



Pennsylvania State Police
People Serving People Since 1905



University of Cincinnati
Policing Institute

Project on Police-Citizen Contacts: Final Report, 2008

**Prepared Exclusively for:
Colonel Frank Pawlowski
Commissioner, Pennsylvania State Police**

**Submitted: February 1, 2010
Revised: April 18, 2011**

**Robin S. Engel, Ph.D.
Jennifer Calnon Cherkauskas, M.A.
Rob Tillyer, Ph.D.**

University of Cincinnati Policing Institute

This communication between the University of Cincinnati and the Office of the Commissioner is strictly privileged and confidential. This communication, containing recommendations on policy matters and/or data and information integral to such recommendations, is a direct part of the pre-decisional, internal deliberative processes of the Pennsylvania State Police. Confidentiality of this communication is necessary in order to allow the free exchange of ideas and information within the Pennsylvania State Police. Unauthorized disclosure of this communication will undermine the ability of the Pennsylvania State Police to perform its statutory functions.

This research was supported by funding from the Pennsylvania State Police (grant # SP 2010060001). The findings and recommendations expressed within this report are from the authors and do not necessarily represent the official positions of the Pennsylvania State Police. Please direct all questions and correspondence regarding this report to: Robin S. Engel, Ph.D., Director, Policing Institute, Division of Criminal Justice, University of Cincinnati, PO Box 210389, Cincinnati, OH 45221, email: robin.engel@uc.edu

TABLE OF CONTENTS

| | |
|---|-------------|
| TABLE OF CONTENTS | i |
| LIST OF TABLES..... | iii |
| LIST OF FIGURES..... | iv |
| ACKNOWLEDGEMENTS | viii |
| 1. INTRODUCTION..... | 1 |
| <i>OVERVIEW</i> | <i>2</i> |
| <i>SUMMARY OF THE YEAR 6 (2007) REPORT.....</i> | <i>2</i> |
| <i>YEAR 7 (2008) REPORT OUTLINE.....</i> | <i>5</i> |
| 2. TRAFFIC STOP DATA COLLECTION METHODOLOGY | 8 |
| <i>OVERVIEW</i> | <i>9</i> |
| <i>DATA COLLECTION.....</i> | <i>9</i> |
| <i>SECTION SUMMARY</i> | <i>16</i> |
| 3. DESCRIPTION OF TRAFFIC STOP DATA | 17 |
| <i>OVERVIEW</i> | <i>18</i> |
| <i>TRAFFIC STOP CHARACTERISTICS.....</i> | <i>18</i> |
| Traffic Stop Descriptives | 18 |
| Traffic Stops By Month | 24 |
| Reason for the Stop | 27 |
| Drivers' Age & Gender..... | 33 |
| Drivers' Race/Ethnicity | 33 |
| Drivers' Residency..... | 34 |
| <i>TRAFFIC STOP OUTCOMES.....</i> | <i>40</i> |
| Warnings..... | 40 |
| Citations | 40 |
| Arrests..... | 40 |
| Searches | 40 |
| Seizures..... | 41 |
| Post-Stop Outcomes by Severity..... | 47 |
| 4. TREND ANALYSES I: TRAFFIC STOPS 2002 – 2008 | 52 |
| <i>OVERVIEW</i> | <i>53</i> |
| <i>METHODOLOGY.....</i> | <i>53</i> |
| Standard Deviation Methodology | 53 |
| Standard Deviation Interpretation | 54 |
| <i>TRAFFIC STOPS: 2002 – 2008.....</i> | <i>55</i> |
| Department Level..... | 56 |
| Troop Level..... | 57 |
| <i>SUMMARY.....</i> | <i>73</i> |
| 5. TRAFFIC STOP OUTCOMES 2002 - 2008..... | 75 |

| | |
|--|------------|
| OVERVIEW | 76 |
| TRAFFIC STOP OUTCOMES: 2002 – 2008 | 77 |
| Traffic Stop Outcomes by Race/Ethnicity: 2002-2008 | 81 |
| 2002-2008 Temporal Trends - Troops | 85 |
| SUMMARY..... | 102 |
| 6. ANALYSES OF TRAFFIC STOP OUTCOMES | 104 |
| OVERVIEW | 105 |
| BIVARIATE ANALYSES OF TRAFFIC STOP OUTCOMES..... | 105 |
| MULTIVARIATE ANALYSES IN TRAFFIC STOP OUTCOMES..... | 118 |
| Multivariate Findings..... | 120 |
| SECTION SUMMARY | 126 |
| 7. SEARCH AND SEIZURE..... | 130 |
| OVERVIEW | 131 |
| SEARCH RATES..... | 131 |
| TYPES OF SEARCHES | 131 |
| TYPES OF SEIZURES..... | 139 |
| SEARCH SUCCESS RATES | 144 |
| Search Success Rates by Reason for Search | 144 |
| Search Success Rates by Drivers’ and Troopers’ Characteristics | 147 |
| SPOTLIGHT ON CONSENT SEARCHES | 153 |
| Driver and Trooper Differences in Requests for Consent | 154 |
| Driver and Trooper Differences in Granting and Obtaining Consent | 156 |
| SUMMARY..... | 159 |
| 8. CONCLUSIONS & RECOMMENDATIONS | 162 |
| OVERVIEW | 163 |
| SUMMARY..... | 163 |
| RECOMMENDATIONS..... | 169 |
| 9. REFERENCES..... | 172 |
| 10. APPENDIX A: TRAFFIC STOPS 2002 – 2008 BY STATION | 175 |
| 11. APPENDIX B: TRAFFIC STOPS OUTCOMES 2002 – 2008..... | 185 |

LIST OF TABLES

| | |
|--|-----|
| Table 2.1: 2008 Traffic Stops by Month (CDR X-press vs. CDR)..... | 11 |
| Table 2.2: CDR Scan Form Report - 2008 (p. 1 of 3) | 13 |
| Table 3.1: 2008 Traffic Stop Descriptives by Department, Area & Troop..... | 19 |
| Table 3.2: 2008 Traffic Stop Descriptives by Station (p. 1 of 4) | 20 |
| Table 3.3: 2008 Monthly Breakdown of Traffic Stops By Department, Area, Troop, & Station (p. 1 of 3) | 24 |
| Table 3.4: Reason for Stop by Department, Area, & Troop - 2008..... | 28 |
| Table 3.5: Reason for Stop by Station – 2008 (p. 1 of 4) | 29 |
| Table 3.6: 2008 Characteristics of Drivers Stopped by Department, Area & Troop | 35 |
| Table 3.7: 2008 Characteristics of Drivers Stopped by Station (p. 1 of 4)..... | 36 |
| Table 3.8: 2008 Driver Outcomes By Department, Area & Troop | 42 |
| Table 3.9: 2008 Driver Outcomes By Station (p. 1 of 4)..... | 43 |
| Table 3.10: 2008 Driver Outcomes By Department, Area, Troop & Station (p. 1 of 3)* | 48 |
| Table 6.1: 2007 Stop Outcomes by Race and Gender for Department and Areas | 108 |
| Table 6.2: 2007 Stop Outcomes by Race and Gender for Troops (p. 1 of 3) | 110 |
| Table 6.3: 2007 Stop Outcomes by Race for Station (p. 1 of 5) | 113 |
| Table 6.4: HLM Analyses Predicting WARNINGS and CITATIONS during all traffic stops in 2008.... | 122 |
| Table 6.5: HLM Analyses Predicting ARRESTS and SEARCHES during all traffic stops in 2008..... | 125 |
| Table 7.1: Reasons for Search by Department, Area and Troop | 133 |
| Table 7.2: Reasons for Search by Station (p. 1 of 4)..... | 134 |
| Table 7.3: Reasons for Search (by search type) by Driver and Trooper Characteristics | 139 |
| Table 7.4: Types of Evidence Seized by Department, Area and Troop | 140 |
| Table 7.5: Types of Evidence Seized by Station (p. 1 of 3)..... | 141 |
| Table 7.6: Search Success Rates by Reasons for Search for Department and Areas | 146 |
| Table 7.7: Search Type Success Rates by Department and Areas | 147 |
| Table 7.8: Probable cause/reasonable suspicion Search Success Rates by Driver & Trooper Characteristics | 148 |
| Table 7.9: Racial/Ethnic Differences in Probable cause/reasonable suspicion Search Success Rates by Reason for Search | 152 |
| Table 7.10: Trooper and Driver Differences in Requests for Consent..... | 155 |
| Table 7.11: Trooper and Driver Differences in Granting and Obtaining Consent..... | 157 |
| Table 7.12: Consent Search Success Rates by Driver and Trooper Characteristics | 158 |

LIST OF FIGURES

| | |
|---|----|
| Figure 2.1: Pennsylvania State Police Contact Data Report, Jan. 1, 2008 – Dec. 31, 2008. | 10 |
| Figure 4.1: Percent of Traffic Stops with Black Drivers – Department | 56 |
| Figure 4.2: Percent of Traffic Stops with Hispanic Drivers – Department | 56 |
| Figure 4.3: Percent of Traffic Stops with Black Drivers – Troop J | 57 |
| Figure 4.4: Percent of Traffic Stops with Hispanic Drivers – Troop J | 57 |
| Figure 4.5: Percent of Traffic Stops with Black Drivers – Troop K | 58 |
| Figure 4.6: Percent of Traffic Stops with Hispanic Drivers – Troop K | 58 |
| Figure 4.7: Percent of Traffic Stops with Black Drivers – Troop L | 59 |
| Figure 4.8: Percent of Traffic Stops with Hispanic Drivers – Troop L | 59 |
| Figure 4.9: Percent of Traffic Stops with Black Drivers – Troop M | 60 |
| Figure 4.10: Percent of Traffic Stops with Hispanic Drivers – Troop M | 60 |
| Figure 4.11: Percent of Traffic Stops with Black Drivers – Troop F | 61 |
| Figure 4.12: Percent of Traffic Stops with Hispanic Drivers – Troop F | 61 |
| Figure 4.13: Percent of Traffic Stops with Black Drivers – Troop N | 62 |
| Figure 4.14: Percent of Traffic Stops with Hispanic Drivers – Troop N | 62 |
| Figure 4.15: Percent of Traffic Stops with Black Drivers – Troop P | 63 |
| Figure 4.16: Percent of Traffic Stops with Hispanic Drivers – Troop P | 63 |
| Figure 4.17: Percent of Traffic Stops with Black Drivers – Troop R | 64 |
| Figure 4.18: Percent of Traffic Stops with Hispanic Drivers – Troop R | 64 |
| Figure 4.19: Percent of Traffic Stops with Black Drivers – Troop A | 65 |
| Figure 4.20: Percent of Traffic Stops with Hispanic Drivers – Troop A | 65 |
| Figure 4.21: Percent of Traffic Stops with Black Drivers – Troop G | 66 |
| Figure 4.22: Percent of Traffic Stops with Hispanic Drivers – Troop G | 66 |
| Figure 4.23: Percent of Traffic Stops with Black Drivers – Troop H | 67 |
| Figure 4.24: Percent of Traffic Stops with Hispanic Drivers – Troop H | 67 |
| Figure 4.25: Percent of Traffic Stops with Black Drivers – Troop C | 68 |
| Figure 4.26: Percent of Traffic Stops with Hispanic Drivers – Troop C | 68 |
| Figure 4.27: Percent of Traffic Stops with Black Drivers – Troop D | 69 |
| Figure 4.28: Percent of Traffic Stops with Hispanic Drivers – Troop D | 69 |
| Figure 4.29: Percent of Traffic Stops with Black Drivers – Troop E | 70 |
| Figure 4.30: Percent of Traffic Stops with Hispanic Drivers – Troop E | 70 |
| Figure 4.31: Percent of Traffic Stops with Black Drivers – Troop B | 71 |
| Figure 4.32: Percent of Traffic Stops with Hispanic Drivers – Troop B | 71 |
| Figure 4.33: Percent of Traffic Stops with Black Drivers – Troop T | 72 |
| Figure 4.34: Percent of Traffic Stops with Hispanic Drivers – Troop T | 72 |
| Figure 5.1: Percent of Traffic Stops Resulting in Warnings – Department | 78 |
| Figure 5.2: Percent of Traffic Stops Resulting in Citations – Department | 78 |
| Figure 5.3: Percent of Traffic Stops Resulting in Arrest – Department | 79 |
| Figure 5.4: Percent of Traffic Stops Resulting in Searches – Department | 79 |
| Figure 5.5: Percent of Searches Resulting in Seizures – Department | 80 |
| Figure 5.6: Percent of Traffic Stops Resulting in Warnings by Race/Ethnicity – Department Wide | 82 |
| Figure 5.7: Percent of Traffic Stops Resulting in Citations by Race/Ethnicity – Department Wide | 82 |
| Figure 5.8: Percent of Traffic Stops Resulting in Arrests by Race/Ethnicity – Department Wide | 83 |
| Figure 5.9: Percent of Traffic Stops Resulting in Searches by Race/Ethnicity – Department Wide | 83 |
| Figure 5.10: Percent of Traffic Stops Resulting in Seizures by Race/Ethnicity – Department Wide | 84 |
| Figure 5.11: Percent of Traffic Stops Resulting in Warnings – Troop J | 86 |
| Figure 5.12: Percent of Traffic Stops Resulting in Citations – Troop J | 86 |
| Figure 5.13: Percent of Traffic Stops Resulting in Arrests – Troop J | 86 |
| Figure 5.14: Percent of Traffic Stops Resulting in Searches – Troop J | 86 |
| Figure 5.15: Percent of Traffic Stops Resulting in Warnings – Troop K | 87 |
| Figure 5.16: Percent of Traffic Stops Resulting in Citations – Troop K | 87 |
| Figure 5.17: Percent of Traffic Stops Resulting in Arrests – Troop K | 87 |
| Figure 5.18: Percent of Traffic Stops Resulting in Searches – Troop K | 87 |

| | |
|--|-----|
| Figure 7.1: Racial/Ethnic Differences in Type II Search Success Rates | 149 |
| Figure 7.2: 2007 PSP Requests for Consent and Consent Searches | 154 |
| Figure 7.3: Racial/Ethnic Differences in Requests for Consent to Search (n=277,344)..... | 156 |
| Figure 7.4: Racial/Ethnic Differences in Requests for Consent Resulting in Consent Search (n=2, 126).156 | |
| Figure 10.1: Percent of Traffic Stops Involving Black Drivers – Troop J | 177 |
| Figure 10.2: Percent of Traffic Stops Involving Hispanic Drivers – Troop J | 177 |
| Figure 10.3: Percent of Traffic Stops Involving Black Drivers – Troop K | 177 |
| Figure 10.4: Percent of Traffic Stops Involving Hispanic Drivers – Troop K | 177 |
| Figure 10.5: Percent of Traffic Stops Involving Black Drivers – Troop L..... | 178 |
| Figure 10.6: Percent of Traffic Stops Involving Hispanic Drivers – Troop L..... | 178 |
| Figure 10.7: Percent of Traffic Stops Involving Black Drivers – Troop M..... | 178 |
| Figure 10.8: Percent of Traffic Stops Involving Hispanic Drivers – Troop M | 178 |
| Figure 10.9: Percent of Traffic Stops Involving Black Drivers – Troop F | 179 |
| Figure 10.10: Percent of Traffic Stops Involving Hispanic Drivers – Troop F..... | 179 |
| Figure 10.11: Percent of Traffic Stops Involving Black Drivers – Troop N..... | 179 |
| Figure 10.12: Percent of Traffic Stops Involving Hispanic Drivers – Troop N | 179 |
| Figure 10.13: Percent of Traffic Stops Involving Black Drivers – Troop P | 180 |
| Figure 10.14: Percent of Traffic Stops Involving Hispanic Drivers – Troop P..... | 180 |
| Figure 10.15: Percent of Traffic Stops Involving Black Drivers – Troop R..... | 180 |
| Figure 10.16: Percent of Traffic Stops Involving Hispanic Drivers – Troop R | 180 |
| Figure 10.17: Percent of Traffic Stops Involving Black Drivers – Troop A..... | 181 |
| Figure 10.18: Percent of Traffic Stops Involving Hispanic Drivers – Troop A | 181 |
| Figure 10.19: Percent of Traffic Stops Involving Black Drivers – Troop G | 181 |
| Figure 10.20: Percent of Traffic Stops Involving Hispanic Drivers – Troop G | 181 |
| Figure 10.21: Percent of Traffic Stops Involving Black Drivers – Troop H | 182 |
| Figure 10.22: Percent of Traffic Stops Involving Hispanic Drivers – Troop H..... | 182 |
| Figure 10.23: Percent of Traffic Stops Involving Black Drivers – Troop C..... | 182 |
| Figure 10.24: Percent of Traffic Stops Involving Hispanic Drivers – Troop C | 182 |
| Figure 10.25: Percent of Traffic Stops Involving Black Drivers – Troop D..... | 183 |
| Figure 10.26: Percent of Traffic Stops Involving Hispanic Drivers – Troop D | 183 |
| Figure 10.27: Percent of Traffic Stops Involving Black Drivers – Troop E..... | 183 |
| Figure 10.28: Percent of Traffic Stops Involving Hispanic Drivers – Troop E..... | 183 |
| Figure 10.29: Percent of Traffic Stops Involving Black Drivers – Troop B..... | 184 |
| Figure 10.30: Percent of Traffic Stops Involving Hispanic Drivers – Troop B..... | 184 |
| Figure 10.31: Percent of Traffic Stops Involving Black Drivers – Troop T..... | 184 |
| Figure 10.32: Percent of Traffic Stops Involving Hispanic Drivers – Troop T..... | 184 |
| Figure 11.1: Percent of Traffic Stops Resulting in a Warning – Troop J | 187 |
| Figure 11.2: Percent of Traffic Stops Resulting in a Citation – Troop J..... | 187 |
| Figure 11.3: Percent of Traffic Stops Resulting in an Arrest – Troop J | 187 |
| Figure 11.4: Percent of Traffic Stops Resulting in a Search – Troop J..... | 187 |
| Figure 11.5: Percent of Traffic Stops Resulting in a Warning – Troop K | 188 |
| Figure 11.6: Percent of Traffic Stops Resulting in a Citation – Troop K..... | 188 |
| Figure 11.7: Percent of Traffic Stops Resulting in an Arrest – Troop K | 188 |
| Figure 11.8: Percent of Traffic Stops Resulting in a Search – Troop K..... | 188 |
| Figure 11.9: Percent of Traffic Stops Resulting in a Warning – Troop L..... | 189 |
| Figure 11.10: Percent of Traffic Stops Resulting in a Citation – Troop L | 189 |
| Figure 11.11: Percent of Traffic Stops Resulting in an Arrest – Troop L..... | 189 |
| Figure 11.12: Percent of Traffic Stops Resulting in a Search – Troop L | 189 |
| Figure 11.13: Percent of Traffic Stops Resulting in a Warning – Troop M..... | 190 |
| Figure 11.14: Percent of Traffic Stops Resulting in a Citation – Troop M | 190 |
| Figure 11.15: Percent of Traffic Stops Resulting in an Arrest – Troop M..... | 190 |
| Figure 11.16: Percent of Traffic Stops Resulting in a Search – Troop M | 190 |
| Figure 11.17: Percent of Traffic Stops Resulting in a Warning – Troop F | 191 |
| Figure 11.18: Percent of Traffic Stops Resulting in a Citation – Troop F | 191 |
| Figure 11.19: Percent of Traffic Stops Resulting in an Arrest – Troop F | 191 |
| Figure 11.20: Percent of Traffic Stops Resulting in a Search – Troop F..... | 191 |

ACKNOWLEDGEMENTS

This research was supported by funding from the Pennsylvania State Police (grant # SP 2010060001). The findings and recommendations expressed within this report are from the authors and do not necessarily represent the official positions of the Pennsylvania State Police.

Our continued research with the Pennsylvania State Police has been greatly enhanced by the dedication and hard work of each individual Pennsylvania State Trooper making the daily traffic stops that result in data for our analyses. We continue to be appreciative of the contributions and support of the PSP command staff, including Colonel Frank E. Pawlowski, Lieutenant Colonel John Brown, Lieutenant Colonel Tedescung L. Bandy, and Lieutenant Colonel Jon D. Kurtz. Their continued commitment to this research project has resulted in one of the largest continuous traffic stop study in the country. They remain leaders in the law enforcement field by providing transparency into their operations, and continue to build legitimacy among citizens. We are also appreciative of the additional efforts of our new project director, Captain Marshall Martin, and the assistance we receive from Lieutenant Garret Rain and his staff. Throughout the course of this project, PSP legal counsel Barbara Christie and Joanna Reynolds provide valuable guidance and oversight. Most importantly, this project would not be possible without the efforts of the individual PSP Troopers who routinely fill out the Contact Data Reports and check for their accuracy, as well as the supervisors who are directly involved in the daily oversight of the data collection process. These individuals are the primary contributors to this research and we would like to recognize their cooperation, diligence, and hard work in maintaining one of the most comprehensive traffic stop data collection efforts in the country. Finally, we thank the following individuals from the University of Cincinnati Policing Institute who assisted with editorial tasks associated with this report: Davin Hall, Kristan Moore, Ashley Sandburg, and Amy Whalen.

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 (PSP) from January 1, 2008 – December 31, 2008. These data represent the seventh year of data collection for the voluntarily-initiated Project on Police-Citizen Contacts. The remainder of Section 1 summarizes the findings from the most recent previous report (Year 6 - 2007), the PSP response to that report, and an overview of the current Year 7 (2008) Report.

SUMMARY OF THE YEAR 6 (2007) REPORT

Prepared February 2009, the *Year 6 Final Report* (see Engel, Tillyer & Cherkauskas, 2009) summarized the data collected during the sixth year of data collection, from January 1, 2007 through December 31, 2007. During 2007, there were 305,071 member-initiated traffic stops either recorded on scannable CDR forms (5.9%) or electronically entered via the CDR X-press system (94.1%) and entered into the database for analysis. Of these stops, only 1% had one or more items with missing or invalid information. The final number of stops included in the dataset for analyses was 299,957.¹

This report reviewed a number of statistical analyses including descriptive statistics for traffic stops in 2007, trend analyses of traffic stops and traffic stop outcomes from 2002-2007, an examination of post-stop outcomes, including a focus on searches and search success rates, and a series of recommendations. A brief summary of the major findings from these analyses is provided below:

- **Trends in Racial/Ethnic Characteristics of Drivers Stopped:**
 - Department wide, the 2007 rate of traffic stops involving Black drivers is equivalent to three standard deviation above the five-year average for that organizational unit. The level of this increased rate was primarily influenced by higher rates of Black drivers stopped in Area V.
 - Department wide, the 2007 rate of traffic stops involving Hispanic drivers was more than one standard deviation above the five-year average. This slight increase was influenced mainly by increases in Hispanic stops reported in Areas II and III.
 - These statistics cannot be used to determine the reasons for the changes in the racial composition of drivers stopped, as they may be due to a number of factors including: 1) changes in the racial/ethnic composition of residential populations serviced by those organizational units which have altered the racial/ethnic

¹ During a brief period of time after the introduction of the CDR X-press, a small error in the data collection system affected the proper and complete collection of data. The error occurred when the Trooper used the <Tab> key to move from one data field to another in the CDR X-press application. With this glitch in the application, some information entered by Troopers in the system was not saved; most important, information on the traffic stop outcome was not recorded. Once the problem was identified by the UCPI team, the glitch in the application was quickly corrected by PSP analysts. All 5,114 traffic stops (0.02%) recorded that were affected by this error were removed from the analyses within this report.

composition of drivers eligible to be stopped, 2) alterations to the reporting patterns by PSP troopers, 3) other changes in travel patterns that differentially impact the percentages of minority drivers on particular roadways, 4) adjustments to PSP deployment patterns and manpower allocation to address changes in reported criminal patterns and calls for service, resulting in higher concentrations of Troopers in areas where minorities are more likely to travel and/or violate the law, and 5) changes across time in Trooper behavior toward minority drivers.

- **Trends in Racial/Ethnic Characteristics of Post-Stop Outcomes Drivers Received:**
 - Although initially, from 2002- 2004, the rates of warnings for Whites were higher than the rates for Blacks and Hispanics, these rates became nearly equivalent in 2005 and 2006. In 2007, however, the initial trend reversed itself, where the warning rates for Black and Hispanic drivers were slightly higher than the 2007 warning rate for White drivers.
 - Between 2002 and 2007, Whites were consistently the least cited racial/ethnic group, while Hispanics were consistently the most cited racial/ethnic group.
 - Between 2002 and 2007, Hispanic drivers consistently had the highest proportion of arrests compared to Whites and Blacks, with the gap in 2007 mirroring the same trend in 2006.
 - Between 2002 and 2006, Hispanic drivers had the highest rates of searches compared to other racial/ethnic groups. In 2007, however, Blacks were the most likely racial/ethnic group to be searched, continuing a steady increase that began in 2003. The trends in seizure rates, however, indicate that, between 2002 and 2007, searches of White drivers consistently produced the highest rates of contraband discovery compared to Black and Hispanic drivers, while searches of Hispanic drivers were consistently the least likely to result in the discovery of contraband.
- **Post-Stop Outcomes:**
 - Based on the multivariate analysis of warnings, drivers of “other” race/ethnicity were 1.2 times *less* likely than White drivers to be issued warnings, while Black drivers were 1.2 times more likely than White drivers to be warned were. Overall, Troopers’ decisions to issue warnings were most strongly based on legal factors.
 - The multivariate analyses of citations and arrests revealed that Hispanic drivers were *not* significantly more or less likely to be issued citations or arrested compared to White drivers. Black drivers were slightly less likely to be issued citations, but not significantly more or less likely than Whites to be arrested. Instead issuing citations was explained primarily by legal factors.
 - Multivariate analyses of searches revealed that Black and Hispanic drivers were 2.9 and 2.2 times *more* likely to be searched than White drivers, after controlling for other measured factors. Collectively, these results demonstrate that racial/ethnic differences in the rates of searches cannot be explained by the legal and extralegal factors captured on the traffic stop forms.
- **Search & Seizure:**
 - In 2007, PSP Troopers conducted 3,726 searches (1.2% of all stops), the majority of which were conducted based on driver’s consent (69.2%).

- Of the 299,957 traffic stops initiated by PSP Troopers in 2007, 2,772 drivers (0.9%) were asked for consent to search. Black and Hispanic drivers were significantly more likely than White drivers to be asked for consent to search, but in contrast to previous years where differences in granting consent were evident by drivers' race/ethnicity (i.e., Blacks and Hispanics more likely to comply with request for consent than Whites), in 2007 Blacks and Hispanics were not significantly more or less than Whites to give consent to search when asked.
- Of the 3,726 searches, 1,076 resulted in the seizure of contraband (28.9% success rate). Type II probable cause/reasonable suspicion searches were the most productive in recovering contraband (38.5%), while only 22.5% of Type III consent-only searches were successful in recovering contraband.
- For both probable cause/reasonable suspicion and consent only searches, PSP Troopers were less likely to discover contraband during searches of Black and Hispanic drivers compared to searches of White drivers.

It is important to note that, although portions of these analyses reveal racial/ethnic disparities, these findings cannot be used to determine the exact causes of the trends reported. The comparisons of rates across years are simply descriptive and do not take into account other factors that may contribute to these racial/ethnic differences. For multivariate statistical models, not all factors that might influence officer decision-making can be included. Similarly, the findings regarding search success rates do not take into account other extralegal and legal factors that might explain the racial/ethnic disparities reported. In sum, the interpretation of these findings must be made with caution and cannot determine the legality of and/or the presence of discrimination in individual stops or searches conducted by PSP Troopers.

When the results of this Year 6 Report are viewed in context of the previous reports, there are a number of consistent patterns. First, across these six years of data, there has been no consistent evidence to suggest that PSP Troopers disproportionately stop minority motorists. Second, there has been continual improvement in the data collection process over time. Third, there has been a continual effort by PSP administrators to promote and measure equitable treatment across racial/ethnic groups. Fourth, nearly all of the racial/ethnic disparities in traffic stop outcomes have decreased and/or been eliminated over time. This is likely due to: 1) increased scrutiny in traffic stops, 2) advances in training, 3) administrative priorities placed on equitable treatment, 4) increased field supervisory oversight, and 5) increased reliability and validity of the traffic stop data itself. And finally, despite the above noted advancements, there has been a persistent findings of racial/ethnic disparities involving discretionary and consent searches, and the seizure of contraband during these searches. This is the only consistently problematic issue uncovered in the data analyses. Therefore, the recommendations provided in the *Year 6 Final Report*, and summarized below, were based nearly exclusively on addressing the lingering racial/ethnic disparities in the PSP search and seizure activities.

- **It is recommended that more advanced analyses be conducted at the troop and station levels that will pinpoint the exact locations where the largest racial/ethnic disparities in searches exist.** These types of analyses often cannot be conducted on

one year of data because there are too few searches and/or seizures for all racial/ethnic groups within stations to provide meaningful comparisons. It is possible, however, to drill down to the station level when multiple years of data are combined. Therefore, it is the recommendation of this research team that the data from 2006 be combined with data collected during 2007 and 2008 to perform more specific analyses examining searches and seizures at the station level. Once the stations with the highest racial/ethnic disparities in search and seizure rates are identified, the possible explanations regarding these elevated disparities can be examined.

- **Once the stations with the highest racial/ethnic disparities in search and seizure rates are identified as described above, it is recommended that detailed focus groups with PSP Troopers working in those stations be conducted to better understand the likely sources for these disparities.** The initial focus groups with Troopers conducted in 2005 provided valuable information that would be supplemented with follow-up discussions. The focus groups proposed here, however, would be specifically focused in stations that were flagged as contributing the largest rates of racial/ethnic disparities in search and seizure rates. The primary goal would be to more specifically discuss and better understand from Troopers' perspectives why there are consistent disparities.
- **In addition to focus groups with PSP Troopers, it is recommended that the commanders of the stations and troops identified be directly interviewed.** The purpose of the focus groups and the interviews is to gain a better understanding of the patterns and practices within those locations. There are several possible explanations for these elevated rates that can only be determined based on local knowledge of the area and additional information that is not included in the Contact Data Reports.
- **Continued monitoring of racial/ethnic disparities in traffic stop outcomes, particularly searches and seizures, remains necessary. PSP should continue to collect and analyze traffic stop data.** By comparing multiple years of traffic stop data, it is possible to determine the relative effectiveness of any new policies and training on the rates of searches and seizures of minority drivers. Further, continual monitoring of traffic stops provides valuable information to the organization, while simultaneously institutionalizing a culture within the organization that inspires fair and equitable policing.

As demonstrated by their ongoing data collection and analysis (contractually scheduled through Dec 31, 2011) and their responsiveness to the UC research team's recommendations from previous reports, 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.

YEAR 7 (2008) REPORT OUTLINE

This report for data collected from January 1, 2008 through December 31, 2008 is divided into eight sections: 1) introduction, 2) traffic stop data collection methodology, 3) description of traffic stop data, 4) trend analyses of stops from 2002 through 2008, 5) trend analyses of stop outcomes from 2002 through 2008, 6) bivariate and multivariate analyses of 2008 post-stop outcomes, 7) searches and seizures, and 8) conclusions and policy recommendations. The general content of Sections 2 - 8 are described below.

Section 2

Section 2 includes a description of the study's methodology, which focuses on the details regarding the collection of traffic stop data by the Pennsylvania State Police. It briefly describes the final police stop dataset that includes 278,323 member-initiated traffic stops in 2008 by summarizing 1) the percentage of stop data submitted by both the CDR X-press system and the scannable CDR form, and 2) the error rate for individual organizational units within the PSP.

Section 3

Section 3 provides descriptive statistics for the traffic stop data collected for the time period from January 1, 2008 – December 31, 2008. This description of data includes the number of stops, characteristics of the stops (e.g., time, day, month, 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.), the characteristics of the drivers (e.g., gender, race, age, residency), and the percent of traffic stops resulting in various post-stop outcomes including warnings, citations, arrests, searches, and seizures. The averages for this information are reported in tables at the department, area, troop, and station levels.

Section 4

Section 4 examines data collected over the seven years of the research project (i.e., May 2002 – December 2008) and documents the stopping trends of Black and Hispanic drivers by PSP Troopers across the department and troop levels during this time period. These temporal trends are assessed using a standard deviation methodology. In contrast to previous reports, these trends are not provided at the area level, due to the reorganization that occurred within the PSP in 2008 that altered the composition of Areas I through V from previous years.

Section 5

Section 5 reports the temporal trends for warnings, citations, arrests, searches, and seizures between 2002 and 2008. Using the standard deviation methodology described in Section 4, the 2008 rate of all traffic stop outcomes are compared to the six-year average at the department level. Thereafter, the rate of traffic stop outcomes is reported within racial/ethnic groups at the department level. Finally, the rate of traffic stop outcomes for different racial/ethnic groups between 2002 and 2008 is reported at the troop level for all traffic stop outcomes. Again, due to the department's reorganization in 2008, these trend analyses are not performed at the area level as they were in previous reports.

Section 6

The analyses of post-stop outcomes (e.g., warning, citation, arrest, and search) are documented in Section 6. Driver differences, based on race/ethnicity and gender, are examined for all post-stop outcomes. Following this, several hierarchical multivariate analyses that isolate factors associated with officer decision-making regarding traffic stop outcomes (e.g., warnings, citations, arrests, and searches) are presented. Specifically, Section 6 documents whether these outcomes differ significantly based on a multitude of factors, including: driver characteristics, vehicle characteristics, stop characteristics, legal variables, Trooper characteristics, and community characteristics.

Section 7

Section 7 focuses specifically on search and seizure activity of the PSP. This focus is conducted due in part to findings in previous years' reports highlighting the fact that the largest racial/ethnic disparities in outcomes occur as the result of searches. Section 7 documents the search rates for minority drivers compared to Whites, and further describes the racial/ethnic disparities in searches and seizures at multiple organization levels. Comparisons of probable cause/reasonable suspicion search success rates are made, followed by analyses specifically of consent searches.

Section 8

Section 8 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 ongoing data collection process, along with exploring trends and patterns in the data that may be utilized for training purposes.

Appendix A

Appendix A utilizes a series of figures to document the stopping trends of Black and Hispanic drivers by PSP Troopers at the station level between 2002 and 2008. This information is intended to supplement the information in Section 4 regarding the stopping trends of Black and Hispanic drivers at the department and troop level.

Appendix B

Appendix B provides a series of figures that report the rates of post-stop outcomes (e.g., warnings, citations, arrests, and searches) at the station level between 2002 and 2008. It is intended to supplement the information provided in Section 5 at the department and troop level.

2. TRAFFIC STOP DATA COLLECTION METHODOLOGY

OVERVIEW

This section documents the methodology utilized for the data collection effort, including a brief description of the information collected on all trooper-initiated traffic stops through the CDR X-press system or the Contact Data Report (CDR) form. Additional tables summarize the total number of traffic stops, the percent of data received through the CDR X-press system and on the CDR forms, as well as the overall error rate for all data by month. This information is also presented for the entire year across the department, area, troop, and station levels.

DATA COLLECTION

Throughout 2008, PSP personnel collected data on all trooper-initiated traffic stops. From January 1, 2008 – December 31, 2008, data were collected on 278,323 stops. This information was primarily collected using the CDR X-press system with the remainder of the information collected using the Contact Data Report (CDR) form (see Figure 2.1 below). Both data collection instruments gathered identical information on the following items:

- The Traffic Stop
 - Date/Time [month, day, hour]
 - Location [county and municipality identifiers]
 - Type of Roadway [interstate, state highway, county/local road, other]
 - Reason(s) for the Stop [speeding, other moving violation, equipment/Inspection, pre-existing information, registration, license, special traffic enforcement, other]
 - Duration [1-15 minutes, 16-30 minutes, 31-60 minutes, 61+ minutes]
 - Outcome [written warning, citation, arrest, search]
 - Consent Search Requested
 - Reason(s) for Search [consent, odor of drugs/alcohol, plain view, incident to arrest, canine alert, inventory, probable cause, search warrant, other]
 - Property seized during a search [cash, drugs, vehicle, weapons, stolen property, alcohol, other]
- The Driver
 - Gender [male, female]
 - Age [in years]
 - Race/Ethnicity [White, Black, White Hispanic, Black Hispanic, Native American, Middle Eastern, Asian/Pacific Islander, unknown]
 - Zip Code of Residency
- The Vehicle
 - State of Registration
 - Number of Passengers
- The Trooper
 - Station Identifier
 - Employee Identifier

Figure 2.1: Pennsylvania State Police Contact Data Report, Jan. 1, 2008 – Dec. 31, 2008.

SP 7-0045 (7-2003)

CONTACT DATA REPORT

PENNSYLVANIA STATE POLICE

CORRECT MARK:

INCORRECT MARKS:

1. Month **Day** **Time**

| | | |
|------|--------------|-----------------|
| (1) | (1) (3) (5) | (0) (0) (0) (0) |
| (2) | (2) (4) (6) | (1) (1) (1) (1) |
| (3) | (3) (5) (7) | (2) (2) (2) (2) |
| (4) | (4) (6) (8) | (3) (3) (3) (3) |
| (5) | (5) (7) (9) | (4) (4) (4) (4) |
| (6) | (6) (8) (0) | (5) (5) (5) (5) |
| (7) | (7) (9) (1) | (6) (6) (6) (6) |
| (8) | (8) (0) (2) | (7) (7) (7) (7) |
| (9) | (9) (1) (3) | (8) (8) (8) (8) |
| (10) | (10) (2) (4) | (9) (9) (9) (9) |
| (11) | (11) (3) (5) | |
| (12) | (12) (4) (6) | |

2. County **Municipality**

| | | | |
|-----|-----|-----|-----|
| (0) | (0) | (0) | (0) |
| (1) | (1) | (1) | (1) |
| (2) | (2) | (2) | (2) |
| (3) | (3) | (3) | (3) |
| (4) | (4) | (4) | (4) |
| (5) | (5) | (5) | (5) |
| (6) | (6) | (6) | (6) |
| (7) | (7) | (7) | (7) |
| (8) | (8) | (8) | (8) |
| (9) | (9) | (9) | (9) |

3. Roadway Interstate
 State Highway
 County/Local Road
 Other

4. Registration Displayed

PA Other None

5. Reason (s) (All That Apply) **Amount Over Limit**

| | | | |
|-----------------------|-----------------------|----------------------------|---------|
| P | S | | (0) (0) |
| <input type="radio"/> | <input type="radio"/> | Speeding | (0) (1) |
| <input type="radio"/> | <input type="radio"/> | Other Moving Violation | (2) (2) |
| <input type="radio"/> | <input type="radio"/> | Equipment/Inspection | (3) (3) |
| <input type="radio"/> | <input type="radio"/> | Pre-Existing Info. | (4) (4) |
| <input type="radio"/> | <input type="radio"/> | Registration | (5) (5) |
| <input type="radio"/> | <input type="radio"/> | License | (6) (6) |
| <input type="radio"/> | <input type="radio"/> | Special Traffic Enf. Prog. | (7) (7) |
| <input type="radio"/> | <input type="radio"/> | Other _____ | (8) (8) |
| | | | (9) (9) |

6. Result of Stop (All That Apply)

| | | | | |
|----------|-----------------|----------------|-----------------------|-----------------------|
| | Citation | Warning | Arrest | Other |
| D | (1) (2) (3) | (1) (2) (3) | <input type="radio"/> | <input type="radio"/> |
| P | (1) (2) (3) | (1) (2) (3) | <input type="radio"/> | <input type="radio"/> |

7. Duration of Stop In Minutes

1-15 16-30 31-60 61+

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 **Driver Zip Code**

| | | | | | |
|-----|-----|-----|-----|-----|-----|
| (0) | (0) | (0) | (0) | (0) | (0) |
| (1) | (1) | (1) | (1) | (1) | (1) |
| (2) | (2) | (2) | (2) | (2) | (2) |
| (3) | (3) | (3) | (3) | (3) | (3) |
| (4) | (4) | (4) | (4) | (4) | (4) |
| (5) | (5) | (5) | (5) | (5) | (5) |
| (6) | (6) | (6) | (6) | (6) | (6) |
| (7) | (7) | (7) | (7) | (7) | (7) |
| (8) | (8) | (8) | (8) | (8) | (8) |
| (9) | (9) | (9) | (9) | (9) | (9) |

11. Number of Passengers

01 02 03 04 05

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 _____

15. Property Seized (All That Apply)

None Weapons
 Cash Stolen Property
 Drugs Alcohol
 Vehicle Other _____

16. Station Code **Employee #**

| | | | | | |
|-----|-----|-----|-----|-----|-----|
| (0) | (0) | (0) | (0) | (0) | (0) |
| (1) | (1) | (1) | (1) | (1) | (1) |
| (2) | (2) | (2) | (2) | (2) | (2) |
| (3) | (3) | (3) | (3) | (3) | (3) |
| (4) | (4) | (4) | (4) | (4) | (4) |
| (5) | (5) | (5) | (5) | (5) | (5) |
| (6) | (6) | (6) | (6) | (6) | (6) |
| (7) | (7) | (7) | (7) | (7) | (7) |
| (8) | (8) | (8) | (8) | (8) | (8) |
| (9) | (9) | (9) | (9) | (9) | (9) |

Initials - Supervisor

In 2006, biweekly data updates were suspended and replaced with monthly reports detailing the number of traffic stops initiated in that time period. This information was supplemented with the rate of forms received through the CDR X-press system versus those received from the CDR form and the error rates associated with each system. Additionally, the number of warnings, citations, arrests, searches, and seizures was included. All this information was reported at the department, area, troop, and station level for review by the PSP administration and supervisors.

