MARICOPA COUNTY SHERIFF'S OFFICE

Traffic Stops Quarterly Report 16

Contracted Jurisdictions and County Communities

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Traffic Stops Quarterly Report: Contracted Jurisdictions and County Communities

December 2024

This study was developed and conducted by the Maricopa County Sheriff's Office (MCSO) Traffic Stop Analysis Unit and Research and Reporting Unit. The developed methodology was approved by the Court Monitoring Team and Parties on November 21, 2024. This report is intended to meet the requirements of Paragraph 65 of the First Order, as Traffic Stop Quarterly Report for Quarter 4, 2024.

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Executive Summary

For this quarterly report, MCSO investigated traffic stop activity of 10 communities which either contract with MCSO for policing services or represent unincorporated communities within the County that rely on MCSO for law enforcement. Data used for this research included all traffic stops made in 2023 and were the same data used in TSAR 9, TSQR 13, TSQR 14, and TSQR 15. Communities identified for this research were Anthem/Desert Hills, Carefree, Cave Creek, Fountain Hills, Gila Bend, Goodyear/Mobile, Guadalupe, Sun City, Sun City West, and Youngtown. In this report, we refer to these communities as "MCSO service communities" and stops outside of these communities are referred to as "all other MCSO stops." There were 8,321 stops made in MCSO service communities (about 45% of 2023 traffic stops). For comparison, we also identified and analyzed stops that were not made in any of these communities (55% of 2023 MCSO traffic stops) and report previously reported (TSAR 9) results for MCSO as a whole.

There were two goals of the research. First, we wished to identify patterns of traffic stops in each community. We provide geospatial maps of stops; the racial/ethnic composition of drivers stopped for traffic violations; stops made when deputies were working on special assignments; patterns of Extended Stop Indicator use; identified reasons for the traffic stops; violation categories (speed, non-speed moving, license/insurance/registration, equipment, and other violations) for stops where a citation or warning was issued; and summary statistics for the TSAR baseline analysis benchmarks of stop length, citation rates, search rates, and arrest rates.

The second and main goal of the research was to identify whether stops made in MCSO service communities evidenced racial/ethnic disparity on the aforementioned baseline benchmarks for Black drivers, Hispanic drivers, and Minority drivers, when compared to White drivers. To accomplish this, we employed the propensity score matching methodology ("PSM") used in TSAR 9 and applied the method to each of the MCSO service communities and for all other MCSO stops.

This report is organized into 16 main sections. Following the introduction and discussion of the methodology, we provide summary statistics for all MCSO service communities and all other MCSO stops. We then provide focused analyses associated with each of the 10 MCSO service communities and all other MCSO stops. We conclude the report with a summary of the main findings and MCSO's response to disparity identified in this report. Readers should review summary statistics for MCSO service communities and all other MCSO stops within the body of the report. We summarize the main findings from the PSM analyses of stop length, citations, searches, and arrests in the tables below.

✓

No Statistically significant disparity

☒

Statistically significant disparity for White drivers

✗

Statistically significant disparity for, Black, Hispanic or Minority drivers

Table E1: Summary of PSM Analyses for Stop Length and Citation Disparity

Stop Length	Stop Length Black	Stop Length Hispanic	Stop Length Minority
TSAR 9	✓	✓	✗
Anthem/Desert Hills	✓	✓	✓
Carefree	✓	✓	✓
Cave Creek	✓	✓	✓
Fountain Hills	✓	✓	✓
Gila Bend	✓	✗	✓
Goodyear/Mobile	✓	✓	✓
Guadalupe	✓	✓	✓
Sun City	✓	✓	✓
Sun City West	✓	✓	✓
Youngtown	✓	✓	✓
All Other MCSO Stops	✓	✓	✗

Citations	Citations Black	Citations Hispanic	Citations Minority
TSAR 9	✓	✓	✗
Anthem/Desert Hills	✓	✓	✗
Carefree	✓	✓	✓
Cave Creek	✓	✓	✓
Fountain Hills	✓	✓	✓
Gila Bend	✓	✓	✓
Goodyear/Mobile	✓	✓	✓
Guadalupe	✓	✓	✓
Sun City	✓	✓	✓
Sun City West	✓	✓	✓
Youngtown	✓	✓	✓
All Other MCSO Stops	✓	✗	✗

Table E2: Summary of PSM Analyses for Searches and Arrests

Searches	Searches Black	Searches Hispanic	Searches Minority
TSAR 9	✓	✓	✓
Anthem/Desert Hills	☒	☒	☒
Carefree	N/A	✓	N/A
Cave Creek	N/A	N/A	N/A
Fountain Hills	✓	✓	✓
Gila Bend	N/A	N/A	N/A
Goodyear/Mobile	✓	✓	✓
Guadalupe	N/A	✓	✓
Sun City	✓	N/A	N/A
Sun City West	N/A	✓	✓
Youngtown	N/A	✓	✓
All Other MCSO Stops	✓	✓	✓

Arrests	Arrests Black	Arrests Hispanic	Arrests Minority
TSAR 9	✓	✓	✓
Anthem/Desert Hills	✓	✓	✓
Carefree	N/A	✓	✓
Cave Creek	☒	✓	✓
Fountain Hills	✓	✓	✓
Gila Bend	✓	✓	✗
Goodyear/Mobile	✓	✓	✓
Guadalupe	✓	✗	✓
Sun City	✓	✓	✓
Sun City West	✓	✓	✓
Youngtown	✓	✓	✓
All Other MCSO Stops	✗	✓	✓

Introduction

MCSO evaluates disparities in traffic stop length and outcomes for the office annually and reports the results of that analysis in the Traffic Stop Annual Report (TSAR) and analyzes disparities in traffic stop outcomes at the district level in quarterly reports each year. MCSO also analyzes individual deputy stop activity for disparities in the Traffic Stop Monthly Report (TSMR). This process allows MCSO to evaluate racial/ethnic disparities to determine if deputies might be making decisions based on bias.

In 2023, MCSO held contracts for policing in 7 cities and towns in Maricopa County, and while not contractually obligated, MCSO is responsive to several other large, organized communities. These cities, towns, and communities include Anthem/Desert Hills, Carefree, Cave Creek, Fountain Hills, Gila Bend, Goodyear/Mobile, Guadalupe, Sun City, Sun City West, and Youngtown. This research investigated traffic stop patterns and racial/ethnic disparity in these communities.

In this report, we refer to these communities as "MCSO service communities," and stops outside of these communities are referred to as "all other MCSO stops." There were 8,321 stops made in MCSO service communities (about 45% of 2023 traffic stops). For comparison we also identified and analyzed stops that were not made in any of these communities (55% of 2023 MCSO traffic stops), and report, previously published (TSAR 9) results, for all traffic stops made by MCSO deputies.

There were two goals of the research. First, we wished to identify patterns of traffic stops in each service community. To accomplish this, we provide geospatial maps of traffic stops; the racial/ethnic composition of drivers stopped for traffic violations; stops made when deputies were working on special assignments; patterns of extended stop indicator use; identified reasons for the traffic stops; violation categories for stops where a citation or warning was issued (speed, non-speed moving, license/insurance/registration, equipment, and other violations); and summary statistics for the TSAR baseline benchmarks of stop length, citation rates, search rates, and arrest rates.

The second and main goal of the research was to identify whether stops made in MCSO service communities evidenced racial/ethnic disparity on the aforementioned baseline benchmarks for Black drivers, Hispanic drivers, and Minority drivers, when compared to White drivers. To accomplish this, we employed the propensity score matching methodology used in TSAR 9 and applied the method to each of the MCSO service communities and for all other MCSO stops.

This report is organized into 16 main sections. Following the introduction and discussion of the methodology, we provide summary statistics for all MCSO service communities and all other MCSO stops. We then provide focused analyses associated with each of the 10 MCSO service communities and for all other MCSO traffic stops. We conclude the report with a summary of the main findings and MCSO's response to disparity identified in this report.

Methods

Data used for analyses presented in this report were the same data used to conduct analyses in the TSAR 9, TSQR 13, TSQR 14, and TSQR 15 reports. The data included all stops made by MCSO deputies in 2023 and included information collected from 18,632 traffic stops.[1] Additional data used for analyses presented in this report included Maricopa County Cities and Towns shapefile.[2]

Identifying MCSO Service Communities

To identify stops in MCSO service communities, MCSO used an overlay of stop GPS coordinates with the Maricopa Cities and Towns shapefile. Stops that bordered two jurisdictions were assigned to the jurisdiction under contract or within MCSO's service area. For example, the towns of Cave Creek and Carefree border Scottsdale and Phoenix along the Carefree Highway. Stops that were made on the Carefree Highway adjacent to Carefree or Cave Creek were assigned to those respective communities. Similarly, the town of Guadalupe borders the city of Tempe along Baseline Road. Traffic stops made along Baseline Road, adjacent to Guadalupe, were identified as Guadalupe stops.

Communities identified using the Maricopa County Cities and Towns shapefile were Carefree, Cave Creek, Fountain Hills, Goodyear/Mobile, Gila Bend, Guadalupe, and Youngtown.

For the unincorporated communities of Anthem/Desert Hills, Sun City, and Sun City West, MCSO utilized boundaries defined by Google Maps and assigned stops to those jurisdictions based on those boundaries.

We excluded stops on major highways that border or intersect the communities analyzed in this report. Specifically, we excluded stops on I-17 for analysis of Anthem/Desert Hills, stops on I-8 for analysis of Gila Bend, stops on I-10 for analysis of Goodyear/Mobile and Guadalupe, stops on Loop 303 for analysis of Sun City, and stops on State Highway 87 for analysis of Fountain Hills.

All stops that were not coded into one of the ten communities identified in this report were identified as "all other MCSO stops" and were also analyzed in this report.

One limitation of the location data should be acknowledged. Traffic stops of drivers who commit traffic violations within a community's boundaries may be stopped outside of these communities. For example, there were over 300 stops made by District 7 deputies along Shea Boulevard near 136th Street. Many of these stops were of vehicles exiting the Town of Fountain Hills and entering

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[1]For additional information about the data and its contents, see the 2023 Traffic Stop Annual Report 9, available at: https://www.mcsobio.org/_files/ugd/b6f92b_8b0225bf8d7f4067913eee84b9618294.pdf

[2]Maricopa County Cities and Towns shapefile was updated June 7 2024 and may not reflect the actual borders for Maricopa County cities and towns for the traffic stop data year of 2023. This is the best available GIS data specifying city/town borders for the county. GIS data on Maricopa County Cities and towns were downloaded September 30, 2024, from:
https://data-maricopa.opendata.arcgis.com/datasets/50144f0cd54e473a8830192ad86a31ed_0/explore

Scottsdale. These stops were coded as "All other MCSO Stops," because geographic x and y coordinate data do not identify where the violation occurred, only where the stop occurred.

We identified zip codes associated with MCSO service communities analyzed in this report. While the geographic boundaries for the zip code were not the same as city and town boundaries or subdivision boundaries, they largely correspond. We used zip codes to determine the proportion of stops made in the service community that were residents of that community. It was necessary to combine Cave Creek and Carefree for this analysis as they share zip code areas. Note that this analysis is limited because drivers may not have had their current address on their driver's license at the time of the stop. Because of this, readers should recognize the values reported as estimates only.

When MCSO deputies initiate a traffic stop, they identify the reason for the stop and this information is stored in the Vehicle Stop Contact Form. MCSO deputies manually enter the stop reason into the VSCF, and these entries were coded into 33 categories for this research. For each service community, we identify the number and percentage of stops for each of these stop reasons (excluding from tables stop reasons that did not occur in the community). Less than one percent of stops were coded as "other/unknown" and less than one percent of stops were coded as "multiple stop reasons."

For each MCSO service community, we provide maps identifying the locations of traffic stops that were analyzed in this report. Following this we provide descriptive statistics on the racial/ethnic composition of drivers stopped in these communities, the number and percent of special assignment stops by race/ethnicity and the number and percent of stops where Extended Traffic Stop Indicators (ETSIs) were used.[3] We also provide ETSI use for each community by race/ethnicity.

For each MCSO service community, we provide additional summary statistics on violation categories (violations that were cited/warned) by race/ethnicity. Finally, for each community we present the results of the propensity score matching for Black, Hispanic, and Minority drivers for the baseline metrics of stop length, citation rate, search rate, and arrest rate. We use the method employed in the TSAR 9 propensity score matching analysis.[4]

In the next section we provide a brief overview of the communities where MCSO is the primary law enforcement entity. We provide summary statistics for the benchmarks used in the propensity score matching analysis and identify the proportion of stops in each community that could be considered "local" community members.

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[3]MCSO investigated Extended Stop Indicator usage using 2023 traffic stop data and published results in TSQR 14. MCSO had previously investigated Extended Stop Indicators and their use in TSQR 3 (2020 data). These reports are available at: https://www.mcsobio.org/traffic-stop-data

[4]For a full review of the propensity score matching methodology, see TSAR 9 available at: https://www.mcsobio.org/_files/ugd/b6f92b_8b0225bf8d7f4067913eee84b9618294.pdf

Proportion of Stops of Local Drivers

One question MCSO wished to examine in this research was whether drivers stopped in MCSO service communities were local residents of those communities. Local drivers were defined as drivers whose zip code from their driver's license corresponds to the community in which they were stopped. We excluded "all other MCSO stops" from an analysis of local stops because stops outside of these communities span the entire county.[5] Table 1 provides the number and percent of stops in each community that could be considered local residents. For all but one community (Guadalupe), the majority of traffic stops were of drivers that did not reside in the zip codes associated with those communities. For example, in Cave Creek and Carefree over 80 percent of traffic stops were of drivers who did not reside in these communities. The proportion of non-resident driver stops was similar for Goodyear/Mobile and Sun City West. In the town of Guadalupe over 77 percent of traffic stops were of drivers who were considered local.

Table 1: Number of Stops in MCSO Service Communities and Percent "Local" Residents

	Number Stops	Number Local	Percent Local
Anthem/Desert Hills	1,005	303	30.15%
Cave Creek/Carefree	1,304	257	19.71%
Fountain Hills	3,186	1,514	47.52%
Gila Bend	644	265	41.15%
Goodyear/Mobile	286	63	22.03%
Guadalupe	428	331	77.34%
Sun City	560	238	42.50%
Sun City West	556	115	20.68%
Youngtown	352	168	47.73%

[5]Maricopa County is over 9,200 square miles in area. For information about the locations of all other MCSO stops see Figure 11 in this report.

Summary Statistics for Benchmarks

In Table 2 below we provide summary statistics for each service community analyzed in this report. Summary statistics for all MCSO traffic stops are also provided for comparison. Regarding stop length, we identify two averages for each community. In the first column we supply average stop length when excluding extended stops from the analysis. In the second column we provide average stop lengths for each community utilizing all stops, whether or not they were Extended Stops.

Table 2: Summary Statistics for Benchmarks, by MCSO Service Areas

	*Average Stop Length (SD)	Average Stop Length (SD)	Citation Rate	Discretionary Search Rate	Arrest Rate
All MCSO Stops	11.68 (11.48)	16.77 (22.24)	56.02%	0.34%	5.47%
Anthem/Desert Hills	11.83 (3.71)	16.05 (20.01)	56.02%	0.20%	3.58%
Carefree	11.04 (2.92)	14.47 (19.68)	83.60%	0.32%	2.07%
Cave Creek	11.50 (3.26)	14.44 (13.55)	63.61%	0.00%	2.22%
Fountain Hills	11.12 (3.55)	13.87 (12.29)	40.52%	0.09%	2.13%
Gila Bend	12.17 (3.45)	16.09 (13.21)	32.76%	0.00%	0.31%
Goodyear/Mobile	11.70 (3.53)	19.31 (31.11)	39.86%	1.05%	5.59%
Guadalupe	12.51 (3.44)	24.01 (29.48)	47.90%	1.17%	7.48%
Sun City	11.44 (3.23)	17.43 (26.83)	50.00%	0.18%	6.79%
Sun City West	11.24 (3.13)	14.98 (19.78)	58.27%	0.36%	4.86%
Youngtown	11.45 (3.45)	17.10 (28.12)	47.44%	0.85%	7.95%
All Other MCSO Stops	11.55 (6.55)	17.75 (24.60)	54.59%	0.41%	7.22%

*Excludes extended stops

In the following sections of this report, we provide analysis of each service community and all other MCSO stops, in turn, and conclude with a summary of all findings from the propensity score matching analysis and MCSO's response to the findings from the analyses.

Anthem/Desert Hills

Anthem is a master-planned community north of Phoenix and includes unincorporated land and land in both Phoenix and New River. Adjacent to Anthem, to the south, is Desert Hills Estates, which is an unincorporated area in Maricopa County. MCSO is the primary law enforcement agency for both Anthem and Desert Hills. Anthem/Desert Hills is patrolled by deputies assigned to District 4

In Figure 1 below, we identify the location of stops made in Anthem/Desert Hills. The majority of these traffic stops (about 80%) were made on thoroughfares of the Carefree Highway (State Hwy 74), North Gavilan Peak Parkway, North Daisy Mountain Drive, and West Anthem Way. Approximately 30 percent of stops made in Anthem/Desert Hills were made of drivers who resided in the area.

Figure 1: Anthem and Desert Hills Traffic Stops, 2023
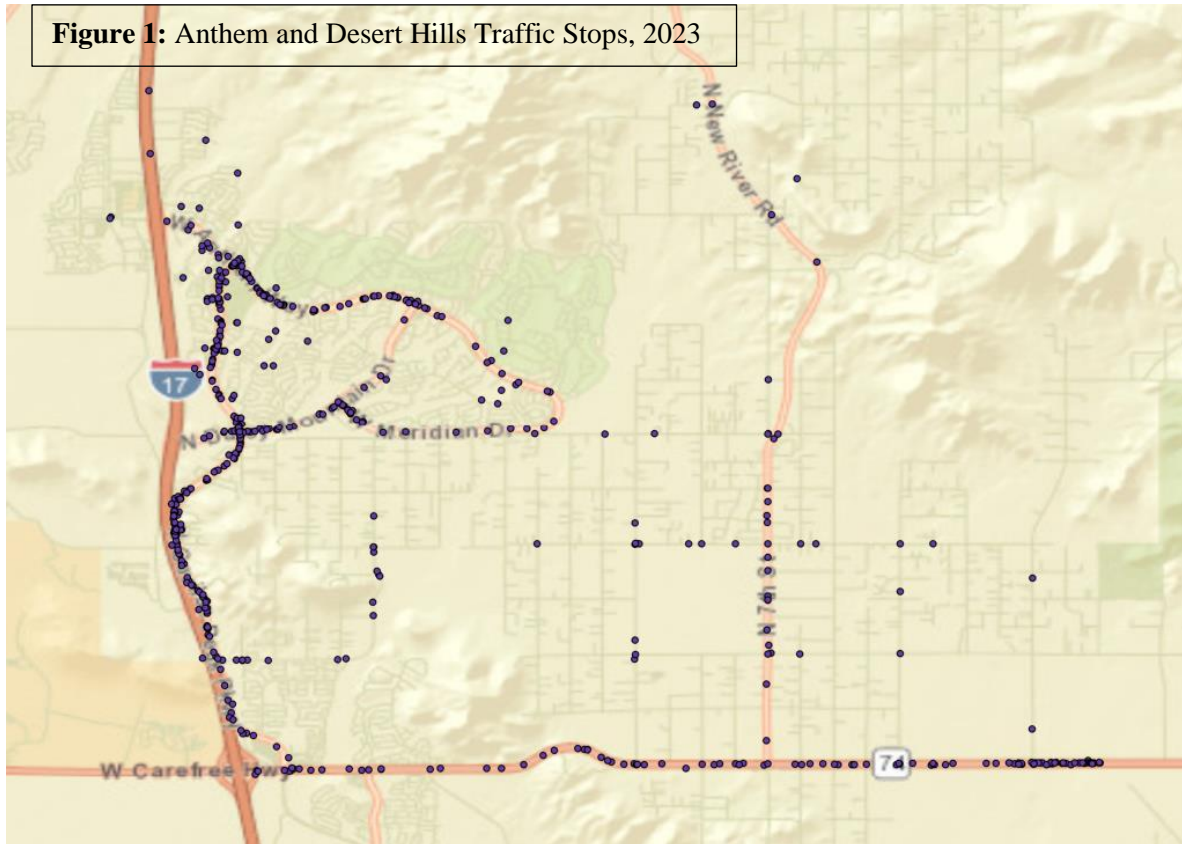
Race/Ethnicity of Drivers

In Table 3 below we report the racial/ethnic composition of drivers stopped by MCSO deputies in Anthem/Desert Hills and provide the racial/ethnic composition of all MCSO traffic stops for comparison. Nearly 85 percent of drivers stopped by MCSO deputies in Anthem/Desert Hills were identified as White. Deputies identified 96 (9.55%) drivers as Hispanic in Anthem/Desert Hills and 3.38 percent of drivers were identified as Black. About 15 percent of drivers stopped in Anthem/Desert Hills were identified as non-White Minorities.

Table 3: Racial/Ethnic Composition of Drivers, Anthem/Desert Hills

Race/Ethnicity	MCSO		Anthem/Desert Hills	
	Number	Percent	Number	Percent
Black	1,560	8.37%	34	3.38%
Hispanic	4,682	25.13%	96	9.55%
White	11,628	62.41%	851	84.68%
All Minority Drivers	7,004	37.59%	154	15.32%
Total	18,632	100.00%	1,005	100.00%

Special Assignments

Table 4, below, identifies stops that were made in Anthem/Desert Hills when deputies were working on special assignments. Special assignment stops were rare in Anthem/Desert Hills: there were 12 stops of drivers by deputies working special assignments in 2023. Four stops were made while deputies were working on Aggressive Driver detail and 8 stops were made when deputies were working on a DUI Task Force.

Table 4: Special Assignments, Anthem/Desert Hills

	Aggressive Driver	DUI Task Force	Click-it-or-Ticket
All Stops	4 (0.40%)	8 (0.80%)	0 (0.00%)
Black	0 (0.00%)	0 (0.00%)	0 (0.00%)
Hispanic	1 (1.04%)	0 (0.00%)	0 (0.00%)
White	3 (0.35%)	8 (0.94%)	0 (0.00%)
Minority	1 (0.65%)	0 (0.00%)	0 (0.00%)

Extended Traffic Stop Indicator Use

Table 5 below identifies extended stop indicator (ETSIs) used in Anthem/Desert Hills. There were 339 traffic stops (33.73%) with delays documented with ETSIs in Anthem/Desert Hills. Delays related to driving documentation (license, insurance, and registration) were most common, with nearly 20 percent (N = 200) of stops delayed for this reason. This delay was not evenly distributed among racial/ethnic groups. Nearly 30 percent of Hispanic drivers experienced delays associated with driving documentation while 18.5 percent of White drivers were delayed for this reason. In Anthem/Desert Hills 8.6 percent of stops were delayed due to training and 6.1 percent of stops were delayed by technical issues. There were only 4 instances of vehicles being towed in Desert Hills/Anthem. There were 45 (4.48%) stops that were delayed for "Other" reasons. Hispanic drivers experienced delays for other reasons during 9.4 percent of stops while White drivers experienced delays for other reasons during 3.8 percent of stops.

