2022 Pennsylvania State Police Traffic Stop Study:
2nd Quarter Report
April 1 – June 30, 2022

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Robin S. Engel, Ph.D.
Jennifer Calnon Cherkauskas, Ph.D.
Murat Yildrim, M.S.

Center for Police Research and Policy
University of Cincinnati

Please direct all correspondence regarding this report to RA-PSPCOMM@pa.gov.

I. INTRODUCTION

The Pennsylvania State Police (PSP) renewed their traffic stop data collection effort in 2021.[1] This report is the second quarterly report[2] for the PSP Traffic Stop Study and offers a preliminary examination of data collected by PSP Troopers during member-initiated traffic stops conducted from April 1 to June 30. This report and all quarterly reports are designed strictly as on-going data audits, focusing on the data collection processes and status updates. Only the annual report (using data from all of 2022) will include substantive and detailed statistical analyses that assess racial/ethnic disparities in traffic stops and outcomes.[3] The results presented in this report are purely descriptive and designed to give feedback to PSP administrators, along with exploring initial trends and patterns that may be utilized for data collection improvement, supervisory, or training purposes.

Given the variety of factors involved in police stop and enforcement decisions, it is beneficial for agencies to identify and better understand trends and patterns to enhance their ability to safely and fairly interact with the public. Furthermore, the voluntary collection and analysis of traffic stop data is consistent with best practices, demonstrates dedication to transparency and accountability to the community it serves, and continues PSP's commitment to evidence-based policing practices.[4]

2022 2nd Quarter Report Outline

The report is organized into five sections: 1) introduction, 2) data audit of data collected from April 1-June 30, 2022, 3) description of traffic stop data collected during Quarter 2 of 2022 based on preliminary statistical analyses, 4) description of traffic stop outcomes during stops conducted during Quarter 2 of 2022 based on preliminary statistical analyses, and 5) summary and recommendations. The general content for Sections 2 through 5 are described below

Section 2: Data Audit

Section 2 includes an initial audit of Quarter 2 stop data, examining these data for missing and logical inconsistencies for each field captured during a traffic stop. A complete data audit,

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[1] Robin Engel & Jennifer Cherkauskas, *2021 Pennsylvania State Police Traffic Stop Study: January 1 – December 31, 2021* (September 2022). Report submitted to the Commissioner of the Pennsylvania State Police. https://www.psp.pa.gov/

[2] See the Quarter 1 report: Robin Engel, Jennifer Cherkauskas, & Murat Yildirim, *2022 Pennsylvania State Police Traffic Stop Study: 1st Quarter Report* (September 2022). Report submitted to the Commissioner of the Pennsylvania State Police. https://www.psp.pa.gov/

[3] See the Quarter 1 Report for a full description of the differences between the types of analyses provided in quarterly vs. annual reports.

[4] Marie Pryor, Philip Goff, Farhang Heydari, & Barry Friedman. "Collecting, Analyzing, and Responding to Stop Data: A Guidebook for Law Enforcement Agencies, Government, and Communities," (2020), https://policingequity.org/images/pdfs-doc/COPS-Guidebook_Final_Release_Version_2-compressed.pdf.

similar to that conducted for the 2021 data will be provided in the 2022 annual report based on a full year of data.

Section 3: Traffic Stop Data Descriptive Statistics

Section 3 describes the traffic stop data collected during the second quarter of 2022. Specifically, it provides information derived from the traffic stop data, such as the number of stops, characteristics of the stops, the reasons for these stops, and the characteristics of the drivers. The averages for this information are reported in tables at the department, area, troop, and station levels. The racial/ethnic characteristics of stopped drivers will be compared to various benchmark data sources in the 2022 annual report based on a full year of data.

Section 4: Post-Stop Outcome Analyses

Section 4 describes drivers' outcomes as a result of their traffic stops (e.g., warnings, citations, arrests, searches, and seizures). This information is also reported by department, area, troop, and station levels. More sophisticated statistical analyses of stop outcomes will be provided in the 2022 annual report based on a full year of data.

Section 5: Summary and Recommendations

Section 5 summarizes the information presented in earlier sections of the report and provides recommendations for the ongoing traffic stop data collection effort by the PSP.

II.   DATA AUDIT

PSP Troopers are required to complete Contact Data Reports (CDR) for all member-initiated traffic stops *regardless of the stop's outcome*. Troopers enter data electronically through mobile data terminals (MDTs) in a software system called TraCS (Traffic and Criminal Software). In an effort to minimize redundancy and maximize efficiency, some of the data are auto-populated from other PSP electronic forms. The CDR form[5] includes the following information:

- **Stop** – date/time, location (county and municipality, and latitude/longitude), type of roadway, use of canine, duration of the stop, and reason(s) for the stop, whether the stop was related to a Special Traffic Enforcement program or Motor Carrier Safety Assistance program, and more specific information related to speeding violations (e.g., posted speed limit, amount over limit, etc.)
- **Driver –** gender, age, race/ethnicity, zip code of residency, compliant or resistant behavior, whether the driver was a foreign national[6], whether the driver had limited English proficiency (LEP), and if yes, the type of language assistance used
- **Vehicle** – state of registration, number of passengers[7]
- **Outcome of the Stop** – whether the driver and/or passenger was issued a citation (including the number of citations) or warning (including whether it was a verbal or written warning and the number of warnings), whether the driver and/or passenger was arrested and/or searched, and if a search was conducted roadside or following vehicle tow, reason(s) for search, and whether property was seized
- **Identifying Information** – Troopers' assigned station, employee identification, and demographic characteristics

Section 2 provides the results of an audit of data collected during the second quarter of 2022, including descriptions of any missing and logical inconsistencies for the fields captured during a traffic stop. Comparisons to the first quarter are noted where appropriate.

Data Integrity

Data integrity is a crucial component of effective data analyses. Even the most sophisticated statistical analyses are meaningless if the data used to generate the analyses lack reliability and validity. Data auditing is a vital oversight mechanism to maintain data quality. Improving data accuracy ensures that recommendations regarding policy and training are made based on the highest quality data possible. In addition to increasing data quality, a data auditing system can also help ensure officer compliance with the data collection protocol. Officers will likely be

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[5] A copy of the data collection form is provided in the Appendix.
[6] If the driver or passenger is reported as a foreign national (DFN or PFN) a series of additional questions are required including the DFN race/ethnicity, whether the communications desk unit or supervisor was contacted, whether ICE was notified, and if yes, the reason and result, whether the DFN or PFN was detained and the reason and result, whether ICE has an administrative or criminal warrant for the DFN or PFN.
[7] If passengers are present, there are additional data fields for Troopers to complete, including the passenger's race, ethnicity, LEP, whether their identification was requested, and if yes, the type of identification provided.

more diligent in their data collection if they know it is being reviewed for comprehensiveness and quality.[8]

Typically, data audits for traffic stop data involve several procedures to check for different types of inaccuracies[9], including:

- Incorrect copying of information from one form to another (e.g., data transfer or entry errors)
- Missing information on individual forms (i.e., no information entered by the PSP member)
- Invalid (i.e., illogical/inconsistent) information on individual forms (e.g., search reason provided but search initiated reported as "no")
- Missing forms for some member-initiated stops conducted (i.e., no forms generated)
- Data contains intentional misstatements of facts

In 2004, the Police Executive Research Forum (PERF), a police research and policy organization, published a comprehensive guide for analyzing data from traffic stops that remains a resource for law enforcement agencies nearly two decades later. In this guide, an error rate of less than 10% was recommended for traffic stop data.[10] Our research team recommends a more stringent standard of less than 5%, with a goal of less than 2% of missing or invalid data.

2022 Quarter 2 Results: April – June

The results of the 2022 Quarter 2 data audit are presented in Table 2.1. It includes assessments of missing data (i.e., no information entered by the officer) and logical inconsistencies (i.e., fields with entries that contradict other fields) for stop, driver, vehicle, and Trooper characteristics. All fields analyzed in this data audit are assessed based on the *CDR Data Dictionary Codebook* provided to the UC team by the PSP. Information entered in a manner inconsistent with the Codebook is considered invalid.

Overall, the results of the Quarter 2 data audit are positive. As shown in Table 2.1, the majority of the variables examined have either no missing or invalid data or have less than 0.005% (indicated as <0.00 in Table 2.1). This is well within the 2% or less standard recommended by the UC team. Overall, the data validation checks built into TraCS have minimized the errors related to missing and invalid data. Similar to the findings of the Quarter 1 data audit, there are two data fields with issues with internal consistency: (1) dedicated enforcement teams, and (2) search initiated. The specific issues identified regarding these data are detailed below.

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[8] Lorie Fridell, *By the Numbers: A Guide for Analyzing Race Data from Vehicle Stops,* Washington, D.C.: Police Executive Research Forum, (2004).
[9] Fridell, 2004.
[10] Fridell, 2004.

Table 2.1: Missing and Invalid Data from Member-Initiated Traffic Stops (n=109,453), Q2 2022

	% Missing	% Invalid
Stop Characteristics		
Date of Contact	0.00	0.00
Time of Contact	0.00	0.00
Location of Stop[11]	0.00	0.00
Roadway Type	0.00	0.00
Duration of Stop	0.00	0.00
Whether K-9 Utilized	0.03	0.00
Reason for the Stop[12]	0.00	0.00
Special Traffic Enforcement	0.00	0.00
Dedicated Enforcement Team	0.03	30.00
MCSAP Related	0.01	0.00
Outcome of the Stop		
Warning Type	0.23	0.00
Number of Driver Warnings	0.00	0.00
Number of Driver Citations	0.00	0.00
Driver Arrest	0.00	0.00
Valid Search	0.89	3.35
Driver Characteristics		
Year of Birth	0.00	0.03[13]
Gender	0.00	0.00
Race	0.00	0.00
Ethnicity	0.00	0.00
LEP	0.03	0.00
Behavior/Demeanor	0.01	0.00
Zip Code	0.00	0.37[14]
Vehicle Characteristics		
Vehicle State of Registration	0.00	0.00
Number of Passengers	0.00	0.00
Trooper Characteristics[15]		
Employee ID Number	0.00	0.00

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[11] A "valid location of stop" exists if there is a valid county and municipality code entered ***and/or*** valid latitude and longitude coordinates provided. Latitude and longitude are auto-populated from various TraCS forms (e.g., warning, citation, etc.), while county and municipality codes are auto-filled from the location selected in the TraCS Location Tool (TLT). If information is missing from original forms, it would appear as missing in CDR data.

[12] These percentages reflect the inclusion of valid data for posted speed limit, actual speed, and amount over speed limit for stops made based on speeding violations.

[13] There were 28 CDRs with dates of birth before 1/1/1921 or after 1/1/2011.

[14] There were 404 CDRs that include zip codes with five digits not in the US Zip Code Database and not equal to 99999, the PSP codebook designation for international addresses.

[15] The CDR form requires employee ID number, which links to an external personnel database and auto-populates the CDR data with information regarding Trooper gender, race, years of service, rank, current assignment/job code, and assigned station code. Therefore, the percent of missing and/or invalid data on employee ID number represents the percent of missing and/or invalid data for all Trooper characteristics.

(1) **Dedicated Enforcement Teams (DET):** Three data fields on the CDR are relevant to this error. First, there is a yes/no question that captures whether the Trooper reporting the stop is *assigned to a DET*. Second, if a Trooper selects "yes" for this question, a follow-up question asks them to identify *their assigned DET*. This can include rotational assignments to DET within PSP Troops or full-time assignments to the Safe Highways Initiative through Effective Law Enforcement and Detection (SHIELD) unit or Canine unit. Third, every organizational unit within the PSP has an *assigned location code*, including Troops and specialized units like SHIELD and Canine.

- Troopers indicated that they were members of DET in 1,513 stops, but the number of stops for the selected DET does not match the location codes for the same enforcement teams. For example, 779 stops reported SHIELD as DET, but there are 911 stops with a SHIELD location code; 115 stops reported Canine as DET, but there are 367 stops with a Canine location code.

  o Location codes are auto-populated from personnel data. It is likely that Troopers are underutilizing the dedicated enforcement team data fields.

- Based on similar issues identified in the Quarter 1 Report, PSP initiated minor adjustments for these data fields. In response to these identified discrepancies, the DET data field will default to "yes" for Troopers assigned to the SHIELD and Canine units (change takes effect in 4th quarter of 2022). Based on the timing of this correction, this issue will be examined in the 2022 Annual Report to see whether the updates have addressed the inconsistencies or whether additional action is needed.

(2) **Search initiated:** Four data fields are related to this error. *Search initiated* is a drop-down field that captures whether Troopers initiate a search, including whether searches conducted are roadside (during the stop) or when vehicles are towed and searched elsewhere. Based on the PSP codebook, the "search initiated" data field is mandatory, which should indicate that the CDR cannot be submitted without a valid response for this data field.

- 975 stops (0.89%) do not indicate whether a search was initiated. These stops are also missing information for each of the remaining search-related data fields: *search target, search reason,* or *contraband seized*. It is likely that these stops did not involve a search, however, that is not definitively known because the Trooper did not specifically indicate that no search was conducted. They are treated as stops with "no search" by the UC team.

  o This is approximately the same percentage of missing information on the "search initiated" data field as reported in the Quarter 1 data audit (0.93%).

- In 88 of the 2,629 stops indicating a search was initiated, there was not a valid entry for search target, search reason, and/or property seized (3.35%). Of these 88 cases, 46 were missing data for all three variables.

- o   This is a slightly higher percentage of inconsistent data entry on the search-related fields than was reported in the Quarter 1 data audit (2.4%)

- Based on similar issues identified in the Quarter 1 Report, PSP initiated minor adjustments for these data fields prior to the conclusion of Quarter 2. On June 27, 2022 updates were made to eliminate the possibility of missing data for the "search initiated" field as well as the search-related data fields. Based on the timing of this correction, however, this issue will be examined in the Quarter 3 report to see whether the updates have addressed the inconsistencies or whether additional action is needed.

III. DESCRIPTION OF TRAFFIC STOP DATA

PSP Troopers engaged in 109,453 traffic stops with the public during the period between April 1 and June 30, 2022. This section describes the characteristics of traffic stops and drivers encountered by Troopers during those stops. The PSP is organized into multiple managerial command levels, including 4 Areas, 16 Troops, and 88 Stations.[16] Information in all reports produced by the UC team is presented for the PSP department, Area, Troop, and Station levels to illustrate differences across organizational units.[17] Presenting information in this manner permits the identification of units that may appear as outliers, providing opportunities for closer examination and focused attention by PSP officials. Several possible explanations for variation across organizational units are unavailable in the aggregate data analyzed. These may include differences in roadway types, traffic volume, posted speed limits, population density, and the demographic makeup of residents and travelers.

Traffic Stop Characteristics

Table 3.1 provides the total number of traffic stops across all organizational units and the temporal breakdown of traffic stops (by month). As shown, there was wide variation in the amount of traffic stop activity across PSP Areas, Troops, and Stations. Overall, Area II accounted for the most traffic stops at the area level (n= 35,312). Similarly, Troops H and T, both within Area II, reported the most traffic stops at the Troop level. Troops P and R, both within Area III, reported the fewest traffic stops.

At the department level, May accounted for the greatest percentage of stops (45.6%), followed by April (29.2%), and June (25.2%). Although this trend was consistent across most of the lower organizational levels, some differences in the percentage of stops made for each month are illustrated in Table 3.1. There are several reasons to expect that traffic patterns, and thus officer activity, will vary by month, including weather, seasonal tourism, holidays, road construction, and school-related traffic.

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[16] The sum of the stops conducted by the four area commands and specialized units does not equal the total of stops conducted department-wide because a small number of stops (0.1%) are made by PSP organizational units outside of the area commands or specialized SHIELD and Canine units.

[17] An examination of specialized units is critical to understanding racial/ethnic disparities in traffic stop outcomes because the activities of these specialized units and the persons with whom they have contact are often different than those of typical patrol Troopers. SHIELD is the Safe Highways Initiative thru Effective Law Enforcement and Detection program and involves PSP members who are specially trained to interdict criminal activity occurring on major highways. These Troopers have been strategically deployed across the entire commonwealth with an emphasis on highway safety through visibility and high-volume traffic stops to identify, disrupt and dismantle criminal activity and organizations. One of the primary objectives of Canine teams focused on narcotic detection is to pursue highway interdiction activity through contacts with field personnel and aiding with traffic stops. Additionally, the narcotic detection teams take a proactive stance by providing traffic enforcement while patrolling the highways and creating a safe highway atmosphere with their visibility.

