National Policing Institute
PURSUING EXCELLENCE THROUGH SCIENCE AND INNOVATION

2022 Pennsylvania State Police Traffic Stop Study:

3rd Quarter Report

July 1 – September 30, 2022

November 2022

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

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 (Engel & Cherkauskas, 2022).[1] This third quarterly report for the PSP Traffic Stop Study offers a preliminary examination of data collected by PSP Troopers during member-initiated traffic stops conducted from July 1 to September 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.[2] 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 interact with the public safely and fairly. 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 (Pryor et al., 2020).

2022 3rd Quarter Report Outline

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

Section 2: Data Audit

Section 2 includes an initial audit of Quarter 3 stop data, examining these data for missing and logical inconsistencies for each field captured during a traffic stop. A complete data audit, similar to that conducted for 2021, 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 third quarter of 2022. Specifically, it provides information derived from the traffic stop data, such as the number of stops,

---

[1] The research team completed the initial work on this project (i.e., the 2021 annual report and first two quarterly reports for 2022) under our affiliation at the University of Cincinnati. The research team recently moved to the National Policing Institute; the PSP and the Institute executed a new contract to complete the remaining original deliverables.

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

characteristics of the stops, reasons for these stops, and 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 driver outcomes as a result of their traffic stops (e.g., warnings, citations, arrests, searches, and seizures). This information is reported at the 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 fields are auto-populated from other PSP electronic forms. The CDR form 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[3], whether the driver had limited English proficiency (LEP), and if yes, the type of language assistance used
- **Vehicle** – state of registration, number of passengers[4]
- **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 third quarter of 2022, including descriptions of any missing and logical inconsistencies for the fields captured during a traffic stop. Comparisons to the first and second quarters 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

---

[3] 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.

[4] 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 (Fridell, 2004).

Typically, data audits for traffic stop data involve several procedures to check for different types of inaccuracies (Fridell, 2004), 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 (Fridell, 2004). 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 3 Results: July – September

The results of the 2022 Quarter 3 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 3 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. Like the Quarter 1 data audit findings, 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. Although driver race and ethnicity are not missing data, there is wide variation in the reported percent of unknown racial/ethnic characteristics. This issue is discussed in greater detail in Section 3.

Table 2.1: Missing and Invalid Data from Member-Initiated Traffic Stops (n=101,006), Q3 2022

	% Missing	% Invalid
Stop Characteristics		
Date of Contact	0.00	0.00
Time of Contact	0.00	0.00
Location of Stop[5]	0.00	0.00
Roadway Type	0.00	0.00
Duration of Stop	0.00	0.00
Whether K-9 Utilized	0.04	0.00
Reason for the Stop[6]	0.00	0.00
Special Traffic Enforcement	0.00	0.00
Dedicated Enforcement Team	0.12	24.73
MCSAP Related	0.00	0.00
Outcome of the Stop		
Warning Type	0.19	0.00
Number of Driver Warnings	0.19	0.00
Number of Driver Citations	0.00	0.00
Driver Arrest	0.00	0.00
Valid Search	0.00	2.44
Driver Characteristics		
Year of Birth	0.00	0.03[7]
Gender	0.00	0.00
Race	0.00	0.00
Ethnicity	0.00	0.00
LEP	0.12	0.00
Behavior/Demeanor	0.01	0.00
Zip Code	0.00	0.65[8]
Vehicle Characteristics		
Vehicle State of Registration	0.00	0.00
Number of Passengers	0.00	0.00
Trooper Characteristics[9]		
Gender	0.00	0.00
Race	0.00	0.00
Years of Service	0.00	0.00
Rank	0.00	0.00
Assigned Station Code	0.00	0.00

---

[5] 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.

[6] 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.

[7] There were 33 CDRs with dates of birth before 1/1/1921 or after 1/1/2011.

[8] There were 654 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.

[9] 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.

(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 2,108 stops, but the number of stops for the selected DET does not match the location codes for the same enforcement teams. For example, 1,242 stops reported SHIELD as DET, but there are 1,437 stops with a SHIELD location code; 298 stops reported Canine as DET, but there are 609 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.

  o Upon further review, it was determined that Canine NE and SE were not identifying themselves as DET (that is, they did not select yes for "assigned to a DET" when completing CDRs). PSP indicated that Canine teams have several missions including drug detection, human tracking, cadaver detection, and explosive detection. Due to this wide mission set, members of the NE and SE canine units did not consider themselves a DET. PSP has provided internal guidance that, for the purposes of CDRs, canine teams are considered a DET.

- Based on similar issues identified in the first two quarterly reports, 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, but this change did not take effect until the 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) **Valid Search:** Four data fields are related to a determination of whether there is valid search data: search initiated, search target, search reason, and property seized. *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.

In the first two quarterly reports, approximately 0.9% of stops were missing information on the "search initiated" data field. The PSP initiated minor adjustments for this data field

on June 27, 2022. There is no longer any missing data for the "search initiated" data field or for the search reason or property seized data fields, which are mandatory if "search initiated" is marked yes. Therefore, PSP's adjustments to the TraCS protocol addressed these issues previously identified in the first two quarterly reports.

One additional concern, however, remains. In 62 of the 2,544 stops indicating a search was initiated (2.44%), there was not a valid entry for search target. The research team recommended that the PSP BCIS team further review this data field to correct the small amount of continued missing data on this field and it is being addressed in a 4th Quarter update.

III. DESCRIPTION OF TRAFFIC STOP DATA

PSP Troopers engaged in 101,006 traffic stops with the public during the period between July 1 and September 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.[10] To illustrate differences across organizational units, information in all reports produced by the research team is presented for the PSP department, Area, Troop, and Station levels, as well as two specialized units that routinely conduct traffic stops.[11] 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, the demographic makeup of residents and travelers, and the traffic and law-violating behavior of motorists.

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= 33,266). 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, September accounted for the greatest percentage of stops (41.1%), followed by August (30.3%) and July (28.6%). 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.

---

[10] 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.

[11] 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 individuals 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 narcotics detection is to pursue highway interdiction activity through contacts with field personnel and aiding with traffic stops. Additionally, the narcotics 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, Q3 2022

	Total # of Stops	July	August	September
PSP Dept.	**101,006**	**28.6%**	**30.3%**	**41.1%**
AREA I	**20,497**	**27.5%**	**30.0%**	**42.4%**
Troop B	**4,844**	**22.9%**	**26.5%**	**50.6%**
Belle Vernon	986	17.6%	26.1%	56.3%
Pittsburgh	1,671	30.8%	23.0%	46.2%
Uniontown	1,071	22.1%	31.5%	46.4%
Washington	686	12.7%	25.9%	61.4%
Waynesburg	429	22.8%	29.6%	47.6%
Troop C	**5,274**	**27.7%**	**33.8%**	**38.5%**
Clarion	595	29.7%	20.7%	49.6%
Clearfield	942	31.0%	31.7%	37.3%
Dubois	612	24.5%	35.3%	40.2%
Lewis Run	1,033	23.6%	35.0%	41.3%
Marienville	583	24.0%	32.8%	43.2%
Punxsutawney	891	27.2%	41.9%	31.0%
Ridgway	618	35.3%	35.3%	29.4%
Troop D	**5,009**	**35.3%**	**26.5%**	**38.2%**
Beaver	756	34.3%	32.4%	33.3%
Butler	1,340	34.9%	23.5%	41.6%
Kittanning	1,705	37.3%	25.3%	37.4%
Mercer	694	29.8%	32.3%	37.9%
New Castle	514	38.9%	21.8%	39.3%
Troop E	**5,370**	**24.3%**	**32.8%**	**42.9%**
Corry	583	23.2%	45.1%	31.7%
Erie	1,635	23.0%	32.5%	44.5%
Franklin	381	30.2%	29.9%	39.9%
Girard	1,067	28.1%	29.6%	42.3%
Meadville	1,003	23.5%	29.5%	47.0%
Warren	665	20.6%	33.4%	46.0%
AREA II	**33,266**	**29.5%**	**31.0%**	**39.5%**
Troop A	**4,135**	**30.2%**	**27.7%**	**42.1%**
Ebensburg	356	25.8%	25.8%	48.3%
Greensburg	1,181	26.2%	28.9%	44.9%
Indiana	1,607	31.4%	33.1%	35.5%
Kiski Valley	329	27.4%	20.1%	52.6%
Somerset (A)	662	38.1%	17.2%	44.7%

Table 3.1: Monthly Breakdown of Traffic Stops by Department, Area, Troop, & Station, Q3 2022

	Total # of Stops	July	August	September
Troop G	**6,378**	**22.9%**	**25.6%**	**51.5%**
Bedford	1,092	25.9%	32.9%	41.2%
Hollidaysburg	728	18.4%	27.9%	53.7%
Huntingdon	672	18.6%	22.3%	59.1%
Lewistown	912	19.0%	23.4%	57.7%
McConnellsburg	769	26.5%	26.8%	46.7%
Rockview	2,205	24.6%	22.7%	52.7%
Troop H	**12,746**	**32.9%**	**33.2%**	**33.9%**
Carlisle	2,586	40.2%	32.3%	27.5%
Chambersburg	3,627	26.4%	37.0%	36.6%
Gettysburg	2,538	32.9%	30.1%	37.0%
Harrisburg	2,358	37.4%	34.6%	28.0%
Lykens	744	31.5%	31.2%	37.4%
Newport	893	27.8%	26.7%	45.6%
Troop T	**10,007**	**29.1%**	**33.0%**	**37.9%**
Bowmansville	919	25.7%	34.7%	39.6%
Everett	1,520	28.0%	31.3%	40.7%
Gibsonia	1,208	39.1%	31.5%	29.5%
Highspire	55	20.0%	36.4%	43.6%
King of Prussia	1,149	32.3%	31.8%	35.9%
New Stanton	1,906	22.9%	36.6%	40.5%
Newville	997	32.4%	23.4%	44.2%
Pocono	936	32.1%	32.2%	35.8%
Somerset (T)	1,317	25.3%	39.2%	35.5%
AREA III	**21,071**	**28.4%**	**28.9%**	**42.7%**
Troop F	**7,936**	**29.6%**	**29.5%**	**40.9%**
Coudersport	614	31.8%	24.6%	43.6%
Emporium	363	27.5%	34.2%	38.3%
Lamar	1,411	31.8%	26.9%	41.4%
Mansfield	772	24.2%	33.7%	42.1%
Milton	1,934	26.3%	28.8%	44.9%
Montoursville	1,437	29.0%	34.2%	36.8%
Selinsgrove	1,017	37.2%	27.4%	35.4%
Stonington	388	29.4%	26.8%	43.8%
Troop N	**6,367**	**25.9%**	**25.7%**	**48.4%**
Bloomsburg	744	27.3%	25.9%	46.8%
Fern Ridge	1,175	20.3%	16.5%	63.1%
Hazleton	1,157	26.2%	23.5%	50.3%
Lehighton	432	27.5%	13.9%	58.6%
Stroudsburg	2,859	27.6%	32.0%	40.4%

Table 3.1: Monthly Breakdown of Traffic Stops by Department, Area, Troop, & Station, Q3 2022

	Total # of Stops	July	August	September
Troop P	**3,148**	**28.4%**	**32.3%**	**39.3%**
Laporte	428	24.3%	32.0%	43.7%
Shickshinny	414	34.3%	28.3%	37.4%
Towanda	761	30.6%	33.5%	35.9%
Tunkhannock	493	25.4%	35.5%	39.1%
Wilkes-Barre	1,052	27.6%	31.7%	40.8%
Troop R	**3,620**	**29.9%**	**30.4%**	**39.7%**
Blooming Grove	1,145	27.4%	26.6%	46.0%
Dunmore	760	37.8%	29.2%	33.0%
Gibson	892	29.1%	33.5%	37.3%
Honesdale	823	27.0%	33.5%	39.5%
AREA IV	**24,031**	**27.9%**	**31.0%**	**41.1%**
Troop J	**7,943**	**28.8%**	**31.6%**	**39.6%**
Avondale	2,431	24.4%	31.9%	43.7%
Embreeville	1,597	28.5%	36.9%	34.6%
Lancaster	1,710	32.3%	32.1%	35.6%
York	2,205	31.2%	27.2%	41.6%
Troop K	**5,411**	**28.5%**	**31.9%**	**39.6%**
Media	2,410	32.6%	29.9%	37.5%
Philadelphia	2,278	24.0%	36.8%	39.2%
Skippack	708	29.5%	23.0%	47.5%
Troop L	**5,027**	**25.4%**	**29.3%**	**45.3%**
Frackville	730	33.4%	25.3%	41.2%
Hamburg	504	23.8%	32.7%	43.5%
Jonestown	1,396	26.8%	33.2%	40.0%
Reading	1,080	24.7%	28.5%	46.8%
Schuylkill Haven	1,317	20.7%	26.7%	52.7%
Troop M	**5,650**	**28.2%**	**30.7%**	**41.1%**
Belfast	880	20.8%	24.2%	55.0%
Bethlehem	986	27.9%	31.9%	40.2%
Dublin	1,189	38.2%	29.9%	31.9%
Fogelsville	1,574	28.5%	33.9%	37.6%
Trevose	1,021	22.7%	31.0%	46.2%

Table 3.2 documents, at the PSP Department, Area, and Troop level, the average percent of stops that occurred on weekdays, during the day, and on various roadway types; the percent of vehicles with a Pennsylvania registration or the presence of passengers; and the stop duration. Table 3.3 displays the same information at the PSP Station level. [12]

As shown in Table 3.2, department-wide, the majority of traffic stops were made on weekdays (70.6%) and during daylight hours (70.6%).[13] State highways (52.8%) and interstates (35.2%) were the most frequent locations for traffic stops. Roughly 80% of vehicles stopped were registered in Pennsylvania, and 20.9% had at least one passenger. Most traffic stops department-wide (88.6%) 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 (62.6% of stops) compared to the department. Similarly, at the Troop level, 84.4% of traffic stops by Troop R were made during daylight hours, compared to 52.0% 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 25.3% of SHIELD and 34.2% of Canine traffic stops involved vehicles with Pennsylvania registration, compared to the department-wide average of 78.5%.

---

[12] Highspire Station, which is the Turnpike Commission Building, conducted only 55 stops in the third quarter of 2022. Therefore, throughout Sections 3 and 4, the highest and lowest percentages provided in station-level comparisons in the text exclude Highspire.

[13] 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, Q3 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.	**101,006**	**70.6%**	**70.6%**	**35.2%**	**52.8%**	**11.3%**	**0.8%**	**78.5%**	**20.9%**	**88.6%**	**8.4%**	**2.2%**	**0.9%**
AREA I	**20,497**	**67.2%**	**68.5%**	**26.7%**	**58.6%**	**14.3%**	**0.3%**	**85.1%**	**21.4%**	**91.2%**	**7.0%**	**1.2%**	**0.5%**
Troop B	4,844	68.9%	72.8%	43.7%	40.4%	15.4%	0.4%	85.4%	21.9%	92.1%	6.2%	1.2%	0.5%
Troop C	5,274	62.9%	63.5%	16.9%	71.4%	11.5%	0.1%	79.5%	21.3%	91.7%	6.7%	1.0%	0.6%
Troop D	5,009	69.6%	70.6%	22.5%	61.1%	15.8%	0.6%	90.4%	18.7%	91.7%	6.4%	1.3%	0.6%
Troop E	5,370	67.6%	67.7%	24.7%	60.2%	14.8%	0.3%	85.1%	23.5%	89.5%	8.8%	1.3%	0.4%
AREA II	**33,266**	**71.2%**	**74.1%**	**41.8%**	**48.0%**	**8.8%**	**1.4%**	**76.6%**	**21.7%**	**89.8%**	**7.7%**	**2.0%**	**0.5%**
Troop A	4,135	70.6%	80.4%	0.9%	88.0%	10.9%	0.2%	91.1%	17.0%	88.9%	7.5%	2.9%	0.6%
Troop G	6,378	66.1%	80.1%	28.8%	62.7%	7.9%	0.6%	80.7%	19.6%	95.8%	3.6%	0.5%	0.1%
Troop H	12,746	70.7%	62.3%	28.6%	56.9%	14.4%	0.1%	78.8%	18.8%	87.8%	8.8%	2.6%	0.8%
Troop T	10,007	75.3%	82.7%	83.8%	10.9%	1.5%	3.8%	65.0%	28.9%	88.9%	8.9%	1.8%	0.5%
AREA III	**21,071**	**69.8%**	**73.6%**	**30.4%**	**56.8%**	**12.3%**	**0.5%**	**75.7%**	**20.4%**	**87.1%**	**9.0%**	**2.8%**	**1.2%**
Troop F	7,936	66.4%	72.4%	20.1%	66.9%	12.8%	0.2%	76.0%	22.8%	93.0%	5.2%	1.4%	0.5%
Troop N	6,367	70.0%	70.1%	40.9%	41.6%	16.6%	0.9%	75.3%	17.6%	85.9%	9.6%	3.3%	1.2%
Troop P	3,148	69.5%	71.7%	12.1%	78.1%	9.0%	0.7%	88.0%	17.2%	90.1%	7.0%	1.9%	1.0%
Troop R	3,620	77.2%	84.4%	50.6%	42.8%	6.3%	0.3%	64.9%	23.0%	73.3%	18.1%	5.7%	2.9%
AREA IV	**24,031**	**71.4%**	**62.6%**	**32.6%**	**55.0%**	**11.8%**	**0.6%**	**82.4%**	**18.5%**	**86.7%**	**9.6%**	**2.4%**	**1.3%**
Troop J	7,943	71.6%	52.0%	14.9%	71.1%	13.1%	0.8%	83.0%	18.0%	87.8%	7.7%	2.3%	2.2%
Troop K	5,411	73.4%	64.0%	62.6%	27.4%	9.6%	0.4%	82.2%	19.1%	87.7%	9.5%	1.9%	0.9%
Troop L	5,027	73.9%	75.6%	27.5%	58.1%	14.1%	0.2%	84.7%	19.3%	87.2%	10.2%	2.1%	0.5%
Troop M	5,650	66.8%	64.6%	33.3%	56.0%	10.1%	0.7%	79.6%	18.0%	83.9%	11.6%	3.2%	1.3%
Specialized Units													
SHIELD	1,437	96.7%	97.9%	97.3%	1.6%	1.1%	0.0%	25.3%	31.4%	81.8%	10.0%	5.8%	2.4%
Canine	609	88.0%	87.5%	77.3%	13.6%	8.9%	0.2%	34.2%	40.1%	79.5%	15.3%	4.4%	0.8%

