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Report Prepared By:

Robin S. Engel, Ph.D.

Rob Tillyer, M.A.

Cody Stoddard, M.A.

Richard Johnson, M.S.

University of Cincinnati Policing Institute

**Please direct all questions and correspondence regarding this report to: Robin Shepard Engel, Ph.D.,
Division of Criminal Justice, University of Cincinnati, PO Box 210389, Cincinnati, OH 45221, email:
robin.engel@uc.edu**

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EXECUTIVE SUMMARY

OVERVIEW

This report documents the findings from statistical analyses of data collected during all member-initiated traffic stops by the Pennsylvania State Police (PSP) from January 1, 2004 – December 31, 2005. This data represents the third and fourth years of data collection for the Project on Police-Citizen Contacts and is based on calendar years rather than the previous reports, which covered data collected between May 1 and April 30. Years 2004 and 2005 are reported together within this document due to concerns regarding the quality of the data (described in detail within this report) raised during focus group discussions with PSP Troopers in September 2005.

Based on the findings and recommendations reported in the *Year 2 Final Report*, the PSP engaged in additional research to identify “best practices” in search and seizure activities. The result was a series of focus groups with PSP personnel, during which it was discovered that some Troopers were not completing Contact Data Reports (the basis for the data reported within this document) during all member-initiated stops as required by departmental policy. Specifically, Troopers were underreporting traffic stops resulting in arrests and/or searches resulting in the discovery of contraband. This form of underreporting produced data that indicated PSP Troopers were *less* productive and accurate than they actually were; therefore it is unlikely that the underreporting was a systematic attempt by PSP officials to circumvent or otherwise disrupt the data collection effort. Rather, it is believed that some PSP Troopers and supervisors were simply unaware of the proper reporting procedures.

As a result of the data concerns, the research team, in consultation with PSP administrators and legal counsel, suspended the reporting of data findings until the sources of the invalid reporting were identified and changes were made to rectify the reporting discrepancies. Several steps were initiated to resolve the problem. Specifically, an internal audit of the data was conducted to determine the extent of underreporting of traffic stops resulting in the most serious outcomes. Proper data collection procedures were reinforced to PSP personnel in September 2005 by reissuing the formal policy mandating data collection. Administrators utilized the chain of command to confirm that all supervisors and Troopers were in compliance with data collection procedures. In addition, the UC research team began issuing monthly reports to PSP officials detailing the number of arrests, searches, and seizures for every station so supervisors would be able to confirm that all traffic stops resulting in arrests and seizures were accounted for every month. Finally, alternatives for electronic data collection were developed and implemented, which culminated with the department wide introduction of the CDR X-Press electronic data collection system in May 2006.

Due to the known inaccuracy in the data collected prior to September 2005, some of the statistical analyses conducted for previous reports (e.g., detailed examinations of racial/ethnic disparities in arrests, searches, and seizures) are not included within this report. Statistical analyses of remaining data from 2004 and 2005 believed to be unaffected by the underreporting of traffic stops resulting in arrests and/or searches with seizures are described within this report.

Released in April 2005, the *Year 2 Final Report* summarized the findings from data collected between May 1, 2003 and April 30, 2004. The report focus on three concerns: 1) racial/ethnic differences in the initial stopping decision, 2) racial/ethnic differences in post-stop outcomes received by drivers (e.g., warnings, citations, arrests, and searches), and 3) racial/ethnic differences specifically based on search and seizure rates. Despite the methodological limitations of benchmarks, the *Year 2 Final Report* concluded that although there were some patterns of stopping disparity across racial/ethnic groups, such patterns could be explained by legitimate factors. In regard to post-stop outcomes, the results of the hierarchical multivariate statistical analyses demonstrated no racial/ethnic disparities in warnings, citations, or arrests of stopped drivers when comparing minority drivers to Caucasians. Finally, an examination of search and seizure activity did demonstrate unexplained racial/ethnic disparities. Specifically, the odds of being searched were 3.1 and 3.0 times higher for Black and Hispanic drivers, respectively, compared to Caucasian drivers.

Based on these findings and recommendations, the response of the PSP administrators was swift, comprehensive, and involved several components. Initially, the findings from the *Year 2 Final Report* were made publicly available and the entire document was posted on the PSP website for all personnel to access. Second, supervisory oversight for data collection at the station level was dramatically enhanced. As a direct result, missing and inaccurate data rates lowered significantly; indirectly, supervisory accountability was enhanced. Third, the PSP extended their contract with the UC research team for data collection and analyses of all member-initiated traffic stops for an additional three years (2007 – 2009), and implemented an electronic data collection method (i.e., CDR X-press) in order to improve the quality and accuracy of the data collected. Fourth, the PSP continued to maintain their focus on research, training, and supervisory oversight of discretionary searches to ensure officer compliance with existing departmental rules and regulations (e.g., the consent to search waiver form). Finally, a separate but related project consisting of multiple focus groups was initiated to further identify the “best practices” of PSP Troopers who engage in search and seizure practices.

BEST PRACTICES IN SEARCH AND SEIZURE ACTIVITIES: FOCUS GROUP RESEARCH

In August 2005, focus groups were conducted with 95 PSP Troopers and corporals to identify “best practices” in search and seizure activities. Participants were identified by their supervisors as those who were the most productive (i.e., conduct high rates of searches), accurate (i.e., high percentages of their searches result in seizures), and professional (i.e., courteous in their encounters with citizens, exhibiting no known signs of racial or ethnic bias, etc.). A wide range of topics related to search and seizure activities were discussed and several main themes surfaced during the qualitative analyses of the focus groups. Over 90% of the participants made at least one substantive comment regarding the importance of indicators of suspicion both prior to and during the stop. The participants also indicated the importance of considering multiple factors of suspicion and understanding the manner in which these indicators interacted with one another, rather than simply relying on individual indicators in isolation. Nevertheless, a small minority of participants indicated that they relied upon “gut feelings,” “sixth sense,” or the race/ethnicity of vehicle occupants in some

capacity to develop suspicion. These individual participants had a significantly lower self-reported search success rate compared to other participants.

One of the goals of the focus group research was to better understand the racial/ethnic disparities in searches and seizures reported in the *Year 2 Final Report*. Participants were asked directly for their thoughts regarding these disparities. They responded that racial/ethnic disparities in search and seizure rates may be due to the following reasons: 1) training deficiencies, 2) reliance on only one or two indicators of suspicion rather than multiple indicators, 3) poor understanding of different behaviors across racial/ethnic groups, 4) different drug trafficking methods used across racial/ethnic groups, and 5) inaccuracies in the data collection effort (i.e., the underreporting of searches with seizures on the CDR forms).

Apart from indicators of suspicion, over 90% of the focus group participants made a substantive comment describing the importance of investigative techniques. In particular, consent is a primary issue due to Pennsylvania's unique search and seizure laws, which increase reliance on consent searches. When asked how often citizens decline to give consent to search, focus group participants indicated that it was an extremely rare occurrence. In contrast, the statistical analyses of CDR data reported in *Year 2* indicated that 32.5% of drivers asked for consent to search declined such requests, and this rate varied across racial/ethnic groups. The discrepancies between Trooper accounts and results from statistical analyses was believed to be based on a misunderstanding of the data collection item on the CDR, and ultimately led to a change in the collection of this information in the CDR X-press electronic data capture. Participants also varied in their responses when asked about the use of search request forms. Some participants suggested that the form was a hindrance to search and seizure activities and rarely used. Other participants indicated that using the form was beneficial in subsequent legal proceedings and thus always used.

Discussion during the focus groups also included participants' perceptions of the differences between themselves (i.e., identified as the most productive in search and seizure activities) and their peers. Over 85% of the participants made at least one substantive comment on this issue. Participants suggested that their peers lacked interpersonal skills necessary for effective roadside interviews, had received insufficient training or were inexperienced, and failed to engage in "quality" traffic stops (i.e., did not spend the time necessary to develop suspicion of criminal activity). When asked about their perceptions regarding SHIELD training, focus group participants were generally positive, but commented on a few areas that could be improved. Specifically, participants suggested that the SHIELD training should enhance "hands-on" training so that participants could apply what they had learned. Other suggestions included providing more advanced classes once the basic information from SHIELD has been learned, a specific focus on commercial vehicles, and a terrorism component.

Finally, there was considerable discussion regarding the CDR data collection effort. The participants described inconsistencies in when CDR forms were completed and indicated that they did not believe the data collection system was accurate.

TRAFFIC STOP DATA: 2004 - 2005

During 2004, there were 300,683 member-initiated traffic stops recorded on CDR forms and entered into the database for analysis. Less than 2% of the CDR forms received by the research team contained any type of missing data. In 2005, there were 272,670 member-initiated traffic stops reported, and the rate of missing data was slightly higher at 2.9% across the department. The number of member-initiated traffic stops reported in 2005 represents a decrease of over 14% since 2003. The majority of traffic stops and citizen characteristics were extremely consistent between 2004 and 2005; for example, in both years, roughly two-thirds of drivers stopped were male and the majority of drivers were Caucasian.

There were significant differences in some of the post-stop outcomes reported for drivers between 2004 and 2005. While the percentage of warnings and citations remained relatively constant, the percentage of drivers arrested and/or searched increased significantly in 2005 compared to 2004. This surge in reported arrests and searches in 2005 is likely based on PSP administrators' reemphasis of the appropriate data collection procedures in September 2005 (after discovering that Troopers were not following department protocol regarding the data collection). Specifically, in comparing the arrest rates of three different time periods – 1) September 2004 to December 2004, 2) January 2005 to August 2005, and 3) September 2005 to December 2005 – significant differences emerged. In late 2004 and the first eight months of 2005, the arrest rate was 0.5%, however, the arrest rate increased to 1.5% during the last four months of 2005. Similarly, the search rate was reported as 1.0% between September 2004 and September 2005, but increased to 1.4% in the last four months of 2005. These results suggest that the data collection problem discovered has been appropriately addressed, and that data collected after September 2005 more accurately reflects traffic stops that result in arrests and/or searches with contraband seizures.

TRAFFIC STOP DATA TRENDS

As described at length in both the *Year 1 Final Report* and *Year 2 Final Report*, the crux of traffic stop data interpretation is dependent upon comparison data. Unfortunately, current benchmarks (e.g., Census data) have limitations that restrict the level of confidence in the results. In addition, the validity of using traffic observation benchmarks collected prior to the current traffic stop data is questionable, as the observation data was collected in 2002, but compared to traffic stops in 2004-2005. Apart from the dated nature of the observation data, the availability of four years worth of traffic stop data makes trend analysis a more robust alternative in assessing the stopping patterns within PSP jurisdiction. For these two reasons, the research team decided to not utilize specific benchmarks for comparisons to traffic stop data. Rather, trends in the percentages of racial/ethnic groups stopped, warned, and cited by PSP Troopers over the course of four years of data collection are reported.

As previously mentioned, characteristics of drivers stopped (e.g., race/ethnicity) were consistent between 2002 and 2005, with Caucasian drivers representing roughly 85% of all traffic stops, Black drivers approximately 8%, and Hispanic drivers roughly 3% of all traffic stops. Changes in trends do appear in post-stop outcomes across the department. Specifically, the rate of warnings *decreased* from 27.0% in 2002 to 24.6% in 2005 for all drivers stopped.

Conversely, the rate of citations *increased* from 82.9% in 2002 to 88.1% in 2005. During the same time period, arrests, searches, and the discovery of contraband all demonstrated a slight decline in 2003 and 2004 before rebounding in 2005 to levels that surpass their initial 2002 rates.

Further examination of the pattern of stops was completed on the four years of data by calculating rate of change scores and conducting bivariate statistical significance tests on the rates of stops for Black and Hispanic drivers. The rate of change score reports the change in percentage of stops for each racial/ethnic group between 2002 – 2005 and 2003 – 2005. These rates of change were then analyzed using a binomial test to determine whether they represented a statistically significant change. The results of this process highlighted two counties and 11 stations that had significantly elevated rates of Black drivers stopped across both comparison timeframes (e.g., 2005 data compared to 2002 data, and 2005 data compared to 2003 data). Furthermore, nine counties and 14 stations had statistically significant elevated rates of Hispanic drivers stopped. The reasons for the elevated rates of Black and Hispanic drivers stopped cannot be determined with these data, as these analyses examine only one factor. It is possible that several factors were working independently or in conjunction to produce the trend displayed across time. For example, these data do not measure changes in the traffic population within that jurisdiction, modifications to CDR reporting procedures as a result of the bi-weekly reports, or changes in police stopping behavior, deployment patterns, manpower allocation, *et cetera*, any of which could have an impact on the jurisdictional trend.

Therefore, it is the conclusion of this report that between 2002 and 2005 several counties and stations display elevated rates of minority stops when compared to Caucasian stops. It cannot be determined with these data, however, if such disparities are due to discrimination. Rather, the findings show that these stations need to be further monitored in 2006 to determine whether such trends continue.

Due to the limitations of the data collected on traffic stops resulting in arrests and/or searches with contraband seizures detailed previously, traffic stops involving warnings and citations became the focus of more detailed analyses for comparisons of Black and Hispanic drivers to Caucasians. Across the four years of data collection, there were no statistically significant differences in the percentages of racial/ethnic groups issued warnings. In contrast, Caucasians consistently had the lowest rates of citations when compared to other racial/ethnic group, although that gap is slowly closing over time. Nevertheless, bivariate statistical analyses confirm that Hispanic drivers were more likely to receive a citation when compared to their Caucasian counterparts. There are a number of possible explanations for this disparity in citation rates (e.g., reason for the initial stop, severity of the traffic offense, etc.) that are not measured in these trend analyses. Therefore, consideration of other potential explanatory factors was conducted using multivariate statistical analyses and is reported below.

CITATIONS: 2004 – 2005

Examination of post-stop outcomes in 2004 and 2005 were limited to citations due to the data limitations with traffic stops resulting in arrests and/or searches with contraband seizures described previously. Traffic stops that resulted in warnings were also not considered in these analyses, as the focus was centered on the most coercive outcome (i.e., citation). Both bivariate and multivariate analyses were conducted on the two years of data and produced several important conclusions. Using chi-square analyses, in 2004, Caucasian drivers were the *least* likely to be issued citations (86.0% of stops) compared to Black (87.3%), Hispanic (88.2%), and “other” (91.8%) drivers.¹ Female drivers were *less* likely to be issued citations compared to male drivers. These patterns and trends varied somewhat at the area level and more noticeably at the troop and station levels.

Initial bivariate analyses of the 2005 data demonstrated slightly different results. Similar to previous years, Caucasian drivers remained the *least* likely to be issued citations (87.8% of stops) compared to Black (88.0%), Hispanic (89.5%), and “other” (92.1%) drivers. In contrast to data collected in 2004, data from 2005 demonstrated that the likelihood of receiving citations did not vary by gender; that is, once stopped, male and female drivers were equally likely to receive citations. These patterns and trends again varied somewhat at the area level and more so at the troop and station levels. Findings reported at specific jurisdictional levels are included within the report for review by PSP supervisors to better understand the patterns of racial/ethnic disparities in citations within their jurisdictions.

The previously noted findings resulted from bivariate analyses, which do not consider alternative explanations for the findings. In contrast, multivariate statistical models take many different factors into account when attempting to explain a particular behavior. For example, driver, vehicle, stop, and Trooper characteristics can be simultaneously included in the analyses to understand the independent effect of drivers’ race/ethnicity on traffic stop outcomes. These types of analyses provide a more thorough and accurate interpretation of the data. Due to the known underreporting of traffic stops resulting in arrests and/or searches with contraband seizures, all traffic stops that resulted in arrests were removed from the data set for these analyses. That is, the analyses reported below represent investigations of racial/ethnic differences in citations for only those traffic stops that were not more serious (i.e., did not result in arrest).

Based on the multivariate models, in 2004, Black and Hispanic drivers were not significantly more likely to be issued citations compared to Caucasian drivers; however, Native American, Asian, and Middle Eastern (“other”) drivers collectively were 1.4 times *more* likely to be issued citations when compared to Caucasians. In 2005, Black drivers were 1.2 times *less* likely than Caucasians to be issued traffic citations during traffic stops that did not involve arrests, while Native American, Asian and/or Middle Eastern (“other”) drivers again were together 1.2 times significantly *more* likely to receive a citation in comparison to Caucasians. Various other driver, vehicle, stop, and Trooper characteristics were associated with the

¹ “Other” drivers include: Native American, Asian/Pacific Islander, and Middle Eastern.

likelihood of receiving a citation in both 2004 and 2005, and are more fully described within this report.

As noted within this report, however, caution must be used when interpreting these findings as not all factors that might influence officer decision-making have been included in the statistical models. It is possible that some unmeasured legal and extralegal factors might account for some of the racial/ethnic disparities reported in traffic stop outcomes. Moreover, such differences in citation rates may be explained by legitimate factors that are unmeasured by these data (e.g., the severity of the traffic offense, drivers' compliance with officers' requests, etc.) or by officer bias toward specific minority groups. Nonetheless, the reasons for the racial/ethnic disparities in citations reported cannot be determined with these data.

Based on the findings in the Year 3-4 Final Report, it is the conclusion of the research team that racial and ethnic disparities existed for citations issued in 2004 and 2005 during member-initiated traffic stops. Native American, Asian, and Middle Eastern drivers collectively were significantly more likely to be issued citations during traffic stops compared to Caucasians drivers. It cannot be determined with these data, however, if such disparities are due to discrimination. Rather, the findings show that racial and ethnic disparities remain after statistically controlling for the legal and extralegal factors that can be measured with these data.

RECOMMENDATIONS

Based on these findings, a series of training and policy recommendations have been made to PSP officials over the course of the data collection effort, and are reiterated below.

Training recommendations:

- PSP interdiction training should attempt to better educate Troopers regarding the complexities of interactions with members of different racial/ethnic groups, and include a stronger discussion of racial profiling.
- Criminal interdiction training should include cultural differences in behaviors that may not be valid indicators of suspicion.
- Criminal interdiction training should continually reinforce that “gut instincts” and “sixth sense” alone are unproductive indicators of suspicion.
- Troopers suggested that both criminal interdiction training and basic academy training include more components regarding successful roadside interview tactics.
- Troopers also recommended that criminal interdiction training be more interactive, advanced, and provide better training on criminal indicators.

Other recommendations:

- The current use and deployment of the canine handlers should be reexamined.
- Based on information gathered during focus groups, the CDR data collection effort needs to be reexamined and perhaps redesigned.
- It remains critical to routinely conduct data audits (similar to that conducted by the Systems and Process Review Division [SPR] in September 2005).
- PSP administrators should examine the specific stations identified in **Section 5** of this report, which demonstrate statistically significant increases in the percentages of Black and Hispanic drivers stopped in their jurisdictions across the four-year time period.
- PSP administrators should examine the racial/ethnic disparities reported in citation rates across areas, troops, and stations to begin to better understand where and why these disparities exist.
- Continued monitoring of racial/ethnic disparities in traffic stops, warnings, citations, arrests, searches, and seizures rates remains necessary.

The implementation of many of these recommendations has already occurred. PSP officials remain committed to both the data collection effort and the larger goals of reducing racial/ethnic disparities in traffic stops and post-stop outcomes, as well as providing legitimate and unbiased policing services to citizens of the Commonwealth of Pennsylvania. An update to this report, based on the statistical analyses of data collected in 2006, will be delivered in May 2007. Thereafter, yearly reports will be issued in April 2008 and 2009.

1. INTRODUCTION

OVERVIEW

This report documents the findings from statistical analyses of data collected during all member-initiated traffic stops by the Pennsylvania State Police from January 1, 2004 – December 31, 2005. These data represent the third and fourth years of data collection for the Project on Police-Citizen Contacts. In comparison to the previous two reports, one of the most significant alterations is the change of time frame for reporting. The final reports previously issued for Years 1 and 2 reflect the time periods of May 1, 2002 – April 30, 2003, and May 1, 2003 – April 30, 2004, respectively. This time frame matched the original starting point of the project (May 1, 2002), and reports were based on a full year of data, rather than on calendar years. This format has been altered in the current report. The data reported within this document is based on calendar years and all subsequent reports will follow this new reporting style. The change in the reporting time period does not affect any of the content of this report; however, it is important to note that reference is made throughout this report to Year 1, Year 2, Year 3, or Year 4 data, which now represent calendar years of 2002 – 2005. The only exception is Year 1 data, which refers to member-initiated traffic stops collected over a 7-month time frame (i.e., May 1, 2002 through December 31, 2002). Year 2 data refers to member-initiated traffic stops during 2003 (i.e., January 1, 2003 – December 31, 2003). Likewise, data from Years 3 and 4 refer to member-initiated traffic stops conducted during 2004 and 2005, respectively (i.e., January 1, 2004 – December 31, 2004, and January 1, 2005 – December 31, 2005).

The specific analyses of data within this report reflect a two-year time period. Years 2004 and 2005 are both reported together within this document due to some concerns raised in September 2005 regarding the validity of the data collection effort. During focus group discussions with PSP Troopers, it was discovered that some Troopers were not completing Contact Data Reports (the basis for the data reported within this document) during all member-initiated stops. Specifically, it was reported that some Troopers were unaware that CDRs were to be completed during traffic stops that resulted in an arrest or seizure of contraband. The research team, in consultation with PSP administrators and legal counsel, suspended the reporting of Year 3 data until the sources of the invalid reporting were identified and changes were made to rectify the reporting discrepancies. These issues are described in further detail below and again in **Section 2**.

SUMMARY OF THE YEAR 2 REPORT (MAY 1, 2003 – APRIL 30, 2004)

Released in April 2005, the *Year 2 Final Report* summarized the data collected between May 1, 2003 and April, 2004 by examining three separate, but related issues: 1) the initial stopping decision, 2) post-stop outcomes received by drivers (e.g., warnings, citations, arrests, and searches), and 3) specific examinations of searches and seizures. In regard to the initial stopping decision, over 300,000 traffic stops were examined by developing five separate benchmarks in an attempt to identify any patterns of disparity across racial/ethnic groups. Despite methodological limitations of the benchmarks, the *Year 2 Final Report* concluded that although there were some patterns of disparity across racial/ethnic groups,

such patterns could also be explained by legitimate factors. Areas with disproportionality ratios that raised initial concerns also often had small residential minority populations (inflating reported disproportionality ratios based on Census data), a major thoroughfare (composed of drivers from racial/ethnic groups not reflected in residential populations), and a significant proportion of traffic stops involving drivers that did not reside in that municipality, county, or even the state (again indicating that Census comparisons are invalid). Thus, based on statistical analyses of all of the data available, the University of Cincinnati research team concluded that there was no consistent statistical evidence that Pennsylvania State Troopers made traffic stops based on drivers' race and/or ethnicity.

The second component of the *Year 2 Final Report* examined racial/ethnic differences in post-stop outcomes. A series of analyses were conducted that examined racial/ethnic disparities in outcomes received by drivers once stopped by PSP Troopers (e.g., warnings, citations, arrests, and/or searches). The results of the hierarchical multivariate statistical analyses demonstrated no racial/ethnic disparities in warnings, citations, or arrests of stopped drivers. In other words, there was no consistent evidence to suggest that Black or Hispanic drivers were significantly more likely to be issued warnings, citations, or arrested during traffic stops, when compared to Caucasian drivers.

The final focus area of the *Year 2 Final Report* was based on PSP search and seizure activities. After controlling for other relevant legal and extralegal factors, findings from the *Year 2 Final Report* indicated that the odds of being searched were 3.1 and 3.0 times higher for Black and Hispanic drivers, respectively, compared to Caucasian drivers. Furthermore, when considering only stops for speeding (where the exact severity of the offense was directly measured as the amount over the speed limit), Black and Hispanic drivers were 3.8 and 3.9 times more likely to be searched compared to Caucasians, respectively. Based on these findings, the UC research team concluded that racial and ethnic disparities exist for searches conducted during member-initiated traffic stops. It could not be determined with these data, however, if disparities were due to discrimination. Rather, the findings showed that racial and ethnic disparities in searches remained after statistically controlling for the legal and extralegal factors that can be measured with these data. Findings from these analyses suggested that more advanced research was needed to understand the reported racial/ethnic disparities in search and seizure rates.

Based on these findings, the *Year 2 Final Report* offered the following recommendations:

1. Disseminate specific findings to area, troop, and station Commanders with a mandate to reduce any reported disparities.
2. Implement a station-level oversight mechanism for data collection and reported racial/ethnic disparities.
3. Continue focusing on PSP research, training, and supervisory oversight on discretionary searches to ensure officer compliance with existing departmental rules and regulations (e.g., the consent to search waiver form).
4. Investigate the factors that Troopers consider "suspicious" which lead to a search.
5. Continue collection of data on all member-initiated traffic stops.

PSP Response to *Year 2 Final Report* Recommendations

Based on these findings and recommendations, the response of the PSP administrators was swift and comprehensive.

1. The findings from the *Year 2 Final Report* were made publicly available and the entire document was posted on the PSP website. All Troopers are able to access this report and supervisors were specifically encouraged to do so.
2. Supervisory oversight for data collection at the station level was dramatically enhanced and, as a direct result, missing and inaccurate data rates lowered significantly. Monthly reports were established to notify supervisors not only of invalid data, but also of aggregate rates of warnings, citations, arrests, searches, and seizures reported on the CDR forms. These data can then be matched by supervisors to arrest, search and seizure data collected on other forms.
3. These steps were taken to increase supervisor accountability for more accurate data collection.
4. PSP continued to maintain their focus on research, training, and supervisory oversight of discretionary searches to ensure officer compliance with existing departmental rules and regulations (e.g., the consent to search waiver form). The PSP Contact Data Report project manager (Lt. Brenda Bernot, replaced by Lt. Byron Lewis in 2006) was in continual contact with the UC research team to ensure seamless and continual oversight of the program. The research project Principal Investigator was invited to and attended the PSP SHIELD training program (introductory criminal interdiction training) in January of 2006. In addition, UC researchers conducted a series of focus groups with PSP Troopers in order to understand the best practices in criminal interdiction activities as well as the impediments to these best practices (see below). Findings from this research, along with training recommendations, were shared with PSP officials during a presentation in July, 2006.
5. A separate but related project was initiated to further identify the “best practices” of PSP Troopers who engage in search and seizure practices. In August of 2005, Dr. Engel and her research team, with the assistance of PSP officials, invited over eighty Troopers to be involved in eight separate focus groups. Thee focus groups were designed to identify the reasons why PSP Troopers conduct searches and what verbal, non-verbal, and behavioral cues are perceived by Troopers as the most effective in predicting criminal behavior. In addition, these focus groups explored how Troopers were trained and their perceptions regarding the usefulness and accuracy of the training they received. Troopers were selected for participation based on their productivity, accuracy, and professionalism in police-citizen encounters resulting in searches. The procedures and findings from this study are described in further detail within **Section 2** of this report.

6. PSP extended their contract with the UC research team for data collection and analyses of all member-initiated traffic stops for an additional three years (2007 – 2009). In addition, the mechanism for collecting the data has changed. Originally captured on scannable forms, information about member-initiated traffic stops is now captured electronically through a system called CDR X-press (described in greater detail below). The electronic capture of these data is a dramatic improvement over the use of scannable forms. First, the data are likely to be more accurate, as the risk of human error associated with scannable forms is minimized. Second, Troopers are more likely to record this information because it is less time consuming and an easier method for capturing data. Finally, supervisory oversight of the electronic data is much easier and more efficient.

Inconsistencies in Data Collection Procedures

While the focus groups with PSP Troopers (described in **Section 2**) provided a wealth of information regarding the “best practices” of search and seizure as well as several training initiatives, it was revealed that there were some problems associated with the on-going data collection project. Information obtained during focus groups with Troopers conducted by UC researchers from 8-23-05 through 8-26-05 suggested there were some discrepancies in PSP Troopers’ compliance with the data collection procedures for the Contact Data Reports (CDR). The original purpose of data collection was to have Troopers complete the forms for every member-initiated traffic stop, regardless of the outcome. It became apparent during the focus group sessions that not all Troopers were following this data collection procedure. Specifically, some Troopers were not completing CDRs for traffic stops when contraband was seized or when drivers were arrested. That is, the most serious traffic stops were not being consistently captured in the CDR database across all Troopers. It appeared that the discrepancies from the data collection procedures were based on honest mistakes by some Troopers and their supervisors. Some Troopers noted that they believed it was not necessary to complete CDR forms for traffic stops involving seizures and arrests because that information was captured in other data sources. The CDR forms, however, do not contain unique identifiers, and therefore cannot be merged with any other data sources collected by PSP. This oversight, while significantly affecting the data collection effort, was unlikely to be intentional on the part of PSP personnel as the results of this type of underreporting are findings that reflect poorly on the efforts of the organization. A consistent reporting of traffic stops that involve searches not resulting in the discovery of contraband, combined with an underreporting of traffic stops when a search resulted in a seizure, leads to findings that PSP is less successful in the discovery of contraband during searches than they are in reality. That is, this type of underreporting actually make PSP Troopers appear to be less productive and accurate than they actually are, and therefore it is unlikely that this underreporting was a systematic attempt by PSP officials to circumvent or otherwise disrupt the data collection effort.

PSP administrators and legal counsel were immediately notified of the potential data collection discrepancy. PSP administrators quickly responded in four ways: 1) an internal audit of the data was conducted to determine the extent of the problem; 2) the proper data collection procedures were reinforced to PSP personnel through the re-issuing of the formal

policy mandating data collection; 3) administrators utilized the chain of command to confirm that all supervisors and Troopers were in compliance with data collection procedures; in addition, the UC research team began issuing monthly reports to PSP officials detailing the number of arrests, searches, and seizures for every station so supervisors would be able to confirm that all traffic stops resulting in arrests and seizures were accounted for every month; and 4) alternatives for electronic data collection were developed and implemented. These responses are described in greater detail below.

Data Audit

It was unclear from the focus group discussions the extent of the inaccuracies in the data. That is, it was unknown if the underreporting of the most serious traffic stops was a department wide problem or limited to a few Troopers working in a small number of stations. As advised by the UC research team, PSP administrators ordered an immediate data audit comparing the number of seizures and arrests reported on CDR forms with the number of arrests and seizures reported through other data sources. This specialty review data audit was conducted by the Systems and Process Review Division (SPR). The SPR reported statistics for a two-month period (June and July 2004), for self-initiated traffic stops that resulted in the seizure of property and/or the physical arrest of a subject in nine randomly selected stations. Based on this initial review, the UC research team requested that seizure data be collected from two additional stations that were likely to conduct more searches and seizures than the originally sampled stations. The results from these specialty reviews were compared to CDR data and demonstrated wide variation in reporting practices across stations. The following conclusions were made based on this review:

1. It is highly likely that previous reports based on CDR data provided an inaccurate account of the following:
 - Number of drivers taken into physically custody
 - Number of searches conducted
 - Number of searches that result in the discovery of contraband (search success or “hit” rates)

2. It is also possible, though less likely, that the following information provided in previous reports based on CDR data is inaccurate:
 - Racial/ethnic composition of drivers arrested during member-initiated traffic stops
 - Racial/ethnic composition of drivers who were searched
 - Racial/ethnic composition of searched drivers found in possession of contraband

3. It was argued that based on the small number of member-initiated traffic stops that actually result in a physical custody arrest and/or search, an underreporting on these traffic stops will likely not significantly influence previous findings of CDR data regarding:
 - Racial/ethnic composition of stopped drivers
 - Racial/ethnic comparisons of traffic stops to benchmark indicators

Based on these conclusions, the UC research team recommended to PSP administrators and legal counsel in November 2004 that the *Year 3 Final Report* be suspended to allow time for

PSP and the UC research team to formulate a clear response to the problems outlined above. Further, it was recommended that rather than issue a *Year 3 Final Report* based on data with known inconsistencies, these data should be reported together with data that were reliably gathered after the inconsistencies in the collection procedures were corrected. It was reasoned that a comparison between these two data bases could demonstrate the likely extent of the underreporting of traffic stops involving the most serious outcomes (i.e., arrests and seizures). Therefore, this report provides findings for data collected in 2004 and the first eight months of 2005 (January – August) compared directly to data collected after September 1, 2005 (after steps were taken to increase the accurate reporting of traffic stops on the CDR). The interventions to address the inconsistencies in the data collection procedures are described in detail below.

Reinforced Proper Data Collection Procedures

On September 2, 2005, an electronic communication was sent to all area, troop and station Commanders from the Early Intervention Program Office, indicating that the focus groups had revealed that Troopers were not in full compliance with Special Order 2003-055, Bias-Based Profiling Contact Data Report, Form SP 7-0045. The importance of this data collection effort was reiterated, and specific examples were given to demonstrate situations when a CDR form must be completed.

Managerial Oversight

In addition to reissuing the policy guiding the collection of data on the Contact Data Reports, the area, troop and station Commanders were notified in September, 2005 that following the data collection procedures was a priority for the agency. Area and station Commanders were held accountable for the percentages of missing and inaccurate data reported biweekly by the UC research team. These commanders, in turn, held their subordinates accountable for reducing the inaccuracies in the data collection and ensuring that CDR forms were completed for all member-initiated stops, including those that resulted in more serious outcomes such as searches, seizures, and arrests.

In addition, new monthly feedback reports were produced beginning in September, 2005 that documented monthly totals of traffic stops, warnings, citations, searches, seizures, and arrests for every area, troop, and station. These reports allow supervisors to review the data collected on CDR forms and, in particular, compare the number of arrests, searches, and seizures to data collected from other sources. Therefore, supervisors have ready access to information that will aid in determining whether or not their Troopers are complying with the data collection procedures.

Electronic Data Capture

Findings from the focus groups conducted with Troopers in August of 2005 also demonstrated the need for a more efficient system to capture information during traffic stops. Although the roll-out of an electronic data collection system for all PSP reports (IIMS) had been anticipated to occur in 2005, this project had experienced a number of delays.

Therefore, it was determined by PSP administrators that an interim electronic data collection strategy was needed to increase the accuracy of the CDR traffic stop data. The IIMS, RMS Operations Policy group was tasked with creating an electronic data capture system that could be used with hardware and software currently available in the patrol cars and at the stations. Labeled the “CDR X-Press,” the electronic capture of information previously recorded on scannable Contact Data Reports was pilot tested in February, 2006. Troopers were trained on the use of the software from February – May 2006, and the system was operational in the majority of stations by May 2006. The date for the mandatory usage of the software listed in Special Order 2006-5 was May 12, 2006. This new data collection system eliminates the majority of human errors associated with scannable forms and allows for more efficient supervisory oversight of the data collected. Specifically, the software will contain costs and streamline department operations by: 1) eliminating supervisory review of the CDR scan forms; 2) shortening the time needed to complete the CDR form; 3) eliminating the cost of printing CDR Scantron forms; and 4) eliminating the costs and effort associated with collecting and mailing the forms to the UC research team.

SECTION SUMMARY

Despite these important changes in the data collection procedures, it remains true that the data collected from 2002 – September 2005 likely underreported the following:

- 1) Total number of member-initiated traffic stops
- 2) Number of member-initiated traffic stops that result in an arrest
- 3) Number of member-initiated traffic stops that result in a search
- 4) Number of member-initiated traffic stops that resulted in a seizure of contraband

It is highly unlikely that the underreporting of traffic stops involving arrests and searches with seizures would impact the previous findings regarding racial/ethnic comparisons of traffic stops, warnings, and citations. Arrests and searches with seizures are relatively infrequent events. The exclusion of such a low percentage of cases from data sets that include, on average, over 300,000 traffic stops per year will likely have only a marginal (if any) impact on previous findings, and the findings documented within this current report.

It is possible that the percentages of racial/ethnic drivers (and the outcomes they receive) documented in previous reports may be greater or smaller based on the inaccuracy in data collected. This possibility, however, is less likely for several reasons. First, member-initiated traffic stops that result in searches with seizures or arrests (the situations which were underreported) are statistically infrequent events. Adding even a few hundred stops to the average number of traffic stops reported per year (approximately 300,000) would have little or no impact on previous findings regarding racial/ethnic differences in traffic stops. Furthermore, there is no reason to believe that the underreporting of traffic stops involving seizures and arrests was different across racial groups. That is, there was no evidence to suggest that Troopers systematically underreported traffic stops involving seizures of contraband and arrests of Black or Hispanic drivers. Rather, Troopers were underreporting traffic stops involving arrest and seizures across all racial/ethnic groups.

The slight possibility does exist, however, that racial/ethnic comparisons reported for traffic stops involving arrests and searches are inaccurate. This possibility exists because the underreporting of these types of traffic stops is not randomly distributed throughout the department. Rather, Troopers from some stations underreported, while Troopers from other stations did not. In some instances, the underreporting actually varied within stations based on direct supervisory oversight (e.g., some field supervisors within a single station required that CDR forms be completed for traffic stops involving arrests and searches, while others did not). If the underreporting occurred in stations where Troopers were more (or less) likely to encounter minority drivers, the underreporting of stops involving arrests and searches with seizures could impact previous analyses examining arrests and searches. Therefore, the prudent approach, and the approach adopted within this report, is to only examine the racial/ethnic differences in arrests, searches, and seizures in data collected after September 2005.

REPORT OUTLINE

The following report for data collected from January 1, 2004 through December 31, 2005 is divided into seven sections: 1) introduction, 2) focus group results, 3) traffic stop data collection methodology, 4) description of traffic stop data, 5) trend analyses of data from 2002 through 2005, 6) description and analyses of post-stop outcomes, and 7) conclusions and policy recommendations. The general content and summary of findings for **Sections 2 - 7** are described below.

Section 2

Section 2 reports on the findings of the focus groups conducted in August 2005 with 95 PSP troopers and corporals. These focus groups explored the reasons why troopers engage in searches, what citizen and vehicle characteristics troopers consider to be suspicious, what verbal and nonverbal cues officers consider to be suspicious, and which of these cues are believed to be the most accurate predictors of criminal behavior.

Section 3

The description of the study's methodology (**Section 3**) focuses on the details regarding the collection of traffic stop data by the Pennsylvania State Police and briefly describes the final police stop dataset that includes 300,683 member-initiated traffic stops in 2004 and 272,670 in 2005.

Section 4

Section 4 provides descriptive statistics for the traffic stop data collected for the entire two-year period (January 1, 2004 – December 31, 2005). This description of data includes the number of stops, characteristics of the stops (e.g., time, day, month, reason for the stop, roadway type, vehicle registration, number of passengers, length of the stop), the reason for the stop (e.g., speeding, moving violation, equipment or inspection violation, etc.), and the characteristics of the drivers (e.g., sex, race, age, residency). The averages for this

information are reported in tables at the department, area, and troop levels and, where appropriate, the station level.

Section 5

Section 5 examines data collected over the four years of the research project (i.e., May, 2002 – December, 2005). Analyses of traffic stop patterns at the department, area, troop, and station levels are conducted by racial/group to describe the stopping trends of the PSP. Additional analyses include statistical significance testing to identify trends in stopping behavior at the county and station level. Post-stop outcomes (i.e., warnings and citations) are also examined at all organizational units by racial/ethnic groups.

Section 6

Post-stop outcomes (e.g., citations) are documented in **Section 6**. Traffic stops that resulted in a warning were not considered in these analyses, as the focus of this report was centered on the most coercive outcome (i.e., citation). Information examining citations is presented for different drivers by race and gender across all organizational units. At the conclusion of **Section 6**, hierarchical multivariate analyses are presented that predict officer decision making after the traffic stop has been made. That is, **Section 6** documents the outcomes drivers receive after traffic stops are made (e.g., citations), and whether these outcomes differ significantly based on a multitude of factors.

Section 7

Section 7 summarizes the information presented, and provides policy recommendations based on interpretations of collected data. Note that the findings reported in this document must be interpreted cautiously. The data collected and presented in this report cannot be used to determine whether or not PSP Troopers have individually or collectively engaged in “racial profiling.” In addition, the legality of prior or future individual traffic stops cannot be assessed with these data. This report is designed to give feedback to PSP administrators regarding the status of the data collection process, along with exploring trends and patterns in the data that may be utilized for training purposes.

Appendix A

Appendix A provides a copy of the implied consent form used in the focus groups.

2. FOCUS GROUP RESULTS

OVERVIEW

In late August 2005, nine focus groups were conducted with 95 PSP Troopers and corporals. These focus groups were initiated as a result of the PSP's on-going commitment to better understand patterns and practices related to search and seizure during traffic stops and the conclusions of the Year Two Report, which reported racial and ethnic disparities for searches conducted during member-initiated traffic stops. These focus groups were designed to explore the reasons why Troopers engage in searches, what citizen and vehicle characteristics Troopers consider to be suspicious, what verbal and nonverbal cues officers consider to be suspicious, and which of these cues are believed to be the most accurate predictors of criminal behavior.

This section reviews the methodology employed in conducting the focus groups and some basic description of the participants. The remainder of the section details the results of the focus groups by reporting on the indicators of suspicion discussed by the participants, the investigative techniques preferred by the participants, and factors that result in unsuccessful interdictions activity. Finally, the participants' comments regarding training are summarized, difficulties in data collection using the CDRs are highlighted, and recommendations are provided.

METHODOLOGY

The research methodology for the focus groups incorporated both qualitative and quantitative elements. The focus group interview lasted approximately two hours and followed the methodological strategies proposed by Morgan (1988, 1996) and Krueger (1988). Participants were advised verbally and in written form that participation in the focus groups was voluntary and they could leave the session at any time for any reason. Participants were asked to read and sign an informed consent form (see **Appendix A**) documenting the procedures of the research and protections of confidentiality.

The purpose of conducting focus groups was to gather information regarding the perceived "best practices" currently used by PSP Troopers when determining who and when to search during member-initiated traffic stops. The research protocol was specifically designed to better understand the issues surrounding perceptions of suspiciousness and search decisions based on information provided by Troopers who were identified by their supervisors as the most productive (i.e., conduct high rates of searches), accurate (i.e., high percentages of their searches result in seizures), and professional (i.e., courteous in their encounters with citizens, exhibiting no obvious signs of racial or ethnic bias, etc.). Furthermore, individuals representing various areas, troops, and stations from across the state were involved in the focus groups based on the belief that some issues pertaining to search and seizure practices would be geographically and/or organizationally specific. The individuals ultimately selected for participation in the focus groups were Troopers and corporals normally assigned to uniformed patrol duties who were identified by their superiors as exhibiting productivity, accuracy, and professionalism in search and seizures, and who provided representation from various geographic and organizational areas.

The original eight sessions were moderated by a project research assistant who had previously served as a state Trooper in another state. Also, the research project's Principal Investigator was present at six of the eight initial focus groups. In addition, a final focus group was conducted by the Principal Investigator with members of the canine unit. The focus groups were conducted in a conference room at the PSP training academy and participants attended in "on-duty" status to assist them in becoming comfortable discussing issues related to their investigative techniques (Krueger, 1988; Morgan, 1988).

The content of the focus groups including the following topics: 1) types of verbal and nonverbal cues used to determine suspiciousness; 2) vehicle characteristics used to determine suspiciousness; 3) behaviors used to determine suspiciousness; 4) verbal, nonverbal, and behavioral cues that are perceived as inaccurate determinants of criminal activity; 5) perceptions of the types of searches that are the most successful; 6) relevance and perceived accuracy of current search and seizure training; 7) perceptions of their peers' search rates and search success rates; 8) practices of their peers that they consider counter-productive; 9) general perceptions of supervision and management regarding searches and seizures; 10) perceptions of departmental emphasis on searches and seizures as well as the use of criminal interdiction through traffic stops; 11) perceptions of the legal limitations on conducting searches and seizures; and 12) perceptions of the existence of racial profiling. Only the topics directly related to racial/ethnic differences in search and seizure rates are described within this report.

The moderator loosely followed a pre-established questioning route designed to elicit information related to the research topics listed above. In six of the eight initial focus group sessions, the Principal Investigator of the project occasionally asked clarifying or follow-up questions after the participants gave responses to the moderator's questions. To ensure that everyone participated in the discussion, the moderator occasionally directed questions to specific participants who had not made many comments up to that point. As a result, all but one of the participants made at least one substantive comment during the interviews and the average number of substantive comments per participant was nineteen. All of the initial focus groups were audio recorded and the moderator took personal notes as well to ensure that the comments were accurately recorded and were properly associated with the correct respondent. Thereafter, verbatim written transcripts were created from the audio recordings and these documents served as the data source for this research. These transcripts were then content analyzed by the research team to identify major themes that allow for analysis by topic. Documentation of the specific coding procedures used to quantify the data source and inter-rater reliability of the coding procedures is available from the lead author upon request. Per the contractual relationship between the University of Cincinnati and the PSP, and research protocol approved by the Institutional Review Board (IRB) at the University of Cincinnati, the audio recordings and verbatim transcripts of the focus group proceedings are confidential and will not be disclosed to PSP officials or any persons outside of the UC research team.

While the use of qualitative methods such as focus groups can provide rich and insightful data on the topic of interest, there are limitations associated with these methods. In this study, there are three main limitations that need to be highlighted: 1) concerns of groupthink, 2)

external validity (i.e., generalizability), and 3) reliability. The findings should be viewed in light of these considerations to ensure that the results are correctly interpreted.

The first threat to the accuracy of the results is the problem of “groupthink.” This reflects the concern that the information gathered during group sessions (e.g., focus groups) will be adversely affected by the group dynamics. That is, ideas, opinions and answers provided in the group are heavily influenced by what others in the group are saying. In an extreme example, when one participant makes a statement, others in the group feel inclined to agree with the statement, in spite of their true opinion. In a more likely scenario, participants do not express their disagreement with the manner in which the topic is being addressed by other participants. The concern is that individuals may prefer to avoid conflict or fear how the group will respond to their comments; thus, the group mentality inhibits creative thoughts and valuable data. In this research, a potential threat to groupthink could have stemmed from the inclusion of the canine handlers within the focus groups. Due to their status and expertise in search and seizure activities, their opinions could have dominated the tone and responses of other participants. For this reason, the canine handlers were not included in the eight focus groups; rather, they were interviewed separately. This likely reduced the threat of groupthink to the accuracy of the results.

Second, external validity is the concern that research findings can be generalized or applied to the larger group or population (Shadish, Cook & Campbell, 2002). One problem with qualitative data is that the nature of the data is subjective (Maxfield & Babbie, 2001). That is, the comments offered by the participants are reflective of their perspective and may not necessarily represent the beliefs or opinions of others. Consequently, as the specificity of the comments increases, it becomes more difficult to generalize to the larger group (Babbie, 2004). Therefore, the statements and themes reported from the focus groups need to be interpreted with some caution when making generalizations to all officers. In addition, these officers were chosen specifically for their expertise in search and seizure activities, so they may not necessarily represent all PSP Troopers’ opinions regarding such procedures.

Finally, reliability reflects the idea that an event or information is viewed in similar ways by two or more individuals or across more than one time period. Due to the manner in which qualitative data is collected and analyzed, it has been criticized as having less reliability than other methods, such as quantitative analysis (Maxfield & Babbie, 2001). This concern rests on two main critiques: participant subjectivity and coder subjectivity. Participant subjectivity is the idea that individuals comprehend and remember events in different ways. Consequently, individual understanding may affect the interpretation of an event, leading to differential interpretations among multiple participants. In this research, participant subjectivity may occur when officers are asked to provide their opinion on historical events or summarize their general opinions on a particular topic. For example, two participants may report opposite interpretations of an event and reliability becomes a concern because it may not be clear which of the perspectives is more accurate.

Coder subjectivity also presents a potential threat to reliability in qualitative methods. When coders have different perceptions or levels of understanding regarding the topic, the resulting codes may be inconsistent (Babbie, 2004). In this case, an identical passage from the

participants would be coded in two different ways by the coders, thus producing a lack of reliability. Descriptions of coding comparisons (available from the lead author upon request) demonstrate a very high level of inter-rater reliability (Pearson's $r = .90$). Therefore, it is believed that the impact of coder subjectivity is minimal in this study and poses little threat to the reliability of the results.

In some descriptions of the findings below, percentages are reported regarding the number of substantive comments coded, the number of participants who stated a particular theme or sub-theme, and the number of focus groups where such discussions occurred. While it is instructive to provide this information to serve as a context around which the themes can be described, it should not be interpreted in a strictly quantitative manner. For example, although not spoken verbally, many Troopers may have agreed with the comments made by others in the focus group and a strict reporting of percentages would not reveal this scenario. For example, a reporting that 20% of Troopers stated a particular opinion should be interpreted as a bottom threshold, not an upper bound – that is, it should be interpreted that *at least 20%* of the focus group participants verbalized that particular opinion. It is unknown how many other participants might have agreed with comments but did not verbalize their thoughts. Themes are coded and quantified in an effort to identify reoccurring trends across focus groups and participants. While using quantified codes adds some objectivity to our findings, content analysis is a subjective methodology simply based on the nature of the qualitative data. The findings reported below represent, to the best of our abilities, a comprehensive and accurate description of the consistent issues raised by focus group participants.

Focus Group Participants

In order to select the participants for the focus group interviews, an official email message was sent from the Office of the Commissioner of the State Police to all station and troop commanders in the field. The email briefly explained the purpose of the “best practices” study and requested that the station and troop commanders identify potential participants. Troopers were identified by their supervisors for voluntary participation in the focus groups based on their productivity, accuracy, and professionalism related to search and seizure activities. Once the potential candidates were identified, each was invited to participate by the lieutenant in charge of the Office of Professional Standards within the department. Eighty-eight personnel were invited to participate in the focus group interviews and only three failed to participate. Each participant attended only one of the eight focus groups that were conducted from 08/23/05 through 08/26/05. One final focus group was conducted in September 2005 with members of the canine unit. All of the participants were given a brief questionnaire that gathered the participants’ basic demographic information, interdiction training history, and self-reported measures of the number of searches conducted to date that year, along with a self-estimate of the percentage of these searches where contraband was discovered.

The age of participants in the first eight focus groups ranged from 26 to 52, with an average age of 35 years. While racial, ethnic, and gender diversity of Troopers was considered important, based on the demographics of the department as a whole and the predetermined

criteria regarding search and seizure activity documented above, the focus group participants were predominately Caucasian and male. Specifically, all but two of the participants were male (97.7%), and 93.0% of the participants were Caucasian; 73 of the participants (85.9%) held the rank of Trooper, of those, 12 were corporals. The length of employment ranged from one to 23 years, with an average of nine years; 32% had at least a four-year college degree. The members of the sample represented 55 stations from across the state.

Many of the participants had received specialized training in highway criminal interdiction as exemplified by the approximately 75% of participants who reported having attended at least one such training program in their career (including training both within PSP and from other agencies). Of those who had attended highway interdiction training, the participants reported attending, on average, three courses.

Although the original instructions to the station and troop commanders specifically requested the recruitment of personnel who actively engaged in criminal interdiction work through frequent searches of vehicles and seizures of illegal contraband, some of those who participated in the focus groups did not fit these criteria. For example, on the demographics questionnaire, each respondent was asked to report how many vehicle searches he/she had conducted since January 1, 2005. Participants were given the January 1, 2005 time point reference in an effort to achieve more accurate recall (i.e., asking respondents to estimate searches conducted since the beginning of the new year). The participants reported an average of 25 searches. Thirty of the 83 participants that responded to this question (36.1%) had conducted an average of no more than one vehicle and/or driver search *per month* and three participants reported not having conducted any searches during the prior eight-month period. In contrast, 37.3% of the participants indicated that they were actively involved in criminal interdiction work, conducting an average of at least one vehicle/driver search *per week*. Thus, the experience in search and seizure activity varied tremendously across participants.

Similarly varied results were found in the self-reported accuracy of participants' searches. The questionnaire asked each participant to report how many searches during this same period resulted in a seizure of any sort of illegal contraband. Search success rates were calculated by dividing the self-reported number of searches resulting in seizures by the self-reported number of searches. The average search success rate across all participants was 46% (i.e., 46% of self-reported searches resulted in contraband seizures). This average self-reported search success rate was much higher than the 26% search success rate recorded for the department as a whole based on Contact Data Reports from May 1, 2003 through April 30, 2004. Self-reported search success rates, however, varied dramatically across participants. For example, 33 participants (39%) reported discovering contraband in less than one third of the searches they conducted, with 6 participants (7%) reporting no discoveries of contraband in the last year. In contrast, 39 of the participants (46%) reported discovering contraband in at least half of their searches.

While it is clear that all the focus group participants did not represent personnel who were active and successful in highway criminal interdiction, the participants likely did represent a cross-section of PSP patrol personnel more generally. Thus, while the initial focus of this

research was to determine the “best practices” of search and seizure activity, the diversity in training, experience, and abilities of the participants represented a more accurate reflection of PSP Troopers more generally. As such, the research team was able to identify issues that led to both effective and ineffective search and seizure practices and procedures.

Canine handlers were purposefully excluded from the initial focus groups because of the different nature of their assignment. The purpose of the focus groups was to understand the best practices and impediments to criminal interdiction work from field Troopers’ experiences, rather than from the perspective of special units. Nevertheless, there is much to be learned regarding criminal interdiction from the experience of canine handlers. Therefore, a separate focus group was conducted specifically with members of the canine unit. This focus group was not recorded, and therefore there was no systematic coding of a transcript for qualitative data analyses. Given the small number of canine handlers in PSP and the known identity of the handlers assigned to the focus group by PSP supervisors, the session was not recorded to provide confidentiality to these individuals. After the focus group session, the Principal Investigator of the project recorded her own notes regarding the content of the focus group and these recorded notes were later transcribed into text for future reference. Thus, descriptions of the comments from canine handlers are based strictly on the moderator’s notes and not from systematic coding of verbatim text.

INDICATORS OF SUSPICION

One of the primary reasons for conducting this research was to determine what indicators of suspicion Troopers relied upon during traffic stops that lead to requests for consent to search or search warrants. As a result, a large proportion of the comments made by the participants related to this broad topic. As previously mentioned, percentages are reported regarding the number of substantive comments coded, the number of participants who stated a particular theme or sub-theme, and the number of focus groups where such discussions occurred. It is important to reemphasize that any percentages should be interpreted as a bottom threshold and not as an upper bound – that is, it should be understood that *at least* that percentage of the focus group participants verbalized that particular issue. In this case, approximately 34% of the participants’ coded comments concerned what indicators of suspiciousness they had successfully relied upon during traffic stops to detect criminal activity and legally conduct searches of vehicles and drivers. Eighty of the participants (94%) made at least one substantive comment regarding this topic area and their comments were focused in three main sub-themes: 1) pre-stop indicators, 2) vehicle indicators, and 3) occupant indicators.

Approximately 26% of the focus group participants made at least one substantive comment regarding the use of pre-stop indicators of suspicion. Many of these comments concerned the appearance of vehicles and driver and passengers’ behaviors prior to initiating traffic stops. Sixty-five participants (77%) made at least one substantive comment about suspicious indicators relating to the physical appearance of vehicles. The largest number of participant comments about indicators of suspicious behavior related to Troopers’ interactions with the vehicle occupants. Seventy-three participants (86%) made at least one substantive comment regarding the effectiveness (or lack thereof) of using drivers’ and passengers’ characteristics to indicate criminal activity. Specifically, participants made comments about the

effectiveness or ineffectiveness of relying on occupants' behavioral cues (66% of participants), followed by the occupants' statements (56% of participants), and the occupants' physical appearance (53% of participants).

More specific information regarding these topics was shared with PSP officials, however this will not be made publicly available. It is imperative that the cues of suspicion used by Troopers be carefully examined for potential bias; however, disclosing the specific indicators that Troopers look for may ultimately make criminal interdiction more difficult. In summary, the focus groups revealed that the majority of indicators of suspicion used by Troopers were covered in the SHIELD training classes provided by the PSP, along with other criminal interdiction trainings. That is, the focus group participants did not reveal any indicators that might be considered innovative. They also appeared to have a firm grasp of the core elements of introductory criminal interdiction training. A handful of participants still rely on what they considered "gut feelings" or "a sixth sense" as indicators of suspicious activities. These individual participants were less likely to be successful in contraband discovery compared to the other focus group participants that did not express such sentiments. In addition, a couple of participants indicated that they do consider racial/ethnic characteristics of the occupants to some degree. More experienced participants in criminal interdiction suggested that reliance on these types of indicators was not a successful strategy and that more/better training would likely eliminate the use of race/ethnicity as a cue of suspicion. Furthermore, more experienced and successful participants indicated that it is important to consider multiple indicators as they relate to one another, and not to rely on isolated indicators. More detail regarding these specific findings that have the potential to explain differential search and seizure rates for minority drivers are reported below.

Reliance on a "sixth sense" ability or "gut feelings" to detect suspicious behavior was mentioned by a handful of participants and deserves further discussion. While 95% of the participants did not mention a "sixth sense" ability to detect criminal behavior and most of the participants clearly articulated the specific behaviors, statements, and appearances they relied upon which they based suspicion, a small number of participants claimed that they relied more on "gut instinct" than they did specific facts which could be articulated. It should also be noted that this small number of participants that could not articulate additional reasons for suspicion beyond "gut instinct" and "sixth sense" had significantly lower self-reported search success rates compared to all other participants. Specifically, the average self-reported percentage of searches that resulted in the seizure of contraband for these individuals was 14%, compared to a 48% average search success rate for participants that did not make such statements. Thus, there is evidence to suggest that those Troopers who rely on "gut instinct" are less likely to be successful in criminal interdiction, and may become a legal liability for the department.

Also important for the purposes of this report, one type of occupant indicator discussed by focus group participants was the personal characteristics of drivers and passengers. Collectively, 45% of participants in the eight original focus groups made at least one substantive comment about the personal characteristics of occupants as related to criminal activity and/or the development of suspicion. These statements are particularly important due to the original purpose of this research: to better understand PSP's racial/ethnic

differences in search success rates documented in the *Project on Police-Citizen Contacts, Year 2 Report*. The participants' responses primarily were focused on age, gender, and race/ethnicity of the occupant.

A number of participants commented on the personal characteristics of the occupants and how these were perceived as the Trooper developed suspicion. Twelve participants (14%) made comments about the ages of the occupants. Most of these comments suggested that if illegal drugs were found, youths in their teens and early twenties were more likely to have a small quantity of contraband, whereas "large load" drug couriers were usually adults in their late twenties.

Twelve participants (14%) also commented on the gender of drivers they encountered carrying illegal contraband. Most of these comments did *not* claim that men were in possession of contraband more often than women but, rather, that females in possession of contraband were more difficult to apprehend because of participants' reluctance to search female suspects. Participants noted that the small percentage of female Troopers, coupled with the small percentage of those female Troopers who were interested in criminal interdiction work, contributed to the problem of apprehending females.

Twenty-three participants (27%) also made at least one substantive comment about the race/ethnicity of those transporting illegal contraband. Some of these comments indicated that the participants felt that contraband smuggling involved all racial groups and that reliance on race/ethnicity as an indicator was ineffective. Specifically, five participants (6%) stated that race was an *ineffective* indicator to rely upon. In contrast, eight participants (9%) made statements suggesting they do consider race and ethnicity to some extent in combination with other factors when determining suspicion. This appears to be especially true with regard to Hispanic and Arabic drivers. Eleven participants (13%) also made comments about their perceptions that trafficking and use of particular drugs were associated with specific racial and ethnic groups. That is, these participants appeared to hold clear perceptions about racial/ethnic differences in drug preference. At least some of the participants' sentiments regarding racial/ethnic differences in drug use/trafficking patterns has been supported in empirical research.²

Participants' perceptions of the importance (and non-importance) of personal characteristics is critical, as this research seeks to better understand racial and ethnic disparities in search and seizure rates. Discussions with canine handlers (not systematically coded) in combination with the coded comments from recorded focus groups provided much insight in this regard. Several plausible interpretations of the inconsistent search success rates across racial/ethnic groups were offered. Some participants suggested that some Troopers may not

² For example, research on drug use differences across racial groups generally supports the claim that African Americans more frequently use crack cocaine when compared to Caucasians (Tonry, 1995). The National Survey on Drug Use and Health (2004) showed that African Americans use crack more often than Caucasians, but that Caucasians use marijuana more often than African Americans. Notwithstanding these findings, there have been some criticisms regarding the validity of empirical studies showing racial/ethnic differences in drug preferences (Beckett et al., 2005). Further, it is unknown whether Hispanics and other minorities are actually more likely to be involved in drug trafficking compared to Caucasians or simply more likely to be stopped and subsequently arrested for such offenses.

be properly trained and thus may be more likely to rely on stereotypes regarding racial/ethnic groups and their possession of contraband. These participants suggested that poorly trained Troopers are more likely to rely on only one or two indicators of suspicion (possibly including race or race-related factors), rather than examining the totality of the circumstances. These participants stressed the importance of having multiple indicators of criminal activity and repeatedly indicated that descriptions of suspicious behavior must be considered in context and with other indicators to be successful for criminal interdiction purposes.

Several participants also stated that there are differences across racial/ethnic groups regarding how drivers react to the presence of officers, and noted that Troopers may misinterpret these differences because they have not been properly trained on cultural differences in behavior. Finally, a couple of participants suggested it is possible that particular racial/ethnic groups use different and more deceptive methods for concealing contraband compared to others. Specifically, it was mentioned that certain ethnic groups were more likely than others to transport contraband in hidden compartments within vehicles. Hidden compartments are becoming more advanced (e.g., hydraulically controlled) and are more difficult to detect. As such, the search success rates of Hispanics may be lower than rates for Caucasians and Blacks (groups perceived to be less likely to use hidden compartments) because the contraband is more difficult to locate in the vehicle.

In summary, those participants that discussed their thoughts of why the *Year 2 Final Report* demonstrated racial and ethnic disparities in search and seizure rates provided valuable insight into the possible mechanisms that led to these disparities. These comments were introspective and thought provoking, providing several alternatives for possible policy and training recommendations. In summary, the participants indicated that lower search success rates for Hispanic drivers may be due to: 1) limited training, 2) Troopers relying on one or two indicators of suspicion rather than multiple indicators, 3) a poor understanding of different behaviors across racial/ethnic groups, and 4) different drug trafficking methods used across racial/ethnic groups. These insights have led to some recommendations for slight modifications to existing PSP training programs (described at the end of this section).

INTERDICTION INVESTIGATIVE TECHNIQUES

While it is necessary to understand what indicators officers view with suspicion, it is equally important to examine the “best” practices used by participants to investigate criminal activity and apprehend criminal suspects. Nearly all participants across the initial eight coded focus groups shared some of the specific investigative techniques they have used while engaged in highway criminal interdiction and regarded as “effective.” Eighty-one participants (95%) made at least one substantive comment in this area. These comments primarily focused around four topic areas: 1) initial contact with the driver, 2) interviews of the occupants, 3) strategies for getting consent to search the vehicle, and 4) how to conduct effective searches. Again, only the information directly relevant to racial/ethnic disparities in search and seizure rates is presented in this report.

Due in part to the unique case law in Pennsylvania guiding vehicular searches, PSP Troopers rely heavily on the use of consent searches. Therefore, the use of consent searches, the forms used to document consent, and the techniques used to gain consent were a major focus of the group discussions. When asked, focus group participants commented about the documentation procedures used by PSP to ensure consent was freely and voluntarily given. There were mixed statements made regarding the use of written consent forms (required by departmental policy). While some participants used the form frequently, others indicated they were opposed to the form and believed it made getting consent more difficult. A handful of participants indicated they did not use the forms, despite PSP policy requiring their use. Regardless of their feelings about using the written consent forms, all of the participants who commented on documenting consent indicated that the best way to document consent was to have drivers' verbal consent recorded with the dash-mounted camera in their patrol vehicle. Participants viewed the use of video recording as a valuable tool for criminal interdiction purposes.

It was perceived by participants that the use of consent searches remains an effective and necessary criminal interdiction tool. Fifteen participants (18%) responded to the moderators' questions regarding why they believed drivers carrying illegal contraband would consent to searches of their vehicles. The reasons reported, however, varied somewhat. In general, these participants indicated that drivers with contraband consented to searches because they believed the Trooper would not actually conduct the search or would not search thoroughly. Participants also noted that guilty individuals believed they could disassociate themselves from the contraband in the vehicle if it was found. Finally, participants indicated that guilty drivers may be afraid that they would appear "guilty" by denying requests to search and/or believed Troopers would get a search warrant and search the vehicle if they denied consent anyway.

Focus group participants were also asked by moderators how often they believed drivers were asked for consent, but refused to give consent. Twelve participants (14%) commented on this topic and these respondents unanimously suggested that the majority of requests for consent to search were granted by drivers. The extremely low percentage of denials of requests to search reported by focus group participants conflicts with the 33% of refusals to consent reported in the *Year 2 Report*. There are two possibilities for this large discrepancy. First, it is possible that the participants of the focus groups (identified by their supervisors as exhibiting the best search and seizure practices within the department) are simply more skilled than their peers at obtaining consent. A second reason for the discrepancy may be a flaw in the data collection on the Contact Data Report (CDR) that has now been corrected in the CDR X-press data collection procedures (documented in **Section 1**).

When asked what types of people refuse consent, fifteen participants (18%) responded. The general consensus of these participants was that those who refuse consent tend to be people with lengthy criminal records who have been through the criminal justice system in the past. These participants did not indicate that giving consent varied across racial/ethnic groups. In contrast, findings reported in the *Year 2 Final Report* based on Contact Data Reports demonstrated that there were racial and ethnic differences in drivers who refused consent. Specifically, Caucasians were found to be significantly less likely to give their consent

compared to drivers of other races/ethnicities. That is, racial minorities were more likely to comply with officers' requests to search their persons and/or vehicles compared to Caucasians. In addition, male drivers, younger drivers, and out-of-state drivers were significantly more likely to comply with officers' requests to search them, compared to female drivers, older drivers, and drivers who reside in Pennsylvania, respectively. Again, the discrepancy between comments made by focus group participants and statistical analyses of CDRs may be due to two possibilities: 1) differences between focus group participants and other Troopers, or 2) a flaw in the CDR data collection system, which has now been corrected (documented in **Section 1**). Future analyses of newly collected CDR X-press data should be able to better inform this issue.

Thirteen participants (15%) shared at least one substantive comment regarding the actual conducting of vehicle searches. The majority of these participants' comments stressed the importance of being systematic and extremely thorough during vehicle searches. The importance of searching the occupants was also mentioned. It was suggested by the participants that many of their peers (who were described as less successful at conducting searches) simply did not search vehicles and occupants using methodical and thorough searching techniques.

When asked by moderators how often they were successful in finding contraband when they did conduct a search (i.e., their hit rate), fourteen participants (16%) responded. These respondents indicated wide variation in their search success rates, ranging from as low as four percent to as high as 100% of their searches resulting in the discovery of contraband. The majority of the respondents commenting on this topic, however, reported a search rate of higher than the departmental average of 26% based on CDRs and documented in the *Year 2 Final Report*. This variation was consistent with the responses of the participants on the short demographics questionnaire completed at the beginning of the group sessions. The average search success rate reported for all participants on the questionnaire was 46%. This discrepancy led to further questioning about the search success rates documented by the CDR data (documented in more detail below).

In summary, participants claimed that drivers rarely refuse to grant consent, and they gave a number of reasons why they believe that people carrying illegal contraband would consent to a search. When drivers do refuse, the participants perceived that the drivers have had prior involvement with the criminal justice system. The participants indicated that when they do receive consent to search, they conduct the searches in a methodical and thorough manner. The reported search success rates varied dramatically across participants, though the average self-reported search success rate was significantly higher than the department's average search success rate based on statistical compilations of Contact Data Reports. These discrepancies may be the result of methodological problems with the CDR data collection system that have now been corrected in the CDR X-press data collection procedures, or a reflection of differences in search quality conducted by focus group participants compared to other Troopers.

LESS SUCCESSFUL INTERDICTION BY PEERS

Participants were asked to discuss why other Troopers may be less successful in criminal interdiction activities compared to themselves. Of the 85 participants, 36 (42%) made at least one comment regarding the unsuccessful nature of other Troopers' search and seizure activities. Three primary themes developed within this topic: 1) peers' interpersonal skills, 2) training issues, and 3) peers' failure to engage in "quality" traffic stops. As with previous topics, only those issues directly related to differential rates of searches and seizures will be discussed.

Eighteen focus group participants (21%) made at least one substantive comment referencing their peers' interpersonal skills as a vital component of their lack of effectiveness in search and seizure activities. Often the participants would reference their own style to demonstrate how their peers do not employ the same types of interpersonal tools to be effective in search and seizure activities. One of the most common comments centered on an inability of their peers to talk to people in a manner that would put drivers at ease. Rather, participants noted that traffic stops engaged in by their peers would be more impersonal and thus not allow the occupants to relax. The participants suggested that a more relaxed approach by Troopers, with respect demonstrated towards the occupants of the vehicle, is a more effective approach for search and seizure activities. This interpersonal style is more likely to allow Troopers to gain consent to search (the most common reason for a search by PSP Troopers) compared to a more confrontational approach. Other participants suggested that younger Troopers with less experience may not utilize all opportunities during a traffic stop to develop suspicion and search the vehicle and/or participants, even when they are initially suspicious and likely have the legal authority to conduct a search.

The second most common theme noted by participants regarding unsuccessful interdiction activity was a lack of training that limited the ability of their peers to be successful. Fifteen of the participants (18%) across seven of the eight focus groups suggested that training can have a substantial impact on successful search and seizure activities of their peers. One of the basic concerns raised by participants was that the quantity and quality of interdiction training is not equivalent across Troopers. Furthermore, it was noted that individuals who were interested and trying to involve themselves in search and seizure activities may not have received training to help facilitate that goal. In addition, training was believed to be insufficient for successful criminal interdiction in part because of some organizational differences in support for search and seizure activities. For example, some participants suggested that the impact of training is different depending on station assignment and opportunities to conduct criminal interdiction. If Troopers are trained in interdiction, but located at a station where there is no time or emphasis on search and seizure activities, then it is unlikely Troopers will be highly successful at interdiction work.

In addition to describing the importance of the Trooper's assignment to a station, some participants suggested that the training of cadets at the academy should include more criminal interdiction. Furthermore, several participants made comments regarding the importance of the academy training and the field training officers (coaches) assigned to new Troopers. While training was mentioned by 18% of the participants as an important

component to effective interdiction, other participants mentioned that pure experience is the key to a fruitful investigation.

Thus, the lack of adequate training was regarded by participants as an important component in the perceived unsuccessful criminal interdiction activity of their peers. It was noted, however, that training alone will not increase their peers' success in criminal interdiction work due to station assignment, lack of exposure at the academy, supervisory preferences, and their general lack of experience. Rather, better training is only the first step toward promoting best practices in searches and seizures.

The third and most common reason that participants said their peers were unsuccessful at interdiction activity was their failure to fully investigate every traffic stop. This was often referred to as the inability (or unwillingness) of their peers to conduct a "quality" traffic stop. The term "quality traffic stop" was best described by one participant as a traffic stop where you look beyond the citation – that is, you look for indicators of suspicious activity beyond the initial motor vehicle offense. Participants generally believed their peers often failed to look for criminal indicators, or worse, ignored criminal indicators when they were present. Twelve participants (14%) specifically mentioned that their peers were unsuccessful at interdiction because they do not look into the traffic encounter with enough detail. Many of the comments indicated that Troopers miss potential criminal interdiction opportunities because they are focused solely on writing tickets or simply lack experience in criminal interdiction techniques. Additionally, participants indicated that the lack of "quality traffic stops" by their peers may be due to feeling "rushed" for time or simply failing to adequately search vehicles and occupants after making a decision to search. Finally, a few participants indicated that some of their colleagues simply ignore signs of criminal behavior that could lead to more effective interdiction of contraband.

TRAINING

Focus group participants were prompted to discuss their opinions regarding the types of criminal interdiction training (and training more generally) that they had received. The amount and type of training varied dramatically across participants. As reported previously, the number of different training courses in which participants indicated involvement ranged from zero to ten, with an average of 2.7 courses. Approximately 75% of participants reported having attended at least one criminal interdiction training program. The number of hours of these training programs ranged from zero to 328 hours across participants, with an average of 66 hours. Forty-six percent of participants indicated they had received SHIELD training, while 18% had Operation White Line training.

Those participants who had attended SHIELD training made extensive comments regarding the trainers and curriculum provided. Of the 83 participants that completed our brief survey, 38 (46%) indicated they had received SHIELD training. Of these 38 SHIELD-trained participants, 28 (74%) made at least one substantive comment regarding that training. Participants' comments included the general strengths and weaknesses of SHIELD training in addition to suggestions for improvement. These sub-themes are further described below.

First, both the benefits and problems with SHIELD training were discussed by participants who had attended the training. Specifically, of the 38 participants who had SHIELD training, 13 (34%) made at least one substantive comment that was supportive of the training and 15 (40%) made at least one substantive comment that was critical or identified areas for improvement.

Collectively, the comments regarding the quality of SHIELD training were positive. Many participants described the importance and high quality of the SHEILD training. Furthermore, some participants indicated that, in addition to teaching specific criminal indicators and effective techniques for interdiction, the class motivated them to conduct more searches. Some participants also made specific comments about the portions of SHIELD which they found the most valuable, in addition to the overall motivational quality of the program. For some participants who had other, previous forms of criminal interdiction training, the SHIELD training was considered to be very good, and was appropriately tailored to the unique search and seizure laws in Pennsylvania. Even for those that thought SHIELD was simply a refresher course on criminal indicators, the point was made that participants can still learn from each other when they get together to discuss criminal interdiction techniques.

Although feedback regarding SHIELD training was generally positive, a number of suggestions for improvement were offered by participants. For example, one of the most frequently voiced criticisms of SHIELD was that it did not incorporate enough “hands-on” training, so that participants could apply what they had learned. For example, a handful of participants noted that they would like to see an actual hidden compartment, or spend time out on the road viewing criminal indicators that were discussed in the classroom setting. Another frequently voiced suggestion was to have more advanced classes once the basic information from SHIELD has been learned. Further, at least one participant suggested incorporating training that focuses on commercial vehicles, and another suggested more training on specific indicators for terrorism.

INCONSISTENCIES IN CDR DATA COLLECTION

Prior to the start of each focus group, participants in the focus groups were given the opportunity to ask questions and give feedback regarding the collection of CDR data prior to the audiotape being initiated. The purpose of this initial question-and-answer period was to give participants an opportunity to voice their concerns regarding the larger study, and to provide an opportunity for the moderators to establish rapport and gain the trust of participants. It became readily apparent during the initial phases of the focus groups that there was much misunderstanding among the participants regarding the larger data collection effort, and further, that there was much resentment toward the study more generally. The research team did not systematically code participants’ responses because these initial question-and-answer periods were not recorded.

First, there was some resentment voiced by the participants regarding the length of the biased-based research study. In general, participants indicated that they felt deceived about the length of the study and remained suspicious that they could be individually identified based on these data (and thus inappropriately accused of racial profiling). Participants were

generally unaware of how these data were being used and remained concerned that the areas in which they patrolled (and thus the racial composition of drivers they would legitimately encounter during their shifts) was not being taken into consideration.

Second, participants were generally upset regarding the length of time required to complete the scan forms, the attention to detail required to properly complete the forms, and supervisors' overemphasis on the importance of adequately completing the forms. Many participants suggested that the CDR data collection effort was a major contributor to lower morale and lower productivity in the field (in terms of the frequency of traffic stops). This may partially explain the 14% reduction in the number of traffic stops recorded on the CDR forms from 2002 to 2005.

Third, participants admitted that they did not believe their peers were accurately completing the forms, despite the supervisory oversight and managerial emphasis placed on this data collection effort. Furthermore, some participants indicated that there was purposeful deception and manipulation of the data, although it was unclear whether the participants were referring to isolated incidents or widespread problems with the data collection effort.

These concerns regarding the accuracy of traffic stop data collection are not unique to the Pennsylvania State Police. While researchers readily admit that the reliability and validity of traffic stop data collected by police officers is in question, there has not been a systematic study of the true accuracy of these data. The Project on Police-Citizen Contacts for the Pennsylvania State Police provides a series of data auditing procedures, and stresses supervisory oversight coupled with routine feedback regarding the internal validity of the data collected (see Engel et al., 2004, 2005). These procedures are similar to others used for large-scale traffic stop data collection efforts (for review, see Fridell, 2004). It is unknown, however, how often traffic stops are conducted for which no data is collected. This is simply a limitation of this and other data collection efforts that rely on officers' collection of traffic stop data.

Finally, perhaps the most important issues discovered during the focus groups was confusion and inaccuracy among participants regarding when Contact Data Reports are required to be completed. It was indicated by multiple respondents across every focus group that member-initiated traffic stops that involve a search where contraband is seized do not require the completion of CDR forms. This confusion is particularly important given the emphasis in previous departmental reports based on the CDR data that indicated low search success rates (particularly for consent searches) and search success rates that differed significantly across racial/ethnic groups. It was obvious that there was a large discrepancy across participants based on station assignment, (and even within the same station, based on direct supervisors), whether or not CDRs were required in situations where members initiate a stop, conduct a search, and seize contraband. Furthermore, many participants did not believe a CDR had to be completed during member-initiated stops that resulted in a DUI arrest.

These potential inconsistencies and inaccuracies in the CDR data were reported in August 2005 to PSP administrators. As a result, PSP administrators elected to conduct an immediate audit of the data (i.e., specialty review) by the Systems and Process Review Division (SPR).

The SPR reported statistics for a two-month period (June and July 2004), for self-initiated traffic stops that resulted in the seizure of property and/or the physical arrest of a subject in nine randomly selected stations (roughly 10% of reporting stations). Based on this initial review, the UC research team requested that seizure data be collected from an additional two stations that were likely to conduct more searches and seizures than the original sample. The results from these specialty reviews were compared to CDR data. The comparisons between these data sources confirmed focus group participants' indications that data was not being systematically recorded on CDRs for member-initiated traffic stops involving a search where contraband was collected, and for member-initiated traffic stops that resulted in a DUI arrest. A summary of the data audit and specific comparison findings was described in more detail in **Section 1**.

In addition, after notification of potential inaccuracies in CDR data, PSP administrators immediately reissued documentation to all area, troop, and station commanders in an effort to clarify when CDRs were to be completed (i.e., during all member-initiated stops, regardless of the outcomes of those stops, including stops where contraband is seized or an in-custody arrest is made). Therefore, beginning September 1, 2005, there is every reason to believe the data collected on CDRs will systematically capture all member-initiated traffic stops, and the search success rates calculated after this data will provide a more accurate description of PSP search and seizure activity.

Finally, there was one other potential inaccuracy in the CDR that was identified by focus group participants. It was acknowledged in the *Year 1 Report* that the data available at that time could not determine how many drivers were initially asked for consent to search but refused officers' requests. Therefore, it was unknown if drivers of different race/ethnicity and age provide consent at equal rates. In an effort to further examine these issues, a new CDR was developed by PSP administrators. The new form was officially adopted department wide October 1, 2003. This form included a field capturing whether or not a consent search was requested, in addition to whether or not a consent search was conducted. It was believed that this format would identify drivers from whom consent to search was requested, but who denied that request. Yet several focus group participants indicated that the CDR format may not adequately capture this information because there are reasons other than refusing to give consent that would lead to no consent search conducted when one was requested. Specifically, focus group participants indicated that some Troopers simply decide not to search once consent is granted; other times backup is not readily available to assist with the search, and finally, Troopers are sometimes called away from the scene and must respond.

The potential inaccuracy of this portion of the CDR was also brought to the attention of PSP administrators. Unfortunately, there is no short-term solution to this potential data inaccuracy. To correct it, the CDR itself would have to be redesigned to include an additional data collection block indicating if the driver refused to give consent. Rather than redesign the form (a costly and time consuming process), the UC research team advised PSP to simply modify the data collection item on the "CDR X-press" to allow for these answers if appropriate. The CDR X-press is a software program designed by PSP Strategic Development Unit, IIMS. This data collection design was pilot tested in January 2006 and

was implemented by May 2006 across the majority of stations. In this system, there is a block available to collect whether or not a driver was asked for consent and refused. Once available, these data will be compared to data collected on the scan CDR forms to determine the inaccuracy of previous reports on this data item.

In summary, focus group participants indicated that there was much confusion and misinformation regarding the CDR data collection effort. Participants were clearly frustrated with the continued collection of information on scan forms, which they considered to be tedious and repetitive. They indicated that they felt overburdened with paperwork that could easily be streamlined. Further, they suggested that morale among Troopers and supervisors was lower because of this data collection effort. Participants generally suggested that this negative attitude has translated into a data collection effort that is likely inaccurate, and purposefully subverted and/or manipulated by some particularly disgruntled colleagues.

SUMMARY AND RECOMMENDATIONS

This section provided a summary of the findings based on qualitative data analyses of verbatim transcripts of focus groups with PSP Troopers. PSP supervisors identified Troopers for participation in the focus groups based on their display of “best practices” in search and seizure activities. That is, focus group participants were identified by PSP supervisors as representing the most productive, accurate, and professional Troopers involved in criminal interdiction work. The initial goal of the focus groups was to understand the current best practices in searches and seizures, along with documenting any impediments to criminal interdiction activity. The larger purpose of this research is to better understand the current search success rate of the PSP as a whole, and the racial/ethnic disparities reported in search success rates.

Summary of the Findings

Key findings by thematic area are listed below.

Indicators of Suspicion

- 94% of participants made at least one substantive comment regarding indicators of suspicion.
- Indicators can be generally grouped into three sub-themes: 1) pre-stop, 2) vehicle, and 3) occupants.
- Participants reported several specific types of indicators with more frequency than others. The types of indicators generally reported are covered in SHIELD and other introductory criminal interdiction training courses.
- Participants indicated the importance of considering multiple factors of suspicion and understanding the manner in which these indicators interacted with one another, rather than simply relying on individual indicators in isolation.

- A very small minority of participants indicated that they relied upon “gut feelings,” “sixth sense,” or the race/ethnicity of vehicle occupants in some capacity to develop suspicion. These individual participants had a significantly lower self-reported search success rate compared to other participants.
- Some participants indicated that lower search success rates for Hispanic and other minority drivers may be due to: 1) improper training, 2) Troopers who rely on one or two indicators of suspicion rather than multiple indicators, 3) a poor understanding of different behaviors across racial/ethnic groups, and/or 4) different drug trafficking methods used across racial/ethnic groups.