Table 2.1 reports the monthly number of traffic stops in the data set based on information received from the CDR X-press system and the CDR forms. The rate of information received through these two methods is also reported by month for the entire department. The final column provides the collective error rate by month for both data sources. The error rate is the product of an internal auditing process in which all the data is checked for invalid / missing entries and logical inconsistencies. 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%, while our research team recommends a more stringent standard of less than 5% missing data.

Between January 1, 2008 and December 31, 2008, information on 278,323 traffic stops was reported using the CDR X-press system or CDR forms. Over 99% of that information was transmitted using the CDR X-press system. The department-wide error rate was 0.6%, which is considerably lower than the recommended 5%. This low rate is likely due to the widespread implementation of the CDR X-press and the conscientious efforts of PSP supervisors.

In 2008, the majority of months accounted for between 20,000 and 30,000 traffic stops. March, February, and December were the exceptions to this pattern, with March supplying the single largest contribution of 30,869 traffic stops. February contributed just under 20,000 traffic stops (n=19,480), while December showed the smallest number of traffic stops (n=14,205) in the data set. Over the twelve months, the rate of traffic stops reported using the CDR X-press system incrementally increased and culminated in 100% of the data received using this method by December. The error rate was consistently less than 1%, with most months experiencing around a 0.5% error rate.

Table 2.1: 2008 Traffic Stops by Month (CDR X-press vs. CDR)

| Time Period | Total # in Dataset | % CDR X-press | % CDR | % Errors |
|--------------------|-------------------------------|--------------------------|------------------|---------------------|
| 2008 Total | 278,323 | 99.5 | 0.5 | 0.6 |
| January | 22,021 | 98.7 | 1.3 | 0.7 |
| February | 19,480 | 99.1 | 0.9 | 0.8 |
| March | 30,869 | 99.3 | 0.7 | 0.6 |
| April | 25,752 | 99.6 | 0.4 | 0.6 |
| May | 27,065 | 99.5 | 0.5 | 0.7 |
| June | 22,832 | 99.8 | 0.2 | 0.5 |
| July | 24,112 | 99.7 | 0.3 | 0.5 |

| | | | | |
|------------------|--------|-------|-----|-----|
| August | 24,436 | 99.7 | 0.3 | 0.5 |
| September | 25,449 | 99.7 | 0.3 | 0.4 |
| October | 20,229 | 99.7 | 0.3 | 0.5 |
| November | 21,873 | 99.9 | 0.1 | 0.4 |
| December | 14,205 | 100.0 | 0.0 | 0.4 |

Table 2.2 presents the total number of traffic stops, rate of data received by CDR X-press and CDR forms, and the error rate by department, area, troop, and station.² Across the areas, Area III conducted the largest number of member-initiated traffic stops (n=68,273) and accounted for approximately 25% of all traffic stop activity. The rate of CDR X-press usage varied slightly, but all areas exceeded 99% usage. Area III exhibited the lowest error rate of 0.2%, but no area reported more than a 1.0% error rate. Slightly greater variation in these rates is evident at the troop and station levels. With few exceptions, organizational units using the CDR X-press form exclusively showed an error rate of approximately 1% or less in 2008.

² Due to a departmental reorganization that occurred in 2009, the organization of all tables in this report has been modified from previous years' reports to reflect the new area and bureau commands. The former organization was: Area I – Troops H,J,L,T; Area II – Troops F,P,R; Area III – Troops A,B,G; Area IV – Troops C,D,E; Area V – Troops K,M,N. The revised organization utilized throughout this report is: Area I - Troops J,K,L,M; Area II- Troops F,N,P,R; Area III-Troops A,G,H; Area IV- Troops C,D,E,B; Bureau of Patrol - Troop T.

Table 2.2: CDR Scan Form Report - 2008 (p. 1 of 3)

| | Total # in Dataset | % CDR X-press | % CDR | % Errors |
|-------------------|---------------------------|----------------------|--------------|-----------------|
| PSP Dept.* | 278,323 | 99.5 | 0.5 | 0.6 |
| AREA I | 52,931 | 99.2 | 0.8 | 1.0 |
| Troop J | 11,906 | 98.2 | 1.8 | 0.5 |
| Avondale | 3,516 | 100.0 | 0.0 | 0.4 |
| Embreeville | 4,098 | 100.0 | 0.0 | 0.3 |
| Ephrata | 3,640 | 99.6 | 0.4 | 0.1 |
| Lancaster | 4,152 | 95.0 | 5.0 | 1.1 |
| Troop K | 17,216 | 100.0 | 0.0 | 2.4 |
| Media | 3,163 | 100.0 | 0.0 | 0.3 |
| Philadelphia | 12,203 | 100.0 | 0.0 | 3.3 |
| Skippack | 1,850 | 100.0 | 0.0 | 0.1 |
| Troop L | 8,706 | 99.2 | 0.8 | 0.4 |
| Frackville | 877 | 99.4 | 0.6 | 0.9 |
| Hamburg | 1,662 | 95.9 | 4.1 | 0.7 |
| Jonestown | 3,132 | 100.0 | 0.0 | 0.4 |
| Reading | 1,619 | 100.0 | 0.0 | 0.2 |
| Schuylkill Haven | 1,416 | 100.0 | 0.0 | 0.1 |
| Troop M | 15,103 | 99.1 | 0.9 | 0.2 |
| Belfast | 2,516 | 95.2 | 4.8 | 0.6 |
| Bethlehem | 1,357 | 100.0 | 0.0 | 0.1 |
| Dublin | 3,435 | 100.0 | 0.0 | 0.1 |
| Fogelsville | 4,620 | 99.8 | 0.2 | 0.1 |
| Trevose | 3,175 | 100.0 | 0.0 | 0.1 |
| AREA II | 45,639 | 99.9 | 0.1 | 0.4 |
| Troop F | 16,442 | 100.0 | 0.0 | 0.3 |
| Coudersport | 2,224 | 100.0 | 0.0 | 0.2 |
| Emporium | 4,238 | 99.0 | 1.0 | 0.5 |
| Lamar | 2,996 | 100.0 | 0.0 | 0.1 |
| Mansfield | 1,071 | 100.0 | 0.0 | 0.7 |
| Milton | 3,257 | 100.0 | 0.0 | 0.4 |
| Montoursville | 1,848 | 100.0 | 0.0 | 0.2 |
| Selinsgrove | 2,700 | 100.0 | 0.0 | 0.3 |
| Stonington | 1,604 | 100.0 | 0.0 | 0.1 |

* 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 2.2: CDR Scan Form Report - 2008 (p. 2 of 3)

| | Total # in Dataset | % CDR X-press | % CDR | % Errors |
|-----------------|-------------------------------|--------------------------|------------------|---------------------|
| Troop N | 12,681 | 99.9 | 0.1 | 0.3 |
| Bloomsburg | 2,229 | 100.0 | 0.0 | 0.3 |
| Fern Ridge | 3,160 | 100.0 | 0.0 | 0.2 |
| Hazleton | 1,390 | 100.0 | 0.0 | 0.4 |
| Lehighton | 1,949 | 100.0 | 0.0 | 0.2 |
| Swiftwater | 3,953 | 99.6 | 0.4 | 0.4 |
| Troop P | 7766 | 100.0 | 0.0 | 0.2 |
| Laporte | 1,581 | 100.0 | 0.0 | 0.1 |
| Shickshinny | 1,016 | 100.0 | 0.0 | 0.1 |
| Towanda | 3,111 | 100.0 | 0.0 | 0.1 |
| Tunkhannock | 1,139 | 100.0 | 0.0 | 0.0 |
| Wyoming | 919 | 100.0 | 0.0 | 1.2 |
| Troop R | 8750 | 99.6 | 0.4 | 1.1 |
| Blooming Grove | 2,693 | 99.7 | 0.3 | 0.4 |
| Dunmore | 2,523 | 98.9 | 1.1 | 1.4 |
| Gibson | 2,251 | 100.0 | 0.0 | 2.0 |
| Honesdale | 1,283 | 100.0 | 0.0 | 0.9 |
| AREA III | 68,273 | 99.5 | 0.5 | 0.2 |
| Troop A | 19,576 | 98.9 | 1.1 | 0.1 |
| Ebensburg | 4,909 | 96.0 | 4.0 | 0.2 |
| Greensburg | 4,185 | 100.0 | 0.0 | 0.1 |
| Indiana | 4,385 | 99.7 | 0.3 | 0.1 |
| Kiski Valley | 3,635 | 100.0 | 0.0 | 0.1 |
| Somerset (A) | 2,462 | 100.0 | 0.0 | 0.0 |
| Troop G | 22,811 | 99.9 | 0.1 | 0.3 |
| Bedford | 2,711 | 100.0 | 0.0 | 0.3 |
| Hollidaysburg | 2,045 | 99.9 | 0.1 | 0.2 |
| Huntingdon | 2,123 | 100.0 | 0.0 | 0.3 |
| Lewistown | 5,575 | 99.8 | 0.2 | 0.1 |
| McConnellsburg | 3,234 | 100.0 | 0.0 | 0.9 |
| Philipsburg | 2,395 | 100.0 | 0.0 | 0.4 |
| Rockview | 4,728 | 99.9 | 0.1 | 0.3 |
| Troop H | 25,886 | 99.5 | 0.5 | 0.3 |
| Carlisle | 7,739 | 100.0 | 0.0 | 0.4 |
| Chambersburg | 3,874 | 100.0 | 0.0 | 0.1 |
| Gettysburg | 2,439 | 100.0 | 0.0 | 0.2 |
| Harrisburg | 3,030 | 98.0 | 2.0 | 0.3 |
| Lykens | 2,174 | 100.0 | 0.0 | 0.1 |
| Newport | 2,722 | 97.9 | 2.1 | 0.3 |
| York | 3,908 | 100.0 | 0.0 | 0.2 |

Table 2.2: CDR Scan Form Report - 2008 (p. 3 of 3)

| | Total # in Dataset | % CDR X-press | % CDR | % Errors |
|-------------------------|-------------------------------|--------------------------|------------------|---------------------|
| AREA IV | 58,830 | 99.5 | 0.5 | 0.6 |
| Troop C | 16,914 | 100.0 | 0.0 | 0.4 |
| Clarion | 2,245 | 100.0 | 0.0 | 0.4 |
| Clearfield | 3,610 | 100.0 | 0.0 | 0.5 |
| Dubois | 2,697 | 100.0 | 0.0 | 0.3 |
| Kane | 1,662 | 100.0 | 0.0 | 1.2 |
| Punxsutawney | 2,541 | 100.0 | 0.0 | 0.0 |
| Ridgway | 2,557 | 100.0 | 0.0 | 0.4 |
| Tionesta | 1,602 | 100.0 | 0.0 | 0.2 |
| Troop D | 16,089 | 100.0 | 0.0 | 0.6 |
| Beaver | 3,039 | 100.0 | 0.0 | 0.0 |
| Butler | 4,943 | 100.0 | 0.0 | 0.6 |
| Kittanning | 2,835 | 100.0 | 0.0 | 0.0 |
| Mercer | 2,716 | 100.0 | 0.0 | 1.7 |
| New Castle | 2,556 | 100.0 | 0.0 | 0.7 |
| Troop E | 12,401 | 99.9 | 0.1 | 1.3 |
| Corry | 1,387 | 100.0 | 0.0 | 0.0 |
| Erie | 3,341 | 99.6 | 0.4 | 2.4 |
| Franklin | 1,644 | 100.0 | 0.0 | 0.2 |
| Girard | 2,318 | 100.0 | 0.0 | 1.2 |
| Meadville | 2,676 | 100.0 | 0.0 | 1.7 |
| Warren | 1,035 | 100.0 | 0.0 | 0.2 |
| Troop B | 13,426 | 98.1 | 1.9 | 0.3 |
| Belle Vernon | 1,199 | 100.0 | 0.0 | 0.3 |
| Pittsburgh | 4,098 | 100.0 | 0.0 | 0.3 |
| Uniontown | 3,640 | 99.6 | 0.4 | 0.2 |
| Washington | 3,697 | 93.5 | 6.5 | 0.4 |
| Waynesburg | 792 | 100.0 | 0.0 | 1.0 |
| Bureau of Patrol | 52,571 | 99.7 | 0.3 | 0.5 |
| Troop T | 52,571 | 99.7 | 0.3 | 0.5 |
| Bowmansville | 6,677 | 99.0 | 1.0 | 0.3 |
| Everett | 12,606 | 100.0 | 0.0 | 0.4 |
| Gibsonia | 5,406 | 98.4 | 1.6 | 0.6 |
| Highspire | 21 | 100.0 | 0.0 | 0.0 |
| King of Prussia | 6,623 | 100.0 | 0.0 | 0.1 |
| New Stanton | 4,998 | 100.0 | 0.0 | 0.4 |
| Newville | 8,152 | 100.0 | 0.0 | 0.2 |
| Pocono | 3,850 | 100.0 | 0.0 | 1.2 |
| Somerset (T) | 4,238 | 99.7 | 0.3 | 1.0 |

SECTION SUMMARY

Between January 1, 2008 and December 31, 2008, information was transmitted on all officer-initiated traffic stops through the CDR X-press system or by the paper CDR form. The information collected included stop, driver, vehicle, and officer characteristics. Regardless of the method of transfer from PSP to the research team, all information was collated into one data set for analysis.

In 2008, 278,323 traffic stops were initiated by PSP personnel and over 99% of that information was recorded using the CDR X-press system. The overall error rate across the department for traffic stops with incorrect, missing, or contradictory information was 0.6%, which is considerably lower than the recommended rate of 5%. This low rate is likely due to the widespread implementation of the CDR X-press and the conscientious efforts of PSP supervisors.

In 2008, the majority of months accounted for between 20,000 and 30,000 traffic stops. Over the twelve months, the rate of traffic stops reported using the CDR X-press system incrementally increased and culminated in 100% of the data received using this method by December. The error rate was consistently less than 1%, with most months experiencing around a 0.5% error rate. At the area level, the rate of CDR X-press usage varied slightly, but all areas exceeded 99% usage. In addition, no area reported more than a 1.0% error rate. Slightly greater variation in these rates is evident at the troop and station levels. With few exceptions, organizational units using the CDR X-press form exclusively showed an error rate of approximately 1% or less in 2008.

3. DESCRIPTION OF TRAFFIC STOP DATA

OVERVIEW

All trooper-initiated traffic stops reported with valid outcomes conducted between January 1, 2008 and December 31, 2008 are examined in this section (n=278,323). All descriptive statistics are reported at multiple organizational levels. First, the characteristics of traffic stops are reported, including the total number of stops, percentage of stops by weekday, daytime hours, work shift, roadway type, Pennsylvania registration, number of passengers, and duration of the stop. Table 3.1 reports these characteristics at the department, area, and troop level, while Table 3.2 summarizes this information at the station level. Table 3.3 reports the percent of traffic stops by month for all organizational units. Tables 3.4 & 3.5 report the reasons for traffic stops at the area, troop, and station level. Second, the characteristics of drivers involved in trooper-initiated traffic stops are reported, including drivers' age, gender, race/ethnicity, and residency. Tables 3.6 & 3.7 report this information at the department, area, troop, and station levels. Finally, the percentage of stops resulting in warning, citations, arrests, and searches are reported across all organizational units in Tables 3.8 – 3.10.

TRAFFIC STOP CHARACTERISTICS

A variety of traffic stop characteristics are summarized in Tables 3.1 and 3.2 below, 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 percent of traffic stops by their duration. Table 3.3 reports the monthly percentages of traffic stops at different organizational levels. Tables 3.4 and 3.5 report the reasons for traffic stops both “prior to” and “subsequent to” the stop are reported. These reasons include: 1) speeding, 2) other moving violations, 3) equipment violations, 4) pre-existing information, 5) registration violations, 6) license violations, 7) special traffic enforcement programs, and 8) “other” reasons not previously indicated. The average speed over the limit observed for traffic stops initiated for a speeding violation is also reported across all organizational levels.

Traffic Stop Descriptives

In 2008, PSP personnel collected valid information during 278,323 member-initiated traffic stops throughout the entire state. At the department level, the majority of traffic stops were initiated on a weekday (69.5%) and during the daytime (75.0%). The day shift (7:00 am – 3:00 pm) accounted for the highest percent of traffic stops (50.3%). Over half of the traffic stops occurred on a state highway (51.8%), while nearly 45% occurred on interstates (44.6%). More than three-fourths of the vehicles stopped (79.4%) were registered in Pennsylvania and, on average, contained 0.7 passengers (the majority of vehicles stopped were single occupants). Nearly ninety percent (89.4%) of the traffic stops were completed within 15 minutes. Table 3.1 reports these characteristics at the area and troop level, while Table 3.2 summarizes this information at the station level.

Table 3.1: 2008 Traffic Stop Descriptives by Department, Area & Troop

| | 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+ |
| PSP Dept. | 278,323 | 69.5 | 75.0 | 50.3 | 42.2 | 7.6 | 44.6 | 51.8 | 0.0 | 3.7 | 79.4 | 0.7 | 89.4 | 9.3 | 0.9 | 0.4 |
| AREA I | 52,931 | 71.4 | 72.0 | 48.9 | 39.4 | 11.8 | 35.8 | 58.6 | 0.1 | 5.5 | 89.7 | 0.5 | 83.5 | 14.4 | 1.6 | 0.4 |
| Troop J | 11,906 | 74.2 | 69.2 | 48.2 | 38.1 | 13.6 | 0.1 | 92.3 | 0.1 | 7.5 | 92.7 | 0.5 | 82.5 | 15.5 | 1.5 | 0.5 |
| Troop K | 17,216 | 68.9 | 75.6 | 50.6 | 37.1 | 12.2 | 56.2 | 38.8 | 0.0 | 5.0 | 92.7 | 0.5 | 85.9 | 11.9 | 1.8 | 0.5 |
| Troop L | 8,706 | 70.7 | 76.4 | 50.3 | 42.4 | 7.3 | 38.0 | 56.7 | 0.1 | 5.1 | 84.5 | 0.6 | 84.8 | 13.9 | 0.9 | 0.4 |
| Troop M | 15,103 | 72.5 | 67.5 | 46.5 | 41.1 | 12.4 | 39.2 | 55.9 | 0.0 | 4.9 | 86.9 | 0.6 | 81.0 | 16.8 | 1.8 | 0.4 |
| AREA II | 45,639 | 68.1 | 76.2 | 51.4 | 42.2 | 6.4 | 37.6 | 59.7 | 0.0 | 2.8 | 74.8 | 0.8 | 86.2 | 12.5 | 0.9 | 0.4 |
| Troop F | 16,442 | 66.5 | 75.9 | 51.5 | 42.6 | 5.9 | 24.5 | 72.3 | 0.0 | 3.1 | 77.2 | 0.8 | 91.8 | 7.1 | 0.7 | 0.3 |
| Troop N | 12,681 | 67.3 | 75.9 | 51.7 | 40.4 | 7.9 | 57.0 | 40.4 | 0.0 | 2.6 | 69.6 | 0.8 | 85.4 | 13.5 | 0.6 | 0.5 |
| Troop P | 7,766 | 70.3 | 74.9 | 48.5 | 45.0 | 6.5 | 8.8 | 89.3 | 0.0 | 1.9 | 90.4 | 0.6 | 90.1 | 9.2 | 0.6 | 0.1 |
| Troop R | 8,750 | 70.2 | 78.6 | 53.5 | 41.4 | 5.1 | 59.6 | 37.4 | 0.0 | 3.0 | 63.9 | 0.7 | 73.7 | 24.3 | 1.7 | 0.4 |
| AREA III | 68,272 | 71.7 | 74.8 | 51.7 | 42.1 | 6.2 | 24.4 | 70.8 | 0.0 | 4.7 | 84.5 | 0.6 | 92.2 | 6.7 | 0.7 | 0.4 |
| Troop A | 19,575 | 71.1 | 77.9 | 53.2 | 41.5 | 5.3 | 0.5 | 94.4 | 0.0 | 5.0 | 94.3 | 0.6 | 93.5 | 5.5 | 0.6 | 0.4 |
| Troop G | 22,811 | 72.8 | 75.5 | 52.5 | 42.8 | 4.7 | 31.2 | 67.2 | 0.0 | 1.6 | 78.1 | 0.7 | 93.9 | 5.1 | 0.6 | 0.4 |
| Troop H | 25,886 | 71.2 | 71.8 | 49.9 | 41.9 | 8.1 | 36.6 | 56.1 | 0.0 | 7.3 | 82.6 | 0.6 | 89.7 | 9.0 | 1.0 | 0.3 |
| AREA IV | 58,829 | 69.7 | 75.0 | 49.6 | 42.8 | 7.5 | 37.2 | 58.8 | 0.1 | 4.0 | 80.6 | 0.7 | 91.2 | 7.3 | 0.9 | 0.7 |
| Troop C | 16,914 | 67.9 | 76.1 | 48.1 | 45.6 | 6.3 | 40.5 | 57.9 | 0.0 | 1.5 | 69.1 | 0.8 | 91.7 | 7.2 | 0.8 | 0.4 |
| Troop D | 16,089 | 70.9 | 74.1 | 50.2 | 41.7 | 8.1 | 19.7 | 74.9 | 0.0 | 5.5 | 89.6 | 0.6 | 91.5 | 6.8 | 1.0 | 0.6 |
| Troop E | 12,401 | 66.9 | 71.8 | 47.0 | 44.5 | 8.5 | 38.6 | 56.5 | 0.0 | 5.0 | 82.3 | 0.7 | 88.3 | 9.4 | 1.0 | 1.4 |
| Troop B | 13,425 | 73.1 | 77.7 | 53.2 | 39.3 | 7.5 | 52.8 | 42.6 | 0.3 | 4.3 | 82.9 | 0.6 | 92.8 | 6.1 | 0.6 | 0.4 |
| Bureau of Patrol | 52,571 | 65.6 | 77.1 | 49.5 | 44.4 | 6.1 | 93.8 | 5.4 | 0.0 | 0.8 | 64.9 | 0.8 | 92.2 | 7.1 | 0.5 | 0.2 |
| Troop T | 52,571 | 65.6 | 77.1 | 49.5 | 44.4 | 6.1 | 93.8 | 5.4 | 0.0 | 0.8 | 64.9 | 0.8 | 92.2 | 7.1 | 0.5 | 0.2 |

Table 3.2: 2008 Traffic Stop Descriptives by Station (p. 1 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 I | | | | | | | | | | | | | | | | |
| Troop J | | | | | | | | | | | | | | | | |
| Avondale | 3,516 | 76.9 | 73.2 | 48.3 | 40.6 | 11.1 | 0.4 | 90.9 | 0.0 | 8.7 | 89.2 | 0.5 | 76.4 | 21.5 | 1.7 | 0.4 |
| Embreeville | 3,149 | 74.1 | 67.4 | 44.9 | 38.8 | 16.3 | 0.1 | 96.2 | 0.0 | 3.7 | 96.3 | 0.5 | 87.6 | 11.0 | 1.1 | 0.3 |
| Ephrata | 1,089 | 68.7 | 67.9 | 51.9 | 41.1 | 7.0 | 0.1 | 85.0 | 0.0 | 14.9 | 97.4 | 0.5 | 90.3 | 8.4 | 0.9 | 0.5 |
| Lancaster | 4,152 | 73.3 | 67.4 | 49.7 | 34.7 | 15.6 | 0.0 | 92.4 | 0.3 | 7.3 | 91.8 | 0.6 | 81.8 | 15.8 | 1.8 | 0.6 |
| Troop K | | | | | | | | | | | | | | | | |
| Media | 3,163 | 69.3 | 66.2 | 47.7 | 36.4 | 15.9 | 35.8 | 59.4 | 0.0 | 4.8 | 87.2 | 0.5 | 81.0 | 16.3 | 2.4 | 0.3 |
| Philadelphia | 12,203 | 68.2 | 78.6 | 51.2 | 38.2 | 10.6 | 69.4 | 27.6 | 0.0 | 2.9 | 93.4 | 0.5 | 87.5 | 10.3 | 1.7 | 0.5 |
| Skippack | 1,850 | 73.0 | 71.8 | 52.0 | 31.4 | 16.6 | 3.7 | 77.1 | 0.0 | 19.2 | 97.5 | 0.5 | 83.4 | 14.9 | 1.4 | 0.4 |
| Troop L | | | | | | | | | | | | | | | | |
| Frackville | 877 | 70.6 | 68.9 | 45.0 | 41.6 | 13.3 | 69.3 | 28.1 | 0.0 | 2.6 | 75.4 | 0.7 | 84.5 | 14.5 | 0.9 | 0.1 |
| Hamburg | 1,662 | 73.9 | 80.9 | 53.3 | 43.6 | 3.1 | 69.7 | 25.8 | 0.5 | 4.0 | 69.5 | 0.7 | 85.6 | 13.4 | 0.8 | 0.2 |
| Jonestown | 3,132 | 65.7 | 73.2 | 48.9 | 41.8 | 9.3 | 46.0 | 46.2 | 0.0 | 7.8 | 81.9 | 0.7 | 79.9 | 17.9 | 1.2 | 1.0 |
| Reading | 1,619 | 78.5 | 79.1 | 51.5 | 43.8 | 4.7 | 3.0 | 92.7 | 0.0 | 4.3 | 99.3 | 0.4 | 87.0 | 12.1 | 0.8 | 0.1 |
| Schuylkill Haven | 1,416 | 69.1 | 79.6 | 51.6 | 41.4 | 7.0 | 4.0 | 92.9 | 0.0 | 3.1 | 96.4 | 0.5 | 91.9 | 7.3 | 0.5 | 0.3 |
| Troop M | | | | | | | | | | | | | | | | |
| Belfast | 2,516 | 76.5 | 74.1 | 50.0 | 45.1 | 4.8 | 32.2 | 60.0 | 0.3 | 7.6 | 82.9 | 0.6 | 85.3 | 13.8 | 0.8 | 0.1 |
| Bethlehem | 1,357 | 73.0 | 67.1 | 46.4 | 40.7 | 13.0 | 0.2 | 93.1 | 0.0 | 6.6 | 96.0 | 0.5 | 79.1 | 17.5 | 2.8 | 0.5 |
| Dublin | 3,435 | 75.8 | 72.7 | 50.5 | 42.1 | 7.4 | 0.3 | 94.3 | 0.0 | 5.4 | 99.3 | 0.5 | 87.7 | 11.0 | 1.1 | 0.1 |
| Fogelsville | 4,620 | 69.3 | 60.7 | 39.7 | 45.3 | 15.0 | 56.2 | 39.3 | 0.0 | 4.5 | 80.3 | 0.7 | 81.7 | 16.2 | 1.6 | 0.5 |
| Trevose | 3,175 | 70.0 | 66.6 | 49.4 | 31.0 | 19.7 | 78.9 | 19.2 | 0.0 | 1.8 | 82.3 | 0.5 | 69.9 | 26.1 | 3.2 | 0.7 |
| AREA II | | | | | | | | | | | | | | | | |
| Troop F | | | | | | | | | | | | | | | | |
| Coudersport | 2,224 | 67.4 | 68.2 | 40.3 | 50.1 | 9.5 | 0.0 | 98.3 | 0.0 | 1.7 | 87.1 | 0.7 | 90.4 | 8.8 | 0.5 | 0.2 |
| Emporium | 742 | 69.3 | 84.8 | 53.2 | 44.1 | 2.7 | 0.0 | 89.6 | 0.0 | 10.4 | 93.0 | 0.7 | 94.9 | 4.4 | 0.5 | 0.1 |
| Lamar | 2,996 | 65.7 | 76.6 | 51.8 | 44.8 | 3.3 | 77.2 | 20.2 | 0.0 | 2.6 | 53.3 | 1.1 | 91.3 | 7.7 | 0.7 | 0.3 |
| Mansfield | 1,071 | 63.5 | 69.8 | 44.0 | 49.6 | 6.4 | 0.0 | 97.9 | 0.0 | 2.1 | 71.4 | 0.7 | 93.5 | 4.2 | 1.0 | 1.3 |
| Milton | 3,257 | 66.9 | 85.7 | 60.5 | 35.8 | 3.7 | 45.2 | 54.1 | 0.0 | 0.7 | 67.5 | 0.8 | 97.1 | 2.5 | 0.3 | 0.1 |
| Montoursville | 1,848 | 67.9 | 73.2 | 52.8 | 40.5 | 6.7 | 12.9 | 76.9 | 0.0 | 10.2 | 89.3 | 0.7 | 82.8 | 15.5 | 1.4 | 0.3 |

Table 3.2: 2008 Traffic Stop Descriptives by Station (p. 2 of 4)

| | Total # of Stops | % Weekday | Time of Stop | | Shift | | | Roadway Type | | | Regist. % PA | Passengers Avg/vehicle | Duration of Stop (minutes) | | | |
|------------------------|---------------------|-----------|--------------|-------|--------|--------|----------|--------------|---------|---------|-----------------|---------------------------|----------------------------|---------|---------|-------|
| | | | % Daytime | % 7-3 | % 3-11 | % 11-7 | % Inter. | % State | % Local | % Other | | | % 1-15 | % 16-30 | % 31-60 | % 61+ |
| AREA II (cont.) | | | | | | | | | | | | | | | | |
| Selinsgrove | 2,700 | 63.3 | 76.0 | 54.7 | 37.9 | 7.4 | 0.2 | 98.0 | 0.0 | 1.9 | 84.1 | 0.7 | 93.5 | 5.0 | 0.9 | 0.6 |
| Stonington | 1,604 | 70.8 | 67.9 | 44.8 | 47.1 | 8.1 | 0.1 | 97.4 | 0.0 | 2.4 | 99.3 | 0.6 | 89.1 | 9.8 | 0.9 | 0.2 |
| Troop N | | | | | | | | | | | | | | | | |
| Bloomsburg | 2,229 | 67.2 | 78.1 | 52.8 | 35.2 | 11.9 | 94.6 | 4.8 | 0.0 | 0.7 | 56.4 | 0.9 | 86.3 | 13.2 | 0.4 | 0.1 |
| Fern Ridge | 3,160 | 63.2 | 77.1 | 53.5 | 41.5 | 5.0 | 66.8 | 30.8 | 0.0 | 2.4 | 62.8 | 0.9 | 76.0 | 23.0 | 0.7 | 0.3 |
| Hazleton | 1,390 | 66.5 | 78.8 | 57.0 | 36.5 | 6.5 | 69.4 | 26.3 | 0.0 | 4.3 | 71.1 | 0.8 | 82.0 | 16.0 | 1.4 | 0.6 |
| Lehighton | 1,949 | 69.4 | 79.3 | 49.8 | 43.2 | 7.0 | 0.2 | 95.3 | 0.0 | 4.5 | 98.7 | 0.6 | 86.1 | 13.5 | 0.3 | 0.1 |
| Swiftwater | 3,953 | 69.7 | 70.9 | 48.6 | 42.5 | 8.9 | 51.5 | 46.2 | 0.0 | 2.4 | 67.7 | 0.8 | 93.0 | 5.2 | 0.6 | 1.2 |
| Troop P | | | | | | | | | | | | | | | | |
| Laporte | 1,581 | 70.5 | 79.4 | 51.0 | 45.0 | 3.9 | 0.0 | 99.7 | 0.0 | 0.3 | 86.3 | 0.7 | 94.9 | 4.7 | 0.3 | 0.0 |
| Shickshinny | 1,016 | 71.0 | 79.6 | 56.4 | 33.9 | 9.7 | 1.5 | 96.9 | 0.0 | 1.7 | 97.4 | 0.5 | 83.6 | 15.8 | 0.5 | 0.1 |
| Towanda | 3,111 | 71.5 | 69.0 | 42.6 | 51.8 | 5.6 | 0.1 | 97.9 | 0.0 | 2.0 | 94.6 | 0.6 | 91.5 | 7.8 | 0.6 | 0.0 |
| Tunkhannock | 1,139 | 63.2 | 75.0 | 44.5 | 48.1 | 7.4 | 4.0 | 92.2 | 0.0 | 3.9 | 89.7 | 0.6 | 91.7 | 7.4 | 0.5 | 0.4 |
| Wyoming | 919 | 74.0 | 81.9 | 60.4 | 30.4 | 9.2 | 67.2 | 30.7 | 0.0 | 2.1 | 76.5 | 0.6 | 82.2 | 16.2 | 1.6 | 0.0 |
| Troop R | | | | | | | | | | | | | | | | |
| Blooming Grove | 2,693 | 71.1 | 79.6 | 50.0 | 44.9 | 5.1 | 48.6 | 46.6 | 0.0 | 4.8 | 70.8 | 0.7 | 66.9 | 30.9 | 1.9 | 0.4 |
| Dunmore | 2,523 | 71.3 | 71.0 | 48.8 | 44.5 | 6.7 | 76.7 | 21.0 | 0.0 | 2.3 | 68.5 | 0.7 | 79.2 | 18.8 | 1.6 | 0.4 |
| Gibson | 2,251 | 66.9 | 82.6 | 59.2 | 36.3 | 4.5 | 75.4 | 22.6 | 0.0 | 2.0 | 41.0 | 0.9 | 72.4 | 25.4 | 1.9 | 0.3 |
| Honesdale | 1,283 | 71.8 | 84.3 | 60.1 | 36.8 | 3.0 | 21.3 | 76.2 | 0.0 | 2.5 | 80.6 | 0.6 | 79.2 | 19.1 | 1.4 | 0.3 |
| AREA III | | | | | | | | | | | | | | | | |
| Troop A | | | | | | | | | | | | | | | | |
| Ebensburg | 4,909 | 68.2 | 76.8 | 52.3 | 42.5 | 5.2 | 0.1 | 99.0 | 0.1 | 0.8 | 91.4 | 0.6 | 95.4 | 3.5 | 0.3 | 0.8 |
| Greensburg | 4,185 | 73.5 | 72.3 | 52.0 | 41.5 | 6.5 | 1.3 | 90.3 | 0.0 | 8.4 | 97.9 | 0.5 | 93.7 | 4.9 | 0.9 | 0.6 |
| Indiana | 4,385 | 76.0 | 79.2 | 52.0 | 42.8 | 5.2 | 0.1 | 93.7 | 0.1 | 6.1 | 93.2 | 0.6 | 90.9 | 8.4 | 0.7 | 0.0 |
| Kiski Valley | 3,635 | 67.2 | 82.4 | 57.6 | 38.6 | 3.8 | 0.1 | 94.3 | 0.0 | 5.6 | 96.4 | 0.6 | 93.0 | 6.0 | 0.6 | 0.4 |
| Somerset (A) | 2,462 | 69.9 | 80.4 | 52.6 | 41.6 | 5.8 | 1.0 | 94.1 | 0.0 | 4.9 | 92.8 | 0.6 | 94.5 | 4.8 | 0.4 | 0.3 |

Table 3.2: 2008 Traffic Stop Descriptives by Station (p. 3 of 4)

| | Total # of Stops | % Weekday | Time of Stop | | Shift | | | Roadway Type | | | Regist. % PA | Passengers Avg/vehicle | Duration of Stop (minutes) | | | |
|-------------------------|---------------------|--------------|--------------|-------|--------|--------|----------|--------------|---------|---------|-----------------|---------------------------|----------------------------|---------|---------|-------|
| | | | % Daytime | % 7-3 | % 3-11 | % 11-7 | % Inter. | % State | % Local | % Other | | | % 1-15 | % 16-30 | % 31-60 | % 61+ |
| AREA III (cont.) | | | | | | | | | | | | | | | | |
| Troop G | | | | | | | | | | | | | | | | |
| Bedford | 2,711 | 67.9 | 76.3 | 55.2 | 41.2 | 3.6 | 30.9 | 67.2 | 0.0 | 1.9 | 79.2 | 0.7 | 95.6 | 3.8 | 0.3 | 0.3 |
| Hollidaysburg | 2,045 | 78.5 | 80.0 | 50.9 | 45.8 | 3.4 | 73.5 | 24.6 | 0.0 | 1.9 | 71.9 | 0.7 | 75.4 | 21.5 | 1.5 | 1.6 |
| Huntingdon | 2,123 | 69.5 | 66.8 | 46.9 | 47.3 | 5.8 | 5.5 | 93.1 | 0.0 | 1.4 | 92.6 | 0.7 | 94.5 | 4.3 | 0.5 | 0.7 |
| Lewistown | 5,575 | 73.9 | 73.3 | 51.0 | 42.0 | 6.9 | 1.9 | 97.5 | 0.0 | 0.6 | 90.9 | 0.7 | 95.9 | 3.2 | 0.6 | 0.3 |
| McConnellsburg | 3,234 | 78.0 | 82.3 | 61.3 | 33.6 | 5.1 | 68.8 | 28.3 | 0.0 | 2.9 | 49.2 | 0.9 | 97.3 | 2.3 | 0.3 | 0.1 |
| Philipsburg | 2,395 | 70.6 | 70.1 | 48.1 | 44.4 | 7.5 | 41.2 | 55.8 | 0.0 | 3.0 | 87.4 | 0.7 | 95.4 | 3.8 | 0.2 | 0.7 |
| Rockview | 4,728 | 70.6 | 77.4 | 52.3 | 46.6 | 1.2 | 28.4 | 70.6 | 0.0 | 0.9 | 73.5 | 0.8 | 95.4 | 3.8 | 0.6 | 0.2 |
| Troop H | | | | | | | | | | | | | | | | |
| Carlisle | 7,739 | 69.0 | 70.8 | 50.1 | 40.4 | 9.5 | 53.8 | 37.5 | 0.0 | 8.7 | 78.8 | 0.7 | 90.1 | 8.1 | 1.3 | 0.5 |
| Chambersburg | 3,874 | 74.3 | 66.5 | 42.3 | 50.7 | 7.0 | 25.1 | 55.9 | 0.0 | 19.0 | 88.4 | 0.7 | 89.6 | 9.1 | 1.1 | 0.2 |
| Gettysburg | 2,439 | 72.8 | 78.0 | 57.6 | 35.3 | 7.1 | 0.2 | 94.5 | 0.0 | 5.3 | 74.1 | 0.6 | 91.1 | 7.3 | 1.1 | 0.5 |
| Harrisburg | 3,030 | 73.0 | 75.4 | 54.8 | 35.2 | 9.9 | 52.9 | 43.8 | 0.2 | 3.1 | 81.1 | 0.6 | 85.0 | 13.0 | 1.7 | 0.3 |
| Lykens | 2,174 | 67.1 | 68.4 | 43.6 | 44.6 | 11.8 | 0.1 | 96.0 | 0.0 | 3.9 | 99.4 | 0.5 | 96.2 | 3.4 | 0.3 | 0.1 |
| Newport | 2,722 | 71.5 | 74.3 | 52.0 | 40.7 | 7.2 | 0.1 | 98.6 | 0.2 | 1.1 | 85.1 | 0.7 | 83.7 | 15.8 | 0.5 | 0.0 |
| York | 3,908 | 72.3 | 72.7 | 50.8 | 44.8 | 4.4 | 69.7 | 26.7 | 0.0 | 3.6 | 79.9 | 0.6 | 92.4 | 6.8 | 0.7 | 0.1 |
| AREA IV | | | | | | | | | | | | | | | | |
| Troop C | | | | | | | | | | | | | | | | |
| Clarion | 2,245 | 70.6 | 65.3 | 43.6 | 38.2 | 18.1 | 73.0 | 25.8 | 0.0 | 1.2 | 53.3 | 1.0 | 81.9 | 17.0 | 0.8 | 0.3 |
| Clearfield | 3,610 | 66.5 | 79.1 | 50.2 | 46.4 | 3.4 | 77.4 | 22.2 | 0.0 | 0.5 | 49.8 | 1.0 | 96.7 | 3.0 | 0.1 | 0.1 |
| Dubois | 2,697 | 63.9 | 78.0 | 46.2 | 49.2 | 4.7 | 76.9 | 22.3 | 0.0 | 0.8 | 51.9 | 0.9 | 93.9 | 4.9 | 0.9 | 0.4 |
| Kane | 1,662 | 64.7 | 72.8 | 50.2 | 45.1 | 4.8 | 1.6 | 92.2 | 0.0 | 6.2 | 79.2 | 0.8 | 92.5 | 6.4 | 0.8 | 0.4 |
| Punxsutawney | 2,541 | 72.7 | 79.6 | 47.2 | 49.2 | 3.6 | 7.6 | 90.3 | 0.0 | 2.1 | 92.6 | 0.6 | 95.0 | 4.4 | 0.3 | 0.3 |
| Ridgway | 2,557 | 70.0 | 78.0 | 52.2 | 41.3 | 6.5 | 0.4 | 98.9 | 0.0 | 0.7 | 85.8 | 0.6 | 90.1 | 8.0 | 1.3 | 0.5 |
| Tionesta | 1,602 | 66.9 | 76.3 | 45.6 | 49.8 | 4.7 | 7.8 | 91.4 | 0.0 | 0.7 | 89.8 | 0.6 | 86.8 | 10.7 | 1.7 | 0.9 |
| Troop D | | | | | | | | | | | | | | | | |
| Beaver | 3,039 | 74.6 | 67.6 | 48.8 | 36.3 | 14.9 | 0.4 | 97.6 | 0.0 | 2.0 | 87.9 | 0.5 | 90.0 | 9.0 | 0.6 | 0.4 |
| Butler | 4,943 | 68.3 | 71.9 | 46.3 | 48.2 | 5.5 | 22.8 | 67.3 | 0.0 | 9.9 | 95.9 | 0.6 | 93.3 | 4.9 | 1.4 | 0.5 |
| Kittanning | 2,835 | 66.8 | 72.8 | 51.0 | 42.5 | 6.5 | 1.9 | 95.9 | 0.0 | 2.2 | 97.8 | 0.5 | 92.6 | 5.3 | 0.9 | 1.2 |
| Mercer | 2,716 | 71.3 | 80.1 | 57.9 | 36.5 | 5.6 | 65.8 | 30.6 | 0.0 | 3.6 | 69.1 | 0.8 | 93.3 | 6.1 | 0.4 | 0.2 |