Table 3.1: Monthly Breakdown of Traffic Stops by Department, Area, Troop, & Station, Q2 2022

	Total # of Stops	April	May	June
PSP Dept.	**109,453**	**29.2%**	**45.6%**	**25.2%**
AREA I	**22,698**	**29.6%**	**48.2%**	**22.3%**
Troop B	*5,047*	*25.9%*	*52.5%*	*21.6%*
Belle Vernon	1,123	24.9%	48.4%	26.7%
Pittsburgh	1,429	23.0%	55.0%	22.0%
Uniontown	1,376	28.9%	52.4%	18.7%
Washington	529	31.6%	56.9%	11.5%
Waynesburg	590	22.4%	50.7%	26.9%
Troop C	*6,216*	*29.3%*	*46.4%*	*24.3%*
Clarion	737	35.5%	48.7%	15.7%
Clearfield	1,179	27.8%	47.6%	24.6%
Dubois	985	30.7%	46.9%	22.4%
Lewis Run	910	31.3%	42.7%	25.9%
Marienville	671	28.6%	44.3%	27.1%
Punxsutawney	836	24.9%	48.2%	26.9%
Ridgway	898	27.5%	45.9%	26.6%
Troop D	*5,482*	*30.0%*	*45.4%*	*24.7%*
Beaver	954	28.4%	52.5%	19.1%
Butler	1,163	34.1%	41.6%	24.2%
Kittanning	1,908	28.2%	44.9%	26.9%
Mercer	851	24.7%	51.2%	24.1%
New Castle	606	37.3%	34.7%	28.1%
Troop E	*5,953*	*32.6%*	*48.9%*	*18.5%*
Corry	866	38.9%	41.7%	19.4%
Erie	1,438	37.1%	47.1%	15.8%
Franklin	671	32.9%	55.3%	11.8%
Girard	1,617	28.6%	48.5%	22.9%
Meadville	734	30.7%	50.4%	18.9%
Warren	596	24.8%	56.4%	18.8%
AREA II	**35,312**	**26.9%**	**44.6%**	**28.5%**
Troop A	*5,079*	*22.5%*	*50.1%*	*27.4%*
Ebensburg	639	25.2%	46.9%	27.9%
Greensburg	1,228	22.6%	45.8%	31.6%
Indiana	1,957	22.4%	47.2%	30.4%
Kiski Valley	309	25.2%	53.4%	21.4%
Somerset (A)	946	20.1%	62.6%	17.3%

Table 3.1: Monthly Breakdown of Traffic Stops by Department, Area, Troop, & Station, Q2 2022

	Total # of Stops	April	May	June
Troop G	**6,530**	**30.9%**	**46.0%**	**23.1%**
Bedford	1,074	31.4%	47.0%	21.6%
Hollidaysburg	847	24.0%	44.9%	31.2%
Huntingdon	794	37.4%	36.9%	25.7%
Lewistown	1,139	32.6%	46.7%	20.7%
McConnellsburg	742	25.6%	53.6%	20.8%
Rockview	1,934	32.1%	46.4%	21.5%
Troop H	**11,842**	**23.8%**	**42.6%**	**33.5%**
Carlisle	2,832	25.9%	42.3%	31.8%
Chambersburg	2,998	17.1%	46.4%	36.5%
Gettysburg	1,883	27.6%	40.2%	32.2%
Harrisburg	2,289	27.4%	39.9%	32.7%
Lykens	754	20.4%	41.9%	37.7%
Newport	1,086	25.3%	43.5%	31.2%
Troop T	**11,861**	**29.5%**	**43.5%**	**27.0%**
Bowmansville	1,080	25.6%	45.8%	28.6%
Everett	1,706	30.9%	40.7%	28.4%
Gibsonia	1,749	33.1%	41.1%	25.8%
Highspire	13	0.0%	76.9%	23.1%
King of Prussia	1,367	28.1%	43.5%	28.4%
New Stanton	2,034	29.1%	42.7%	28.2%
Newville	985	33.3%	46.1%	20.6%
Pocono	1,282	27.0%	43.3%	29.7%
Somerset (T)	1,644	28.5%	47.0%	24.6%
AREA III	**26,803**	**32.7%**	**44.2%**	**23.1%**
Troop F	**9,237**	**29.9%**	**47.2%**	**22.9%**
Coudersport	813	24.0%	46.9%	29.2%
Emporium	346	33.2%	46.0%	20.8%
Lamar	1,774	34.3%	45.1%	20.6%
Mansfield	692	27.5%	51.7%	20.8%
Milton	2,416	32.5%	46.0%	21.5%
Montoursville	1,677	25.7%	51.8%	22.5%
Selinsgrove	854	28.5%	40.0%	31.5%
Stonington	665	29.6%	51.4%	18.9%
Troop N	**8,399**	**31.9%**	**45.9%**	**22.2%**
Bloomsburg	897	35.6%	45.2%	19.3%
Fern Ridge	1,852	29.9%	54.1%	16.0%
Hazleton	1,853	31.3%	46.7%	22.0%
Lehighton	632	33.1%	45.3%	21.7%
Stroudsburg	3,164	32.2%	41.0%	26.8%

Table 3.1: Monthly Breakdown of Traffic Stops by Department, Area, Troop, & Station, Q2 2022

	Total # of Stops	April	May	June
Troop P	**4,797**	**36.8%**	**38.8%**	**24.5%**
Laporte	654	40.7%	40.7%	18.7%
Shickshinny	553	38.5%	41.0%	20.4%
Towanda	1,571	35.5%	36.3%	28.1%
Tunkhannock	593	36.3%	35.6%	28.2%
Wilkes-Barre	1,425	35.8%	41.0%	23.2%
Troop R	**4,370**	**35.3%**	**40.6%**	**24.1%**
Blooming Grove	1,333	33.0%	44.2%	22.8%
Dunmore	967	27.4%	43.8%	28.7%
Gibson	1,195	39.0%	37.4%	23.6%
Honesdale	875	42.5%	36.1%	21.4%
AREA IV	**23,258**	**28.0%**	**47.0%**	**25.0%**
Troop J	**7,649**	**29.0%**	**44.5%**	**26.5%**
Avondale	1,914	25.8%	42.1%	32.2%
Embreeville	1,654	30.2%	44.8%	25.0%
Lancaster	1,464	28.1%	46.0%	26.0%
York	2,617	31.0%	45.4%	23.7%
Troop K	**4,914**	**24.1%**	**45.7%**	**30.2%**
Media	2,296	26.0%	44.3%	29.7%
Philadelphia	1,738	21.9%	46.0%	32.1%
Skippack	880	23.5%	49.1%	27.4%
Troop L	**5,003**	**28.7%**	**53.7%**	**17.6%**
Frackville	826	42.5%	42.3%	15.3%
Hamburg	829	28.6%	58.3%	13.1%
Jonestown	1,209	27.6%	51.4%	20.9%
Reading	848	19.7%	62.9%	17.5%
Schuylkill Haven	1,291	26.9%	54.2%	18.9%
Troop M	**5,692**	**29.5%**	**45.6%**	**25.0%**
Belfast	1,054	36.2%	42.9%	20.9%
Bethlehem	1,044	37.8%	45.6%	16.6%
Dublin	855	29.5%	44.8%	25.7%
Fogelsville	1,632	23.5%	47.3%	29.2%
Trevose	1,107	23.9%	46.1%	30.0%

Table 3.2 documents, at the PSP department, area, and troop level, the average percent of stops that occurred on weekdays, during the day, on various roadway types, the percent of vehicles with a Pennsylvania registration, presence of passengers, and the stop duration. Table 3.3 displays the same information at the PSP Station level. [18]

As shown in Table 3.2, department-wide, the majority of traffic stops were made on weekdays (66.3%) and during daylight hours (76.8%).[19] State highways (53.0%) and interstates (35.4%) were the most frequent locations for traffic stops. Roughly 80% of vehicles stopped were registered in Pennsylvania; on average, 22.5% had at least one passenger. Most traffic stops department-wide (88.8%) were conducted in 15 minutes or less.

Traffic stop characteristics varied somewhat by PSP Area and Troop (as reported in Table 3.2) and by Station (as reported in Table 3.3). For example, Area IV made fewer traffic stops during daylight hours (54.5% of stops) compared to the department. Similarly, at the Troop level, 88.3% of traffic stops by Troop T were made during daylight hours, compared to 60.7% of traffic stops by Troop J.

In terms of roadway types, there were several noticeable variations. For example, 83.8% of stops made by Troop T occurred on interstates, which is consistent with their primary area of responsibility on the Pennsylvania Turnpike. The percent of stops made on interstates was considerably lower in other troops (e.g., Troop A), with fewer miles of interstate roadways. Much less variation is evident in the average percent of stops that involved vehicles with a Pennsylvania registration, stops with the presence of passengers, and the average stop duration, with only a few outliers. For example, Troop T stopped considerably more drivers with out-of-state vehicle registrations.

There is also significant variation in the traffic stop characteristics for the SHIELD and Canine specialized units. For example, only 20.1% of SHIELD and 41.4% of Canine traffic stops involved vehicles with Pennsylvania registration, compared to the department-wide average of 79.1%.

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[18] Highspire station conducted only 13 stops in the second quarter of 2022. Therefore, throughout Sections 3 and 4, the highest and lowest percentages provided in station-level comparisons in the text exclude Highspire.
[19] The creation of day and night variables from the time of stop data field were roughly adjusted by month to align with the shift in sunrise and sunset throughout the year.

Table 3.2: Traffic Stop Descriptives by Department, Area, & Troop, Q2 2022

	Total #of Stops	Weekday	Daytime	Roadway Type				PA Regist. Vehicle	Vehicles with Passengers	Duration of Stop (minutes)			
				Inter	State	Local	Other			1-15	16-30	31-60	61+
PSP Dept.	**109,453**	**66.3%**	**76.8%**	**35.4%**	**53.0%**	**10.8%**	**0.9%**	**79.1%**	**22.5%**	**88.8%**	**8.2%**	**2.1%**	**0.9%**
AREA I	**22,698**	**71.3%**	**67.5%**	**25.0%**	**60.0%**	**14.6%**	**0.4%**	**86.7%**	**25.4%**	**90.1%**	**7.7%**	**1.5%**	**0.7%**
Troop B	5,047	68.1%	81.1%	34.6%	48.0%	17.0%	0.3%	85.9%	25.0%	90.9%	7.0%	1.4%	0.7%
Troop C	6,216	61.2%	72.0%	20.6%	67.9%	11.1%	0.3%	79.0%	23.1%	91.3%	6.7%	1.0%	1.0%
Troop D	5,482	67.3%	81.4%	28.1%	58.6%	13.2%	0.1%	89.8%	21.2%	92.4%	5.6%	1.2%	0.7%
Troop E	5,953	60.0%	82.6%	27.8%	60.9%	11.1%	0.2%	85.9%	25.2%	90.2%	8.3%	1.1%	0.4%
AREA II	**35,312**	**72.3%**	**70.9%**	**42.7%**	**46.8%**	**8.9%**	**1.6%**	**77.6%**	**24.2%**	**88.3%**	**8.8%**	**2.2%**	**0.7%**
Troop A	5,079	64.3%	85.7%	1.4%	89.1%	9.4%	0.1%	90.7%	18.4%	90.4%	7.2%	1.9%	0.5%
Troop G	6,530	64.8%	85.5%	28.2%	65.4%	6.2%	0.2%	79.1%	22.8%	95.1%	4.0%	0.6%	0.3%
Troop H	11,842	68.2%	65.9%	29.3%	57.0%	13.4%	0.3%	78.5%	22.3%	86.8%	8.9%	3.4%	0.9%
Troop T	11,861	68.9%	88.3%	83.8%	9.9%	1.6%	4.7%	67.3%	26.8%	89.6%	7.6%	2.2%	0.6%
AREA III	**26,803**	**68.8%**	**65.7%**	**27.5%**	**56.2%**	**15.4%**	**0.8%**	**80.3%**	**23.5%**	**87.1%**	**9.3%**	**2.4%**	**1.2%**
Troop F	9,237	62.5%	75.6%	21.7%	65.3%	12.8%	0.2%	77.6%	25.8%	92.5%	5.8%	1.2%	0.5%
Troop N	8,399	62.2%	76.7%	44.6%	38.8%	15.9%	0.7%	74.9%	20.8%	86.8%	9.3%	2.6%	1.3%
Troop P	4,797	66.9%	80.7%	8.4%	78.6%	11.9%	1.1%	89.8%	19.1%	92.6%	5.4%	1.3%	0.8%
Troop R	4,370	70.9%	83.0%	48.5%	44.4%	6.3%	0.8%	66.8%	21.0%	73.9%	18.1%	5.2%	2.7%
AREA IV	**23,258**	**72.5%**	**54.5%**	**34.1%**	**54.2%**	**11.3%**	**0.4%**	**81.6%**	**21.5%**	**85.5%**	**10.6%**	**2.6%**	**1.3%**
Troop J	7,649	67.9%	60.7%	19.4%	67.5%	12.3%	0.8%	82.7%	19.2%	87.1%	8.4%	2.5%	1.9%
Troop K	4,914	68.4%	63.5%	58.7%	31.3%	9.6%	0.4%	82.0%	18.7%	88.5%	8.8%	1.9%	0.9%
Troop L	5,003	68.4%	80.1%	28.0%	58.6%	13.3%	0.1%	84.4%	21.8%	89.0%	9.4%	1.4%	0.2%
Troop M	5,692	65.3%	69.8%	34.3%	53.3%	12.2%	0.2%	79.4%	20.4%	83.0%	12.4%	3.1%	1.5%
Specialized Units													
SHIELD	911	95.4%	96.4%	97.8%	2.1%	0.1%	0.0%	20.1%	33.0%	77.2%	13.5%	6.9%	2.4%
Canine	367	92.9%	88.8%	72.5%	17.2%	10.4%	0.0%	41.4%	36.2%	74.9%	19.1%	5.2%	0.8%

Table 3.3: Area I Traffic Stop Descriptives by Station, Q2 2022

	Total #of Stops	Weekday	Daytime	Roadway Type				PA Regist. Vehicle	Vehicles with Passengers	Duration of Stop (minutes)			
				Inter	State	Local	Other			1-15	16-30	31-60	61+
Troop B	**5,047**	**68.1%**	**81.1%**	**34.6%**	**48.0%**	**17.0%**	**0.3%**	**85.9%**	**25.0%**	**90.9%**	**7.0%**	**1.4%**	**0.7%**
Belle Vernon	1,123	75.1%	89.0%	31.6%	49.5%	18.4%	0.4%	87.8%	31.1%	89.4%	8.4%	1.7%	0.5%
Pittsburgh	1,429	66.3%	71.0%	64.1%	25.1%	10.5%	0.3%	83.6%	15.3%	94.5%	4.8%	0.6%	0.0%
Uniontown	1,376	66.1%	82.8%	2.9%	73.8%	23.0%	0.2%	91.5%	26.9%	89.8%	8.1%	1.5%	0.7%
Washington	529	66.9%	82.2%	50.7%	18.9%	29.9%	0.6%	84.3%	27.6%	85.8%	8.5%	3.4%	2.3%
Waynesburg	590	64.7%	85.4%	28.6%	66.6%	4.7%	0.0%	76.4%	30.0%	92.4%	5.4%	0.8%	1.4%
Troop C	**6,216**	**61.2%**	**72.0%**	**20.6%**	**67.9%**	**11.1%**	**0.3%**	**79.0%**	**23.1%**	**91.3%**	**6.7%**	**1.0%**	**1.0%**
Clarion	737	56.0%	67.3%	45.2%	48.4%	6.0%	0.4%	72.7%	29.7%	90.1%	8.5%	0.5%	0.8%
Clearfield	1,179	60.7%	66.7%	36.0%	55.9%	7.5%	0.5%	74.2%	10.0%	93.8%	3.8%	0.8%	1.5%
Dubois	985	59.7%	81.3%	51.4%	42.0%	6.0%	0.6%	62.8%	25.6%	93.2%	5.0%	1.0%	0.8%
Lewis Run	910	64.5%	59.9%	0.8%	66.6%	32.6%	0.0%	83.2%	26.3%	90.7%	7.8%	0.4%	1.1%
Marienville	671	56.2%	79.1%	0.6%	97.6%	1.8%	0.0%	89.3%	33.8%	92.0%	6.3%	1.0%	0.7%
Punxsutawney	836	67.2%	65.7%	0.6%	88.9%	10.4%	0.1%	96.4%	25.6%	86.5%	9.8%	2.6%	1.1%
Ridgway	898	62.4%	85.3%	0.2%	87.9%	11.7%	0.2%	80.1%	18.4%	91.9%	6.9%	0.7%	0.6%
Troop D	**5,482**	**67.3%**	**81.4%**	**28.1%**	**58.6%**	**13.2%**	**0.1%**	**89.8%**	**21.2%**	**92.4%**	**5.6%**	**1.2%**	**0.7%**
Beaver	954	68.0%	85.1%	55.9%	23.2%	20.8%	0.2%	84.6%	18.3%	94.5%	4.9%	0.4%	0.1%
Butler	1,163	65.0%	81.5%	14.3%	67.5%	18.1%	0.1%	93.6%	21.1%	94.1%	3.9%	0.9%	1.1%
Kittanning	1,908	70.1%	76.5%	0.8%	89.4%	9.6%	0.1%	95.4%	16.8%	90.1%	7.1%	1.9%	0.8%
Mercer	851	62.2%	87.7%	62.7%	32.3%	4.8%	0.1%	80.3%	29.6%	94.2%	4.6%	0.5%	0.7%
New Castle	606	69.5%	82.2%	48.3%	37.0%	14.5%	0.2%	86.3%	28.2%	90.8%	7.1%	1.9%	0.8%
Troop E	**5,953**	**60.0%**	**82.6%**	**27.8%**	**60.9%**	**11.1%**	**0.2%**	**85.9%**	**25.2%**	**90.2%**	**8.3%**	**1.1%**	**0.4%**
Corry	866	62.9%	75.9%	0.1%	83.8%	16.1%	0.0%	93.0%	19.9%	93.8%	4.8%	0.9%	0.5%
Erie	1,438	58.3%	81.9%	21.3%	62.4%	16.1%	0.2%	87.6%	30.9%	88.5%	10.3%	1.0%	0.3%
Franklin	671	52.2%	74.8%	10.6%	74.5%	13.7%	1.2%	87.3%	19.5%	87.5%	9.7%	1.9%	0.9%
Girard	1,617	64.3%	89.4%	60.7%	33.5%	5.6%	0.2%	81.9%	27.7%	89.1%	9.8%	0.7%	0.3%
Meadville	734	57.4%	84.1%	36.0%	57.9%	6.1%	0.0%	83.4%	22.5%	91.4%	7.4%	1.1%	0.1%
Warren	596	57.9%	81.5%	1.3%	89.3%	9.4%	0.0%	84.9%	22.3%	93.6%	3.9%	2.2%	0.3%

Table 3.3: Area II Traffic Stop Descriptives by Station, Q2 2022

	Total #of Stops	Weekday	Daytime	Roadway Type				PA Regist. Vehicle	Vehicles with Passengers	Duration of Stop (minutes)			
				Inter	State	Local	Other			1-15	16-30	31-60	61+
Troop A	**5,079**	**64.3%**	**85.7%**	**1.4%**	**89.1%**	**9.4%**	**0.1%**	**90.7%**	**18.4%**	**90.4%**	**7.2%**	**1.9%**	**0.5%**
Ebensburg	639	65.6%	87.5%	0.9%	97.3%	1.7%	0.0%	86.4%	35.5%	91.9%	7.5%	0.2%	0.5%
Greensburg	1,228	57.3%	78.4%	2.9%	78.3%	18.5%	0.3%	95.7%	28.7%	82.6%	13.0%	3.2%	1.2%
Indiana	1,957	66.5%	87.6%	0.9%	94.0%	5.1%	0.1%	88.5%	9.7%	93.5%	3.5%	2.7%	0.3%
Kiski Valley	309	63.4%	91.9%	0.0%	86.4%	13.3%	0.3%	94.2%	19.1%	92.2%	7.1%	0.6%	0.0%
Somerset (A)	946	68.4%	87.7%	1.0%	88.4%	10.6%	0.1%	90.6%	11.4%	92.8%	6.9%	0.3%	0.0%
Troop G	**6,530**	**64.8%**	**85.5%**	**28.2%**	**65.4%**	**6.2%**	**0.2%**	**79.1%**	**22.8%**	**95.1%**	**4.0%**	**0.6%**	**0.3%**
Bedford	1,074	64.4%	88.7%	24.8%	71.0%	4.2%	0.0%	72.5%	30.0%	94.2%	4.4%	0.7%	0.7%
Hollidaysburg	847	66.7%	89.8%	34.9%	48.5%	16.4%	0.1%	88.4%	14.4%	95.6%	3.5%	0.6%	0.2%
Huntingdon	794	60.5%	89.0%	1.1%	96.6%	2.3%	0.0%	91.8%	12.7%	88.4%	9.9%	1.6%	0.0%
Lewistown	1,139	64.6%	84.8%	0.4%	92.8%	6.8%	0.1%	92.9%	32.8%	97.5%	2.0%	0.4%	0.0%
McConnellsburg	742	61.6%	86.1%	54.4%	39.6%	5.9%	0.0%	54.3%	38.1%	97.3%	1.9%	0.7%	0.1%
Rockview	1,934	67.4%	80.7%	44.7%	50.5%	4.1%	0.7%	74.9%	14.8%	95.9%	3.4%	0.3%	0.4%
Troop H	**11,842**	**68.2%**	**65.9%**	**29.3%**	**57.0%**	**13.4%**	**0.3%**	**78.5%**	**22.3%**	**86.8%**	**8.9%**	**3.4%**	**0.9%**
Carlisle	2,832	72.1%	57.3%	47.0%	31.3%	21.3%	0.4%	74.2%	21.8%	79.1%	14.2%	5.1%	1.6%
Chambersburg	2,998	68.1%	74.6%	23.7%	62.3%	13.8%	0.2%	81.2%	21.8%	92.2%	5.5%	1.8%	0.5%
Gettysburg	1,883	66.3%	60.8%	1.0%	90.6%	8.1%	0.3%	73.0%	17.3%	95.5%	3.7%	0.6%	0.2%
Harrisburg	2,289	69.3%	65.5%	59.7%	33.1%	6.6%	0.6%	74.0%	24.2%	78.1%	13.1%	7.3%	1.6%
Lykens	754	64.9%	69.6%	1.6%	84.1%	14.2%	0.1%	94.7%	29.0%	94.3%	4.6%	0.7%	0.4%
Newport	1,086	61.2%	71.7%	2.8%	83.1%	14.0%	0.2%	89.7%	24.8%	90.2%	8.1%	1.7%	0.0%
Troop T	**11,861**	**68.9%**	**88.3%**	**83.8%**	**9.9%**	**1.6%**	**4.7%**	**67.3%**	**26.8%**	**89.6%**	**7.6%**	**2.2%**	**0.6%**
Bowmansville	1,080	76.6%	83.1%	94.5%	3.6%	1.8%	0.1%	78.1%	32.8%	89.5%	8.1%	1.7%	0.6%
Everett	1,706	69.5%	78.0%	96.8%	0.6%	0.2%	2.5%	49.8%	25.4%	90.3%	6.0%	3.1%	0.5%
Gibsonia	1,749	69.4%	93.3%	96.5%	2.3%	1.1%	0.1%	66.3%	26.6%	89.6%	6.3%	2.3%	1.7%
Highspire	13	100.0%	100.0%	76.9%	15.4%	0.0%	7.7%	76.9%	38.5%	69.2%	23.1%	7.7%	0.0%
King of Prussia	1,367	70.2%	88.1%	95.2%	0.5%	0.2%	4.0%	82.6%	25.2%	77.2%	21.1%	1.2%	0.4%
New Stanton	2,034	68.8%	95.3%	48.3%	29.3%	5.4%	17.1%	84.0%	29.4%	93.4%	5.7%	0.8%	0.0%
Newville	985	60.3%	86.8%	93.8%	0.2%	0.0%	6.0%	60.2%	35.4%	90.1%	7.8%	1.4%	0.7%
Pocono	1,282	75.2%	86.8%	65.4%	34.5%	0.1%	0.0%	74.3%	33.7%	97.3%	2.0%	0.5%	0.2%
Somerset (T)	1,644	68.0%	90.3%	92.6%	2.3%	2.1%	3.0%	44.9%	11.9%	88.6%	5.5%	5.8%	0.2%