Interdiction Investigative Techniques

- 95% of participants made at least one substantive comment regarding interdiction investigative techniques.
- Four general sub-themes were identified: 1) initial contact, 2) interview strategies, 3) obtaining consent, and 4) conducting effective searches.
- Effective interview strategies were viewed by participants as crucial for successful criminal interdiction.
- Strategies for obtaining consent to search were also considered important due in part to the unique search and seizure laws in Pennsylvania that increase reliance on consent searches.
- Participants indicated that drivers rarely deny consent to search when asked. This is contrary to initial findings from analyses of CDR data. Some respondents suggested that only those who have been through the criminal justice system refuse to give consent.
- The use of search request forms varied across participants. Some participants indicated never using it, while others indicated they always used it. There seemed to be little familiarity with the specific PSP policy governing their usage. Several participants indicated they were a hindrance to gaining consent to search.
- Participants indicated the need of other Troopers to be more systematic and thorough during vehicle searches to increase search success rates (i.e., the discovery of contraband).
- The average self-reported search success rate for participants was 46%, compared to the departmental average search success rate of 26% (based on analyses of CDRs documented in the *Year 2 Final Report*). This finding led to a questioning of the validity of CDR data for search and seizure rates.

Unsuccessful Interdiction

- 85% of participants made at least one substantive comment regarding their peers' criminal interdiction activities.
- Two general sub-themes of peer behavior were identified: 1) intrinsic motivators/deterrents, and 2) unsuccessful criminal interdiction.
- 26% of participants made at least one substantive comment regarding their intrinsic motivators compared to their peers.
- The most frequently mentioned intrinsic motivators for criminal interdiction work included: 1) work ethic, 2) internal drive/motivation, 3) personal priorities, 4) self-satisfaction and a sense of moral obligation, and 5) the challenging nature of work.
- 42% of participants articulated why they believed their peers were less successful in criminal interdiction.
- The most commonly identified reasons for unsuccessful interdiction by their peers included: 1) lack of interpersonal skills, 2) inexperience/insufficient training, and 3) failure to engage in "quality" traffic stops.

Training

- Approximately 75% of participants reported having attended at least one criminal interdiction training program; 46% attended SHIELD and 18% attended Operation White Line.
- Of the 46% of participants that attended SHIELD training, 74% made at least one substantive comment regarding this training. Collectively, the comments regarding the quality of SHIELD training were positive; several participants described the importance and quality of the training program.
- Several specific recommendations for improvement in the SHIELD curriculum were noted, including incorporating more hands-on training and offering more advanced classes.

Contact Data Reports

- Participants expressed much resentment regarding the CDR program, including the length of the program, the length of time required to fill out the reports themselves, and the overemphasis of supervisors on the accuracy of the scantron forms.
- Participants also expressed comments indicating that they and/or their peers were not completing the CDRs when required and/or were not filling them out properly. Participants indicated that they did not believe the data collection system was

accurate and specifically indicated that the search and seizure component of the form was not being completed for every search or for DUI arrests.

- Based on these comments, an internal audit of the CDR data was conducted in September 2005 and the problems reported by the participants appeared to be an accurate reflection for data collected in some stations.

3. TRAFFIC STOP DATA COLLECTION METHODOLOGY

OVERVIEW

This section documents the methodology utilized for the data collection effort, including a brief description of the Contact Data Form (CDR) and a comprehensive overview of the bi-weekly reports for Years 3 and 4 of the research project. **Figure 3.1** displays the CDR form used at the time by PSP personnel for all member-initiated traffic stops. **Tables 3.1 & 3.2** provide a summary of the Years 3 and 4 submitted CDR forms, respectively.

CONTACT DATA FORM

The CDR form utilized by troopers during all member-initiated traffic stops conducted from January 1, 2004 to December 31, 2005 gathered information regarding: 1) the stop (e.g., date/time, location, type of roadway, reasons for the stop, and the duration of the stop); 2) the driver (e.g., gender, age, race/ethnicity, zip code of residency); 3) the vehicle (e.g., state of registration, number of passengers); 4) the outcome of the stop (e.g., citation, written warning, arrest, search, property seized during the search); and 5) identification information (e.g., location of the stop – county and municipality, and the trooper's station and employee identification).

Originally, a slightly different CDR was used when the data collection for this research project was initiated on May 1, 2002. This original form was used from May 1, 2002 to September 30, 2003. Beginning October 1, 2003, a modified Contact Data Report replaced the original form used by troopers. The modifications were based in part on findings from the Year 1 report (see Engel et al., 2004). Specifically, the modified form added the following data collection points:

- 1) Result of the stop (passenger): other
- 2) Consent search requested (yes or no)
- 3) Reason for the search: not applicable
- 4) Reason for the search: search warrant

This modified Contact Data Report form is displayed as **Figure 3.1** below and was used for the entire data collection period reported in this document (i.e., January 1, 2004 to December 31, 2005).

Figure 3.1: Pennsylvania State Police Contact Data Report, Jan. 1, 2004 – Dec. 31, 2005.

SP 7-0045 (7-2003)

CONTACT DATA REPORT

PENNSYLVANIA STATE POLICE

CORRECT MARK:

INCORRECT MARKS:

1. Month

1	2	3	4	5	6	7	8	9	10	11	12
1	2	3	4	5	6	7	8	9	10	11	12

Day

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31

Time

0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9
0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9

8. Driver Gender Male Female

9. Driver Race/Ethnicity

<input type="radio"/> White	<input type="radio"/> White Hispanic
<input type="radio"/> Black	<input type="radio"/> Black Hispanic
<input type="radio"/> Native American	<input type="radio"/> Mid. Eastern
<input type="radio"/> Asian/Pac. Isl.	<input type="radio"/> Unknown

10. Driver Yr. of Birth

0	1	2	3	4	5	6	7	8	9
0	1	2	3	4	5	6	7	8	9

Driver Zip Code

0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9
0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9

2. County

0	1	2	3	4	5	6	7	8	9
0	1	2	3	4	5	6	7	8	9

Municipality

0	1	2	3	4	5	6	7	8	9
0	1	2	3	4	5	6	7	8	9

11. Number of Passengers

0	1	2	3	4	5
0	1	2	3	4	5

12. Consent Search Requested

Yes No

13. Search Initiated Yes No

14. Reason for Search (All That Apply)

Not Applicable
 Consent
 Odor of Drugs/Alcohol
 Plain View Contraband
 Incident to Arrest
 K-9 Alert
 Inventory
 Probable Cause
 Search Warrant
 Other _____

3. Roadway Interstate
 State Highway
 County/Local Road
 Other _____

4. Registration Displayed

PA Other None

5. Reason (s) (All That Apply)

P	S	Amount Over Limit
<input type="radio"/>	<input type="radio"/>	0
<input type="radio"/>	<input type="radio"/>	1
<input type="radio"/>	<input type="radio"/>	2
<input type="radio"/>	<input type="radio"/>	3
<input type="radio"/>	<input type="radio"/>	4
<input type="radio"/>	<input type="radio"/>	5
<input type="radio"/>	<input type="radio"/>	6
<input type="radio"/>	<input type="radio"/>	7
<input type="radio"/>	<input type="radio"/>	8
<input type="radio"/>	<input type="radio"/>	9

Speeding
 Other Moving Violation
 Equipment/Inspection
 Pre-Existing Info.
 Registration
 License
 Special Traffic Enf. Prog.
 Other _____

15. Property Seized (All That Apply)

None Weapons
 Cash Stolen Property
 Drugs Alcohol
 Vehicle Other _____

6. Result of Stop (All That Apply)

Citation	Warning	Arrest	Other
D <input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
P <input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

7. Duration of Stop In Minutes

1-15 16-30 31-60 61+

Initials - Supervisor

16. Station Code

0	1	2	3	4	5	6	7	8	9
0	1	2	3	4	5	6	7	8	9

Employee #

0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9
0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9

BI-WEEKLY DATA STATUS REPORTS

Bi-weekly data status reports were provided to PSP administrators that documented (by department, area, troop, and station) missing data rates and other potential problems with the data collected. This feedback provided an opportunity to address and correct data collection errors without directly identifying troopers. The compilation of these reports for 2004 and 2005 is presented in **Tables 3.1 & 3.2**, respectively.

For both tables, the first column identifies the organization level and the second column reports the total number of stops per organizational unit. Columns 3 and 4 report the percentage of forms rejected by the scanner and the percentage of forms with missing or inaccurate data, respectively. The percentage of rejected forms is calculated from the number of CDRs that are initially rejected by the Scantron machine based on errors such as missing information, double entries, or stray marks on the CDRs. The percentage of missing data is a product of an internal authentication process in which all the data is checked for logical consistencies. For example, if the CDR records that contraband was discovered, then one of the search boxes must also be marked. In addition, information that is requested on the form but not entered is considered missing data. The procedures for completing the form require that every field be completed.

The final two columns report the percent missing race and percent missing employee identification number. These two rates are a subset of the percent missing rate and were deemed important to monitor due to the importance of collecting information on the race/ethnicity of the driver, and the necessity of gathering valid employee identification numbers for statistical analyses. If troopers were failing to comply with the data collection effort, the percentage of missing and invalid information recorded for these two items would likely be high. The percent missing race/ethnicity of the driver includes CDRs that had no race information recorded, more than one racial category recorded, or indicated that the race of the driver was “unknown.” The employee identification number was used to link the data collected during traffic stops to individual trooper characteristics (e.g., sex, race, experience, rank, and education). The employee identification number was used to link this information on a rolling basis and was then deleted from the data sets to ensure confidentiality. As specified in the contract with the PSP, this report will not document findings regarding trooper differences where ten or fewer troopers could be identified. That is, information will not be provided that identifies multiple officers’ characteristics and that could possibly lead to an individual trooper being identified.

Maintaining data quality is essential for traffic stop data collection efforts. The Police Executive Research Forum (PERF) has devised a set of guidelines to aid police departments in the collection of traffic and pedestrian stop data (for details, see Fridell, Lunney, Diamond, & Kubu, 2001). PERF recommends a missing data rate of less than 10%. Our research team recommended a more stringent standard of less than 5% missing data, which was met by PSP Troopers, department wide for data collected in 2004 and 2005. As shown in **Table 3.1**, of the 300,683 CDRs included in the final data set for 2004, 1.0% was initially rejected by the scanner, 1.9% had one or more items missing, and less than one percent of the CDRs were missing either the race/ethnicity of the driver (0.1%) or employee identification (0.2%). As

shown in **Table 3.2**, in 2005 at the *department* level, 272,670 CDRs were included in the final data set, with 1.3% initially rejected by the scanner, 2.9% had one or more items missing, and less than one percent of the CDRs were missing either the race/ethnicity of the driver (0.1%) or employee identification (0.2%). At the station level, there was some variation in the missing and rejected data rates; however no station raised concerns regarding the overall validity of the data.

The consistently low missing data and rejection rates documented in both **Tables 3.1 & 3.2** were likely due in part to the following factors documented in the Year 2 Final Report (see Engel et al., 2005):

- 1) Troopers were guaranteed confidentiality.
- 2) Two pilot tests were conducted and most troopers were trained on the use of the forms.
- 3) PSP administrators were provided routine and prompt feedback regarding the status of the data collection effort and the percentage of missing data.
- 4) Supervisors were held accountable for their subordinates and required to review and sign all forms before they were sent to project staff.
- 5) A firm commitment to the data collection effort was initially made by Colonel Evanko's administration, and continued under Colonel Miller's administration.

Table 3.1: CDR Scan Form Report - 2004 (p. 1 of 3)

	Total # in Dataset	% Rejected Initially	% Missing Any Data	% Missing Race	% Employee ID
PSP Dept.*	300,683	1.0	1.9	0.1	0.2
AREA I	102,264	1.5	1.8	0.0	0.2
Troop H	26,073	1.7	2.1	0.1	0.2
Carlisle	5,944	2.0	1.8	0.0	0.3
Chambersburg	5,049	1.7	2.6	0.2	0.2
Gettysburg	2,969	1.5	0.9	0.1	0.1
Harrisburg	3,885	1.0	2.1	0.1	0.1
Lykens	1,250	0.6	3.5	0.3	0.1
Newport	2,058	3.1	1.2	0.1	0.1
York	4,918	1.9	2.9	0.1	0.2
Troop J	8,510	0.7	1.7	0.0	0.2
Avondale	3,007	0.8	1.0	0.0	0.2
Embreeville	2,400	0.1	1.3	0.0	0.3
Ephrata	977	0.5	2.5	0.0	0.1
Lancaster	2,126	1.3	2.8	0.1	0.1
Troop L	9,033	1.1	2.5	0.1	0.2
Frackville	952	2.3	3.6	0.1	0.3
Hamburg	1,812	0.6	2.0	0.0	0.1
Jonestown	2,739	0.5	2.3	0.0	0.1
Reading	1,938	0.8	3.0	0.2	0.4
Schuylkill Haven	1,592	2.5	2.1	0.1	0.1
Troop T	58,648	1.5	1.6	0.1	0.3
Bowmansville	6,486	1.8	1.9	0.1	0.1
Everett	7,816	0.2	0.6	0.0	0.1
Gibsonia	8,209	2.8	1.7	0.1	0.3
Highspire	4	0.0	0.0	25.0	0.0
King of Prussia	6,773	0.9	1.7	0.0	0.4
New Stanton	7,829	1.1	1.1	0.1	0.3
Newville	9,978	0.8	0.7	0.1	0.1
Pocono	4,250	1.1	2.1	0.1	0.6
Somerset (T)	7,303	3.7	3.6	0.1	0.4

* The total number of stops included in the data set for the whole department is larger than the sum of the forms for each area, troop, or station as some forms were used for special projects and others had invalid station codes.

Table 3.1: CDR Scan Form Report - 2004 (p. 2 of 3)

	Total # in Dataset	% Rejected Initially	% Missing Any Data	% Missing Race	% Employee ID
AREA II	39,743	0.7	1.5	0.0	0.2
Troop F	22,033	0.9	1.3	0.0	0.2
Coudersport	1,515	0.1	1.3	0.0	0.0
Emporium	1,182	0.0	1.1	0.0	0.1
Lamar	3,536	2.2	1.7	0.0	0.5
Mansfield	1,438	0.5	0.9	0.0	0.1
Milton	2,873	0.0	1.3	0.1	0.1
Montoursville	6,897	0.7	1.5	0.1	0.1
Selinsgrove	3,095	0.4	0.7	0.0	0.1
Stonington	1,497	2.7	0.9	0.0	0.1
Troop P	8,072	0.3	1.7	0.1	0.2
Laporte	1,343	0.4	1.6	0.1	0.0
Shickshinny	996	0.1	0.9	0.1	0.2
Towanda	1,781	0.7	2.2	0.0	0.1
Tunkhannock	1,438	0.1	1.8	0.0	0.4
Wyoming	2,514	0.2	1.5	0.1	0.2
Troop R	9,638	0.8	1.8	0.0	0.3
Blooming Grove	2,607	1.8	1.8	0.0	0.1
Dunmore	2,823	0.1	1.3	0.0	0.4
Gibson	2,121	0.9	3.3	0.0	0.6
Honesdale	2,087	0.1	1.1	0.0	0.3
AREA III	54,792	0.5	1.2	0.1	0.2
Troop A	15,734	0.2	1.1	0.1	0.2
Ebensburg	3,127	0.1	1.1	0.0	0.0
Greensburg	4,180	0.6	1.5	0.2	0.3
Indiana	3,920	0.2	1.3	0.1	0.1
Kiski Valley	2,495	0.1	0.6	0.2	0.1
Somerset (A)	2,012	0.0	0.9	0.0	0.2
Troop B	19,364	0.7	1.4	0.1	0.2
Belle Vernon	3,052	0.0	1.0	0.0	0.1
Findlay	4,403	1.6	1.4	0.0	0.1
Uniontown	3,981	0.7	1.4	0.0	0.1
Washington	5,336	0.5	1.6	0.1	0.3
Waynesburg	2,592	0.2	1.3	0.0	0.4
Troop G	19,694	0.4	1.2	0.1	0.2
Bedford	3,119	0.6	0.8	0.0	0.0
Hollidaysburg	3,156	0.1	0.2	0.0	0.1
Huntingdon	2,188	0.0	0.5	0.0	0.0
Lewistown	2,457	0.5	1.7	0.0	0.6
McConnellsburg	2,036	0.3	1.1	0.0	0.1
Philipsburg	2,803	0.4	1.2	0.1	0.2
Rockview	3,935	0.9	2.2	0.2	0.4

Table 3.1: CDR Scan Form Report - 2004 (p. 3 of 3)

	Total # in Dataset	% Rejected Initially	% Missing Any Data	% Missing Race	% Employee ID
AREA IV	54,582	0.8	1.7	0.0	0.2
Troop C	21,421	0.5	1.7	0.1	0.1
Clarion	4,934	0.4	2.1	0.0	0.1
Clearfield	5,145	0.1	1.1	0.0	0.1
Dubois	3,080	0.3	2.2	0.0	0.1
Kane	1,559	0.7	1.5	0.0	0.1
Punxsutawney	2,369	0.9	2.0	0.1	0.2
Ridgway	2,317	0.8	1.3	0.1	0.3
Tionesta	2,017	1.4	2.0	0.1	0.1
Troop D	16,028	1.2	1.6	0.0	0.2
Beaver	2,334	0.3	1.5	0.1	0.1
Butler	4,281	0.8	1.1	0.0	0.1
Kittanning	4,147	0.6	1.6	0.0	0.3
Mercer	3,098	1.3	1.8	0.0	0.2
New Castle	2,168	3.8	2.3	0.1	0.4
Troop E	17,133	0.8	1.8	0.0	0.1
Corry	1,208	0.3	3.2	0.0	0.2
Erie	4,329	0.1	1.9	0.0	0.2
Franklin	2,988	0.6	1.7	0.0	0.1
Girard	3,719	1.6	1.8	0.0	0.1
Meadville	3,325	1.4	1.9	0.0	0.2
Warren	1,564	0.0	0.2	0.0	0.1
AREA V	46,648	1.2	2.7	0.1	0.3
Troop K	11,044	1.0	3.0	0.1	0.2
Media	3,867	1.2	3.7	0.3	0.2
Philadelphia	2,735	1.6	4.2	0.0	0.6
Skippack	4,442	0.5	1.8	0.0	0.0
Troop M	20,218	0.9	2.4	0.1	0.3
Belfast	3,159	0.8	1.8	0.0	0.3
Bethlehem	4,432	1.3	3.3	0.3	0.5
Dublin	4,173	0.9	2.4	0.0	0.2
Fogelsville	5,142	0.7	1.8	0.0	0.1
Trevoise	3,312	0.8	2.6	0.1	0.5
Troop N	15,386	1.8	2.7	0.1	0.2
Bloomsburg	2,895	1.2	0.8	0.0	0.1
Fern Ridge	2,774	6.6	3.1	0.1	0.3
Hazleton	3,298	0.7	2.0	0.1	0.2
Lehighton	2,554	0.8	2.0	0.1	0.3
Swiftwater	3,865	0.3	5.2	0.1	0.2

Table 3.2: CDR Scan Form Report - 2005 (p. 1 of 3)

	Total # in Dataset	% Rejected Initially	% Missing Any Data	% Missing Race	% Employee ID
PSP Dept.*	272,670	1.3	2.9	0.1	0.2
AREA I	99,765	1.7	2.7	0.1	0.2
Troop H	23,209	1.6	3.1	0.1	0.2
Carlisle	5,213	1.5	2.5	0.1	0.1
Chambersburg	3,761	0.8	3.6	0.1	0.1
Gettysburg	2,689	2.5	2.8	0.0	0.1
Harrisburg	3,321	1.2	2.4	0.1	0.2
Lykens	1,481	1.1	4.7	0.3	0.2
Newport	2,340	1.5	2.1	0.1	0.3
York	4,404	2.5	4.2	0.1	0.2
Troop J	9,286	1.3	3.7	0.1	0.2
Avondale	2,747	1.6	4.4	0.1	0.4
Embreeville	2,410	1.0	1.9	0.0	0.1
Ephrata	1,014	0.7	3.3	0.0	0.3
Lancaster	3,115	1.4	4.7	0.1	0.2
Troop L	8,878	1.6	2.9	0.0	0.1
Frackville	873	2.0	5.8	0.0	0.2
Hamburg	2,005	0.8	2.7	0.0	0.0
Jonestown	3,187	1.2	2.4	0.1	0.1
Reading	1,295	2.0	2.8	0.1	0.2
Schuylkill Haven	1,518	3.2	2.3	0.0	0.1
Troop T	58,392	1.8	2.4	0.1	0.2
Bowmansville	5,859	2.6	2.9	0.1	0.3
Everett	9,652	0.6	0.9	0.0	0.1
Gibsonia	7,977	1.4	2.1	0.1	0.2
Highspire	45	0.0	0.0	0.0	0.0
King of Prussia	6,188	3.2	2.5	0.2	0.1
New Stanton	8,086	1.8	2.7	0.0	0.2
Newville	8,607	0.9	1.9	0.0	0.1
Pocono	5,242	1.2	1.4	0.1	0.3
Somerset (T)	6,736	3.9	5.4	0.2	0.2

* The total number of stops included in the data set for the whole department is larger than the sum of the forms for each area, troop, or station as some forms were used for special projects and others had invalid station codes.

Table 3.2: CDR Scan Form Report - 2005 (p.2 of 3)

	Total # in Dataset	% Rejected Initially	% Missing Any Data	% Missing Race	% Employee ID
AREA II	31,626	0.9	2.6	0.1	0.2
Troop F	15,409	0.8	2.1	0.1	0.1
Coudersport	1,366	0.5	1.1	0.0	0.1
Emporium	956	0.3	1.8	0.0	0.0
Lamar	1,735	0.5	2.2	0.0	0.1
Mansfield	1,243	0.8	2.2	0.1	0.1
Milton	2,121	1.4	3.0	0.2	0.3
Montoursville	4,075	0.9	2.5	0.0	0.2
Selinsgrove	2,847	1.0	2.1	0.1	0.1
Stonington	1,066	0.4	0.8	0.0	0.0
Troop P	7,678	0.8	2.7	0.0	0.2
Laporte	1,456	0.5	2.1	0.0	0.0
Shickshinny	1,101	0.5	1.5	0.0	0.2
Towanda	2,400	0.5	3.0	0.0	0.2
Tunkhannock	1,052	2.0	4.8	0.3	0.4
Wyoming	1,669	0.8	2.2	0.0	0.1
Troop R	8,539	1.2	3.4	0.1	0.3
Blooming Grove	1,918	2.9	4.4	0.3	0.4
Dunmore	3,093	0.5	2.8	0.0	0.3
Gibson	1,541	1.4	5.3	0.1	0.4
Honesdale	1,987	0.6	1.8	0.0	0.1
AREA III	56,643	0.8	2.5	0.0	0.2
Troop A	15,736	0.4	2.6	0.0	0.2
Ebensburg	4,054	0.6	2.8	0.1	0.0
Greensburg	3,957	0.5	2.8	0.0	0.3
Indiana	2,629	0.3	2.9	0.1	0.3
Kiski Valley	2,732	0.2	3.0	0.0	0.1
Somerset (A)	2,364	0.2	1.1	0.0	0.0
Troop B	19,666	0.9	2.3	0.0	0.2
Belle Vernon	2,368	0.4	2.3	0.0	0.2
Findlay	4,639	0.2	1.7	0.0	0.1
Uniontown	5,401	1.5	3.0	0.1	0.2
Washington	5,044	1.1	2.5	0.0	0.4
Waynesburg	2,214	0.4	1.3	0.0	0.2
Troop G	21,241	1.1	2.5	0.1	0.2
Bedford	3,082	0.7	3.8	0.0	0.0
Hollidaysburg	2,885	2.1	4.2	0.1	0.4
Huntingdon	1,873	0.8	1.8	0.1	0.1
Lewistown	3,180	0.9	1.7	0.1	0.1
McConnellsburg	2,121	1.6	2.5	0.0	0.2
Philipsburg	2,483	0.7	2.2	0.2	0.1
Rockview	5,617	0.9	1.9	0.0	0.2

Table 3.2: CDR Scan Form Report - 2005 (p.3 of 3)

	Total # in Dataset	% Rejected Initially	% Missing Any Data	% Missing Race	% Employee ID
AREA IV	44,801	1.2	2.6	0.1	0.2
Troop C	17,140	0.8	2.4	0.1	0.1
Clarion	3,545	1.2	2.9	0.1	0.1
Clearfield	3,660	0.4	1.8	0.1	0.2
Dubois	2,261	0.4	2.6	0.0	0.0
Kane	1,475	1.8	2.3	0.1	0.1
Punxsutawney	2,024	0.4	2.3	0.1	0.0
Ridgway	1,890	0.6	1.7	0.0	0.1
Tionesta	2,285	1.3	3.0	0.1	0.2
Troop D	14,251	1.7	2.7	0.1	0.2
Beaver	2,318	0.6	2.3	0.1	0.1
Butler	4,015	0.7	1.4	0.0	0.2
Kittanning	3,637	1.1	3.0	0.1	0.2
Mercer	2,534	1.7	3.0	0.0	0.2
New Castle	1,747	6.4	5.0	0.2	0.3
Troop E	13,410	1.2	2.7	0.1	0.2
Corry	852	0.5	2.5	0.0	0.4
Erie	2,714	1.3	3.8	0.2	0.2
Franklin	1,662	0.9	3.7	0.2	0.2
Girard	2,791	1.6	2.6	0.0	0.2
Meadville	4,407	1.4	2.2	0.0	0.3
Warren	984	0.4	0.9	0.0	0.2
AREA V	38,157	1.6	3.5	0.1	0.4
Troop K	8,395	0.9	3.8	0.0	0.4
Media	2,571	1.5	3.0	0.0	0.1
Philadelphia	3,141	0.7	3.9	0.0	0.9
Skippack	2,683	0.7	4.4	0.0	0.0
Troop M	16,860	1.2	3.4	0.1	0.3
Belfast	3,164	1.2	2.7	0.1	0.3
Bethlehem	3,479	1.4	4.5	0.1	0.2
Dublin	3,139	0.4	2.3	0.1	0.2
Fogelsville	4,943	0.9	2.9	0.0	0.2
Trevoise	2,135	2.7	5.8	0.4	0.6
Troop N	12,902	2.6	3.5	0.1	0.5
Bloomsburg	2,027	1.9	2.5	0.0	0.6
Fern Ridge	1,893	3.2	4.6	0.1	1.0
Hazleton	3,149	2.9	4.2	0.1	0.5
Lehighton	2,356	2.0	2.9	0.3	0.0
Swiftwater	3,477	2.7	3.2	0.0	0.5

4. DESCRIPTION OF TRAFFIC STOP DATA: 2004 – 2005

OVERVIEW

Section 4 describes the findings based on a compilation of the data from the Contact Data Reports received for the period of January 1, 2004 through December 31, 2005. This section is divided into three parts that report on the 2004 and 2005 characteristics of traffic stops, the characteristics of drivers, and stop outcomes for drivers and passengers. The information reported is strictly descriptive in nature. This summary does not include analyses that examine causal influences, and any data presented at aggregate levels are for purposes of comparison across PSP units and data collection years.

The first section contains **Tables 4.1 – 4.10**, which report on the characteristics of traffic stops for 2004 and 2005 across the department, area, troop, and station levels.³ **Tables 4.1 – 4.4** report the total number of stops, the percentage of stops by weekday, daytime hours, work shift, roadway type, Pennsylvania registration, passengers, and duration of the stop. **Tables 4.5 & 4.6** provide a monthly breakdown of traffic stops across the department, area, troop, and station levels in 2004 and 2005, respectively. **Tables 4.7 – 4.10** report the reasons for the stop across years at the area, troop, and station level. The second section reports the characteristics of drivers (e.g., age, gender, race/ethnicity and residency) across the department, area, troop, and station level for 2004 and 2005 in **Tables 4.11 – 4.14**. The final section, consisting of **Tables 4.15 - 4.19**, focuses on traffic stop outcomes (e.g., warnings, citations, arrests, and searches) for drivers and passengers across the department, area, troop, and station levels across the two-year period.

TRAFFIC STOP CHARACTERISTICS

Based on the data available, Pennsylvania State Patrol (PSP) Troopers initiated 300,683 traffic stops during 2004 (January 1, 2004 to December 31, 2004). In 2005, 272,670 traffic stops were initiated by PSP Troopers, which is a 9.3% reduction in overall traffic stops from the previous year.

Traffic Stop Descriptives

Tables 4.1 – 4.4 document the specific details of the traffic stops, including: total number of stops, percent of stops occurring on weekdays, percent of stops occurring during daytime hours, percent of stops by shift, percent of stops by roadway type, percent of Pennsylvania registered vehicles, average number of passengers per vehicle, and duration of the stops. This information is reported at the department, area, and troop levels in **Table 4.1** for 2004 and in **Table 4.3** for 2005. **Tables 4.2 and 4.4** report the same variables at the station level for 2004 and 2005, respectively.

As shown in **Table 4.1**, *Area I* stops (102,265) accounted for roughly one-third of the total number of member-initiated traffic stops. The majority of the stops for the *department* were initiated on a weekday (69.8%) and occurred during the daytime (73.1%). The 7 a.m. – 3

³ Results for **Highspire** station must be interpreted with caution due to the instability associated with reporting small numbers of traffic stops.

p.m. shift conducted 48.8% of the stops, followed closely by the 3 p.m. – 11 p.m. shift, which accounted for 42.6% of stops. The remaining 8.6% of traffic stops were recorded during the 11 p.m. – 7 a.m. shift. Approximately 96% of the stops occurred on an interstate (49.6%) or state highway (46.4%). Local and other county roadways accounted for 3.9% of stops. The majority of vehicles stopped (73.6%) were registered in Pennsylvania and had, on average, 0.6 passengers. Nearly 90% of the stops lasted between 1-15 minutes in duration, while 99% of the stops were completed within 30 minutes. Please refer to **Table 4.1** for specific variation across areas and troops, and **Table 4.2** for variation across stations. For each of the categories, the variation at the station level is, as expected, most pronounced.

Table 4.1: 2004 Traffic Stop Descriptives by Department, Area & Troop

	Total # of Stops	% Weekday	Time of Stop % Daytime	Shift			% Inter	Roadway Type			Regist. % PA	Passengers Avg/vehicle	Duration of Stop (minutes)			
				% 7-3	% 3-11	% 11-7		% State	% Local	% Other			% 1-15	% 16-30	% 31-60	% 61+
PSP Dept.	300,683	69.8	73.1	48.8	42.6	8.6	49.6	46.4	3.8	0.1	73.6	0.6	88.7	10.4	0.7	0.2
AREA I	102,265	69.1	73.2	48.0	43.7	8.3	71.5	25.5	2.9	0.1	68.9	0.7	88.0	11.1	0.7	0.2
Troop H	26,073	70.1	68.5	45.3	44.2	10.5	47.8	45.5	6.6	0.2	74.9	0.6	87.0	11.8	0.8	0.4
Troop J	8,510	72.9	64.2	42.8	42.3	14.9	0.6	90.9	8.3	0.2	91.0	0.5	82.5	15.3	2.0	0.3
Troop L	9,033	70.2	71.7	49.0	42.3	8.7	44.4	50.0	5.3	0.3	78.3	0.6	77.2	21.2	1.1	0.5
Troop T	58,649	67.9	76.9	49.7	43.9	6.3	96.6	3.3	0.0	0.0	61.5	0.7	90.9	8.6	0.4	0.1
AREA II	39,743	68.8	75.9	50.9	42.8	6.2	34.3	63.4	2.2	0.1	72.3	0.7	86.2	13.1	0.5	0.1
Troop F	22,033	69.0	75.2	49.2	44.6	6.1	25.3	72.4	2.3	0.1	73.7	0.7	94.3	5.3	0.3	0.1
Troop P	8,072	65.7	73.8	49.4	42.8	7.8	19.0	78.8	2.2	0.1	87.1	0.6	86.4	12.5	0.9	0.2
Troop R	9,638	70.9	79.4	56.0	38.8	5.2	67.9	29.8	2.1	0.2	56.9	0.7	67.6	31.6	0.8	0.1
AREA III	54,792	71.9	72.7	49.3	41.5	9.1	31.9	63.7	4.3	0.1	82.6	0.5	92.8	6.4	0.6	0.2
Troop A	15,734	71.8	76.7	52.0	40.8	7.2	0.5	93.9	5.4	0.2	94.4	0.5	93.4	6.1	0.3	0.2
Troop B	19,364	73.7	72.3	48.5	39.9	11.6	57.9	37.1	4.9	0.1	78.5	0.5	91.0	7.8	1.0	0.3
Troop G	19,694	70.3	69.8	47.9	43.8	8.3	31.3	65.9	2.8	0.1	77.1	0.6	94.0	5.3	0.5	0.2
AREA IV	54,582	68.5	72.4	48.6	43.1	8.3	41.1	54.9	3.9	0.1	71.8	0.7	90.3	8.6	0.7	0.3
Troop C	21,421	68.5	72.7	49.1	43.2	7.7	49.9	48.9	1.2	0.0	59.2	0.8	90.2	9.1	0.4	0.3
Troop D	16,028	70.1	71.5	47.7	43.8	8.6	23.7	71.4	4.8	0.1	84.1	0.6	90.9	7.8	0.9	0.4
Troop E	17,133	67.0	72.8	48.9	42.4	8.6	46.5	46.8	6.5	0.2	75.9	0.7	89.8	8.8	0.9	0.4
AREA V	46,648	70.5	71.4	48.2	40.7	11.1	44.6	49.4	5.8	0.3	77.6	0.6	86.4	12.7	0.7	0.2
Troop K	11,044	69.8	63.0	44.6	38.0	17.4	27.7	63.1	9.0	0.2	88.3	0.5	86.7	12.1	0.9	0.4
Troop M	20,218	74.2	72.0	47.7	43.4	8.8	37.2	56.3	6.2	0.4	81.8	0.5	85.2	13.8	0.8	0.2
Troop N	15,386	66.2	76.7	51.4	39.2	9.4	66.6	30.4	2.9	0.1	64.2	0.7	87.6	11.9	0.4	0.1

Table 4.2: 2004 Traffic Stop Descriptives by Station (p. 1 of 4)

	Total # of Stops	% Weekday	Time of Stop % Daytime	Shift			Roadway Type			Regist. % PA	Passengers Avg/vehicle	Duration of Stop (minutes)				
				% 7-3	% 3-11	% 11-7	% Inter.	% State	% Local			% Other	% 1-15	% 16-30	% 31-60	% 61+
AREA I																
Troop H																
Carlisle	5,944	67.7	70.8	47.9	44.8	7.3	79.7	15.3	4.8	0.2	60.3	0.7	86.4	12.5	0.9	0.2
Chambersburg	5,049	67.5	66.4	44.9	43.6	11.4	34.6	47.0	18.2	0.2	78.6	0.6	89.9	9.4	0.6	0.2
Gettysburg	2,969	74.3	74.2	47.2	44.4	8.4	4.9	92.5	2.6	0.1	67.1	0.6	82.7	13.1	2.4	1.8
Harrisburg	3,885	70.3	75.7	48.9	42.9	8.2	57.4	39.2	3.1	0.3	80.4	0.5	85.4	14.2	0.3	0.1
Lykens	1,250	71.0	73.8	42.3	49.9	7.8	0.3	96.2	3.5	0.0	98.3	0.5	90.5	9.1	0.2	0.2
Newport	2,058	74.7	74.8	52.3	40.3	7.4	0.2	97.0	2.7	0.0	89.5	0.6	87.4	11.7	0.8	0.1
York	4,918	71.0	54.7	36.6	44.9	18.4	73.1	22.4	4.3	0.3	77.1	0.5	87.6	11.3	0.7	0.3
Troop J																
Avondale	3,007	75.3	72.5	45.2	43.0	11.8	0.4	89.8	9.4	0.4	85.2	0.6	84.3	13.0	2.2	0.4
Embreeville	2,400	72.8	55.0	35.8	47.1	17.0	0.3	94.6	5.0	0.1	95.3	0.5	83.2	15.1	1.7	0.0
Ephrata	977	62.5	67.5	50.3	33.5	16.3	2.4	91.1	6.4	0.1	92.6	0.6	88.8	8.8	1.6	0.7
Lancaster	2,126	74.3	61.1	43.9	39.8	16.2	0.4	88.3	11.2	0.1	93.6	0.5	76.1	21.6	2.1	0.2
Troop L																
Frackville	952	68.0	65.3	47.3	36.1	16.6	59.3	38.1	2.3	0.2	74.7	0.7	87.1	11.3	1.1	0.5
Hamburg	1,812	65.9	66.9	47.5	43.9	8.7	75.2	19.6	5.0	0.1	65.0	0.8	83.9	13.6	1.4	1.0
Jonestown	2,739	64.3	75.6	48.0	41.8	10.2	63.4	29.1	7.4	0.2	66.6	0.7	53.7	44.0	1.6	0.7
Reading	1,938	77.9	68.9	46.4	47.6	6.0	13.4	79.2	6.8	0.7	95.6	0.5	85.6	13.2	1.1	0.1
Schuylkill Haven	1,592	77.0	77.6	56.7	38.6	4.7	5.7	92.3	1.8	0.2	94.8	0.5	93.5	6.4	0.0	0.1
Troop T																
Bowmansville	6,486	66.2	78.5	51.4	44.6	4.1	100.0	0.0	0.0	0.0	76.0	0.8	95.7	4.0	0.2	0.0
Everett	7,816	66.0	70.4	44.2	44.7	11.1	100.0	0.0	0.0	0.0	51.2	0.9	93.6	5.3	0.7	0.4
Gibsonia	8,209	73.8	88.6	61.3	36.4	2.3	91.0	8.9	0.1	0.0	57.4	0.7	66.1	33.2	0.6	0.1
Highspire	4	75.0	75.0	50.0	25.0	25.0	75.0	25.0	0.0	0.0	75.0	0.3	100.0	0.0	0.0	0.0
King of Prussia	6,773	63.2	76.8	52.1	34.2	13.8	99.4	0.5	0.1	0.0	76.6	0.5	92.5	7.2	0.3	0.0
New Stanton	7,829	69.0	78.0	52.6	42.5	4.9	85.0	14.6	0.1	0.3	67.4	0.7	93.9	5.8	0.2	0.1
Newville	9,978	64.5	70.8	42.8	52.7	4.6	99.8	0.2	0.0	0.0	62.4	0.9	95.3	4.2	0.4	0.2
Pocono	4,250	72.6	76.9	46.6	52.2	1.2	99.9	0.1	0.0	0.0	74.2	0.8	98.4	1.3	0.2	0.0
Somerset (T)	7,303	69.5	76.4	47.5	44.5	8.0	99.8	0.2	0.0	0.0	35.6	0.7	96.8	2.9	0.2	0.2

Table 4.2: 2004 Traffic Stop Descriptives by Station (p. 2 of 4)

	Total # of Stops	% Weekday	Time of Stop % Daytime	Shift			Roadway Type			Regist.	Passengers	Duration of Stop (minutes)				
			% 7-3	% 3-11	% 11-7	% Inter.	% State	% Local	% Other	% PA	Avg/vehicle	% 1-15	% 16-30	% 31-60	% 61+	
AREA II																
Troop F																
Coudersport	1,515	70.4	70.3	38.8	53.3	7.9	0.3	96.8	2.8	0.1	85.2	0.8	88.1	11.6	0.3	0.0
Emporium	1,182	67.4	85.2	59.3	36.7	4.0	0.2	95.6	4.2	0.0	92.0	0.6	98.0	1.9	0.1	0.0
Lamar	3,536	68.4	78.9	52.0	43.2	4.9	83.2	15.7	1.0	0.1	44.1	0.8	97.2	2.5	0.2	0.1
Mansfield	1,438	63.2	69.7	37.0	60.2	2.8	0.0	99.0	1.0	0.0	65.4	0.7	96.3	3.5	0.2	0.0
Milton	2,873	77.6	78.1	54.0	42.4	3.7	59.0	40.3	0.7	0.0	58.4	0.8	93.2	6.4	0.3	0.0
Montoursville	6,897	66.2	75.4	50.3	43.9	5.8	13.3	83.0	3.6	0.1	82.4	0.7	94.3	5.3	0.3	0.1
Selinsgrove	3,095	69.2	72.7	48.4	41.6	10.0	0.0	98.7	1.3	0.0	81.5	0.6	94.7	4.9	0.3	0.1
Stonington	1,497	71.7	67.5	44.8	44.8	10.4	0.3	96.3	3.1	0.3	98.3	0.5	90.6	9.0	0.4	0.1
Troop P																
Laporte	1,343	61.9	75.7	44.2	50.8	5.1	0.0	99.9	0.1	0.0	84.8	0.7	93.1	6.1	0.7	0.1
Shickshinny	996	65.1	78.0	58.3	30.7	10.9	0.5	97.3	1.8	0.4	96.0	0.5	88.4	10.8	0.6	0.2
Towanda	1,781	68.7	73.8	47.1	47.6	5.3	0.2	99.0	0.7	0.1	87.6	0.6	87.5	11.1	1.0	0.3
Tunkhannock	1,438	64.8	64.0	41.1	44.6	14.3	0.1	97.8	2.1	0.0	94.6	0.5	90.5	7.6	1.5	0.3
Wyoming	2,514	66.3	76.7	55.0	39.0	6.0	60.4	34.9	4.7	0.0	80.0	0.5	78.7	20.3	0.8	0.2
Troop R																
Blooming Grove	2,607	70.4	80.6	53.7	42.1	4.1	64.2	32.6	2.8	0.5	54.8	0.7	32.0	66.5	1.5	0.1
Dunmore	2,823	69.7	78.6	56.6	39.0	4.4	89.3	9.2	1.5	0.0	60.3	0.7	79.3	20.0	0.6	0.0
Gibson	2,121	72.8	82.3	59.6	33.1	7.3	79.5	18.5	1.7	0.2	35.4	0.8	84.4	15.0	0.6	0.0
Honesdale	2,087	71.2	76.0	54.6	40.1	5.3	31.7	65.5	2.5	0.2	76.7	0.6	79.0	20.5	0.5	0.0
AREA III																
Troop A																
Ebensburg	3,127	69.7	77.8	52.9	41.8	5.3	0.1	97.5	2.3	0.0	93.9	0.5	94.9	3.9	0.4	0.8
Greensburg	4,180	74.7	76.6	58.2	30.8	11.0	0.5	93.8	5.7	0.0	98.0	0.3	97.0	2.8	0.2	0.0
Indiana	3,920	70.2	79.7	50.8	44.0	5.2	0.3	93.5	5.9	0.3	93.0	0.5	95.6	4.0	0.3	0.1
Kiski Valley	2,495	70.7	75.3	50.8	44.8	4.4	0.2	90.4	8.7	0.6	94.1	0.5	81.5	18.1	0.4	0.0
Somerset (A)	2,012	73.3	71.1	41.8	49.0	9.2	1.8	93.5	4.2	0.4	90.9	0.6	94.3	5.4	0.3	0.0

Table 4.2: 2004 Traffic Stop Descriptives by Station (p. 3 of 4)

	Total # of Stops	% Weekday	Time of Stop % Daytime	% 7-3	Shift % 3-11	% 11-7	% Inter.	Roadway Type			Regist. % PA	Passengers Avg/vehicle	Duration of Stop (minutes)			
								% State	% Local	% Other			% 1-15	% 16-30	% 31-60	% 61+
AREA III (cont.)																
Troop B																
Belle Vernon	3,052	72.9	76.8	53.9	35.8	10.3	67.2	29.8	2.9	0.1	74.1	0.6	92.8	5.0	0.7	1.5
Findlay	4,403	71.2	74.2	47.9	47.1	5.0	75.4	22.5	2.1	0.1	84.2	0.5	94.2	5.6	0.2	0.1
Uniontown	3,981	70.9	60.4	39.1	40.1	20.7	2.4	89.5	7.8	0.2	92.9	0.6	92.5	7.0	0.5	0.1
Washington	5,336	74.1	73.2	51.5	35.1	13.4	79.0	13.5	7.4	0.0	73.6	0.5	94.0	5.6	0.3	0.1
Waynesburg	2,592	82.4	79.9	51.6	41.7	6.7	59.2	38.6	2.2	0.0	62.3	0.6	74.7	20.3	4.8	0.2
Troop G																
Bedford	3,119	73.3	70.7	46.6	48.2	5.2	32.0	65.8	2.1	0.1	77.8	0.6	96.1	3.2	0.5	0.3
Hollidaysburg	3,156	74.8	66.7	41.5	49.8	8.7	62.0	31.6	6.3	0.1	82.3	0.6	93.6	5.2	1.0	0.2
Huntingdon	2,188	69.4	63.1	41.6	44.1	14.3	0.5	97.7	1.6	0.1	96.0	0.6	84.9	13.5	1.1	0.4
Lewistown	2,457	69.9	64.4	45.4	46.0	8.5	0.3	97.0	2.6	0.0	91.6	0.6	90.2	9.0	0.6	0.2
McConnellsburg	2,036	69.9	85.6	63.5	32.1	4.4	78.4	20.3	1.1	0.2	39.9	0.7	98.3	1.7	0.0	0.0
Philipsburg	2,803	65.5	68.1	44.8	43.7	11.5	14.8	81.1	4.1	0.0	78.9	0.7	94.1	5.7	0.1	0.2
Rockview	3,935	68.8	72.0	53.0	40.0	7.0	29.8	68.9	1.3	0.0	70.7	0.7	97.9	1.8	0.2	0.1
AREA IV																
Troop C																
Clarion	4,934	69.8	71.3	49.5	41.5	9.0	77.5	21.3	1.2	0.0	43.2	0.9	91.1	8.0	0.7	0.2
Clearfield	5,145	67.5	69.2	47.0	43.2	9.8	62.3	36.9	0.8	0.0	53.0	0.8	91.5	8.1	0.2	0.2
Dubois	3,080	69.7	81.9	55.9	41.7	2.4	80.6	18.4	1.0	0.0	45.9	0.9	94.4	5.1	0.3	0.2
Kane	1,559	66.8	72.5	46.0	49.8	4.2	11.7	84.7	3.6	0.0	70.5	0.7	89.9	9.4	0.2	0.4
Punxsutawney	2,369	63.6	73.1	49.3	42.6	8.1	18.9	79.3	1.9	0.0	81.0	0.7	93.4	6.0	0.3	0.3
Ridgway	2,317	69.1	73.3	49.5	41.3	9.1	14.6	84.6	0.7	0.1	72.7	0.6	83.6	15.3	0.7	0.4
Tionesta	2,017	72.7	70.1	44.8	46.9	8.3	10.0	89.3	0.6	0.0	85.3	0.7	82.4	16.3	0.8	0.5
Troop D																
Beaver	2,334	67.8	75.3	46.5	41.5	12.0	0.2	98.1	1.7	0.0	82.5	0.5	87.0	12.3	0.6	0.1
Butler	4,281	74.6	75.0	48.0	48.0	4.0	32.0	58.8	8.9	0.2	91.1	0.6	90.4	7.8	1.4	0.4
Kittanning	4,147	68.2	63.9	42.7	49.8	7.5	0.0	98.3	1.5	0.1	97.1	0.5	94.6	4.8	0.3	0.2
Mercer	3,098	65.3	70.1	48.1	39.7	12.1	75.3	22.2	2.2	0.3	56.3	0.9	87.7	9.9	1.4	1.0
New Castle	2,168	74.1	76.8	57.1	32.2	10.7	3.6	86.5	9.8	0.0	87.1	0.5	94.0	5.6	0.3	0.1

Table 4.2: 2004 Traffic Stop Descriptives by Station (p. 4 of 4)

	Total # of Stops	% Weekday	Time of Stop % Daytime	% 7-3	Shift % 3-11	% 11-7	% Inter.	Roadway Type			Regist. % PA	Passengers Avg/vehicle	Duration of Stop (minutes)			
								% State	% Local	% Other			% 1-15	% 16-30	% 31-60	% 61+
AREA IV (cont.)																
Troop E																
Corry	1,208	73.4	74.5	54.7	40.0	5.2	26.9	68.6	4.5	0.0	85.6	0.7	93.3	6.1	0.4	0.2
Erie	4,329	71.4	75.6	51.7	41.6	6.8	61.3	29.5	9.1	0.1	60.6	0.7	83.6	14.2	1.7	0.4
Franklin	2,988	67.7	66.9	42.8	50.4	6.8	15.1	71.2	12.9	0.7	87.5	0.6	91.9	7.4	0.5	0.2
Girard	3,719	69.8	69.4	43.9	43.5	12.7	56.6	39.2	4.0	0.1	76.4	0.7	89.0	9.1	1.4	0.5
Meadville	3,325	51.7	78.1	57.3	33.0	9.7	71.8	25.4	2.8	0.1	74.1	0.9	94.1	5.0	0.3	0.5
Warren	1,564	75.0	71.6	42.8	49.0	8.2	2.5	95.0	2.5	0.0	91.3	0.6	93.1	6.5	0.1	0.3
AREA V																
Troop K																
Media	3,867	69.5	51.2	32.1	40.3	27.5	38.3	56.7	4.6	0.4	78.5	0.6	81.3	16.4	1.4	0.9
Philadelphia	2,735	72.0	62.0	45.3	38.0	16.7	53.2	44.4	2.2	0.1	89.2	0.4	87.7	11.4	0.8	0.1
Skippack	4,442	68.7	74.0	54.9	36.0	9.1	2.8	80.1	17.0	0.1	96.3	0.4	90.8	8.8	0.4	0.1
Troop M																
Belfast	3,159	73.6	80.3	52.7	42.9	4.4	39.7	56.6	3.7	0.0	76.1	0.6	85.6	13.5	0.8	0.1
Bethlehem	4,432	70.8	64.9	45.3	40.9	13.8	4.3	91.4	4.3	0.1	91.9	0.5	86.4	12.6	1.0	0.0
Dublin	4,173	80.6	74.3	46.2	47.1	6.6	1.7	86.6	11.2	0.4	94.6	0.4	85.6	13.9	0.4	0.1
Fogelsville	5,142	73.0	66.3	44.3	45.5	10.3	67.2	28.9	3.9	0.1	71.3	0.6	83.3	15.4	1.1	0.2
Treose	3,312	72.9	79.7	53.6	39.3	7.1	76.8	13.4	8.2	1.6	73.7	0.4	85.7	13.0	0.9	0.4
Troop N																
Bloomsburg	2,895	60.5	77.6	52.2	34.3	13.5	93.9	5.1	1.0	0.0	52.2	0.8	97.1	2.5	0.2	0.1
Fern Ridge	2,774	63.2	75.1	45.9	48.6	5.5	85.1	12.7	1.9	0.3	49.0	0.8	94.4	5.0	0.4	0.3
Hazleton	3,298	64.4	77.3	48.9	40.3	10.9	74.0	21.9	3.8	0.2	66.1	0.8	82.1	17.6	0.3	0.1
Lehighton	2,554	69.3	80.5	59.0	36.7	4.3	0.8	93.7	5.5	0.0	95.8	0.5	76.1	23.1	0.8	0.0
Swiftwater	3,865	71.9	74.2	52.0	36.7	11.3	70.0	27.4	2.5	0.0	61.8	0.7	88.1	11.6	0.3	0.1

Based on the data available, in 2005, 272,670 traffic stops were initiated by PSP Troopers. As shown in **Table 4.3**, *Area I* again accounted for over one-third of the total stops (99,776). The majority of the stops for the *department* were initiated on a weekday (70.1%) and occurred during the daytime (71.8%). The 7 a.m. – 3 p.m. shift conducted 48.0% of the stops, followed closely by the 3 p.m. – 11 p.m. shift, accounting for 42.4% of the stops. The remaining 9.6% of traffic stops were recorded during the 11 p.m. – 7 a.m. shift. Approximately 96% of the stops occurred on an interstate (49.3%) or state highway (47.0%). Local and county roadways accounted for only 3.7% of stops. The majority of vehicles stopped (74.7%) were registered in Pennsylvania and had on average of 0.6 passengers. Over 88.4% of the stops lasted between 1-15 minutes in duration, while 98.9% of the stops were completed within 30 minutes. Please refer to **Table 4.3** for specific variation across areas and troops, and **Table 4.4** for variation across stations. Again, as expected, the variation at the station level is most pronounced.

Table 4.3: 2005 Traffic Stop Descriptives by Department, Area & Troop

	Total # of Stops	% Weekday	Time of Stop % Daytime	Shift			% Inter.	Roadway Type			Regist. % PA	Passengers Avg/vehicle	Duration of Stop (minutes)			
				% 7-3	% 3-11	% 11-7		% State	% Local	% Other			% 1-15	% 16-30	% 31-60	% 61+
PSP Dept.	272,670	70.1	71.8	48.0	42.4	9.6	49.3	47.0	3.5	0.2	74.7	0.6	88.4	10.5	0.8	0.3
AREA I	99,776	69.7	73.2	47.6	43.3	9.1	71.6	25.3	2.7	0.3	69.0	0.7	88.5	10.6	0.7	0.2
Troop H	23,209	70.4	67.9	46.2	42.4	11.4	46.0	46.9	6.9	0.2	75.4	0.6	88.8	10.0	0.9	0.3
Troop J	9,286	72.7	62.4	41.7	38.6	19.7	1.0	92.3	6.5	0.2	92.1	0.6	80.5	17.2	1.9	0.4
Troop L	8,878	70.0	74.2	46.9	43.7	9.4	47.4	47.1	5.4	0.2	76.7	0.7	77.3	21.2	1.1	0.4
Troop T	58,403	68.9	76.9	49.2	44.4	6.4	96.7	2.8	0.1	0.4	61.6	0.8	91.3	8.2	0.3	0.2
AREA II	31,626	68.0	74.1	50.3	42.8	6.9	31.3	66.2	2.4	0.1	74.9	0.7	85.0	14.1	0.7	0.2
Troop F	15,409	69.5	73.8	50.6	41.9	7.6	19.0	78.8	2.2	0.0	77.8	0.7	94.2	5.3	0.4	0.2
Troop P	7,678	68.2	71.1	46.4	45.5	8.1	14.5	82.5	2.8	0.1	86.9	0.6	81.5	17.4	0.9	0.2
Troop R	8,539	65.1	77.3	53.4	42.0	4.6	68.6	28.9	2.4	0.1	58.9	0.7	71.6	27.1	1.1	0.2
AREA III	56,643	72.9	71.1	48.2	42.4	9.4	29.4	66.5	4.0	0.2	82.9	0.6	92.3	6.7	0.6	0.4
Troop A	15,736	71.0	72.6	47.3	45.1	7.6	0.6	93.8	5.2	0.4	93.8	0.6	92.3	6.8	0.4	0.5
Troop B	19,666	74.1	71.0	48.9	38.4	12.7	52.8	42.7	4.4	0.1	80.5	0.5	90.9	7.8	1.0	0.4
Troop G	21,241	73.1	70.0	48.2	44.0	7.8	29.1	68.2	2.6	0.1	77.0	0.6	93.6	5.7	0.5	0.2
AREA IV	44,801	67.5	69.3	45.9	43.7	10.3	39.9	56.4	3.6	0.1	73.7	0.7	89.2	9.3	1.0	0.6
Troop C	17,140	66.3	68.4	42.3	47.9	9.8	43.6	54.8	1.6	0.0	63.4	0.8	89.3	9.6	0.8	0.3
Troop D	14,251	71.1	69.1	46.5	42.8	10.6	23.9	71.5	4.4	0.2	84.3	0.6	88.2	9.7	1.3	0.8
Troop E	13,410	65.2	70.6	49.9	39.3	10.7	52.1	42.5	5.2	0.2	75.5	0.7	90.1	8.3	0.9	0.7
AREA V	38,157	71.6	69.9	48.7	38.5	12.8	45.3	48.8	5.6	0.3	79.7	0.6	84.8	13.9	1.0	0.3
Troop K	8,395	69.2	63.1	45.5	34.9	19.6	37.3	55.5	7.0	0.2	88.8	0.5	85.4	12.8	1.4	0.4
Troop M	16,860	74.8	68.4	47.4	40.8	11.8	37.4	56.1	6.1	0.4	83.7	0.5	82.2	16.3	1.3	0.3
Troop N	12,902	69.0	76.4	52.6	37.7	9.7	60.9	34.9	4.1	0.1	68.5	0.7	87.9	11.5	0.4	0.1

Table 4.4: 2005 Traffic Stop Descriptives by Station (p. 1 of 4)

	Total # of Stops	% Weekday	Time of Stop % Daytime	Shift		% 7-3	% 3-11	% 11-7	% Inter.	Roadway Type			Regist. % PA	Passengers Avg/vehicle	Duration of Stop (minutes)			
				% 7-3	% 3-11					% State	% Local	% Other			% 1-15	% 16-30	% 31-60	% 61+
AREA I																		
Troop H																		
Carlisle	5,213	68.6	67.8	44.9	45.8	9.3	72.5	21.4	6.0	0.1	64.4	67.2	86.5	11.9	1.4	0.2		
Chambersburg	3,761	66.2	63.2	46.5	39.4	14.0	36.1	41.6	22.0	0.3	79.5	60.9	89.4	10.0	0.4	0.2		
Gettysburg	2,689	65.8	73.2	49.0	43.6	7.4	1.1	96.4	2.3	0.1	70.8	60.4	81.0	16.0	1.9	1.1		
Harrisburg	3,321	76.7	74.3	48.5	41.9	9.6	68.5	28.4	3.0	0.1	72.6	47.7	90.6	8.6	0.7	0.1		
Lykens	1,481	74.2	75.2	51.0	38.4	10.6	1.4	95.3	3.2	0.2	97.4	45.6	90.3	8.8	0.5	0.3		
Newport	2,340	72.4	69.4	46.4	45.1	8.5	0.7	97.4	1.8	0.0	88.4	59.0	92.2	7.0	0.7	0.2		
York	4,404	71.9	60.7	42.3	40.5	17.2	72.6	22.1	5.0	0.4	75.5	52.4	91.9	7.3	0.6	0.2		
Troop J																		
Avondale	2,747	71.7	66.6	40.3	43.5	16.1	1.2	90.9	7.5	0.4	86.1	54.2	80.6	17.4	1.4	0.5		
Embreeville	2,410	74.1	60.8	40.3	39.6	20.0	0.2	91.7	8.0	0.0	95.1	50.5	84.9	13.6	1.2	0.3		
Ephrata	1,014	66.7	57.3	41.5	42.0	16.5	0.3	95.9	3.6	0.2	93.4	60.9	88.8	9.9	1.0	0.3		
Lancaster	3,115	74.6	61.5	44.0	32.3	23.6	1.7	92.7	5.5	0.1	94.6	56.1	74.1	22.1	3.3	0.5		
Troop L																		
Frackville	873	73.2	66.1	43.1	43.3	13.6	59.3	36.9	3.7	0.1	74.6	62.5	86.1	12.8	0.8	0.2		
Hamburg	2,005	73.0	68.8	41.1	49.0	9.9	73.3	21.2	5.5	0.0	66.7	71.8	82.6	15.3	1.9	0.2		
Jonestown	3,187	60.3	83.3	50.8	41.7	7.5	64.3	29.2	6.4	0.1	67.1	68.2	61.3	37.1	0.9	0.6		
Reading	1,295	77.2	58.1	40.8	47.6	11.7	10.3	80.9	8.2	0.6	95.2	50.9	84.5	13.4	1.7	0.5		
Schuylkill Ha.	1,518	78.5	80.6	53.6	38.0	8.4	2.6	95.7	1.6	0.1	95.3	44.9	92.6	7.2	0.1	0.0		
Troop T																		
Bowmansville	5,859	65.9	80.2	50.9	46.1	3.0	100.0	0.0	0.0	0.0	78.0	71.8	97.8	1.9	0.2	0.1		
Everett	9,652	69.0	71.5	46.8	43.0	10.2	100.0	0.0	0.0	0.0	50.9	88.9	95.4	3.8	0.5	0.3		
Gibsonia	7,977	71.7	86.1	55.9	40.6	3.5	92.4	7.5	0.1	0.0	56.2	64.4	71.5	27.7	0.5	0.3		
Highspire	45	57.8	97.8	93.3	4.4	2.2	95.6	4.4	0.0	0.0	48.9	100.0	97.8	2.2	0.0	0.0		
King of Prussia	6,188	67.7	74.3	50.3	36.6	13.1	99.3	0.5	0.3	0.0	75.8	49.4	90.0	9.6	0.3	0.1		
New Stanton	8,086	70.4	77.8	52.2	43.1	4.7	85.4	12.0	0.0	2.6	68.3	76.4	94.6	5.0	0.2	0.1		
Newville	8,607	63.8	72.1	42.7	52.7	4.7	99.8	0.2	0.0	0.0	64.0	86.8	89.9	9.7	0.3	0.2		
Pocono	5,242	70.4	79.4	49.3	48.0	2.7	99.9	0.1	0.0	0.0	73.7	79.3	99.1	0.8	0.1	0.0		
Somerset (T)	6,736	73.1	76.6	46.5	45.2	8.2	99.4	0.5	0.1	0.0	35.3	73.3	96.2	3.5	0.3	0.1		

Table 4.4: 2005 Traffic Stop Descriptives by Station (p. 2 of 4)

	Total # of Stops	% Weekday	Time of Stop % Daytime	Shift			Roadway Type			Regist.	Passengers	Duration of Stop (minutes)				
			% 7-3	% 3-11	% 11-7	% Inter.	% State	% Local	% Other	% PA	Avg/vehicle	% 1-15	% 16-30	% 31-60	% 61+	
AREA II																
Troop F																
Coudersport	1,366	68.7	68.8	41.4	49.1	9.5	0.0	97.6	2.3	0.1	83.2	69.3	93.5	6.1	0.3	0.1
Emporium	956	65.2	80.0	53.8	41.2	5.0	0.0	95.8	4.2	0.0	93.0	65.4	96.8	2.9	0.3	0.0
Lamar	1,735	70.2	82.6	61.7	34.9	3.4	87.7	11.6	.7	0.0	41.9	86.1	95.4	4.0	0.5	0.1
Mansfield	1,243	71.0	66.7	43.1	53.1	3.8	0.1	98.2	1.6	0.1	66.8	68.8	97.2	2.6	0.0	0.2
Milton	2,121	75.6	79.4	56.0	38.0	6.0	45.7	53.7	.6	0.0	67.8	71.7	93.1	6.0	0.4	0.4
Montoursville	4,075	67.7	73.9	50.7	42.4	6.9	10.7	85.4	3.8	0.1	86.7	61.4	94.7	4.7	0.4	0.1
Selinsgrove	2,847	67.9	69.8	46.9	40.3	12.9	0.0	98.9	1.0	0.0	83.7	60.2	94.3	5.1	0.5	0.1
Stonington	1,066	70.0	67.6	48.3	41.5	10.2	0.3	96.6	3.0	0.1	98.6	55.7	87.1	12.7	0.1	0.2
Troop P																
Laporte	1,456	62.8	73.8	44.9	50.8	4.3	0.0	99.4	.5	0.1	83.6	65.2	92.7	6.9	0.4	0.0
Shickshinny	1,101	65.9	72.0	53.7	31.2	15.2	0.1	96.5	3.4	0.1	97.3	51.2	89.8	8.9	1.1	0.2
Towanda	2,400	76.3	67.3	40.5	53.5	6.0	0.2	99.0	.8	0.0	87.3	57.9	74.8	24.4	0.6	0.2
Tunkhannock	1,052	59.7	66.3	39.6	49.7	10.6	0.7	89.0	10.4	0.0	94.0	52.1	78.9	19.2	1.7	0.2
Wyoming	1,669	68.3	76.6	55.8	36.1	8.1	66.1	30.9	2.7	0.3	77.9	53.3	77.7	21.0	1.1	0.2
Troop R																
Blooming Gr.	1,918	61.8	79.2	47.3	49.4	3.3	72.5	24.7	2.6	0.2	52.1	74.0	57.0	41.3	1.5	0.2
Dunmore	3,093	66.2	76.1	59.0	35.6	5.4	84.4	13.4	2.1	0.1	63.8	68.3	71.1	27.7	0.9	0.3
Gibson	1,541	66.9	74.1	51.6	43.3	5.1	73.8	23.4	2.8	0.1	40.7	80.8	78.5	19.8	1.6	0.1
Honesdale	1,987	65.2	79.8	51.7	43.7	4.5	36.2	61.3	2.3	0.1	72.1	57.2	81.2	18.2	0.5	0.2
AREA III																
Troop A																
Ebensburg	4,054	67.3	76.1	50.1	45.0	4.8	0.0	97.7	2.2	0.0	93.0	54.7	94.8	3.9	0.2	1.1
Greensburg	3,957	74.6	69.7	50.0	40.4	9.6	0.9	92.5	6.5	0.0	97.0	36.8	93.6	5.7	0.5	0.2
Indiana	2,629	69.6	70.2	43.8	46.8	9.4	0.2	93.6	5.8	0.4	91.5	54.1	94.6	4.7	0.5	0.2
Kiski Valley	2,732	73.9	75.5	44.6	49.0	6.4	0.6	89.7	8.8	0.9	94.2	56.2	82.5	16.5	0.7	0.3
Somerset (A)	2,364	69.9	70.5	44.9	46.9	8.2	1.6	94.3	3.3	0.8	91.5	56.0	94.3	4.8	0.3	0.5

Table 4.4: 2005 Traffic Stop Descriptives by Station (p. 3 of 4)

	Total # of Stops	% Weekday	Time of Stop % Daytime	% 7-3	<u>Shift</u> % 3-11	% 11-7	% Inter.	<u>Roadway Type</u>			Regist. % PA	Passengers Avg/vehicle	<u>Duration of Stop (minutes)</u>			
								% State	% Local	% Other			% 1-15	% 16-30	% 31-60	% 61+
AREA III (cont.)																
Troop B																
Belle Vernon	2,368	74.8	77.1	61.4	29.1	9.4	67.1	28.8	4.0	0.0	74.7	57.1	94.4	4.5	0.5	0.6
Findlay	4,639	69.7	70.9	48.1	41.3	10.6	75.2	22.9	1.7	0.2	83.2	46.0	92.8	6.2	0.5	0.5
Uniontown	5,401	77.0	62.7	41.6	42.1	16.3	0.9	94.4	4.6	0.1	94.2	51.0	91.9	7.3	0.3	0.5
Washington	5,044	74.6	76.4	52.6	34.2	13.1	79.7	12.5	7.7	0.1	73.7	46.4	95.4	4.3	0.3	0.0
Waynesburg	2,214	74.6	72.6	46.5	42.7	10.8	55.8	41.3	2.8	0.1	63.7	66.8	70.4	23.4	5.6	0.5
Troop G																
Bedford	3,082	71.7	68.2	45.7	48.7	5.6	36.4	62.1	1.4	0.1	76.4	64.8	94.1	4.9	0.7	0.3
Hollidaysburg	2,885	74.2	69.6	44.7	46.8	8.5	59.9	30.7	9.4	0.0	82.2	63.3	91.5	7.6	0.8	0.2
Huntingdon	1,873	74.1	63.2	43.0	43.2	13.7	0.3	97.7	2.0	0.0	96.3	59.4	78.2	21.1	0.5	0.2
Lewistown	3,180	75.4	71.4	53.1	39.8	7.1	0.3	98.2	1.5	0.1	90.5	68.7	93.6	5.7	0.5	0.3
McConnellsburg	2,121	75.9	78.6	55.4	39.4	5.1	73.8	24.7	1.3	0.2	44.1	54.4	98.3	1.5	0.1	0.1
Philipsburg	2,483	66.3	72.0	47.4	45.3	7.3	19.2	77.7	3.0	0.1	77.6	66.5	93.9	5.6	0.3	0.2
Rockview	5,617	73.5	68.5	48.0	43.8	8.2	22.7	76.3	1.0	0.0	72.6	63.0	97.5	1.8	0.4	0.3
AREA IV																
Troop C																
Clarion	3,545	66.0	64.2	42.5	44.3	13.1	76.7	22.1	1.2	0.0	43.0	90.9	85.1	13.6	1.0	0.3
Clearfield	3,660	66.7	67.8	44.1	46.3	9.6	68.3	30.7	1.0	0.1	50.5	83.4	92.7	6.4	0.4	0.4
Dubois	2,261	65.9	79.3	44.7	52.5	2.8	80.2	18.7	1.1	0.0	47.2	88.2	96.2	2.9	0.6	0.3
Kane	1,475	67.4	66.8	39.3	56.0	4.7	2.5	92.1	5.3	0.1	76.4	69.9	88.6	10.6	0.5	0.3
Punxsutawney	2,024	68.5	67.6	40.6	45.1	14.3	15.8	81.9	2.3	0.0	83.3	64.7	94.6	4.6	0.4	0.3
Ridgway	1,890	63.9	66.4	38.0	48.9	13.0	2.8	95.5	1.7	0.0	81.3	64.3	78.5	19.0	2.1	0.4
Tionesta	2,285	66.1	68.8	43.4	48.1	8.5	1.1	98.1	0.7	0.0	90.8	61.3	88.1	11.3	0.5	0.1
Troop D																
Beaver	2,318	71.3	69.4	44.9	43.7	11.4	0.2	98.4	1.3	0.0	83.4	49.4	91.3	8.0	0.4	0.3
Butler	4,015	72.3	76.5	51.1	43.3	5.6	35.7	57.8	6.1	0.4	89.0	61.2	87.3	11.5	0.8	0.4
Kittanning	3,637	71.8	61.8	43.0	47.2	9.7	0.4	98.2	1.3	0.1	97.4	52.1	88.2	7.9	2.6	1.2
Mercer	2,534	64.6	62.5	40.3	41.2	18.5	76.2	18.8	4.7	0.4	56.0	88.2	84.1	13.0	1.2	1.7
New Castle	1,747	75.9	76.6	54.8	33.5	11.6	1.0	88.2	10.8	0.1	89.0	57.5	92.1	7.1	0.6	0.1

Table 4.4: 2005 Traffic Stop Descriptives by Station (p. 4 of 4)

	Total # of Stops	% Weekday	Time of Stop % Daytime	% 7-3	Shift % 3-11	% 11-7	% Inter.	Roadway Type			Regist. % PA	Passengers Avg/vehicle	Duration of Stop (minutes)			
								% State	% Local	% Other			% 1-15	% 16-30	% 31-60	% 61+
AREA IV (cont.)																
Troop E																
Corry	852	63.6	63.5	42.8	48.9	8.2	1.3	94.7	4.0	0.0	93.5	63.7	88.1	9.9	1.5	0.5
Erie	2,714	69.9	73.0	53.8	40.1	6.2	53.7	37.7	8.2	0.4	65.0	64.9	86.3	12.4	1.1	0.2
Franklin	1,662	66.8	63.8	48.1	39.4	12.6	25.9	63.1	10.7	0.4	82.1	68.9	89.5	9.4	0.6	0.5
Girard	2,791	69.8	63.6	41.0	40.2	18.7	59.9	36.3	3.7	0.1	77.3	74.1	87.3	10.2	1.5	1.0
Meadville	4,407	58.5	77.9	57.1	34.2	8.6	77.4	19.5	3.0	0.1	71.5	82.6	94.6	4.2	0.4	0.9
Warren	984	68.0	68.5	41.6	49.2	9.2	0.7	95.9	3.3	0.1	91.0	66.4	91.4	7.2	0.7	0.7
AREA V																
Troop K																
Media	2,571	70.0	53.9	33.9	42.2	23.8	34.0	61.1	4.6	0.2	81.5	52.6	85.2	13.1	1.5	0.2
Philadelphia	3,141	70.5	64.2	49.0	31.7	19.3	67.1	30.9	2.0	0.1	88.8	50.3	80.7	16.6	2.0	0.8
Skippack	2,683	66.9	70.7	52.5	31.7	15.8	5.6	78.9	15.1	0.4	95.8	45.4	91.1	8.2	0.6	0.1
Troop M																
Belfast	3,164	76.3	74.2	49.5	45.2	5.3	38.4	56.8	4.6	0.3	77.0	63.0	75.2	23.8	0.8	0.2
Bethlehem	3,479	71.1	58.6	39.0	41.3	19.7	1.9	91.7	6.1	0.2	94.5	49.9	86.0	13.2	0.7	0.1
Dublin	3,139	80.7	77.8	54.4	40.1	5.5	0.6	91.1	8.2	0.1	95.9	38.3	89.7	9.1	1.1	0.1
Fogelsville	4,943	71.7	65.5	45.9	42.2	12.0	64.6	28.1	7.1	0.2	74.7	62.8	80.2	17.4	2.0	0.5
Trevoise	2,135	77.1	68.6	51.2	31.7	17.0	84.9	10.1	3.2	1.8	79.3	47.3	79.7	18.1	1.8	0.5
Troop N																
Bloomsburg	2,027	60.7	71.7	52.5	32.0	15.4	88.9	9.3	1.8	0.0	54.7	81.4	94.4	5.2	0.2	0.2
Fern Ridge	1,893	64.9	83.5	58.5	36.6	5.0	79.3	18.4	2.1	0.2	56.4	84.7	88.0	11.4	0.5	0.1
Hazleton	3,149	69.6	74.5	45.3	42.8	11.9	66.5	28.4	5.0	0.1	68.4	77.4	82.6	17.0	0.3	0.0
Lehighton	2,356	71.8	80.8	53.9	43.7	2.4	0.4	91.1	8.4	0.1	96.5	51.7	81.7	17.8	0.3	0.1
Swiftwater	3,477	73.5	73.9	55.2	32.8	12.0	70.7	26.4	2.7	0.2	64.2	73.3	93.1	6.1	0.7	0.1

Traffic Stops By Month

Table 4.5 provides the temporal breakdown of traffic stop occurrences by month for 2004. The month of May accounted for the greatest percentage of stops at both the department and area level: 11.1% across the *department*, and between 10.9% and 11.6% in the five areas. July (9.7%) and March (9.5%) were the next highest months in terms of traffic stops across the *department*. The lowest percentage of traffic stop activity at the *department* level was reported during the winter months of December (6.1%) and January (5.6%).