Table 5: Extended Traffic Stop Indicator Use, Anthem/Desert Hills

	DUI	Language Barrier	Driving Documentation	Technical Issue
All Stops	13 (1.29%)	7 (0.70%)	200 (19.90%)	61 (6.07%)
Black	0 (0.00%)	0 (0.00%)	8 (23.53%)	3 (8.82%)
Hispanic	1 (1.04%)	5 (5.21%)	27 (28.12%)	8 (8.33%)
White	11 (1.29%)	2 (0.24%)	157 (18.45%)	46 (5.41%)
Minority	2 (1.30%)	5 (3.25%)	43 (27.92%)	15 (9.74%)

	Training Stop	Vehicle Tow	Other Delay
All Stops	86 (8.56%)	4 (0.40%)	45 (4.48%)
Black	0 (0.00%)	0 (0.00%)	2 (5.88%)
Hispanic	11 (11.46%)	0 (0.00%)	9 (9.38%)
White	75 (8.81%)	4 (0.46%)	32 (3.76%)
Minority	11 (7.14%)	0 (0.00%)	13 (8.44%)

Stop Reasons

In Table 6 we identify the reasons drivers were stopped for traffic violations in Anthem/Desert Hills. The most common reason for traffic stops was speeding with 58.7 percent of drivers stopped for this reason. The second most common reason for traffic stops was a stop sign violation (10.35%). About 80 percent of stops in Anthem/Desert Hills were made for speeding or non-speeding moving violations while 20 percent of stops were made for other reasons (e.g., Expired/suspended plates, no license plates, no license plate light, or having a headlight or taillight not illuminated).

Table 6: Stop Reasons, Anthem/Desert Hills

Stop Reason	All Stop	Black	Hispanic	White	Minority
Cell phone use	15(1.49%)	0 (0.00%)	2 (2.08%)	13 (1.53%)	2 (1.30%)
Exp/Sus plate	78 (7.76%)	0 (0.00%)	10 (10.42%)	65 (7.64%)	13 (8.44%)
Fail to drive on right	2 (0.20%)	0 (0.00%)	0 (0.00%)	2 (0.24%)	0 (0.00%)
Failure to signal	1 (0.10%)	0 (0.00%)	1 (1.04%)	0 (0.00%)	1 (0.65%)
Failure to yield	1 (0.10%)	0 (0.00%)	0 (0.00%)	1 (0.12%)	0 (0.00%)
Failure to maintain lane	12 (1.19%)	0 (0.00%)	1 (1.04%)	9 (1.06%)	3 (1.95%)
Failure to obey traffic control device	2(0.20%)	0 (0.00%)	2 (2.08%)	0 (0.00%)	2 (1.30%)
Tailgating	1 (0.10%)	0 (0.00%)	0 (0.00%)	1 (0.12%)	0 (0.00%)
No head/taillights	45 (4.48%)	1 (2.94%)	6 (6.25%)	35 (4.11%)	10 (6.49%)
No license plate light	54 (5.37%)	4 (11.76%)	7 (7.29%)	42 (4.94%)	12 (7.79%)
No visible plate	25 (2.49%)	0 (0.00%)	2 (2.08%)	22 (2.59%)	3 (1.95%)
One head/taillight	47 (4.68%)	3 (8.82%)	6 (6.25%)	36 (4.23%)	11 (7.14%)
Passing violation	1 (0.10%)	0 (0.00%)	0 (0.00%)	1 (0.12%)	0 (0.00%)
Reckless driving	2 (0.20%)	0 (0.00%)	0 (0.00%)	2 (0.24%)	0 (0.00%)
Red light violation	12 (1.19%)	0 (0.00%)	3 (3.12%)	9 (1.06%)	3 (1.95%)
Speeding	590 (58.71%)	20 (58.82%)	50 (52.08%)	509(59.81%)	81 (52.60%)
Stop sign violation	104 (10.35%)	4 (11.76%)	6 (6.25%)	93 (10.93%)	11 (7.14%)
Unsafe lane change	4 (0.40%)	1 (2.94%)	0 (0.00%)	3(0.35%)	1 (0.65%)
Wrong way driving	3 (0.30%)	0 (0.00%)	0 (0.00%)	3 (0.35%)	0 (0.00%)
Multiple stop reasons	5 (0.50%)	1 (2.94%)	0 (0.00%)	4 (0.47%)	1 (0.65%)
Other /unknown	1 (0.10%)	0 (0.00%)	0 (0.00%)	1 (0.12%)	0 (0.00%)

Violation Categories

In Table 7 below we identify the categories of violations that were cited or warned during stops in Anthem/Desert Hills.[6] In Anthem/Desert Hills 57.7 percent of drivers were cited or warned for speeding violations. This was the most common violation that was cited/warned. The second most common category of violation that was cited/warned was for driving documentation (18.01%). Equipment and non-speed moving violations were cited/warned during 13.9 percent and 15.5 percent of traffic stops, respectively. Two percent of drivers were cited or warned for "Other" violations.

Table 7: Violation Categories, Number and Percent of Stops, Anthem/Desert Hills

	Driving Documentation	Equipment	Non-Speed Moving	Speed	Other Violation
All Stops	181 (18.01%)	140 (13.93%)	156 (15.52%)	580 (57.71%)	20 (1.99%)
Black	6 (17.65%)	8 (23.53%)	6 (17.65%)	19 (55.88%)	0 (0.00%)
Hispanic	19 (19.79%)	17 (17.71%)	13 (13.54%)	49 (51.04%)	3 (3.12%)
White	151 (17.74%)	110 (12.93%)	134 (15.75%)	501 (58.87%)	17 (2.00%)
Minority	30 (19.48%)	30 (19.48%)	22 (14.29%)	79 (51.30%)	3 (1.95%)

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[6]Note that because drivers may receive more than one citation or warning, percentages across violation categories exceed 100 percent.

Propensity Score Matching Analysis

In Table 8 below we provide summary statistics for the benchmarks used in the baseline propensity score matching analysis. Note that arrests include both custodial arrests and non-custodial "cite and release" arrests. In Tables 9–12 below we report the results of propensity score matching on the baseline benchmarks used in the TSAR—stop length, citation rate, search rate, and arrest rate. For each benchmark we used propensity score matching to compare Black, Hispanic, and Minority drivers to White drivers.

Table 8: Summary Statistics for PSM Benchmarks, Anthem/Desert Hills

Racial/Ethnicity	Stop Length[7] (Standard Deviation)	Citation Rate	Search Rate	Arrest Rate
Black Drivers	11.68 (3.99)	47.06%	0.00%	2.94%
Hispanic Drivers	11.70 (3.30)	62.50%	0.24%	3.12%
White Driver	11.82 (3.76)	55.46%	0.00%	3.64%
Minority Drivers	11.90 (3.39)	59.09%	0.00%	3.25%

Table 9 presents results from the propensity score analysis of stop length for stops made in Anthem/Desert Hills. We found no statistically significant disparity for Hispanic, Black, or Minority drivers for differences in stop length for stops made in Anthem/Desert Hills.

Table 9: PSM Results, Stop Length, Anthem/Desert Hills

Model	Stop Length difference (in minutes)	t-statistic	Statistically Significant
Black Drivers	0.18	0.18	No
Hispanic Drivers	–0.45	–0.76	No
Minority Drivers	0.08	0.29	No

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[7]All PSM analyses for stop length throughout the report exclude Extended Stops.

Table 10 presents results from the propensity score analysis of citation rates for stops made in Anthem/Desert Hills. We identified a statistically significant difference in citation rates between Minority and White drivers. Minority drivers were cited 5.5 percent more often than White drivers in Anthem/Desert Hills.

Table 10: PSM Results, Citations, Anthem/Desert Hills

Model	Difference (percentage points)	t-statistic	Statistically Significant
Black Drivers	−8.41	−1.32	No
Hispanic Drivers	7.04	1.89	No
Minority Drivers	5.50	2.04	Yes

Table 11 provides results from the propensity score analysis of discretionary searches for Anthem/Desert Hills. We found statistically significant difference in search rates between Black and White drivers, between Hispanic and White drivers and between Minority and White drivers. In each case, White drivers were searched at a higher rate than non-White drivers. Note that there were only two discretionary searches in Anthem/Desert Hills in 2023 and both searches were of White drivers.

Table 11: PSM Results, Discretionary Searches, Anthem/Desert Hills

Model	Difference (percentage points)	t-statistic	Statistically Significant
Black Drivers	−0.24	−2.00	Yes
Hispanic Drivers	−0.24	−2.00	Yes
Minority Drivers	−0.28	−2.00	Yes

Table 12 provides the results from the propensity score analysis of arrest rates in Anthem/Desert Hills. We found no statistically significant disparity for Hispanic, Black, or Minority drivers for differences in arrest rates for stops made in Anthem/Desert Hills.

Table 12: PSM Results, Arrests, Anthem/Desert Hills

Model	Difference (percentage points)	t-statistic	Statistically Significant
Black Drivers	−0.70	−0.32	No
Hispanic Drivers	−0.52	−0.38	No
Minority Drivers	−0.68	−0.60	No

Carefree

Carefree is a small town located north of Scottsdale and Phoenix in the northeast portion of Maricopa County. MCSO is the primary law enforcement entity in the town and contracts with the town to provide policing services and traffic enforcement. Carefree is one jurisdiction that MCSO patrols using a dedicated traffic car. Deputies who patrol in the town are managed under District 4 command.

In Figure 2 below, we identify the location of traffic stops in the Town of Carefree. In 2023 MCSO made 628 traffic stops within the town limits or along thoroughfares which represent the boundaries of the town. The majority of these stops were made on the main throughfares North Cave Creek Road to the south of Cave Creek, North Cave Creek Road travelling east and west through the northern portion of Carefree, and North Tom Darlington Drive. Carefree and its neighboring town of Cave Creek are patrolled out of District 4 and have a dedicated traffic car. Approximately 20 percent of stops made in Carefree/Cave Creek were made of drivers who resided in the area.

Figure 2: Town of Carefree MCSO Traffic Stops, 2023

Race/Ethnicity of Drivers

In Table 13 below we report the racial/ethnic composition of drivers stopped by MCSO deputies in Carefree and provide the racial/ethnic composition of all MCSO traffic stops for comparison. Over 85 percent of drivers stopped by MCSO deputies in Carefree were identified as White. Deputies identified 60 (9.55%) drivers as Hispanic in Carefree, and 1.59 percent of drivers were identified as Black. Finally, 14.81 percent of drivers stopped in Carefree were identified as non-White Minorities.

Table 13: Racial/Ethnic Composition of Drivers Stopped, Carefree

| | MCSO | | Carefree | |
	Number	Percent	Number	Percent
Black	1,560	8.37%	10	1.59%
Hispanic	4,682	25.13%	60	9.55%
White	11,628	62.41%	535	85.19%
All Minority Drivers	7,004	37.59%	93	14.81%
Total	18,632	100.00%	628	100.00%

Special Assignments

Table 14 below provides a tabulation of stops made on special assignment details in Carefree. There were no stops made on either Aggressive Driving special assignments or on Click-it-or-Ticket special assignments. Seventeen stops (2.71%) were made by deputies working DUI Taskforce special assignments. Of these 17 stops, 16 were stops of drivers perceived to be White and one stop was of a Hispanic driver.

Table 14: Special Assignments, Carefree

	Aggressive Driver	DUI Task Force	Click-it-or-Ticket
All Stops	0 (0.00%)	17 (2.71%)	0 (0.00%)
Black	0 (0.00%)	0 (0.00%)	0 (0.00%)
Hispanic	0 (0.00%)	1 (1.67%)	0 (0.00%)
White	0 (0.00%)	16 (2.99%)	0 (0.00%)
Minority	0 (0.00%)	1 (1.08%)	0 (0.00%)

Extended Traffic Stop Indicator Use

In Table 15 below we report Extended Traffic Stop Indicator (ETSIs) use for Carefree. There were 161 traffic stops (25.64%) with delays documented with ETSIs in Carefree. Delays related to driving documentation (license, insurance, and registration) were most common with about 14.5 percent (N = 91) of stops delayed for this reason. This delay was not evenly distributed among racial/ethnic groups. Twenty-five percent of Hispanic drivers (N = 15) experienced delays associated with driving documentation while 14.02 percent of White drivers were delayed for this reason. In Carefree, 6.85 percent of stops were delayed due to training and 2.23 percent of stops were delayed by technical issues. There were 7 instances of vehicles being towed in Carefree. There were 20 stops that were delayed for "Other" reasons.

Table 15: Extended Traffic Stop Indicator Use, Carefree

	DUI	Language Barrier	Driving Documentation	Technical Issue
All Stops	9 (1.43%)	4 (0.64%)	91 (14.49%)	14 (2.23%)
Black	0 (0.00%)	0 (0.00%)	1 (10.00%)	0 (0.00%)
Hispanic	1 (1.67%)	4 (6.67%)	15 (25.00%)	2 (3.33%)
White	7 (1.31%)	0 (0.00%)	75 (14.02%)	11 (2.06%)
Minority	2 (2.15%)	4 (4.30%)	16 (17.20%)	3 (3.23%)

	Training Stop	Vehicle Tow	Other Delay
All Stops	43 (6.85%)	7 (1.11%)	20 (3.18%)
Black	1 (10.00%)	0 (0.00%)	1 (10.00%)
Hispanic	4 (6.67%)	1 (1.67%)	2 (3.33%)
White	36 (6.73%)	5 (0.93%)	17 (3.18%)
Minority	7 (7.53%)	2 (2.15%)	3 (3.23%)

Stop Reasons

In Table 16 we identify the reasons drivers were stopped for traffic violations in Carefree. The most common reason for a traffic stop was speeding, with 77.55 percent of drivers stopped for this reason. The second most common reason for traffic stops in Carefree was a stop sign violation. About 8.3 percent of drivers were stopped for this reason. About 91.6 percent of stops in Carefree were made for speeding or non-speeding moving violations while 8.4 percent of stops were made for other violations (e.g. expired/suspended plates, no license plates, no license plate light, or having a headlight or taillight not illuminated).

Table 16: Stop Reasons, Carefree

Stop Reason	All Stop	Black	Hispanic	White	Minority
Cell phone use	8 (1.27%)	0 (0.00%)	2 (3.33%)	6 (1.12%)	2 (2.15%)
Driving w/ high beams	1 (0.16%)	0 (0.00%)	0 (0.00%)	1 (0.19%)	0 (0.00%)
Exp/Sus plate	45 (7.17%)	1 (10.00%)	6 (10.00%)	36 (6.73%)	9 (9.68%)
Failure to signal	1 (0.16%)	0 (0.00%)	0 (0.00%)	1 (0.19%)	0 (0.00%)
Failure to yield	2 (0.32%)	0 (0.00%)	0 (0.00%)	2 (0.37%)	0 (0.00%)
Failure to maintain lane	3 (0.48%)	0 (0.00%)	0 (0.00%)	3 (0.56%)	0 (0.00%)
Failure to obey traffic control device	2 (0.32%)	0 (0.00%)	0 (0.00%)	2 (0.37%)	0 (0.00%)
Failure to stop for school bus	1 (0.16%)	0 (0.00%)	0 (0.00%)	1 (0.19%)	0 (0.00%)
Improper lights	1 (0.16%)	0 (0.00%)	0 (0.00%)	1 (0.19%)	0 (0.00%)
Improper turn	2 (0.32%)	0 (0.00%)	0 (0.00%)	2 (0.37%)	0 (0.00%)
No head/taillights	2 (0.32%)	0 (0.00%)	1 (1.67%)	1 (0.19%)	1 (1.08%)
No license plate light	2 (0.32%)	0 (0.00%)	0 (0.00%)	1 (0.19%)	1 (1.08%)
No visible plate	1 (0.16%)	0 (0.00%)	0 (0.00%)	1 (0.19%)	0 (0.00%)
One head/taillight	4 (0.64%)	0 (0.00%)	0 (0.00%)	4 (0.75%)	0 (0.00%)
Passing violation	1 (0.16%)	0 (0.00%)	0 (0.00%)	1 (0.19%)	0 (0.00%)
Reckless driving	1 (0.16%)	0 (0.00%)	0 (0.00%)	1 (0.19%)	0 (0.00%)
Red Light Violation	8 (1.27%)	0 (0.00%)	0 (0.00%)	7 (1.31%)	1 (1.08%)
Speeding	487 (77.55%)	8 (80.00%)	47 (78.33%)	414 (77.38%)	73 (78.49%)
Stop sign violation	52 (8.28%)	1 (10.00%)	4 (6.67%)	46 (8.61%)	6 (6.45%)
Multiple stop reasons	1 (0.16%)	0 (0.00%)	0 (0.00%)	1 (0.19%)	0 (0.00%)
Other /unknown	3 (0.48%)	0 (0.00%)	0 (0.00%)	3 (0.56%)	0 (0.00%)

Violation Categories

In Table 17 below we identify the categories of violations that were cited or warned during stops in Carefree.[8] In Carefree 76.4 percent of drivers were cited or warned for speeding violations. This was the most common violation that was cited/warned. The second most common category of violation that was cited/warned was for driving documentation (14.17%). Equipment and non-speed moving violations were cited/warned during 1.75 percent and 12.10 percent of traffic stops, respectively. About 2 percent of drivers were cited or warned for "Other violations."

Table 17: Violation Categories, Carefree

	Driving Documentation	Equipment	Non-Speed Moving	Speed	Other Violation
All Stops	89 (14.17%)	11 (1.75%)	76 (12.10%)	480 (76.43%)	12 (1.91%)
Black	3 (30.00%)	0 (0.00%)	1 (10.00%)	7 (70.00%)	0 (0.00%)
Hispanic	16 (26.67%)	3 (5.00%)	4 (6.67%)	45 (75.00%)	2 (3.33%)
White	68 (12.71%)	7 (1.31%)	68 (12.71%)	410 (76.64%)	10 (1.87%)
Minority	21 (22.58%)	4 (4.30%)	8 (8.60%)	70 (75.27%)	2 (2.15%)

Propensity Score Matching Analysis

In Table 18 below we provide summary statistics for the benchmarks used in the baseline propensity score matching analysis for Carefree. Note that arrests include both custodial arrests and non-custodial "cite and release" arrests. In Tables 19–22 below we report the results of propensity score matching on the baseline benchmarks used in the TSAR—stop length, citation rate, search rate, and arrest rate. For each benchmark we used propensity score matching to compare Black, Hispanic, and Minority drivers to White drivers.

Table 18: Summary Statistics for PSM Benchmarks, Carefree

Racial/Ethnicity	Stop Length (Standard Deviation)	Citation Rate	Search Rate	Arrest Rate
Black Drivers	10.38 (2.67)	80.00%	0.00%	0.00%
Hispanic Drivers	11.00 (2.40)	91.67%	0.00%	1.67%
White Driver	10.10 (2.98)	82.99%	0.37%	2.06%
Minority Drivers	10.63 (2.44)	87.10%	0.00%	2.15%

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[8]Note that because drivers may receive more than one citation or warning, percentages across violation categories exceed 100 percent.

Table 19 presents results from the propensity score analysis of stop length for stops made in Carefree. We found no statistically significant disparity for Hispanic, Black, or Minority drivers for differences in stop length for stops made in Carefree.

Table 19: PSM Results, Stop Length, Carefree

Model	Stop Length difference (in minutes)	t-statistic	Statistically Significant
Black Drivers	–0.73	–1.01	No
Hispanic Drivers	0.68	1.20	No
Minority Drivers	0.36	0.87	No

Table 20 presents results from the propensity score analysis of citation rates for stops made in Carefree. We identified no statistically significant differences for Hispanic, Black, or Minority drivers for differences in citation rates for stops made in Carefree.

Table 20: PSM Results, Citations, Carefree

Model	Difference (percentage points)	t-statistic	Statistically Significant
Black Drivers	–2.99	–0.30	No
Hispanic Drivers	3.33	0.63	No
Minority Drivers	5.38	0.91	No

Table 21 provides results from the propensity score analysis of discretionary searches for Carefree. There were insufficient data to analyze search disparity between White and Black drivers and between White and Minority drivers. We found no statistically significant difference in search rates between Hispanic and White drivers.

Table 21: PSM Results, Discretionary Searches, Carefree[9]

Model	Difference (percentage points)	t-statistic	Statistically Significant
Black Drivers	N/A	N/A	N/A
Hispanic Drivers	–1.01	–0.74	No
Minority Drivers	N/A	N/A	N/A

[9]Note that there were two discretionary searches in Carefree in 2023. Each of these searches were of White drivers.

Table 22 provides the results from the propensity score analysis of arrest rates in Carefree. We found no statistically significant disparity for Hispanic or Minority drivers for differences in arrest rates for stops made in Carefree. There were insufficient data to analyze arrest disparity between Black and White drivers.

Table 22: PSM Results, Arrests, Carefree

Model	Difference (percentage points)	t-statistic	Statistically Significant
Black Drivers[10]	N/A	N/A	N/A
Hispanic Drivers	−1.01	−0.74	No
Minority Drivers	0.00	0.00	No

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[10]There were no arrests of Black drivers in Carefree in 2023.

Cave Creek

Cave Creek is a small town located north of Scottsdale and Phoenix in the northeast portion of Maricopa County. MCSO is the primary law enforcement agency in the town and contracts with the town to provide policing services and traffic enforcement. MCSO operates a dedicated traffic car in Cave Creek. In 2023, MCSO made 676 traffic stops within the town limits of Cave Creek.[11] In Figure 3 below, we identify the location of these traffic stops. The majority of these traffic stops occurred along the Carefree Highway and along North Cave Creek Road. Deputies that patrol the town of Cave Creek are managed under District 4 command. Approximately 20 percent of stops made in Cave Creek/Carefree were made of drivers who resided in the area.

Figure 3: Town of Cave Creek MCSO Traffic Stops.