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Table 3.3: Area III Traffic Stop Descriptives by Station, Q2 2022

	Total #of Stops	Weekday	Daytime	Roadway Type				PA Regist. Vehicle	Vehicles with Passengers	Duration of Stop (minutes)			
				Inter	State	Local	Other			1-15	16-30	31-60	61+
Troop F	**9,237**	**62.5%**	**75.6%**	**21.7%**	**65.3%**	**12.8%**	**0.2%**	**77.6%**	**25.8%**	**92.5%**	**5.8%**	**1.2%**	**0.5%**
Coudersport	813	61.7%	76.6%	0.0%	91.6%	8.4%	0.0%	84.5%	26.3%	87.6%	11.3%	0.7%	0.4%
Emporium	346	73.4%	77.2%	0.3%	94.5%	5.2%	0.0%	89.3%	27.2%	97.7%	2.0%	0.0%	0.3%
Lamar	1,774	54.7%	78.7%	48.5%	40.6%	10.8%	0.1%	65.4%	27.1%	94.2%	3.6%	2.0%	0.3%
Mansfield	692	53.9%	74.9%	8.4%	86.4%	5.2%	0.0%	60.0%	24.0%	95.8%	3.2%	0.3%	0.7%
Milton	2,416	66.6%	78.5%	24.8%	61.5%	13.5%	0.2%	75.5%	24.0%	95.5%	3.2%	0.8%	0.4%
Montoursville	1,677	68.4%	75.3%	28.3%	54.7%	16.6%	0.4%	85.6%	27.6%	87.5%	10.3%	1.3%	0.8%
Selinsgrove	854	64.4%	63.5%	1.2%	87.8%	10.9%	0.1%	83.0%	29.0%	91.2%	7.0%	1.2%	0.6%
Stonington	665	54.9%	71.4%	0.8%	73.1%	26.0%	0.2%	94.4%	21.2%	90.8%	6.8%	1.8%	0.6%
Troop N	**8,399**	**62.2%**	**76.7%**	**44.6%**	**38.8%**	**15.9%**	**0.7%**	**74.9%**	**20.8%**	**86.8%**	**9.3%**	**2.6%**	**1.3%**
Bloomsburg	897	58.6%	66.9%	74.1%	20.6%	5.2%	0.0%	66.8%	14.9%	93.6%	2.7%	1.3%	2.3%
Fern Ridge	1,852	57.5%	88.7%	60.3%	32.7%	7.0%	0.1%	61.3%	26.6%	85.5%	10.7%	2.4%	1.3%
Hazleton	1,853	65.5%	81.8%	46.4%	39.9%	13.3%	0.4%	81.2%	23.4%	89.9%	8.1%	1.6%	0.4%
Lehighton	632	54.6%	89.1%	1.9%	74.2%	22.0%	1.9%	90.7%	22.2%	85.4%	9.0%	2.2%	3.3%
Stroudsburg	3,164	65.4%	67.0%	34.6%	39.8%	24.4%	1.2%	78.2%	17.4%	84.1%	11.1%	3.7%	1.0%
Troop P	**4,797**	**66.9%**	**80.7%**	**8.4%**	**78.6%**	**11.9%**	**1.1%**	**89.8%**	**19.1%**	**92.6%**	**5.4%**	**1.3%**	**0.8%**
Laporte	654	61.8%	76.8%	3.5%	80.4%	16.1%	0.0%	86.4%	24.0%	92.4%	6.7%	0.8%	0.2%
Shickshinny	553	68.5%	83.5%	3.4%	84.8%	3.8%	8.0%	93.5%	19.2%	93.3%	4.5%	0.5%	1.6%
Towanda	1,571	70.3%	79.6%	0.7%	88.6%	10.6%	0.1%	89.1%	17.4%	94.3%	4.3%	1.0%	0.4%
Tunkhannock	593	66.3%	77.9%	1.2%	91.4%	7.4%	0.0%	94.4%	13.5%	92.2%	5.9%	0.8%	1.0%
Wilkes-Barre	1,425	65.3%	83.6%	24.2%	58.9%	16.4%	0.5%	89.0%	20.8%	90.6%	6.1%	2.3%	1.0%
Troop R	**4,370**	**70.9%**	**83.0%**	**48.5%**	**44.4%**	**6.3%**	**0.8%**	**66.8%**	**21.0%**	**73.9%**	**18.1%**	**5.2%**	**2.7%**
Blooming Grove	1,333	70.8%	78.5%	58.0%	30.9%	10.2%	0.9%	60.8%	25.8%	75.2%	16.6%	5.4%	2.8%
Dunmore	967	74.3%	81.3%	55.4%	39.7%	4.3%	0.5%	74.4%	23.0%	53.4%	33.6%	9.5%	3.5%
Gibson	1,195	69.0%	87.5%	64.4%	33.1%	2.5%	0.0%	48.7%	19.0%	79.5%	12.2%	4.5%	3.8%
Honesdale	875	70.1%	85.6%	4.7%	85.6%	7.8%	1.9%	92.2%	14.1%	87.1%	11.5%	1.1%	0.2%

Table 3.3: Area IV Traffic Stop Descriptives by Station, Q2 2022

	Total #of Stops	Weekday	Daytime	Roadway Type				PA Regist. Vehicle	Vehicles with Passengers	Duration of Stop (minutes)			
				Inter	State	Local	Other			1-15	16-30	31-60	61+
Troop J	**7,649**	**67.9%**	**60.7%**	**19.4%**	**67.5%**	**12.3%**	**0.8%**	**82.7%**	**19.2%**	**87.1%**	**8.4%**	**2.5%**	**1.9%**
Avondale	1,914	70.4%	58.5%	1.6%	86.0%	10.4%	2.0%	77.2%	21.3%	86.1%	9.4%	3.0%	1.5%
Embreeville	1,654	65.8%	69.8%	0.5%	89.2%	9.9%	0.4%	89.9%	17.5%	84.6%	12.0%	1.4%	2.0%
Lancaster	1,464	66.3%	59.0%	2.4%	87.0%	10.4%	0.2%	90.7%	21.2%	86.7%	8.5%	2.0%	2.7%
York	2,617	68.2%	57.4%	53.8%	29.3%	16.4%	0.5%	77.8%	17.5%	89.7%	5.3%	3.3%	1.7%
Troop K	**4,914**	**68.4%**	**63.5%**	**58.7%**	**31.3%**	**9.6%**	**0.4%**	**82.0%**	**18.7%**	**88.5%**	**8.8%**	**1.9%**	**0.9%**
Media	2,296	72.0%	53.2%	63.5%	31.2%	5.0%	0.3%	75.5%	16.5%	90.1%	7.3%	1.8%	0.8%
Philadelphia	1,738	67.7%	74.9%	78.8%	9.6%	11.0%	0.6%	85.3%	23.2%	86.3%	10.9%	2.0%	0.8%
Skippack	880	60.3%	67.7%	6.5%	74.2%	19.0%	0.3%	92.3%	15.7%	88.5%	8.6%	1.7%	1.1%
Troop L	**5,003**	**68.4%**	**80.1%**	**28.0%**	**58.6%**	**13.3%**	**0.1%**	**84.4%**	**21.8%**	**89.0%**	**9.4%**	**1.4%**	**0.2%**
Frackville	826	70.1%	84.6%	47.3%	43.6%	8.7%	0.4%	81.4%	23.8%	90.7%	8.6%	0.6%	0.1%
Hamburg	829	68.2%	83.2%	39.1%	49.5%	11.5%	0.0%	79.6%	23.8%	81.7%	15.3%	2.7%	0.4%
Jonestown	1,209	71.7%	78.8%	47.6%	37.2%	14.9%	0.3%	75.0%	23.7%	89.7%	8.0%	1.7%	0.5%
Reading	848	69.5%	71.6%	8.7%	64.0%	27.2%	0.0%	92.5%	14.3%	90.0%	9.2%	0.7%	0.1%
Schuylkill Haven	1,291	63.7%	82.0%	2.7%	90.4%	6.9%	0.0%	93.0%	22.5%	91.2%	7.4%	1.4%	0.0%
Troop M	**5,692**	**65.3%**	**69.8%**	**34.3%**	**53.3%**	**12.2%**	**0.2%**	**79.4%**	**20.4%**	**83.0%**	**12.4%**	**3.1%**	**1.5%**
Belfast	1,054	61.2%	67.6%	24.3%	67.6%	8.1%	0.1%	73.4%	26.4%	83.6%	11.6%	3.4%	1.4%
Bethlehem	1,044	66.5%	67.0%	1.1%	91.6%	7.0%	0.3%	89.6%	18.1%	86.1%	9.6%	3.4%	0.9%
Dublin	855	65.3%	70.5%	2.1%	83.9%	13.6%	0.5%	93.0%	17.1%	81.9%	14.2%	3.2%	0.8%
Fogelsville	1,632	65.5%	65.0%	45.6%	33.5%	20.6%	0.2%	77.2%	18.9%	82.7%	13.0%	3.1%	1.2%
Trevose	1,107	68.0%	80.8%	83.1%	9.3%	7.5%	0.1%	68.5%	21.8%	81.0%	13.5%	2.3%	3.3%

Reason for the Stop

Tables 3.4 & 3.5 report the reasons for the stops initiated by PSP Troopers, including speeding, other moving violations, equipment violation, registration, license, and other. These tables also report the average speed over the limit observed for traffic stops involving speeding violations. The PSP data collection protocol indicates Troopers should select all applicable reasons. Almost 11% of stops involved two or more reasons for the stop; as a result, the percentages reported in Figure 3.1, Table 3.4, and Table 3.5 sum to more than 100%.

Figure 3.1 displays the stop reasons at the department level. As shown, speeding was the most common reason for a stop (47.7%). The next most common reasons were other moving violations (21.9%), equipment/inspection violations (18.9%), and registration violations (14.6%)

Figure 3.1: Department-Wide Reason for Stop, Q2 2022
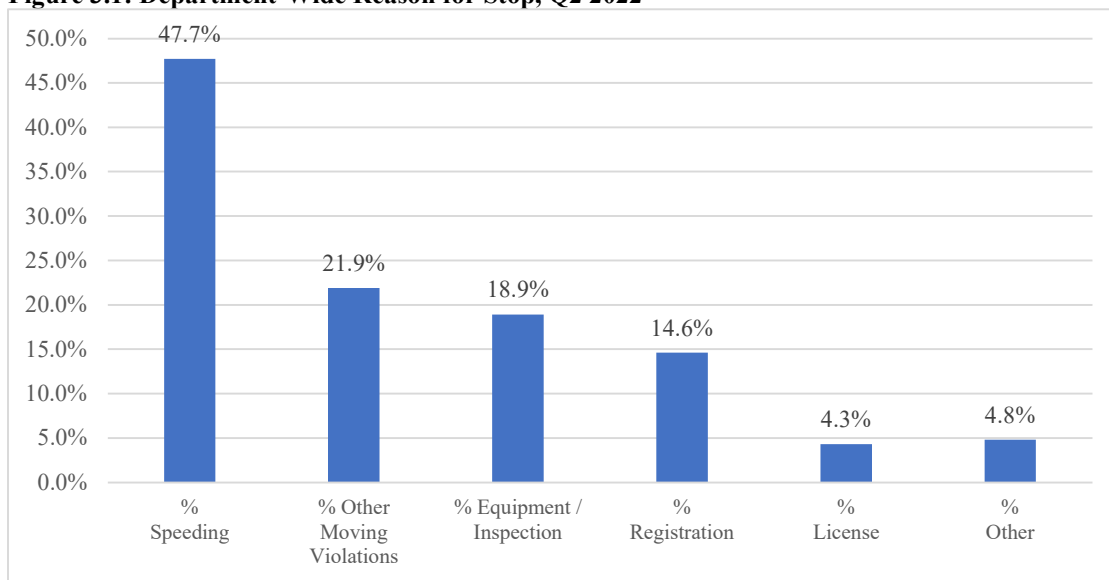
Similar to the department-level trends, speeding was the most frequent reason for stop across most Areas and Troops except for Troop J and Troop K, where the most frequent reason was other moving violations. The percent of stops made for speeding varied by area, with a high of 58% in Area II, compared to the lowest percentage in Area IV (37.8%). The troops varied in their percentage of traffic stops for speeding from a high of 74.7% (Troop T) to a low of 31.3% (Troop K).

At the department level, the average amount over the posted speed limit recorded for a speeding was 21.3 miles per hour. This varied from a low of 20.2 miles per hour over the limit in Areas I and III to a high of 24.0 in Area IV. Troop-level variation was also evident, with a low of 18.0 miles per hour over the limit in Troop C to a high of 27.1 miles per hour in Troop M.

Other moving violations were the second most common reason across the department at 21.9%. Areas varied in the percentage of stops based on other moving violations, from 33.8% in Area IV to 14.2% in Area I. Other moving violations were the most frequent reason for stops in Troop J

(36.0%) and Troop K (47.0%), which are both in Area IV. The percent of stops for other moving violations varied from 10.0% in Troop E to 47.0% of stops in Troop K. See Table 3.4 for additional reasons for the stops across Areas and Troops.

For specialized units, the reasons for traffic stops had similar patterns in both units. The most common traffic stop reason by SHIELD and Canine was other moving violations (47.5% and 62.4%, respectively). The second most common stop reason was for equipment/inspection (32.3% and 20.4%). Finally, speeding was the fourth most common reason for both specialized units (17.2% and 13.9%), and both units demonstrated a considerably lower average amount over the speed limit during speeding stops (10.5 and 12.5 mph) compared to the departmental average of 21.6 mph.

Table 3.5 shows that traffic stop reasons varied dramatically across Stations. On average, speeding is by far the most frequent reason for a stop, but it varies from 15.4% in Highspire Station to 90.1% in Pocono Station. The average miles per hour over the limit ranged from 16.9 in Mansfield Station to 31.3 in Trevose Station. The second most common reason for a stop is other moving violations; however, its prevalence ranges from a low of 5.8% in Girard Station to a high of 62.9% in Philadelphia Station. On average, equipment or inspection violations were the third most common stop reason, but this varied across Stations, from 1.5% in Pocono Station to 51.4% in Honesdale Station.