Table 3.2: 2008 Traffic Stop Descriptives by Station (p. 4 of 4)

| | Total # of Stops | % Weekda y | 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 IV (cont.) | | | | | | | | | | | | | | | | |
| New Castle | 2,556 | 75.5 | 81.0 | 50.4 | 40.2 | 9.4 | 7.0 | 86.2 | 0.0 | 6.7 | 92.0 | 0.5 | 86.9 | 10.3 | 1.8 | 1.0 |
| Troop E | | | | | | | | | | | | | | | | |
| Corry | 1,387 | 67.0 | 73.6 | 44.6 | 48.7 | 6.6 | 0.7 | 94.4 | 0.0 | 4.8 | 96.6 | 0.7 | 92.0 | 6.6 | 0.8 | 0.6 |
| Erie | 3,341 | 72.8 | 72.2 | 48.8 | 39.5 | 11.7 | 42.7 | 50.0 | 0.0 | 7.3 | 74.5 | 0.7 | 82.3 | 14.0 | 1.1 | 2.5 |
| Franklin | 1,644 | 69.5 | 71.8 | 50.9 | 42.1 | 7.0 | 22.9 | 68.1 | 0.0 | 9.0 | 84.7 | 0.7 | 88.9 | 9.3 | 1.3 | 0.4 |
| Girard | 2,318 | 61.9 | 68.7 | 46.5 | 43.9 | 9.5 | 51.1 | 45.1 | 0.0 | 3.8 | 82.9 | 0.7 | 86.4 | 10.7 | 1.3 | 1.6 |
| Meadville | 2,676 | 61.3 | 76.2 | 48.2 | 46.6 | 5.2 | 66.5 | 32.4 | 0.0 | 1.2 | 78.5 | 0.9 | 94.5 | 4.3 | 0.7 | 0.6 |
| Warren | 1,035 | 68.8 | 63.9 | 36.4 | 54.1 | 9.5 | 0.5 | 95.7 | 0.0 | 3.9 | 93.2 | 0.6 | 89.7 | 8.4 | 0.4 | 1.5 |
| Troop B | | | | | | | | | | | | | | | | |
| Belle Vernon | 1,199 | 72.0 | 81.6 | 63.9 | 30.3 | 5.8 | 52.8 | 42.2 | 0.0 | 5.0 | 86.0 | 0.6 | 92.2 | 7.0 | 0.5 | 0.3 |
| Pittsburgh | 4,098 | 70.5 | 80.1 | 59.9 | 30.8 | 9.2 | 73.3 | 25.4 | 0.0 | 1.3 | 86.1 | 0.6 | 95.4 | 4.0 | 0.4 | 0.2 |
| Uniontown | 3,640 | 73.9 | 74.5 | 46.1 | 46.4 | 7.4 | 0.5 | 90.9 | 0.0 | 8.7 | 96.0 | 0.6 | 91.0 | 7.6 | 0.5 | 0.9 |
| Washington | 3,697 | 74.4 | 77.6 | 50.9 | 42.9 | 6.2 | 81.7 | 13.8 | 1.0 | 3.5 | 68.5 | 0.6 | 95.1 | 4.3 | 0.5 | 0.2 |
| Waynesburg | 792 | 78.4 | 74.6 | 45.5 | 46.6 | 8.0 | 52.5 | 44.7 | 0.0 | 2.8 | 67.7 | 0.6 | 78.7 | 16.8 | 3.9 | 0.6 |
| Bureau of Patrol | | | | | | | | | | | | | | | | |
| Troop T | | | | | | | | | | | | | | | | |
| Bowmansville | 6,677 | 64.5 | 80.0 | 52.1 | 45.0 | 2.9 | 91.3 | 8.6 | 0.0 | 0.1 | 77.7 | 0.8 | 87.1 | 12.0 | 0.5 | 0.4 |
| Everett | 12,606 | 64.8 | 75.2 | 47.9 | 44.2 | 7.9 | 99.7 | 0.1 | 0.0 | 0.2 | 52.5 | 1.0 | 95.5 | 3.8 | 0.6 | 0.2 |
| Gibsonia | 5,406 | 59.8 | 82.1 | 54.4 | 43.0 | 2.6 | 91.9 | 8.0 | 0.0 | 0.1 | 57.8 | 0.8 | 88.5 | 11.0 | 0.4 | 0.1 |
| Highspire | 21 | 76.2 | 90.5 | 71.4 | 28.6 | 0.0 | 42.9 | 57.1 | 0.0 | 0.0 | 81.0 | 0.9 | 90.5 | 9.5 | 0.0 | 0.0 |
| King of Prussia | 6,623 | 68.8 | 70.1 | 46.8 | 46.4 | 6.7 | 88.9 | 6.8 | 0.0 | 4.3 | 78.7 | 0.6 | 89.1 | 9.8 | 0.8 | 0.3 |
| New Stanton | 4,998 | 67.5 | 79.1 | 53.1 | 39.0 | 8.0 | 73.9 | 25.9 | 0.0 | 0.2 | 81.1 | 0.7 | 93.5 | 6.0 | 0.4 | 0.1 |
| Newville | 8,152 | 67.2 | 77.9 | 47.7 | 46.4 | 5.9 | 99.6 | 0.3 | 0.0 | 0.1 | 65.2 | 0.9 | 95.2 | 4.3 | 0.4 | 0.1 |
| Pocono | 3,850 | 68.5 | 79.2 | 47.5 | 51.0 | 1.5 | 97.6 | 1.0 | 0.0 | 1.5 | 75.9 | 0.8 | 92.1 | 7.5 | 0.3 | 0.1 |
| Somerset (T) | 4,238 | 63.7 | 76.2 | 49.0 | 39.1 | 11.9 | 99.6 | 0.3 | 0.0 | 0.1 | 39.2 | 0.9 | 92.7 | 6.7 | 0.5 | 0.0 |

Traffic Stops By Month

Table 3.3 provides a monthly report of traffic stops for 2008 across all organizational units. March and May accounted for the largest percentage of traffic stops with 11.1% and 9.7% of all traffic stops, respectively. In contrast, February (7.0%) and December (5.1%) contributed the smallest percentages of traffic stops in 2008. The monthly percentages are also reported at the area, troop, and station levels below.

Table 3.3: 2008 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. | 278,323 | 7.9 | 7.0 | 11.1 | 9.3 | 9.7 | 8.2 | 8.7 | 8.8 | 9.1 | 7.3 | 7.9 | 5.1 |
| AREA I | 52,931 | 10.1 | 8.6 | 11.6 | 9.3 | 9.3 | 8.4 | 7.7 | 7.4 | 9.0 | 5.9 | 7.6 | 5.2 |
| Troop J | 11,906 | 9.1 | 7.8 | 10.1 | 8.7 | 8.4 | 10.1 | 7.5 | 6.5 | 11.7 | 7.5 | 6.2 | 6.5 |
| Avondale | 3,516 | 9.5 | 8.4 | 8.1 | 7.3 | 6.9 | 11.8 | 7.8 | 9.4 | 10.6 | 9.3 | 5.5 | 5.3 |
| Embreeville | 3,149 | 7.8 | 7.8 | 11.8 | 9.3 | 8.7 | 7.6 | 9.7 | 4.3 | 11.7 | 5.8 | 6.7 | 8.7 |
| Ephrata | 1,089 | 9.1 | 5.8 | 11.1 | 8.4 | 16.6 | 10.2 | 4.7 | 8.1 | 7.8 | 7.3 | 5.7 | 5.1 |
| Lancaster | 4,152 | 9.9 | 7.8 | 10.2 | 9.3 | 7.2 | 10.4 | 6.3 | 5.4 | 13.8 | 7.1 | 6.5 | 6.1 |
| Troop K | 17,216 | 13.0 | 10.0 | 10.6 | 9.0 | 10.2 | 7.3 | 7.6 | 7.8 | 7.5 | 4.8 | 7.2 | 5.1 |
| Media | 3,163 | 14.7 | 12.2 | 6.9 | 8.8 | 9.5 | 6.5 | 6.5 | 6.2 | 8.9 | 5.0 | 8.5 | 6.3 |
| Philadelphia | 12,203 | 13.3 | 9.5 | 10.7 | 9.1 | 11.0 | 7.1 | 8.4 | 8.3 | 6.5 | 4.5 | 6.8 | 4.7 |
| Skippack | 1,850 | 7.9 | 9.3 | 16.5 | 9.0 | 5.6 | 9.4 | 3.8 | 7.8 | 11.7 | 5.8 | 7.3 | 5.8 |
| Troop L | 8,706 | 5.2 | 6.0 | 16.2 | 9.4 | 9.3 | 8.3 | 7.3 | 7.4 | 9.2 | 6.4 | 10.4 | 4.9 |
| Frackville | 877 | 5.8 | 3.6 | 14.0 | 9.4 | 12.9 | 10.1 | 11.5 | 5.7 | 7.6 | 2.9 | 10.9 | 5.5 |
| Hamburg | 1,662 | 5.4 | 6.4 | 17.9 | 12.9 | 9.2 | 11.9 | 8.2 | 7.5 | 7.2 | 3.9 | 6.8 | 2.7 |
| Jonestown | 3,132 | 6.7 | 7.3 | 13.9 | 7.4 | 7.5 | 5.5 | 6.6 | 10.4 | 12.2 | 6.5 | 11.5 | 4.5 |
| Reading | 1,619 | 4.0 | 6.7 | 12.6 | 7.1 | 8.4 | 6.9 | 5.7 | 5.9 | 9.0 | 12.1 | 12.8 | 8.8 |
| Schuyl. Haven | 1,416 | 2.5 | 3.6 | 24.5 | 12.1 | 12.2 | 10.7 | 7.1 | 3.6 | 6.1 | 4.8 | 9.3 | 3.5 |
| Troop M | 15,103 | 10.3 | 9.0 | 11.2 | 9.9 | 9.1 | 8.5 | 8.2 | 7.6 | 8.5 | 5.7 | 7.6 | 4.4 |
| Belfast | 2,516 | 12.3 | 9.6 | 9.5 | 8.7 | 9.7 | 7.5 | 5.4 | 8.5 | 10.5 | 6.6 | 8.9 | 2.8 |
| Bethlehem | 1,357 | 9.7 | 10.7 | 13.2 | 13.6 | 8.9 | 8.7 | 7.8 | 6.0 | 6.6 | 5.0 | 7.8 | 2.1 |
| Dublin | 3,435 | 9.8 | 9.9 | 13.2 | 10.0 | 8.6 | 9.0 | 7.7 | 6.2 | 8.6 | 4.2 | 7.3 | 5.6 |
| Fogelsville | 4,620 | 12.3 | 7.6 | 10.9 | 11.5 | 9.5 | 8.0 | 8.6 | 8.4 | 7.6 | 5.6 | 6.3 | 3.8 |
| Trevose | 3,175 | 6.8 | 8.9 | 10.2 | 7.0 | 8.4 | 9.4 | 10.4 | 8.0 | 9.2 | 6.8 | 8.6 | 6.2 |
| AREA II | 45,639 | 6.5 | 6.3 | 12.9 | 9.4 | 11.3 | 7.5 | 8.7 | 8.5 | 8.8 | 6.4 | 9.0 | 4.8 |
| Troop F | 16,442 | 6.3 | 7.2 | 12.1 | 9.2 | 9.2 | 7.0 | 8.8 | 8.0 | 10.1 | 7.7 | 9.0 | 5.4 |
| Coudersport | 2,224 | 8.7 | 8.6 | 9.0 | 9.4 | 9.4 | 6.2 | 7.0 | 4.8 | 9.4 | 12.1 | 9.7 | 5.7 |
| Emporium | 742 | 5.5 | 11.3 | 13.6 | 15.9 | 13.1 | 5.7 | 10.1 | 5.8 | 7.1 | 4.4 | 5.0 | 2.4 |
| Lamar | 2,996 | 2.9 | 6.0 | 17.6 | 9.6 | 8.8 | 7.0 | 11.2 | 6.7 | 10.9 | 5.3 | 7.7 | 6.2 |
| Mansfield | 1,071 | 2.5 | 3.0 | 5.5 | 9.9 | 9.2 | 7.8 | 7.3 | 16.0 | 10.5 | 13.5 | 7.3 | 7.5 |
| Milton | 3,257 | 6.4 | 7.1 | 11.3 | 7.8 | 7.6 | 6.9 | 9.0 | 8.8 | 11.4 | 9.2 | 9.4 | 5.2 |
| Montoursville | 1,848 | 6.4 | 8.8 | 12.3 | 6.4 | 7.8 | 5.7 | 10.6 | 8.3 | 10.9 | 5.8 | 10.7 | 6.2 |
| Selinsgrove | 2,700 | 8.8 | 6.0 | 10.8 | 9.4 | 12.9 | 8.8 | 7.9 | 8.8 | 7.7 | 4.9 | 9.5 | 4.6 |
| Stonington | 1,604 | 8.2 | 8.3 | 13.4 | 10.0 | 6.8 | 6.5 | 6.3 | 7.0 | 11.5 | 7.4 | 10.1 | 4.5 |

Table 3.3: 2008 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. |
|-----------------|-----------------------------|-------------------|-------------------|-------------------|-------------------|------------------|-------------------|-------------------|-------------------|--------------------|-------------------|-------------------|-------------------|
| Troop N | 12,681 | 8.8 | 7.3 | 13.0 | 9.3 | 11.8 | 7.1 | 7.8 | 10.5 | 7.2 | 5.1 | 7.4 | 4.7 |
| Bloomsburg | 2,229 | 10.2 | 7.9 | 12.6 | 6.1 | 11.6 | 7.0 | 6.5 | 12.7 | 7.5 | 6.5 | 8.3 | 3.1 |
| Fern Ridge | 3,160 | 6.9 | 5.9 | 14.2 | 8.6 | 14.0 | 6.9 | 9.9 | 9.8 | 6.5 | 6.0 | 7.4 | 4.0 |
| Hazleton | 1,390 | 13.1 | 10.7 | 12.0 | 10.5 | 9.6 | 7.6 | 7.0 | 7.9 | 7.6 | 2.5 | 5.3 | 6.1 |
| Lehighton | 1,949 | 7.0 | 7.8 | 8.7 | 9.7 | 9.4 | 6.4 | 9.5 | 11.1 | 8.9 | 7.5 | 8.8 | 5.2 |
| Swiftwater | 3,953 | 8.8 | 6.7 | 14.7 | 11.2 | 12.2 | 7.6 | 6.3 | 10.4 | 6.5 | 3.4 | 6.9 | 5.3 |
| Troop P | 7,766 | 4.6 | 4.9 | 13.1 | 7.7 | 12.4 | 6.3 | 9.8 | 9.2 | 9.8 | 7.3 | 10.7 | 4.1 |
| Laporte | 1,581 | 4.9 | 5.3 | 11.6 | 4.4 | 12.2 | 9.7 | 9.7 | 9.0 | 7.3 | 8.4 | 12.9 | 4.4 |
| Shickshinny | 1,016 | 3.1 | 5.5 | 17.0 | 10.9 | 12.5 | 4.8 | 10.8 | 9.3 | 9.8 | 3.1 | 11.0 | 2.1 |
| Towanda | 3,111 | 6.3 | 6.0 | 12.4 | 7.3 | 10.1 | 5.8 | 8.0 | 8.9 | 10.0 | 9.0 | 10.2 | 5.9 |
| Tunkhannock | 1,139 | 2.5 | 2.2 | 12.5 | 6.7 | 20.1 | 3.9 | 12.4 | 8.8 | 12.6 | 6.8 | 9.3 | 2.4 |
| Wyoming | 919 | 2.5 | 3.0 | 14.1 | 12.5 | 11.1 | 6.6 | 11.5 | 11.1 | 9.9 | 5.3 | 10.1 | 2.1 |
| Troop R | 8,750 | 5.2 | 4.7 | 14.1 | 11.2 | 13.6 | 10.1 | 8.9 | 5.8 | 7.6 | 4.8 | 9.7 | 4.2 |
| Bloom. Grove | 2,693 | 7.2 | 5.3 | 12.7 | 10.6 | 12.2 | 9.7 | 5.2 | 6.3 | 8.7 | 5.8 | 9.8 | 6.6 |
| Dunmore | 2,523 | 6.3 | 3.9 | 15.3 | 10.5 | 14.0 | 9.0 | 11.5 | 6.5 | 7.0 | 6.1 | 7.4 | 2.6 |
| Gibson | 2,251 | 3.5 | 3.8 | 13.1 | 10.4 | 16.8 | 12.6 | 12.2 | 4.5 | 5.8 | 2.5 | 10.9 | 3.8 |
| Honesdale | 1,283 | 1.5 | 6.9 | 16.4 | 15.4 | 10.1 | 9.1 | 5.9 | 5.5 | 9.8 | 4.4 | 11.9 | 3.0 |
| AREA III | 68,273 | 8.1 | 7.2 | 11.2 | 8.1 | 8.8 | 8.1 | 9.2 | 8.9 | 9.2 | 7.5 | 8.2 | 5.5 |
| Troop A | 19,576 | 8.7 | 6.4 | 12.6 | 8.8 | 9.5 | 7.2 | 7.9 | 9.0 | 8.7 | 7.8 | 7.7 | 5.7 |
| Ebensburg | 4,909 | 8.1 | 5.1 | 11.2 | 10.1 | 10.6 | 8.1 | 8.2 | 10.9 | 7.8 | 7.7 | 6.7 | 5.5 |
| Greensburg | 4,185 | 10.2 | 7.6 | 15.6 | 9.4 | 6.1 | 5.6 | 6.2 | 7.4 | 10.0 | 8.0 | 8.3 | 5.6 |
| Indiana | 4,385 | 10.8 | 6.8 | 10.6 | 7.3 | 9.3 | 6.8 | 7.5 | 9.2 | 10.5 | 8.2 | 8.2 | 4.7 |
| Kiski Valley | 3,635 | 6.5 | 5.3 | 12.8 | 9.0 | 10.8 | 7.1 | 9.0 | 8.5 | 8.0 | 7.2 | 8.8 | 6.9 |
| Somerset (A) | 2,462 | 7.1 | 8.0 | 13.9 | 7.4 | 11.8 | 9.1 | 9.2 | 8.0 | 6.2 | 7.6 | 6.0 | 5.8 |
| Troop G | 22,811 | 7.1 | 7.4 | 10.0 | 8.4 | 9.3 | 8.6 | 11.2 | 9.4 | 9.7 | 6.5 | 7.2 | 5.2 |
| Bedford | 2,711 | 7.3 | 8.6 | 12.7 | 10.8 | 8.0 | 7.1 | 9.3 | 8.2 | 10.2 | 4.9 | 8.1 | 4.8 |
| Hollidaysburg | 2,045 | 8.1 | 8.6 | 12.2 | 7.4 | 10.5 | 9.2 | 11.4 | 5.5 | 9.7 | 6.1 | 7.1 | 4.1 |
| Huntingdon | 2,123 | 9.0 | 12.8 | 11.3 | 7.7 | 5.8 | 7.4 | 12.2 | 10.9 | 6.3 | 4.6 | 5.8 | 6.1 |
| Lewistown | 5,575 | 6.8 | 8.1 | 7.8 | 7.7 | 10.4 | 10.3 | 11.9 | 10.8 | 8.2 | 4.2 | 7.0 | 6.7 |
| McConnells. | 3,234 | 4.2 | 3.6 | 8.5 | 6.6 | 9.7 | 9.8 | 10.0 | 8.0 | 10.3 | 16.0 | 8.8 | 4.5 |
| Philipsburg | 2,395 | 7.5 | 7.5 | 8.7 | 6.8 | 6.9 | 5.8 | 11.2 | 11.9 | 11.9 | 8.5 | 7.7 | 5.6 |
| Rockview | 4,728 | 7.7 | 5.5 | 11.2 | 10.5 | 10.8 | 8.5 | 11.6 | 9.1 | 11.1 | 3.6 | 6.4 | 4.2 |
| Troop H | 25,886 | 8.5 | 7.6 | 11.3 | 7.4 | 7.7 | 8.4 | 8.4 | 8.4 | 9.1 | 8.2 | 9.5 | 5.5 |
| Carlisle | 7,739 | 8.5 | 8.9 | 9.5 | 6.7 | 6.4 | 7.4 | 8.2 | 7.7 | 9.3 | 9.8 | 13.0 | 4.6 |
| Chambersburg | 3,874 | 12.5 | 7.3 | 11.8 | 7.2 | 9.0 | 8.6 | 7.6 | 6.6 | 8.5 | 8.7 | 7.0 | 5.1 |
| Gettysburg | 2,439 | 7.3 | 6.4 | 13.7 | 9.8 | 9.6 | 11.0 | 7.2 | 9.1 | 6.8 | 6.4 | 6.9 | 5.8 |
| Harrisburg | 3,030 | 5.2 | 4.2 | 8.5 | 7.6 | 6.2 | 6.8 | 7.1 | 8.8 | 11.5 | 11.3 | 15.8 | 6.9 |
| Lykens | 2,174 | 7.5 | 5.9 | 15.0 | 8.1 | 7.7 | 8.2 | 9.1 | 12.2 | 7.3 | 8.1 | 6.4 | 4.4 |
| Newport | 2,722 | 8.5 | 6.8 | 11.1 | 5.1 | 9.7 | 8.0 | 13.9 | 9.6 | 7.5 | 6.5 | 7.3 | 6.2 |
| York | 3,908 | 8.6 | 10.1 | 12.9 | 8.8 | 7.8 | 10.1 | 7.5 | 7.6 | 10.9 | 4.3 | 4.8 | 6.7 |

Table 3.3: 2008 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 | 58,830 | 6.3 | 6.0 | 10.7 | 10.5 | 10.5 | 8.9 | 9.4 | 9.5 | 9.7 | 7.2 | 6.8 | 4.6 |
| Troop C | 16,914 | 4.9 | 5.6 | 8.9 | 9.3 | 11.7 | 7.7 | 9.5 | 9.9 | 10.2 | 9.3 | 8.0 | 4.8 |
| Clarion | 2,245 | 4.0 | 6.9 | 9.2 | 9.8 | 11.0 | 8.6 | 12.2 | 7.3 | 9.0 | 3.9 | 10.7 | 7.4 |
| Clearfield | 3,610 | 5.0 | 5.1 | 8.3 | 8.6 | 11.2 | 8.1 | 9.4 | 10.9 | 11.0 | 14.2 | 5.6 | 2.6 |
| Dubois | 2,697 | 5.1 | 6.0 | 7.6 | 7.3 | 12.5 | 7.5 | 10.0 | 10.2 | 9.2 | 7.5 | 10.0 | 7.0 |
| Kane | 1,662 | 5.2 | 6.1 | 7.2 | 9.5 | 10.8 | 3.9 | 6.3 | 9.9 | 12.1 | 14.8 | 9.0 | 5.2 |
| Punxs. | 2,541 | 3.0 | 4.4 | 10.5 | 9.9 | 14.7 | 7.6 | 11.2 | 11.7 | 8.0 | 7.2 | 8.1 | 3.7 |
| Ridgway | 2,557 | 7.3 | 6.3 | 11.4 | 11.1 | 8.1 | 8.8 | 9.0 | 8.2 | 11.9 | 6.8 | 7.2 | 3.9 |
| Tionesta | 1,602 | 4.4 | 4.8 | 7.7 | 9.8 | 14.4 | 8.1 | 6.9 | 10.8 | 10.2 | 10.9 | 6.9 | 5.2 |
| Troop D | 16,089 | 6.0 | 5.5 | 11.4 | 10.6 | 9.7 | 9.2 | 9.5 | 8.7 | 10.0 | 6.7 | 7.1 | 5.5 |
| Beaver | 3,039 | 4.6 | 3.8 | 9.4 | 11.9 | 10.7 | 10.7 | 9.7 | 9.5 | 9.9 | 7.9 | 7.9 | 4.0 |
| Butler | 4,943 | 6.7 | 5.0 | 12.2 | 10.1 | 8.8 | 9.5 | 8.7 | 8.4 | 8.8 | 6.5 | 8.7 | 6.6 |
| Kittanning | 2,835 | 5.9 | 6.8 | 12.4 | 10.8 | 12.2 | 5.8 | 10.4 | 10.2 | 12.8 | 4.9 | 5.5 | 2.4 |
| Mercer | 2,716 | 4.9 | 7.1 | 10.5 | 9.6 | 9.1 | 10.2 | 8.6 | 7.6 | 9.8 | 7.7 | 5.6 | 9.2 |
| New Castle | 2,556 | 8.0 | 5.4 | 11.9 | 11.0 | 8.3 | 9.5 | 10.6 | 8.0 | 9.6 | 6.5 | 6.4 | 4.9 |
| Troop E | 12,401 | 6.1 | 5.0 | 12.0 | 10.6 | 10.5 | 9.9 | 9.4 | 7.6 | 10.0 | 6.7 | 7.6 | 4.5 |
| Corry | 1,387 | 6.1 | 3.6 | 13.3 | 12.9 | 9.5 | 8.9 | 7.0 | 7.1 | 10.7 | 5.5 | 8.1 | 7.3 |
| Erie | 3,341 | 5.0 | 6.0 | 11.6 | 13.2 | 10.4 | 12.9 | 9.0 | 6.0 | 10.4 | 6.6 | 6.1 | 2.8 |
| Franklin | 1,644 | 6.2 | 4.4 | 8.3 | 11.3 | 11.7 | 12.4 | 9.1 | 6.0 | 10.0 | 6.7 | 9.8 | 4.0 |
| Girard | 2,318 | 5.6 | 4.0 | 12.3 | 6.8 | 13.4 | 6.6 | 13.8 | 8.9 | 8.5 | 6.7 | 8.5 | 4.8 |
| Meadville | 2,676 | 7.4 | 5.6 | 12.8 | 9.8 | 9.5 | 7.6 | 6.7 | 10.3 | 10.7 | 7.1 | 7.5 | 5.0 |
| Warren | 1,035 | 7.4 | 5.6 | 14.4 | 8.9 | 6.0 | 10.9 | 11.6 | 6.0 | 9.7 | 7.9 | 6.4 | 5.2 |
| Troop B | 13,426 | 8.7 | 7.9 | 10.9 | 11.7 | 10.0 | 9.0 | 8.9 | 11.4 | 8.6 | 5.4 | 4.1 | 3.3 |
| Belle Vernon | 1,199 | 13.7 | 8.6 | 8.3 | 11.4 | 6.3 | 6.6 | 7.0 | 10.8 | 11.4 | 5.6 | 4.6 | 5.8 |
| Pittsburgh | 4,098 | 4.8 | 4.5 | 11.4 | 13.5 | 9.1 | 10.4 | 10.8 | 11.9 | 10.2 | 7.1 | 4.0 | 2.2 |
| Uniontown | 3,640 | 8.5 | 9.1 | 10.4 | 10.4 | 10.8 | 10.2 | 8.0 | 11.2 | 6.9 | 5.1 | 5.1 | 4.4 |
| Washington | 3,697 | 12.1 | 9.8 | 12.8 | 10.1 | 9.9 | 7.4 | 7.9 | 12.1 | 7.9 | 4.4 | 3.1 | 2.5 |
| Waynesburg | 792 | 7.1 | 9.3 | 5.8 | 16.0 | 16.5 | 8.0 | 11.5 | 8.1 | 7.4 | 2.5 | 3.5 | 4.2 |
| Bur. of Patrol | 52,571 | 8.5 | 6.9 | 9.3 | 9.2 | 9.1 | 7.9 | 8.1 | 9.5 | 8.9 | 9.3 | 7.9 | 5.4 |
| Troop T | 52,571 | 8.5 | 6.9 | 9.3 | 9.2 | 9.1 | 7.9 | 8.1 | 9.5 | 8.9 | 9.3 | 7.9 | 5.4 |
| Bowmansville | 6,677 | 9.6 | 7.2 | 8.7 | 9.4 | 9.4 | 7.1 | 7.0 | 9.0 | 9.3 | 9.5 | 9.2 | 4.6 |
| Everett | 12,606 | 7.5 | 7.2 | 8.8 | 8.6 | 8.0 | 8.1 | 8.4 | 9.1 | 9.4 | 9.7 | 9.1 | 6.2 |
| Gibsonia | 5,406 | 6.7 | 4.3 | 8.2 | 11.0 | 10.7 | 9.9 | 8.8 | 8.4 | 9.8 | 10.6 | 5.9 | 5.8 |
| Highspire | 21 | 4.8 | 4.8 | 4.8 | 0.0 | 19.0 | 4.8 | 0.0 | 47.6 | 0.0 | 9.5 | 4.8 | 0.0 |
| K. of Prussia | 6,623 | 8.9 | 6.8 | 10.5 | 10.3 | 9.4 | 4.7 | 7.9 | 11.6 | 8.5 | 9.8 | 6.0 | 5.6 |
| New Stanton | 4,998 | 9.4 | 10.2 | 10.7 | 9.7 | 10.1 | 8.7 | 7.3 | 9.1 | 7.5 | 8.2 | 5.6 | 3.5 |
| Newville | 8,152 | 9.7 | 7.2 | 8.5 | 7.0 | 9.2 | 8.4 | 8.6 | 9.4 | 9.0 | 8.4 | 9.3 | 5.2 |
| Pocono | 3,850 | 8.7 | 6.3 | 10.7 | 10.7 | 8.4 | 6.8 | 5.9 | 9.3 | 8.6 | 10.3 | 8.4 | 5.8 |
| Somerset (T) | 4,238 | 7.7 | 5.4 | 10.0 | 9.1 | 8.7 | 10.4 | 10.0 | 10.8 | 7.5 | 7.3 | 7.4 | 5.6 |

Reason for the Stop

Information is also collected regarding the reason(s) both “prior to” and “subsequent to” the initiated traffic stop. As reported in Tables 3.4 & 3.5, reasons for member-initiated traffic stops include: 1) speeding, 2) other moving violations, 3) equipment violations, 4) pre-existing information, 5) registration violations, 6) license violations, 7) special traffic enforcement programs, and 8) “other” reasons not previously indicated. In the case of traffic stops initiated for speeding, the average speed over the limit is also recorded. All information is reported at the department, area, and troop levels in Table 3.4, and at the station level in Table 3.5.

In 2008, traffic stops were initiated most frequently due to speeding. Across the department, 68.6% of all traffic stops were initiated due to a speeding violation, with the average speed reported at 19.2 miles per hour over the posted speed limit. Moving violations accounted for 16.7% of the reasons for the stop, and equipment inspections were noted as a reason prior to the stop in 9.8% of all trooper initiated traffic stops. No other reason accounted for more than 5% of the traffic stops as reported.

As shown in Table 3.4, at the area level, speeding was also the most common reason for the stop, and ranged from a high of 80.1% of all traffic stops in the Bureau of Patrol to a low of 56.4% of all traffic stops in Area I. The average speed over the limit ranged from a low of 17.7 miles per hour in the Bureau of Patrol to a high of 23.0 miles per hour in Area I. Moving violations and equipment inspections were the next two most common reasons for traffic stops in each of the areas, respectively. Area II personnel initiated 20.8% of their traffic stops due to moving violations, while the Bureau of Patrol only initiated 14.5% of their traffic stops based on a moving violation. Area I had the highest percent of equipment inspections at 14.1%, whereas the Bureau of Patrol initiated only 4.4% of their traffic stops based on an equipment inspection. All other reasons for the stop at the area level accounted for less than 5% of the traffic stops with the exception of Area I, which initiated 8.5% of their traffic stops for a reason related to registration. The reasons for the stop are reported at the troop level in Table 3.4 and at the station level in Table 3.5. These organizational units demonstrated greater variation in their reasons for the stop.

Table 3.4: Reason for Stop by Department, Area, & Troop - 2008

| | Total # of Stops | % Speeding | | Amt. over Limit (MPH) | % Moving Violation | | % Equipment/ Inspection | | % Preexisting Info | | % Registration | | % License | | % Spec. Traf. Enf. | % Other | |
|-------------------------|---------------------|---------------|-----|-----------------------------|--------------------------|-----|-------------------------------|-----|--------------------------|-----|-------------------|-----|--------------|-----|--------------------------|------------|-----|
| | | P | S | | P | S | P | S | P | S | P | S | P | S | | | |
| PSP Dept | 278,323 | 68.6 | 0.0 | 19.2 | 16.7 | 0.0 | 9.8 | 2.2 | 0.1 | 0.3 | 4.5 | 2.2 | 0.8 | 3.4 | 0.7 | 1.1 | 2.6 |
| AREA I | 52,931 | 56.4 | 0.0 | 23.0 | 19.2 | 0.0 | 14.1 | 2.6 | 0.1 | 0.3 | 8.5 | 2.4 | 1.2 | 5.5 | 0.9 | 1.6 | 3.5 |
| Troop J | 11,906 | 60.7 | 0.0 | 22.2 | 14.3 | 0.1 | 13.0 | 2.7 | 0.1 | 0.4 | 8.7 | 2.2 | 2.2 | 6.9 | 0.3 | 1.2 | 3.4 |
| Troop K | 17,216 | 47.5 | 0.0 | 25.1 | 23.9 | 0.0 | 15.2 | 2.3 | 0.2 | 0.2 | 11.1 | 2.1 | 1.0 | 5.3 | 0.3 | 2.5 | 3.9 |
| Troop L | 8,706 | 70.0 | 0.0 | 19.5 | 17.7 | 0.0 | 7.6 | 2.5 | 0.2 | 1.0 | 3.6 | 2.3 | 0.7 | 3.8 | 3.7 | 1.3 | 3.3 |
| Troop M | 15,103 | 55.2 | 0.0 | 24.1 | 18.8 | 0.0 | 17.4 | 2.9 | 0.1 | 0.1 | 8.2 | 3.0 | 1.0 | 5.8 | 0.4 | 1.1 | 3.4 |
| AREA II | 45,639 | 62.2 | 0.0 | 18.9 | 20.8 | 0.0 | 12.9 | 2.1 | 0.1 | 0.2 | 3.4 | 1.9 | 0.8 | 2.9 | 0.4 | 1.0 | 2.3 |
| Troop F | 16,442 | 72.1 | 0.0 | 18.0 | 13.1 | 0.0 | 10.4 | 2.1 | 0.1 | 0.1 | 3.1 | 1.9 | 0.6 | 2.9 | 0.2 | 1.2 | 2.3 |
| Troop N | 12,681 | 58.2 | 0.0 | 19.9 | 25.8 | 0.0 | 13.0 | 1.9 | 0.0 | 0.4 | 3.7 | 1.7 | 0.6 | 2.9 | 0.2 | 0.5 | 2.0 |
| Troop P | 7,766 | 55.5 | 0.0 | 18.7 | 24.0 | 0.0 | 14.6 | 2.5 | 0.1 | 0.3 | 4.0 | 2.5 | 1.1 | 3.5 | 0.9 | 1.5 | 4.1 |
| Troop R | 8,750 | 55.3 | 0.1 | 19.4 | 25.2 | 0.0 | 16.3 | 2.2 | 0.1 | 0.1 | 3.1 | 1.7 | 0.8 | 2.6 | 0.3 | 1.2 | 1.4 |
| AREA III | 68,273 | 72.2 | 0.0 | 19.2 | 14.6 | 0.0 | 8.3 | 2.5 | 0.1 | 0.4 | 4.6 | 2.1 | 0.8 | 2.9 | 0.4 | 1.0 | 2.8 |
| Troop A | 19,576 | 63.0 | 0.0 | 19.8 | 18.2 | 0.0 | 11.2 | 3.9 | 0.2 | 1.0 | 6.8 | 2.9 | 1.0 | 3.7 | 0.5 | 0.7 | 2.7 |
| Troop G | 22,811 | 78.8 | 0.0 | 18.7 | 12.8 | 0.0 | 6.6 | 2.6 | 0.1 | 0.3 | 2.5 | 2.6 | 0.3 | 2.7 | 0.6 | 0.4 | 2.6 |
| Troop H | 25,886 | 73.3 | 0.0 | 19.4 | 13.4 | 0.0 | 7.7 | 1.4 | 0.1 | 0.0 | 4.7 | 1.2 | 1.0 | 2.5 | 0.2 | 1.8 | 3.0 |
| AREA IV | 58,830 | 70.1 | 0.0 | 18.4 | 15.7 | 0.0 | 10.2 | 2.4 | 0.2 | 0.2 | 4.5 | 2.5 | 0.9 | 3.7 | 1.5 | 0.9 | 3.3 |
| Troop C | 16,914 | 81.1 | 0.0 | 16.8 | 9.6 | 0.0 | 7.4 | 2.3 | 0.1 | 0.3 | 2.3 | 2.4 | 0.7 | 2.3 | 0.7 | 1.0 | 3.4 |
| Troop D | 16,089 | 66.9 | 0.0 | 19.1 | 12.2 | 0.0 | 15.2 | 2.8 | 0.2 | 0.1 | 5.9 | 2.6 | 1.1 | 4.3 | 4.2 | 0.9 | 3.0 |
| Troop E | 12,401 | 72.6 | 0.0 | 17.7 | 13.2 | 0.0 | 9.0 | 2.0 | 0.2 | 0.2 | 4.7 | 2.9 | 0.6 | 4.3 | 0.2 | 0.9 | 4.5 |
| Troop B | 13,426 | 57.6 | 0.0 | 20.8 | 29.7 | 0.0 | 8.9 | 2.3 | 0.2 | 0.2 | 5.5 | 2.1 | 1.3 | 4.5 | 0.4 | 0.7 | 2.3 |
| Bureau of Patrol | 52,571 | 80.1 | 0.0 | 17.7 | 14.5 | 0.0 | 4.4 | 1.4 | 0.0 | 0.2 | 1.3 | 1.9 | 0.3 | 2.0 | 0.0 | 0.9 | 1.1 |
| Troop T | 52,571 | 80.1 | 0.0 | 17.7 | 14.5 | 0.0 | 4.4 | 1.4 | 0.0 | 0.2 | 1.3 | 1.9 | 0.3 | 2.0 | 0.0 | 0.9 | 1.1 |

NOTE: P=prior to stop, S=subsequent to stop

NOTE: Reasons for the stop may exceed 100% as more than one reason for the stop may be indicated for a traffic stop.

