	Non-Discretionary
IA	--	IA, IS, PS	1 (0.20 %)	Discretionary
AE, CS, IS	--	AE, IS	1 (0.20 %)	Discretionary
IA	IA, PV	AE, IA, IS	1 (0.20 %)	Discretionary

After the BWC review of multiple search stops, MCSO compared the review results with search options recorded by the deputy in the VSCF. Table 7 below compares observed searches to the indicators selected by deputies during these stops. Reviewers were instructed not to select searches incident to arrest for vehicles, or inventory search of persons, even though deputies did indicate these types of searches. This led to the most notable differences between reviewers and deputy search indicators. Reviewers did not apply certain indicators to vehicles or persons. For example, deputies indicated inventory searches for drivers in eight stops, while reviewers did not use inventory searches for drivers and instead identified inventory searches of vehicles. Similarly, deputies identified vehicle searches incident to arrest in 28 stops. In contrast, reviewers did not identify searches of vehicles incident to arrest and instead identified searches specific to driver or passenger when an arrest was made.

Table 7: Incidence of Search Types for Reviewed Searches (N=53)

	Driver		Passenger		Vehicle	
	Deputies	Reviewers	Deputies	Reviewers	Deputies	Reviewers
Automobile Exception	1	0	1	0	7	16
Consent Search	10	7	2	2	2	5
Incident to Arrest	45	45	6	7	28	0
Inventory Search	8	0	0	0	37	38
Plain View	1	0	2	0	8	16
Protective Sweep	1	0	0	0	0	1
Terry Frisk	1	10	1	4	0	0
Search Warrant	3	0	0	0	0	0

Table 8 provides agreement analysis between the searches identified in the reviews of BWC footage and deputy selected indicators in the VSCF. Cohen's Kappa was used to determine whether agreement was statistically significant. Overall, agreement was relatively high and statistically significant for consent search of drivers and search incident to arrest of drivers. Passenger search types of consent search, incident to arrest, and Terry Frisk were also statistically significant at relatively high agreement rates. Agreement for vehicle search types of automobile exception, consent search, inventory search, and plain view were statistically significant as well. Again, it is worth mentioning that reviewers were instructed not to select searches incident to arrest for vehicles, or inventory search of persons, even though deputies did indicate these types of searches. This resulted in a low level of agreement on searches of vehicles that were incident to arrest and inventory search of drivers.

Table 8: Reviewer-Deputy Agreement on Searches

	Driver	Passenger	Vehicle
Automobile Exception	98.11%[†]	98.11%[†]	79.25%***
Consent Search	90.57%***	96.23%***	94.34%***
Incident to Arrest	84.91%**	94.34%***	47.17%
Inventory Search	84.91%[†]	100.00%[†]	90.57%***
Plain View	98.11%[†]	96.23%[†]	77.36%**
Protective Sweep	98.11%[†]	100.00%[†]	98.11%[†]
Terry Frisk	83.02%*	94.34%***	100.00%[†]
Search Warrant	94.34%[†]	100.00%[†]	100.00%[†]

*$p<0.05$; **$p<0.01$; ***$p<0.001$; [†]Significance could not be determined[13]

While the agreement was high for most individual items on this comparison, whether agreement existed for all search types selected during a stop was also tested. In other words, was there agreement between the VSCF and reviewers on <u>all</u> search options selected for a given stop? Analysis indicates there was little agreement between reviewers and deputies. Specifically, only five (9.4 %) of the 53 stops were in total agreement between the reviewer and the deputy. Because there was such a low level of agreement in the analysis, MCSO compared the results from the reviewers to the deputy's identified searches for each stop to determine which stops were not in agreement and why. Below, we identify common patterns in the data when agreement was not met.

Several accounts help explain why there was little overall agreement between reviewers and the deputy. The first includes the difficulty in classifying certain types of searches by reviewers. Traffic stops reviewed for this research are some of the most complex in the data. Their complexity demonstrate how fluid situations during stops do not allow for a clear distinction of when certain types of searches were conducted. For example, in one BWC video, deputies verbally identified drug paraphernalia as visible in the vehicle's

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[13] Cohen's Kappa could not be calculated for a number of comparisons either because neither the deputy or the reviewer selected these options, or because the deputies and the reviewer did not select those options for any stop. This occurred for the following comparisons: Automobile Exception for drivers and passengers, searches Incident to Arrest for Vehicles, Inventory Searches of drivers and passengers, Plain View searches of drivers and passengers and Search Warrant searches of drivers, passengers, and vehicles. These comparisons are identified in Table 8 with "†".

interior. This led deputies to search the vehicle as an auto exception search. Reviewers indicated both a plain view search and an auto exception search. The deputy only indicated an automobile exception search. Both plain view searches and automobile exception searches are classified as discretionary.