Table 3.4: Reason for Stop by Department, Area, & Troop, Q2 2022

	Total # of Stops	Speeding	Avg.Amount Over Limit (MPH)	Other Moving Violation	Equipment/ Inspection	Registration	License	Other
PSP Department	109,453	47.7%	21.3	21.9%	18.9%	14.6%	4.3%	4.8%
AREA I	**22,698**	**45.9%**	**20.2**	**14.2%**	**24.7%**	**17.5%**	**4.9%**	**4.7%**
Troop B	5,047	44.6%	22.7	15.7%	22.9%	21.7%	7.2%	5.8%
Troop C	6,216	45.5%	18.0	15.7%	24.5%	12.9%	2.7%	5.1%
Troop D	5,482	46.3%	22.1	15.5%	23.0%	18.9%	5.7%	4.2%
Troop E	5,953	47.2%	18.9	10.0%	28.2%	17.3%	4.5%	3.9%
AREA II	**35,312**	**58.3%**	**21.5**	**18.9%**	**15.6%**	**12.9%**	**3.3%**	**4.2%**
Troop A	5,079	62.2%	22.3	14.2%	14.3%	13.0%	3.4%	5.0%
Troop G	6,530	62.5%	20.9	12.5%	14.6%	13.6%	2.9%	2.4%
Troop H	11,842	37.8%	20.0	27.3%	22.1%	15.1%	4.35	3.6%
Troop T	11,861	74.7%	22.2	16.0%	10.3%	10.4%	2.5%	5.4%
AREA III	**26,803**	**45.3%**	**20.2**	**20.5%**	**21.0%**	**13.4%**	**4.6%**	**5.2%**
Troop F	9,237	54.6%	18.8	19.0%	16.8%	10.8%	3.0%	3.2%
Troop N	8,399	42.6%	21.3	23.6%	19.3%	13.0%	6.1%	7.8%
Troop P	4,797	38.2%	21.5	13.8%	27.3%	18.8%	5.6%	4.5%
Troop R	4,370	38.9%	20.8	25.3%	26.6%	13.6%	4.0%	5.5%
AREA IV	**23,258**	**37.8%**	**24.0**	**33.8%**	**15.1%**	**15.9%**	**4.9%**	**4.8%**
Troop J	7,649	33.0%	24.4	36.0%	15.8%	16.5%	5.0%	4.5%
Troop K	4,914	31.3%	26.0	47.0%	11.1%	16.8%	4.3%	4.4%
Troop L	5,003	55.2%	20.3	17.9%	14.9%	12.5%	5.0%	3.7%
Troop M	5,692	34.5%	27.1	33.5%	17.7%	17.1%	5.1%	6.4%
Specialized Units								
SHIELD	911	17.2%	10.5	47.5%	32.3%	12.5%	0.9%	9.8%
Canine	367	13.9%	12.5	62.4%	20.4%	11.4%	2.7%	13.6%

Table 3.5: Area I Reason for Stop by Station, Q2 2022

	Total # of Stops	Speeding	Avg. Amount Over Limit (MPH)	Other Moving Violation	Equipment/ Inspection	Registration	License	Other
Troop B	**5,047**	**44.6%**	**22.7**	**15.7%**	**22.9%**	**21.7%**	**7.2%**	**5.8%**
Belle Vernon	1,123	35.5%	22.1	11.3%	24.8%	31.7%	11.1%	9.0%
Pittsburgh	1,429	52.8%	25.3	16.0%	20.5%	18.1%	6.3%	4.7%
Uniontown	1,376	43.9%	20.3	18.2%	18.7%	21.9%	7.1%	5.0%
Washington	529	32.1%	23.8	16.3%	40.8%	19.5%	6.0%	8.9%
Waynesburg	590	54.6%	21.1	16.8%	19.0%	13.1%	2.7%	1.4%
Troop C	**6,216**	**45.5%**	**18.0**	**15.7%**	**24.5%**	**12.9%**	**2.7%**	**5.1%**
Clarion	737	41.9%	17.6	22.7%	22.9%	13.0%	1.9%	5.0%
Clearfield	1,179	55.6%	17.3	14.5%	18.9%	9.7%	2.4%	3.2%
Dubois	985	45.2%	18.2	17.0%	17.2%	16.0%	3.2%	8.7%
Lewis Run	910	28.7%	17.3	14.9%	38.2%	16.9%	2.6%	2.5%
Marienville	671	54.1%	18.5	10.1%	23.2%	12.4%	2.2%	5.7%
Punxsutawney	836	27.5%	18.0	20.3%	38.0%	12.6%	4.5%	8.9%
Ridgway	898	62.8%	18.9	10.5%	15.3%	10.0%	2.0%	2.0%
Troop D	**5,482**	**46.3%**	**22.1**	**15.5%**	**23.0%**	**18.9%**	**5.7%**	**4.2%**
Beaver	954	43.9%	26.6	17.6%	17.3%	18.9%	7.0%	3.1%
Butler	1,163	49.8%	22.3	16.2%	24.2%	15.7%	4.1%	4.3%
Kittanning	1,908	35.3%	21.0	17.9%	31.0%	20.2%	6.5%	3.9%
Mercer	851	59.1%	20.1	11.5%	13.9%	20.6%	3.1%	6.7%
New Castle	606	59.7%	21.5	8.9%	17.2%	18.5%	8.1%	2.8%
Troop E	**5,953**	**47.2%**	**18.9**	**10.0%**	**28.2%**	**17.3%**	**4.5%**	**3.9%**
Corry	866	41.9%	17.6	12.9%	29.2%	17.6%	2.2%	5.9%
Erie	1,438	21.1%	20.1	11.5%	42.3%	29.0%	9.7%	4.7%
Franklin	671	41.4%	17.8	18.5%	21.2%	18.8%	5.2%	4.8%
Girard	1,617	62.8%	19.7	5.8%	25.7%	9.6%	2.8%	2.5%
Meadville	734	61.2%	18.1	7.4%	19.1%	13.1%	2.9%	2.2%
Warren	596	62.1%	18.2	8.4%	20.3%	13.6%	1.7%	3.7%

Table 3.5: Area II Reason for Stop by Station, Q2 2022

	Total # of Stops	Speeding	Avg. Amount Over Limit (MPH)	Other Moving Violation	Equipment/ Inspection	Registration	License	Other
Troop A	**5,079**	**62.2%**	**22.3**	**14.2%**	**14.2%**	**13.0%**	**3.4%**	**5.0%**
Ebensburg	639	85.4%	22.6	9.4%	6.9%	6.4%	2.7%	2.0%
Greensburg	1,228	42.4%	22.4	22.3%	20.4%	19.6%	6.6%	2.9%
Indiana	1,957	71.5%	22.8	10.6%	8.0%	9.5%	1.3%	3.3%
Kiski Valley	309	33.0%	25.8	28.2%	25.9%	15.5%	6.5%	7.8%
Somerset (A)	946	62.3%	20.2	9.5%	20.6%	15.3%	3.3%	12.3%
Troop G	**6,530**	**62.5%**	**20.9**	**12.5%**	**14.6%**	**13.6%**	**2.9%**	**2.4%**
Bedford	1,074	67.9%	19.0	8.3%	10.9%	13.6%	1.8%	1.4%
Hollidaysburg	847	39.4%	20.3	14.4%	24.3%	26.3%	5.9%	3.4%
Huntingdon	794	72.5%	19.8	9.6%	9.1%	12.6%	3.1%	3.1%
Lewistown	1,139	67.4%	20.8	10.1%	14.2%	11.5%	3.3%	3.4%
McConnellsburg	742	68.5%	24.8	15.6%	9.7%	10.8%	1.3%	1.3%
Rockview	1,934	60.4%	21.1	15.3%	16.6%	10.7%	2.3%	2.0%
Troop H	**11,842**	**37.8%**	**20.0**	**27.3%**	**22.1%**	**15.1%**	**4.3%**	**3.6%**
Carlisle	2,832	33.4%	20.3	27.9%	24.6%	12.5%	3.8%	7.3%
Chambersburg	2,998	41.8%	19.0	23.2%	23.3%	17.9%	4.5%	1.9%
Gettysburg	1,883	35.2%	20.1	29.5%	25.7%	10.7%	4.7%	1.4%
Harrisburg	2,289	35.3%	20.9	38.9%	12.7%	15.9%	4.0%	4.4%
Lykens	754	38.2%	19.7	12.1%	28.1%	23.5%	6.5%	1.7%
Newport	1,086	47.6%	20.9	19.8%	21.5%	14.5%	3.5%	2.3%
Troop T	**11,861**	**74.7%**	**22.2**	**16.0%**	**10.3%**	**10.4%**	**2.5%**	**5.4%**
Bowmansville	1,080	65.0%	21.1	14.3%	9.4%	15.1%	3.2%	2.8%
Everett	1,706	82.4%	22.6	16.6%	9.8%	6.6%	1.6%	2.6%
Gibsonia	1,749	83.1%	18.7	29.4%	12.2%	6.4%	2.4%	8.4%
Highspire	13	15.4%	21.5	46.2%	38.5%	15.4%	0.0%	0.0%
King of Prussia	1,367	64.2%	23.9	17.3%	16.2%	12.9%	3.0%	6.6%
New Stanton	2,034	65.9%	21.8	11.8%	19.1%	15.4%	3.9%	4.4%
Newville	985	79.2%	23.9	10.6%	3.0%	10.4%	2.4%	2.8%
Pocono	1,282	90.1%	24.3	8.9%	1.5%	2.6%	0.9%	0.9%
Somerset (T)	1,644	69.9%	22.4	14.9%	4.6%	13.1%	2.1%	12.2%

Table 3.5: Area III Reason for Stop by Station, Q2 2022

	Total # of Stops	Speeding	Avg. Amount Over Limit (MPH)	Other Moving Violation	Equipment/ Inspection	Registration	License	Other
Troop F	**9,237**	**54.6%**	**18.8**	**19.0%**	**16.8%**	**10.8%**	**3.0%**	**3.2%**
Coudersport	813	42.2%	17.8	12.4%	31.5%	11.8%	1.7%	1.7%
Emporium	346	63.6%	17.6	15.3%	16.5%	15.3%	4.0%	4.0%
Lamar	1,774	60.7%	19.2	19.1%	14.4%	7.5%	2.2%	3.8%
Mansfield	692	60.4%	16.9	20.4%	9.1%	8.8%	1.6%	2.6%
Milton	2,416	55.2%	19.7	23.4%	13.2%	9.1%	3.4%	2.6%
Montoursville	1,677	53.4%	17.7	15.7%	18.7%	14.6%	3.7%	2.9%
Selinsgrove	854	50.2%	21.9	19.8%	18.3%	16.9%	5.0%	2.3%
Stonington	665	48.7%	17.5	18.2%	19.2%	7.5%	2.1%	7.4%
Troop N	**8,399**	**42.6%**	**21.3**	**23.6%**	**19.3%**	**13.0%**	**6.1%**	**7.8%**
Bloomsburg	897	45.9%	19.3	13.8%	12.3%	8.7%	3.0%	20.0%
Fern Ridge	1,852	57.4%	21.4	21.9%	20.2%	7.1%	2.5%	5.0%
Hazleton	1,853	50.2%	21.6	21.7%	13.1%	13.8%	10.9%	8.0%
Lehighton	632	38.4%	21.8	19.8%	23.3%	13.3%	6.5%	10.6%
Stroudsburg	3,164	29.2%	21.8	29.4%	23.5%	17.2%	6.2%	5.3%
Troop P	**4,797**	**38.2%**	**21.5**	**13.8%**	**27.3%**	**18.8%**	**5.6%**	**4.5%**
Laporte	654	43.1%	18.2	10.6%	18.0%	23.4%	6.9%	6.6%
Shickshinny	553	54.6%	20.2	12.5%	15.7%	14.3%	8.9%	1.6%
Towanda	1,571	25.2%	19.8	15.8%	32.1%	21.1%	5.3%	6.0%
Tunkhannock	593	40.5%	20.2	11.1%	29.2%	20.7%	3.5%	2.7%
Wilkes-Barre	1,425	42.9%	25.3	14.6%	29.9%	15.0%	5.1%	3.9%
Troop R	**4,370**	**38.9%**	**20.8**	**25.3%**	**26.6%**	**13.6%**	**4.0%**	**5.5%**
Blooming Grove	1,333	33.7%	17.0	36.5%	21.4%	12.9%	4.4%	4.1%
Dunmore	967	47.2%	25.0	24.7%	19.4%	14.5%	4.4%	3.5%
Gibson	1,195	51.1%	20.4	19.7%	20.0%	12.2%	4.1%	9.2%
Honesdale	875	20.8%	21.1	16.3%	51.4%	15.5%	2.6%	4.7%

Table 3.5: Area IV Reason for Stop by Station, Q2 2022

	Total # of Stops	Speeding	Avg. Amount Over Limit (MPH)	Other Moving Violation	Equipment/ Inspection	Registration	License	Other
Troop J	**7,649**	**33.0%**	**24.4**	**36.0%**	**15.8%**	**16.5%**	**5.0%**	**4.5%**
Avondale	1,914	33.4%	24.7	43.4%	11.1%	13.2%	5.9%	7.4%
Embreeville	1,654	38.8%	27.2	30.2%	17.4%	16.1%	5.1%	3.4%
Lancaster	1,464	33.7%	21.0	34.9%	14.6%	17.1%	6.4%	4.0%
York	2,617	28.6%	23.8	34.9%	19.1%	18.8%	3.6%	3.4%
Troop K	**4,914**	**31.3%**	**26.0**	**47.0%**	**11.1%**	**16.8%**	**4.3%**	**4.4%**
Media	2,296	36.6%	25.1	42.4%	9.9%	15.5%	4.6%	4.1%
Philadelphia	1,738	19.4%	29.8	62.9%	8.6%	19.0%	4.3%	5.2%
Skippack	880	40.8%	24.6	27.5%	19.3%	15.8%	3.5%	3.4%
Troop L	**5,003**	**55.2%**	**20.3**	**17.9%**	**14.9%**	**12.5%**	**5.0%**	**3.7%**
Frackville	826	55.6%	20.1	11.3%	18.3%	14.6%	5.3%	2.4%
Hamburg	829	61.8%	18.8	19.8%	11.2%	10.5%	3.7%	2.1%
Jonestown	1,209	53.6%	20.0	20.8%	12.1%	10.6%	3.0%	7.6%
Reading	848	40.0%	25.3	28.3%	18.9%	16.5%	10.4%	2.5%
Schuylkill Haven	1,291	62.2%	19.7	11.2%	15.1%	11.6%	3.9%	2.9%
Troop M	**5,692**	**34.5%**	**27.1**	**33.5%**	**17.7%**	**17.1%**	**5.1%**	**6.4%**
Belfast	1,054	40.4%	26.6	26.0%	23.4%	11.3%	4.5%	6.6%
Bethlehem	1,044	22.5%	27.1	40.2%	16.3%	18.5%	4.8%	7.6%
Dublin	855	26.1%	25.9	29.9%	26.4%	19.4%	6.2%	8.4%
Fogelsville	1,632	38.4%	24.7	38.6%	13.1%	14.8%	5.3%	4.0%
Trevose	1,107	41.1%	31.3	29.3%	13.8%	23.1%	4.7%	7.3%

Drivers' Characteristics

The characteristics of drivers stopped by PSP Troopers during the second quarter of 2022 are described at the Department, Area, and Troop levels in Table 3.6, and at the Station level in Table 3.7. The characteristics of the drivers are grouped by: 1) drivers' age and gender, 2) drivers' race and ethnicity, and 3) drivers' behavior. Note that, as described in the 2021 report, the gender and racial/ethnic characteristics of drivers are determined by officers' perceptions rather than asking drivers to identify their gender, race, or ethnicity. This is consistent with the guidance of best practice guides regarding traffic stop data collection; identifying driver race/ethnicity based on officers' perceptions is the recommended method of data collection for examining racially biased policing. [20] Officers may incorrectly perceive drivers' actual race and/or ethnicity. This possible misperception, however, is irrelevant for data collection analyses that seek to explain officer-decision making.[21] Other information about the driver (e.g., year of birth) was gathered from drivers' licenses.

Drivers' Age & Gender

As shown in Table 3.6, department-wide, the average age of drivers stopped by Troopers was 37.8 years, which is similar to the averages at the Area, Troop, and Station levels. The largest difference in the average age of drivers occurred at the Station level (see Table 3.7). For instance, the average age of drivers stopped by Troopers in the Coudersport Station was 41.3 years, compared to 34.8 years in Pocono Station.

At the department level, 66.4% of stopped drivers were male; likewise, males were more likely than females to be stopped across organizational units within the department. The lowest percent of male drivers stopped occurred in Area I (64.1%) and, more specifically, Troop D (61.8%). The highest percent of male drivers stopped occurred in Fogelsville and Trevose Stations (72.4%), while the lowest percent occurred in New Castle Station (59.9%).

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[20] Engel & Cherkauskas, 2022, p.10; Lorie Fridell, Robert Lunney, Drew Diamond & Bruce Kubu, "Racially Biased Policing: A Principled Response, Police Executive Research Forum," (2001), https://www.policeforum.org/assets/docs/Free_Online_Documents/Racially-Biased_Policing/racially%20biased%20policing%20-%20a%20principled%20response%202001.pdf; Pryor et al., 2020; Ramirez et al., 2000.

[21] Concerns regarding racial, ethnic, and gender profiling are often based on the presumption that officers treat citizens differently due to their personal bias. Therefore, proper data collection efforts must identify officers' perceptions of the race/ethnicity of the driver, not necessarily the driver's actual race/ethnicity.

Table 3.6: Characteristics of Drivers Stopped by Department, Area & Troop, Q2 2022

	Total # of Stops	Age Average (years)	Gender Male	White	Black	Amer. Indian or Alaskan Native	Asian/ Pacific Islander	Unknown	Hispanic	Unknown	Civil	Disrespect-ful	Non-compliant	Verbal or Phys Resistant
PSP Dept.	109,453	37.8	66.5%	78.6%	13.5%	0.3%	1.8%	5.8%	8.6%	7.4%	98.1%	1.0%	0.4%	0.9%
AREA I	22,698	38.4	64.1%	85.4%	9.2%	0.1%	1.0%	4.3%	1.7%	5.4%	98.3%	0.9%	0.4%	0.8%
Troop B	5,047	38.2	63.6%	80.7%	14.0%	0.1%	1.3%	3.8%	1.6%	7.5%	97.5%	1.1%	0.9%	0.9%
Troop C	6,216	39.8	67.6%	87.8%	3.9%	0.1%	1.1%	7.1%	1.9%	6.9%	98.7%	0.8%	0.2%	0.6%
Troop D	5,482	37.0	61.8%	84.4%	12.2%	0.1%	0.7%	2.6%	1.2%	2.7%	98.4%	0.9%	0.3%	0.7%
Troop E	5,953	38.3	62.9%	87.8%	7.9%	0.2%	1.1%	3.1%	2.2%	4.4%	98.5%	0.7%	0.3%	0.8%
AREA II	35,312	37.7	66.6%	78.5%	12.7%	0.3%	2.2%	6.4%	6.0%	7.2%	98.4%	0.9%	0.3%	0.8%
Troop A	5,079	38.1	64.5%	89.9%	6.7%	0.1%	0.7%	2.5%	1.3%	3.5%	98.7%	0.7%	0.2%	0.6%
Troop G	6,530	38.3	64.2%	85.7%	7.5%	0.4%	2.1%	4.4%	3.2%	4.7%	98.7%	0.8%	0.1%	0.6%
Troop H	11,842	37.8	67.1%	80.3%	14.4%	0.3%	1.6%	3.4%	9.3%	3.5%	97.6%	1.3%	0.5%	1.1%
Troop T	11,861	37.1	68.4%	67.8%	16.3%	0.3%	3.4%	12.1%	6.5%	13.9%	98.9%	0.5%	0.1%	0.7%
AREA III	26,803	38.0	66.8%	79.3%	10.7%	0.2%	1.4%	8.3%	10.0%	11.2%	98.1%	1.1%	0.4%	0.9%
Troop F	9,237	38.1	64.9%	85.5%	8.9%	0.3%	1.4%	3.9%	4.2%	4.4%	98.4%	0.7%	0.4%	0.9%
Troop N	8,399	37.0	67.5%	68.3%	15.6%	0.3%	1.7%	14.2%	21.3%	18.8%	97.9%	1.2%	0.4%	0.9%
Troop P	4,797	38.6	65.6%	89.2%	7.4%	0.1%	0.5%	2.9%	5.6%	3.2%	98.0%	1.3%	0.4%	0.8%
Troop R	4,370	38.9	70.7%	76.8%	8.7%	0.1%	2.1%	12.3%	8.6%	19.8%	97.8%	1.3%	0.6%	1.1%
AREA IV	23,258	37.2	67.6%	71.6%	22.1%	0.4%	2.2%	3.8%	16.4%	5.3%	97.3%	1.4%	0.6%	1.3%
Troop J	7,649	37.2	64.9%	76.7%	19.1%	0.4%	2.0%	1.8%	14.2%	3.1%	97.4%	1.6%	0.5%	1.2%
Troop K	4,914	37.2	69.2%	52.2%	40.3%	0.5%	2.8%	4.2%	9.2%	6.2%	97.0%	1.6%	0.7%	1.7%
Troop L	5,003	36.8	67.1%	83.9%	10.8%	0.2%	1.2%	3.9%	19.5%	5.4%	98.6%	0.7%	0.3%	0.6%
Troop M	5,692	37.5	70.3%	70.5%	20.3%	0.5%	2.8%	6.0%	23.1%	7.6%	96.5%	1.4%	0.9%	1.7%
Specialized Units														
SHIELD	911	38.5	84.7%	71.8%	16.2%	1.0%	9.3%	1.6%	31.3%	8.9%	99.1%	0.1%	0.1%	0.8%
Canine	367	38.2	79.8%	75.5%	19.1%	0.8%	3.3%	1.4%	15.8%	1.6%	96.2%	1.9%	0.5%	1.9%