Table 3.5: Reason for Stop by Station – 2008 (p. 1 of 4)

| | Total # of Stops | % Speeding | | Amt. over Limit (MPH) | % Moving Violation | | % Equipment/ Inspection | | % Preexisting Info | | % Registration | | % License | | % Spec. Traf. Enf. | % Other | |
|------------------|---------------------|------------|-----|-----------------------------|-----------------------|-----|----------------------------|-----|-----------------------|-----|----------------|-----|-----------|-----|--------------------------|---------|-----|
| | | P | S | | P | S | P | S | P | S | P | S | P | S | | | |
| AREA I | | | | | | | | | | | | | | | | | |
| Troop J | | | | | | | | | | | | | | | | | |
| Avondale | 3,516 | 47.2 | 0.0 | 22.4 | 21.5 | 1.7 | 0.4 | 2.7 | 0.1 | 0.1 | 8.1 | 2.8 | 2.0 | 9.0 | 0.6 | 1.2 | 1.9 |
| Embreeville | 3,149 | 72.6 | 0.0 | 23.8 | 11.0 | 1.1 | 0.3 | 1.4 | 0.1 | 0.2 | 6.3 | 1.9 | 1.8 | 4.9 | 0.4 | 1.6 | 2.7 |
| Ephrata | 1,089 | 79.4 | 0.0 | 20.7 | 8.4 | 0.9 | 0.5 | 3.3 | 0.0 | 0.0 | 4.4 | 2.8 | 0.3 | 5.1 | 0.1 | 0.2 | 1.8 |
| Lancaster | 4,152 | 58.1 | 0.0 | 21.0 | 15.8 | 1.8 | 0.6 | 3.6 | 0.1 | 1.0 | 12.1 | 1.7 | 3.0 | 7.1 | 0.0 | 1.1 | 5.5 |
| Troop K | | | | | | | | | | | | | | | | | |
| Media | 3,163 | 37.2 | 0.0 | 24.1 | 16.3 | 2.4 | 0.3 | 2.8 | 0.5 | 0.3 | 15.6 | 1.9 | 0.6 | 6.0 | 0.3 | 3.5 | 4.0 |
| Philadelphia | 12,203 | 48.5 | 0.0 | 25.8 | 10.3 | 1.7 | 0.5 | 2.0 | 0.1 | 0.1 | 10.5 | 1.7 | 1.2 | 4.8 | 0.1 | 2.3 | 3.3 |
| Skippack | 1,850 | 58.3 | 0.0 | 22.4 | 14.9 | 1.4 | 0.4 | 3.4 | 0.2 | 0.4 | 6.9 | 4.8 | 0.6 | 7.5 | 2.1 | 1.8 | 8.0 |
| Troop L | | | | | | | | | | | | | | | | | |
| Frackville | 877 | 61.7 | 0.0 | 18.8 | 14.5 | 0.9 | 0.1 | 3.0 | 0.6 | 0.1 | 4.9 | 4.1 | 1.4 | 7.1 | 0.3 | 0.2 | 3.9 |
| Hamburg | 1,662 | 80.0 | 0.2 | 19.8 | 13.4 | 0.8 | 0.2 | 4.3 | 0.2 | 4.1 | 4.2 | 1.5 | 0.5 | 3.0 | 11.6 | 1.4 | 2.3 |
| Jonestown | 3,132 | 75.8 | 0.0 | 19.1 | 17.9 | 1.2 | 1.0 | 2.0 | 0.1 | 0.1 | 2.8 | 1.9 | 0.4 | 3.6 | 1.3 | 2.0 | 3.1 |
| Reading | 1,619 | 70.7 | 0.0 | 20.2 | 12.1 | 0.8 | 0.1 | 1.6 | 0.1 | 0.3 | 3.6 | 2.3 | 0.5 | 1.7 | 0.8 | 1.2 | 3.6 |
| Schuylkill Haven | 1,416 | 49.7 | 0.0 | 19.4 | 7.3 | 0.5 | 0.3 | 2.2 | 0.0 | 0.6 | 3.7 | 3.0 | 1.2 | 5.3 | 5.3 | 0.4 | 4.0 |
| Troop M | | | | | | | | | | | | | | | | | |
| Belfast | 2,516 | 59.2 | 0.0 | 20.5 | 13.8 | 0.8 | 0.1 | 2.8 | 0.0 | 0.1 | 6.7 | 3.1 | 0.9 | 5.5 | 0.1 | 0.5 | 1.6 |
| Bethlehem | 1,357 | 51.4 | 0.0 | 20.9 | 17.5 | 2.8 | 0.5 | 3.2 | 0.1 | 0.1 | 8.6 | 2.7 | 0.9 | 9.5 | 0.1 | 1.8 | 5.5 |
| Dublin | 3,435 | 44.4 | 0.0 | 21.9 | 11.0 | 1.1 | 0.1 | 2.8 | 0.2 | 0.0 | 9.0 | 3.6 | 1.9 | 5.8 | 0.3 | 1.3 | 2.9 |
| Fogelsville | 4,620 | 58.0 | 0.0 | 23.9 | 16.2 | 1.6 | 0.5 | 3.1 | 0.1 | 0.2 | 8.4 | 2.6 | 0.6 | 4.1 | 0.8 | 0.9 | 3.7 |
| Treose | 3,175 | 61.4 | 0.0 | 30.0 | 26.1 | 3.2 | 0.7 | 2.7 | 0.2 | 0.2 | 8.2 | 3.1 | 0.5 | 6.6 | 0.4 | 1.5 | 4.2 |
| AREA II | | | | | | | | | | | | | | | | | |
| Troop F | | | | | | | | | | | | | | | | | |
| Coudersport | 2,224 | 64.3 | 0.0 | 16.1 | 8.8 | 0.5 | 0.2 | 1.6 | 0.0 | 0.1 | 3.5 | 2.3 | 0.8 | 3.3 | 0.3 | 0.8 | 1.8 |
| Emporium | 742 | 37.2 | 0.0 | 12.7 | 4.4 | 0.5 | 0.1 | 0.8 | 0.3 | 0.4 | 0.9 | 2.2 | 0.9 | 2.4 | 0.4 | 1.2 | 1.3 |
| Lamar | 2,996 | 83.8 | 0.0 | 17.3 | 7.7 | 0.7 | 0.3 | 0.7 | 0.1 | 0.1 | 1.8 | 0.5 | 0.4 | 0.8 | 0.1 | 1.0 | 0.4 |
| Mansfield | 1,071 | 65.6 | 0.0 | 17.2 | 4.2 | 1.0 | 1.3 | 3.2 | 0.6 | 0.2 | 3.1 | 3.8 | 0.3 | 5.0 | 0.1 | 0.7 | 5.8 |
| Milton | 3,257 | 83.3 | 0.0 | 18.9 | 2.5 | 0.3 | 0.1 | 3.1 | 0.0 | 0.0 | 1.2 | 0.7 | 0.3 | 1.6 | 0.4 | 0.2 | 0.5 |
| Montoursville | 1,848 | 61.6 | 0.0 | 19.0 | 15.5 | 1.4 | 0.3 | 1.6 | 0.1 | 0.0 | 4.5 | 2.0 | 1.0 | 2.9 | 0.4 | 4.4 | 2.1 |

NOTE: P=prior to stop, S=subsequent to stop

NOTE: Reasons for the stop may exceed 100% as more than one reason for the stop may be indicated for a traffic stop.

Table 3.5: Reason for Stop by Station - 2008 (p. 2 of 4)

| | Total # of Stops | % Speeding | | Amt. over Limit (MPH) | % Moving Violation | | % Equipment/ Inspection | | % Preexisting Info | | % Registration | | % License | | % Spec. Traf. Enf. | % Other | |
|------------------------|---------------------|------------|-----|-----------------------------|-----------------------|-----|----------------------------|-----|-----------------------|-----|----------------|-----|-----------|-----|--------------------------|---------|------|
| | | P | S | | P | S | P | S | P | S | P | S | P | S | | | |
| AREA II (cont.) | | | | | | | | | | | | | | | | | |
| Selinsgrove | 2,700 | 77.3 | 0.0 | 19.6 | 5.0 | 0.9 | 0.6 | 1.9 | 0.1 | 0.0 | 4.4 | 1.6 | 0.8 | 1.7 | 0.0 | 1.3 | 4.3 |
| Stonington | 1,604 | 61.7 | 0.0 | 18.2 | 9.8 | 0.9 | 0.2 | 4.4 | 0.2 | 0.1 | 6.2 | 5.0 | 0.9 | 9.4 | 0.0 | 0.5 | 4.7 |
| Troop N | | | | | | | | | | | | | | | | | |
| Bloomsburg | 2,229 | 57.8 | 0.0 | 19.2 | 13.2 | 0.4 | 0.1 | 1.3 | 0.0 | 0.0 | 1.0 | 1.3 | 0.2 | 2.3 | 0.1 | 0.0 | 2.0 |
| Fern Ridge | 3,160 | 53.6 | 0.0 | 18.7 | 23.0 | 0.7 | 0.3 | 1.2 | 0.0 | 0.0 | 2.6 | 1.1 | 0.8 | 1.8 | 0.8 | 1.4 | 2.4 |
| Hazleton | 1,390 | 63.2 | 0.0 | 20.1 | 16.0 | 1.4 | 0.6 | 1.7 | 0.0 | 0.0 | 8.5 | 0.9 | 0.5 | 4.4 | 0.0 | 0.6 | 0.6 |
| Lehighton | 1,949 | 56.3 | 0.0 | 19.6 | 13.5 | 0.3 | 0.1 | 0.7 | 0.1 | 0.0 | 4.5 | 1.7 | 0.4 | 1.9 | 0.1 | 0.1 | 1.6 |
| Swiftwater | 3,953 | 61.2 | 0.0 | 21.1 | 5.2 | 0.6 | 1.2 | 3.4 | 0.1 | 1.4 | 3.9 | 2.7 | 0.9 | 4.2 | 0.1 | 0.3 | 2.4 |
| Troop P | | | | | | | | | | | | | | | | | |
| Laporte | 1,581 | 52.3 | 0.0 | 18.4 | 4.7 | 0.3 | 0.0 | 1.7 | 0.1 | 0.1 | 1.5 | 2.4 | 0.3 | 1.5 | 0.3 | 0.2 | 3.4 |
| Shickshinny | 1,016 | 56.4 | 0.0 | 19.9 | 15.8 | 0.5 | 0.1 | 3.4 | 0.0 | 0.4 | 3.4 | 3.0 | 1.4 | 5.5 | 0.0 | 0.8 | 3.3 |
| Towanda | 3,111 | 56.3 | 0.0 | 17.2 | 7.8 | 0.6 | 0.0 | 2.8 | 0.1 | 0.5 | 5.8 | 2.5 | 0.8 | 4.1 | 1.4 | 1.6 | 3.3 |
| Tunkhannock | 1,139 | 43.9 | 0.0 | 18.0 | 7.4 | 0.5 | 0.4 | 3.5 | 0.0 | 0.0 | 4.5 | 3.9 | 2.6 | 4.9 | 0.0 | 4.3 | 10.1 |
| Wyoming | 919 | 72.0 | 0.0 | 22.7 | 16.2 | 1.6 | 0.0 | 0.7 | 0.0 | 0.0 | 2.2 | 0.4 | 1.3 | 0.7 | 2.4 | 0.5 | 1.2 |
| Troop R | | | | | | | | | | | | | | | | | |
| Blooming Grove | 2,693 | 40.0 | 0.0 | 19.3 | 30.9 | 1.9 | 0.4 | 1.8 | 0.2 | 0.0 | 5.1 | 2.3 | 1.3 | 2.0 | 0.3 | 1.2 | 1.1 |
| Dunmore | 2,523 | 67.6 | 0.3 | 21.2 | 18.8 | 1.6 | 0.4 | 3.3 | 0.1 | 0.1 | 2.7 | 1.6 | 0.5 | 3.7 | 0.4 | 0.4 | 1.7 |
| Gibson | 2,251 | 55.4 | 0.0 | 18.1 | 25.4 | 1.9 | 0.3 | 1.1 | 0.0 | 0.1 | 1.7 | 1.2 | 0.8 | 2.2 | 0.4 | 1.8 | 0.9 |
| Honesdale | 1,283 | 62.9 | 0.0 | 17.7 | 19.1 | 1.4 | 0.3 | 2.5 | 0.1 | 0.1 | 2.1 | 1.9 | 0.6 | 2.7 | 0.0 | 1.5 | 2.0 |
| AREA III | | | | | | | | | | | | | | | | | |
| Troop A | | | | | | | | | | | | | | | | | |
| Ebensburg | 4,909 | 75.6 | 0.0 | 19.2 | 3.5 | 0.3 | 0.8 | 6.3 | 0.1 | 2.5 | 3.9 | 3.8 | 0.4 | 3.8 | 0.0 | 0.3 | 2.3 |
| Greensburg | 4,185 | 49.4 | 0.0 | 21.3 | 4.9 | 0.9 | 0.6 | 3.1 | 0.2 | 0.3 | 11.4 | 2.2 | 1.8 | 4.3 | 0.1 | 1.1 | 1.8 |
| Indiana | 4,385 | 57.7 | 0.0 | 20.2 | 8.4 | 0.7 | 0.0 | 1.4 | 0.2 | 0.1 | 8.1 | 1.3 | 1.3 | 1.9 | 0.3 | 0.8 | 1.3 |
| Kiski Valley | 3,635 | 61.2 | 0.0 | 20.0 | 6.0 | 0.6 | 0.4 | 4.4 | 0.2 | 1.4 | 4.9 | 3.2 | 0.8 | 5.1 | 2.3 | 0.6 | 2.7 |
| Somerset (A) | 2,462 | 73.0 | 0.0 | 18.5 | 4.8 | 0.4 | 0.3 | 4.1 | 0.1 | 0.2 | 5.4 | 4.3 | 0.9 | 3.5 | 0.0 | 1.0 | 7.4 |

NOTE: P=prior to stop, S=subsequent to stop

NOTE: Reasons for the stop may exceed 100% as more than one reason for the stop may be indicated for a traffic stop.

Table 3.5: Reason for Stop by Station - 2008 (p. 3 of 4)

| | Total # of Stops | % Speeding | | Amt. over Limit (MPH) | % Moving Violation | | % Equipment/ Inspection | | % Preexisting Info | | % Registration | | % License | | % Spec. Traf. Enf. | % Other | |
|-------------------------|---------------------|------------|-----|-----------------------------|-----------------------|-----|----------------------------|-----|-----------------------|-----|----------------|-----|-----------|-----|-----------------------|---------|-----|
| | | P | S | | P | S | P | S | P | S | P | S | P | S | | | |
| AREA III (cont.) | | | | | | | | | | | | | | | | | |
| Troop G | | | | | | | | | | | | | | | | | |
| Bedford | 2,711 | 69.9 | 0.0 | 17.9 | 3.8 | 0.3 | 0.3 | 1.7 | 0.1 | 0.4 | 3.5 | 1.6 | 0.3 | 2.3 | 0.1 | 0.5 | 1.0 |
| Hollidaysburg | 2,045 | 67.1 | 0.0 | 17.8 | 21.5 | 1.5 | 1.6 | 2.7 | 0.0 | 0.2 | 2.2 | 2.7 | 0.1 | 2.1 | 0.0 | 0.8 | 1.3 |
| Huntingdon | 2,123 | 72.6 | 0.0 | 16.9 | 4.3 | 0.5 | 0.7 | 1.8 | 0.1 | 0.2 | 5.5 | 3.9 | 1.1 | 3.5 | 0.8 | 0.3 | 3.8 |
| Lewistown | 5,575 | 89.3 | 0.0 | 18.8 | 3.2 | 0.6 | 0.3 | 3.7 | 0.1 | 0.4 | 2.2 | 3.7 | 0.4 | 4.3 | 0.1 | 0.3 | 5.3 |
| McConnellsburg | 3,234 | 71.4 | 0.0 | 21.0 | 2.3 | 0.3 | 0.1 | 0.8 | 0.1 | 0.0 | 1.4 | 0.6 | 0.2 | 0.5 | 1.4 | 0.5 | 0.1 |
| Philipsburg | 2,395 | 87.3 | 0.0 | 17.5 | 3.8 | 0.2 | 0.7 | 3.3 | 0.0 | 1.2 | 1.5 | 3.4 | 0.3 | 3.4 | 2.7 | 0.7 | 4.9 |
| Rockview | 4,728 | 80.1 | 0.0 | 19.3 | 3.8 | 0.6 | 0.2 | 3.0 | 0.0 | 0.1 | 2.4 | 2.1 | 0.0 | 2.0 | 0.0 | 0.3 | 1.0 |
| Troop H | | | | | | | | | | | | | | | | | |
| Carlisle | 7,739 | 79.7 | 0.0 | 18.7 | 8.1 | 1.3 | 0.5 | 1.4 | 0.1 | 0.0 | 4.7 | 1.3 | 0.9 | 3.1 | 0.1 | 2.4 | 4.8 |
| Chambersburg | 3,874 | 58.6 | 0.0 | 18.2 | 9.1 | 1.1 | 0.2 | 1.4 | 0.2 | 0.1 | 7.6 | 1.4 | 1.0 | 3.2 | 0.4 | 2.6 | 1.0 |
| Gettysburg | 2,439 | 74.2 | 0.0 | 19.1 | 7.3 | 1.1 | 0.5 | 1.8 | 0.2 | 0.0 | 2.9 | 0.8 | 0.9 | 2.6 | 0.1 | 0.8 | 1.1 |
| Harrisburg | 3,030 | 70.7 | 0.0 | 22.4 | 13.0 | 1.7 | 0.3 | 1.9 | 0.0 | 0.0 | 4.9 | 1.2 | 1.2 | 2.4 | 0.4 | 2.7 | 3.6 |
| Lykens | 2,174 | 65.5 | 0.0 | 17.6 | 3.4 | 0.3 | 0.1 | 1.1 | 0.1 | 0.0 | 5.7 | 1.7 | 1.2 | 2.3 | 0.3 | 1.4 | 1.3 |
| Newport | 2,722 | 89.1 | 0.0 | 19.6 | 15.8 | 0.5 | 0.0 | 0.8 | 0.1 | 0.0 | 1.2 | 0.7 | 0.7 | 1.4 | 0.0 | 0.4 | 3.1 |
| York | 3,908 | 70.0 | 0.0 | 20.8 | 6.8 | 0.7 | 0.1 | 1.2 | 0.1 | 0.1 | 4.4 | 0.9 | 1.5 | 1.9 | 0.1 | 0.9 | 2.9 |
| AREA IV | | | | | | | | | | | | | | | | | |
| Troop C | | | | | | | | | | | | | | | | | |
| Clarion | 2,245 | 85.8 | 0.0 | 18.9 | 17.0 | 0.8 | 0.3 | 2.7 | 0.1 | 0.1 | 2.4 | 1.7 | 0.6 | 1.5 | 0.4 | 0.6 | 3.6 |
| Clearfield | 3,610 | 89.5 | 0.0 | 16.0 | 3.0 | 0.1 | 0.1 | 2.2 | 0.0 | 0.2 | 1.2 | 1.1 | 0.2 | 0.9 | 0.0 | 0.4 | 2.5 |
| Dubois | 2,697 | 85.9 | 0.0 | 17.6 | 4.9 | 0.9 | 0.4 | 1.9 | 0.0 | 0.0 | 1.3 | 2.1 | 0.3 | 2.2 | 3.1 | 0.3 | 1.7 |
| Kane | 1,662 | 56.4 | 0.0 | 17.0 | 6.4 | 0.8 | 0.4 | 1.4 | 0.3 | 0.1 | 5.3 | 1.6 | 1.4 | 2.0 | 0.1 | 0.5 | 3.2 |
| Punxsutawney | 2,541 | 76.2 | 0.0 | 17.4 | 4.4 | 0.3 | 0.3 | 2.7 | 0.0 | 0.2 | 2.7 | 3.9 | 1.1 | 3.1 | 0.0 | 1.2 | 3.5 |
| Ridgway | 2,557 | 80.8 | 0.0 | 15.6 | 8.0 | 1.3 | 0.5 | 1.6 | 0.1 | 0.3 | 2.7 | 2.1 | 0.9 | 2.9 | 0.2 | 3.1 | 4.7 |
| Tionesta | 1,602 | 81.6 | 0.0 | 15.3 | 10.7 | 1.7 | 0.9 | 4.4 | 0.2 | 1.5 | 2.1 | 5.6 | 0.7 | 4.6 | 1.4 | 0.8 | 6.4 |
| Troop D | | | | | | | | | | | | | | | | | |
| Beaver | 3,039 | 54.2 | 0.0 | 21.2 | 9.0 | 0.6 | 0.4 | 4.5 | 0.2 | 0.0 | 9.1 | 2.6 | 0.5 | 5.5 | 0.2 | 1.7 | 2.2 |
| Butler | 4,943 | 71.7 | 0.0 | 19.0 | 4.9 | 1.4 | 0.5 | 2.2 | 0.1 | 0.1 | 5.4 | 2.0 | 1.7 | 2.9 | 12.7 | 0.5 | 1.2 |
| Kittanning | 2,835 | 70.5 | 0.0 | 20.2 | 5.3 | 0.9 | 1.2 | 2.7 | 0.1 | 0.0 | 4.9 | 2.1 | 0.9 | 5.1 | 1.1 | 0.5 | 3.3 |

NOTE: P=prior to stop, S=subsequent to stop

NOTE: Reasons for the stop may exceed 100% as more than one reason for the stop may be indicated for a traffic stop.

Table 3.5: Reason for Stop by Station - 2008 (p. 4 of 4)

| | Total # of Stops | % Speeding | | Amt. over Limit (MPH) | % Moving Violation | | % Equipment/ Inspection | | % Preexisting Info | | % Registration | | % License | | % Spec. Traf. Enf. | % Other | |
|-------------------------|---------------------|---------------|-----|-----------------------------|--------------------------|-----|-------------------------------|-----|--------------------------|-----|-------------------|-----|--------------|-----|-----------------------|------------|-----|
| | | P | S | | P | S | P | S | P | S | P | S | P | S | | | |
| AREA IV (cont.) | | | | | | | | | | | | | | | | | |
| Mercer | 2,716 | 78.5 | 0.0 | 17.2 | 6.1 | 0.4 | 0.2 | 1.7 | 0.1 | 0.1 | 3.3 | 2.4 | 1.1 | 2.1 | 0.5 | 0.8 | 1.8 |
| New Castle | 2,556 | 56.8 | 0.0 | 18.2 | 10.3 | 1.8 | 1.0 | 3.2 | 0.3 | 0.3 | 7.3 | 4.9 | 1.0 | 6.9 | 0.1 | 1.0 | 8.4 |
| Troop E | | | | | | | | | | | | | | | | | |
| Corry | 1,387 | 76.9 | 0.0 | 16.6 | 6.6 | 0.8 | 0.6 | 2.5 | 0.1 | 0.0 | 2.6 | 2.7 | 0.6 | 3.9 | 0.1 | 0.6 | 5.2 |
| Erie | 3,341 | 74.3 | 0.0 | 18.8 | 14.0 | 1.1 | 2.5 | 2.1 | 0.2 | 0.3 | 5.1 | 4.1 | 0.4 | 4.2 | 0.3 | 1.2 | 7.4 |
| Franklin | 1,644 | 54.0 | 0.0 | 16.1 | 9.3 | 1.3 | 0.4 | 1.8 | 0.2 | 0.1 | 7.8 | 1.9 | 1.6 | 5.2 | 0.2 | 1.0 | 1.5 |
| Girard | 2,318 | 73.5 | 0.0 | 17.7 | 10.7 | 1.3 | 1.6 | 1.8 | 0.2 | 0.5 | 3.5 | 3.5 | 0.5 | 5.7 | 0.3 | 1.1 | 4.8 |
| Meadville | 2,676 | 82.8 | 0.0 | 18.0 | 4.3 | 0.7 | 0.6 | 1.9 | 0.0 | 0.1 | 3.7 | 2.2 | 0.3 | 3.1 | 0.0 | 0.3 | 2.8 |
| Warren | 1,035 | 62.5 | 0.0 | 16.9 | 8.4 | 0.4 | 1.5 | 2.3 | 0.7 | 0.2 | 6.8 | 1.6 | 0.5 | 3.0 | 1.0 | 1.4 | 3.0 |
| Troop B | | | | | | | | | | | | | | | | | |
| Belle Vernon | 1,199 | 57.5 | 0.0 | 22.4 | 7.0 | 0.5 | 0.3 | 2.6 | 0.2 | 0.0 | 11.1 | 1.7 | 1.5 | 4.5 | 0.0 | 0.8 | 0.7 |
| Pittsburgh | 4,098 | 67.0 | 0.0 | 22.1 | 4.0 | 0.4 | 0.2 | 2.3 | 0.5 | 0.6 | 2.8 | 2.0 | 1.0 | 3.7 | 0.8 | 0.8 | 1.6 |
| Uniontown | 3,640 | 48.8 | 0.0 | 19.0 | 7.6 | 0.5 | 0.9 | 2.1 | 0.2 | 0.0 | 8.2 | 1.5 | 2.5 | 5.5 | 0.4 | 1.0 | 3.8 |
| Washington | 3,697 | 53.7 | 0.0 | 20.5 | 4.3 | 0.5 | 0.2 | 2.5 | 0.0 | 0.1 | 4.1 | 3.3 | 0.8 | 4.7 | 0.1 | 0.2 | 2.1 |
| Waynesburg | 792 | 67.3 | 0.0 | 18.4 | 16.8 | 3.9 | 0.6 | 2.1 | 0.0 | 0.1 | 5.8 | 0.9 | 0.0 | 2.7 | 0.4 | 0.3 | 1.4 |
| Bureau of Patrol | | | | | | | | | | | | | | | | | |
| Troop T | | | | | | | | | | | | | | | | | |
| Bowmansville | 6,677 | 70.5 | 0.0 | 18.9 | 12.0 | 0.5 | 0.4 | 1.3 | 0.0 | 0.0 | 1.4 | 0.8 | 0.1 | 1.8 | 0.1 | 0.4 | 0.7 |
| Everett | 12,606 | 94.8 | 0.0 | 16.2 | 3.8 | 0.6 | 0.2 | 1.9 | 0.0 | 0.1 | 0.7 | 1.8 | 0.2 | 2.0 | 0.0 | 0.7 | 1.0 |
| Gibsonia | 5,406 | 79.7 | 0.0 | 15.6 | 11.0 | 0.4 | 0.1 | 1.9 | 0.1 | 0.4 | 1.9 | 3.3 | 0.4 | 1.7 | 0.0 | 0.5 | 1.6 |
| Highspire | 21 | 95.2 | 0.0 | 17.6 | 9.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| King of Prussia | 6,623 | 67.2 | 0.0 | 19.4 | 9.8 | 0.8 | 0.3 | 1.6 | 0.0 | 0.5 | 2.3 | 1.9 | 0.4 | 2.7 | 0.0 | 3.5 | 1.8 |
| New Stanton | 4,998 | 71.7 | 0.0 | 17.8 | 6.0 | 0.4 | 0.1 | 1.3 | 0.0 | 0.1 | 1.3 | 1.4 | 0.4 | 2.3 | 0.0 | 0.2 | 0.5 |
| Newville | 8,152 | 91.0 | 0.0 | 18.3 | 4.3 | 0.4 | 0.1 | 1.0 | 0.0 | 0.0 | 1.6 | 3.1 | 0.5 | 1.9 | 0.0 | 0.2 | 1.1 |
| Pocono | 3,850 | 74.1 | 0.0 | 19.6 | 7.5 | 0.3 | 0.1 | 0.7 | 0.1 | 0.0 | 1.5 | 1.5 | 0.4 | 2.3 | 0.0 | 0.5 | 1.6 |
| Somerset (T) | 4,238 | 66.0 | 0.0 | 18.5 | 6.7 | 0.5 | 0.0 | 0.6 | 0.1 | 0.0 | 0.4 | 0.4 | 0.3 | 1.1 | 0.0 | 0.6 | 0.5 |

NOTE: P=prior to stop, S=subsequent to stop

NOTE Reasons for the stop may exceed 100% as more than one reason for the stop may be indicated for a traffic stop.

DRIVERS' CHARACTERISTICS

Driver characteristics are reported in Tables 3.6 & 3.7 across all organizational units. The characteristics of the drivers are grouped by: 1) drivers' age and gender, 2) drivers' race/ethnicity, and 3) drivers' residency.

Drivers' Age & Gender

Table 3.6 reports the total number of traffic stops initiated by PSP personnel, the average age of the driver, and the percent of traffic stops involving male drivers at the department, area, and troop levels. Based on the 278,323 traffic stops, drivers' average age was 35.1 years old, and 67.6% of all traffic stops involved a male driver. At the area level, the average age of drivers ranged from a high of 35.6 years old in Area IV to a low of 34.2 years old in Area I. The percentage of male drivers varied from a high of 69.1% in the Bureau of Patrol to a low of 66.7% in Area III. Drivers' average age varied more noticeably at the troop level (Table 3.6) and at the station level (Table 3.7).

Drivers' Race/Ethnicity

In all trooper initiated traffic stops, PSP personnel visually determined the racial/ethnic composition of the drivers based solely on their own perceptions. This method avoids asking drivers to self-identify their race/ethnicity. The collection of drivers' race/ethnicity raises reliability and validity concerns for data collection. Police may be reluctant to indicate drivers' race/ethnicity or may report that information incorrectly. Alternatively, PSP personnel may "disengage," or initiate fewer traffic stops overall.

There are strategies, however, to increase the 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 the Troopers' demographic information has been successfully merged with the traffic stop 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. 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 fully described in the *Year 1 Final Report* (see Engel et al., 2004).

Across the department, the racial/ethnic composition of all drivers encountered during member-initiated traffic stops in 2008 is as follows:

- White = 83.4%
- Black = 8.9%
- Any Hispanic = 3.5%
 - White Hispanic = 3.2%

- Black Hispanic = 0.3%
- Native American = 0.0%
- Middle Eastern = 2.0%
- Asian = 1.8%
- Unknown race/ethnicity or missing data 0.4%³

Importantly, some variation in the racial/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. Further analyses are provided in Section 4, where the percentage of traffic stops by race/ethnicity is compared with the percentage across previous years.

At the area level, the rate of traffic stops involving White drivers ranged from a high of 89.8% in Area IV to a low of 72.4% in Area I (see Table 3.6). Traffic stops involving Black drivers reached a high of 15.4% in Area I and a low of 5.5% in Area IV. Finally, Hispanic traffic stops were also highest in Area I (7.7%) and lowest in Area IV (1.4%). Greater variation is reported at the troop and station levels in Tables 3.6 & 3.7, respectively.

Drivers' Residency

Tables 3.6 & 3.7 also report stopped drivers' residency 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 reside. Across the department, 94.4% of drivers stopped did not reside in the municipality where they were stopped, 63.9% did not reside in the county where they were stopped, and 24.1% did not reside in the state of Pennsylvania. The rates of out-of-state and out-of-county residents stopped varied noticeably across organizational units. At the area level, out-of-state traffic stops ranged from a high of 36.7% in the Bureau of Patrol to a low of 14.5% in Area I, while out-of-county traffic stops ranged from a high of 90.6% in the Bureau of Patrol to a low of 49.6% in Area I. These differences are likely partially related to the geographic locations of these organizational units and the traffic patterns that exist within those units. Table 3.6 provides a description of the troop rates, while station rates are reported in Table 3.7.

³ In 2008, only two stations (Mansfield and Somerset (T)) had an unknown/missing rate above 2.0%, which is directly attributed to PSP administrators' continued emphasis on Trooper compliance with the data collection effort. The rate of unknown/missing for Mansfield (7.1%) is considerably higher than all other stations, however, and should be examined more closely.

Table 3.6: 2008 Characteristics of Drivers Stopped by Department, Area & Troop

| | Total # of Stops | Average Age | % Male | % White | % Black | % White Hispanic | % Black Hispanic | % Any Hispanic | % Native American | % Middle Eastern | % Asian | % Missing/Unknown | % stopped out of municipality | % stopped out of county | % stopped out of state |
|-------------------------|------------------|-------------|--------|---------|---------|------------------|------------------|----------------|-------------------|------------------|---------|-------------------|-------------------------------|-------------------------|------------------------|
| PSP Dept. | 278,323 | 35.1 | 67.6 | 83.4 | 8.9 | 3.2 | 0.3 | 3.5 | 0.0 | 2.0 | 1.8 | 0.4 | 94.4 | 63.9 | 24.1 |
| AREA I | 52,931 | 34.2 | 67.7 | 72.4 | 15.4 | 7.0 | 0.7 | 7.7 | 0.0 | 1.7 | 2.4 | 0.5 | 90.2 | 49.6 | 14.5 |
| Troop J | 11,906 | 33.7 | 66.4 | 77.5 | 9.9 | 9.4 | 0.6 | 10.0 | 0.0 | 1.0 | 1.5 | 0.1 | 94.0 | 33.2 | 9.7 |
| Troop K | 17,216 | 34.7 | 68.3 | 60.4 | 27.8 | 4.5 | 0.5 | 5.0 | 0.0 | 1.9 | 3.9 | 1.0 | 81.0 | 53.5 | 13.2 |
| Troop L | 8,706 | 35.0 | 66.4 | 84.2 | 6.4 | 5.2 | 0.9 | 6.2 | 0.0 | 1.8 | 1.2 | 0.3 | 95.4 | 54.8 | 19.1 |
| Troop M | 15,103 | 33.7 | 68.7 | 75.2 | 11.0 | 8.9 | 0.9 | 9.7 | 0.0 | 1.9 | 1.9 | 0.2 | 94.7 | 55.2 | 17.1 |
| AREA II | 45,639 | 35.5 | 67.9 | 85.5 | 6.8 | 3.4 | 0.3 | 3.7 | 0.0 | 1.9 | 1.6 | 0.4 | 93.8 | 65.6 | 28.8 |
| Troop F | 16,442 | 35.7 | 66.3 | 89.2 | 5.0 | 1.7 | 0.2 | 1.9 | 0.0 | 1.6 | 1.4 | 0.8 | 95.0 | 70.0 | 26.0 |
| Troop N | 12,681 | 34.2 | 68.2 | 76.1 | 11.6 | 6.6 | 0.6 | 7.1 | 0.1 | 2.5 | 2.4 | 0.2 | 92.7 | 69.0 | 34.5 |
| Troop P | 7,766 | 37.0 | 67.9 | 95.7 | 1.7 | 1.4 | 0.1 | 1.5 | 0.0 | 0.7 | 0.3 | 0.1 | 94.6 | 51.7 | 13.9 |
| Troop R | 8,750 | 35.7 | 70.3 | 82.8 | 7.7 | 3.8 | 0.3 | 4.1 | 0.0 | 2.7 | 2.2 | 0.4 | 92.1 | 64.8 | 39.0 |
| AREA III | 68,273 | 35.3 | 66.7 | 89.6 | 5.7 | 1.9 | 0.2 | 2.1 | 0.0 | 1.3 | 1.1 | 0.2 | 94.6 | 60.0 | 20.4 |
| Troop A | 19,576 | 35.5 | 67.6 | 94.9 | 3.2 | 0.4 | 0.1 | 0.5 | 0.0 | 0.7 | 0.5 | 0.2 | 93.1 | 49.9 | 7.3 |
| Troop G | 22,811 | 35.6 | 67.3 | 88.5 | 5.8 | 1.9 | 0.2 | 2.1 | 0.1 | 1.8 | 1.6 | 0.2 | 96.6 | 71.8 | 26.7 |
| Troop H | 25,886 | 34.8 | 65.5 | 86.6 | 7.4 | 3.1 | 0.3 | 3.4 | 0.0 | 1.2 | 1.1 | 0.2 | 94.0 | 57.2 | 24.9 |
| AREA IV | 58,830 | 35.6 | 67.2 | 89.8 | 5.5 | 1.3 | 0.2 | 1.4 | 0.0 | 1.9 | 1.1 | 0.2 | 93.7 | 56.3 | 22.1 |
| Troop C | 16,914 | 37.1 | 69.3 | 88.2 | 4.8 | 2.0 | 0.4 | 2.4 | 0.1 | 2.9 | 1.4 | 0.3 | 94.4 | 72.0 | 33.2 |
| Troop D | 16,089 | 34.7 | 65.5 | 90.7 | 5.9 | 1.0 | 0.1 | 1.0 | 0.0 | 1.3 | 0.9 | 0.2 | 94.0 | 53.2 | 14.3 |
| Troop E | 12,401 | 35.4 | 66.7 | 90.8 | 4.2 | 1.3 | 0.1 | 1.4 | 0.0 | 2.1 | 1.1 | 0.3 | 92.1 | 47.8 | 21.1 |
| Troop B | 13,426 | 34.7 | 66.9 | 90.1 | 7.3 | 0.7 | 0.0 | 0.7 | 0.0 | 0.9 | 0.8 | 0.1 | 93.7 | 48.1 | 18.4 |
| Bureau of Patrol | 52,571 | 34.7 | 69.1 | 77.3 | 12.3 | 3.0 | 0.4 | 3.3 | 0.0 | 3.6 | 3.0 | 0.5 | 99.5 | 90.6 | 36.7 |
| Troop T | 52,571 | 34.7 | 69.1 | 77.3 | 12.3 | 3.0 | 0.4 | 3.3 | 0.0 | 3.6 | 3.0 | 0.5 | 99.5 | 90.6 | 36.7 |

NOTE: Any Hispanic totals may appear to differ slightly from the combination of White Hispanic & Black Hispanic due to rounding.