Another common situation in videos was for deputies to perform a brief Terry Frisk of drivers for weapons prior to administering field sobriety tests. This search was often requested of the driver, and drivers were not searched comprehensively until after an arrest. In this situation, reviewers selected consent search, Terry Frisk, and incident to arrest, whereas deputies often selected consent search and incident to arrest search. Similarly, in several stops, deputies needed to obtain a search warrant for a biological sample during DUI investigations. Reviewers never selected a search warrant search in these situations.

A primary source of disagreement between reviewers and deputies was the result of deputies indicating a search of a vehicle as incident to arrest. Reviewers were trained to select inventory search for searches of a vehicle that would be towed. Some deputies select searches of vehicles as incident to arrest when these should be identified as inventory searches for a tow. Relatedly, other deputies identified inventory searches of drivers when the driver was searched incident to arrest. Both inventory searches of vehicles and searches of drivers incident to arrest are non-discretionary searches. Deputies selected a vehicle search incident to arrest for 28 of the 53 stops and inventory searches of drivers for 4 of the 53 stops that were reviewed.

In addition to identifying types of searches, reviewers also determined which search type occurred first, to determine whether the searches conducted during the stop should be considered discretionary or non-discretionary (e.g., searches incident to arrest or inventory searches prior to vehicle tow). Cramer's V was used to quantify the agreement between reviewers' determinations and how the TSAR/TSMR algorithm identifies these searches.

Table 9 compares stops designated as discretionary/non-discretionary by reviewers and the TSAR/TSMR algorithm. Reviewers identified 36 searches as non-discretionary and 17 searches as discretionary, whereas the TSAR/TSMR algorithm identified 33 searches as non-discretionary and 10 searches as discretionary. Agreement between reviewers and the TSAR/TSMR classification was 67.92 percent and was statistically significant (Cramer's $V = 0.299$, $p<0.05$).

Table 9: Comparison of Discretionary/Non-Discretionary Coding of Multiple Search Traffic Stops

		Reviewer Determination		
		Discretionary	Non-Discretionary	Total
TSAR/TSMR	Discretionary	10	10	20
Coding	Non-Discretionary	7	26	33
	Total	17	36	53

A total of 17 stops were identified as having no agreement between the reviewers and the TSAR/TSMR algorithm. These stops with deputy-selected VSCF search options are identified in Table 10 below.[14] Deputy search options are those utilized in the TSAR/TSMR. Note that passenger searches are not considered in determining whether the search was discretionary or not. In total, 10 searches were coded by the TSAR/TSMR algorithm as discretionary, while the searches conducted during the stop were non-discretionary. For an additional seven stops, the TSAR/TSMR coding criteria identified searches as non-discretionary, while reviewers identified the search type(s) as discretionary.

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[14] MC numbers for these stops are available to the Monitoring Team and Parties upon request.

Table 10: Searches where Reviewer and TSAR/TSMR Coding were not in Agreement

| Stop Number | Discretionary or Non-Discretionary | | Selected VSCF Search Options | | |
	Reviewer	TSAR/TSMR	Driver	Passenger	Vehicle
1	Non-Discretionary	Discretionary	IA		IA, IS
3	Non-Discretionary	Discretionary	IA		IA, IS
4	Discretionary	Non-Discretionary	CS, IA		
5	Non-Discretionary	Discretionary	IA		IA, IS
6	Non-Discretionary	Discretionary			IA, IS
9	Discretionary	Non-Discretionary	CS, IA		
19	Non-Discretionary	Discretionary			IA, IS
20	Non-Discretionary	Discretionary	IA		IA, IS
26	Non-Discretionary	Discretionary	IA		IA, IS
29	Non-Discretionary	Discretionary	IA	IA	IA, IS
33	Non-Discretionary	Discretionary	IA		IA, IS
40	Discretionary	Non-Discretionary	CS, IA		
46	Discretionary	Non-Discretionary	CS, IA		
52	Discretionary	Non-Discretionary	IA, TF	IA	IS
53	Non-Discretionary	Discretionary			IA, IS
54	Discretionary	Non-Discretionary	CS, IA		
56	Discretionary	Non-Discretionary	CS, IA		

Because of the disagreement between reviewers and TSAR/TSMR coding, MCSO explored the specific criteria that led to incorrectly coded searches. Two patterns were identified. The first included stops where deputies selected both inventory search and incident to arrest for vehicles. For each of these stops, reviewers identified drivers searched incident to arrest and vehicles searched for an inventory search prior to tow. Given these searches, the identified 10 stops should have been coded as non-discretionary and excluded from analysis of searches in both the TSAR and subsequent TSMR analyses.

The second pattern in the reviews included stops identified as non-discretionary by the TSAR/TSMR algorithm, even though discretionary searches of consent search, protective sweep, or Terry Frisk were identified in the VSCF. Reviewers identified these discretionary searches during these stops. Because of this, the identified seven stops should be coded as discretionary and included in both the TSAR and future TSMR analyses.