Table 4.5: 2004 Monthly Breakdown of Traffic Stops By Department, Area, Troop, & Station (p. 1 of 3)

	Total # of Stops	% Jan.	% Feb.	% Mar.	% Apr.	% May	% June	% July	% Aug.	% Sept.	% Oct.	% Nov.	% Dec.
PSP Dept.	300,683	5.6	8.5	9.5	8.1	11.1	9.3	9.7	8.7	8.5	7.0	7.8	6.1
AREA I	102,265	6.4	8.5	9.3	8.0	10.9	9.0	9.4	8.9	8.5	7.3	7.6	6.3
Troop H	26,073	7.7	8.6	9.7	6.0	10.4	8.9	10.6	8.2	8.9	6.7	7.1	7.2
Carlisle	5,944	8.6	12.2	12.2	6.3	9.5	8.3	9.4	9.3	8.2	5.3	4.3	6.3
Chambersburg	5,049	10.0	5.9	7.9	5.8	11.2	10.1	12.6	9.2	8.6	5.9	5.2	7.5
Gettysburg	2,969	7.4	3.8	9.7	3.2	7.2	5.2	10.2	7.6	13.2	10.0	11.8	10.7
Harrisburg	3,885	7.3	5.9	8.4	4.6	9.2	7.2	11.2	7.8	9.3	9.3	10.2	9.4
Lykens	1,250	4.6	7.4	8.1	5.8	9.9	9.5	14.0	9.4	5.5	8.6	12.6	4.4
Newport	2,058	3.4	9.3	6.7	6.7	14.0	13.7	15.4	3.7	9.7	6.6	4.4	6.3
York	4,918	7.1	11.7	11.4	8.1	12.5	9.9	7.0	7.9	7.6	4.9	7.0	5.0
Troop J	8,510	5.6	8.3	8.2	8.3	11.9	9.9	7.0	8.5	8.8	8.1	8.4	7.0
Avondale	3,007	8.0	11.7	10.3	10.3	12.0	9.1	7.2	5.3	7.7	7.1	6.8	4.5
Embreeville	2,400	5.3	7.6	5.4	7.5	12.6	10.4	8.9	11.7	8.9	8.1	7.5	6.1
Ephrata	977	2.6	4.3	7.7	8.2	13.5	9.7	4.2	9.0	10.1	6.1	9.8	14.7
Lancaster	2,126	3.7	5.9	8.5	6.3	10.2	10.8	6.0	9.5	9.9	10.4	10.9	8.0
Troop L	9,033	4.8	8.3	12.0	8.1	12.9	10.6	9.4	7.1	8.6	5.0	6.4	6.8
Frackville	952	4.4	8.3	12.7	11.2	7.1	15.4	9.3	7.7	10.7	5.3	4.4	3.4
Hamburg	1,812	5.3	7.1	11.6	5.6	19.1	7.7	9.0	6.8	6.4	7.1	7.6	6.7
Jonestown	2,739	4.8	6.6	12.0	8.7	10.5	9.1	8.7	8.1	12.2	5.6	6.9	6.7
Reading	1,938	7.0	13.3	14.7	8.5	11.0	11.7	7.6	5.5	5.3	3.7	5.5	6.2
Schuylkill Haven	1,592	1.9	6.7	8.6	7.8	15.5	12.3	13.6	7.2	7.5	3.3	6.2	9.5
Troop T	58,649	6.2	8.5	8.8	8.8	10.7	8.6	9.1	9.6	8.3	7.7	7.9	5.8
Bowmansville	6,486	7.8	9.6	10.9	7.9	10.5	8.7	7.7	7.0	6.9	7.8	8.7	6.4
Everett	7,816	7.5	10.6	9.5	9.6	11.7	8.7	8.4	8.9	6.5	7.5	6.7	4.3
Gibsonia	8,209	4.1	6.6	8.6	8.5	11.4	9.1	8.9	13.2	8.0	8.2	7.7	5.8
Highspire	4	0.0	50.0	25.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.0
King of Prussia	6,773	9.4	9.3	9.3	8.5	8.6	9.0	10.0	7.9	8.0	6.5	8.8	4.7
New Stanton	7,829	1.6	6.6	6.3	7.1	12.1	10.1	12.1	12.8	10.7	9.7	5.7	5.1
Newville	9,978	6.5	7.7	9.3	8.2	8.2	7.8	8.0	8.6	9.9	8.2	10.6	7.1
Pocono	4,250	6.8	10.0	9.0	11.3	10.2	7.8	9.4	10.4	8.4	6.4	5.6	4.8
Somerset (T)	7,303	6.7	9.1	7.8	10.7	12.9	7.3	8.8	7.5	7.5	6.3	7.8	7.5

Table 4.5: 2004 Monthly Breakdown of Traffic Stops by Department, Area, Troop, & Station (p. 2 of 3)

	Total # Of Stops	% Jan.	% Feb.	% Mar.	% Apr.	% May	% June	% July	% Aug.	% Sept.	% Oct.	% Nov.	% Dec.
AREA II	39,743	4.9	8.4	10.1	7.3	11.4	9.7	11.2	8.2	8.4	6.7	7.6	6.0
Troop F	22,033	5.0	8.3	10.4	7.9	9.8	9.2	10.6	9.5	10.1	6.8	6.9	5.4
Coudersport	1,515	7.1	7.7	12.5	9.4	11.0	10.2	10.6	9.6	6.7	7.3	4.7	3.2
Emporium	1,182	6.4	6.6	10.2	10.3	11.2	13.0	8.5	6.8	10.8	6.2	7.9	2.1
Lamar	3,536	2.6	10.2	16.0	9.3	11.3	10.4	9.7	8.3	6.6	5.6	5.5	4.5
Mansfield	1,438	3.4	9.0	7.9	10.1	10.5	8.6	10.8	9.9	10.5	9.1	6.4	3.7
Milton	2,873	4.8	6.4	9.3	5.9	4.2	9.4	13.7	11.0	9.9	6.1	10.0	9.4
Montoursville	6,897	4.3	6.8	8.0	7.0	12.4	9.0	10.3	9.3	11.6	8.0	7.8	5.4
Selinsgrove	3,095	9.3	10.8	11.8	6.9	6.6	7.2	10.6	8.7	11.6	5.8	5.3	5.3
Stonington	1,497	4.1	10.4	8.1	9.6	8.8	6.9	9.6	14.3	11.6	5.2	5.9	5.7
Troop P	8,072	5.6	10.0	12.0	6.9	13.3	7.9	11.0	6.8	5.8	7.9	8.1	4.7
Laporte	1,343	4.1	9.6	9.5	6.9	12.9	9.7	11.5	11.9	7.4	7.5	5.6	3.5
Shickshinny	996	3.4	9.4	11.2	7.1	16.3	12.6	6.6	9.6	4.8	5.9	8.6	4.3
Towanda	1,781	6.6	11.2	14.7	4.5	14.4	6.2	13.2	4.6	4.3	6.7	8.7	4.9
Tunkhannock	1,438	7.6	9.2	7.7	7.4	12.6	7.4	10.2	4.7	7.1	6.3	13.2	6.4
Wyoming	2,514	5.3	10.1	14.2	8.1	12.0	6.6	11.5	5.6	5.6	10.7	5.8	4.5
Troop R	9,638	4.7	7.3	8.0	6.2	13.6	12.5	12.9	6.4	6.5	5.5	8.5	8.4
Blooming Grove	2,607	8.8	13.5	10.2	7.8	14.5	11.4	6.6	4.2	3.7	2.5	5.8	11.1
Dunmore	2,823	3.0	4.7	5.4	5.4	11.9	12.0	15.3	7.9	9.1	6.6	11.2	7.5
Gibson	2,121	0.8	2.0	7.6	5.1	15.3	14.0	18.8	10.4	6.5	3.9	7.3	8.3
Honesdale	2,087	3.4	8.6	9.1	6.2	13.2	13.3	11.5	3.4	6.3	9.2	9.6	6.2
AREA III	54,792	5.6	9.0	10.9	9.8	10.9	9.8	10.4	7.9	7.6	5.8	7.2	5.1
Troop A	15,734	4.8	8.7	11.4	9.2	10.2	9.3	9.2	9.4	9.2	6.2	7.6	4.8
Ebensburg	3,127	4.6	6.9	9.2	6.3	7.9	7.1	13.0	10.4	11.4	8.2	9.7	5.4
Greensburg	4,180	6.3	7.9	11.8	10.4	9.5	10.2	7.5	11.0	7.9	6.6	6.8	4.1
Indiana	3,920	4.6	8.6	14.1	9.3	9.0	9.8	9.0	8.9	9.3	5.5	7.5	4.4
Kiski Valley	2,495	4.7	10.3	10.9	10.8	9.9	7.9	6.7	9.1	10.0	5.4	7.9	6.5
Somerset (A)	2,012	2.6	11.1	9.3	9.3	18.1	11.2	10.5	5.7	7.1	5.1	6.0	3.9
Troop B	19,364	5.5	8.4	10.3	11.3	11.2	10.1	11.4	8.4	6.5	5.2	7.1	4.8
Belle Vernon	3,052	3.8	6.7	9.7	11.7	10.1	10.8	14.5	9.2	6.3	4.4	6.5	6.2
Findlay	4,403	5.6	10.9	12.9	10.5	13.1	10.1	10.5	7.3	3.0	5.2	6.9	4.1
Uniontown	3,981	6.0	7.3	10.9	12.0	11.5	9.8	8.3	9.2	7.1	5.4	7.2	5.3
Washington	5,336	6.5	10.6	7.5	8.8	9.5	8.6	11.0	9.0	9.2	5.9	8.9	4.5
Waynesburg	2,592	4.2	3.2	11.4	15.9	12.5	12.7	14.6	6.4	6.2	4.2	4.2	4.5
Troop G	19,694	6.3	9.9	11.0	8.9	11.2	9.9	10.3	6.3	7.4	6.0	7.0	5.7
Bedford	3,119	5.0	10.7	10.4	6.1	8.1	10.9	8.0	6.9	9.8	10.1	7.9	6.2
Hollidaysburg	3,156	4.2	10.4	7.4	8.6	13.3	9.3	11.4	6.1	9.8	7.4	6.3	5.7
Huntingdon	2,188	7.4	9.7	14.9	10.7	11.2	11.3	8.0	5.7	6.5	4.0	7.3	3.5
Lewistown	2,457	7.9	8.8	11.6	8.0	14.5	9.8	7.9	7.5	5.4	5.2	8.0	5.3
McConnellsburg	2,036	7.1	9.5	10.0	12.9	6.9	11.7	16.4	7.4	6.9	3.0	4.6	3.6
Philipsburg	2,803	4.9	6.2	13.7	10.3	13.0	7.5	9.8	5.5	7.3	6.2	8.6	7.1
Rockview	3,935	7.9	12.6	10.6	7.9	10.6	9.4	11.4	5.9	5.8	4.5	6.5	6.8

Table 4.5: 2004 Monthly Breakdown of Traffic Stops by Department, Area, Troop, & Station (p. 3 of 3)

	Total # of Stops	% Jan.	% Feb.	% Mar.	% Apr.	% May	% June	% July	% Aug.	% Sept.	% Oct.	% Nov.	% Dec.
AREA IV	54,582	4.6	7.7	9.1	8.7	11.2	8.9	9.6	8.6	9.1	7.1	9.4	6.3
Troop C	21,421	4.8	6.9	9.9	9.0	12.1	8.8	9.8	7.9	8.0	7.6	8.9	6.3
Clarion	4,934	5.4	4.0	11.0	10.5	12.7	7.5	11.3	8.7	6.5	8.7	8.8	5.0
Clearfield	5,145	5.8	8.6	10.5	9.2	9.2	7.3	9.1	7.8	7.6	8.2	8.7	8.0
Dubois	3,080	4.5	5.7	8.8	7.9	11.2	8.7	11.2	10.3	8.3	6.7	9.1	7.7
Kane	1,559	2.7	6.0	8.9	7.6	8.9	10.1	11.1	9.4	10.4	8.5	11.4	5.1
Punxsutawney	2,369	5.1	7.2	10.0	9.5	16.0	9.7	9.3	5.8	8.1	6.3	9.5	3.6
Ridgway	2,317	4.1	9.9	10.3	10.0	17.6	13.2	8.8	4.9	6.4	4.6	5.0	5.1
Tionesta	2,017	3.7	7.9	8.0	6.6	11.0	8.9	6.7	7.1	12.2	9.0	10.9	8.1
Troop D	16,028	5.4	8.6	9.9	9.4	9.3	7.8	8.9	9.3	9.2	6.6	10.1	5.5
Beaver	2,334	4.1	8.3	10.7	10.8	9.8	8.8	6.4	7.0	9.6	9.1	11.4	3.9
Butler	4,281	5.4	10.3	9.6	9.3	9.9	7.7	8.0	9.4	10.0	5.2	10.3	4.8
Kittanning	4,147	6.1	7.7	9.0	6.3	7.1	7.2	11.4	11.7	10.3	8.1	9.2	6.0
Mercer	3,098	4.9	7.2	10.2	9.3	9.6	8.6	9.8	8.7	8.9	6.2	9.1	7.5
New Castle	2,168	5.9	8.9	11.1	14.3	11.2	6.6	7.5	7.7	5.8	4.5	11.8	4.7
Troop E	17,133	3.5	7.8	7.3	7.5	11.9	10.0	9.9	8.7	10.2	6.9	9.3	7.0
Corry	1,208	2.1	4.8	5.4	4.2	10.2	12.5	16.1	11.1	14.0	6.9	8.3	4.6
Erie	4,329	4.9	9.4	7.9	8.5	12.3	9.6	6.8	8.9	8.8	7.2	10.3	5.2
Franklin	2,988	3.4	8.6	9.0	9.1	11.7	9.8	10.3	5.8	7.6	8.6	8.7	7.4
Girard	3,719	1.9	7.3	8.3	9.5	12.6	11.2	11.5	9.2	11.1	3.5	6.6	7.3
Meadville	3,325	4.1	7.3	4.6	3.4	11.0	10.1	8.9	10.3	10.6	8.8	12.2	8.8
Warren	1,564	3.1	6.5	7.5	7.9	12.9	6.3	11.1	7.5	13.2	7.2	8.8	8.0
AREA V	46,648	5.4	9.0	8.7	6.7	11.6	9.6	8.1	9.7	8.7	8.3	7.6	6.6
Troop K	11,044	6.6	9.1	8.7	5.8	10.2	6.5	6.4	10.2	9.4	10.8	7.8	8.4
Media	3,867	6.5	10.1	7.9	6.3	10.5	9.5	6.2	11.6	7.1	8.2	7.6	8.3
Philadelphia	2,735	6.7	8.6	9.5	6.1	7.1	1.1	3.6	9.0	11.3	19.1	8.4	9.6
Skippack	4,442	6.6	8.4	8.9	5.2	11.9	7.2	8.4	9.7	10.3	8.0	7.5	7.8
Troop M	20,218	5.3	8.3	7.9	5.9	11.2	10.6	9.3	9.7	8.9	8.1	7.7	7.1
Belfast	3,159	6.2	9.3	8.5	6.2	9.2	9.4	8.5	12.5	8.7	9.9	7.2	4.5
Bethlehem	4,432	3.1	8.2	9.1	6.4	10.1	7.8	7.5	8.5	9.9	8.6	10.6	10.1
Dublin	4,173	7.3	9.6	7.5	6.1	10.8	9.8	9.7	11.3	8.8	7.9	6.0	5.2
Fogelsville	5,142	5.8	9.0	8.8	6.0	11.8	10.1	9.7	7.4	8.4	6.9	7.9	8.1
Treose	3,312	4.2	4.8	4.9	4.2	14.1	17.2	11.2	10.3	8.5	7.9	6.3	6.6
Troop N	15,386	4.8	9.8	9.8	8.4	13.2	10.4	7.8	9.2	7.9	6.7	7.5	4.6
Bloomsburg	2,895	5.0	15.1	7.3	6.9	13.6	9.4	4.8	9.1	9.5	7.0	8.5	3.8
Fern Ridge	2,774	3.5	13.0	19.5	9.7	13.6	11.9	4.7	3.6	5.7	5.4	5.6	3.8
Hazleton	3,298	4.2	10.4	7.4	9.6	12.7	13.1	13.2	9.1	6.8	4.8	6.3	2.4
Lehighton	2,554	6.3	5.4	7.3	10.7	10.2	7.2	8.8	7.1	8.4	8.3	13.2	7.2
Swiftwater	3,865	4.9	6.0	8.7	5.8	15.0	9.7	7.0	14.9	8.9	7.8	5.3	6.2

Table 4.6 provides the temporal breakdown of traffic stop occurrences by month for 2005. At both the department and area level, May accounted for the highest percentage of stops: 12.4% across the *department* and between 10.6% and 15.1% in the five areas. September and November were the next highest months in terms of traffic stops across the *department*, both at 9.5%. Again, traffic stop activity at the *department* level showed a considerable decrease in the winter months of December (6.4%) and January (5.5%).

Table 4.6: 2005 Monthly Breakdown of Traffic Stops by Department, Area, Troop, & Station (p. 1 of 3)

	Total # of Stops	% Jan.	% Feb.	% Mar.	% Apr.	% May	% June	% July	% Aug.	% Sept.	% Oct.	% Nov.	% Dec.
PSP Dept.	272,670	5.5	6.8	8.8	7.8	12.4	8.8	9.0	7.7	9.5	7.8	9.5	6.4
AREA I	99,776	5.5	6.8	9.1	7.7	10.6	8.4	9.1	8.0	8.6	8.3	9.8	7.1
Troop H	23,209	5.7	7.2	9.8	6.4	9.5	7.9	9.4	6.9	9.8	7.7	10.9	8.8
Carlisle	5,213	6.3	7.9	10.2	7.4	11.0	7.8	10.2	6.1	9.7	6.2	8.6	8.6
Chambersburg	3,761	6.2	6.8	7.2	4.1	6.8	4.9	10.5	8.4	14.4	9.9	11.0	9.9
Gettysburg	2,689	8.2	5.1	14.0	4.2	7.6	7.9	6.2	4.9	11.8	9.1	9.9	11.0
Harrisburg	3,321	6.7	10.0	13.0	8.5	10.9	8.2	8.3	5.9	5.1	6.3	11.3	5.8
Lykens	1,481	4.1	8.4	8.1	5.7	6.9	7.6	11.7	8.8	9.5	8.2	12.4	8.6
Newport	2,340	3.8	5.4	8.9	9.1	12.7	7.6	7.6	7.0	11.8	7.3	11.0	7.9
York	4,404	3.6	6.6	7.7	5.7	9.4	10.3	10.4	7.6	7.4	8.1	13.6	9.7
Troop J	9,286	5.3	5.3	8.3	8.2	14.6	9.2	8.3	7.1	9.3	8.3	9.4	6.7
Avondale	2,747	3.9	4.4	7.7	8.7	16.4	7.8	8.3	6.8	12.0	8.3	7.4	8.3
Embreeville	2,410	5.6	4.6	7.5	8.0	14.5	10.2	9.5	8.8	8.0	7.1	11.9	4.2
Ephrata	1,014	9.0	10.7	11.8	7.6	11.8	8.0	6.3	4.6	6.6	5.7	9.3	8.6
Lancaster	3,115	5.2	4.8	8.4	8.2	14.0	10.2	7.9	6.8	8.8	9.9	9.4	6.5
Troop L	8,878	3.9	6.4	12.4	9.9	16.2	9.2	8.0	6.8	9.4	4.8	7.1	5.8
Frackville	873	2.7	4.4	13.6	6.5	9.4	7.6	5.6	4.0	9.9	10.4	16.3	9.6
Hamburg	2,005	2.8	6.0	10.1	9.0	22.0	9.8	9.2	9.7	7.0	3.7	6.1	4.5
Jonestown	3,187	4.2	6.5	15.2	13.3	13.0	11.7	8.3	6.5	9.9	3.5	4.6	3.3
Reading	1,295	5.3	9.1	6.9	7.3	10.5	2.5	5.5	7.6	15.1	7.1	10.9	12.0
Schuylkill Ha.	1,518	4.0	5.5	13.4	8.0	24.0	9.9	9.4	4.7	6.5	3.6	5.4	5.5
Troop T	58,403	5.7	7.0	8.5	7.8	9.6	8.4	9.3	8.7	9.6	9.0	9.8	6.7
Bowmansville	5,859	6.7	8.4	10.8	9.9	9.3	8.4	8.1	8.0	8.3	6.9	8.8	6.5
Everett	9,652	5.2	4.8	8.8	7.0	10.7	6.8	10.1	7.9	11.6	9.6	9.0	8.4
Gibsonia	7,977	7.0	9.4	9.6	7.5	10.4	9.1	8.9	9.3	6.8	8.4	8.1	5.5
Highspire	45	0.0	0.0	2.2	0.0	0.0	13.3	4.4	0.0	51.1	28.9	0.0	0.0
King of Prussia	6,188	5.3	7.4	8.8	8.2	9.0	8.1	10.9	6.2	9.8	7.1	10.6	8.6
New Stanton	8,086	3.4	5.8	6.5	7.0	8.6	11.1	9.0	10.1	10.9	10.3	11.0	6.3
Newville	8,607	7.1	7.2	7.4	8.2	10.1	7.7	8.0	7.9	8.6	10.3	11.8	5.9
Pocono	5,242	3.3	7.4	9.7	9.0	8.9	7.6	10.9	10.1	8.1	7.6	10.0	7.4
Somerset (T)	6,736	7.0	6.3	7.4	6.9	9.0	8.4	8.9	10.6	11.4	10.2	8.8	5.1

Table 4.6: 2005 Monthly Breakdown of Traffic Stops by Department, Area, Troop, & Station (p. 2 of 3)

	Total # of Stops	% Jan.	% Feb.	% Mar.	% Apr.	% May	% June	% July	% Aug.	% Sept.	% Oct.	% Nov.	% Dec.
AREA II	31,626	5.3	7.5	8.9	7.2	13.7	8.3	8.3	6.3	10.5	7.4	10.8	5.9
Troop F	15,409	6.5	7.9	8.9	7.0	11.8	8.3	8.8	7.1	10.9	7.4	9.9	5.5
Coudersport	1,366	2.3	5.2	7.0	6.8	13.8	9.7	11.2	8.6	9.5	8.4	9.0	8.3
Emporium	956	6.3	11.1	8.1	10.6	18.2	7.2	7.6	7.2	6.0	4.7	10.1	2.9
Lamar	1,735	3.9	5.7	6.7	1.6	9.6	16.8	19.4	9.3	16.5	4.1	3.9	2.7
Mansfield	1,243	7.2	7.6	10.4	8.0	9.8	10.9	6.9	8.6	10.5	7.2	8.0	4.9
Milton	2,121	5.2	6.7	9.7	7.4	14.1	6.2	10.1	7.4	11.3	5.4	7.4	9.1
Montoursville	4,075	10.1	10.7	11.7	5.3	12.0	7.4	4.4	4.6	12.2	7.5	11.9	2.3
Selinsgrove	2,847	5.1	6.0	7.8	10.3	9.9	4.7	8.6	5.8	8.2	10.6	14.5	8.5
Stonington	1066	7.9	9.3	5.0	7.9	9.8	8.3	6.2	12.3	9.6	9.2	7.8	6.8
Troop P	7,678	4.7	8.4	8.5	6.6	13.3	8.0	7.6	6.2	10.3	7.8	13.0	5.6
Laporte	1,456	3.6	8.0	10.5	5.8	15.1	9.9	10.3	5.8	11.4	6.9	8.8	3.8
Shickshinny	1,101	6.0	11.5	13.4	8.1	14.4	9.7	7.4	5.5	6.3	5.1	6.7	5.9
Towanda	2,400	2.4	4.6	6.5	8.0	12.3	9.8	5.9	9.5	10.4	11.9	11.6	7.2
Tunkhannock	1,052	6.7	11.7	4.8	6.7	13.4	4.4	8.8	5.5	11.7	5.5	18.1	2.8
Wyoming	1,669	7.1	10.0	9.0	4.2	12.6	4.9	7.1	2.4	10.9	5.8	19.6	6.5
Troop R	8,539	3.5	5.9	9.4	8.2	17.3	8.4	7.9	5.0	10.0	7.2	10.6	6.8
Blooming Grove	1,918	4.6	4.2	8.2	7.6	9.3	6.5	9.4	6.1	13.9	7.8	14.0	8.2
Dunmore	3,093	3.9	6.0	9.9	7.2	11.3	8.6	8.0	6.2	11.3	10.4	12.2	5.0
Gibson	1,541	2.5	1.9	6.9	8.0	26.5	10.8	9.8	4.2	7.3	5.6	9.5	6.9
Honesdale	1,987	2.7	10.5	11.4	10.4	27.1	7.9	4.9	2.5	6.1	2.8	5.5	8.2
AREA III	56,643	5.1	6.4	8.4	8.3	12.2	9.6	8.7	8.2	9.2	8.4	9.4	6.0
Troop A	15,736	4.7	5.5	9.4	7.7	10.9	7.9	7.9	7.5	10.5	10.1	10.8	7.1
Ebensburg	4,054	3.4	4.8	7.7	7.9	10.2	7.3	10.7	10.7	14.6	10.4	7.8	4.4
Greensburg	3,957	5.1	4.8	6.7	8.4	11.1	8.3	4.0	4.5	9.4	12.9	15.2	9.6
Indiana	2,629	6.8	7.4	11.0	5.5	9.9	7.5	4.7	6.4	10.5	9.3	11.2	10.0
Kiski Valley	2,732	5.4	7.7	12.8	8.0	10.9	8.9	8.9	8.1	7.1	6.7	10.1	5.4
Somerset (A)	2,364	3.3	3.5	11.2	8.1	12.6	7.5	11.8	7.7	9.4	9.7	8.9	6.4
Troop B	19,666	5.5	8.8	9.4	10.1	12.5	10.9	7.6	8.3	8.0	7.4	7.6	3.9
Belle Vernon	2,368	7.5	9.0	9.5	7.7	12.3	13.7	7.9	6.6	6.8	8.2	7.4	3.4
Findlay	4,639	3.7	9.0	8.0	12.8	11.8	11.6	8.6	9.4	7.5	7.8	7.8	2.0
Uniontown	5,401	7.1	8.9	8.3	8.3	12.1	9.0	6.9	9.9	8.0	7.5	8.3	5.7
Washington	5,044	5.3	8.1	10.1	9.3	12.5	11.3	8.0	7.3	9.4	7.7	7.4	3.6
Waynesburg	2,214	3.9	9.3	13.7	13.3	14.7	10.3	6.5	6.4	6.8	4.5	5.9	4.6
Troop G	21,241	5.1	4.8	6.7	7.1	13.0	9.7	10.3	8.6	9.3	8.1	10.2	7.1
Bedford	3,082	5.5	6.7	12.1	7.6	12.3	10.0	9.2	6.7	8.5	6.9	9.6	5.0
Hollidaysburg	2,885	3.6	3.0	5.1	6.0	12.5	9.3	7.2	9.2	11.8	10.1	14.4	7.9
Huntingdon	1,873	3.7	2.2	5.4	5.7	14.7	14.1	15.9	10.3	6.3	7.6	9.8	4.3
Lewistown	3,180	4.4	4.7	4.5	6.5	12.2	7.3	9.0	10.3	10.8	9.3	11.6	9.4
McConnellsburg	2,121	5.8	4.9	7.3	6.3	8.9	8.2	9.3	8.1	12.4	9.0	13.9	6.0
Philipsburg	2,483	8.0	6.6	8.9	7.6	13.7	8.7	12.6	7.2	6.9	7.2	6.5	6.1
Rockview	5,617	4.8	4.8	5.2	8.2	14.9	10.6	10.9	8.9	8.5	7.3	7.9	8.2

Table 4.6: 2005 Monthly Breakdown of Traffic Stops by Department, Area, Troop, & Station (p. 3 of 3)

	Total # of Stops	% Jan.	% Feb.	% Mar.	% Apr.	% May	% June	% July	% Aug.	% Sept.	% Oct.	% Nov.	% Dec.
AREA IV	44,801	5.8	5.9	8.9	7.4	15.1	8.8	10.0	7.5	9.1	7.1	8.5	5.8
Troop C	17,140	6.4	6.0	9.3	7.3	15.5	9.3	10.8	7.0	9.0	6.3	7.0	6.0
Clarion	3,545	5.6	6.0	9.1	7.3	18.4	8.8	11.0	8.3	8.3	5.8	6.6	4.9
Clearfield	3,660	9.0	9.3	9.9	7.4	11.3	9.4	10.8	5.2	7.0	6.5	7.4	6.9
Dubois	2,261	6.5	4.5	8.4	4.9	14.7	9.9	13.2	8.2	9.7	6.6	8.0	5.4
Kane	1,475	5.6	4.8	10.5	6.8	16.2	8.5	8.2	7.9	10.2	5.8	6.8	8.7
Punxsutawney	2,024	6.3	5.8	9.1	8.1	16.1	10.4	11.2	8.9	9.6	6.6	4.0	4.1
Ridgway	1,890	4.8	4.9	9.6	8.0	19.3	7.6	8.9	4.6	11.7	6.5	6.3	7.7
Tionesta	2,285	5.3	4.2	9.1	8.9	14.2	10.5	10.8	6.9	9.1	6.4	9.4	5.3
Troop D	14,251	4.6	5.7	8.3	8.3	15.3	9.1	11.5	8.4	8.1	6.4	8.5	5.8
Beaver	2,318	4.5	6.6	11.3	8.2	16.4	9.6	8.9	8.0	6.2	6.3	9.0	5.0
Butler	4,015	4.8	6.2	6.4	8.0	12.9	9.9	10.0	9.3	9.0	6.5	10.5	6.6
Kittanning	3,637	4.4	5.1	8.2	9.3	16.3	9.7	9.8	8.6	6.6	7.5	9.0	5.5
Mercer	2,534	4.4	4.7	9.7	9.4	14.7	5.7	15.4	5.5	9.7	5.9	8.2	6.6
New Castle	1,747	5.3	6.2	6.9	5.6	17.9	10.4	16.0	10.5	9.3	4.5	3.0	4.4
Troop E	13,410	6.4	6.0	9.2	6.5	14.4	7.9	7.4	7.0	10.3	8.9	10.3	5.7
Corry	852	4.5	2.7	14.6	10.0	13.1	3.6	6.8	8.6	10.2	12.3	7.9	5.8
Erie	2,714	6.5	4.5	7.6	6.2	12.7	5.6	4.9	7.4	10.8	14.7	13.3	6.0
Franklin	1,662	8.1	7.6	11.3	6.9	8.5	8.7	8.7	4.9	12.0	10.0	9.4	4.1
Girard	2,791	5.6	5.3	7.1	6.9	19.0	10.1	11.9	7.7	8.4	5.2	9.1	3.7
Meadville	4,407	7.0	7.2	8.9	5.8	14.5	9.1	6.4	7.6	10.0	6.5	10.7	6.1
Warren	984	4.3	6.3	12.3	6.2	16.1	4.7	4.7	4.3	13.2	9.1	7.2	11.7
AREA V	38,157	6.0	7.7	8.1	8.0	13.1	9.2	8.5	7.8	9.4	6.9	9.4	6.1
Troop K	8,395	6.8	7.1	8.1	7.1	11.8	9.5	8.3	8.1	8.9	7.6	9.8	6.9
Media	2,571	8.0	6.8	7.4	7.5	14.0	8.2	6.2	6.6	7.2	9.8	9.6	8.7
Philadelphia	3,141	6.6	6.0	8.1	7.0	8.4	9.0	9.4	8.3	9.5	8.0	10.8	8.9
Skippack	2,683	6.0	8.8	8.9	6.8	13.7	11.4	8.8	9.4	9.7	4.9	8.8	2.9
Troop M	16,860	6.2	8.3	8.0	7.4	10.8	9.6	9.6	8.7	9.6	6.7	8.6	6.4
Belfast	3,164	5.3	7.0	10.2	8.2	13.6	8.7	9.0	8.6	9.7	6.9	6.6	6.3
Bethlehem	3,479	8.3	11.1	9.6	9.2	10.4	9.7	8.2	7.2	8.6	5.9	7.3	4.3
Dublin	3,139	5.7	8.3	8.7	6.4	7.8	9.1	12.6	9.3	10.2	5.8	9.9	6.2
Fogelsville	4,943	6.3	9.3	6.6	6.8	9.8	9.8	7.8	9.1	9.9	8.5	9.5	6.6
Treose	2,135	4.7	3.6	4.3	5.9	13.9	11.3	12.7	9.2	9.7	5.0	10.0	9.6
Troop N	12,902	5.3	7.1	8.1	9.2	16.9	8.3	7.1	6.5	9.5	6.6	10.1	5.1
Bloomsburg	3,164	8.6	7.8	9.3	7.0	13.7	6.5	7.2	7.7	9.6	3.6	12.3	6.8
Fern Ridge	3,479	4.4	1.8	5.0	15.7	27.0	5.9	6.7	4.3	12.5	7.4	6.8	2.5
Hazleton	3,139	2.0	5.2	8.0	7.9	13.4	8.4	7.0	9.7	12.5	6.5	12.4	7.0
Lehighton	4,943	6.7	12.0	7.3	8.8	13.0	9.3	6.7	7.7	8.1	7.6	8.3	4.3
Swiftwater	2,135	5.9	8.2	9.9	8.5	19.1	10.0	7.4	3.4	6.1	7.3	9.8	4.4

Reason for the Stop

Tables 4.7 - 4.10 report the reasons for the stop both prior to and subsequent to the stop initiated by the Troopers. Reasons for member-initiated traffic stop include: speeding, other moving violations, equipment violations, pre-existing information, registration violations, license violations, special traffic enforcement programs, and “other” reasons not previously indicated. These tables also report the average speed over the limit observed for traffic stops involving speeding violations. Information for all of these categories is summarized at the department, area, and troop level for 2004 in **Table 4.7** and for 2005 in **Table 4.9**. At the station level, **Tables 4.8 & 4.10** summarize the data from 2004 and 2005, respectively.

Across the *department* in 2004, speeding was the most frequent violation observed prior to the stop (70.7%). Slight variation exists across areas in the frequency of speeding stops, with *Area IV* reporting speeding as the reason preceding the stop for 77.4% of their drivers stopped, compared to *Area V*'s 57.6% of drivers stopped. The troops varied in speeding stops from a high of 82.0% (*Troop C*) to a low of 50.6% (*Troop K*). Note, however, that nearly half of the troops reported speeding as the reason preceding the stop for over 70% of drivers stopped (7 of 16 troops). The differences at the troop level are even more pronounced at the station level. For example, *Everett* station reported speeding as the reason preceding the stop for 91.5% of their drivers, compared to only 39.7% of drivers stopped by Troopers in the *Dublin* station. Similar to the troop level, about half of the stations reported speeding as the reason preceding the stop for over 70% of the traffic stops (49 out of 90 stations).

The average speed over the limit was recorded at 19.2 mph across the *department*. At the area level, the average speed over the limit ranged from a high of 21.4 mph in *Area V* to a low of 17.6 mph in *Area IV*. At the troop level, there was a somewhat larger range between average speeds over the limit, with an average of 24.4 mph over the limit in *Troop K*, compared to an average speed of 16.8 mph in *Troop C*. The differences are even greater at the station level. For example, the average speed over the limit ranged from highs of 25.1 (*Trevoise*), 25.0 (*Philadelphia*), and 24.9 (*Media*), to lows of 14.0 (*Emporium*), 14.7 (*Tionesta*), and 15.7 (*Coudersport*).

One interesting result arising from the speeding data appears at both the area and troop level. *Area IV* represents the area with the highest percentage of stops occurring for speeding (77.4%), but has the lowest average over the speed limit (17.6 mph). The inverse phenomenon occurs at the troop level where *Troop K* had the lowest percentage of speeding as the reason for the stop (50.6%) but reported the highest average speed over the limit (24.4 mph).

Other moving violations were the next most common reason preceding the traffic stop across the *department* at 16.7%. The areas varied on the percentage of stops based on moving violations, from a high of 19.8% in *Area III* to a low of 10.8% in *Area IV*. Similarly, there was variation across the troops, from 26.5% of stops in *Troop K* to 9.6% of stops in *Troop C*.

At the *department* level, the third most cited reason for stops was equipment inspections (9.9%), followed by special traffic enforcement (2.6%). The rank ordering of these two

categories at the departmental level was mirrored at the area level, where equipment inspections ranked third in all five of the areas. For a complete breakdown of the categories at the various levels, please refer to **Tables 4.7 and 4.8**. For each of the categories, the variation at the station level is most pronounced.

Table 4.7: Reason for Stop by Department, Area, & Troop - 2004

	Total # of Stops	% Speeding*		Amt. over Limit (MPH)	% Mov. Viol.*		% Equip./Inspect.*		% Preexist. Info.*		% Regist.*		% License*		% Spec. Traf. Enf.*	% Other*	
		P	S		P	S	P	S	P	S	P	S	P	S			
PSP Dept	300,683	70.7	0.3	19.2	16.7	2.0	9.9	3.4	0.1	0.2	2.1	3.3	0.3	4.2	2.6	1.0	2.5
AREA I	102,265	75.1	0.2	19.6	16.6	1.2	6.2	2.5	0.1	0.1	1.6	2.2	0.2	3.0	1.2	0.6	1.6
Troop H	26,073	72.9	0.4	18.8	15.7	1.4	8.2	2.8	0.1	0.1	2.1	2.1	0.3	3.3	0.7	0.8	1.5
Troop J	8,510	56.7	0.5	21.9	17.0	1.1	19.1	3.3	0.1	0.1	5.9	4.2	0.9	7.6	2.6	1.0	1.8
Troop L	9,033	68.6	0.3	19.3	18.3	1.2	9.8	3.5	0.1	0.8	2.4	2.6	0.2	3.8	5.9	1.6	1.7
Troop T	58,649	79.8	0.1	19.7	16.8	1.2	3.0	2.0	0.0	0.1	0.7	1.8	0.1	2.0	0.4	0.3	1.6
AREA II	39,743	72.1	0.2	18.7	16.9	2.1	9.1	4.3	0.1	0.1	1.3	3.2	0.4	4.1	2.2	0.9	3.4
Troop F	22,033	76.9	0.1	18.1	13.9	1.4	7.5	3.4	0.0	0.1	1.2	2.5	0.4	3.7	2.3	0.6	4.2
Troop P	8,072	64.8	0.3	19.8	21.3	4.8	10.6	7.9	0.1	0.3	2.1	5.6	0.5	6.4	0.7	0.5	4.1
Troop R	9,638	67.3	0.2	19.5	20.1	1.6	11.6	3.4	0.1	0.1	0.9	2.6	0.4	3.0	3.1	1.8	0.9
AREA III	54,792	67.0	0.2	19.3	19.8	2.3	10.0	3.9	0.1	0.3	2.5	4.0	0.4	4.9	2.1	0.6	2.0
Troop A	15,734	63.0	0.2	19.6	19.9	1.9	13.0	4.2	0.1	0.5	3.6	4.2	0.5	5.4	2.1	0.4	1.6
Troop B	19,364	60.4	0.2	20.9	25.9	1.7	10.2	2.9	0.1	0.3	2.7	3.3	0.5	4.5	1.9	0.9	1.0
Troop G	19,694	76.8	0.1	17.8	13.8	3.3	7.3	4.6	0.1	0.2	1.5	4.5	0.2	5.0	2.2	0.4	3.2
AREA IV	54,582	77.4	0.2	17.6	10.8	3.0	9.6	3.8	0.1	0.3	1.9	4.1	0.3	4.8	2.9	0.7	4.4
Troop C	21,421	82.0	0.2	16.8	9.6	3.4	6.9	3.6	0.1	0.5	0.9	3.3	0.2	4.3	2.4	0.7	4.7
Troop D	16,028	72.2	0.3	18.9	12.3	3.2	12.8	4.9	0.1	0.1	2.8	4.8	0.4	5.9	3.8	0.6	5.4
Troop E	17,133	76.3	0.2	17.5	10.7	2.2	10.0	2.9	0.2	0.3	2.2	4.3	0.3	4.5	2.9	0.8	3.0
AREA V	46,648	57.6	0.5	21.4	19.4	1.8	18.3	3.3	0.1	0.2	3.4	4.0	0.5	5.2	6.4	2.2	2.4
Troop K	11,044	50.6	0.8	24.4	26.5	1.3	17.4	3.0	0.1	0.5	4.9	5.0	0.9	6.4	5.0	3.9	3.8
Troop M	20,218	52.6	0.4	22.4	17.4	1.8	23.5	4.1	0.1	0.2	3.8	5.0	0.4	5.8	8.1	2.6	2.8
Troop N	15,386	69.2	0.4	18.8	16.9	2.3	12.3	2.3	0.1	0.2	1.7	2.1	0.3	3.5	5.2	0.4	0.9

* P=prior to stop, S=subsequent to stop

Table 4.8: Reason for Stop by Station - 2004 (p. 1 of 4)

	Total # of Stops	% Speeding*		Amt. over limit (MPH)	% Mov. Viol.*		% Equip./ Inspect.*		% Preexist. Info.*		% Regist.*		% License*		% Spec. Traf. Enf.*	% Other*	
		P	S		P	S	P	S	P	S	P	S	P	S			
AREA I																	
Troop H																	
Carlisle	5,944	83.1	0.3	17.3	10.4	1.4	4.0	3.4	0.1	0.2	1.7	2.0	0.2	2.9	0.0	1.0	2.1
Chambersburg	5,049	68.1	0.5	17.3	14.4	1.7	12.5	3.7	0.3	0.2	3.0	3.1	0.4	4.1	1.1	1.2	1.3
Gettysburg	2,969	75.8	0.2	17.4	13.7	1.0	9.1	2.7	0.1	0.0	1.1	1.8	0.1	2.5	0.8	0.5	1.0
Harrisburg	3,885	69.2	0.3	20.5	22.9	1.3	4.3	2.3	0.0	0.0	2.7	0.8	0.4	1.9	0.8	0.6	0.8
Lykens	1,250	57.5	1.4	19.0	20.8	2.2	18.8	4.7	0.2	0.0	1.0	6.2	0.7	7.4	0.2	0.7	4.3
Newport	2,058	77.9	0.4	20.2	15.4	1.3	4.3	1.7	0.0	0.2	1.3	2.1	0.5	3.3	0.9	0.3	1.3
York	4,918	68.6	0.3	21.1	17.7	1.1	10.0	1.4	0.1	0.0	2.6	1.5	0.3	3.4	1.0	0.9	1.0
Troop J																	
Avondale	3,007	50.8	0.5	22.1	19.5	1.2	23.5	3.1	0.1	0.0	4.2	5.0	0.6	9.4	0.7	1.5	2.1
Embreeville	2,400	54.7	0.6	22.9	19.3	1.4	18.4	4.3	0.0	0.1	7.8	4.7	0.8	7.4	0.1	0.2	1.3
Ephrata	977	81.7	0.2	21.4	9.5	1.0	6.6	2.4	0.1	0.0	2.4	2.5	0.4	6.4	10.5	0.6	0.9
Lancaster	2,126	55.7	0.4	20.6	14.3	0.7	19.5	3.0	0.1	0.0	7.9	3.3	1.6	5.8	4.3	1.3	2.2
Troop L																	
Frackville	952	64.7	0.2	18.4	19.9	1.3	12.9	4.9	0.1	0.7	3.5	6.5	0.4	8.0	6.0	1.7	1.7
Hamburg	1,812	77.0	0.2	20.9	12.6	1.9	8.2	3.9	0.1	3.0	1.7	2.1	0.2	2.4	12.9	1.5	1.3
Jonestown	2,739	71.4	0.2	19.1	15.5	0.6	9.3	3.7	0.0	0.3	2.0	2.2	0.1	3.1	2.0	2.3	2.1
Reading	1,938	63.9	0.5	19.1	20.8	0.9	10.7	1.9	0.1	0.0	2.6	1.3	0.4	4.3	1.9	1.6	1.5
Schuylkill Haven	1,592	62.2	0.2	18.3	25.5	1.8	9.4	3.9	0.3	0.3	2.8	3.1	0.1	3.5	9.2	0.3	1.6
Troop T																	
Bowmansville	6,486	71.5	0.1	17.5	26.8	0.9	1.5	0.8	0.0	0.0	0.2	1.4	0.1	2.3	1.0	0.1	0.4
Everett	7,816	91.5	0.1	17.8	6.4	0.9	2.9	3.0	0.0	0.0	1.0	2.6	0.1	3.0	0.2	0.4	2.6
Gibsonia	8,209	81.8	0.0	16.8	14.5	1.3	2.1	3.8	0.0	0.1	0.8	4.1	0.1	2.3	1.4	0.5	4.6
Highspire	4	25.0	0.0	21.0	0.0	0.0	50.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.0	0.0
King of Prussia	6,773	82.3	0.2	23.3	14.6	2.9	3.3	1.3	0.1	0.0	0.9	1.5	0.1	1.9	0.1	0.3	0.3
New Stanton	7,829	64.4	0.1	21.5	29.2	1.0	5.3	2.3	0.0	0.1	0.9	1.5	0.1	2.1	0.1	0.1	1.0
Newville	9,978	78.4	0.2	19.0	16.6	1.1	4.3	1.9	0.0	0.0	0.6	1.4	0.0	2.0	0.5	0.2	1.2
Pocono	4,250	91.2	0.0	18.1	7.3	1.2	1.0	1.2	0.0	0.3	0.4	1.0	0.2	1.8	0.1	0.2	0.3
Somerset (T)	7,303	82.0	0.0	23.8	15.9	0.6	1.7	1.4	0.0	0.0	0.6	0.5	0.2	0.7	0.0	0.8	1.7

* P=prior to stop, S=subsequent to stop

Table 4.8: Reason for Stop by Station - 2004 (p. 2 of 4)

	Total # of Stops	% Speeding*		Amt. over limit (MPH)	% Mov. Viol.*		% Equip./Inspect.*		% Preexist. Info.*		% Regist.*		% License*		% Spec. Traf. Enf.*	% Other*	
		P	S		P	S	P	S	P	S	P	S	P	S			
AREA II																	
Troop F																	
Coudersport	1,515	65.4	0.1	15.7	11.3	1.4	19.4	1.7	0.0	0.0	2.3	5.1	0.3	5.3	0.6	1.8	11.7
Emporium	1,182	39.8	0.0	14.0	44.1	4.7	15.0	1.9	0.0	0.0	0.7	3.1	0.8	4.7	3.9	0.2	0.8
Lamar	3,536	85.1	0.2	18.0	11.3	2.1	2.1	2.5	0.0	0.3	0.6	1.4	0.1	1.7	1.3	0.8	1.3
Mansfield	1,438	75.4	0.1	16.7	17.1	2.0	6.3	6.1	0.1	0.1	1.0	3.5	0.1	4.0	0.1	0.2	5.4
Milton	2,873	66.8	0.1	18.7	29.1	0.5	3.4	3.7	0.0	0.0	0.4	1.3	0.4	2.5	2.0	0.2	0.7
Montoursville	6,897	83.0	0.0	18.5	9.1	0.5	7.3	2.2	0.0	0.0	1.3	2.3	0.4	4.0	4.3	0.3	6.1
Selinsgrove	3,095	85.7	0.1	19.2	5.3	0.4	5.9	4.2	0.1	0.0	1.4	1.7	0.5	2.3	0.1	1.1	2.5
Stonington	1,497	73.4	0.1	17.2	6.7	3.9	15.8	10.2	0.1	0.4	3.1	6.3	0.4	8.8	2.5	0.6	6.3
Troop P																	
Laporte	1,343	58.9	0.1	18.1	29.7	6.1	9.5	5.1	0.2	0.5	0.4	5.4	0.1	6.4	0.0	1.8	10.1
Shickshinny	996	70.6	0.0	19.2	18.2	2.7	8.8	4.2	0.0	0.3	1.6	2.5	0.5	6.3	0.6	0.3	6.8
Towanda	1,781	77.1	0.3	18.9	9.5	10.6	9.4	7.1	0.3	0.6	2.3	9.6	0.4	7.3	1.2	0.3	3.4
Tunkhannock	1,438	47.0	0.0	19.3	35.7	2.7	13.4	20.0	0.2	0.1	2.9	4.9	0.3	7.2	0.8	0.5	1.8
Wyoming	2,514	67.0	0.6	21.8	18.1	2.1	11.1	4.5	0.0	0.0	2.6	4.5	0.9	5.4	0.6	0.2	1.6
Troop R																	
Blooming Grove	2,607	60.3	0.2	19.1	18.8	0.8	20.0	3.3	0.2	0.3	0.9	2.9	0.3	2.5	3.5	5.8	0.7
Dunmore	2,823	73.7	0.2	21.8	24.4	1.3	2.1	1.9	0.1	0.0	0.9	1.6	0.1	2.7	0.5	0.3	1.0
Gibson	2,121	78.6	0.3	18.7	14.7	3.5	5.7	4.9	0.0	0.0	0.8	2.2	0.4	3.0	5.8	0.2	0.5
Honesdale	2,087	56.0	0.2	16.9	21.4	1.3	19.9	4.1	0.1	0.0	1.1	3.9	1.0	4.2	3.5	0.6	1.6
AREA III																	
Troop A																	
Ebensburg	3,127	59.6	0.4	18.0	24.0	0.8	12.2	5.4	0.0	0.2	3.8	3.1	0.2	4.4	0.6	0.2	0.9
Greensburg	4,180	64.9	0.3	21.2	17.2	1.4	13.8	2.1	0.0	0.2	4.5	3.0	0.6	4.6	1.2	0.5	1.0
Indiana	3,920	61.7	0.3	19.1	20.5	1.0	13.1	3.5	0.3	0.0	3.6	4.5	0.4	5.1	0.8	0.6	2.7
Kiski Valley	2,495	62.9	0.0	20.4	23.7	4.7	10.8	7.4	0.2	2.2	2.4	5.3	0.7	6.5	7.3	0.3	0.1
Somerset (A)	2,012	67.2	0.1	18.5	13.6	2.7	15.3	4.2	0.1	0.7	2.7	6.8	0.4	7.8	2.5	0.6	3.9

* P=prior to stop, S=subsequent to stop

Table 4.8: Reason for Stop by Station - 2004 (p. 3 of 4)

	Total # Of Stops	% Speeding*		Amt. over limit (MPH)	% Mov. Viol.*		% Equip./ Inspect.*		% Preexist. Info.*		% Regist.*		% License*		% Spec. Traf. Enf.*	% Other*		
		P	S		P	S	P	S	P	S	P	S	P	S				
AREA III (cont.)																		
Troop B																		
Belle Vernon	3,052	75.1	0.0	21.4	13.4	0.6	10.6	1.5	0.1	0.0	2.1	0.9	0.2	2.4	0.0	0.2	0.2	
Findlay	4,403	75.9	0.3	22.3	14.9	3.1	6.4	4.5	0.1	1.0	2.3	3.7	0.4	5.3	5.0	0.4	1.1	
Uniontown	3,981	44.9	0.1	19.7	30.8	0.4	17.0	2.3	0.2	0.1	4.0	2.7	0.8	4.2	1.4	2.7	2.2	
Washington	5,336	44.1	0.2	20.8	45.1	2.3	8.1	2.9	0.0	0.1	2.3	5.1	0.7	5.9	1.3	0.5	0.9	
Waynesburg	2,592	73.9	0.2	18.9	12.0	1.1	10.3	2.8	0.2	0.0	2.9	2.8	0.3	2.9	0.7	0.4	0.4	
Troop G																		
Bedford	3,119	70.4	0.0	17.8	15.6	3.3	11.1	4.3	0.0	1.0	2.2	3.8	0.4	4.2	1.3	1.0	3.5	
Hollidaysburg	3,156	62.4	0.1	18.0	21.1	4.5	12.4	4.5	0.0	0.1	2.2	6.7	0.3	7.6	3.4	0.4	2.1	
Huntingdon	2,188	74.7	0.0	16.8	13.9	3.1	9.1	5.0	0.1	0.1	2.1	4.8	0.2	6.3	0.5	0.2	5.7	
Lewistown	2,457	76.1	0.2	18.4	13.9	3.2	7.8	3.7	0.1	0.0	1.3	4.1	0.5	4.4	2.4	0.7	3.1	
McConnellsburg	2,036	86.1	0.1	20.3	6.6	0.4	5.4	1.8	0.0	0.0	1.2	2.4	0.2	1.8	2.1	0.1	2.2	
Philipsburg	2,803	90.3	0.1	15.8	8.0	4.6	1.2	11.7	0.1	0.0	0.4	7.8	0.0	8.2	2.2	0.0	0.8	
Rockview	3,935	80.4	0.1	18.0	14.4	2.9	4.3	1.6	0.0	0.0	1.0	2.1	0.1	2.8	3.0	0.2	4.7	
AREA IV																		
Troop C																		
Clarion	4,934	85.9	0.3	18.2	7.9	5.0	5.5	4.6	0.1	0.2	0.9	4.1	0.1	4.4	5.6	0.5	4.9	
Clearfield	5,145	82.4	0.3	16.6	9.9	4.5	6.0	3.7	0.1	0.5	0.9	2.5	0.2	2.9	0.6	0.6	3.4	
Dubois	3,080	88.4	0.1	17.0	5.8	1.7	3.9	1.7	0.3	0.6	0.9	2.0	0.1	2.1	0.2	0.6	4.8	
Kane	1,559	76.9	0.2	16.6	15.5	2.1	5.8	1.3	0.0	0.0	0.7	3.3	0.6	6.7	0.8	0.5	7.3	
Punxsutawney	2,369	77.7	0.2	16.4	8.4	1.9	11.2	4.0	0.1	0.1	1.6	4.5	0.2	6.0	0.5	0.8	5.4	
Ridgway	2,317	73.2	0.3	15.8	16.1	3.7	9.0	4.0	0.1	1.0	0.6	3.4	0.4	5.2	2.5	0.6	4.3	
Tionesta	2,017	81.1	0.2	14.7	7.8	2.4	10.8	5.1	0.1	0.8	0.6	4.2	0.0	5.8	5.5	1.8	4.5	
Troop D																		
Beaver	2,334	72.2	0.1	19.6	8.7	1.8	17.8	6.1	0.1	0.0	4.1	3.1	0.8	4.8	0.4	0.6	3.0	
Butler	4,281	72.4	0.4	19.2	10.9	2.8	12.9	3.1	0.2	0.1	3.5	4.1	0.4	4.1	1.9	0.4	1.9	
Kittanning	4,147	76.8	0.2	20.2	12.2	3.6	10.0	4.8	0.1	0.3	1.6	4.0	0.3	6.7	8.5	0.7	8.6	
Mercer	3,098	77.2	0.4	17.5	9.4	3.8	10.2	6.1	0.2	0.1	2.2	8.0	0.2	7.3	2.8	0.7	4.1	
New Castle	2,168	55.8	0.4	16.9	23.6	4.2	16.4	5.5	0.0	0.1	3.2	4.9	0.6	7.2	3.2	0.7	10.7	

* P=prior to stop, S=subsequent to stop

Table 4.8: Reason for Stop by Station - 2004 (p. 4 of 4)

	Total # of Stops	% Speeding*		Amt. over limit (MPH)	% Mov. Viol.*		% Equip./ Inspect.*		% Preexist. Info.*		% Regist.*		% License*		% Spec. Traf. Enf.*	% Other*	
		P	S		P	S	P	S	P	S	P	S	P	S			
AREA IV (cont.)																	
Troop E																	
Corry	1,208	82.0	0.0	16.9	9.3	1.7	6.7	3.1	0.2	0.0	1.4	4.3	0.3	5.4	3.2	0.7	3.6
Erie	4,329	76.9	0.2	18.5	13.8	2.5	6.1	2.0	0.1	0.0	2.1	4.4	0.2	3.3	2.5	1.0	3.4
Franklin	2,988	66.6	0.2	16.6	13.5	4.5	17.3	3.9	0.1	0.1	2.6	6.9	0.4	8.6	0.3	0.5	1.7
Girard	3,719	77.5	0.2	17.9	8.8	1.1	10.7	2.5	0.2	0.9	2.2	3.5	0.3	4.0	7.0	0.5	2.5
Meadville	3,325	78.8	0.2	17.1	7.5	1.8	9.7	3.8	0.2	0.1	2.6	3.2	0.5	3.5	2.3	0.8	2.5
Warren	1,564	80.8	0.1	17.1	9.8	0.4	7.7	2.6	0.4	0.0	1.5	3.0	0.3	2.9	0.1	1.1	6.3
AREA V																	
Troop K																	
Media	3,867	41.6	0.6	24.9	38.9	0.9	14.3	2.1	0.1	0.0	4.8	2.1	1.3	3.7	1.4	0.9	1.6
Philadelphia	2,735	56.3	2.0	25.0	21.9	2.0	16.3	2.9	0.1	0.0	4.9	3.9	0.7	6.3	1.4	1.3	1.5
Skippack	4,442	54.8	0.3	23.6	18.4	1.3	20.7	3.8	0.1	1.1	5.1	8.1	0.6	8.8	10.4	8.1	7.1
Troop M																	
Belfast	3,159	64.5	0.2	23.6	13.8	2.3	18.5	4.7	0.0	0.0	2.2	4.0	0.3	4.0	1.1	0.6	2.1
Bethlehem	4,432	51.8	0.5	21.3	13.2	1.3	28.2	4.6	0.1	0.2	5.9	4.7	0.5	8.3	1.9	0.8	3.0
Dublin	4,173	39.7	0.6	20.9	12.1	2.1	42.6	3.4	0.1	0.5	4.1	10.3	0.2	8.2	17.1	1.9	6.4
Fogelsville	5,142	64.9	0.5	22.3	23.0	1.8	8.1	4.5	0.1	0.0	3.0	2.3	0.4	3.1	7.7	6.5	1.2
Trevoze	3,312	39.5	0.3	25.1	24.4	1.4	21.9	3.3	0.2	0.1	3.4	4.1	0.4	5.3	12.3	1.7	0.9
Troop N																	
Bloomsburg	2,895	83.1	0.2	17.2	13.5	5.9	2.5	1.9	0.1	0.1	0.6	1.0	0.2	1.9	3.4	0.3	0.9
Fern Ridge	2,774	80.8	0.1	18.5	12.5	3.1	6.9	1.8	0.0	0.1	0.8	0.8	0.3	2.9	11.7	0.6	0.9
Hazleton	3,298	56.2	0.4	18.8	27.2	0.4	15.3	1.5	0.1	0.0	1.9	2.6	0.4	5.8	7.2	0.3	0.6
Lehighton	2,554	68.0	0.2	18.5	12.1	0.7	17.7	2.2	0.1	0.1	2.2	3.2	0.1	4.2	1.8	0.2	1.7
Swiftwater	3,865	62.2	0.9	20.8	17.1	1.8	17.2	3.8	0.1	0.5	2.7	2.6	0.3	2.7	2.2	0.6	0.7

* P=prior to stop, S=subsequent to stop

The trends in the reasons for traffic stops in 2005 were similar to those reported for 2004. Across the *department* in 2005, speeding was again the most frequent violation observed prior to the stop (70.6%). There was slight variation across areas in the frequency of speeding stops, with *Area I* reporting speeding as the reason preceding the stop for 77.0% of their drivers stopped, compared to *Area V*'s 56.1% of drivers stopped. The troops varied in speeding stops from a high of 84.2% (*Troop T*) to a low of 51.5% (*Troop K*). Note, however, that half of the troops reported speeding as the reason preceding the stop for over 70% of drivers stopped (9 of 16 troops). The differences at the troop level are mirrored at the station level. For example, *Everett* station reported speeding as the reason preceding the stop for 94.6% of their drivers, compared to only 35.1% of drivers stopped by Troopers in the *Washington* station. Similar to the troop level, about half of the stations reported speeding as the reason preceding the stop for over 70% of the traffic stops (42 out of 90 stations).

The average speed over the limit was recorded at 19.2 mph across the *department*. At the area level, the average speed over the limit ranged from a high of 21.9 in *Area V* to a low of 18.1 in *Area IV*. At the troop level, the range between average speeds over the limit was somewhat larger, with an average speed of 25.4 over the limit in *Troop K*, compared to an average speed of 16.9 in *Troop C*. More dramatic differences are displayed at the station level. For example, the average speed over the limit ranged from highs of 27.9 (*Trevose*), 27.2 (*Philadelphia*), and 25.0 (*Media*) to lows of 13.2 (*Emporium*), 15.1 (*Tionesta*), and 15.4 (*Ridgway*).

Area V had the lowest percentage of speeding as the reason for the stop (56.5%); however, it also had the highest average speed over the limit (21.9 mph). This result is likely driven by *Troop K*, which had the lowest percentage of speeding as the reason for the stop (51.5%) and the highest average speed over the limit (25.4 mph).

Other moving violations were the second most common reason preceding the traffic stop across the *department* at 17.0%. The areas varied on the percentage of stops based on moving violations, from a high of 22.2% in *Area III* to a low of 11.2% in *Area IV*. Similarly, there was variation across the troops from 28.8% of stops in *Troop B* to 11.0% of stops in *Troop E*.

At the *department* level, the third ranking reason for stops was equipment inspections (8.6%), followed by registration (2.6%). The rank ordering of these two categories at the departmental level was mirrored at the area level, where equipment inspections ranked third in all five of the areas. For a complete breakdown of the categories at the various levels, please refer to **Tables 4.9 and 4.10**.

The differences across the department in the average speed over the limit for which drivers are stopped are an important aspect to consider when determining disparities in traffic stops. It appears that the “norms” of what is considered “speeding” and violations that are “worthy” of Troopers’ attention vary dramatically from one location to another. Thus, traveling 18 mph over the posted speed limit is very likely to initiate a traffic stop in some stations (e.g., *Emporium*), while much less likely in others (e.g., *Trevose* and *Philadelphia*). There are several possible legitimate explanations for these differences. The most obvious is

differences in roadway types, differences in workloads and manpower, and differences in traffic patterns. The important thing to note is that if particular types of drivers are more likely to speed (as has been found in several studies – see Engel et al., 2006; Engel et al., 2004; Lange et al., 2005; Smith et al., 2003), their risk of being stopped for speeding violations differs across the state. Given that traffic patterns and types of drivers are not evenly distributed across the state, this could be one possible explanation for any racial/ethnic disparities in stop rates that should be considered.

Table 4.9: Reason for Stop by Department, Area, & Troop - 2005

	Total # of Stops	% Speeding*		Amt. over limit (MPH)	% Mov. Viol.*		% Equip./ Inspect.*		% Preexist. Info.*		% Regist.*		% License*		% Spec. Traf. Enf.*	% Other*	
		P	S		P	S	P	S	P	S	P	S	P	S			
PSP Dept	272,670	70.6	0.3	19.2	17.0	2.1	8.6	3.4	0.1	0.3	2.6	3.4	0.4	4.6	1.6	0.8	3.2
AREA I	99,776	77.0	0.3	19.0	14.8	1.5	5.5	2.5	0.1	0.2	1.9	2.7	0.4	3.5	0.7	0.8	2.5
Troop H	23,209	69.8	0.4	19.4	18.4	1.7	7.8	3.0	0.1	0.1	2.4	2.7	0.4	4.0	0.7	1.0	2.7
Troop J	9,286	58.4	0.3	22.4	16.6	1.0	15.5	3.2	0.1	0.0	6.6	3.9	1.8	7.7	1.3	1.7	2.8
Troop L	8,878	67.6	0.3	19.8	19.3	1.5	9.1	3.8	0.1	1.0	3.3	3.0	0.3	5.2	3.8	1.1	2.5
Troop T	58,403	84.2	0.3	18.4	12.4	1.6	2.4	2.0	0.0	0.1	0.7	2.5	0.1	2.3	0.1	0.5	2.4
AREA II	31,626	70.4	0.2	18.7	17.3	1.8	9.3	4.0	0.1	0.3	1.8	3.6	0.4	4.5	1.4	0.8	4.4
Troop F	15,409	76.1	0.1	17.8	14.3	1.3	6.7	4.0	0.0	0.3	1.9	2.4	0.5	3.6	1.9	0.7	5.4
Troop P	7,678	64.1	0.4	19.5	20.1	3.0	11.8	5.3	0.1	0.5	2.2	6.6	0.3	7.3	0.6	0.5	5.6
Troop R	8,539	65.6	0.2	19.9	20.1	1.5	11.5	2.7	0.0	0.0	1.3	3.1	0.4	3.7	1.2	1.3	1.6
AREA III	56,643	65.3	0.2	19.4	22.2	2.8	8.4	4.2	0.1	0.6	2.8	3.7	0.5	5.1	2.2	0.5	2.9
Troop A	15,736	62.2	0.2	20.2	22.0	2.4	10.4	5.7	0.2	0.9	3.8	4.2	0.5	5.7	3.0	0.5	3.0
Troop B	19,666	57.2	0.2	20.7	28.8	2.8	9.4	3.0	0.1	0.8	3.3	3.2	0.7	5.2	0.7	0.5	1.4
Troop G	21,241	75.1	0.2	18.0	16.3	3.2	6.0	4.2	0.1	0.3	1.7	3.8	0.2	4.6	3.0	0.5	4.1
AREA IV	44,801	76.3	0.3	18.1	11.2	2.6	9.0	4.3	0.1	0.2	2.4	4.1	0.4	5.1	1.1	0.9	4.5
Troop C	17,140	78.3	0.4	16.9	11.5	3.4	7.6	4.4	0.1	0.4	1.4	3.5	0.3	4.4	0.9	1.1	4.5
Troop D	14,251	72.2	0.3	19.6	11.1	2.2	12.3	4.7	0.1	0.1	3.5	4.4	0.6	5.8	1.5	1.0	4.9
Troop E	13,410	78.0	0.3	18.0	11.0	2.0	7.2	3.9	0.1	0.2	2.6	4.6	0.3	5.3	1.1	0.7	4.2
AREA V	38,157	56.1	0.4	21.9	21.3	2.0	16.1	3.3	0.1	0.3	4.9	4.0	0.7	5.9	3.6	1.2	2.8
Troop K	8,395	51.5	0.5	25.4	26.9	2.5	12.6	3.0	0.0	0.3	6.9	4.6	0.9	6.8	2.8	1.5	3.9
Troop M	16,860	53.6	0.3	22.8	19.1	2.0	19.3	4.2	0.1	0.3	5.8	4.2	0.7	6.1	4.4	1.6	2.8
Troop N	12,902	62.4	0.3	19.0	20.5	1.6	14.1	2.2	0.1	0.3	2.5	3.4	0.5	5.0	3.0	0.6	2.0

* P=prior to stop, S=subsequent to stop

Table 4.10: Reason for Stop by Station - 2005 (p. 1 of 4)

	Total # of Stops	% Speeding*		Amt. over limit (MPH)	% Mov. Viol.*		% Equip./ Inspect.*		% Preexist. Info.*		% Regist.*		% License*		% Spec. Traf. Enf.*	% Other*	
		P	S		P	S	P	S	P	S	P	S	P	S			
AREA I																	
Troop H																	
Carlisle	5,213	77.1	0.1	18.8	12.9	2.5	5.7	5.0	0.0	0.1	2.8	2.9	0.3	3.8	0.2	1.1	3.4
Chambersburg	3,761	66.1	0.5	17.9	16.8	1.2	11.1	3.0	0.2	0.1	3.3	3.6	0.5	5.7	0.6	1.1	2.1
Gettysburg	2,689	76.1	0.8	18.4	13.5	1.2	8.0	2.2	0.1	0.0	1.3	2.2	0.4	3.8	0.7	0.8	2.2
Harrisburg	3,321	69.2	0.6	21.3	25.9	1.9	2.2	3.0	0.0	0.0	1.6	1.3	0.3	2.4	1.7	0.4	1.9
Lykens	1,481	52.1	0.7	18.8	27.9	2.8	12.9	3.4	0.0	0.0	3.8	5.9	0.7	7.8	2.3	1.8	4.9
Newport	2,340	74.2	0.3	19.6	18.2	1.2	4.9	2.2	0.1	0.4	1.5	2.9	0.3	3.7	0.1	0.8	3.8
York	4,404	64.3	0.3	20.7	20.3	1.2	11.5	1.3	0.1	0.0	2.7	1.7	0.4	2.9	0.6	1.1	2.1
Troop J																	
Avondale	2,747	50.2	0.4	22.0	19.9	1.2	19.7	3.7	0.1	0.1	4.6	5.6	2.0	10.5	1.5	2.9	3.6
Embreeville	2,410	60.2	0.3	23.9	17.8	0.7	11.7	4.5	0.1	0.0	8.2	4.2	1.1	9.2	0.2	1.0	2.2
Ephrata	1,014	81.0	0.4	21.7	10.7	1.2	6.0	2.6	0.0	0.1	2.3	2.9	0.2	6.1	3.4	0.5	1.5
Lancaster	3,115	56.9	0.2	21.8	14.4	0.9	17.7	2.1	0.2	0.0	8.7	2.5	2.8	4.5	1.2	1.5	3.0
Troop L																	
Frackville	873	55.6	0.6	18.4	26.0	1.4	11.9	5.0	0.2	0.1	5.3	4.8	0.8	11.9	3.8	0.3	1.9
Hamburg	2,005	67.3	0.6	21.5	19.2	2.6	9.1	4.6	0.3	3.6	4.0	2.6	0.3	3.3	4.0	2.3	2.2
Jonestown	3,187	76.6	0.1	19.4	12.1	0.5	8.4	3.0	0.1	0.1	2.1	2.1	0.1	3.8	0.1	0.9	1.8
Reading	1,295	63.1	0.4	19.3	23.2	0.8	9.0	2.9	0.1	0.0	4.4	2.9	0.4	6.8	2.0	1.1	1.7
Schuylkill Haven	1,518	59.7	0.1	19.3	27.7	2.8	9.0	4.3	0.1	0.7	2.8	4.4	0.5	5.3	12.6	0.2	5.1
Troop T																	
Bowmansville	5,859	78.6	0.3	17.8	19.9	1.1	1.1	1.2	0.0	0.1	0.2	2.5	0.1	3.4	0.2	0.1	1.8
Everett	9,652	94.6	0.1	17.3	3.9	0.7	2.2	3.2	0.0	0.2	0.5	2.3	0.0	2.7	0.2	0.2	2.4
Gibsonia	7,977	85.8	0.1	16.2	8.3	1.5	2.7	3.7	0.0	0.0	0.9	4.7	0.1	2.6	0.0	1.8	5.0
Highspire	45	80.0	0.0	18.8	4.4	0.0	2.2	0.0	0.0	0.0	2.2	2.2	0.0	0.0	0.0	11.1	2.2
King of Prussia	6,188	78.3	0.4	19.9	17.8	2.0	3.2	1.2	0.0	0.1	1.5	1.3	0.3	2.6	0.1	1.0	0.3
New Stanton	8,086	76.8	0.6	18.4	17.9	1.0	3.8	1.4	0.0	0.0	0.8	2.6	0.1	2.5	0.3	0.2	2.0
Newville	8,607	85.2	0.5	19.4	9.8	3.2	3.0	2.3	0.0	0.0	0.7	3.5	0.0	2.6	0.3	0.3	3.6
Pocono	5,242	90.4	0.1	17.5	8.7	2.9	0.8	0.8	0.0	0.2	0.2	1.0	0.1	1.0	0.0	0.1	0.3
Somerset (T)	6,736	80.9	0.1	21.1	17.2	0.4	1.5	1.1	0.0	0.0	0.3	0.9	0.1	0.9	0.0	0.6	2.2

* P=prior to stop, S=subsequent to stop

Table 4.10: Reason for Stop by Station - 2005 (p. 2 of 4)

	Total # of Stops	% Speeding*		Amt. over limit (MPH)	% Mov. Viol.*		% Equip./ Inspect.*		% Preexist. Info.*		% Regist.*		% License*		% Spec. Traf. Enf.*	% Other*	
		P	S		P	S	P	S	P	S	P	S	P	S	P	S	
AREA II																	
Troop F																	
Coudersport	1,366	72.5	0.3	16.6	11.0	1.6	13.5	2.9	0.1	0.4	1.9	2.9	0.4	4.9	0.1	0.8	9.4
Emporium	956	40.3	0.2	13.2	47.9	1.9	8.9	2.1	0.0	0.2	1.9	3.2	0.8	5.3	0.0	0.1	0.4
Lamar	1,735	81.3	0.0	18.2	14.2	1.5	1.6	2.1	0.0	0.6	0.8	1.0	0.3	1.6	2.0	1.8	1.5
Mansfield	1,243	76.2	0.2	17.0	14.0	2.3	6.8	3.4	0.1	0.0	1.7	3.5	0.0	3.9	0.7	0.6	7.4
Milton	2,121	70.0	0.3	19.0	22.4	1.4	5.6	5.1	0.0	0.0	1.3	1.8	0.3	2.6	0.5	0.2	1.0
Montoursville	4,075	81.1	0.0	17.3	10.8	0.2	5.8	2.5	0.1	0.0	2.3	1.8	0.5	3.3	5.8	0.6	9.6
Selinsgrove	2,847	86.9	0.2	19.1	5.9	0.7	4.0	6.7	0.0	0.0	1.8	1.1	0.7	2.2	0.0	0.5	4.1
Stonington	1,066	68.5	0.1	17.6	8.3	4.6	17.7	6.7	0.0	2.4	3.8	8.5	0.5	10.8	0.2	1.7	5.4
Troop P																	
Laporte	1,456	56.5	0.2	18.0	33.4	1.6	7.8	3.6	0.1	0.1	0.8	5.2	0.1	5.0	0.1	0.2	9.0
Shickshinny	1,101	65.3	0.2	19.3	23.6	2.3	8.1	5.9	0.1	0.2	1.6	3.5	0.3	6.1	0.3	0.3	9.7
Towanda	2,400	68.0	0.4	17.8	8.6	5.2	18.5	7.0	0.2	1.1	2.3	10.3	0.2	9.2	0.9	1.1	6.3
Tunkhannock	1,052	54.1	0.4	20.6	27.3	2.9	12.9	6.9	0.0	1.0	3.5	9.6	0.7	11.5	0.0	0.9	1.6
Wyoming	1,669	70.8	0.7	22.4	18.2	1.7	7.4	3.0	0.0	0.1	3.1	2.7	0.2	4.6	1.0	0.1	1.4
Troop R																	
Blooming Grove	1,918	64.2	0.3	19.4	15.5	0.8	18.4	1.9	0.1	0.1	1.0	3.3	0.1	3.0	1.8	2.6	1.5
Dunmore	3,093	70.3	0.2	21.7	21.4	1.6	5.6	2.8	0.0	0.0	1.1	3.1	0.5	4.1	1.4	0.4	1.8
Gibson	1,541	60.9	0.1	18.7	22.6	2.5	14.8	2.3	0.0	0.0	1.0	3.0	0.2	3.8	0.6	0.5	1.0
Honesdale	1,987	63.4	0.3	18.3	20.6	1.1	11.6	3.7	0.0	0.1	2.1	2.8	1.0	3.8	0.8	1.9	1.7
AREA III																	
Troop A																	
Ebensburg	4,054	56.6	0.1	19.3	30.8	1.6	8.8	5.3	0.1	0.6	3.2	2.9	0.2	4.4	0.0	0.3	2.2
Greensburg	3,957	62.4	0.4	20.8	18.9	1.6	11.7	3.1	0.1	0.1	5.7	3.1	1.0	5.3	2.0	0.5	1.9
Indiana	2,629	59.3	0.3	20.4	21.6	1.1	12.1	8.9	0.3	0.1	4.0	3.0	0.3	4.5	1.4	1.3	1.2
Kiski Valley	2,732	66.4	0.1	22.0	21.0	5.9	8.2	9.0	0.2	3.8	2.0	7.8	0.8	7.8	11.0	0.0	0.1
Somerset (A)	2,364	69.8	0.1	18.7	13.7	2.8	11.5	3.5	0.3	0.3	3.5	5.6	0.1	7.7	2.2	0.5	11.3

* P=prior to stop, S=subsequent to stop

Table 4.10: Reason for Stop by Station - 2005 (p. 3 of 4)

	Total # Of Stops	% Speeding*		Amt. over limit (MPH)	% Mov. Viol.*		% Equip./ Inspect.*		% Preexist. Info.*		% Regist.*		% License*		% Spec. Traf. Enf.*	% Other*		
		P	S		P	S	P	S	P	S	P	S	P	S				
AREA III (cont.)																		
Troop B																		
Belle Vernon	2,368	72.3	0.4	22.7	14.7	0.6	9.6	2.6	0.1	0.0	3.8	2.6	0.4	4.7	0.6	0.2	0.5	
Findlay	4,639	67.3	0.0	21.7	22.7	8.1	6.4	5.0	0.1	2.8	2.7	3.8	0.6	5.4	1.6	0.5	1.3	
Uniontown	5,401	56.4	0.2	19.5	26.4	1.4	11.2	2.6	0.1	0.1	4.1	2.2	1.1	4.1	0.5	0.9	2.2	
Washington	5,044	35.1	0.2	20.8	50.4	1.0	10.1	2.2	0.2	0.3	2.8	4.6	0.5	7.4	0.1	0.3	1.5	
Waynesburg	2,214	72.4	0.3	18.6	13.1	1.8	10.1	2.5	0.2	0.0	3.0	2.1	0.5	3.2	0.6	0.6	0.6	
Troop G																		
Bedford	3,082	65.9	0.4	17.9	20.5	6.9	9.5	5.8	0.1	0.1	2.5	6.2	0.3	6.3	0.1	0.7	7.7	
Hollidaysburg	2,885	62.0	0.3	18.1	19.3	1.8	13.8	2.8	0.0	0.0	3.6	2.8	0.2	5.0	0.7	0.7	1.8	
Huntingdon	1,873	74.2	0.3	17.4	15.1	2.2	6.7	3.4	0.1	0.1	2.8	5.3	0.2	6.0	2.3	0.3	5.0	
Lewistown	3,180	81.2	0.1	17.8	12.5	3.8	5.2	4.7	0.2	0.8	1.1	3.2	0.4	4.9	3.2	0.7	3.5	
McConnellsburg	2,121	85.9	0.4	21.3	6.8	0.4	5.2	1.7	0.0	0.0	0.7	2.5	0.3	2.5	0.0	0.7	2.5	
Philipsburg	2,483	91.2	0.2	16.2	7.1	3.5	0.9	9.9	0.0	0.0	0.4	4.8	0.1	6.2	1.7	0.0	1.0	
Rockview	5,617	72.5	0.2	17.9	22.7	2.7	2.9	2.5	0.0	0.6	1.2	2.8	0.2	2.9	7.4	0.4	5.3	
AREA IV																		
Troop C																		
Clarion	3,545	83.1	0.5	18.8	9.5	6.5	6.2	5.7	0.2	0.1	1.3	4.6	0.1	4.9	1.7	0.5	5.6	
Clearfield	3,660	81.6	0.6	16.7	10.5	3.6	6.0	4.5	0.1	0.3	1.3	2.2	0.4	2.5	0.4	0.7	1.8	
Dubois	2,261	84.6	0.0	16.9	9.0	2.6	4.1	2.7	0.2	0.5	1.2	1.7	0.1	2.9	0.0	0.8	2.9	
Kane	1,475	65.0	0.2	17.1	19.4	2.1	11.5	2.1	0.1	0.1	2.2	3.0	0.7	7.4	0.1	1.3	5.4	
Punxsutawney	2,024	71.0	0.3	17.2	10.3	1.0	11.4	2.9	0.0	0.0	2.2	4.6	0.2	4.8	2.1	2.6	6.4	
Ridgway	1,890	69.1	0.4	15.4	19.2	3.2	8.8	4.0	0.2	1.6	1.6	3.9	0.5	5.0	0.2	2.3	6.3	
Tionesta	2,285	82.0	0.3	15.1	8.3	2.4	8.8	6.9	0.0	0.2	0.7	4.8	0.0	5.8	1.1	0.4	5.2	
Troop D																		
Beaver	2,318	73.5	0.1	21.0	6.0	0.8	16.4	7.9	0.0	0.0	4.9	2.6	0.4	4.5	0.2	0.2	1.1	
Butler	4,015	77.6	0.1	19.9	9.6	1.3	8.4	3.1	0.1	0.1	3.0	3.3	0.5	3.9	0.5	0.6	1.3	
Kittanning	3,637	69.9	0.2	21.1	13.9	2.3	14.3	3.8	0.1	0.3	2.9	4.6	0.8	7.0	3.2	0.6	10.3	
Mercer	2,534	77.4	0.6	17.7	10.0	4.6	8.6	4.3	0.2	0.1	2.2	6.3	0.8	7.5	1.2	0.7	5.4	
New Castle	1,747	54.8	0.6	16.5	17.1	2.6	16.9	6.7	0.2	0.1	5.5	6.3	0.6	7.1	2.3	3.8	6.0	

* P=prior to stop, S=subsequent to stop

Table 4.10: Reason for Stop by Station - 2005 (p. 4 of 4)

	Total # of Stops	% Speeding*		Amt. over limit (MPH)	% Mov. Viol.*		% Equip./ Inspect.*		% Preexist. Info.*		% Regist.*		% License*		% Spec. Traf. Enf.*	% Other*	
		P	S		P	S	P	S	P	S	P	S	P	S			
AREA IV (cont.)																	
Troop E																	
Corry	852	77.6	0.5	17.6	15.1	1.8	6.5	2.9	0.0	0.0	1.1	5.6	0.2	7.4	2.7	0.2	6.2
Erie	2,714	71.3	0.6	19.2	16.2	2.8	6.9	6.3	0.0	0.3	3.5	6.8	0.1	6.3	2.3	1.3	9.1
Franklin	1,662	64.9	0.7	17.5	14.9	3.9	15.5	3.4	0.2	0.0	3.7	6.0	0.4	6.8	0.4	0.2	1.5
Girard	2,791	83.2	0.2	18.1	9.5	1.2	3.8	3.5	0.4	0.4	2.4	3.7	0.4	5.7	1.6	0.7	2.4
Meadville	4,407	86.0	0.2	17.6	5.8	1.7	5.3	3.1	0.0	0.0	2.0	3.2	0.4	3.7	0.1	0.4	2.7
Warren	984	67.9	0.1	17.5	14.8	.8	12.7	2.8	0.2	0.2	3.9	4.2	0.1	3.4	1.0	2.0	5.3
AREA V																	
Troop K																	
Media	2,571	36.9	0.4	25.0	42.1	0.9	11.4	1.6	0.0	0.1	8.0	2.0	0.7	4.0	0.5	1.4	2.2
Philadelphia	3,141	53.5	0.9	27.2	21.4	3.2	15.5	2.4	0.0	0.1	7.1	2.9	1.5	6.1	0.6	1.1	1.5
Skipack	2,683	63.2	0.3	23.8	18.7	3.4	10.5	5.0	0.0	0.6	5.7	9.2	0.4	10.1	7.5	2.2	8.3
Troop M																	
Belfast	3,164	61.6	0.4	22.3	13.7	2.8	18.7	4.6	0.0	0.1	4.3	3.4	0.3	6.2	0.2	0.8	2.7
Bethlehem	3,479	47.6	0.2	21.7	18.1	2.4	24.6	5.3	0.2	0.7	7.4	6.6	0.7	10.6	0.8	0.8	4.7
Dublin	3,139	48.6	0.4	22.1	12.9	1.9	29.8	3.3	0.2	0.6	6.3	6.0	0.8	6.3	8.6	1.4	3.3
Fogelsville	4,943	59.0	0.4	22.6	24.8	1.5	10.1	4.5	0.1	0.0	4.8	2.4	0.6	3.6	6.7	2.2	1.7
Trevoze	2,135	46.4	0.1	27.9	24.5	1.6	17.5	2.1	0.0	0.0	7.0	3.2	1.1	4.4	4.8	3.4	1.9
Troop N																	
Bloomsburg	2,027	76.6	0.3	17.6	18.5	2.9	4.0	1.1	0.0	0.0	0.5	0.6	0.2	1.9	2.0	0.3	2.8
Fern Ridge	1,893	64.2	0.6	18.6	26.1	2.2	8.0	1.3	0.1	0.2	0.9	1.0	0.3	1.7	4.5	0.5	0.6
Hazleton	3,149	55.9	0.3	19.8	22.3	0.9	18.0	1.7	0.1	0.3	3.7	2.5	0.5	7.3	6.5	1.1	1.2
Lehighton	2,356	56.2	0.1	19.0	18.3	1.2	23.6	3.4	0.1	0.0	2.1	7.9	0.2	7.0	0.8	0.2	2.8
Swiftwater	3,477	63.4	0.3	19.6	18.3	1.4	13.1	3.2	0.1	0.7	3.8	4.2	0.9	5.1	1.0	0.5	2.3

* P=prior to stop, S=subsequent to stop

DRIVERS' CHARACTERISTICS

Tables 4.11 – 4.14 report the characteristics of drivers stopped during 2004 and 2005. The characteristics of drivers stopped by PSP Troopers are described at the department, area, and troop levels in **Tables 4.11 & 4.13**, and at the station level in **Tables 4.12 & 4.14**. The characteristics of the drivers are grouped as: 1) drivers' age and gender, 2) drivers' race/ethnicity, and 3) drivers' residency.

Drivers' Age & Gender

The total number of stops, average age of the driver, and the percent of male drivers stopped in 2004 are reported at the department, area, and troop level in **Table 4.11** and at the station level in **Table 4.12**. At the *department* level, the average age of drivers stopped was 34.1, which is similar to the individual averages at the area, troop, and station levels. The largest difference in the average age of drivers occurred at the station level. The average age of drivers stopped by Troopers in *Laporte* was 39.4 years, compared to 30.7 years in *Ephrata* (see **Table 4.11**). At the *department* level, 69.6% of the stopped drivers were male; likewise, males were more likely than females to be stopped at all levels within the department. Excluding *Highspire* (which reported only four traffic stops), the highest percent of male drivers stopped occurred in *Emporium* station (76.6%), while the lowest percent of male drivers stopped occurred in *Greensburg* (63.5%).

Data from 2005 demonstrated similar trends. **Tables 4.13 & 4.14** report the total number of stops, average age of the driver, and the percent of male drivers in 2005 across the department, area, troop, and station levels. At the *department* level, the average age of drivers stopped was 34.8, again reflecting the average age of stopped drivers at the area, troop, and station levels. At the *department* level, 69.6% of the stopped drivers were male. Again, male drivers were more likely than females to be stopped at all levels within the department. Troopers stationed in *Emporium* stopped the highest percentage of male drivers (76.9%), while Troopers stationed in *Stonington* stopped the lowest percentage of male drivers (63.5%).

Drivers' Race & Ethnicity

In addition to age and gender, Troopers also recorded the racial/ethnic background of drivers. Troopers visually determined the racial and ethnic composition of the drivers and these determinations were based solely on Troopers' perceptions. That is, no drivers were asked for their racial or ethnic category. The reliability and validity of citizens' race involves two related concerns for data collected by the police. First, police may be reluctant to indicate drivers' race or may simply report that information inaccurately. Second, Troopers may "disengage," or initiate fewer traffic stops overall. Both of these behaviors represent an effort by Troopers to protect themselves from criticism, departmental discipline, and potential litigation. From the Troopers' perspective, this is a reasonable response to data collection efforts that are specifically designed to identify Troopers who "racially profile."

Unfortunately, the validity of data collected by police officers often cannot be directly assessed. There are strategies, however, to increase validity and reliability of this type of data. For example, the current data collection effort contractually guarantees confidentiality to each Trooper. Although Troopers' employee numbers are initially reported on the data collection forms, the research team is required to remove this information from all data files after Troopers' demographic information has been successfully merged with the CDR data. Through the procedures included in the contract and approved by the University of Cincinnati Institutional Review Board, PSP legal team, and PSP union officials, individual Troopers cannot be identified in data analyses. This procedure insulates Troopers from internal discipline and potential civil and criminal liability based on the data collection effort. The purpose of this protection is to increase the reliability and validity of the data collected. All PSP Troopers were advised of this confidentiality agreement by the Principal Investigator in a training video. Other initiatives designed to increase compliance and data accuracy are described in the Year 1 Final Report (see Engel et al., 2004).

In **Tables 4.11 - 4.14**, missing data is collapsed with the category "unknown race." It is important to note that the percentages of unknown or missing drivers' race/ethnicity are extremely low, with only three stations (i.e., *Kane*, *Lamar* and *Highspire*) reporting greater than 3% of traffic stops with unknown or missing drivers' race/ethnicity. This remarkably low percentage of missing data is directly attributable to PSP administrators' continued emphasis on Trooper compliance with the data collection effort. As described in previous reports, multiple supervisors ensured the accuracy of the data forms and minimized errors by reviewing each individual traffic stop form. Supervisors were given feedback every two weeks regarding the error rates for their individual areas, troops, and stations, with particular emphasis placed on missing race/ethnicity information. This continual feedback, combined with direct supervisory oversight and administrator emphasis on the importance of this data collection effort has resulted in more reliable and valid data regarding member-initiated traffic stops.

For 2004, the racial and ethnic descriptions of drivers stopped by Troopers are reported at the department, area, and troop levels in **Table 4.11**, and the station level in **Table 4.12**. The Contact Data Report captures Troopers' perceptions of drivers' race/ethnicity in one of eight categories, with the percentage across the *department* for 2004 indicated in parentheses:

- White (84.9%)
- Black (7.7%)
- White Hispanic (3.0%)
- Black Hispanic (0.3%)
- Native American (0.0%)
- Middle Eastern (1.9%)
- Asian/Pacific Islander (1.7%)
- Unknown race/ethnicity or missing data (0.5%)

It should be noted that some variation in the racial and ethnic background of drivers stopped across areas, troops, and stations is to be expected due to differences in the demographic

makeup of residents and travelers, as well as differences in traffic flow patterns in these locations.

As shown in **Table 4.11**, at the area level, variations in the racial/ethnic background of drivers were evident. For example, **Area III** reported the highest number of Caucasian drivers stopped (91.9%), while Troopers in **Area V** stopped the lowest percent of Caucasian drivers (77.3%). Differences in racial composition of drivers stopped across areas are also pronounced for Black drivers. For example, Black drivers accounted for 10.9% of drivers stopped in **Area V**, compared to 4.5% of drivers in **Area II**. This pattern is repeated across the other racial groups, although it is less noticeable in the White Hispanic, Middle Eastern, and Asian/Pacific Islander categories, where the percentages of drivers stopped are all extremely low.