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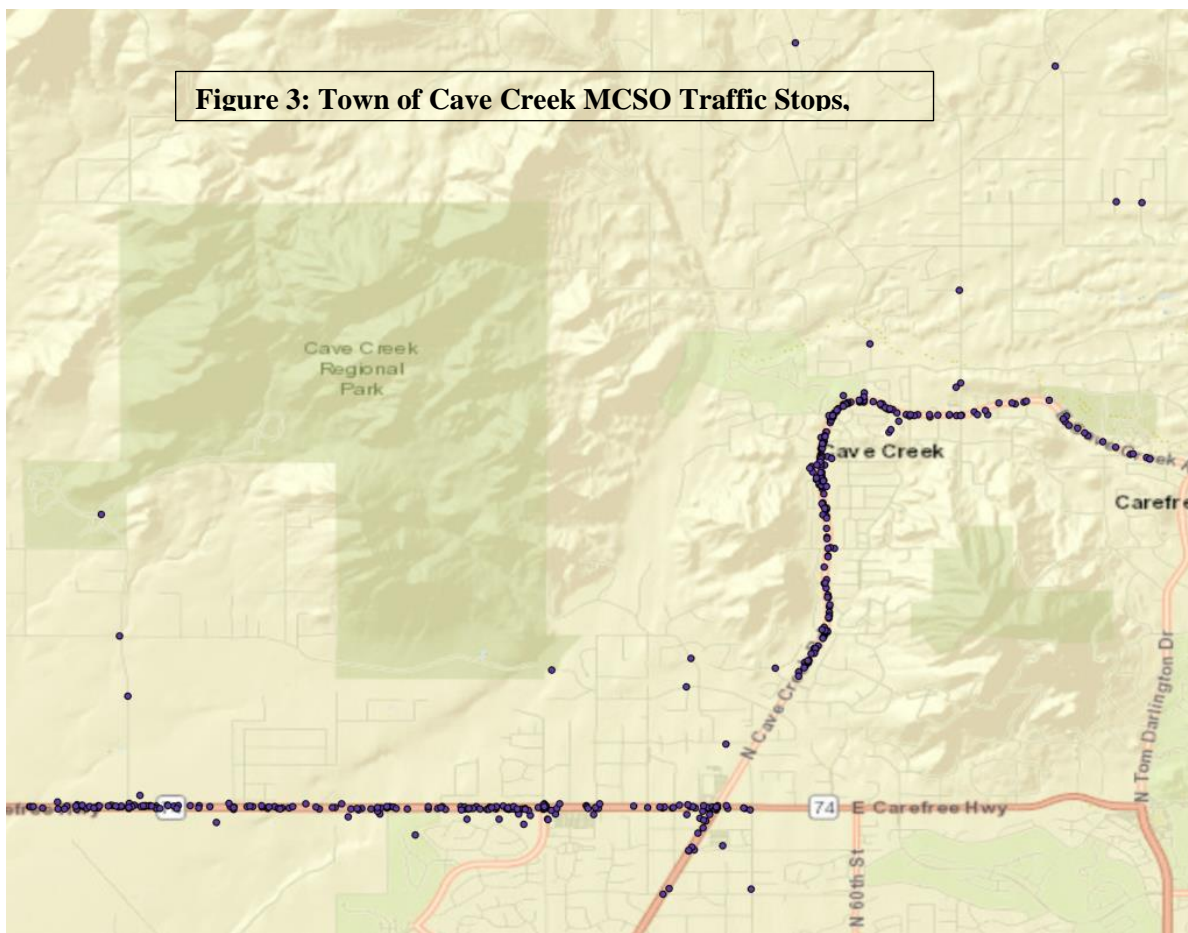
[11] Note that stops made on the southern border of Cave Creek on the Carefree Highway were classified as Cave Creek traffic stops.

Race/Ethnicity of Drivers

In Table 23 below we report the racial/ethnic composition of drivers stopped by MCSO deputies in Cave Creek and provide the racial/ethnic composition of all MCSO traffic stops for comparison. Over 82 percent of drivers stopped by MCSO deputies in Cave Creek were identified as White. Deputies identified 83 (12.28%) drivers as Hispanic in Cave Creek and 3.55 percent of drivers stopped in Cave Creek were identified as Black. Finally, 16.86 percent of drivers stopped in Cave Creek were identified as non-White Minorities.

Table 23: Racial/Ethnic Composition of Drivers Stopped, Cave Creek

| | MCSO | | Cave Creek | |
	Number	Percent	Number	Percent
Black	1,560	8.37%	24	3.55%
Hispanic	4,682	25.13%	83	12.28%
White	11,628	62.41%	562	83.14%
All Minority Drivers	7,004	37.59%	114	16.86%
Total	18,632	100.00%	676	100.00%

Special Assignments

Table 24, below, identifies stops that were made in Cave Creek when deputies were working on special assignments. There were only 18 stops of drivers in Cave Creek by deputies working special assignments in 2023. Three stops were made while deputies were working on Aggressive Driver detail and 14 stops were made when deputies were working on a DUI Task Force. Finally, one driver was stopped by a deputy who was working on a Click-it-or-Ticket assignment.

Table 24: Special Assignments, Cave Creek

	Aggressive Driver	DUI Task Force	Click-it-or-Ticket
All Stops	3 (0.44%)	14 (2.07%)	1 (0.00%)
Black	1 (4.17%)	0 (0.00%)	0 (0.00%)
Hispanic	1 (1.20%)	2 (2.41%)	1 (0.15%)
White	1 (0.18%)	12 (2.14%)	0 (0.00%)
Minority	2 (1.75%)	2 (1.75%)	1 (1.20%)

Extended Traffic Stop Indicator Use

In Table 25 below we report Extended Traffic Stop Indicator (ETSIs) use for Cave Creek. There were 216 traffic stops (31.95%) with delays documented with ETSIs in Cave Creek. Delays related to driving documentation (license, insurance, and registration) were most common with about 20.41 percent (N = 138) of stops delayed for this reason. Twenty-three percent of Hispanic drivers (N = 19) experienced delays associated with driving documentation while 19 percent of White drivers (N = 108) were delayed for this reason. In Cave Creek, 7.10 percent of stops were delayed due to training and 5.18 percent of stops were delayed by technical issues. There were 7 instances of vehicles being towed in Cave Creek. There were 45 stops (6.66%) that were delayed for "Other" reasons.

Table 25: Extended Traffic Stop Indicator Use, Cave Creek

	DUI	Language Barrier	Driving Documentation	Technical Issue
All Stops	7 (1.04%)	11 (1.63%)	138 (20.41%)	35 (5.18%)
Black	0 (0.00%)	0 (0.00%)	8 (33.33%)	1 (4.17%)
Hispanic	1 (1.20%)	10 (12.05%)	19 (22.89%)	5 (6.02%)
White	6 (1.07%)	0 (0.00%)	108 (19.22%)	29 (5.16%)
Minority	1 (0.88%)	11 (9.65%)	30 (26.32%)	6 (5.26%)

	Training Stop	Vehicle Tow	Other Delay
All Stops	48 (7.10%)	7 (1.04%)	45 (6.66%)
Black	3 (12.50%)	0 (0.00%)	1 (4.17%)
Hispanic	6 (7.23%)	3 (3.61%)	8 (9.64%)
White	39 (6.94%)	4 (0.71%)	35 (6.23%)
Minority	9 (7.89%)	3 (2.63%)	10 (8.77%)

Stop Reasons

In Table 26 we identify the reasons drivers were stopped for traffic violations in Cave Creek. The most common reason for stops in Cave Creek was speeding with 63.91 percent of drivers stopped for this reason. The second most common reason for traffic stops was expired or suspended license plates. About 13.8 percent of drivers were stopped for this reason. About 76 percent of stops in Cave Creek were made for speeding or non-speeding moving violations while 24 percent of stops were made for other violations (e.g. expired/suspended plates, no license plates, no license plate light, or having a headlight or taillight not illuminated).

Table 26: Stop Reasons, Cave Creek

Stop Reason	All Stop	Black	Hispanic	White	Minority
Attempt to Locate	1 (0.15%)	0 (0.00%)	0 (0.00%)	1 (0.18%)	0 (0.00%)
Cell phone use	14 (2.07%)	1 (4.17%)	0 (0.00%)	13 (2.31%)	1 (0.88%)
Exp/Sus plate	93 (13.76%)	3 (12.50%)	16 (19.28%)	74 (13.17%)	19 (16.67%)
Fail to drive on right	1 (0.15%)	0 (0.00%)	1 (1.20%)	0 (0.00%)	1 (0.88%)
Failure to yield	3 (0.44%)	0 (0.00%)	0 (0.00%)	3 (0.53%)	0 (0.00%)
Failure to maintain lane	7 (1.04%)	0 (0.00%)	0 (0.00%)	7 (1.25%)	0 (0.00%)
Failure to move for EV	4 (0.59%)	0 (0.00%)	1 (1.20%)	3 (0.53%)	1 (0.88%)
Improper turn	1 (0.15%)	0 (0.00%)	0 (0.00%)	1 (0.18%)	0 (0.00%)
No head/taillights	22 (3.25%)	2 (8.33%)	3 (3.61%)	17 (3.02%)	5 (4.39%)
No license plate light	28 (4.14%)	0 (0.00%)	5 (6.02%)	22 (3.91%)	6 (5.26%)
No visible plate	10 (1.48%)	1 (4.17%)	2 (2.41%)	7 (1.25%)	3 (2.63%)
One head/taillight	28 (4.14%)	0 (0.00%)	6 (7.23%)	22 (3.91%)	6 (5.26%)
Passing violation	1 (0.15%)	0 (0.00%)	1 (1.20%)	0 (0.00%)	1 (0.88%)
Red Light Violation	2 (0.30%)	0 (0.00%)	1 (1.20%)	1 (0.18%)	1 (0.88%)
Speed too slow	1 (0.15%)	0 (0.00%)	1 (1.20%)	0 (0.00%)	1 (0.88%)
Speeding	432 (63.91%)	15 (62.50%)	44 (53.01%)	367 (65.30%)	65 (57.02%)
Stop sign violation	19 (2.81%)	1 (4.17%)	1 (1.20%)	17 (3.02%)	2 (1.75%)
Unsafe lane change	2 (0.30%)	0 (0.00%)	1 (1.20%)	1 (0.18%)	1 (0.88%)
Wrong way driving	4 (0.59%)	0 (0.00%)	0 (0.00%)	4 (0.71%)	0 (0.00%)
Multiple stop reasons	2 (0.30%)	0 (0.00%)	0 (0.00%)	2 (0.36%)	0 (0.00%)
Other /unknown	1 0.15(%)	1 (4.17%)	0 (0.00%)	0 (0.00%)	1 (0.88%)

Violation Categories

In Table 27 below we identify the categories of violations that were cited or warned during stops in Cave Creek.[12] In Cave Creek 63 percent of drivers were cited or warned for speeding violations. This was the most common violation that was cited/warned. The second most common category of violation that was cited/warned was for driving documentation (23.52%). Equipment and non-speed moving violations were cited/warned during 12.13 percent and 7.1 percent of traffic stops, respectively. About 2 percent of drivers were cited or warned for "Other violations."

Table 27: Violation Categories, Cave Creek

	Driving Documentation	Equipment	Non-Speed Moving	Speed	Other Violation
All Stops	159 (23.52%)	82 (12.13%)	48 (7.10%)	425 (62.87%)	16 (2.37%)
Black	6 (25.00%)	3 (12.50%)	2 (8.33%)	15 (62.50%)	1 (4.17%)
Hispanic	27 (32.53%)	15 (18.07%)	6 (7.23%)	44 (53.01%)	0 (0.00%)
White	125 (22.24%)	63 (11.21%)	40 (7.12%)	360 (64.06%)	15 (2.67%)
Minority	34 (29.82%)	19 (16.67%)	8 (7.02%)	65 (57.02%)	1 (0.88%)

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[12]Note that because drivers may receive more than one citation or warning, percentages across violation categories exceed 100 percent.

Propensity Score Matching Analysis

In Table 28 below we provide summary statistics for the benchmarks used in the baseline propensity score matching analysis for Carefree. Note that arrests include both custodial arrests and non-custodial "cite and release" arrests. In Tables 29–32 below we report the results of propensity score matching on the baseline benchmarks used in the TSAR—stop length, citation rate, search rate, and arrest rate. For each benchmark we used propensity score matching to compare Black, Hispanic, and Minority drivers to White drivers.

Table 28: Summary Statistics for PSM Benchmarks, Cave Creek

Racial/Ethnicity	Stop Length (Standard Deviation)	Citation Rate	Search Rate	Arrest Rate
Black Drivers	11.21 (2.75)	54.17%	0.00%	0.00%
Hispanic Drivers	11.44 (3.10)	66.27%	0.00%	2.41%
White Driver	11.54 (3.31)	63.52%	0.00%	2.31%
Minority Drivers	11.26 (2.98)	64.04%	0.00%	1.75%

Table 29 presents results from the propensity score analysis of stop length for stops made in Cave Creek. We found no statistically significant disparity for Hispanic, Black, or Minority drivers for differences in stop length for stops made in Cave Creek.

Table 29: PSM Results, Stop Length, Cave Creek

Model	Stop Length difference (in minutes)	t-statistic	Statistically Significant
Black Drivers	–0.33	–0.59	No
Hispanic Drivers	1.04	1.12	No
Minority Drivers	–0.17	–0.28	No

Table 30 presents results from the propensity score analysis of citation rates for stops made in Cave Creek. We identified no statistically significant differences for Hispanic, Black, or Minority drivers for differences in citation rates for stops made in Cave Creek.

Table 30: PSM Results, Citations, Cave Creek

Model	Difference (percentage points)	t-statistic	Statistically Significant
Black Drivers	–9.4	–1.22	No
Hispanic Drivers	7.2	0.88	No
Minority Drivers	4.4	0.57	No

There were insufficient data to analyze search disparity in Cave Creek as there were no discretionary searches in Cave Creek.

Table 31: PSM Results, Discretionary Searches, Cave Creek[13]

Model	Difference (percentage points)	t-statistic	Statistically Significant
Black Drivers	N/A	N/A	N/A
Hispanic Drivers	N/A	N/A	N/A
Minority Drivers	N/A	N/A	N/A

Table 32 provides the results from the propensity score analysis of arrest rates in Cave Creek. We found no statistically significant disparity for Hispanic or Minority drivers for differences in arrest rates for stops made in Cave Creek. We found a statistically significant difference between Black and White drivers, with White drivers arrested 2.31 percent more often than Black drivers.

Table 32: PSM Results, Arrests, Cave Creek

Model	Difference (percentage points)	t-statistic	Statistically Significant
Black Drivers	–2.31	–5.15	Yes
Hispanic Drivers	0.00	0.00	No
Minority Drivers	0.88	0.29	No

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[13]There were no discretionary searches in Cave Creek in 2023.

Fountain Hills

The Town of Fountian Hills is an community in northeastern Maricopa County. The Town of Fountain Hills has a contract with MCSO for police services and traffic enforcement. MCSO deputies made 3,186 traffic stops in 2023 within the city's jurisdictional boundaries and represents over 17 percent of all MCSO traffic stops made in 2023.

In Figure 4 below, we identify the location of traffic stops in the Town of Fountain Hills. The highest concentration of traffic stops in Fountain Hills occurred on Shea Boulevard, Palisades Boulevard, North Fountain Hills Boulevard, and North Saguaro Boulevard. Palisades Boulevard, North Fountain Hills Boulevard, and North Saguaro Boulevard are designated by Fountain Hills city council as safety corridors. Fountain Hills has a dedicated traffic car, and 395 stops were made by the traffic patrol vehicle in Fountain Hills in 2023 and MCSO operated patrols for Fountain Hills out of District 7.[14] Approximately 50 percent of stops made in Fountain Hills were made of drivers who resided in the area.

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[14] Approximately 400 stops made by traffic cars assigned to Fountain Hills occured in Scottsdale, while the underlying violations occurred within Fountain Hills.

Figure 4: Town of Fountain Hills MCSO Traffic Stops, 2023
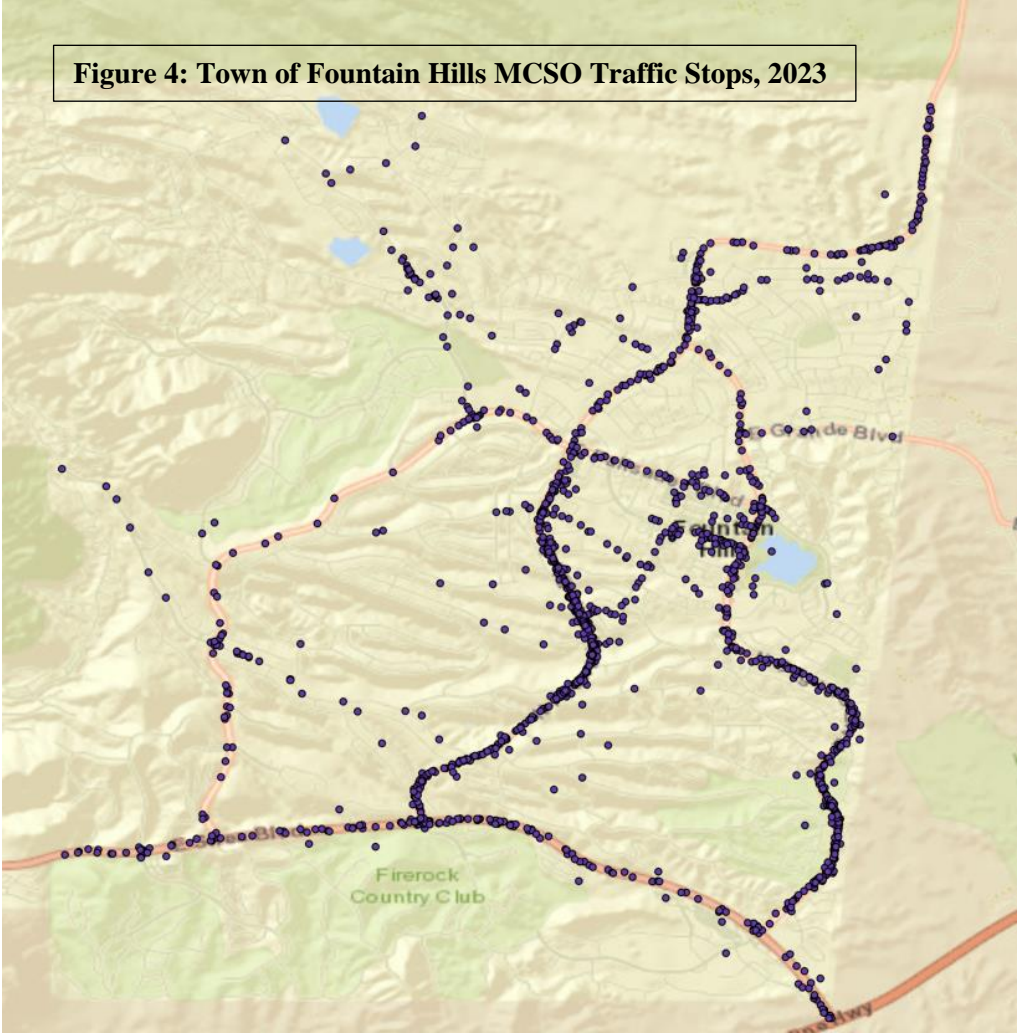
Race/Ethnicity of Drivers

In Table 33 below we report the racial/ethnic composition of drivers stopped by MCSO deputies in Fountain Hills and provide the racial/ethnic composition of all MCSO traffic stops for comparison. About 76 percent of drivers stopped by MCSO deputies in Fountain Hills were identified as White. Deputies identified 390 (12.24%) drivers as Hispanic in Fountain Hills, and 5.71 percent of drivers stopped in Fountain Hills were identified as Black. Finally, 23.51 percent of drivers stopped in Fountain Hills were identified as non-White Minorities.

Table 33: Racial/Ethnic Composition of Drivers Stopped, Fountain Hills

	MCSO		Fountain Hills	
	Number	Percent	Number	Percent
Black	1,560	8.37%	182	5.71%
Hispanic	4,682	25.13%	390	12.24%
White	11,628	62.41%	2,437	76.49%
All Minority Drivers	7,004	37.59%	750	23.51%
Total	18,632	100.00%	3,186	100.00%

Special Assignments

Table 34 below identifies stops that were made in Fountain Hills when deputies were working on special assignments. There were 104 stops of drivers and Fountain Hills by deputies working special assignments in 2023. 89 stops were made while deputies were working on Aggressive Driver detail and 15 stops were made when deputies were working on a DUI Task Force.

Table 34: Special Assignments, Fountain Hills

	Aggressive Driver	DUI Task Force	Click-it-or-Ticket
All Stops	89 (2.79%)	15 (0.47%)	0 (0.00%)
Black	7 (3.85%)	0 (0.00%)	0 (0.00%)
Hispanic	15 (3.85%)	4 (1.03%)	0 (0.00%)
White	63 (2.59%)	10 (0.41%)	0 (0.00%)
Minority	26 (3.47%)	5 (0.67%)	0 (0.00%)

Extended Traffic Stop Indicator Use

In Table 35 below we report Extended Traffic Stop Indicator (ETSIs) use for Fountain Hills. There were 801 traffic stops (25.14%) with delays documented with ETSIs in Fountain Hills. Delays related to driving documentation (license, insurance, and registration) were most common with about 15.76 percent (N = 502) of stops delayed for this reason. This delay was not evenly distributed among racial/ethnic groups. Twenty-four percent of Hispanic drivers (N = 95) experienced delays associated with driving documentation while 13.50 percent of White drivers were delayed for this reason. In Fountain Hills, 0.53 percent of stops were delayed due to training and 5.27 percent of stops were delayed by technical issues. There were 26 instances of vehicles being towed in Fountain Hills. About 7 percent of stops were delayed for "Other" reasons.

Table 35: Extended Traffic Stop Indicator Use, Fountain Hills

	DUI	Language Barrier	Driving Documentation	Technical Issue
All Stops	15 (0.47%)	31 (0.97%)	502 (15.76%)	168 (5.27%)
Black	1 (0.55%)	2 (1.10%)	47 (25.82%)	6 (3.30%)
Hispanic	1 (0.26%)	26 (6.67%)	95 (24.36%)	25 (6.41%)
White	12 (0.49%)	1 (0.04%)	329 (13.50%)	131 (5.38%)
Minority	3 (0.40%)	30 (4.01%)	173 (23.10%)	37 (4.94%)

	Training Stop	Vehicle Tow	Other Delay
All Stops	17 (0.53%)	26 (0.82%)	214 (6.72%)
Black	0 (0.00%)	1 (0.55%)	24 (13.19%)
Hispanic	5 (1.28%)	11 (2.82%)	34 (8.72%)
White	10 (0.41%)	13 (0.53%)	143 (5.87%)
Minority	7 (0.93%)	13 (1.74%)	71 (9.48%)

Stop Reason

In Table 36 we identify the reasons drivers were stopped for traffic violations in Fountain Hills. The most common reason for stops in Fountain Hills was speeding with 47.05 percent of drivers stopped for this reason. The second most common reason for traffic stops was a stop sign violation. 21.3 percent of drivers were stopped for this reason. About 77 percent of stops in Fountain Hills were made for speeding or non-speeding moving violations while 23 percent of stops were made for other violations (e.g. expired/suspended plates, no license plates, no license plate light, or having a headlight or taillight no illuminated).