Table 3.3: Area I Traffic Stop Descriptives by Station, Q3 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	**4,844**	**68.9%**	**72.8%**	**43.7%**	**40.4%**	**15.4%**	**0.4%**	**85.4%**	**21.9%**	**92.1%**	**6.2%**	**1.2%**	**0.5%**
Belle Vernon	986	75.3%	78.8%	33.9%	47.1%	18.5%	0.6%	86.6%	30.5%	90.5%	7.8%	1.1%	0.6%
Pittsburgh	1,671	64.6%	61.3%	71.6%	17.8%	10.1%	0.5%	84.4%	9.9%	93.5%	4.9%	1.4%	0.2%
Uniontown	1,071	72.5%	76.4%	2.8%	77.5%	19.6%	0.1%	91.5%	22.9%	91.1%	7.3%	1.1%	0.5%
Washington	686	68.2%	83.2%	65.6%	9.8%	24.3%	0.3%	81.8%	30.5%	91.7%	6.9%	1.2%	0.3%
Waynesburg	429	62.7%	78.1%	24.9%	69.9%	4.9%	0.2%	77.4%	32.9%	93.5%	3.0%	1.2%	2.3%
Troop C	**5,274**	**62.9%**	**63.5%**	**16.9%**	**71.4%**	**11.5%**	**0.1%**	**79.5%**	**21.3%**	**91.7%**	**6.7%**	**1.0%**	**0.6%**
Clarion	595	57.3%	54.8%	32.8%	61.7%	5.5%	0.0%	77.5%	22.5%	87.9%	10.8%	0.3%	1.0%
Clearfield	942	65.5%	65.5%	43.0%	51.2%	5.7%	0.1%	64.2%	7.6%	95.4%	3.1%	0.8%	0.6%
Dubois	612	65.2%	64.9%	39.1%	49.5%	11.4%	0.0%	73.9%	24.2%	92.5%	5.7%	0.7%	1.1%
Lewis Run	1,033	65.2%	53.8%	1.0%	72.1%	26.8%	0.1%	81.5%	20.5%	93.2%	4.9%	1.3%	0.6%
Marienville	583	56.6%	79.1%	2.1%	96.7%	1.2%	0.0%	85.9%	34.5%	94.5%	4.5%	0.7%	0.3%
Punxsutawney	891	62.9%	55.9%	1.1%	89.1%	9.4%	0.3%	94.3%	29.7%	89.0%	8.5%	2.0%	0.4%
Ridgway	618	64.4%	79.6%	3.6%	82.8%	13.6%	0.0%	79.9%	14.7%	87.2%	11.7%	1.0%	0.2%
Troop D	**5,009**	**69.6%**	**70.6%**	**22.5%**	**61.1%**	**15.8%**	**0.6%**	**90.4%**	**18.7%**	**91.7%**	**6.4%**	**1.3%**	**0.6%**
Beaver	756	76.6%	78.7%	43.5%	29.8%	25.5%	1.2%	86.8%	13.1%	90.3%	8.3%	1.2%	0.1%
Butler	1,340	61.0%	58.3%	12.7%	64.6%	21.9%	0.8%	91.9%	18.9%	92.8%	5.3%	1.5%	0.4%
Kittanning	1,705	69.3%	69.3%	0.8%	89.9%	9.1%	0.2%	95.5%	17.2%	91.6%	6.3%	0.9%	1.2%
Mercer	694	72.9%	79.5%	57.6%	36.7%	5.2%	0.4%	81.6%	26.1%	93.5%	5.3%	1.2%	0.0%
New Castle	514	78.0%	82.5%	42.0%	35.8%	21.4%	0.8%	86.6%	21.8%	89.1%	7.8%	2.7%	0.4%
Troop E	**5,370**	**67.6%**	**67.7%**	**24.7%**	**60.2%**	**14.8%**	**0.3%**	**85.1%**	**23.5%**	**89.5%**	**8.8%**	**1.3%**	**0.4%**
Corry	583	62.3%	62.3%	0.3%	82.0%	17.7%	0.0%	91.9%	19.7%	95.5%	3.4%	0.9%	0.2%
Erie	1,635	70.2%	70.1%	23.5%	54.9%	21.1%	0.4%	81.7%	24.4%	86.7%	12.2%	0.9%	0.2%
Franklin	381	64.6%	63.3%	7.9%	74.5%	16.8%	0.8%	86.9%	17.6%	87.7%	8.1%	2.6%	1.6%
Girard	1,067	66.0%	79.1%	66.2%	29.0%	4.7%	0.2%	81.3%	36.3%	88.7%	10.5%	0.5%	0.4%
Meadville	1,003	67.8%	61.1%	18.2%	64.8%	16.7%	0.3%	87.8%	20.4%	90.1%	7.0%	2.4%	0.5%
Warren	665	69.5%	60.5%	0.6%	91.6%	7.8%	0.0%	89.6%	13.1%	92.9%	5.9%	1.1%	0.2%

Table 3.3: Area II Traffic Stop Descriptives by Station, Q3 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	**4,135**	**70.6%**	**80.4%**	**0.9%**	**88.0%**	**10.9%**	**0.2%**	**91.1%**	**17.0%**	**88.9%**	**7.5%**	**2.9%**	**0.6%**
Ebensburg	356	70.2%	82.6%	0.3%	94.7%	4.8%	0.3%	90.4%	28.9%	91.0%	7.3%	1.7%	0.0%
Greensburg	1,181	69.5%	73.5%	1.5%	80.2%	18.2%	0.1%	96.0%	25.1%	78.6%	14.4%	5.4%	1.6%
Indiana	1,607	70.6%	83.9%	0.7%	90.9%	8.1%	0.4%	88.4%	8.5%	93.5%	3.5%	2.7%	0.3%
Kiski Valley	329	66.6%	73.6%	0.0%	90.9%	9.1%	0.0%	91.5%	16.7%	91.5%	7.6%	0.9%	0.0%
Somerset (A)	662	74.8%	86.3%	1.1%	90.0%	8.8%	0.2%	89.3%	16.6%	94.0%	5.3%	0.5%	0.3%
Troop G	**6,378**	**66.1%**	**80.1%**	**28.8%**	**62.7%**	**7.9%**	**0.6%**	**80.7%**	**19.6%**	**95.8%**	**3.6%**	**0.5%**	**0.1%**
Bedford	1,092	61.7%	74.3%	23.7%	68.9%	5.1%	2.3%	75.4%	17.2%	95.9%	3.5%	0.5%	0.2%
Hollidaysburg	728	63.0%	79.9%	36.0%	43.7%	20.1%	0.3%	88.2%	14.7%	94.8%	4.4%	0.7%	0.1%
Huntingdon	672	69.9%	85.6%	0.7%	94.9%	4.3%	0.0%	93.2%	11.3%	90.3%	8.2%	1.2%	0.3%
Lewistown	912	65.5%	82.1%	1.4%	91.4%	7.0%	0.1%	91.3%	34.1%	96.2%	3.3%	0.4%	0.1%
McConnellsburg	769	58.5%	83.5%	51.5%	42.8%	5.6%	0.1%	57.3%	37.7%	97.4%	2.0%	0.5%	0.1%
Rockview	2,205	71.0%	79.2%	41.0%	51.1%	7.4%	0.5%	80.7%	12.6%	97.0%	2.6%	0.3%	0.1%
Troop H	**12,746**	**70.7%**	**62.3%**	**28.6%**	**56.9%**	**14.4%**	**0.1%**	**78.8%**	**18.8%**	**87.8%**	**8.8%**	**2.6%**	**0.8%**
Carlisle	2,586	75.3%	59.7%	43.3%	30.6%	25.7%	0.4%	75.8%	21.8%	77.0%	16.1%	4.9%	1.9%
Chambersburg	3,627	71.2%	69.5%	28.7%	55.4%	15.8%	0.1%	79.8%	17.0%	93.3%	5.1%	1.2%	0.4%
Gettysburg	2,538	68.9%	57.2%	1.3%	90.3%	8.3%	0.1%	73.8%	12.1%	95.3%	4.1%	0.4%	0.2%
Harrisburg	2,358	70.6%	58.7%	58.9%	33.1%	7.8%	0.2%	78.2%	22.9%	81.9%	11.4%	5.6%	1.1%
Lykens	744	68.5%	66.1%	3.4%	85.9%	10.8%	0.0%	91.9%	27.2%	94.9%	4.4%	0.3%	0.4%
Newport	893	62.9%	62.0%	4.1%	82.3%	13.5%	0.0%	88.7%	18.5%	85.4%	12.7%	1.7%	0.2%
Troop T	**10,007**	**75.3%**	**82.7%**	**83.8%**	**10.9%**	**1.5%**	**3.8%**	**65.0%**	**28.9%**	**88.9%**	**8.9%**	**1.8%**	**0.5%**
Bowmansville	919	76.9%	77.1%	91.4%	5.7%	1.5%	1.4%	77.1%	33.4%	90.0%	6.3%	2.4%	1.3%
Everett	1,520	76.3%	73.8%	97.3%	0.6%	0.1%	2.0%	46.6%	29.7%	90.7%	6.0%	2.8%	0.5%
Gibsonia	1,208	72.1%	90.5%	94.8%	3.8%	1.4%	0.0%	69.6%	27.6%	87.9%	10.7%	0.8%	0.6%
Highspire	55	90.9%	54.5%	78.2%	14.5%	1.8%	5.5%	81.8%	34.5%	87.3%	10.9%	0.0%	1.8%
King of Prussia	1,149	78.0%	79.4%	93.6%	2.8%	0.4%	3.2%	81.3%	23.8%	75.4%	22.5%	1.9%	0.3%
New Stanton	1,906	75.6%	92.6%	57.8%	25.1%	4.8%	12.3%	79.4%	27.1%	90.2%	7.1%	2.2%	0.5%
Newville	997	75.6%	75.4%	96.6%	0.2%	0.3%	2.9%	52.3%	40.4%	87.6%	10.9%	1.0%	0.5%
Pocono	936	75.1%	86.3%	54.5%	45.5%	0.0%	0.0%	69.6%	41.5%	98.4%	1.1%	0.4%	0.1%
Somerset (T)	1,317	72.2%	82.5%	93.2%	2.5%	1.5%	2.8%	44.6%	15.1%	90.9%	7.1%	1.9%	0.2%

Table 3.3: Area III Traffic Stop Descriptives by Station, Q3 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	**7,936**	**66.4%**	**72.4%**	**20.1%**	**66.9%**	**12.8%**	**0.2%**	**76.0%**	**22.8%**	**93.0%**	**5.2%**	**1.4%**	**0.5%**
Coudersport	614	65.6%	77.9%	1.0%	86.6%	12.4%	0.0%	84.4%	25.7%	88.9%	10.6%	0.2%	0.3%
Emporium	363	71.6%	71.9%	2.8%	86.8%	9.4%	1.1%	86.0%	29.8%	97.0%	2.2%	0.8%	0.0%
Lamar	1,411	62.6%	74.2%	56.9%	25.9%	17.1%	0.1%	60.4%	24.1%	93.5%	4.1%	1.9%	0.5%
Mansfield	772	60.6%	71.8%	2.8%	91.8%	5.3%	0.0%	59.3%	19.3%	97.9%	1.8%	0.3%	0.0%
Milton	1,934	68.0%	77.0%	21.4%	70.8%	7.8%	0.1%	76.3%	19.5%	96.0%	2.6%	0.9%	0.5%
Montoursville	1,437	74.1%	72.6%	22.8%	60.6%	16.0%	0.6%	82.6%	21.2%	88.0%	9.6%	1.4%	1.0%
Selinsgrove	1,017	65.3%	64.0%	0.6%	88.8%	10.5%	0.1%	84.7%	29.3%	93.4%	4.7%	1.5%	0.4%
Stonington	388	54.6%	57.0%	1.5%	62.6%	35.8%	0.0%	94.3%	19.3%	86.9%	7.2%	5.9%	0.0%
Troop N	**6,367**	**70.0%**	**70.1%**	**40.9%**	**41.6%**	**16.6%**	**0.9%**	**75.3%**	**17.6%**	**85.9%**	**9.6%**	**3.3%**	**1.2%**
Bloomsburg	744	67.5%	57.8%	61.3%	32.3%	6.3%	0.1%	67.3%	15.1%	94.6%	2.8%	0.9%	1.6%
Fern Ridge	1,175	68.7%	78.8%	59.6%	38.3%	1.8%	0.3%	59.1%	20.7%	86.8%	11.4%	1.2%	0.6%
Hazleton	1,157	73.0%	70.1%	52.2%	37.3%	9.9%	0.5%	79.5%	24.2%	87.9%	8.0%	3.8%	0.3%
Lehighton	432	66.9%	79.2%	6.3%	63.0%	29.4%	1.4%	86.8%	26.2%	83.8%	10.6%	2.5%	3.0%
Stroudsburg	2,859	70.4%	68.3%	28.6%	43.9%	26.1%	1.4%	80.5%	13.1%	82.9%	11.1%	4.7%	1.4%
Troop P	**3,148**	**69.5%**	**71.7%**	**12.1%**	**78.1%**	**9.0%**	**0.7%**	**88.0%**	**17.2%**	**90.1%**	**7.0%**	**1.9%**	**1.0%**
Laporte	428	63.1%	64.3%	0.5%	85.3%	14.3%	0.0%	86.4%	27.8%	94.2%	4.9%	0.5%	0.5%
Shickshinny	414	69.1%	72.7%	9.7%	83.6%	2.4%	4.3%	86.2%	13.8%	91.3%	6.5%	1.0%	1.2%
Towanda	761	75.7%	66.0%	1.1%	88.0%	10.8%	0.1%	88.6%	13.0%	90.4%	7.0%	2.2%	0.4%
Tunkhannock	493	72.2%	70.6%	1.2%	94.3%	4.3%	0.2%	94.9%	10.1%	92.7%	6.7%	0.4%	0.2%
Wilkes-Barre	1,052	66.6%	78.9%	31.0%	58.4%	10.4%	0.3%	85.6%	20.7%	86.6%	8.3%	3.3%	1.8%
Troop R	**3,620**	**77.2%**	**84.4%**	**50.6%**	**42.8%**	**6.3%**	**0.3%**	**64.9%**	**23.0%**	**73.3%**	**18.1%**	**5.7%**	**2.9%**
Blooming Grove	1,145	72.8%	81.7%	60.1%	30.9%	8.8%	0.2%	56.6%	26.7%	76.5%	16.2%	4.5%	2.7%
Dunmore	760	80.1%	84.1%	59.6%	35.5%	4.3%	0.5%	74.1%	24.6%	51.3%	35.4%	10.0%	3.3%
Gibson	892	75.4%	90.2%	70.4%	26.5%	3.0%	0.1%	47.2%	22.8%	73.4%	14.7%	6.6%	5.3%
Honesdale	823	82.6%	82.1%	7.8%	83.8%	8.0%	0.4%	87.4%	16.4%	88.9%	8.3%	2.6%	0.2%

**Table 3.3: Area IV Traffic Stop Descriptives by Station, Q3 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	**7,943**	**71.6%**	**52.0%**	**14.9%**	**71.1%**	**13.1%**	**0.8%**	**83.0%**	**18.0%**	**87.8%**	**7.7%**	**2.3%**	**2.2%**
Avondale	2,431	71.2%	44.2%	0.7%	83.4%	14.3%	1.6%	76.3%	20.2%	88.6%	7.7%	2.4%	1.3%
Embreeville	1,597	70.4%	62.0%	0.4%	91.9%	7.5%	0.2%	89.8%	15.3%	86.0%	8.9%	1.6%	3.5%
Lancaster	1,710	70.1%	58.1%	2.2%	89.1%	8.4%	0.4%	90.5%	20.0%	83.7%	10.5%	2.6%	3.2%
York	2,205	74.1%	48.7%	51.0%	28.7%	19.5%	0.9%	79.5%	15.9%	91.3%	4.9%	2.4%	1.5%
Troop K	**5,411**	**73.4%**	**64.0%**	**62.6%**	**27.4%**	**9.6%**	**0.4%**	**82.2%**	**19.1%**	**87.7%**	**9.5%**	**1.9%**	**0.9%**
Media	2,410	72.4%	51.2%	65.0%	30.6%	4.2%	0.2%	76.0%	18.5%	89.0%	8.0%	2.1%	1.0%
Philadelphia	2,278	75.7%	73.5%	76.6%	9.3%	13.6%	0.6%	85.2%	20.9%	87.5%	10.4%	1.4%	0.7%
Skippack	708	69.2%	76.4%	9.2%	75.4%	15.0%	0.4%	93.9%	14.5%	85.7%	11.0%	2.5%	0.7%
Troop L	**5,027**	**73.9%**	**75.6%**	**27.5%**	**58.1%**	**14.1%**	**0.2%**	**84.7%**	**19.3%**	**87.2%**	**10.2%**	**2.1%**	**0.5%**
Frackville	730	79.3%	82.6%	44.4%	42.9%	12.3%	0.4%	82.6%	27.1%	92.6%	6.7%	0.5%	0.1%
Hamburg	504	77.2%	81.0%	36.7%	49.0%	14.1%	0.2%	78.0%	20.8%	78.0%	16.5%	4.8%	0.8%
Jonestown	1,396	74.6%	75.1%	48.9%	36.3%	14.8%	0.1%	75.1%	21.3%	84.1%	12.6%	2.3%	1.0%
Reading	1,080	70.7%	69.4%	13.4%	68.8%	17.3%	0.5%	91.9%	11.6%	92.3%	6.4%	1.2%	0.1%
Schuylkill Haven	1,317	71.7%	75.0%	3.6%	84.3%	11.9%	0.2%	92.9%	18.6%	86.9%	10.4%	2.5%	0.2%
Troop M	**5,650**	**66.8%**	**64.6%**	**33.3%**	**56.0%**	**10.1%**	**0.7%**	**79.6%**	**18.0%**	**83.9%**	**11.6%**	**3.2%**	**1.3%**
Belfast	880	61.5%	62.7%	30.8%	59.8%	9.1%	0.3%	70.6%	19.3%	83.2%	11.6%	3.9%	1.4%
Bethlehem	986	73.4%	65.8%	2.8%	91.9%	5.1%	0.2%	90.9%	16.8%	86.1%	9.5%	2.8%	1.5%
Dublin	1,189	63.8%	60.8%	2.2%	87.0%	10.4%	0.4%	91.8%	12.7%	85.1%	11.7%	2.4%	0.8%
Fogelsville	1,574	68.4%	59.9%	44.5%	38.2%	16.3%	1.0%	77.0%	20.4%	80.1%	15.4%	3.2%	1.4%
Trevose	1,021	65.9%	76.6%	83.8%	9.3%	5.6%	1.3%	66.3%	20.7%	86.7%	7.9%	3.6%	1.8%

17

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 (41.4%). The next most common reasons were other moving violations (25.5%), equipment/inspection violations (19.3%), and registration violations (16.8%).