Table 3.7: 2008 Characteristics of Drivers Stopped by Station (p. 1 of 4)

| | Total # of Stops | Ave. Age | % Male | % White | % Black | % White Hispanic | % Black Hispanic | % Any Hispanic | % Native American | % Middle Eastern | % Asian | % Missing/Unknown | % stopped out of municipality | % stopped out of county | % stopped out of state |
|------------------|------------------|----------|--------|---------|---------|------------------|------------------|----------------|-------------------|------------------|---------|-------------------|-------------------------------|-------------------------|------------------------|
| AREA I | | | | | | | | | | | | | | | |
| Troop J | | | | | | | | | | | | | | | |
| Avondale | 3,516 | 34.4 | 64.9 | 71.6 | 10.1 | 15.7 | 0.6 | 16.4 | 0.0 | 0.9 | 1.0 | 0.1 | 94.9 | 32.8 | 94.9 |
| Embreeville | 3,149 | 32.7 | 62.9 | 74.7 | 16.1 | 5.1 | 0.4 | 5.5 | 0.1 | 1.5 | 2.2 | 0.0 | 94.8 | 37.0 | 94.8 |
| Ephrata | 1,089 | 32.7 | 69.8 | 86.0 | 3.5 | 6.4 | 0.6 | 7.1 | 0.1 | 1.2 | 1.8 | 0.3 | 97.5 | 33.9 | 97.5 |
| Lancaster | 4,152 | 34.0 | 69.5 | 82.5 | 6.8 | 8.0 | 0.7 | 8.7 | 0.0 | 0.6 | 1.2 | 0.1 | 91.9 | 30.4 | 91.9 |
| Troop K | | | | | | | | | | | | | | | |
| Media | 3,163 | 34.5 | 65.9 | 68.6 | 24.3 | 3.0 | 0.2 | 3.3 | 0.0 | 1.4 | 2.3 | 0.2 | 94.6 | 50.3 | 94.6 |
| Philadelphia | 12,203 | 34.7 | 69.5 | 55.2 | 31.4 | 4.9 | 0.6 | 5.4 | 0.0 | 2.1 | 4.5 | 1.4 | 75.5 | 57.2 | 75.5 |
| Skippack | 1,850 | 34.9 | 65.0 | 80.2 | 10.3 | 4.5 | 0.5 | 5.1 | 0.0 | 1.4 | 3.0 | 0.1 | 93.8 | 34.1 | 93.8 |
| Troop L | | | | | | | | | | | | | | | |
| Frackville | 877 | 34.4 | 70.9 | 85.1 | 6.0 | 4.9 | 1.3 | 6.2 | 0.0 | 1.7 | 0.8 | 0.2 | 97.3 | 65.9 | 97.3 |
| Hamburg | 1,662 | 35.6 | 66.5 | 78.6 | 9.0 | 5.7 | 1.4 | 7.1 | 0.0 | 3.0 | 2.0 | 0.3 | 97.8 | 75.5 | 97.8 |
| Jonestown | 3,132 | 34.9 | 67.0 | 82.0 | 7.7 | 5.8 | 0.6 | 6.4 | 0.0 | 2.1 | 1.3 | 0.4 | 95.2 | 63.8 | 95.2 |
| Reading | 1,619 | 35.0 | 63.6 | 88.0 | 3.4 | 5.8 | 1.5 | 7.3 | 0.0 | 0.6 | 0.6 | 0.1 | 92.4 | 29.3 | 92.4 |
| Schuylkill Haven | 1,416 | 34.9 | 65.1 | 90.6 | 3.9 | 2.8 | 0.4 | 3.2 | 0.2 | 1.1 | 0.9 | 0.1 | 95.0 | 33.1 | 95.0 |
| Troop M | | | | | | | | | | | | | | | |
| Belfast | 2,516 | 32.9 | 67.8 | 75.1 | 10.2 | 10.0 | 0.8 | 10.8 | 0.0 | 2.1 | 1.5 | 0.3 | 97.2 | 60.6 | 97.2 |
| Bethlehem | 1,357 | 33.0 | 67.6 | 71.4 | 10.5 | 13.2 | 1.5 | 14.7 | 0.0 | 2.3 | 1.0 | 0.1 | 91.7 | 46.4 | 91.7 |
| Dublin | 3,435 | 34.9 | 69.3 | 88.8 | 3.7 | 5.0 | 0.7 | 5.7 | 0.1 | 0.7 | 0.9 | 0.2 | 93.0 | 51.0 | 93.0 |
| Fogelsville | 4,620 | 34.4 | 68.9 | 73.0 | 9.5 | 11.3 | 1.1 | 12.4 | 0.0 | 2.5 | 2.4 | 0.1 | 97.0 | 58.3 | 97.0 |
| Trevoise | 3,175 | 32.5 | 69.1 | 65.4 | 21.7 | 6.6 | 0.6 | 7.2 | 0.0 | 2.3 | 3.2 | 0.2 | 92.6 | 54.7 | 92.6 |
| AREA II | | | | | | | | | | | | | | | |
| Troop F | | | | | | | | | | | | | | | |
| Coudersport | 2,224 | 39.5 | 70.4 | 98.2 | 0.7 | 0.5 | 0.0 | 0.5 | 0.0 | 0.3 | 0.2 | 0.0 | 88.7 | 59.3 | 88.7 |
| Emporium | 742 | 38.1 | 75.1 | 97.8 | 0.9 | 0.5 | 0.0 | 0.5 | 0.0 | 0.4 | 0.1 | 0.1 | 89.5 | 66.6 | 89.5 |
| Lamar | 2,996 | 34.9 | 67.2 | 79.6 | 8.4 | 3.1 | 0.5 | 3.6 | 0.0 | 3.9 | 3.4 | 1.0 | 98.2 | 89.4 | 98.2 |
| Mansfield | 1,071 | 35.3 | 69.0 | 83.9 | 4.4 | 1.4 | 0.1 | 1.5 | 0.1 | 1.3 | 1.7 | 7.1 | 94.8 | 58.6 | 94.8 |
| Milton | 3,257 | 34.5 | 63.4 | 85.0 | 7.6 | 2.6 | 0.4 | 2.9 | 0.1 | 1.9 | 2.1 | 0.5 | 98.6 | 88.3 | 98.6 |
| Montoursville | 1,848 | 34.6 | 64.0 | 90.7 | 6.5 | 0.8 | 0.1 | 0.9 | 0.0 | 0.8 | 0.7 | 0.3 | 92.7 | 47.0 | 92.7 |

NOTE: Any Hispanic totals may appear to differ slightly from the combination of White Hispanic & Black Hispanic due to rounding.

Table 3.7: 2008 Characteristics of Drivers Stopped by Station (p. 2 of 4)

| | Total # of Stops | Ave. Age | % Male | % White | % Black | % Hispanic | % White Hispanic | % Black Hispanic | % Any Hispanic | % Native American | % Middle Eastern | % Asian | % Missing/ Unknown | % stopped out of municipality | % stopped out of county | % stopped out of state |
|------------------------|---------------------|-------------|-----------|------------|------------|---------------|---------------------|---------------------|-------------------|----------------------|---------------------|------------|-----------------------|-------------------------------------|-------------------------------|---------------------------|
| AREA II (cont.) | | | | | | | | | | | | | | | | |
| Selinsgrove | 2,700 | 35.0 | 64.9 | 91.8 | 4.3 | 1.3 | 0.3 | 1.5 | 0.0 | 1.2 | 0.9 | 0.2 | 97.6 | 76.1 | 97.6 | |
| Stonington | 1,604 | 35.6 | 64.0 | 96.9 | 0.9 | 1.5 | 0.1 | 1.6 | 0.0 | 0.4 | 0.1 | 0.0 | 91.8 | 37.1 | 91.8 | |
| Troop N | | | | | | | | | | | | | | | | |
| Bloomsburg | 2,229 | 31.8 | 64.8 | 74.7 | 12.0 | 5.6 | 0.3 | 5.8 | 0.1 | 3.4 | 3.4 | 0.5 | 99.5 | 90.7 | 99.5 | |
| Fern Ridge | 3,160 | 34.9 | 70.4 | 75.7 | 10.6 | 7.4 | 0.5 | 7.9 | 0.2 | 2.8 | 2.6 | 0.1 | 87.2 | 73.1 | 87.2 | |
| Hazleton | 1,390 | 32.2 | 67.9 | 74.3 | 11.1 | 9.1 | 0.8 | 9.9 | 0.1 | 2.3 | 2.2 | 0.2 | 96.7 | 71.5 | 96.7 | |
| Lehighton | 1,949 | 35.4 | 65.7 | 91.1 | 4.1 | 3.0 | 0.4 | 3.4 | 0.0 | 0.8 | 0.5 | 0.1 | 89.1 | 48.1 | 89.1 | |
| Swiftwater | 3,953 | 35.0 | 69.7 | 70.4 | 16.2 | 7.3 | 0.8 | 8.1 | 0.0 | 2.6 | 2.6 | 0.1 | 93.8 | 62.8 | 93.8 | |
| Troop P | | | | | | | | | | | | | | | | |
| Laporte | 1,581 | 41.5 | 72.9 | 98.2 | 0.6 | 0.3 | 0.1 | 0.3 | 0.1 | 0.6 | 0.3 | 0.0 | 97.2 | 84.4 | 97.2 | |
| Shickshinny | 1,016 | 33.5 | 65.1 | 94.6 | 2.4 | 1.9 | 0.3 | 2.2 | 0.0 | 0.4 | 0.4 | 0.1 | 93.8 | 35.4 | 93.8 | |
| Towanda | 3,111 | 37.2 | 65.2 | 97.2 | 1.0 | 0.7 | 0.1 | 0.8 | 0.0 | 0.6 | 0.4 | 0.0 | 92.3 | 32.2 | 92.3 | |
| Tunkhannock | 1,139 | 34.8 | 70.4 | 95.3 | 1.5 | 2.4 | 0.4 | 2.7 | 0.0 | 0.4 | 0.1 | 0.0 | 96.3 | 70.0 | 96.3 | |
| Wyoming | 919 | 35.3 | 68.4 | 88.1 | 5.5 | 3.7 | 0.1 | 3.8 | 0.0 | 1.4 | 0.8 | 0.3 | 96.7 | 56.9 | 96.7 | |
| Troop R | | | | | | | | | | | | | | | | |
| Blooming Grove | 2,693 | 36.4 | 69.0 | 84.6 | 8.2 | 5.0 | 0.3 | 5.3 | 0.0 | 0.9 | 0.8 | 0.2 | 87.0 | 60.8 | 87.0 | |
| Dunmore | 2,523 | 34.4 | 70.1 | 83.3 | 7.2 | 3.7 | 0.4 | 4.1 | 0.1 | 3.1 | 2.0 | 0.4 | 95.9 | 63.6 | 95.9 | |
| Gibson | 2,251 | 35.2 | 74.4 | 74.0 | 10.4 | 3.6 | 0.3 | 4.0 | 0.0 | 5.7 | 5.0 | 0.9 | 96.1 | 79.6 | 96.1 | |
| Honesdale | 1,283 | 37.7 | 66.3 | 93.8 | 2.8 | 1.9 | 0.1 | 2.0 | 0.0 | 0.9 | 0.5 | 0.0 | 88.2 | 49.4 | 88.2 | |
| AREA III | | | | | | | | | | | | | | | | |
| Troop A | | | | | | | | | | | | | | | | |
| Ebensburg | 4,909 | 35.6 | 66.9 | 95.3 | 2.6 | 0.5 | 0.0 | 0.5 | 0.0 | 0.6 | 0.7 | 0.2 | 91.7 | 57.4 | 91.7 | |
| Greensburg | 4,185 | 35.2 | 65.8 | 95.7 | 3.1 | 0.3 | 0.0 | 0.3 | 0.0 | 0.5 | 0.4 | 0.0 | 92.8 | 26.9 | 92.8 | |
| Indiana | 4,385 | 33.8 | 68.7 | 93.5 | 3.9 | 0.8 | 0.1 | 0.9 | 0.0 | 1.1 | 0.5 | 0.0 | 92.8 | 56.0 | 92.8 | |
| Kiski Valley | 3,635 | 35.6 | 68.9 | 93.4 | 4.6 | 0.3 | 0.1 | 0.4 | 0.1 | 0.7 | 0.4 | 0.4 | 97.1 | 63.5 | 97.1 | |
| Somerset (A) | 2,462 | 38.3 | 68.0 | 97.4 | 1.1 | 0.1 | 0.0 | 0.1 | 0.0 | 0.4 | 0.2 | 0.8 | 90.9 | 43.3 | 90.9 | |

NOTE: Any Hispanic totals may appear to differ slightly from the combination of White Hispanic & Black Hispanic due to rounding.

Table 3.7: 2008 Characteristics of Drivers Stopped by Station (p. 3 of 4)

| | Total # of Stops | Ave. Age | % Male | % White | % Black | % White Hispanic | % Black Hispanic | % Any Hispanic | % Native American | % Middle Eastern | % Asian | % Missing/ Unknown | % stopped out of municipality | % stopped out of county | % stopped out of state |
|-------------------------|---------------------|-------------|-----------|------------|------------|---------------------|---------------------|-------------------|----------------------|---------------------|------------|-----------------------|-------------------------------------|-------------------------------|---------------------------|
| AREA III (cont.) | | | | | | | | | | | | | | | |
| Troop G | | | | | | | | | | | | | | | |
| Bedford | 2,711 | 35.7 | 66.0 | 91.7 | 4.3 | 1.2 | 0.0 | 1.2 | 0.1 | 1.5 | 1.0 | 0.2 | 95.2 | 58.9 | 95.2 |
| Hollidaysburg | 2,045 | 32.7 | 67.9 | 85.2 | 6.5 | 3.9 | 0.2 | 4.1 | 0.0 | 1.9 | 2.0 | 0.3 | 95.0 | 67.6 | 95.0 |
| Huntingdon | 2,123 | 36.7 | 68.7 | 94.5 | 3.6 | 0.9 | 0.0 | 0.9 | 0.0 | 0.4 | 0.3 | 0.2 | 96.7 | 56.2 | 96.7 |
| Lewistown | 5,575 | 35.3 | 65.6 | 90.7 | 4.4 | 1.9 | 0.2 | 2.0 | 0.0 | 1.4 | 1.5 | 0.1 | 95.9 | 69.5 | 95.9 |
| McConnellsburg | 3,234 | 38.9 | 69.8 | 79.8 | 12.2 | 1.9 | 0.2 | 2.1 | 0.2 | 3.2 | 2.3 | 0.2 | 97.0 | 87.7 | 97.0 |
| Philipsburg | 2,395 | 34.1 | 67.4 | 93.9 | 3.0 | 1.0 | 0.2 | 1.1 | 0.0 | 1.0 | 0.8 | 0.1 | 97.5 | 75.4 | 97.5 |
| Rockview | 4,728 | 35.1 | 67.4 | 86.0 | 5.9 | 2.5 | 0.3 | 2.7 | 0.0 | 2.5 | 2.5 | 0.3 | 98.4 | 78.0 | 98.4 |
| Troop H | | | | | | | | | | | | | | | |
| Carlisle | 7,739 | 35.3 | 64.4 | 87.4 | 7.4 | 2.5 | 0.2 | 2.7 | 0.0 | 1.2 | 1.2 | 0.1 | 95.7 | 69.4 | 95.7 |
| Chambersburg | 3,874 | 34.3 | 63.8 | 86.6 | 7.1 | 3.7 | 0.2 | 3.9 | 0.1 | 1.0 | 0.7 | 0.7 | 91.0 | 38.2 | 91.0 |
| Gettysburg | 2,439 | 34.8 | 64.0 | 84.8 | 5.2 | 6.4 | 0.2 | 6.7 | 0.0 | 2.1 | 1.1 | 0.1 | 96.9 | 58.4 | 96.9 |
| Harrisburg | 3,030 | 34.5 | 71.6 | 80.8 | 9.8 | 5.2 | 0.7 | 5.9 | 0.0 | 1.8 | 1.4 | 0.3 | 95.9 | 70.7 | 95.9 |
| Lykens | 2,174 | 36.5 | 62.3 | 97.9 | 1.0 | 0.7 | 0.0 | 0.7 | 0.0 | 0.1 | 0.2 | 0.0 | 84.4 | 27.0 | 84.4 |
| Newport | 2,722 | 33.9 | 65.4 | 91.1 | 4.3 | 1.3 | 0.2 | 1.5 | 0.0 | 1.6 | 1.4 | 0.1 | 97.5 | 80.6 | 97.5 |
| York | 3,908 | 34.1 | 67.2 | 81.1 | 13.1 | 2.6 | 0.4 | 3.0 | 0.1 | 1.0 | 1.7 | 0.1 | 93.5 | 41.1 | 93.5 |
| AREA IV | | | | | | | | | | | | | | | |
| Troop C | | | | | | | | | | | | | | | |
| Clarion | 2,245 | 36.4 | 71.7 | 78.3 | 9.2 | 4.1 | 0.5 | 4.6 | 0.1 | 5.3 | 2.3 | 0.3 | 97.9 | 82.3 | 97.9 |
| Clearfield | 3,610 | 36.5 | 67.3 | 80.6 | 8.1 | 3.2 | 0.7 | 3.9 | 0.1 | 5.1 | 2.1 | 0.1 | 97.2 | 80.7 | 97.2 |
| Dubois | 2,697 | 35.7 | 67.1 | 82.8 | 7.3 | 3.1 | 0.7 | 3.7 | 0.1 | 3.4 | 2.1 | 0.6 | 98.1 | 84.9 | 98.1 |
| Kane | 1,662 | 38.4 | 76.0 | 94.3 | 1.3 | 0.7 | 0.1 | 0.7 | 0.2 | 2.2 | 0.8 | 0.4 | 87.3 | 56.4 | 87.3 |
| Punxsutawney | 2,541 | 37.5 | 67.1 | 96.3 | 1.5 | 0.9 | 0.2 | 1.1 | 0.1 | 0.5 | 0.4 | 0.2 | 94.2 | 61.5 | 94.2 |
| Ridgway | 2,557 | 37.7 | 68.5 | 96.2 | 1.0 | 0.5 | 0.0 | 0.5 | 0.0 | 1.1 | 0.7 | 0.4 | 88.9 | 52.5 | 88.9 |
| Tionesta | 1,602 | 39.3 | 72.0 | 95.8 | 2.2 | 0.2 | 0.1 | 0.4 | 0.0 | 1.2 | 0.4 | 0.1 | 93.7 | 80.3 | 93.7 |
| Troop D | | | | | | | | | | | | | | | |
| Beaver | 3,039 | 33.6 | 65.5 | 89.0 | 8.3 | 1.0 | 0.0 | 1.0 | 0.0 | 1.0 | 0.5 | 0.2 | 95.7 | 47.6 | 95.7 |
| Butler | 4,943 | 34.6 | 64.3 | 94.3 | 3.1 | 0.5 | 0.0 | 0.5 | 0.0 | 1.1 | 0.9 | 0.1 | 93.3 | 51.6 | 93.3 |
| Kittanning | 2,835 | 33.9 | 65.6 | 92.5 | 4.5 | 1.1 | 0.1 | 1.1 | 0.0 | 0.9 | 0.7 | 0.2 | 96.3 | 48.4 | 96.3 |
| Mercer | 2,716 | 34.6 | 67.1 | 82.0 | 9.4 | 2.4 | 0.2 | 2.6 | 0.0 | 3.6 | 1.9 | 0.6 | 96.4 | 73.7 | 96.4 |

NOTE: Any Hispanic totals may appear to differ slightly from the combination of White Hispanic & Black Hispanic due to rounding.

Table 3.7: 2008 Characteristics of Drivers Stopped by Station (p. 4 of 4)

| | Total # of Stops | Ave. Age | % Male | % White | % Black | % White Hispanic | % Black Hispanic | % Any Hispanic | % Native American | % Middle Eastern | % Asian | % Missing/ Unknown | % stopped out of municipality | % stopped out of county | % stopped out of state |
|-------------------------|---------------------|-------------|-----------|------------|------------|---------------------|---------------------|-------------------|----------------------|------------------------|------------|-----------------------|-------------------------------------|-------------------------------|---------------------------|
| AREA IV (cont.) | | | | | | | | | | | | | | | |
| New Castle | 2,556 | 37.0 | 66.3 | 92.8 | 6.1 | 0.3 | 0.0 | 0.3 | 0.1 | 0.4 | 0.2 | 0.2 | 88.0 | 46.6 | 88.0 |
| Troop E | | | | | | | | | | | | | | | |
| Corry | 1,387 | 36.6 | 69.1 | 98.4 | 0.9 | 0.3 | 0.0 | 0.3 | 0.0 | 0.3 | 0.1 | 0.0 | 95.4 | 39.4 | 95.4 |
| Erie | 3,341 | 36.0 | 66.8 | 89.5 | 4.8 | 1.3 | 0.2 | 1.6 | 0.1 | 2.2 | 1.4 | 0.4 | 89.6 | 40.9 | 89.6 |
| Franklin | 1,644 | 36.2 | 69.6 | 92.0 | 3.5 | 1.9 | 0.1 | 2.0 | 0.0 | 1.5 | 1.0 | 0.0 | 90.3 | 51.9 | 90.3 |
| Girard | 2,318 | 34.2 | 64.2 | 89.3 | 5.0 | 1.9 | 0.1 | 2.0 | 0.0 | 2.3 | 1.3 | 0.2 | 89.0 | 37.1 | 89.0 |
| Meadville | 2,676 | 34.3 | 64.6 | 86.7 | 6.4 | 1.2 | 0.1 | 1.2 | 0.0 | 4.0 | 1.5 | 0.2 | 97.8 | 72.6 | 97.8 |
| Warren | 1,035 | 36.1 | 69.9 | 97.1 | 0.5 | 0.5 | 0.0 | 0.5 | 0.1 | 0.1 | 0.4 | 1.4 | 91.2 | 33.9 | 91.2 |
| Troop B | | | | | | | | | | | | | | | |
| Belle Vernon | 1,199 | 35.2 | 69.6 | 88.8 | 8.1 | 0.8 | 0.2 | 1.0 | 0.0 | 1.3 | 0.8 | 0.0 | 92.1 | 56.2 | 92.1 |
| Pittsburgh | 4,098 | 34.7 | 68.0 | 87.1 | 9.1 | 0.8 | 0.0 | 0.9 | 0.0 | 1.3 | 1.5 | 0.1 | 96.9 | 51.6 | 96.9 |
| Uniontown | 3,640 | 34.2 | 63.5 | 92.8 | 6.4 | 0.3 | 0.0 | 0.3 | 0.0 | 0.3 | 0.1 | 0.0 | 91.4 | 26.7 | 91.4 |
| Washington | 3,697 | 35.2 | 67.3 | 90.5 | 6.5 | 0.7 | 0.1 | 0.7 | 0.1 | 1.1 | 0.8 | 0.2 | 93.0 | 59.4 | 93.0 |
| Waynesburg | 792 | 34.4 | 70.6 | 92.7 | 4.4 | 1.0 | 0.1 | 1.1 | 0.0 | 0.6 | 0.9 | 0.3 | 94.2 | 62.5 | 94.2 |
| Bureau of Patrol | | | | | | | | | | | | | | | |
| Troop T | | | | | | | | | | | | | | | |
| Bowmansville | 6,677 | 33.3 | 68.1 | 75.2 | 13.6 | 4.3 | 0.4 | 4.6 | 0.0 | 2.7 | 3.7 | 0.1 | 99.6 | 91.9 | 99.6 |
| Everett | 12,606 | 34.7 | 68.0 | 73.4 | 14.7 | 3.1 | 0.2 | 3.3 | 0.1 | 4.3 | 3.9 | 0.4 | 99.9 | 99.2 | 99.9 |
| Gibsonia | 5,406 | 36.6 | 70.2 | 84.1 | 9.0 | 1.3 | 0.3 | 1.6 | 0.1 | 3.3 | 1.9 | 0.1 | 98.9 | 81.4 | 98.9 |
| Highspire | 21 | 32.5 | 57.1 | 90.5 | 4.8 | 4.8 | 0.0 | 4.8 | 0.0 | 0.0 | 0.0 | 0.0 | 95.2 | 47.6 | 95.2 |
| King of Prussia | 6,623 | 34.6 | 72.3 | 75.6 | 11.6 | 4.6 | 1.2 | 5.8 | 0.0 | 3.7 | 3.0 | 0.3 | 99.2 | 79.3 | 99.2 |
| New Stanton | 4,998 | 34.2 | 68.7 | 85.9 | 8.9 | 1.0 | 0.1 | 1.2 | 0.0 | 1.8 | 1.8 | 0.3 | 98.4 | 73.2 | 98.4 |
| Newville | 8,152 | 35.0 | 69.0 | 78.1 | 12.3 | 3.0 | 0.2 | 3.2 | 0.1 | 3.5 | 2.8 | 0.2 | 99.9 | 96.6 | 99.9 |
| Pocono | 3,850 | 32.9 | 66.6 | 82.7 | 9.0 | 2.7 | 0.2 | 3.0 | 0.0 | 2.2 | 1.9 | 1.2 | 99.8 | 93.0 | 99.8 |
| Somerset (T) | 4,238 | 36.3 | 70.4 | 69.3 | 16.1 | 2.6 | 0.2 | 2.8 | 0.0 | 6.3 | 3.1 | 2.3 | 100.0 | 98.7 | 100.0 |

NOTE: Any Hispanic totals may appear to differ slightly from the combination of White Hispanic & Black Hispanic due to rounding.

TRAFFIC STOP OUTCOMES

Traffic stop outcomes, including the rate of warnings, citations, arrests, searches, and seizures of contraband, are provided at all organizational levels in Tables 3.8 & 3.9. These tables report: 1) the total number of stops; 2) the percentage of warnings, citations, and arrests issued to drivers and passengers; 3) the total number of searches conducted; 4) the percentage of occupants and/or vehicles searched; and 5) the percentage of searches resulting in contraband seizures (i.e., the “hit rate”). These percentages may exceed one-hundred percent, as drivers and passengers may experience one or more outcomes (i.e., a driver may be both warned and cited in the same stop). Additional analyses are presented in Table 3.10, in which traffic stop outcomes are examined for drivers only. Post-stop outcomes are discussed in greater detail in Sections 5 & 7 of this report.

Warnings

Based on the 278,323 traffic stops initiated in 2008, warnings were issued to drivers in 27.6% of those traffic stops. Passengers were warned in 0.2% of all department-wide traffic stops. At the area level, drivers received a warning most frequently in Area I (35.9% of all stops) and least frequently in the Bureau of Patrol (11.9%). Troop level rates of warnings are reported in Table 3.8 and at the station level in Table 3.9.

Citations

The most common traffic stop outcome for drivers in 2008 was a citation, which occurred in 87.6% of all traffic stops. Furthermore, 0.3% of all traffic stops involved one or more passengers receiving a citation. The rate of citations for drivers differed across areas. The highest rate of citations was reported in Bureau of Patrol (95.1%) while the lowest rate of citations occurred in Area IV (84.0%). The percentages of citations at the troop and station levels are also reported in Tables 3.8 & 3.9.

Arrests

Compared to warnings and citations, member-initiated traffic stops that result in arrests of drivers or passengers are relatively rare events. In 2008, 1.3% of stops resulted in the arrest of the driver, while 0.1% of all traffic stops resulted in the arrest of a passenger. At the area level, the rate of arrest ranged from a high of 2.7% in Area I to a low of 0.1% in the Bureau of Patrol. Troop level and station level rates of arrests demonstrate greater variation and are reported in Tables 3.8 & 3.9, respectively.

Searches

Similar to arrests, searches of vehicles or occupants are rare events and only occurred in 1.1% of all member-initiated traffic stops in 2008. Throughout the department, PSP

personnel reported 3,110 searches of vehicles or occupants.⁴ At the area level, the rate of searches was highest in Area I, where over two-fifth of all searches were conducted. This organizational unit reported a search during 2.5% of all traffic stops. The fewest searches were conducted by the Bureau of Patrol (n=99 searches), with a rate of 0.2% searches occurring during traffic stops. Tables 3.8 & 3.9 also report the raw number of searches and the rate of searches at the troop and station levels, respectively.

Seizures

The rate of contraband discovery during traffic stops is referred to as a “hit rate” or a “search success rate.” To calculate this rate, the number of traffic stops in which contraband was seized is divided by the number of traffic stops in which a search was conducted. This rate allows a comparison across organizational units regardless of the number of searches conducted. The search success rates reported in the tables below include searches for any reason. Additional analyses in Section 7 further examine search success rates by reason for the search.

In 2008, the overall search success rate across the department was 27.4%. In other words, contraband was discovered in slightly less than 30% of all traffic stops in which a search was reported. At the area level, the highest hit rate was reported in Area IV at 32.3%, while Area I had the lowest hit rate at 25.7%. Interestingly, Area I conducted the most searches, but had the lowest hit rate. Table 3.8 also reports the hit rates at the troop level, and Table 3.9 summarizes the hit rate for stations. It is important to note that at some of these organizational units, only a limited number of searches were conducted, thus an asterisk is placed beside the hit rates based on less than ten searches. These hit rates may be unstable due to the infrequent occurrence of a vehicle or occupant search.

⁴ A search is defined by one of three conditions present on the CDR: a) ‘search initiated’ is indicated, b) ‘reason for the search’ is indicated, or c) ‘seizure of contraband’ is indicated.

Table 3.8: 2008 Driver Outcomes By Department, Area & Troop

| | Total # of Stops | Warnings | | Citations | | Arrests | | # of Searches | % Person or Vehicle Searched | % Seized |
|-------------------------|---------------------|--------------|-----------------|--------------|-----------------|--------------|-----------------|------------------|------------------------------------|-------------|
| | | % Drivers | % Passengers | % Drivers | % Passengers | % Drivers | % Passengers | | | |
| PSP Dept. | 278,323 | 27.6 | 0.2 | 87.6 | 0.3 | 1.3 | 0.1 | 3,110 | 1.1 | 27.4 |
| AREA I | 52,931 | 35.9 | 0.2 | 87.1 | 0.3 | 2.7 | 0.2 | 1,337 | 2.5 | 25.7 |
| Troop J | 11,906 | 27.9 | 0.2 | 94.2 | 0.4 | 3.8 | 0.2 | 191 | 1.6 | 36.1 |
| Troop K | 17,216 | 39.2 | 0.3 | 87.5 | 0.3 | 2.6 | 0.4 | 795 | 4.6 | 27.2 |
| Troop L | 8,706 | 31.2 | 0.1 | 85.8 | 0.2 | 1.4 | 0.1 | 56 | 0.6 | 16.1 |
| Troop M | 15,103 | 41.3 | 0.2 | 81.7 | 0.3 | 2.6 | 0.1 | 295 | 2.0 | 16.9 |
| AREA II | 45,639 | 26.3 | 0.4 | 86.8 | 0.4 | 1.1 | 0.1 | 490 | 1.1 | 28.4 |
| Troop F | 16,442 | 26.4 | 0.9 | 84.6 | 0.8 | 1.1 | 0.1 | 143 | 0.9 | 32.9 |
| Troop N | 12,681 | 19.6 | 0.2 | 91.6 | 0.1 | 0.9 | 0.2 | 96 | 0.8 | 25.0 |
| Troop P | 7,766 | 34.6 | 0.2 | 81.5 | 0.5 | 1.0 | 0.0 | 86 | 1.1 | 22.1 |
| Troop R | 8,750 | 28.1 | 0.2 | 88.5 | 0.2 | 1.4 | 0.2 | 165 | 1.9 | 29.7 |
| AREA III | 68,273 | 28.8 | 0.2 | 85.7 | 0.2 | 1.3 | 0.1 | 654 | 1.0 | 26.5 |
| Troop A | 19,576 | 32.2 | 0.2 | 87.6 | 0.2 | 1.1 | 0.1 | 163 | 0.8 | 22.1 |
| Troop G | 22,811 | 35.7 | 0.2 | 79.2 | 0.1 | 0.6 | 0.1 | 173 | 0.8 | 30.1 |
| Troop H | 25,886 | 20.0 | 0.2 | 90.0 | 0.3 | 1.9 | 0.1 | 318 | 1.2 | 26.7 |
| AREA IV | 58,830 | 33.9 | 0.2 | 84.0 | 0.2 | 1.5 | 0.1 | 530 | 0.9 | 32.3 |
| Troop C | 16,914 | 32.6 | 0.1 | 81.6 | 0.2 | 0.9 | 0.1 | 74 | 0.4 | 29.7 |
| Troop D | 16,089 | 38.5 | 0.2 | 82.3 | 0.2 | 1.8 | 0.2 | 223 | 1.4 | 32.7 |
| Troop E | 12,401 | 38.8 | 0.3 | 77.6 | 0.3 | 2.1 | 0.2 | 72 | 0.6 | 27.8 |
| Troop B | 13,426 | 25.3 | 1.2 | 95.1 | 0.2 | 1.6 | 0.1 | 161 | 1.2 | 34.8 |
| Bureau of Patrol | 52,571 | 11.9 | 0.0 | 95.1 | 0.3 | 0.1 | 0.0 | 99 | 0.2 | 26.3 |
| Troop T | 52,571 | 11.9 | 0.0 | 95.1 | 0.3 | 0.1 | 0.0 | 99 | 0.2 | 26.3 |

Table 3.9: 2008 Driver Outcomes By Station (p. 1 of 4)

| | Total # of Stops | Warnings | | Citations | | Arrests | | # of Searches | % Person or Vehicle Searched | % Seized |
|------------------|---------------------|--------------|-----------------|--------------|-----------------|--------------|-----------------|------------------|------------------------------------|-------------|
| | | % Drivers | % Passengers | % Drivers | % Passengers | % Drivers | % Passengers | | | |
| AREA I | | | | | | | | | | |
| Troop J | | | | | | | | | | |
| Avondale | 3,516 | 41.9 | 0.2 | 95.3 | 0.5 | 2.5 | 0.2 | 66 | 1.9 | 33.3 |
| Embreeville | 3,149 | 23.7 | 0.1 | 94.4 | 0.3 | 2.3 | 0.1 | 64 | 2.0 | 18.8 |
| Ephrata | 1,089 | 26.9 | 0.0 | 94.3 | 0.5 | 1.5 | 0.0 | 10 | 0.9 | 60.0 |
| Lancaster | 4,152 | 19.5 | 0.3 | 92.9 | 0.4 | 6.7 | 0.5 | 51 | 1.2 | 56.9 |
| Troop K | | | | | | | | | | |
| Media | 3,163 | 46.2 | 0.7 | 78.5 | 0.3 | 4.5 | 0.6 | 273 | 8.6 | 25.3 |
| Philadelphia | 12,203 | 36.6 | 0.3 | 89.8 | 0.4 | 1.9 | 0.3 | 466 | 3.8 | 26.6 |
| Skippack | 1,850 | 44.2 | 0.2 | 87.5 | 0.1 | 4.1 | 0.3 | 56 | 3.0 | 41.1 |
| Troop L | | | | | | | | | | |
| Frackville | 877 | 25.1 | 0.2 | 88.4 | 0.6 | 2.4 | 0.1 | 8 | 0.9 | 25.0* |
| Hamburg | 1,662 | 29.9 | 0.0 | 92.5 | 0.0 | 0.1 | 0.0 | 5 | 0.3 | 20.0* |
| Jonestown | 3,132 | 29.1 | 0.1 | 80.9 | 0.2 | 2.6 | 0.1 | 39 | 1.2 | 15.4 |
| Reading | 1,619 | 36.9 | 0.1 | 86.3 | 0.2 | 0.7 | 0.1 | 1 | 0.1 | 0.0* |
| Schuylkill Haven | 1,416 | 34.6 | 0.1 | 86.4 | 0.1 | 0.6 | 0.1 | 3 | 0.2 | 0.0* |
| Troop M | | | | | | | | | | |
| Belfast | 2,516 | 25.8 | 0.0 | 87.0 | 0.3 | 1.0 | 0.0 | 26 | 1.0 | 11.5 |
| Bethlehem | 1,357 | 37.4 | 0.5 | 84.3 | 0.2 | 2.8 | 0.1 | 62 | 4.6 | 8.1 |
| Dublin | 3,435 | 51.9 | 0.1 | 78.8 | 0.4 | 3.8 | 0.2 | 38 | 1.1 | 26.3 |
| Fogelsville | 4,620 | 48.5 | 0.1 | 77.1 | 0.2 | 1.4 | 0.2 | 115 | 2.5 | 23.5 |
| Trevoise | 3,175 | 33.2 | 0.3 | 86.2 | 0.3 | 4.4 | 0.0 | 54 | 1.7 | 9.3 |
| AREA II | | | | | | | | | | |
| Troop F | | | | | | | | | | |
| Coudersport | 2,224 | 53.5 | 2.0 | 59.8 | 0.2 | 1.7 | 0.0 | 18 | 0.8 | 16.7 |
| Emporium | 742 | 32.9 | 0.3 | 74.8 | 0.0 | 0.5 | 0.0 | 2 | 0.3 | 100.0* |
| Lamar | 2,996 | 24.1 | 3.1 | 86.1 | 3.8 | 1.3 | 0.1 | 22 | 0.7 | 22.7 |
| Mansfield | 1,071 | 40.3 | 0.0 | 73.0 | 0.1 | 1.3 | 0.1 | 9 | 0.8 | 22.2* |
| Milton | 3,257 | 12.7 | 0.1 | 96.7 | 0.0 | 0.2 | 0.0 | 7 | 0.2 | 14.3* |
| Montoursville | 1,848 | 15.2 | 0.3 | 91.7 | 0.0 | 1.1 | 0.4 | 42 | 2.3 | 57.1 |

* Indicates fewer than 10 searches conducted. Interpret percentages with caution.

Table 3.9: 2008 Driver Outcomes By Station (p. 2 of 4)

| | Total # of Stops | Warnings | | Citations | | Arrests | | # of Searches | % Person or Vehicle Searched | % Seized |
|------------------------|---------------------|--------------|-----------------|--------------|-----------------|--------------|-----------------|------------------|------------------------------------|-------------|
| | | % Drivers | % Passengers | % Drivers | % Passengers | % Drivers | % Passengers | | | |
| AREA II (cont.) | | | | | | | | | | |
| Selinsgrove | 2,700 | 22.4 | 0.1 | 89.4 | 0.1 | 1.1 | 0.1 | 12 | 0.4 | 41.7 |
| Stonington | 1,604 | 28.4 | 0.0 | 87.3 | 0.2 | 1.6 | 0.1 | 31 | 1.9 | 16.1 |
| Troop N | | | | | | | | | | |
| Bloomsburg | 2,229 | 13.8 | 0.1 | 97.3 | 0.1 | 0.3 | 0.1 | 7 | 0.3 | 28.6* |
| Fern Ridge | 3,160 | 8.2 | 0.1 | 95.5 | 0.1 | 1.0 | 0.0 | 4 | 0.1 | 25.0* |
| Hazleton | 1,390 | 29.4 | 0.5 | 85.8 | 0.5 | 0.7 | 0.4 | 34 | 2.4 | 17.6 |
| Lehighton | 1,949 | 14.1 | 0.2 | 92.8 | 0.2 | 0.7 | 0.1 | 2 | 0.1 | 0.0* |
| Swiftwater | 3,953 | 31.4 | 0.1 | 86.9 | 0.1 | 1.4 | 0.3 | 49 | 1.2 | 30.6 |
| Troop P | | | | | | | | | | |
| Laporte | 1,581 | 23.1 | 0.1 | 85.8 | 0.0 | 0.3 | 0.0 | 2 | 0.1 | 50.0* |
| Shickshinny | 1,016 | 26.3 | 0.2 | 92.9 | 0.4 | 1.5 | 0.0 | 2 | 0.2 | 0.0* |
| Towanda | 3,111 | 54.4 | 0.2 | 66.3 | 0.6 | 0.6 | 0.0 | 65 | 2.1 | 13.8 |
| Tunkhannock | 1,139 | 24.2 | 0.3 | 94.9 | 0.9 | 1.6 | 0.1 | 7 | 0.6 | 71.4* |
| Wyoming | 919 | 9.2 | 0.1 | 96.7 | 0.3 | 2.1 | 0.0 | 10 | 1.1 | 40.0 |
| Troop R | | | | | | | | | | |
| Blooming Grove | 2,693 | 39.8 | 0.1 | 86.9 | 0.1 | 1.6 | 0.1 | 51 | 1.9 | 27.5 |
| Dunmore | 2,523 | 24.2 | 0.2 | 86.3 | 0.1 | 1.2 | 0.2 | 51 | 2.0 | 27.5 |
| Gibson | 2,251 | 23.0 | 0.1 | 89.6 | 0.4 | 1.0 | 0.2 | 35 | 1.6 | 25.7 |
| Honesdale | 1,283 | 20.6 | 0.5 | 94.2 | 0.2 | 2.2 | 0.2 | 28 | 2.2 | 42.9 |
| AREA III | | | | | | | | | | |
| Troop A | | | | | | | | | | |
| Ebensburg | 4,909 | 25.8 | 0.0 | 85.9 | 0.2 | 1.5 | 0.0 | 15 | 0.3 | 6.7 |
| Greensburg | 4,185 | 46.2 | 0.2 | 84.3 | 0.2 | 1.4 | 0.1 | 31 | 0.7 | 35.5 |
| Indiana | 4,385 | 29.5 | 0.2 | 88.4 | 0.2 | 0.4 | 0.0 | 31 | 0.7 | 25.8 |
| Kiski Valley | 3,635 | 25.9 | 0.2 | 89.1 | 0.2 | 1.3 | 0.2 | 77 | 2.1 | 15.6 |
| Somerset (A) | 2,462 | 35.4 | 0.5 | 92.9 | 0.2 | 1.0 | 0.1 | 9 | 0.4 | 44.4* |

* Indicates fewer than 10 searches conducted. Interpret percentages with caution.