Table 36: Stop Reasons, Fountain Hills

Stop Reason	All Stop	Black	Hispanic	White	Minority
Cell phone use	18 (0.56%)	1 (0.55%)	2 (0.51%)	15 (0.62%)	3 (0.40%)
Driving w/ high beams	1 (0.03%)	0 (0.00%)	0 (0.00%)	1 (0.04%)	0 (0.00%)
Exp/Sus plate	389 (12.21%)	19 (10.44%)	35 (8.97%)	317 (13.01%)	72 (9.61%)
Failure to signal	23 (0.72%)	0 (0.00%)	1 (0.26%)	21 (0.86%)	2 (0.27%)
Failure to yield	6 (0.19%)	0 (0.00%)	0 (0.00%)	6 (0.25%)	0 (0.00%)
Failure to maintain lane	14 (0.44%)	0 (0.00%)	0 (0.00%)	14 (0.57%)	0 (0.00%)
Failure to move for EV	2 (0.06%)	0 (0.00%)	0 (0.00%)	2 (0.08%)	0 (0.00%)
Failure to obey traffic control device	33 (1.04%)	3 (1.65%)	16 (4.10%)	13 (0.53%)	20 (2.67%)
Failure to stop for school bus	1 (0.03%)	0 (0.00%)	0 (0.00%)	1 (0.04%)	0 (0.00%)
Improper lights	5 (0.16%)	0 (0.00%)	1 (0.26%)	4 (0.16%)	1 (0.13%)
Improper turn	16 (0.50%)	1 (0.55%)	0 (0.00%)	14 (0.57%)	2 (0.27%)
Tailgating	2 (0.02%)	0 (0.00%)	0 (0.00%)	2 (0.08%)	0 (0.00%)
No head/taillights	68 (2.13%)	2 (1.10%)	3 (0.77%)	57 (2.34%)	11 (1.47%)
No license plate light	187 (5.87%)	15 (8.24%)	32 (8.21%)	124 (5.09%)	63 (8.41%)
No visible plate	39 (1.22%)	3 (1.65%)	8 (2.05%)	27 (1.11%)	12 (1.60%)
Obstructing roadway	2 (0.06%)	1 (0.55%)	0 (0.00%)	0 (0.00%)	2 (0.27%)
One head/taillight	119 (3.74%)	10 (5.49%)	12 (3.08%)	88 (3.61%)	31 (4.14%)
Passing violation	3 (0.09%)	0 (0.00%)	0 (0.00%)	3 (0.12%)	0 (0.00%)
Red Light Violation	63 (1.98%)	4 (2.20%)	7 (1.79%)	50 (2.05%)	13 (1.74%)
Speeding	1,499 (47.05%)	86 (47.25%)	207 (53.08%)	1,120 (45.96%)	379 (50.60%)
Stop sign violation	678 (21.28%)	37 (20.33%)	61 (15.64%)	545 (22.36%)	133 (17.76%)
Unsafe lane change	5 (0.16%)	0 (0.00%)	1 (0.26%)	4 (0.16%)	1 (0.13%)
Window Tint	1 (0.03%)	0 (0.00%)	1 (0.26%)	0 (0.00%)	1 (0.13%)
Wrong way driving	2 (0.06%)	0 (0.00%)	0 (0.00%)	2 (0.08%)	0 (0.00%)
Multiple stop reasons	3 (0.09%)	0 (0.00%)	0 (0.00%)	3 (0.12%)	0 (0.00%)
Other /unknown	7 (0.22%)	0 (0.00%)	3 (0.77%)	4 (0.15%)	3 (0.40%)

Violation Categories

In Table 37 below we identify the categories of violations that were cited or warned during stops in Fountain Hills.[15] In Fountain Hills, 45.61 percent of drivers were cited or warned for speeding violations. This was the most common violation that was cited/warned. The second most common category of violation that was cited/warned was for non-speed moving violations (24.42%). Equipment and driving documentation violations were cited/warned during 11 percent and 21.5 percent of traffic stops, respectively. Less than 2 percent of drivers were cited or warned for "Other violations."

Table 37: Violation Categories, Fountain Hills

	Driving Documentation	Equipment	Non-Speed Moving	Speed	Other Violation
All Stops	684 (21.47%)	350 (10.99%)	778 (24.42%)	1,453 (45.61%)	41 (1.29%)
Black	45 (24.73%)	28 (15.38%)	36 (19.78%)	87 (47.80%)	3 (1.65%)
Hispanic	91 (23.33%)	43 (11.03%)	65 (16.67%)	200 (51.28%)	16 (4.10%)
White	512 (21.01%)	250 (10.26%)	640 (26.26%)	1,082 (44.40%)	21 (0.86%)
Minority	172 (22.96%)	100 (13.35%)	138 (18.42%)	371 (49.53%)	20 (2.67%)

Propensity Score Matching Analysis

In Table 38 below we provide summary statistics for the benchmarks used in the baseline propensity score matching analysis for Fountain Hills. Note that arrests include both custodial arrests and non-custodial "cite and release" arrests. In Tables 39–42 below we report the results of propensity score matching on the baseline benchmarks used in the TSAR—stop length, citation rate, search rate, and arrest rate. For each benchmark we used propensity score matching to compare Black, Hispanic, and Minority drivers to White drivers.

Table 38: Summary Statistics for PSM Benchmarks, Fountain Hills

Racial/Ethnicity	Stop Length (Standard Deviation)	Citation Rate	Search Rate	Arrest Rate
Black Drivers	10.76 (3.24)	44.51%	0.00%	2.75%
Hispanic Drivers	11.41 (3.34)	51.03%	0.00%	4.10%
White Driver	11.07 (3.58)	38.45%	0.12%	1.72%
Minority Drivers	11.31 (3.44)	47.26%	0.00%	3.47%

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[15]Note that because drivers may receive more than one citation or warning, percentages across violation categories exceed 100 percent.

Table 39 presents results from the propensity score analysis of stop length for stops made in Fountain Hills. We found no statistically significant disparity for Hispanic, Black, or Minority drivers for differences in stop length for stops made in Fountain Hills.

Table 39: PSM, Stop Length, Fountain Hills

Model	Stop Length difference (in minutes)	t-statistic	Statistically Significant
Black Drivers	–0.20	–0.50	No
Hispanic Drivers	0.32	0.94	No
Minority Drivers	0.14	0.57	No

Table 40 presents results from the propensity score analysis of citation rates for stops made in Fountain Hills. We identified no statistically significant differences for Hispanic, Black, or Minority drivers for differences in citation rates for stops made in Fountain Hills.

Table 40: PSM, Citations, Fountain Hills

Model	Difference (percentage points)	t-statistic	Statistically Significant
Black Drivers	4.95	1.03	No
Hispanic Drivers	–0.29	–0.08	No
Minority Drivers	2.67	0.97	No

Table 41 provides results from the propensity score analysis of discretionary searches for Fountain Hills. We found no statistically significant disparity for Hispanic, Black, or Minority drivers for differences in search rates for stops made in Fountain Hills.

Table 41: PSM, Discretionary Searches, Fountain Hills

Model	Difference (percentage points)	t-statistic	Statistically Significant
Black Drivers	0.00	0.00	No
Hispanic Drivers	–0.26	–1.41	No
Minority Drivers	0.00	0.00	No

Table 42 provides the results from the propensity score analysis of arrest rates in Fountain Hills. We found no statistically significant disparity for Hispanic, Black, or Minority drivers for differences in arrest rates for stops made in Fountain Hills.

Table 42: PSM, Arrests, Fountain Hills

Model	Difference (percentage points)	t-statistic	Statistically Significant
Black Drivers	2.20	1.71	No
Hispanic Drivers	1.28	0.82	No
Minority Drivers	1.07	1.15	No

Gila Bend

Gila Bend is a small town in south-central Maricopa County. MCSO has a contract for policing activity with the town. The town is situated at a juncture of two state highways (Highway 85 and Highway 238) and Interstate 8. The town is an important thoroughfare for drivers traveling to and from Mexico/Southern California and the Phoenix area. The I-8 is a bypass around Phoenix. In 2023 MCSO made a total of 652 traffic stops within the town limits of Gila Bend. Patrol of Gila Bend is managed out of MCSO District 2. Approximately 41 percent of traffic stops made in Gila Bend were residents of the town.

In Figure 5 below, we provide the location of traffic stops made in the Town of Gila Bend. Over 80 percent of traffic stops in Gila Bend were conducted on the main thoroughfare through Gila Bend, Pima Street, and at the juncture of Highway 87 and West Maricopa Road.

Figure 5: Town of Gila Bend MCSO Traffic Stops, 2023
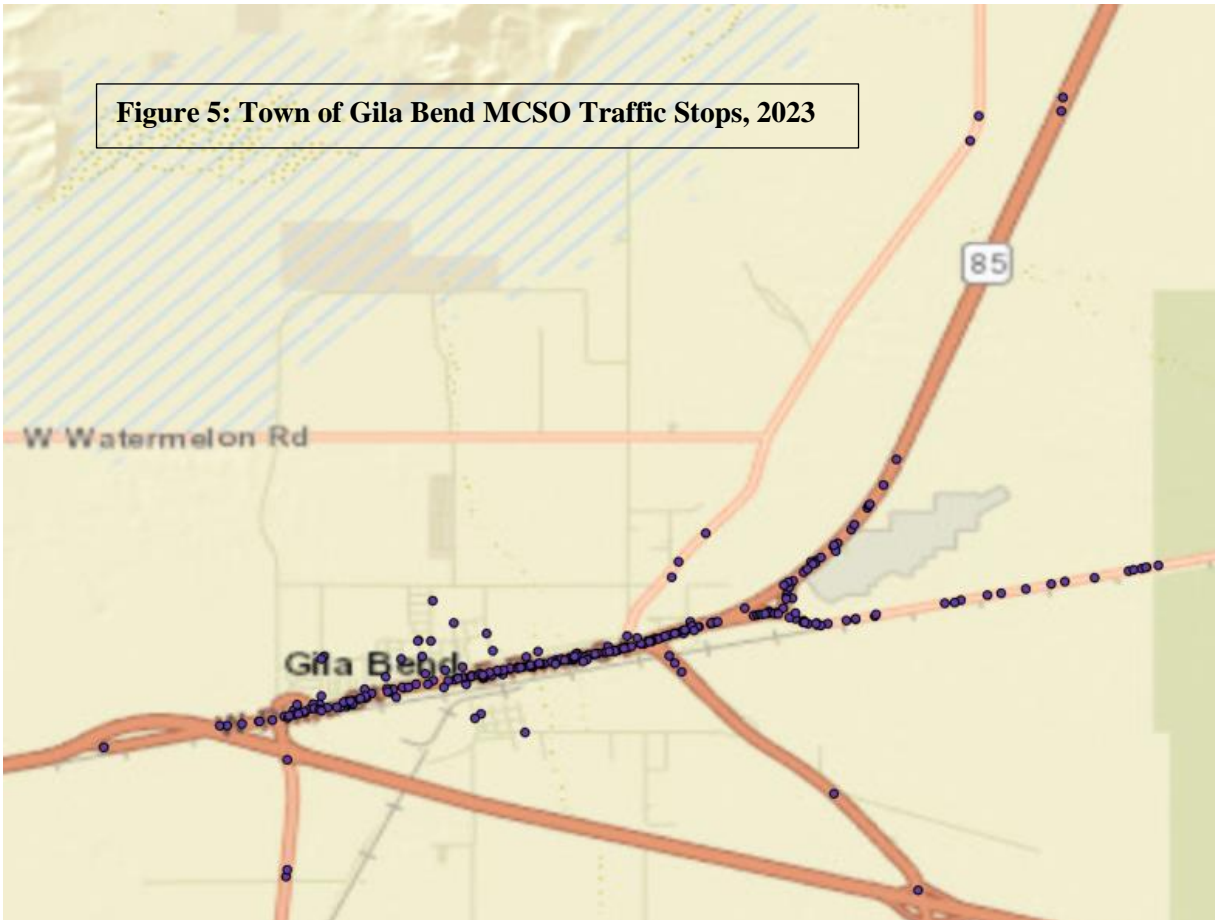
Race/Ethnicity of Drivers

In Table 43 below we report the racial/ethnic composition of drivers stopped by MCSO deputies in Gila Bend and provide the racial/ethnic composition of all MCSO traffic stops for comparison. The majority (63.98%) of traffic stops in Gila Bend were of drivers perceived to be non-White minorities. About 51 percent of drivers stopped by MCSO deputies in Gila Bend were identified as Hispanic. Deputies identified 232 (36.02%) drivers as White in Gila Bend and 7 percent of drivers stopped in Gila Bend were identified as Black.

Table 43: Racial/Ethnic Composition of Drivers Stopped, Gila Bend

| | MCSO | | Gila Bend | |
	Number	Percent	Number	Percent
Black	1,560	8.37%	45	6.99%
Hispanic	4,682	25.13%	326	50.62%
White	11,628	62.41%	232	36.02%
All Minority Drivers	7,004	37.59%	412	63.98%
Total	18,632	100.00%	644	100.00%

Special Assignments

There were no special assignment traffic stops in Gila Bend in 2023.

Table 44: Number (percent of stops), Special Assignments, Gila Bend

	Aggressive Driver	DUI Task Force	Click-it-or-Ticket
All Stops	0 (0.00%)	0 (0.00%)	0 (0.00%)
Black	0 (0.00%)	0 (0.00%)	0 (0.00%)
Hispanic	0 (0.00%)	0 (0.00%)	0 (0.00%)
White	0 (0.00%)	0 (0.00%)	0 (0.00%)
Minority	0 (0.00%)	0 (0.00%)	0 (0.00%)

Extended Traffic Stop Indicator Use

In Table 45 below we report Extended Stop Indicator (ETSIs) use for Gila Bend. There were 244 traffic stops (37.89%) with delays documented with ETSIs in Gila Bend. Delays related to driving documentation (license, insurance, and registration) were most common with about 24.39 percent (N = 159) of stops delayed for this reason. This delay was not evenly distributed among racial/ethnic groups. 27.61 percent of Hispanic drivers (N = 90) experienced delays associated with driving documentation while 20.26 percent of White drivers were delayed for this reason. In Gila Bend, 2.33 percent of stops were delayed due to training and 10.09 percent of stops were delayed by technical issues. There were 10 instances of vehicles being towed in Gila Bend. There were 32 stops that were delayed for "Other" reasons.

Table 45: Extended Traffic Stop Indicator Use, Gila Bend

	DUI	Language Barrier	Driving Documentation	Technical Issue
All Stops	2 (0.31%)	44 (6.83%)	159 (24.39%)	65 (10.09%)
Black	0 (0.00%)	0 (0.00%)	11 (24.44%)	6 (13.33%)
Hispanic	1 (0.31%)	40 (12.27%)	90 (27.61%)	28 (8.59%)
White	1 (0.43%)	1 (0.43%)	48 (20.26%)	27 (11.64%)
Minority	1 (0.24%)	43 (10.44%)	111 (26.94%)	38 (9.22%)

	Training Stop	Vehicle Tow	Other Delay
All Stops	15 (2.33%)	10 (1.55%)	32 (4.97%)
Black	1 (2.22%)	1 (2.22%)	3 (6.67%)
Hispanic	4 (1.23%)	8 (2.45%)	18 (5.52%)
White	10 (4.31%)	0 (0.00%)	8 (3.45%)
Minority	5 (1.21%)	10 (2.43%)	24 (5.83%)

Stop Reasons

In Table 46 we identify the reasons drivers were stopped for traffic violations in Gila Bend. The most common reason for stops in Gila Bend was speeding with 58.85 percent of drivers stopped for this reason. The second most common reason for traffic stops was only having one headlight/taillight. 12.89 percent of drivers were stopped for this reason. About 72 percent of stops in Gila Bend were made for speeding or non-speeding moving violations while 28 percent of stops were made for other violations (e.g., expired/suspended plates, no license plates, no license plate light, or having a headlight or taillight not illuminated).

Table 46: Stop Reasons, Gila Bend

Stop Reason	All Stop	Black	Hispanic	White	Minority
Cell phone use	6 (0.93%)	0 (0.00%)	3 (0.92%)	3 (1.29%)	3 (0.73%)
Driving w/ high beams	3 (0.47%)	1 (2.22%)	1 (0.31%)	1 (0.43%)	2 (0.49%)
Exp/Sus plate	13 (2.02%)	0 (0.00%)	7 (2.15%)	5 (2.16%)	8 (1.94%)
Failure to maintain lane	2 (0.31%)	0 (0.00%)	1 (0.31%)	1 (0.43%)	1 (0.24%)
Failure to obey traffic control device	2 (0.31%)	0 (0.00%)	2 (0.61%)	0 (0.00%)	2 (0.49%)
Improper lights	4 (0.62%)	0 (0.00%)	4 (1.23%)	0 (0.00%)	0 (0.00%)
Improper turn	3 (0.47%)	0 (0.00%)	1 (0.31%)	2 (0.86%)	1 (0.24%)
Tailgating	1 (0.16%)	0 (0.00%)	0 (0.00%)	1 (0.43%)	0 (0.00%)
No head/taillights	51 (7.92%)	3 (6.67%)	20 (6.13%)	26 (11.21%)	25 (6.07%)
No license plate light	75 (11.65%)	2 (4.44%)	60 (18.40%)	11 (4.74%)	64 (15.53%)
No visible plate	2 (0.31%)	0 (0.00%)	2 (0.61%)	0 (0.00%)	3 (0.72%)
One head/taillight	83 (12.89%)	6 (13.33%)	58 (17.79%)	16 (6.90%)	67 (16.26%)
Passing violation	2 (0.31%)	0 (0.00%)	0 (0.00%)	2 (0.86%)	0 (0.00%)
Speeding	379 (58.85%)	33 (73.33%)	157 (48.16%)	157 (67.67%)	222 (53.49%)
Stop sign violation	16 (2.48%)	0 (0.00%)	10 (3.07%)	5 (2.16%)	11 (2.65%)
Multiple stop reasons	1 (0.16%)	0 (0.00%)	0 (0.00%)	0 (0.00%)	0 (0.00%)
Other /unknown	1 (0.16%)	0 (0.00%)	0 (0.00%)	0 (0.00%)	0 (0.00%)

Violation Categories

In Table 47 below we identify the categories of violations that were cited or warned during stops in Gila Bend.[16] In Gila Bend 57.6 percent of drivers were cited or warned for speeding violations. This was the most common violation that was cited/warned. The second most common category of violation that was cited/warned was for equipment (28.73%). Driving documentation and non-speed moving violations were cited/warned during 14.9 percent and 3.9 percent of traffic stops, respectively. About 1 percent of drivers were cited or warned for "Other violations."

Table 47: Number (percent of stops), Violation Categories, Gila Bend

	Driving Documentation	Equipment	Non-Speed Moving	Speed	Other Violation
All Stops	96 (14.91%)	185 (28.73%)	25 (3.88%)	371 (57.61%)	6 (0.93%)
Black	5 (11.11%)	9 (20.00%)	0 (0.00%)	33 (73.33%)	0 (0.00%)
Hispanic	65 (19.94%)	120 (36.81%)	14 (4.29%)	152 (46.63%)	3 (0.92%)
White	20 (8.62%)	49 (21.12%)	10 (4.31%)	157 (67.67%)	3 (1.29%)
Minority	76 (18.45%)	136 (33.01%)	15 (3.64%)	214 (51.94%)	3 (0.73%)

Propensity Score Matching Analysis

In Table 48 below we provide summary statistics for the benchmarks used in the baseline propensity score matching analysis for Fountain Hills. Note that arrests include both custodial arrests and non-custodial "cite and release" arrests. In Tables 49–52 below we report the results of propensity score matching on the baseline benchmarks used in the TSAR—stop length, citation rate, search rate, and arrest rate. For each benchmark we used propensity score matching to compare Black, Hispanic, and Minority drivers to White drivers.

Table 48: Summary Statistics for PSM Benchmarks, Gila Bend

Racial/Ethnicity	Stop Length (Standard Deviation)	Citation Rate	Search Rate	Arrest Rate
Black Drivers	12.23 (3.82)	33.33%	0.00%	2.22%
Hispanic Drivers	12.31 (3.43)	30.98%	0.00%	0.31%
White Driver	11.95 (3.36)	34.05%	0.00%	0.00%
Minority Drivers	12.29 (3.50)	32.04%	0.00%	0.49%

Table 49 presents results from the propensity score analysis of stop length for stops made in Gila Bend. We found a statistically significant difference in stop length between Hispanic and White drivers in Gila Bend. In this case, stops of Hispanic drivers were about one minute longer than

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[16]Note that because drivers may receive more than one citation or warning, percentages across violation categories exceed 100 percent.

stops of White drivers. We found no statistically significant disparity for Black or Minority drivers for differences in stop length for stops made in Gila Bend.

Table 49: PSM Results, Stop Length, Gila Bend

Model	Stop Length difference (in minutes)	t-statistic	Statistically Significant
Black Drivers	0.30	0.23	No
Hispanic Drivers	1.05	3.11	Yes
Minority Drivers	0.48	1.52	No

Table 50 presents results from the propensity score analysis of citation rates for stops made in Gila Bend. We identified no statistically significant differences for Hispanic, Black, or Minority drivers for differences in citation rates for stops made in Gila Bend.

Table 50: PSM Results, Citations, Gila Bend

Model	Difference (percentage points)	t-statistic	Statistically Significant
Black Drivers	−8.89	−0.84	No
Hispanic Drivers	1.47	0.42	No
Minority Drivers	0.20	0.07	No

There were insufficient data to analyze search disparity in Gila Bend as there were no discretionary searches in Gila Bend in 2023.

Table 51: PSM Results, Discretionary Searches, Gila Bend

Model	Difference (percentage points)	t-statistic	Statistically Significant
Black Drivers	N/A	N/A	N/A
Hispanic Drivers	N/A	N/A	N/A
Minority Drivers	N/A	N/A	N/A

Table 52 provides the results from the propensity score analysis of arrest rates in Gila Bend. We found no statistically significant disparity for Black or Hispanic drivers for differences in arrest rates for stops made in Gila Bend. We found statistically significant difference in arrests for Minority and White drivers in Gila Bend. There were no arrests of White drivers in Gila Bend while Minority drivers were arrested during 0.49 percent of traffic stops.

Table 52: PSM Results, Arrests, Gila Bend

Model	Difference (percentage points)	t-statistic	Statistically Significant
Black Drivers	2.22	1.41	No
Hispanic Drivers	0.31	0.82	No
Minority Drivers	0.49	2.00	Yes

Goodyear/Mobile

Goodyear is a city located in the southwest Phoenix metropolitan area. Goodyear has a municipal police force but contracts with MCSO for patrol of Mobile, a small agricultural community whose other municipal services are managed by Goodyear. Additionally, Goodyear has a number of county islands throughout its boundaries that require MCSO policing. As such, MCSO and Goodyear Police Department work closely together on patrol in the city. In 2023, MCSO made 432 traffic stops in Mobile and Goodyear. Only 30 of these stops were made in Mobile, while the remainder were made in the City of Goodyear. Patrol activity in Goodyear and Mobile is managed by District 2.

Figure 6: Goodyear/Mobile MCSO Traffic Stops, 2023
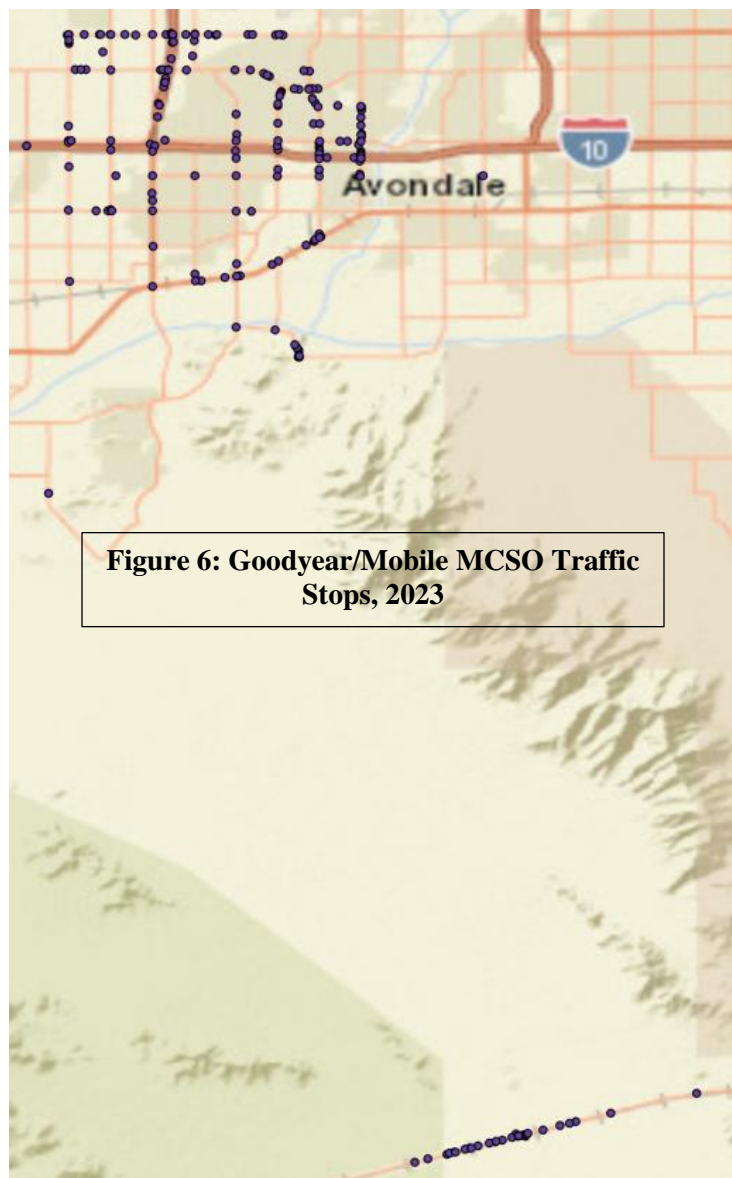
Race/Ethnicity of Drivers

In Table 53 below we report the racial/ethnic composition of drivers stopped by MCSO deputies in Goodyear/Mobile and provide the racial/ethnic composition of all MCSO traffic stops for comparison. The majority (58.04%) of drivers stopped in Goodyear/Mobile were identified as non-White Minorities. About 42 percent of drivers stopped by MCSO deputies in Goodyear/Mobile were identified as White. Deputies identified 115 (40.21%) drivers as Hispanic in Goodyear/Mobile and 14.69 percent of drivers stopped in Goodyear/Mobile were identified as Black.