Figure 3.1: Department-Wide Reason for Stop, Q3 2022
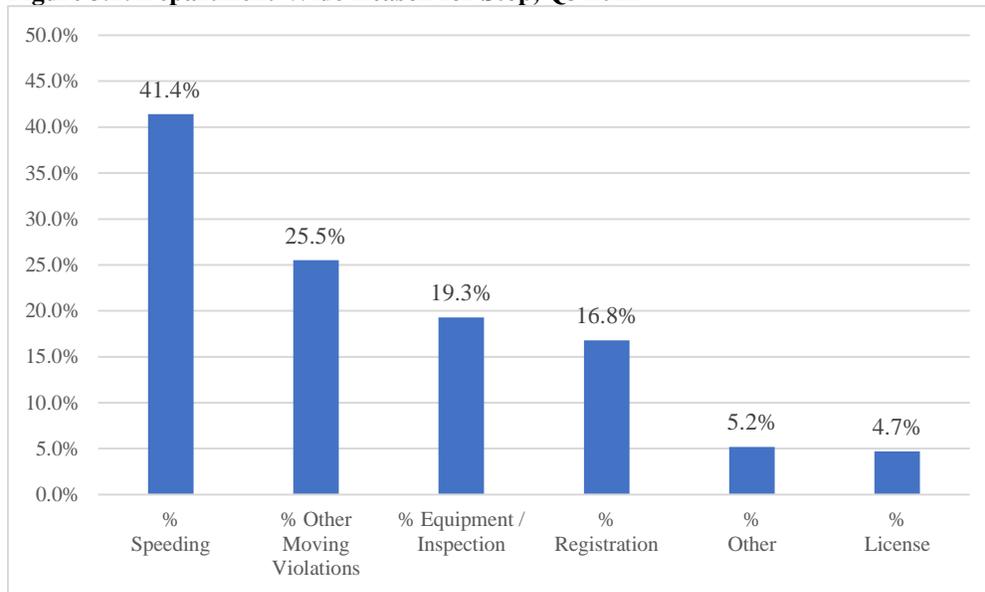
Similar to the department-level trends, speeding was the most frequent reason for a stop across most Areas and Troops except for Area IV, Troop J, Troop K, and Troop M, where the most frequent reason was other moving violations. The percent of stops made for speeding varied by area, with a high of 52% in Area II, compared to the lowest percentage in Area IV (31.3%). The troops varied in their percentage of traffic stops for speeding, from a high of 73.5% (Troop T) to a low of 25.7% (Troop K).

At the department level, the average amount over the posted speed limit recorded for speeding was 21.6 miles per hour. This varied from a low of 20.0 miles per hour over the limit in Area III to a high of 24.2 in Area IV. Troop-level variation was also evident, with a low of 17.6 miles per hour over the limit in Troop C to a high of 27.8 miles per hour in Troop M.

Other moving violations were the second most common reason across the department at 25.5%. Areas varied in the percentage of stops based on other moving violations, from 37.4% in Area IV to 18.9% in Area I. Other moving violations were the most frequent reason for stops in Troop J

(42.1%), Troop K (46.5%), and Troop M (35.1%), which are all in Area IV. The percent of stops for other moving violations varied from 12.8% in Troop E to 46.5% in Troop K. See Table 3.4 for additional reasons for 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 (40.3% and 61.6%, respectively). The second most common stop reason was for equipment/inspection (36.6% and 25.1%). Finally, speeding was the third most common reason for both specialized units (17.3% and 15.9%). Both units demonstrated a considerably lower average amount over the speed limit during speeding stops (10.8 and 12.4 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 12.3% in Philadelphia Station to 94.0% in Pocono Station. The average miles per hour over the limit ranged from 15.2 in Clarion Station to 32.9 in Trevose Station. The second most common reason for a stop is other moving violations; however, its prevalence ranges from a low of 6.1% in Pocono Station to a high of 56.0% in Philadelphia Station. On average, equipment or inspection violations were the third most common stop reason, but this varied across Stations, from 1.1% in Pocono Station to 39.2% in Honesdale Station.

Table 3.4: Reason for Stop by Department, Area, & Troop, Q3 2022

	Total # of Stops	Speeding	Avg. Amount Over Limit (MPH)	Other Moving Violation	Equipment/ Inspection	Registration	License	Other
PSP Department	101,006	41.4%	21.6	25.5%	19.3%	16.8%	4.7%	5.2%
AREA I	**20,497**	**38.2%**	**20.6**	**18.9%**	**24.9%**	**19.5%**	**5.9%**	**5.5%**
Troop B	4,844	42.4%	23.5	19.8%	21.1%	20.6%	8.4%	8.3%
Troop C	5,274	40.1%	17.6	20.1%	25.0%	14.8%	3.0%	3.6%
Troop D	5,009	33.6%	22.3	23.4%	24.5%	19.7%	6.4%	5.5%
Troop E	5,370	36.9%	19.4	12.8%	28.6%	22.8%	6.0%	4.9%
AREA II	**33,266**	**52.4%**	**21.8**	**20.4%**	**16.9%**	**15.2%**	**3.8%**	**4.7%**
Troop A	4,135	51.5%	22.9	16.8%	17.6%	17.1%	4.9%	3.7%
Troop G	6,378	58.7%	21.2	13.7%	15.5%	15.1%	3.3%	2.9%
Troop H	12,746	33.0%	20.4	28.6%	22.5%	17.3%	5.0%	4.0%
Troop T	10,007	73.5%	22.6	15.8%	10.3%	11.9%	2.3%	7.3%
AREA III	**21,071**	**41.0%**	**20.0**	**24.5%**	**20.9%**	**15.0%**	**4.8%**	**5.1%**
Troop F	7,936	49.7%	19.2	21.4%	17.9%	12.1%	3.4%	2.9%
Troop N	6,367	34.2%	20.5	29.8%	20.4%	15.4%	6.0%	7.0%
Troop P	3,148	34.9%	22.1	19.7%	23.4%	19.9%	5.9%	5.9%
Troop R	3,620	39.2%	20.0	25.8%	26.1%	16.4%	4.8%	5.7%
AREA IV	**24,031**	**31.3%**	**24.2**	**37.4%**	**15.4%**	**18.9%**	**5.2%**	**5.1%**
Troop J	7,943	26.9%	23.6	42.1%	14.7%	16.9%	4.7%	4.6%
Troop K	5,411	25.7%	26.7	46.5%	13.1%	22.7%	4.4%	5.5%
Troop L	5,027	45.3%	20.6	22.7%	15.9%	17.2%	6.1%	3.7%
Troop M	5,650	30.3%	27.8	35.1%	18.2%	19.4%	5.9%	6.6%
Specialized Units								
SHIELD	1,437	17.3%	10.8	40.3%	36.6%	13.3%	1.7%	7.7%
Canine	609	15.9%	12.4	61.6%	25.1%	10.7%	1.6%	12.8%

Table 3.5: Area I Reason for Stop by Station, Q3 2022

	Total # of Stops	Speeding	Avg. Amount Over Limit (MPH)	Other Moving Violation	Equipment/ Inspection	Registration	License	Other
Troop B	**4,844**	**42.4%**	**23.5**	**19.8%**	**21.1%**	**20.6%**	**8.4%**	**8.3%**
Belle Vernon	986	33.2%	21.4	14.7%	24.6%	31.7%	11.8%	9.8%
Pittsburgh	1,671	48.1%	26.2	23.6%	17.5%	13.8%	5.5%	6.8%
Uniontown	1,071	41.5%	20.5	19.7%	16.6%	24.9%	11.0%	7.4%
Washington	686	37.6%	24.6	19.5%	33.4%	19.8%	8.9%	14.0%
Waynesburg	429	50.8%	21.1	17.5%	19.1%	12.4%	4.7%	4.0%
Troop C	**5,274**	**40.1%**	**17.6**	**20.1%**	**25.0%**	**14.8%**	**3.0%**	**3.6%**
Clarion	595	41.0%	15.2	24.9%	16.8%	16.0%	3.4%	3.9%
Clearfield	942	50.6%	16.8	24.2%	15.9%	7.2%	2.0%	2.9%
Dubois	612	39.4%	18.0	22.1%	24.5%	18.6%	4.1%	2.3%
Lewis Run	1,033	23.0%	16.9	20.3%	38.4%	18.0%	3.1%	2.4%
Marienville	583	62.1%	18.6	9.3%	17.5%	13.4%	1.0%	2.9%
Punxsutawney	891	29.6%	18.3	22.1%	32.8%	16.2%	4.8%	7.0%
Ridgway	618	47.1%	19.1	14.2%	20.9%	15.2%	2.4%	3.9%
Troop D	**5,009**	**33.6%**	**22.3**	**23.4%**	**24.5%**	**19.7%**	**6.4%**	**5.5%**
Beaver	756	34.5%	25.9	17.3%	17.1%	22.4%	8.7%	6.1%
Butler	1,340	24.6%	20.6	34.0%	27.5%	15.3%	4.5%	6.5%
Kittanning	1,705	34.3%	22.9	21.8%	27.3%	19.9%	7.5%	2.5%
Mercer	694	43.9%	21.2	17.0%	21.8%	22.5%	4.5%	9.9%
New Castle	514	39.5%	21.0	19.1%	21.6%	23.0%	7.2%	6.0%
Troop E	**5,370**	**36.9%**	**19.4**	**12.8%**	**28.6%**	**22.8%**	**6.0%**	**4.9%**
Corry	583	30.2%	16.9	14.2%	25.4%	25.4%	2.4%	6.7%
Erie	1,635	27.1%	22.1	12.5%	31.0%	32.5%	11.3%	5.4%
Franklin	381	31.8%	18.9	22.0%	19.9%	26.0%	6.3%	8.1%
Girard	1,067	52.1%	20.0	6.6%	31.5%	13.9%	3.3%	2.0%
Meadville	1,003	29.4%	18.0	16.4%	30.5%	20.1%	4.1%	6.6%
Warren	665	55.2%	17.4	10.8%	23.6%	14.0%	3.8%	2.7%

Table 3.5: Area II Reason for Stop by Station, Q3 2022

	Total # of Stops	Speeding	Avg. Amount Over Limit (MPH)	Other Moving Violation	Equipment/ Inspection	Registration	License	Other
Troop A	**4,135**	**51.5%**	**22.9**	**16.8%**	**17.6%**	**17.1%**	**4.9%**	**3.7%**
Ebensburg	356	74.7%	24.0	10.7%	9.0%	9.3%	4.2%	4.5%
Greensburg	1,181	34.0%	22.9	23.9%	24.0%	24.0%	9.5%	1.9%
Indiana	1,607	61.9%	23.1	10.1%	12.9%	14.5%	2.3%	3.0%
Kiski Valley	329	31.6%	28.4	32.8%	25.5%	16.4%	7.3%	4.3%
Somerset (A)	662	54.8%	20.2	15.4%	18.3%	15.6%	2.4%	8.0%
Troop G	**6,378**	**58.7%**	**21.2**	**13.7%**	**15.5%**	**15.1%**	**3.3%**	**2.9%**
Bedford	1,092	50.2%	19.9	19.1%	16.6%	15.7%	2.2%	3.4%
Hollidaysburg	728	38.3%	22.0	11.4%	25.4%	27.9%	8.0%	2.2%
Huntingdon	672	65.8%	18.8	10.0%	15.2%	14.0%	5.1%	4.3%
Lewistown	912	70.1%	20.6	9.5%	11.1%	12.1%	2.9%	5.4%
McConnellsburg	769	66.7%	25.5	12.7%	11.4%	10.8%	1.2%	1.6%
Rockview	2,205	59.9%	20.8	15.1%	15.1%	13.6%	2.6%	1.8%
Troop H	**12,746**	**33.0%**	**20.4**	**28.6%**	**22.5%**	**17.3%**	**5.0%**	**4.0%**
Carlisle	2,586	31.0%	20.0	27.7%	26.5%	12.5%	3.7%	8.6%
Chambersburg	3,627	36.0%	19.5	22.7%	23.3%	22.7%	4.9%	2.1%
Gettysburg	2,538	23.6%	20.1	32.4%	28.1%	13.9%	6.2%	3.3%
Harrisburg	2,358	33.8%	22.7	39.4%	12.4%	17.4%	5.3%	4.2%
Lykens	744	39.8%	19.7	15.3%	24.9%	24.3%	5.6%	1.6%
Newport	893	45.4%	20.6	27.0%	16.6%	13.7%	4.1%	2.4%
Troop T	**10,007**	**73.5%**	**22.6**	**15.8%**	**10.3%**	**11.9%**	**2.3%**	**7.3%**
Bowmansville	919	67.6%	21.8	10.4%	10.8%	17.3%	2.9%	3.5%
Everett	1,520	79.8%	22.6	19.7%	10.1%	9.3%	1.4%	7.8%
Gibsonia	1,208	75.1%	19.3	28.3%	15.0%	12.7%	3.2%	15.4%
Highspire	55	54.5%	20.9	12.7%	32.7%	5.5%	0.0%	1.8%
King of Prussia	1,149	64.2%	24.6	18.6%	14.4%	11.2%	2.4%	5.8%
New Stanton	1,906	63.1%	20.8	14.2%	14.8%	17.1%	3.3%	8.0%
Newville	997	74.4%	24.2	15.9%	4.6%	10.7%	2.2%	1.8%
Pocono	936	94.0%	24.7	6.1%	1.1%	1.6%	0.5%	0.5%
Somerset (T)	1,317	77.7%	23.9	10.0%	5.5%	11.6%	1.7%	11.2%

Table 3.5: Area III Reason for Stop by Station, Q3 2022

	Total # of Stops	Speeding	Avg. Amount Over Limit (MPH)	Other Moving Violation	Equipment/ Inspection	Registration	License	Other
Troop F	**7,936**	**49.7%**	**19.2**	**21.4%**	**17.9%**	**12.1%**	**3.4%**	**2.9%**
Coudersport	614	39.4%	17.4	13.4%	30.9%	13.7%	2.0%	3.4%
Emporium	363	52.1%	17.1	15.4%	18.7%	14.6%	3.0%	3.0%
Lamar	1,411	45.7%	19.0	25.4%	18.5%	12.2%	3.2%	4.1%
Mansfield	772	54.3%	18.1	25.0%	11.0%	8.5%	1.6%	2.3%
Milton	1,934	50.8%	20.3	22.0%	14.1%	12.6%	5.2%	3.1%
Montoursville	1,437	55.6%	18.4	19.4%	17.8%	11.1%	2.5%	2.2%
Selinsgrove	1,017	52.1%	21.5	19.7%	16.8%	14.9%	4.2%	1.4%
Stonington	388	35.1%	17.4	27.8%	29.6%	7.0%	3.6%	3.9%
Troop N	**6,367**	**34.2%**	**20.5**	**29.8%**	**20.4%**	**15.4%**	**6.0%**	**7.0%**
Bloomsburg	744	40.6%	19.4	22.0%	19.0%	12.9%	3.1%	10.1%
Fern Ridge	1,175	38.9%	20.0	37.4%	20.7%	9.7%	3.0%	3.6%
Hazleton	1,157	47.5%	20.6	26.4%	12.8%	15.0%	9.6%	8.2%
Lehighton	432	26.2%	22.9	19.2%	28.0%	20.6%	3.9%	12.7%
Stroudsburg	2,859	26.4%	20.8	31.7%	22.6%	17.8%	7.0%	6.3%
Troop P	**3,148**	**34.9%**	**22.1**	**19.7%**	**23.4%**	**19.9%**	**5.9%**	**5.9%**
Laporte	428	28.0%	19.3	15.9%	17.1%	28.3%	7.7%	8.9%
Shickshinny	414	46.6%	19.4	17.4%	12.8%	22.0%	8.0%	3.1%
Towanda	761	14.3%	19.5	22.7%	27.2%	26.1%	6.4%	12.0%
Tunkhannock	493	37.1%	20.2	12.6%	30.2%	20.9%	3.7%	3.7%
Wilkes-Barre	1,052	47.1%	25.0	23.3%	24.2%	10.6%	5.0%	2.6%
Troop R	**3,620**	**39.2%**	**20.0**	**25.8%**	**26.1%**	**16.4%**	**4.8%**	**5.7%**
Blooming Grove	1,145	42.8%	17.4	33.4%	20.2%	11.8%	3.8%	3.3%
Dunmore	760	35.3%	24.9	27.1%	24.2%	21.7%	5.1%	5.0%
Gibson	892	51.8%	19.5	21.7%	23.2%	14.5%	4.9%	9.4%
Honesdale	823	24.2%	21.0	18.5%	39.2%	19.9%	5.6%	5.8%