Table 3.9: 2008 Driver Outcomes By Station (p. 3 of 4)

| | Total # of Stops | Warnings | | Citations | | Arrests | | # of Searches | % Person or Vehicle Searched | % Seized |
|-------------------------|---------------------|--------------|-----------------|--------------|-----------------|--------------|-----------------|------------------|------------------------------------|-------------|
| | | % Drivers | % Passengers | % Drivers | % Passengers | % Drivers | % Passengers | | | |
| AREA III (cont.) | | | | | | | | | | |
| Troop G | | | | | | | | | | |
| Bedford | 2,711 | 43.5 | 0.0 | 76.4 | 0.1 | 0.4 | 0.0 | 6 | 0.2 | 16.7* |
| Hollidaysburg | 2,045 | 46.4 | 0.3 | 73.1 | 0.7 | 0.5 | 0.0 | 74 | 3.6 | 24.3 |
| Huntingdon | 2,123 | 49.4 | 0.4 | 68.5 | 0.0 | 1.0 | 0.0 | 17 | 0.8 | 35.3 |
| Lewistown | 5,575 | 25.4 | 0.1 | 88.8 | 0.1 | 0.9 | 0.1 | 46 | 0.8 | 47.8 |
| McConnellsburg | 3,234 | 50.5 | 0.0 | 62.9 | 0.0 | 0.3 | 0.0 | 4 | 0.1 | 50.0* |
| Philipsburg | 2,395 | 35.4 | 0.1 | 80.3 | 0.2 | 0.7 | 0.0 | 3 | 0.1 | 0.0* |
| Rockview | 4,728 | 22.5 | 0.4 | 87.5 | 0.1 | 0.4 | 0.1 | 23 | 0.5 | 13.0 |
| Troop H | | | | | | | | | | |
| Carlisle | 7,739 | 12.3 | 0.1 | 94.8 | 0.2 | 3.3 | 0.1 | 80 | 1.0 | 46.2 |
| Chambersburg | 3,874 | 35.0 | 0.6 | 89.9 | 0.2 | 1.0 | 0.1 | 63 | 1.6 | 15.9 |
| Gettysburg | 2,439 | 30.6 | 0.1 | 74.9 | 0.2 | 2.8 | 0.0 | 30 | 1.2 | 26.7 |
| Harrisburg | 3,030 | 19.8 | 0.1 | 92.9 | 0.3 | 1.0 | 0.0 | 38 | 1.3 | 10.5 |
| Lykens | 2,174 | 33.7 | 0.0 | 73.2 | 0.2 | 1.0 | 0.1 | 21 | 1.0 | 28.6 |
| Newport | 2,722 | 12.5 | 0.1 | 94.8 | 0.1 | 0.5 | 0.0 | 9 | 0.3 | 22.2* |
| York | 3,908 | 11.9 | 0.1 | 94.1 | 0.6 | 1.8 | 0.2 | 77 | 2.0 | 23.4 |
| AREA IV | | | | | | | | | | |
| Troop C | | | | | | | | | | |
| Clarion | 2,245 | 33.5 | 0.0 | 80.2 | 0.2 | 0.4 | 0.0 | 13 | 0.6 | 23.1 |
| Clearfield | 3,610 | 20.4 | 0.2 | 94.1 | 0.1 | 0.3 | 0.0 | 8 | 0.2 | 75.0* |
| Dubois | 2,697 | 23.0 | 0.0 | 86.9 | 0.1 | 0.6 | 0.0 | 6 | 0.2 | 16.7* |
| Kane | 1,662 | 40.4 | 0.2 | 76.6 | 0.3 | 2.6 | 0.1 | 32 | 1.9 | 28.1 |
| Punxsutawney | 2,541 | 44.9 | 0.2 | 72.9 | 0.1 | 1.0 | 0.0 | 7 | 0.3 | 28.6* |
| Ridgway | 2,557 | 29.3 | 0.2 | 80.7 | 0.2 | 1.6 | 0.2 | 3 | 0.1 | 33.3* |
| Tionesta | 1,602 | 52.7 | 0.1 | 66.2 | 0.1 | 0.5 | 0.1 | 5 | 0.3 | 0.0* |
| Troop D | | | | | | | | | | |
| Beaver | 3,039 | 28.7 | 0.1 | 92.2 | 0.1 | 1.3 | 0.1 | 43 | 1.4 | 16.3 |
| Butler | 4,943 | 51.2 | 0.3 | 76.7 | 0.3 | 2.2 | 0.2 | 53 | 1.1 | 41.5 |
| Kittanning | 2,835 | 32.6 | 0.3 | 77.8 | 0.2 | 2.0 | 0.5 | 79 | 2.8 | 48.1 |
| Mercer | 2,716 | 45.2 | 0.1 | 80.6 | 0.1 | 0.3 | 0.0 | 35 | 1.3 | 8.6 |

* Indicates fewer than 10 searches conducted. Interpret percentages with caution.

Table 3.9: 2008 Driver Outcomes By Station (p. 4 of 4)

| | Total # of Stops | Warnings | | Citations | | Arrests | | # of Searches | % Person or Vehicle Searched | % Seized |
|-------------------------|---------------------|--------------|-----------------|--------------|-----------------|--------------|-----------------|------------------|------------------------------------|-------------|
| | | % Drivers | % Passengers | % Drivers | % Passengers | % Drivers | % Passengers | | | |
| AREA IV (cont.) | | | | | | | | | | |
| New Castle | 2,556 | 25.2 | 0.2 | 88.3 | 0.2 | 2.9 | 0.2 | 13 | 0.5 | 23.1 |
| Troop E | | | | | | | | | | |
| Corry | 1,387 | 34.9 | 0.3 | 76.8 | 0.3 | 1.9 | 0.1 | 5 | 0.4 | 40.0* |
| Erie | 3,341 | 41.5 | 0.2 | 79.3 | 0.2 | 2.8 | 0.3 | 18 | 0.5 | 33.3 |
| Franklin | 1,644 | 61.4 | 0.7 | 64.3 | 1.0 | 2.4 | 0.4 | 6 | 0.4 | 16.7* |
| Girard | 2,318 | 34.1 | 0.3 | 81.1 | 0.2 | 2.1 | 0.1 | 22 | 0.9 | 31.8 |
| Meadville | 2,676 | 26.5 | 0.1 | 83.3 | 0.1 | 0.4 | 0.0 | 10 | 0.4 | 30.0 |
| Warren | 1,035 | 41.1 | 0.4 | 72.3 | 0.4 | 3.9 | 0.0 | 11 | 1.1 | 9.1 |
| Troop B | | | | | | | | | | |
| Belle Vernon | 1,199 | 25.4 | 1.4 | 96.2 | 0.2 | 1.6 | 0.0 | 18 | 1.5 | 27.8 |
| Pittsburgh | 4,098 | 31.0 | 0.0 | 97.1 | 0.1 | 0.5 | 0.0 | 24 | 0.6 | 16.7 |
| Uniontown | 3,640 | 25.1 | 0.1 | 91.3 | 0.3 | 3.5 | 0.4 | 89 | 2.4 | 46.1 |
| Washington | 3,697 | 12.6 | 0.5 | 97.0 | 0.4 | 0.9 | 0.1 | 19 | 0.5 | 31.6 |
| Waynesburg | 792 | 56.2 | 1.4 | 90.5 | 0.4 | 1.1 | 0.1 | 11 | 1.4 | 0.0 |
| Bureau of Patrol | | | | | | | | | | |
| Troop T | | | | | | | | | | |
| Bowmansville | 6,677 | 8.9 | 0.0 | 98.1 | 0.2 | 0.1 | 0.1 | 34 | 0.5 | 14.7 |
| Everett | 12,606 | 10.1 | 0.0 | 94.9 | 0.1 | 0.1 | 0.0 | 3 | 0.0 | 33.3* |
| Gibsonia | 5,406 | 13.8 | 0.1 | 92.9 | 0.7 | 0.0 | 0.0 | 3 | 0.1 | 33.3* |
| Highspire | 21 | 23.8 | 0.0 | 76.2 | 9.5 | 0.0 | 0.0 | 0 | 0.0 | 0.0* |
| King of Prussia | 6,623 | 16.2 | 0.1 | 92.3 | 0.1 | 0.2 | 0.0 | 29 | 0.4 | 20.7 |
| New Stanton | 4,998 | 10.7 | 0.0 | 94.6 | 0.1 | 0.1 | 0.0 | 4 | 0.1 | 0.0* |
| Newville | 8,152 | 17.7 | 0.0 | 96.9 | 0.1 | 0.1 | 0.0 | 4 | 0.0 | 0.0* |
| Pocono | 3,850 | 9.6 | 0.0 | 94.7 | 0.1 | 0.1 | 0.0 | 6 | 0.2 | 50.0* |
| Somerset (T) | 4,238 | 5.4 | 0.0 | 96.0 | 1.8 | 0.2 | 0.0 | 16 | 0.4 | 62.5 |

* Indicates fewer than 10 searches conducted. Interpret percentages with caution.

Post-Stop Outcomes by Severity

All previous analyses on post-stop outcomes reported each disposition independently. The total percentages across outcomes may exceed 100% because drivers could receive multiple outcomes. An alternative way to examine these data is to use a severity index, where only the most severe outcome for each traffic stop is reported. A severity index was created using warnings, citations, and arrests.⁵ The rank ordering is as follows (from least severe to most severe):

- Level 1: Warning
- Level 2: Citation
- Level 3: Arrest

For example, if a driver received both a warning and a citation, they would be included only in the citation category. In the case of a citation and an arrest, the traffic stop would be categorized as resulting in an arrest.

Table 3.10 reports the severity index for all member-initiated traffic stops in 2008. Across the department, 11.8% of all traffic stops resulted in the issuance of a warning to the driver as the most severe disposition. A large majority of traffic stops resulted in a citation as the most severe outcome (86.8%), while only 1.3% of all traffic stops resulted in a drivers' arrest. Compared to the information reported in Table 3.8, there is a dramatic reduction in the percentage of warnings; that is, the overwhelming majority of these warnings were issued in combination with either a citation or arrest.

⁵ Searches and seizures were removed from these analyses because they represent a special type of activity and were conducted independent of warnings, citation, and arrests. To create the severity index, all traffic stops that resulted in the classification of 'Other' (n=194) were removed due to their rare occurrence and the complexity they introduce to the development of a severity index. No traffic stops resulted in a disposition to a passenger and not a driver; thus, there is no need to consider traffic stop outcomes for passengers in this analysis.

Table 3.10: 2008 Driver Outcomes By Department, Area, Troop & Station (p. 1 of 3)*

| | Total # of Stops | % Warning Only | % Citation Only | % Arrest Only |
|------------------|-----------------------------|---------------------------|----------------------------|--------------------------|
| PSP Dept. | 278,323 | 11.8 | 86.8 | 1.3 |
| AREA I | 52,931 | 11.5 | 85.7 | 2.7 |
| Troop J | 11,906 | 3.8 | 92.3 | 3.8 |
| Avondale | 3,516 | 4.1 | 93.4 | 2.5 |
| Embreeville | 3,149 | 4.9 | 92.9 | 2.3 |
| Ephrata | 1,089 | 5.1 | 93.4 | 1.5 |
| Lancaster | 4,152 | 2.5 | 90.8 | 6.7 |
| Troop K | 17,216 | 11.0 | 86.3 | 2.7 |
| Media | 3,163 | 19.4 | 76.1 | 4.5 |
| Philadelphia | 12,203 | 8.8 | 89.2 | 2.0 |
| Skippack | 1,850 | 11.5 | 84.4 | 4.1 |
| Troop L | 8,706 | 13.9 | 84.7 | 1.4 |
| Frackville | 877 | 10.1 | 87.5 | 2.4 |
| Hamburg | 1,662 | 7.5 | 92.4 | 0.1 |
| Jonestown | 3,132 | 18.7 | 78.7 | 2.6 |
| Reading | 1,619 | 13.5 | 85.8 | 0.7 |
| Schuylkill Haven | 1,416 | 13.3 | 86.1 | 0.6 |
| Troop M | 15,103 | 16.9 | 80.5 | 2.6 |
| Belfast | 2,516 | 12.1 | 86.9 | 1.0 |
| Bethlehem | 1,357 | 13.4 | 83.8 | 2.8 |
| Dublin | 3,435 | 19.5 | 76.7 | 3.7 |
| Fogelsville | 4,620 | 22.2 | 76.4 | 1.4 |
| Trevose | 3,175 | 11.4 | 84.2 | 4.4 |
| AREA II | 45,639 | 12.7 | 86.2 | 1.1 |
| Troop F | 16,442 | 15.0 | 84.0 | 1.1 |
| Coudersport | 2,224 | 39.7 | 58.5 | 1.7 |
| Emporium | 742 | 25.1 | 74.4 | 0.5 |
| Lamar | 2,996 | 13.1 | 85.6 | 1.3 |
| Mansfield | 1,071 | 26.2 | 72.5 | 1.3 |
| Milton | 3,257 | 3.3 | 96.5 | 0.2 |
| Montoursville | 1,848 | 7.7 | 91.2 | 1.1 |
| Selinsgrove | 2,700 | 10.3 | 88.6 | 1.1 |
| Stonington | 1,604 | 11.7 | 86.7 | 1.6 |

* 168 traffic stops were reported as Other and are not included in these percentages.

Table 3.10: 2008 Driver Outcomes By Department, Area, Troop & Station (p. 2 of 3)

| | Total # of Stops | % Warning Only | % Citation Only | % Arrest Only |
|-----------------|-----------------------------|---------------------------|----------------------------|--------------------------|
| Troop N | 12,681 | 7.7 | 91.4 | 0.9 |
| Bloomsburg | 2,229 | 2.6 | 97.0 | 0.3 |
| Fern Ridge | 3,160 | 3.7 | 95.3 | 1.0 |
| Hazleton | 1,390 | 13.8 | 85.5 | 0.7 |
| Lehighton | 1,949 | 7.0 | 92.3 | 0.7 |
| Swiftwater | 3,953 | 12.0 | 86.6 | 1.4 |
| Troop P | 7,766 | 18.0 | 81.0 | 1.0 |
| Laporte | 1,581 | 13.9 | 85.8 | 0.3 |
| Shickshinny | 1,016 | 6.0 | 92.5 | 1.5 |
| Towanda | 3,111 | 33.4 | 66.0 | 0.6 |
| Tunkhannock | 1,139 | 4.6 | 93.9 | 1.6 |
| Wyoming | 919 | 2.9 | 95.0 | 2.1 |
| Troop R | 8,750 | 11.0 | 87.6 | 1.4 |
| Blooming Grove | 2,693 | 12.4 | 86.0 | 1.6 |
| Dunmore | 2,523 | 13.3 | 85.5 | 1.2 |
| Gibson | 2,251 | 10.1 | 88.8 | 1.0 |
| Honesdale | 1,283 | 4.6 | 93.2 | 2.2 |
| AREA III | 68,273 | 13.8 | 84.9 | 1.3 |
| Troop A | 19,576 | 11.8 | 87.0 | 1.1 |
| Ebensburg | 4,909 | 13.0 | 85.5 | 1.5 |
| Greensburg | 4,185 | 15.5 | 83.1 | 1.4 |
| Indiana | 4,385 | 11.4 | 88.2 | 0.4 |
| Kiski Valley | 3,635 | 10.1 | 88.6 | 1.3 |
| Somerset (A) | 2,462 | 6.5 | 92.5 | 1.0 |
| Troop G | 22,811 | 20.6 | 78.9 | 0.6 |
| Bedford | 2,711 | 23.5 | 76.1 | 0.4 |
| Hollidaysburg | 2,045 | 26.7 | 72.8 | 0.5 |
| Huntingdon | 2,123 | 30.9 | 68.0 | 1.0 |
| Lewistown | 5,575 | 10.9 | 88.2 | 0.9 |
| McConnellsburg | 3,234 | 37.1 | 62.6 | 0.3 |
| Philipsburg | 2,395 | 19.1 | 80.2 | 0.7 |
| Rockview | 4,728 | 12.3 | 87.4 | 0.4 |
| Troop H | 25,886 | 9.3 | 88.7 | 1.9 |
| Carlisle | 7,739 | 4.5 | 92.2 | 3.3 |
| Chambersburg | 3,874 | 9.9 | 89.1 | 1.0 |
| Gettysburg | 2,439 | 23.6 | 73.6 | 2.8 |
| Harrisburg | 3,030 | 6.8 | 92.2 | 1.0 |
| Lykens | 2,174 | 26.0 | 73.0 | 1.0 |
| Newport | 2,722 | 5.1 | 94.4 | 0.5 |
| York | 3,908 | 5.2 | 93.0 | 1.8 |

Table 3.10: 2008 Driver Outcomes By Department, Area, Troop & Station (p. 3 of 3)

| | Total # of Stops | % Warning Only | % Citation Only | % Arrest Only |
|-------------------------|-----------------------------|---------------------------|----------------------------|--------------------------|
| AREA IV | 58,830 | 15.4 | 83.1 | 1.5 |
| Troop C | 16,914 | 18.1 | 81.0 | 0.9 |
| Clarion | 2,245 | 19.6 | 80.0 | 0.4 |
| Clearfield | 3,610 | 5.6 | 94.0 | 0.3 |
| Dubois | 2,697 | 13.0 | 86.5 | 0.6 |
| Kane | 1,662 | 23.0 | 74.4 | 2.6 |
| Punxsutawney | 2,541 | 26.8 | 72.1 | 1.0 |
| Ridgway | 2,557 | 18.1 | 80.4 | 1.6 |
| Tionesta | 1,602 | 33.6 | 65.9 | 0.5 |
| Troop D | 16,089 | 16.9 | 81.3 | 1.8 |
| Beaver | 3,039 | 7.4 | 91.2 | 1.3 |
| Butler | 4,943 | 22.1 | 75.7 | 2.2 |
| Kittanning | 2,835 | 21.0 | 77.0 | 2.0 |
| Mercer | 2,716 | 19.4 | 80.4 | 0.3 |
| New Castle | 2,556 | 11.2 | 85.9 | 2.9 |
| Troop E | 12,401 | 21.3 | 76.7 | 2.1 |
| Corry | 1,387 | 22.0 | 76.1 | 1.9 |
| Erie | 3,341 | 19.8 | 77.4 | 2.8 |
| Franklin | 1,644 | 34.3 | 63.3 | 2.4 |
| Girard | 2,318 | 17.3 | 80.6 | 2.1 |
| Meadville | 2,676 | 16.4 | 83.1 | 0.4 |
| Warren | 1,035 | 25.7 | 70.4 | 3.9 |
| Troop B | 13,426 | 4.7 | 93.8 | 1.6 |
| Belle Vernon | 1,199 | 3.8 | 94.7 | 1.6 |
| Pittsburgh | 4,098 | 2.8 | 96.8 | 0.5 |
| Uniontown | 3,640 | 7.9 | 88.6 | 3.5 |
| Washington | 3,697 | 2.9 | 96.2 | 0.9 |
| Waynesburg | 792 | 9.3 | 89.5 | 1.1 |
| Bureau of Patrol | 52,571 | 4.9 | 95.0 | 0.1 |
| Troop T | 52,571 | 4.9 | 95.0 | 0.1 |
| Bowmansville | 6,677 | 1.9 | 97.9 | 0.1 |
| Everett | 12,606 | 5.1 | 94.8 | 0.1 |
| Gibsonia | 5,406 | 7.1 | 92.9 | 0.0 |
| Highspire | 21 | 23.8 | 76.2 | 0.0 |
| King of Prussia | 6,623 | 7.6 | 92.3 | 0.2 |
| New Stanton | 4,998 | 5.4 | 94.6 | 0.1 |
| Newville | 8,152 | 3.1 | 96.8 | 0.1 |
| Pocono | 3,850 | 5.3 | 94.6 | 0.1 |
| Somerset (T) | 4,238 | 3.9 | 95.9 | 0.2 |

SUMMARY

Section 3 reported the characteristics of traffic stops and stopped drivers at the department, area, troop, and station levels based on 278,323 member-initiated traffic stops from January 1, 2008 through December 31, 2008. Department-wide trends are reported below. Trends at the area, troop, and station levels are reported within this section.

- Across the department, the majority of traffic stops had the following characteristics:
 - Occurred on a weekday (69.5%)
 - Occurred during the daytime (75.0%)
 - Occurred on a state highway (51.8%) or an interstate (44.6%)
 - Involved a vehicle registered in Pennsylvania (79.4%)
 - Involved vehicles with an average of 0.7 passengers
 - Lasted between 1-15 minutes (89.4%)
 - March and May accounted for the largest percentages of traffic stops

- Across the department, characteristics of the stop included:
 - The most frequent violation observed prior to traffic stops was speeding (68.6%), followed by moving violations (16.7%), equipment inspections (9.8%), and registration (4.5%)
 - For speeding stops, the average amount over the limit was 19.2 mph

- Across the department, characteristics of the drivers included:
 - Average age of 35.1 years
 - 67.6% male
 - White (83.4%), Black (8.9%), Hispanic (3.5%), Middle Eastern (2.0%), and Asian/Pacific Islander (1.8%)
 - Non-resident of the municipality in which they were stopped (94.4%), non-resident of the county in which they were stopped (63.9%), and non-Pennsylvania resident (24.1%)

- Across the department, traffic stop outcomes can be summarized by the following characteristics:
 - 27.6% of stops resulted in a warning issued to the driver
 - 87.6% of stops resulted in a citation issued to the driver
 - 1.3% 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
 - Of the searches conducted, 27.4% resulted in the discovery of contraband
 - Severity scale:
 - Warning was most severe outcome = 11.8% of stops
 - Citation was most severe outcome = 86.8% of stops
 - Arrest was most severe outcome = 1.3% of stops

4. TREND ANALYSES I: TRAFFIC STOPS 2002 – 2008

OVERVIEW

This section documents the rate of Black and Hispanic drivers stopped by PSP Troopers between 2002 and 2008. These trends are reported at the department and troop levels (Appendix A summarizes the station level trends). In this section and all subsequent sections involving temporal trends, no analyses are offered regarding rates of activity at the area level. As described below, temporal trends are based on all previous years of data collection and are only applicable to organizational units that are consistent in composition from year to year. In 2008, the PSP underwent an agency-wide re-organization, which significantly altered the composition of all areas. Thus, comparing the rate of activity within Area I between 2002 and 2008, for example, would be inappropriate due to the difference in troop and station composition. All temporal analyses are restricted to the department, troop, and station levels.

METHODOLOGY

Temporal analyses are best used to summarize the rate of activity (i.e., the rate of traffic stops of a selected group) within organizational units across time. This section exclusively uses this type of analysis to compare the rate of traffic stops of Black and Hispanic citizens within one organizational unit. In this manner, the rates from year to year in a jurisdiction are comparable. Importantly, changes in the rate of traffic stops within that organizational unit may result from a variety of factors including differences in traffic patterns, alterations of driver behaviors, modifications of officer behavior, and/or officer deployment practices; however, any changes in the rate of traffic stops will not be affected by changes in other jurisdictions. In effect, differences between organizational units are considered in these analyses and do not influence the results. As a result, the strength of documenting temporal trends is to examine differences within organizational units across time.

Standard Deviation Methodology

The temporal trends of Black and Hispanic drivers stopped by PSP Troopers were constructed using a standard deviation analysis technique. This approach relies on the previous years' data as the key component in reporting the spectrum of activity that occurred within one organizational unit. The rate of traffic stops could range from considerably less activity relative to the normal rate (i.e., one or more standard deviational units below the average) to considerably more activity compared to the normal rate (i.e., one or more standard deviational units above the average). Based on probability theory, the majority of values (i.e., the rate of traffic stops) will fall within one standard deviation of the average. Fewer cases will be within two standard deviations of the average, and even fewer values within three standard deviations.

To create the standard deviation, the following steps were used:

- a. Calculate an average rate of traffic stops. For Black and Hispanic drivers, the rate of traffic stops between 2002 and 2007 was used to compute an average rate for the organizational unit of interest. The current year (2008) was not included in the

average because it is the data point of most interest and should not be included in the average for comparison purposes.

- b. Calculate standard deviation using the six-year average rate of traffic stops. The standard deviation is a standardized measure of variability based on the changes in the rate of traffic stops across all years. Again, the 2008 rate was not included in the average as it is the focal point of this report. Inclusion of its rate would bias the development of the standard deviation.
- c. Compare the 2008 rate of traffic stops to the six-year average using the standard deviation. The six-year average and three standard deviations in either direction comprise the background of each graph. For all seven years (i.e., 2002-2008), the actual values of traffic stops for the target group are plotted on the graph to allow an assessment of the 2008 rate of traffic stops in relation to the six-year average and the standard deviational values.

Standard Deviation Interpretation

The aforementioned methodology is applied to traffic stops of Black and Hispanic drivers at the department and troop levels. For each organizational unit and race/ethnicity, a graph shows the six-year average represented by a solid black line. Moving up and down from this central number are the values for one, two, and three standard deviations above and below the six-year average, respectively. The red line indicates the actual rate of traffic stops for each year. The interpretation is straightforward: if the red line is above the six-year average at one time point, the rate for that year was above the average; similarly, if the red line is below the black line, the rate for that year was below the average.

Each graph includes text indicating how the 2008 rate of traffic stops compares to the value of the standard deviation (based on the previous six years). This provides a simple method to assess any of the seven years of data in relation to the six-year trend, while also offering substantive information regarding the difference between the specific year and the average. In summary, each graph reports the following information:

- the actual rate of traffic stops for each year
- each year's rate of traffic stops in relation to the six-year average
- each year's rate of traffic stops in standard deviational units
- the overall trend of traffic stops

The standard deviation is a measure of variation in the rate of traffic stops for one organizational unit based on six years of data collection. The research team purposefully does not offer a value assessment of the 2008 rate in relation to the six-year average. In other words, the research team does not assign a "cutoff value" for an acceptable rate of traffic stops (i.e., a standard deviational value at which any rate of traffic stops above or below is concerning). The graphs demonstrating temporal values are strictly a tool to assess trends over time in the rate of traffic stops and to identify organizational units that are experiencing noticeable increases in their rate of traffic stops of Black or Hispanic drivers. There are numerous factors beyond the scope of this methodology that may be directly related to changes in the rate of traffic stops. For example:

- changes in the traffic population within that jurisdiction

- alterations to the reporting patterns by PSP troopers
- adjustments in PSP traffic stop behaviors
- differences in deployment patterns across time
- modifications of manpower allocation

Any single factor or a combination of these factors may influence the rate of traffic stops of minority drivers in any one year and result in an increase or decrease in the rates reported in the graphs below. The following graphs are to be interpreted with caution and cannot be used as evidence of overt biased policing by the PSP or any of its organizational units.

While no definitive conclusions regarding bias in traffic stops can be ascertained from the following graphs, they do offer a basic picture of the traffic stopping trends by organizational unit. The standard deviation is a statistical indicator that offers a range of roughly “average” values. Using this statistic, units experiencing rates of traffic stops within one standard deviation of the six-year average were operating in a similar fashion to the six-year average. Organizational units reporting rates of traffic stops more than two standard deviations outside their six-year average were experiencing a shift from previous years. Any rate of traffic stops beyond three standard deviations is roughly equivalent to achieving statistical significance using a statistical test. Such changes identified should be further examined by PSP administrators to identify the cause of these changes.

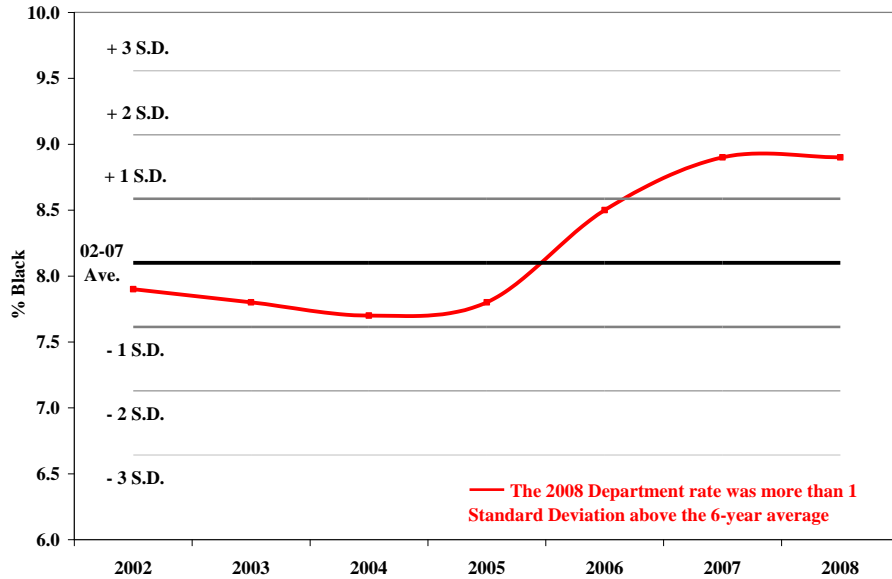
TRAFFIC STOPS: 2002 – 2008

The stopping rate of Black and Hispanic drivers by PSP Troopers between 2002 and 2008 is reported in the following graphs. The department rate for Black and Hispanic drivers is reported in Figures 4.1 & 4.2 and the rate of traffic stops for Black and Hispanic drivers at the troop level is summarized in Figures 4.3 – 4.34. Within each graph, the actual rate of activity (i.e., Black or Hispanic traffic stops) is located on the vertical axis and the year of activity is represented on the horizontal axis. Importantly, the scale of the graphs is appropriate for the specific organizational unit of interest reported in that graph and should be consulted prior to reviewing the results. Comparison of trends between organizational units is not recommended due to the difference in scales and due to geographic and organizational differences between units. Information regarding traffic stops at the station level is reported in Appendix A.⁶

⁶ The graphs in Appendix A were not constructed using the standard deviation methodology; rather, they simply report the rate of traffic stops by race/ethnicity between 2002 and 2008. Additional standard deviation analyses at the station level are available from the authors upon request.

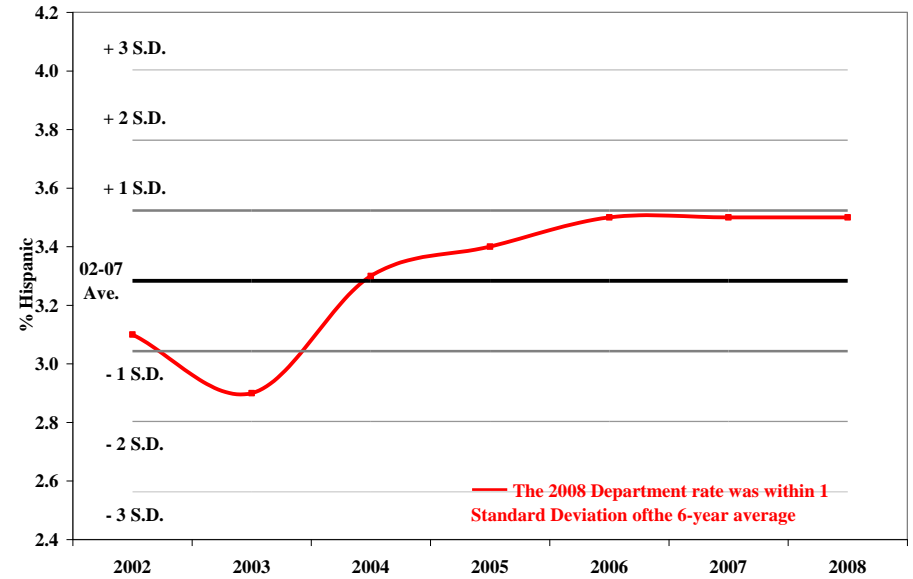
Department Level

Figure 4.1: Percent of Traffic Stops with Black Drivers – Department



Across the department, the rate of traffic stops involving Black drivers was 8.9% in 2008 and relatively unchanged from 2007. As demonstrated in Figure 4.1, the rate of traffic stops involving Black drivers increased in 2006 and 2007 after several years of relative stability. The 2008 rate was slightly higher than one standard deviation above the six-year average. This finding is a product of the lower rates between 2002 and 2005. Please refer to the subsequent graphs to determine the specific contributions of each lower organizational unit.

Figure 4.2: Percent of Traffic Stops with Hispanic Drivers – Department



As demonstrated in Figure 4.2, the rates of traffic stops involving Hispanic drivers continued to stay slightly above 3.5% for 2008. This mirrors the rate in previous years after a noticeable increase in 2004. The 2008 rate of Hispanic traffic stops was within one standard deviation above the six-year average (i.e., 2002-2007). Please refer to the subsequent graphs to determine the specific contributions of each lower organizational unit.

Troop Level

Figure 4.3: Percent of Traffic Stops with Black Drivers – Troop J

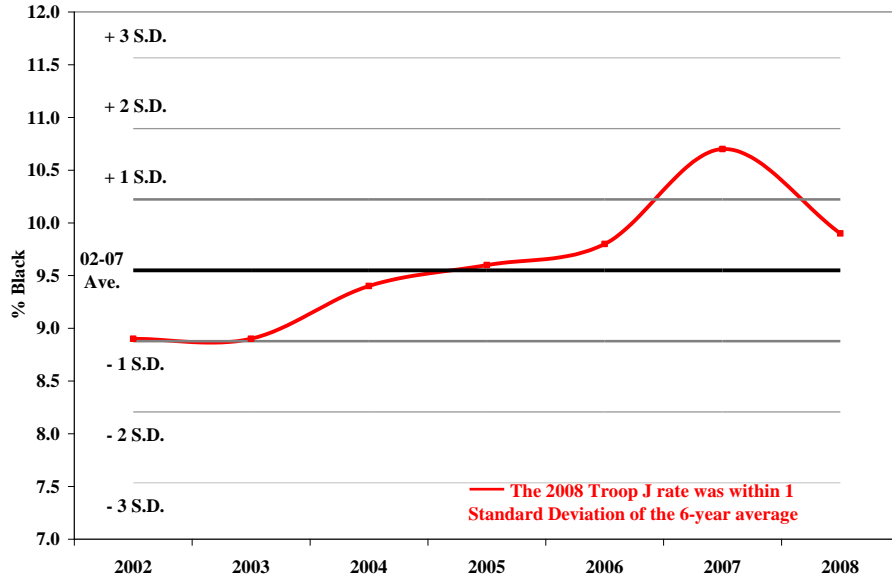
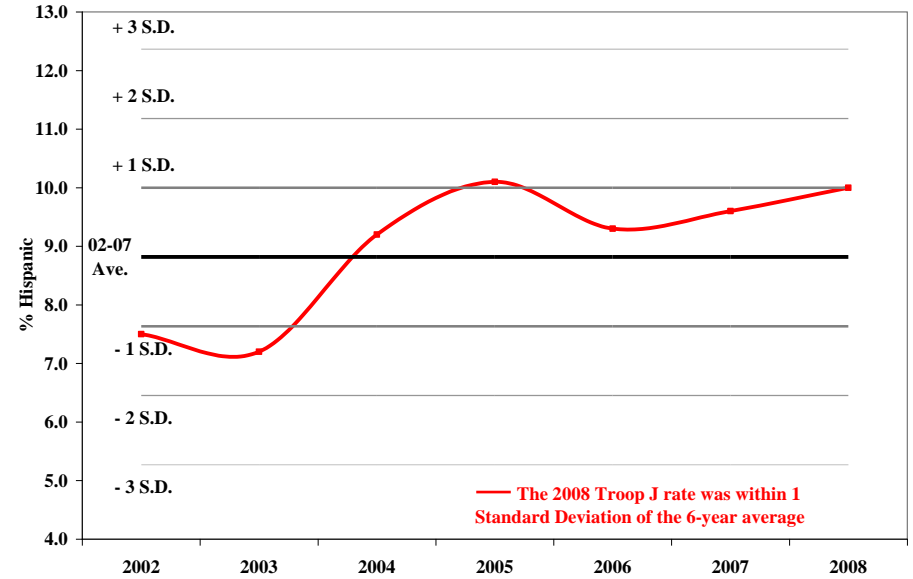


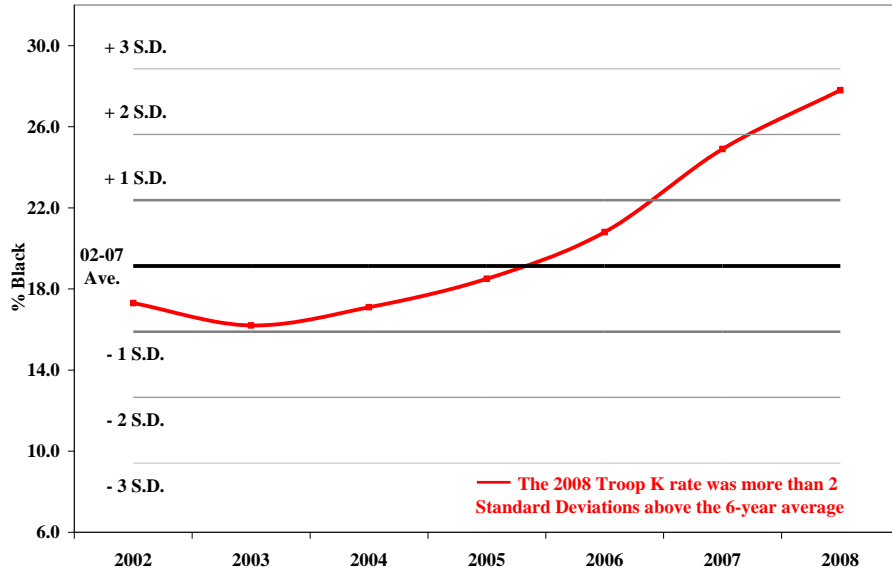
Figure 4.3 displays the rate of traffic stops involving Black drivers in Troop J between 2002 and 2008. Overall, the rate of traffic stops of Black drivers had been increasing since 2003 prior to the reduction in 2008. The decline experienced in 2008 resulted in the rate falling within one standard deviation of the six-year average. The 2007 rate of 10.7% was the highest rate in any of the seven years available for analysis.

Figure 4.4: Percent of Traffic Stops with Hispanic Drivers – Troop J



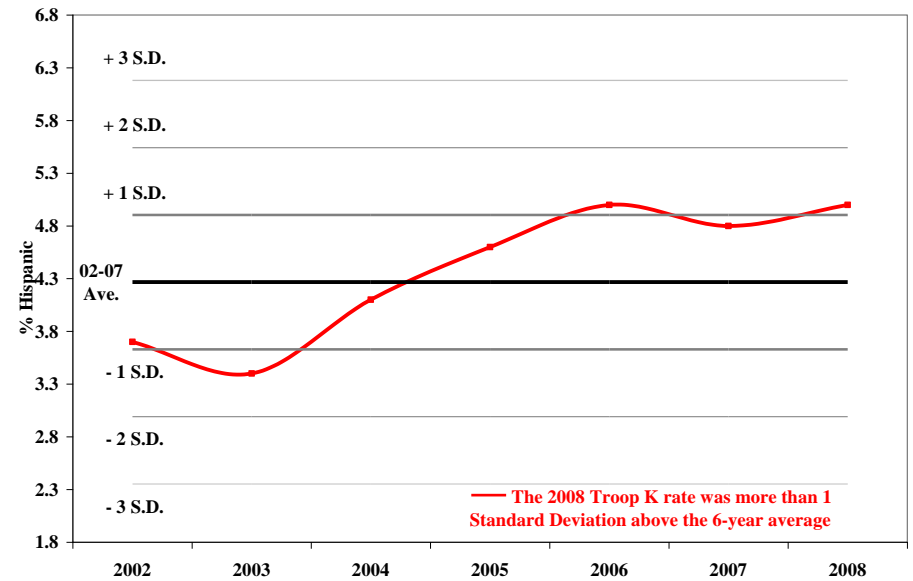
In Troop J, the rate of traffic stops involving Hispanic drivers in 2008 continued a slightly upward trend that began in 2007. As demonstrated in Figure 4.4, the 2008 rate was still within one standard deviation of the six-year average for this organizational unit. The lowest rate occurred in 2003 and preceded a noticeable increase in the 2004 and 2005.