Table 53: Racial/Ethnic Composition of Drivers Stopped, Goodyear/Mobile

	MCSO		Goodyear/Mobile	
	Number	Percent	Number	Percent
Black	1,560	8.37%	42	14.69%
Hispanic	4,682	25.13%	115	40.21%
White	11,628	62.41%	120	41.96%
All Minority Drivers	7,004	37.59%	166	58.04%
Total	18,632	100.00%	286	100.00%

Special Assignments

Table 54, below, identifies stops that were made in Goodyear/Mobile when deputies were working on special assignments. There were 27 stops of drivers in Goodyear/Mobile by deputies working special assignments in 2023. Four stops were made while deputies were working on Aggressive Driver detail and 23 stops were made when deputies were working on a DUI Task Force.

Table 54: Number (percent of stops), Special Assignments, Goodyear/Mobile

	Aggressive Driver	DUI Task Force	Click-it-or-Ticket
All Stops	4 (1.40%)	23 (8.04%)	0 (0.00%)
Black	0 (0.00%)	4 (9.52%)	0 (0.00%)
Hispanic	2 (1.74%)	7 (6.09%)	0 (0.00%)
White	2 (2.67%)	9 (7.50%)	0 (0.00%)
Minority	2 (1.20%)	14 (8.43%)	0 (0.00%)

Extended Traffic Stop Indicator Use

In Table 55 below we report Extended Traffic Stop Indicator (ETSIs) use for Goodyear/Mobile. There were 159 traffic stops (55.59%) with delays documented with ETSIs in Goodyear/Mobile. Delays related to driving documentation (license, insurance, and registration) were most common with about 36.71 percent (N = 105) of stops delayed for this reason. This delay was not evenly distributed among racial/ethnic groups. Nearly 50 percent of Hispanic drivers (N = 57) experienced delays associated with driving documentation while 24.17 percent of White drivers were delayed for this reason. In Goodyear/Mobile, 12.24 percent of stops were delayed due to training and 10.49 percent of stops were delayed by technical issues. There were 8 instances of vehicles being towed in Carefree. There were 35 stops that were delayed for "Other" reasons.

Table 55: Extended Traffic Stop Indicator Use, Goodyear/Mobile

	DUI	Language Barrier	Driving Documentation	Technical Issue
All Stops	6 (2.10%)	9 (3.15%)	105 (36.71%)	30 (10.49%)
Black	1 (2.38%)	0 (0.00%)	18 (42.86%)	6 (14.29%)
Hispanic	4 (3.48%)	9 (5.82%)	57 (49.57%)	15 (13.04%)
White	1 (0.83%)	0 (0.00%)	29 (24.17%)	9 (7.50%)
Minority	5 (3.01%)	9 (5.42%)	76 (45.78%)	21 (12.65%)

	Training Stop	Vehicle Tow	Other Delay
All Stops	35 (12.24%)	8 (2.80%)	35 (12.24%)
Black	3 (7.14%)	1 (2.38%)	12 (28.57%)
Hispanic	13 (11.30%)	4 (3.48%)	13 (11.30%)
White	17 (14.17%)	3 (2.50%)	9 (7.50%)
Minority	18 (10.84%)	5 (3.01%)	26 (15.66%)

Stop Reasons

In Table 56 we identify the reasons drivers were stopped for traffic violations in Goodyear/Mobile. The most common reason for stops in Goodyear/Mobile was speeding with 32.2 percent of drivers stopped for this reason. The second most common reason for traffic stops was a stop sign violation. 16.1 percent of drivers were stopped for this reason. About 75 percent of stops in Goodyear/Mobile were made for speeding or non-speeding moving violations while 25 percent of stops were made for other violations (e.g., expired/suspended plates, no license plates, no license plate light, or having a headlight or taillight no illuminated).

Table 56: Stop Reasons, Goodyear/Mobile

Stop Reason	All Stop	Black	Hispanic	White	Minority
Cell phone use	12 (4.20%)	1 (2.38%)	4 (3.48%)	6 (5.00%)	6 (3.61%)
Crossing Gore	5 (1.75%)	1 (2.38%)	2 (1.74%)	2 (1.67%)	3 (1.81%)
Crossing median	2 (0.70%)	1 (2.38%)	0 (0.00%)	1 (0.83%)	1 (0.60%)
Driving w/ high beams	2 (0.70%)	0 (0.00%)	2 (1.74%)	0 (0.00%)	2 (1.20%)
Exp/Sus plate	41 (14.34%)	6 (14.29%)	17 (14.78%)	18 (15.00%)	23 (13.86%)
Failure to signal	1 (0.35%)	1 (2.38%)	0 (0.00%)	0 (0.00%)	1 (0.60%)
Failure to yield	1 (0.35%)	0 (0.00%)	0 (0.00%)	1 (0.83%)	1 (0.60%)
Failure to maintain lane	7 (2.45%)	1 (2.38%)	4 (3.48%)	2 (1.67%)	5 (3.01%)
Failure to obey traffic control device	1. (0.35%)	0 (0.00%)	1 (0.87%)	0 (0.00%)	1 (0.60%)
Failure to stop for school bus	2 (0.70%)	0 (0.00%)	1 (0.87%)	1 (0.83%)	1 (0.60%)
HOV violation	1 (0.35%)	0 (0.00%)	1 (0.87%)	0 (0.00%)	1 (0.60%)
Improper lights	2 (0.70%)	0 (0.00%)	0 (0.00%)	1 (0.83%)	1 (0.60%)
Improper turn	7 (2.45%)	0 (0.00%)	3 (2.61%)	2 (1.67%)	5 (3.01%)
No head/taillights	18 (6.29%)	4 (9.52%)	10 (8.70%)	4 (3.33%)	14 (8.43%)
No license plate light	2 (0.70%)	0 (0.00%)	2 (1.74%)	4 (3.33%)	2 (1.20%)
No visible plate	12 (4.20%)	5 (11.90%)	3 (2.61%)	4 (3.33%)	8 (4.82%)
One head/taillight	12 (4.20%)	2 (4.76%)	4 (3.48%)	6 (5.00%)	6 (3.61%)
Passing violation	1 (0.35%)	0 (0.00%)	0 (0.00%)	1 (0.83%)	0 (0.00%)
Red Light Violation	12 (4.20%)	4 (9.52%)	4 (3.48%)	4 (3.33%)	8 (4.82%)
Speeding	92 (32.17%)	10 (23.81%)	36 (31.30%)	43 (35.83%)	49 (29.52%)
Stop sign violation	46 (16.08%)	5 (11.90%)	20 (17.39%)	19 (15.83%)	27 (16.27%)
Unsafe lane change	4 (1.40%)	1 (0.00%)	1 (0.87%)	2 (1.67%)	2 (1.20%)
Multiple stop reasons	2 (0.70%)	0 (0.00%)	0 (0.00%)	2 (1.67%)	0 (0.00%)
Other /unknown	1 (0.35%)	0 (0.00%)	0 (0.00%)	1 (0.83%)	0 (0.00%)

Violation Categories

In Table 57 below we identify the categories of violations that were cited or warned during stops in Goodyear/Mobile.[17] In Goodyear/Mobile, 32.9 percent of drivers were cited or warned for speeding violations. This was the most common violation that was cited/warned. The second most common category of violation that was cited/warned was for driving documentation (30.07%). Equipment and non-speed moving violations were cited/warned during 10.14 percent and 29.37 percent of traffic stops, respectively. Nearly 5 percent of drivers were cited or warned for "Other violations."

Table 57: Number (percent of stops), Violation Categories, Goodyear/Mobile

	Driving Documentation	Equipment	Non-Speed Moving	Speed	Other Violation
All Stops	86 (30.07%)	29 (10.14%)	84 (29.37%)	94 (32.87%)	14 (4.90%)
Black	17 (40.48%)	4 (9.42%)	13 (30.95%)	12 (28.57%)	2 (4.76%)
Hispanic	41 (35.65%)	12 (10.43%)	33 (28.70%)	35 (30.43%)	6 (5.22%)
White	28 (23.33%)	11 (9.17%)	34 (28.33%)	43 (35.83%)	5 (4.17%)
Minority	58 (34.94%)	18 (10.84%)	50 (30.12%)	51 (30.72%)	9 (5.42%)

Propensity Score Matching Analysis

In Table 58 below we provide summary statistics for the benchmarks used in the baseline propensity score matching analysis for Goodyear/Mobile. Note that arrests include both custodial arrests and non-custodial "cite and release" arrests. In Tables 59–62 below we report the results of propensity score matching on the baseline benchmarks used in the TSAR—stop length, citation rate, search rate, and arrest rate. For each benchmark we used propensity score matching to compare Black, Hispanic, and Minority drivers to White drivers.

Table 58: Summary Statistics for PSM Benchmarks, Goodyear/Mobile

Racial/Ethnicity	Stop Length (Standard Deviation)	Citation Rate	Search Rate	Arrest Rate
Black Drivers	12.50 (4.38)	45.24%	2.38%	4.76%
Hispanic Drivers	11.36 (3.24)	43.48%	1.74%	6.96%
White Driver	11.69 (3.57)	35.83%	0.00%	5.00%
Minority Drivers	11.71 (3.51)	42.77%	1.81%	6.02%

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[17]Note that because drivers may receive more than one citation or warning, percentages across violation categories exceed 100 percent.

Table 59 presents results from the propensity score analysis of stop length for stops made in Goodyear/Mobile. We found no statistically significant disparity for Hispanic, Black, or Minority drivers for differences in stop length in Goodyear/Mobile.

Table 59: PSM Results, Stop Length, Goodyear/Mobile

Model	Stop Length difference (in minutes)	t-statistic	Statistically Significant
Black Drivers	–0.28	–0.18	No
Hispanic Drivers	–0.33	–0.67	No
Minority Drivers	0.03	0.06	No

Table 60 presents results from the propensity score analysis of citation rates for stops made in Goodyear/Mobile. We identified no statistically significant differences in citation rates for Hispanic, Black, or Minority drivers for stops made in Goodyear/Mobile.

Table 60: PSM Results, Citations, Goodyear/Mobile

Model	Difference (percentage points)	t-statistic	Statistically Significant
Black Drivers	1.84	0.23	No
Hispanic Drivers	2.61	0.50	No
Minority Drivers	6.02	0.67	No

Table 61 provides results from the propensity score analysis of discretionary searches for Goodyear/Mobile. We found no statistically significant difference in search rates between Black and White drivers, between Hispanic and White drivers or between Minority and White drivers.

Table 61: PSM Results, Discretionary Searches, Goodyear/Mobile

Model	Difference (percentage points)	t-statistic	Statistically Significant
Black Drivers	2.38	0.82	No
Hispanic Drivers	1.74	1.41	No
Minority Drivers	1.81	1.73	No

Table 62 provides the results from the propensity score analysis of arrest rates in Goodyear/Mobile. We found no statistically significant disparity for Hispanic, Black, or Minority drivers for differences in arrest rates for stops made in Goodyear/Mobile.

Table 62: PSM Results, Arrests, Goodyear/Mobile

Model	Difference (percentage points)	t-statistic	Statistically Significant
Black Drivers	0.00	0.00	No
Hispanic Drivers	5.22	1.85	No
Minority Drivers	−1.81	−0.42	No

Guadalupe

Guadalupe is a small town (population 5,000) adjacent to the I-10 and bordered by Chandler and Tempe in the Southeast Valley. The town is home to the Yaqui native Mexican tribe and is contracted and exclusively patrolled by MCSO. MCSO made 428 traffic stops in the town of Guadalupe in 2023. Approximately 77 percent of stops made in Guadalupe were of drivers with addresses within the town limits. The majority of traffic stops made in Guadalupe were made on the main thoroughfare through the town, Avenia del Yaqui, and near the main street intersection of Baseline Road and Avenia del Yaqui/Priest Drive.

Figure 7: Guadalupe MCSO Traffic Stops, 2023
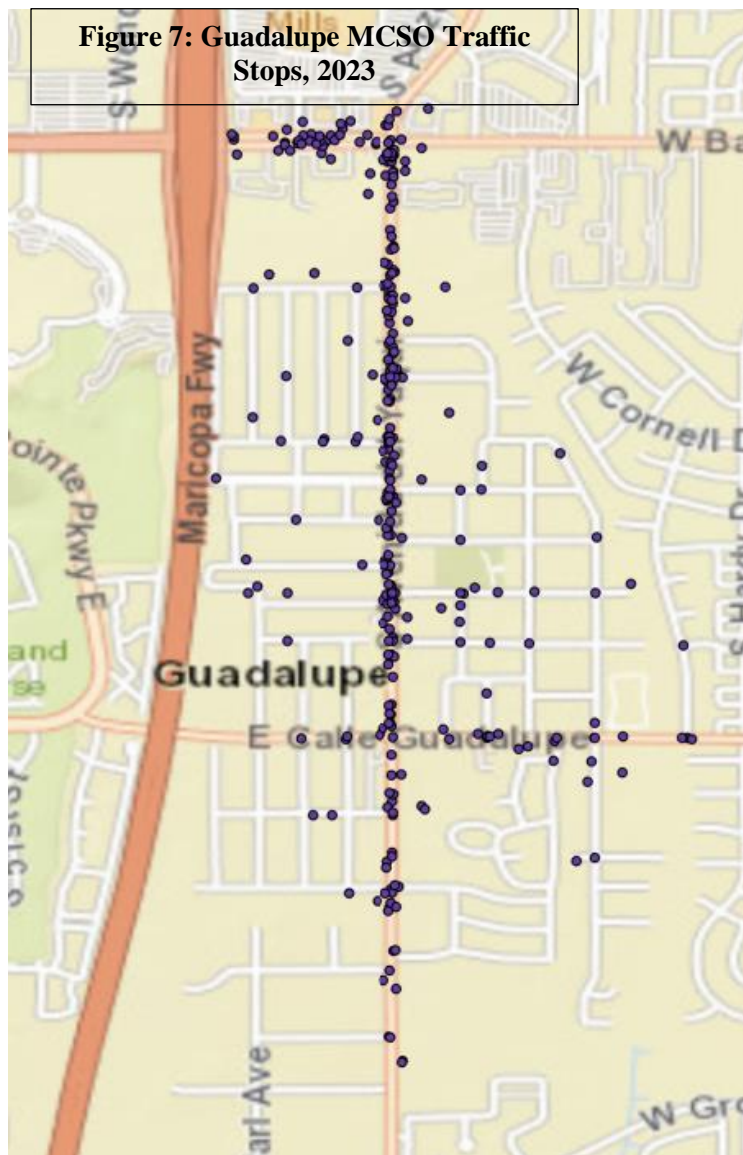
Race/Ethnicity of Drivers

In Table 62 below we report the racial/ethnic composition of drivers stopped by MCSO deputies in Guadalupe and provide the racial/ethnic composition of all MCSO traffic stops for comparison. Nearly three-quarters of drivers stopped in Guadalupe (74.30%) were perceived as non-White Minorities. About 26 percent of drivers stopped by MCSO deputies in Guadalupe were identified as White. Deputies identified 200 (46.73%) drivers as Hispanic in Guadalupe and 22.43 percent of drivers stopped in Guadalupe were identified as Black.

Table 63: Racial/Ethnic Composition of Drivers Stopped, Guadalupe

	MCSO		Guadalupe	
	Number	Percent	Number	Percent
Black	1,560	8.37%	96	22.43%
Hispanic	4,682	25.13%	200	46.73%
White	11,628	62.41%	110	25.70%
All Minority Drivers	7,004	37.59%	318	74.30%
Total	18,632	100.00%	428	100.00%

Special Assignments

There were no stops in Guadalupe by deputies working special assignments.

Table 64: Number (percent of stops), Special Assignments, Guadalupe

	Aggressive Driver	DUI Task Force	Click-it-or-Ticket
All Stops	0 (0.00%)	0 (0.00%)	0 (0.00%)
Black	0 (0.00%)	0 (0.00%)	0 (0.00%)
Hispanic	0 (0.00%)	0 (0.00%)	0 (0.00%)
White	0 (0.00%)	0 (0.00%)	0 (0.00%)
Minority	0 (0.00%)	0 (0.00%)	0 (0.00%)

Extended Traffic Stop Indicator Use

In Table 65 below we report Extended Traffic Stop Indicator (ETSIs) use for Guadalupe. There were 247 traffic stops (57.71%) with delays documented with ETSIs in Guadalupe. Delays related to driving documentation (license, insurance, and registration) were most common with about 46.5 percent (N = 199) of stops delayed for this reason. This delay was not evenly distributed among racial/ethnic groups. Fifty-five percent of Hispanic drivers (N = 110) experienced delays associated with driving documentation while 38.18 percent of White drivers were delayed for this reason. In Guadalupe, 4.91 percent of stops were delayed due to training and 11.92 percent of stops were delayed by technical issues. There were 34 instances of vehicles being towed in Guadalupe. There were 42 stops that were delayed for "Other" reasons.

Table 65: Extended Traffic Stop Indicator Use, Guadalupe

	DUI	Language Barrier	Driving Documentation	Technical Issue
All Stops	11 (2.57%)	11 (2.57%)	199 (46.50%)	51 (11.92%)
Black	2 (2.08%)	0 (0.00%)	40 (41.67%)	10 (10.42%)
Hispanic	8 (4.00%)	11 (5.50%)	110 (55.00%)	21 (10.50%)
White	0 (0.00%)	0 (0.00%)	42 (38.18%)	19 (17.27%)
Minority	11 (3.46%)	11 (3.46%)	157 (49.37%)	32 (10.06%)

	Training Stop	Vehicle Tow	Other Delay
All Stops	21 (4.91%)	34 (7.94%)	42 (9.81%)
Black	6 (6.25%)	4 (4.17%)	11 (11.46%)
Hispanic	9 (4.50%)	25 (12.50%)	17 (8.50%)
White	5 (4.55%)	3 (2.73%)	12 (10.91%)
Minority	16 (5.03%)	31 (9.75%)	30 (9.43%)

Stop Reasons

In Table 66 we identify the reasons drivers were stopped for traffic violations in Guadalupe. The most common reason for stops in Guadalupe was a stop sign violation with 25 percent of drivers stopped for this reason. The second most common reason for traffic stops was for expired or suspended license plates. 24.30 percent of drivers were stopped for this reason. About half of stops in Guadalupe were made for speeding or non-speeding moving violations while half of stops were made for other violations (e.g., expired/suspended plates, no license plates, no license plate light, or having a headlight or taillight not illuminated).

Table 66: Stop Reasons, Guadalupe

Stop Reason	All Stop	Black	Hispanic	White	Minority
ATL	1 (0.23%)	0 (0.00%)	0 (0.00%)	1 (0.91%)	0 (0.00%)
Cell phone use	9 (2.10%)	4 (4.17%)	3 (1.50%)	2 (1.82%)	7 (2.20%)
Exp/Sus plate	104 (24.30%)	21 (21.88%)	48 (24.00%)	29 (26.36%)	75 (23.58%)
Failure to yield	1 (0.23%)	0 (0.00%)	0 (0.00%)	0 (0.00%)	1 (0.31%)
Failure to maintain lane	2 (0.47%)	1 (1.04%)	0 (0.00%)	0 (0.00%)	2 (0.63%)
Failure to move for EV	2 (0.47%)	0 (0.00%)	0 (0.00%)	1 (0.91%)	1 (0.31%)
Failure to obey traffic control device	18 (4.21%)	9 (9.38%)	5 (2.50%)	4 (3.64%)	14 (4.40%)
Improper lights	4 (0.93%)	1 (1.04%)	3 (1.50%)	0 (0.00%)	4 (1.26%)
Improper turn	2 (0.47%)	0 (0.00%)	3 (1.50%)	0 (0.00%)	2 (0.63%)
No head/taillights	30 (7.01%)	7 (7.29%)	16 (8.00%)	7 (6.36%)	23 (7.23%)
No license plate light	14 (3.27%)	3 (3.12%)	8 (4.00%)	3 (2.73%)	11 (3.46%)
No visible plate	16 (3.74%)	3 (3.12%)	8 (4.00%)	3 (2.73%)	13 (4.09%)
Obstructing roadway	2 (0.47%)	0 (0.00%)	1 (0.50%)	1 (0.91%)	1 (0.31%)
One head/taillight	73 (17.06%)	14 (14.58%)	41 (20.50%)	16 (14.55%)	57 (17.92%)
Passing violation	1 (0.23%)	0 (0.00%)	0 (0.00%)	0 (0.00%)	1 (0.31%)
Reckless drivers	5 (1.17%)	0 (0.00%)	4 (2.00%)	0 (0.00%)	4 (1.26%)
Red Light Violation	9 (1.87%)	3 (3.12%)	3 (1.50%)	3 (2.73%)	5 (1.57%)
Speeding	17 (3.97%)	4 (4.17%)	7 (3.50%)	5 (4.55%)	12 (3.77%)
Stop sign violation	107 (25.00%)	25 (26.04%)	44 (22.00%)	31 (28.18%)	76 (23.90%)
Wrong way driving	2 (0.47%)	0 (0.00%)	2 (1.00%)	0 (0.00%)	2 (0.63%)
Multiple stop reasons	6 (1.40%)	1 (1.04%)	3 (1.50%)	0 (0.00%)	4 (1.26%)
Other /unknown	4 (0.93%)	0 (0.00%)	2 (1.00%)	1 (0.91%)	3 (0.94%)

Violation Categories

In Table 67 below we identify the categories of violations that were cited or warned during stops in Guadalupe.[18] In Guadalupe only 4.44 percent of drivers were cited or warned for speeding violations. The most common category of violation that was cited/warned was for driving documentation (48.83%). Equipment and non-speed moving violations were cited/warned during 19.2 percent and 33.4 percent of traffic stops, respectively. Lastly, 3.5 percent of drivers were cited or warned for "Other violations."