Table 3.5: Area IV Reason for Stop by Station, Q3 2022

	Total # of Stops	Speeding	Avg. Amount Over Limit (MPH)	Other Moving Violation	Equipment/ Inspection	Registration	License	Other
Troop J	**7,943**	**26.9%**	**23.6**	**42.1%**	**14.7%**	**16.9%**	**4.7%**	**4.6%**
Avondale	2,431	24.3%	23.9	52.1%	11.0%	15.3%	4.9%	4.4%
Embreeville	1,597	34.1%	26.5	36.4%	17.6%	15.5%	5.1%	4.1%
Lancaster	1,710	28.7%	21.1	36.4%	13.2%	20.2%	5.4%	5.6%
York	2,205	23.4%	22.4	39.8%	17.7%	17.2%	3.7%	4.4%
Troop K	**5,411**	**25.7%**	**26.7**	**46.5%**	**13.1%**	**22.7%**	**4.4%**	**5.5%**
Media	2,410	35.5%	26.6	40.7%	9.4%	19.0%	3.6%	4.1%
Philadelphia	2,278	12.3%	30.1	56.0%	14.3%	27.1%	5.0%	7.8%
Skippack	708	36.0%	23.6	35.3%	22.0%	20.3%	5.4%	3.2%
Troop L	**5,027**	**45.3%**	**20.6**	**22.7%**	**15.9%**	**17.2%**	**6.1%**	**3.7%**
Frackville	730	46.0%	20.2	16.3%	17.7%	21.4%	5.3%	2.3%
Hamburg	504	60.1%	20.5	19.6%	11.9%	14.5%	5.6%	2.8%
Jonestown	1,396	43.1%	19.5	29.1%	14.8%	13.9%	4.7%	7.2%
Reading	1,080	40.6%	23.9	29.8%	14.7%	17.0%	7.7%	2.7%
Schuylkill Haven	1,317	45.4%	19.5	14.9%	18.5%	19.5%	7.1%	2.1%
Troop M	**5,650**	**30.3%**	**27.8**	**35.1%**	**18.2%**	**19.4%**	**5.9%**	**6.6%**
Belfast	880	39.9%	25.8	30.0%	22.0%	11.9%	4.2%	6.4%
Bethlehem	986	27.5%	24.9	38.4%	13.9%	19.8%	4.3%	5.1%
Dublin	1,189	22.4%	28.3	30.9%	28.3%	19.9%	6.4%	10.1%
Fogelsville	1,574	27.4%	26.1	41.9%	14.1%	21.8%	7.2%	3.5%
Trevose	1,021	38.3%	32.9	30.6%	13.8%	21.1%	6.3%	8.9%

Driver Characteristics

The characteristics of drivers stopped by PSP Troopers during the third quarter of 2022 are described at the Department, Area, and Troop levels in Table 3.6 and the Station level in Table 3.7. The characteristics of the drivers are grouped by: 1) driver age and gender, 2) driver race and ethnicity, and 3) driver 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 (Engel & Cherkauskas, 2022). 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 data collection method for examining racially biased policing (Fridell et al., 2001; Pryor et al., 2020; Ramirez et al., 2000). Officers may incorrectly perceive the actual race and/or ethnicity of the driver. This possible misperception, however, is irrelevant for data collection analyses that seek to explain officer-decision making.[14] Other information about the driver (e.g., year of birth) was gathered from driver's license.

Driver Age & Gender

As shown in Table 3.6, department-wide, the average age of drivers stopped by Troopers was 38.0 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 Marienville Station was 42.6 years, compared to 34.0 years in Pocono Station.

At the department level, 67.2% of stopped drivers were male; likewise, males were more likely than females to be stopped across organizational units within the department. A small percent of drivers was reported to be of unknown gender (0.3%). The lowest percent of male drivers stopped occurred in Area I (64.4%), more specifically, Troop G (62.9%). The highest percent of male drivers stopped occurred in Fern Ridge Station (75.7%), while the lowest percent occurred in Lewistown Station (58.7%).

---

[14] 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, Q3 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
						Race			Ethnicity		Behavior			
PSP Dept.	**101,006**	**38.0**	**67.2%**	**78.7%**	**14.7%**	**0.4%**	**2.1%**	**4.1%**	**9.2%**	**5.2%**	**97.9%**	**1.0%**	**0.5%**	**1.0%**
AREA I	**20,497**	**38.6**	**64.4%**	**84.5%**	**10.2%**	**0.2%**	**1.2%**	**3.8%**	**1.9%**	**5.1%**	**98.0%**	**1.0%**	**0.5%**	**1.0%**
Troop B	4,844	37.7	64.7%	77.4%	16.2%	0.3%	1.4%	4.6%	2.4%	8.5%	96.8%	1.4%	1.1%	1.3%
Troop C	5,274	40.0	66.5%	89.0%	4.0%	0.4%	1.1%	5.5%	1.6%	5.4%	98.5%	0.9%	0.2%	0.6%
Troop D	5,009	37.7	62.9%	84.0%	11.7%	0.1%	0.7%	3.5%	1.3%	4.3%	98.3%	0.9%	0.3%	1.0%
Troop E	5,370	38.9	63.7%	86.8%	9.4%	0.2%	1.8%	1.8%	2.4%	2.2%	98.4%	0.7%	0.5%	1.0%
AREA II	**33,266**	**37.6**	**66.7%**	**79.9%**	**13.0%**	**0.4%**	**2.3%**	**4.5%**	**6.6%**	**4.9%**	**98.1%**	**0.9%**	**0.4%**	**1.0%**
Troop A	4,135	37.7	64.6%	90.2%	7.6%	0.1%	0.6%	1.5%	1.5%	1.7%	98.5%	0.6%	0.3%	0.7%
Troop G	6,378	37.9	62.9%	87.0%	7.7%	0.3%	2.1%	2.9%	3.0%	2.6%	98.7%	0.8%	0.1%	0.5%
Troop H	12,746	37.7	67.2%	80.8%	14.6%	0.4%	1.8%	2.4%	10.0%	2.5%	97.1%	1.4%	0.7%	1.4%
Troop T	10,007	37.4	69.2%	70.0%	16.5%	0.5%	3.7%	9.3%	6.6%	10.8%	98.6%	0.6%	0.1%	0.8%
AREA III	**21,071**	**38.7**	**67.4%**	**81.5%**	**11.4%**	**0.3%**	**1.7%**	**5.1%**	**9.9%**	**6.8%**	**98.2%**	**1.0%**	**0.4%**	**1.0%**
Troop F	7,936	38.8	65.1%	86.7%	8.6%	0.4%	1.8%	2.5%	4.9%	2.6%	98.5%	0.7%	0.3%	0.8%
Troop N	6,367	37.6	68.7%	73.1%	17.1%	0.3%	1.8%	7.6%	17.9%	10.5%	97.9%	1.2%	0.5%	1.0%
Troop P	3,148	38.8	67.4%	88.6%	8.6%	0.0%	0.3%	2.5%	6.9%	3.3%	98.0%	1.0%	0.3%	1.0%
Troop R	3,620	40.1	70.2%	78.7%	10.1%	0.4%	2.5%	8.4%	9.4%	12.9%	97.9%	1.2%	0.5%	1.1%
AREA IV	**24,031**	**37.2**	**68.7%**	**70.4%**	**23.4%**	**0.5%**	**2.5%**	**3.3%**	**16.8%**	**4.5%**	**97.5%**	**1.3%**	**0.7%**	**1.3%**
Troop J	7,943	37.4	66.5%	76.1%	19.8%	0.6%	2.4%	1.0%	16.1%	1.7%	97.5%	1.4%	0.8%	1.4%
Troop K	5,411	37.0	71.2%	48.4%	44.1%	0.4%	3.0%	4.1%	10.4%	6.1%	96.7%	1.8%	0.9%	1.5%
Troop L	5,027	37.6	67.1%	83.8%	11.2%	0.2%	1.1%	3.7%	20.3%	4.4%	98.4%	0.8%	0.3%	0.9%
Troop M	5,650	36.9	70.8%	71.5%	19.4%	0.5%	3.2%	5.5%	21.0%	6.9%	97.7%	0.9%	0.7%	1.5%
Specialized Units														
SHIELD	1,437	38.0	84.9%	70.6%	16.9%	1.2%	10.5%	0.8%	31.9%	2.6%	99.1%	0.3%	0.1%	0.6%
Canine	609	37.2	76.5%	72.9%	21.2%	0.5%	3.9%	1.5%	16.3%	1.5%	96.7%	2.0%	0.5%	2.0%

Table 3.7: Area I Characteristics of Drivers Stopped by Station, Q3 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
Troop B	**4,844**	**37.7**	**64.7%**	**77.4%**	**16.2%**	**0.3%**	**1.4%**	**4.6%**	**2.4%**	**8.5%**	**96.8%**	**1.4%**	**1.1%**	**1.3%**
Belle Vernon	986	38.5	63.6%	76.3%	13.5%	0.2%	1.5%	8.5%	2.3%	9.3%	97.1%	1.7%	0.7%	1.1%
Pittsburgh	1,671	36.7	67.3%	67.6%	25.9%	0.5%	1.9%	4.1%	3.4%	14.6%	95.3%	1.8%	2.0%	1.7%
Uniontown	1,071	38.2	59.3%	84.2%	10.0%	0.0%	0.6%	5.2%	0.7%	4.9%	97.5%	1.5%	0.7%	1.1%
Washington	686	38.0	67.1%	84.1%	13.1%	0.4%	1.7%	0.6%	2.9%	0.9%	98.3%	0.3%	0.4%	1.0%
Waynesburg	429	38.9	66.9%	90.7%	5.6%	0.2%	0.5%	3.0%	1.4%	4.2%	98.6%	0.9%	0.9%	0.9%
Troop C	**5,274**	**40.0**	**66.5%**	**89.0%**	**4.0%**	**0.4%**	**1.1%**	**5.5%**	**1.6%**	**5.4%**	**98.5%**	**0.9%**	**0.2%**	**0.6%**
Clarion	595	38.3	65.9%	89.2%	5.5%	0.0%	2.0%	3.2%	3.7%	3.9%	99.2%	0.3%	0.3%	0.2%
Clearfield	942	39.1	68.2%	84.1%	6.9%	0.3%	1.5%	7.2%	1.7%	7.2%	97.9%	1.2%	0.4%	1.0%
Dubois	612	39.6	65.4%	84.8%	6.0%	0.0%	1.3%	7.8%	2.1%	7.7%	97.9%	2.0%	0.5%	0.3%
Lewis Run	1,033	40.2	65.0%	90.1%	2.7%	0.5%	0.9%	5.8%	1.2%	4.5%	99.2%	0.6%	0.1%	0.1%
Marienville	583	42.6	69.1%	94.7%	2.7%	0.2%	0.3%	2.1%	1.0%	2.6%	99.0%	0.2%	0.2%	0.9%
Punxsutawney	891	40.8	63.5%	97.8%	1.7%	0.0%	0.3%	0.2%	0.4%	0.0%	97.9%	1.1%	0.0%	1.0%
Ridgway	618	39.8	69.9%	80.9%	2.4%	1.6%	1.8%	13.3%	1.8%	14.2%	98.7%	0.6%	0.2%	0.6%
Troop D	**5,009**	**37.7**	**62.9%**	**84.0%**	**11.7%**	**0.1%**	**0.7%**	**3.5%**	**1.3%**	**4.3%**	**98.3%**	**0.9%**	**0.3%**	**1.0%**
Beaver	756	36.7	59.1%	72.6%	21.2%	0.1%	0.5%	5.6%	1.1%	11.2%	98.0%	1.6%	0.4%	0.8%
Butler	1,340	38.1	64.1%	87.8%	7.2%	0.1%	0.7%	4.2%	1.2%	4.6%	97.8%	1.2%	0.4%	1.1%
Kittanning	1,705	37.5	64.3%	86.4%	12.1%	0.1%	0.3%	1.1%	0.7%	1.1%	99.1%	0.5%	0.2%	0.5%
Mercer	694	37.6	63.5%	84.6%	7.3%	0.1%	1.6%	6.3%	2.3%	5.6%	98.6%	0.4%	0.3%	1.2%
New Castle	514	39.4	59.3%	82.3%	14.6%	0.2%	0.6%	2.3%	2.3%	2.5%	96.7%	1.4%	0.2%	2.5%
Troop E	**5,370**	**38.9**	**63.7%**	**86.8%**	**9.4%**	**0.2%**	**1.8%**	**1.8%**	**2.4%**	**2.2%**	**98.4%**	**0.7%**	**0.5%**	**1.0%**
Corry	583	40.6	63.5%	93.8%	5.7%	0.0%	0.5%	0.0%	0.9%	0.2%	98.6%	0.9%	0.2%	0.7%
Erie	1,635	38.0	64.2%	80.8%	16.4%	0.2%	1.5%	1.1%	4.7%	1.7%	97.9%	0.7%	0.7%	1.6%
Franklin	381	40.1	62.5%	89.0%	4.2%	0.3%	1.6%	5.0%	1.8%	8.4%	98.2%	0.8%	0.3%	0.8%
Girard	1,067	37.9	60.6%	83.6%	9.9%	0.3%	4.2%	2.0%	1.8%	2.2%	98.8%	0.4%	0.3%	0.9%
Meadville	1,003	39.4	66.9%	89.0%	5.9%	0.1%	1.5%	3.5%	1.4%	3.1%	98.2%	0.9%	0.6%	0.9%
Warren	665	40.3	63.0%	96.2%	2.6%	0.0%	0.5%	0.8%	0.9%	0.6%	99.1%	0.3%	0.5%	0.5%

Table 3.7: Area II Characteristics of Drivers Stopped by Station, Q3 2022

	Total # of Stops	Age Average (years)	Gender Male	Race White	Black	Amer. Indian or Alaskan Native	Asian/ Pacific Islander	Un-known	Ethnicity Hispanic	Unknown	Behavior Civil	Disrespect-ful	Non-compliant	Verbal or Phys Resistant
Troop A	**4,135**	**37.7**	**64.6%**	**90.2%**	**7.6%**	**0.1%**	**0.6%**	**1.5%**	**1.5%**	**1.7%**	**98.5%**	**0.6%**	**0.3%**	**0.7%**
Ebensburg	356	34.4	60.4%	86.5%	8.4%	0.0%	0.6%	4.5%	2.0%	4.5%	98.6%	0.0%	0.3%	1.1%
Greensburg	1,181	40.0	63.7%	91.2%	7.2%	0.3%	0.3%	1.1%	1.4%	1.2%	98.0%	0.9%	0.3%	1.1%
Indiana	1,607	36.4	65.3%	88.8%	9.3%	0.0%	0.5%	1.4%	1.2%	2.0%	99.3%	0.3%	0.1%	0.5%
Kiski Valley	329	38.6	67.8%	90.0%	7.6%	0.0%	1.5%	0.9%	2.4%	0.9%	97.0%	1.5%	0.9%	1.2%
Somerset (A)	662	38.1	65.6%	94.0%	4.1%	0.3%	0.8%	0.9%	1.7%	0.9%	98.6%	0.6%	0.6%	0.2%
Troop G	**6,378**	**37.9**	**62.9%**	**87.0%**	**7.7%**	**0.3%**	**2.1%**	**2.9%**	**3.0%**	**2.6%**	**98.7%**	**0.8%**	**0.1%**	**0.5%**
Bedford	1,092	38.4	63.0%	89.7%	7.1%	0.1%	2.2%	1.0%	2.8%	0.8%	98.8%	0.8%	0.2%	0.4%
Hollidaysburg	728	35.6	61.7%	87.4%	8.1%	0.1%	1.8%	2.6%	3.0%	2.6%	98.2%	1.2%	0.4%	0.4%
Huntingdon	672	41.9	64.0%	90.2%	2.7%	0.0%	0.1%	7.0%	0.6%	6.5%	99.4%	0.3%	0.0%	0.3%
Lewistown	912	37.6	58.7%	90.9%	6.6%	0.4%	1.3%	0.8%	3.6%	0.8%	98.9%	0.8%	0.1%	0.2%
McConnellsburg	769	39.3	66.4%	77.8%	12.9%	0.1%	2.6%	6.6%	2.6%	6.1%	97.8%	1.3%	0.3%	0.9%
Rockview	2,205	36.8	63.5%	86.2%	8.0%	0.7%	3.0%	2.2%	3.8%	1.8%	98.8%	0.8%	0.0%	0.5%
Troop H	**12,746**	**37.7**	**67.2%**	**80.8%**	**14.6%**	**0.4%**	**1.8%**	**2.4%**	**10.0%**	**2.5%**	**97.1%**	**1.4%**	**0.7%**	**1.4%**
Carlisle	2,586	37.4	72.2%	77.1%	18.3%	0.2%	2.0%	2.4%	9.5%	2.5%	97.5%	1.2%	1.0%	1.3%
Chambersburg	3,627	38.1	63.3%	86.2%	11.5%	0.1%	0.9%	1.3%	8.9%	1.5%	98.0%	0.8%	0.4%	1.4%
Gettysburg	2,538	37.1	67.6%	84.9%	11.4%	1.0%	1.4%	1.3%	13.6%	0.9%	94.8%	2.8%	1.4%	1.7%
Harrisburg	2,358	37.9	68.1%	65.7%	23.7%	0.5%	3.7%	6.4%	12.6%	6.5%	97.2%	1.5%	0.5%	1.4%
Lykens	744	38.3	66.1%	90.7%	7.3%	0.1%	1.1%	0.8%	4.0%	0.7%	98.3%	0.9%	0.4%	0.9%
Newport	893	37.1	66.3%	88.8%	7.7%	0.0%	1.9%	1.6%	3.5%	1.7%	97.9%	0.7%	0.3%	1.6%
Troop T	**10,007**	**37.4**	**69.2%**	**70.0%**	**16.5%**	**0.5%**	**3.7%**	**9.3%**	**6.6%**	**10.8%**	**98.6%**	**0.6%**	**0.1%**	**0.8%**
Bowmansville	919	36.8	68.7%	70.0%	20.5%	0.5%	5.5%	3.5%	12.1%	6.0%	98.9%	0.1%	0.1%	0.9%
Everett	1,520	36.6	72.7%	56.5%	20.5%	0.8%	4.6%	17.6%	6.3%	17.0%	99.2%	0.3%	0.1%	0.5%
Gibsonia	1,208	38.8	65.5%	81.7%	12.7%	0.0%	3.1%	2.6%	3.6%	7.4%	99.0%	0.6%	0.1%	0.3%
Highspire	55	39.0	74.5%	78.2%	18.2%	0.0%	3.6%	0.0%	12.7%	1.8%	100%	0.0%	0.0%	0.0%
King of Prussia	1,149	36.6	69.8%	65.3%	20.6%	0.8%	3.6%	9.7%	9.5%	13.7%	97.5%	0.9%	0.1%	1.8%
New Stanton	1.906	38.8	67.5%	83.2%	8.6%	0.1%	1.3%	7.0%	1.3%	9.1%	98.4%	0.5%	0.3%	1.0%
Newville	997	36.2	73.9%	70.4%	20.2%	0.8%	5.7%	2.9%	8.5%	1.2%	98.1%	0.8%	0.3%	1.2%
Pocono	936	34.0	64.7%	74.1%	19.2%	1.5%	3.6%	1.5%	11.9%	1.5%	98.8%	1.2%	0.2%	0.0%
Somerset (T)	1,317	39.5	70.4%	56.1%	16.1%	0.2%	3.8%	23.8%	5.3%	24.5%	99.0%	0.4%	0.0%	0.6%