Table 3.7: Area I Characteristics of Drivers Stopped by Station, Q2 2022

	Total # of Stops	Age Average (years)	Gender Male	Race White	Black	Amer. Indian or Alaskan Native	Asian/ Pacific Islander	Unknown	Ethnicity Hispanic	Unknown	Behavior Civil	Disrespect-ful	Non-compliant	Verbal or Phys Resistant
Troop B	**5,047**	**38.2**	**63.6%**	**80.7%**	**14.0%**	**0.1%**	**0.7%**	**3.8%**	**1.6%**	**7.5%**	**97.5%**	**1.1%**	**0.9%**	**0.9%**
Belle Vernon	1,123	38.5	63.3%	78.3%	14.8%	0.1%	0.8%	6.1%	1.5%	8.8%	97.0%	1.9%	0.9%	1.2%
Pittsburgh	1,429	37.4	67.2%	69.5%	22.9%	0.2%	3.1%	4.3%	2.0%	14.1%	96.1%	1.5%	1.8%	1.0%
Uniontown	1,376	38.4	61.6%	85.8%	8.6%	0.1%	0.3%	2.4%	1.1%	2.6%	98.5%	0.9%	0.4%	0.7%
Washington	529	39.7	62.0%	85.8%	11.0%	0.2%	1.7%	1.3%	3.3%	1.3%	97.9%	0.2%	0.8%	1.3%
Waynesburg	590	38.2	61.2%	89.3%	6.3%	0.0%	0.3%	4.1%	0.7%	5.9%	99.0%	0.5%	0.3%	0.5%
Troop C	**6,216**	**39.8**	**67.6%**	**87.8%**	**3.9%**	**0.1%**	**1.1%**	**7.1%**	**1.9%**	**6.9%**	**98.7%**	**0.8%**	**0.2%**	**0.6%**
Clarion	737	38.0	68.25	83.7%	7.1%	0.0%	1.9%	7.3%	4.1%	6.2%	99.2%	0.3%	0.1%	0.7%
Clearfield	1,179	39.3	67.6%	89.3%	5.6%	0.2%	1.2%	3.7%	1.4%	3.8%	98.3%	0.8%	0.3%	0.9%
Dubois	985	39.8	70.8%	76.5%	7.4%	0.1%	1.8%	14.1%	4.3%	14.1%	98.6%	1.1%	0.2%	0.3%
Lewis Run	910	39.9	63.8%	92.1%	2.9%	0.3%	0.7%	4.1%	1.3%	3.6%	98.9%	0.5%	0.3%	0.3%
Marienville	671	41.1	71.4%	95.4%	1.0%	0.0%	0.4%	3.1%	0.5%	3.6%	99.0%	0.3%	0.0%	0.7%
Punxsutawney	836	40.5	64.8%	98.9%	0.5%	0.0%	0.4%	0.2%	0.6%	0.4%	97.8%	1.6%	0.1%	0.7%
Ridgway	898	40.5	66.9%	81.2%	1.4%	0.2%	1.1%	16.0%	1.2%	15.7%	99.1%	0.7%	0.0%	0.3%
Troop D	**5,482**	**37.0**	**61.8%**	**84.4%**	**12.2%**	**0.1%**	**0.7%**	**2.6%**	**1.2%**	**2.7%**	**98.4%**	**0.9%**	**0.3%**	**0.7%**
Beaver	954	37.2	61.1%	73.0%	23.3%	0.0%	0.3%	3.5%	2.0%	2.0%	97.6%	1.8%	0.2%	0.7%
Butler	1,163	36.9	62.6%	91.3%	6.2%	0.0%	0.6%	1.9%	0.8%	2.6%	98.4%	0.9%	0.7%	0.9%
Kittanning	1,908	37.0	62.8%	85.8%	11.9%	0.1%	0.3%	1.8%	0.9%	1.4%	98.7%	0.7%	0.3%	0.5%
Mercer	851	36.5	60.8%	84.1%	7.8%	0.2%	2.5%	5.4%	1.8%	7.1%	98.8%	0.6%	0.2%	0.4%
New Castle	606	37.3	59.9%	85.0%	13.2%	0.0%	0.3%	1.5%	0.7%	2.1%	98.0%	0.2%	0.2%	1.7%
Troop E	**5,953**	**38.3**	**62.9%**	**87.8%**	**7.9%**	**0.2%**	**1.1%**	**3.1%**	**2.2%**	**4.4%**	**98.5%**	**0.7%**	**0.3%**	**0.8%**
Corry	866	39.3	64.3%	97.0%	2.1%	0.0%	0.3%	0.6%	0.6%	0.3%	98.5%	0.5%	0.5%	0.6%
Erie	1,438	37.5	64.2%	83.1%	12.6%	0.3%	1.5%	2.6%	3.8%	2.5%	97.4%	1.0%	0.7%	1.6%
Franklin	671	39.9	63.4%	84.9%	3.0%	0.1%	0.6%	11.3%	0.8%	22.5%	99.0%	0.9%	0.1%	0.1%
Girard	1,617	37.4	60.6%	85.7%	11.0%	0.2%	1.1%	2.0%	3.2%	2.0%	98.6%	0.6%	0.2%	0.8%
Meadville	734	38.2	60.9%	85.8%	7.6%	0.1%	2.2%	4.2%	1.6%	4.0%	98.9%	0.7%	0.1%	0.5%
Warren	596	39.6	65.3%	96.6%	2.2%	0.0%	0.2%	1.0%	0.2%	1.8%	99.5%	0.3%	0.0%	0.2%

Table 3.7: Area II Characteristics of Drivers Stopped by Station, Q2 2022

	Total # of Stops	Age	Gender	Race					Ethnicity		Behavior			
		Average (years)	Male	White	Black	Amer. Indian or Alaskan Native	Asian/ Pacific Islander	Un-known	Hispanic	Unknown	Civil	Disrespect-ful	Non-compliant	Verbal or Phys Resistan
Troop A	**5,079**	**38.1**	**64.5%**	**89.9%**	**6.7%**	**0.1%**	**0.7%**	**2.5%**	**1.3%**	**3.5%**	**98.7%**	**0.7%**	**0.2%**	**0.6%**
Ebensburg	639	36.3	64.0%	81.4%	4.9%	0.5%	1.3%	12.1%	1.2%	12.2%	99.4%	0.5%	0.0%	0.5%
Greensburg	1,228	40.4	65.4%	92.0%	7.2%	0.1%	0.2%	0.4%	1.1%	0.4%	98.0%	1.0%	0.5%	0.9%
Indiana	1,957	37.4	62.6%	88.5%	8.4%	0.1%	1.0%	2.0%	1.6%	4.4%	99.0%	0.6%	0.2%	0.4%
Kiski Valley	309	39.8	68.3%	91.9%	6.5%	0.3%	0.6%	0.6%	1.3%	0.6%	99.7%	0.3%	0.0%	0.0%
Somerset (A)	946	37.4	66.5%	95.3%	3.9%	0.0%	0.2%	0.5%	2.2%	2.9%	98.6%	0.6%	0.2%	0.7%
Troop G	**6,530**	**38.3**	**64.2%**	**85.7%**	**7.5%**	**0.4%**	**2.1%**	**4.4%**	**3.2%**	**4.7%**	**98.7%**	**0.8%**	**0.1%**	**0.6%**
Bedford	1,074	38.4	63.1%	87.7%	7.3%	0.8%	1.9%	2.3%	2.2%	2.9%	98.6%	0.6%	0.2%	0.7%
Hollidaysburg	847	37.6	61.7%	91.4%	5.5%	0.1%	1.3%	1.7%	3.1%	1.3%	98.9%	0.7%	0.1%	0.6%
Huntingdon	794	40.5	64.9%	87.7%	3.8%	0.0%	0.8%	7.8%	1.4%	7.6%	99.2%	0.5%	0.0%	0.3%
Lewistown	1,139	37.5	61.0%	89.8%	4.7%	0.4%	2.0%	3.1%	3.5%	3.4%	97.9%	1.1%	0.3%	1.1%
McConnellsburg	742	40.3	67.7%	73.7%	13.6%	0.3%	3.0%	9.4%	4.5%	10.5%	98.1%	1.3%	0.0%	0.7%
Rockview	1,934	37.3	66.0%	83.5%	9.2%	0.4%	2.7%	4.2%	3.9%	4.7%	99.1%	0.7%	0.1%	0.3%
Troop H	**11,842**	**37.8**	**67.1%**	**80.3%**	**14.4%**	**0.3%**	**1.6%**	**3.4%**	**9.3%**	**3.5%**	**97.6%**	**1.3%**	**0.5%**	**1.1%**
Carlisle	2,832	37.9	71.5%	78.0%	17.3%	0.3%	1.8%	2.5%	10.1%	2.7%	97.8%	1.2%	0.6%	1.0%
Chambersburg	2,998	39.1	63.5%	85.2%	12.1%	0.1%	0.8%	1.8%	7.3%	2.3%	98.3%	1.1%	0.2%	0.7%
Gettysburg	1,883	36.3	65.9%	84.2%	12.1%	0.2%	1.5%	2.0%	11.7%	1.8%	96.1%	2.4%	0.6%	1.5%
Harrisburg	2,289	38.1	69.6%	64.8%	22.3%	0.7%	2.9%	9.3%	13.5%	9.1%	97.0%	1.5%	0.9%	1.7%
Lykens	754	37.5	64.1%	91.6%	5.7%	0.3%	0.7%	1.7%	6.2%	1.7%	99.5%	0.3%	0.3%	0.3%
Newport	1,086	36.2	64.8%	90.5%	6.5%	0.0%	1.5%	1.5%	2.2%	1.7%	97.8%	0.7%	0.3%	1.6%
Troop T	**11,861**	**37.1**	**68.4%**	**67.8%**	**16.3%**	**0.3%**	**3.4%**	**12.1%**	**6.5%**	**13.9%**	**98.9%**	**0.5%**	**0.1%**	**0.7%**
Bowmansville	1,080	35.8	67.2%	67.4%	23.9%	0.4%	3.9%	4.4%	12.5%	7.2%	98.8%	0.3%	0.1%	0.9%
Everett	1,706	36.3	68.3%	53.5%	19.4%	0.4%	4.5%	22.2%	4.8%	21.3%	99.1%	0.4%	0.1%	0.5%
Gibsonia	1,749	38.4	68.7%	80.9%	12.9%	0.3%	2.6%	3.3%	3.8%	8.5%	99.3%	0.4%	0.1%	0.3%
Highspire	13	35.8	61.5%	61.5%	23.1%	0.0%	7.7%	7.7%	16.7%	7.7%	100%	0.0%	0.0%	0.0%
King of Prussia	1,367	35.5	69.7%	57.6%	22.5%	0.4%	4.3%	15.1%	10.1%	19.6%	98.0%	0.8%	0.2%	1.5%
New Stanton	2,034	38.6	66.0%	82.0%	6.8%	0.0%	0.5%	10.6%	1.8%	11.9%	98.9%	0.3%	0.1%	0.9%
Newville	985	35.0	71.0%	68.7%	22.6%	0.2%	5.8%	2.6%	6.7%	2.4%	98.8%	0.7%	0.2%	0.7%
Pocono	1,282	34.8	64.4%	74.9%	18.1%	0.7%	4.1%	2.3%	10.8%	2.3%	98.3%	1.2%	0.3%	0.5%
Somerset (T)	1,644	39.9	72.3%	53.8%	13.4%	0.1%	4.0%	28.7%	5.6%	29.9%	99.5%	0.3%	0.0%	0.2%

Table 3.7: Area III Characteristics of Drivers Stopped by Station, Q2 2022

	Total #of Stops	Age Average (years)	Gender Male	Race White	Black	Amer. Indian or Alaskan Native	Asian / Pacific Islander	Un-known	Ethnicity Hispanic	Un-known	Behavior Civil	Dis-respectful	Non-compliant	Verbal or Phys Resistant
Troop F	**9,237**	**38.1**	**64.9%**	**85.5%**	**8.9%**	**0.3%**	**1.4%**	**3.9%**	**4.2%**	**4.4%**	**98.4%**	**0.7%**	**0.4%**	**0.9%**
Coudersport	813	41.3	69.7%	96.1%	1.2%	0.0%	1.0%	1.7%	1.0%	1.5%	97.9%	1.1%	0.7%	0.4%
Emporium	346	40.4	64.6%	97.4%	0.9%	0.0%	0.0%	1.7%	0.3%	1.7%	99.4%	0.3%	0.0%	0.3%
Lamar	1,774	37.8	67.0%	80.7%	10.4%	0.5%	2.5%	5.9%	5.1%	6.7%	98.2%	0.8%	0.3%	1.1%
Mansfield	692	38.4	66.0%	79.5%	7.4%	0.6%	2.3%	10.3%	1.8%	9.7%	96.5%	1.7%	0.3%	1.7%
Milton	2,416	37.4	63.5%	84.4%	10.8%	0.7%	1.4%	2.8%	6.8%	3.0%	99.2%	0.4%	0.2%	0.5%
Montoursville	1,677	37.9	63.2%	82.7%	12.3%	0.2%	1.1%	3.8%	2.4%	3.9%	98.1%	0.8%	0.6%	1.2%
Selinsgrove	854	37.2	64.9%	88.2%	7.1%	0.0%	1.1%	3.6%	4.3%	6.6%	98.9%	0.6%	0.2%	0.4%
Stonington	665	37.7	62.4%	92.9%	6.5%	0.0%	0.0%	0.6%	4.7%	0.6%	97.6%	0.9%	0.6%	1.4%
Troop N	**8,399**	**37.0**	**67.5%**	**68.3%**	**15.6%**	**0.3%**	**1.7%**	**14.2%**	**21.3%**	**18.8%**	**97.9%**	**1.2%**	**0.4%**	**0.9%**
Bloomsburg	897	35.3	64.6%	66.0%	12.4%	0.1%	1.4%	20.1%	9.4%	23.3%	99.1%	0.6%	0.1%	0.2%
Fern Ridge	1,852	37.7	70.0%	77.3%	15.9%	0.2%	1.9%	4.7%	17.2%	6.0%	99.1%	0.3%	0.2%	0.4%
Hazleton	1,853	36.1	67.2%	64.5%	9.6%	0.0%	1.5%	24.4%	39.4%	25.0%	97.2%	1.9%	0.7%	1.1%
Lehighton	632	36.2	67.2%	66.9%	3.8%	0.2%	0.3%	28.8%	21.6%	33.4%	97.3%	1.7%	1.4%	0.8%
Stroudsburg	3,164	37.7	67.1%	66.2%	22.2%	0.5%	2.0%	9.2%	17.3%	18.5%	97.4%	1.4%	0.3%	0.5%
Troop P	**4,797**	**38.6**	**65.6%**	**89.2%**	**7.4%**	**0.1%**	**0.5%**	**2.9%**	**5.6%**	**3.2%**	**98.0%**	**1.3%**	**0.4%**	**0.8%**
Laporte	654	40.9	67.3%	89.3%	6.1%	0.0%	0.8%	3.8%	2.9%	3.8%	98.5%	1.2%	0.3%	0.5%
Shickshinny	553	38.6	62.9%	86.4%	9.6%	0.0%	0.5%	3.4%	8.2%	3.3%	98.9%	0.5%	0.4%	0.9%
Towanda	1,571	38.4	64.7%	98.0%	1.7%	0.1%	0.0%	0.3%	1.0%	0.3%	97.6%	1.9%	0.4%	0.8%
Tunkhannock	593	40.5	65.7%	90.1%	2.5%	0.2%	0.3%	6.9%	4.0%	10.6%	97.6%	1.3%	0.3%	0.7%
Wilkes-Barre	1,425	37.0	66.8%	80.1%	15.4%	0.2%	0.8%	3.4%	11.4%	2.9%	98.0%	0.8%	0.4%	1.1%
Troop R	**4,370**	**38.9**	**70.7%**	**76.8%**	**8.7%**	**0.1%**	**2.1%**	**12.3%**	**8.6%**	**19.8%**	**97.8%**	**1.3%**	**0.6%**	**1.1%**
Blooming Grove	1,333	40.2	71.0%	70.3%	8.0%	0.0%	1.6%	20.1%	10.7%	35.8%	97.7%	1.3%	0.5%	1.1%
Dunmore	967	36.8	71.4%	79.5%	13.1%	0.1%	2.0%	5.3%	12.5%	13.0%	97.5%	1.4%	0.4%	1.2%
Gibson	1,195	37.7	70.0%	70.4%	10.4%	0.3%	4.0%	14.9%	8.1%	15.6%	97.7%	1.4%	0.8%	1.5%
Honesdale	875	40.9	70.5%	92.2%	2.5%	0.0%	0.6%	4.7%	2.8%	8.8%	98.4%	1.0%	0.5%	0.2%

Table 3.7: Area IV Characteristics of Drivers Stopped by Station, Q2 2022

| | Total # of Stops | Age | Gender | Race | | | | | Ethnicity | | Behavior | | | |
		Average (years)	Male	White	Black	Amer. Indian or Alaskan Native	Asian / Pacific Islander	Un-known	Hispanic	Un-known	Civil	Dis-respectful	Non-compliant	Verbal or Phys Resistant
Troop J	**7,649**	**37.2**	**64.9%**	**76.7%**	**19.1%**	**0.4%**	**2.0%**	**1.8%**	**14.2%**	**3.1%**	**97.4%**	**1.6%**	**0.5%**	**1.2%**
Avondale	1,914	37.7	64.6%	82.5%	15.2%	0.3%	1.1%	0.9%	21.2%	1.7%	96.7%	2.5%	0.7%	1.3%
Embreeville	1,654	37.1	65.9%	70.7%	22.6%	0.8%	3.0%	2.9%	10.2%	3.1%	98.2%	1.1%	0.3%	0.8%
Lancaster	1,464	36.4	67.2%	81.0%	16.0%	0.4%	1.5%	1.1%	15.5%	2.3%	96.9%	1.6%	0.5%	1.2%
York	2,617	37.2	63.3%	73.9%	21.4%	0.3%	2.2%	2.2%	10.8%	4.5%	97.6%	1.3%	0.5%	1.2%
Troop K	**4,914**	**37.2**	**69.2%**	**52.2%**	**40.3%**	**0.5%**	**2.8%**	**4.2%**	**9.2%**	**6.2%**	**97.0%**	**1.6%**	**0.7%**	**1.7%**
Media	2,296	37.8	68.5%	51.5%	42.8%	0.6%	3.0%	2.1%	6.8%	2.2%	97.4%	1.4%	0.5%	1.1%
Philadelphia	1,738	36.2	70.0%	42.8%	46.5%	0.3%	3.2%	7.2%	12.8%	11.2%	96.3%	1.8%	1.0%	2.8%
Skippack	880	37.2	69.2%	72.6%	21.7%	0.5%	1.7%	3.5%	9.3%	6.7%	97.0%	2.0%	0.2%	1.1%
Troop L	**5,003**	**36.8**	**67.1%**	**83.9%**	**10.8%**	**0.2%**	**1.2%**	**3.9%**	**19.5%**	**5.4%**	**98.6%**	**0.7%**	**0.3%**	**0.6%**
Frackville	826	38.4	65.2%	83.7%	10.8%	0.1%	0.5%	5.0%	15.3%	5.8%	99.0%	0.4%	0.1%	0.5%
Hamburg	829	38.2	70.8%	83.6%	13.5%	0.5%	1.3%	1.1%	21.3%	3.5%	98.8%	0.5%	0.5%	0.6%
Jonestown	1,209	35.8	66.3%	81.2%	9.0%	0.1%	2.1%	7.6%	20.8%	9.8%	98.6%	0.8%	0.2%	0.7%
Reading	848	35.5	68.7%	80.0%	14.3%	0.2%	1.4%	4.1%	35.2%	6.1%	97.5%	1.4%	0.9%	0.8%
Schuylkill Haven	1,291	36.6	65.7%	89.4%	8.4%	0.0%	0.7%	1.5%	10.0%	1.8%	99.1%	0.3%	0.2%	0.5%
Troop M	**5,692**	**37.5**	**70.3%**	**70.5%**	**20.3%**	**0.5%**	**2.8%**	**6.0%**	**23.1%**	**7.6%**	**96.5%**	**1.4%**	**0.9%**	**1.7%**
Belfast	1,054	36.9	68.9%	69.5%	25.4%	0.3%	2.8%	2.0%	23.1%	2.4%	93.9%	2.0%	0.9%	1.9%
Bethlehem	1,044	37.5	66.7%	69.0%	17.2%	0.1%	1.4%	12.3%	32.6%	13.1%	96.6%	1.4%	1.4%	1.2%
Dublin	855	38.2	69.9%	74.3%	9.2%	0.0%	1.1%	15.4%	8.8%	16.4%	95.0%	1.5%	1.2%	3.9%
Fogelsville	1,632	38.3	72.4%	75.6%	19.1%	0.9%	2.1%	2.4%	28.5%	5.7%	97.9%	0.9%	0.7%	0.9%
Trevose	1,107	36.4	72.4%	62.6%	28.5%	0.9%	6.2%	1.8%	16.6%	3.3%	97.7%	1.2%	0.5%	1.3%

Drivers' Race & Ethnicity

Drivers' race and ethnicity are captured in separate fields on the stop data collection form with the following available response options:

- Race: White, Black, American Indian/Alaskan Native, Asian/Pacific Islander, and Unknown
- Ethnicity: Hispanic Origin, Not of Hispanic Origin, and Unknown

Figure 3.2 displays the perceived race and ethnicity of drivers stopped by Troopers department wide. As shown, the majority of drivers stopped (78.6%) were White, followed by 13.5% Black, 1.8% Asian, and 0.3% American Indian or Alaskan Native. In the ethnicity field, 8.6% of stopped drivers were reported to be Hispanic.