Table 67: Number (percent of stops), Violation Categories, Guadalupe

	Driving Documentation	Equipment	Non-Speed Moving	Speed	Other Violation
All Stops	209 (48.83%)	82 (19.16%)	143 (33.41%)	19 (4.44%)	15 (3.50%)
Black	45 (46.88%)	17 (17.71%)	35 (36.46%)	5 (5.21%)	4 (4.17%)
Hispanic	106 (53.00%)	42 (21.00%)	58 (29.00%)	7 (3.50%)	8 (4.00%)
White	49 (44.55%)	21 (19.09%)	40 (36.36%)	6 (5.45%)	3 (2.73%)
Minority	160 (50.31%)	61 (19.18%)	103 (32.39%)	13 (4.09%)	12 (3.77%)

Propensity Score Matching Analysis

In Table 68 below we provide summary statistics for the benchmarks used in the baseline propensity score matching analysis for Guadalupe. Note that arrests include both custodial arrests and non-custodial "cite and release" arrests. In Tables 69–72 below we report the results of propensity score matching on the baseline benchmarks used in the TSAR—stop length, citation rate, search rate, and arrest rate. For each benchmark we used propensity score matching to compare Black, Hispanic, and Minority drivers to White drivers.

Table 68: Summary Statistics for PSM Benchmarks, Guadalupe

Racial/Ethnicity	Stop Length (Standard Deviation)	Citation Rate	Search Rate	Arrest Rate
Black Drivers	12.27 (2.86)	39.58%	0.00%	6.25%
Hispanic Drivers	12.03 (3.43)	53.50%	2.00%	9.00%
White Driver	12.83 (3.34)	45.45%	0.91%	5.45%
Minority Drivers	12.37 (3.49)	48.74%	1.26%	8.18%

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[18]Note that because drivers may receive more than one citation or warning, percentages across violation categories exceed 100 percent.

Table 69 presents results from the propensity score analysis of stop length for stops made in Guadalupe. We found no statistically significant disparity for Hispanic, Black, or Minority drivers for differences in stop length for stops made in Guadalupe.

Table 69: PSM Results, Stop Length, Guadalupe

Model	Stop Length difference (in minutes)	t-statistic	Statistically Significant
Black Drivers	1.26	0.97	No
Hispanic Drivers	–0.81	–1.87	No
Minority Drivers	–0.91	–1.06	No

Table 70 presents results from the propensity score analysis of citation rates for stops made in Guadalupe. We identified no statistically significant differences for Hispanic, Black, or Minority drivers for differences in citation rates for stops made in Guadalupe.

Table 70: PSM Results, Citations, Guadalupe

Model	Difference (percentage points)	t-statistic	Statistically Significant
Black Drivers	–11.45	–1.12	No
Hispanic Drivers	11.66	1.75	No
Minority Drivers	3.29	0.84	No

Table 71 provides results from the propensity score analysis of discretionary searches for Guadalupe. There were insufficient data to analyze search disparity between White and Black drivers. We found no statistically significant difference in search rates between Hispanic and White drivers and between Minority and White drivers.

Table 71: PSM Results, Discretionary Searches, Guadalupe

Model	Difference (percentage points)	t-statistic	Statistically Significant
Black Drivers	N/A	N/A	N/A
Hispanic Drivers	1.50	0.57	No
Minority Drivers	0.35	0.45	No

Table 72 provides the results from the propensity score analysis of arrest rates in Guadalupe. We found no statistically significant disparity for Black or Minority drivers for differences in arrest rates for stops made in Guadalupe. We found statistically significant disparity in arrest rates for Hispanic and White drivers. Hispanic drivers were arrested 6 percent more often than White drivers.

Table 72: PSM Results, Arrests, Guadalupe

Model	Difference (percentage points)	t-statistic	Statistically Significant
Black Drivers	1.04	0.30	No
Hispanic Drivers	6.00	2.68	Yes
Minority Drivers	2.72	1.44	No

Sun City

Sun City is an unincorporated community in the Phoenix metropolitan area. Sun City is a retirement community that is patrolled by District 3 deputies. In 2023, MCSO deputies made 483 traffic stops in Sun City. Stops in Sun City were concentrated on 111th Avenue, 95th Avenue North Del Webb Boulevard, Grand Avenue, and intersections on Bell Road.. Approximately 43 percent of stops made in Sun City were of drivers who resided in the community.

Figure 8: Sun City MCSO Traffic Stops, 2023
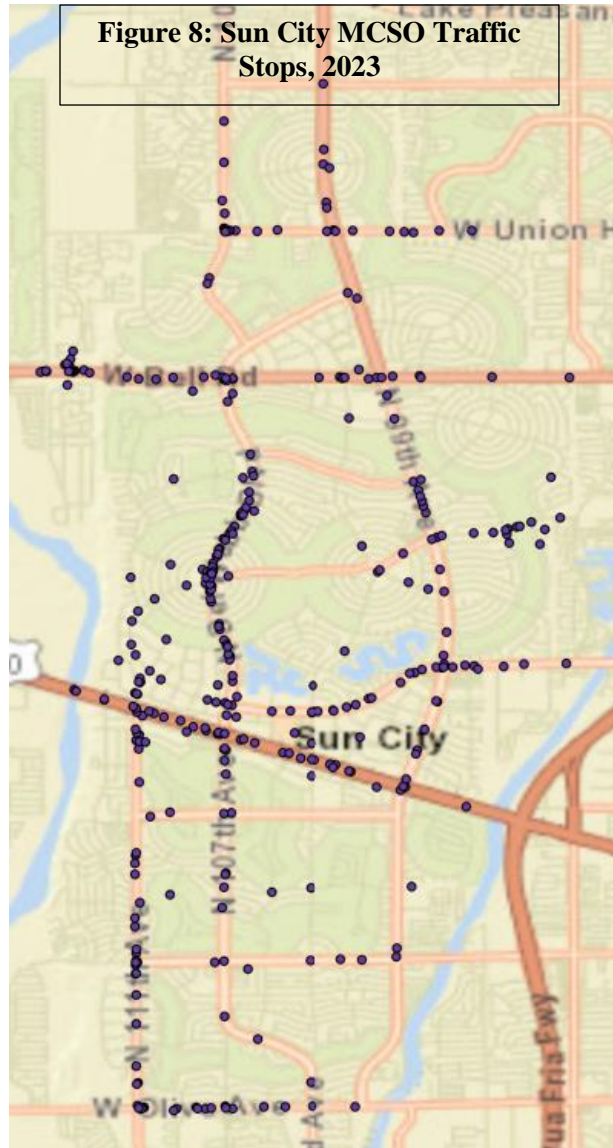
Race/Ethnicity of Drivers

In Table 73 below we report the racial/ethnic composition of drivers stopped by MCSO deputies in Sun City and provide the racial/ethnic composition of all MCSO traffic stops for comparison. Nearly two-thirds (66.43%) of drivers stopped by MCSO deputies in Sun City were identified as White. Deputies identified 118 (21.07%) drivers as Hispanic in Sun City and 8.75 percent of drivers stopped in Sun City were identified as Black. Finally, 33.57 percent of drivers stopped in Sun City were identified as non-White Minorities.

Table 73: Racial/Ethnic Composition of Drivers Stopped, Sun City

	MCSO		Sun City	
	Number	Percent	Number	Percent
Black	1,560	8.37%	49	8.75%
Hispanic	4,682	25.13%	118	21.07%
White	11,628	62.41%	372	66.43%
All Minority Drivers	7,004	37.59%	188	33.57%
Total	18,632	100.00%	560	100.00%

Special Assignments

Table 74, below, identifies stops that were made in Sun City when deputies were working on special assignments. There were only 16 stops of drivers and Sun City by deputies working special assignments in 2023. Four stops were made while deputies were working on Aggressive Driver detail and 12 stops were made when deputies were working on a DUI Task Force.

Table 74: Number (percent of stops), Special Assignments, Sun City

	Aggressive Driver	DUI Task Force	Click-it-or-Ticket
All Stops	4 (0.71%)	12 (2.14%)	0 (0.00%)
Black	1 (2.04%)	0 (0.00%)	0 (0.00%)
Hispanic	0 (0.00%)	5 (4.24%)	0 (0.00%)
White	2 (0.53%)	6 (1.61%)	0 (0.00%)
Minority	2 (1.06%)	6 (3.19%)	0 (0.00%)

Extended Traffic Stop Indicator Use

In Table 75 below we report Extended Traffic Stop Indicator (ETSIs) use for Sun City. There were 204 traffic stops (36.43%) with delays documented with ETSIs in Sun City. Delays related to driving documentation (license, insurance, and registration) were most common with about 25 percent (N = 142) stops delayed for this reason. This delay was not evenly distributed among racial/ethnic groups. About 34 percent of Hispanic drivers (N = 40) experienced delays associated with driving documentation while 21 percent of White drivers were delayed for this reason. In Sun City, 4.29 percent of stops were delayed due to training and 7.68 percent of stops were delayed by technical issues. There were 10 instances of vehicles being towed in Carefree. There were 30 stops that were delayed for "Other" reasons.

Table 75: Extended Stop Indicator Use, Sun City

	DUI	Language Barrier	Driving Documentation	Technical Issue
All Stops	13 (2.32%)	8 (1.43%)	142 (25.36%)	43 (7.68%)
Black	0 (0.00%)	3 (6.12%)	18 (36.73%)	4 (8.16%)
Hispanic	0 (0.00%)	4 (3.39%)	40 (33.90%)	11 (9.32%)
White	13 (3.49%)	0 (0.00%)	79 (21.24%)	26 (6.99%)
Minority	0 (0.00%)	8 (4.26%)	63 (33.51%)	17 (9.04%)

	Training Stop	Vehicle Tow	Other Delay
All Stops	24 (4.29%)	10 (1.79%)	30 (5.36%)
Black	3 (6.12%)	1 (2.04%)	1 (2.04%)
Hispanic	7 (5.93%)	5 (4.24%)	10 (8.47%)
White	13 (3.49%)	3 (0.81%)	17 (4.57%)
Minority	11 (5.85%)	7 (3.72%)	13 (6.91%)

Stop Reasons

In Table 6 we identify the reasons drivers were stopped for traffic violations in Sun City. The most common reason for stops in Sun City was speeding with 47.7 percent of drivers stopped for this reason. The second most common reason for traffic stops was expired or suspended license plates. 14.8 percent of drivers were stopped for this reason. About 74 percent of stops in Sun City were made for speeding or non-speeding moving violations while 26 percent of stops were made for other violations (e.g. expired/suspended plates, no license plates, no license plate light, or having a headlight or taillight no illuminated).

Table 76: Stop Reasons, Sun City

Stop Reason	All Stop	Black	Hispanic	White	Minority
ATL	1 (0.18%)	0 (0.00%)	0 (0.00%)	1 (0.27%)	0(0.00%)
Cell phone use	11 (1.96%)	0 (0.00%)	1 (0.85%)	8 (2.15%)	3 (1.60%)
Exp/Sus plate	83 (14.82%)	4 (8.16%)	16 (13.56%)	61 (16.40%)	23 (11.70%)
Failure to yield	3 (0.54%)	0 (0.00%)	0 (0.00%)	3 (0.81%)	0(0.00%)
Failure to maintain lane	7 (1.25%)	1 (2.04%)	2 (1.69%)	4 (1.08%)	3 (1.60%)
Failure to move for EV	1 (0.18%)	0 (0.00%)	0 (0.00%)	1 (0.27%)	0(0.00%)
Failure to obey traffic control device	2 (0.36%)	0 (0.00%)	0 (0.00%)	1 (0.27%)	1 (0.53%)
Failure to stop for school bus	1 (0.18%)	0 (0.00%)	0 (0.00%)	0 (0.00%)	1 (0.53%)
Improper lights	6 (1.07%)	1 (2.04%)	1 (0.85%)	4 (1.08%)	2 (1.06%)
Improper turn	3 (0.54%)	0 (0.00%)	1 (0.85%)	2 (0.54%)	1 (0.53%)
No head/taillights	60 (10.71%)	8 (16.33%)	13 (11.02%)	37 (9.95%)	23 (12.23%)
No license plate light	11 (1.96%)	1 (2.04%)	6 (5.08%)	4 (1.08%)	7 (3.72%)
No visible plate	12 (2.14%)	3 (6.12%)	4 (3.39%)	5 (1.34%)	7 (3.72%)
Obstructing roadway	2 (0.36%)	0 (0.00%)	0 (0.00%)	2 (0.54%)	0 (0.00%)
One head/taillight	30 (5.36%)	3 (6.12%)	7 (5.93%)	20 (5.38%)	10 (5.32%)
Passing violation	1 (0.18%)	0 (0.00%)	1 (0.85%)	0 (0.00%)	0(0.00%)
Red Light Violation	28 (5.00%)	3 (6.12%)	6 (5.08%)	18 (4.84%)	10 (5.32%)
Speed too slow	1 (0.18%)	0 (0.00%)	0 (0.00%)	1 (0.27%)	0(0.00%)
Speeding	267 (47.68%)	24 (48.98%)	52 (44.07%)	180 (48.39%)	87 (46.28%)
Stop sign violation	19 (3.39%)	1 (2.04%)	6 (5.08%)	12 (3.23%)	7 (3.72%)
Unsafe lane change	2 (0.36%)	0 (0.00%)	0 (0.00%)	2 (0.54%)	0(0.00%)
Window Tint	1 (0.18%)	0 (0.00%)	1 (0.85%)	0 (0.00%)	1 (0.53%)
Wrong way driving	5 (0.89%)	0 (0.00%)	0 (0.00%)	4 (1.08%)	1 (0.53%)
Multiple stop reasons	1 (0.18%)	0 (0.00%)	0 (0.00%)	0 (0.00%)	1 (0.53%)
Other /unknown	2 (0.36%)	0 (0.00%)	0 (0.00%)	2 (0.54%)	0 (0.00%)

Violation Categories

In Table 77 below we identify the categories of violations that were cited or warned during stops in Sun City.[19] In Sun City, 47.5 percent of drivers were cited or warned for speeding violations. This was the most common violation that was cited/warned. The second most common category of violation that was cited/warned was for driving documentation (30%). Equipment and non-speed moving violations were cited/warned during 18.04 percent and 13.93 percent of traffic stops, respectively. 2.5 percent of drivers were cited or warned for "Other violations."

Table 77: Number (percent of stops), Violation Categories, Sun City

	Driving Documentation	Equipment	Non-Speed Moving	Speed	Other Violation
All Stops	168 (30.00%)	101 (18.04%)	78 (13.93%)	266 (47.50%)	14 (2.50%)
Black	14 (28.57%)	10 (20.41%)	5 (10.20%)	24 (48.98%)	1 (2.04%)
Hispanic	39 (33.07%)	27 (22.88%)	17 (14.41%)	52 (43.07%)	1 (0.85%)
White	111 (29.84%)	62 (16.67%)	52 (13.98%)	179 (48.12%)	10 (2.69%)
Minority	57 (30.32%)	39 (20.74%)	26 (13.83%)	87 (46.28%)	4 (2.13%)

Propensity Score Matching Analysis

In Table 78 below we provide summary statistics for the benchmarks used in the baseline propensity score matching analysis for Sun City. Note that arrests include both custodial arrests and non-custodial "cite and release" arrests. In Tables 79–82 below we report the results of propensity score matching on the baseline benchmarks used in the TSAR—stop length, citation rate, search rate, and arrest rate. For each benchmark we used propensity score matching to compare Black, Hispanic, and Minority drivers to White drivers.

Table 78: Summary Statistics for PSM Benchmarks, Sun City

Racial/Ethnicity	Stop Length (Standard Deviation)	Citation Rate	Search Rate	Arrest Rate
Black Drivers	11.83 (3.50)	48.98%	0.00%	10.20%
Hispanic Drivers	11.10 (2.58)	51.69%	0.00%	10.17%
White Driver	11.47 (3.41)	49.73%	0.27%	5.38%
Minority Drivers	11.35 (2.74)	50.53%	0.00%	9.57%

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[19]Note that because drivers may receive more than one citation or warning, percentages across violation categories exceed 100 percent.

Table 79 presents results from the propensity score analysis of stop length for stops made in Sun City. We found no statistically significant disparity for Hispanic, Black, or Minority drivers for differences in stop length for stops made in Sun City.

Table 79: PSM Results, Stop Length, Sun City

Model	Stop Length difference (in minutes)	t-statistic	Statistically Significant
Black Drivers	0.54	0.63	No
Hispanic Drivers	–1.76	–1.62	No
Minority Drivers	–0.11	–0.19	No

Table 80 presents results from the propensity score analysis of citation rates for stops made in Sun City. We identified no statistically significant differences for Hispanic, Black, or Minority drivers for differences in citation rates for stops made in Sun City.

Table 80: PSM Results, Citations, Sun City

Model	Difference (percentage points)	t-statistic	Statistically Significant
Black Drivers	5.80	0.65	No
Hispanic Drivers	5.93	0.84	No
Minority Drivers	6.38	1.10	No

Table 81 provides results from the propensity score analysis of discretionary searches for Sun City. There were insufficient data to analyze search disparity between White and Hispanic drivers and between White and Minority drivers. We found no statistically significant difference in search rates between Black and White drivers.

Table 81: PSM Results, Discretionary Searches, Sun City

Model	Difference (percentage points)	t-statistic	Statistically Significant
Black Drivers	–0.78	–1.36	No
Hispanic Drivers	N/A	N/A	N/A
Minority Drivers	N/A	N/A	N/A

Table 82 provides the results from the propensity score analysis of arrest rates in Sun City. We found no statistically significant disparity for Hispanic, Black, or Minority drivers for differences in arrest rates for stops made in Sun City.

Table 82: PSM, Arrests, Sun City

Model	Difference (percentage points)	t-statistic	Statistically Significant
Black Drivers	–2.57	–0.49	No
Hispanic Drivers	0.00	0.00	No
Minority Drivers	0.00	0.00	No

Sun City West

Sun City West is an unincorporated retirement community in the northwest quadrant of the Phoenix metropolitan area. MCSO made 498 traffic stops in Sun City West in 2023. These stops were concentrated on El Mirage Road, Grand Avenue, R. H. Johnson Boulevard, West Bell Road, and West Meeker Boulevard. Approximately 21 percent of stops made in Sun City West were of residents of the community.

Figure 9: Sun City West MCSO Traffic Stops, 2023

Race/Ethnicity of Drivers

In Table 82 below we report the racial/ethnic composition of drivers stopped by MCSO deputies in Sun City West and provide the racial/ethnic composition of all MCSO traffic stops for comparison. Over 71 percent of drivers stopped by MCSO deputies in Sun City West were identified as White. Deputies identified 118 (21.22%) drivers as Hispanic in Sun City West and 4.86 percent of drivers stopped in Sun City West were identified as Black. Finally, 28.78 percent of drivers stopped in Sun City West were identified as non-White Minorities.

Table 83: Racial/Ethnic Composition of Drivers Stopped, Sun City West

	MCSO		Sun City West	
	Number	Percent	Number	Percent
Black	1,560	8.37%	27	4.86%
Hispanic	4,682	25.13%	118	21.22%
White	11,628	62.41%	396	71.22%
All Minority Drivers	7,004	37.59%	160	28.78%
Total	18,632	100.00%	556	100.00%

Special Assignments

Table 84, below, identifies stops that were made in Sun City West when deputies were working on special assignments. There were 19 stops of drivers and Sun City West by deputies working special assignments in 2023. Four stops were made while deputies were working on Aggressive Driver detail and 14 stops were made when deputies were working on a DUI Task Force. There was one stop by a deputy working the Click-it-or-Ticket special assignment.

Table 84: Number (percent of stops), Special Assignments, Sun City West

	Aggressive Driver	DUI Task Force	Click-it-or-Ticket
All Stops	4 (0.72%)	14 (2.52%)	1 (0.18%)
Black	0 (0.00%)	1 (3.70%)	0 (0.00%)
Hispanic	0 (0.00%)	6 (5.08%)	0 (0.00%)
White	3 (0.76%)	7 (1.77%)	1 (0.25%)
Minority	1 (0.62%)	7 (4.38%)	0 (0.00%)

Extended Traffic Stop Indicator Use

In Table 85 below we report Extended Traffic Stop Indicator (ETSIs) use for Sun City West. There were 152 traffic stops (27.34%) with delays documented with ETSIs in Sun City West. Delays related to driving documentation (license, insurance, and registration) were most common with about 15.7 percent (N = 87) of stops delayed for this reason. In Sun City West, 7.19 percent of stops were delayed due to training and 5.40 percent of stops were delayed by technical issues. There were 3 instances of vehicles being towed in Sun City West. There were 23 stops that were delayed for "Other" reasons.

Table 85: Extended Traffic Stop Indicator Use, Sun City West

	DUI	Language Barrier	Driving Documentation	Technical Issue
All Stops	8 (1.44%)	6 (1.08%)	87 (15.65%)	30 (5.40%)
Black	1 (3.70%)	0 (0.00%)	8 (29.63%)	2 (7.41%)
Hispanic	4 (3.39%)	3 (2.54%)	23 (19.49%)	5 (4.24%)
White	3 (0.76%)	1 (0.25%)	53 (13.38%)	23 (5.81%)
Minority	5 (3.12%)	5 (3.12%)	34 (21.25%)	7 (4.38%)

	Training Stop	Vehicle Tow	Other Delay
All Stops	40 (7.19%)	3 (0.54%)	23 (4.14%)
Black	1 (3.70%)	1 (3.70%)	4 (14.81%)
Hispanic	13 (11.02%)	1 (0.85%)	7 (5.93%)
White	25 (6.31%)	2 (0.25%)	11 (2.78%)
Minority	15 (9.38%)	2 (1.25%)	12 (7.50%)

Stop Reasons

In Table 86 we identify the reasons drivers were stopped for traffic violations in Sun City West. The most common reason for stops in Sun City West was speeding with 68.4 percent of drivers stopped for this reason. The second most common reason for traffic stops was expired or suspended plates. 8.5 percent of drivers were stopped for this reason. About 88 percent of stops in Sun City West were made for speeding or non-speeding moving violations while 12 percent of stops were made for other violations (e.g., expired/suspended plates, no license plates, no license plate light, or having a headlight or taillight no illuminated).