28

Table 3.7: Area III Characteristics of Drivers Stopped by Station, Q3 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	Disrespect-ful	Non-compliant	Verbal or Phys Resistant
Troop F	**7,936**	**38.8**	**65.1%**	**86.7%**	**8.6%**	**0.4%**	**1.8%**	**2.5%**	**4.9%**	**2.6%**	**98.5%**	**0.7%**	**0.3%**	**0.8%**
Coudersport	614	41.2	67.4%	95.0%	0.2%	0.2%	1.3%	3.4%	0.3%	3.1%	98.7%	1.0%	0.3%	0.2%
Emporium	363	41.6	67.2%	95.0%	2.8%	0.3%	0.6%	1.4%	0.8%	1.1%	99.4%	0.6%	0.0%	0.3%
Lamar	1,411	38.4	67.7%	83.1%	10.2%	0.4%	2.0%	4.3%	6.5%	3.8%	98.7%	0.6%	0.3%	1.0%
Mansfield	772	39.4	64.2%	85.0%	7.8%	0.9%	3.4%	3.0%	3.6%	2.5%	99.1%	0.1%	0.1%	0.6%
Milton	1,934	38.2	65.1%	86.9%	9.0%	0.4%	2.1%	1.6%	8.1%	1.9%	98.9%	0.6%	0.3%	0.6%
Montoursville	1,437	38.0	61.9%	82.5%	13.6%	0.4%	1.5%	2.1%	2.7%	1.9%	98.0%	0.6%	0.3%	1.2%
Selinsgrove	1,017	38.7	63.4%	89.7%	6.8%	0.0%	1.1%	2.5%	4.6%	4.5%	98.7%	0.3%	0.2%	0.8%
Stonington	338	39.6	66.8%	90.5%	8.2%	0.0%	0.5%	0.8%	5.2%	0.0%	95.9%	3.4%	0.8%	2.3%
Troop N	**6,367**	**37.6**	**68.7%**	**73.1%**	**17.1%**	**0.3%**	**1.8%**	**7.6%**	**17.9%**	**10.5%**	**97.9%**	**1.2%**	**0.5%**	**1.0%**
Bloomsburg	744	36.1	66.8%	76.9%	13.6%	0.4%	3.0%	6.2%	10.6%	7.3%	98.5%	0.9%	0.5%	0.5%
Fern Ridge	1,175	38.5	75.7%	78.5%	15.1%	0.5%	1.2%	4.7%	14.6%	5.8%	98.7%	0.9%	0.2%	0.5%
Hazleton	1,157	37.0	69.1%	75.2%	11.5%	0.1%	1.6%	11.6%	33.8%	10.3%	96.9%	2.1%	0.7%	1.2%
Lehighton	432	36.3	71.1%	81.3%	6.9%	0.2%	0.9%	10.6%	18.5%	13.9%	98.1%	1.4%	0.9%	1.2%
Stroudsburg	2,859	38.1	65.8%	67.8%	22.7%	0.4%	1.9%	7.2%	14.7%	12.8%	97.7%	1.1%	0.6%	1.2%
Troop P	**3,148**	**38.8**	**67.4%**	**88.6%**	**8.6%**	**0.0%**	**0.3%**	**2.5%**	**6.9%**	**3.3%**	**98.0%**	**1.0%**	**0.3%**	**1.0%**
Laporte	428	40.8	66.8%	92.5%	4.9%	0.0%	0.5%	2.1%	3.0%	2.6%	97.9%	0.9%	0.0%	1.2%
Shickshinny	414	39.5	72.2%	86.2%	10.4%	0.0%	0.0%	3.4%	12.3%	2.9%	97.8%	1.2%	0.5%	1.2%
Towanda	761	38.1	65.7%	96.6%	2.0%	0.0%	0.3%	1.2%	2.1%	1.4%	98.6%	0.7%	0.1%	0.8%
Tunkhannock	493	40.8	65.9%	93.9%	2.4%	0.0%	0.0%	3.7%	3.0%	4.3%	96.8%	2.0%	0.6%	2.2%
Wilkes-Barre	1,052	37.2	67.8%	79.6%	17.0%	0.0%	0.7%	2.8%	11.5%	4.6%	98.4%	0.8%	0.5%	0.6%
Troop R	**3,620**	**40.1**	**70.2%**	**78.7%**	**10.1%**	**0.4%**	**2.5%**	**8.4%**	**9.4%**	**12.9%**	**97.9%**	**1.2%**	**0.5%**	**1.1%**
Blooming Grove	1,145	41.4	70.8%	84.5%	8.2%	0.2%	1.6%	5.5%	11.2%	15.4%	97.9%	1.3%	0.5%	1.1%
Dunmore	760	37.9	70.8%	77.2%	15.9%	0.5%	2.4%	3.9%	13.3%	9.6%	96.4%	2.0%	0.5%	1.4%
Gibson	892	38.7	74.0%	68.8%	14.8%	0.8%	5.6%	10.0%	11.2%	9.0%	98.3%	0.8%	0.8%	1.5%
Honesdale	823	41.9	64.8%	82.6%	2.2%	0.0%	0.5%	14.7%	1.6%	16.8%	98.8%	0.7%	0.2%	0.5%

Table 3.7: Area IV Characteristics of Drivers Stopped by Station, Q3 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	Disrespect-ful	Non-compliant	Verbal or Phys Resistant
Troop J	**7,943**	**37.4**	**66.5%**	**76.1%**	**19.8%**	**0.6%**	**2.4%**	**1.0%**	**16.1%**	**1.7%**	**97.5%**	**1.4%**	**0.8%**	**1.4%**
Avondale	2,431	37.9	66.7%	80.5%	16.3%	0.6%	2.2%	0.4%	23.6%	0.7%	97.2%	2.0%	0.9%	1.2%
Embreeville	1,597	37.2	66.4%	66.6%	26.8%	1.1%	3.6%	1.9%	11.0%	1.6%	97.7%	1.1%	0.9%	1.5%
Lancaster	1,710	37.2	68.5%	81.8%	15.4%	0.5%	1.8%	0.6%	16.8%	1.3%	97.7%	1.1%	0.6%	1.4%
York	2,205	37.1	64.8%	73.7%	22.1%	0.4%	2.4%	1.5%	10.9%	3.0%	97.5%	1.4%	0.5%	1.5%
Troop K	**5,411**	**37.0**	**71.2%**	**48.4%**	**44.1%**	**0.4%**	**3.0%**	**4.1%**	**10.4%**	**6.1%**	**96.7%**	**1.8%**	**0.9%**	**1.5%**
Media	2,410	37.3	68.0%	48.9%	46.1%	0.5%	3.5%	1.0%	8.0%	1.6%	97.4%	1.4%	0.6%	1.0%
Philadelphia	2,278	36.0	74.2%	39.9%	48.9%	0.4%	2.7%	8.1%	13.3%	9.9%	96.0%	2.2%	1.2%	2.1%
Skippack	708	39.0	72.0%	73.7%	22.2%	0.0%	2.3%	1.8%	9.3%	9.2%	96.3%	2.1%	1.0%	1.4%
Troop L	**5,027**	**37.6**	**67.1%**	**83.8%**	**11.2%**	**0.2%**	**1.1%**	**3.7%**	**20.3%**	**4.4%**	**98.4%**	**0.8%**	**0.3%**	**0.9%**
Frackville	730	38.0	71.2%	81.1%	11.2%	0.0%	1.2%	6.4%	18.2%	8.1%	99.2%	0.5%	0.0%	0.4%
Hamburg	504	38.1	65.7%	83.1%	13.7%	0.2%	1.0%	2.0%	21.6%	3.2%	98.6%	0.6%	0.2%	1.0%
Jonestown	1,396	38.1	63.4%	82.4%	11.0%	0.4%	1.7%	4.4%	19.8%	5.2%	98.1%	0.8%	0.5%	0.9%
Reading	1,080	35.9	68.9%	81.4%	13.1%	0.1%	1.0%	4.4%	32.0%	5.2%	97.6%	1.4%	0.5%	1.3%
Schuylkill Haven	1,317	38.1	68.0%	89.0%	8.9%	0.2%	0.5%	1.5%	12.0%	1.1%	98.8%	0.5%	0.2%	0.8%
Troop M	**5,650**	**36.9**	**70.8%**	**71.5%**	**19.4%**	**0.5%**	**3.2%**	**5.5%**	**21.0%**	**6.9%**	**97.7%**	**0.9%**	**0.7%**	**1.5%**
Belfast	880	36.9	73.8%	71.6%	23.5%	0.3%	3.1%	1.5%	22.4%	2.7%	97.0%	1.5%	0.6%	1.9%
Bethlehem	986	36.8	66.6%	68.9%	16.2%	0.4%	1.4%	13.1%	25.4%	13.4%	97.3%	1.2%	0.8%	1.5%
Dublin	1,189	38.4	69.0%	80.7%	9.6%	0.2%	2.0%	7.6%	10.1%	8.7%	96.0%	1.3%	1.4%	2.8%
Fogelsville	1,574	37.0	72.4%	74.3%	19.1%	0.7%	2.5%	3.4%	28.8%	6.6%	99.0%	0.3%	0.4%	0.6%
Trevose	1,021	35.1	71.7%	58.8%	31.0%	0.6%	7.2%	2.4%	16.2%	2.4%	98.6%	0.5%	0.2%	0.8%

Driver Race & Ethnicity

Driver race and ethnicity are captured in separate fields on the CDR 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 (78.7%) were White, followed by 14.7% Black, 2.1% Asian, and 0.4% American Indian or Alaskan Native. In the ethnicity field, 9.2% of stopped drivers were reported to be Hispanic.

Figure 3.2: Department-Wide Racial/Ethnic Characteristics of Drivers Stopped, Q3 2022
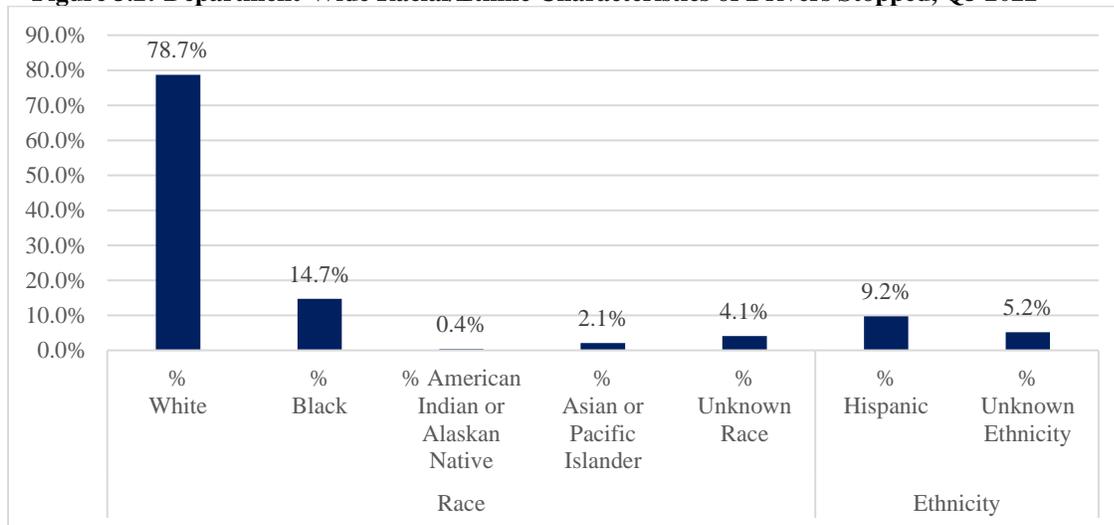
Table 3.6 displays the perceived race and ethnicity of drivers stopped by Department, Areas, Troops, and specialized units, while Table 3.7 displays the same information at the Station level. These tables demonstrate large variations in the race/ethnicity of drivers stopped across organizational units. Some variation is to be expected based on geographic, demographic, and roadway type differences across the Commonwealth.

As shown in Figure 3.2, PSP Troopers indicated they were unable to identify the race of the driver in 4.1% of all traffic stops and were unable to identify driver ethnicity during 5.2% of stops. In 82% of the cases with unknown driver race, the ethnicity of the driver was also reported as unknown, while in 65% 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 3.4% of all stops made in the third quarter of 2022. Other observational and traffic studies have reported the difficulties associated with identifying driver race and ethnicity, particularly distinguishing Hispanic drivers from White drivers (Alpert et al., 2004; Lange et al., 2001; Smith & DeFrances, 2003).

At the Area level, the highest percent of unknown race was reported in Area III (5.1% of stops) and the lowest in Area IV (3.3%). Across Troops, the highest percentage of unknown race occurred in Troop T (9.3%) and the lowest in Troop J (1.0%). As shown in Table 3.7 and Figure 3.5, of the 88 Stations, 14 (15.9%) reported 1% or fewer stops with unknown driver race,[15] and 12 Stations (13.6%) reported 1% or fewer stops with unknown driver ethnicity.[16] Conversely, 8 Stations (9.1%) reported 10% or more stops with unknown driver race[17], and 12 Stations (13.6%) with 10% or more stops with driver ethnicity unknown.[18] This issue is explored in more detail below.

Driver Behavior

Finally, Tables 3.6 and 3.7 provide information about driver 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 as behavior may change throughout the stop, so there are a small number of cases where drivers were reported to be civil as well as one of the other categories (n=177, 0.2%).[19] As shown, at the department level, 97.9% of drivers are reported as only civil, while 1.0% of drivers were disrespectful. 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 94.8% at Gettysburg Station.

Further Exploration of Unknown Driver Race and Ethnicity

The Quarter 1 and 2 reports both showed large variations in the percent of unknown responses for the driver race and ethnicity fields. In response, the PSP provided additional guidance to its members based on recommendations from the Institute research team. On August 12, 2022, the Director of the Bureau of Communication and Information Services (BCIS) released a PSP Postmaster Communication. This directive reiterated that when completing the race and ethnicity fields, "members are reminded that they **<u>shall</u>** report their perceptions of occupants' race/ethnicity." Further guidance indicated:

---

[15] Stations with 1% or fewer stops with unknown driver *race* include: Washington, Punxsutawney, Corry, Warren, Kiski Valley, Somerset (A), Bedford, Stonington, Lewistown. Lykens, Highspire, Stonington, Avondale, Lancaster, and Media.

[16] Stations with 1% or fewer stops with unknown driver *ethnicity* include: Washington, Punxsutawney, Corry, Warren, Kiski Valley, Somerset (A), Bedford, Lewistown, Gettysburg. Lykens, Stonington, and Avondale.

[17] Stations that reported 10% or more stops with unknown driver *race* include: Ridgway, Everett, Somerset (T), Hazelton, Lehighton, Gibson, Honesdale, and Bethlehem.

[18] Stations that reported 10% or more stops with unknown driver *ethnicity* include: Pittsburgh, Ridgway, Beaver, Everett, King of Prussia, Somerset (T), Hazelton, Lehighton, Stroudsburg, Blooming Grove, Honesdale, and Bethlehem.

[19] 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 at least one other behavior category, they are reported in the percent for the other categories. As a result, the sum of these percentages slightly exceeds 100% due to a small percentage of drivers that were reported to have displayed behavior consistent with more than one of the following categories: disrespectful, non-compliant, verbally resistant, or physically resistant. Overall, in 99.4% of traffic stops, Troopers selected only one category for this data field.

> "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 third quarter started on Friday July 1, 2022 and the Postmaster communication was issued on Friday, August 12th, the 7th week of data collection (approximately midway through the quarter). We compare the average percentage of drivers with unknown race and ethnicity reported before and after the August 12th directive. Table 3.8 displays the average percentages of unknown race and ethnicity for the PSP Department, Areas, Troops, Stations, and specialized SHIELD and Canine units for two time periods within the 3rd quarter: July 1 – August 11 compared to August 12 – September 30. This information is also displayed graphically (by week) for the department (Figure 3.3) and Areas (Figure 3.4 - race; Figure 3.5 - ethnicity). The red dotted line indicates the directive going into effect at the beginning of Week 7.