At the troop level (see **Table 4.11**), the variation increased across all racial/ethnic categories when compared to the departmental averages. The percentage of Caucasian drivers stopped at the troop level varied from a high of 95.5% of drivers in **Troop P**, to a low of 74.4% in **Troop K**. Black drivers represented 17.1% of stops in **Troop K**, but only 2.3% of stops in **Troop P**. Similarly, White Hispanics varied from 8.8% of the stops by Troopers in **Troop J**, compared to only 0.4% of stops by Troopers in **Troop A**.

As expected, at the station level (see **Table 4.12**), this pattern of racial/ethnic variation in the percentage of drivers stopped is even more pronounced. For example, Caucasian drivers ranged from 99.0% of stops in **Emporium** to only 63.5% of stops in **Philadelphia**. Apart from **Highspire**, Troopers in **Philadelphia** stopped the highest percentage of Black drivers compared to all other stations (24.2%), while there were five stations with less than 1% of stops of Black drivers. Please refer to **Table 4.7** for the breakdown across the other racial categories.

Similar patterns emerged in the 2005 data. In 2005, the racial and ethnic descriptions of drivers stopped by Troopers are reported at the department, area, and troop levels in **Table 4.13**, and the station level in **Table 4.14**. The following percentages of stopped drivers were reported across the department:

- White (84.9%)
- Black (7.8%)
- White Hispanic (3.1%)
- Black Hispanic (0.3%)
- Native American (0.0%)
- Middle Eastern (1.8%)
- Asian/Pacific Islander (1.6%)
- Unknown race/ethnicity or missing data (0.5%)

Again, it must be reiterated that some variation in the racial and ethnic background of drivers stopped across areas, troops, and stations is to be expected due to differences in the

demographic makeup of residents and travelers, along with differences in traffic flow patterns in these locations.

As shown in **Table 4.13**, variations at the area level in the racial/ethnic background of drivers were evident. For example, **Area III** reported the highest number of Caucasian drivers stopped (92.0%), while **Area V** stopped the lowest percent of Caucasian drivers (75.5%). Differences in the racial composition of drivers stopped across areas are also pronounced for Black drivers and White Hispanic drivers. For example, Black drivers accounted for 11.5% of drivers stopped in **Area V**, compared to 4.1% of drivers in **Area II**. Further, White Hispanic drivers accounted for 7.3% of drivers stopped in **Area V** compared to only 0.7% in **Area III**. This pattern is repeated across the other racial groups, although less noticeable in the Black Hispanic, Middle Eastern, and Asian/Pacific Islander categories, where the percentages of drivers stopped are all extremely low.

At the troop level (see **Table 4.13**), the variation increased across all racial/ethnic categories when compared to the departmental averages. The percentage of Caucasian drivers stopped at the troop level varied from a high of 95.9% in **Troop A**, to a low of 71.6% in **Troop K**. Black drivers represented 18.5% of stops in **Troop K**, while only 2.2% of stops in **Troop P**. Similarly, White Hispanics varied from 9.5% of the stops by Troopers in **Troop J**, compared to only 0.2% of stops by Troopers in **Troop A**.

As expected, this pattern of racial/ethnic variation at the station level (see **Table 4.14**) in the percentage of drivers stopped is even more pronounced. For example, Caucasian drivers ranged from 99.2% of stops in **Emporium** to only 62.7% of stops in **Philadelphia**. In addition, Troopers in **Philadelphia** stopped the second highest percentage of Black drivers compared to all other stations (24.5%), while there were six stations with less than 1% of stops of Black drivers. Please refer to **Table 4.14** for the breakdown across other racial categories.

Drivers' Residency

Tables 4.11 - 4.14 also report drivers' residency for 2004 and 2005 based on reported residential zip codes. For every traffic stop, drivers' zip codes were recorded to determine the percentage of stops that occurred in locations where the drivers actually resided. This is important information to collect because benchmarks based on Census data assume that the driving population is similar to the residential population of an area. As shown in **Tables 4.11 - 4.14**, however, this is an inaccurate assumption for the 2004 and 2005 data. Specifically, 95.5% of drivers stopped statewide in 2004 did not reside in the municipality where they were stopped, 65.5% did not reside in the county where they were stopped, and 27.1% did not reside in the state of Pennsylvania. Similar percentages were reported for 2005.

When examining the area, troop, and station levels in 2004, it becomes obvious that the percentages of out-of-state and out-of-county residents stopped by Troopers varied dramatically by location (see **Tables 4.11 & 4.12**). For example, Troopers working in **Area I** stopped the highest percent of out-of-county drivers (74.5%) and out-of-state drivers

(31.8%). Conversely, Troopers working in **Area III** stopped the lowest percent of out-of-county drivers (55.3%) and out-of-state drivers (17.9%). The differences between areas stopping out-of-municipality drivers only varied from 93.9% (**Area III**) to 97.5% (**Area I**).

At the troop and station levels, more dramatic differences in the percentages of non-residents stopped were reported. For example, the percentage of drivers who did not live in the municipality where they were stopped ranged from 99.6% of drivers stopped in **Troop T** to 92.6% of drivers stopped in **Troop A**. At the station level, **Somerset (T)** station had a 100% stopping percentage for out-of-municipality drivers, compared to 86.0% of drivers stopped by Troopers assigned to the **Lykens** station.

Likewise, drivers stopped in a county other than the one in which they resided ranged from 90.4% of drivers in **Troop T** to only 34.9% of drivers in **Troop J**. At the station level, 99.4% of drivers stopped by Troopers assigned to the **Everett** station were of out-of-county drivers (the highest percentage after **Highspire**), while Troopers assigned to the **Uniontown** station stopped the lowest percent of out-of-county drivers (25.1%).

Finally, the highest percentage of out-of-state drivers stopped at the troop level was in **Troop R** (43.6%), and the lowest percentage of out-of-state drivers stopped in **Troop A** (6.1%). At the station level, the highest percentages of non-PA residents were stopped in **Gibson** (65.1%), **Somerset (T)** (63.1%), and **McConnellsburg** (60.7%) stations. In contrast, only 1.7%, 2.5%, and 2.6% of drivers stopped in **Stonington**, **Lykens**, and **Greensburg** stations, respectively, were non-PA residents.

Data for 2005, reported in **Tables 4.13 & 4.14**, demonstrated similar trends. Statewide, 95.5% of the drivers stopped by Troopers did not reside in the municipality where they were stopped, 65.7% did not reside in the county where they were stopped, and 26.0% did not reside in Pennsylvania. Again, the percentage of out-of-state and out-of-county residents stopped by Troopers varied dramatically by location. For example, **Tables 4.13 & 4.14** demonstrate that Troopers working in **Area I** consistently stopped the highest percent of out-of-county (74.9%) and out-of-state (31.7%) drivers. Conversely, Troopers working in **Area III** stopped the lowest percent of out-of-county (56.0%) and out-of-state (17.7%) drivers. The differences between areas stopping out-of-municipality drivers only varied from 94.0% (**Area III**) to 97.5% (**Area I**).

Larger differences in the percentages of non-residents stopped by Troopers are again found at the troop and station levels. For example, the percentage of drivers who did not live in the municipality where they were stopped ranged from 99.6% of drivers stopped in **Troop T** to 92.3% of drivers stopped in **Troop A**. At the station level, every stop made by Troopers in the **Everett** station involved a driver who did not live in the municipality in which they were stopped, compared to 84.9% of drivers stopped by Troopers assigned to the **Lykens** station.

Likewise, drivers stopped in a county other than the one in which they resided ranged from 90.5% of drivers stopped in **Troop T** to only 34.7% of drivers stopped in **Troop J**. At the station level, Troopers assigned to the **Everett** station stopped the highest percentage of out-

of-county drivers (99.4%), while Troopers assigned to the *Uniontown* station stopped the lowest percent of out-of-county drivers (24.7%).

Finally, the highest percentage of out-of-state drivers stopped at the troop level was in *Troop R* (41.6%), whereas *Troop A* (6.5%) stopped the lowest percentage of out-of-state drivers. At the station level, the highest percentages of non-PA residents were stopped in *Somerset (T)* (62.4%) and *Gibson* (58.7%). In contrast, only 1.9%, 3.2%, and 3.4% of drivers stopped in *Stonington*, *Lykens*, and *Kittanning* stations, respectively, were non-PA residents.

Table 4.11: 2004 Characteristics of Drivers Stopped by Department, Area & Troop

	Total # of Stops	Average Age	% Male	% White	% Black	% White Hispanic	% Black Hispanic	% Native American	% Middle Eastern	% Asian	% Missing/Unknown	% stopped out of municipality	% stopped out of county	% stopped out of state
PSP Dept.	300,683	34.1	69.6	84.9	7.7	3.0	0.3	0.0	1.9	1.7	0.5	95.5	65.5	27.1
AREA I	102,265	33.9	70.0	81.4	9.9	3.5	0.4	0.0	2.2	2.2	0.4	97.5	74.5	31.8
Troop H	26,073	33.4	67.8	87.2	6.5	3.2	0.2	0.0	1.2	1.3	0.4	95.0	57.7	26.2
Troop J	8,510	32.8	69.2	78.9	9.4	8.8	0.5	0.0	0.8	1.5	0.2	94.3	34.9	9.9
Troop L	9,033	34.1	70.5	83.8	6.3	5.3	0.9	0.0	2.0	1.5	0.2	94.8	56.6	22.3
Troop T	58,649	34.3	71.1	78.8	12.0	2.6	0.4	0.1	2.9	2.7	0.5	99.6	90.4	39.0
AREA II	39,743	34.8	70.1	90.1	4.5	1.9	0.2	0.0	1.4	1.3	0.7	95.3	65.7	28.4
Troop F	22,033	34.7	69.3	90.2	4.7	1.7	0.1	0.0	1.3	1.3	0.7	96.5	69.5	27.0
Troop P	8,072	34.5	69.9	95.5	2.3	0.9	0.1	0.0	0.4	0.6	0.2	93.8	51.6	14.0
Troop R	9,638	35.3	72.0	85.2	5.9	3.0	0.3	0.0	2.6	1.9	1.0	93.9	68.9	43.6
AREA III	54,792	33.8	68.3	91.9	5.0	0.8	0.1	0.0	1.0	1.0	0.2	93.9	55.3	17.9
Troop A	15,734	33.7	67.7	95.3	3.0	0.4	0.0	0.0	0.5	0.6	0.2	92.6	45.3	6.1
Troop B	19,364	33.9	68.5	90.7	6.6	0.6	0.1	0.1	0.9	0.9	0.1	93.8	52.1	22.1
Troop G	19,694	33.8	68.7	90.4	5.0	1.3	0.1	0.0	1.5	1.4	0.4	95.1	66.6	23.4
AREA IV	54,582	34.6	68.9	88.5	5.5	1.8	0.3	0.0	2.0	1.4	0.5	94.7	62.7	28.6
Troop C	21,421	35.3	72.0	85.0	6.4	2.7	0.6	0.1	2.8	1.7	0.7	95.6	76.2	41.0
Troop D	16,028	33.4	67.2	90.5	5.7	1.3	0.1	0.0	1.1	1.0	0.3	95.0	56.0	16.6
Troop E	17,133	34.8	66.4	90.9	4.3	1.0	0.1	0.0	1.8	1.4	0.4	93.2	52.0	24.3
AREA V	46,648	34.1	70.2	77.3	10.9	6.3	0.6	0.0	2.2	2.2	0.6	94.5	60.3	23.7
Troop K	11,044	34.1	68.3	74.4	17.1	3.8	0.4	0.0	1.4	2.7	0.4	94.7	50.1	12.6
Troop M	20,218	34.4	70.7	78.6	8.3	7.8	0.6	0.1	2.2	1.9	0.5	94.5	57.3	19.3
Troop N	15,386	33.6	70.9	77.6	9.8	6.1	0.6	0.0	2.9	2.3	0.8	94.4	71.7	37.5

Table 4.12: 2004 Characteristics of Drivers Stopped by Station (p. 1 of 4)

	Total # of Stops	Average Age	% Male	% White	% Black	% White Hispanic	% Black Hispanic	% Native American	% Middle Eastern	% Asian	% Missing/Unknown	% stopped out of municipality	% stopped out of county	% stopped out of state
AREA I														
Troop H														
Carlisle	5,944	34.6	69.4	85.5	7.3	3.2	0.4	0.0	1.6	1.6	0.3	98.4	78.2	41.3
Chambersburg	5,049	33.6	65.0	89.3	5.8	3.2	0.1	0.0	0.7	0.7	0.4	91.1	35.1	21.2
Gettysburg	2,969	34.1	65.7	87.4	5.0	4.3	0.0	0.0	1.6	1.2	0.4	97.2	62.0	32.6
Harrisburg	3,885	34.0	70.0	85.1	7.2	3.9	0.3	0.1	1.5	1.6	0.4	96.0	67.8	22.8
Lykens	1,250	33.7	63.8	97.3	1.0	0.6	0.2	0.0	0.4	0.4	0.5	86.0	29.7	2.5
Newport	2,058	31.2	64.0	91.5	4.2	0.9	0.1	0.0	1.2	1.7	0.4	97.6	76.1	12.1
York	4,918	31.9	70.7	84.1	9.0	3.5	0.3	0.1	1.2	1.3	0.6	93.9	44.8	23.8
Troop J														
Avondale	3,007	33.4	68.5	73.6	9.9	14.1	0.2	0.0	0.6	1.3	0.2	95.6	36.4	15.7
Embreeville	2,400	32.8	66.1	78.0	13.2	5.0	0.3	0.0	1.1	2.3	0.2	95.0	34.2	5.3
Ephrata	977	30.7	72.7	81.0	6.8	7.7	1.4	0.0	1.0	1.9	0.2	95.6	41.9	8.9
Lancaster	2,126	32.9	71.9	86.3	5.6	5.8	0.7	0.0	0.8	0.7	0.1	91.2	30.3	7.3
Troop L														
Frackville	952	34.4	73.1	91.4	3.0	3.5	0.2	0.0	0.7	1.2	0.1	96.5	59.8	24.8
Hamburg	1,812	34.7	71.9	76.5	8.7	5.6	1.4	0.0	4.6	2.9	0.2	97.2	78.3	36.1
Jonestown	2,739	33.8	73.4	80.1	8.9	6.4	0.5	0.0	2.3	1.6	0.2	97.2	73.4	33.8
Reading	1,938	33.2	67.8	84.0	5.2	7.5	1.7	0.0	0.6	0.9	0.3	87.7	28.9	4.7
Schuylkill Haven	1,592	34.7	65.7	93.8	2.3	1.6	0.3	0.1	1.0	0.8	0.1	95.6	35.1	6.8
Troop T														
Bowmansville	6,486	31.4	67.6	76.7	13.0	3.9	0.5	0.1	2.2	3.0	0.8	99.9	93.7	26.8
Everett	7,816	34.1	71.3	73.7	15.1	2.9	0.4	0.1	4.1	3.7	0.1	99.9	99.4	48.6
Gibsonia	8,209	35.6	69.3	82.8	10.3	1.8	0.1	0.1	2.5	1.7	0.8	98.8	82.2	42.3
Highspire	4	48.0	100.0	66.7	33.3	0.0	0.0	0.0	0.0	0.0	25.0	100.0	100.0	25.0
King of Prussia	6,773	35.2	73.5	79.6	10.5	3.2	1.0	0.0	2.5	3.0	0.1	99.1	79.6	24.4
New Stanton	7,829	34.1	69.6	83.5	10.7	1.3	0.1	0.0	2.1	1.9	0.4	99.2	78.0	33.2
Newville	9,978	33.9	71.5	77.2	12.3	2.9	0.6	0.1	3.6	3.1	0.5	99.9	96.8	38.3
Pocono	4,250	32.8	67.7	85.8	7.9	2.1	0.3	0.0	1.7	2.1	0.1	99.9	96.2	27.2
Somerset (T)	7,303	36.5	76.4	73.8	14.5	3.2	0.3	0.1	3.9	3.1	1.2	100.0	98.6	63.1

Table 4.12: 2004 Characteristics of Drivers Stopped by Station (p. 2 of 4)

	Total # of Stops	Average Age	% Male	% White	% Black	% White Hispanic	% Black Hispanic	% Native American	% Middle Eastern	% Asian	% Missing/ Unknown	% stopped out of municipality	% stopped out of county	% stopped out of state
AREA II														
Troop F														
Coudersport	1,515	36.3	71.7	97.5	1.1	0.5	0.1	0.0	0.4	0.4	0.1	90.1	62.0	15.7
Emporium	1,182	36.7	76.6	99.0	0.4	0.2	0.0	0.0	0.3	0.2	0.0	95.9	77.2	8.8
Lamar	3,536	34.7	71.3	76.8	8.7	4.2	0.4	0.1	3.2	3.4	3.3	99.6	89.9	56.1
Mansfield	1,438	34.6	70.2	92.7	3.7	0.3	0.0	0.0	0.8	0.7	1.7	96.6	62.5	35.1
Milton	2,873	33.4	68.2	83.8	7.7	3.7	0.2	0.0	2.6	2.0	0.1	98.7	89.9	42.2
Montoursville	6,897	34.8	67.4	92.7	4.3	1.1	0.1	0.0	0.7	0.9	0.3	96.3	56.0	18.6
Selingsgrove	3,095	34.1	69.1	93.8	3.7	1.0	0.1	0.0	0.6	0.7	0.0	96.5	78.2	19.5
Stonington	1,497	34.8	66.7	98.2	0.7	0.7	0.1	0.0	0.1	0.2	0.0	93.0	34.6	1.7
Troop P														
Laporte	1,343	39.4	75.4	97.3	1.0	0.7	0.0	0.0	0.2	0.7	0.1	95.3	83.7	15.6
Shickshinny	996	33.0	67.4	94.1	3.4	1.5	0.3	0.0	0.5	0.2	0.1	92.9	32.5	3.9
Towanda	1,781	35.0	68.3	98.3	0.5	0.4	0.1	0.0	0.2	0.4	0.2	91.2	31.8	13.3
Tunkhannock	1,438	34.3	72.5	97.2	0.8	1.2	0.0	0.1	0.2	0.2	0.2	94.4	65.6	6.9
Wyoming	2,514	32.2	67.7	92.3	4.7	1.1	0.1	0.0	0.8	0.9	0.2	94.9	48.0	21.6
Troop R														
Blooming Grove	2,607	35.9	72.2	87.6	5.5	3.8	0.1	0.0	0.8	1.0	1.2	90.2	70.6	45.7
Dunmore	2,823	33.8	71.1	82.9	6.6	3.4	0.5	0.0	3.4	2.2	1.0	96.4	69.0	40.3
Gibson	2,121	35.0	75.1	76.6	9.1	2.6	0.5	0.0	5.6	4.2	1.6	98.0	82.1	65.1
Honesdale	2,087	36.9	69.7	94.3	2.2	1.8	0.2	0.0	0.6	0.4	0.4	91.0	53.1	23.7
AREA III														
Troop A														
Ebensburg	3,127	34.3	66.6	95.8	2.5	0.5	0.1	0.0	0.5	0.5	0.1	92.4	46.3	5.8
Greensburg	4,180	33.6	63.5	96.5	2.4	0.3	0.0	0.0	0.3	0.4	0.3	91.1	26.0	2.6
Indiana	3,920	32.3	68.8	94.7	3.3	0.4	0.0	0.0	0.6	0.8	0.2	92.8	56.5	8.3
Kiski Valley	2,495	33.8	71.0	92.2	5.2	0.6	0.0	0.0	0.6	1.1	0.4	96.4	65.0	6.0
Somerset (A)	2,012	35.4	72.1	97.2	1.6	0.3	0.0	0.0	0.4	0.2	0.2	90.7	37.2	9.5

Table 4.12: 2004 Characteristics of Drivers Stopped by Station (p. 3 of 4)

	Total # of Stops	Average Age	% Male	% White	% Black	% White Hispanic	% Black Hispanic	% Native American	% Middle Eastern	% Asian	% Missing/ Unknown	% stopped out of municipality	% stopped out of county	% stopped out of state
AREA III (cont.)														
Troop B														
Belle Vernon	3,052	35.1	72.6	88.7	8.0	0.9	0.1	0.1	1.2	0.9	0.0	94.5	62.4	26.0
Findlay	4,403	33.5	69.0	88.0	8.4	0.7	0.2	0.0	1.0	1.5	0.2	94.9	50.6	16.7
Uniontown	3,981	32.7	66.3	93.5	5.7	0.2	0.0	0.0	0.3	0.3	0.1	90.2	25.1	6.9
Washington	5,336	34.4	68.5	90.9	6.2	0.7	0.0	0.1	0.9	1.0	0.3	94.7	59.6	27.6
Waynesburg	2,592	34.1	65.9	93.0	3.8	0.8	0.1	0.0	1.2	1.0	0.1	94.8	68.3	38.6
Troop G														
Bedford	3,119	34.0	68.5	93.0	4.1	0.8	0.0	0.0	1.1	0.8	0.1	94.4	54.8	21.5
Hollidaysburg	3,156	31.2	65.8	92.5	4.5	0.7	0.0	0.0	1.1	1.1	0.2	89.3	55.8	18.3
Huntingdon	2,188	33.9	68.8	96.8	2.0	0.5	0.0	0.0	0.4	0.3	0.0	97.3	58.6	4.8
Lewistown	2,457	32.5	67.2	90.2	4.5	1.8	0.1	0.1	1.0	1.7	0.6	92.9	65.7	10.3
McConnellsburg	2,036	36.3	70.4	79.1	13.1	1.7	0.1	0.1	3.2	2.6	0.2	97.1	91.2	60.7
Philipsburg	2,803	35.6	70.7	91.6	3.9	1.5	0.2	0.0	1.6	1.1	0.2	97.5	73.3	20.9
Rockview	3,935	33.8	69.7	88.0	4.6	2.0	0.4	0.0	2.1	2.2	1.0	97.5	72.0	29.8
AREA IV														
Troop C														
Clarion	4,934	34.6	70.8	77.3	10.2	4.3	1.2	0.1	4.0	2.3	0.5	97.6	85.8	56.6
Clearfield	5,145	34.2	72.1	83.4	6.8	2.9	0.8	0.1	3.7	2.1	0.3	96.8	72.3	46.5
Dubois	3,080	34.7	71.8	79.0	10.2	4.4	0.4	0.0	3.1	2.4	0.7	98.5	87.6	54.5
Kane	1,559	36.6	75.4	89.1	2.4	1.0	0.1	0.1	2.0	1.1	4.2	94.5	65.6	34.6
Punxsutawney	2,369	36.1	72.6	93.2	3.1	1.2	0.3	0.0	1.4	0.8	0.2	95.6	66.7	19.0
Ridgway	2,317	35.1	72.1	92.0	2.5	1.7	0.2	0.0	1.6	1.3	0.9	87.9	61.8	27.1
Tionesta	2,017	39.0	71.9	95.8	1.9	0.5	0.0	0.0	0.7	0.8	0.3	93.5	81.4	15.3
Troop D														
Beaver	2,334	32.8	64.1	91.9	6.6	0.5	0.0	0.0	0.8	0.2	0.2	96.2	50.6	18.6
Butler	4,281	32.7	65.4	94.7	3.1	0.4	0.0	0.0	0.7	1.0	0.2	94.2	56.2	9.2
Kittanning	4,147	33.0	65.9	92.7	5.5	0.4	0.1	0.0	0.5	0.5	0.2	96.8	48.0	4.1
Mercer	3,098	33.0	73.8	78.9	9.3	4.8	0.5	0.1	3.0	2.6	0.8	98.8	77.2	44.3
New Castle	2,168	36.6	66.9	93.2	5.4	0.4	0.1	0.0	0.5	0.3	0.2	86.6	46.4	13.2

Table 4.12: 2004 Characteristics of Drivers Stopped by Station (p. 4 of 4)

	Total # of Stops	Average Age	% Male	% White	% Black	% White Hispanic	% Black Hispanic	% Native American	% Middle Eastern	% Asian	% Missing/ Unknown	% stopped out of municipality	% stopped out of county	% stopped out of state
AREA IV (cont.)														
Troop E														
Corry	1,208	35.3	71.4	94.0	3.0	0.2	0.4	0.1	0.7	1.4	0.2	94.5	48.8	14.1
Erie	4,329	35.1	65.9	88.8	5.2	1.3	0.1	0.0	2.3	1.9	0.3	94.4	53.2	39.6
Franklin	2,988	34.6	66.5	94.4	2.5	1.0	0.2	0.1	0.9	0.5	0.5	90.3	47.7	13.0
Girard	3,719	34.5	65.3	89.1	5.3	1.3	0.0	0.0	1.9	1.5	0.8	88.4	40.7	22.9
Meadville	3,325	33.8	66.2	87.9	5.8	1.1	0.1	0.1	2.9	1.7	0.4	97.9	73.7	26.5
Warren	1,564	36.4	67.3	98.5	0.4	0.3	0.0	0.0	0.4	0.3	0.1	95.4	39.8	9.7
AREA V														
Troop K														
Media	3,867	33.8	69.2	71.5	21.3	2.9	0.3	0.0	1.3	2.3	0.7	95.1	55.6	22.5
Philadelphia	2,735	33.6	71.8	63.5	24.2	4.5	0.5	0.0	2.0	4.9	0.4	95.5	65.4	11.7
Skippack	4,442	34.8	65.2	83.6	9.0	4.1	0.4	0.0	1.1	1.8	0.2	93.9	35.8	4.4
Troop M														
Belfast	3,159	33.2	70.6	76.2	9.3	9.4	0.8	0.0	2.5	1.5	0.4	98.5	68.9	25.2
Bethlehem	4,432	32.8	69.0	77.3	8.4	9.8	0.5	0.1	2.4	1.2	0.7	92.1	49.6	9.3
Dublin	4,173	35.2	70.3	89.9	3.0	4.1	0.5	0.0	1.1	1.2	0.2	92.5	51.9	6.9
Fogelsville	5,142	34.9	72.6	74.6	9.1	9.9	0.7	0.1	2.8	2.6	0.3	96.8	65.2	28.8
Trebose	3,312	36.1	70.9	74.9	12.9	5.1	0.7	0.0	2.3	3.1	1.1	92.9	51.1	27.7
Troop N														
Bloomsburg	2,895	32.1	68.1	76.9	10.6	4.6	0.6	0.0	3.8	3.2	0.3	99.2	91.5	48.7
Fern Ridge	2,774	32.7	74.0	73.3	10.9	7.7	0.8	0.0	3.8	2.9	0.7	93.6	86.3	52.5
Hazleton	3,298	32.8	73.3	75.0	8.6	9.3	0.8	0.1	2.9	2.0	1.5	95.0	70.6	37.9
Lehighton	2,554	34.7	65.0	92.3	3.2	2.5	0.4	0.0	0.5	0.7	0.5	90.1	45.2	5.0
Swiftwater	3,865	35.4	72.6	73.8	13.7	5.8	0.6	0.0	3.1	2.4	0.8	93.9	64.9	39.5

Table 4.13: 2005 Characteristics of Drivers Stopped by Department, Area & Troop

	Total # of Stops	Average Age	% Male	% White	% Black	% White Hispanic	% Black Hispanic	% Native American	% Middle Eastern	% Asian	% Missing/Unknown	% stopped out of municipality	% stopped out of county	% stopped out of state
PSP Dept.	272,670	34.8	69.6	84.9	7.8	3.1	0.3	0.0	1.8	1.6	0.5	95.5	65.7	26.0
AREA I	99,776	34.7	70.0	81.3	9.8	3.7	0.4	0.0	2.2	2.1	0.4	97.5	74.9	31.7
Troop H	23,209	34.3	67.7	86.5	7.0	3.5	0.3	0.0	1.2	1.2	0.4	94.3	57.5	25.4
Troop J	9,286	33.3	69.7	78.3	9.6	9.5	0.5	0.0	0.8	1.1	0.3	94.1	34.7	8.9
Troop L	8,878	35.1	71.0	82.5	6.9	6.2	0.9	0.0	2.0	1.3	0.2	95.6	59.6	23.8
Troop T	58,403	35.0	70.7	79.6	11.5	2.5	0.4	0.0	2.9	2.7	0.4	99.6	90.5	39.0
AREA II	31,626	35.6	69.5	91.0	4.1	1.8	0.2	0.0	1.2	1.1	0.7	95.1	64.4	25.9
Troop F	15,409	35.7	68.5	91.7	4.0	1.4	0.2	0.0	1.0	0.9	0.8	96.1	68.6	23.3
Troop P	7,678	35.7	69.5	95.7	2.2	0.9	0.1	0.0	0.5	0.5	0.1	94.2	50.6	13.8
Troop R	8,539	35.5	71.4	85.4	5.9	3.3	0.3	0.0	2.2	2.1	1.0	94.0	69.3	41.6
AREA III	56,643	34.8	68.7	92.0	5.0	0.7	0.1	0.0	1.0	1.0	0.2	94.0	56.0	17.7
Troop A	15,736	34.6	67.8	95.9	2.8	0.2	0.0	0.0	0.5	0.5	0.2	92.3	46.9	6.5
Troop B	19,666	34.8	69.2	90.9	6.7	0.5	0.1	0.0	1.0	0.8	0.1	93.9	49.1	20.2
Troop G	21,241	35.0	68.9	90.2	5.0	1.3	0.2	0.0	1.4	1.5	0.4	95.4	69.0	23.8
AREA IV	44,801	34.9	69.2	88.5	5.9	1.6	0.2	0.0	1.9	1.3	0.5	94.6	63.5	26.4
Troop C	17,140	36.2	72.8	85.8	6.1	2.3	0.5	0.0	2.5	1.9	0.9	95.4	74.3	36.6
Troop D	14,251	33.6	67.4	90.3	6.3	1.1	0.1	0.0	1.0	0.9	0.2	95.0	57.7	16.3
Troop E	13,410	34.9	66.4	90.0	5.2	1.1	0.1	0.0	2.1	1.1	0.5	93.1	55.8	23.9
AREA V	38,157	34.4	70.4	75.5	11.5	7.3	0.6	0.0	2.1	2.3	0.8	94.2	59.5	22.0
Troop K	8,395	34.6	68.5	71.6	18.5	4.3	0.3	0.0	1.5	3.4	0.4	94.6	54.2	12.6
Troop M	16,860	34.3	71.3	75.8	9.2	9.4	0.7	0.0	2.0	2.0	1.0	94.6	56.2	17.6
Troop N	12,902	34.3	70.4	77.5	10.0	6.6	0.7	0.1	2.5	2.1	0.6	93.3	67.2	33.7

Table 4.14: 2005 Characteristics of Drivers Stopped by Station (p. 1 of 4)

	Total # of Stops	Average Age	% Male	% White	% Black	% White Hispanic	% Black Hispanic	% Native American	% Middle Eastern	% Asian	% Missing/ Unknown	% stopped out of municipality	% stopped out of county	% stopped out of state
AREA I														
Troop H														
Carlisle	5,213	35.2	69.5	84.9	7.6	3.9	0.4	0.1	1.7	1.3	0.2	97.0	72.5	36.5
Chambersburg	3,761	33.5	63.8	88.1	6.1	4.0	0.2	0.1	0.7	0.6	0.2	89.9	33.2	20.3
Gettysburg	2,689	34.6	66.2	85.7	5.2	5.2	0.2	0.0	1.9	1.5	0.3	96.8	61.9	28.8
Harrisburg	3,321	35.6	73.1	82.9	8.9	3.9	0.4	0.1	1.8	1.6	0.6	96.9	73.5	29.9
Lykens	1,481	35.0	64.7	97.8	0.9	0.7	0.3	0.0	0.0	0.1	0.5	84.9	30.5	3.2
Newport	2,340	32.4	66.1	90.7	4.4	1.8	0.3	0.0	1.0	1.6	0.3	97.9	78.1	12.8
York	4,404	33.4	67.9	84.2	9.9	3.2	0.3	0.0	0.8	1.0	0.6	92.6	43.8	25.3
Troop J														
Avondale	2,747	34.0	68.3	73.3	9.4	15.4	0.2	0.0	0.6	0.9	0.3	95.6	35.0	15.2
Embreeville	2,410	33.0	69.0	76.0	14.8	6.1	0.2	0.0	1.3	1.2	0.4	95.0	37.8	4.9
Ephrata	1,014	30.9	69.7	80.5	7.3	8.3	1.4	0.0	1.1	1.3	0.2	96.6	39.3	8.0
Lancaster	3,115	33.8	71.6	83.6	6.5	7.4	0.8	0.0	0.5	1.0	0.2	91.2	30.6	6.9
Troop L														
Frackville	873	34.9	73.4	87.4	6.1	3.4	0.1	0.0	1.3	1.5	0.2	94.3	58.6	25.8
Hamburg	2,005	35.8	71.7	77.6	8.5	6.9	1.8	0.0	3.8	1.4	0.0	97.3	76.6	34.2
Jonestown	3,187	34.6	71.4	80.2	8.7	6.6	0.6	0.1	2.0	1.7	0.2	96.8	74.1	33.8
Reading	1,295	34.6	69.8	81.0	5.6	9.4	1.4	0.0	1.2	0.9	0.5	90.0	27.5	4.3
Schuylkill Haven	1,518	35.9	68.8	92.3	2.8	3.3	0.2	0.1	0.7	0.5	0.1	96.6	34.9	4.7
Troop T														
Bowmansville	5,859	32.7	69.0	77.5	12.2	3.8	0.5	0.0	2.3	2.9	0.8	99.9	93.3	26.8
Everett	9,652	35.3	70.3	74.6	14.6	3.0	0.2	0.0	3.8	3.4	0.3	100.0	99.4	49.0
Gibsonia	7,977	36.0	70.4	82.7	10.3	1.6	0.1	0.0	2.6	1.9	0.8	99.2	82.8	44.2
Highspire	45	37.2	75.6	73.3	13.3	4.4	2.2	0.0	4.4	2.2	0.0	100.0	93.3	48.9
King of Prussia	6,188	35.2	74.4	79.3	10.2	3.2	1.2	0.1	2.9	3.1	0.3	98.9	79.3	25.2
New Stanton	8,086	33.8	70.1	82.7	10.8	1.2	0.5	0.0	2.5	1.9	0.3	99.0	77.3	31.9
Newville	8,607	35.2	71.1	79.4	11.2	2.7	0.5	0.1	2.9	3.1	0.2	99.9	96.7	37.1
Pocono	5,242	33.2	67.1	86.9	6.7	2.4	0.4	0.0	1.8	1.8	0.1	99.7	96.3	27.1
Somerset (T)	6,736	37.4	73.2	75.8	13.7	2.7	0.1	0.0	3.9	3.2	0.8	99.9	98.4	62.4

Table 4.14: 2005 Characteristics of Drivers Stopped by Station (p. 2 of 4)

	Total # of Stops	Average Age	% Male	% White	% Black	% White Hispanic	% Black Hispanic	% Native American	% Middle Eastern	% Asian	% Missing/ Unknown	% stopped out of municipality	% stopped out of county	% stopped out of state
AREA II														
Troop F														
Coudersport	1,366	37.7	71.1	98.2	0.4	0.3	0.1	0.0	0.4	0.4	0.1	91.7	64.3	18.2
Emporium	956	37.2	76.9	99.2	0.5	0.1	0.0	0.0	0.2	0.0	0.0	95.9	78.1	9.2
Lamar	1,735	36.2	69.5	75.7	9.1	4.3	0.5	0.3	2.6	3.0	4.5	99.2	92.9	58.3
Mansfield	1,243	36.1	70.3	92.8	3.5	0.8	0.3	0.0	0.6	0.8	1.3	96.6	59.6	33.6
Milton	2,121	34.4	66.8	85.6	7.1	3.5	0.1	0.0	2.3	1.3	0.2	97.6	83.5	32.2
Montoursville	4,075	35.6	66.2	94.0	3.4	0.7	0.1	0.0	0.7	0.8	0.4	95.8	55.8	14.9
Selinsgrove	2,847	34.8	69.3	94.0	3.8	0.9	0.2	0.0	0.5	0.4	0.3	97.8	76.9	18.0
Stonington	1,066	35.6	63.5	97.8	1.0	0.6	0.2	0.0	0.2	0.1	0.1	90.5	33.8	1.9
Troop P														
Laporte	1,456	40.0	73.8	97.8	1.0	0.3	0.0	0.0	0.5	0.4	0.0	94.6	80.5	16.2
Shickshinny	1,101	33.6	64.5	95.6	2.2	1.1	0.3	0.0	0.5	0.1	0.2	91.8	30.8	3.5
Towanda	2,400	36.0	68.3	97.3	1.3	0.6	0.1	0.0	0.2	0.5	0.1	92.6	32.4	13.5
Tunkhannock	1,052	34.7	73.0	96.8	1.1	1.2	0.1	0.0	0.1	0.5	0.5	95.5	69.5	7.0
Wyoming	1,669	33.6	68.4	90.9	5.3	1.7	0.1	0.0	1.1	0.8	0.0	97.1	51.9	23.0
Troop R														
Blooming Grove	1,918	36.2	70.8	88.0	5.4	4.0	0.3	0.0	0.9	1.0	0.8	92.4	78.2	48.8
Dunmore	3,093	34.0	71.4	82.7	6.7	3.7	0.4	0.1	2.8	2.3	1.4	95.5	66.9	36.9
Gibson	1,541	34.8	74.8	77.3	8.8	3.1	0.5	0.1	4.4	4.7	1.2	96.1	77.5	58.7
Honesdale	1,987	37.6	69.1	93.5	2.8	2.1	0.0	0.0	0.6	0.7	0.3	91.6	58.2	28.7
AREA III														
Troop A														
Ebensburg	4,054	35.2	67.8	96.3	2.2	0.2	0.0	0.0	0.6	0.5	0.1	90.9	50.6	6.9
Greensburg	3,957	34.1	65.5	96.6	2.6	0.3	0.0	0.1	0.3	0.2	0.1	92.5	27.6	3.5
Indiana	2,629	32.1	69.3	94.6	3.3	0.2	0.0	0.0	0.9	0.8	0.2	93.3	57.3	9.6
Kiski Valley	2,732	34.9	70.3	93.8	4.6	0.2	0.0	0.0	0.3	0.7	0.3	95.9	66.0	5.1
Somerset (A)	2,364	36.9	67.1	97.8	1.2	0.3	0.0	0.0	0.3	0.2	0.3	89.1	39.1	9.0

Table 4.14: 2005 Characteristics of Drivers Stopped by Station (p. 3 of 4)

	Total # of Stops	Average Age	% Male	% White	% Black	% White Hispanic	% Black Hispanic	% Native American	% Middle Eastern	% Asian	% Missing/ Unknown	% stopped out of municipality	% stopped out of county	% stopped out of state
AREA III (cont.)														
Troop B														
Belle Vernon	2,368	34.9	72.4	87.5	9.3	1.2	0.1	0.0	1.1	0.8	0.0	94.6	63.3	25.6
Findlay	4,639	34.6	69.5	88.2	8.4	0.6	0.1	0.0	1.3	1.4	0.0	95.4	51.3	17.8
Uniontown	5,401	34.4	66.1	94.1	5.3	0.1	0.0	0.0	0.2	0.2	0.1	92.2	24.7	5.8
Washington	5,044	35.3	69.6	91.3	6.2	0.6	0.0	0.0	1.1	0.7	0.0	93.6	59.9	28.1
Waynesburg	2,214	34.5	71.2	91.4	4.8	0.5	0.2	0.1	1.5	1.3	0.2	94.8	64.3	36.8
Troop G														
Bedford	3,082	35.5	66.7	92.7	4.2	0.7	0.2	0.0	1.3	0.8	0.2	95.0	58.7	24.1
Hollidaysburg	2,885	32.1	66.4	91.0	5.0	1.1	0.2	0.0	1.0	1.4	0.4	87.6	56.3	18.8
Huntingdon	1,873	36.1	68.0	97.0	2.1	0.5	0.1	0.1	0.2	0.1	0.2	96.5	59.8	5.1
Lewistown	3,180	34.0	68.2	92.0	3.8	1.6	0.1	0.0	0.7	1.6	0.2	94.9	71.6	11.4
McConnellsburg	2,121	37.1	72.8	81.1	12.0	1.0	0.2	0.0	2.8	2.6	0.3	97.0	88.9	55.9
Philipsburg	2,483	36.1	72.4	90.4	4.2	1.9	0.2	0.0	1.7	1.6	0.2	97.1	73.9	22.9
Rockview	5,617	35.3	69.1	88.6	5.0	1.8	0.3	0.0	1.7	2.0	0.7	98.3	73.2	27.6
AREA IV														
Troop C														
Clarion	3,545	35.0	73.1	75.0	12.0	4.4	1.3	0.1	3.9	3.0	0.5	98.0	85.6	57.1
Clearfield	3,660	35.1	70.4	81.6	7.8	2.7	0.7	0.1	4.2	2.7	0.3	97.2	76.6	48.4
Dubois	2,261	35.5	72.2	77.9	9.0	5.0	0.2	0.1	3.9	3.0	0.9	98.8	87.5	52.7
Kane	1,475	37.2	74.8	90.2	1.7	0.3	0.1	0.0	0.9	0.9	6.0	92.9	57.0	25.4
Punxsutawney	2,024	36.3	74.0	94.3	3.0	0.7	0.1	0.0	1.0	0.5	0.4	95.0	62.6	16.5
Ridgway	1,890	36.2	72.0	95.7	1.4	0.6	0.2	0.0	0.9	1.1	0.1	88.1	52.1	18.6
Tionesta	2,285	39.2	74.8	98.4	0.9	0.1	0.0	0.0	0.3	0.2	0.1	93.0	80.1	10.3
Troop D														
Beaver	2,318	32.1	64.2	91.7	6.7	0.3	0.0	0.0	0.7	0.5	0.2	95.3	50.4	17.6
Butler	4,015	33.3	66.3	94.0	4.0	0.4	0.0	0.0	0.7	0.7	0.1	94.7	61.8	11.5
Kittanning	3,637	32.8	67.4	91.7	6.4	0.6	0.1	0.1	0.4	0.7	0.1	96.5	47.5	3.4
Mercer	2,534	34.2	72.5	79.8	9.6	4.0	0.6	0.1	2.9	2.4	0.6	97.1	78.9	44.1
New Castle	1,747	36.8	67.1	92.5	6.3	0.4	0.1	0.1	0.3	0.3	0.2	89.5	48.5	12.3

Table 4.14: 2005 Characteristics of Drivers Stopped by Station (p. 4 of 4)

	Total # of Stops	Average Age	% Male	% White	% Black	% White Hispanic	% Black Hispanic	% Native American	% Middle Eastern	% Asian	% Missing/ Unknown	% stopped out of municipality	% stopped out of county	% stopped out of state
AREA IV (cont.)														
Troop E														
Corry	852	34.6	72.5	98.1	0.8	0.5	0.0	0.0	0.2	0.2	0.1	94.1	38.3	5.8
Erie	2,714	35.7	68.3	89.4	5.2	1.3	0.1	0.0	2.1	1.6	0.5	92.5	47.6	34.2
Franklin	1,662	35.8	67.0	90.8	4.9	1.6	0.2	0.2	1.5	0.5	0.5	89.5	52.2	18.2
Girard	2,791	33.7	65.2	87.9	6.1	1.4	0.1	0.0	2.4	1.4	0.8	88.1	41.0	21.9
Meadville	4,407	34.5	64.2	87.8	6.7	1.0	0.1	0.0	2.9	1.1	0.4	98.0	78.6	27.8
Warren	984	36.1	67.6	98.7	0.4	0.1	0.0	0.0	0.5	0.2	0.1	92.8	39.6	9.2
AREA V														
Troop K														
Media	2,571	35.3	66.6	72.9	19.3	3.9	0.1	0.0	1.4	2.2	0.2	94.3	53.5	20.5
Philadelphia	3,141	34.5	71.6	62.7	24.5	4.9	0.4	0.0	1.9	5.0	0.7	95.1	67.0	12.7
Skippack	2,683	34.1	66.8	80.8	10.7	4.1	0.3	0.1	1.3	2.6	0.1	94.1	39.9	5.0
Troop M														
Belfast	3,164	33.4	70.6	74.3	9.4	11.0	0.6	0.0	2.4	1.9	0.4	97.4	66.9	24.8
Bethlehem	3,479	32.7	71.2	73.4	9.4	11.3	0.7	0.0	2.1	1.2	1.9	91.6	47.8	7.0
Dublin	3,139	35.6	69.0	89.2	4.0	4.2	0.4	0.0	0.8	1.1	0.4	93.6	48.2	5.1
Fogelsville	4,943	35.5	72.6	73.3	9.1	11.0	0.9	0.0	2.3	2.6	0.8	96.8	63.2	26.4
Treose	2,135	33.6	72.8	68.0	16.2	7.7	0.7	0.3	2.4	3.1	2.1	91.6	49.5	22.4
Troop N														
Bloomsburg	2,027	32.6	69.1	77.2	11.3	3.7	0.6	0.0	3.9	3.0	0.3	99.2	88.7	46.5
Fern Ridge	1,893	34.6	70.9	75.6	10.3	7.5	0.8	0.1	2.7	2.2	0.8	92.4	79.3	45.6
Hazleton	3,149	33.6	73.1	74.6	7.9	10.6	0.8	0.1	2.7	2.1	1.3	94.3	69.0	36.9
Lehighton	2,356	34.9	65.2	92.4	3.3	2.6	0.2	0.0	0.6	0.6	0.6	86.8	43.2	4.2
Swiftwater	3,477	35.3	72.2	71.4	15.4	7.0	0.9	0.1	2.6	2.5	0.2	93.9	62.7	36.9

TRAFFIC STOP OUTCOMES

The disposition of traffic stops (e.g., warnings, citations, arrests, and searches) is also collected on the CDR and reported in **Tables 4.15 - 4.18** for 2004 and 2005, respectively. Reported at the department, area, troop, and station levels, these tables provide: 1) the total number of stops, 2) the percentage of *drivers* issued *only* warnings, *any* warnings, citations, and/or arrested, 3) the percentage of *passengers* issued *only* warnings, *any* warnings, citations, and/or arrested, and 4) the percentage of occupants and/or vehicles searched. Note that drivers and passengers can receive multiple outcomes (e.g., warning and citation) during a single traffic stop. The information below reports both the percentage of drivers who were issued only a warning and no other sanction, along with those who were issued any warning, regardless of whether or not more coercive action was taken. Post-stop outcomes are discussed in greater detail in **Sections 5 & 6** of this report.

As reported in **Table 4.15**, there were 300,683 member-initiated traffic stops in 2004. Of these stops, 13.0% resulted in *only* a warning, 24.9% resulted in a warning issued to the driver and 86.4% resulted in a citation issued to the driver. Additionally, in 0.4% of the stops, the driver was arrested, and 0.8% of the stops resulted in a search of either the occupants or the vehicle. Note, however, that for data collected prior to September, 2005 there are reasons to believe (documented in **Section 1**) that member-initiated traffic stops involving arrests and/or searches are underreported. The evidence documenting the extent of the underreporting will be discussed within the text below.

2004 Warnings and Citations

Table 4.15 also provides information about the outcomes of Trooper-initiated stops at the area level. **Area I** had the largest number of stops with 102,265, **Area II** had the least number of stops with 39,743, and the other three areas stopped approximately 50,000 vehicles each. In regard to warnings, Troopers in **Area IV** issued the highest percentage of warnings (34.9%), while **Area I** issued the fewest (16.8%). The percentage of drivers that were issued a citation also varied by areas and is inversely related to the drivers warned. **Area I** had the highest percentage with 90.9 % of stops resulting in citations, while **Area IV** had the lowest with 79.4% of stops resulting in a driver citation.

At the troop level, **Table 4.15** also displays information about stop outcomes for 2004. When compared to the area level, traffic stop outcomes at the troop level demonstrated greater variation, with warnings ranging from a high of 40.6% of the stops in **Troop M** to a low of only 10.6% in **Troop T**. Similar to the area level, there was an inverse relationship between warnings and citations at the troop level demonstrated by **Troop T**, which had the highest percentage of drivers cited (94.2%), and **Troop M**, which had the lowest percentage of stops resulting in a citation (74.6%).

Finally, **Table 4.16** provides information regarding traffic stops outcomes at the station level, which demonstrated the greatest amount of variation of any organizational level. The total number of traffic stops ranged from a high of 9,978 at **Newville** station to a low of 952 at **Frackville** station. Warnings were issued in 60.5% of the stops at **Dublin** station to a low of

4.4% at *Somerset (T)*. Citations were inversely related to warnings and ranged from a high of 98.9% at *Milton* station to a low of 54.8% at *Tionesta* station.

Table 4.15: 2004 Driver Outcomes By Department, Area, & Troop

	Total # of Stops	% Drivers Warned ONLY	% Drivers Warned	% Drivers Cited	% Drivers Arrested	% Passengers Warned ONLY	% Passengers Warned	% Passengers Cited	% Passengers Arrested	% Person or Vehicle Searched
PSP Dept.	300,683	13.0	24.9	86.4	0.4	0.1	0.1	0.1	0.1	0.8
AREA I	102,265	8.7	16.8	90.9	0.4	0.1	0.1	0.2	0.1	0.8
Troop H	26,073	13.6	22.2	85.5	0.9	0.1	0.1	0.2	0.2	0.2
Troop J	8,510	9.6	30.3	89.7	0.8	0.2	0.3	0.4	0.2	2.3
Troop L	9,033	13.8	29.0	85.9	0.7	0.2	0.2	0.1	0.0	0.7
Troop T	58,649	5.6	10.6	94.2	0.1	0.1	0.1	0.1	0.0	0.3
AREA II	39,743	9.1	18.1	90.7	0.3	0.0	0.0	0.1	0.0	0.5
Troop F	22,033	8.6	15.6	91.3	0.1	0.0	0.0	0.1	0.0	0.2
Troop P	8,072	13.3	26.2	86.0	0.7	0.0	0.0	0.1	0.1	0.8
Troop R	9,638	6.6	16.8	93.2	0.4	0.0	0.0	0.1	0.0	0.6
AREA III	54,792	11.8	26.2	87.7	0.6	0.1	0.2	0.1	0.1	0.7
Troop A	15,734	9.5	25.9	89.9	0.5	0.2	0.3	0.2	0.0	0.8
Troop B	19,364	9.9	22.1	89.7	0.8	0.2	0.2	0.2	0.1	0.9
Troop G	19,694	15.4	30.4	84.1	0.6	0.0	0.1	0.1	0.0	0.5
AREA IV	54,582	20.0	34.9	79.4	0.4	0.2	0.2	0.1	0.0	0.8
Troop C	21,421	18.4	31.9	81.2	0.3	0.2	0.2	0.1	0.0	0.5
Troop D	16,028	22.0	39.3	77.3	0.5	0.2	0.3	0.2	0.1	1.4
Troop E	17,133	20.3	34.6	79.1	0.4	0.1	0.1	0.1	0.0	0.4
AREA V	46,648	17.0	32.5	82.4	0.5	0.1	0.1	0.1	0.1	0.9
Troop K	11,044	15.5	35.3	83.7	0.9	0.2	0.2	0.1	0.1	1.9
Troop M	20,218	24.8	40.6	74.6	0.4	0.1	0.1	0.1	0.0	0.8
Troop N	15,386	7.9	19.9	91.9	0.4	0.1	0.2	0.1	0.0	0.4

Table 4.16: 2004 Driver Outcomes By Station (p. 1 of 4)

	Total # of Stops	% Drivers Warned ONLY	% Drivers Warned	% Drivers Cited	% Drivers Arrested	% Passengers Warned ONLY	% Passengers Warned	% Passengers Cited	% Passengers Arrested	% Person or Vehicle Searched
AREA I										
Troop H										
Carlisle	5,944	7.5	16.0	91.8	0.4	0.1	0.1	0.2	0.1	1.3
Chambersburg	5,049	16.0	28.8	81.6	1.5	0.2	0.2	0.2	0.5	3.0
Gettysburg	2,969	39.6	46.5	59.5	0.5	0.0	0.0	0.2	0.1	1.2
Harrisburg	3,885	6.4	12.6	93.4	0.0	--	0.0	0.1	0.0	0.5
Lykens	1,250	11.4	32.3	88.2	0.2	0.4	0.4	0.1	0.0	1.4
Newport	2,058	6.3	11.8	93.5	0.7	0.0	0.1	0.1	0.0	0.2
York	4,918	12.0	17.5	87.4	1.9	0.2	0.2	0.3	0.2	1.5
Troop J										
Avondale	3,007	8.2	34.8	91.4	0.4	0.3	0.3	0.6	0.3	2.1
Embreeville	2,400	11.6	32.7	87.8	0.4	0.2	0.2	0.3	0.2	2.3
Ephrata	977	5.1	17.9	94.4	0.8	0.3	0.3	0.0	0.2	0.9
Lancaster	2,126	11.2	27.0	87.3	1.6	0.2	0.3	0.3	0.2	3.4
Troop L										
Frackville	952	15.7	38.8	84.0	0.5	0.6	0.6	0.1	0.0	0.7
Hamburg	1,812	9.9	28.9	89.8	0.5	0.3	0.3	0.1	0.0	0.3
Jonestown	2,739	14.4	23.7	85.0	1.1	0.1	0.2	0.2	0.1	1.2
Reading	1,938	12.0	25.0	87.9	0.3	--	0.0	0.0	0.0	0.4
Schuylkill Haven	1,592	18.0	36.9	81.8	0.4	0.1	0.1	0.1	0.1	0.6
Troop T										
Bowmansville	6,486	2.0	5.7	97.9	0.0	--	0.0	0.1	0.0	0.1
Everett	7,816	6.6	12.4	93.2	0.2	0.0	0.0	0.1	0.1	0.3
Gibsonia	8,209	5.5	13.4	94.2	0.0	0.4	0.4	0.2	0.0	0.4
Highspire	4	25.0	25.0	50.0	0.0	--	0.0	0.0	0.0	0.0
King of Prussia	6,773	7.8	12.3	92.2	0.1	0.0	0.0	0.1	0.0	0.1
New Stanton	7,829	8.0	15.0	91.8	0.1	0.0	0.1	0.1	0.0	0.1
Newville	9,978	6.5	10.2	93.4	0.1	0.1	0.1	0.1	0.0	0.2
Pocono	4,250	5.3	10.2	94.7	0.0	0.0	0.0	0.2	0.0	0.0
Somerset (T)	7,303	2.0	4.4	97.2	0.2	0.0	0.0	0.0	0.1	1.1

Table 4.16: 2004 Driver Outcomes By Station (p. 2 of 4)

	Total # of Stops	% Drivers Warned ONLY	% Drivers Warned	% Drivers Cited	% Drivers Arrested	% Passengers Warned ONLY	% Passengers Warned	% Passengers Cited	% Passengers Arrested	% Person or Vehicle Searched
AREA II										
Troop F										
Coudersport	1,515	28.6	40.9	70.4	0.1	0.1	0.1	0.3	0.0	0.1
Emporium	1,182	15.1	25.2	84.4	0.0	--	0.0	0.0	0.0	0.0
Lamar	3,536	6.1	11.1	93.9	0.1	--	0.0	0.1	0.0	0.2
Mansfield	1,438	21.1	34.4	78.7	0.1	0.1	0.1	0.1	0.0	0.4
Milton	2,873	1.1	6.6	98.9	0.0	0.0	0.0	0.1	0.0	0.1
Montoursville	6,897	4.8	8.9	95.1	0.0	--	0.0	0.0	0.0	0.3
Selinsgrove	3,095	3.6	7.0	96.4	0.1	--	0.0	0.1	0.0	0.3
Stonington	1,497	19.4	41.2	80.4	0.2	--	0.1	0.1	0.0	0.3
Troop P										
Laporte	1,343	12.2	30.4	87.2	1.0	--	0.0	0.0	0.0	0.3
Shickshinny	996	16.8	25.1	83.0	0.3	0.1	0.1	0.1	0.0	0.3
Towanda	1,781	10.6	24.0	89.0	0.4	0.1	0.1	0.3	0.2	1.5
Tunkhannock	1,438	29.7	49.3	68.8	2.0	--	0.0	0.1	0.1	0.5
Wyoming	2,514	5.2	12.6	94.2	0.2	--	0.0	0.0	0.0	1.1
Troop R										
Blooming Grove	2,607	4.5	19.2	95.4	0.0	--	0.0	0.1	0.0	0.5
Dunmore	2,823	8.5	16.2	91.1	0.1	--	0.0	0.0	0.0	0.6
Gibson	2,121	5.6	17.9	94.3	1.3	0.2	0.2	0.1	0.1	0.5
Honesdale	2,087	7.9	13.8	92.0	0.3	--	0.0	0.1	0.1	1.0
AREA III										
Troop A										
Ebensburg	3,127	11.1	18.6	87.4	1.5	0.0	0.0	0.2	0.0	0.9
Greensburg	4,180	4.5	26.8	95.3	0.0	0.3	0.4	0.2	0.0	0.4
Indiana	3,920	8.4	22.8	91.4	0.2	0.0	0.0	0.1	0.1	0.8
Kiski Valley	2,495	11.9	31.6	87.9	0.1	0.4	0.4	0.2	0.0	0.7
Somerset (A)	2,012	16.9	34.4	82.1	0.8	0.6	0.8	0.2	0.2	1.2

Table 4.16: 2004 Driver Outcomes By Station (p. 3 of 4)

	Total # of Stops	% Drivers Warned ONLY	% Drivers Warned	% Drivers Cited	% Drivers Arrested	% Passengers Warned ONLY	% Passengers Warned	% Passengers Cited	% Passengers Arrested	% Person or Vehicle Searched
AREA III (cont.)										
Troop B										
Belle Vernon	3,052	5.2	22.1	93.8	4.5	0.5	0.5	0.1	0.0	0.6
Findlay	4,403	4.9	14.8	95.0	0.1	0.0	0.1	0.1	0.0	0.9
Uniontown	3,981	22.7	33.9	76.5	0.3	0.2	0.3	0.4	0.1	1.7
Washington	5,336	8.6	16.3	91.3	0.0	0.0	0.0	0.2	0.1	0.5
Waynesburg	2,592	7.2	28.6	92.8	0.2	0.1	0.1	0.0	0.0	0.5
Troop G										
Bedford	3,119	23.7	34.2	75.8	0.8	0.0	0.0	0.1	0.0	0.5
Hollidaysburg	3,156	15.0	35.6	83.8	1.3	--	0.0	0.0	0.2	1.2
Huntingdon	2,188	13.5	30.9	84.9	1.5	0.0	0.1	0.2	0.1	0.6
Lewistown	2,457	21.8	34.2	78.1	0.3	--	0.0	0.1	0.0	0.5
McConnellsburg	2,036	7.0	15.1	92.9	0.1	--	0.0	0.1	0.0	0.5
Philipsburg	2,803	13.0	37.0	86.9	0.1	--	0.0	0.0	0.0	0.1
Rockview	3,935	12.3	23.6	87.6	0.1	0.1	0.1	0.2	0.0	0.4
AREA IV										
Troop C										
Clarion	4,934	23.8	38.3	75.2	0.1	0.0	0.0	0.1	0.0	0.9
Clearfield	5,145	5.5	18.9	94.3	0.1	0.6	0.6	0.0	0.0	0.5
Dubois	3,080	13.8	24.0	85.7	0.0	--	0.0	0.1	0.0	0.5
Kane	1,559	17.8	32.8	81.3	0.8	0.2	0.2	0.1	0.0	0.5
Punxsutawney	2,369	22.8	36.9	77.0	0.3	0.1	0.1	0.2	0.0	0.2
Ridgway	2,317	14.3	28.0	85.5	0.7	0.0	0.0	0.2	0.0	0.4
Tionesta	2,017	44.8	59.4	54.8	0.5	0.0	0.1	0.0	0.1	0.1
Troop D										
Beaver	2,334	27.8	44.6	72.2	0.4	0.6	0.7	0.1	0.0	0.4
Butler	4,281	15.2	30.3	84.1	0.7	0.0	0.1	0.1	0.1	0.8
Kittanning	4,147	24.1	41.9	75.4	0.8	0.3	0.3	0.3	0.2	1.8
Mercer	3,098	23.4	44.9	75.2	0.3	0.1	0.4	0.5	0.0	2.5
New Castle	2,168	23.1	38.5	76.0	0.1	0.0	0.1	0.0	0.1	1.4

Table 4.16: 2004 Driver Outcomes By Station (p. 4 of 4)

	Total # of Stops	% Drivers Warned ONLY	% Drivers Warned	% Drivers Cited	% Drivers Arrested	% Passengers Warned ONLY	% Passengers Warned	% Passengers Cited	% Passengers Arrested	% Person or Vehicle Searched
AREA IV (cont.)										
Troop E										
Corry	1,208	27.0	41.8	71.7	0.3	0.2	0.2	0.0	0.0	0.2
Erie	4,329	15.0	26.4	83.9	0.1	0.0	0.1	0.3	0.0	0.3
Franklin	2,988	35.6	57.2	64.2	0.3	0.2	0.2	0.0	0.0	0.4
Girard	3,719	12.0	27.9	87.6	0.4	0.1	0.1	0.1	0.0	0.6
Meadville	3,325	21.2	32.0	78.6	0.6	0.1	0.1	0.1	0.0	0.6
Warren	1,564	18.8	29.5	80.1	0.6	0.1	0.1	0.3	0.0	0.4
AREA V										
Troop K										
Media	3,867	22.9	37.3	75.7	1.5	0.3	0.3	0.1	0.2	3.1
Philadelphia	2,735	11.4	29.7	88.2	0.5	0.1	0.2	0.2	0.2	1.6
Skipack	4,442	11.6	37.1	87.8	0.6	0.1	0.1	0.1	0.0	1.0
Troop M										
Belfast	3,159	20.5	32.9	79.1	0.4	0.0	0.0	0.1	0.0	0.6
Bethlehem	4,432	13.7	29.1	85.8	0.3	0.2	0.2	0.1	0.0	0.4
Dublin	4,173	32.9	60.5	66.1	0.3	0.1	0.1	0.1	0.7	0.4
Fogelsville	5,142	21.9	33.9	77.3	0.5	0.0	0.1	0.1	0.0	1.4
Treose	3,312	37.9	48.8	61.7	0.3	0.1	0.1	0.0	0.0	0.8
Troop N										
Bloomsburg	2,895	3.1	10.9	96.7	0.1	--	0.0	0.0	0.0	0.2
Fern Ridge	2,774	1.8	9.4	98.2	1.6	0.0	0.0	0.4	0.0	0.1
Hazleton	3,298	7.2	13.4	92.4	0.1	0.0	0.0	0.1	0.0	0.7
Lehighton	2,554	11.7	35.2	88.2	0.1	--	0.0	0.1	0.0	0.1
Swiftwater	3,865	13.9	29.6	85.8	0.1	0.5	0.6	0.1	0.1	0.7

2005 Warnings and Citations

Data recorded for 2005 included 272,670 member-initiated traffic stops (reported in **Table 4.17**). Of these stops, 11.2% resulted in *only* a warning, 24.6% resulted in a warning issued to the driver and 88.1% resulted in a citation issued to the driver. **Table 4.17** reports **Area I** had the largest number of stops with 99,776, while **Area II** had the least with 31,626. In regard to warnings, the percentages varied: for example, Troopers in **Area IV** issued warnings in 33.8% of stops, whereas **Area I** issued the lowest percentage of warnings (17.9%). The proportion of drivers issued a citation also varied by area and is inversely related to the proportion of drivers warned. **Area I** had the highest percentage of citations (91.8%), while **Area IV** had the lowest percentage (81.2%) of drivers receiving a citation.

Table 4.17 displays information about stop outcomes at the troop level for 2005; these outcomes demonstrate greater variation when compared to the area level. Total traffic stops ranged from a high of 58,403 in **Troop T** to a low of 7,678 in **Troop P**. More specifically, warnings ranged from a high in **Troop D** (37.1%) to a low in **Troop T** (12.9%). Similar to the area level, there was an inverse relationship between warnings and citations as demonstrated by **Troop T**, which reported the highest percentage of drivers cited (94.2%), and **Troop D**, which had the lowest percentage (79.8%).

Finally, **Table 4.18** provides information regarding the outcomes of traffic stops at the individual station level, where the greatest degree of variation was displayed of any organizational unit. The total number of traffic stops ranged from a high of 9,652 at **Everett** to a low of 852 at **Corry**. The percentage of drivers given a warning ranged from a high of 58.7% at **Tionesta** to a low 5.4% at **Somerset (T)**. Similar to the other organizational units, warnings varied inversely with the proportion of drivers given a citation at the station level. The percentage of drivers issued a citation ranged from a high of 98.1% at **Bowmansville** to a low of 58.3% at **Tionesta**.

Table 4.17: 2005 Driver Outcomes By Department, Area, & Troop

	Total # of Stops	% Drivers Warned ONLY	% Drivers Warned	% Drivers Cited	% Drivers Arrested	% Passengers Warned ONLY	% Passengers Warned	% Passengers Cited	% Passengers Arrested	% Person or Vehicle Searched
PSP Dept.	272,670	11.2	24.6	88.1	0.8	0.1	0.2	0.2	0.1	1.1
AREA I	99,776	7.6	17.9	91.8	0.6	0.1	0.1	0.1	0.1	1.0
Troop H	23,209	11.9	23.8	86.8	1.2	0.1	0.1	0.2	0.1	1.8
Troop J	9,286	6.0	25.6	92.5	2.1	0.2	0.2	0.3	0.3	3.5
Troop L	8,878	11.2	28.0	88.3	0.8	0.3	0.3	0.1	0.1	0.6
Troop T	58,403	5.6	12.9	94.2	0.2	0.1	0.1	0.1	0.0	0.3
AREA II	31,626	8.5	18.3	91.0	0.1	0.1	0.1	0.1	0.0	0.8
Troop F	15,409	8.1	16.2	91.7	0.4	0.1	0.1	0.1	0.0	0.4
Troop P	7,678	13.0	26.0	86.2	0.6	0.0	0.0	0.1	0.0	1.0
Troop R	8,539	5.1	15.4	94.2	0.8	0.0	0.1	0.1	0.1	1.4
AREA III	56,643	11.5	27.4	87.8	0.9	0.2	0.2	0.2	0.1	0.9
Troop A	15,736	9.3	27.3	90.0	1.1	0.1	0.2	0.2	0.1	1.2
Troop B	19,666	9.8	24.7	89.7	0.9	0.2	0.2	0.2	0.1	1.0
Troop G	21,241	14.8	29.9	84.5	0.8	0.2	0.2	0.1	0.1	0.6
AREA IV	44,801	17.9	33.8	81.2	1.0	0.1	0.2	0.2	0.2	1.4
Troop C	17,140	18.8	33.0	80.6	0.5	0.1	0.1	0.2	0.1	0.9
Troop D	14,251	18.4	37.1	79.8	1.7	0.2	0.3	0.3	0.5	2.8
Troop E	13,410	16.2	31.3	83.2	0.9	0.1	0.2	0.1	0.0	0.5
AREA V	38,157	12.6	29.9	86.5	0.9	0.2	0.2	0.2	0.1	1.4
Troop K	8,395	14.5	33.6	84.2	1.4	0.2	0.2	0.3	0.2	1.7
Troop M	16,860	16.4	35.9	82.7	0.8	0.2	0.2	0.1	0.1	1.6
Troop N	12,902	6.4	19.8	93.1	0.7	0.2	0.3	0.2	0.0	0.7

Table 4.18: 2005 Driver Outcomes By Station (p. 1 of 4)

	Total # of Stops	% Drivers Warned ONLY	% Drivers Warned	% Drivers Cited	% Drivers Arrested	% Passengers Warned ONLY	% Passengers Warned	% Passengers Cited	% Passengers Arrested	% Person or Vehicle Searched
AREA I										
Troop H										
Carlisle	5,213	6.0	20.3	92.4	1.2	0.0	0.1	0.3	0.2	2.7
Chambersburg	3,761	11.7	23.9	86.2	2.1	0.1	0.3	0.4	0.1	2.8
Gettysburg	2,689	30.7	38.1	68.4	0.9	0.2	0.3	0.1	0.0	1.3
Harrisburg	3,321	6.3	17.2	92.7	0.3	0.0	0.0	0.1	0.0	1.4
Lykens	1,481	12.5	30.7	87.0	0.9	0.1	0.1	0.2	0.0	0.9
Newport	2,340	7.8	17.2	91.4	1.2	0.1	0.1	0.1	0.2	1.7
York	4,404	14.1	25.1	85.2	1.3	0.2	0.2	0.3	0.1	0.9
Troop J										
Avondale	2,747	6.3	36.2	92.5	1.7	0.1	0.1	0.4	0.2	2.9
Embreeville	2,410	4.8	25.7	94.2	1.5	0.2	0.3	0.2	0.2	3.7
Ephrata	1,014	7.8	21.5	91.2	0.7	--	0.0	0.0	0.2	0.7
Lancaster	3,115	6.0	17.6	91.4	0.4	0.2	0.3	0.4	0.6	4.8
Troop L										
Frackville	873	15.6	36.5	84.1	0.2	0.2	0.3	0.1	0.2	0.9
Hamburg	2,005	7.4	35.3	92.5	0.2	0.4	0.4	0.0	0.0	0.1
Jonestown	3,187	11.2	19.3	88.1	1.5	0.2	0.2	0.1	0.1	0.6
Reading	1,295	13.1	27.7	85.8	1.3	0.5	0.5	0.2	0.4	1.5
Schuylkill Haven	1,518	12.0	32.2	87.9	0.1	0.1	0.1	0.0	0.0	0.5
Troop T										
Bowmansville	5,859	1.9	9.7	98.1	0.1	0.0	0.0	0.0	0.0	0.1
Everett	9,652	6.2	11.7	93.6	0.2	0.0	0.0	0.0	0.0	0.2
Gibsonia	7,977	6.7	15.4	92.9	0.2	0.2	0.2	0.1	0.1	0.6
Highspire	45	4.4	4.4	95.6	0.0	--	0.0	0.0	0.0	0.0
King of Prussia	6,188	9.1	14.3	90.6	0.1	0.0	0.1	0.2	0.0	0.2
New Stanton	8,086	6.6	16.1	93.1	0.1	0.1	0.1	0.1	0.0	0.3
Newville	8,607	5.0	17.2	95.0	0.1	0.0	0.0	0.1	0.0	0.1
Pocono	5,242	5.3	10.9	94.7	0.1	--	0.0	0.0	0.0	0.1
Somerset (T)	6,736	2.8	5.4	96.1	0.4	0.0	0.0	0.1	0.2	1.2

Table 4.18: 2005 Driver Outcomes By Station (p. 2 of 4)

	Total # of Stops	% Drivers Warned ONLY	% Drivers Warned	% Drivers Cited	% Drivers Arrested	% Passengers Warned ONLY	% Passengers Warned	% Passengers Cited	% Passengers Arrested	% Person or Vehicle Searched
AREA II										
Troop F										
Coudersport	1,366	27.2	38.4	72.4	0.5	0.4	0.4	0.0	0.0	0.4
Emporium	956	15.1	24.0	84.8	0.0	--	0.0	0.0	0.0	0.3
Lamar	1,735	3.3	8.5	96.6	0.2	0.1	0.1	0.0	0.1	0.2
Mansfield	1,243	15.2	29.0	84.8	0.1	0.1	0.2	0.1	0.0	0.1
Milton	2,121	2.2	12.3	97.6	0.4	--	0.0	0.1	0.0	0.2
Montoursville	4,075	4.0	8.0	95.5	0.7	0.0	0.0	0.1	0.1	0.5
Selinsgrove	2,847	3.0	5.5	96.8	0.5	0.1	0.1	0.1	0.0	0.6
Stonington	1,066	17.4	45.9	82.6	0.3	--	0.0	0.2	0.0	0.6
Troop P										
Laporte	1,456	14.8	25.6	84.7	0.3	--	0.0	0.1	0.0	0.3
Shickshinny	1,101	16.3	27.3	83.2	0.7	0.1	0.1	0.0	0.0	0.7
Towanda	2,400	16.0	35.1	83.5	0.4	0.0	0.0	0.1	0.0	1.0
Tunkhannock	1,052	15.1	31.2	82.3	2.0	--	0.0	0.2	0.1	2.7
Wyoming	1,669	3.8	9.2	95.7	0.2	--	0.1	0.2	0.1	0.8
Troop R										
Blooming Grove	1,918	3.0	18.3	96.4	0.4	0.1	0.1	0.4	0.0	1.5
Dunmore	3,093	5.5	15.7	93.8	0.5	--	0.0	0.1	0.0	1.0
Gibson	1,541	5.2	15.3	94.2	2.5	0.1	0.1	0.1	0.1	1.8
Honesdale	1,987	6.6	12.1	92.8	0.4	0.1	0.1	0.1	0.1	1.7
AREA III										
Troop A										
Ebensburg	4,054	7.4	19.5	91.7	2.2	0.1	0.1	0.2	0.1	1.0
Greensburg	3,957	7.3	25.4	91.8	0.6	0.2	0.2	0.2	0.0	1.5
Indiana	2,629	9.4	28.1	90.0	1.0	--	0.0	0.2	0.0	2.0
Kiski Valley	2,732	10.1	35.6	89.5	0.6	0.0	0.0	0.1	0.1	0.7
Somerset (A)	2,364	14.8	33.5	84.4	1.0	0.5	0.5	0.3	0.1	0.6

Table 4.18: 2005 Driver Outcomes By Station (p. 3 of 4)

	Total # of Stops	% Drivers Warned ONLY	% Drivers Warned	% Drivers Cited	% Drivers Arrested	% Passengers Warned ONLY	% Passengers Warned	% Passengers Cited	% Passengers Arrested	% Person or Vehicle Searched
AREA III (cont.)										
Troop B										
Belle Vernon	2,368	4.7	19.6	95.2	2.4	1.1	1.1	0.3	0.0	1.5
Findlay	4,639	8.4	26.7	91.0	1.0	--	0.0	0.1	0.1	0.9
Uniontown	5,401	17.6	31.8	81.2	0.9	0.4	0.4	0.3	0.1	1.3
Washington	5,044	6.5	12.4	93.5	0.1	--	0.0	0.3	0.1	0.3
Waynesburg	2,214	6.5	36.5	93.1	1.0	0.0	0.1	0.2	0.1	1.2
Troop G										
Bedford	3,082	24.1	44.0	75.2	1.0	0.6	0.6	0.1	0.1	0.4
Hollidaysburg	2,885	17.9	33.0	80.2	1.6	0.1	0.2	0.1	0.1	1.9
Huntingdon	1,873	12.7	29.6	86.2	1.6	0.1	0.1	0.2	0.0	0.5
Lewistown	3,180	16.7	32.0	83.0	0.5	0.1	0.1	0.2	0.1	0.6
McConnellsburg	2,121	6.0	13.3	93.8	0.3	--	0.0	0.1	0.0	0.3
Philipsburg	2,483	11.1	29.5	88.5	0.5	--	0.0	0.0	0.1	0.4
Rockview	5,617	12.6	25.9	86.8	0.6	0.4	0.5	0.1	0.0	0.3
AREA IV										
Troop C										
Clarion	3,545	22.1	40.2	77.2	0.3	0.1	0.1	0.1	0.1	1.8
Clearfield	3,660	4.3	16.6	95.2	0.5	0.0	0.0	0.1	0.1	0.8
Dubois	2,261	15.1	25.8	84.3	0.3	0.0	0.1	0.0	0.0	1.0
Kane	1,475	15.6	27.5	83.3	1.4	--	0.0	0.0	0.1	1.5
Punxsutawney	2,024	18.5	31.1	81.0	0.6	0.1	0.2	0.1	0.0	0.3
Ridgway	1,890	20.3	35.5	79.2	0.4	0.1	0.1	0.9	0.0	0.7
Tionesta	2,285	41.6	58.7	58.3	0.1	0.3	0.3	0.3	0.0	0.1
Troop D										
Beaver	2,318	21.1	37.7	78.2	0.4	0.2	0.3	0.1	0.0	1.1
Butler	4,015	13.3	28.8	85.8	1.1	0.1	0.2	0.2	0.0	0.9
Kittanning	3,637	20.6	42.7	74.7	4.5	0.1	0.2	0.4	1.7	7.2
Mercer	2,534	15.9	40.0	83.2	0.9	0.1	0.6	0.5	0.1	2.3
New Castle	1,747	25.7	39.6	74.0	0.4	0.3	0.3	0.2	0.1	1.0

Table 4.18: 2005 Driver Outcomes By Station (p. 4 of 4)

	Total # of Stops	% Drivers Warned ONLY	% Drivers Warned	% Drivers Cited	% Drivers Arrested	% Passengers Warned ONLY	% Passengers Warned	% Passengers Cited	% Passengers Arrested	% Person or Vehicle Searched
AREA IV (cont.)										
Troop E										
Corry	852	27.3	42.5	71.0	2.5	0.6	0.6	0.1	0.0	0.1
Erie	2,714	13.9	36.3	85.9	0.2	0.3	0.3	0.0	0.1	0.5
Franklin	1,662	31.6	51.1	68.2	0.6	0.1	0.1	0.1	0.2	0.4
Girard	2,791	14.3	30.1	84.8	1.0	0.0	0.0	0.1	0.0	0.2
Meadville	4,407	10.3	19.7	89.5	0.9	0.1	0.1	0.1	0.0	0.7
Warren	984	19.1	30.2	79.4	1.6	0.1	0.1	0.1	0.0	1.0
AREA V										
Troop K										
Media	2,571	23.2	39.3	75.0	2.1	0.1	0.2	0.2	0.4	2.7
Philadelphia	3,141	10.9	26.7	87.8	1.1	0.3	0.3	0.6	0.2	1.5
Skipack	2,683	10.5	36.1	88.6	1.1	0.1	0.1	0.1	0.1	1.2
Troop M										
Belfast	3,164	13.6	27.0	85.8	0.4	0.1	0.1	0.0	0.0	1.0
Bethlehem	3,479	12.0	31.0	87.7	0.4	0.5	0.5	0.2	0.1	1.0
Dublin	3,139	18.1	49.8	81.2	1.0	0.1	0.1	0.1	0.0	1.0
Fogelsville	4,943	19.0	36.1	79.5	1.0	0.1	0.1	0.1	0.1	3.2
Treose	2,135	19.3	36.9	79.5	1.2	0.1	0.1	0.1	0.1	1.0
Troop N										
Bloomsburg	2,027	6.9	12.2	93.1	0.2	0.0	0.1	0.1	0.0	0.4
Fern Ridge	1,893	2.5	9.3	96.5	3.2	0.4	0.5	0.2	0.1	0.6
Hazleton	3,149	6.4	15.1	93.0	0.4	0.3	0.3	0.2	0.1	1.1
Lehighton	2,356	7.1	31.9	92.9	0.2	0.0	0.0	0.2	0.0	0.1
Swiftwater	3,477	7.9	25.9	91.6	0.3	0.3	0.4	0.1	0.0	1.1

2004 - 2005 Arrests and Searches

As detailed in **Sections 1 & 2**, there was significant anecdotal evidence gathered during focus groups sessions with Troopers to raise concerns regarding the validity of data collected. Specifically, these concerns center on member-initiated traffic stops that resulted in arrests and/or searches with seizures of contraband. This anecdotal evidence led to a data auditing procedure that confirmed Troopers in some stations were not following the data collection protocol by not documenting member-initiated traffic stops that resulted in arrest and/or searches with contraband seizures. This situation was discovered in late August 2005 and procedures were implemented in September 2005 in an attempt to correct this problem. The analyses reported in **Table 4.19** below confirm: 1) the protocol for data collection was not consistently followed prior to September 2005, and 2) PSP administrators' intervention in September 2005 resulted in a significant increase in the reporting of traffic stops that resulted in arrests and/or searches with seizures. Specifically, **Table 4.19** below reports the percent of traffic stops that resulted in arrests and searches, and the percent of searches that resulted in seizures of contraband for three time periods: 1) September 2004 – December 2004, 2) January – August 2005, and 3) September 2005 – December 2005. These time periods were selected for comparisons purposes for the following reasons. The data from 2005 was divided into two groups: January – August (prior to the intervention) and September – December (after the intervention). In addition, the same four-month time period from a previous year (September – December 2004) was also considered for comparison to the time period of interest. The results show a statistically significant increase in the percent of arrests, searches, and searches that result in the discovery of contraband during the time period of September – December 2005, when compared to the other time periods. Again, this demonstrates considerable evidence that the percentage of traffic stops resulting in arrests and searches reported in **Tables 4.15 - 4.18** are inaccurate.

As a result of this evidence, further examinations of post-stop outcome data (in the form of multivariate statistical analyses) will not be performed until the 2006 data are available and ready for analyses. That is, due to the known inaccuracy of these data, this report will not include the detailed statistical analyses of the outcomes that drivers received as was provided in the Year 1 and Year 2 Final Reports. The final report examining data collected in 2006 (to be issued in 2007) will specifically address these issues, and advanced statistical analyses of post-stop outcomes will be reported at that time. These analyses will be compared with analyses conducted on 2004 and 2005 data (not included in this report) in an effort to determine the level of inconsistency in the data related to arrests, searches, and seizures.