Table 86: Stop Reasons, Sun City West

Stop Reason	All Stop	Black	Hispanic	White	Minority
Cell phone use	7 (1.26%)	0 (0.00%)	0 (0.00%)	7 (1.77%)	0 (0.00%)
Driving w/ high beams	1 (0.18%)	0 (0.00%)	0 (0.00%)	1 (0.25%)	0 (0.00%)
Exp/Sus plate	47 (8.45%)	1 (3.70%)	7 (7.93%)	37 (9.34%)	10 (6.25%)
Failure to signal	0 (0.00%)	0 (0.00%)	0 (0.00%)	0 (0.00%)	0 (0.00%)
Failure to yield	3 (0.54%)	0 (0.00%)	0 (0.00%)	3 (0.76%)	0 (0.00%)
Failure to maintain lane	17 (3.06%)	2 (7.41%)	4 (3.39%)	10 (2.53%)	7 (4.38%)
Failure to move for EV	2 (0.36%)	0 (0.00%)	1 (0.85%)	1 (0.25%)	1 (0.62%)
Failure to obey traffic control device	2 (0.36%)	0 (0.00%)	0 (0.00%)	2 (0.51%)	0 (0.00%)
Improper turn	2 (0.36%)	0 (0.00%)	0 (0.00%)	2 (0.51%)	0 (0.00%)
Tailgating	1 (0.18%)	0 (0.00%)	1 (0.85%)	0 (0.00%)	1 (0.62%)
No head/taillights	30 (5.40%)	2 (7.41%)	5 (4.25%)	23 (5.81%)	7 (4.38%)
No license plate light	2 (0.36%)	0 (0.00%)	0 (0.00%)	2 (0.51%)	0 (0.00%)
No visible plate	11 (1.98%)	0 (0.00%)	5 (4.24%)	5 (1.26%)	6 (3.75%)
One head/taillight	7 (1.26%)	1 (3.70%)	2 (1.69%)	4 (1.01%)	3 (1.88%)
Passing violation	1 (0.18%)	0 (0.00%)	1 (0.85%)	0 (0.00%)	1 (0.62%)
Red Light Violation	18 (3.24%)	3 (11.11%)	4(3.39%)	11 (2.78%)	7 (4.38%)
Speeding	380 (68.35%)	17 (62.96%)	82 (67.80%)	272 (68.69%)	108 (67.50%)
Speed too slow	0 (0.00%)	0 (0.00%)	1 (0.85%)	0 (0.00%)	1 (0.62%)
Stop sign violation	11 (1.98%)	1 (3.70%)	2 (1.69%)	8 (2.02%)	3 (1.88%)
Unsafe lane change	3 (0.54%)	0 (0.00%)	1 (0.85%)	2 (0.51%)	1 (0.62%)
Wrong way driving	3 (0.54%)	0 (0.00%)	1 (0.85%)	2 (0.51%)	1 (0.62%)
Multiple stop reasons	3 (0.54%)	0 (0.00%)	1 (0.85%)	2 (0.51%)	1 (0.62%)
Other /unknown	4 (0.72%)	0 (0.00%)	2 (1.69%)	2 (0.51%)	2 (1.25%)

Violation Categories

In Table 87 below we identify the categories of violations that were cited or warned during stops in Sun City West.[20] In Sun City West, 67.5 percent of drivers were cited or warned for speeding violations. This was the most common violation that was cited/warned. The second most common

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[20]Note that because drivers may receive more than one citation or warning, percentages across violation categories exceed 100 percent.

category of violation that was cited/warned was for driving documentation (19.06%). Equipment and non-speed moving violations were cited/warned during 7.55 percent and 12.05 percent of traffic stops, respectively. Less than 2 percent of drivers were cited or warned for "Other violations."

Table 87: Number (percent of stops), Violation Categories, Sun City West

	Driving Documentation	Equipment	Non-Speed Moving	Speed	Other Violation
All Stops	106 (19.06%)	42 (7.55%)	67 (12.05%)	375 (67.45%)	10 (1.80%)
Black	6 (22.22%)	3 (11.11%)	6 (22.22%)	16 (59.26%)	0 (0.00%)
Hispanic	27 (22.88%)	8 (6.78%)	16 (13.56%)	77 (65.25%)	3 (2.54%)
White	70 (17.68%)	31 (7.83%)	44 (11.11%)	271 (68.43%)	7 (1.77%)
Minority	36 (22.50%)	11 (6.88%)	23 (14.38%)	104 (65.00%)	3 (1.88%)

Propensity Score Matching Analysis

In Table 88 below we provide summary statistics for the benchmarks used in the baseline propensity score matching analysis for Sun City West. Note that arrests include both custodial arrests and non-custodial "cite and release" arrests. In Tables 89–92 below we report the results of propensity score matching on the baseline benchmarks used in the TSAR—stop length, citation rate, search rate, and arrest rate. For each benchmark we used propensity score matching to compare Black, Hispanic, and Minority drivers to White drivers.

Table 88: Summary Statistics for PSM Benchmarks, Sun City West

Racial/Ethnicity	Stop Length (Standard Deviation)	Citation Rate	Search Rate	Arrest Rate
Black Drivers	11.75 (4.19)	59.26%	0.00%	11.11%
Hispanic Drivers	11.59 (2.96)	65.25%	0.85%	10.17%
White Driver	11.10 (3.13)	55.56%	0.25%	2.78%
Minority Drivers	11.60 (3.10)	65.00%	0.62%	10.00%

Table 89 presents results from the propensity score analysis of stop length for stops made in Sun City West. We found no statistically significant disparity for Hispanic, Black, or Minority drivers for differences in stop length for stops made in Sun City West.

Table 89: PSM Results, Stop Length, Sun City West

Model	Stop Length difference (in minutes)	t-statistic	Statistically Significant
Black Drivers	1.38	1.07	No
Hispanic Drivers	0.02	0.04	No
Minority Drivers	0.01	0.04	No

Table 90 presents results from the propensity score analysis of citation rates for stops made in Sun City West. We identified no statistically significant differences for Hispanic, Black, or Minority drivers for differences in citation rates for stops made in Sun City West.

Table 90: PSM Results, Citations, Sun City West

Model	Difference (percentage points)	t-statistic	Statistically Significant
Black Drivers	18.52	1.31	No
Hispanic Drivers	11.02	1.61	No
Minority Drivers	–4.30	–0.95	No

Table 21 provides results from the propensity score analysis of discretionary searches for Sun City West. There were insufficient data to analyze search disparity between White and Black drivers. We found no statistically significant difference in search rates between Hispanic and White drivers or between Minority and White drivers.

Table 91: PSM Results, Discretionary Searches, Sun City West

| Model	Difference (percentage points)	t-statistic	Statistically Significant
Black Drivers	N/A	N/A	N/A
Hispanic Drivers	0.00	0.00	No
Minority Drivers	–0.83	–0.59	No

Table 92 provides the results from the propensity score analysis of arrest rates in Sun City West. We found no statistically significant disparity for Hispanic, Black, or Minority drivers for differences in arrest rates for stops made in Sun City West.

Table 92: PSM Results, Arrests, Sun City West

Model	Difference (percentage points)	t-statistic	Statistically Significant
Black Drivers	3.70	0.82	No
Hispanic Drivers	5.08	1.29	No
Minority Drivers	–0.33	–0.14	No

Youngtown

Youngtown is a small community located between El Mirage/Surprise and Sun City. The town contracts with MCSO for policing services. In 2023, MCSO made 341 traffic stops in Youngtown. The majority of stops in Youngtown were made along North 111th Avenue and North Agua Fría Ranch Road Approximately 48 percent of stops made in Youngtown were of town residents.
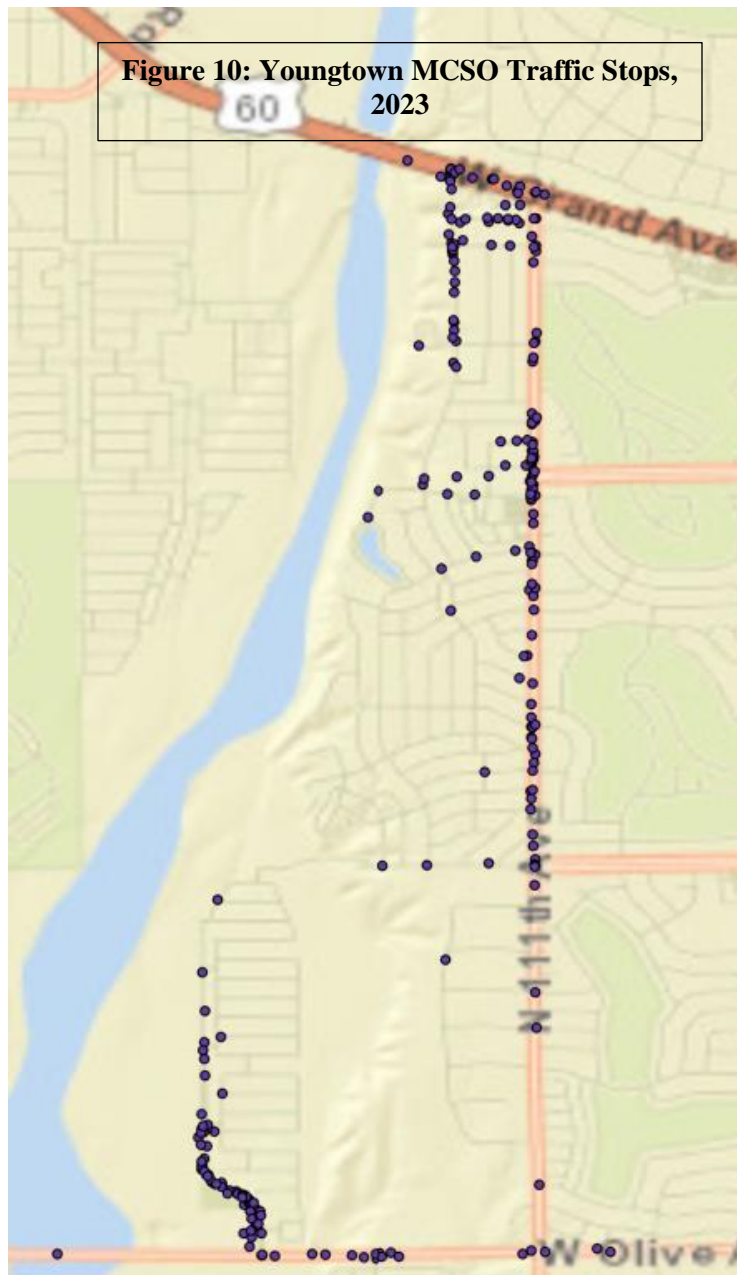
Figure 10: Youngtown MCSO Traffic Stops, 2023

Race/Ethnicity of Drivers

In Table 1 below we report the racial/ethnic composition of drivers stopped by MCSO deputies in Youngtown and provide the racial/ethnic composition of all MCSO traffic stops for comparison. About 44 percent of drivers stopped by MCSO deputies in Youngtown were identified as White. Deputies identified 144 (40.91%) drivers as Hispanic in Youngtown and 13.07 percent of drivers stopped in Youngtown were identified as Black. Finally, 56.25 percent of drivers stopped in Youngtown were identified as non-White Minorities.

Table 93: Racial/Ethnic Composition of Drivers Stopped, Youngtown

	MCSO		Youngtown	
	Number	Percent	Number	Percent
Black	1,560	8.37%	46	13.07%
Hispanic	4,682	25.13%	144	40.91%
White	11,628	62.41%	154	43.75%
All Minority Drivers	7,004	37.59%	198	56.25%
Total	18,632	100.00%	352	100.00%

Special Assignments

Table 4, below, identifies stops that were made in Youngtown when deputies were working on special assignments. There were only 8 stops of drivers in Youngtown by deputies working special assignments in 2023. Two stops were made while deputies were working on Aggressive Driver detail and 6 stops were made when deputies were working on a DUI Task Force.

Table 94: Number (percent of stops), Special Assignments, Youngtown

	Aggressive Driver	DUI Task Force	Click-it-or-Ticket
All Stops	2 (0.57%)	6 (1.70%)	0 (0.00%)
Black	0 (0.00%)	0 (0.00%)	0 (0.00%)
Hispanic	1 (0.69%)	2 (1.39%)	0 (0.00%)
White	1 (0.65%)	4 (2.60%)	0 (0.00%)
Minority	1 (0.51%)	2 (1.01%)	0 (0.00%)

Extended Traffic Stop Indicator Use

In Table 95 below we report Extended Traffic Stop Indicator (ETSIs) use for Youngtown. There were 112 traffic stops (31.82%) with delays documented with ETSIs in Youngtown. Delays related to driving documentation (license, insurance, and registration) were most common, with about 20.17 percent (N = 71) of stops delayed for this reason. This delay was not evenly distributed among racial/ethnic groups. Twenty-six percent of Hispanic drivers (N = 38) experienced delays associated with driving documentation, while 15.6 percent of White drivers were delayed for this reason. In Youngtown, 4.55 percent of stops were delayed due to training and 7.67 percent of stops were delayed by technical issues. There were 4 instances of vehicles being towed in Youngtown. There were 17 stops that were delayed for "Other" reasons.

Table 95: Extended Stop Indicator Use, Youngtown

	DUI	Language Barrier	Driving Documentation	Technical Issue
All Stops	6 (1.70%)	17 (4.83%)	71 (20.17%)	27 (7.67%)
Black	0 (0.00%)	0 (0.00%)	8 (17.39%)	7 (15.22%)
Hispanic	4 (2.78%)	16 (11.11%)	38 (26.39%)	10 (6.94%)
White	2 (1.30%)	1 (0.65%)	24 (15.58%)	10 (6.49%)
Minority	4 (2.02%)	16 (8.08%)	47 (23.74%)	17 (8.59%)

	Training Stop	Vehicle Tow	Other Delay
All Stops	16 (4.55%)	4 (1.14%)	17 (4.83%)
Black	3 (6.52%)	0 (0.00%)	1 (2.17%)
Hispanic	4 (2.78%)	3 (2.08%)	12 (8.33%)
White	9 (5.84%)	1 (0.65%)	4 (2.60%)
Minority	7 (3.54%)	3 (1.52%)	12 (6.57%)

Stop Reasons

In Table 96 we identify the reasons drivers were stopped for traffic violations in Youngtown. The most common reason for stops in Youngtown was speeding with 51.42 percent of drivers stopped for this reason. The second most common reason for traffic stops was a stop sign violation. 20.2 percent of drivers were stopped for this reason. 87.5 percent of stops in Youngtown were made for speeding or non-speeding moving violations while 12.5 percent of stops were made for other violations (e.g., expired/suspended plates, no license plates, no license plate light, or having a headlight or taillight not illuminated).

Table 96: Stop Reasons, Youngtown

Stop Reason	All Stop	Black	Hispanic	White	Minority
Attempt to locate	1 (0.28)	0 (0.00%)	1 (0.69%)	0 (0.00%)	1 (0.51%)
Cell phone use	4 (1.14%)	0 (0.00%)	2 (1.39%)	2 (1.30%)	2 (1.01%)
Exp/Sus plate	13 (3.69%)	3 (6.52%)	5 (3.47%)	5 (3.25%)	8 (4.04%)
Failure to yield	1 (0.28%)	1 (2.17%)	0 (0.00%)	0 (0.00%)	1 (0.51%)
Failure to maintain lane	1 (0.28%)	0 (0.00%)	0 (0.00%)	1 (0.65%)	0 (0.00%)
Failure to obey traffic control device	2 (0.57%)	0 (0.00%)	0 (0.00%)	2 (1.32%)	0 (0.00%)
Failure to stop for school bus	3 (0.85%)	0 (0.00%)	2 (1.39%)	1 (0.65%)	2 (1.01%)
Improper lights	2 (0.57%)	0 (0.00%)	1 (0.69%)	1 (0.65%)	1 (0.51%)
No head/taillights	24 (6.82%)	4 (8.70%)	15 (10.42%)	4 (2.60%)	20 (10.10%)
No license plate light	8 (2.27%)	0 (0.00%)	4 (2.78%)	4 (2.60%)	4 (2.02%)
No visible plate	6 (1.70%)	0 (0.00%)	4 (2.78%)	2 (1.30%)	4 (2.02%)
One head/taillight	13 (3.69%)	3 (6.52%)	5 (3.47%)	5 (3.25%)	8 (4.04%)
Reckless Driving	1 (0.28%)	0 (0.00%)	0 (0.00%)	1 (0.65%)	0 (0.00%)
Red Light Violation	17 (4.83%)	2 (4.35%)	7 (4.86%)	8 (5.19%)	9 (4.55%)
Speed too slow	1 (0.28%)	0 (0.00%)	0 (0.00%)	0 (0.00%)	0 (0.00%)
Speeding	181 (51.42%)	24 (52.17%)	71 (49.31%)	81 (52.60%)	100 (50.51%)
Stop sign violation	71 (20.17%)	8 (17.39%)	26 (18.06%)	35 (22.73%)	36 (18.18%)
Multiple stop reasons	3 (0.85%)	1 (2.17%)	1 (0.69%)	1 (0.65%)	2 (1.01%)

Violation Categories

In Table 97 below we identify the categories of violations that were cited or warned during stops in Sun City West.[21] In Youngtown, 50 percent of drivers were cited or warned for speeding violations. This was the most common violation that was cited/warned. The second most common category of violation that was cited/warned was for non-speed moving violations (27.56%). Equipment and driving documentation violations were cited/warned during 13.6 percent and 17.6 percent of traffic stops, respectively. Less than 2 percent of drivers were cited or warned for "Other violations."

Table 97: Number (percent of stops), Violation Categories, Youngtown

	Driving Documentation	Equipment	Non-Speed Moving	Speed	Other Violation
All Stops	62 (17.61%)	48 (13.64%)	97 (27.56%)	174 (50.00%)	5 (1.42%)
Black	7 (15.22%)	8 (17.39%)	11 (23.91%)	21 (45.65%)	0 (0.00%)
Hispanic	34 (23.61%)	24 (16.67%)	36 (25.00%)	70 (48.61%)	3 (2.08%)
White	21 (13.64%)	15 (9.74%)	48 (31.17%)	78 (51.95%)	2 (1.30%)
Minority	41 (20.71%)	33 (16.67%)	49 (24.75%)	96 (48.48%)	3 (1.52%)

Propensity Score Matching Analysis

In Table 88 below we provide summary statistics for the benchmarks used in the baseline propensity score matching analysis for Youngtown. Note that arrests include both custodial arrests and non-custodial "cite and release" arrests. In Tables 99–102 below we report the results of propensity score matching on the baseline benchmarks used in the TSAR—stop length, citation rate, search rate, and arrest rate. For each benchmark we used propensity score matching to compare Black, Hispanic, and Minority drivers to White drivers.

Table 98: Summary Statistics for PSM Benchmarks, Youngtown

Racial/Ethnicity	Stop Length (Standard Deviation)	Citation Rate	Search Rate	Arrest Rate
Black Drivers	12.36 (4.66)	45.65%	0.00%	6.52%
Hispanic Drivers	11.13 (2.91)	48.61%	0.69%	9.03%
White Driver	11.46 (3.45)	46.75%	1.30%	7.79%
Minority Drivers	11.43 (3.46)	47.98%	0.51%	8.08%

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[21]Note that because drivers may receive more than one citation or warning, percentages across violation categories exceed 100 percent.

Table 99 presents results from the propensity score analysis of stop length for stops made in Youngtown. We found no statistically significant disparity for Hispanic, Black, or Minority drivers for differences in stop length for stops made in Youngtown.

Table 99: PSM Results, Stop Length, Youngtown

Model	Stop Length difference (in minutes)	t-statistic	Statistically Significant
Black Drivers	0.90	1.44	No
Hispanic Drivers	–0.61	–1.30	No
Minority Drivers	–0.25	–0.57	No

Table 100 presents results from the propensity score analysis of citation rates for stops made in Youngtown. We identified no statistically significant differences for Hispanic, Black, or Minority drivers for differences in citation rates for stops made in Youngtown.

Table 100: PSM Results, Citations, Youngtown

Model	Difference (percentage points)	t-statistic	Statistically Significant
Black Drivers	–1.10	–0.18	No
Hispanic Drivers	3.91	0.53	No
Minority Drivers	5.53	1.01	No

Table 101 provides results from the propensity score analysis of discretionary searches for Youngtown. There were insufficient data to analyze search disparity between White and Black drivers. We found no statistically significant difference in search rates between Hispanic and White drivers or between Minority and White drivers.

Table 101: PSM Results, Discretionary Searches, Youngtown

Model	Difference (percentage points)	t-statistic	Statistically Significant
Black Drivers	N/A	N/A	N/A
Hispanic Drivers	–2.78	–1.02	No
Minority Drivers	0.00	0.00	No

Table 102 provides the results from the propensity score analysis of arrest rates in Youngtown. We found no statistically significant disparity for Hispanic, Black, or Minority drivers for differences in arrest rates for stops made in Youngtown.

Table 102: PSM Results, Arrests, Youngtown

Model	Difference (percentage points)	t-statistic	Statistically Significant
Black Drivers	−6.52	−0.95	No
Hispanic Drivers	2.78	0.79	No
Minority Drivers	3.19	1.11	No

All Other MCSO Traffic Stops

For all areas not included in the communities above, MCSO made a total of 10,113 traffic stops. This represented 54.28 percent of traffic stops made by MCSO deputies in 2023.

Outside of the 10 service areas identified in this report, other MCSO traffic stops are concentrated in the Lakes areas[22] (Saguaro, Canyon, Pleasant, and Bartlett), east of the city of Mesa, east of Luke Airforce base, and along major freeway and main street thoroughfares throughout the Valley.

Figure 11: Other MCSO Traffic Stops, 2023

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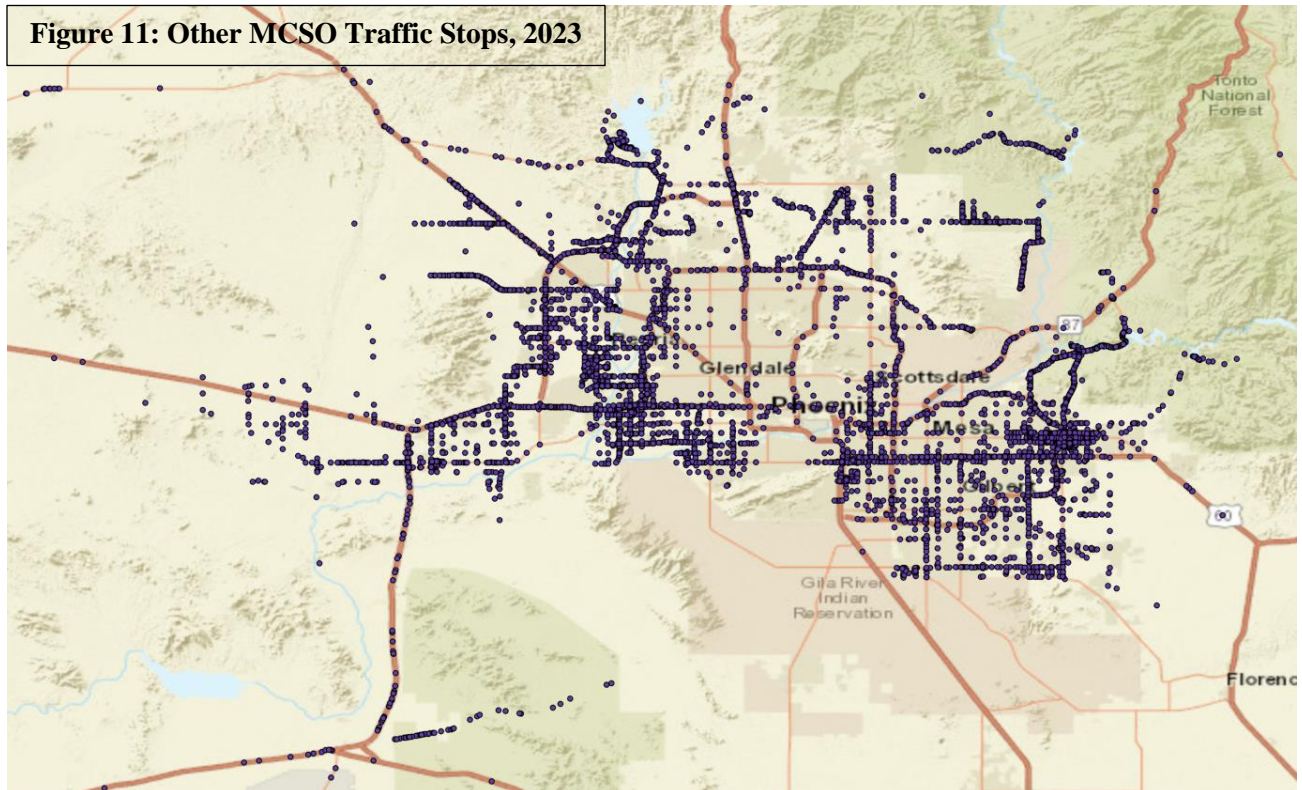
[22] Note that the areas associated with lake and river recreation are patrolled by District 5 deputies. District 5 traffic stops were analyzed in TSQR 14, available at:
https://www.mcsobio.org/_files/ugd/b6f92b_8660761c33d44aba80f7f7014491d1ad.pdf

Race/Ethnicity of Drivers

In Table 1 below we report the racial/ethnic composition of drivers stopped by MCSO outside of MCSO service communities identified earlier in this report and provide the racial/ethnic composition of all MCSO traffic stops for comparison. Nearly 57 percent of drivers stopped by MCSO deputies in 2023 were identified as White. Deputies identified 3,032 (29.41%) drivers as Hispanic in these areas and 9.75 percent of drivers stopped were identified as Black. Finally, 43.18 percent of drivers stopped were identified as non-White Minorities.