**Figure 3.3: PSP Department Average Weekly Percent of Drivers With Unknown Race and Ethnicity, Q3 2022**
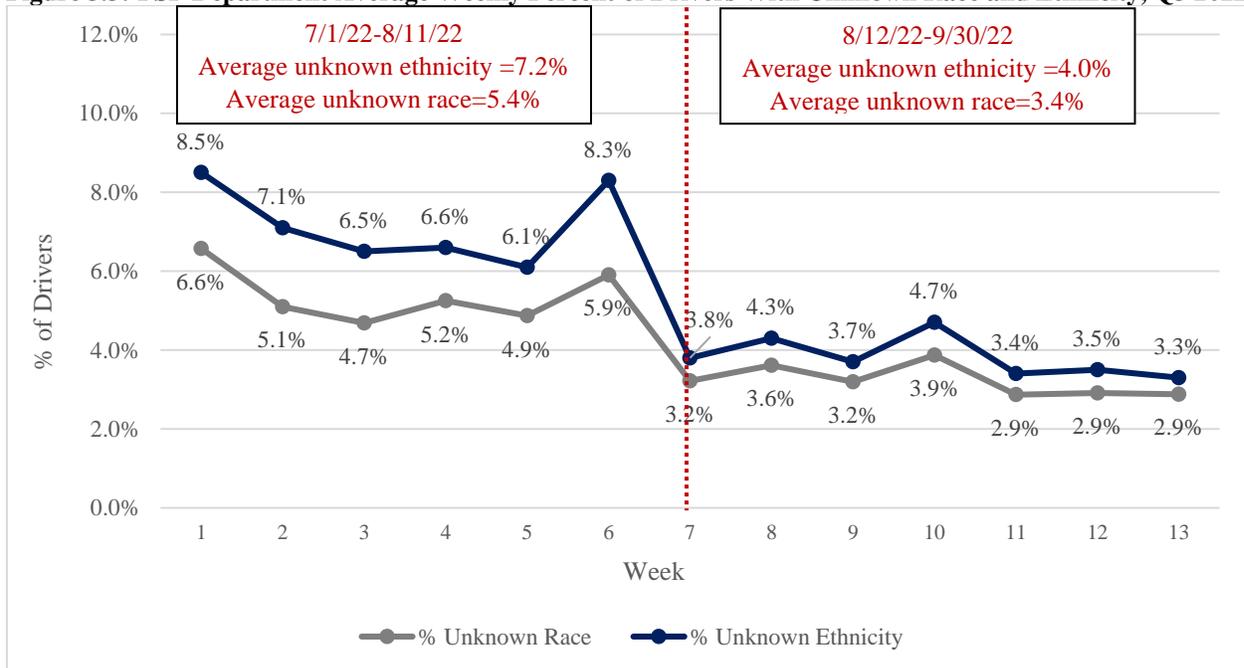
As shown, the percent of unknown race reported on the CDR forms decreased from an average of 5.4% for the six weeks prior to the August 12th directive to an average of 3.3% across the department after the directive; similarly, the percent of reported unknown ethnicity decreased

from 7.1% to 4.0%. This represents a statistically significant decline using a t-test comparison of means analysis. At the Area level, declines in the average percentage of CDRs with unknown race (Figure 3.4) and ethnicity (Figure 3.5) were also reported across all four Areas after the August 12th directive.

Figure 3.4: PSP Areas Average Weekly Percent of Drivers With Unknown Race, Q3 2022
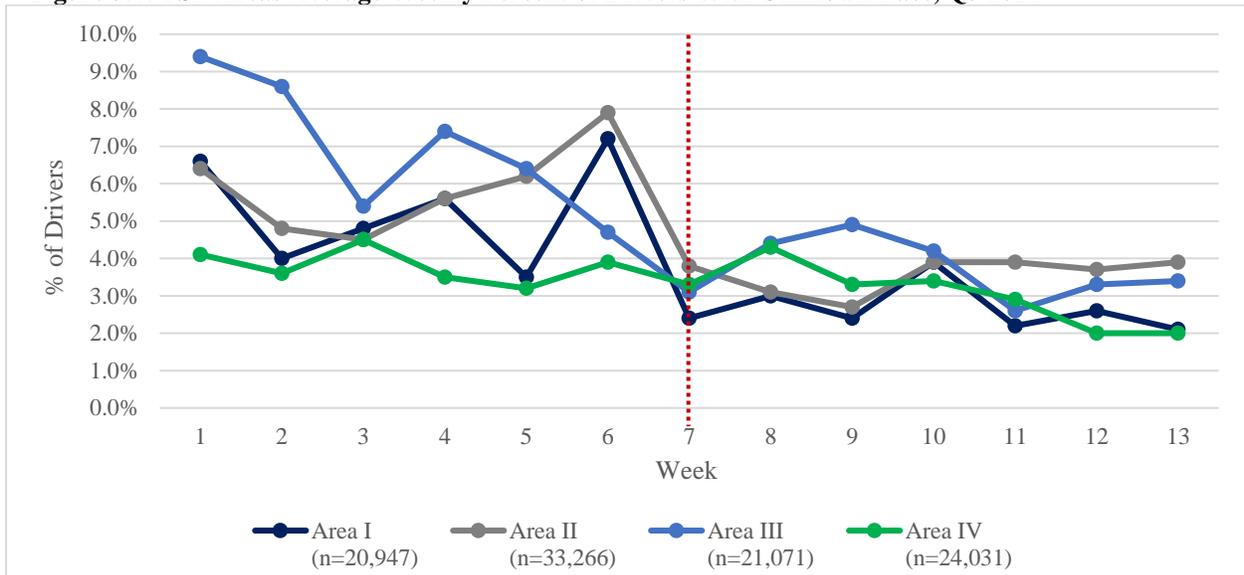
Figure 3.5: PSP Areas Average Weekly Percent of Drivers With Unknown Ethnicity, Q3 2022
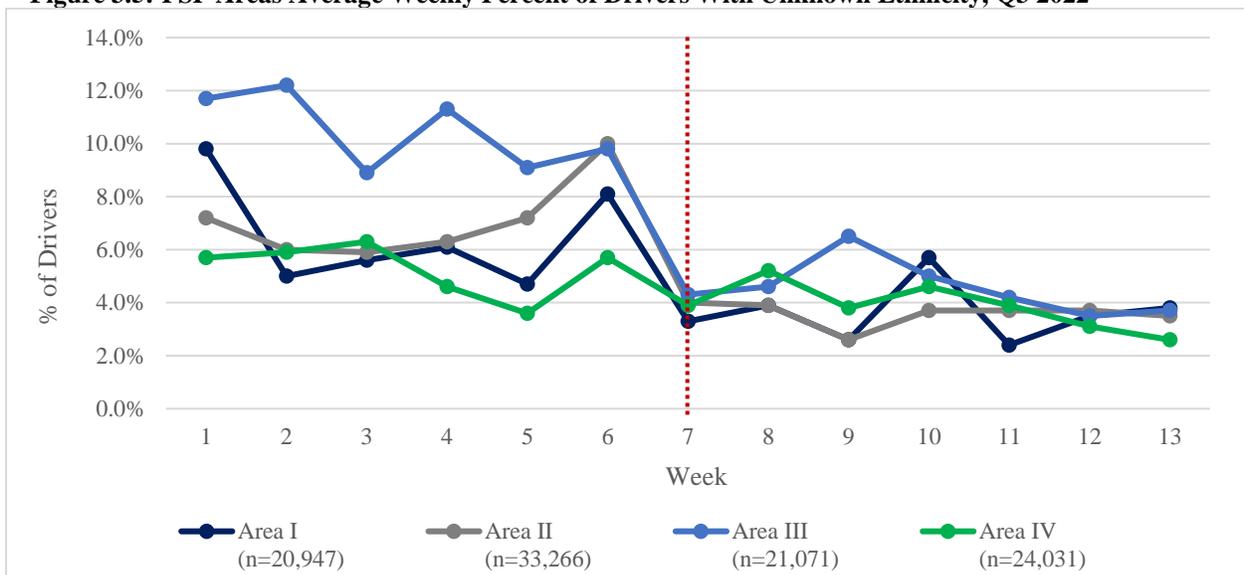
At the Troop level, lower percentages of unknown driver race were reported by all Troops following the directive except for Troop K, which increased slightly. Importantly, the percent of unknown driver race for all Troops is now below 10%, and all Troops, except Troops T and R,

reported 5.0% or lower unknown driver race. Additionally, the percent of unknown driver ethnicity for all Troops except Troop R is now below 10%, and 10 of 16 Troops reported 5.0% or lower unknown driver ethnicity.

At the station level, decreased percentages of unknowns were reported in 63 of 88 stations (driver race), and 69 of 88 stations (driver ethnicity) following the August 12th directive. As documented in Table 3.8, some stations experienced large reductions in unknown driver race, including Somerset T, Hazleton, Lehighton, Stroudsburg, and Bethlehem. Likewise, large reductions in the percentage of reports with unknown driver ethnicity were reported in the following stations: Franklin, Everett, King of Prussia, Somerset (T), Fern Ridge, Hazelton, Lehighton, and Stroudsburg.

Despite the issued directive, a small number of stations (3 of 88) showed notable *increases* (difference of 3% or more) in the percentage of reported unknown driver race/ethnicity: Waynesburg (ethnicity only), Beaver (ethnicity only), and Honesdale (race and ethnicity). Further, seven stations remain over 10% of stops with reported unknown driver race and/or ethnicity: Pittsburgh, Ridgway, Everett, Somerset (T), Blooming Grove, Honesdale, and Bethlehem. Both these trends warrant further examination by PSP officials.

Table 3.8: Percent Unknown Race/Ethnicity of Drivers Stopped by Department, Area, Troop, & Station, Q3 2022 (p.1 of 3)

	Total # of Stops	Unknown Race 7/1-8/11	Unknown Race 8/12-9/30	Difference	Unknown Ethnicity 7/1-8/11	Unknown Ethnicity 8/12-9/30	Difference
PSP Dept.	**101,006**	**5.4%**	**3.4%**	**-2.0%**	**7.2%**	**4.0%**	**-3.2%**
AREA I	**20,497**	**5.3%**	**3.0%**	**-2.3%**	**6.7%**	**4.1%**	**-2.6%**
Troop B	***4,844***	***6.6%***	***3.7%***	***-2.9%***	***11.8%***	***7.0%***	***-4.8%***
Belle Vernon	986	8.7%	8.5%	-0.2%	11.5%	8.5%	-3.0%
Pittsburgh	1,671	6.0%	3.0%	-3.0%	17.4%	13.0%	-4.4%
Uniontown	1,071	9.8%	2.8%	-7.0%	9.6%	2.6%	-7.0%
Washington	686	1.4%	0.4%	-1.0%	2.8%	0.4%	-2.4%
Waynesburg	429	2.3%	3.4%	1.1%	2.3%	5.1%	2.8%
Troop C	***5,274***	***6.6%***	***4.9%***	***-1.7%***	***6.6%***	***4.8%***	***-1.8%***
Clarion	595	4.6%	2.5%	-2.1%	4.6%	3.5%	-1.1%
Clearfield	942	7.5%	7.0%	-0.5%	8.5%	6.3%	-2.2%
Dubois	612	11.0%	6.5%	-4.5%	11.0%	6.3%	-4.7%
Lewis Run	1,033	5.9%	5.8%	-0.1%	3.7%	4.9%	1.2%
Marienville	583	4.1%	1.2%	-2.9%	5.8%	1.2%	-4.6%
Punxsutawney	891	0.7%	0.0%	-0.7%	0.0%	0.0%	0.0%
Ridgway	618	12.5%	14.0%	1.5%	13.5%	14.9%	1.4%
Troop D	***5,009***	***5.6%***	***1.8%***	***-3.8%***	***5.6%***	***3.4%***	***-2.2%***
Beaver	756	8.4%	3.0%	-5.4%	9.5%	12.8%	3.3%
Butler	1,340	8.9%	1.0%	-7.9%	8.9%	1.8%	-7.1%
Kittanning	1,705	1.8%	0.5%	-1.3%	1.8%	0.4%	-1.4%
Mercer	694	8.7%	4.9%	-3.8%	7.6%	4.4%	-3.2%
New Castle	514	2.8%	2.0%	-0.8%	2.3%	2.7%	0.4%
Troop E	***5,370***	***2.6%***	***1.5%***	***-1.1%***	***3.6%***	***1.5%***	***-2.1%***
Corry	583	0.0%	0.0%	0.0%	0.0%	0.3%	0.3%
Erie	1,635	1.2%	1.1%	-0.1%	2.4%	1.4%	-1.0%
Franklin	381	8.8%	1.9%	-6.9%	12.9%	4.7%	-8.2%
Girard	1,067	1.9%	2.0%	0.1%	3.1%	1.5%	-1.6%
Meadville	1,003	5.4%	2.6%	-2.8%	5.7%	1.9%	-3.8%
Warren	665	0.0%	1.0%	1.0%	0.0%	0.8%	0.8%
AREA II	**33,266**	**5.8%**	**3.7%**	**-2.1%**	**7.0%**	**3.6%**	**-3.4%**
Troop A	***4,135***	***2.4%***	***0.9%***	***-1.5%***	***2.8%***	***1.0%***	***-1.8%***
Ebensburg	356	9.1%	**2.7%**	-6.4%	9.1%	2.7%	-6.4%
Greensburg	1,181	1.1%	1.1%	0.0%	1.9%	0.9%	-1.0%
Indiana	1,607	2.6%	0.5%	-2.1%	3.3%	1.0%	-2.3%
Kiski Valley	329	1.0%	0.9%	-0.1%	1.0%	0.9%	-0.1%
Somerset (A)	662	1.7%	0.3%	-1.4%	1.4%	0.5%	-0.9%

Table 3.8: Percent Unknown Race/Ethnicity of Drivers Stopped by Department, Area, Troop, & Station, Q3 2022 (p.2 of 3)

	Total # of Stops	Unknown Race	Unknown Race	Difference	Unknown Ethnicity	Unknown Ethnicity	Difference
		7/1-8/11	8/12-9/30		7/1-8/11	8/12-9/30	
Troop G	*6,378*	*3.3%*	*2.7%*	*-0.6%*	*3.1%*	*2.4%*	*-0.7%*
Bedford	1,092	0.8%	1.1%	0.3%	0.5%	1.0%	0.5%
Hollidaysburg	728	1.8%	2.8%	1.0%	1.2%	3.0%	1.8%
Huntingdon	672	7.9%	6.7%	-1.2%	7.9%	6.2%	-1.7%
Lewistown	912	0.4%	0.9%	0.5%	0.9%	0.7%	-0.2%
McConnellsburg	769	7.8%	6.0%	-1.8%	7.4%	5.4%	-2.0%
Rockview	2,205	3.1%	1.8%	-1.3%	2.9%	1.3%	-1.6%
Troop H	*12,746*	*3.3%*	*1.9%*	*-1.4%*	*3.6%*	*1.7%*	*-1.9%*
Carlisle	2,586	2.4%	2.5%	0.1%	3.0%	2.0%	-1.0%
Chambersburg	3,627	2.1%	0.8%	-1.3%	2.5%	1.0%	-1.5%
Gettysburg	2,538	1.5%	1.1%	-0.4%	1.3%	0.7%	-0.6%
Harrisburg	2,358	8.3%	4.6%	-3.7%	8.6%	4.6%	-4.0%
Lykens	744	0.4%	1.0%	0.6%	0.4%	0.8%	0.4%
Newport	893	1.6%	1.5%	-0.1%	2.3%	1.4%	-0.9%
Troop T	*10,007*	*11.3%*	*7.9%*	*-3.4%*	*14.5%*	*8.2%*	*-6.3%*
Bowmansville	919	5.3%	2.4%	-2.9%	10.1%	3.6%	-6.5%
Everett	1,520	21.5%	15.1%	-6.4%	22.5%	13.5%	-9.0%
Gibsonia	1,208	2.9%	2.2%	-0.7%	9.1%	5.6%	-3.5%
Highspire	55	0.0%	0.0%	0.0%	6.7%	0.0%	-6.7%
King of Prussia	1,149	14.6%	5.9%	-8.7%	19.6%	9.0%	-10.6%
New Stanton	1,906	7.9%	6.5%	-1.4%	12.3%	7.1%	-5.2%
Newville	997	1.7%	3.7%	2.0%	1.5%	1.0%	-0.5%
Pocono	936	2.1%	1.0%	-1.1%	2.6%	0.6%	-2.0%
Somerset (T)	1,317	29.5%	19.7%	-9.8%	31.8%	19.3%	-12.5%
AREA III	**21,071**	**7.2%**	**3.8%**	**-3.4%**	**10.6%**	**4.6%**	**-6.0%**
Troop F	*7,936*	*3.2%*	*2.1%*	*-1.1%*	*3.9%*	*1.8%*	*-2.1%*
Coudersport	614	3.7%	3.2%	-0.5%	4.1%	2.4%	-1.7%
Emporium	363	2.8%	0.5%	-2.3%	2.1%	0.5%	-1.6%
Lamar	1,411	4.8%	4.0%	-0.8%	5.3%	2.9%	-2.4%
Mansfield	772	5.6%	1.7%	-3.9%	5.6%	1.0%	-4.6%
Milton	1,934	2.7%	1.0%	-1.7%	3.3%	1.1%	-2.2%
Montoursville	1,437	3.2%	1.4%	-1.8%	3.0%	1.3%	-1.7%
Selinsgrove	1,017	1.3%	3.5%	2.2%	4.7%	4.4%	-0.3%
Stonington	388	0.0%	1.1%	1.1%	0.0%	0.0%	0.0%
Troop N	*6,367*	*13.3%*	*4.7%*	*-8.6%*	*20.1%*	*5.4%*	*-14.7%*
Bloomsburg	744	9.3%	4.6%	-4.7%	11.8%	5.0%	-6.8%
Fern Ridge	1,175	9.6%	2.9%	-6.7%	15.0%	2.4%	-12.6%
Hazleton	1,157	19.2%	7.9%	-11.3%	18.1%	6.4%	-11.7%
Lehighton	432	20.3%	6.4%	-13.9%	25.6%	8.7%	-16.9%
Stroudsburg	2,859	12.3%	3.8%	-8.5%	23.4%	5.8%	-17.6%

Table 3.8: Percent Unknown Race/Ethnicity of Drivers Stopped by Department, Area, Troop, & Station, Q3 2022 (p.3 of 3)