As shown in Figure 3.2, PSP Troopers indicated they were unable to identify the race of the driver in 5.8% of all traffic stops and were unable to identify driver ethnicity during 7.4% of stops. In 87% of the cases with unknown driver race, the ethnicity of the driver was also reported as unknown, while in 68% of the cases with unknown driver ethnicity, the race of the driver was also unknown. In total, Troopers reported driver race *and* ethnicity to be unknown in 5.0% of all stops made in the second quarter of 2022. Other observational and traffic studies have reported the difficulties associated with identifying driver race and ethnicity, particularly with distinguishing Hispanics from White drivers.[22] This issue is explored in more detail below.

Figure 3.2: Department-Wide Racial/Ethnic Characteristics of Drivers Stopped, Q2 2022

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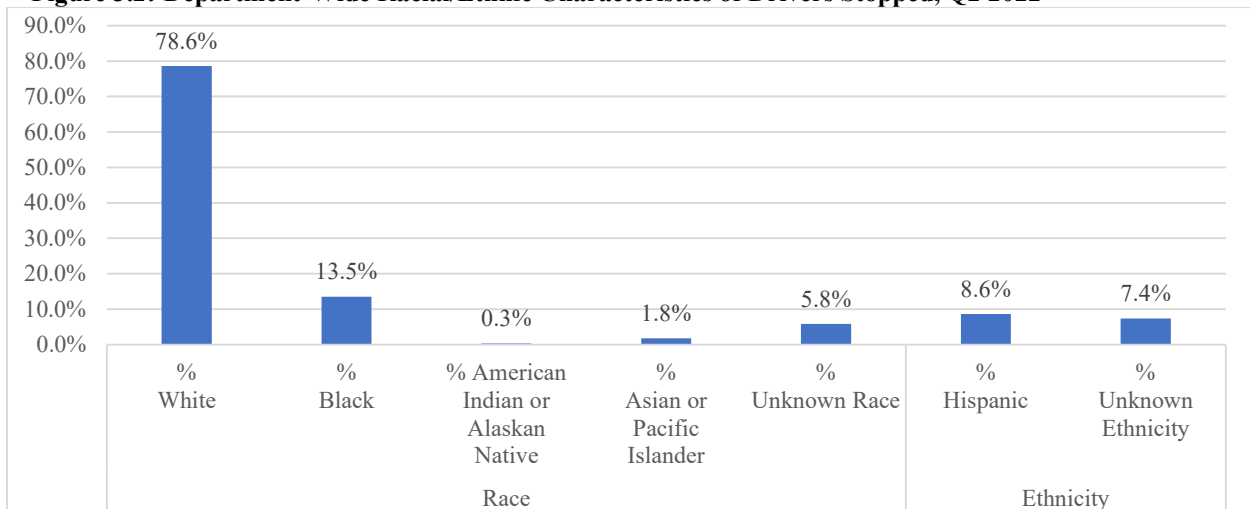
[22] Alpert Group (Alpert, G.P., Smith, M.R., Dunham, R., & Piquero, A., & Parker, K.). "Miami-Dade Police Department racial profiling study," Columbia, SC: Author, (November 2004); James E. Lange, J. E., Kenneth O. Blackman, K. O., & Mark B. Johnson, "Speed Violation Survey of the New Jersey Turnpike: Final Report," Trenton, NJ: Office of the Attorney General, (2001); Steven K. Smith & Carol J. DeFrances, "Assessing measurement techniques for identifying race, ethnicity, and gender: Observation-based data collection in airports and at immigration checkpoints," Washington, D.C.: U.S. Department of Justice, (2003).

Table 3.6 displays the perceived race and ethnicity of drivers stopped by Department, Areas, Troops, and specialized units, while Table 3.7 displays the same information at the Station level. These tables demonstrate large variation in the race/ethnicity of drivers stopped across organizational units. Some variation is to be expected based on geographic, demographic, and roadway type differences across the Commonwealth.

Most important for this data audit is a comparison of the percent of drivers with unknown race/ethnicity reported across organizational units. This information represented graphically in Figure 3.3 (by Department and Area), Figure 3.4 (by Troop), and Figure 3.5 (by Station). At the Area level, the highest percent of unknown race was reported in Area III (8.3% of stops), and the lowest in Area IV (3.8%). Across Troops, the highest percent of unknown race occurred in Troop N (14.2% of stops) and the lowest in Troop J (1.8% of stops). As shown in Table 3.7 and Figure 3.5, of the 88 Stations, 9 (10.2%) reported 1% or fewer stops with unknown driver race[23], and 7 Stations (8.0%) reported 1% or fewer stops with unknown driver ethnicity.[24] Conversely, 16 Stations (18.2%) reported 10% or more stops with unknown driver race[25], and 21 Stations (23.9%) with 10% or more stops with driver ethnicity unknown.[26] The wide variation in the percent of unknown race and ethnicity reported by Troopers warrants further scrutiny by PSP officials.

Figure 3.3: Percentages of Unknown Race/Ethnicity by Department and Area Command, Q2 2022

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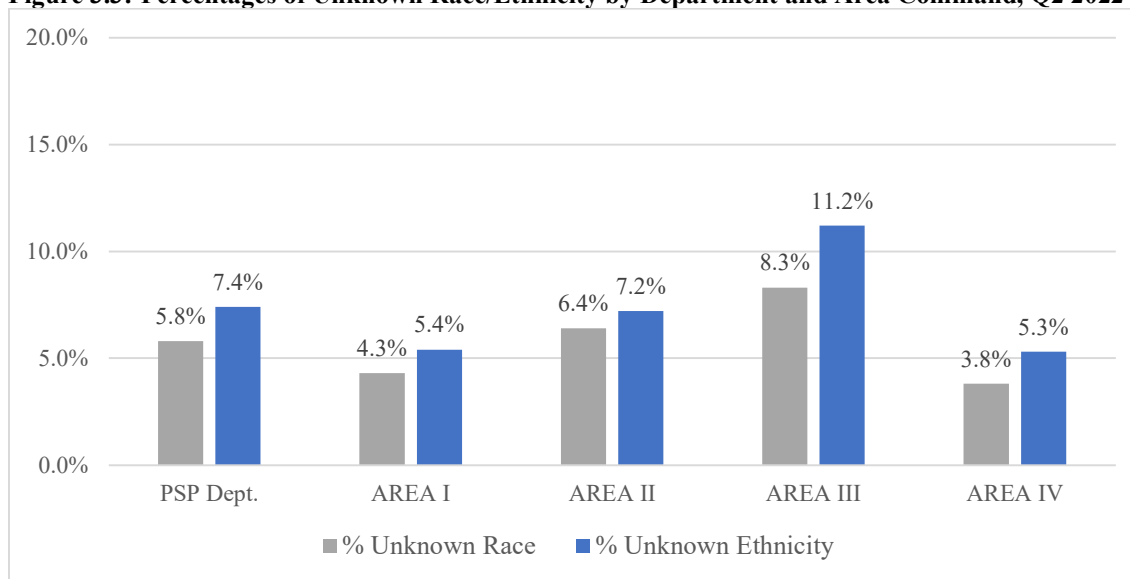
[23] Stations with 1% or fewer stops with unknown drivers' *race* include: Punxsutawney, Corry, Warren, Greensburg, Kiski Valley, Somerset (A), Stonington, Towanda, and Avondale.
[24] Stations with 1% or fewer stops with unknown drivers' *ethnicity* include: Punxsutawney, Corry, Greensburg, Kiski Valley, Somerset (A), Stonington, and Towanda.
[25] Stations that reported 10% or more stops with unknown drivers' *race* include: Dubois, Ridgway, Franklin, Edensburg, Everett, King of Prussia, New Stanton, Somerset (T), Mansfield, Bloomsburg, Hazelton, Lehighton, Blooming Grove, Gibson, Bethlehem, and Dublin.
[26] Stations that reported 10% or more stops with unknown drivers' *ethnicity* include: Pittsburgh, Dubois, Ridgway, Franklin, Edensburg, McConnellsburg, Everett, King of Prussia, New Stanton, Somerset (T), Bloomsburg, Hazelton, Lehighton, Stroudsburg, Tunkhannock, Blooming Grove, Dunmore, Gibson, Philadelphia, Bethlehem, Dublin.

Figure 3.4: Percentages of Unknown Race/Ethnicity by Troop, Q2 2022

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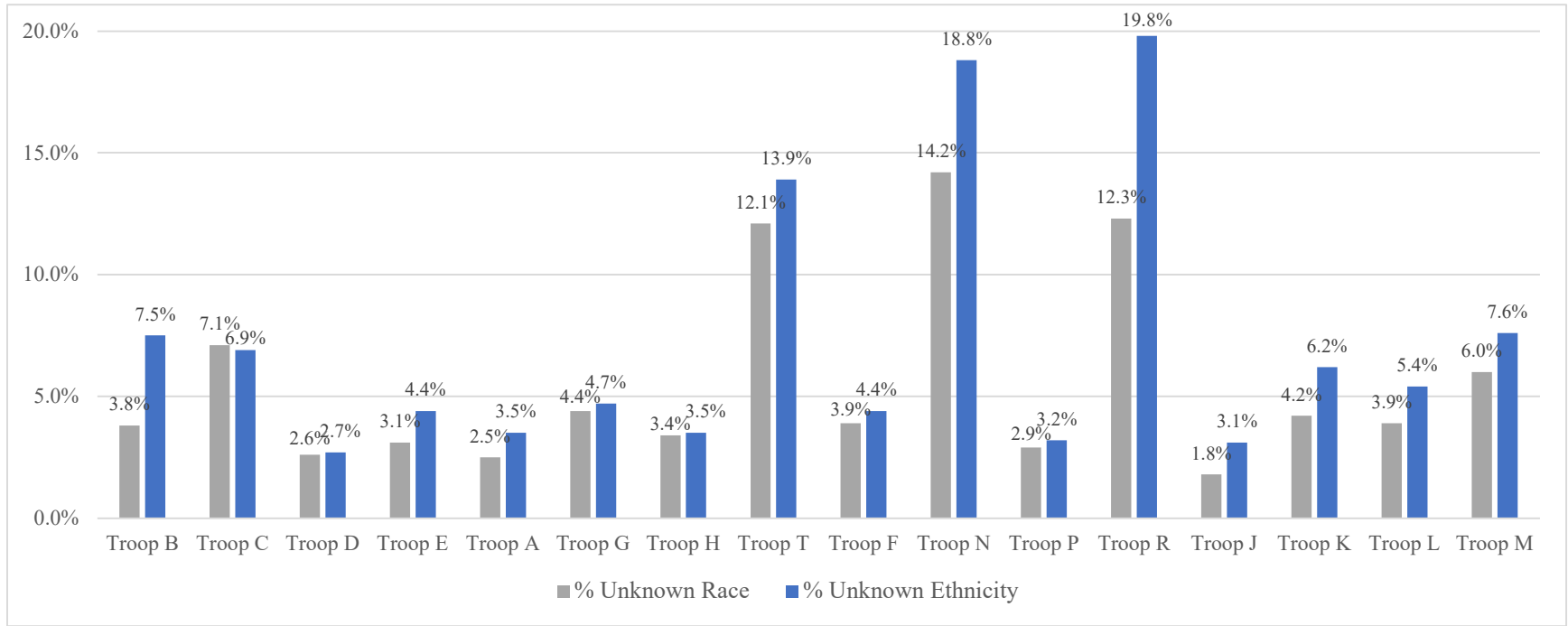
Figure 3.5: Percentages of Unknown Race/Ethnicity by Station, Q2 2022
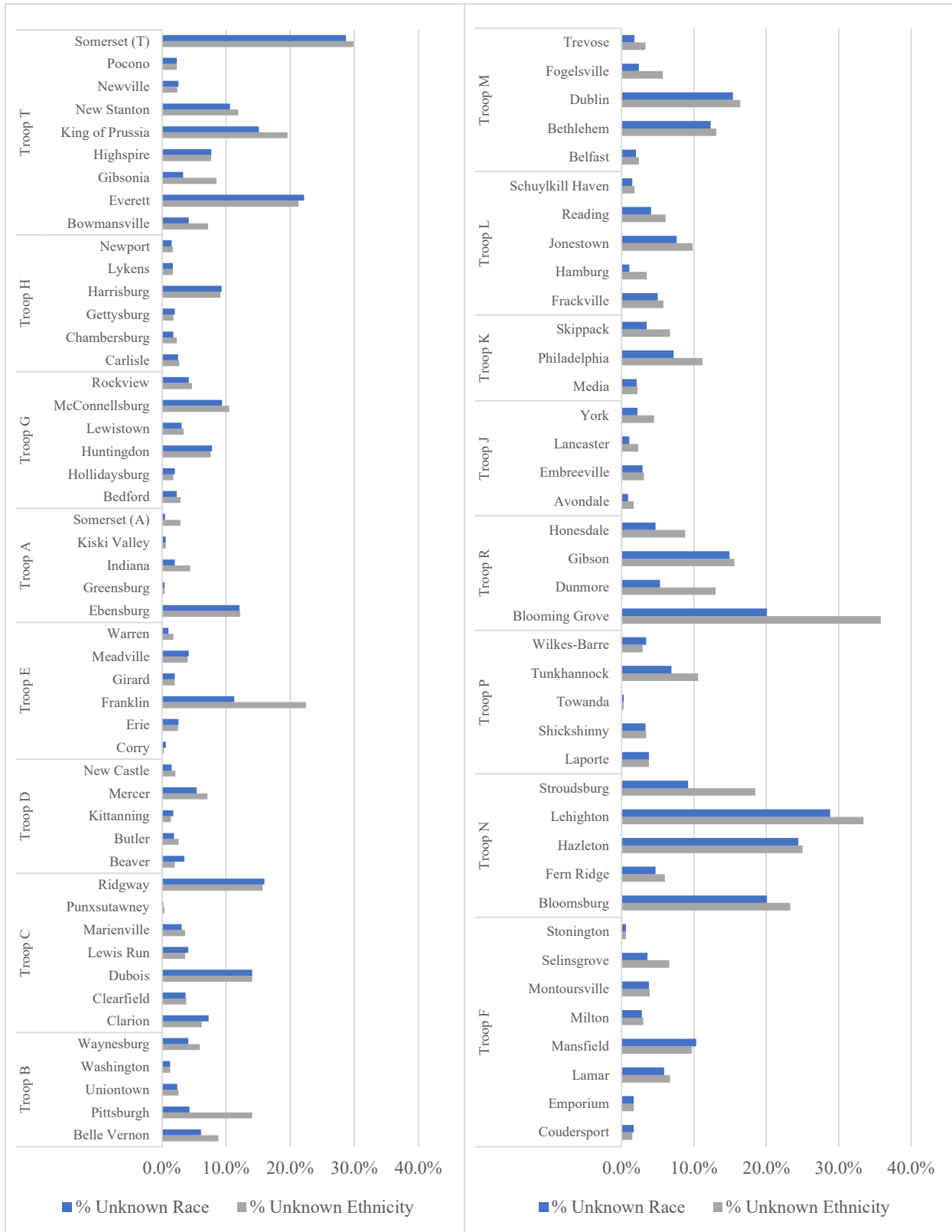
Drivers' Behavior

Finally, Tables 3.6 and 3.7 provide information about drivers' behavior, including whether they were civil, disrespectful, non-compliant, verbally resistant, or physically resistant toward Troopers during traffic stops. Troopers are instructed to select all that apply, so there are a small number of cases where drivers were reported to be civil as well as one of the other categories (n=162, 0.2%).[27] As shown, at the department level, 98.1% of drivers are reported as only civil. Disrespectful drivers are identified in 1.0% of stops. Non-compliant and/or resistant drivers were rare. These findings were consistent at the Area and Troop levels. There is slightly more variation across Stations, but the lowest reported civil rate is still only 93.9% at Belfast Station.

Summary

Section 3 described the characteristics of traffic stops and stopped drivers across various PSP organizational units based on data collected for 109,453 stops that occurred from April 1, 2022 to June 30, 2022. Department-level trends in these descriptive findings are summarized below.