Table 103: Racial/Ethnic Composition of Drivers Stopped, All Other MCSO Stops

	MCSO		All Other MCSO Stops	
	Number	Percent	Number	Percent
Black	1,560	8.37%	1,005	9.75%
Hispanic	4,682	25.13%	3,032	29.41%
White	11,628	62.41%	5,859	56.82%
All Minority Drivers	7,004	37.59%	4,452	43.18%
Total	18,632	100.00%	10,311	100.00%

Special Assignments

Table 104, below, identifies stops made by deputies working on special assignments that were made outside of the 10 service areas identified in this report. There were 1,232 stops of drivers in these areas by deputies working special assignments in 2023. In all, 11.95 percent of stops made in these areas were made on special assignments, accounting for 84.79 percent of all special assignment stops. There were 299 stops made while deputies were working on Aggressive Driver detail and 856 stops were made when deputies were working on a DUI Task Force. There were 77 stops by a deputy working the Click-it-or-Ticket special assignment.

Table 104: Number (percent of stops), All Other MCSO Stops

	Aggressive Driver	DUI Task Force	Click-it-or-Ticket
All Stops	299 (2.90%)	856 (8.30%)	77 (0.75%)
Black	18 (1.79%)	111 (11.04%)	2 (0.20%)
Hispanic	74 (2.44%)	239 (7.88%)	36 (1.19%)
White	199 (3.40%)	461 (7.87%)	38 (0.65%)
Minority	100 (2.25%)	395 (8.87%)	39 (0.88%)

Extended Traffic Stop Indicator Use

In Table 105 below we report Extended Traffic Stop Indicator (ETSIs) use for All Other MCSO Stops. There were 4,321 traffic stops (41.91%) with delays documented with ETSIs in areas outside of the MCSO service communities identified in this report. Delays related to driving documentation (license, insurance, and registration) were most common with about 28.2 percent (N = 2,907) of stops delayed for this reason. This delay was not evenly distributed among racial/ethnic groups. One third of Hispanic drivers (37.66%) experienced delays associated with driving documentation while 21.04 percent of White drivers were delayed for this reason. About 8 percent of stops were delayed due to technical issues and 6.91 percent of stops were delayed by training. There were 258 instances of vehicles being towed (2.50%). There were 770 (7.47%) stops that were delayed for "Other" reasons. Delays for DUI investigations and because of language barriers accounted for delays during 2.6 percent and 2.9 percent of stops, respectively.

Table 105: Extended Stop Indicator Use, All Other MCSO Stops

	DUI	Language Barrier	Driving Documentation	Technical Issue
All Stops	270 (2.62%)	294 (2.85%)	2,907 (28.19%)	866 (8.40%)
Black	32 (3.18%)	7 (0.70%)	423 (42.09%)	92 (9.15%)
Hispanic	111 (3.66%)	251 (8.28%)	1,142 (37.66%)	290 (9.56%)
White	113 (1.93%)	10 (0.17%)	1,233 (21.04%)	444 (7.58%)
Minority	157 (3.53%)	284 (6.38%)	1,674 (37.60%)	422 (9.48%)

	Training Stop	Vehicle Tow	Other Delay
All Stops	713 (6.91%)	258 (2.50%)	770 (7.47%)
Black	74 (7.36%)	26 (2.59%)	102 (10.15%)
Hispanic	249 (8.21%)	167 (5.51%)	288 (9.50%)
White	350 (5.97%)	53 (0.90%)	355 (6.06%)
Minority	363 (8.15%)	205 (4.60%)	415 (9.32%)

Stop Reasons

Table 106: Stop Reasons, All Other MCSO, Stops

Stop Reason	All Stop	Black	Hispanic	White	Minority
ATL	14 (0.14%)	0 (0.00%)	5 (0.16%)	9 (0.15%)	5 (0.11%)
Cell phone use	186 (1.80%)	17 (1.69%)	61 (2.01%)	102 (1.74%)	84 (1.89%)
Crossing gore	43 (0.42%)	5 (0.50%)	12 (0.40%)	21 (0.36%)	22 (0.49%)
Crossing median	9 (0.09%)	1 (0.10%)	4 (0.13%)	4 (0.07%)	5 (0.11%)
Driving w/ high beams	6 (0.06%)	2 (0.20%)	1 (0.03%)	3 (0.05%)	3 (0.07%)
Exp/Sus plate	1,430 (13.87%)	163 (16.22%)	371 (12.24%)	853 (14.56%)	577 (12.96%)
Fail to drive on the right	16 (0.16%)	0 (0.00%)	8 (0.26%)	7 (0.12%)	9 (0.20%)
Failure to signal	42 (0.41%)	4 (0.40%)	24 (0.79%)	12 (0.20%)	30 (0.67%)
Failure to yield	35 (0.34%)	2 (0.20%)	10 (0.33%)	21 (0.36%)	14 (0.31%)
Failure to maintain lane	224 (2.17%)	28 (2.79%)	67 (2.21%)	117 (2.00%)	107 (2.40%)
Failure to move for EV	15 (0.15%)	0 (0.00%)	6 (0.20%)	9 (0.15%)	6 (0.13%)
Failure to obey traffic control device	124 (1.20%)	14 (1.39%)	44 (1.45%)	59 (1.01%)	65 (1.46%)
Failure to stop for school bus	16 (0.16%)	0 (0.00%)	6 (0.20%)	10 (0.17%)	6 (0.13%)
HOV Violation	39 (0.38%)	6 (0.60%)	17 (0.56%)	16 (0.27%)	23 (0.52%)
Improper lights	36 (0.35%)	5 (0.50%)	19 (0.63%)	11 (0.19%)	25 (0.56%)
Improper turn	83 (0.80%)	7 (0.70%)	34 (1.12%)	40 (0.68%)	43 (0.97%)
Tailgating	25 (0.24%)	2 (0.20%)	11 (0.36%)	12 (0.20%)	13 (0.29%)
No head/taillights	474 (4.60%)	70 (6.97%)	140 (4.62%)	226 (3.86%)	248 (5.57%)
No license plate light	139 (1.35%)	18 (1.79%)	65 (2.14%)	50 (0.85%)	89 (2.20%)
No visible plate	244 (2.37%)	26 (2.59%)	80 (2.64%)	128 (2.18%)	116 (2.61%)
Obstructing roadway	9 (0.09%)	1 (0.10%)	4 (0.13%)	4 (0.07%)	5 (0.11%)
One head/taillight	449 (4.35%)	78 (7.76%)	159 (5.24%)	192 (3.28%)	257 (5.77%)
Passing violation	101 (0.98%)	7 (0.70%)	27 (0.89%)	67 (1.14%)	34 (0.76%)
Reckless driving	27 (0.26%)	4 (0.40%)	8 (0.26%)	12 (0.20%)	15 (0.34%)
Red Light Violation	312 (3.03%)	29 (2.89%)	116 (3.83%)	148 (2.53%)	164 (3.68%)
Speed too slow	11 (0.11%)	1 (0.10%)	4 (0.13%)	6 (0.10%)	5 (0.11%)
Speeding	5,145 (49.90%)	400 (39.80%)	1,265 (41.72%)	3,277 (55.93%)	1,868 (41.96%)
Stop sign violation	671 (6.51%)	72 (7.16%)	301 (9.93%)	272 (4.64%)	399 (8.96%)
Unsafe lane change	109 (1.06%)	17 (1.69%)	38 (1.25%)	52 (0.89%)	57 (1.28%)
Window Tint	37 (0.36%)	1 (0.10%)	25 (0.82%)	11 (0.19%)	26 (0.58%)
Wrong way driving	19 (0.18%)	0 (0.00%)	9 (0.30%)	9 (0.15%)	10 (0.22%)
Multiple stop reasons	98 (0.95%)	14 (1.39%)	39 (1.29%)	43 (0.73%)	55 (1.24%)
Other /unknown	123 (1.19%)	11 (1.09%)	52 (1.72%)	56 (0.96%)	67 (1.50%)

Violation Categories

In Table 107 below we identify the categories of violations that were cited or warned for all other MCSO stops.[23] For all other MCSO traffic stops, about 49 percent of drivers were cited or warned for speeding violations. This was the most common violation that was cited/warned. The second most common category of violation that was cited/warned was for driving documentation (27.85%). Equipment and non-speed moving violations were cited/warned during 10.3 percent and 19.4 percent of traffic stops, respectively. Nearly 3 percent of drivers were cited or warned for "Other violations."

Table 107: Number (percent of stops), Violation Categories, All Other MCSO, Stops

	Driving Documentation	Equipment	Non-Speed Moving	Speed	Other Violation
All Stops	2,872 (27.85%)	1,065 (10.33%)	2,004 (19.44%)	5,088 (49.35%)	304 (2.95%)
Black	362 (36.02%)	150 (14.93%)	205 (20.40%)	388 (38.61%)	27 (2.69%)
Hispanic	1,004 (33.11%)	357 (11.77%)	742 (24.47%)	1,246 (41.09%)	114 (3.76%)
White	1,418 (24.20%)	497 (8.48%)	966 (16.49%)	3,254 (55.54%)	153 (2.61%)
Minority	1,454 (32.66%)	568 (12.76%)	1,038 (23.32%)	1,834 (41.19%)	151 (3.39%)

Propensity Score Matching

In Table 108 below we provide summary statistics for the benchmarks used in the baseline propensity score matching analysis. Note that arrests include both custodial and non-custodial "cite and release" arrests. In Tables 109–112 below, we provide the results of the propensity score matching analyses on the baseline benchmarks used in the TSAR—stop length, citation rate, search rate, and arrest rate. For each benchmark we used propensity score matching to compare Black, Hispanic, and Minority drivers to White drivers.

Table 108: Summary Statistics for PSM Benchmarks, All Other MCSO, Stops

Racial/Ethnicity	Stop Length (Standard Deviation)	Citation Rate	Search Rate	Arrest Rate
Black Drivers	12.19 (6.47)	50.75%	0.10%	9.35%
Hispanic Drivers	12.17 (8.52)	53.96%	0.43%	8.54%
White Driver	11.25 (5.83)	56.02%	0.41%	6.06%
Minority Drivers	12.10 (7.70)	52.72%	0.40%	8.74%

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[23]Note that because drivers may receive more than one citation or warning, percentages across violation categories exceed 100 percent.

Table 109 presents results from the propensity score analysis of stop length for all other MCSO stops. We found no statistically significant disparity for Hispanic or Black drivers when compared to White drivers. We did identify statistically significant differences in stop length for Minority and White drivers. In this case, stops of Minority drivers were 30 seconds longer, on average, than stops of White drivers.

Table 109: PSM Results, Stop Length, All Other MCSO, Stops

Model	Stop Length difference (in minutes)	t-statistic	Statistically Significant
Black Drivers	0.07	0.13	No
Hispanic Drivers	0.31	1.16	No
Minority Drivers	0.50	2.20	Yes

Table 110 presents results from the propensity score analysis of citation rates for all other MCSO stops. We identified no statistically significant difference in citation rates between Black and White drivers. We identified statistically significant differences in citation rates for Hispanic and White drivers and for Minority and White drivers. In this case, Hispanic drivers were cited 5.77 percent more often than White drivers and minority drivers were cited 3.03 percent more often than White drivers.

Table 110: PSM Results, Citations, All Other MCSO, Stops

Model	Difference (percentage points)	t-statistic	Statistically Significant
Black Drivers	0.05	0.02	No
Hispanic Drivers	5.77	3.41	Yes
Minority Drivers	3.03	2.00	Yes

Table 111 provides results from the propensity score analysis of discretionary searches for all other MCSO stops. We found no statistically significant differences in searches for Black, Hispanic, or Minority drivers when compared to White drivers.

Table 111: PSM Results, Discretionary Searches, All Other MCSO, Stops

Model	Difference (percentage points)	t-statistic	Statistically Significant
Black Drivers	–0.50	–1.41	No
Hispanic Drivers	–0.26	–0.73	No
Minority Drivers	–0.16	–0.59	No

Table 112 provides the results from the propensity score analysis of arrest rates for all other MCSO stops. We found statistically significant disparity for Black and White drivers. In this case, Black drivers were arrested 2.79 percent more often than White drivers. There was no statistically significant difference in arrest rates for Hispanic and White drivers or between Minority and White drivers.

Table 112: PSM Results, Arrests, All Other MCSO, Stops

Model	Difference (percentage points)	t-statistic	Statistically Significant
Black Drivers	2.79	1.99	Yes
Hispanic Drivers	1.48	1.59	No
Minority Drivers	1.03	1.25	No

Summary of Findings

In this research, we applied the propensity score matching analysis used in the TSAR 9 to ten MCSO service communities and to all other MCSO traffic stops. In total we conducted 132 propensity score matching analyses for these communities. In Tables 113 and 114 below, we supply a summary of those findings. In Anthem/Desert Hills we identified a statistically significant difference in citation rates between Minority and White drivers. We found no statistically significant differences for stop length, citation rates, search rates, or arrest rates for the towns of Carefree, Cave Creek, and Fountain Hills. In Gila Bend we identified statistically significant differences in stop length for Hispanic and White drivers and for arrest rates between Minority and White drivers. We found no statistically significant differences in stop length, citation rates, search rates, and arrest rates for Goodyear/Mobile. We found no statistically significant disparity in stop length, citation rates or search rates in Guadalupe. We did however identify statistically significant differences in arrest rates between White and Hispanic drivers in Guadalupe.

We found no statistically significant disparity in stop length, citations, search rates, or arrest rates for the communities of Sun City, Sun City West, and Youngtown. For all other MCSO traffic stops we identified statistically significant differences in stop length between Minority and White drivers. We also identified statistically significant differences in citation rates between White and Hispanic drivers and between White and Minority drivers for all other MCSO traffic stops. There were no statistically significant differences in search rates for all other MCSO stops. Lastly, we identified statistically significant differences in arrest rates between Black and White drivers for all other MCSO traffic stops.

✓	☒	✗
No Statistically significant disparity	Statistically significant disparity for White drivers	Statistically significant disparity for, Black, Hispanic or Minority drivers

Table 113: Summary of PSM Analyses for Stop Length and Citation Disparity

Stop Length	Stop Length Black	Stop Length Hispanic	Stop Length Minority
TSAR 9	✓	✓	✗
Anthem/Desert Hills	✓	✓	✓
Carefree	✓	✓	✓
Cave Creek	✓	✓	✓
Fountain Hills	✓	✓	✓
Gila Bend	✓	✗	✓
Goodyear/Mobile	✓	✓	✓
Guadalupe	✓	✓	✓
Sun City	✓	✓	✓
Sun City West	✓	✓	✓
Youngtown	✓	✓	✓
All Other MCSO Stops	✓	✓	✗

Citations	Citations Black	Citations Hispanic	Citations Minority
TSAR 9	✓	✓	✗
Anthem/Desert Hills	✓	✓	✗
Carefree	✓	✓	✓
Cave Creek	✓	✓	✓
Fountain Hills	✓	✓	✓
Gila Bend	✓	✓	✓
Goodyear/Mobile	✓	✓	✓
Guadalupe	✓	✓	✓
Sun City	✓	✓	✓
Sun City West	✓	✓	✓
Youngtown	✓	✓	✓
All Other MCSO Stops	✓	✗	✗

Table 114: Summary of PSM Analyses for Searches and Arrests

Searches	Searches Black	Searches Hispanic	Searches Minority
TSAR 9	✓	✓	✓
Anthem/Desert Hills	☒	☒	☒
Carefree	N/A	✓	N/A
Cave Creek	N/A	N/A	N/A
Fountain Hills	✓	✓	✓
Gila Bend	N/A	N/A	N/A
Goodyear/Mobile	✓	✓	✓
Guadalupe	N/A	✓	✓
Sun City	✓	N/A	N/A
Sun City West	N/A	✓	✓
Youngtown	N/A	✓	✓
All Other MCSO Stops	✓	✓	✓

Arrests	Arrests Black	Arrests Hispanic	Arrests Minority
TSAR 9	✓	✓	✓
Anthem/Desert Hills	✓	✓	✓
Carefree	N/A	✓	✓
Cave Creek	☒	✓	✓
Fountain Hills	✓	✓	✓
Gila Bend	✓	✓	✘
Goodyear/Mobile	✓	✓	✓
Guadalupe	✓	✘	✓
Sun City	✓	✓	✓
Sun City West	✓	✓	✓
Youngtown	✓	✓	✓
All Other MCSO Stops	✘	✓	✓

Conclusion and MCSO Response

Of the 132 analyses conducted for this report, MCSO identified eight statistically significant differences in outcomes that warranted further investigation. Results from this research were consistent with findings from the TSAR 9 and TSQR 14. These research results indicated that MCSO's jurisdictions are performing traffic patrol functions in an evenly applied manner within each jurisdiction.

MCSO has been combating disparities in outcomes for over a decade and has implemented robust and comprehensive training, audits and inspections, and ongoing traffic stop analyses and reviews. MCSO is not aware of any other police agency in the United States implementing more robust and comprehensive strategies to combat bias in its patrol.

The Bureau of Internal Oversight conducts 16 monthly audits and inspections each month, seven of which are specific to traffic stops. These include: Traffic Stop Data Collection, Review of Traffic Stops, Discussion of Traffic Stops, Search Inspection, Incident Report Inspection, Passenger Contact Inspection, and the Post Stop Ethnicity Inspection. Since April of 2021, approximately 103,000 traffic stops have been evaluated for potential bias as part of the TSMR process. The TSMR analysis uses a propensity score weighting methodology to identify disparities in traffic stop outcomes for every deputy who initiates traffic stops. Approximately 5,500 to 6,000 statistical tests are considered each month to identify racial/ethnic disparity. Furthermore, MCSO has conducted quarterly research using traffic stop data since January 2021. Results from this research have led to policy changes, increased data quality, and improved methodology used for identifying potential bias.

As of November 2024, the TSMR analyses have resulted in 570 total flags that MCSO has investigated for potential bias. These investigations identified inequality across five benchmarks (Stop Length, Citation Rate, Search Rate, Arrest Rate, and Seizure rates after a search) for four race/ethnicity categories (Asian, Black, Hispanic, Native American) compared to White drivers. Qualitative reviews of these flags have resulted in 20 interventions, 13 of which involved potential bias. Other reviews identified 84 situations necessitating non-race-related memorandums for policy violations that identify areas of improvement for the deputy and supervisor to consider. All decisions regarding TSMR-related actions have been approved by the Monitoring Team. Additionally, the Monitoring Team samples and reviews 35 traffic stops each month..Since 2016 they have reviewed over 3,780 traffic stops and no reviews have led to an allegation of bias-based policing at MCSO.

MCSO supervisors must review all deputy Vehicle Stop Contact Forms within 72 hours and discuss each traffic stop with deputies within 30 days. As a result, over 145,000 traffic stops have been reviewed since July of 2016. Supervisors also review body worn camera videos each month. Since 2016 supervisors have reviewed approximately 25,000 BWC videos of MCSO deputies initiating traffic stops. Finally, all incident reports are reviewed within 7 days and those which resulted in a custodial arrest are reviewed within 72 hours.

MCSO continues to be vigilant in its analyses of traffic stops and is continuing all of the above efforts to further mitigate disparities in traffic stop outcomes.

Additional Actions

As with every quarterly report, this report will be made available to the public, and Internal Town Halls will be held in each district to brief district commanders and staff on the findings.

It is often challenging to identify new operational measures designed to reduce disparities that may be impactful in addition to significant efforts that MCSO has been implementing with its continual policy evaluation, training, inspections, and TSMR interventions. To ensure the internal discussions that have historically occurred are evidenced moving forward, the Internal Review Group (IRG) was created in November 2023. The IRG is a multi-disciplinary group of personnel of varied ranks and roles, including patrol representatives from multiple districts civilian staff, and command personnel to ensure that findings are appropriately interpreted and to provide advice to Executive Command on potential strategies to address any findings of disparity. This review group will consider the results of this quarterly report and any recommendations made by the Monitor, Parties or Community Advisory Board. The IRG will make recommendations to Executive Command for any appropriate MCSO response. To provide transparency, all recommendations and responses are documented. We document our response to clarify how a particular recommendations were addressed . MCSO will share the results of this report with the Internal Review Group and solicit feedback from the Monitoring Team and Parties.

Of the 132 analyses of inequality conducted for this report, MCSO identified eight statistically significant differences that warrant further investigation. In compliance with Paragraph 70 of the Second Order, MCSO will take the following steps necessary to address these findings:

1. Stop Length, Hispanic drivers, Gila Bend:

    a. Review BWC footage and VSCF data for all Hispanic stops in Gila Bend that exceeded 20 minutes to determine what circumstances led to longer stops.

2. Stop Length Minority drivers, all other MCSO traffic stops:

    a. Review BWC footage and VSCF data for all Minority stops not in MCSO service communities that exceeded 20 minutes to determine what circumstances led to longer stops.

3. Citation rate, Minority drivers, Anthem/Desert Hills traffic stops:

    a. Compare citation rates for each ARS code for Minority and White drivers in Anthem/Desert Hills.

    b. Compare driver speeds for citations/warnings for speeding violations in Anthem/Desert Hills.

4. Citation rate Hispanic drivers, all other MCSO traffic stops:

a. Compare citation rates for each ARS code for Hispanic and White drivers for all other MCSO traffic stops.

b. Compare driver speeds for citations/warnings for speeding violations for all other MCSO traffic stops.

5. Citation rate Minority drivers, all other MCSO traffic stops.

a. Compare citation rates for each ARS code for Hispanic and White drivers for all other MCSO traffic stops.

b. Compare driver speeds for citations/warnings for speeding violations for all other MCSO traffic stops.

6. Arrest rate Minority drivers, Gila Bend.

a. Review arrests of Minority and White drivers in Gila Bend

7. Arrest rate Hispanic drivers, Guadalupe.

a. Review arrests of Hispanic and White drivers in Guadalupe

8. Arrest rate Black drivers, all other MCSO traffic stops.

a. Review arrests of Black and White drivers for all other MCSO stops.