	Total # of Stops	Unknown Race	Unknown Race	Difference	Unknown Ethnicity	Unknown Ethnicity	Difference
		7/1-8/12	8/13-9/30		7/1-8/12	8/13-9/30	
Troop P	*3,148*	*3.8%*	*1.8%*	*-2.0%*	*3.8%*	*2.9%*	*-0.9%*
Laporte	428	2.9%	1.7%	-1.2%	3.6%	2.1%	-1.5%
Shickshinny	414	3.9%	3.0%	-0.9%	2.8%	3.0%	0.2%
Towanda	761	2.0%	0.7%	-1.3%	1.3%	1.5%	0.2%
Tunkhannock	493	5.2%	2.8%	-2.4%	5.8%	3.4%	-2.4%
Wilkes-Barre	1,052	4.8%	1.6%	-3.2%	5.6%	4.0%	-1.6%
Troop R	*3,620*	*8.9%*	*8.0%*	*-0.9%*	*15.6%*	*11.2%*	*-4.4%*
Blooming Grove	1,145	8.6%	3.9%	-4.7%	19.6%	13.3%	-6.3%
Dunmore	760	5.1%	2.8%	-2.3%	16.8%	2.8%	-14.0%
Gibson	892	13.4%	7.9%	-5.5%	13.4%	6.3%	-7.1%
Honesdale	823	8.9%	18.5%	9.6%	12.0%	19.9%	7.9%
AREA IV	**24,031**	**3.8%**	**3.0%**	**-0.8%**	**5.3%**	**3.9%**	**-1.4%**
Troop J	*7,943*	*1.2%*	*0.9%*	*-0.3%*	*2.0%*	*1.5%*	*-0.5%*
Avondale	2,431	0.6%	0.3%	-0.3%	1.3%	0.5%	-0.8%
Embreeville	1,597	1.7%	2.0%	0.3%	1.4%	1.8%	0.4%
Lancaster	1,710	0.6%	0.5%	-0.1%	1.2%	1.5%	0.3%
York	2,205	1.9%	1.2%	-0.7%	3.9%	2.5%	-1.4%
Troop K	*5,411*	*3.7%*	*4.3%*	*0.6%*	*7.2%*	*5.4%*	*-1.8%*
Media	2,410	0.9%	1.0%	0.1%	2.0%	1.3%	-0.7%
Philadelphia	2,278	7.0%	8.7%	1.7%	11.3%	9.2%	-2.1%
Skippack	708	4.2%	0.4%	-3.8%	13.4%	6.7%	-6.7%
Troop L	*5,027*	*4.6%*	*3.3%*	*-1.3%*	*4.7%*	*4.2%*	*-0.5%*
Frackville	730	5.9%	6.8%	0.9%	7.2%	8.7%	1.5%
Hamburg	504	4.7%	0.8%	-3.9%	4.7%	2.5%	-2.2%
Jonestown	1,396	3.4%	5.0%	1.6%	4.2%	5.8%	1.6%
Reading	1,080	7.2%	3.0%	-4.2%	6.4%	4.6%	-1.8%
Schuylkill Haven	1,317	2.3%	1.2%	-1.1%	1.7%	0.9%	-0.8%
Troop M	*5,650*	*7.2%*	*4.5%*	*-2.7%*	*9.1%*	*5.6%*	*-3.5%*
Belfast	880	1.4%	1.5%	0.1%	4.3%	2.0%	-2.3%
Bethlehem	986	18.9%	10.0%	-8.9%	18.6%	10.6%	-8.0%
Dublin	1,189	8.1%	7.1%	-1.0%	9.6%	8.1%	-1.5%
Fogelsville	1,574	5.1%	2.3%	-2.8%	9.0%	5.2%	-3.8%
Trevose	1,021	2.2%	2.6%	0.4%	2.8%	2.3%	-0.5%
Specialized Units							
SHIELD	1,437	1.0%	0.5%	-0.5%	4.7%	0.8%	-3.9%
Canine	609	1.7%	1.3%	-0.4%	0.7%	2.2%	1.5%

Summary

Section 3 described the characteristics of traffic stops and stopped drivers across PSP organizational units based on data collected during 101,006 stops that occurred from July 1 to September 30, 2022. Department trends in these descriptive findings are summarized below.

- Across the department, the majority of traffic stops had the following characteristics:
  - Occurred on a weekday (70.6%)
  - Occurred during the daytime (70.6%)
  - Occurred on a state highway (52.8%) or an interstate (35.2%)
  - Involved a vehicle registered in Pennsylvania (78.5%)
  - Involved vehicles without passengers (79.1%)
  - Lasted between 1-15 minutes (88.6%)

- Across the department, the most frequent reason for a stop was speeding (41.4%), with an average amount over the posted speed limit of 21.6 mph, followed by other moving violations (25.5%), equipment inspections (19.3%), and registration (16.8%).

- Across the department, the characteristics of the drivers include:
  - Average age of 38.0 years
  - 67.4% male
  - White (78.7%), Black (14.7%), Hispanic (9.7%), Asian (2.1%), American Indian or Alaskan Native (0.4%), unknown race (4.1%), unknown ethnicity (5.2%)
  - Driver behavior was overwhelmingly civil (97.9%), 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.

- In response to the wide variation in the percent of unknown driver race and ethnicity in the first two quarterly reports, the PSP provided additional guidance to its members on completing these fields with an August 12th directive.

  - After the August 12th directive, the average percent of unknown race decreased from 5.4% to 3.3% across the department; similarly, the percent of unknown ethnicity decreased from 7.1% to 4.0%.

  - Most of the PSP organizational units also reported decreased percentages of unknown driver race and ethnicity following the August 12th directive.

  - In a small number of Stations, however, the percentage of unknown race or ethnicity noticeably increased. In other Stations that experienced declines after the directive, the percentage of unknown driver race and ethnicity remained more than 10%. Both these trends warrant further examination by PSP officials.

IV.   ANALYSES OF POST-STOP OUTCOMES

This section reports traffic stop outcomes during member-initiated traffic stops conducted in the third 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.[20]

Description of Post-Stop Outcomes

Figure 4.1 and Table 4.1 report the post-stop outcomes for drivers during the 101,006 stops initiated by PSP Troopers in the third quarter of 2022. As shown, 58.7% of drivers were issued citations, while 57.1% received verbal or written warnings (15.8% and 41.3%, respectively). Driver arrests were rare, occurring in only 3.4% of traffic stops.

Figure 4.1: Department-Wide Post-Stop Outcomes, Q3 2022
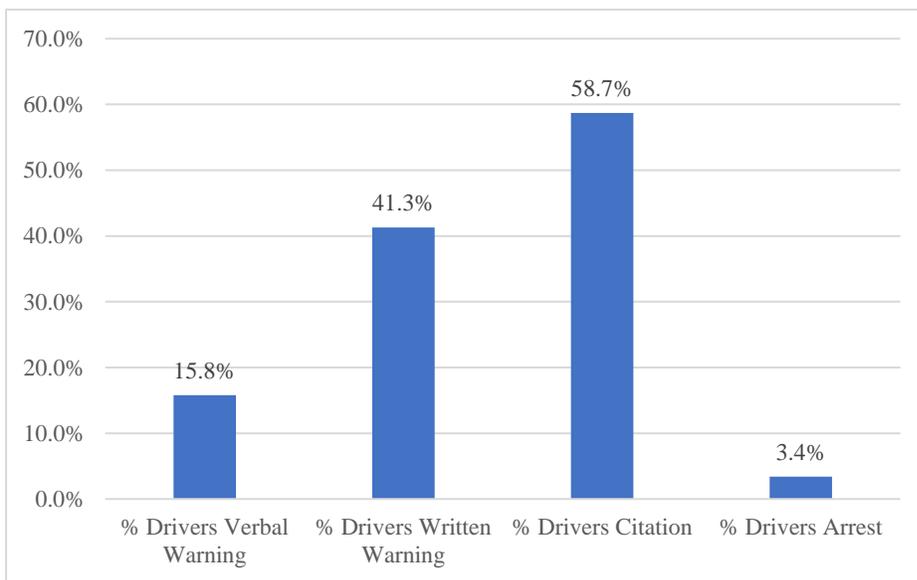
As reported in Table 4.1 and graphically displayed in Figure 4.2, post-stop outcomes differed across PSP Areas. For example, Troopers assigned to Area II issued the most warnings to drivers (12.5% verbal and 50.2% written warnings), while Troopers in Area III issued the least (15.8% verbal, 31.6% written warnings). Drivers in Areas I and II were the most likely to be cited (62.2% and 63.2%, respectively), while drivers in Area IV were least likely to be issued citations

---

[20] This information will be presented at the Station level in the 2022 annual report, but due to the limited number of searches, it is not presented at the Station level for quarterly reports.

(51.4%). Troopers in Area II arrested the smallest percentage of stopped drivers (2.3%), while Area III reported the highest percentage of drivers arrested (4.3%).

Figure 4.2: Post-Stop Outcomes by PSP Area, Q3 2022
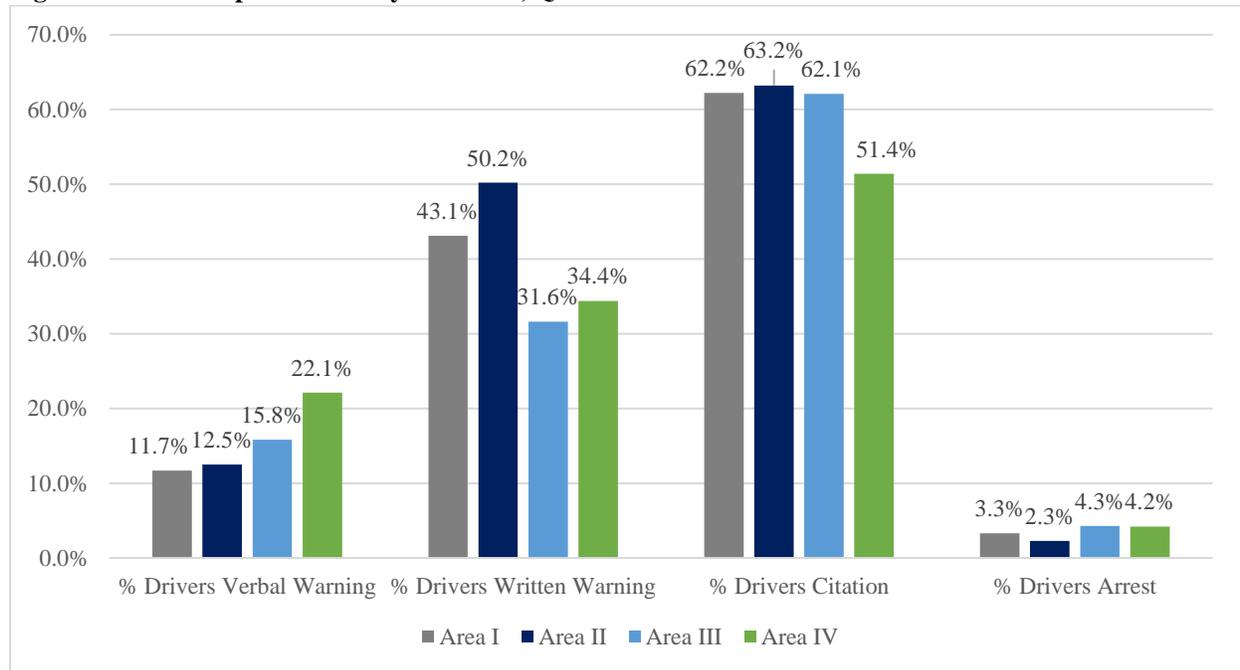
Troops ranged in issuing warnings from a high of 72.2% in Troop H to a low of 39.7% in Troop B. For citations, Troop T had the highest percentage of drivers cited (82.2%), while Troop J had the lowest (40.6%). Traffic stops resulting in driver arrests ranged from 5.7% of stops in Troop N to 0.5% in Troop T.

As for specialized units, the SHIELD unit issued a very high number of warnings (25.7% verbal, 73.3% written warnings). The Canine unit also issued about 95.6% warnings but had a higher percentage of verbal warnings (61.4%) than the SHIELD unit. In addition, both units infrequently cited drivers. Finally, the SHIELD unit arrested 2.0% of drivers, while the Canine unit arrested 3.0% of drivers.

Table 4.1: Post-Stop Outcomes by Department, Area & Troop, Q3 2022

	Total # of Stops	Drivers Verbal Warning	Drivers Written Warning	Drivers Citation	Drivers Arrest
PSP Dept.	101,006	15.8%	41.3%	58.7%	3.4%
AREA I	**20,497**	**11.7%**	**43.1%**	**62.2%**	**3.3%**
Troop B	4,844	11.4%	28.3%	74.3%	2.2%
Troop C	5,274	9.8%	56.4%	54.9%	3.2%
Troop D	5,009	12.9%	47.7%	52.4%	5.2%
Troop E	5,370	12.7%	39.1%	67.4%	2.7%
AREA II	**33,266**	**12.5%**	**50.2%**	**63.2%**	**2.3%**
Troop A	4,135	5.4%	42.1%	72.1%	4.7%
Troop G	6,378	12.5%	45.2%	64.9%	2.1%
Troop H	12,746	18.5%	53.7%	44.6%	3.1%
Troop T	10,007	7.7%	52.2%	82.2%	0.5%
AREA III	**21,071**	**15.8%**	**31.6%**	**62.1%**	**4.3%**
Troop F	7,936	16.8%	32.4%	58.7%	4.5%
Troop N	6,367	15.5%	28.4%	63.7%	5.7%
Troop P	3,148	18.6%	34.6%	57.6%	2.7%
Troop R	3,620	11.8%	32.8%	70.9%	3.0%
AREA IV	**24,031**	**22.1%**	**34.4%**	**51.4%**	**4.2%**
Troop J	7,943	32.4%	32.6%	40.6%	5.1%
Troop K	5,411	17.8%	34.1%	54.4%	2.8%
Troop L	5,027	14.8%	32.0%	63.1%	4.1%
Troop M	5,650	18.3%	39.3%	53.1%	4.3%
Specialized Units					
SHIELD	1,437	25.7%	73.3%	0.3%	2.0%
Canine	609	61.4%	34.2%	3.4%	3.0%

Table 4.2 reports post-stop outcomes at the Station level. There is considerable variability across Stations for all stop outcomes. The highest percentage of warnings were issued at New Stanton Station (83.2%) and the fewest at Waynesburg Station (28.0%). Troopers assigned to King of Prussia Station had the highest citation rate (90.6%). In approximately 15% of PSP Stations (13 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 (13.1%), compared to less than 0.2% of drivers in Somerset (T) Station and Highspire Station.

Table 4.2: Post-Stop Outcomes by Station, Q3 2022 (p.1 of 3)

	Total # of Stops	Drivers Verbal Warning	Drivers Written Warning	Drivers Citation	Drivers Arrest
AREA I	**20,497**	**11.7%**	**43.1%**	**62.2%**	**3.3%**
Troop B	4,844	11.4%	28.3%	74.3%	2.2%
Belle Vernon	986	9.4%	30.9%	76.0%	2.1%
Pittsburgh	1,671	19.4%	17.6%	71.6%	2.6%
Uniontown	1,071	7.7%	36.9%	73.4%	0.9%
Washington	686	4.2%	41.0%	73.9%	2.0%
Waynesburg	429	5.4%	22.6%	83.7%	3.7%
Troop C	5,274	9.8%	56.4%	54.9%	3.2%
Clarion	595	6.4%	46.6%	58.7%	2.7%
Clearfield	942	9.6%	35.7%	60.8%	3.3%
Dubois	612	10.5%	69.3%	60.8%	3.9%
Lewis Run	1,033	7.6%	73.6%	42.1%	3.7%
Marienville	583	8.2%	46.8%	74.1%	1.4%
Punxsutawney	891	11.1%	62.7%	46.4%	3.6%
Ridgway	618	15.9%	56.0%	51.8%	3.4%
Troop D	5,009	12.9%	47.7%	52.4%	5.2%
Beaver	756	10.1%	20.9%	77.5%	7.1%
Butler	1,340	24.6%	48.3%	39.6%	4.3%
Kittanning	1,705	2.6%	61.8%	46.9%	4.5%
Mercer	694	19.5%	37.5%	64.1%	5.6%
New Castle	514	11.7%	52.7%	51.6%	6.4%
Troop E	5,370	12.7%	39.1%	67.4%	2.7%
Corry	583	9.8%	49.4%	56.6%	1.9%
Erie	1,635	8.1%	31.6%	78.5%	3.2%
Franklin	381	13.9%	39.9%	57.2%	4.2%
Girard	1,067	6.5%	34.1%	78.2%	2.1%
Meadville	1,003	27.4%	43.3%	53.1%	2.8%
Warren	665	12.8%	51.6%	59.8%	1.5%
AREA II	**33,266**	**12.5%**	**50.2%**	**63.2%**	**2.3%**
Troop A	4,135	5.4%	42.1%	72.1%	4.7%
Ebensburg	356	10.7%	28.9%	83.7%	3.1%
Greensburg	1,181	3.6%	55.4%	69.3%	6.1%
Indiana	1,607	5.8%	35.2%	70.3%	5.6%
Kiski Valley	329	7.9%	37.4%	70.2%	0.6%
Somerset (A)	662	3.6%	44.4%	76.1%	2.9%
Troop G	6,378	12.5%	45.2%	64.9%	2.1%
Bedford	1,092	23.0%	43.0%	56.3%	1.9%
Hollidaysburg	728	11.7%	48.6%	61.8%	4.4%
Huntingdon	672	7.6%	43.8%	74.9%	1.2%
Lewistown	912	2.9%	57.5%	70.3%	3.6%
McConnellsburg	769	10.0%	53.3%	66.2%	0.8%
Rockview	2,205	14.1%	37.8%	64.4%	1.7%

Table 4.2: Post-Stop Outcomes by Station, Q3 2022 (p. 2 of 3)