Figure 4:5: Percent of Traffic Stops with Black Drivers – Troop K



The 2008 rate of traffic stops involving Black drivers in Troop K was more than two standard deviations above the six-year average for this organizational unit. As reported in Figure 4.5, the rate began its increase in 2004 and maintained that trend through 2008. The 2008 rate is the highest of any years under study, as it is nearly 30%.

Figure 4:6: Percent of Traffic Stops with Hispanic Drivers – Troop K



The rate of traffic stops involving Hispanic drivers in Troop K between 2002 and 2008 are reported in Figure 4.6. The 2008 rate increased marginally from the 2007 rate and was slightly more than one standard deviation above the six-year average for this organizational unit. Overall, the rate of traffic stops has been relatively stable since 2006, which was the peak of a three-year increase.

Figure 4:7: Percent of Traffic Stops with Black Drivers – Troop L

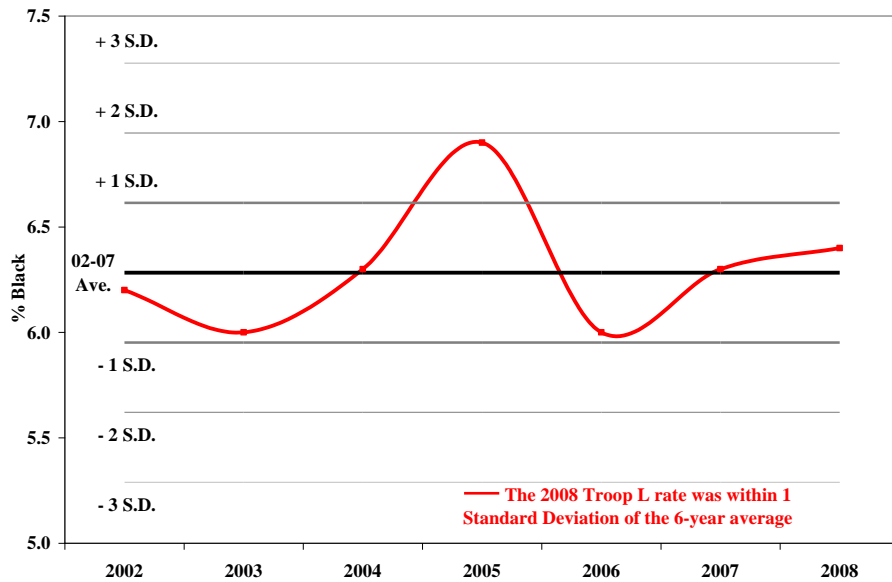
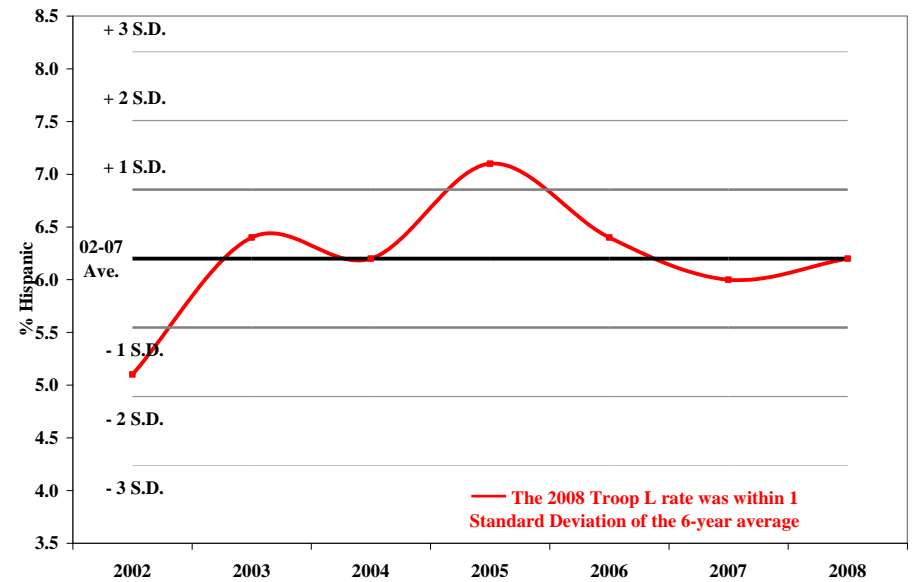


Figure 4.7 reports the rate of traffic stops involving Black drivers in Troop L between 2002 and 2008. In 2008, the rate was similar to the 2007 rate and within one standard deviation of the six-year average. The highest rate of traffic stops involving Black drivers occurred in 2005.

Figure 4:8: Percent of Traffic Stops with Hispanic Drivers – Troop L



The rate of traffic stops in 2008 involving Hispanic drivers was within one standard deviation of the six-year average for this organizational unit. As reported in Figure 4.8, the 2008 rate was identical to the six-year average and ended the downward trend that began in 2006. The lowest rate occurred in 2002 prior to a noticeable increase in subsequent years.

Figure 4:9: Percent of Traffic Stops with Black Drivers – Troop M

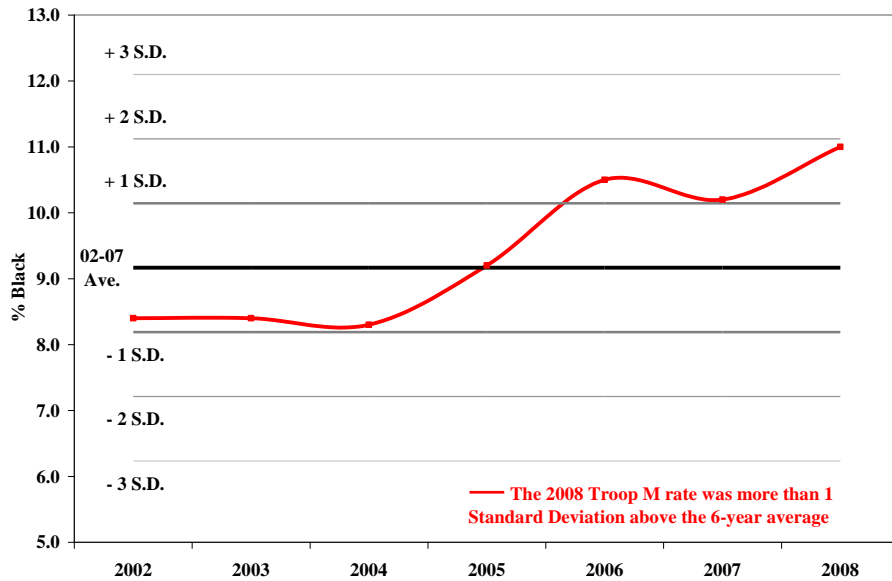
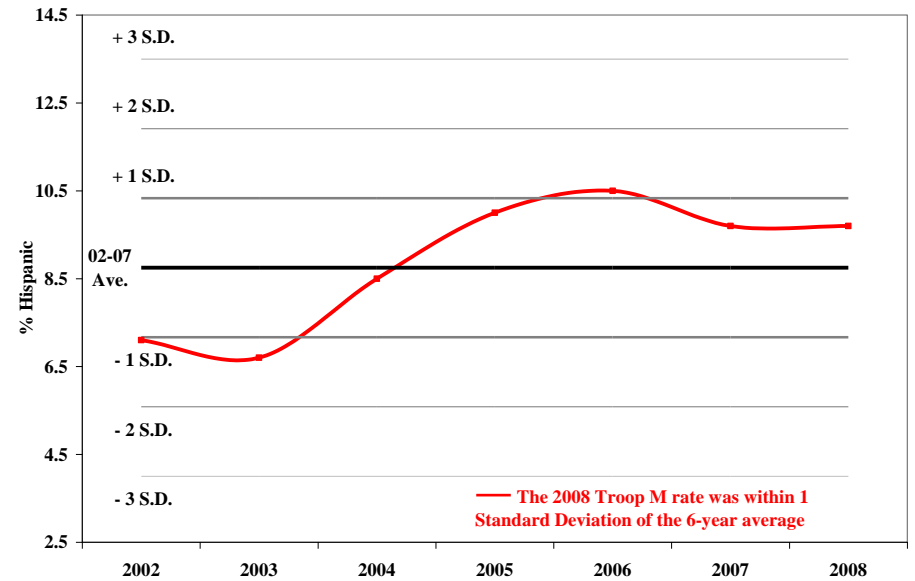


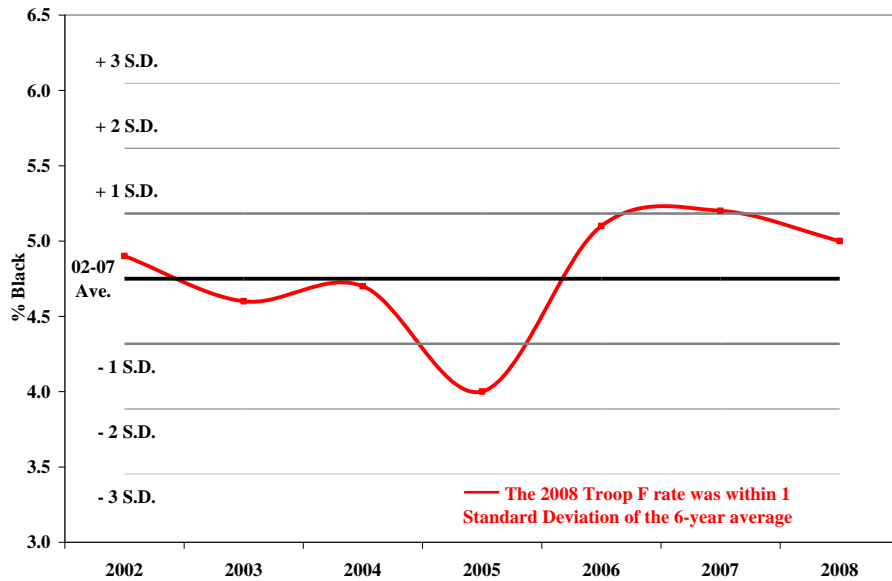
Figure 4.9 displays the rate of traffic stops involving Black drivers in Troop M between 2002 and 2008. The 2008 rate was slightly higher than the 2007 rate and more than one standard deviation above the six-year average. Previously, the rate was relatively stable between 2002 and 2004 prior to rising in 2005 and 2006.

Figure 4:10: Percent of Traffic Stops with Hispanic Drivers – Troop M



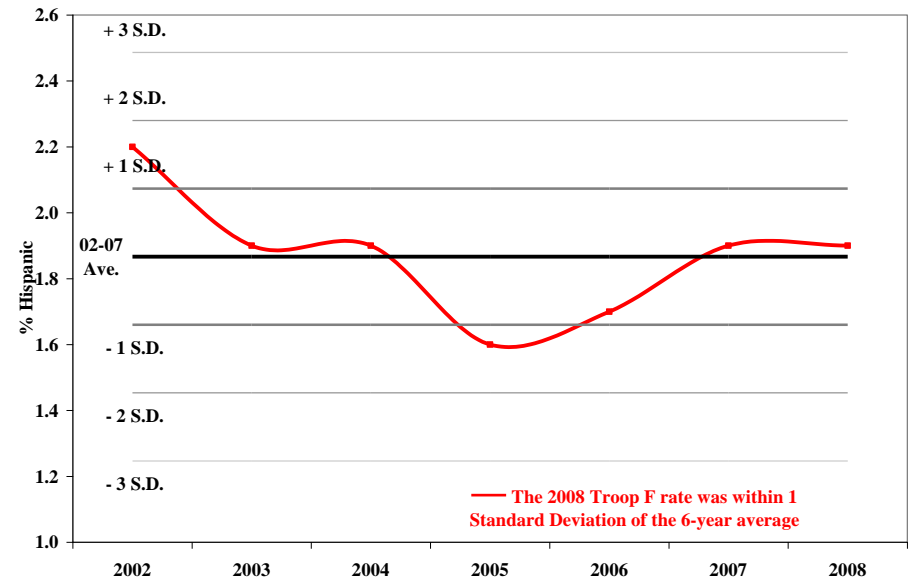
The rate of traffic stops involving Hispanic drivers in Troop M between 2002 and 2008 are reported in Figure 4.10. The 2008 rate virtually identical to the 2007 rate and was within one standard deviation of the six-year average for this organizational unit. The past four years have been relatively stable after a steady increase in the previous years.

Figure 4:11: Percent of Traffic Stops with Black Drivers – Troop F



The rate of traffic stops involving Black drivers in Troop F between 2002 and 2008 are reported in Figure 4.11. The 2008 rate is slightly lower than the 2007 rate and within one standard deviation of the six-year average for this organizational unit. The lowest rate was reported in 2005, but has been relatively stable in the last three years.

Figure 4:12: Percent of Traffic Stops with Hispanic Drivers – Troop F



In 2008, the rate of traffic stops involving Hispanic drivers in Troop F was nearly identical to the 2007 rate and was within one standard deviation of the six-year average for this organizational unit. As demonstrated in Figure 4.12, the rate declined steadily between 2002 and 2005 before increasing in 2006 and 2007.

Figure 4:13: Percent of Traffic Stops with Black Drivers – Troop N

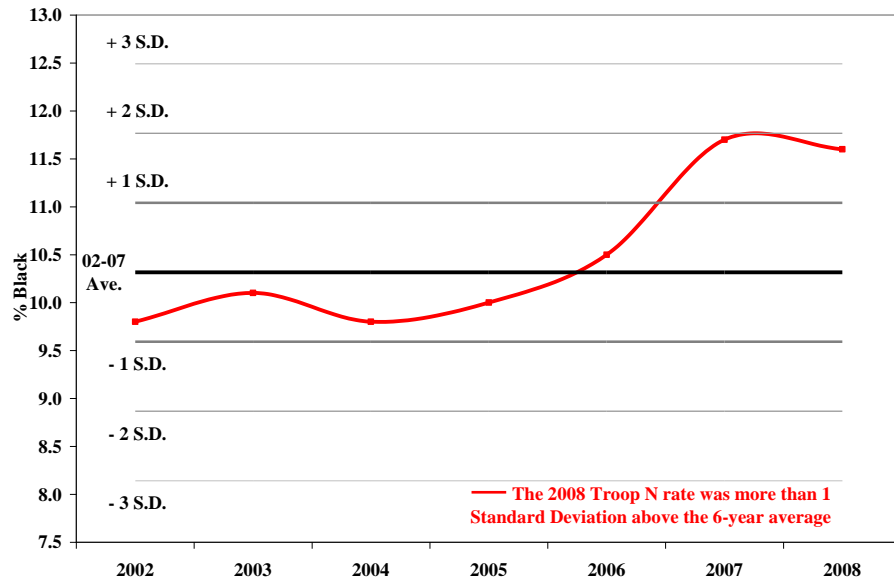


Figure 4.13 displays the rate of traffic stops involving Black drivers in Troop N between 2002 and 2008. The 2008 rate was slightly lower than the previous year and more than one standard deviation above the six-year average for this organizational unit. An upward trend began in 2005 prior to stabilizing in the past two years.

Figure 4:14: Percent of Traffic Stops with Hispanic Drivers – Troop N

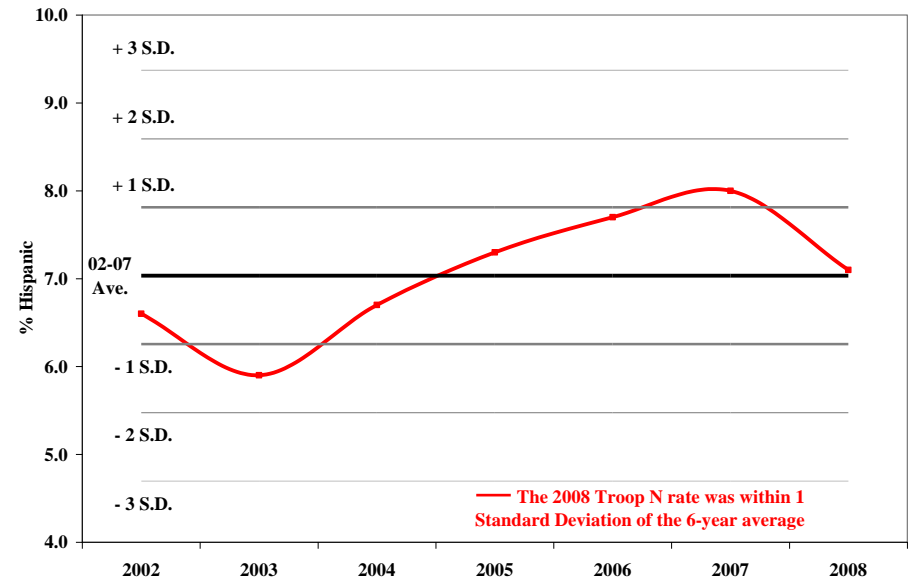
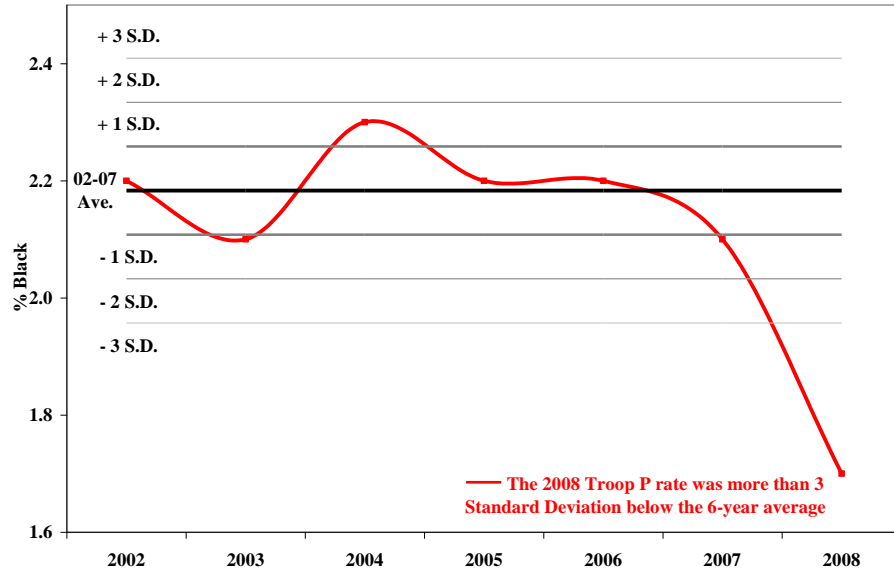


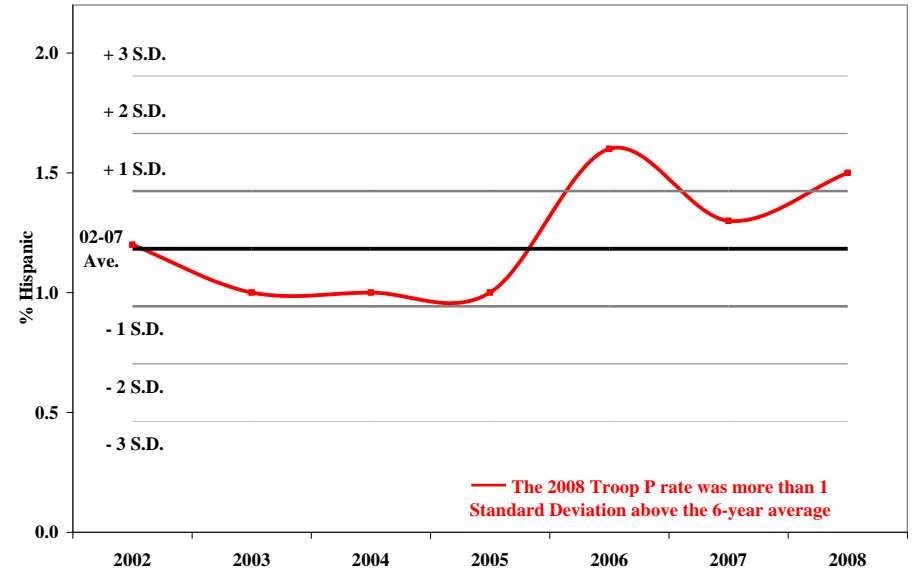
Figure 4.14 displays the rate of traffic stops involving Hispanic drivers in Troop N between 2002 and 2008. The 2008 rate was lower than in 2007 and closely mirrored the six-year average. This reduction broke the four-year upward trend that began in 2004. The lowest rate occurred in 2003 and represented a decline from the 2002 rate.

Figure 4:15: Percent of Traffic Stops with Black Drivers – Troop P



The rate of traffic stops involving Black drivers in Troop P between 2002 and 2008 is reported in Figure 4.15. The 2008 rate was substantially lower than any previous year and continued a downward trend originating in 2005. It was also more than three standard deviational units below the six-year average.

Figure 4:16: Percent of Traffic Stops with Hispanic Drivers – Troop P



The rate of traffic stops involving Hispanic drivers in Troop P between 2002 and 2008 is reported in Figure 4.16. The 2008 rate was more than one standard deviation above the six-year average for this organizational unit. After several years of relative stability, the rate increased in 2006, decreased in 2007, and increased in 2008.

Figure 4:17: Percent of Traffic Stops with Black Drivers – Troop R

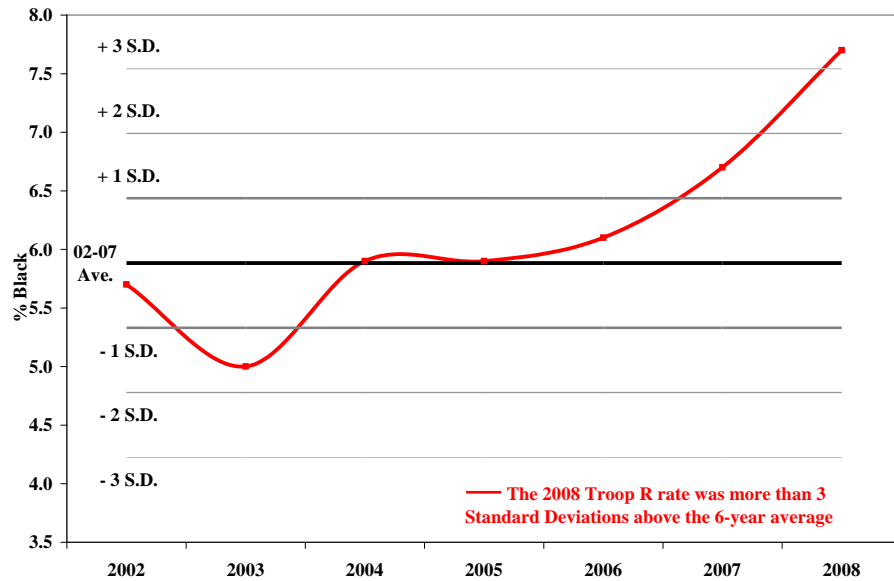
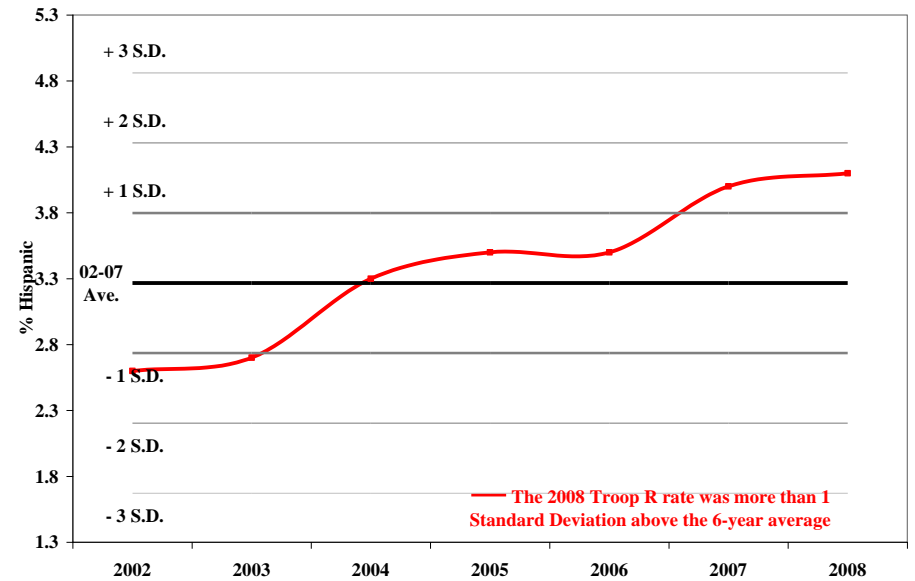


Figure 4.17 displays the rate of traffic stops involving Black drivers in Troop R between 2002 and 2008. Since 2003, the rate has steadily increased culminating with the 2008 rate more than three standard deviations above the six-year average for this organizational unit. The 2008 rate was nearly 3 percentage points higher than the 2003 rate.

Figure 4:18: Percent of Traffic Stops with Hispanic Drivers – Troop R



The rate of traffic stops involving Hispanic drivers in Troop R has been steadily increasing since data collection began in 2002. As demonstrated in Figure 4.18, the lowest rate was 2.6% in 2002, while the 2008 rate was the highest at 4.0%. As a result, the 2008 rate was more than one standard deviation above the six-year average for this organizational unit.

Figure 4:19: Percent of Traffic Stops with Black Drivers – Troop A

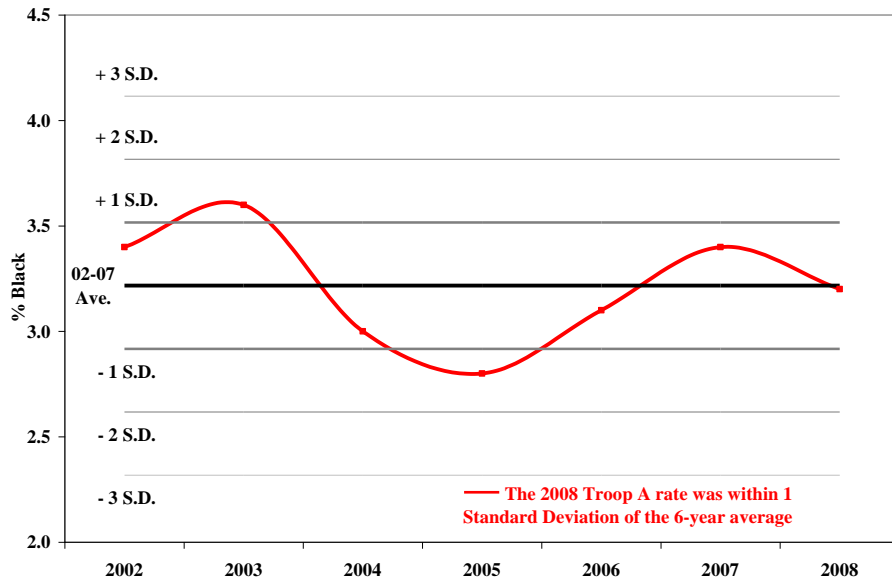
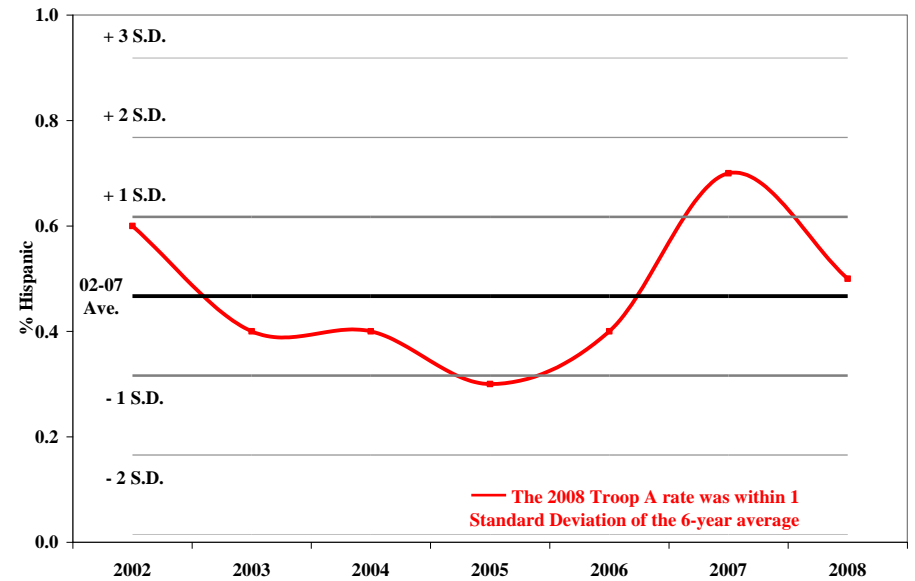


Figure 4.19 displays the rate of traffic stops for Black drivers in Troop A between 2002 and 2008. The 2008 rate was nearly identical to the six-year average and was within one standard deviation of the six-year average for this organizational unit. After higher rates in 2002 and 2003, the rates fell in 2004 and 2005. The increases in 2006 and 2007 were ended with the 2008 result.

Figure 4:20: Percent of Traffic Stops with Hispanic Drivers – Troop A



The rate of traffic stops involving Hispanic drivers in Troop A between 2002 and 2008 is reported in Figure 4.20. The 2008 rate was reduced from the 2007 rate and within one standard deviational unit of the six-year average. There has been little stability in the seven-year trend, with initial declines between 2002 and 2005 prior to increases in 2006 and 2007.

Figure 4:21: Percent of Traffic Stops with Black Drivers – Troop G

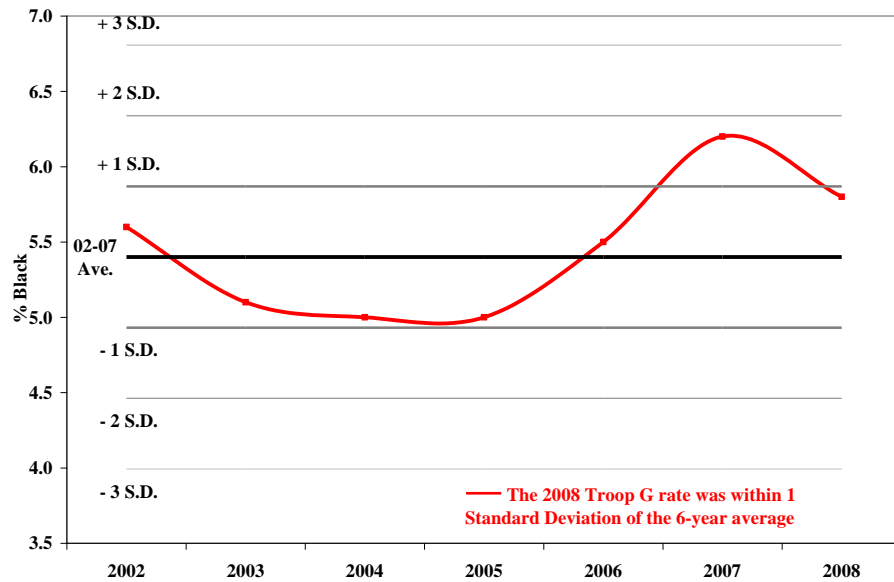
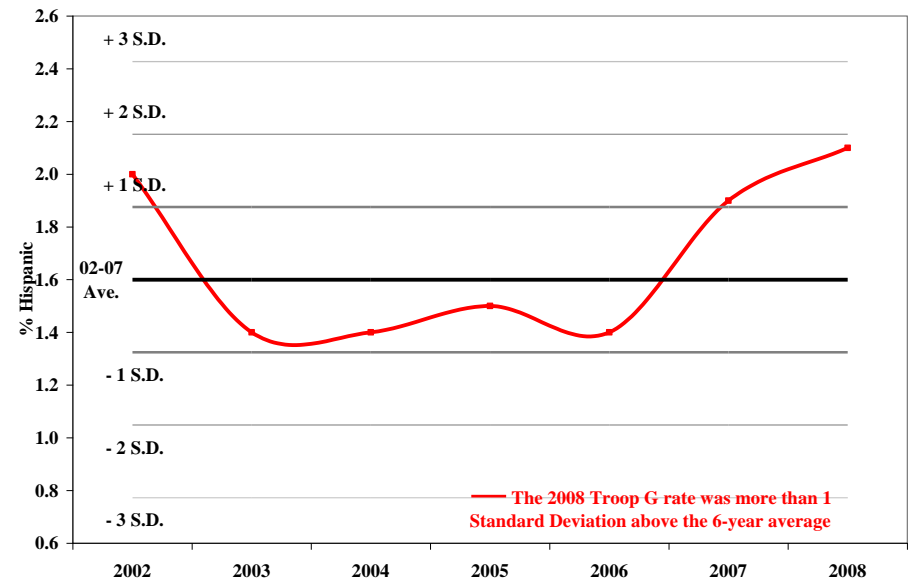


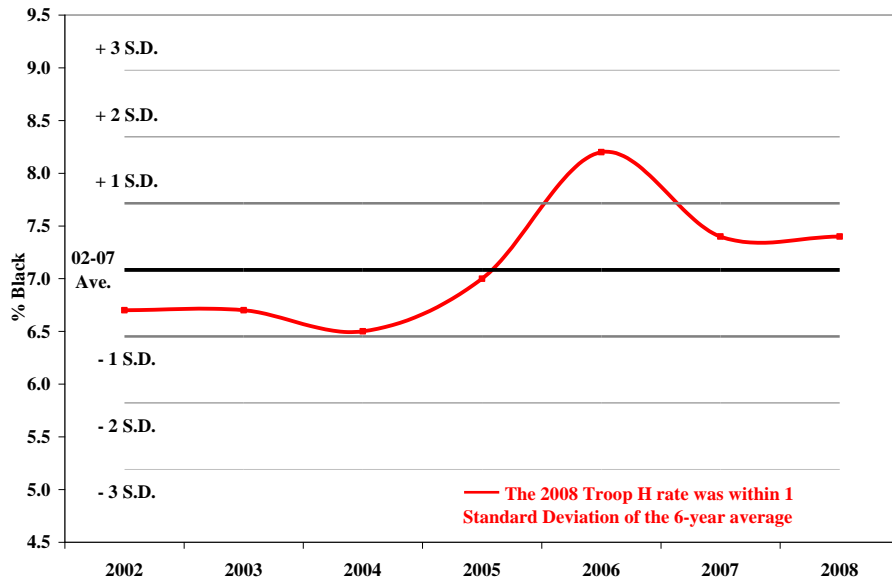
Figure 4.21 displays the rate of traffic stops for Black drivers in Troop G between 2002 and 2008. The 2008 rate was less than the 2007 rate and within one standard deviation of the six-year average for this organizational unit. The 2008 rate stemmed an upward trend that began in 2006. Assessing the longer trend indicates that the rates initially dipped in 2003 and remained relatively unchanged until the increase in 2006.

Figure 4:22: Percent of Traffic Stops with Hispanic Drivers – Troop G



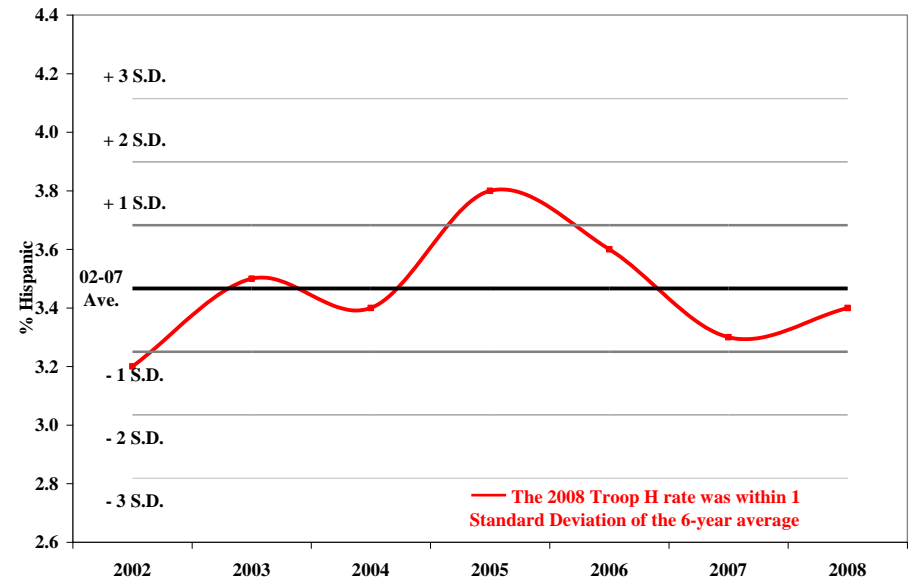
The rate of traffic stops involving Hispanic drivers between 2002 and 2008 is reported in Figure 4.22 for Troop G. The 2008 rate was more than one standard deviation above the six-year average for this organizational unit and continued the upward trend initiated in 2007. Throughout the seven years of data collection, the highest rate of traffic stops involving Hispanic drivers occurred in 2008.

Figure 4:23: Percent of Traffic Stops with Black Drivers – Troop H



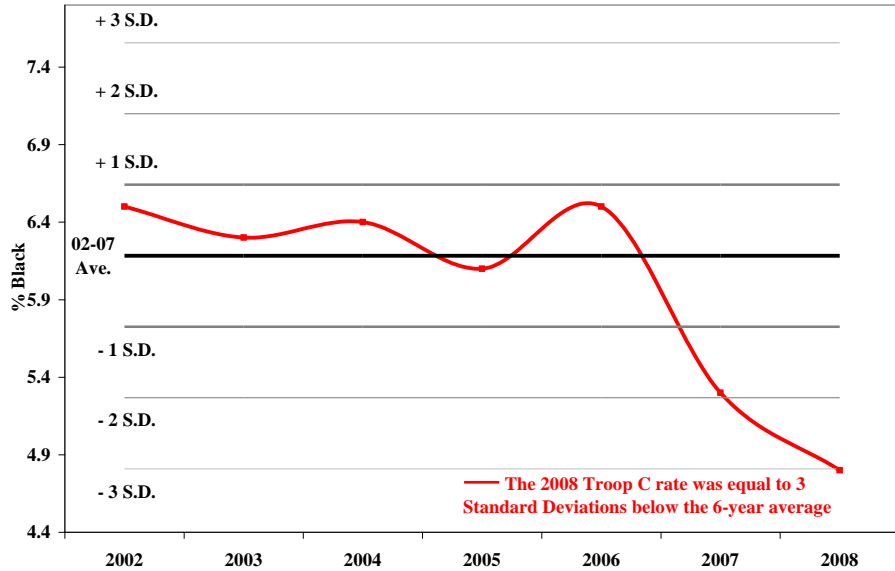
As reported in Figure 4.23, the 2008 rate of traffic stops involving Black drivers in Troop H was within one standard deviation of the six-year average for this organizational unit. This rate represented an identical rate compared to 2007. Across all years, there is consistency in activity except for the increase between 2004 and 2006.

Figure 4:24: Percent of Traffic Stops with Hispanic Drivers – Troop H



The rate of traffic stops involving Hispanic drivers in Troop H between 2002 and 2008 is reported in Figure 4.24. The 2008 rate was slightly higher than the previous year, but was within one standard deviation of the six-year average in this organizational unit. The 2008 rate broke a downward trend that began in 2006. The lowest rate was reported in 2002.