Table 4.19: Comparison of Post-Stop Outcomes across Three Time Periods (p. 1 of 3)

	<u>September – December, 2004</u>			<u>January – August, 2005</u>			<u>September – December, 2005</u>		
	% Arrest	% Search	% Seizure	% Arrest	% Search	% Seizure	% Arrest	% Search	% Seizure
PSP Dept.	0.5	1.0	23.2	0.5	1.0	22.7	1.5	1.4	34.4
AREA I	0.5	0.8	27.2	0.4	0.9	26.3	1.2	1.3	33.5
Troop H	1.1	1.2	30.8	0.6	1.6	23.4	2.1	2.0	33.7
Carlisle	0.5	1.1	0.0	0.5	1.9	27.7	2.7	4.2	37.0
Chambersburg	1.3	3.2	38.6	1.4	3.6	32.9	2.9	1.8	58.1
Gettysburg	0.6	1.0	53.9	0.5	1.0	6.3	1.4	1.6	16.7
Harrisburg	0.0	0.3	0.0*	0.2	1.6	13.5	0.5	0.9	37.5
Lykens	0.5	1.3	20.0*	0.0	1.0	0.0	2.3	0.7	25.0*
Newport	1.1	0.4	0.0*	1.2	1.4	19.1	1.1	2.0	5.6
York	3.7	0.6	42.9	0.6	0.7	22.2	2.4	1.2	25.0
Troop J	0.9	2.9	21.5	0.9	2.5	29.2	4.6	5.4	28.6
Avondale	0.5	2.6	30.0	0.4	2.1	29.7	4.1	4.3	21.4
Embreeville	0.3	4.1	20.0	0.4	2.0	24.2	4.0	7.3	23.6
Ephrata	0.8	0.8	33.3*	0.4	0.3	0.0*	1.3	1.6	20.0*
Lancaster	1.9	3.1	15.4	1.9	4.0	31.7	6.4	6.1	37.9
Troop L	0.6	0.7	25.0	0.7	0.7	26.7	1.0	0.5	41.7
Frackville	0.4	1.3	33.3*	0.2	1.3	16.7	0.3	0.5	0.0*
Hamburg	0.6	0.4	0.0*	0.2	0.1	0.0*	0.2	0.0	--
Jonestown	1.1	0.7	16.7	1.2	0.7	29.4	2.7	0.4	33.3*
Reading	0.5	0.8	33.3*	1.7	2.0	21.4	0.7	1.0	50.0
Schuylkill Haven	0.0	0.5	50.0*	0.1	0.5	50.0	0.0	0.3	100.0*
Troop T	0.1	0.3	30.2	0.1	0.3	28.3	0.2	0.4	41.4
Bowmansville	0.0	0.0	--	0.1	0.1	0.0*	0.2	0.2	66.7*
Everett	0.1	0.3	20.0*	0.2	0.2	18.2	0.2	0.2	25.0
Gibsonia	0.0	0.3	0.0	0.1	0.6	14.7	0.4	0.7	43.8
Highspire	0.0*	0.0*	--	0.0	0.0	--	0.0	0.0	--
King of Prussia	0.1	0.2	25.0*	0.1	0.2	42.9	0.2	0.2	50.0*
New Stanton	0.2	0.0	100.0*	0.1	0.2	0.0	0.2	0.5	21.4
Newville	0.1	0.3	33.3	0.1	0.1	25.0*	0.2	0.2	40.0*
Pocono	0.0	0.0	--	0.0	0.1	25.0*	0.1	0.1	0.0*
Somerset (T)	0.2	1.2	38.5	0.3	1.0	47.6*	0.5	1.5	50.0

* Five or fewer searches; interpret percentage with caution.

Table 4.19: Comparison of Post-Stop Outcomes across Three Time Periods (p. 2 of 3)

	<u>September – December, 2004</u>			<u>January – August, 2005</u>			<u>September – December, 2005</u>		
	% Arrest	% Search	% Seizure	% Arrest	% Search	% Seizure	% Arrest	% Search	% Seizure
AREA II	0.2	0.4	33.3	0.4	0.7	17.9	1.0	1.0	27.1
Troop F	0.0	0.1	0.0	0.1	0.4	13.2	1.0	0.5	29.2
Coudersport	0.3	0.3	0.0*	0.1	0.3	33.3	1.2	0.4	0.0*
Emporium	0.0	0.0	--	0.0	0.3	0.0*	0.0	0.4	0.0*
Lamar	0.0	0.0	--	0.2	0.3	25.0*	0.2	0.0	--
Mansfield	0.0	0.2	0.0*	0.0	0.1	0.0*	0.3	0.0	--
Milton	0.0	0.1	0.0*	0.1	0.2	0.0*	1.0	0.3	50.0*
Montoursville	0.0	0.1	0.0*	0.1	0.5	8.3	1.8	0.7	33.3
Selingsgrove	0.1	0.1	0.0*	0.2	0.7	18.2	0.9	0.5	50.0
Stonington	0.0	0.0	--	0.1	0.3	0.0*	0.6	1.1	0.0*
Troop P	0.6	0.9	40.0	0.4	1.1	21.8	0.9	0.8	38.1
Laporte	1.2	0.0	--	0.3	0.2	0.0*	0.4	0.4	0.0*
Shickshinny	0.0	0.4	0.0*	0.8	0.7	16.7	0.4	0.8	50.0*
Towanda	0.2	1.1	20.0*	0.1	1.3	15.8	0.8	0.4	25.0*
Tunkhannock	1.3	0.4	100.0*	1.2	3.7	29.2	3.3	1.0	50.0*
Wyoming	0.3	1.8	41.7	0.2	0.4	25.0*	0.3	1.3	44.4
Troop R	0.2	0.7	38.9	0.8	1.0	17.2	0.9	2.1	22.6
Blooming Grove	0.0	0.8	20.0*	0.1	0.7	0.0	0.8	2.5	28.6
Dunmore	0.1	0.6	50.0	0.0	0.6	0.0	1.2	1.6	10.5
Gibson	0.7	0.5	33.3*	3.1	1.6	23.5	1.1	2.4	36.4
Honesdale	0.2	0.6	50.0*	0.4	1.5	26.1	0.2	2.5	18.2
AREA III	0.6	1.0	18.2	0.5	0.8	20.9	1.7	1.1	33.3
Troop A	0.6	1.1	22.0	0.7	1.2	17.4	1.7	1.2	28.8
Ebensburg	1.6	2.0	27.3	2.1	1.4	22.3	2.3	0.4	50.0
Greensburg	0.0	0.7	14.3	0.1	1.5	12.9	1.1	1.6	17.2
Indiana	0.2	1.1	27.3	0.3	1.9	13.8	2.0	2.2	41.7
Kiski Valley	0.3	0.5	0.0*	0.2	0.4	0.0	1.5	1.5	16.7
Somerset (A)	0.7	1.4	16.7	0.5	0.8	33.3	2.0	0.3	50.0*
Troop B	0.7	1.4	10.9	0.4	0.9	21.7	2.3	1.2	34.4
Belle Vernon	4.1	1.4	0.0	1.8	1.3	13.6	3.9	2.3	35.7
Findlay	0.0	2.1	0.0	0.3	0.8	26.9	3.1	1.5	29.4
Uniontown	0.3	2.4	20.8	0.3	1.4	18.5	2.3	1.1	58.8
Washington	0.0	0.7	10.0	0.1	0.3	33.3	0.2	0.1	0.0*
Waynesburg	0.2	0.4	50.0*	0.1	0.9	26.7	4.4	2.3	9.1
Troop G	0.6	0.4	29.2	0.5	0.4	25.9	1.4	0.9	37.3
Bedford	0.7	0.3	0.0*	0.9	0.2	20.0*	1.2	0.7	50.0
Hollidaysburg	2.2	1.4	53.9	0.8	0.8	53.9	2.5	3.2	31.7
Huntingdon	0.7	0.2	0.0*	1.0	0.5	0.0	3.1	0.6	33.3*
Lewistown	0.2	0.5	0.0*	0.3	0.6	0.0	0.8	0.6	37.5
McConnellsburg	0.0	0.3	0.0*	0.2	0.3	25.0*	0.6	0.3	33.3*
Philipsburg	0.0	0.0	--	0.4	0.6	40.0	0.8	0.0	--
Rockview	0.1	0.3	0.0*	0.4	0.2	25.0	1.2	0.3	66.7

* Five or fewer searches; interpret percentage with caution.

Table 4.19: Comparison of Post-Stop Outcomes across Three Time Periods (p. 3 of 3)

	<u>September – December, 2004</u>			<u>January – August, 2005</u>			<u>September – December, 2005</u>		
	% Arrest	% Search	% Seizure	% Arrest	% Search	% Seizure	% Arrest	% Search	% Seizure
AREA IV	0.3	1.0	16.8	0.5	1.2	24.3	2.0	1.9	45.8
Troop C	0.2	0.9	12.3	0.3	0.9	13.6	1.0	1.0	21.3
Clarion	0.1	1.5	19.1	0.2	1.9	10.2	0.8	1.4	7.7
Clearfield	0.2	1.0	12.5	0.2	0.7	36.8	1.3	1.0	40.0
Dubois	0.0	1.0	10.0	0.1	0.8	0.0	0.7	1.3	0.0
Kane	0.7	0.7	0.0*	1.0	1.2	16.7	2.4	2.2	40.0
Punxsutawney	0.3	0.3	0.0*	0.3	0.3	25.0*	1.6	0.4	0.0*
Ridgway	0.2	0.6	0.0*	0.4	0.9	0.0	0.5	0.5	33.3*
Tionesta	0.4	0.1	0.0*	0.1	0.1	0.0*	0.3	0.0	--
Troop D	0.5	1.8	22.0	0.9	2.1	29.3	3.8	4.5	53.3
Beaver	0.5	0.4	33.3	0.2	0.4	0.0	1.1	3.3	35.0
Butler	0.3	0.9	25.0	0.4	0.6	17.7	2.5	1.4	16.7
Kittanning	1.0	1.9	33.3	2.5	5.4	37.6	9.4	11.4	68.1
Mercer	0.4	3.1	22.6	0.5	2.0	13.9	1.7	2.9	27.3
New Castle	0.0	3.1	0.0	0.2	0.9	8.3	1.1	1.4	20.0*
Troop E	0.2	0.4	8.0	0.5	0.4	27.8	1.5	0.7	38.7
Corry	0.5	0.0	--	2.2	0.2	0.0*	2.9	0.0	--
Erie	0.0	0.4	0.0	0.1	0.3	50.0*	0.3	0.7	44.4
Franklin	0.3	0.6	16.7	0.5	0.5	20.0*	0.9	0.3	0.0*
Girard	0.2	0.4	0.0*	0.2	0.2	33.3*	3.1	0.3	50.0*
Meadville	0.3	0.5	16.7	0.6	0.6	16.7	1.6	0.9	38.5
Warren	0.3	0.5	0.0*	1.0	0.9	60.0*	2.5	1.2	40.0*
AREA V	0.5	1.1	24.4	0.5	1.3	18.2	1.7	1.5	26.5
Troop K	0.9	1.9	30.3	0.7	1.8	24.2	2.8	1.7	40.4
Media	1.8	3.2	33.3	0.8	2.7	27.3	4.4	2.8	52.0
Philadelphia	0.3	1.4	27.8	0.6	1.6	25.0	2.0	1.2	7.1
Skippack	0.7	1.3	26.3	0.7	1.2	17.4	2.3	1.1	62.5
Troop M	0.3	0.8	22.6	0.5	1.6	13.2	1.5	1.8	19.2
Belfast	0.4	0.4	25.0*	0.5	0.9	20.0	0.3	1.1	20.0
Bethlehem	0.3	0.5	44.4	0.3	1.1	10.3	0.7	0.7	16.7
Dublin	0.4	0.5	0.0	0.5	0.7	13.3	2.1	1.7	17.7
Fogelsville	0.4	1.7	11.1	0.7	3.3	11.1	1.6	2.9	18.0
Trevoise	0.2	0.7	57.1	0.1	0.7	30.0	3.1	1.5	27.3
Troop N	0.5	0.7	11.1	0.5	0.6	23.6	1.1	1.0	27.5
Bloomsburg	0.1	0.1	0.0*	0.2	0.5	14.3	0.3	0.3	50.0*
Fern Ridge	2.8	0.0	--	2.0	0.2	0.0*	6.2	1.6	11.1
Hazleton	0.2	2.1	7.1	0.3	1.0	15.0	0.4	1.1	30.8
Lehighton	0.1	0.0	--	0.2	0.1	0.0*	0.0	0.2	100.0*
Swiftwater	0.2	1.1	16.7	0.2	1.0	37.5	0.5	1.6	26.7

* Five or fewer searches; interpret percentage with caution.

SECTION SUMMARY

Section 4 described the characteristics of traffic stops and stopped drivers at the department, area, troop, and station levels based on data collected from January 1, 2004 through December 31, 2005. The trends in these descriptive findings are summarized below.

- In 2004, at all jurisdictional levels, the majority of traffic stops had the following characteristics:
 - Occurred on a weekday (69.8%)
 - Occurred during the daytime (73.1%)
 - Occurred on an interstate (49.6%) or state highway (46.4%)
 - Involved a vehicle registered in Pennsylvania (73.6%)
 - Involved vehicles with an average of 0.6 passengers
 - Lasted between 1-15 minutes (98.7%)
 - May and July accounted for the largest percentages of traffic stops

- For 2005, the majority of traffic stops had the following characteristics:
 - Occurred on a weekday (70.1%)
 - Occurred during the daytime (71.8%)
 - Occurred on an interstate (49.3%) or state highway (47.0%)
 - Involved a vehicle registered in Pennsylvania (74.7%)
 - Involved vehicles with an average of 0.6 passengers
 - Lasted between 1-15 minutes (88.4%)
 - May accounted for the largest percentage of traffic stops

The stopping behavior of the Pennsylvania State Police between 2004 and 2005 is relatively consistent with only slight variation across years. Stops initiated on weekdays, on interstates or state highways, and of in-state vehicles increased slightly in 2005, whereas stops initiated during the daytime, and stops of a short duration were more prevalent in 2004.

In regard to the reasons for the stop:

- At the department level in 2004, the most frequent violation observed prior to traffic stops was speeding (70.7%), followed by moving violations (16.7%), equipment inspections (9.9%), and special traffic enforcement programs (2.6%).

- At the department level in 2005, the most frequent violation observed prior to traffic stops was speeding (70.6%), followed by moving violations (17.0%), equipment inspections (8.6%), and registration (2.6%).

- In both 2004 and 2005:
 - Speeding was the most common reason for the stop
 - Average speed over the limit was 19.2 mph
 - The demographics of drivers stopped varied inconsequentially

- Drivers' characteristics, particularly race and residency, varied considerably by area, troop, and station
- The dramatic variation in residency of drivers stopped indicates that it is inappropriate to assume municipality, county, or state residential populations are similar to the driving populations in those areas

The characteristics of stopped drivers were also very consistent across 2004 and 2005:

- In 2004, department wide, Troopers recorded the following drivers' characteristics:
 - Average age of 34.1 years
 - 69.6% male
 - White (84.9%), Black (7.7%), White Hispanic (3.0%), Black Hispanic (0.3%), Middle Eastern (1.9%), Asian/Pacific Islander (1.7%), unknown race/ethnicity or missing data (0.5%)
 - Non-resident of municipality in which they were stopped (95.5%), non-resident of county in which they were stopped (65.5%), and non-Pennsylvania resident (27.1%)
- In 2005, department wide, Troopers recorded the following drivers' characteristics:
 - Average age of 34.8 years
 - 69.6% were male
 - White (84.9%), Black (7.8%), White Hispanic (3.1%), Black Hispanic (0.3%), Middle Eastern (1.8%), Asian/Pacific Islander (1.6%), unknown race/ethnicity or missing data (0.5%)
 - Non-resident of municipality in which they were stopped (95.5%), non-resident of county in which they were stopped (65.7%), and non-Pennsylvania resident (26.0%)

There were significant differences in post-stop outcomes reported across 2004 and 2005. These differences were based on the percentage of traffic stops that resulted in arrests and searches, and are likely due to inconsistencies in reporting patterns documented in **Section 1** rather than any real changes in Trooper behavior. The rate of arrests reported in 2005 doubled those reported in 2004, while the rate of searches increased by nearly 40%.

Across the department in 2004:

- 13.0% of stops resulted in ONLY a warning issued to the driver
- 24.9% of stops resulted in a warning issued to the driver
- 86.4% of stops resulted in a citation issued to the driver
- 0.4% of stops resulted in the arrest of the driver
- 0.8% of stops resulted in a search of either the occupant(s) and/or the vehicle

Across the department in 2005:

- 11.2% of stops resulted in ONLY a warning issued to the driver
- 24.6% of stops resulted in a warning issued to the driver
- 88.1% of stops resulted in a citation issued to the driver

- 0.8% of stops resulted in the arrest of the driver
- 1.1% of stops resulted in a search of either the occupant(s) and/or the vehicle

An examination of the 2004 data for September – December 2005 with data both prior (January – August 2005) and subsequent to (September – December 2005) PSP intervention demonstrates the following differences:

Across the department, September – December 2004:

- 25.1% of stops resulted in a warning issued to the driver
- 86.3% of stops resulted in a citation issued to the driver
- 0.5% of stops resulted in the arrest of the driver
- 1.0% of stops resulted in a search of either the occupant(s) and/or the vehicle
- 23.2% of searches resulted in contraband seizures

Across the department, January – August 2005:

- 24.5% of stops resulted in a warning issued to the driver
- 88.3% of stops resulted in a citation issued to the driver
- 0.5% of stops resulted in the arrest of the driver
- 1.0% of stops resulted in a search of either the occupant(s) and/or the vehicle
- 22.7% of searches resulted in contraband seizures

Across the department, September – December 2005:

- 24.6% of stops resulted in a warning issued to the driver
- 87.6% of stops resulted in a citation issued to the driver
- 1.5% of stops resulted in the arrest of the driver
- 1.4% of stops resulted in a search of either the occupant(s) and/or the vehicle
- 34.4% of searches resulted in contraband seizures

There are no significant differences in the percentage of traffic stops reported that resulted in warnings or citations. Data from September – December 2005, show statistically significant increases in the percentages of traffic stops that resulted in arrests and searches, and the percentage of searches that resulted in the discovery of contraband compared to previous months in 2005 and the same months in 2004. Data collected after PSP administrators reemphasized data collection procedures resulted in a reported arrest rate 3.0 times larger, a search rate 1.4 times larger, and seizure rate 1.5 times larger than previous months. Given these known inaccuracies in the arrest, search, and seizure data collected prior to September 2005, more detailed analyses examining these outcomes will not be performed in this report.

**5. COMPARISON OF TRAFFIC STOPS & POST-STOP
OUTCOMES: 2002 – 2005**

OVERVIEW

This section provides comparisons of the racial/ethnic composition of drivers stopped by PSP Troopers across three years and seven months of data collection (May 1, 2002 through December 31, 2005). Initially, a discussion of benchmarking is provided to detail the historical use of benchmarks during this data collection effort and the inherent limitations of the continued use of this methodology.

The remaining components of this section report on traffic stops across the four years of data collection at the department, area, troop, and station level with a specific focus on the race/ethnicity of the drivers. **Tables 5.1 & 5.2** report the stop rates for Caucasian, Black, and Hispanic drivers across all organizational units between 2002 and 2005. In addition, **Figures 5.1 - 5.32** visually display the rate of stops of Black and Hispanic drivers across all stations in their respective troops. Thereafter statistical analyses of the rate of change across time for all stations are described. **Tables 5.3 - 5.6** report the on counties and stations that demonstrate statistically significant rates of change across the four years of data collection.

In addition, this section reports the rate of stop outcomes (e.g., warnings, citations, arrests, searches, and seizures) for all organizational units between 2002 and 2005, displayed in **Tables 5.7 & 5.8**. A further examination of post-stop outcomes focuses on warnings (**Table 5.9**) and citations (**Table 5.10**) for Black and Hispanic drivers at the department, area and troop level, while **Table 5.11** reports the distinction between Caucasian and non-Caucasians in regard to post-stop outcomes at the station level. Finally, **Figures 5.33 & 5.34** visually display department level trends in warnings and citations across the four years of data collection.

BENCHMARKING

As described at length in both the *Year 1 Final Report* and *Year 2 Final Report*, the crux of traffic stop data interpretation is dependent upon comparison data. That is, a group's representation in traffic stops is only meaningful when compared to the same group's "expected" representation in traffic stops, based on alternative data. The most frequent comparison groups used by researchers in traffic stop studies have been: 1) Census data; 2) adjusted Census data; 3) observations of roadway usage; 4) official accident data; 5) assessments of traffic violating behavior; 6) citizen surveys of roadway usage and driving patterns; and 7) internal departmental comparisons. Each of these benchmarks has associated strengths and weaknesses (for a more thorough review of these techniques, see Engel & Calnon, 2004). The best approach for comparisons to traffic stop data is to measure several benchmarks and compare the results to one another. While none of these benchmark methodologies are without flaws, some are inherently stronger than others and should be given more weight when comparing the results from different benchmarks. For example, Census data are widely regarded as the weakest benchmark measure, while observations that are based on methodologically sound data collection efforts are considered more valid indicators of actual roadway usage.

Yet, it must be acknowledged that despite the best efforts of social scientists, even the most sophisticated benchmarking techniques have not been able to fully and accurately estimate the population of drivers at risk for traffic stops. Drivers' risk of being stopped for traffic offenses depends on a number of factors, including: 1) where they drive, 2) when they drive, 3) how often they drive, 4) what they drive, 5) how they drive, and 6) who they are. That is, an accurate benchmark must take into consideration driving location, time of travel, driving quantity, vehicle types and conditions, driving behavior, and drivers' characteristics. All of these factors are believed to have the potential to influence drivers' likelihood of being stopped for traffic offenses, and therefore must be measured to assess similarly situated people for purposes of accurate statistical comparisons. No benchmark has been able to successfully measure all of these factors. As a result, some scholars have abandoned the use of benchmark comparisons to estimate racial/ethnic disparities in traffic stops (e.g., see Walker, 2002; Ridgeway, 2006; Ridgeway et al., 2007).

In both the *Year 1 Final Report* and the *Year 2 Final Report*, comparisons of traffic stops were made to a number of benchmarks in an effort to identify patterns of racial/ethnic disparities. Specifically, in the *Year 2 Final Report*, PSP traffic stop data were directly compared to five benchmarks, creating disproportionality ratios at the county level. These five different benchmark comparisons included: 1) all traffic stops compared to county level Census data for the driving age population⁴; 2) traffic stops of drivers who reside in the county where the stop occurred in comparison to county level Census data; 3) all traffic stops compared to a weighted spatial traffic model; 4) daytime traffic stops compared to daytime roadway observation data; and 5) daytime speeding traffic stops compared to daytime speeding observation data. The first three comparisons were made for Black, Hispanic, and a collapsed category including all non-Caucasian drivers. The last two comparisons, based on observation data, were made only for two racial/ethnic groups: Black drivers and all non-Caucasian drivers (including drivers who are Black, Hispanic, Middle Eastern, Asian, American Indian, and/or Pacific Islanders). Disproportionality ratios were not created for Hispanic drivers using observation data, because the observation techniques for identifying Hispanic drivers are less reliable.⁵

Despite a few minor differences, the findings regarding traffic stops made by PSP Troopers were relatively consistent overall across the initial two-year time period examined in the *Year 1* and *Year 2 Final Reports*. Based on these and other statistical analyses, both reports concluded that the pattern of findings demonstrated no consistent statistical evidence indicating that Pennsylvania State Troopers made stopping decisions based on drivers' race or ethnicity.

⁴ The driving age population was defined as any individual over the age of 15 at the time of the Census. Although 16 years of age is the driving age for residents of Pennsylvania, the U.S. Census reports data for ages 15 or 17. For the *Year 1 Final Report*, the demographics for ages 16+ were estimated based on the 15 and 17 year old data. In contrast, for the *Year 2 Final Report*, all calculations and analysis involving driving age and/or Census used 15 years of age and older. While using the 15-year cut off requires the inclusion of some citizens that are not eligible to drive, it eliminates the need to estimate data at 16 years old.

⁵ It is likely that if our observers have misestimated the driving population of Hispanics, they have underestimated (by classifying Hispanics as Caucasian) rather than overestimated their representation in the driving population. Therefore, the disproportionality indices for Hispanics based on observational data would likely be artificially inflated. For further discussion of this issue, see *Year 2 Final Report* (Engel et al., 2005).

It was reported that a large majority of drivers did not reside in the location where they are stopped (a trend that continued in 2004 and 2005; see **Section 4**). Thus, relying on Census-based driving age population figures would likely significantly underestimate the number of minorities driving on Pennsylvania roadways, particularly in counties with significant interstate travel and low percentages of minorities in residential population statistics. In the previous reports, the imprecise nature of the Census-based analysis produced disproportionality ratios that were highly varied, and were thus described as “likely invalid.” Therefore, the conclusions that no consistent patterns of disparities in stopping patterns existed was heavily influenced by the findings from comparisons of traffic stops to the sampled counties with observations of drivers traveling and speeding on the roadways. The majority of the observation data (gathered in 27 of Pennsylvania’s 67 counties), was collected in 2002. It is unknown if the observations of traffic patterns in 2002 would accurately reflect the travel patterns in 2004 and 2005 for comparisons to traffic stop data collected during those years. Analyses of observation data collected in other jurisdictions suggests that traffic patterns do fluctuate over time (Engel, 2004; 2005). Thus, one might suggest that the prudent course of action would be to gather more data examining the traffic patterns across Pennsylvania. It must be recognized, however, that this type of data collection involves significant monetary and personnel investment by the PSP. Further, given the inherent limitations known regarding traffic observation data, this approach was not recommended to PSP by this research team. Rather, the recommended analytical strategy was to compare trends in geographic locations over time to determine if significant differences in stopping patterns present themselves. If these trends are unexplained by obvious changes (e.g., changes in the racial/ethnic population of the surrounding area, changes in deployment patterns, etc.) then further examination of these locations could be conducted at the discretion of PSP administrators.

Thus, given the inherent limitations of all benchmarking techniques in estimating racial/ethnic bias, the strategy of the current report is to examine the stopping patterns of PSP Troopers over time. Using the baseline figures of racial/ethnic traffic stops established in 2002 and 2003, comparisons will be made within the department, areas, troops, and stations to determine if racial/ethnic trends in stopping patterns have changed in a significant manner. That is, the strategy of the current report is to examine if Black and Hispanic drivers are significantly more or less likely to be stopped by PSP Troopers in 2004 and 2005 (within organizational units and geographic areas) compared to the two years prior. While it is possible that some racial disparities observed in traffic stops may be the result of individual Troopers targeting racial minorities, it is important to note that this hypothesis cannot be directly tested with the data available. That is, we cannot determine if Troopers make traffic stops based on drivers’ race/ethnicity, as we have not measured the factors related to individual officer decision making. Rather, we can only examine trends in the traffic stop data over time, based on initial comparisons to benchmark data.

COMPARISON OF TRAFFIC STOP DATA: 2002 – 2005

The following information documents the stopping trends of PSP Troopers across all organizational units between 2002 and 2005. The racial/ethnic makeup of the drivers

stopped is highlighted in addition to the post-stop outcomes reported for those drivers (i.e., warnings, citations, arrests, searches, and seizures). It is important to note that only seven months of data were collected during 2002 (May – December), as the data collection effort did not officially begin until May 1, 2002. As a result, the number of member-initiated traffic stops reported in 2002 is naturally much lower than the remaining complete years of data. Therefore, all comparisons of the total number of stops will focus only on data collected for years 2003 through 2005. In contrast, comparisons of the racial/ethnic percentages of stops and post-stop outcomes will include data from 2002.

Reporting data over time and across organizational units allows for two interpretations: 1) across organizational units, and 2) within organizational units across time. As noted previously, it can be somewhat misleading to compare traffic stops across organizational units due to likely differences in traffic patterns, driver behaviors, and officer deployment. Therefore, the strength of the comparisons reported below is within organizational units across time. That is, the following tables should be examined for trends across time to evaluate the continuity or change in behavior of each organizational unit. Substantial changes in the patterns of traffic stops within organizational units over time should be identified and further examined to identify the cause of these changes.

Importantly, a change in the pattern of occurrences of traffic stops and/or post-stop outcomes over time is not necessarily the result of a single factor. Several factors could be working independently or in conjunction to produce the trend displayed across time. Specifically, when assessing the rates of traffic stops and post-stop outcomes by organizational unit, it is crucial to acknowledge that such results could be due to changes in the traffic population within that jurisdiction. Furthermore, throughout the course of this research, bi-weekly reports have been issued to all organizational units to inform them of their traffic stopping patterns. Therefore, alterations in the trends of traffic stops and post-stop outcomes over time could also be due to modifications to CDR reporting procedures as a result of these bi-weekly reports. It is possible that any differences in outcomes across years could be the result of changes in police stopping behavior, deployment patterns, manpower allocation, etc. Regardless of the specific reason(s), it is important to recognize that the following tables present an overall picture of traffic stops and post-stop outcomes across three years and seven months of data collection, but do not provide clear explanations for the reasons underlying the trends. That is, this section is descriptive in nature and should be used to highlight potential areas of concern for future study, but should not be used to conclude any particular organizational unit is engaging in racially biased traffic stop behavior.

Racial/Ethnic Composition of Traffic Stops at the Department, Area, Troop & Station Levels: 2002 – 2005

Table 5.1 reports the total number of traffic stops by year, as well as the percentage of stops involving Caucasian, Black, and Hispanic drivers at the department, area, and troop levels. **Table 5.2** summarizes the same information at the station level. As demonstrated in **Table 5.1**, there was a decrease in the total number of member-initiated traffic stops at the department level from 2003 to 2005. At the department level, there were 317,920 reported officer-initiated stops in 2003, 300,683 stops in 2004, and 272,670 stops in 2005. That is, the

number of member-initiated traffic stops decreased by 5.4% from 2003 to 2004, and declined an additional 9.3% from 2004 to 2005. Over this two year period (2003 – 2005), the number of member-initiated traffic stops reported on CDR forms declined 14.2% overall. This steady decline in the reported number of officer-initiated traffic stops may be due to a number of factors, including changes in officer workload (responding to more calls for service resulting in fewer initiated stops), reductions in manpower (fewer Troopers available to make officer-initiated stops), changes in driving patterns (fewer drivers violating traffic laws leading to a stop), and/or failure of Troopers to follow traffic stop reporting protocols.

As expected, trends in total number of stops varied at the area level. For all traffic stops, *Areas I & IV* demonstrated stopping trends that were similar to the department level. In contrast, *Areas II & V* had an increase in officer initiated stops in 2004 prior to a decrease in 2005. Finally, *Area III* decreased their number of traffic stops in 2004, which preceded an increase in 2005.

Table 5.1 also documents that, department wide, Caucasian drivers consistently represent approximately 85% of all drivers stopped by Troopers. This fluctuated from a low in 2002 of 84.0% to a high in 2003 of 85.2%. In 2004 and 2005, the rate remained constant at 84.9%. Throughout the study period, Black drivers consistently represent approximately 8% of the drivers stopped, and Hispanics drivers slightly more than 3%. While there are racial/ethnic differences in the percent of stops across areas, when the within-area percentages are compared, it is clear that the racial/ethnic composition of drivers stopped within these organizational units remained consistent. For example, stops in *Area I* ranged between 80.9% and 81.4% for Caucasian drivers across the four years; *Area III*'s percentage for Black drivers ranged between 5.5% and 5.0% over the four years, and Hispanic drivers made up between 1.8% and 2.2% of the stops in *Area IV*. The troop (**Table 5.1**) and station level (**Table 5.2**) numbers mirror this pattern of consistency across the four years, with only a slight increase in variability.

Overall, consistencies in the percentage of minority drivers stopped within organizational units and geographic areas suggest that the initial findings reported in the Year 1 and Year 2 Final Reports remain. When compared to relevant benchmarks, these previous reports suggested there was no consistent evidence indicating that PSP Troopers made stopping decisions based on drivers' race/ethnicity. Given the stability in these stopping patterns over time, it is the conclusion of this report that, once again, there is no consistent evidence found demonstrating officer bias.

Table 5.1: Traffic Stops By Race of Driver By Department, Area & Troop – 2002-2005

	<u>Total # of Stops</u>				<u>% Caucasian</u>				<u>% Black</u>				<u>% Hispanic</u>			
	2002	2003	2004	2005	2002	2003	2004	2005	2002	2003	2004	2005	2002	2003	2004	2005
PSP Dept.	229,359	317,920	300,683	272,670	84.0	85.2	84.9	84.9	8.1	7.8	7.7	7.8	3.2	2.9	3.3	3.4
AREA I	84,341	111,149	102,265	99,776	80.9	81.2	81.4	81.3	10.2	10.0	9.9	9.8	3.8	3.7	3.9	4.2
Troop H	15,486	18,955	26,073	23,209	86.1	87.1	87.2	86.5	7.0	6.7	6.5	7.0	3.3	3.5	3.4	3.8
Troop J	9,537	9,448	8,510	9,286	80.4	81.4	78.9	78.3	9.0	8.9	9.4	9.6	7.5	7.2	9.2	10.1
Troop L	8,228	10,135	9,033	8,878	84.7	84.5	83.8	82.5	6.4	6.0	6.3	6.9	5.0	6.4	6.2	7.1
Troop T	51,090	72,611	58,649	58,403	78.9	79.1	78.8	79.6	12.0	11.6	12.0	11.5	3.0	2.9	3.1	3.0
AREA II	28,500	39,282	39,743	31,626	88.7	90.7	90.1	91.0	4.7	4.2	4.5	4.1	2.1	1.9	2.1	2.0
Troop F	16,509	20,967	22,033	15,409	89.1	90.1	90.2	91.7	4.9	4.6	4.7	4.0	2.1	1.9	1.9	1.6
Troop P	5,565	8,177	8,072	7,678	94.1	96.1	95.5	95.7	2.5	2.1	2.3	2.2	1.4	1.0	1.0	1.0
Troop R	6,426	10,138	9,638	8,539	83.1	87.9	85.2	85.4	6.2	5.0	5.9	5.9	2.6	2.7	3.3	3.5
AREA III	42,806	62,416	54,792	56,643	90.7	91.4	91.9	92.0	5.5	5.3	5.0	5.0	1.2	0.8	0.9	0.8
Troop A	10,395	17,469	15,734	15,736	94.6	94.8	95.3	95.9	3.2	3.6	3.0	2.8	0.6	0.4	0.4	0.3
Troop B	17,612	22,745	19,364	19,666	90.6	90.3	90.7	90.9	6.4	6.9	6.6	6.7	0.8	0.6	0.7	0.6
Troop G	14,799	22,202	19,694	21,241	88.0	89.9	90.4	90.2	5.9	5.1	5.0	5.0	2.2	1.4	1.4	1.5
AREA IV	41,084	57,377	54,582	44,801	86.9	88.3	88.5	88.5	5.9	5.5	5.5	5.9	2.2	1.9	2.1	1.8
Troop C	19,577	26,403	21,421	17,140	84.0	84.8	85.0	85.8	6.5	6.3	6.4	6.1	3.3	2.9	3.3	2.8
Troop D	10,472	15,237	16,028	14,251	89.9	91.5	90.5	90.3	5.9	5.4	5.7	6.3	1.3	0.9	1.4	1.2
Troop E	11,035	15,737	17,133	13,410	89.1	91.2	90.9	90.0	5.1	4.3	4.3	5.2	1.1	1.1	1.1	1.2
AREA V	31,572	44,925	46,648	38,157	75.6	78.5	77.3	75.5	11.5	11.2	10.9	11.5	6.1	5.5	6.9	7.9
Troop K	8,761	12,758	11,044	8,395	73.1	75.5	74.4	71.6	17.8	16.2	17.1	18.5	3.8	3.4	4.1	4.6
Troop M	10,985	17,100	20,218	16,860	79.3	80.6	78.6	75.8	8.6	8.4	8.3	9.2	7.2	6.7	8.5	10.0
Troop N	11,826	15,067	15,386	12,902	74.0	78.7	77.6	77.5	9.6	10.1	9.8	10.0	6.9	5.9	6.7	7.3

Table 5.2: Traffic Stops By Race of Driver By Stations – 2002-2005 (p. 1 of 4)

	<u>Total # of Stops</u>				<u>% Caucasian</u>				<u>% Black</u>				<u>% Hispanic</u>			
	2002	2003	2004	2005	2002	2003	2004	2005	2002	2003	2004	2005	2002	2003	2004	2005
AREA I																
Troop H																
Carlisle	2,198	3,432	5,944	5,213	87.3	87.0	85.5	84.9	6.6	7.0	7.3	7.6	2.9	2.8	3.6	4.3
Chambersburg	2,330	3,637	5,049	3,761	86.2	88.5	89.3	88.1	7.7	6.1	5.8	6.1	3.5	3.4	3.3	4.2
Gettysburg	1,450	1,865	2,969	2,689	87.0	86.6	87.4	85.7	4.7	5.3	5.0	5.2	5.3	5.5	4.4	5.4
Harrisburg	3,853	4,305	3,885	3,321	86.3	86.3	85.1	82.9	7.1	7.3	7.2	8.9	3.4	3.9	4.2	4.3
Lykens	747	916	1,250	1,481	97.6	96.6	97.3	97.8	1.2	1.7	1.0	0.9	0.8	0.9	0.8	1.1
Newport	1,244	1,310	2,058	2,340	90.1	90.4	91.5	90.7	3.2	3.7	4.2	4.4	1.8	1.8	1.0	2.1
York	3,664	3,490	4,918	4,404	81.2	83.4	84.1	84.2	10.0	9.3	9.0	9.9	3.4	3.9	3.8	3.5
Troop J																
Avondale	2,765	3,159	3,007	2,747	77.0	78.0	73.6	73.3	10.3	9.6	9.9	9.4	11.2	10.4	14.4	15.6
Embreeville	2,179	2,745	2,400	2,410	76.8	79.1	78.0	76.0	12.7	12.1	13.2	14.8	4.8	5.5	5.3	6.3
Ephrata	1,254	1,408	977	1,014	82.8	83.1	81.0	80.5	6.5	6.9	6.8	7.3	8.1	7.0	9.1	9.7
Lancaster	3,339	2,136	2,126	3,115	84.6	88.5	86.3	83.6	6.3	5.0	5.6	6.5	5.9	4.9	6.5	8.2
Troop L																
Frackville	1,718	1,642	952	873	88.8	91.2	91.4	87.4	5.4	3.9	3.0	6.1	2.8	2.9	3.7	3.6
Hamburg	1,390	1,616	1,812	2,005	73.0	76.1	76.5	77.6	10.0	9.7	8.7	8.5	8.0	7.7	7.1	8.7
Jonestown	2,014	2,942	2,739	3,187	81.3	81.5	80.1	80.2	9.0	8.2	8.9	8.7	5.8	6.2	6.9	7.2
Reading	1,991	2,555	1,938	1,295	87.5	82.6	84.0	81.0	4.0	5.1	5.2	5.6	6.0	10.7	9.2	10.8
Schuylkill Haven	1,115	1,380	1,592	1,518	94.0	96.0	93.8	92.3	3.0	1.5	2.3	2.8	1.5	1.5	1.9	3.5
Troop T																
Bowmansville	7,046	9,649	6,486	5,859	76.5	76.5	76.7	77.5	12.8	12.5	13.0	12.2	4.5	4.4	4.4	4.3
Everett	8,573	10,533	7,816	9,652	76.0	75.5	73.7	74.6	13.9	14.2	15.1	14.6	2.8	2.9	3.3	3.3
Gibsonia	4,453	8,745	8,209	7,977	81.2	83.3	82.8	82.7	11.6	9.6	10.3	10.3	1.7	1.9	1.9	1.7
Highspire	12	27	4	45	75.0	63.0	66.7	73.3	8.3	14.8	33.3	13.3	0.0	7.4	0.0	6.7
King of Prussia	5,113	7,415	6,773	6,188	80.0	79.9	79.6	79.3	9.9	10.2	10.5	10.2	4.0	3.9	4.2	4.4
New Stanton	3,908	9,234	7,829	8,086	86.8	86.1	83.5	82.7	9.0	8.7	10.7	10.8	1.1	1.1	1.4	1.7
Newville	8,535	11,257	9,978	8,607	77.4	76.6	77.2	79.4	12.8	13.2	12.3	11.2	3.3	3.4	3.5	3.2
Pocono	5,387	6,419	4,250	5,242	87.2	86.7	85.8	86.9	6.0	6.5	7.9	6.7	2.9	2.3	2.4	2.8
Somerset (T)	8,060	9,331	7,303	6,736	74.0	72.5	73.8	75.8	15.2	14.9	14.5	13.7	2.9	2.9	3.5	2.8

Table 5.2: Traffic Stops By Race of Driver By Station – 2002-2005 (p. 2 of 4)

	<u>Total # of Stops</u>				<u>% Caucasian</u>				<u>% Black</u>				<u>% Hispanic</u>			
	2002	2003	2004	2005	2002	2003	2004	2005	2002	2003	2004	2005	2002	2003	2004	2005
AREA II																
Troop F																
Coudersport	1,535	1,593	1,515	1,366	98.5	98.2	97.5	98.2	0.6	0.8	1.1	0.4	0.1	0.5	0.6	0.4
Emporium	1,050	1,355	1,182	956	98.8	99.0	99.0	99.2	0.6	0.6	0.4	0.5	0.2	0.2	0.2	0.1
Lamar	2,584	3,514	3,536	1,735	76.1	76.5	76.8	75.7	8.3	8.9	8.7	9.1	5.2	4.4	4.6	4.8
Mansfield	970	1,559	1,438	1,243	89.4	92.9	92.7	92.8	4.1	2.8	3.7	3.5	1.4	1.1	0.3	1.1
Milton	2,678	2,404	2,873	2,121	81.0	83.1	83.8	85.6	9.4	8.3	7.7	7.1	4.4	3.5	3.9	3.6
Montoursville	3,101	4,624	6,897	4,075	92.9	92.2	92.7	94.0	3.9	4.4	4.3	3.4	0.8	1.5	1.1	0.8
Selinsgrove	3,311	4,202	3,095	2,847	91.6	93.0	93.8	94.0	4.9	4.0	3.7	3.8	1.4	1.0	1.1	1.1
Stonington	1,280	1,716	1,497	1,066	97.3	97.5	98.2	97.8	0.8	0.9	0.7	1.0	0.6	1.0	0.8	0.8
Troop P																
Laporte	903	1,603	1,343	1,456	97.7	98.1	97.3	97.8	1.2	0.7	1.0	1.0	0.4	0.6	0.7	0.3
Shickshinny	714	1,033	996	1,101	96.8	96.4	94.1	95.6	1.1	1.7	3.4	2.2	1.3	1.5	1.8	1.4
Towanda	1,190	1,650	1,781	2,400	97.9	97.7	98.3	97.3	0.8	1.3	0.5	1.3	0.9	0.5	0.4	0.7
Tunkhannock	791	1,366	1,438	1,052	92.7	97.3	97.2	96.8	1.1	0.7	0.8	1.1	1.9	1.2	1.2	1.3
Wyoming	1,967	2,525	2,514	1,669	89.9	92.9	92.3	90.9	5.0	4.6	4.7	5.3	1.9	1.3	1.2	1.8
Troop R																
Blooming Grove	1,235	2,697	2,607	1,918	85.1	88.6	87.6	88.0	5.1	5.3	5.5	5.4	3.2	2.8	3.9	4.2
Dunmore	2,693	2,944	2,823	3,093	82.7	86.2	82.9	82.7	7.0	5.8	6.6	6.7	2.4	3.7	3.9	4.0
Gibson	1,247	1,569	2,121	1,541	76.6	79.5	76.6	77.3	9.5	8.3	9.1	8.8	3.3	2.6	3.1	3.6
Honesdale	1,251	2,928	2,087	1,987	88.3	93.4	94.3	93.5	2.3	2.1	2.2	2.8	1.8	1.8	2.0	2.1
AREA III																
Troop A																
Ebensburg	1,861	3,578	3,127	4,054	94.1	95.3	95.8	96.3	3.3	2.8	2.5	2.2	0.6	0.5	0.6	0.3
Greensburg	3,603	5,374	4,180	3,957	95.4	95.3	96.5	96.6	2.7	3.3	2.4	2.6	0.3	0.4	0.3	0.3
Indiana	2,159	3,620	3,920	2,629	93.6	94.9	94.7	94.6	3.4	3.1	3.3	3.3	1.4	0.3	0.4	0.2
Kiski Valley	1,549	2,796	2,495	2,732	92.1	90.6	92.2	93.8	5.9	7.9	5.2	4.6	0.6	0.4	0.6	0.3
Somerset (A)	1,223	2,101	2,012	2,364	97.9	97.9	97.2	97.8	0.7	1.1	1.6	1.2	0.4	0.2	0.3	0.3

Table 5.2: Traffic Stops By Race of Driver By Station – 2002-2005 (p. 3 of 4)

	<u>Total # of Stops</u>				<u>% Caucasian</u>				<u>% Black</u>				<u>% Hispanic</u>			
	2002	2003	2004	2005	2002	2003	2004	2005	2002	2003	2004	2005	2002	2003	2004	2005
AREA III (cont.)																
Troop B																
Belle Vernon	2,479	4,015	3,052	2,368	88.1	90.2	88.7	87.5	6.9	6.7	8.0	9.3	1.2	0.7	1.0	1.3
Findlay	4,991	7,266	4,403	4,639	89.1	88.1	88.0	88.2	7.6	8.3	8.4	8.4	0.8	0.8	0.9	0.6
Uniontown	3,360	3,416	3,981	5,401	93.8	93.4	93.5	94.1	5.6	5.9	5.7	5.3	0.3	0.3	0.2	0.1
Washington	5,031	5,149	5,336	5,044	90.6	90.1	90.9	91.3	6.1	7.1	6.2	6.2	1.0	0.5	0.8	0.6
Waynesburg	1,751	2,899	2,592	2,214	92.2	92.3	93.0	91.4	5.0	4.2	3.8	4.8	0.6	0.7	0.8	0.6
Troop G																
Bedford	1,750	3,190	3,119	3,082	92.0	92.5	93.0	92.7	5.0	4.2	4.1	4.2	0.6	1.2	0.8	0.9
Hollidaysburg	2,125	3,153	3,156	2,885	90.9	93.7	92.5	91.0	4.7	3.6	4.5	5.0	1.2	0.7	0.7	1.3
Huntingdon	1,217	2,159	2,188	1,873	95.9	97.6	96.8	97.0	2.5	1.7	2.0	2.1	1.2	0.5	0.6	0.6
Lewistown	2,426	2,951	2,457	3,180	92.5	90.8	90.2	92.0	2.9	4.0	4.5	3.8	1.3	1.8	1.9	1.8
McConnellsburg	1,406	2,570	2,036	2,121	76.5	77.8	79.1	81.1	15.5	13.6	13.1	12.0	2.5	2.1	1.8	1.2
Philipsburg	1,613	2,658	2,803	2,483	94.6	94.9	91.6	90.4	2.7	2.5	3.9	4.2	0.7	0.5	1.7	2.1
Rockview	4,262	5,521	3,935	5,617	81.4	86.1	88.0	88.6	7.6	5.5	4.6	5.0	4.8	2.4	2.4	2.0
AREA IV																
Troop C																
Clarion	4,237	6,064	4,934	3,545	76.1	76.6	77.3	75.0	10.3	10.4	10.2	12.0	5.2	4.9	5.5	5.7
Clearfield	3,878	5,827	5,145	3,660	79.3	81.9	83.4	81.6	9.1	8.2	6.8	7.8	3.6	3.0	3.7	3.4
Dubois	3,737	4,249	3,080	2,261	78.7	78.9	79.0	77.9	8.7	9.1	10.2	9.0	5.5	5.1	4.7	5.2
Kane	1,355	2,158	1,559	1,475	89.7	89.9	89.1	90.2	1.6	0.8	2.4	1.7	0.8	0.5	1.1	0.3
Punxsutawney	2,520	3,405	2,369	2,024	92.5	93.5	93.2	94.3	3.3	3.1	3.1	3.0	1.4	1.4	1.5	0.8
Ridgway	1,899	2,416	2,317	1,890	91.8	92.5	92.0	95.7	1.9	1.8	2.5	1.4	0.9	0.9	1.9	0.7
Tionesta	1,951	2,284	2,017	2,285	98.2	98.4	95.8	98.4	0.5	0.6	1.9	0.9	0.7	0.2	0.5	0.1
Troop D																
Beaver	2,453	2,902	2,334	2,318	90.3	91.9	91.9	91.7	6.9	6.8	6.6	6.7	0.7	0.3	0.5	0.3
Butler	2,869	5,272	4,281	4,015	93.7	95.2	94.7	94.0	3.3	2.9	3.1	4.0	1.2	0.5	0.4	0.4
Kittanning	2,022	2,726	4,147	3,637	94.1	93.1	92.7	91.7	3.7	5.0	5.5	6.4	0.4	0.4	0.5	0.7
Mercer	1,953	2,588	3,098	2,534	78.3	80.7	78.9	79.8	10.0	8.9	9.3	9.6	4.0	3.2	5.3	4.6
New Castle	1,175	1,749	2,168	1,747	92.0	93.0	93.2	92.5	6.7	6.0	5.4	6.3	0.3	0.3	0.5	0.5

Table 5.2: Traffic Stops By Race of Driver By Station – 2002-2005 (p. 4 of 4)

	<u>Total # of Stops</u>				<u>% Caucasian</u>				<u>% Black</u>				<u>% Hispanic</u>			
	2002	2003	2004	2005	2002	2003	2004	2005	2002	2003	2004	2005	2002	2003	2004	2005
AREA IV (cont.)																
Troop E																
Corry	669	1,153	1,208	852	98.9	97.0	94.0	98.1	0.8	1.9	3.0	0.8	0.3	0.3	0.6	0.5
Erie	2,328	4,068	4,329	2,714	86.6	89.5	88.8	89.4	5.9	4.9	5.2	5.2	1.7	1.4	1.4	1.4
Franklin	1,203	2,132	2,988	1,662	95.8	97.3	94.4	90.8	1.7	1.0	2.5	4.9	0.7	0.6	1.2	1.8
Girard	3,147	4,362	3,719	2,791	87.8	87.3	89.1	87.9	6.2	6.2	5.3	6.1	1.3	1.8	1.3	1.5
Meadville	3,153	2,709	3,325	4,407	86.1	89.4	87.9	87.8	6.2	5.6	5.8	6.7	1.0	0.8	1.2	1.1
Warren	535	1,313	1,564	984	98.7	98.8	98.5	98.7	0.6	0.5	0.4	0.4	0.4	0.4	0.3	0.1
AREA V																
Troop K																
Media	4,342	5,179	3,867	2,571	74.2	75.5	71.5	72.9	18.1	17.0	21.3	19.3	2.9	3.0	3.2	4.0
Philadelphia	2,163	3,498	2,735	3,141	63.1	65.1	63.5	62.7	24.9	23.6	24.2	24.5	5.4	4.0	5.0	5.3
Skippack	2,256	4,081	4,442	2,683	80.4	84.4	83.6	80.8	10.4	8.9	9.0	10.7	4.2	3.3	4.4	4.4
Troop M																
Belfast	2,411	3,028	3,159	3,164	78.0	79.9	76.2	74.3	8.5	8.9	9.3	9.4	8.4	8.1	10.2	11.6
Bethlehem	2,002	2,333	4,432	3,479	80.5	79.7	77.3	73.4	6.6	7.2	8.4	9.4	8.3	8.2	10.3	12.1
Dublin	1,914	4,143	4,173	3,139	92.7	92.1	89.9	89.2	2.0	2.4	3.0	4.0	3.2	3.5	4.6	4.6
Fogelsville	2,771	4,371	5,142	4,943	75.2	77.1	74.6	73.3	9.6	8.8	9.1	9.1	9.3	9.0	10.6	11.8
Trevoise	1,887	3,225	3,312	2,135	72.2	71.9	74.9	68.0	16.2	16.2	12.9	16.2	5.1	5.5	5.8	8.3
Troop N																
Bloomsburg	2,109	3,209	2,895	2,027	77.1	77.6	76.9	77.2	9.4	11.0	10.6	11.3	6.5	4.7	5.1	4.3
Fern Ridge	1,499	1,668	2,774	1,893	78.3	75.8	73.3	75.6	10.1	10.0	10.9	10.3	5.5	7.9	8.4	8.2
Hazleton	2,811	2,836	3,298	3,149	79.0	77.3	75.0	74.6	8.0	9.9	8.6	7.9	6.9	6.8	10.0	11.5
Lehighton	863	2,454	2,554	2,356	92.2	93.1	92.3	92.4	2.6	2.5	3.2	3.3	4.1	2.8	2.8	2.8
Swiftwater	4,544	4,900	3,865	3,477	64.5	74.1	73.8	71.4	11.7	13.3	13.7	15.4	8.0	7.0	6.3	7.9

Table 5.2 reported on the percentages of drivers stopped by racial group at the station level across the data collection period. It is important to identify those stations with significant increases (or decreases) in the percentages of minority drivers stopped. As previously noted, the reasons for these changes may be legitimate (e.g., changes in traffic patterns, deployment patterns, etc.) or illegitimate (e.g., officer bias). The reasons for these changes, however, cannot be identified based solely on analyses of CDR data. Rather, trends over time are presented at the station level and a handful of stations are identified as needing further consideration by PSP administrators. **Figures 5.1 – 5.32** are included to graphically display the percentages of Black and Hispanic stop rates across stations within the sixteen troops⁶. These figures do not provide any definitive conclusions about racial inequities at the station level, but do permit an assessment of the overall trend of each station. There is expected variation between stations within each of the troops, as each station patrols in diverse areas with different demographic compositions and travel patterns. The text preceding each figure highlights any station with percentages of minority stops that are trending upward in 2005. These stations should be monitored in the 2006 data. As noted previously, an upward trend does not necessarily indicate police bias. An upward trend in the percentage of minority drivers stopped with a station simply indicates that the reasons for this trend need to be considered and explored by PSP administrators.

⁶ Highspire station was removed from these graphs due to the low number of stops that occurred at this station.

The stopping patterns for all stations in *Troop H* are reported for Black and Hispanic drivers in **Figures 5.1 & 5.2**, respectively. **Figure 5.1** reports on the stopping patterns of Black drivers in *Troop H*, and demonstrates that slight increases occurred from 2004 to 2005 in *Carlisle*, *Chambersburg*, *Harrisburg*, *Newport*, and *York*. Most of these changes were less than one percent in magnitude save *Harrisburg*, which rose approximately two percent in 2005. In regard to the other two stations, *Gettysburg* did not demonstrate a noticeable change from 2002 to 2005, while *Lykens* saw a reduction in the percent of Black drivers stopped since 2003.

Figure 5.1: Percent of Drivers Stopped – Recorded as Black – Troop H: 2002-2005

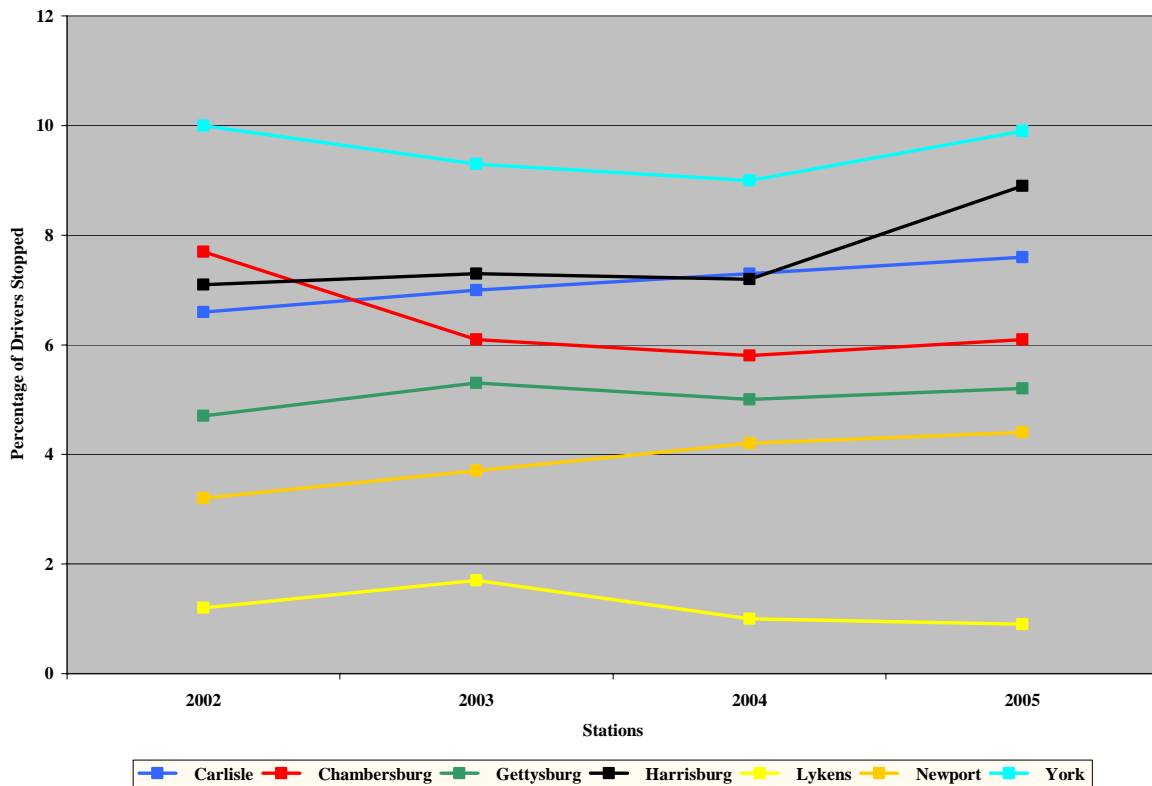
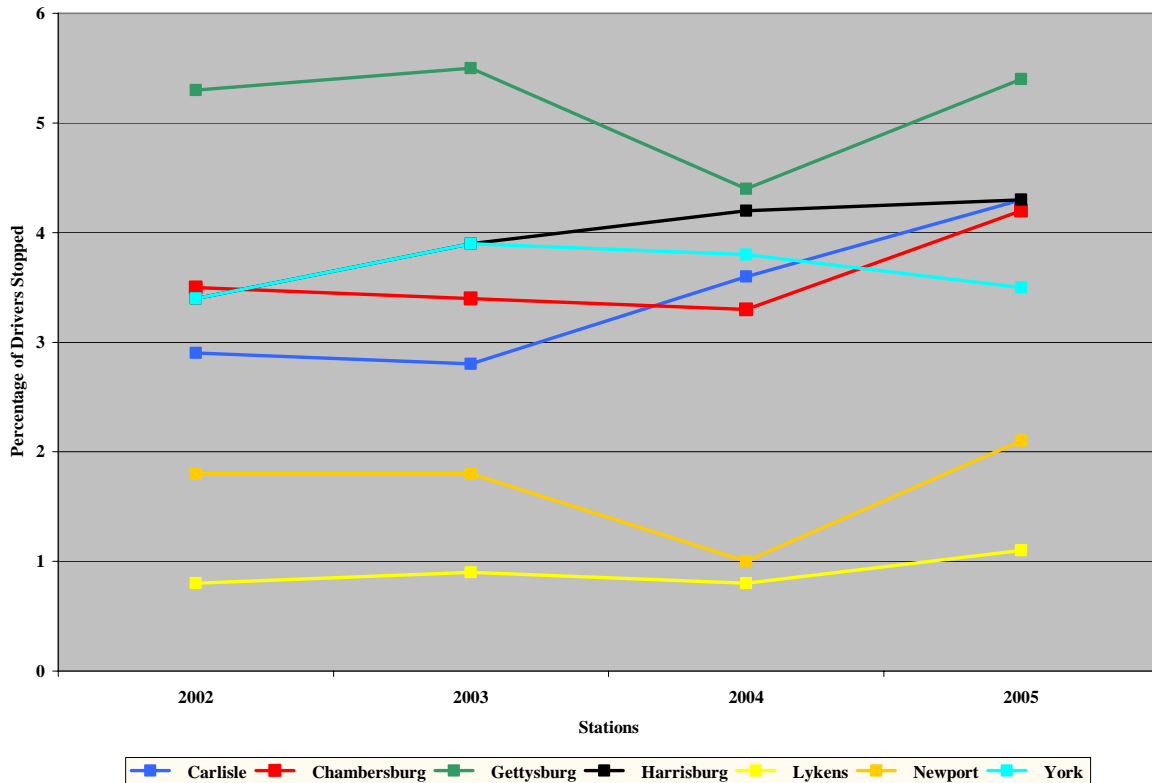


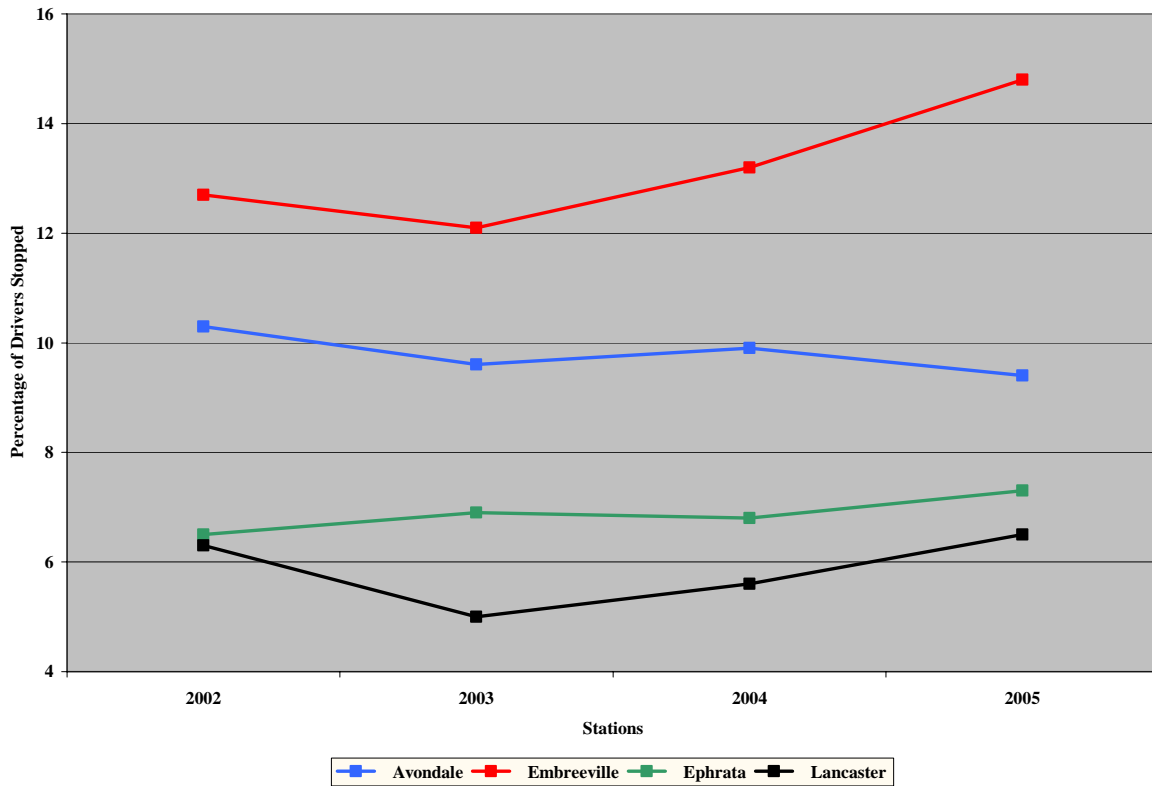
Figure 5.2 reports on the stopping trends of Hispanic drivers between 2002 and 2005 in *Troop H*. During this time period, *Gettysburg & Newport* reported a reduction of approximately one percent in 2004, but then reversed that same one percent in 2005. *Carlisle* and *Chambersburg* also reported increases of approximately one percent in 2005, and this follows *Carlisle's* pattern from 2003. *Harrisburg, Lykens,* and *York* all had modest fluctuations in 2005, with *York* slightly reducing its percent of Hispanic drivers stopped.

Figure 5.2: Percent of Drivers Stopped – Recorded as Hispanic – Troop H: 2002-2005



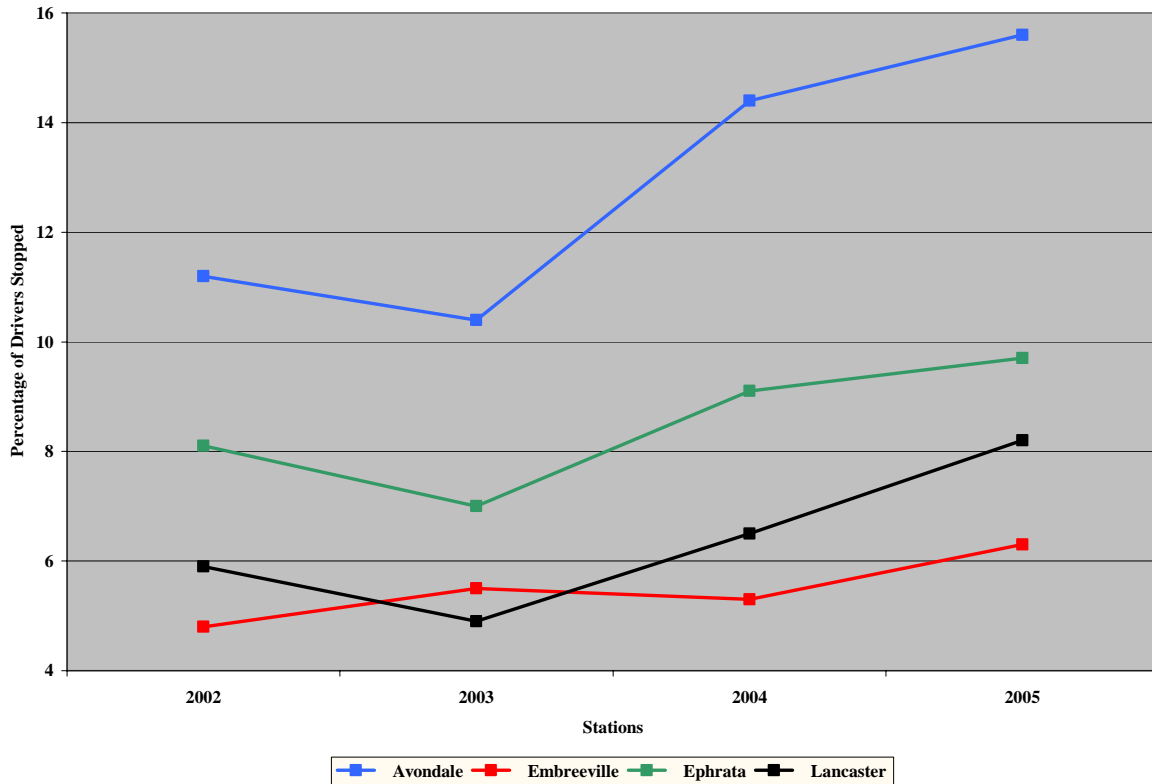
The percentages of Black and Hispanic drivers stopped in *Troop J* between 2002 and 2005 are displayed in **Figures 5.3 & 5.4**, respectively. **Figure 5.3** demonstrates that *Embreeville* reported a noticeable increase between 2003, when 12% of the stops were of black citizens, and 2005, when 15% of the stops were of black citizens. *Lancaster* also demonstrated a slight increase in stops of black drivers (approximately 1.5%) between 2003 and 2005; however, the rate in 2005 matches the rate in 2002. Finally, *Ephrata* was relatively unchanged across the four years, and *Avondale* demonstrated a slight decrease in the percentage of Black drivers stopped.

Figure 5.3: Percent of Drivers Stopped – Recorded as Black – Troop J: 2002-2005



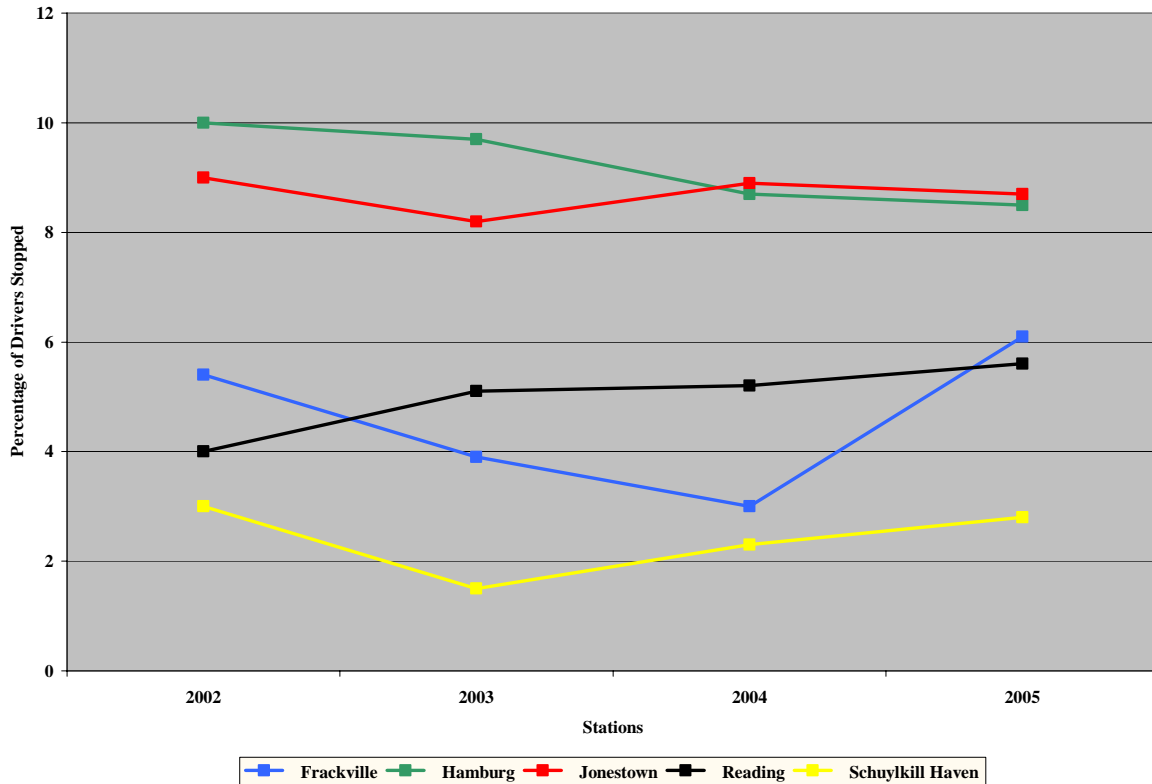
In contrast to the percentages of Black drivers stopped, **Figure 5.4** demonstrates that, for Hispanic drivers, **Avondale** had the highest percentage across the four years and showed a noticeable increase of roughly 5% since 2003. **Lancaster** and **Ephrata** also exhibited slight increases from 2002 of roughly 3% each. It will be important to monitor these stations' trends during 2006. Finally, **Embreeville** was relatively unchanged from 2002 through 2005, with approximately a 1% increase in stops of Hispanic drivers over the study period.

Figure 5.4: Percent of Drivers Stopped – Recorded as Hispanic – Troop J: 2002-2005



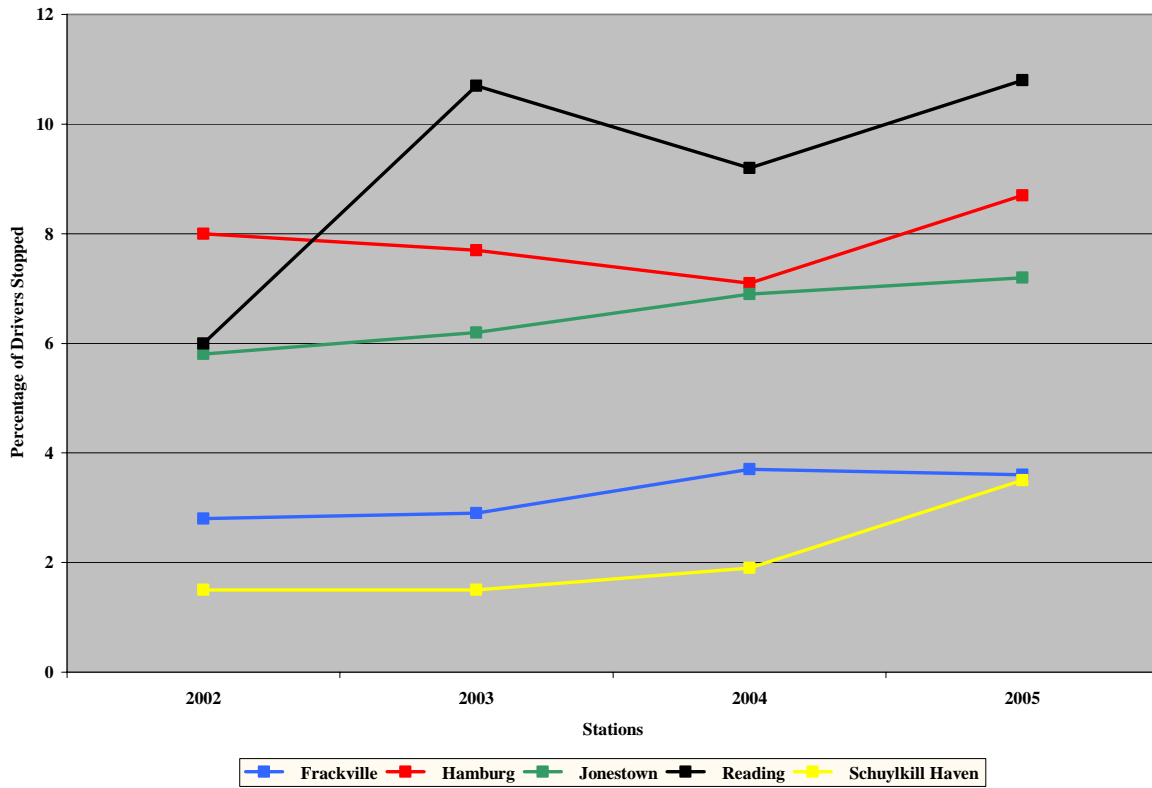
Figures 5.5 & 5.6 display the percentage of Black and Hispanic drivers stopped in *Troop L* between 2002 and 2005. Specifically, **Figure 5.5** demonstrates that, for Black drivers, all stations in *Troop L* except *Frackville* exhibited minor fluctuations across the four years (e.g., *Hamburg* had a slight decrease in its percentage of black drivers stopped, while *Schuykill Haven* demonstrated a minor increase in its percentage of Black drivers stopped). *Frackville* had a noticeable increase of roughly 3% of Black drivers stopped between 2004 and 2005. It will be important to continue monitoring this trend during 2006.

Figure 5.5: Percent of Drivers Stopped – Recorded as Black – Troop L: 2002-2005



In regard to Hispanic drivers, **Figure 5.6** reports that *Frackville* and *Jonestown* demonstrated minor fluctuations in their percentage of drivers stopped between 2002 and 2005. *Hamburg*, *Reading*, and *Schuylkill Haven* also showed slight fluctuations across the four years, with increases of roughly 2% in each station between 2004 and 2005. Again, it will be important to monitor these trends in future data analyses.

Figure 5.6: Percent of Drivers Stopped – Recorded as Hispanic – Troop L: 2002-2005



Figures 5.7 & 5.8 document the percentage of Black and Hispanic drivers stopped in *Troop T* between 2002 and 2005, respectively. As displayed in **Figure 5.7**, Black drivers comprised a lower percentage of those being stopped in 2005 for six of the eight stations when compared to 2004. In *Gibsonia* and *New Scranton*, the rates of Black citizens stopped were virtually unchanged from 2004.

Figure 5.7: Percent of Drivers Stopped – Recorded as Black – Troop T: 2002-2005

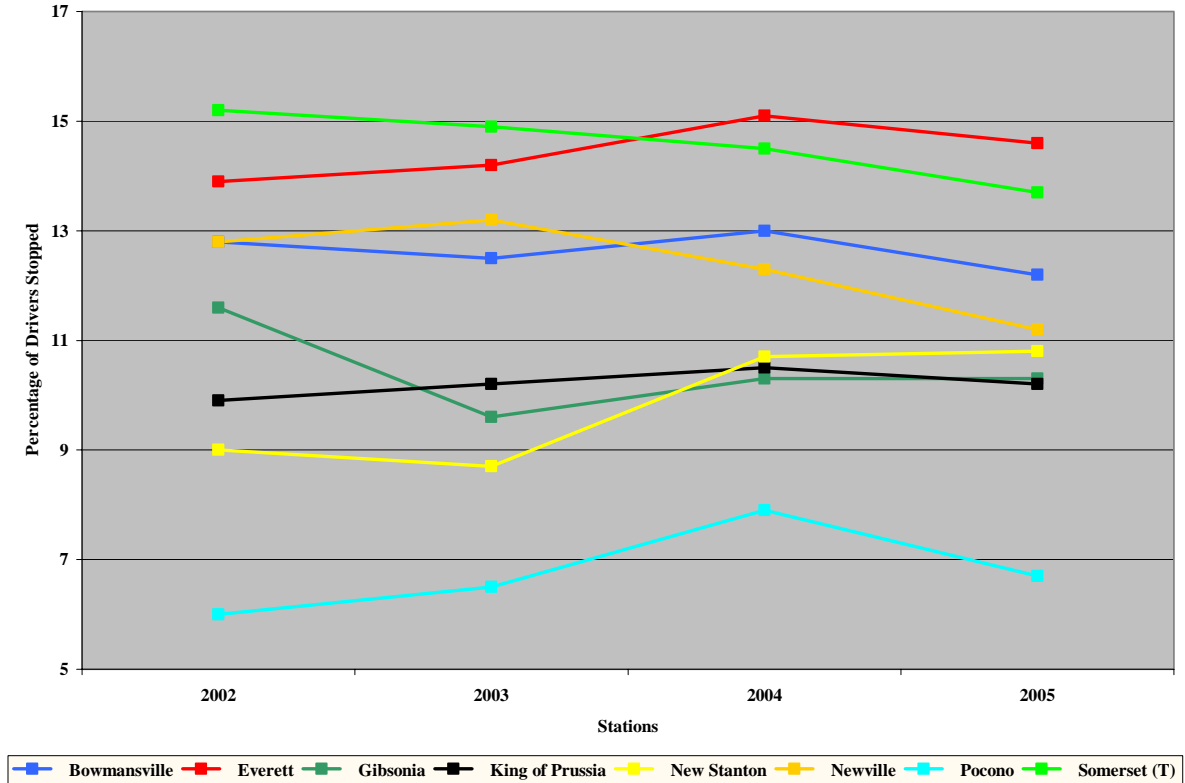
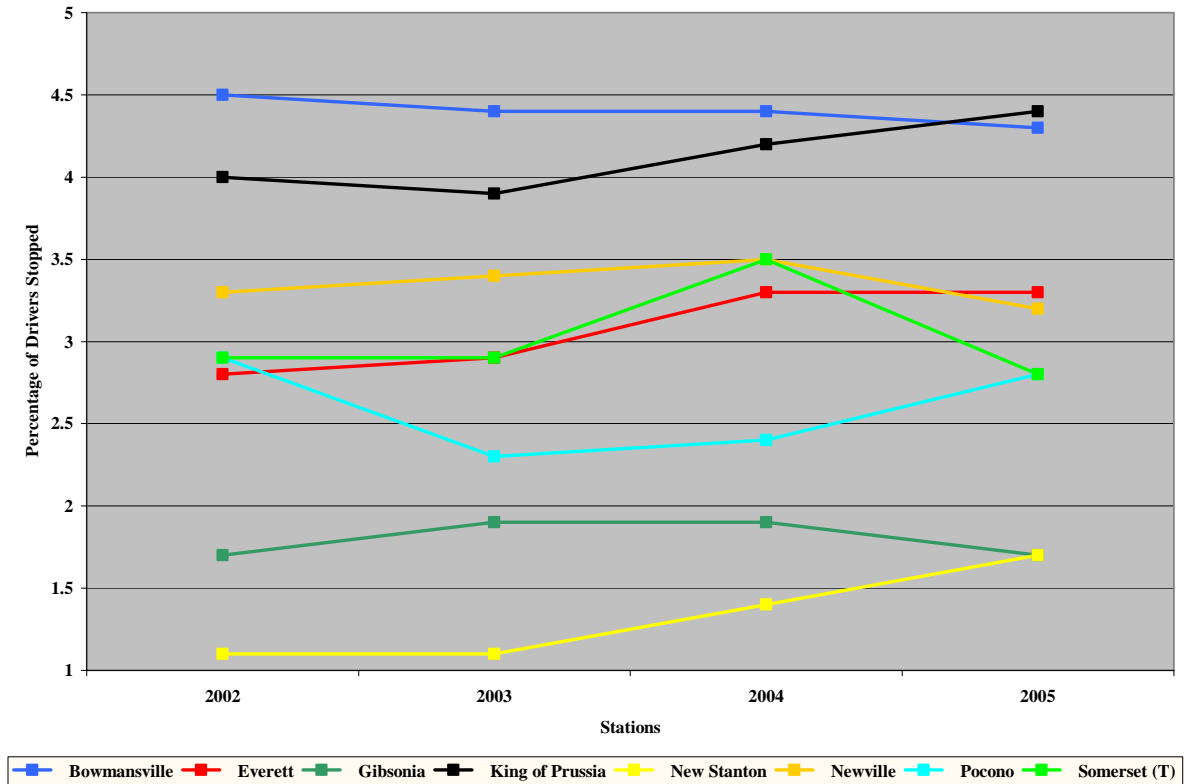


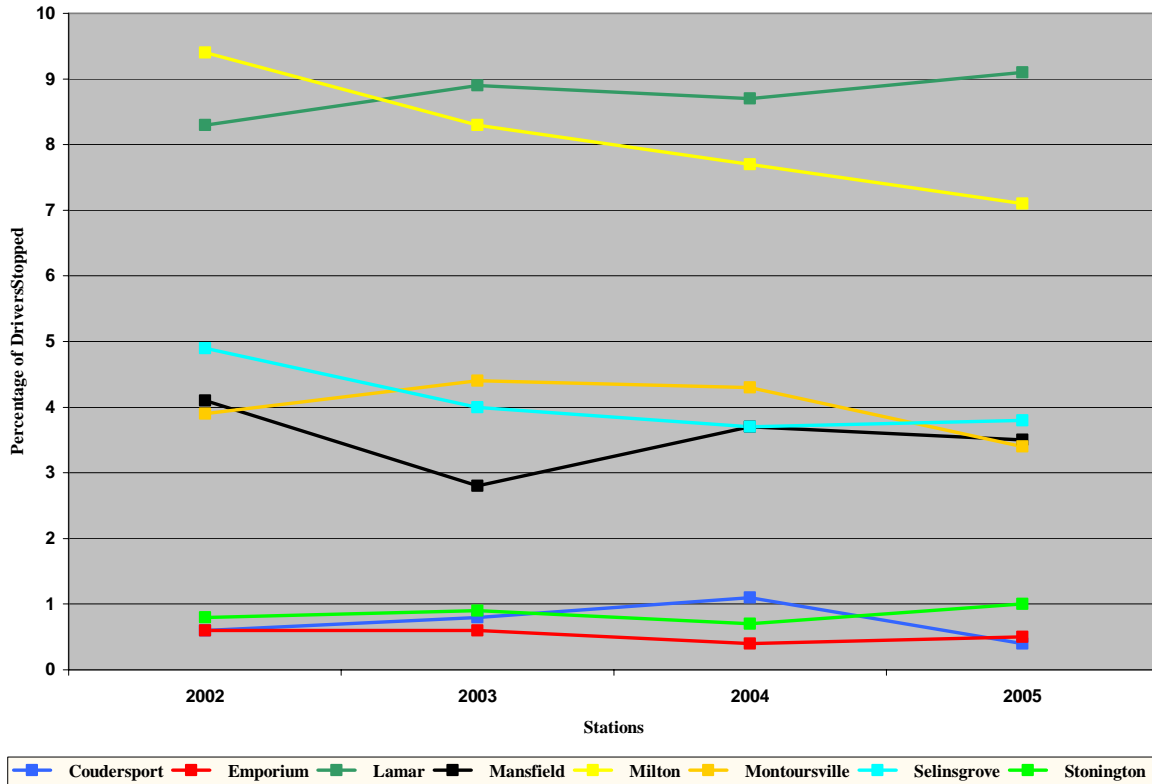
Figure 5.8 reports the percentages of Hispanic drivers stopped in *Troop T*. Similar to the trends for Black drivers, Hispanic drivers in five of the eight stations were either stopped less often or at similar rates when compared to 2004. Increases of stops of Hispanic drivers comprised a minor change of less than 1% in *King of Prussia*, *New Stanton*, and *Pocono*.