	Total # of Stops	Drivers Verbal Warning	Drivers Written Warning	Drivers Citation	Drivers Arrest
Troop H	12,746	18.5%	53.7%	44.6%	3.1%
Carlisle	2,586	8.9%	63.3%	42.5%	4.4%
Chambersburg	3,627	20.4%	48.7%	52.3%	1.8%
Gettysburg	2,538	24.4%	53.7%	28.6%	3.7%
Harrisburg	2,358	26.1%	46.8%	44.8%	2.7%
Lykens	744	4.6%	70.6%	63.4%	1.2%
Newport	893	13.9%	49.8%	48.5%	5.9%
Troop T	10,007	7.7%	52.2%	82.2%	0.5%
Bowmansville	919	6.6%	30.8%	84.3%	0.5%
Everett	1,520	6.8%	74.2%	79.3%	0.8%
Gibsonia	1,208	2.7%	77.3%	86.7%	0.8%
Highspire	55	10.9%	56.4%	43.6%	0.0%
King of Prussia	1,149	7.6%	26.5%	90.6%	0.3%
New Stanton	1,906	15.8%	67.4%	73.2%	0.4%
Newville	997	6.8%	31.3%	74.9%	0.5%
Pocono	936	3.8%	26.8%	88.8%	0.4%
Somerset (T)	1,317	5.9%	52.8%	88.0%	0.2%
AREA III	**21,071**	**15.8%**	**31.6%**	**62.1%**	**4.3%**
Troop F	7,936	16.8%	32.4%	58.7%	4.5%
Coudersport	614	12.7%	42.7%	57.5%	1.5%
Emporium	363	5.0%	67.2%	47.7%	1.4%
Lamar	1,411	29.8%	12.3%	56.0%	4.4%
Mansfield	772	16.2%	39.2%	60.6%	1.3%
Milton	1,934	14.1%	27.0%	61.8%	2.2%
Montoursville	1,437	23.2%	25.8%	56.9%	3.3%
Selinsgrove	1,017	5.0%	48.5%	65.8%	13.1%
Stonington	388	9.8%	51.8%	49.0%	12.1%
Troop N	6,367	15.5%	28.4%	63.7%	5.7%
Bloomsburg	744	15.9%	29.8%	61.0%	2.6%
Fern Ridge	1,175	16.9%	18.5%	73.1%	1.5%
Hazleton	1,157	16.2%	25.1%	77.1%	4.9%
Lehighton	432	20.4%	24.5%	72.9%	7.9%
Stroudsburg	2,859	13.7%	34.0%	53.7%	8.3%
Troop P	3,148	18.6%	34.6%	57.6%	2.7%
Laporte	428	23.8%	35.5%	48.8%	1.4%
Shickshinny	414	22.0%	22.7%	70.5%	3.9%
Towanda	761	33.0%	35.9%	40.3%	3.4%
Tunkhannock	493	9.5%	53.1%	48.1%	3.2%
Wilkes-Barre	1,052	8.9%	29.2%	73.1%	2.1%
Troop R	3,620	11.8%	32.8%	70.9%	3.0%
Blooming Grove	1,145	12.6%	32.8%	63.8%	3.3%
Dunmore	760	10.5%	33.6%	76.4%	2.1%
Gibson	892	11.9%	27.9%	78.6%	4.3%
Honesdale	823	11.9%	37.2%	67.6%	1.9%

Table 4.2: Post-Stop Outcomes by Station, Q3 2022 (p. 3 of 3)

	Total # of Stops	Drivers Verbal Warning	Drivers Written Warning	Drivers Citation	Drivers Arrest
AREA IV	**24,031**	**22.1%**	**34.4%**	**51.4%**	**4.2%**
Troop J	7,943	32.4%	32.6%	40.6%	5.1%
Avondale	2,431	47.7%	24.2%	36.0%	4.6%
Embreeville	1,597	15.9%	42.6%	52.7%	5.4%
Lancaster	1,710	29.1%	31.8%	43.3%	6.1%
York	2,205	29.9%	35.2%	35.0%	4.8%
Troop K	5,411	17.8%	34.1%	54.4%	2.8%
Media	2,410	12.4%	33.9%	54.6%	3.5%
Philadelphia	2,278	25.9%	29.7%	54.8%	2.0%
Skippack	708	10.0%	49.4%	51.7%	3.0%
Troop L	5,027	14.8%	32.0%	63.1%	4.1%
Frackville	730	28.5%	17.3%	62.6%	1.5%
Hamburg	504	11.1%	38.9%	69.2%	2.4%
Jonestown	1,396	12.3%	36.8%	61.5%	4.7%
Reading	1,080	10.7%	38.8%	58.6%	6.3%
Schuylkill Haven	1,317	14.7%	27.0%	66.5%	3.8%
Troop M	5,650	18.3%	39.3%	53.1%	4.3%
Belfast	880	17.7%	31.5%	56.8%	3.2%
Bethlehem	986	14.3%	36.7%	59.6%	3.5%
Dublin	1,189	17.4%	53.7%	41.2%	5.5%
Fogelsville	1,574	20.5%	32.0%	53.4%	5.1%
Trevose	1,021	20.6%	43.2%	56.7%	3.3%

Searches & Seizures

Table 4.3 displays information related to traffic stops that resulted in searches at the Department, Area, and Troop levels. Specifically, this table reports 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").

Approximately 2.5% of traffic stops made by PSP Troopers resulted in a search, with 2,544 searches conducted across the department during the third 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 (3.7%). Similarly, there is variation in the percentages of traffic stops resulting in searches at the Troop level. For example, 0.7% of stops conducted in Troop T resulted in a search, compared to 4.5% in Troop K. Of note, all Troops within Area IV averaged a similar or higher percentage of stops resulting in searches than the department-wide average of 2.5%. Finally, the average search rate was considerably higher for the specialized units in comparison to the department-wide average. Specifically, searches were conducted during 11.6% of traffic stops made by the SHIELD unit and 8.5% 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 42.3% of its searches conducted roadside and 57.7% of searches conducted after a tow.

The percentage of searches that were successful in the seizure of evidence and/or contraband was 43.3% across the department. This seizure rate varied across Areas, from a high of 51.6% of searches in Area III to a low of 41.0% 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 (67.7% of searches), while Troop T had the lowest (14.1% 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, Q3 2022

	Stops Resulting in Search	Total # of Searches	Searches Conducted Roadside	Searches After Tow	Searches Resulting in Seizure
PSP Dept.	**2.5%**	**2,544**	**94.1%**	**5.9%**	**43.3%**
AREA I	**2.2%**	**448**	**97.5%**	**2.5%**	**49.8%**
Troop B	2.9%	142	96.5%	3.5%	38.0%
Troop C	1.2%	65	96.9%	3.1%	67.7%
Troop D	3.4%	171	97.7%	2.3%	53.8%
Troop E	1.3%	70	100.0%	0.0%	47.1%
AREA II	**1.6%**	**535**	**86.2%**	**13.8%**	**45.4%**
Troop A	2.1%	86	94.2%	5.8%	47.7%
Troop G	1.6%	101	93.1%	6.9%	54.5%
Troop H	2.2%	277	92.4%	7.6%	49.5%
Troop T	0.7%	71	42.3%	57.7%	14.1%
AREA III	**2.1%**	**444**	**96.8%**	**3.2%**	**51.6%**
Troop F	1.4%	110	94.5%	5.5%	63.6%
Troop N	2.4%	152	97.4%	2.6%	49.3%
Troop P	2.2%	68	100.0%	0.0%	33.8%
Troop R	3.1%	114	96.5%	3.5%	53.5%
AREA IV	**3.7%**	**897**	**95.4%**	**4.6%**	**41.0%**
Troop J	4.4%	347	95.1%	4.9%	53.9%
Troop K	4.5%	243	94.7%	5.3%	23.5%
Troop L	2.7%	137	99.3%	0.7%	40.9%
Troop M	3.0%	170	94.1%	5.9%	40.0%
Specialized Units					
SHIELD	11.6%	167	94.6%	5.4%	16.8%
Canine	8.5%	52	98.1%	1.9%	19.2%

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 (64.0%), while nearly 21% were based on written consent. Combined, 84.9% of PSP searches during traffic stops had verbal consent, written consent, or both. Other prevalent reasons for search include incident to arrest (26.3% of searches), inventory (13.0%), and officer safety (10.1%). Less than 10% of searches were based on the following reasons: plain view (9.4%), search warrant (4.3%), and probable cause/exigent circumstances (2.2%).

Figure 4.3: Department-Wide Reasons for Search, Q3 2022
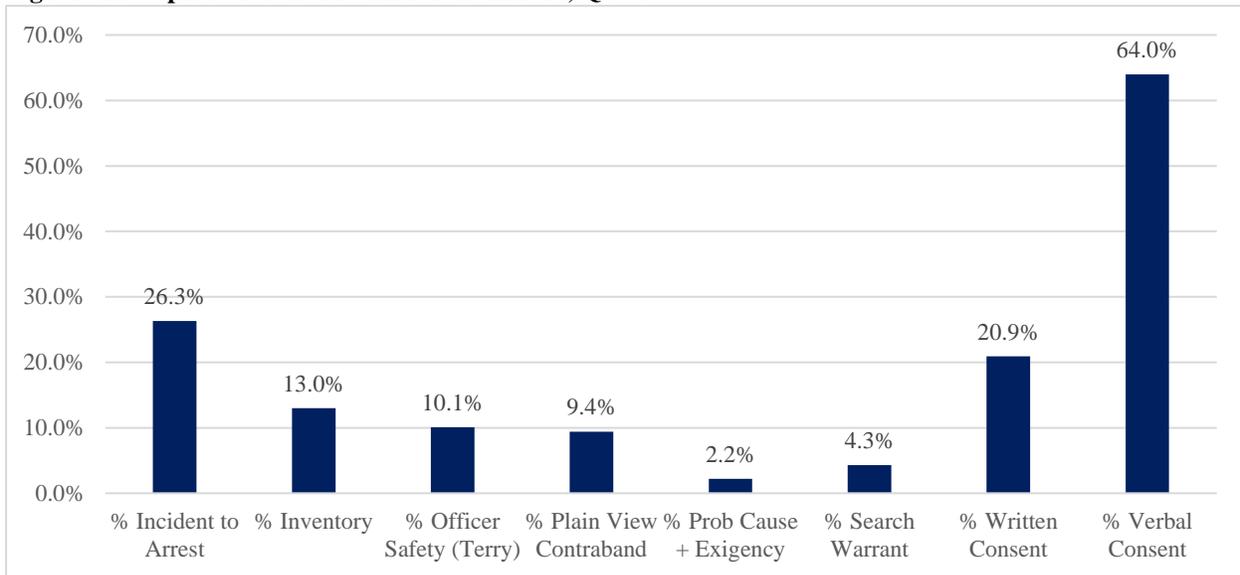
As described in the previous quarterly reports, PSP made the research team aware of an issue discovered on September 5, 2022 with the "incident to arrest" response option for the "reason for search" data field. As described in the *2021 Pennsylvania State Police Traffic Stop Study,* the values for categories 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 (Engel & Cherkauskas, 2022). Previously "0" indicated that the 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 3 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, 3.4% of drivers were arrested (n=3,432), but as reported in Figure 4.3 and Table 4.4, only 26.3% of searches were reported to be based on incident to arrest (n=670). This includes 47 searches that were only based on incident to arrest (note that reason for search is a select all that apply). As noted in the previous quarterly reports, 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, which 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.

Table 4.4 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, 76.6% of searches conducted in Area I included verbal consent, compared to just 46.5% in Area IV. In Area I, written consent accounted for just 10.3% of searches, while it accounted for 26.8% of stops in Area IV. Compared to the department-wide averages, Area IV also demonstrated higher percentages of searches incident to arrest (35.0%) and inventory (29.1%).

Notable differences exist in the ways that motorists consent to searches at the Troop level as well. For instance, only 3.5% of searches by Troop D involve written consent, while 83.0% involve verbal consent. Conversely, 42.3% of searches by Troop L involve written consent, while only 59.1% involve verbal consent. Finally, the overwhelming majority of searches by the SHIELD and Canine units involved verbal consent from motorists; 65% of SHIELD searches were also based on written consent. 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, Q3 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.	2,544	26.3%	13.0%	10.1%	9.4%	2.2%	4.3%	20.9%	64.0%
AREA I	448	23.2%	2.5%	15.4%	13.6%	2.5%	2.9%	10.3%	76.6%
Troop B	142	28.9%	4.2%	18.3%	10.6%	2.8%	4.9%	8.5%	71.1%
Troop C	65	32.3%	0.0%	13.8%	20.0%	1.5%	3.1%	27.7%	70.8%
Troop D	171	14.0%	1.8%	13.5%	16.4%	1.8%	1.8%	3.5%	83.0%
Troop E	70	25.7%	2.9%	15.7%	7.1%	4.3%	1.4%	14.3%	77.1%
AREA II	535	28.2%	5.4%	9.3%	9.9%	2.8%	6.2%	11.8%	68.4%
Troop A	86	29.1%	11.6%	9.3%	12.8%	5.8%	5.8%	17.4%	62.8%
Troop G	101	10.9%	2.0%	5.0%	8.9%	2.0%	5.0%	20.8%	82.2%
Troop H	277	25.6%	4.7%	11.6%	9.7%	2.9%	7.6%	7.2%	76.2%
Troop T	71	62.0%	5.6%	7.0%	8.5%	0.0%	2.8%	9.9%	25.4%
AREA III	444	21.2%	5.9%	5.6%	8.8%	1.6%	3.2%	13.7%	75.9%
Troop F	110	20.9%	1.8%	1.8%	7.3%	1.8%	6.4%	9.1%	79.1%
Troop N	152	24.3%	9.2%	7.9%	11.2%	0.7%	2.0%	8.6%	74.3%
Troop P	68	23.5%	2.9%	5.9%	8.8%	4.4%	0.0%	35.3%	66.2%
Troop R	114	15.8%	7.0%	6.1%	7.0%	0.9%	3.5%	12.3%	80.7%
AREA IV	897	35.0%	29.1%	12.5%	8.6%	2.5%	4.5%	26.8%	46.5%
Troop J	347	45.0%	36.0%	10.7%	10.4%	2.0%	4.9%	34.6%	36.6%
Troop K	243	32.9%	39.1%	14.8%	6.6%	1.6%	4.1%	7.0%	47.3%
Troop L	137	19.7%	5.1%	16.1%	5.8%	6.6%	2.2%	42.3%	59.1%
Troop M	170	30.0%	20.0%	10.0%	10.0%	1.2%	5.9%	26.5%	55.3%
Specialized Units									
SHIELD	167	3.0%	1.8%	0.6%	1.2%	0.0%	5.4%	65.3%	70.7%
Canine	52	1.9%	0.0%	0.0%	13.5%	0.0%	1.9%	23.1%	92.3%

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:
- 57.1% of stops resulted in a warning issued to the driver
  - 15.8% were verbal warnings
  - 41.3% were written warnings
- 58.7% of stops resulted in a citation issued to the driver
- 3.4% of stops resulted in the arrest of the driver

During this quarter, 2,544 searches (2.5% 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 (11.6%) and the Canine unit (8.5%)
- 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 43.3%, but again, it varied by organizational unit

V. SUMMARY AND RECOMMENDATIONS

This report represents the last 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 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 third 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 July 1, 2022 to September 30, 2022, PSP Troopers initiated 101,006 traffic stops with members of the public. Across the department, the majority of traffic stops occurred on a state highway (52.8%) or interstate (35.2%), involved a vehicle registered in Pennsylvania (78.5%), and lasted between 1-15 minutes (88.6%). The most frequent reason for traffic stops was speeding (41.4%), with an average amount over the posted speed limit of 21.6 miles per hour. The other most common reasons for a stop included other moving violations (25.5%) and equipment/inspection violations (19.3%). 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 14.7% were Black; 9.7% were of Hispanic ethnicity. 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. The overwhelming majority of drivers across all organizational units were civil to the Troopers who stopped them (97.9%); 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, approximately 59% of stops resulted in the driver being issued a citation. A similar percentage of stops (57.1%) resulted in a warning for the driver, most of which were written as opposed to verbal. Only 3.4% of traffic stops resulted in the arrest of the driver. Approximately 2.5% of all stops resulted in a search of the driver, vehicle, and/or passenger. During the third quarter of 2022, 2,544 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 43.3%, but the search success rate varied by organizational unit.

Recommendations

As described in Section 3, the PSP addressed wide variation in the percent of unknown driver race and ethnicity in the first two quarterly reports by issuing a directive midway through the third quarter to provide additional guidance to its members on completing these fields. The directive largely had the desired impact of increasing the valid race and ethnicity data reported based on officer perceptions and decreasing the percentage of unknown driver race and ethnicity reported. In a small number of stations, however, the percentage of unknown race or ethnicity noticeably increased, and in other stations that experienced declines after the directive, the percentage of unknown driver race and ethnicity remained more than 10%. Both these trends warrant further examination by PSP officials. The research team also recommends that PSP Area, Troop, and Station commanders review all 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 third 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.

REFERENCES

Alpert, G.P., Smith, M.R., Dunham, R., & Piquero, A., & Parker, K. (2004). *Miami-Dade Police Department racial profiling study*. Columbia, SC: Alpert Group.

Engel, R.S. & Cherkauskas, J. (2022). *2021 Pennsylvania State Police Traffic Stop Study: January 1 – December 31, 2021*. Report submitted to the Commissioner of the Pennsylvania State Police. https://www.psp.pa.gov/data/Documents/CDR/CDR_2021.pdf

Fridell, L. (2004). *By the Numbers: A Guide for Analyzing Race Data from Vehicle Stops,* Washington, D.C.: Police Executive Research Forum.

Fridell, L., Lunney, R., Diamond, D., Kubu, B., Scott, M., & Laing, C. (2001). *Racially biased policing: A principled response*. Washington, DC: Police Executive Research Forum. https://www.policeforum.org/assets/docs/Free_Online_Documents/Racially-Biased_Policing/racially%20biased%20policing%20-%20a%20principled%20response%202001.pdf

Lange, J. E., Blackman, K. O., & Johnson, M.B. (2001). *Speed Violation Survey of the New Jersey Turnpike: Final Report.* Trenton, NJ: Office of the Attorney General.

Pryor, M., Goff, P.A., Heydari, F., & Friedman, B. (2020). Collecting, Analyzing, and Responding to Stop Data: A Guidebook for Law Enforcement Agencies, Government, and Communities. https://policingequity.org/images/pdfs-doc/COPS-Guidebook_Final_Release_Version_2-compressed.pdf.

Ramirez, D., McDevitt, J., & Farrell, A. (2000). *A resource guide on racial profiling data collection systems: Promising practices and lessons learned*. Washington, DC: U.S. Department of Justice.

Smith, S. K., & DeFrances, C. J. (2003). *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.