Following BWC reviews and the determination that the 17 stops identified in Table 10 required their discretionary/non-discretionary status changed, MCSO identified an additional seven stops that had not been included in the initial BWC reviews but warranted reviews.[15] For each of these seven stops deputies selected a search of the driver incident to arrest and a search of a vehicle incident to arrest. TSAU staff performed confirmation reviews for these stops. This review determined that six of the seven vehicle

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[15] These stops were excluded from the initial BWC review because only one search option was selected for the vehicle and/or driver. MC Numbers for these stops are available to the Monitoring Team and Parties upon request.

searches identified by deputies as incident to arrest were inventory searches incident to tow. In one case, the vehicle had not been searched incident to tow because a family member of the driver retrieved the vehicle from the scene. No vehicle search was performed during this stop. For each of these seven stops, the searches should be coded as non-discretionary and excluded from the analysis of searches in the TSAR and subsequent TSMR analyses. [16]

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[16] Racial/ethnic differences in discretionary searches were not analyzed in this report because these comparisons are provided in the TSAR8 using Propensity Score Matching.

Summary of Findings

There were two primary goals for this research. The first included providing a general overview of MCSO search activity during traffic stops and identifying the racial/ethnic composition of persons who experienced searches (or had their vehicle searched). The second goal was to identify whether searches with multiple search types applied to a driver or vehicle were correctly identified as discretionary/non-discretionary by the TSAR/TSMR algorithm for inclusion in analyses. Findings from the research are summarized below.

- MCSO conducted searches of a driver, passenger, or vehicle during 490 traffic stops in 2022 (2.48% of all stops).

   o Drivers were searched during 310 stops (1.57 % of all stops)

   o Passengers were searched during 26 stops (0.38 % of all stops with passengers present)

   o Vehicles were searched during 334 stops (1.69 % of all stops)

   o Of all stops with searches, approximately 20 percent included a discretionary search of the driver, and/or vehicle.

- Based on TraCS data the most common search of a driver in 2022 was incident to arrest (N=280). These searches occurred during 1.41 percent of traffic stops and are considered non-discretionary.

- Based on TraCS data, the most common passenger searches were incident to arrest (N=14). Passenger searches are not considered for analyses in the TSAR or TSMR.

- Based on TraCS data, the most common search of a vehicle in 2022 was an inventory search (N=282). These searches occurred during 1.42 percent of traffic stops and are considered non-discretionary.

- Racial/ethnic disparity in driver searches were found for:

   o Consent searches of Hispanic and Minority drivers

   o Incident to arrest searches of Hispanic and Minority drivers

   o Plain view searches of Hispanic drivers

   o Multiple search types of Hispanic and Minority drivers

   o Plain view searches of vehicles with Hispanic drivers

   o All searches of Hispanic and Minority drivers.

- Racial/ethnic disparity in vehicle searches were found for:

   o Automobile exception searches of vehicles with Hispanic and Minority drivers

   o Inventory searches of vehicles with African American, Hispanic, and Minority drivers

   o Plain view searches of vehicles with Hispanic drivers

   o Multiple search types of vehicles with Hispanic and Minority drivers

   o All searches of vehicles with Hispanic and Minority drivers

- MCSO identified 56 stops where a deputy selected multiple types of searches for either a driver, a passenger or a vehicle. Three of these stops were unavailable, and the remaining 53 stops' BWC footage was reviewed.
  - Reviewers and VSCF data had high levels of agreement for individual search types.
  - Reviewers and VCSF data had low levels of agreement for all search types selected for a single stop.
- Following reviews of BWC footage, MCSO identified 24 stops that required re-coding of discretionary/non-discretionary designation.
  - The TSAR/TSMR algorithm identified 108 searches as discretionary (0.55% of all traffic stops).
  - Following BWC reviews, and subsequent changes to discretionary/non-discretionary designations, MCSO identified a total of 98 stops with discretionary searches (0.50% of all traffic stops).
  - Differences between reviewer and TSAR/TSMR designation can be attributed to both errors in the syntax and documentation error.

Limitations

Readers should be aware of the limitations of this research. First, findings from the investigation of multiple search stops cannot be generalized to the Office as a whole. The sample was purposive and included only those stops where deputies selected multiple search types for a driver, passenger, or vehicle. Second, reviews of BWC footage presented a problem for classifying certain types of searches because the search could not always be identified in the video footage. For example, plain view searches were only coded by reviewers when deputies verbalized a plain view situation (e.g., beer cans in the center console). If there was no verbalization of a plain view search, it was not coded.

Further, not all searches were available in BWC footage. This occurred during several stops where other police agencies carried out searches of people or vehicles. In these cases, deputies indicated the searches occurred, but the search could not be confirmed using MCSO BWC footage. Similarly, during some stops, deputies asked drivers for consent to search, but the driver's responses were inaudible.