Figure 5.8: Percent of Drivers Stopped – Recorded as Hispanic – Troop T: 2002-2005



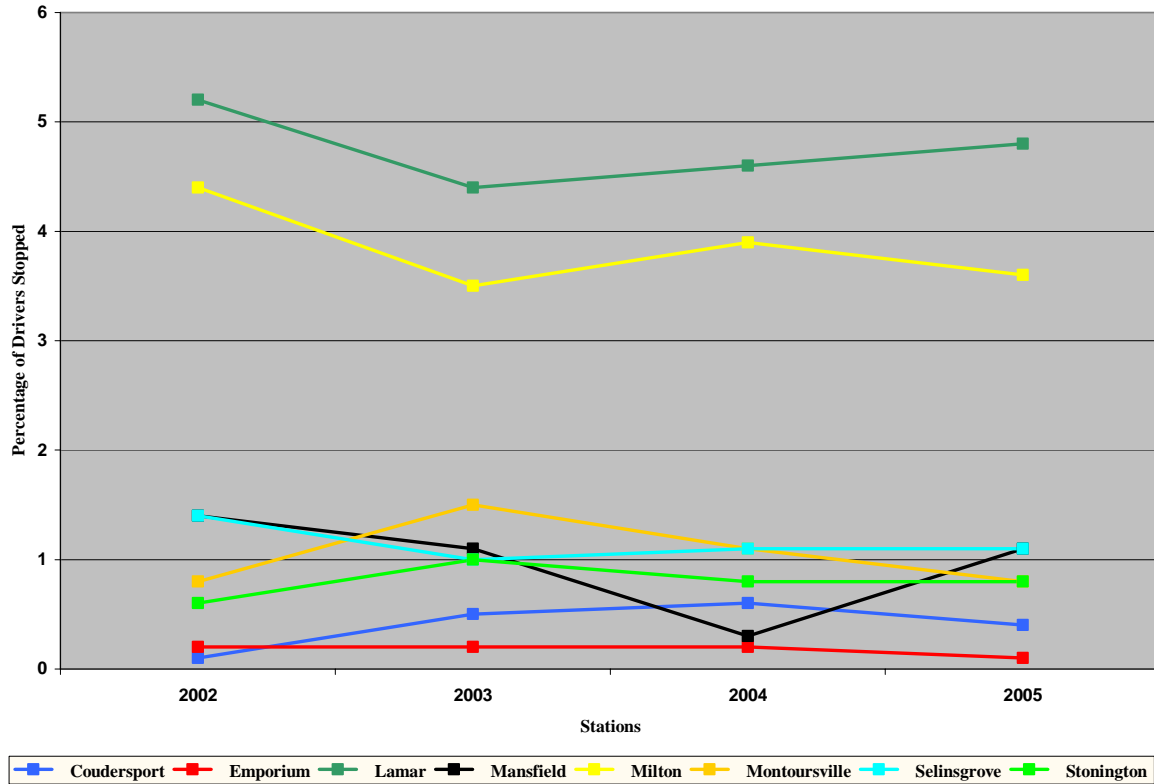
Figures 5.9 & 5.10 report the percentages of Black and Hispanic drivers stopped in *Troop F* between 2002 and 2005. Seven of the eight stations demonstrated relatively stable patterns of stopping Black citizens across the four years, with *Milton* exhibiting a steady decline of roughly 3% between 2002 and 2005.

Figure 5.9: Percent of Drivers Stopped – Recorded as Black – Troop F: 2002-2005



In regard to Hispanic drivers, **Figure 5.10** demonstrates a similar pattern of stability across seven of the eight stations in *Troop F*. Only *Mansfield* exhibited a slight (but minor) increase in 2005 of less than 1%.

Figure 5.10: Percent of Drivers Stopped – Recorded as Hispanic – Troop F: 2002-2005



The rates of Black and Hispanic drivers stopped in *Troop P* between 2002 and 2005 are reported in **Figures 5.11 & 5.12**. Minor fluctuations were demonstrated in *Shickshinny*, with approximately a 1% decrease in rates of black drivers stopped in 2005 when compared to 2004. *Towanda* and *Wyoming* demonstrated slight increases when comparing 2004 to 2005, but both were changes of less than 1%.

Figure 5.11: Percent of Drivers Stopped – Recorded as Black – Troop P: 2002-2005

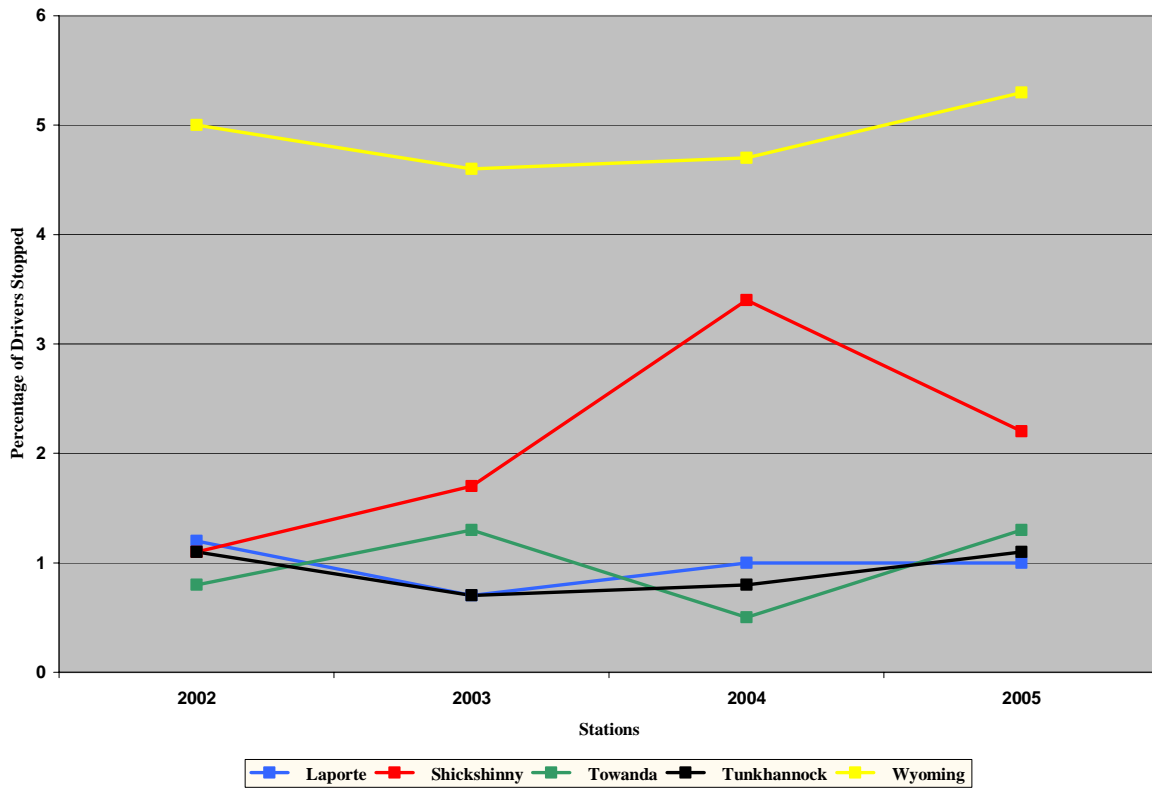
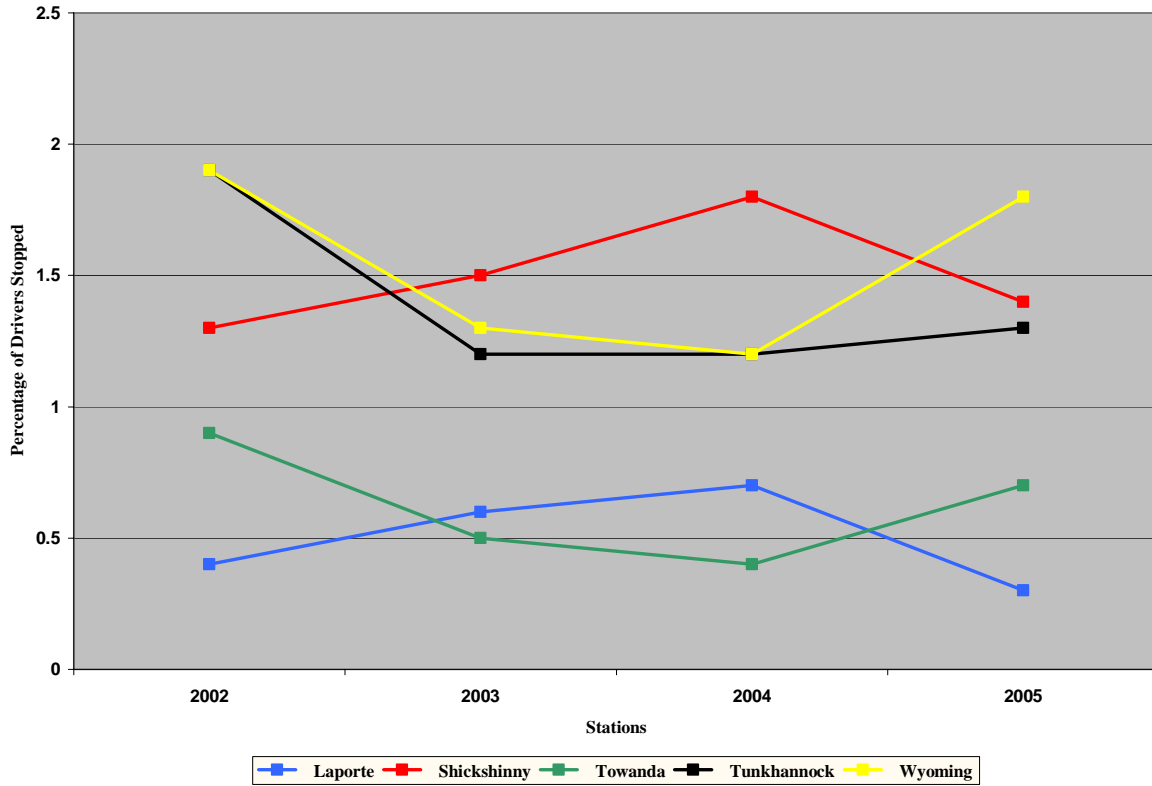


Figure 5.12 reports the stopping rates of Hispanic drivers between 2002 and 2005 in *Troop P. Wyoming* and *Towanda* had slight increases in their rates of stopping Hispanic drivers; however, these are less than 1% increases from 2004. Similarly, *Laporte* and *Shickshinny* exhibited decreases in their rates of stopping Hispanic drivers from 2004 to 2005, but these were also changes of less than 1%.

Figure 5.12: Percent of Drivers Stopped – Recorded as Hispanic – Troop P: 2002-2005



Figures 5.13 & 5.14 report the percentages of Black and Hispanic drivers stopped in *Troop R* between 2002 and 2005. For Black drivers, all four stations exhibited slight fluctuations across the four years, with less than a 1% change in any one station.

Figure 5.13: Percent of Drivers Stopped – Recorded as Black – Troop R: 2002-2005

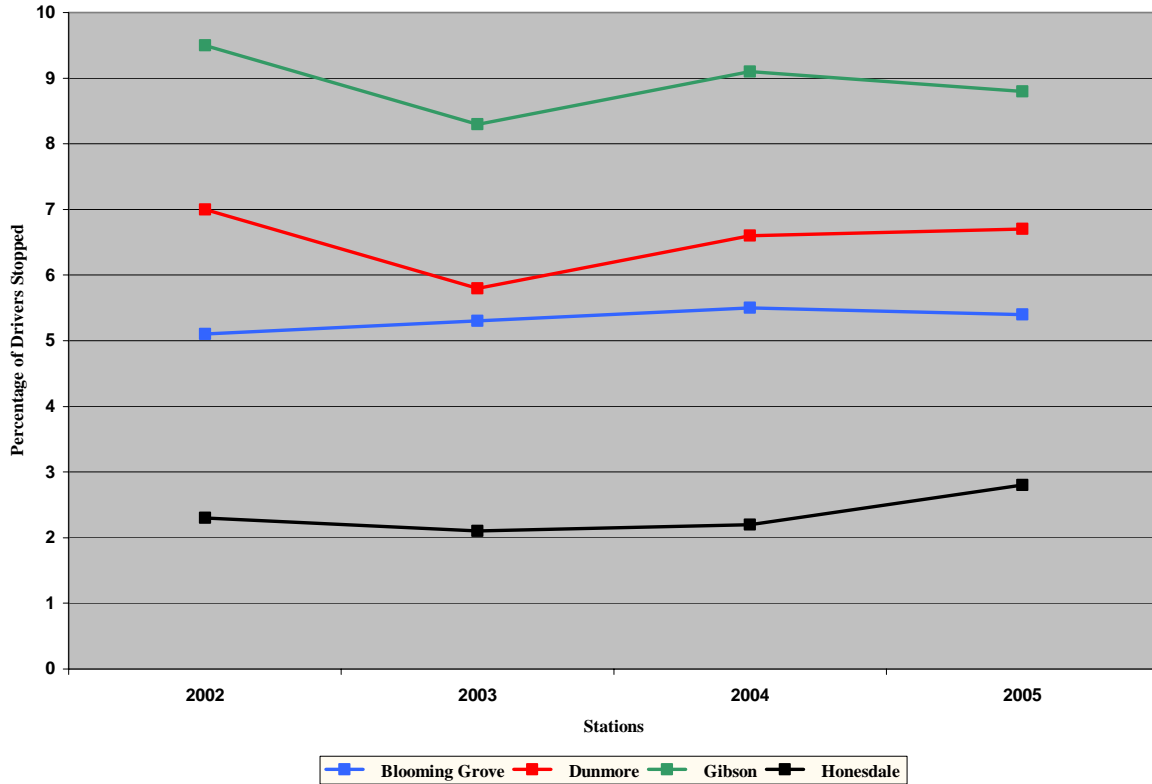
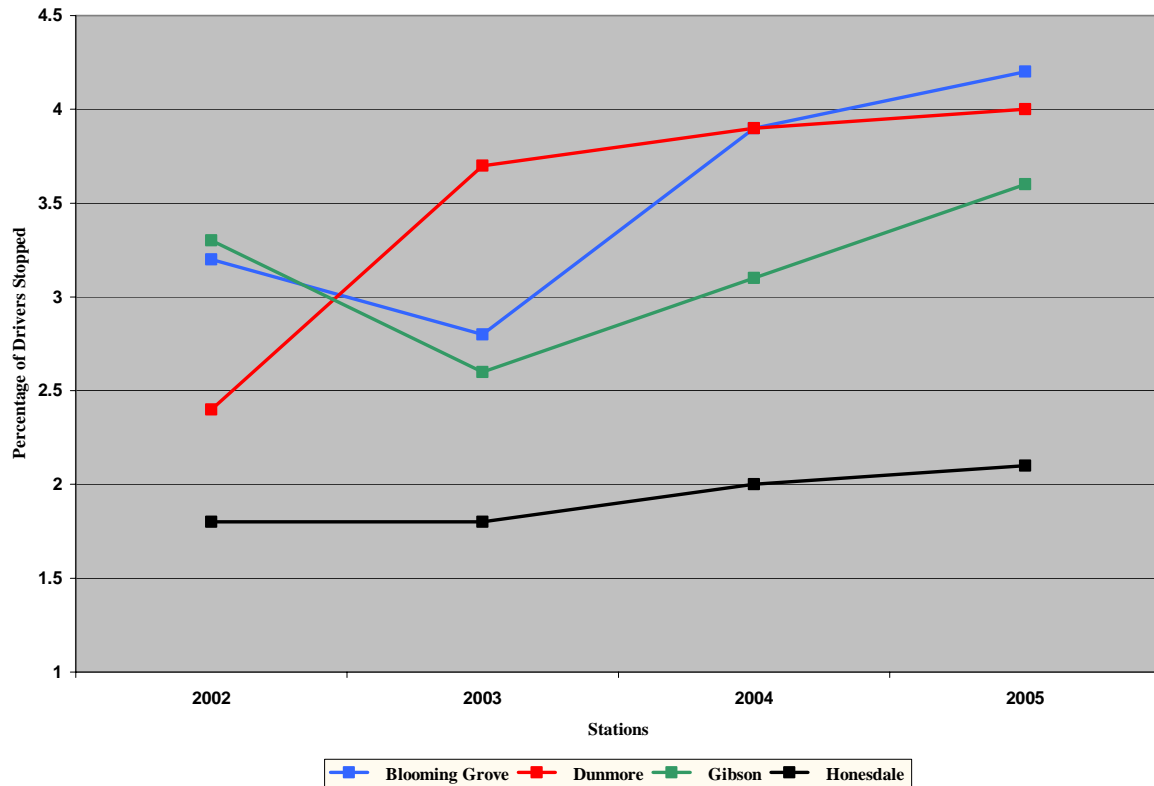


Figure 5.14 details the pattern of Hispanic stops between 2002 and 2005 in *Troop R*. *Honesdale* demonstrated a slight change of less than 1% in their rate of stopping Hispanic drivers over the four years. *Dunmore*, after a noticeable increase between 2002 and 2003, continued an upward trend in the percentage of traffic stops of minority drivers in 2004 and 2005. Slightly more noticeable increases were apparent in *Blooming Grove & Gibson*, which had increases of just over 1%. It will be important to monitor these stations' trends during 2006.

Figure 5.14: Percent of Drivers Stopped – Recorded as Hispanic – Troop R: 2002-2005



The rates of Black and Hispanic drivers stopped in *Troop A* between 2002 and 2005 are reported in **Figures 5.15 & 5.16**. Across the four years, the rates of stops for Black drivers were relatively stable in four of the five stations (i.e., *Ebensburg, Greensburg, Indiana, & Somerset (A)*). *Kiski Valley* exhibited more variation, with a 2% increase in 2003 followed by an over 3% decrease in the percentage of stopped Black drivers between 2003 and 2005.

Figure 5.15: Percent of Drivers Stopped – Recorded as Black – Troop A: 2002-2005

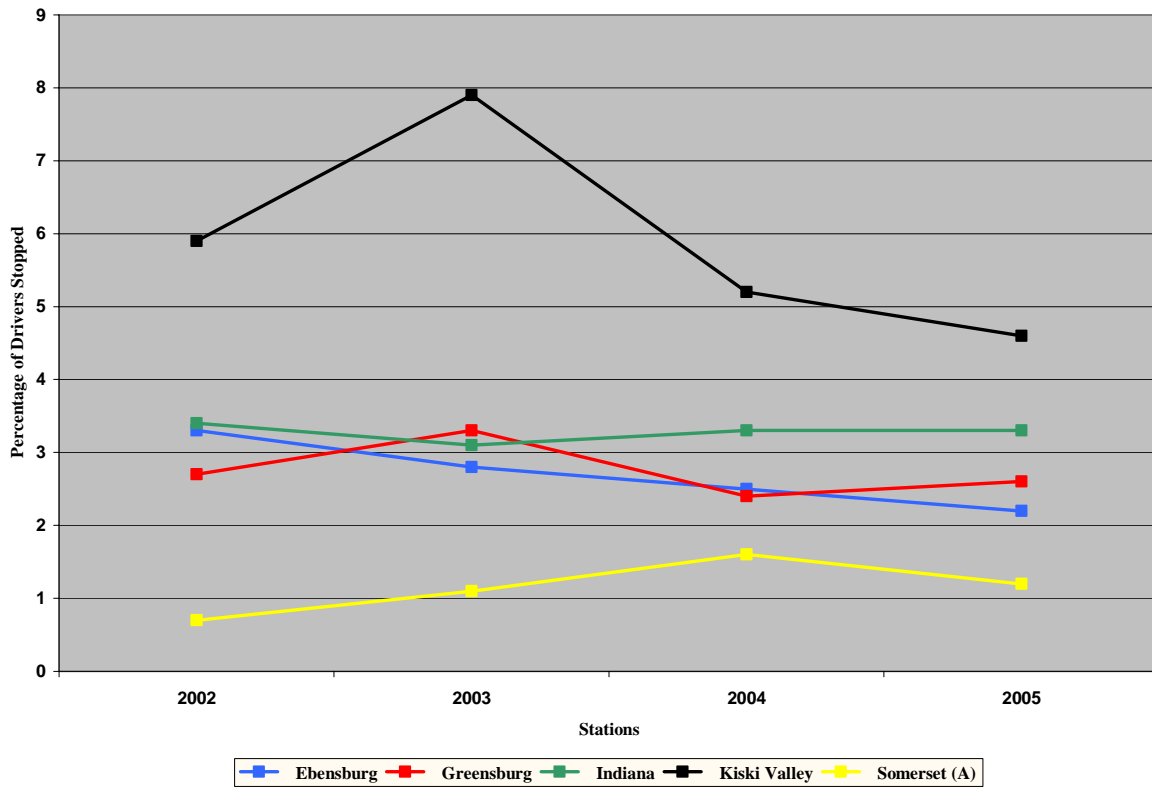
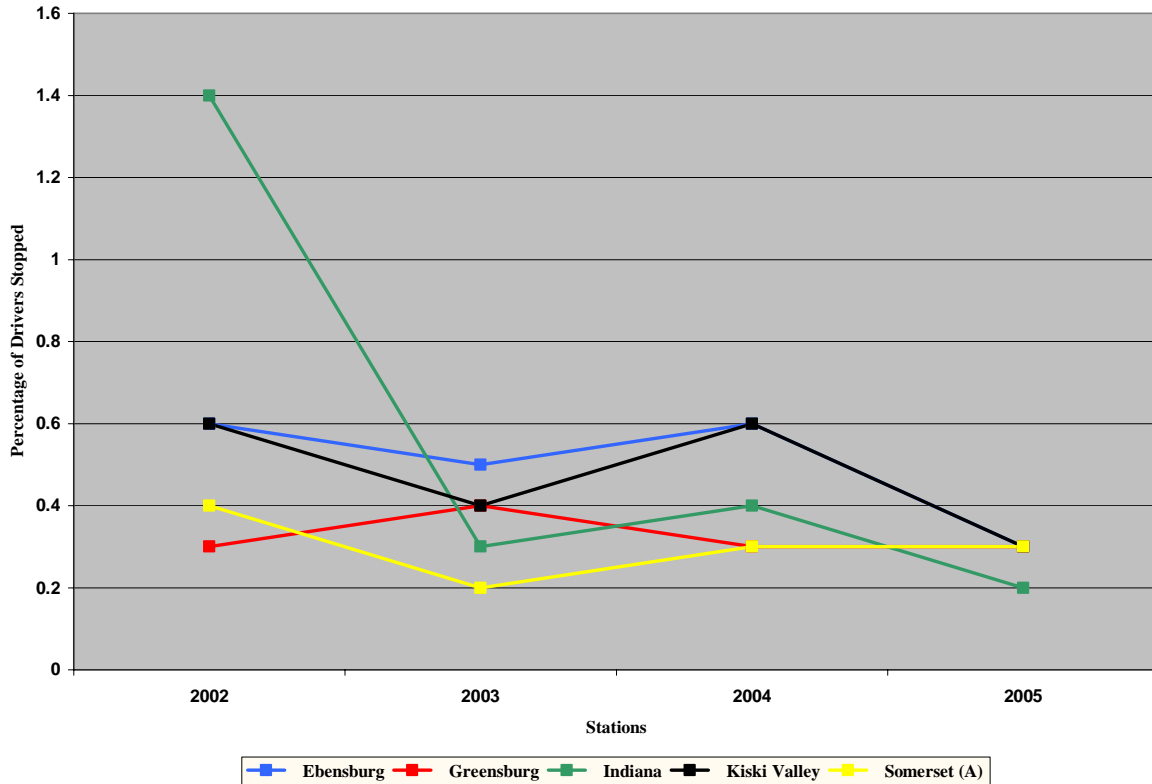


Figure 5.16 displays the stopping trends of Hispanic drivers across the study period in *Troop A*. All five stations demonstrated little variation between 2002 and 2005, with *Indiana & Kiski Valley* slightly reducing their rate of Hispanic stops in 2005. In addition, *Indiana* had a roughly 1% decline in Hispanic stops between 2002 and 2003.

Figure 5.16: Percent of Drivers Stopped – Recorded as Hispanic – Troop A: 2002-2005



Figures 5.17 & 5.18 report the percentages of Black and Hispanic drivers stopped in *Troop B* between 2002 and 2005. As displayed in **Figure 5.17**, three of the five stations (i.e., *Findlay, Uniontown, & Washington*) had relatively consistent rates of Black stops across the four years, with each station demonstrating a change of less than 1%. *Waynesburg* demonstrated a slight dip in their percent of Black stops in 2003 and 2004 prior to a return to their 2002 level in 2005. Finally, beginning in 2003, *Belle Vernon* showed a steady increase in their rate of Black stops with an overall increase of roughly 2%. This trend should be monitored with future data analyses.

Figure 5.17: Percent of Drivers Stopped – Recorded as Black – Troop B: 2002-2005

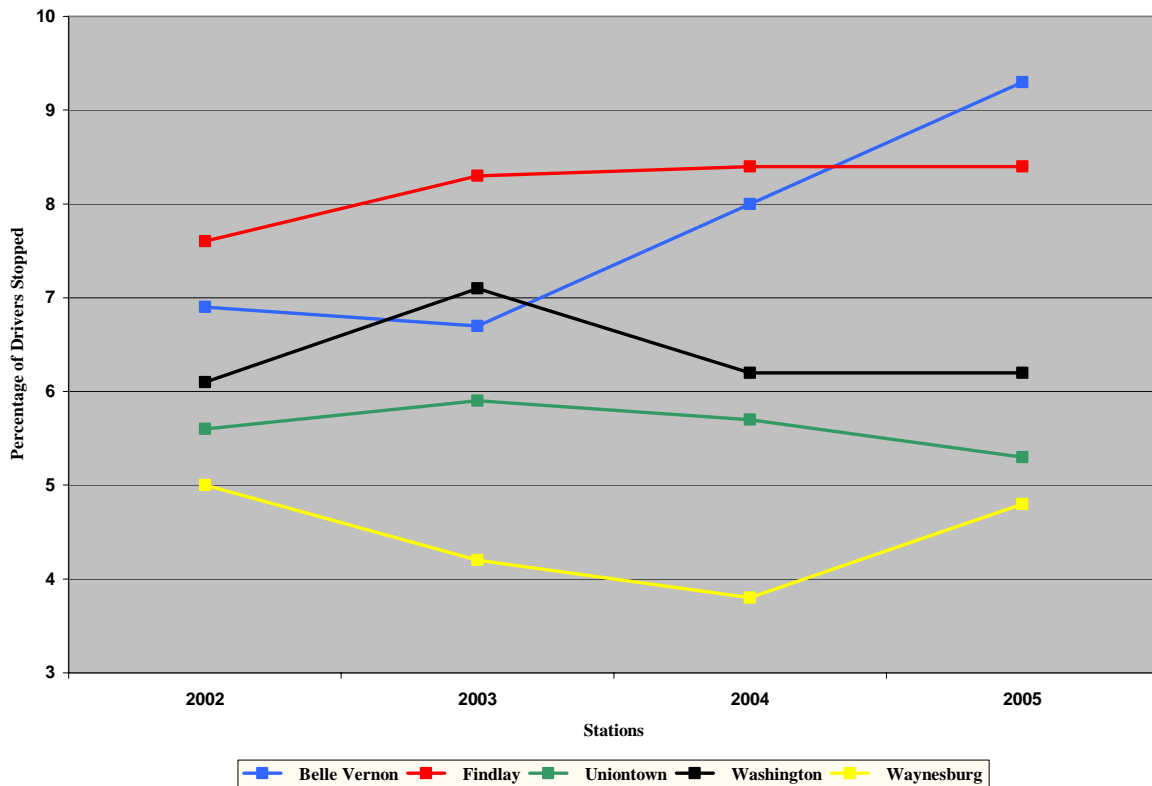
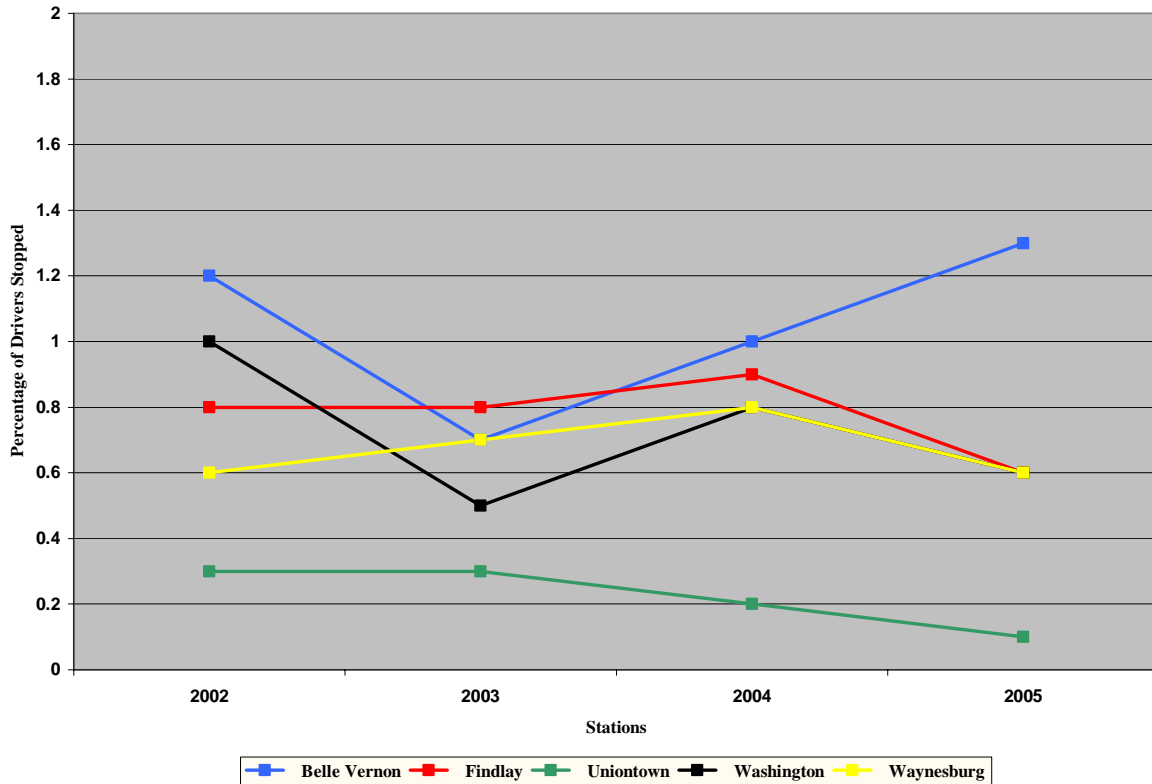


Figure 5.18 reports the trends in *Troop B* across four years for Hispanic drivers. Four of the five stations displayed a reduction in Hispanic stops in 2005. *Belle Vernon* is the only station with an increase in Hispanic stops in 2005. It will be important to monitor the trend in this station during 2006.

Figure 5.18: Percent of Drivers Stopped – Recorded as Hispanic – Troop B: 2002-2005



The rates of Black and Hispanic drivers stopped in **Troop G** between 2002 and 2005 are reported in **Figures 5.19 & 5.20**. Across all seven stations, there was considerable consistency in the rates of Black drivers stopped between 2002 and 2005. Notwithstanding this consistency, there are a couple of changes in the trends worth noting. **McConnellsburg's** rate of Black stops decreased roughly 3% over this time period, and **Rockview's** rate has decreased slightly more than 2%. The remaining stations had slight alterations of roughly 1% or less, with some stations slightly reducing their rates and others slightly increasing their rates of Black stops.

Figure 5.19: Percent of Drivers Stopped – Recorded as Black – Troop G: 2002-2005

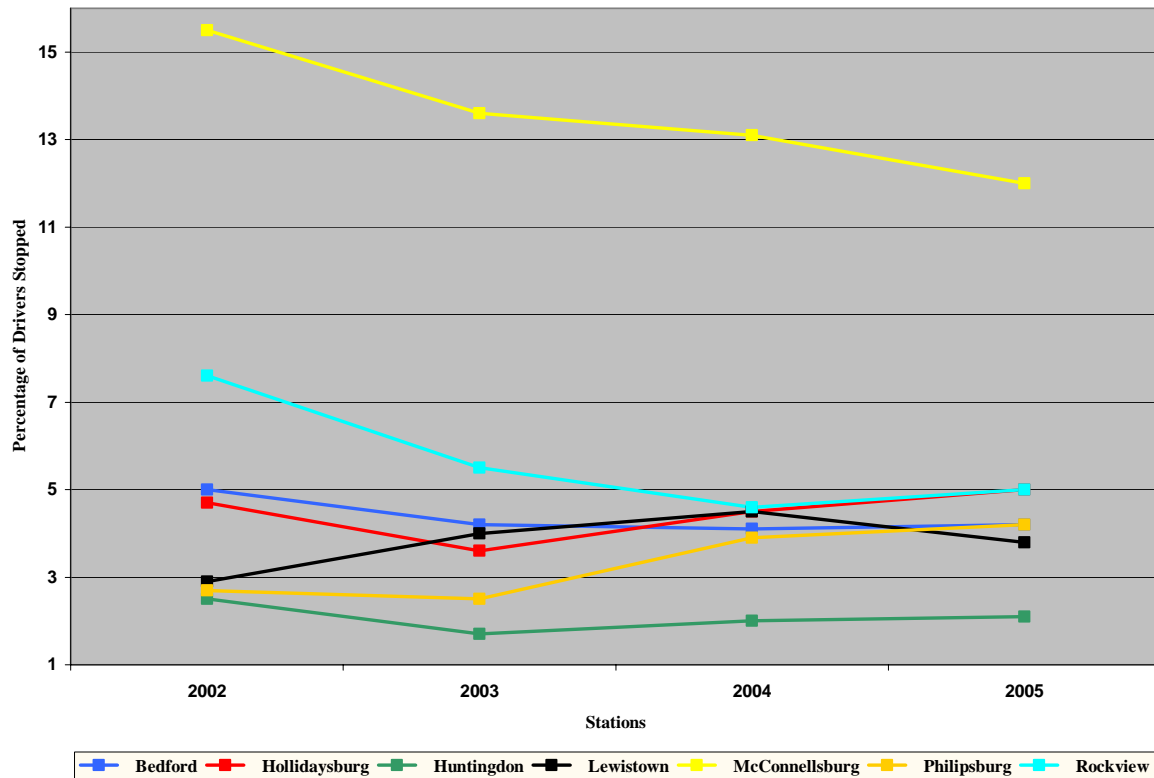
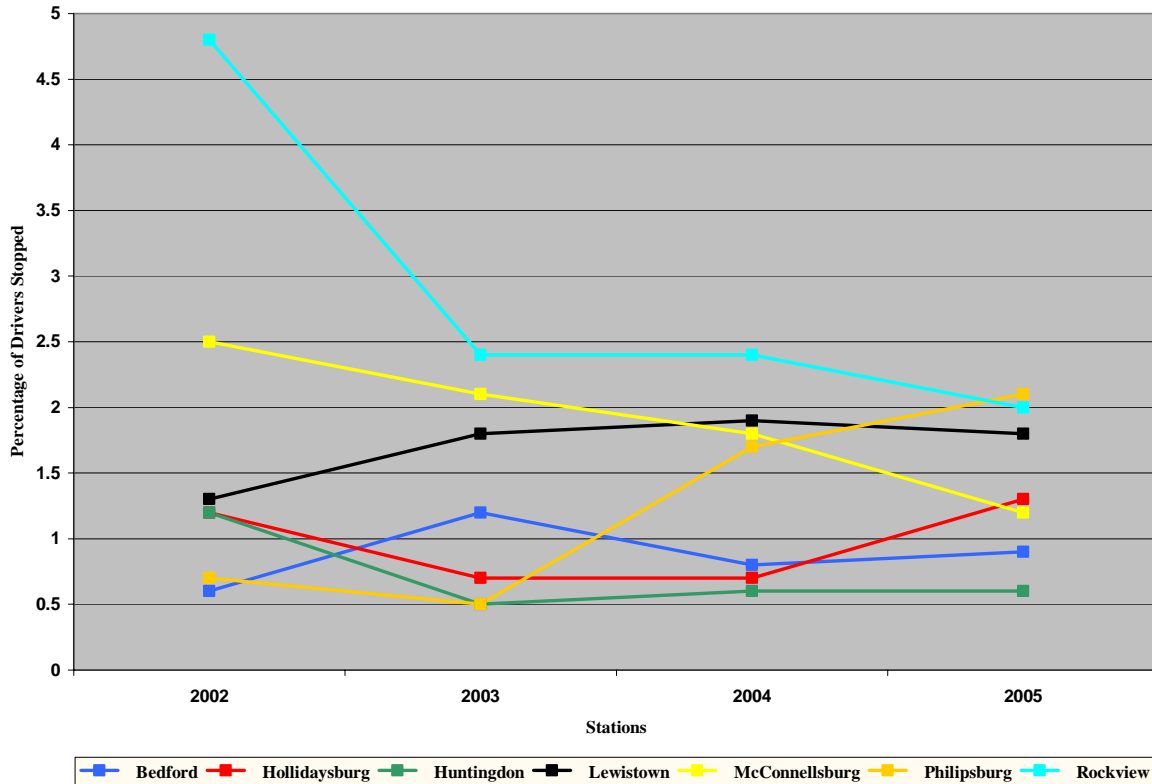


Figure 5.20 reports the trends in *Troop G* for Hispanic drivers between 2002 and 2005. *Bedford, Hollidaysburg, Huntingdon, & Lewistown* all displayed slight variation in their trends across the four years, these variations were less than 1%. More noticeable changes were evident in *McConnellsburg, Philipsburg, & Rockview*. Specifically, *McConnellsburg & Rockview* both reported decreases in their rates of Hispanic stops, while *Philipsburg* increased their rate by close to 2% between 2003 and 2005. Again, these trends should be monitored with the continuing data collection.

Figure 5.20: Percent of Drivers Stopped – Recorded as Hispanic – Troop G: 2002-2005



Figures 5.21 & 5.22 report the percentages of Black and Hispanic drivers stopped in *Troop C* between 2002 and 2005. As displayed in **Figure 5.21**, five of the seven stations demonstrated either a slight reduction or no change in their rates of Black stops across the study period. *Clarion & Clearfield* both displayed increases of roughly 2% and 1%, respectively, between 2004 and 2005. These trends will be examined in light of 2006 data.

Figure 5.21: Percent of Drivers Stopped – Recorded as Black – Troop C: 2002-2005

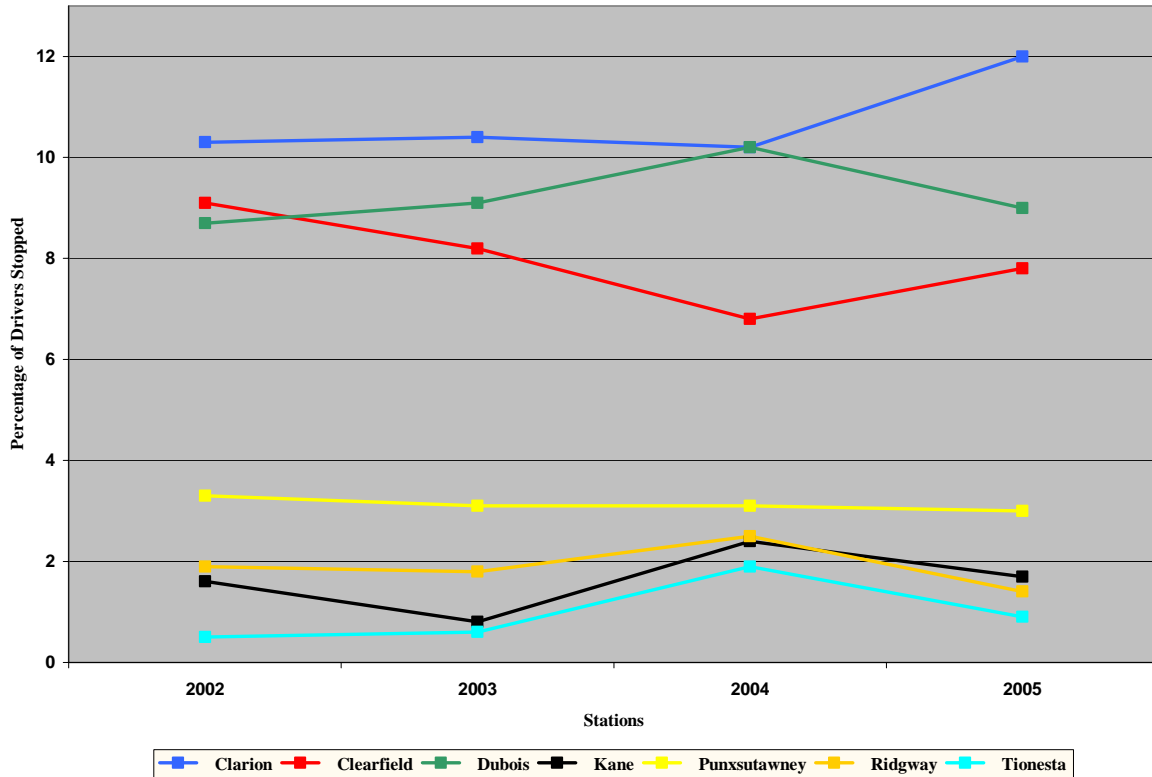
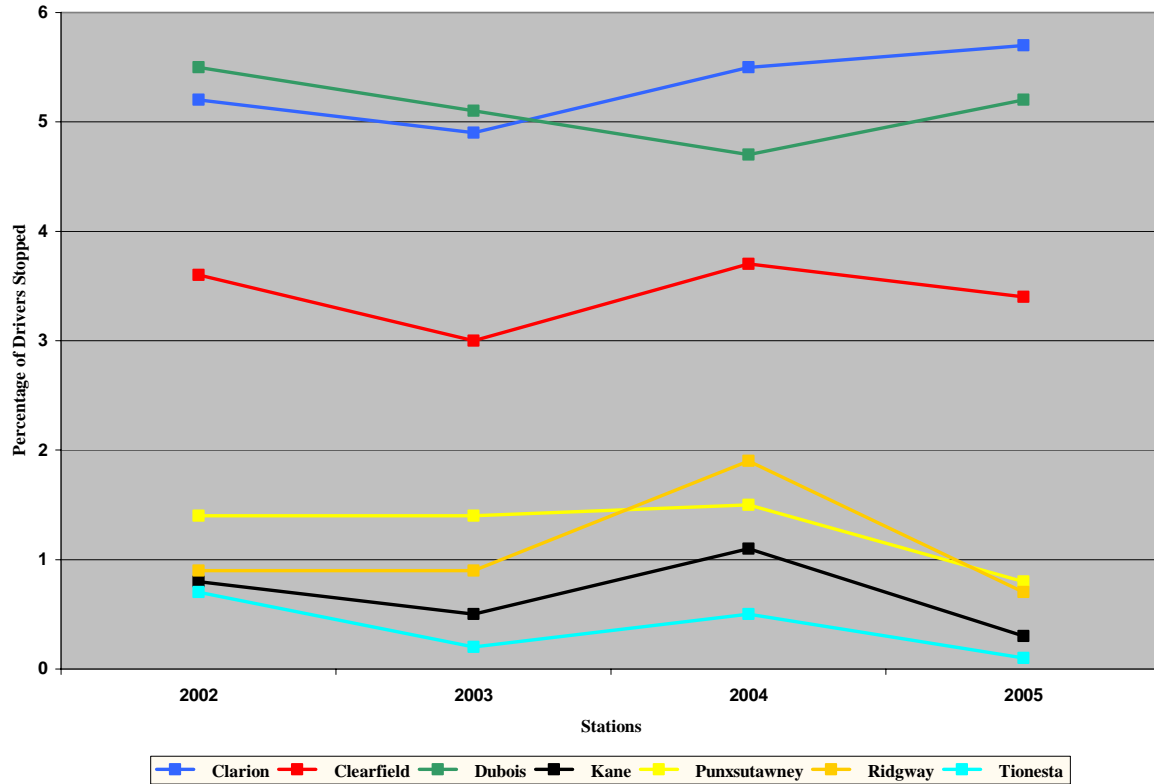


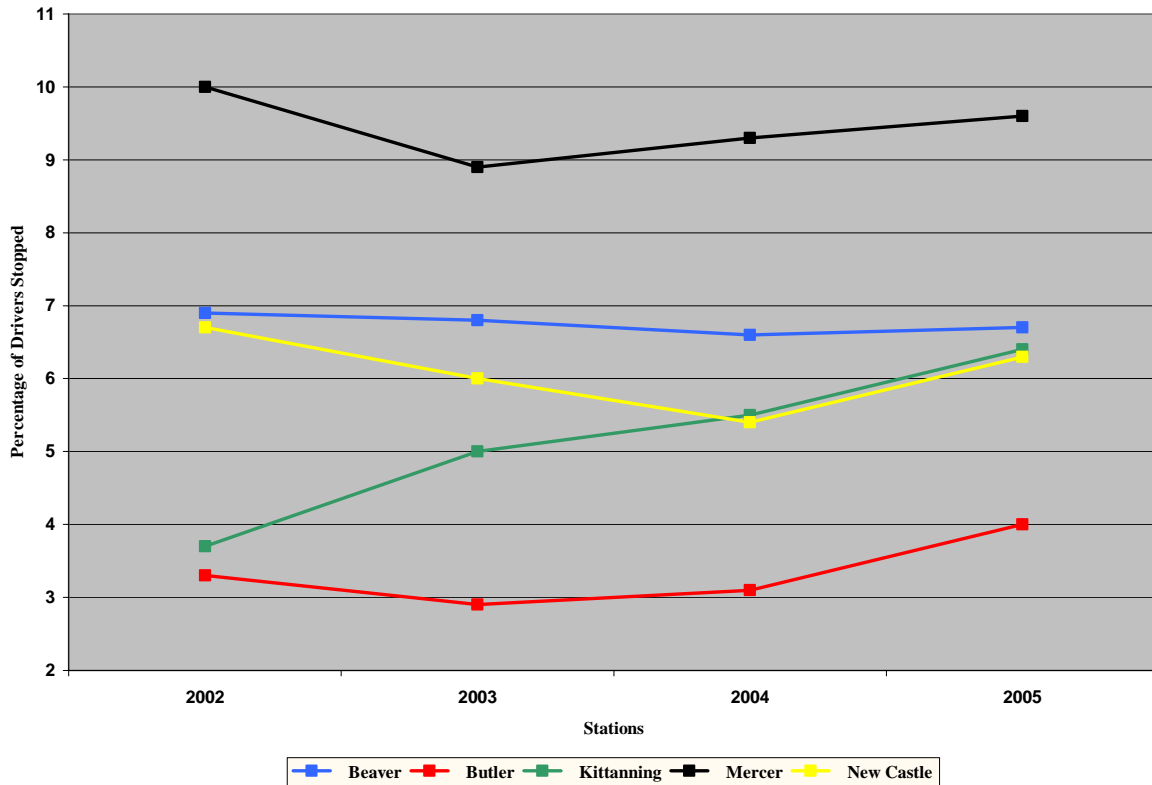
Figure 5.22 reports the Hispanic stops in *Troop C* between 2002 and 2005. Five of the seven stations demonstrated reductions in their rate of stops for this racial/ethnic group. The remaining two stations, *Clarion & Dubois*, reported slight increases in 2005.

Figure 5.22: Percent of Drivers Stopped – Recorded as Hispanic – Troop C: 2002-2005



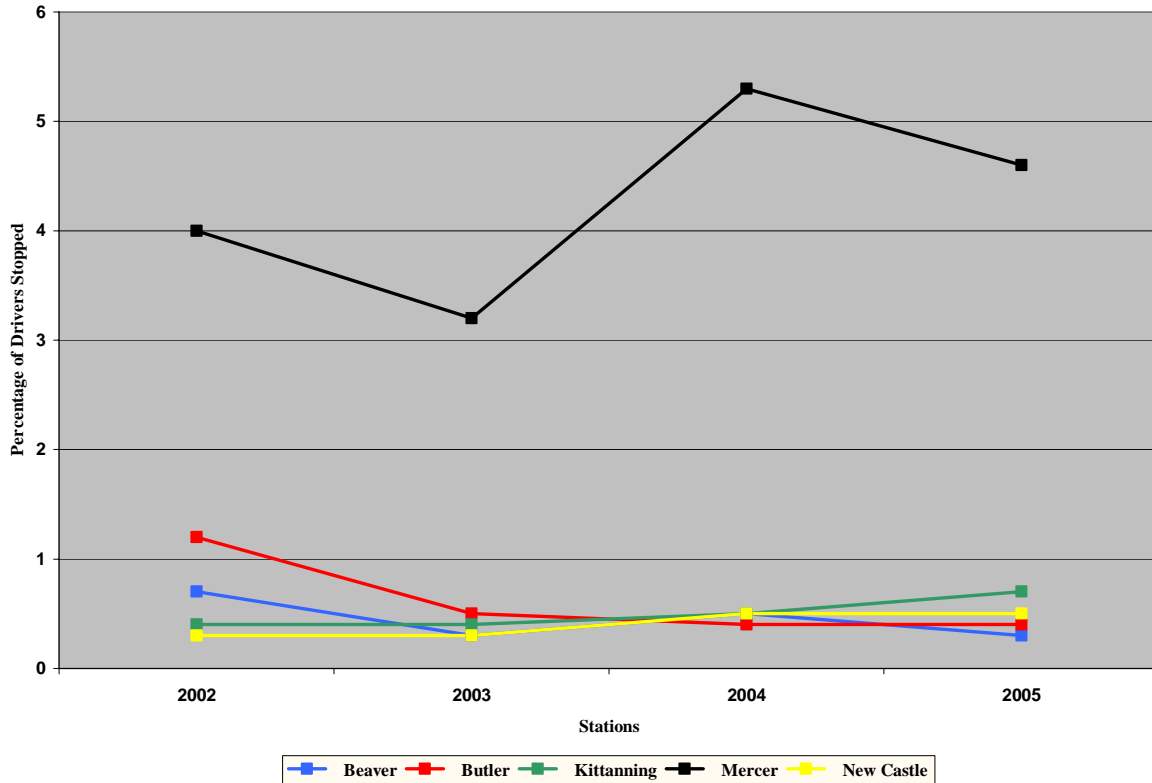
The rates of Black and Hispanic drivers stopped in *Troop D* between 2002 and 2005 are reported in **Figures 5.23 & 5.24**. For Black drivers, the stopping rate held relatively steady in *Beaver* across the four years of analysis and rose less than 1% in *Butler, Mercer, New Castle, & Kittanning* during 2005. This rising trend in *Kittanning* has been evident since 2003 and should be examined in conjunction with 2006 data.

Figure 5.23: Percent of Drivers Stopped – Recorded as Black – Troop D: 2002-2005



Hispanic drivers are detailed in **Figure 5.24** across the four years of analysis. Four of the five stations showed little variation between 2002 and 2005, with changes of less than 1% for any of the stations. *Mercer* showed more variation across the four years but, after a noticeable increase in 2004, had a reduction of almost 1% in 2005. This instability in the percentage of Hispanic drivers stopped in *Mercer* should be monitored with future data collection.

Figure 5.24: Percent of Drivers Stopped – Recorded as Hispanic – Troop D: 2002-2005



Figures 5.25 & 5.26 report the percentages of Black and Hispanic drivers stopped in *Troop E* between 2002 and 2005. *Erie, Girard, & Meadville* all demonstrated slight variation in stops of Black drivers between 2002 and 2005, with an overall reduction in *Erie & Girard*, and a slight increase in *Meadville*. The rate of stops in *Warren* was unchanged, while *Corry* demonstrated a noticeable climb until 2005, when there was a substantial decrease. After a decrease in 2003, *Franklin* experienced a noticeable increase through 2005, and should be monitored closely in 2006, as the overall increase in the percentage of Black drivers stopped has been roughly 4%.

Figure 5.25: Percent of Drivers Stopped – Recorded as Black – Troop E: 2002-2005

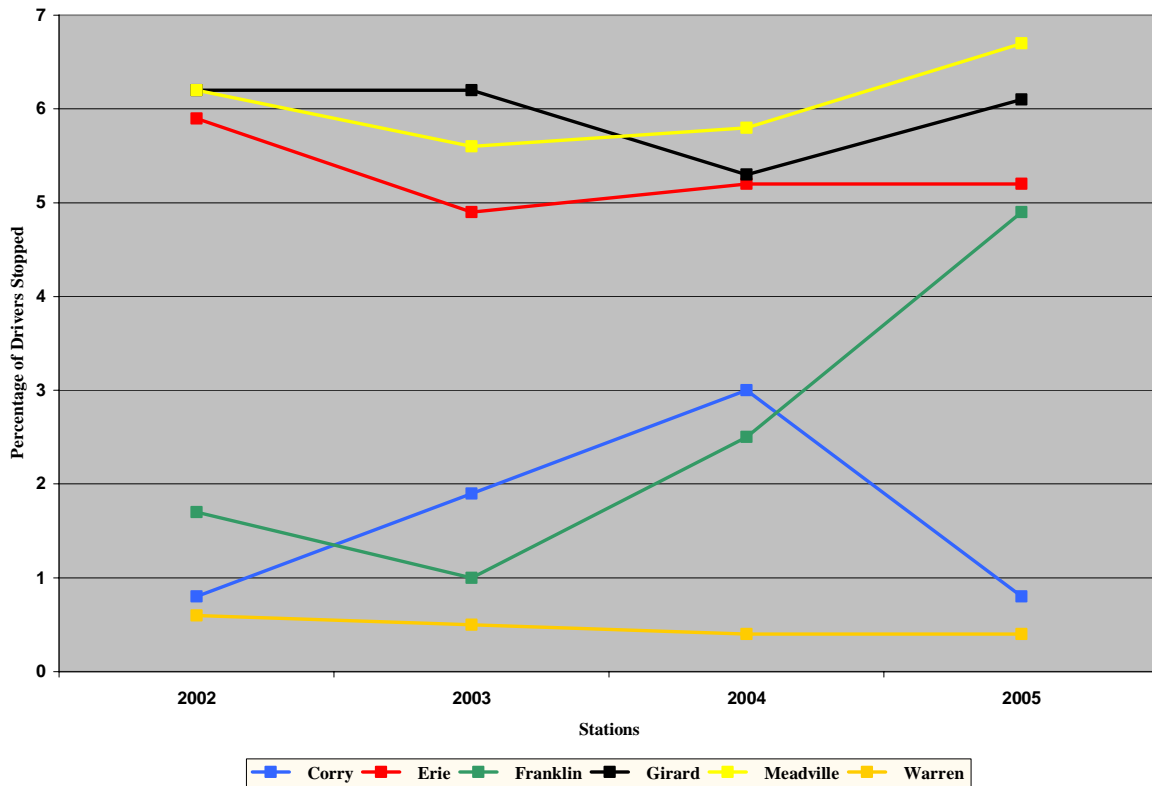
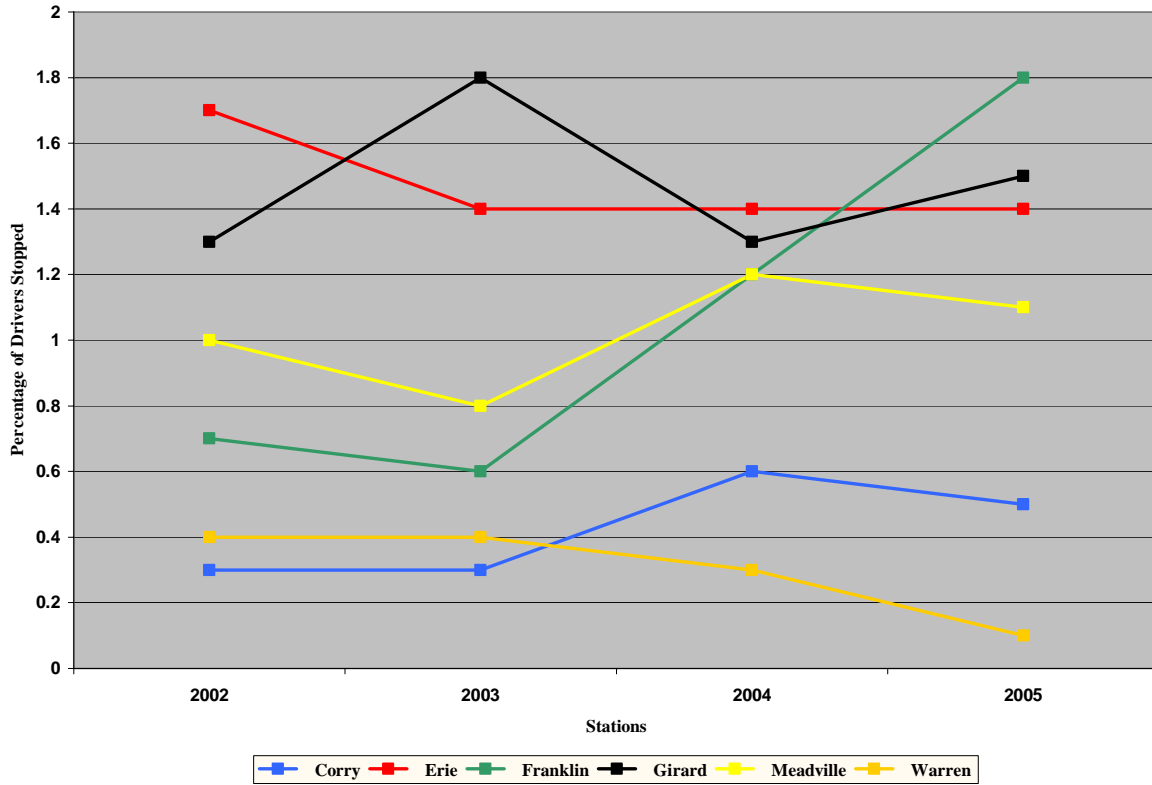


Figure 5.26 highlights the stopping trends for Hispanic drivers in *Troop E* between 2002 and 2005. Four stations (i.e., *Corry*, *Erie*, *Meadville*, & *Warren*) exhibited lower or unchanged rates of Hispanic stops in 2005 when compared to the previous year. *Girard* reported a slight increase in 2005, while *Franklin* reported a more noticeable increase. Both of these stations need to be monitored with 2006 data in order to further document these trends.

Figure 5.26: Percent of Drivers Stopped – Recorded as Hispanic – Troop E: 2002-2005



The rates of Black and Hispanic drivers stopped in *Troop K* between 2002 and 2005 are reported in **Figures 5.27 & 5.28**. In regard to Black drivers, *Media* exhibited a decrease in their rate of stops during 2005, while *Philadelphia & Skippack* remained relatively stable across the four years of data analysis.

Figure 5.27: Percent of Drivers Stopped – Recorded as Black – Troop K: 2002-2005

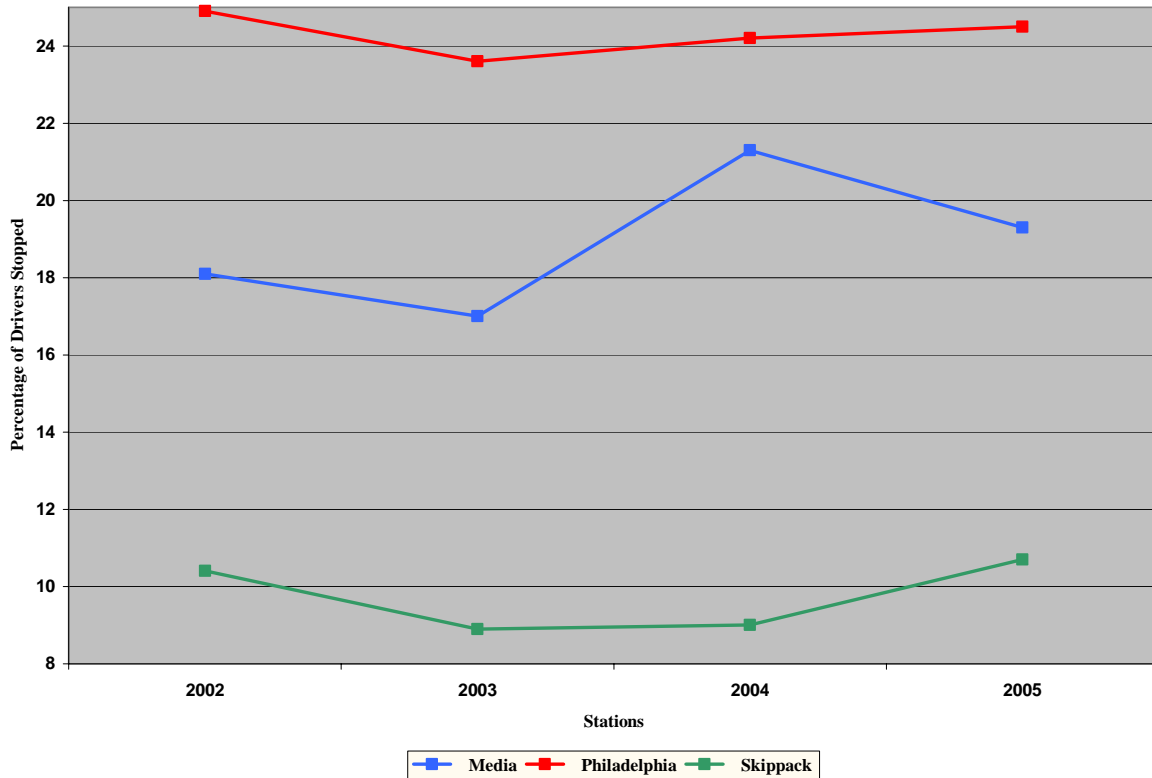
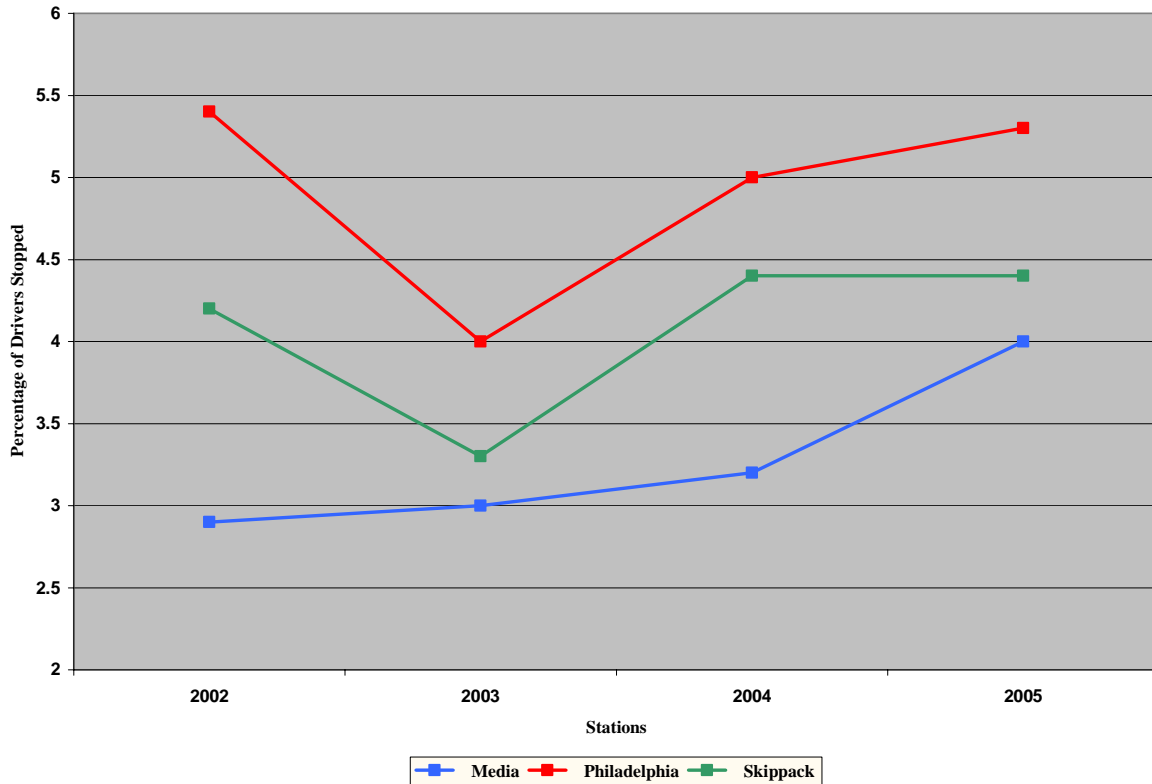


Figure 5.28 reports the trends for Hispanic drivers in *Troop K* between 2002 and 2005. *Media* displayed slightly more than a 1% increase across the four years. *Philadelphia & Skippack* both reported noticeable decreases in 2003 prior to a return to their 2002 levels of Hispanic stops in 2004 and 2005.

Figure 5.28: Percent of Drivers Stopped – Recorded as Hispanic – Troop K: 2002-2005



The rates of Black and Hispanic drivers stopped in *Troop M* between 2002 and 2005 are reported in **Figures 5.29 & 5.30**. *Belfast, Fogelsville & Trevoise* remained virtually unchanged in their rates of Black stops between 2002 and 2005. *Bethlehem & Dublin* both demonstrated slight increases over the four years of data analysis, with increases of roughly 2%.

Figure 5.29: Percent of Drivers Stopped – Recorded as Black – Troop M: 2002-2005

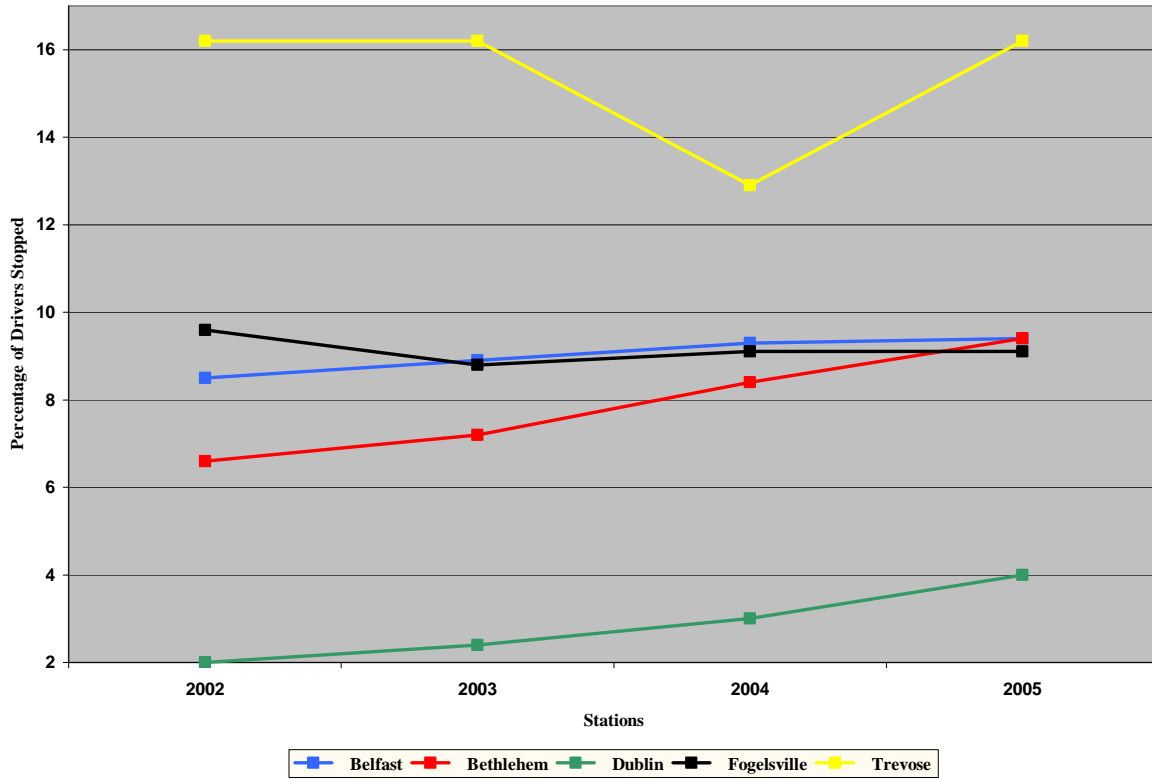
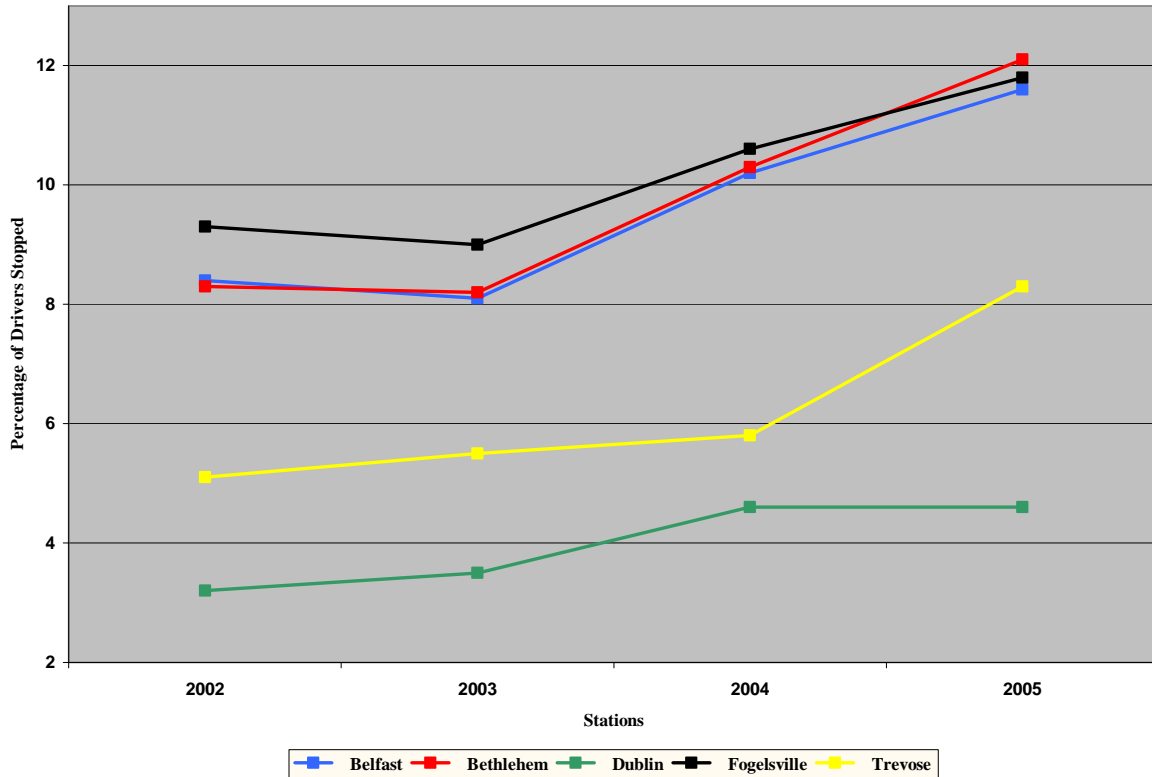


Figure 5.30 reports the trends of Hispanic stops in Troop M between 2002 and 2005. Each of the five stations demonstrated varying degrees of increases in the percent of Hispanic stops over the four years of data analysis and should continue to be monitored in 2006. Specifically, *Belfast, Bethlehem, Dublin, Fogelsville, & Trevose* increased between 2% and 3% each from 2002 to 2005.

Figure 5.30: Percent of Drivers Stopped – Recorded as Hispanic – Troop M: 2002-2005



The rates of Black and Hispanic drivers stopped in *Troop N* between 2002 and 2005 are reported in **Figures 5.31 & 5.32**. In regard to Black drivers, four of the five stations in *Troop N* demonstrated relatively unchanged rates of stops across the four years of data analysis. Only one station, *Swiftwater*, displayed an upward trend across the four years.

Figure 5.31: Percent of Drivers Stopped – Recorded as Black – Troop N: 2002-2005

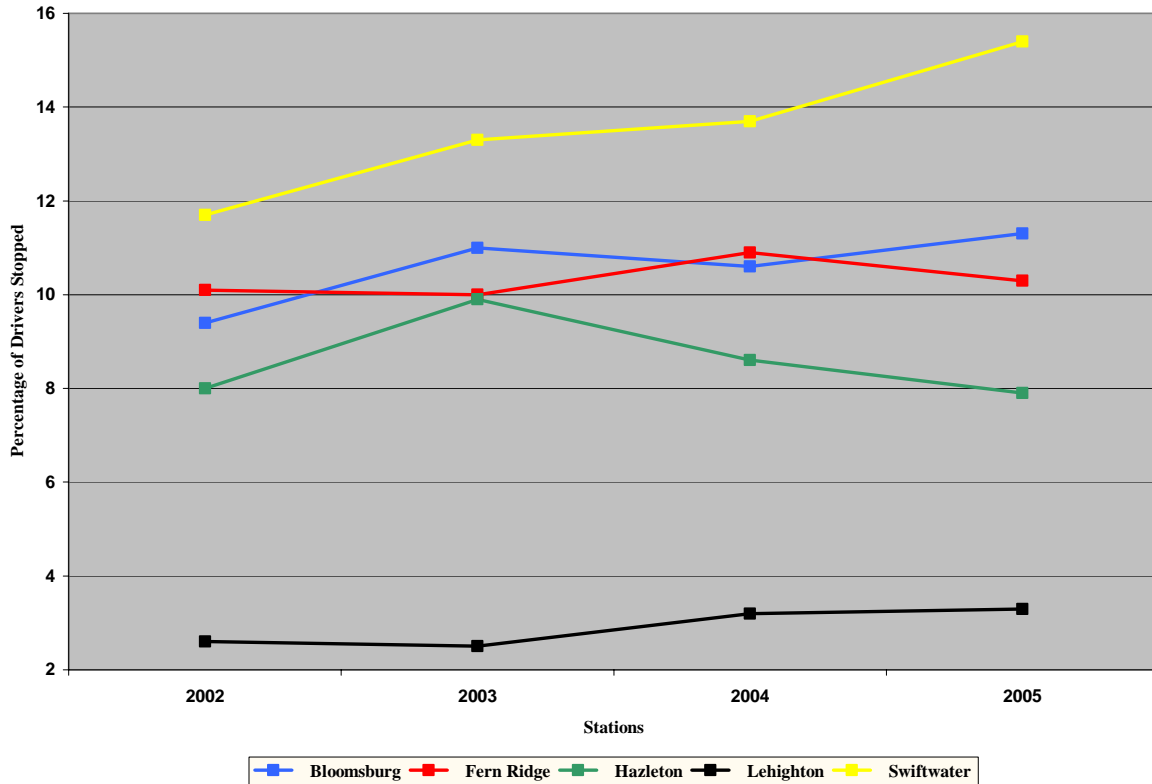
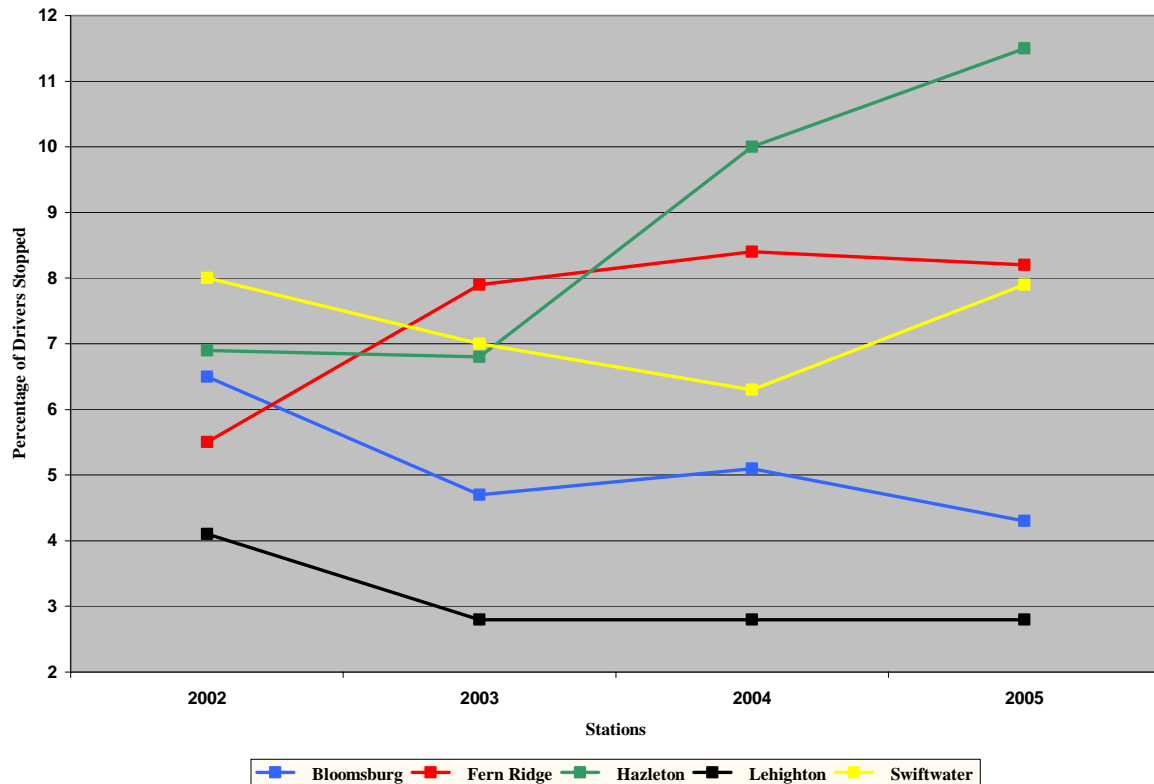


Figure 5.32 shows the trends for Hispanic drivers between 2002 and 2005, with *Bloomsburg & Lehigh* demonstrating reductions in the rates of Hispanic drivers stopped across the four year period. After initial decreases, *Swiftwater* reported a slight increase in 2005, while *Fern Ridge* stabilized in 2004 and reduced its Hispanic stopping rate in 2005. Finally, *Hazleton* showed a noticeable increase from 2003 to 2005 in stops of Hispanic driver. This trend needs to be monitored in 2006 to further understand the dynamics of Hispanic stops in this station.

Figure 5.32: Percent of Drivers Stopped – Recorded as Hispanic – Troop N: 2002-2005



Stops of Black & Hispanic Drivers at the County & Station Levels: 2002 – 2005

As demonstrated in **Figures 5.1 - 5.32**, trends of stopping Black and Hispanic drivers varied considerably by station between 2002 and 2005. While these figures are useful for descriptive purposes, they do not examine if there is a statistically significant differences in the rates of stopping Black and Hispanic drivers within each station. To address this issue, a statistical test, the binomial, was run at the county and station level to compare both the rates of Black drivers stopped and Hispanic drivers stopped across the four years of data collection.

The binomial significance test was used for this analysis because it allows a comparison of two proportions to determine if there is a statistically significant difference in the two values. In addition, it considers the sample size (i.e., the number of traffic stops) when determining if

there is a statistical difference between the two proportions. The result of the binomial test is a value that is interpretable as the probability of that outcome occurring by chance alone; in other words, the value produced by the binomial is the confidence that the difference between the two proportions is in fact a real statistical difference and not an artifact of the data. For example, if a .0001 confidence level is used, the binomial statistic should be interpreted as reflecting a statistically significant difference between the proportions 9,999 times out of 10,000. Alternatively, only one time out of 10,000 will this result occur due to chance alone.

Importantly, the binomial is particularly appropriate for examining percentages across time periods when the total number of events change across those time periods. In this case, there are a fluctuating number of traffic stops across years, both when considering all traffic stops and traffic stops of only minority drivers. The binomial is constructed in a manner to consider these varying numbers of cases when determining statistical significance. Moreover, because the binomial considers the number of cases, it also accounts for locations that have a low number of stops. In other words, the result of the binomial has taken into account areas that have low numbers of stops and has corrected for any bias that may be associated with such conditions. Simply put, this statistical technique takes into account the small number of stops in some locations when calculating measures of statistical significance.

Prior to computing the binomial, two decisions were made to ensure that the results of the binomial were accurate. First, a stringent confidence level was selected. The research team decided on using a confidence level of .0001, which allows for an extremely high degree of confidence in the result. That is, for each county and station, an independent binomial value is produced, and only if that value reaches the .0001 level is the county or station identified as having a statistically significant difference in their rate of stopping the racial/ethnic group of interest during the selected time period.