- Across the department, the majority of traffic stops had the following characteristics:
  o Occurred on a weekday (66.3%)
  o Occurred during the daytime (76.8%)
  o Occurred on a state highway (53.0%) or an interstate (35.4%)
  o Involved a vehicle registered in Pennsylvania (79.1%)
  o Involved vehicles without passengers (77.5%)
  o Lasted between 1-15 minutes (88.8%)

- Across the department, the most frequent reason for the stop was speeding (47.7%) with an average amount over the posted speed limit of 21.3 mph, followed by other moving violations (21.9%), equipment inspections (18.9%), and registration (14.6%)
  o 22% of stops were related to special traffic enforcement programs

- Across the department, characteristics of the drivers include:
  o Average age of 37.8 years
  o 66.5% male
  o White (78.6%), Black (13.5%), Hispanic (8.6%), Asian (1.8%), American Indian or Alaskan Native (0.3%), unknown race (5.8%), unknown ethnicity (7.4%)
  o Driver behavior was overwhelmingly civil (98.1%), with only a small percentage of stops reported to involve disrespectful, non-compliant, or resistant drivers

  - Considerable variation is reported in stop characteristics, reasons for the stop, and driver characteristics across PSP organizational units. This is to be expected due to differences in the geography, roadways, jurisdiction, traffic flow, and demographic makeup of residents and travelers across the state.

  - The large variation across organizational units in the percentage of drivers reported as unknown race/ethnicity, however, must be further examined by PSP officials.

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[27] In this table, the percent "civil" reflects stops where that was the only behavior category selected by the Trooper. If a Trooper selected civil and another behavior category or categories, they are reported in the percent for the other categories. Overall, in 99.5% of traffic stops, Troopers selected only one category for this data field.

IV.   ANALYSES OF POST-STOP OUTCOMES

This section reports traffic stop outcomes during member-initiated traffic stops conducted in the second quarter of 2022. The disposition of traffic stops (e.g., warnings, citations, and arrests) is reported at the Department, Area, and Troop levels in Table 4.1 and the Station level in Table 4.2. These tables report the total number and percentage of stops resulting in a *driver* warning, citation, and/or arrest. It is important to note that these percentages may exceed 100%, as drivers may experience one or more post-stop outcomes (e.g., a driver may be both warned and cited in the same stop). Tables 4.3 and 4.4 display information related to stops that resulted in searches at the Department, Area, and Troop levels.[28]

Description of Post-Stop Outcomes

Figure 4.1 and Table 4.1 report the post-stop outcomes for drivers during the 109,349 stops initiated by PSP Troopers in the second quarter of 2022. As shown, 65.5% of drivers were issued citations, while 53.2% received verbal or written warnings (12.4% and 40.8%, respectively). Driver arrests were rare, occurring in only 3.2% of traffic stops.

Figure 4.1: Department-Wide Post-Stop Outcomes, Q2 2022
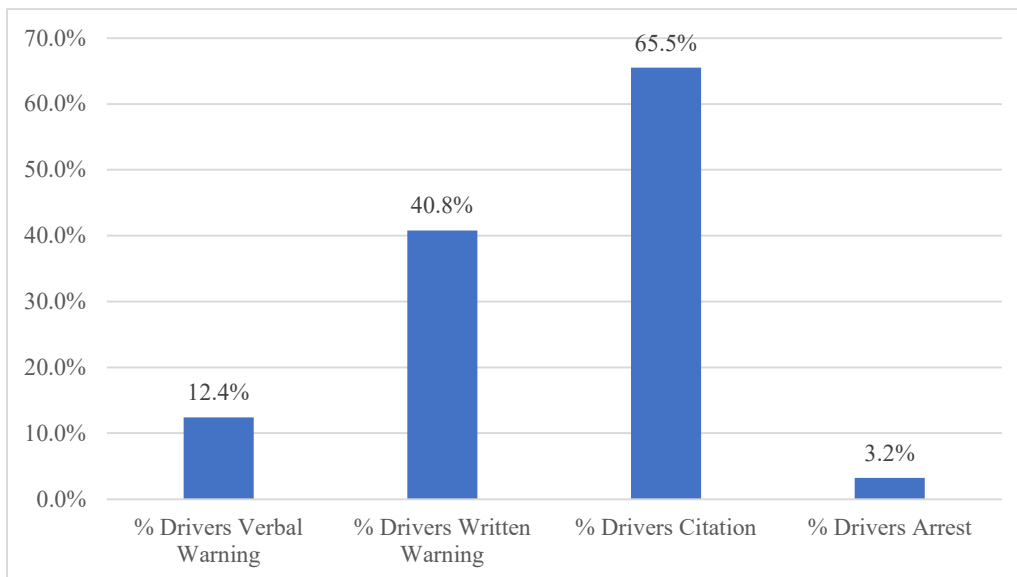
As reported in Table 4.1 and graphically displayed in Figure 4.2, post-stop outcomes differed across PSP Areas. For example, Troopers assigned to Area II issued the most warnings to drivers (10.2% verbal and 50.5% written warnings), while Troopers in Area III issued the least (14.0% verbal, 30.1% written warnings). Drivers in Areas I and II were the most likely to be cited (71.8% and 68.6%, respectively), while drivers in Area IV were least likely to be issued citations

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(56.1%). Troopers in Area II arrested the smallest percentage of stopped drivers (2.2%), while Area IV reported the highest percentage of drivers arrested (4.0%).

Figure 4.2: Post-Stop Outcomes by PSP Area, Q2 2022
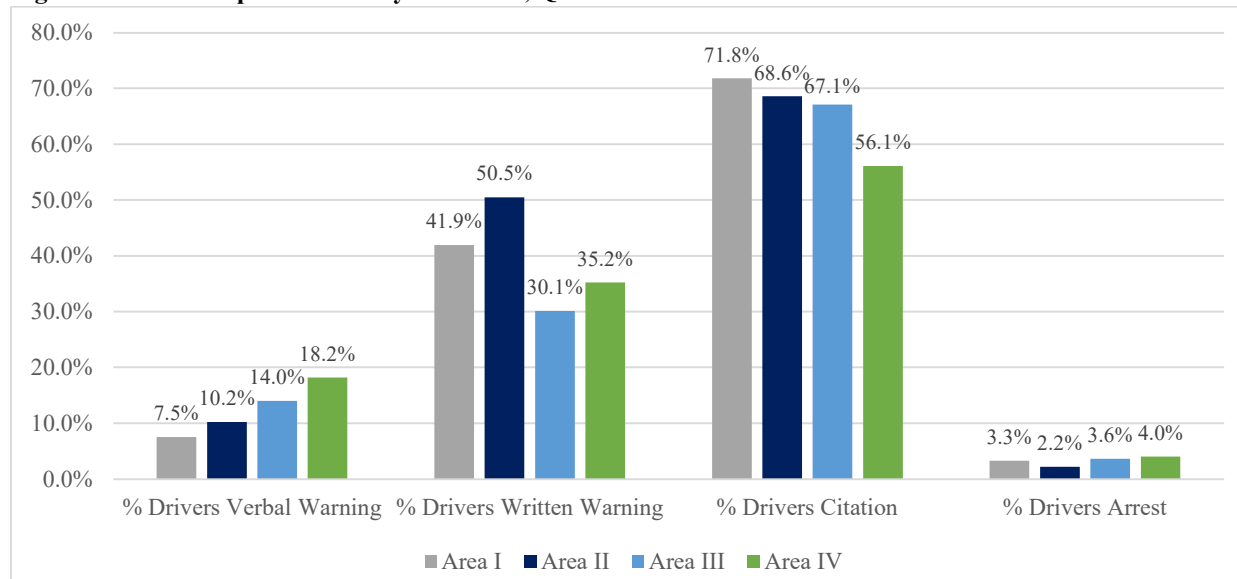
Troops ranged in issuing warnings from a high of 69.6% in Troop H to a low of 39.5% in Troop B. For citations, Troop T had the highest percentage of drivers cited (85.2%), while Troop J had the lowest (47.2%). Traffic stop outcomes at the Troop level demonstrated the greatest variation, with driver arrests ranging from 5.2% of stops in Troop D, to 0.5% in Troop T.

As for specialized units, the SHIELD unit issued a very high number of warnings (10.3% verbal, 89.1% written warnings). The Canine unit also issued about 92.6% warnings but had a higher percentage of verbal warnings (40.6%) than the SHIELD unit. In addition, both units infrequently cited drivers. Finally, the SHIELD unit arrested 1.8% of drivers, while the Canine unit arrested 2.7% of drivers.

Table 4.1: Post-Stop Outcomes by Department, Area & Troop, Q2 2022

	Total # of Stops	Drivers Verbal Warning	Drivers Written Warning	Drivers Citation	Drivers Arrest
PSP Dept.	**109,453**	**12.4%**	**40.8%**	**65.5%**	**3.2%**
AREA I	22,698	7.5%	41.9%	71.8%	3.3%
Troop B	5,047	8.7%	30.8%	76.6%	2.3%
Troop C	6,216	8.7%	53.3%	63.9%	3.2%
Troop D	5,482	4.6%	46.8%	69.1%	5.2%
Troop E	5,953	7.9%	34.9%	78.7%	2.4%
AREA II	35,312	10.2%	50.5%	68.6%	2.2%
Troop A	5,079	6.5%	40.9%	75.5%	3.1%
Troop G	6,530	8.6%	48.1%	69.2%	2.4%
Troop H	11,842	15.5%	54.1%	48.8%	3.5%
Troop T	11,861	7.4%	52.3%	85.2%	0.5%
AREA III	26,803	14.0%	30.1%	67.1%	3.6%
Troop F	9,237	16.0%	30.0%	63.2%	4.0%
Troop N	8,399	12.0%	28.6%	70.3%	4.1%
Troop P	4,797	15.6%	32.3%	64.7%	2.4%
Troop R	4,370	12.1%	31.2%	71.8%	3.5%
AREA IV	23,258	18.2%	35.2%	56.1%	4.0%
Troop J	7,649	25.0%	35.1%	47.2%	5.1%
Troop K	4,914	15.3%	38.0%	56.6%	2.8%
Troop L	5,003	12.5%	29.0%	69.7%	2.9%
Troop M	5,692	16.5%	38.4%	55.9%	4.6%
Specialized Units					
SHIELD	911	10.3%	89.1%	0.3%	1.8%
Canine	367	40.6%	52.0%	8.2%	2.7%

Table 4.2 reports post-stop outcomes at the Station level. There is considerable variability across Stations for all stop outcomes. The highest percent of warnings were issued at New Stanton Station (88.5%) and the fewest at Waynesburg Station (25.3%). Troopers assigned to Gibsonia Station had the highest citation rate (91.3%). In approximately 14% of PSP Stations (12 of 88 Stations), drivers were arrested in 1.0% or less of all stops. Selinsgrove Station reported the largest percentage of drivers who were arrested (11.2%), compared to less than 0.1% of drivers in Somerset (T) Station and King of Prussia Station.

Table 4.2: Post-Stop Outcomes by Station, Q2 2022 (p.1 of 3)

	Total # of Stops	Drivers Verbal Warning	Drivers Written Warning	Drivers Citation	Drivers Arrest
AREA I	22,698	7.5%	41.9%	71.8%	3.3%
Troop B	*5,047*	*8.7%*	*30.8%*	*76.6%*	*2.3%*
Belle Vernon	1,123	8.1%	31.7%	75.1%	2.7%
Pittsburgh	1,429	12.7%	24.3%	79.5%	1.0%
Uniontown	1,376	6.9%	41.5%	72.2%	2.0%
Washington	529	5.9%	32.5%	76.0%	5.9%
Waynesburg	590	7.2%	18.1%	83.4%	2.2%
Troop C	*6,216*	*8.7%*	*53.3%*	*63.9%*	*3.2%*
Clarion	737	7.3%	39.9%	69.3%	3.8%
Clearfield	1,179	9.9%	37.5%	63.7%	4.0%
Dubois	985	10.7%	60.6%	77.3%	1.5%
Lewis Run	910	5.2%	73.0%	52.3%	4.1%
Marienville	671	6.0%	43.4%	74.5%	2.2%
Punxsutawney	836	11.5%	57.1%	48.7%	4.9%
Ridgway	898	9.0%	60.8%	62.9%	1.7%
Troop D	*5,482*	*4.6%*	*46.8%*	*69.1%*	*5.2%*
Beaver	954	8.5%	19.6%	88.6%	3.7%
Butler	1,163	7.4%	49.6%	72.2%	7.4%
Kittanning	1,908	1.8%	61.8%	49.4%	3.8%
Mercer	851	4.0%	35.0%	82.1%	8.5%
New Castle	606	2.5%	53.8%	75.7%	3.5%
Troop E	*5,953*	*7.9%*	*34.9%*	*78.7%*	*2.4%*
Corry	866	9.4%	46.2%	63.4%	2.1%
Erie	1,438	5.3%	35.4%	81.2%	3.5%
Franklin	671	15.5%	33.5%	67.4%	2.8%
Girard	1,617	6.0%	23.7%	84.8%	1.9%
Meadville	734	9.1%	38.6%	81.6%	2.0%
Warren	596	5.4%	45.2%	86.7%	1.5%
AREA II	35,312	10.2%	50.5%	68.6%	2.2%
Troop A	*5,079*	*6.5%*	*40.9%*	*75.5%*	*3.1%*
Ebensburg	639	7.7%	33.4%	88.4%	1.1%
Greensburg	1,228	5.4%	56.0%	70.0%	2.5%
Indiana	1,957	8.6%	31.9%	70.8%	5.1%
Kiski Valley	309	6.8%	25.2%	81.9%	1.6%
Somerset (A)	946	2.9%	49.9%	81.9%	1.4%
Troop G	*6,530*	*8.6%*	*48.1%*	*69.2%*	*2.4%*
Bedford	1,074	4.0%	54.1%	78.1%	1.3%
Hollidaysburg	847	16.2%	43.3%	62.1%	6.6%
Huntingdon	794	7.4%	44.1%	79.6%	3.0%
Lewistown	1,139	1.7%	48.3%	71.5%	1.7%
McConnellsburg	742	6.2%	62.3%	66.8%	0.7%
Rockview	1,934	13.2%	42.8%	62.7%	2.1%

Table 4.2: Post-Stop Outcomes by Station , Q2 2022 (p. 2 of 3)

	Total # of Stops	Drivers Verbal Warning	Drivers Written Warning	Drivers Citation	Drivers Arrest
Troop H	11,842	15.5%	54.1%	48.8%	3.5%
Carlisle	2,832	8.4%	63.6%	44.0%	3.2%
Chambersburg	2,998	22.2%	46.8%	54.4%	1.9%
Gettysburg	1,883	19.7%	58.9%	36.1%	4.1%
Harrisburg	2,289	19.6%	46.7%	49.8%	4.7%
Lykens	754	4.8%	62.7%	66.0%	3.6%
Newport	1,086	6.9%	51.2%	53.2%	4.8%
Troop T	11,861	7.4%	52.3%	85.2%	0.5%
Bowmansville	1,080	6.1%	28.1%	84.5%	0.6%
Everett	1,706	9.9%	68.9%	82.8%	0.7%
Gibsonia	1,749	3.0%	80.6%	91.3%	0.8%
Highspire	13	30.8%	38.5%	61.5%	7.7%
King of Prussia	1,367	5.5%	27.2%	90.9%	0.1%
New Stanton	2,034	12.3%	76.2%	75.4%	0.6%
Newville	985	5.3%	26.6%	79.7%	0.6%
Pocono	1,282	6.6%	25.4%	90.7%	0.2%
Somerset (T)	1,644	7.8%	48.6%	87.8%	0.1%
AREA III	26,803	14.0%	30.1%	67.1%	3.6%
Troop F	9,237	16.0%	30.0%	63.2%	4.0%
Coudersport	813	8.9%	51.3%	55.1%	1.7%
Emporium	346	7.0%	60.6%	53.2%	1.2%
Lamar	1,774	21.6%	15.1%	65.4%	2.6%
Mansfield	692	16.3%	29.0%	70.1%	3.6%
Milton	2,416	15.7%	21.6%	65.9%	2.3%
Montoursville	1,677	22.4%	28.6%	61.0%	3.6%
Selinsgrove	854	6.6%	45.8%	67.0%	11.2%
Stonington	665	11.2%	42.5%	57.0%	9.6%
Troop N	8,399	12.0%	28.6%	70.3%	4.1%
Bloomsburg	897	10.7%	20.8%	77.9%	2.7%
Fern Ridge	1,852	9.7%	17.3%	81.3%	4.9%
Hazleton	1,853	12.6%	20.4%	81.8%	1.9%
Lehighton	632	9.5%	16.9%	87.2%	9.8%
Stroudsburg	3,164	13.7%	44.4%	51.6%	4.2%
Troop P	4,797	15.6%	32.3%	64.7%	2.4%
Laporte	654	20.4%	25.0%	65.3%	1.4%
Shickshinny	553	10.9%	20.8%	79.6%	5.2%
Towanda	1,571	23.4%	36.3%	49.8%	1.8%
Tunkhannock	593	8.1%	56.5%	54.5%	3.2%
Wilkes-Barre	1,425	9.7%	25.6%	79.4%	2.0%
Troop R	4,370	12.1%	31.2%	71.8%	3.5%
Blooming Grove	1,333	13.1%	41.1%	55.4%	6.2%
Dunmore	967	9.9%	28.1%	83.7%	2.5%
Gibson	1,195	12.0%	21.7%	81.4%	3.2%
Honesdale	875	12.9%	32.3%	70.6%	1.0%

Table 4.2: Post-Stop Outcomes by Station, Q2 2022 (p. 3 of 3)

	Total # of Stops	Drivers Verbal Warning	Drivers Written Warning	Drivers Citation	Drivers Arrest
AREA IV	23,258	18.2%	35.2%	56.1%	4.0%
Troop J	7,649	25.0%	35.1%	47.2%	5.1%
Avondale	1,914	27.8%	38.3%	46.4%	5.0%
Embreeville	1,654	19.7%	39.3%	55.1%	2.8%
Lancaster	1,464	25.7%	29.7%	48.3%	6.4%
York	2,617	26.0%	33.1%	42.2%	5.8%
Troop K	4,914	15.3%	38.0%	56.6%	2.8%
Media	2,296	13.3%	35.7%	56.2%	3.3%
Philadelphia	1,738	19.3%	36.8%	58.7%	2.2%
Skippack	880	12.5%	46.2%	53.2%	2.7%
Troop L	5,003	12.5%	29.0%	69.7%	2.9%
Frackville	826	15.4%	20.3%	74.3%	1.7%
Hamburg	829	11.2%	33.5%	71.2%	1.9%
Jonestown	1,209	15.0%	30.5%	65.8%	3.3%
Reading	848	10.6%	36.3%	62.7%	7.3%
Schuylkill Haven	1,291	10.5%	25.3%	74.1%	0.9%
Troop M	5,692	16.5%	38.4%	55.9%	4.6%
Belfast	1,054	22.9%	23.9%	61.1%	4.8%
Bethlehem	1,044	12.1%	38.9%	60.1%	3.8%
Dublin	855	8.1%	52.7%	49.1%	6.7%
Fogelsville	1,632	15.1%	38.8%	53.4%	4.1%
Trevose	1,107	23.4%	39.9%	55.8%	4.0%

Searches & Seizures

Table 4.3 displays information related to traffic stops that resulted in searches at the Department, Area, and Troop levels. Specifically, the percentage of stops resulting in searches, total number of searches, percent of searches that were conducted roadside as compared to searches that were conducted after the vehicle was towed, and the percent of searches resulting in the seizure of contraband (sometimes referred to as the "hit rate" or "search success rate") are reported.