A third issue encountered during the research is a limitation and a finding. MCSO identified that during a few stops, deputies indicated searches in the incorrect field. In most cases, these errors were easily identified, such as an automobile exception, inventory search of drivers, or searches of vehicles that were marked incident to arrest when these should have been considered inventory searches. This challenged researchers regarding what searches should be tabulated based on TraCS data (entered by deputies) and reviewer data (data obtained through BWC reviews). To address this, MCSO included tabulations of the raw TraCS data and the BWC footage tabulation results.

A fourth issue encountered during reviews and subsequent comparison of results to the TraCS data concerned deputies' use of the search warrant field. In the three incidents where a deputy selected a search warrant in 2022, the search warrant was requested to obtain biological samples for DUI investigations.

Obtaining a biological sample is prescribed by policy once a driver has been detained for a suspected DUI.[17] Thus, identifying these search warrants as discretionary or non-discretionary was difficult for reviewers.

While some of these limitations were issues that could not be addressed during the research, future research on searches will benefit from changes to policy regarding data entry in the VSCF. These changes are discussed more in the next section of this report.

Conclusion and MCSO Response

This research had two primary goals. The first was to identify all search activity conducted during traffic stops by MCSO in 2022. The second was verifying the discretionary/non-discretionary coding of searches used in the TSAR/TSMR. Findings from this research align with previous research in the TSAR identifying search activity. Of the 490 stops with searches in 2022, approximately 80 percent were non-discretionary (stops with driver searches incident to arrest, vehicle inventory searches, or both). The remaining 20 percent of searches (98 stops) included discretionary searches. Discretionary searches by MCSO occurred during less than 0.50 percent of traffic stops in 2022.

Even with so few stops with searches, MCSO identified racial/ethnic disparity for several search types. One finding worth highlighting was that in addition to racial/ethnic differences in certain types of discretionary searches, there were also significant racial/ethnic differences in non-discretionary search activity. These findings are congruent with previous quarterly research that found racial/ethnic disparities in arrests (TSQR 7) and vehicle tows (TSQR 3). Thus, while the TSAR identifies disparity in discretionary searches, this report also identifies disparity in non-discretionary searches which may impact disparity in other benchmarks used in the TSAR and TSMR.

In conducting this research, MCSO was also able to identify the efficacy of the coding criteria for determining whether searches during traffic stops are considered discretionary or non-discretionary. Of the 490 stops with searches in 2022, twenty-four stops required re-examination to identify the discretionary/non-discretionary nature of the initial searches correctly. This allowed MCSO to correct the data prior to conducting analyses for the 2022 TSAR and subsequent TSMR analyses. Finally, by conducting this research and identifying shortcomings of the current process for identifying stops as discretionary/non-discretionary, MCSO was able to identify possible changes in its operations.

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[17] Policy EB-3 is MCSO's DUI policy and directs deputies to obtain biological samples.

Based on the findings from this research MCSO proposes the following actions:

- In order to reduce the selection of inappropriate search options MCSO should revise the VSCF options for searches of both vehicle and persons (drivers and passengers). Currently, all search options are available for drivers, passengers, and vehicles. Table 11 provides a listing of the revised search options in the VSCF.

Table 11: *Revised VSCF Search Options*

Driver Option Field	Passenger Option Field	Vehicle Option Field
Community Caretaker	Community Caretaker	Automobile Exception
Consent Search	Consent Search	Consent Search
Emergency Aid Exigent Circumstances	Emergency Aid Exigent Circumstances	Incident to Arrest[18]
Incident to Arrest	Incident to Arrest	Inventory Search
Search Warrant	Search Warrant	Protective Sweep
Terry Frisk	Terry Frisk	Search Warrant
Special Need Exception	Special Need Exception	Plain View

- Revise the current TSMR and TSAR data coding algorithms to correctly identify searches as discretionary/non-discretionary.

- Direct TSAU liaison sergeants to attend district roll call meetings to communicate findings from this research and reiterate any changes made to the VSCF.

- Recode the 24 stops identified incorrectly as discretionary/non-discretionary by the TSAR/TSMR syntax into the appropriate category.

- Provide additional training for deputies on how to document searches on the VSCF.

- Clarify MCSO's expectations on the appropriate way to document pat downs prior to DUI investigations.

- Confer with Monitoring Team and Parties about the reclassifications of searches as non-discretionary for plain view searches and search warrant issuances for biological samples (DUI).

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[18] According to MCSO policy on searches, vehicle searches that are incident to arrest occur under very narrow circumstances.

- An MCSO Command staff group will convene to examine search types and policy requirements to identify if any changes to search policy can be made that may mitigate the disparities observed without compromising officer safety and the mission of the office.