Second, for Black and Hispanic drivers, their rates of stops in 2005 were compared to 2002 and 2003. It is important to compare the 2005 rate to not only 2002, but also 2003. This is done in order to ensure that there is a consistent increase in 2005 rather than merely a random fluctuation based on selecting just one year to compare. By comparing both 2002 to 2005 and 2003 to 2005, counties and stations with elevated rates in 2005 can be identified with confidence and any statistically significant result is not a consequence of examining only one year.

Based on these criteria, binomial analyses were conducted for all counties and stations. Counties and stations with a downward trend between 2002 and 2005 and/or 2003 and 2005 were removed from further consideration. That is, if the rate of stops for either Blacks or Hispanics decreased between the years of interest, they were not examined further. Moreover, based on the binomial, only counties and stations that demonstrated an increase in both analyses and exhibited a statistically significant result in both comparisons are reported in **Tables 5.3 - 5.6**.

County Analyses

Based on these criteria, two counties were identified as having statistically significant increases in rates of traffic stops of Black drivers from 2002 and 2003 to 2005 and are identified in **Table 5.3**. In the first three columns of **Table 5.3**, the total number of stops of Blacks drivers in 2002, 2003, and 2005 are presented, while the final three columns present the percentage of all stops that were of Black drivers in 2002, 2003, and 2005. The binomial was computed based on both the total number of stops that occurred in each year and the percent of minority stops in each year. These counties are listed due to their statistically significant increases in both comparisons (i.e., 2002 to 2005, and 2003 to 2005).

Table 5.3: Comparison of Black Stops between 2002, 2003, & 2005 at the County Level

	<u># Black Stops</u>			<u>% Black Stops</u>		
	2002*	2003	2005	2002	2003	2005
Mercer	185	252	376	10.4	9.4	12.8
Venango	27	44	94	2.2	1.9	5.5

* These data only represents eight months of data collection (May – December, 2002)

It is critical to note that these counties have been identified because of their statistically significant increases in stopping rates of minorities. The reasons for these increased rates in traffic stops of minority drivers, however, cannot be determined from these data. Importantly, the counties identified as having statistically significant increases in the percentages of Black drivers stopped are geographically clustered in the northwest quadrant of the state.

Table 5.4 reports the rate of change for nine counties identified as having statistically significant increases in stops of Hispanic drivers. Similar to the results for Black drivers, the results of the binomial analyses for Hispanic drivers suggest a geographic component; specifically, all of the counties, except *Venango*, are located in the southeast quadrant of the state.

Table 5.4: Comparison of Hispanic Stops between 2002, 2003, & 2005 at the County Level

	<u># Hispanic Stops</u>			<u>% Hispanic Stops</u>		
	2002*	2003	2005	2002	2003	2005
Bucks	217	407	402	4.6	4.6	6.1
Chester	486	580	702	7.5	6.9	9.3
Lancaster	502	475	489	5.3	4.9	6.8
Lehigh	433	569	953	7.8	7.8	11.1
Luzerne	237	249	415	3.9	3.5	6.2
Montgomery	329	494	513	4.3	3.9	5.2
Northhampton	255	307	472	8.5	7.9	11.5
Schuylhill	74	80	110	2.4	2.2	3.7
Venango	9	19	39	0.7	0.8	2.3

* These data only represents eight months of data collection (May – December, 2002)

There are several plausible factors that might account for the statistically significant differences in the increasing rates of traffic stops of Black and Hispanic drivers reported in **Tables 5.3 & 5.4**. Unfortunately the data available cannot be used to determine these reasons. Some factors that may be responsible for statistically significant increases in the percentages of traffic stops of Black and Hispanic drivers include:

- Changes in the racial/ethnic composition of residential populations surrounding these jurisdictions that have altered the racial/ethnic composition of drivers eligible to be stopped.
- Other changes in travel patterns that differentially impact the percentages of minority drivers on particular roadways.
- Changes in PSP deployment patterns and manpower allocation to address changes in reported criminal patterns and calls for service that result in higher concentrations of Troopers in areas where minorities are more likely to travel and/or violate the law.
- Modifications to data collection procedures that resulted in more accurate (or less accurate) collection of data in 2005 compared to earlier time periods.
- Increases in Trooper bias toward minority drivers.

Station Analyses

Based on these criteria, 11 stations were identified as having statistically significant increases in rates of traffic stops of Black drivers from 2002 and 2003 to 2005. These 11 stations are identified in **Table 5.5**. In the first three columns of **Table 5.5**, the total number of stops of Blacks drivers in 2002, 2003, and 2005 are presented, while the final three columns present the percentage of all stops that were of Black drivers in 2002, 2003, and 2005. The binomial was computed based on both the total number of stops that occurred in each year and the percent of minority stops in each year. These counties are listed due to their statistically significant increases in both comparisons (i.e., 2002 to 2005, and 2003 to 2005).

Table 5.5: Comparison of Black Stops between 2002, 2003, & 2005 at the Station Level

	<u># Black Stops</u>			<u>% Black Stops</u>		
	2002*	2003	2005	2002	2003	2005
Belle Vernon	171	269	220	6.9	6.7	9.3
Bethlehem	132	168	327	6.6	7.2	9.4
Clarion	436	631	425	10.3	10.4	12.0
Dublin	38	99	126	2.0	2.4	4.0
Embreeville	277	332	357	12.7	12.1	14.8
Franklin	20	21	81	1.7	1.0	4.9
Harrisburg	274	314	296	7.1	7.3	8.9
Kittanning	75	136	233	3.7	5.0	6.4
Philipsburg	44	66	104	2.7	2.5	4.2
Swiftwater	532	652	535	11.7	13.3	15.4

* These data only represents eight months of data collection (May – December, 2002)

It is critical to note that these stations have been identified because of their statistically significant increases in stopping rates of minorities. The reasons for these increased rates in traffic stops of minority drivers, however, cannot be determined from these data. For the stations identified as having statistically significant increases in the percentages of Black drivers stopped there appears to be no clear pattern of geographic concentration or police organizational concentration. That is, the stations identified in **Table 5.5** are spread across different troops and areas and, as such, no clear pattern of geographic concentration is evident.

Table 5.6 reports the rate of change for 14 stations identified as having statistically significant increases in stops of Hispanic drivers. Contrary to the results for Black drivers, the results of the binomial analyses for Hispanic drivers suggest a geographic component; specifically, all of the stations in *Area V, Troop M* have statistically significant increases in the percentages of Hispanic drivers stopped in 2005 compared to both 2002 and 2003.

Table 5.6: Comparison of Hispanic Stops between 2002, 2003, & 2005 at the Station Level

	<u># Hispanic Stops</u>			<u>% Hispanic Stops</u>		
	2002*	2003	2005	2002	2003	2005
Avondale	310	329	429	11.2	10.4	15.6
Belfast	203	245	367	8.4	8.1	11.6
Bethlehem	166	191	421	8.3	8.2	12.1
Carlisle	64	96	224	2.9	2.8	4.3
Dublin	61	145	144	3.2	3.5	4.6
Franklin	8	13	30	0.7	0.6	1.8
Fogelsville	258	393	583	9.3	9.0	11.8
Hazleton	194	193	362	6.9	6.8	11.5
Lancaster	197	105	255	5.9	4.9	8.2
Media	126	155	103	2.9	3.0	4.0
New Stanton	43	102	137	1.1	1.1	1.7
Philipsburg	11	13	52	0.7	0.5	2.1
Schuylkill Haven	17	21	53	1.5	1.5	3.5
Treose	96	177	177	5.1	5.5	8.3

* These data only represents eight months of data collection (May – December, 2002)

There are several plausible factors that might account for the statistically significant differences in the increasing rates of traffic stops of Black and Hispanic drivers reported in **Tables 5.5 & 5.6**. Unfortunately the data available cannot be used to determine these reasons. Some factors that may be responsible for statistically significant increases in the percentages of traffic stops of Black and Hispanic drivers include:

- Changes in the racial/ethnic composition of residential populations surrounding these jurisdictions that have altered the racial/ethnic composition of drivers eligible to be stopped.

- Other changes in travel patterns that differentially impact the percentages of minority drivers on particular roadways.
- Changes in PSP deployment patterns and manpower allocation to address changes in reported criminal patterns and calls for service that result in higher concentrations of Troopers in areas where minorities are more likely to travel and/or violate the law.
- Modifications to data collection procedures that resulted in more accurate (or less accurate) collection of data in 2005 compared to earlier time periods.
- Increases in Trooper bias toward minority drivers.

While the analyses reported above cannot determine the reasons for the statistically significant increases in the percentages of minority drivers stopped in these stations, the simple identification of these patterns can be used by PSP administrators to further examine the most plausible reasons for these increases. In addition, data collected in 2006 and 2007 will be used in future reports to examine whether or not these trends continue.

Traffic Stop Outcomes at the Department, Area, & Troop Levels: 2002 – 2005

Tables 5.7 & 5.8 report traffic stop outcomes received by drivers over time, across the department, area, troop, and station levels. Specifically, **Table 5.7** summarizes the percentages of stops that resulted in warnings, citations, arrests, searches of the vehicle and/or occupant, and discoveries of contraband during searches at the department, area, and troop levels. **Table 5.8** summarizes the same post-stop outcome information at the station level.

As reported in **Table 5.7**, the percentage of member-initiated traffic stops at the *department* level resulting in warnings declined across the four years of data collection. In 2002, 27.0% of traffic stops resulted in warnings, whereas in 2005, that percentage dropped to 24.6%. This pattern is consistent across most of the areas, with the exception of **Area II** (18.1% to 18.3%) and **Area III** (26.2% to 27.4%), which had slight increases in warnings for 2005 compared to 2004. In addition, **Area V** reported a spike in warnings issued in 2004 (an increase from 29.3% in 2003 to 32.5% in 2004), followed by a reduction back to 29.9% of all member-initiated traffic stops in 2005. The reduction in warnings evident at the department level is much less pronounced at the troop level. Only five of the sixteen troops demonstrated a continued reduction in the percentage of traffic stops that resulted in warnings. In six of sixteen troops, there was actually an increase in the percentage of stops resulting in warnings between 2004 and 2005. For example, warnings issued in **Troop B** increased from 22.1% to 24.7%. The station level trends for percent of traffic stops that result in warnings reflect the same pattern as seen at the troop level. That is, only 14 of the 90 stations (16%) reported decreases in warnings across all four years; whereas 40 stations (44%) reported increases between 2004 and 2005. In summary, the trend at the department and area level is a general decrease in the percentages of member-initiated traffic stops that result in warnings per year, whereas the troop and station levels demonstrate that this larger trend is not consistent across the state but, rather, location specific. That is, almost half of the stations reported a higher percentage of warnings in 2005 when compared to 2004; however, it is important to remember that these percentages are based on the amount of traffic stops that occur in each

geographical area. The department level percentages are based on approximately 300,000 traffic stops per year, whereas some of the stations reported less than 1,000 traffic stops per year. Therefore, while the department trend is a decrease in warnings overall, specific locales are experiencing different trends.

Over the same four year period, the percentage of traffic stops that resulted in citations demonstrated the inverse of the reported patterns for warnings. That is, there has been a reported steady increase in the percentage of member-initiated traffic stops that result in citations issued across the *department*. From a low of 82.9% of traffic stops in 2002, citations have increased to 88.1% of traffic stops in 2005. This pattern is consistent at the area level. For example, *Area IV* increased their reported citations by almost 10% (from 72.1% of traffic stops in 2002 to 81.2% in 2005). The only exception to this pattern is in *Area V*, where there was a slight decrease in 2003 (83.6%) and 2004 (82.4%) prior to a noticeable increase in 2005 (86.5%). The troop level mirrors this upward trend in percentages of traffic stops that result in citations, except for a few locations with minor reductions. **Table 5.8** reports the station level citation rates across time and demonstrates more variation than at the other organizational units. Nevertheless, the general increasing rate of citations is relatively consistent.

While warnings and citations are the most common traffic stop outcomes, arrests and searches are more serious outcomes for citizens. As noted throughout this report, however, there are reasons to believe that the data reported for these more serious outcomes are incomplete. Nevertheless, these trends will be reported and future analyses (based on data from 2006 and 2007) will be able to demonstrate the likely levels of underreporting across organizational units. From 2002 to 2005, less than 1% of the reported member-initiated traffic stops resulted in arrests. In 2002, 0.6% of the stops resulted in arrests; the arrest rate decreased to 0.5% in 2003 and 0.4% in 2004, but then doubled to 0.8% in 2005. The significant increases in arrests reported for 2005 are likely driven by the change in reporting procedures affecting data collected during the last four months of 2005 (September through December). The significant increase in arrests in 2005 was most prevalent in *Area IV*, which increased from a 2004 rate of 0.4% to 1.0% in 2005. *Area II* and *Area V* also reported noticeable increases from 0.3% to 0.6% and from 0.5% to 0.9%, respectively. Of the sixteen troops, only *Troop P* reported a decline in arrest rates in 2005. Over the four year period, seven of the 16 troops (75% of the troops) matched the department trend of decreasing percentages of arrests in 2003 and 2004, prior to increasing percentages in 2005. **Table 6.4** demonstrates greater variation across the station level both in the percentage of arrests and the patterns displayed across the four years of data collection.

Table 5.7 also reports the percentage of stops that resulted in searches of the vehicle and/or occupants. Similar to the outcome of arrest, searches occur infrequently and accounted for 1.1% of all traffic stops in 2005 across the *department*. This rate is higher than previous years, where it ranged from 0.7% in 2003 to 0.8% in 2002 and 2004. As with arrests, there are reasons to believe that data collected prior to September 2005 do not contain information regarding all searches. Specifically, it is believed that searches resulting in seizures were significantly underreported during this time period. Future analyses examining the search and seizure rates with data collected after September of 2005 will provide more information

regarding the level of underreporting, and the patterns that emerge as a result of more accurate data collection.

As with the department wide percentages of searches, most of the PSP areas demonstrated a fairly flat level of traffic stop percentages that resulted in searches until 2005, when a noticeable increase occurred. The exceptions to this pattern are *Area IV*, which had a 0.9% search rate in 2002, 0.6% in 2003, and 1.4% in 2005, and *Area V*, which also had a relatively high search rate in 2002 (1.3%) but experienced a reduction before resurging in 2005 to a rate of 1.4%. No significant differences from these patterns are found at the troop or station level with the exception of *Troop L*, which is trending downward. In addition, some troops did not report increased search rates in 2005 (e.g., *Troop T*). Sixty-four of the 90 stations (71%) reported either a stable or increasing percentage of searches in 2005 when compared to 2004.

The percentage of searches that resulted in seizures are also reported in **Tables 5.7 & 5.8**. Seizure rates are calculated by dividing the number of contraband seizures reported by the number of searches reported (i.e., search success, or “hit” rates). As noted previously, the research team believes that the search success rates reported prior to September, 2005 are artificially low as Troopers did not consistently record information on CDR forms when the member-initiated traffic stop resulted in a search with contraband discovered.

Table 5.7: Traffic Stop Outcomes by Department, Area & Troop – 2002-2005

	<u>% Warnings</u>				<u>% Citations</u>				<u>% Arrested</u>				<u>% Searched</u>				<u>% Seized</u>			
	2002	2003	2004	2005	2002	2003	2004	2005	2002	2003	2004	2005	2002	2003	2004	2005	2002	2003	2004	2005
PSP Dept.	27.0	26.2	24.9	24.6	82.9	84.5	86.4	88.1	0.6	0.5	0.4	0.8	0.8	0.7	0.8	1.1	26.3	25.3	24.0	27.4
AREA I	19.7	18.3	16.8	17.9	87.3	88.8	90.9	91.8	0.4	0.4	0.4	0.6	0.6	0.6	0.8	1.0	27.9	29.3	27.0	29.5
Troop H	24.6	25.2	22.2	23.8	81.3	81.8	85.5	86.8	1.0	0.9	0.9	1.2	1.1	1.1	1.5	1.8	20.4	27.9	30.2	27.7
Troop J	29.2	29.5	30.3	25.6	86.7	88.3	89.7	92.5	0.8	0.9	0.8	2.1	1.0	1.5	2.3	3.5	26.0	29.5	23.1	28.9
Troop L	31.6	30.2	28.9	28.0	81.5	83.0	85.9	88.3	0.8	0.6	0.6	0.8	0.8	1.0	0.7	0.6	37.9	28.0	21.3	29.8
Troop T	14.6	13.4	10.6	12.9	90.2	91.5	94.2	94.1	0.2	0.1	0.1	0.2	0.3	0.3	0.3	0.3	32.9	31.1	26.6	34.0
AREA II	20.6	19.5	18.1	18.3	87.1	89.8	90.6	91.0	0.4	0.2	0.3	0.6	0.5	0.4	0.4	0.8	27.5	19.5	23.7	21.7
Troop F	18.4	17.6	15.6	16.2	88.2	90.4	91.2	91.7	0.3	0.2	0.1	0.4	0.3	0.3	0.2	0.4	29.4	24.1	15.7	19.4
Troop P	27.0	26.1	26.2	26.0	81.7	84.4	86.0	86.2	0.6	0.2	0.7	0.6	0.4	0.5	0.8	1.0	36.4	12.8	29.9	26.3
Troop R	20.5	18.1	16.8	15.4	89.0	92.8	93.2	94.2	0.4	0.3	0.4	0.8	0.9	0.6	0.6	1.4	22.4	19.4	23.7	20.0
AREA III	30.0	30.1	26.2	27.4	82.1	83.2	87.7	87.8	0.8	0.7	0.6	0.9	0.7	0.6	0.7	0.9	25.0	28.3	19.6	25.8
Troop A	33.9	31.3	25.9	27.3	84.3	85.9	89.9	90.0	0.9	0.5	0.5	1.1	0.9	0.4	0.7	1.2	29.2	24.3	19.5	21.8
Troop B	23.1	23.4	22.1	24.7	86.6	87.5	89.7	89.7	0.7	0.9	0.8	0.9	0.7	0.8	0.8	1.0	15.7	23.0	11.0	25.8
Troop G	35.5	36.1	30.4	29.9	75.1	76.7	84.1	84.5	0.8	0.7	0.6	0.8	0.5	0.6	0.5	0.6	35.7	37.6	33.3	32.0
AREA IV	41.3	37.1	34.9	33.8	72.1	77.1	79.4	81.2	0.8	0.4	0.4	1.0	0.9	0.6	0.7	1.4	27.7	19.2	21.4	33.4
Troop C	34.5	33.8	31.9	33.0	79.4	80.5	81.1	80.6	0.4	0.3	0.3	0.5	0.6	0.5	0.5	0.9	15.2	15.2	11.4	15.9
Troop D	48.4	42.6	39.3	37.1	65.8	72.5	77.3	79.8	1.3	0.5	0.5	1.7	1.2	0.7	1.4	2.8	23.3	20.6	25.0	40.4
Troop E	46.7	37.4	34.6	31.3	65.3	75.7	79.1	83.2	1.1	0.6	0.4	0.9	0.9	0.5	0.4	0.5	49.0	23.8	24.3	32.8
AREA V	28.0	29.3	32.5	29.9	83.9	83.6	82.4	86.5	0.5	0.5	0.5	0.9	1.3	1.0	0.9	1.4	23.4	22.7	23.5	21.1
Troop K	29.7	31.9	35.3	33.6	84.4	83.4	83.7	84.1	0.9	1.0	0.9	1.4	2.4	2.2	1.9	1.7	28.4	27.5	24.4	29.5
Troop M	33.5	34.7	40.6	35.9	78.0	78.4	74.6	82.7	0.5	0.5	0.4	0.8	1.2	0.8	0.7	1.6	18.8	16.5	25.2	15.2
Troop N	21.7	20.8	19.9	19.8	88.9	89.5	91.9	93.1	0.3	0.2	0.4	0.7	0.5	0.4	0.4	0.7	16.1	13.8	16.1	25.3

* Five or fewer searches; interpret percentage with caution.

Table 5.8: Traffic Stop Outcomes by Station – 2002-2005 (p. 1 of 4)

	<u>% Warnings</u>				<u>% Citations</u>				<u>% Arrested</u>				<u>% Searched</u>				<u>% Seized</u>			
	2002	2003	2004	2005	2002	2003	2004	2005	2002	2003	2004	2005	2002	2003	2004	2005	2002	2003	2004	2005
AREA I																				
Troop H																				
Carlisle	17.8	17.0	16.0	20.3	89.2	90.1	91.8	92.4	0.3	0.0	0.4	1.2	1.0	0.7	1.3	2.6	22.7	4.2	13.0	32.6
Chambersburg	39.5	36.4	28.8	23.9	68.7	71.1	81.6	86.1	2.1	2.7	1.5	2.1	2.7	2.6	3.0	2.8	12.5	33.3	43.0	40.4
Gettysburg	46.6	44.3	46.5	38.1	61.5	62.8	59.5	68.4	1.0	0.4	0.5	0.9	0.2	0.3	1.2	1.3	66.7*	33.3	31.4	11.8
Harrisburg	18.4	19.3	12.6	17.2	86.6	88.0	93.4	92.7	0.2	0.1	0.0	0.3	0.3	0.5	0.5	1.4	20.0	0.0	0.0	17.8
Lykens	33.6	35.8	32.3	30.7	78.3	81.4	88.2	87.0	0.7	0.2	0.2	0.9	0.5	0.7	1.4	0.9	25.0*	50.0	11.1	7.7
Newport	17.4	14.1	11.8	17.2	87.9	89.5	93.5	91.4	0.3	1.1	0.7	1.2	0.4	0.3	0.2	1.7	20.0*	50.0*	25.0*	12.8
York	17.5	20.0	17.4	25.1	85.0	84.6	87.4	85.2	1.9	1.4	1.9	1.3	1.6	1.5	1.5	0.9	25.4	35.3	34.7	23.7
Troop J																				
Avondale	35.5	37.9	34.8	36.2	95.6	90.8	91.4	92.5	0.7	0.5	0.4	1.7	1.0	1.6	2.1	2.9	18.5	24.5	35.5	25.3
Embreeville	39.8	31.6	32.7	25.7	73.9	84.4	87.8	94.2	0.9	0.7	0.4	1.5	1.6	1.3	2.3	3.7	38.2	31.4	19.6	23.9
Ephrata	16.6	16.0	17.9	21.5	91.2	93.0	94.4	91.9	0.6	1.2	0.8	0.7	0.9	1.1	0.9	0.7	0.0	37.5	33.3	14.3
Lancaster	21.9	23.4	27.0	17.6	85.9	86.8	87.3	91.4	0.9	1.5	1.6	3.5	0.8	1.8	3.4	4.8	28.6	30.8	13.9	34.5
Troop L																				
Frackville	28.5	35.7	38.8	36.5	81.3	78.6	84.0	84.1	1.0	0.7	0.5	0.2	0.8	1.7	0.7	0.9	21.4	28.6	42.9	12.5
Hamburg	37.0	31.5	28.9	35.3	88.2	90.6	89.8	92.5	0.6	0.2	0.5	0.2	0.1	0.0	0.3	0.1	0.0	--	0.0	0.0
Jonestown	26.7	25.3	23.7	19.3	81.8	82.1	85.0	88.0	1.3	0.8	1.1	1.5	1.8	2.0	1.2	0.6	47.2	28.8	21.9	30.0
Reading	20.8	25.9	25.0	27.7	87.1	83.5	87.9	85.8	0.5	0.5	0.3	1.2	0.4	0.4	0.4	1.5	25.0	20.0	14.3	30.0
Schuylkill Haven	57.4	40.4	36.9	32.1	62.7	80.5	81.8	87.9	0.8	0.4	0.4	0.1	0.5	0.2	0.6	0.5	50.0	33.3*	22.2	57.1
Troop T																				
Bowmansville	11.5	8.1	5.7	9.7	93.1	96.2	97.9	98.1	0.1	0.0	0.0	0.1	0.3	0.1	0.0	0.1	47.4	16.7	33.3*	40.0*
Everett	15.9	11.8	12.4	11.6	90.1	93.6	93.2	93.6	0.3	0.3	0.2	0.2	0.2	0.3	0.3	0.2	11.8	38.2	18.2	21.1
Gibsonia	22.6	26.1	13.4	15.4	83.4	82.5	94.2	92.9	0.0	0.0	0.0	0.2	0.2	0.2	0.6	0.6	0.0	23.5	9.1	24.0
Highspire	66.7	70.4	25.0	4.4	33.3	55.6	50.0	95.6	0.0	0.0	0.0	0.0	0.0	3.7	0.0	0.0	--	0.0	--	--
King of Prussia	19.7	19.4	12.3	14.3	86.7	87.5	92.2	90.6	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.2	18.2	44.4	42.9	45.5
New Stanton	15.6	13.5	15.0	16.1	90.0	92.1	91.8	93.0	0.2	0.1	0.1	0.1	0.2	0.1	0.1	0.3	22.2	11.1	20.0	13.0
Newville	13.6	11.5	10.2	17.2	91.5	92.4	93.4	94.9	0.0	0.1	0.1	0.1	0.4	0.5	0.2	0.1	25.8	24.6	29.2	33.3
Pocono	16.4	11.7	10.2	10.9	86.1	91.2	94.7	94.7	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.1	50.0	0.0	0.0	20.0*
Somerset (T)	7.4	7.2	4.4	5.4	95.0	94.5	97.2	96.1	0.3	0.2	0.2	0.4	0.7	0.7	1.1	1.2	46.6	42.6	35.1	48.7

* Five or fewer searches; interpret percentage with caution.

Table 5.8: Traffic Stop Outcomes by Station – 2002-2005 (p. 2 of 4)

	<u>% Warnings</u>				<u>% Citations</u>				<u>% Arrested</u>				<u>% Searched</u>				<u>% Seized</u>			
	2002	2003	2004	2005	2002	2003	2004	2005	2002	2003	2004	2005	2002	2003	2004	2005	2002	2003	2004	2005
AREA II																				
Troop F																				
Coudersport	49.2	52.0	40.9	38.4	61.3	65.5	70.4	72.4	0.7	0.4	0.1	0.5	1.0	1.0	0.1	0.4	33.3	25.0	0.0	20.0*
Emporium	37.0	33.8	25.2	24.0	79.3	82.3	84.3	84.8	0.0	0.1	0.0	0.0	0.2	0.1	0.0	0.3	50.0	0.0	--	0.0
Lamar	10.8	10.0	11.1	8.5	93.3	93.5	93.9	96.6	0.2	0.0	0.1	0.2	0.2	0.2	0.2	0.2	33.3	16.7	33.3	25.0*
Mansfield	25.8	23.9	34.4	29.0	82.3	86.3	78.7	84.8	0.5	0.2	0.1	0.1	0.3	0.1	0.3	0.1	0.0	0.0	20.0*	0.0
Milton	8.4	9.3	6.6	12.3	96.3	97.7	98.9	97.6	0.3	0.0	0.0	0.4	0.3	0.3	0.1	0.2	42.9	0.0	0.0	20.0*
Montoursville	10.1	10.4	8.9	8.0	94.6	94.7	95.1	95.5	0.2	0.2	0.0	0.7	0.3	0.4	0.3	0.5	37.5	29.4	9.5	19.0
Selinsgrove	7.6	6.1	7.0	5.5	95.3	97.4	96.4	96.8	0.2	0.0	0.1	0.5	0.3	0.1	0.3	0.6	10.0	16.7	30.0	29.4
Stonington	45.5	42.4	41.1	45.9	70.9	78.8	80.4	82.6	0.3	0.8	0.2	0.3	0.0	0.2	0.2	0.6	--	66.7*	0.0	0.0
Troop P																				
Laporte	39.0	35.0	30.4	25.5	70.1	80.0	87.2	84.7	0.8	0.1	1.0	0.3	0.2	0.1	0.3	0.3	0.0	0.0	75.0*	0.0
Shickshinny	28.4	24.4	25.1	27.3	86.6	85.4	83.0	83.2	0.4	0.7	0.3	0.7	0.1	0.0	0.3	0.7	0.0	--	0.0	25.0
Towanda	41.7	34.2	24.0	35.1	66.5	78.4	89.0	83.5	0.8	0.1	0.4	0.4	0.7	0.8	1.5	1.0	50.0	0.0	23.1	17.4
Tunkhannock	26.4	30.4	49.3	31.2	84.3	78.8	68.8	82.3	0.9	0.6	2.0	2.0	0.4	0.4	0.5	2.7	100.0*	20.0*	57.1	32.1
Wyoming	12.3	13.5	12.6	9.2	93.5	93.7	94.2	95.7	0.3	0.1	0.2	0.2	0.4	0.8	1.1	0.8	12.5	20.0	25.9	38.5
Troop R																				
Blooming Grove	23.6	19.1	19.2	18.3	87.8	93.2	95.4	96.4	0.4	0.3	0.0	0.4	1.0	0.5	0.5	1.5	16.7	38.5	16.7	21.4
Dunmore	15.8	17.0	16.2	15.7	92.0	92.9	91.1	93.8	0.1	0.1	0.1	0.5	0.7	0.6	0.6	1.0	15.8	5.6	25.0	6.7
Gibson	22.2	25.3	17.9	15.2	91.3	93.4	94.3	94.2	0.3	0.4	1.3	2.5	0.8	0.4	0.5	1.8	10.0	14.3	9.1	28.6
Honesdale	25.8	14.5	13.8	12.1	81.5	91.9	92.0	92.8	0.8	0.3	0.3	0.4	1.4	0.8	1.0	1.7	41.2	20.8	35.0	23.5
AREA III																				
Troop A																				
Ebensburg	19.2	20.3	18.6	19.5	91.0	87.1	87.4	91.7	1.0	0.8	1.5	2.2	0.4	0.4	0.9	1.0	14.3	43.8	34.5	26.8
Greensburg	35.0	30.7	26.7	25.3	89.4	92.0	95.3	91.8	0.6	0.0	0.0	0.6	0.6	0.2	0.4	1.5	35.0	10.0	12.5	15.0
Indiana	34.6	29.9	22.8	28.1	78.8	87.6	91.4	90.0	1.1	0.4	0.2	1.0	1.2	0.6	0.8	2.0	30.8	15.0	12.5	26.4
Kiski Valley	48.6	44.4	31.6	35.6	76.4	77.5	87.9	89.5	0.3	0.2	0.1	0.5	1.0	0.5	0.7	0.7	13.3	23.1	5.9	10.0
Somerset (A)	33.1	36.5	34.4	33.5	79.0	76.5	82.1	84.3	2.5	1.6	0.8	1.0	1.7	0.7	1.2	0.6	38.1	26.7	25.0	35.7

* Five or fewer searches; interpret percentage with caution.

Table 5.8: Traffic Stop Outcomes by Station – 2002-2005 (p. 3 of 4)

	<u>% Warnings</u>				<u>% Citations</u>				<u>% Arrested</u>				<u>% Searched</u>				<u>% Seized</u>			
	2002	2003	2004	2005	2002	2003	2004	2005	2002	2003	2004	2005	2002	2003	2004	2005	2002	2003	2004	2005
AREA III (cont.)																				
Troop B																				
Belle Vernon	25.6	20.8	22.1	19.6	92.0	91.5	93.8	95.2	2.3	2.7	4.5	2.4	0.2	0.4	0.6	1.5	33.3	31.3	5.3	22.2
Findlay	10.8	13.9	14.8	26.7	95.2	95.3	95.0	91.0	0.5	0.2	0.0	1.0	0.2	0.6	0.9	0.9	9.1	13.3	5.0	27.9
Uniontown	37.8	41.2	33.9	31.8	74.0	70.2	76.5	81.2	0.5	0.8	0.3	0.9	1.0	1.5	1.7	1.3	12.1	23.1	13.2	28.2
Washington	18.4	21.4	16.3	12.4	87.7	86.3	91.3	93.5	0.2	0.3	0.0	0.1	1.0	0.8	0.5	0.3	16.7	29.3	8.0	28.6
Waynesburg	40.3	33.3	28.5	36.4	75.0	84.5	92.7	93.1	1.3	1.1	0.2	1.0	1.3	0.7	0.5	1.2	17.4	25.0	33.3	19.2
Troop G																				
Bedford	39.1	36.4	34.2	44.0	72.2	72.6	75.8	75.2	1.2	1.1	0.8	1.0	0.2	0.4	0.4	0.4	33.3*	46.2	21.4	36.4
Hollidaysburg	52.4	44.8	35.6	33.0	66.1	74.8	83.8	80.2	0.9	0.8	1.3	1.6	0.8	1.9	1.2	1.9	64.7	45.0	52.6	37.0
Huntingdon	35.7	37.8	30.9	29.6	77.4	76.5	84.9	86.2	3.9	2.9	1.5	1.5	0.4	0.6	0.5	0.5	80.0*	42.9	25.0	10.0
Lewistown	36.6	36.1	34.2	32.0	72.4	73.6	78.1	83.0	0.2	0.4	0.3	0.5	0.4	0.6	0.5	0.6	44.4	31.6	25.0	15.8
McConnellsburg	29.6	34.0	15.1	13.3	77.0	77.8	92.9	93.8	0.4	0.2	0.0	0.3	0.4	0.3	0.5	0.3	20.0*	42.9	9.1	28.6
Philipsburg	44.2	49.8	37.0	29.5	69.7	71.1	86.9	88.5	0.1	0.1	0.1	0.5	0.1	0.1	0.1	0.4	50.0*	0.0	75.0*	40.0
Rockview	23.6	24.6	23.6	25.9	83.2	83.9	87.5	86.8	0.3	0.0	0.1	0.6	0.7	0.3	0.4	0.2	10.3	11.1	14.3	42.9
AREA IV																				
Troop C																				
Clarion	40.0	37.2	38.3	40.2	73.4	78.5	75.2	77.2	0.8	0.2	0.1	0.3	1.3	0.9	0.9	1.7	15.8	10.7	13.6	9.7
Clearfield	21.9	25.7	18.9	16.6	88.9	88.0	94.3	95.2	0.0	0.0	0.1	0.5	0.7	0.3	0.5	0.8	3.8	16.7	8.3	37.9
Dubois	27.4	21.1	24.0	25.8	84.1	87.0	85.7	84.3	0.3	0.0	0.0	0.3	0.5	0.3	0.5	1.0	35.3	7.1	6.3	0.0
Kane	31.6	34.4	32.8	27.5	90.9	82.8	81.3	83.3	0.3	1.4	0.8	1.4	0.9	0.6	0.5	1.5	0.0	14.3	12.5	27.3
Punxsutawney	34.2	37.0	36.9	31.1	80.5	77.0	77.0	81.0	0.3	0.2	0.3	0.6	0.3	0.3	0.2	0.3	12.5	54.5	0.0	16.7
Ridgway	39.4	40.0	28.0	35.4	78.8	79.2	85.5	79.2	0.2	0.3	0.7	0.4	0.1	0.5	0.3	0.7	0.0	8.3	25.0	7.1
Tionesta	58.4	57.5	59.4	58.7	55.7	59.5	54.8	58.2	0.6	0.7	0.4	0.1	0.2	0.3	0.0	0.1	50.0*	14.3	0.0	0.0
Troop D																				
Beaver	57.7	52.6	44.6	37.7	53.6	61.6	72.2	78.2	1.4	0.6	0.4	0.4	0.3	0.4	0.4	1.1	14.3	16.7	20.0	26.9
Butler	40.7	39.2	30.2	28.8	71.0	75.5	84.1	85.8	1.6	0.7	0.7	1.1	0.7	0.6	0.8	0.9	21.1	24.1	37.1	17.1
Kittanning	49.9	43.9	41.9	42.7	67.6	71.1	75.4	74.7	1.4	0.8	0.7	4.5	2.2	0.7	1.8	7.1	26.7	52.6	33.3	51.5
Mercer	40.1	35.9	44.9	40.0	80.2	80.6	75.2	83.2	0.4	0.2	0.3	0.9	2.7	1.4	2.5	2.3	25.0	5.4	19.5	19.0
New Castle	59.1	44.0	38.5	39.6	51.4	72.0	76.0	74.0	1.5	0.1	0.1	0.4	0.5	0.3	1.4	1.0	0.0	0.0	6.5	11.8

* Five or fewer searches; interpret percentage with caution.

Table 5.8: Traffic Stop Outcomes by Station – 2002-2005 (p. 4 of 4)

	<u>% Warnings</u>				<u>% Citations</u>				<u>% Arrested</u>				<u>% Searched</u>				<u>% Seized</u>			
	2002	2003	2004	2005	2002	2003	2004	2005	2002	2003	2004	2005	2002	2003	2004	2005	2002	2003	2004	2005
AREA IV (cont.)																				
Troop E																				
Corry	52.5	45.8	41.8	42.5	61.7	70.5	71.7	71.0	0.6	0.7	0.3	2.5	0.3	0.3	0.2	0.1	50.0*	0.0	0.0	0.0
Erie	38.1	26.3	26.4	36.3	69.9	82.1	83.9	85.9	0.1	0.0	0.1	0.1	0.8	0.2	0.3	0.5	38.9	10.0	0.0	46.2
Franklin	63.2	61.8	57.2	51.1	54.9	58.8	64.2	68.2	0.2	0.6	0.3	0.6	0.4	0.6	0.4	0.4	20.0*	25.0	8.3	14.3
Girard	42.5	28.8	27.9	30.1	71.9	84.1	87.6	84.8	0.3	0.4	0.4	1.0	0.4	0.5	0.6	0.2	14.3	14.3	19.0	40.0*
Meadville	47.9	48.0	32.0	19.7	61.8	66.6	78.6	89.5	2.9	1.5	0.7	0.9	1.8	1.0	0.6	0.7	62.1	35.7	57.1	25.8
Warren	57.8	32.1	29.5	30.2	55.3	78.9	80.9	79.4	1.5	0.9	0.6	1.6	0.6	0.8	0.4	1.0	66.7*	30.0	16.7	50.0
AREA V																				
Troop K																				
Media	29.9	29.8	37.3	39.3	81.4	81.0	75.7	75.0	1.0	1.5	1.4	2.1	3.0	3.5	3.1	2.7	28.7	28.2	25.8	36.2
Philadelphia	20.8	28.8	29.7	26.7	93.2	87.7	88.2	87.8	0.7	0.8	0.5	1.1	1.8	1.5	1.6	1.5	35.0	31.4	25.0	19.6
Skippack	38.0	37.4	37.1	36.1	81.8	82.7	87.8	88.6	0.9	0.6	0.6	1.1	1.7	1.2	1.0	1.2	20.5	20.8	20.0	29.0
Troop M																				
Belfast	38.5	29.6	32.9	27.0	74.7	80.6	79.1	85.8	0.2	0.4	0.3	0.4	1.2	0.4	0.6	0.9	7.1	23.1	11.1	11.4
Bethlehem	31.0	31.6	29.1	30.5	79.8	80.4	85.8	87.7	0.5	0.6	0.3	0.4	1.0	0.9	0.4	1.0	23.8	30.0	43.8	15.6
Dublin	44.2	54.7	60.5	49.8	70.5	67.6	66.1	81.2	0.7	0.3	0.3	1.0	0.9	0.6	0.4	1.0	47.1	13.0	5.6	13.3
Fogelsville	32.7	32.4	33.9	36.1	79.5	80.1	77.3	79.5	0.4	0.4	0.5	1.0	1.4	0.8	1.4	3.2	15.8	9.1	21.6	28.6
Trevoise	20.5	19.2	48.8	36.9	85.8	86.5	61.7	79.5	0.7	0.8	0.3	1.2	1.3	1.4	0.8	1.0	12.5	15.9	48.0	22.2
Troop N																				
Bloomsburg	23.7	16.1	10.8	12.2	95.8	97.2	96.6	93.1	0.2	0.2	0.1	0.2	0.1	0.0	0.2	0.4	0.0	0.0	0.0	8.3
Fern Ridge	10.0	17.2	9.4	9.3	93.9	92.7	98.2	96.5	1.0	0.4	1.6	3.2	0.3	0.4	0.1	0.6	20.0*	14.3	0.0	21.2
Hazleton	24.7	17.6	13.4	15.1	84.2	88.7	92.4	93.0	0.2	0.1	0.2	0.3	0.6	0.3	0.7	1.0	27.8	22.2	8.3	50.0*
Lehighton	37.0	35.8	35.2	31.9	77.5	82.0	88.2	92.9	0.8	0.1	0.1	0.2	0.3	0.4	0.1	0.1	33.3*	18.2	0.0	33.3
Swiftwater	19.8	19.4	29.6	25.9	89.0	87.7	85.8	91.6	0.1	0.1	0.1	0.3	0.7	0.6	0.7	1.1	8.8	10.0	29.6	26.0

* Five or fewer searches; interpret percentage with caution.

Racial/Ethnic Comparison of Warnings and Citations: 2002 – 2005

While the general trends in traffic stop outcomes are important to examine across organizational units, one of the key areas of interest for this research project is the pattern of stop outcomes that occur for different racial/ethnic groups. **Tables 5.9 & 5.10** report the percentage of stops from 2002 to 2005 that resulted in warnings and citations, respectively, for different minority groups across the department, area, and troop levels. Additional post-stop outcomes (i.e., arrests, searches, and seizures) are not reported across racial groups because of the likely underreporting of these traffic stops described previously in this report. Due to the small number of traffic stops that occurred for some racial/ethnic groups, the descriptive statistics reported below are limited to comparisons for Caucasian, Black, and Hispanic drivers. Information at the station level is not provided for each of these groups as there are too few traffic stops of some minority groups to produce reliable results. Instead, **Table 5.11** compares the percentages of stops that resulted in warnings or citations for Caucasian and non-Caucasian drivers only. These tables provide a significant amount of information and this discussion will highlight only general trends in each of the outcomes across the department, area, and troop levels. For more detailed information at the station level, please refer to **Table 5.11**.

For Caucasian drivers, **Table 5.9** reports a general decrease in the percentage of warnings issued between 2002 and 2005 across the *department*, and this trend is reflected in all areas except *Area V*, which had higher rates of warnings issued to Caucasian drivers in 2005 than 2002. *Areas I, II, & III* all had slight increases in warning rates for Caucasian drivers in 2005 when compared to 2004. At the troop level, only *Troops B, F, & M* reported increases in the percentage of warnings issued to Caucasians between 2002 and 2005. When comparing 2004 to 2005, however, six troops had increased percentages of warnings issued for Caucasian drivers.

For Black drivers, **Table 5.9** documents that, across the *department*, there was a slight increase in the percentage of traffic stops that resulted in warnings, from 23.3% in 2002 to 24.8% in 2005. This pattern was fairly consistent across areas, with only *Areas I & IV* not reflecting this trend. *Area I* remained unchanged across the four years, while *Area IV* demonstrated a reduction in warnings issued to black drivers (34.3% in 2002 to 32.8% in 2005). At the troop level, eight troops reported increases between 2002 and 2005 in the rate of Black drivers receiving warnings, and nine troops reported increases between 2004 and 2005.

For Hispanic drivers, **Table 5.9** reports that the percentage of stops at the *department* level resulting in warnings increased from 23.5% in 2002 to 26.1% in 2005. This pattern was consistent across all areas, and eight troops also reported increased percentages of warnings for Hispanic drivers between 2002 and 2005.

Table 5.9: Traffic Stop WARNINGS by Department, Area & Troop – 2002-2005

	<u>Caucasian</u>				<u>Black</u>				<u>Hispanic</u>			
	2002	2003	2004	2005	2002	2003	2004	2005	2002	2003	2004	2005
PSP Dept.	28.0	27.0	25.4	24.8	23.3	24.0	23.6	24.8	23.5	23.1	24.5	26.1
AREA I	20.3	18.8	17.2	17.9	18.2	17.7	15.8	18.2	20.9	19.9	19.2	22.2
Troop H	25.1	25.2	22.5	23.7	23.6	26.4	20.5	25.4	18.6	23.9	20.9	26.4
Troop J	28.8	29.5	29.3	24.9	33.2	31.2	36.0	27.9	31.5	32.8	32.6	28.7
Troop L	32.2	30.6	29.6	28.1	30.7	32.2	25.6	28.7	28.0	27.1	28.8	27.7
Troop T	15.0	13.7	10.8	12.8	14.0	14.0	11.6	14.2	14.9	12.1	9.5	14.6
AREA II	21.6	20.2	18.7	18.9	13.4	12.5	14.3	14.9	12.8	16.6	12.3	15.0
Troop F	19.6	18.5	16.3	16.8	9.7	10.1	10.9	9.7	9.0	13.7	8.2	10.8
Troop P	27.7	26.2	26.4	26.3	17.0	22.4	21.9	22.9	16.0	30.0	17.1	17.5
Troop R	21.2	18.6	17.2	15.5	19.6	13.5	18.0	18.5	19.3	17.0	16.3	17.9
AREA III	30.7	30.6	26.6	27.6	26.5	29.5	24.4	27.0	15.5	21.2	19.6	25.2
Troop A	33.9	31.1	25.7	27.3	40.7	42.2	34.0	32.5	23.1	23.8	19.7	39.0
Troop B	23.1	23.4	22.4	24.5	25.4	26.2	23.0	28.7	13.4	21.4	16.7	28.1
Troop G	37.6	37.5	31.5	30.8	22.7	26.9	21.6	22.7	14.9	20.6	21.1	22.5
AREA IV	43.0	38.7	36.1	34.6	34.3	30.4	30.6	32.8	30.9	19.7	27.0	26.3
Troop C	36.7	36.4	34.3	34.7	23.3	23.3	22.1	27.4	26.6	17.6	19.7	24.2
Troop D	48.7	43.0	39.0	36.7	50.7	43.7	45.3	44.7	43.6	27.6	48.7	35.6
Troop E	48.0	38.3	35.5	32.2	41.2	31.5	28.2	25.6	39.2	22.7	28.9	22.6
AREA V	28.9	29.9	33.4	30.0	26.7	28.7	32.2	31.2	26.7	28.3	29.0	30.9
Troop K	30.0	31.6	35.0	33.7	29.8	34.4	37.7	34.1	29.4	36.2	36.9	34.9
Troop M	34.5	35.8	42.0	35.8	30.8	30.5	38.4	37.5	30.6	31.8	34.5	36.8
Troop N	22.5	21.7	20.8	20.5	19.1	19.1	18.5	20.1	21.9	19.9	16.4	18.6

In regard to citations, **Table 5.10** demonstrates that larger percentages of Caucasian drivers were issued citations across the *department* in 2005 compared to preceding years. All areas and troops except *Troop K* reflected this trend of increasing percentages of citations issued to Caucasian drivers.

For Black drivers, **Table 5.10** reports slight increases in the percentages of citations issued at the *department* level between 2002 (85.8% of Black drivers stopped received citations) and 2005 (88.0% received citations). All areas and troops across the department also demonstrated slight increases in the percentages of Black drivers issued citations across the study period, except for three troops (one of which was unchanged).

For Hispanic drivers, **Table 5.10** reports that, across the *department*, Hispanic drivers received more citations in 2005 (89.5% of Hispanic drivers stopped) in comparison to 2002 (87.7% of Hispanic drivers stopped). This pattern was somewhat consistent across areas except *Area III*, where there was a reduction of nearly 3% in citations issued to Hispanic drivers. It should be noted, however, that three of the five areas all reported reductions in their 2005 rate of citations for Hispanic drivers when compared to 2004. At the troop level,

seven of the 16 troops reported reductions in their rates of citations for Hispanic drivers between 2002 and 2005.

Table 5.10: Traffic Stop CITATIONS by Department, Area & Troop – 2002-2005

	<u>Caucasian</u>				<u>Black</u>				<u>Hispanic</u>			
	2002	2003	2004	2005	2002	2003	2004	2005	2002	2003	2004	2005
PSP Dept.	82.0	83.9	86.0	87.8	85.8	86.2	87.3	88.0	87.7	88.3	88.2	89.5
AREA I	86.8	88.4	90.5	91.7	88.4	89.0	91.1	91.3	89.4	90.3	92.1	91.5
Troop H	80.9	81.6	85.1	86.7	81.6	81.0	87.3	86.9	87.6	86.3	88.8	87.0
Troop J	86.8	88.1	89.6	92.4	83.3	86.1	87.8	90.8	90.1	92.4	93.1	95.0
Troop L	80.7	82.6	85.5	88.1	83.8	81.2	85.2	87.3	86.2	86.0	87.9	90.9
Troop T	89.7	91.3	94.2	94.3	90.8	91.1	92.8	92.8	90.4	92.2	94.7	92.3
AREA II	86.4	89.3	90.2	90.6	92.3	93.9	93.9	93.4	94.2	93.7	95.0	94.8
Troop F	87.4	90.0	90.8	91.2	94.4	94.4	94.8	96.1	96.8	95.2	96.1	96.4
Troop P	81.3	84.3	85.8	86.0	87.4	83.9	90.4	87.1	90.7	87.5	90.2	88.8
Troop R	88.7	92.5	92.9	94.2	89.6	96.4	93.3	92.2	90.4	93.5	94.7	95.0
AREA III	81.5	82.8	87.4	87.6	85.9	85.7	90.4	89.2	91.5	89.3	93.5	88.8
Troop A	84.3	85.9	89.9	89.9	83.5	83.9	89.0	91.0	87.7	90.5	89.4	80.5
Troop B	86.5	87.3	89.3	89.7	87.6	86.7	91.6	89.3	93.3	90.7	96.4	92.1
Troop G	73.5	75.5	83.3	83.9	84.8	85.4	89.6	88.4	91.5	88.5	93.0	88.6
AREA IV	70.7	75.8	78.5	80.5	77.9	83.4	83.2	84.1	84.5	92.0	85.6	88.2
Troop C	77.6	78.7	79.4	79.4	87.1	89.1	88.9	86.5	90.1	94.4	91.7	87.6
Troop D	65.4	72.1	77.6	79.8	65.0	72.7	73.1	77.5	67.1	83.6	65.6	85.6
Troop E	64.2	75.1	78.4	82.5	71.1	82.2	85.2	88.9	75.0	87.5	86.1	92.7
AREA V	82.9	82.8	81.6	86.2	85.4	85.5	83.9	86.1	86.8	85.9	86.2	88.6
Troop K	83.9	83.0	83.2	83.3	85.4	83.8	83.9	85.4	85.6	84.9	87.0	89.9
Troop M	77.2	77.6	73.3	82.4	79.9	81.7	76.8	81.8	81.5	82.0	81.3	84.7
Troop N	87.8	88.8	91.6	92.8	90.0	91.6	91.8	92.1	92.5	91.5	93.9	95.0

Table 5.11 reports on the rate of warnings and citations for Caucasian and non-Caucasian drivers between 2002 and 2005 at the station level. In general, the rate of citations were higher compared to warnings rates for both Caucasian and non-Caucasian drivers. When post-stop outcomes are compared within stations, some stations display considerable variation between Caucasian and non-Caucasian drivers (see **Table 5.11** for more details).

Table 5.11: Traffic Stop Warnings & Citations by Station for Caucasian & Non-Caucasian Drivers: 2002 - 2005 (p. 1 of 4)

	<u>Warnings</u>								<u>Citations</u>							
	<u>2002</u>		<u>2003</u>		<u>2004</u>		<u>2005</u>		<u>2002</u>		<u>2003</u>		<u>2004</u>		<u>2005</u>	
	Cau.	Non-Cau.	Cau.	Non-Cau.	Cau.	Non-Cau.	Cau.	Non-Cau.	Cau.	Non-Cau.	Cau.	Non-Cau.	Cau.	Non-Cau.	Cau.	Non-Cau.
AREA I																
Troop H																
Carlisle	19.7	19.5	17.0	17.6	16.4	13.6	20.1	21.4	89.3	87.5	90.1	89.4	91.6	92.4	92.3	93.2
Chambersburg	40.9	31.0	36.7	34.1	29.2	25.7	23.4	27.4	67.6	74.8	70.6	75.6	80.9	87.5	86.1	86.4
Gettysburg	48.6	30.3	44.5	43.5	47.0	43.0	39.2	31.9	59.4	77.1	61.7	69.9	58.5	66.7	66.8	77.6
Harrisburg	18.1	18.9	18.9	21.7	12.5	13.8	16.2	21.9	86.9	86.4	88.1	87.2	93.2	94.3	94.0	87.2
Lykens	33.8	23.5	36.4	19.4	31.9	43.8	30.4	35.5	78.3	88.5	81.3	83.9	88.3	84.4	87.0	83.9
Newport	16.8	20.2	14.2	12.0	11.9	9.6	17.0	19.6	88.4	82.0	89.5	91.2	93.5	93.4	91.5	90.2
York	17.9	14.2	19.6	20.5	17.4	17.1	25.3	24.0	84.6	88.8	84.8	85.4	87.2	88.5	84.8	87.6
Troop J																
Avondale	36.1	33.7	38.3	36.6	33.8	37.8	36.6	35.0	95.3	96.4	90.6	91.5	91.5	91.1	92.2	93.3
Embreeville	40.7	38.2	31.6	31.9	31.9	35.5	23.7	31.5	73.1	75.9	84.1	85.4	87.8	87.8	94.9	91.7
Ephrata	16.6	16.9	16.4	14.3	18.0	17.4	22.5	16.8	91.5	89.7	92.4	95.8	94.1	96.2	90.3	98.5
Lancaster	20.5	28.5	23.6	22.5	26.3	31.8	17.4	18.6	86.6	82.4	86.8	87.3	87.1	88.2	91.4	91.3
Troop L																
Frackville	29.5	20.5	36.9	24.3	39.9	26.8	36.6	37.0	80.3	90.3	77.6	88.6	83.3	91.5	83.6	87.0
Hamburg	40.1	27.8	33.8	24.5	30.6	23.5	35.5	34.4	86.5	92.8	89.9	92.9	89.0	92.4	91.8	94.7
Jonestown	26.8	26.0	25.1	26.2	23.5	24.9	19.3	19.2	81.6	82.9	82.3	80.8	85.0	84.8	87.9	89.0
Reading	20.0	26.0	24.8	31.5	24.8	26.7	27.0	30.8	87.6	84.8	83.8	82.0	88.1	86.6	86.4	82.9
Schuylkill Haven	57.3	60.0	40.0	50.9	37.1	32.7	31.9	34.8	62.9	55.4	80.3	83.6	81.5	86.7	88.1	86.1
Troop T																
Bowmansville	11.4	11.8	8.1	8.2	5.5	6.7	8.9	11.9	93.1	93.3	96.0	96.6	98.0	97.2	98.6	96.8
Everett	16.7	13.3	12.3	10.2	12.9	11.0	12.0	10.6	89.8	91.4	93.3	94.7	92.9	94.2	93.5	93.9
Gibsonia	23.5	19.2	26.6	24.3	13.2	14.6	15.2	16.7	82.8	85.6	82.2	83.6	94.6	92.5	93.1	91.7
Highspire	77.8	33.3	70.6	70.0	0.0	100.0	0.0	16.7	22.2	66.7	52.9	60.0	50.0	0.0	100.0	83.3
King of Prussia	19.5	20.2	19.7	18.3	12.2	12.6	13.7	16.2	86.5	87.8	87.5	87.7	92.2	91.8	90.9	89.2
New Stanton	15.4	16.1	13.3	14.6	15.3	13.1	16.0	16.6	90.1	89.3	92.2	91.5	91.6	93.0	93.3	91.7
Newville	14.3	11.4	11.7	11.1	10.5	8.9	17.5	16.2	91.1	92.7	92.3	92.6	93.2	94.1	94.9	95.3
Pocono	16.8	14.0	11.7	11.9	10.2	10.3	10.8	11.2	85.6	89.5	91.3	90.7	94.7	94.5	94.7	95.2
Somerset (T)	7.4	7.2	7.1	8.1	4.3	4.9	4.8	7.4	94.8	95.3	94.7	93.5	97.5	96.4	96.5	95.0

Table 5.11: Traffic Stop Warnings & Citations by Station for Caucasian & Non-Caucasian Drivers: 2002 - 2005 (p. 2 of 4)

	<u>Warnings</u>								<u>Citations</u>							
	<u>2002</u>		<u>2003</u>		<u>2004</u>		<u>2005</u>		<u>2002</u>		<u>2003</u>		<u>2004</u>		<u>2005</u>	
	Cau.	Non-Cau.	Cau.	Non-Cau.	Cau.	Non-Cau.	Cau.	Non-Cau.	Cau.	Non-Cau.	Cau.	Non-Cau.	Cau.	Non-Cau.	Cau.	Non-Cau.
AREA II																
Troop F																
Coudersport	49.2	52.2	52.0	53.6	41.2	29.7	38.5	40.9	61.2	65.2	65.5	67.9	70.3	75.7	72.4	68.2
Emporium	37.1	27.3	33.9	35.7	25.1	33.3	23.8	37.5	79.4	81.8	82.3	78.6	84.4	75.0	84.7	100.0
Lamar	11.3	9.6	11.0	6.2	12.1	7.7	9.0	7.3	92.8	94.6	92.8	96.2	93.0	96.7	96.1	97.7
Mansfield	26.3	18.3	24.2	18.2	34.6	32.5	29.7	21.6	81.5	93.3	86.3	89.8	78.5	85.5	84.3	89.2
Milton	8.9	6.0	9.5	7.7	7.1	3.9	12.7	9.6	96.2	96.8	97.6	98.3	98.8	99.6	97.4	99.0
Montoursville	10.1	7.8	10.1	13.5	8.8	10.6	8.2	4.8	94.7	95.1	94.8	93.5	95.2	94.7	95.3	97.8
Selinsgrove	8.0	3.3	6.2	4.8	7.2	3.7	5.4	6.1	95.2	97.0	97.4	98.3	96.3	97.9	96.9	95.8
Stonington	45.3	50.0	42.3	43.9	41.2	40.7	45.9	40.9	71.2	69.2	79.0	75.7	80.2	88.9	82.6	86.4
Troop P																
Laporte	39.1	42.1	34.9	37.9	30.7	22.2	25.6	25.0	70.4	57.9	80.3	69.0	87.1	88.9	84.6	90.6
Shickshinny	28.7	19.0	24.6	16.7	25.6	16.9	27.1	34.8	86.7	85.7	85.2	94.4	82.6	89.8	83.0	87.0
Towanda	41.9	33.3	34.3	25.0	23.8	39.3	35.2	31.7	66.3	70.8	78.4	83.3	89.3	67.9	83.5	81.0
Tunkhannock	26.5	30.0	30.1	48.5	49.4	45.9	31.6	18.8	83.8	80.0	78.8	72.7	68.7	73.0	82.3	84.4
Wyoming	12.8	8.4	13.3	16.0	12.6	13.2	9.2	8.6	93.3	95.5	93.9	90.3	94.1	95.8	95.8	94.1
Troop R																
Blooming Grove	22.6	29.9	19.6	12.5	19.3	19.0	17.9	21.8	88.5	86.1	93.2	96.6	95.4	96.3	96.5	95.9
Dunmore	16.7	12.0	17.4	14.1	16.3	16.1	16.3	13.8	91.6	93.4	92.7	94.4	91.1	91.2	93.7	94.3
Gibson	24.2	13.4	28.1	14.6	19.3	13.8	15.3	15.4	90.8	94.3	92.4	97.0	93.5	96.8	94.0	94.6
Honesdale	26.2	21.0	14.6	11.1	14.1	9.1	12.2	11.4	81.4	80.6	91.7	94.5	91.8	94.5	92.8	92.7
AREA III																
Troop A																
Ebensburg	19.0	19.1	20.6	16.3	18.8	16.5	19.7	16.9	90.8	93.6	86.9	90.4	87.3	90.6	91.6	95.3
Greensburg	35.2	33.8	30.7	31.7	26.3	40.0	25.0	34.1	89.3	92.2	92.1	90.0	95.4	92.1	92.0	87.1
Indiana	34.7	32.6	29.8	33.1	22.9	21.6	28.5	20.9	78.8	78.5	87.5	88.2	91.3	93.1	90.0	89.9
Kiski Valley	48.3	53.0	43.3	55.1	30.9	39.2	35.2	44.4	76.8	72.6	77.3	79.3	88.0	86.2	89.2	93.8
Somerset (A)	33.3	32.0	36.5	35.7	34.5	30.2	33.7	19.6	78.7	88.2	76.5	73.8	82.1	81.1	84.1	93.5

Table 5.11: Traffic Stop Warnings & Citations by Station for Caucasian & Non-Caucasian Drivers: 2002 - 2005 (p. 3 of 4)

	<u>Warnings</u>								<u>Citations</u>							
	<u>2002</u>		<u>2003</u>		<u>2004</u>		<u>2005</u>		<u>2002</u>		<u>2003</u>		<u>2004</u>		<u>2005</u>	
	Cau.	Non-Cau.	Cau.	Non-Cau.	Cau.	Non-Cau.	Cau.	Non-Cau.	Cau.	Non-Cau.	Cau.	Non-Cau.	Cau.	Non-Cau.	Cau.	Non-Cau.
AREA III (cont.)																
Troop B																
Belle Vernon	25.9	21.4	21.1	18.4	22.7	17.2	19.9	17.5	91.8	92.5	91.2	93.6	93.7	95.1	94.9	97.3
Findlay	10.2	14.7	12.9	21.2	14.4	17.6	26.1	31.6	95.6	94.2	95.6	93.1	95.0	95.4	91.1	90.7
Uniontown	37.4	39.8	41.2	42.8	34.1	31.8	31.3	38.7	74.1	75.2	70.4	67.1	76.0	83.1	81.5	77.1
Washington	18.4	19.8	21.3	21.9	16.3	16.3	11.9	18.0	87.6	89.1	86.4	86.4	91.0	93.9	93.5	92.7
Waynesburg	40.4	34.6	34.0	24.5	28.9	23.9	37.3	28.0	74.7	83.1	84.0	92.3	92.6	95.0	93.1	93.0
Troop G																
Bedford	40.4	20.9	37.6	21.0	35.5	17.2	45.3	28.4	71.3	85.6	71.4	87.8	74.9	87.4	74.4	86.0
Hollidaysburg	53.1	44.4	45.2	38.3	36.0	30.3	33.0	32.9	65.7	69.5	74.2	84.5	83.6	85.5	80.7	74.7
Huntingdon	35.5	44.0	37.7	42.0	30.8	32.4	29.2	37.5	77.5	72.0	76.3	84.0	85.1	80.3	86.2	85.7
Lewistown	37.2	25.0	37.2	28.9	34.7	29.5	32.4	27.7	71.4	86.3	72.5	81.8	77.2	87.7	82.4	89.6
McConnellsburg	35.2	11.9	37.7	20.7	16.1	11.6	14.6	7.8	71.7	93.7	74.5	89.7	91.9	96.9	92.8	98.0
Philipsburg	44.9	31.8	50.5	38.0	38.5	21.1	30.9	16.0	69.1	78.8	70.5	81.4	86.2	94.0	87.8	95.4
Rockview	26.1	12.5	25.7	17.8	24.6	15.9	26.6	21.7	81.3	92.0	83.2	88.6	86.8	92.0	86.2	90.4
AREA IV																
Troop C																
Clarion	44.1	26.7	41.6	22.7	41.3	28.9	42.0	34.9	69.5	86.0	75.3	88.9	72.6	83.7	75.6	81.9
Clearfield	23.3	16.6	27.4	18.4	20.5	11.1	17.5	12.7	87.9	92.7	86.6	94.0	93.8	97.3	94.8	96.8
Dubois	29.3	20.1	23.8	11.4	27.0	13.1	27.4	19.8	82.6	90.2	85.0	94.5	83.4	94.3	83.2	88.5
Kane	33.1	18.7	36.2	34.4	34.6	17.1	29.1	24.6	90.2	100.0	81.9	90.2	79.7	93.3	82.2	86.0
Punxsutawney	35.4	19.7	38.0	24.9	38.7	13.0	32.2	13.9	79.7	89.6	76.1	88.3	75.7	94.4	80.3	91.7
Ridgway	40.1	27.2	39.9	34.5	29.3	13.7	35.8	27.8	78.0	90.2	79.7	82.7	84.6	94.6	78.9	83.5
Tionesta	58.3	61.8	57.9	42.4	60.4	38.3	59.1	34.3	55.8	50.0	59.0	75.8	54.1	72.8	58.1	68.6
Troop D																
Beaver	57.7	59.4	52.7	53.0	44.2	48.9	37.2	44.0	53.6	52.6	61.7	60.3	72.5	68.6	78.6	73.3
Butler	40.8	38.0	39.6	30.6	30.5	24.9	29.0	25.4	70.8	72.5	75.2	82.9	84.0	86.4	85.9	86.0
Kittanning	49.9	46.5	44.3	38.5	42.3	37.8	42.1	47.8	67.1	80.8	70.4	80.4	75.1	79.6	74.8	74.1
Mercer	40.6	38.3	37.2	30.6	44.0	49.3	39.7	41.9	81.0	77.4	80.0	82.5	77.2	67.3	83.2	83.3
New Castle	41.1	60.9	42.9	55.9	38.1	44.8	39.1	46.9	51.4	52.2	72.4	69.5	76.0	76.6	73.7	76.9

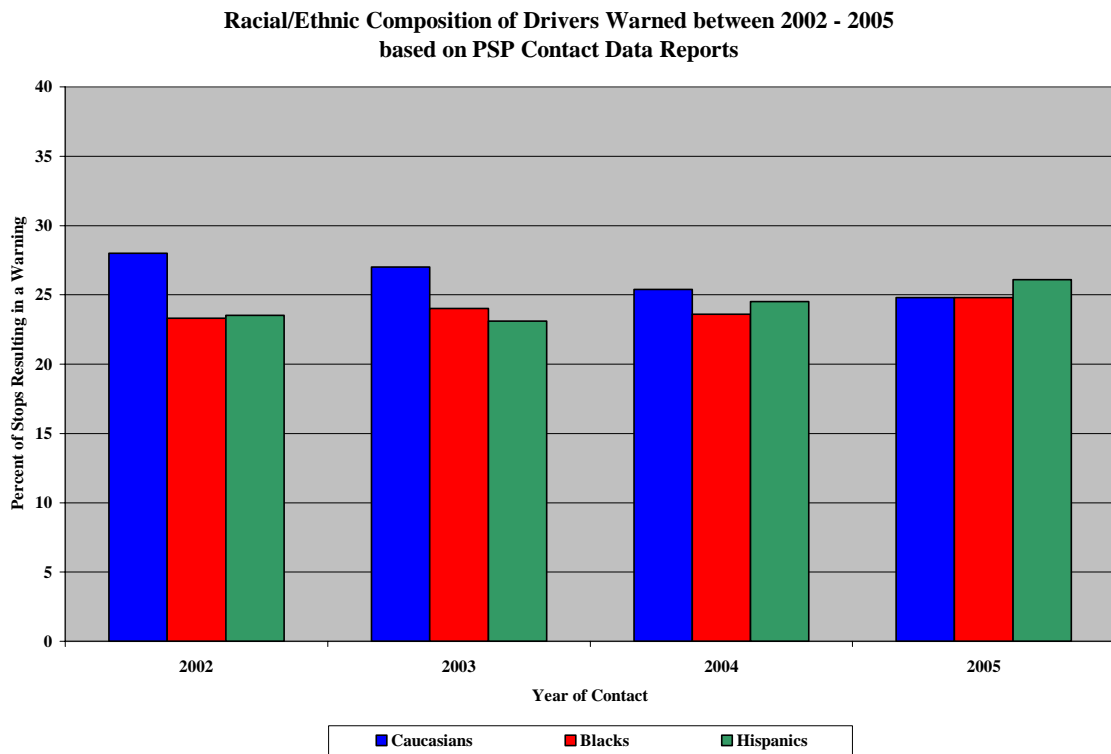
Table 5.11: Traffic Stop Warnings & Citations by Station for Caucasian & Non-Caucasian Drivers: 2002 - 2005 (p. 4 of 4)

	<u>Warnings</u>								<u>Citations</u>							
	<u>2002</u>		<u>2003</u>		<u>2004</u>		<u>2005</u>		<u>2002</u>		<u>2003</u>		<u>2004</u>		<u>2005</u>	
	Cau.	Non-Cau.	Cau.	Non-Cau.	Cau.	Non-Cau.	Cau.	Non-Cau.	Cau.	Non-Cau.	Cau.	Non-Cau.	Cau.	Non-Cau.	Cau.	Non-Cau.
AREA IV (cont.)																
Troop E																
Corry	51.9	85.7	45.4	55.9	42.5	31.4	42.2	60.0	61.8	71.4	70.5	70.6	71.0	82.9	71.4	46.7
Erie	39.4	29.4	27.1	20.1	26.8	23.9	36.7	32.3	68.8	77.7	81.5	87.3	83.7	85.0	85.6	88.5
Franklin	63.6	54.8	61.8	64.3	58.1	41.8	53.5	27.0	54.1	69.0	59.0	48.2	63.6	74.5	66.3	87.2
Girard	43.3	35.6	29.1	26.0	28.3	23.4	30.5	27.8	70.9	79.1	83.9	86.6	87.3	90.4	84.0	90.5
Meadville	49.7	36.7	49.5	33.5	33.5	20.3	20.4	13.7	60.3	69.4	65.2	78.2	77.2	88.9	89.0	92.9
Warren	58.2	42.9	32.0	37.5	29.5	26.1	30.4	16.7	55.5	42.9	79.1	62.5	80.8	87.0	79.3	83.3
AREA V																
Troop K																
Media	29.1	31.9	29.3	31.4	36.5	39.7	40.1	37.1	81.8	80.1	80.6	82.3	75.0	77.6	73.0	80.3
Philadelphia	21.0	21.5	26.9	32.7	29.2	30.5	25.0	30.1	92.9	93.4	88.5	85.9	87.4	89.7	87.8	87.7
Skippack	38.4	35.5	37.2	38.7	36.6	39.9	36.2	35.9	80.9	86.5	82.0	86.5	87.4	89.3	88.2	90.3
Troop M																
Belfast	40.0	33.2	29.8	28.8	32.5	34.5	25.4	31.5	73.3	79.4	80.1	82.5	78.4	80.8	86.7	83.3
Bethlehem	30.7	31.4	30.8	34.3	29.3	28.1	29.2	33.3	80.1	79.6	80.8	80.0	85.3	87.4	86.8	90.5
Dublin	43.9	45.3	54.5	56.9	60.9	57.5	50.0	47.7	70.5	72.7	67.5	70.4	65.5	71.3	80.5	87.3
Fogelsville	34.4	27.8	33.3	29.7	34.8	31.2	35.9	36.9	77.9	83.7	79.2	83.2	76.4	80.3	79.1	80.2
Trevoze	19.1	24.1	19.3	19.3	51.5	40.4	36.5	38.1	86.9	83.1	86.6	86.3	58.7	70.8	79.7	79.1
Troop N																
Bloomsburg	24.0	23.2	16.1	16.0	11.6	8.3	13.4	8.6	95.5	96.9	97.1	97.9	96.4	97.3	92.2	96.1
Fern Ridge	9.6	10.6	18.0	14.1	9.9	8.2	9.8	7.6	93.6	95.2	92.0	94.9	98.2	98.3	95.8	98.4
Hazleton	26.6	17.6	19.1	12.7	13.9	12.2	15.6	14.2	82.2	91.3	87.3	93.4	92.0	92.9	92.9	92.9
Lehighton	38.0	22.7	35.9	34.6	35.4	35.1	31.5	38.4	76.7	89.4	81.6	85.2	87.9	90.3	93.2	89.0
Swiftwater	19.5	19.6	19.4	19.6	29.6	29.8	26.1	25.5	88.5	88.7	87.3	88.7	85.8	85.7	91.1	92.8

Figures 5.33 & 5.34 graphically display the rates of warnings and citations between 2002 and 2005 across the department for Caucasian, Black, and Hispanic drivers. In both of the figures, the rates for each racial/ethnic group are represented by colored bars. These rates are based on the within group rates; that is, the rate of citations for Caucasian drivers is calculated by taking the number of Caucasian cited within one year and dividing it by the number of Caucasian drivers stopped that year. In this manner, the rates are standardized and can be accurately compared to one another.

As reported in **Figure 5.33**, the rates of warnings issued to Caucasian, Black, and Hispanic drivers has fluctuated slightly around 25% between 2002 and 2005. Prior to 2005, the percentages of warnings issued to Caucasian drivers were the highest across racial/ethnic groups. In 2005, the percentages of warning issued were slightly higher for Hispanics drivers compared to Caucasian and Black drivers.

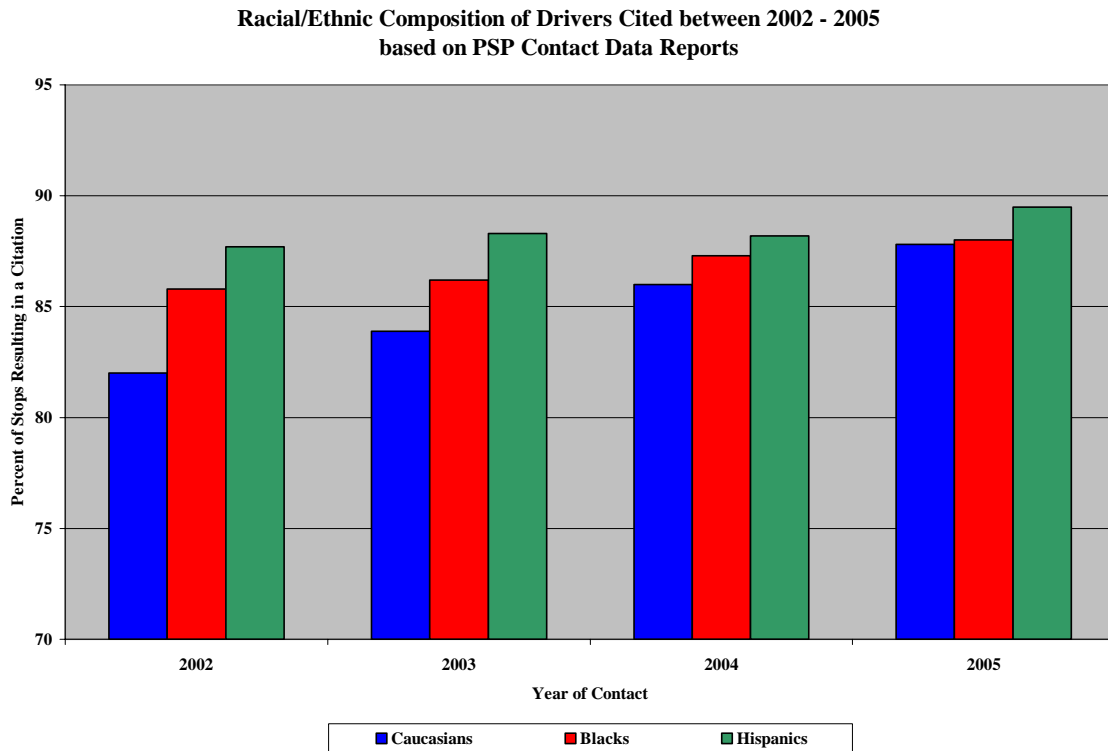
Figure 5.33: Racial/Ethnic Composition of Drivers Warned: 2002-2005



As graphically displayed in **Figure 5.34**, between 2002 and 2005, Hispanic drivers consistently received more citations when compared to Caucasians and Black drivers. As reported in **Table 5.6**, the overall trend across the department for all racial/ethnic groups is an increase in the rate of citations issued. Across all four years, Caucasians have the lowest rate of citations issued; however, the difference between Caucasians and other racial/ethnic groups was the smallest in 2005 when compared to the previous three years. That is, the disparities reported across racial/ethnic groups in the rates of citations have decreased significantly from 2002 to 2005, though a small amount of disparity still exists for Hispanic drivers compared to other racial/ethnic groups. There are a number of possible explanations

for this disparity in citation rate (e.g., reason for the initial stop, severity of the traffic offense, etc.). These and other explanations of disparities in citation rates are further explored in **Section 7**.

Figure 5.34: Racial/Ethnic Composition of Drivers Cited: 2002-2005



SECTION SUMMARY

Section 5 reported on the four years of data collection by focusing on trends in stops and post-stop outcomes between 2002 and 2005 at all organizational units. Moreover, the racial/ethnic composition of those stops and outcomes is of particular interest and represents a significant component of the analyses. It is important to note that a large number of the analyses reported in this section are descriptive and, when they are based on statistical testing, strictly of the bivariate nature. That is, these findings should be interpreted with caution, as not all possible factors that might explain the results are included (please see Section 6 for a more detailed analyses). Irrespective of the nature of the analyses, several findings are important to highlight:

Benchmarking

- Traffic stop data is often analyzed by comparing it to one or more benchmarks. This report did not employ the use of benchmarks due to their significant limitations including (but not limited to) the inability to measure all important factors associated with the decision to stop a vehicle as well as the subsequent outcome of that stop.

- Instead, based on the strength of having four years of traffic stop data, this report considered the stopping and post-stop patterns of behavior over time by examining trends of activity at all organizational units.

Analyses of Traffic Stop Data

- Between 2003 and 2005, there was a department wide reduction in the number of traffic stops initiated by PSP personnel from 317,920 in 2003 to 272,670 in 2005.
- Between 2002 and 2005, Caucasian drivers made up roughly 85% of all traffic stops, Black drivers accounted for approximately 8%, and Hispanic drivers represented roughly 3% of all traffic stops.
- These levels varied increasingly as more specific organizational units were examined (i.e., areas, troops and stations); as a result, a more thorough analysis at the station level was conducted.
 - Each station was visually graphed, a rate of change value was computed, and a binomial statistical test was conducted for Black and Hispanic drivers.
 - The results of these analyses highlighted two counties and 11 stations that had statistically significant elevated levels of stops of Black drivers when stops in 2002 were compared to 2005, and when stops in 2003 were compared to 2005.
 - Similar analyses of Hispanic stops revealed that nine counties and 14 stations also had statistically significant elevated rates of stops for this racial/ethnic group based on the same comparison.
 - These stations need to be monitored in upcoming data collection to determine whether these are continuing trends and which of the factors listed previously (e.g., changes in residential populations, alterations in travel patterns, etc.) may be responsible for these elevated rates.

Analyses of Post-Stop Outcomes

- Department- wide between 2002 and 2005, the rates of drivers warned slightly declined from 27.0% in 2002 to 24.6% in 2005.
- In regard to citations, this rate increased during the same time period, from 82.9% in 2002 to 88.1% in 2005.
- During the same time period, arrests, searches, and the discovery of contraband all demonstrated a slight dip during 2003 and 2004 before rebounding in 2005 to levels that surpass their 2002 rates.

- Similar to the patterns for traffic stops, post-stop outcomes varied more noticeably at increasingly specific organizational units (i.e., areas, troops, and stations).
- Due to the limitations of the data collected on post-stop outcomes as detailed in **Section 1**, warnings and citations were the focus of a more detailed analysis for Black and Hispanic drivers.
- In regard to warnings, Caucasian drivers experienced a slight reduction between 2002 and 2005 while Hispanic drivers had a slight increase.
- Across all four years, Caucasians are consistently the least cited racial/ethnic group, although that gap is slowly closing over time.
- Statistical analyses examining the rate of citations issued to Hispanic and Caucasian drivers did indicate that Hispanic drivers were more likely to receive a citation when compared to their Caucasian counterparts. There are a number of possible explanations for this disparity in citation rate (e.g., reason for the initial stop, severity of the traffic offense, etc.); however, these factors are considered in the multivariate analyses reported in **Section 6**. As a result, any interpretation of these findings must be made with caution.

6. ANALYSES OF CITATIONS: 2004 - 2005

OVERVIEW

In this section, differences in post-stop outcomes (e.g., citations) are examined in greater detail. Specifically, **Section 6** is divided into two components: 1) differences in post-stop outcomes across types of drivers, and 2) multivariate statistical analyses predicting post-stop outcomes. Given the underreporting of member-initiated traffic stops involving arrests and searches conducted prior to September 2005 (documented in **Sections 2 & 4**), the analyses reported in **Section 6** only examine citations for both 2004 and 2005 data. Traffic stops that resulted in a warning were not considered in these analyses, as the focus of this report was centered on the most coercive outcome (i.e., citation). Data collected after September 2005 will be analyzed in future reports to examine trends regarding arrest, search & seizure patterns. **Tables 6.1 – 6.7** throughout this section summarize the analyses conducted on warnings and citations.

Initially, post-stop outcomes are examined by drivers' race/ethnicity and gender at the department, area, troop, and station levels for 2004 and 2005. **Tables 6.1 – 6.6** document statistically significant differences between racial/ethnic and gender groups for citations across all organizational units for 2004 and 2005 data, respectively. These relationships are then further explored in hierarchical multivariate statistical analyses presented in **Table 6.7** that predict officer actions (i.e., citations) for all member-initiated traffic stops, and only member-initiated traffic stops for speeding. Throughout this section, the term "Caucasian" is used to describe the "White" category recorded on the CDR, while "Hispanic" is used to describe the combined "White Hispanic" and "Black Hispanic" groups recorded on the CDR. Likewise, the "other" racial/ethnic category includes Native American, Middle Eastern, and Asian drivers.

In **Tables 6.1– 6.6**, the asterisks indicate statistically significant differences in the outcomes received by racial and gender groups based on bivariate chi-square associations. Chi-square statistics are based on the differences between groups and the sample size. Because this statistical technique is sensitive to sample size, smaller differences between groups can result in statistically significant differences when the sample size is large. Therefore, depending on the sample size used in the chi-square test, statistical significance is reported at the 0.05, 0.01, or 0.001 level. For example, if the 0.05 level is used, a finding is statistically significant if we are 95% confident that the difference between groups is not due to chance; in contrast, a 0.001 level is interpreted as 99.9% confident that the result is not due to chance. Also note that these analyses are based on only the relationship between two variables (e.g., drivers' race and citations). That is, for each chi-square test, the comparison is between one outcome (e.g., citation) and one explanatory variable (e.g., drivers' gender). These findings do not take into account any other factors that might influence the outcome of the stop. In addition, multivariate analyses are reported and statistical significance in these analyses is also signified by an asterisk (see **Table 6.7**). These asterisks, however, represent statistical significance when other factors believed to influence the outcome of stops are taken into account.

DIFFERENCES IN CITATIONS ACROSS TYPES OF DRIVERS

For the comparisons reported in this section, drivers' race is collapsed into four categories – Caucasian, Black, Hispanic, and other. Traffic stops where Troopers classified drivers' race as “unknown” or did not record the race of the driver on the CDR (0.1% of the total number of forms collected in both 2004 and 2005) are excluded from all analyses. All of the tables in this section report the total number of stops, and the percentage of drivers cited by organizational unit.