Approximately 2.4% of traffic stops made by PSP Troopers resulted in a search, with 2,629 searches conducted department-wide during the second quarter of 2022. The prevalence of searches varied across PSP Areas, with Area II having the lowest percentage of stops that resulted in searches (1.6%) and Area IV having the highest (3.8%). Similarly, there is variation in the percentages of traffic stops resulting in searches at the Troop level. For example, 0.3% of stops conducted in Troop T resulted in a search, compared to 4.5% in Troop J. Of note, all Troops within Area IV averaged a similar or higher percentage of stops resulting in searches than the department-wide average of 2.4%. Finally, the average search rate was considerably higher for the specialized units in comparison to the department-wide average. Specifically, searches

were conducted during 12.1% of traffic stops made by the SHIELD unit and 15.2% by the Canine unit.

The overwhelming majority of searches, both department-wide and at the Area and Troop levels, were conducted roadside. Each Area and nearly every Troop conducted at least 85% of searches roadside and less than 15% of searches after a tow, aligning with the overall PSP department average. Troop T was the only Troop to significantly differ in this regard, with 76.5% of its searches conducted roadside and 23.5% of searches conducted after a tow.

The percentage of searches that were successful in the seizure of evidence and/or contraband was 40.5% across the department. This seizure rate varied across Areas, from a high of 45.9% of searches in Area I to a low of 38.1% in Area IV. Of note, Area IV had the highest percentage of stops that resulted in a search, but the lowest seizure rate. The 2022 annual report will examine search and seizure rates in more detail to further explore possible explanations for this trend. At the Troop level, Troop C had the highest percentage of searches resulting in seizures of evidence/contraband (57.5% of searches), while Troop K had the lowest (25.9% of searches). Again, due to the small number of searches conducted in many stations, it is only appropriate to report seizure rates at the Area and Troop levels until more data is collected.

Table 4.3: Searches by Department, Area & Troop, Q2 2022

	Stops Resulting in Search	Total # of Searches	Searches Conducted Roadside	Searches After Tow	Searches Resulting in Seizure
PSP Dept.	**2.4%**	**2,629**	**94.0%**	**6.0%**	**40.5%**
AREA I	2.0%	449	93.1%	6.9%	45.9%
Troop B	3.1%	155	94.8%	5.2%	32.9%
Troop C	1.2%	73	86.3%	13.7%	57.5%
Troop D	3.0%	165	95.8%	4.2%	51.5%
Troop E	1.0%	56	89.3%	10.7%	50.0%
AREA II	1.6%	546	94.5%	5.5%	41.9%
Troop A	1.1%	53	98.1%	1.9%	45.3%
Troop G	1.2%	81	95.1%	4.9%	37.0%
Troop H	3.2%	378	95.5%	4.5%	44.2%
Troop T	0.3%	34	76.5%	23.5%	23.5%
AREA III	2.2%	590	94.9%	5.1%	45.4%
Troop F	1.6%	142	93.0%	7.0%	46.5%
Troop N	2.3%	194	95.9%	4.1%	40.7%
Troop P	2.3%	108	96.3%	3.7%	38.9%
Troop R	3.4%	146	94.5%	5.5%	55.5%
AREA IV	3.8%	880	93.5%	6.5%	38.1%
Troop J	4.5%	344	94.5%	5.5%	44.8%
Troop K	4.0%	193	95.3%	4.7%	25.9%
Troop L	2.1%	104	96.2%	3.8%	38.5%
Troop M	4.2%	239	89.5%	10.5%	38.1%
Specialized Units					
SHIELD	12.1%	109	91.7%	8.3%	18.3%
Canine	15.2%	55	98.2%	1.8%	12.7%

Table 4.4 provides more detailed information on the reasons for searches at the Department, Area, and Troop levels. The department-wide results are graphically displayed in Figure 4.3. Troopers are instructed to report all reasons for a search – therefore, the categories for search reason reported below are not mutually exclusive. As shown, the majority of searches conducted department-wide secured motorists' verbal consent 60.3%, while nearly 20% were based on written consent. Combined, 79.3% of PSP searches during traffic stops had verbal consent, written consent, or both. Other prevalent reasons for search include incident to arrest (29.5% of searches) and inventory (11.4%). Less than 10% of searches were based on the following reasons: plain view (8.2%), officer safety (7.5%), search warrant (4.9%), and probable cause/exigent circumstances (1.2%).

As this report was being finalized, PSP made the research team aware of an issue discovered on September 5, 2022 with the "incident to arrest" response option for the "reason for search" data field. As described in the *2021 Pennsylvania State Police Traffic Stop Study,* the values for categories of search reasons changed mid-year in 2021, with some reasons eliminated, others

added, and the numeric codes for all categories differing from the previous CDR form to the updated form.[29] Previously "0" indicated that search reason was "not applicable" and "incident to arrest" was "1". The "not applicable" option, however, was eliminated on the updated form because search reason does not open as a field for completion if no search is initiated and "incident to arrest" was subsequently assigned the value "0". When the update was made, however, it appears that an old validation rule inadvertently was not removed; specifically, if search initiated is yes, search reason cannot be "not applicable." This issue was discovered when a member tried to select "0" for "incident to arrest" as a search reason and the system warned them it was not a valid response when search initiated is yes. Although some Quarter 2 searches still indicated incident to arrest as the reason for search, this issue likely undercounted this particular reason for search and possibly searches overall. For example, as noted in Table 4.1, 3.2% of drivers were arrested (n=3,455), but as reported in Figure 4.3 and Table 4.4, only 29.5% of searches were reported to be based on incident to arrest (n=775). This includes 183 searches that were only based on incident to arrest (note that reason for search is a select all that apply). As noted in the Quarter 1 report, it is unknown how frequently this issue may have occurred prior to it being reported and there is no method for either PSP or the research team to determine how other members would have proceeded in similar circumstances. The PSP Bureau of Communications and Information Services began a pilot test of a rule change to correct this issue on September 22, 2022 and it went into effect department-wide on September 30, 2022. The research team will evaluate this data integrity issue and its implications for search and seizure analyses in the 2022 Annual Report once a full year of data is available and the correction has been implemented.

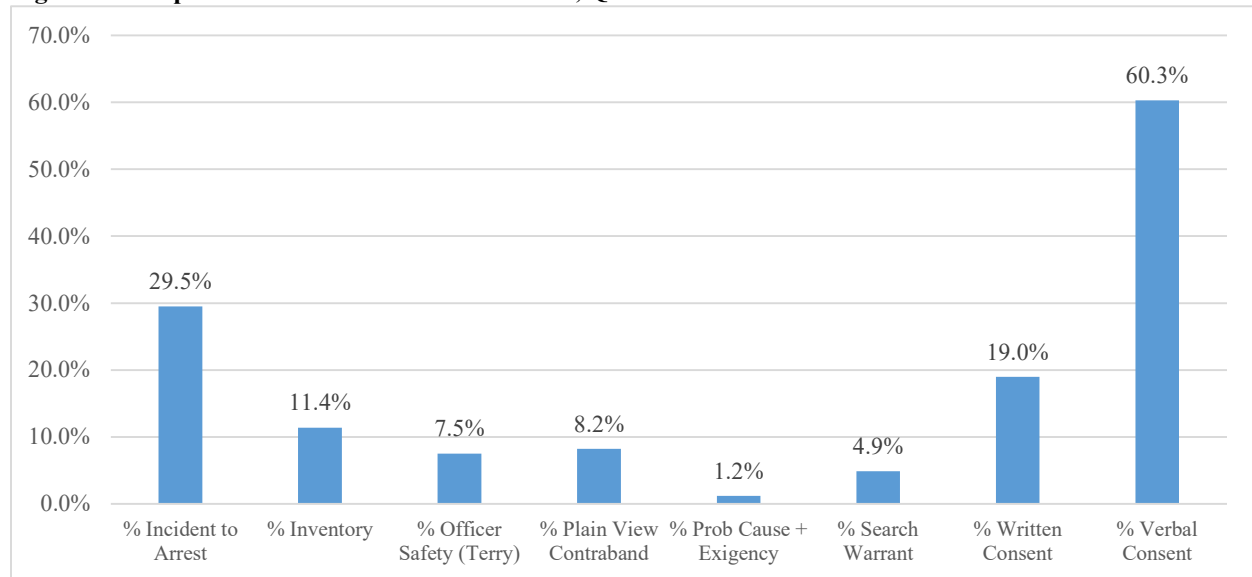**Figure 4.3: Department-Wide Reasons for Search, Q2 2022**

Table 4.4 also illustrates the different search reasons across Areas, Troops, and the specialized SHIELD and Canine units. As shown, the reasons for search differ across Areas and Troops. For example, 71.3% of searches conducted in Area I included verbal consent, compared to just

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[29] Engel & Cherkauskas, 2022, p.17-18.

42.7% in Area IV. In Area I, written consent accounted for just 9.4% of searches, while it accounted for 42.7% of stops in Area IV. Area IV also demonstrated much higher percentages of searches incident to arrest (43.1%) and inventory (29.1%) compared to the department-wide averages of 29.5% and 11.4%, respectively.

Notable differences exist in the ways that motorists consent to searches at the Troop level as well. For instance, only 3.6% of searches by Troop D involve written consent, while 78.8% involve verbal consent. Conversely, 46.3% of searches by Troop P involve written consent, while only 51.9% involve verbal consent. Finally, the overwhelming majority of searches by the SHIELD and Canine units involved verbal consent from motorists. These specialized units were much less likely to report conducting searches based on incident to arrest and inventory compared to the departmental averages.

Table 4.4: Search Reasons by Department, Area & Troop, Q2 2022

	Total # of Searches	Incident to Arrest	Inventory	Officer Safety (Terry)	Plain View Contraband	Probable Cause + Exigency	Search Warrant	Written Consent	Verbal Consent
PSP Dept.	**2,629**	**29.5%**	**11.4%**	**7.5%**	**8.2%**	**1.2%**	**4.9%**	**19.0%**	**60.3%**
AREA I	449	27.6%	2.2%	9.6%	13.4%	2.9%	6.2%	9.4%	71.3%
Troop B	155	25.8%	5.8%	8.4%	5.8%	1.3%	3.9%	5.2%	75.5%
Troop C	73	39.7%	1.4%	12.3%	13.7%	2.7%	9.6%	16.4%	58.9%
Troop D	165	23.0%	0.0%	9.7%	20.0%	4.2%	5.5%	3.6%	78.8%
Troop E	56	30.4%	0.0%	8.9%	14.3%	3.6%	10.7%	28.6%	53.6%
AREA II	546	23.8%	2.4%	4.4%	6.6%	1.5%	4.0%	12.6%	70.7%
Troop A	53	26.4%	1.9%	5.7%	1.9%	1.9%	1.9%	13.2%	79.2%
Troop G	81	12.3%	0.0%	0.0%	2.5%	0.0%	6.2%	17.3%	72.8%
Troop H	378	25.7%	2.9%	5.0%	7.9%	1.3%	4.0%	11.4%	71.2%
Troop T	34	26.5%	2.9%	5.9%	8.8%	5.9%	2.9%	14.7%	47.1%
AREA III	590	23.1%	3.7%	4.9%	8.1%	0.7%	4.4%	19.2%	67.3%
Troop F	142	26.1%	3.5%	2.1%	9.9%	0.0%	7.0%	15.5%	69.0%
Troop N	194	27.8%	7.7%	6.7%	9.3%	1.5%	3.1%	11.9%	66.5%
Troop P	108	16.7%	0.0%	6.5%	3.7%	0.0%	2.8%	46.3%	51.9%
Troop R	146	18.5%	1.4%	4.1%	8.2%	0.7%	4.8%	12.3%	78.1%
AREA IV	880	43.1%	29.1%	11.6%	7.4%	0.8%	4.8%	22.4%	42.7%
Troop J	344	54.9%	40.7%	14.0%	6.1%	0.3%	6.1%	32.3%	26.7%
Troop K	193	36.3%	31.6%	17.6%	7.3%	1.0%	6.2%	7.3%	54.9%
Troop L	104	21.2%	2.9%	7.7%	1.9%	1.0%	2.9%	28.8%	61.5%
Troop M	239	41.0%	21.8%	5.0%	11.7%	1.3%	2.5%	17.6%	47.7%
Specialized Units									
SHIELD	109	3.7%	0.0%	0.0%	1.8%	0.0%	8.3%	63.3%	55.0%
Canine	55	3.6%	0.0%	0.0%	9.1%	0.0%	5.5%	16.4%	83.6%

Summary

Post-stop outcomes varied considerably by PSP Area, Troop, and Station, but across the department, traffic stop outcomes can be summarized by the following characteristics:
- 53.2% of stops resulted in a warning issued to the driver
  - 12.4% were verbal warnings
  - 40.8% were written warnings
- 65.5% of stops resulted in a citation issued to the driver
- 3.2% of stops resulted in the arrest of the driver

During this quarter, 2,629 searches (2.4% of all stops) were conducted department wide.
- The prevalence of searches conducted varied across Areas and Troops
- The search rate was higher for stops made by the SHIELD unit (12.1%) and the Canine unit (15.2%)
- The overwhelming majority of searches, both department-wide and across Areas and Troops, were conducted roadside as compared to searches conducted after towing
- The percentage of searches resulting in the seizures of evidence and/or contraband was 40.5%, but again, it varied by organizational unit

V. SUMMARY AND RECOMMENDATIONS

This report represents the second of three quarterly reports to be provided by the UC team based on 2022 CDR data. These reports are designed to update PSP administrators on the data collection progress and to provide initial descriptive analyses of the data collected each quarter. Given the limited number of traffic stops, all of the descriptive information reported in this document should be considered preliminary and subject to change based on additional months of data collection. In addition, none of the results reported in this document statistically control for alternative explanations for findings, which will be included in the annual report based on a full year of data and released in spring 2023.

This concluding section briefly summarizes the main trends evident in the preliminary analyses of the second quarter of 2022 data, previews the more rigorous statistical analyses that will be employed in the 2022 annual report, and offers some minor recommendations for data collection improvement that can be implemented in the interim.

The Initial Traffic Stop

From April 1, 2022 to June 30, 2022, PSP Troopers initiated 109,453 traffic stops with members of the public. Across the department, the majority of traffic stops occurred on a state highway (53.0%) or interstate (35.4%), involved a vehicle registered in Pennsylvania (79.1%), and lasted between 1-15 minutes (88.8%). The most frequent reason for traffic stops was speeding (47.7%), with an average amount over the posted speed limit of 21.3 miles per hour. The other most common reasons for a stop included other moving violations (21.9%) and equipment/inspection violations (18.9%). As expected, differences across organizational units were evident for many of these variables.

Of the drivers stopped, two-thirds were male. Approximately 79% of the drivers were perceived to be White while 13.5% were Black; 8.6% were of Hispanic ethnicity. Approximately 17% of the drivers were Non-White, with the majority of these drivers being Black (13.5%). The rate of stops for different racial and ethnic groups varied dramatically across Areas, Troops, and Stations. Some variation is expected given residential patterns related to race and travel patterns along interstate and state highways. However, the overwhelming majority of drivers across all organizational units were civil to the Troopers who stopped them (98.1%); disrespectful, non-compliant, or resistant behavior was rare.

Post Stop Outcomes

Post-stop outcomes varied considerably by PSP Area, Troop, and Station, but on average, almost two-thirds of stops resulted in the driver being issued a citation (65.5%). Over half of the stops (53.2%) resulted in a warning for the driver, most of which were written as opposed to verbal. Only 3.2% of traffic stops resulted in the arrest of the driver. Approximately 2.4% of all stops resulted in a search of the driver, vehicle, and/or passenger. During the second quarter of 2022, 2,629 searches were conducted department wide. The search rate varied across PSP Areas and

Troops. The average percentage of searches that were successful in the seizure of contraband was 40.5%, but the search success rate varied by organizational unit.

Recommendations

In the process of preparing this report, the research team communicated some of the preliminary findings to the PSP team to allow them to make necessary adjustments. Based on the Quarter 1 large variation in the percent of unknown responses for the driver race and ethnicity fields, which was also evident in Quarter 2, the PSP provided additional guidance to its members based on recommendations from the UC team. On August 12, 2022, the Director of the Bureau of Communication and Information Services released a PSP Postmaster communication. This directive indicated reiterated that when completing the race and ethnicity fields "members are reminded that they **shall** report their perceptions of occupants' race/ethnicity." Further guidance indicated:

> "Unknown" should only be used in the rare circumstance that a member is unable to perceive the race and/or ethnicity. For the purposes of the CDR form, the occupant's actual race/ethnicity is irrelevant as the information we are collecting is based on the members' perception. For the same reason, members shall not ask occupants to identify their actual race/ethnicity.

The directive also noted that because there is no response option for more than one race, "Members may select 'unknown' when they encounter someone they perceive to be biracial. To the extent that is the case, please select the race/ethnicity that most closely aligns to your perception whenever possible." The impact of this directive on the percent of unknown race and ethnicity will be examined in the 2022 3rd Quarter report to see if any additional action is needed.

The research team also recommends that PSP Area, Troop, and Station commanders review the initial data trends described in this report.

Future Analyses

These preliminary findings document the progress of PSP's traffic stop data collection in 2022 and provide descriptive information regarding the second quarter of stops. As described in the introduction of this report, the 2022 annual report will include more in-depth statistical analyses of 12 months of traffic stop data (January 1, 2022 – December 31, 2022), including the use of appropriate benchmark comparisons for traffic stops, multivariate statistical analyses of stop outcomes that account for multiple explanatory factors, and outcome test analyses of searches and seizures. Future annual reports will allow for the examination of patterns and trends in traffic stops and post-stop outcomes over time to determine if changes in policies and training to reduce possible racial/ethnic disparities have the desired impact on officer behavior.

APPENDIX

CDR Form – Page 1 of 2

Contact Data Reporting
9.00.00, Form 12/22/2021, Rule 12/21/2021

CDR Number	Related Document Number
CBWVTTGTS22	
CAD/Case Number	RMS location

STOP LOCATION

Location

County Name	Municipality Code	Municipality Name

Stop Time HRS	Stop Date	Roadway Type	Registration State

GPS

Latitude: | Degrees | Minutes | Seconds | Decimal | Longitude: | Degrees | Minutes | Seconds | Decimal |

Prior Posted Speed Limit	Driver Speed MPH	Amount Over Limit MPH	
Special Traffic Enforcement	Dedicated Enforcement Team	Assigned Enforcement Team	

DRIVER

Zip Code	Gender	Date of Birth	Race	Ethnicity
LEP?		LEP Language Access?		

STOP RESULT

Stop Duration minutes	MCSAP Related?	Number of Passengers	K-9 Utilized ?

DRIVER

Driver's Behavior	Driver Arrested?	Number of Citations	Warning Type	Number of Warnings

PASSENGER

Asked for Passenger Identification?	Passenger Identification Type?	Passenger Identification Justification?

Passenger Race		Passenger Ethnicity

LEP?	LEP Language Access?

Number of Warnings	Number of Citations	Passenger Arrested?	

ADD PASSENGER GROUP

SEARCH

Search Initiated?	Searched? (Mark all the apply)

Search Reason(s) "Mark all that apply"

Property Seized "Mark all that apply"

EMPLOYEE INFORMATION

Location Code	Employee Number
Z99	00111222