Table 6.1 illustrates the variation in post-stop outcomes (i.e., citations) by drivers' race and gender for both the department and area levels in 2004. At the *department* level, Caucasian drivers were the least likely to be issued a citation (86.0% of stops) compared to Black (87.3%), Hispanic (88.2%), and other (91.8%) drivers. These differences are statistically significant based on a 0.001 level chi-square analysis. That is, the differences noted are likely due to chance no more than 0.1% of the time. It is important to recognize, however, that chi-square analyses do not consider other variables when determining statistical significance. That is, the chi-square test does not measure other factors potentially associated with the likelihood of receiving a citation; rather, it only considers the race/ethnicity of the driver. Consequently, the results of these analyses should be interpreted with some caution and the multivariate models (reported later in this section) should be examined prior to reaching conclusions regarding the relationship between race of the driver and post-stop outcomes. This caution also applies to the additional findings reviewed below.

At the area level, all except one (*Area I*) demonstrated that Caucasians were statistically less likely to be given a citation when compared to the minority racial/ethnic groups. Gender differences for 2004 citations are also displayed in **Table 6.1**. At the *department* level, female drivers were significantly less likely to be issued citations compared to male drivers. This pattern had some variation at the area level, where only in *Areas I, IV, & V* were females less likely to be issued a citation.

Table 6.1: 2004 Stop Outcomes by Race and Gender for Department and Areas

	Drivers	Total # of stops	% drivers cited
PSP Dept	Caucasian	255,154	86.0*
	Black	23,254	87.3
	Hispanic	9,999	88.2
	Other race	10,843	91.8
	Male	209,163	86.8*
	Female	91,242	85.6
AREA I	Caucasian	83,165	90.5*
	Black	10,096	91.1
	Hispanic	4,033	92.1
	Other race	4,535	95.4
	Male	71,544	91.3*
	Female	30,645	89.9
AREA II	Caucasian	35,785	90.2*
	Black	1,781	93.9
	Hispanic	816	95.0
	Other race	1,082	96.0
	Male	27,827	91.0
	Female	11,877	89.9
AREA III	Caucasian	50,323	87.4*
	Black	2,722	90.4
	Hispanic	489	93.5
	Other race	1,122	94.0
	Male	37,389	87.9
	Female	17,321	87.3
AREA IV	Caucasian	48,266	78.5*
	Black	3,028	83.2
	Hispanic	1,130	85.6
	Other race	1,874	89.1
	Male	37,563	79.9*
	Female	16,988	78.2
AREA V	Caucasian	36,013	81.6*
	Black	5,070	83.9
	Hispanic	3,193	86.2
	Other race	2,098	86.6
	Male	32,720	83.2*
	Female	13,881	80.7

NOTE: Asterisks indicate statistically significant chi-square associations across four racial groups and two gender groups. * p < .001

Table 6.2 displays the difference in citations by driver race and gender at the troop level for 2004. In regard to the race/ethnicity of the driver, nine troops had statistically significant differences between racial groups for drivers cited. In seven of those troops, minority drivers had a higher likelihood of receiving a citation when compared to Caucasian drivers.

Table 6.2 also reports differences in citations by gender are also reported at the troop level. For citations, seven troops had statistically significant differences and, in all but one (*Troop J*), male drivers were more likely than female drivers to receive citations.

Table 6.3 presents similar information at the station level for 2004. In contrast to information provided in **Tables 6.1 & 6.2**, the racial/ethnic categories presented in **Table 6.3** are a simple Caucasian/non-Caucasian dichotomy. The “non-Caucasian” category in this table includes Black, Black Hispanic, White Hispanic, Native American, Middle Eastern, and Asian drivers. A Caucasian/non-Caucasian comparison is used in **Table 6.3** because the number of stops in some racial/ethnic groups is too small for individual comparisons at the station level. **Table 6.3** indicates that there are significant differences in citations across racial groups at the station level for 2004. Out of all stations, 31 (34.4%) reported significant differences in the proportion of drivers cited by racial group.

Table 6.2: 2004 Stop Outcomes by Race and Gender for Troops (p. 1 of 3)

	Drivers	Total # of Stops	% drivers cited
Area I, Troop H	Caucasian	22,708	85.1*
	Black	1,697	87.3
	Hispanic	890	88.8
	Other	669	89.5
	Male	17,655	86.1*
	Female	8,400	84.1
Area I, Troop J	Caucasian	6,709	89.6
	Black	798	87.8
	Hispanic	786	93.1
	Other	202	88.1
	Male	5,882	87.8*
	Female	2,622	90.5
Area I, Troop L	Caucasian	7,568	85.5
	Black	566	85.2
	Hispanic	562	87.9
	Other	319	92.8
	Male	6,364	86.2
	Female	2,663	85.2
Area I, Troop T	Caucasian	46,180	94.2*
	Black	7,035	92.8
	Hispanic	1,795	94.7
	Other	3,345	97.3
	Male	41,643	94.4
	Female	16,960	93.8
Area II, Troop F	Caucasian	19,864	90.8*
	Black	1,026	94.8
	Hispanic	414	96.1
	Other	566	97.3
	Male	15,259	91.7*
	Female	6,757	90.2
Area II, Troop P	Caucasian	7,707	85.8
	Black	187	90.4
	Hispanic	82	90.2
	Other	81	86.4
	Male	5,636	85.7
	Female	2,422	86.6

NOTE: Asterisks indicate statistically significant chi-square associations across four racial groups and two gender groups. * $p < .001$

Table 6.2: 2004 Stop Outcomes by Race and Gender for Troops (p. 2 of 3)

	Drivers	Total # of Stops	% drivers cited
Area I, Troop R	Caucasian	8,214	92.9
	Black	568	93.3
	Hispanic	320	94.7
	Other	435	96.1
	Male	6,932	93.6
	Female	2,698	92.0
Area I, Troop A	Caucasian	14,987	89.9
	Black	471	89.0
	Hispanic	66	89.4
	Other	176	92.0
	Male	10,636	89.5
	Female	5,069	90.8
Area I, Troop B	Caucasian	17,555	89.3*
	Black	1,272	91.6
	Hispanic	138	96.4
	Other	370	97.3
	Male	13,243	90.3*
	Female	6,101	88.4
Area I, Troop G	Caucasian	17,781	83.3*
	Black	979	89.6
	Hispanic	285	93.0
	Other	576	92.5
	Male	13,510	84.4
	Female	6,151	83.4
Area II, Troop C	Caucasian	18,188	79.4*
	Black	1,375	88.9
	Hispanic	712	91.7
	Other	986	92.7
	Male	15,424	81.9*
	Female	5,986	79.2
Area II, Troop D	Caucasian	14,500	77.6*
	Black	918	73.1
	Hispanic	224	65.6
	Other	333	80.8
	Male	10,765	77.8
	Female	5,256	76.1

NOTE: Asterisks indicate statistically significant chi-square associations across four racial groups and two gender groups. * $p < .001$

Table 6.2: 2004 Stop Outcomes by Race and Gender for Troops (p. 3 of 3)

	Drivers	Total # of Stops	% drivers cited
Area I, Troop E	Caucasian	15,578	78.4*
	Black	735	85.2
	Hispanic	194	86.1
	Other	555	87.7
	Male	11,374	79.1
	Female	5,746	79.0
Area I, Troop K	Caucasian	8,203	83.2
	Black	1,881	83.9
	Hispanic	455	87.0
	Other	456	86.9
	Male	7,528	84.3
	Female	3,501	82.3
Area I, Troop M	Caucasian	15,880	73.3*
	Black	1,686	76.8
	Hispanic	1,707	81.3
	Other	843	80.7
	Male	14,292	75.5*
	Female	5,910	72.3
Area I, Troop N	Caucasian	11,930	91.6
	Black	1,503	91.8
	Hispanic	1,031	93.9
	Other	799	92.7
	Male	10,900	92.5*
	Female	4,470	90.5

NOTE: Asterisks indicate statistically significant chi-square associations across four racial groups and two gender groups. * p < .001

Table 6.3: 2004 Stop Outcomes By Race for Station (p. 1 of 5)

Drivers		Total # of Stops	% drivers cited
AREA I, Troop H			
Carlisle	Caucasian	5,100	91.7
	Non-Caucasian	844	92.4
Chambersburg	Caucasian	4,510	80.9***
	Non-Caucasian	530	87.5
Gettysburg	Caucasian	2,604	58.5**
	Non-Caucasian	363	66.7
Harrisburg	Caucasian	3,317	93.2
	Non-Caucasian	566	94.3
Lykens	Caucasian	1,214	88.3
	Non-Caucasian	32	84.4
Newport	Caucasian	1,892	93.5
	Non-Caucasian	166	93.4
York	Caucasian	4,158	87.2
	Non-Caucasian	755	88.5
AREA I, Troop J			
Avondale	Caucasian	2,217	91.5
	Non-Caucasian	789	91.1
Embreeville	Caucasian	1,875	87.8
	Non-Caucasian	524	87.8
Ephrata	Caucasian	793	93.9
	Non-Caucasian	184	96.2
Lancaster	Caucasian	1,835	87.1
	Non-Caucasian	289	88.2
AREA I, Troop L			
Frackville	Caucasian	869	83.3
	Non-Caucasian	82	91.5
Hamburg	Caucasian	1,391	89.0*
	Non-Caucasian	421	92.4
Jonestown	Caucasian	2,200	85.0
	Non-Caucasian	539	84.8
Reading	Caucasian	1,627	88.1
	Non-Caucasian	307	86.6
Schuylkill Haven	Caucasian	1,493	81.5
	Non-Caucasian	98	86.7
AREA I, Troop T			
Bowmansville	Caucasian	5,015	98.1*
	Non-Caucasian	1,465	97.2
Everett	Caucasian	5,766	92.9*
	Non-Caucasian	2,050	94.2

NOTE: Asterisks identify statistically significant chi-square associations. * p < .05 ** p<.01 *** p<.001

Table 6.3: 2004 Stop Outcomes By Race for Station (p. 2 of 5)

	Drivers	Total # of Stops	% drivers cited
AREA I, Troop T			
Gibsonia	Caucasian	6,851	94.6**
	Non-Caucasian	1,352	92.5
Highspire	Caucasian	2	50.0
	Non-Caucasian	1	0.0
King of Prussia	Caucasian	5,400	92.3
	Non-Caucasian	1,373	91.8
New Stanton	Caucasian	6,559	91.6
	Non-Caucasian	1,266	93.0
Newville	Caucasian	7,734	93.2
	Non-Caucasian	2,237	94.1
Pocono	Caucasian	3,644	94.7
	Non-Caucasian	603	94.5
Somerset (T)	Caucasian	5,470	97.5*
	Non-Caucasian	1,828	96.4
AREA II, Troop F			
Coudersport	Caucasian	1,478	70.3
	Non-Caucasian	37	75.7
Emporium	Caucasian	1,170	84.4
	Non-Caucasian	12	75.0
Lamar	Caucasian	2,830	93.1***
	Non-Caucasian	705	96.7
Mansfield	Caucasian	1,358	78.5
	Non-Caucasian	80	82.5
Milton	Caucasian	2,406	98.8
	Non-Caucasian	465	99.6
Montoursville	Caucasian	6,403	95.2
	Non-Caucasian	489	94.7
Selinsgrove	Caucasian	2,904	96.3
	Non-Caucasian	191	97.9
Stonington	Caucasian	1,470	80.2
	Non-Caucasian	27	88.9
AREA II, Troop P			
Laporte	Caucasian	1,305	87.1
	Non-Caucasian	36	88.9
Shickshinny	Caucasian	936	82.6
	Non-Caucasian	59	89.8
Towanda	Caucasian	1,753	89.3***
	Non-Caucasian	28	67.9
Tunkhannock	Caucasian	1,401	68.7
	Non-Caucasian	37	73.0

NOTE: Asterisks identify statistically significant chi-square associations. * p < .05 ** p<.01 *** p<.001

Table 6.3: 2004 Stop Outcomes By Race for Station (p. 3 of 5)

	Drivers	Total # of Stops	% drivers cited
AREA II, Troop P			
Wyoming	Caucasian	2,322	94.1
	Non-Caucasian	190	95.8
AREA II, Troop R			
Blooming Grove	Caucasian	2,312	95.3
	Non-Caucasian	294	96.3
Dunmore	Caucasian	2,369	91.1
	Non-Caucasian	454	91.2
Gibson	Caucasian	1,655	93.7*
	Non-Caucasian	465	96.8
Honesdale	Caucasian	1,977	91.8
	Non-Caucasian	110	94.5
AREA III, Troop A			
Ebensburg	Caucasian	3,000	87.3
	Non-Caucasian	127	90.6
Greensburg	Caucasian	4,033	95.4
	Non-Caucasian	140	92.1
Indiana	Caucasian	3,714	91.3
	Non-Caucasian	204	93.1
Kiski Valley	Caucasian	2,300	88.0
	Non-Caucasian	189	86.2
Somerset (A)	Caucasian	1,959	82.1
	Non-Caucasian	53	81.1
AREA III, Troop B			
Belle Vernon	Caucasian	2,707	93.7
	Non-Caucasian	344	95.1
Pittsburgh	Caucasian	3,878	95.0
	Non-Caucasian	523	95.4
Uniontown	Caucasian	3,725	76.1*
	Non-Caucasian	255	83.1
Washington	Caucasian	4,851	91.0*
	Non-Caucasian	478	93.9
Waynesburg	Caucasian	2,412	92.6
	Non-Caucasian	180	95.0
AREA III, Troop G			
Bedford	Caucasian	2,904	74.9***
	Non-Caucasian	215	87.4
Hollidaysburg	Caucasian	2,921	83.6
	Non-Caucasian	234	85.5
Huntingdon	Caucasian	2,116	85.1
	Non-Caucasian	71	80.3

NOTE: Asterisks identify statistically significant chi-square associations. * p < .05 ** p < .01 *** p < .001

Table 6.3: 2004 Stop Outcomes By Race for Station (p. 4 of 5)

	Drivers	Total # of Stops	% drivers cited
AREA III, Troop G			
Lewistown	Caucasian	2,229	77.2***
	Non-Caucasian	227	87.7
McConnellsburg	Caucasian	1,615	91.9***
	Non-Caucasian	421	96.9
Philipsburg	Caucasian	2,568	86.3**
	Non-Caucasian	232	94.0
Rockview	Caucasian	3,487	87.0**
	Non-Caucasian	440	92.0
AREA IV, Troop C			
Clarion	Caucasian	3,840	72.8***
	Non-Caucasian	1,093	83.7
Clearfield	Caucasian	4,306	93.8***
	Non-Caucasian	837	97.3
Dubois	Caucasian	2,451	83.5***
	Non-Caucasian	628	94.3
Kane	Caucasian	1,454	80.5**
	Non-Caucasian	105	93.3
Punxsutawney	Caucasian	2,205	75.7***
	Non-Caucasian	161	94.4
Ridgway	Caucasian	2,147	84.7***
	Non-Caucasian	168	94.6
Tionesta	Caucasian	1,933	54.1**
	Non-Caucasian	81	72.8
AREA IV, Troop D			
Beaver	Caucasian	2,144	72.5
	Non-Caucasian	188	68.6
Butler	Caucasian	4,060	83.9
	Non-Caucasian	221	86.4
Kittanning	Caucasian	3,852	75.1
	Non-Caucasian	294	79.6
Mercer	Caucasian	2,471	77.2***
	Non-Caucasian	627	67.3
New Castle	Caucasian	2,020	75.9
	Non-Caucasian	145	76.6
AREA IV, Troop E			
Corry	Caucasian	1,138	71.0*
	Non-Caucasian	70	82.9
Erie	Caucasian	3,856	83.7
	Non-Caucasian	473	85.0

NOTE: Asterisks identify statistically significant chi-square associations. * p < .05 ** p<.01 *** p<.001

Table 6.3: 2004 Stop Outcomes By Race for Station (p. 5 of 5)

	Drivers	Total # of Stops	% drivers cited
AREA IV, Troop E			
Franklin	Caucasian	2,834	63.7**
	Non-Caucasian	153	74.5
Girard	Caucasian	3,342	87.3
	Non-Caucasian	376	90.4
Meadville	Caucasian	2,935	77.2***
	Non-Caucasian	389	88.9
Warren	Caucasian	1,541	80.8
	Non-Caucasian	23	87.0
AREA V, Troop K			
Media	Caucasian	2,771	75.0
	Non-Caucasian	1,083	77.6
Philadelphia	Caucasian	1,747	87.4
	Non-Caucasian	987	89.7
Skippack	Caucasian	3,718	87.4
	Non-Caucasian	722	89.3
AREA V, Troop M			
Belfast	Caucasian	2,417	78.5
	Non-Caucasian	741	80.8
Bethlehem	Caucasian	3,434	85.3
	Non-Caucasian	986	87.4
Dublin	Caucasian	3,757	65.5*
	Non-Caucasian	414	71.3
Fogelsville	Caucasian	3,845	76.4**
	Non-Caucasian	1,295	80.3
Treose	Caucasian	2,508	58.8***
	Non-Caucasian	800	70.8
AREA V, Troop N			
Bloomsburg	Caucasian	2,234	96.5
	Non-Caucasian	660	97.3
Fern Ridge	Caucasian	2,047	98.2
	Non-Caucasian	723	98.3
Hazleton	Caucasian	2,514	92.2
	Non-Caucasian	780	92.9
Lehighton	Caucasian	2,366	88.0
	Non-Caucasian	185	90.3
Swiftwater	Caucasian	2,875	85.8
	Non-Caucasian	985	85.7

NOTE: Asterisks identify statistically significant chi-square associations. * p < .05 ** p<.01 *** p<.001

Table 6.4 reports stop outcomes by drivers' race/ethnicity and gender for 2005. At the *department* level, statistical analyses demonstrate that Caucasian drivers were the least likely to be issued a citation (87.8% of stops) compared to Black (88.0%), Hispanic (89.5%), and other (92.1%) drivers. At the area level, there were statistically significant differences between race/ethnicity and citations. There is no clear pattern across areas, however, regarding which racial/ethnic groups were more likely to receive this outcome. In some areas, Hispanics and Blacks were more likely to be issued citations (*Areas II, III, IV & V*) compared to Caucasians.

Gender differences for 2005 stop outcomes are also displayed in **Table 6.4**. At the *department* level, there were no statistically significant differences in citations by gender. At the area level, male drivers were significantly more likely than female drivers to be issued citations only in *Area V*.

Table 6.5 displays the differences in 2005 stop outcomes by driver race and gender at the troop level. Out of all 16 PSP troops, six troops had statistically significant differences between racial groups for drivers cited. Of the 16 PSP troops, few differences in citations by gender were found at the troop level, with only one troop reported statistically significant differences in drivers cited by gender.

Table 6.4: 2005 Stop Outcomes by Race and Gender for Department and Areas

	Drivers	Total # of stops	% drivers cited
PSP Dept	Caucasian	231,246	87.8*
	Black	21,353	88.0
	Hispanic	9,356	89.5
	Other race	9,435	92.1
	Male	46,544	88.2
	Female	20,359	87.8
AREA I	Caucasian	81,069	91.7*
	Black	9,817	91.3
	Hispanic	4,182	91.5
	Other race	4,317	94.7
	Male	69,760	91.9
	Female	29,935	91.6
AREA II	Caucasian	28,748	90.6*
	Black	1,290	93.4
	Hispanic	633	94.8
	Other race	734	97.0
	Male	21,958	91.2
	Female	9,643	90.7
AREA III	Caucasian	52,098	87.6*
	Black	2,820	89.2
	Hispanic	480	88.8
	Other race	1,122	93.4
	Male	38,881	88.1
	Female	17,726	87.2
AREA IV	Caucasian	39,614	80.5*
	Black	2,650	84.1
	Hispanic	821	88.2
	Other race	1,470	89.3
	Male	30,955	81.2
	Female	13,809	81.1
AREA V	Caucasian	28,773	86.2*
	Black	4,382	86.1
	Hispanic	3,022	88.6
	Other race	1,693	88.8
	Male	26,832	87.1*
	Female	11,283	85.3

NOTE: Asterisks indicate statistically significant chi-square associations across four racial groups and two gender groups. * p < .001

Table 6.5: 2005 Stop Outcomes by Race and Gender for Troops (p. 1 of 3)

	Drivers	Total # of Stops	% drivers cited
Area I, Troop H	Caucasian	20,051	86.7
	Black	1,615	86.9
	Hispanic	891	87.0
	Other	564	91.0
	Male	15,711	87.0
	Female	7,479	86.6
Area I, Troop J	Caucasian	7,260	92.4
	Black	892	90.8
	Hispanic	933	95.0
	Other	174	92.0
	Male	6,473	92.6
	Female	2,808	92.2
Area I, Troop L	Caucasian	7,322	88.1
	Black	614	87.3
	Hispanic	628	90.9
	Other	296	90.2
	Male	6,300	88.9
	Female	2,574	86.9
Area I, Troop T	Caucasian	46,436	94.3*
	Black	6,696	92.8
	Hispanic	1,730	92.3
	Other	3,283	95.9
	Male	41,276	94.0
	Female	17,074	94.4
Area II, Troop F	Caucasian	14,116	91.2*
	Black	618	96.1
	Hispanic	251	96.4
	Other	296	97.3
	Male	10,542	91.8
	Female	4,859	91.5
Area II, Troop P	Caucasian	7,344	86.0
	Black	170	87.1
	Hispanic	80	88.8
	Other	75	94.7
	Male	5,332	86.2
	Female	2,343	86.1

NOTE: Asterisks indicate statistically significant chi-square associations across four racial groups and two gender groups. * $p < .001$

Table 6.5: 2005 Stop Outcomes by Race and Gender for Troops (p. 2 of 3)

	Drivers	Total # of Stops	% drivers cited
Area I, Troop R	Caucasian	7,288	94.2
	Black	502	92.2
	Hispanic	302	95.0
	Other	363	97.2
	Male	6,084	94.4
	Female	2,441	93.7
Area I, Troop A	Caucasian	15,081	89.9
	Black	434	91.0
	Hispanic	41	80.5
	Other	150	97.3
	Male	10,662	90.0
	Female	5,063	89.9
Area I, Troop B	Caucasian	17,867	89.7
	Black	1,315	89.3
	Hispanic	114	92.1
	Other	355	92.7
	Male	13,596	90.2
	Female	6,065	88.6
Area I, Troop G	Caucasian	19,150	83.9*
	Black	1,071	88.4
	Hispanic	325	88.6
	Other	617	92.9
	Male	14,623	84.8
	Female	6,598	83.8
Area II, Troop C	Caucasian	14,697	79.4*
	Black	1,047	86.5
	Hispanic	483	87.6
	Other	761	90.4
	Male	12,459	81.2
	Female	4,664	79.2
Area II, Troop D	Caucasian	12,863	79.8
	Black	901	77.5
	Hispanic	174	85.6
	Other	280	83.2
	Male	9,604	79.5
	Female	4,638	80.5

NOTE: Asterisks indicate statistically significant chi-square associations across four racial groups and two gender groups. * p < .001

Table 6.5: 2005 Stop Outcomes by Race and Gender for Troops (p. 3 of 3)

	Drivers	Total # of Stops	% drivers Cited
Area I, Troop E	Caucasian	12,054	82.5*
	Black	702	88.9
	Hispanic	164	92.7
	Other	429	91.1
	Male	8,892	83.1
	Female	4,507	83.6
Area I, Troop K	Caucasian	6,010	83.3
	Black	1,552	85.4
	Hispanic	387	89.9
	Other	416	85.1
	Male	5,748	84.8
	Female	2,643	82.7
Area I, Troop M	Caucasian	12,769	82.4
	Black	1,546	81.8
	Hispanic	1,691	84.7
	Other	680	84.3
	Male	12,009	83.4*
	Female	4,833	80.8
Area I, Troop N	Caucasian	9,994	92.8*
	Black	1,284	92.1
	Hispanic	944	95.0
	Other	597	96.5
	Male	9,075	93.2
	Female	3,807	92.9

NOTE: Asterisks indicate statistically significant chi-square associations across four racial groups and two gender groups. * p < .001

Table 6.6 demonstrates significant differences in stop outcomes across racial groups at the station level for 2005. Again, in contrast to information provided in **Tables 6.4 & 6.5**, the racial/ethnic categories presented in **Table 6.6** are a simple Caucasian/non-Caucasian dichotomy. Out of all stations, 31 (34.4%) reported significant differences in the percentages of drivers cited by racial group.

Table 6.6: 2005 Stop Outcomes By Race for Station (p. 1 of 5)

	Drivers	Total # of Stops	% drivers cited
AREA I, Troop H			
Carlisle	Caucasian	4,426	92.3
	Non-Caucasian	781	93.2
Chambersburg	Caucasian	3,317	86.1
	Non-Caucasian	441	86.4
Gettysburg	Caucasian	2,309	66.8***
	Non-Caucasian	379	77.6
Harrisburg	Caucasian	2,770	93.8***
	Non-Caucasian	549	87.2
Lykens	Caucasian	1,445	87.1
	Non-Caucasian	31	83.9
Newport	Caucasian	2,124	91.5
	Non-Caucasian	214	90.2
York	Caucasian	3,723	84.7
	Non-Caucasian	675	87.6
AREA I, Troop J			
Avondale	Caucasian	2,015	92.2
	Non-Caucasian	728	93.3
Embreeville	Caucasian	1,840	94.9**
	Non-Caucasian	569	91.7
Ephrata	Caucasian	818	90.3***
	Non-Caucasian	196	98.5
Lancaster	Caucasian	2,605	91.4
	Non-Caucasian	506	91.3
AREA I, Troop L			
Frackville	Caucasian	765	83.7
	Non-Caucasian	108	87.0
Hamburg	Caucasian	1,555	91.8*
	Non-Caucasian	450	94.7
Jonestown	Caucasian	2,560	87.9
	Non-Caucasian	625	89.0
Reading	Caucasian	1,054	86.4
	Non-Caucasian	240	82.9
Schuylkill Haven	Caucasian	1,403	88.1
	Non-Caucasian	115	86.1
AREA I, Troop T			
Bowmansville	Caucasian	4,582	98.5***
	Non-Caucasian	1,274	96.8
Everett	Caucasian	7,229	93.5
	Non-Caucasian	2,422	93.9

NOTE: Asterisks identify statistically significant chi-square associations. * p < .05 ** p<.01 *** p<.001

Table 6.6: 2005 Stop Outcomes By Race for Station (p. 2 of 5)

	Drivers	Total # of Stops	% drivers cited
AREA I, Troop T			
Gibsonia	Caucasian	6,652	93.2
	Non-Caucasian	1,321	91.7
Highspire	Caucasian	33	100.0*
	Non-Caucasian	12	83.3
King of Prussia	Caucasian	4,900	90.9
	Non-Caucasian	1,274	89.2
New Stanton	Caucasian	6,708	93.3*
	Non-Caucasian	1,376	91.7
Newville	Caucasian	6,850	94.9
	Non-Caucasian	1,755	95.3
Pocono	Caucasian	4,553	94.7
	Non-Caucasian	685	95.2
Somerset (T)	Caucasian	5,132	96.5**
	Non-Caucasian	1,588	95.0
AREA II, Troop F			
Coudersport	Caucasian	1,344	72.5
	Non-Caucasian	22	68.2
Emporium	Caucasian	948	84.7
	Non-Caucasian	8	100.0
Lamar	Caucasian	1,392	96.3
	Non-Caucasian	343	97.7
Mansfield	Caucasian	1,168	84.5
	Non-Caucasian	74	89.2
Milton	Caucasian	1,814	97.4
	Non-Caucasian	303	99.0
Montoursville	Caucasian	3,845	95.3
	Non-Caucasian	228	97.8
Selinsgrove	Caucasian	2,678	96.9
	Non-Caucasian	165	95.8
Stonington	Caucasian	1,044	82.5
	Non-Caucasian	22	86.4
AREA II, Troop P			
Laporte	Caucasian	1,424	84.6
	Non-Caucasian	32	90.6
Shickshinny	Caucasian	1,055	83.0
	Non-Caucasian	46	87.0
Towanda	Caucasian	2,337	83.5
	Non-Caucasian	63	81.0
Tunkhannock	Caucasian	1,017	82.3
	Non-Caucasian	32	84.4

NOTE: Asterisks identify statistically significant chi-square associations. * p < .05 ** p<.01 *** p<.001

Table 6.6: 2005 Stop Outcomes By Race for Station (p. 3 of 5)

	Drivers	Total # of Stops	% drivers cited
AREA II, Troop P			
Wyoming	Caucasian	1,517	95.8
	Non-Caucasian	152	94.1
AREA II, Troop R			
Blooming Grove	Caucasian	1,692	96.5
	Non-Caucasian	220	95.9
Dunmore	Caucasian	2,601	93.7
	Non-Caucasian	492	94.3
Gibson	Caucasian	1,208	94.1
	Non-Caucasian	332	94.6
Honesdale	Caucasian	1,864	92.8
	Non-Caucasian	123	92.7
AREA III, Troop A			
Ebensburg	Caucasian	3,902	91.6
	Non-Caucasian	148	95.3
Greensburg	Caucasian	3,825	92.0*
	Non-Caucasian	132	87.1
Indiana	Caucasian	2,488	90.0
	Non-Caucasian	139	89.9
Kiski Valley	Caucasian	2,572	89.2
	Non-Caucasian	160	93.8
Somerset (A)	Caucasian	2,317	84.2
	Non-Caucasian	46	93.5
AREA III, Troop B			
Belle Vernon	Caucasian	2,071	94.9
	Non-Caucasian	297	97.3
Pittsburgh	Caucasian	4,091	91.1
	Non-Caucasian	548	90.7
Uniontown	Caucasian	5,083	81.5
	Non-Caucasian	315	77.1
Washington	Caucasian	4,605	93.5
	Non-Caucasian	438	92.7
Waynesburg	Caucasian	2,028	93.1
	Non-Caucasian	186	93.0
AREA III, Troop G			
Bedford	Caucasian	2,859	74.4***
	Non-Caucasian	222	86.0
Hollidaysburg	Caucasian	2,634	80.7*
	Non-Caucasian	249	74.7
Huntingdon	Caucasian	1,815	86.2
	Non-Caucasian	56	85.7

NOTE: Asterisks identify statistically significant chi-square associations. * p < .05 ** p<.01 *** p<.001

Table 6.6: 2005 Stop Outcomes By Race for Station (p. 4 of 5)

	Drivers	Total # of Stops	% drivers cited
AREA III, Troop G			
Lewistown	Caucasian	2,929	82.4**
	Non-Caucasian	249	89.6
McConnellsburg	Caucasian	1,725	92.8***
	Non-Caucasian	395	98.0
Philipsburg	Caucasian	2,240	87.8***
	Non-Caucasian	238	95.4
Rockview	Caucasian	5,012	86.3**
	Non-Caucasian	604	90.4
AREA IV, Troop C			
Clarion	Caucasian	2,673	75.6***
	Non-Caucasian	869	81.9
Clearfield	Caucasian	2,994	94.9*
	Non-Caucasian	664	96.8
Dubois	Caucasian	1,781	83.1**
	Non-Caucasian	479	88.5
Kane	Caucasian	1,417	83.2
	Non-Caucasian	57	86.0
Punxsutawney	Caucasian	1,914	80.4**
	Non-Caucasian	108	91.7
Ridgway	Caucasian	1,811	79.0
	Non-Caucasian	79	83.5
Tionesta	Caucasian	2,248	58.1
	Non-Caucasian	35	68.6
AREA IV, Troop D			
Beaver	Caucasian	2,125	78.6
	Non-Caucasian	191	73.3
Butler	Caucasian	3,778	85.8
	Non-Caucasian	236	86.0
Kittanning	Caucasian	3,333	74.8
	Non-Caucasian	301	74.1
Mercer	Caucasian	2,036	83.2
	Non-Caucasian	497	83.3
New Castle	Caucasian	1,614	73.7
	Non-Caucasian	130	76.9
AREA IV, Troop E			
Corry	Caucasian	837	71.4*
	Non-Caucasian	15	46.7
Erie	Caucasian	2,430	85.6
	Non-Caucasian	279	88.5

NOTE: Asterisks identify statistically significant chi-square associations. * p < .05 ** p<.01 *** p<.001

Table 6.6: 2005 Stop Outcomes By Race for Station (p. 5 of 5)

	Drivers	Total # of Stops	% drivers cited
AREA IV, Troop E			
Franklin	Caucasian	1,511	66.4***
	Non-Caucasian	148	87.2
Girard	Caucasian	2,473	84.1**
	Non-Caucasian	317	90.5
Meadville	Caucasian	3,881	89.0**
	Non-Caucasian	524	92.9
Warren	Caucasian	972	79.3
	Non-Caucasian	12	83.3
AREA V, Troop K			
Media	Caucasian	1,879	73.0***
	Non-Caucasian	692	80.3
Philadelphia	Caucasian	1,991	87.9
	Non-Caucasian	1,150	87.7
Skippack	Caucasian	2,169	88.2
	Non-Caucasian	513	90.3
AREA V, Troop M			
Belfast	Caucasian	2,361	86.7*
	Non-Caucasian	800	83.3
Bethlehem	Caucasian	2,616	86.7**
	Non-Caucasian	860	90.5
Dublin	Caucasian	2,806	80.5**
	Non-Caucasian	331	87.3
Fogelsville	Caucasian	3,660	79.2
	Non-Caucasian	1,281	80.2
Treiose	Caucasian	1,482	79.6
	Non-Caucasian	645	79.1
AREA V, Troop N			
Bloomsburg	Caucasian	1,570	92.2**
	Non-Caucasian	456	96.1
Fern Ridge	Caucasian	1,446	95.9*
	Non-Caucasian	446	98.4
Hazleton	Caucasian	2,384	93.0
	Non-Caucasian	762	92.9
Lehighton	Caucasian	2,177	93.2*
	Non-Caucasian	172	89.0
Swiftwater	Caucasian	2,487	91.1
	Non-Caucasian	989	92.8

NOTE: Asterisks identify statistically significant chi-square associations. * p < .05 ** p<.01 *** p<.001

Tables 6.1 - 6.6 illustrate the wide variation in outcomes across racial/ethnic and gender groups at the department, area, troop, and station levels for both 2004 and 2005. It is important to reiterate, however, that the relationships reported in these tables are bivariate and thus do not statistically control for other relevant legal and extralegal factors that might be expected to influence officer decision-making. Therefore, the information provided in these tables cannot determine whether or not differences in outcomes across racial/ethnic and gender groups are due to Trooper bias.

It is plausible that racial/ethnic and gender differences in post-stop outcomes exist due to legal and extralegal reasons other than race, ethnicity, and gender. To explore these possibilities, more advanced statistical analyses that control for other legally relevant variables are presented below. The information reported in **Tables 6.1 - 6.6** is included in this report solely to provide details to PSP administrators regarding differences in post-stop outcomes at the department, area, troop, and station levels. Although this information will allow PSP administrators to identify potential problems and target specific troops and stations for policy interventions, this information cannot alone examine whether or not discriminatory practices exist.

MULTIVARIATE ANALYSES

In **Table 6.7**, the results of two hierarchical multivariate models are presented. A multivariate statistical model is one that takes many different factors into account when attempting to explain a particular behavior. Unlike a bivariate model, it does not simply assess the relationship between two variables. Rather, a multivariate model examines many variables simultaneously, and therefore provides a more thorough and accurate interpretation of the data. The multivariate analyses to follow examine the associations between drivers' characteristics and citations issued when other characteristics likely associated with this outcome are statistically controlled.

Many factors other than drivers' race/ethnicity are likely to influence officers' decision making once a traffic stop has been made. For example, other driver characteristics (e.g., drivers' gender, age, residency), vehicle characteristics (e.g., registration, number of passengers), stop characteristics (e.g., time of day, day of the week, season, and roadway type), reasons for the stop (speeding, moving violations, equipment violations, etc.), other legal variables (e.g., number of reasons for the stop, evidence found during a search), Trooper characteristics (e.g., sex, race, experience, education, assignment), and community characteristics where the stop occurred (e.g., residential population, poverty, factors related to traffic patterns, etc.) have all been hypothesized to influence post-stop outcomes. Multivariate analyses allow the examination of the effects of each of these predictor variables, while controlling for the influence of the remaining variables. For example, the influence of drivers' race can be examined while holding constant the predictive power of drivers' age, reason for the stop, time of day, etc. Note, however, that unmeasured factors (e.g., drivers' demeanor) which likely have an important influence on officer behavior cannot be examined with these data.

The inclusion of community characteristics in the analyses introduces additional statistical complexity with the use of data at two levels of aggregation. Therefore, the application of a specialized statistical program called hierarchical linear and nonlinear modeling (HLM) is required.⁷ The multivariate analyses examine the following specific variables for their influence over post-stop outcomes (i.e., citations):

- Driver characteristics: race/ethnicity (four dichotomous variables – Caucasian, Black, Hispanic, other; Caucasian is the excluded comparison category in the analyses), gender (1=male), age (in years), county residency where stop occurred (1=yes), Pennsylvania residency (1=yes).
- Vehicle characteristics: registration (1= no registration, 0=PA or out of state registration), number of passengers in the vehicle (range 1-5)
- Stop characteristics: time of day (1=daytime, 1=rush hour), day of the week (1=weekday), season (1=summer), roadway type (1=interstate)
- Legal variables: reason for the stop (1=speeding), number of reasons for the stop (range 1-6), evidence found during a search (evidence=1)
- Trooper characteristics: gender (1=male), race (1=Caucasian), experience (1= less than 5 years), education (range 1-5), assignment (1=patrol)
- Community characteristics of the municipality where the stop occurred: total driving-age population (logged), % male in driving-age population, % Black in driving-age population, % Hispanic in driving-age population, average commute (in minutes), and three factor scores, measuring the latent variables poverty, residential mobility, and traffic/travel patterns

Table 6.7 presents the results of two Hierarchical non-Linear Model (HLM), Bernoulli (over dispersed) analyses predicting citations issued to stopped drivers in 2004 and 2005 (for details regarding these statistical models, see Raudenbush & Bryk, 2002). These models demonstrate what factors likely influence whether or not citations are issued when other factors are equal. That is, the effect of drivers' race/ethnicity over the likelihood of being issued a citation is isolated. A statistically significant finding on race/ethnicity would indicate that Black and/or Hispanic drivers are significantly more likely to be issued a citation compared to Caucasians in similar situations (e.g., traveling in the same locations, on

⁷ Using data at two or more levels of aggregation introduces a statistical dilemma where regression residuals for the level 1 cases (observations) within the same level 2 units (municipalities) may be correlated (i.e., more similar than level 1 cases taken from independent municipalities). This violates the assumption of independence that underlies most ordinary regression techniques. The implications of violating this assumption are substantial, as dependence can lead to inefficient estimates and biased test statistics, making the analyses appear to have more power than they do (Raudenbush & Bryk, 2002). Hierarchical linear modeling (HLM) is a modeling procedure that can overcome this statistical dilemma (Raudenbush & Bryk, 2002). HLM includes an extra error term, U_i , that reflects the extra variation common to all level 1 cases within the level 2 unit, so the level 1 error term (R_{ij}) can be independent. That is, HLM explicitly models the dependence of the residuals through this error term. For binary outcome variables like the ones utilized here, hierarchical models cannot use the standard level 1 model which assumes a linear model and normally distributed errors at level 1, once the additional error term is included (Raudenbush & Bryk, 2002). To account for these characteristics of this type of dependent variable, we employ a nonlinear form of hierarchical modeling that uses a binomial sampling model with a Bernoulli distribution, as opposed to a normal sampling model, and a logit link instead of an identity link (Guo & Zhao, 2000; Raudenbush & Bryk, 2002).

the same type of roadways, during the same time periods, stopped for the same initial reasons, etc.). In addition, the $\text{Exp}(b)$ is calculated and reported as a measure of the log odds – this is loosely translated into the number of times more likely Black/Hispanic drivers are to receive the particular outcome compared to Caucasians.

The number of traffic stops included in these multivariate hierarchical models represents a portion of the original samples of traffic stops for each year. Due to the known underreporting of the most serious traffic stops (i.e., stops resulting in the arrest of the drivers and/or passengers, and searches that resulted in the seizure of contraband and thus the likely arrest of the driver and/or passengers) in these data sets, all traffic stops resulting in arrest were eliminated from the analyses. That is, the analyses below represent only “ordinary” traffic stops – any stops that resulted in a more serious outcome (i.e., arrest) have been eliminated from consideration. Therefore, findings from these analyses represent the likelihood of each racial/ethnic group’s likelihood of receiving a citation during less serious traffic stops. In addition, traffic stops with any missing data on any variables of interest were excluded from the analyses. Based on these criteria, 293,880 of the original 300,683 traffic stops reported in 2004 are included in the analyses (97.7%). Likewise, 267,078 of the original 272,670 traffic stops reported in 2005 are included in the analyses (97.9%).

Table 6.7 displays the results of two separate hierarchical multivariate models that predict the issuance of a citation. For each of these models, numerous independent variables were included that could potentially influence officer actions. As shown in the left hand column, the predictor variables at Level 1 include: 1) driver characteristics, 2) vehicle characteristics, 3) stop characteristics, 4) legal variables, and 5) Trooper characteristics. Community characteristics of the stop location are included as predictor variables at Level 2. It is believed that each of these variables has the potential to influence officer behavior, and therefore must be statistically controlled to examine our variables of interest (i.e., drivers’ race/ethnicity).

Each of the independent variables is assessed relative to their effect upon the dependent variable (i.e., citations). It is important to note, though, that some variables are excluded from the model for comparison purposes. For example, the drivers’ race is captured in the model as Black, Hispanic, and “other.” The “other” category includes Native American, Asian/Pacific Islander, and Middle Eastern. Caucasian is excluded from the model for comparison purposes. That is, the affect of the other race/ethnic variables that are reported in the models are in comparison to Caucasians. Thus, the coefficients reported in the models should be interpreted as compared to Caucasians – that is, the likelihood of Black drivers being issued a citation compared to Caucasian drivers. The other dichotomous variables in the models are simply compared against their opposite (e.g., male drivers are compared to female drivers).

The first column in each model reported in **Table 6.7** displays the variable coefficient, or predicted log-odds, for the independent variable. The coefficient represents an additive expression of a particular variable. In the “coefficient” column, there are two things to examine: 1) the presence of an asterisk following the coefficient indicating a statistically significant relationship, and 2) the presence of a negative sign preceding the number. The

asterisk reveals whether or not a significant relationship exists between the independent variable (e.g., male drivers) and the dependent variable (e.g., issuing a citation). If an asterisk is not present, the relationship is not considered statistically significant. Due to the extremely large sample size at level 1, (i.e., the large number of traffic stops), the statistical significance of the relationships is assessed at the 0.001 level. The asterisks indicate that the relationships between variables are due to chance less than 0.1% of the time. The sign of the coefficient (i.e., positive or negative) indicates the direction of the relationship. For example, a positive sign on the “driver male” variable would indicate that male drivers are *more* likely than female drivers to receive a particular outcome, while a negative sign would indicate that males are *less* likely than females to receive a particular outcome.

Because the interpretation of log-odds is not intuitively straightforward, this type of coefficient is usually exponentiated to allow for interpretation in terms of odds (Liao, 1994). The second column—the odds ratio—represents this antilog transformation of the coefficient into the multiplicative odds of the outcome variable based on the predictor variable, all being equal. The odds ratio indicates the strength of the relationship. For example, an odds ratio of 3.0 indicates that the presence of the variable (e.g., being a male driver) leads to three times the likelihood of receiving the outcome (e.g., receiving a citation). The strength of the relationship is one of the most important considerations. Even if the relationship between variables is statistically significant, it may not be substantively important. This is due to the large sample size – that is, there is such a large number of traffic stops, even the slightest differences might be considered statistically significant, but not substantively important. That is, the strength of the relationship may not be very large, and therefore, the odds ratio is important to consider when determining the amount of influence particular factors have over the outcomes of being issued a citation.

Table 6.7 documents the significant predictors of issuing citations. The results show that after controlling for other relevant factors, in 2004, Black and Hispanic drivers were not significantly more likely to be issued citations compared to Caucasian drivers. Drivers of “other” races/ethnicities, however, were significantly more likely than Caucasians to be issued citations. Specifically, Native American, Asian, and Middle Eastern drivers collectively were 1.4 times *more* likely compared to Caucasians to be issued citations in similar situations. Likewise, drivers who were male, stopped during daylight hours, stopped on interstates, stopped for speeding, stopped for multiple reasons, and stopped by Troopers assigned to patrol duties were significantly *more* likely to receive citations compared to female drivers, those driving during non-daylight hours, driving on non-interstates, stopped for reasons other than speeding, stopped for few reasons, and stopped by Troopers with non-patrol assignments. In contrast, older drivers, drivers stopped in the county where they reside, drivers stopped with multiple passengers, and drivers stopped by Troopers with more education were significantly *less* likely to receive a citation compared to their counterparts.

With all but one exception, these trends continued in 2005. In 2005, Black drivers were found to be statistically significantly *less* likely compared to Caucasians to be issued traffic citations during traffic stops that did not involve arrests. While data from 2005 demonstrated that again, Native American, Asian and/or Middle Eastern drivers were together 1.2 times *more* likely to be issued citations compared to Caucasians, Black drivers were 1.2 times *less*

likely compared to Caucasians to be issued citations. Thus, it appears there are some racial/ethnic differences in the likelihood of being issued traffic citations in similar situations. These differences may be explained by legitimate factors unmeasured by these data (e.g., the severity of the traffic offense, drivers' compliance with officers' requests, etc.) or officer bias toward specific minority groups other than Hispanics and Blacks.

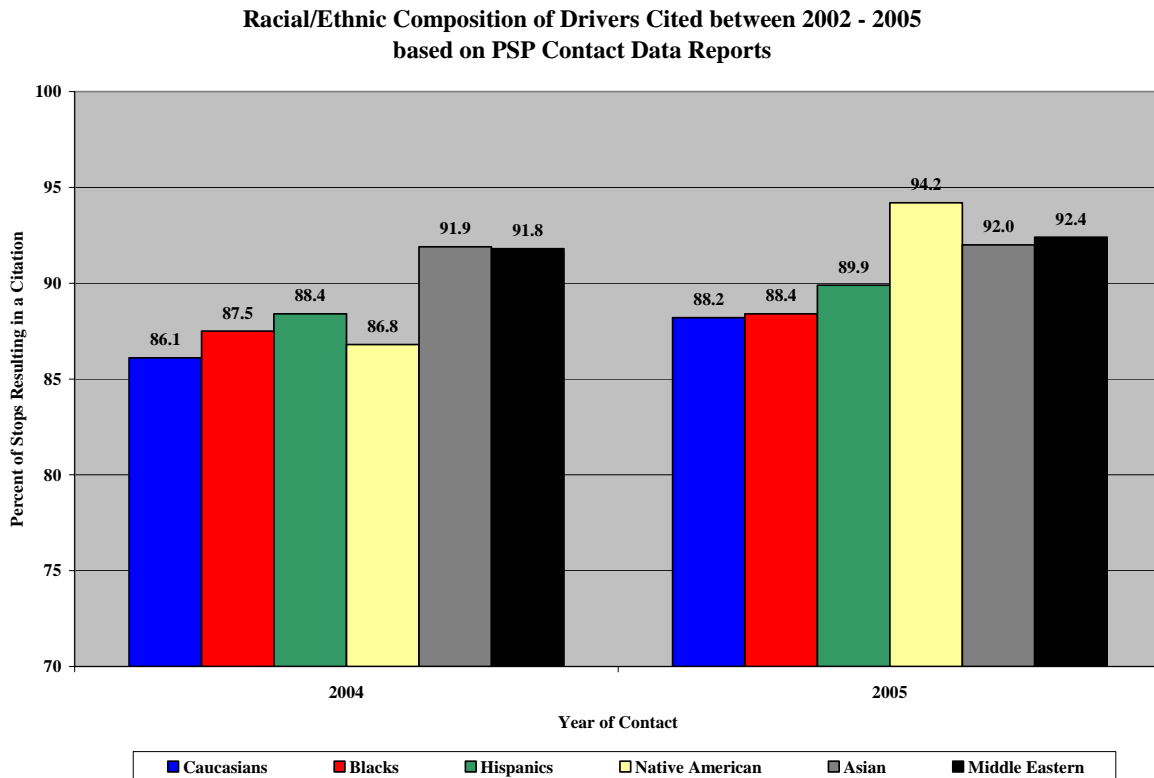
Table 6.8: HLM Analyses Predicting Troopers' Issuing a CITATION during all traffic stops

Level 1 Variables	<u>2004 (N = 293,880)</u>		<u>2005 (N = 267,078)</u>	
	Coefficient	Odds Ratio	Coefficient	Odds Ratio
Intercept	0.360	1.434	1.630	5.106
<u>Driver Characteristics</u>				
Black	-0.082	0.922	-0.165*	0.848
Hispanic	0.125	1.133	0.390	1.040
Other Race	0.308*	1.360	0.173*	1.189
Male	0.198*	1.219	0.165*	1.179
Age	-0.017*	0.983	-0.017*	0.983
County resident	-0.092*	0.912	-0.153*	0.858
PA resident	0.013	1.013	-0.001	0.999
<u>Vehicle Characteristics</u>				
No registration	0.247	1.281	0.407	1.502
Number of Passengers	-0.051*	0.950	-0.046*	0.955
<u>Stop Characteristics</u>				
Daytime	0.413*	1.511	0.385	1.470
Rush hour	0.027	1.028	0.035	1.035
Weekday	-0.052	0.950	-0.043	0.958
Summer	0.045	1.046	0.134*	1.144
Interstate	0.500*	1.649	0.418*	1.518
<u>Legal variables</u>				
Speeding is reason for the	0.809*	2.245	0.908*	2.481
Number of reasons for stop	0.473*	1.605	0.443*	1.558
Evidence found during	-0.575*	0.563	-0.794*	0.452
<u>Trooper variables</u>				
Male	0.030	1.031	0.030	1.030
Caucasian	-0.155	0.857	-0.160	0.852
Less than 5 years experience	0.047	1.048	0.041	1.042
Education scale	-0.127*	0.881	-0.160*	0.853
Patrol assignment	1.103*	3.014	1.433*	4.190
<u>Level 2 Variables (Municipalities) (2004 N = 2087) (2005 N = 2203)</u>				
Total Pop ≥15 (Ln)	0.133*	1.142	0.098*	1.103
% Pop Male ≥15	0.007	1.007	-0.009	0.991
% Pop Black ≥15	-0.003	0.997	0.003	1.003
% Pop Hispanic ≥15	0.018	1.018	0.041	1.041
Poverty Factor	0.002	1.002	-0.088	0.916
Resid. Mobility Factor	0.024	1.025	0.013	0.988
Traffic/Travel Factor	-0.064	0.938	-0.003	0.997
Average Commute	0.008	1.008	0.007	1.007

NOTE: * p ≤ .0001

To further understand what particular races/ethnicities are at increased risk for citations during traffic stops, **Figure 6.1** demonstrates the racial breakdowns in citation rates for traffic stops not involving arrest in both 2004 and 2005. As shown in this figure, in 2004, drivers of Asian and Middle Eastern descent were the most likely to be issued citations (91.9% and 91.8% of drivers stopped, respectively). This pattern continued in 2005 for drivers of Asian and Middle Eastern descent, (92.0% and 92.4% of stopped drivers were issued citations, respectively), however, Native American drivers were the most likely to be issued citations (94.2%). As demonstrated in the multivariate hierarchical statistical models in **Table 6.8** above, these differences did not dissipate when other factors likely to influence citations were considered. That is, given similar situations, Native American, Asian, and Middle Eastern drivers were significantly more likely to be issued traffic citations during stops that did not result in arrest compared to other racial/ethnic groups.

Figure 6.1: Percent of Citations Issued to ALL Racial/Ethnic Groups: 2004-2005



SECTION SUMMARY

This summary highlights the findings of racial/ethnic disparities in citations issued to drivers in 2004 and 2005. When reviewing these results, it is important to remember that the bivariate analyses only consider two variables at a time (e.g., the race of the driver and the post-stop outcome). As a result, the interpretation of these findings should be made with caution and cannot determine the existence of racial bias. The multivariate analyses are better suited to make substantive claims about the results of the post-stop outcomes due to their

consideration of more than one factor simultaneously. Nevertheless, the multivariate analyses are limited by the type and amount of data collected. Thus, multivariate analyses can demonstrate racial/ethnic disparities that exist after statistically controlling for other factors that might influence officer decision making that are measured with these data.

Bivariate Analysis – Differences in Citations across Types of Drivers

- 2004:
 - At the *department* level, Caucasian drivers were the *least* likely to be issued a citation (86.0% of stops) compared to Black (87.3%), Hispanic (88.2%), and other (91.8%) drivers.
 - At the *department* level, female drivers were significantly less likely to be issued citations compared to male drivers.
 - These patterns and trends varied somewhat at the *area* level and more so at the *troop* and *station* levels.
- 2005:
 - At the *department* level, Caucasian drivers were the *least* likely to be issued a citation (87.8% of stops) compared to Black (88.0%), Hispanic (89.5%), and other (92.1%) drivers.
 - At the *department* level, there were no statistically significant differences in citations by gender.
 - These patterns and trends varied somewhat at the *area* level and more so at the *troop* and *station* levels.
- PSP supervisors should review findings at multiple levels within the organization for the best understanding of trends of racial/ethnic disparities in citations within their jurisdictions.

Multivariate Analyses

- Multivariate statistical models take many different factors into account when attempting to explain a particular behavior. Unlike a bivariate model, they do not simply assess the relationship between two variables. Rather, multivariate models examine many variables simultaneously, and therefore provide a more thorough and accurate interpretation of the data.

- 2004 Citations:
 - Black and Hispanic drivers were not significantly more likely to be issued citations compared to Caucasian drivers.
 - Drivers of “other” races/ethnicities, however, were significantly more likely than Caucasians to be issued citations. Specifically, Native American, Asian, and Middle Eastern drivers collectively were 1.4 times *more* likely compared to Caucasians to be issued citations in similar situations.
 - Drivers who were male, stopped during daylight hours, stopped on interstates, stopped for speeding, stopped for multiple reasons, and stopped by Troopers assigned to patrol duties were significantly *more* likely to receive citations compared to female drivers, those driving during non-daylight hours, driving on non-interstates, stopped for reasons other than speeding, stopped for few reasons, and stopped by Troopers with non-patrol assignments.
 - In contrast, older drivers, drivers stopped in the county where they reside, drivers stopped with multiple passengers, and drivers stopped by Troopers with more education were significantly *less* likely to receive a citation compared to their counterparts.
- 2005 Citations:
 - Some racial/ethnic differences in the likelihood of being issued traffic citations in similar situations remained.
 - Black drivers were found to be statistically significantly *less* likely compared to Caucasians to be issued traffic citations during traffic stops that did not involve arrests, while drivers of “other” races/ethnicities were significantly *more* likely compared to Caucasians.
 - Black drivers were 1.2 times *less* likely compared to Caucasians to be issued citations.
 - Native American, Asian and/or Middle Eastern drivers were together 1.2 times *more* likely to be issued citations compared to Caucasians.
 - The other above noted trends in citation rates reported for 2004 remained in 2005.
- Racial / ethnic differences in citation rates may be explained by legitimate factors unmeasured by these data (e.g., the severity of the traffic offense, drivers’ compliance with officers’ requests, etc.) or officer bias toward specific minority groups.

- The reasons for the racial/ethnic disparities in citations reported cannot be determined with these data.

7. CONCLUSIONS & RECOMMENDATIONS

OVERVIEW

This report documents the findings from statistical analyses of data collected during all member-initiated traffic stops conducted by the Pennsylvania State Police from January 1, 2004 through December 31, 2005, which represents the third and fourth years of data collection for the *Project on Police-Citizen Contacts*. It is the first report issued under the new schedule corresponding to calendar years. Data collected for years 2004 and 2005 are reported together within this document due to concerns raised in September 2005 regarding the validity of the data collection effort.

PSP administrators took several steps to address this situation, including conducting a data audit, reissuing a comprehensive policy statement for recording traffic stop information, increasing managerial supervision, and the initiation of an electronic reporting system for all traffic stops. Future reports will be able to address the effectiveness of these interventions.

It is likely that the data collected from 2002 through September of 2005 underreported the total number of traffic stops, the number of traffic stops that resulted in an arrest, the number of traffic stops that resulted in a search, and the number of traffic stops that resulted in a seizure of contraband. Importantly, there is little reason to believe that these data shortcomings will substantively influence the statistical analyses examining the race/ethnic disparities in traffic stops, warnings, and citations. Therefore, this report summarizes the data collected over two years (i.e., 2004 and 2005) and focuses specifically on data analyses examining the actual traffic stop, as well as warning and citation outcomes.

This conclusion section provides a review of the major findings in this report, followed by a list of policy and training recommendations for PSP administrators. First, highlights of the findings from focus groups conducted in August, 2005 with 95 PSP Troopers and Corporals are reviewed. Next, findings from statistical analyses of all member-initiated traffic stops reported from 2004 and 2005 are summarized. These data are examined in relation to the initial two years of data collection to allow some basic trend analyses across the four years of data collection. In addition, despite the data limitations outlined previously, a summary of an examination of 2004 and 2005 post-stop outcomes (e.g., warnings and citations) is provided. Finally, several policy and training recommendations are provided based on these analyses.

FOCUS GROUPS

One of the conclusions of the *Year 2 Final Report* was that minority drivers were more likely to be searched, but less likely to be discovered with contraband. As a result of this finding, PSP administrators contracted with the UC research team to further investigate this issue by conducting focus groups with PSP personnel. In August and September of 2005, 95 PSP Troopers and Corporals were involved in several focus groups, during which they were asked to discuss “best practices” regarding search and seizure activities. The goal was to document the most effective techniques to improve and potentially alter departmental training in order to reduce the racial/ethnic disparities reported in the *Year 2 Final Report*. To identify the “best practices,” PSP supervisors identified Troopers for participation in the focus groups

based on three criteria related to search and seizure activity: 1) productivity, 2) accuracy, and 3) professionalism.

After all focus groups were completed, the information was qualitatively analyzed to identify common themes discussed during the focus groups. In this manner, the most productive, accurate, and professional PSP personnel would play an integral role in highlighting “best practices” in search and seizure activities. Several key findings emerged from these focus groups and are summarized below:

Indicators of Suspicion

- Extensive discussion (i.e., 94% of the participants made at least one substantive comment on this topic) centered on indicators of suspicion both prior to and during the stop as crucial to identifying criminal behavior.
- Indicators were generally grouped into three sub-themes: 1) pre-stop, 2) vehicle, and 3) occupants.
- Participants reported several specific types of indicators with more frequency than others. The types of indicators used are covered in SHIELD and other introductory criminal interdiction training courses.
- Participants indicated the importance of considering multiple factors of suspicion and understanding the manner in which these indicators interacted with one another, rather than simply relying on individual indicators in isolation.
- Twenty-three participants (28%) made at least one substantive comment about the race/ethnicity of those transporting illegal contraband. Some of these comments indicated that participants felt contraband smuggling involved all racial groups and that reliance on race/ethnicity as an indicator was ineffective. Specifically, five participants (6%) stated that race was an *ineffective* indicator to rely upon. In contrast, eight participants (9%) made statements that suggested they do consider race and ethnicity to some extent in combination with other factors when determining suspicion, particularly for Hispanic and Arabic drivers. Eleven participants (13%) also made comments about their perceptions that trafficking and use of particular drugs were associated with specific racial and ethnic groups.
- Some participants indicated that lower search success rates for Hispanic and other minority drivers may be due to: 1) improper training, 2) Troopers who rely on one or two indicators of suspicion rather than multiple indicators, 3) a poor understanding of different behaviors across racial/ethnic groups, and/or 4) different drug trafficking methods used across racial/ethnic groups.
- A very small minority of participants indicated that they relied upon “gut feelings,” “sixth sense,” or the race/ethnicity of vehicle occupants in some capacity to develop suspicion. These individual participants had a significantly lower self-reported search success rate compared to other participants.

Interdiction Investigative Techniques

- 95% of participants made at least one substantive comment regarding interdiction investigative techniques.
- Four general sub-themes were identified: 1) initial contact, 2) interview strategies, 3) obtaining consent, and 4) conducting effective searches.
- Effective interview strategies were viewed by participants as crucial for successful criminal interdiction.
- Participants indicated the need of other Troopers to be more systematic and thorough during vehicle searches to increase search success rates (i.e., the discovery of contraband).

Unsuccessful Interdiction

- 85% of participants made at least one substantive comment regarding their peers' criminal interdiction activities.
- Two general sub-themes of peer behavior were identified:
 - Intrinsic motivators/deterrents
 - The most frequently mentioned intrinsic motivators for criminal interdiction work included: 1) work ethic, 2) internal drive/motivation, 3) personal priorities, and 4) self-satisfaction and a sense of moral obligation, and 5) the challenging nature of work.
 - Unsuccessful criminal interdiction
 - The most commonly identified reasons for unsuccessful interdiction by their peers included: 1) lack of interpersonal skills, 2) inexperience/insufficient training, and 3) failure to engage in “quality” traffic stops.

Training

- Approximately 75% of participants reported attending at least one criminal interdiction training program.
- Of the 46% of participants that attended SHIELD training, 74% made at least one substantive comment regarding this training. Collectively, the comments regarding the quality of SHIELD training were positive; several participants described the importance and quality of the training program.
- Several specific recommendations for improvement in the SHIELD curriculum were noted, including incorporating more hands-on training and offering more advanced classes.

Contact Data Reports

- Participants expressed resentment regarding the CDR program, including the length of the program, the length of time required to fill out the reports themselves, and the overemphasis of supervisors on the accuracy of the scan forms.

- Participants also indicated that they and/or their peers were not completing the CDRs when required and/or were not filling them out properly. Participants indicated that the search and seizure component of the form was not being completed for every search or for DUI arrests.
- Based on these comments, an internal audit of the CDR data was conducted in September 2005 and the problems reported by the participants were found to be an accurate reflection of data collected in some stations.
- The data audit and subsequent analyses of data indicated that traffic stops involving arrests and searches with discoveries of contraband were not being systematically recorded on the CDR forms across the department.

TRAFFIC STOP DATA: 2004 – 2005

During 2004, 300,683 member-initiated traffic stops were recorded on the CDR forms and entered into the database for analysis. Less than two percent of the CDR forms contained any type of missing data. In 2005, 272,670 member-initiated traffic stops were reported, and the rate of missing data was slightly higher at 2.9% across the department. The number of member-initiated traffic stops reported in 2005 represents a decrease of over 14% since 2003. Based on the traffic stops reported, basic descriptive information is reported in **Section 4**. The majority of traffic stop characteristics were extremely consistent between 2004 and 2005. The characteristics of citizens stopped in both years were also consistent, as roughly two-thirds of drivers stopped were male and the majority of drivers were Caucasian.

There were significant differences in post-stop outcomes for drivers reported across 2004 and 2005. Differences reported in the percentages of drivers that were searched and/or arrested increased significantly in 2005. This surge in reported arrests and searches in 2005 is likely based on PSP administrators' reemphasis of data collection procedures in September 2005. Once the inconsistencies in data collection procedures were discovered and reported to PSP administrators in late August 2005, several steps were taken to address increased data integrity and adherence to the initial data collection procedures. The result was data reported from September to December 2005 that was significantly different when compared to data collected in previous time periods. Specifically, in comparing the arrest rates of three different time periods (September 2004 to December 2004; January 2005 to August 2005; September to December 2005), significant differences emerged. In late 2004 and the first eight months of 2005, the arrest rate was 0.5%; however, once the aforementioned steps were implemented by the PSP, the arrest rate increased to 1.5%. Similarly, the search rate was reported as 1.0% between September 2004 and September 2005, but increased to 1.4% in the last four months of 2005. These results should increase confidence that the data problem has been addressed and data collection during 2006 is accurate.

TRAFFIC STOP DATA TRENDS

As described at length in both the *Year 1 Final Report* and *Year 2 Final Report*, the crux of traffic stop data interpretation is dependent upon comparison data. That is, a group's representation in traffic stops is only meaningful when compared to the same group's "expected" representation in traffic stops, based on alternative data. Unfortunately, current

benchmarks (e.g., Census data) have limitations that restrict the level of confidence in the results. In addition, the validity of using traffic observation benchmarks collected prior to the current traffic stop data is questionable. These limitations coupled with the availability of four years worth of data led to a decision to not utilize specific benchmarks for comparisons to traffic stop data. Rather, trends in the percentages of racial/ethnic groups stopped, warned, and cited by PSP Troopers over the course of four years of data collection are reported.

Data collected during the first four years of the Project on Police-Citizen Contacts were analyzed at all organizational units to identify patterns of racial/ethnic disparities in stops and/or post-stop outcomes. Throughout the department, several trends emerged between 2002 and 2005:

- Between 2003 and 2005, there was over a 14% department wide reduction in the number of reported traffic stops initiated by PSP personnel.
- Caucasian drivers made up roughly 85% of all traffic stops, Black drivers accounted for approximately 8%, and Hispanic drivers represented roughly 3% of all traffic stops.
- Rates of drivers warned slightly declined from 27.0% in 2002 to 24.6% in 2005.
- Rates of drivers issued citations increased from 82.9% in 2002 to 88.1% in 2005.
- During the same time period, arrests, searches, and the discovery of contraband all demonstrated a slight decline in 2003 and 2004 before rebounding in 2005 to levels that surpass their initial 2002 rates.
- Due to the limitations of the data collected on arrests and searches as detailed previously, warnings and citations became the focus of more detailed analyses for Black and Hispanic drivers.
 - Across all four years, Caucasians are consistently the least cited racial/ethnic group, although that gap is slowly closing over time.
 - Hispanic drivers were more likely to receive a citation when compared to their Caucasian counterparts. There are a number of possible explanations for this disparity in citation rates (e.g., reason for the initial stop, severity of the traffic offense, etc.) considered in the multivariate analyses summarized below.

Further analyses were conducted at the station level to determine if disparate racial/ethnic patterns emerged. Binomial analyses were employed at the county and station level between 2002 and 2005, and 2003 and 2005, to statistical test for differences in the rates of stops.

These analyses identified two counties and 11 stations that had elevated rates of Black stops in 2005 when compared to previous years. In addition, nine counties and 14 stations had elevated rates of Hispanic stops in 2005.

It is possible that these significant increases in the percentages of Black and Hispanic drivers stopped are the result of a multitude of factors, including changes in the driving population in those jurisdictions, changes in PSP manpower allocation and deployment to address criminal activity and calls for service, adjustments in the data collection procedures in these stations, and/or increases in Trooper bias towards minority drivers.

These identified stations warrant increased monitoring to reduce potential on-going racial/ethnic disparities in traffic stops.

POST-STOP OUTCOMES

To more thoroughly investigate the pattern of citations in 2004 and 2005 across the department, bivariate and multivariate analyses were conducted on this post-stop outcome. Initially, chi-square analyses were computed for citations for various types of drivers. The following are the main findings of these analyses:

- **2004**
 - At the *department* level, Caucasian drivers were the *least* likely to be issued a citation (86.0% of stops) compared to Black (87.3%), Hispanic (88.2%), and other (91.8%) drivers.
 - At the *department* level, female drivers were significantly less likely to be issued citations compared to male drivers.
 - These patterns and trends varied somewhat at the *area* level and more so at the *troop* and *station* levels.
- **2005**
 - At the *department* level, Caucasian drivers were the *least* likely to be issued a citation (87.8% of stops) compared to Black (88.0%), Hispanic (89.5%), and other (92.1%) drivers.
 - At the *department* level, there were no statistically significant differences in citations by gender.
 - These patterns and trends varied somewhat at the *area* level and more so at the *troop* and *station* levels.
- PSP supervisors should review findings at multiple levels within the organization for the best understanding of trends of racial/ethnic disparities in warnings and citations within their jurisdictions.

Due to the fact that bivariate analyses only consider two variables at one time, multivariate analyses were computed to understand the independent effect of each of the variables in relation to the post-stop outcomes (e.g., citations). As a result, multivariate analyses provide a more thorough understanding and interpretation of the data. The main results of these analyses are provided below:

2004 Citations

- Black and Hispanic drivers were not significantly more likely to be issued citations compared to Caucasian drivers; however, Native American, Asian, and Middle Eastern drivers collectively were 1.4 times *more* likely than Caucasians to be issued citations in similar situations.
- Drivers who were male, stopped during daylight hours, stopped on interstates, stopped for speeding, stopped for multiple reasons, and stopped by Troopers assigned to patrol duties were significantly *more* likely to receive citations

compared to female drivers, those driving during non-daylight hours, driving on non-interstates, stopped for reasons other than speeding, stopped for few reasons, and stopped by Troopers with non-patrol assignments.

- In contrast, older drivers, drivers stopped in the county where they reside, drivers stopped with multiple passengers, and drivers stopped by Troopers with more education were significantly *less* likely to receive a citation compared to their counterparts.

2005 Citations

- Black drivers were found to be 1.2 times significantly *less* likely than Caucasians to be issued traffic citations during stops that did not involve arrests, while Native American, Asian, and/or Middle Eastern drivers were altogether 1.2 times significantly *more* likely compared to Caucasians.
- The other above noted trends in citation rates reported for 2004 remained in 2005.

Racial/ethnic differences in citation rates may be explained by legitimate factors unmeasured by these data (e.g., the severity of the traffic offense, drivers' compliance with officers' requests, etc.) or officer bias toward specific minority groups. The reasons for the racial/ethnic disparities in citations reported cannot be determined with these data.

RECOMMENDATIONS

Based on these findings, a series of training and policy recommendations have been offered to PSP officials over the course of the data collection effort, and are reiterated below.

Training Recommendations

While there was strong support voiced during focus groups for the existing SHIELD training initiative, there were also several constructive criticisms that could easily be incorporated to increase the success of an already well-respected training initiative. These recommendations also apply to academy training. Unless otherwise indicated, the following training recommendations are provided by the UC research team based on observation of the SHIELD training and findings from the focus groups and CDR data analyses.

1. It is especially important for PSP training to better educate Troopers regarding the complexities of interactions with members of different racial/ethnic groups. Even among those selected by field supervisors to participate, five to ten percent of these individuals expressed statements regarding the use of racial/ethnic characteristics and/or the reliance on "gut instincts" and "sixth sense" to inform their search decisions. This is a practice that must be eradicated within the PSP. The best opportunity is to demonstrate through SHIELD training the ineffective nature of these types of practices. This will require a stronger training curriculum on biased-based policing than what currently exists in the SHIELD program. Furthermore, once developed, this training should be incorporated in the training academy for all new cadets.

2. It is also recommended that the discussion of racial profiling as a component of the training curriculum be enhanced. Training should focus on the problems with using individual characteristics to determine suspicion, and better emphasize the importance of relying on multiple indicators, rather than one or two indicators of suspicion.

3. A component should be added to criminal interdiction training that teaches officers about the cultural differences in behaviors they might see from drivers, which may not be valid indicators of suspicion. For example, a growing body of research indicates that racial and ethnic differences exist in cues of suspicion that officers are trained to identify when determining who to search. Social psychology and cross-cultural communications research suggests that normal (i.e., non-criminal), nonverbal communication styles among African Americans are more likely to be identified as “suspicious” by both laypersons and police officers (for review, see Engel & Johnson, 2006). Research on consumerism and marketing has revealed cultural differences in style of dress, vehicle preferences, and recreational travel practices that could cause non-criminal behaviors by minority drivers to be interpreted as clues of drug smuggling (for review see Engel & Johnson, 2006). Finally, demographic research indicates that patterns of residence and vehicle ownership for minorities could cause them to unwittingly fit the characteristics police officers are trained to look for when identifying drug smugglers (for review, see Engel & Johnson, 2006). Based on this body of research, it is recommended that PSP criminal interdiction training describe these racial/ethnic differences in verbal and nonverbal behaviors, and stress that these behaviors alone should not be interpreted as reliable cues of suspicion.

The training provided by PSP must continually reinforce that “gut instincts” and “sixth sense” alone are unproductive indicators of suspicion. This report suggests that Troopers who rely on these feelings rather than articulated indicators of suspicion are less successful in recovering contraband. In addition, those Troopers who cannot articulate their cues of suspicion likely pose a liability risk for PSP, and threaten to damage police-community relations through citizens’ perceptions of procedural injustice during traffic stops.

4. It is also recommended that both criminal interdiction training and basic academy training include more components regarding successful roadside interview tactics. A number of participants noted that their success in criminal interdiction was based primarily on the ability to conduct a successful roadside interview. These participants also remarked that they believed this portion of their training to be insufficient.

5. In addition to adjustments in training for Troopers, it is recommended that some modifications in the training for supervisors be provided as well. A large portion of the negative feedback during these focus group sessions was based on participants’ perceptions of the inadequacy of their field supervisors. It is recommended that the Commissioner consider the development of a leadership-training program for field supervisors. This leadership program could be used to directly funnel the priorities of the command staff to field supervisors, while simultaneously increasing their leadership and management skills.

6. PSP Troopers themselves also had several recommended changes for the SHIELD training curriculum to incorporate or strengthen the following elements:

- Hands-on training – include simulation scenarios, vehicles with hidden compartments, road-side interrogation training, time in the field using the techniques learned in the classroom, etc.
- More advanced, detailed training – designed specifically for Troopers with interest beyond the introductory level.
- Better training on criminal indicators– literally demonstrate to individual Troopers what cues and indicators to look for and how they link together to develop suspicion.

Policy Recommendations

7. It is recommended that some consideration be given to the current use and deployment of the canine unit. Participants indicated their desire for an expansion in the canine program. Obviously, the expansion of this unit would have both manpower and monetary implications. If expansion of the canine unit is not fiscally possible at this time, it is recommended that PSP reconsider the manner in which this unit is currently deployed, and determine whether alternative deployment patterns could be created to better use the available resources.

8. Based on the information gathered in the focus groups, it is clear that the CDR data collection effort needs to be reexamined and perhaps redesigned. When initially created, the CDR Scantron form was designed as an interim strategy for data collection that would be replaced with an electronic application after the first year. PSP has completed its fifth year of data collection utilizing this form. While the collection of information during all member-initiated traffic stops is clearly an important and worthwhile endeavor, it continues to be a source of officer discontent and negativity – likely resulting in diminished morale, reduced job satisfaction, and officer disengagement.

The first, and perhaps most important, step in a redesign effort for the CDR has already occurred. Based on complaints and suggestions from the field, Colonel Miller authorized the development of an interim electronic data collection system that will elevate the data collection burdens associated with Scantron forms. The electronic data collection system – IIMS – remains in the development stage, with a continually changing implementation date. The interim solution was to provide immediate relief to field personal who feel overly burdened with the Scantron form data collection system. As indicated above, the CDR X-press has been developed and is operational. Initial informal feedback regarding this software application has been positive. It is believed that this effort will demonstrate to Troopers that PSP administrators understand their frustration with the scan data collection system, and are seeking compromises between the need to collect race-based information during traffic stops and reducing administrative burdens on field Troopers.

9. It remains critical to routinely conduct data audits (similar to that conducted by the Systems and Process Review Division (SPR) in September 2005). Even though the CDR X-press will eliminate data entry errors, it will not ensure that Troopers are completing the form during every member-initiated traffic stop. Continual supervisory oversight and routine data audits are necessary to ensure the accuracy and validity of these data. Furthermore,

comparisons between data collected electronically and those collected on the Scantron forms should be conducted to determine inaccuracies in previous reports.

10. PSP administrators should examine the specific stations identified in **Section 5** as demonstrating statistically significant increases in the percentages of Black and Hispanic drivers stopped in their jurisdictions. As mentioned previously, there are a number of possible legitimate explanations for these trends. It is incumbent upon PSP officials to examine and identify the likely sources producing these statistically significant increases in minority stops.

11. Better understanding of the racial/ethnic disparities in citation rates is warranted. While the racial/ethnic disparities in citation rates have declined significantly in the four years of data collection, some disparities remain. These disparities cannot be explained by factors collected with the CDR forms. Therefore, it will be important for PSP administrators to better understand and examine these trends. The first step in this process has been achieved through the commitment by PSP officials to continue this data collection effort for an additional three year period (through December 31, 2009). During this extended data collection period, it will be important for area, troop, and station commanders to examine their monthly data reports in order to identify any potent problems.

12. Continued monitoring of arrest, search, and seizure rates is necessary. Unfortunately, the data collected during the 2004 to 2005 time period underreported traffic stops that involved arrests and searches with seizures. It will be important to resume the monitoring of arrest, search, and seizure patterns with data collected after September of 2005.

The implementation of many of these recommendations has already occurred. PSP officials remain committed to both the data collection effort and the larger goals of reducing racial/ethnic disparities in traffic stops and post-stop outcomes, as well as providing legitimate and unbiased policing services to citizens of the Commonwealth of Pennsylvania. An update to this report, based on the statistical analyses of data collected in 2006, will be delivered in May 2007. Thereafter, yearly reports will be issued in April 2008 and 2009.

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APPENDIX A

FOCUS GROUP IMPLIED CONSENT FORM



College of Education, Criminal Justice, and Human Services Division of Criminal Justice

University of Cincinnati
PO Box 210389
Cincinnati, Ohio 45221-0389

600 Dyer Hall, Clifton Avenue
Phone (513) 556-5827
Fax (513) 556-3303
Web www.uc.edu/criminaljustice

Consent to Participate in a Research Study

Research Director: Dr. Robin Engel
(513) 556-5850, robin.engel@uc.edu

Identifying Effective Indicators of Criminal Activity during Traffic Stops

Before agreeing to participate in this study, it is important that the following explanation of the proposed procedures be read and understood. The information below describes the purpose, procedures, risks, and benefits of the study. It also explains your right to withdraw from the study at any time. It is important to understand that no guarantee or assurance can be made as to the results of the study.

The purpose of this research project is to identify “best practices” within the Pennsylvania State Police by determining what suspicious indicators used by Troopers during traffic stops to develop reasonable suspicion are the most and least effective at detecting the criminal activities of drivers. Your supervisors have identified you for participation in this study due to your effectiveness in criminal interdiction. You will be one of approximately 120 Troopers taking part in focus group discussions as part of this study. This focus group discussion will require your participation for approximately two (2) hours.

This research project will involve approximately 10 separate focus group discussion sessions, each with a different set of 8 to 10 Troopers. The focus groups will be facilitated by Dr. Robin Engel and/or Mr. Richard Johnson and will discuss the following topics:

- Types of verbal and nonverbal indicators used to determine suspiciousness.
- Vehicle characteristics used to determine suspiciousness.
- Behavioral indicators used to determine suspiciousness.
- Verbal, nonverbal, and behavioral cues that are poor indicators of suspiciousness.
- Types of searches that are least successful in discovering illegal contraband.
- Relevancy of current search and seizure training.
- Perceptions of peers’, supervisors’, citizens’, and the courts’ attitudes about search and seizure.

The discussions of these topics will be audio taped and the research staff will also take written notes. You may request that the focus group session not be audio taped. The information gained from these focus groups will help identify effective search and seizure practices. A department-wide survey of

Troopers to determine the extent to which they engage in these practices will also be conducted based, in part, on the information gathered during the focus group sessions.

While the research team will not disclose the specific statements made by any participant in these focus groups, we must inform you of certain risks involved in participating. We cannot protect the identity of those who attended the focus groups, as each of you has been selected by your chain of command, will complete department reimbursement paperwork, and will be known to the other focus group participants. Also, it may be possible that your identity will be revealed indirectly through specific demographic characteristics, for example being the only female Trooper from a specific station to attend a focus group. Likewise, we cannot prevent the other focus group members from disclosing statements that were made during the focus group discussions. Therefore, we ask that the other participants maintain confidentiality about what is said in the focus groups but we are unable to guarantee this confidentiality. We can guarantee that we will not violate your confidentiality.

The information collected from these focus groups in the form of audiotapes and notes made by the members of the research team will remain confidential. The audiotapes and researcher notes will be kept in a locked file cabinet in the Dr. Engel's office at the University of Cincinnati and only Dr. Engel and Mr. Johnson will have access to these materials. The audiotapes and notes will be transcribed into written form that will not identify any of the participants by name. After these materials are transcribed the audiotapes will be destroyed through incineration and the written notes will be shredded. Only the final report, free of any individual identifier information, will be accessible by the Commissioner of the Pennsylvania State Police or anyone he officially designates.

While you will receive no special direct benefit from your participation in this study, your participation will help improve the effectiveness of the Pennsylvania State Police and other law enforcement agencies in the detection and seizure of illegal contraband being transported on public roadways.

The information gained from these focus groups may be published in official department reports, training documents, and academic publications; however, no information will be provided that would permit the identification of any specific Trooper. Your identity will remain confidential unless disclosure is required by law, such as mandatory reporting of child abuse, elder abuse, or immediate danger to self or others.

You may choose not to participate in this study at any time. If you do choose not to participate the research team will not disclose this decision to the department.

Again, your participation in this study is voluntary and you may refuse to participate, or may discontinue participation AT ANY TIME, without penalty or loss of benefits to which you are otherwise entitled. You also have the right to refrain from answering specific questions during the focus group discussions. The researchers have the right to withdraw you from the study AT ANY TIME. Your withdrawal from the study may be for reasons related solely to you (for example, not following study-related directions) or because the entire study has been terminated.

If you have any other questions about this study, you may call Dr. Robin Engel at robin.engel@uc.edu or (513) 556-5820. If you have any questions about your rights as a research participant, you may contact the Chair of the Institutional Review Board – Social and Behavioral Sciences, University of Cincinnati, at claudia.norman@uc.edu or (513) 558-5784.

Nothing in this consent form waives any legal right you may have, nor does it release the researcher, the Pennsylvania State Police, the University of Cincinnati, or its agents from liability for negligence.

I HAVE READ THE INFORMATION PROVIDED ABOVE. I VOLUNTARILY AGREE TO PARTICIPATE IN THIS STUDY. I WILL RECEIVE A COPY OF THIS CONSENT FORM FOR MY INFORMATION.

Participant Signature

Date