Figure 4:25: Percent of Traffic Stops with Black Drivers – Troop C



The rate of traffic stops involving Black drivers between 2002 and 2008 are reported for Troop C in Figure 4.25. The 2008 rate exhibited a noticeable reduction from previous years and continued a downward trend that began in 2007. The 2008 rate was equal to three standard deviational units below the six-year average for this organizational unit. Prior to 2007, the rate was relatively unchanged, with some variation in 2005 and 2006.

Figure 4:26: Percent of Traffic Stops with Hispanic Drivers – Troop C

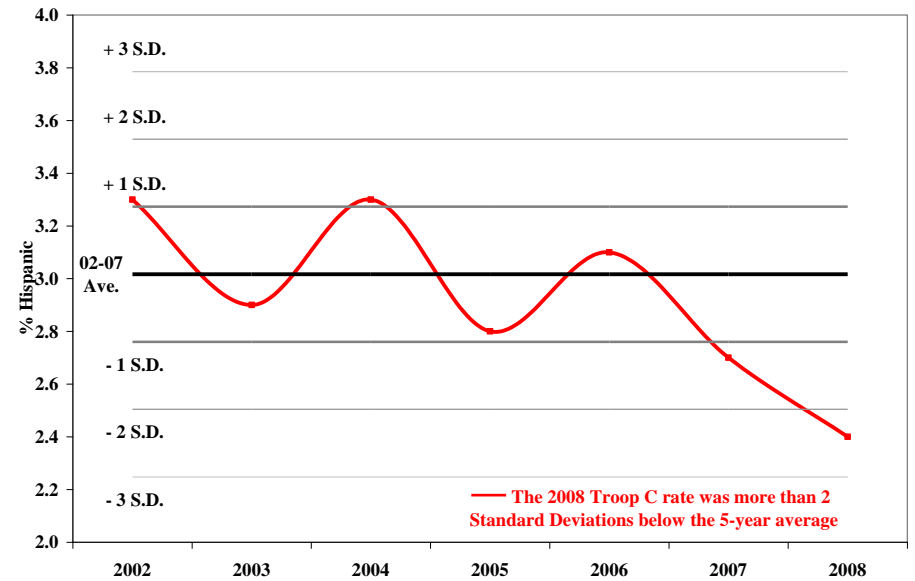


Figure 4.26 displays the rate of traffic stops for Hispanic drivers in Troop C between 2002 and 2008. The 2008 rate continued a downward trend that began in 2007 and was more than two standard deviations below the six-year average for this organizational unit. The general trend for all seven years is a slight decrease with year-to-year fluctuations. The highest rate occurred in 2002 and 2004, while 2008 reported the lowest rate to date.

Figure 4:27: Percent of Traffic Stops with Black Drivers – Troop D

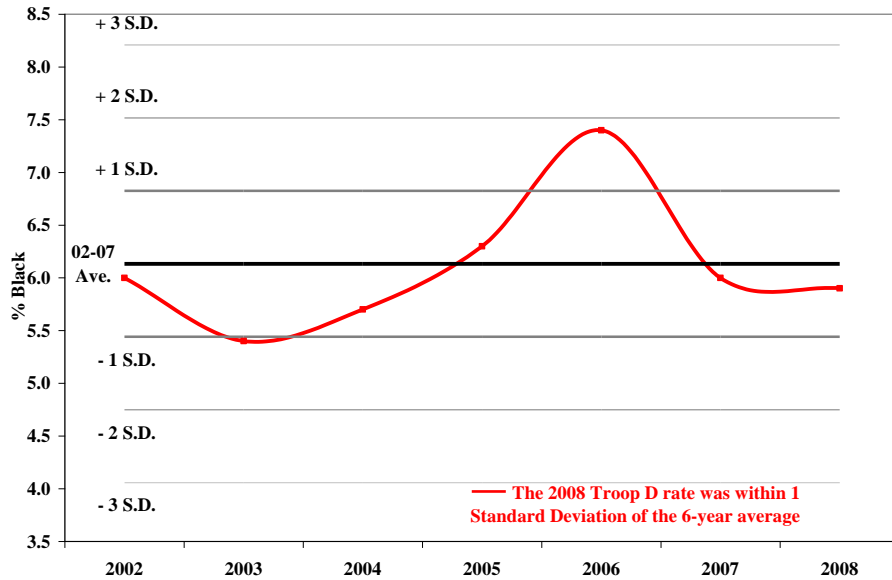
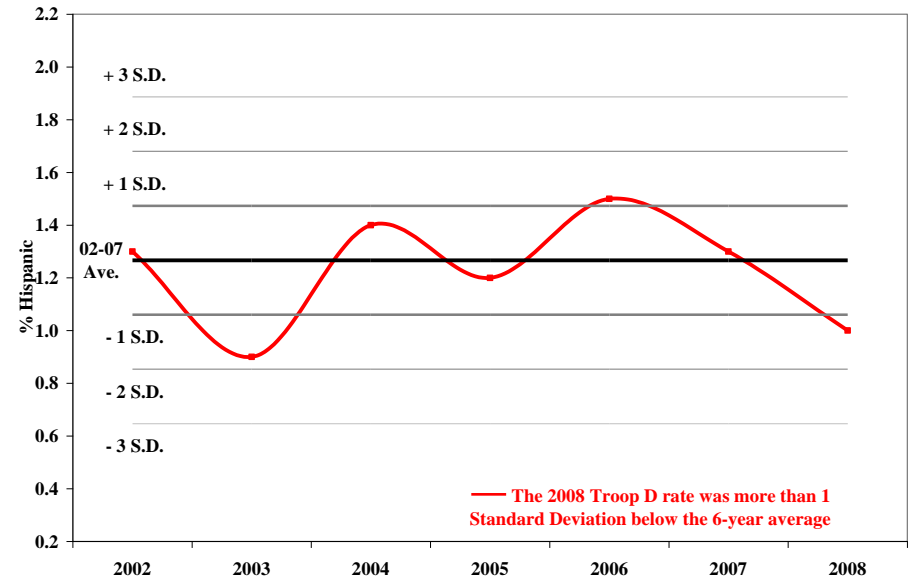


Figure 4.27 displays the rate of traffic stops involving Black drivers in Troop D between 2002 and 2008. The 2008 rate was relatively unchanged from both the previous year and the six-year average for this organizational unit. The 2008 rate was also within one standard deviation of the six-year average. The lowest rate occurred in 2003 and the highest rate in 2006.

Figure 4:28: Percent of Traffic Stops with Hispanic Drivers – Troop D



The rate of traffic stops involving Hispanic drivers in Troop D between 2002 and 2008 is reported in Figure 4.28. The 2008 rate was more than one standard deviation below the six-year average for this organizational unit and continues a downward trend that began in 2007. The 2003 rate was the lowest rate of traffic stops involving Hispanic drivers since data collection was initiated.

Figure 4:29: Percent of Traffic Stops with Black Drivers – Troop E

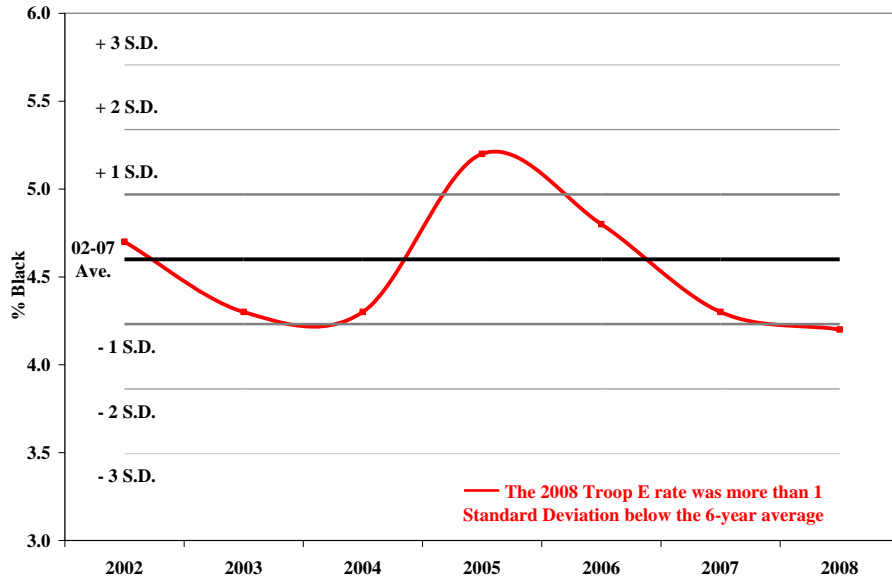
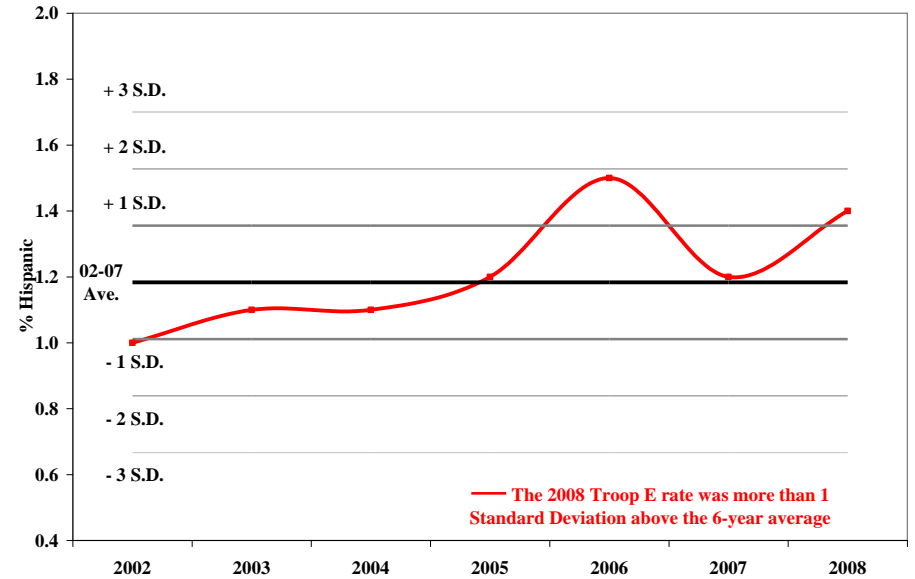


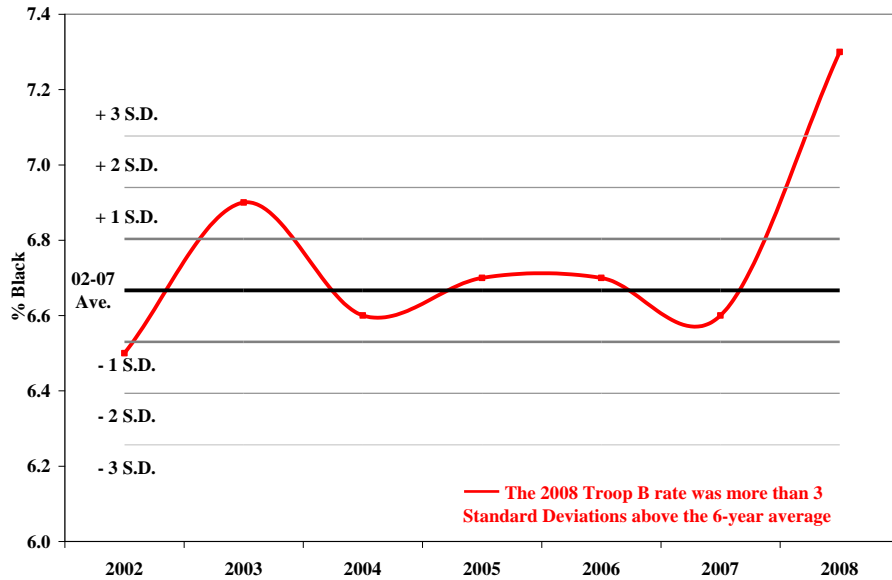
Figure 4.29 displays the rate of traffic stops involving Black drivers in Troop E between 2002 and 2008. The 2008 rate was slightly less than the 2007 and continued the downward trend initiated in 2006. The 2008 rate was more than one standard deviation below the six-year average for this organizational unit. It also marked the lowest rate on record in contrast to the 2005 rate, which represented the highest rate in any of the seven years of data collection.

Figure 4:30: Percent of Traffic Stops with Hispanic Drivers – Troop E



The rate of traffic stops involving Hispanic drivers in Troop E between 2002 and 2008 is reported in Figure 4.30. The 2008 rate was more than one standard deviation above the six-year average for this organizational unit. The 2008 rate also represented an increase from the 2007 rate; the 2002 rate remains the lowest of any of the seven years.

Figure 4:31: Percent of Traffic Stops with Black Drivers – Troop B



The rate of traffic stops involving Black drivers in Troop B between 2002 and 2008 is reported in Figure 4.31. The 2008 rate was the highest on record and was more than three standard deviations above the six-year average. This upswing followed three years of relative stability. The lowest rate was recorded in 2002.

Figure 4:32: Percent of Traffic Stops with Hispanic Drivers – Troop B

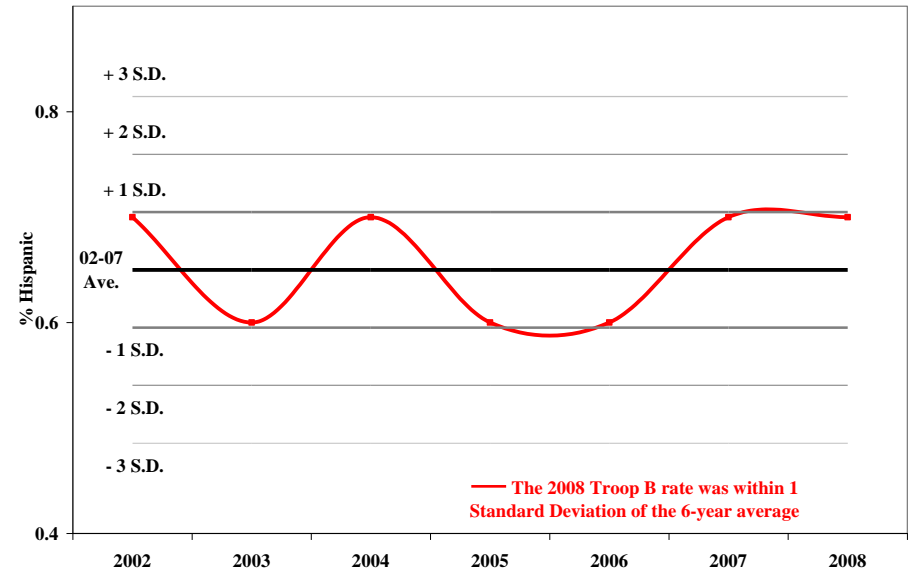


Figure 4.32 displays the rate of traffic stops involving Hispanic drivers in Troop B between 2002 and 2008. The 2008 rate was within one standard deviation of the six-year average for this organizational unit. Across the six years of data collection, Troop B's rate fluctuated from a high of 0.7% in 2002, 2004, 2007, and 2008 to a low of 0.6% in 2003, 2005, & 2006. Overall, the change in rates is not large and indicates few encounters with Hispanic drivers in Troop B.

Figure 4:33: Percent of Traffic Stops with Black Drivers – Troop T

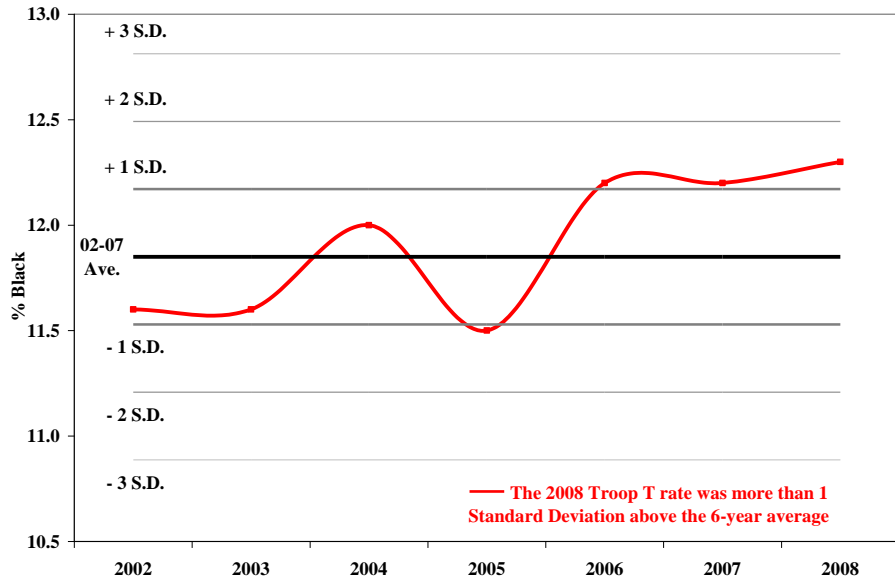
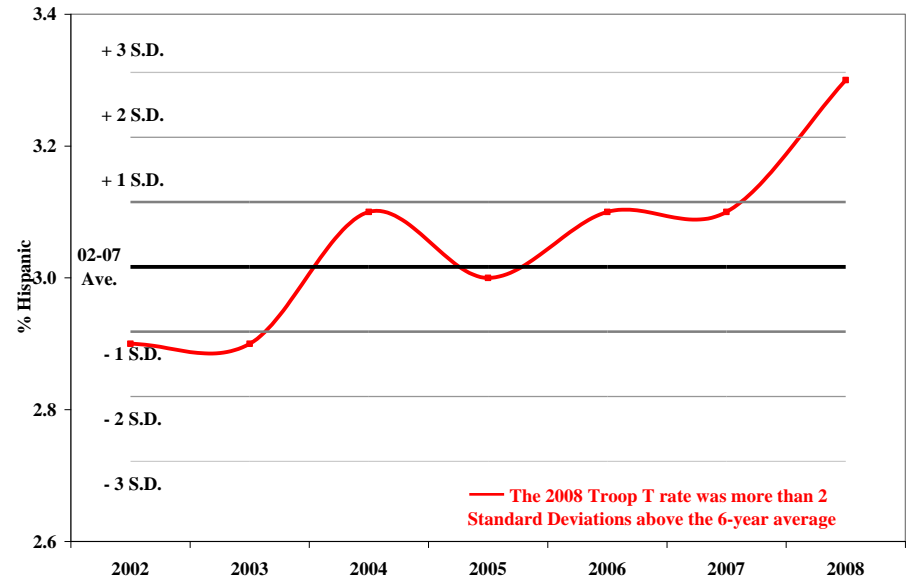


Figure 4.33 displays the rate of traffic stops involving Black drivers between 2002 and 2008 in Troop T. The 2008 rate was slightly higher than the 2007 rate and was more than one standard deviation above the six-year average for this organizational unit. These most recent years represent the highest rate of traffic stops involving Black drivers in any of the seven years of data collection.

Figure 4:34: Percent of Traffic Stops with Hispanic Drivers – Troop T



The rate of traffic stops involving Hispanic drivers in Troop T between 2002 and 2008 is reported in Figure 4.34. The 2008 rate continues an upward trend initiated in 2006 and was more than two standard deviations above the six-year average for this organizational unit. The lowest rates of traffic stops involving Hispanic drivers occurred in 2002 & 2003.

SUMMARY

Section 4 summarizes the trends in traffic stops for Black and Hispanic drivers between 2002 and 2008 at the department and troop levels⁷. It is important to note that the analyses reported in this section are descriptive and cannot be used to determine the causes of the trends reported. The available data simply cannot be used to determine why certain organizational units reported increases in the percentage of stops involving Black or Hispanic drivers. Some factors potentially responsible for upward trends include:

- Changes in the racial/ethnic composition of residential populations serviced by those organizational units which have altered the racial/ethnic composition of drivers eligible to be stopped
- Alterations to the reporting patterns by PSP troopers
- Other changes in travel patterns that differentially impact the percentages of minority drivers on particular roadways
- Adjustments to PSP deployment patterns and manpower allocation to address changes in reported criminal patterns and calls for service, resulting in higher concentrations of Troopers in areas where minorities are more likely to travel and/or violate the law
- Trooper behavior toward minority drivers may have changed across time

Importantly, it is not possible to conclusively determine that an upward trend in traffic stops indicates racially biased behavior. One factor or a combination of factors listed above may be responsible for such trends.

The major findings of the traffic stop temporal analyses are:

- Department wide, the 2008 rate of traffic stops involving Black drivers was more than one standard deviation above the six-year average for that organizational unit. The departmental rate of traffic stops was primarily influenced by rates of Black drivers stopped in Troops R and B, which were more than three standard deviations above their six-year average.
- Department wide, the 2008 rate of traffic stops involving Hispanic drivers was within one standard deviation of the six-year average.

Troop trends for **Black** drivers (n=16 troops):

- 7 troops reported 2008 traffic stop rates of **Black** drivers that were within one standard deviation of the six-year average (Troops J, L, F, A, G, H and D)
- Increases in the 2008 rate of traffic stops involving **Black** drivers:
 - 3 troops were more than one standard deviation above their six-year averages (Troops M, N and T)
 - 1 troop was more than two standard deviations above its six-year average (Troop K)
 - 2 troops were more than three standard deviations above their six-year averages (Troops R and B)
- Decreases in the 2008 rate of traffic stops involving **Black** drivers:

⁷ No area level rates were reported due to the changes in organizational structure in 2008.

- 1 troop was more than one standard deviation below its six-year average (Troop E)
- No troop was more than two standard deviations below their six-year averages
- 2 troops were more than three standard deviations below their six-year average (Troop P and C)

Troop trends for **Hispanic** drivers (n=16 troops):

- 8 troops reported 2008 traffic stop rates of **Hispanic** drivers that were within one standard deviation of their six-year average (Troops J, L, M, F, N, A, H and B)
- Increases in the 2008 rate of traffic stops with **Hispanic** drivers:
 - 5 troops were more than one standard deviation above their six-year averages (Troops K, P, R, G and E)
 - 1 troop was more than two standard deviations above its six-year average (Troop T)
 - No troops were more than three standard deviations above their six-year averages
- Decreases in the 2008 rate of traffic stops with **Hispanic** drivers:
 - 1 troop was more than one standard deviation below its six-year average (Troop D)
 - 1 troop was more than two standard deviations below their six-year average (Troop C)
 - No troop was more than three standard deviations below their six-year averages

5. TRAFFIC STOP OUTCOMES 2002 - 2008

OVERVIEW

Section 5 reports the temporal trends for warnings, citations, arrests, searches, and seizures between 2002 and 2008. Using the standard deviation methodology, the 2008 rate of all traffic stop outcomes are compared to the six-year average at the department level in Figures 5.1 – 5.5. Figures 5.6 – 5.10 present the information regarding the department level traffic stop outcomes in bar charts in order to display the rates of traffic stop outcomes by racial/ethnic group.⁸ The rates of traffic stop outcomes at the troop are reported in graph format in Figures 5.11 – 5.74, and all station level trends are reported in Appendix B.

As described in Section 4, temporal analyses are best used to summarize the rate of activity (i.e., the rate of traffic stop outcomes of a selected group) within organizational units across time. This section exclusively uses this type of analysis to compare the rate of traffic stop outcomes of Black and Hispanic citizens within one organizational unit. In this manner, the rates from year to year in a jurisdiction are comparable. In effect, differences between organizational units are considered in these analyses and do not influence the results. As a result, the strength of documenting temporal trends is to examine differences within organizational units across time.

The research team purposefully does not offer a value assessment of the 2008 rate in relation to the six-year average. In other words, the research team does not assign a “cutoff value” for an acceptable rate of traffic stop outcomes. The graphs demonstrating temporal values are strictly a tool to assess trends over time in the rate of traffic stop outcomes and to identify organizational units that are experiencing noticeable increases in their rate of traffic stop outcomes of Black or Hispanic drivers. There are numerous factors beyond the scope of this methodology that may be directly related to changes in the rate of traffic stop outcomes. For example:

- changes in the traffic population within that jurisdiction
- alterations to the reporting patterns by PSP troopers
- adjustments in PSP traffic stop behaviors
- differences in deployment patterns across time
- modifications of manpower allocation

Any single factor or a combination of these factors may influence the rate of traffic stop outcomes of minority drivers in any year and result in an increase or decrease in the rates reported in the graphs below. The following graphs are to be interpreted with caution and cannot be used as evidence of overt biased policing by the PSP or any of its organizational units. While no definitive conclusions regarding bias in traffic stop outcomes can be ascertained from the following graphs, they do offer a basic picture of the traffic stop outcome trends by organizational unit.

For the trends in arrests and searches during traffic stops, it is important to remember that, prior to 2006 there were some data inconsistencies for these outcomes. As documented in the *2003-2004 Final Report*, during focus groups conducted with PSP Troopers in August

⁸ No graphs are presented at the area level due to changes to the organizational structure in 2008.

2005, it was discovered that there were some problems associated with the ongoing data collection project. Specifically, it became apparent that not all Troopers were completing the Contact Data Reports during all member-initiated stops and were, in particular, underreporting traffic stops resulting in arrests and/or searches that resulted in the discovery of contraband. Upon discovery of these discrepancies, the PSP immediately addressed and corrected these issues. Nevertheless, based on the known problems of underreporting of arrests and searches, firm conclusions regarding trends in these outcomes cannot be made.

TRAFFIC STOP OUTCOMES: 2002 – 2008

This section documents the rate of warnings, citations, arrests, searches, and seizures across the department between 2002 and 2008 in Figures 5.1 – 5.5. A standard deviational methodology is applied to traffic stop outcomes of Black and Hispanic drivers at the department level. The standard deviation is a statistical indicator that offers a range of roughly “average” values. Using this statistic, rates of traffic stop outcomes within one standard deviation of the six-year average were operating in a similar fashion to the six-year average. Rates of traffic stop outcomes more than two standard deviations outside their six-year average were experiencing a shift from previous years, and any rate of traffic stop outcomes beyond three standard deviations is roughly equivalent to achieving statistical significance using a statistical test.

For each racial/ethnic group, a solid black line shows the six-year average. Moving up and down from this central number are the values for one, two, and three standard deviations above and below the six-year average, respectively. The red line indicates the actual rate of traffic stop outcomes in each year. The interpretation is straightforward: if the red line is above the six-year average at one time point, the rate for that year was above the average; similarly, if the red line is below the black line, the rate for that year was below the average.

Each graph includes text indicating how the 2008 rate of traffic stop outcomes compares to the value of the standard deviation (based on the previous six years). This provides a simple method to assess any of the seven years of data in relation to the six-year trend, while also offering substantive information regarding the difference between the specific year and the average. In summary, each graph reports the following information:

- the actual rate of traffic stop outcomes for each year
- each year’s rate of traffic stop outcomes in relation to the six-year average
- each year’s rate of traffic stop outcomes in standard deviational units
- the overall trend of traffic stop outcomes

Figure 5.1: Percent of Traffic Stops Resulting in Warnings – Department

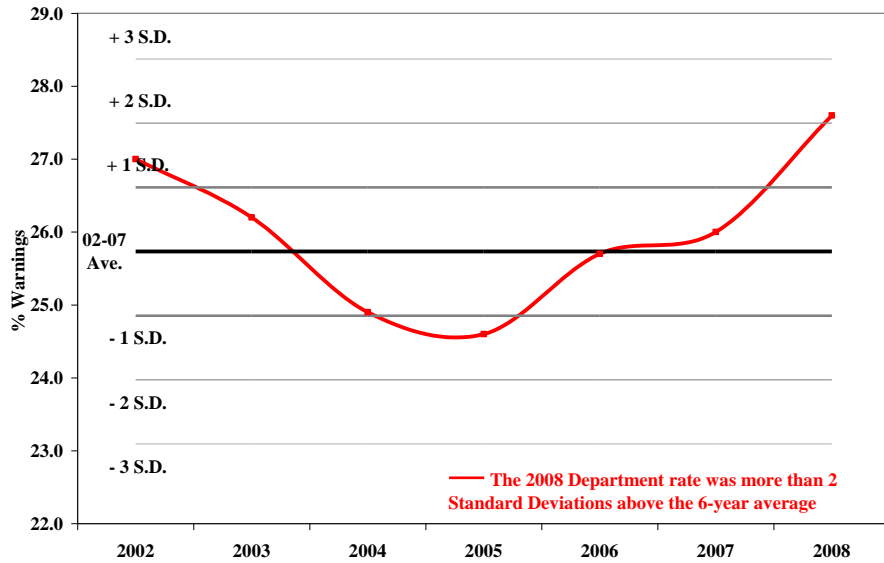
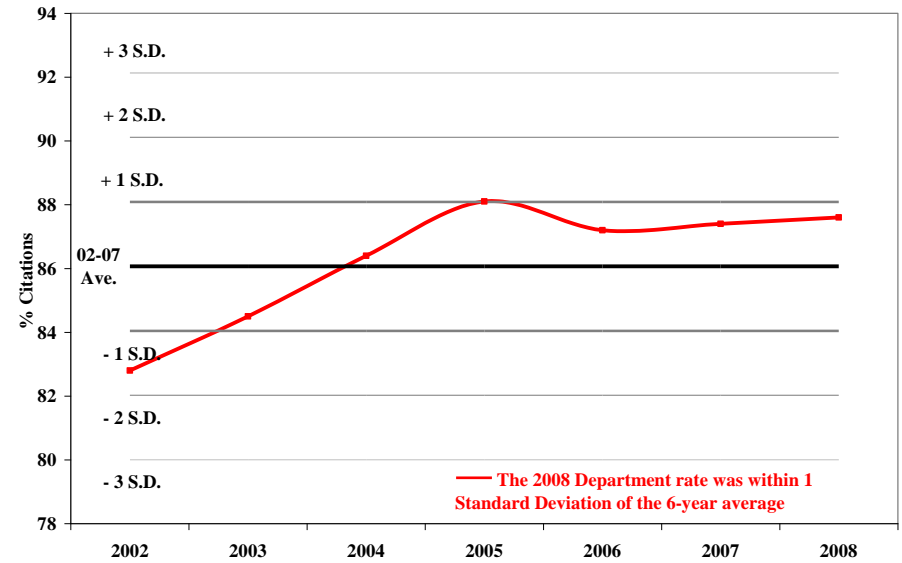


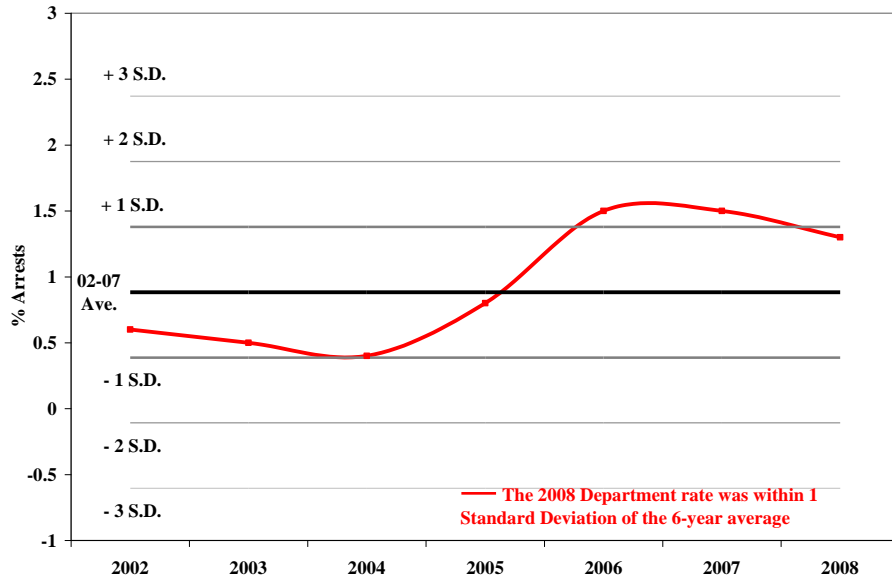
Figure 5.1 displays the rate of warnings (i.e., the number of traffic stops resulting in a warning divided by the total number of traffic stops) throughout the department between 2002 and 2008. The 2008 warning rate was more than two standard deviations above the six-year average. Throughout the seven years of data collection, the rates of warnings issued have been relatively stable have ranged from a low of 24.6% in 2005 to a high of 27.6% in 2008.

Figure 5.2: Percent of Traffic Stops Resulting in Citations – Department



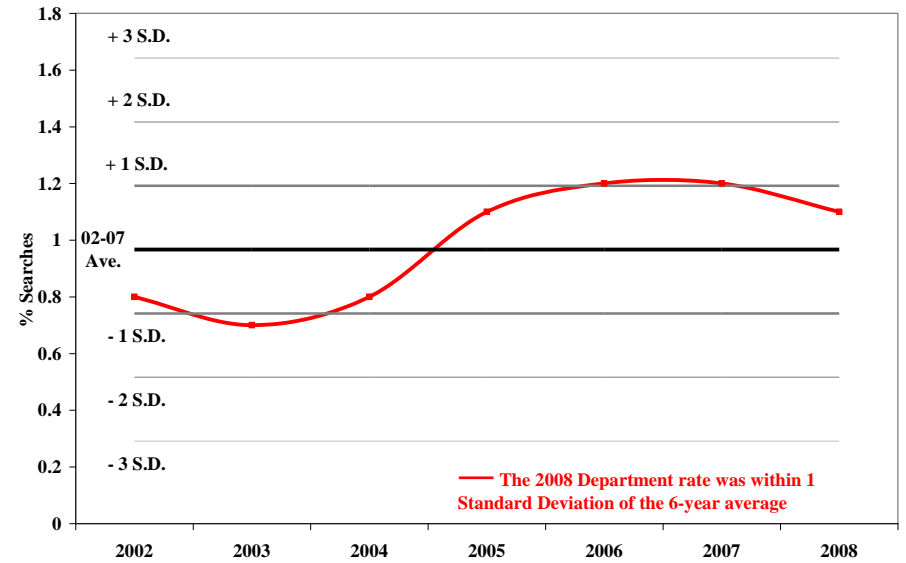
The citation rate (i.e., the number of traffic stops resulting in a citation divided by the total number of traffic stops) for the department between 2002 and 2008 is reported in Figure 5.2. The 2008 citation rate was within one standard deviation of the six-year average. There are two trends evident based on the six years of data collection. Between 2002 and 2005, there was a steady increase in citation rates, from a low of 83.0% to a high of 88.1% in 2005. Since 2006, the citation rate has been relatively stable.

Figure 5:3: Percent of Traffic Stops Resulting in Arrest – Department



The arrest rate (i.e., the number of traffic stops resulting in arrests divided by the total number of traffic stops) for the department between 2002 and 2008 is summarized in Figure 5.3. The 2008 arrest rate was within one standard deviation of the six-year average and slightly less than the 2007 rate. The seven-year trend indicates that there was a considerable rise in the arrest rate between 2004 and 2006, but this upswing is at least partially the result of discrepancies in the data collection regarding arrests prior to 2006, as documented in the *2003 - 2004 Final Report*. These data collection limitations were believed to result in an underreporting of arrests prior to 2006. Therefore, it is likely that this reported upswing is simply the result of more accurate reporting since 2006, rather than changes in actual outcomes received by motorists. This is further evidenced by the stability in the arrest rate since 2006.

Figure 5:4: Percent of Traffic Stops Resulting in Searches – Department



The search rate (i.e., the number of traffic stops resulting in a search divided by the total number of traffic stops) for the department between 2002 and 2008 is reported in Figure 5.4. The 2008 search rate was within one standard deviation of the six-year average and slightly less than the 2007 rate. The seven-year trend indicates relative stability in the past four years after an increase in 2005. Similar to the arrest rate, however, there were some data collection problems prior to 2006, which may have resulted in an underreporting of searches throughout the department. Please refer to the *2003 - 2004 Final Report* for further discussion of these limitations.

Figure 5:5: Percent of Searches Resulting in Seizures – Department

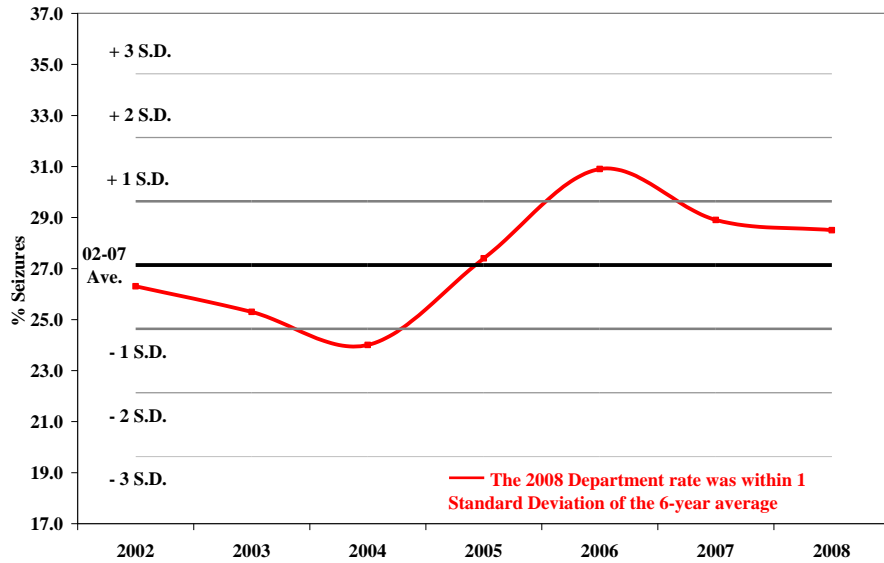


Figure 5.5 displays the seizure rate (i.e., the number of traffic stops resulting in the discovery of contraband divided by the number of traffic stops involving a search) for the department between 2002 and 2008. The 2008 seizure rate was within one standard deviation of the six-year average and similar to the 2007 seizure rate. Note that the seizure rate includes the discovery of contraband from searches made for any reason. Further examination of *discretionary* searches is conducted in Section 7.

Traffic Stop Outcomes by Race/Ethnicity: 2002-2008

Figures 5.6 – 5.10 display the rate of traffic stop outcomes at the department level between 2002 and 2008 for specific racial/ethnic groups. Due to the small number of traffic stops that occurred for some racial/ethnic groups (e.g., Native Americans, Asians, etc.), the statistics reported below are limited to comparisons of White, Black, and Hispanic drivers. All percentages reported in the following figures were calculated by taking the total number of traffic stop outcomes issued to a specific racial/ethnic group of drivers and dividing it by the total number of traffic stops for that group. In this manner, the percentages reflect only the outcomes that occurred within a specific racial/ethnic group.

Figure 5:6: Percent of Traffic Stops Resulting in Warnings by Race/Ethnicity – Department Wide

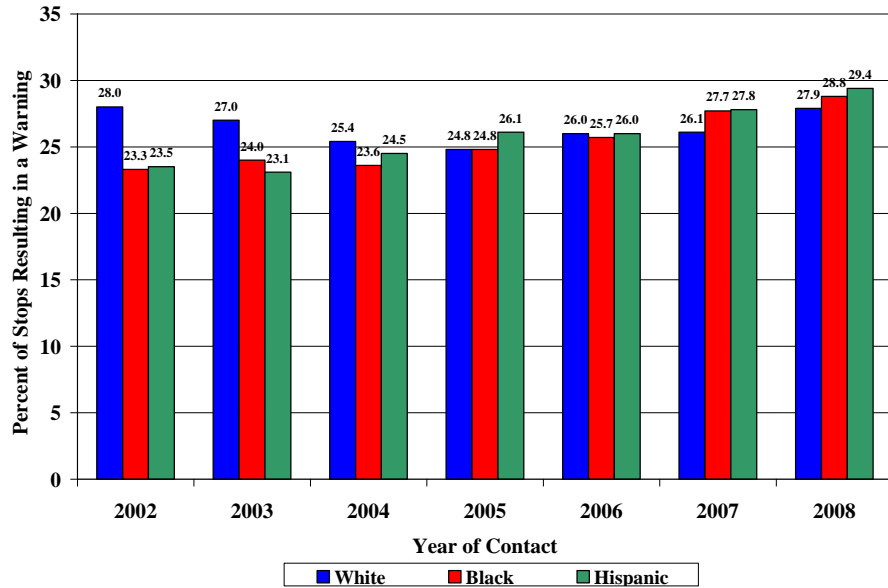
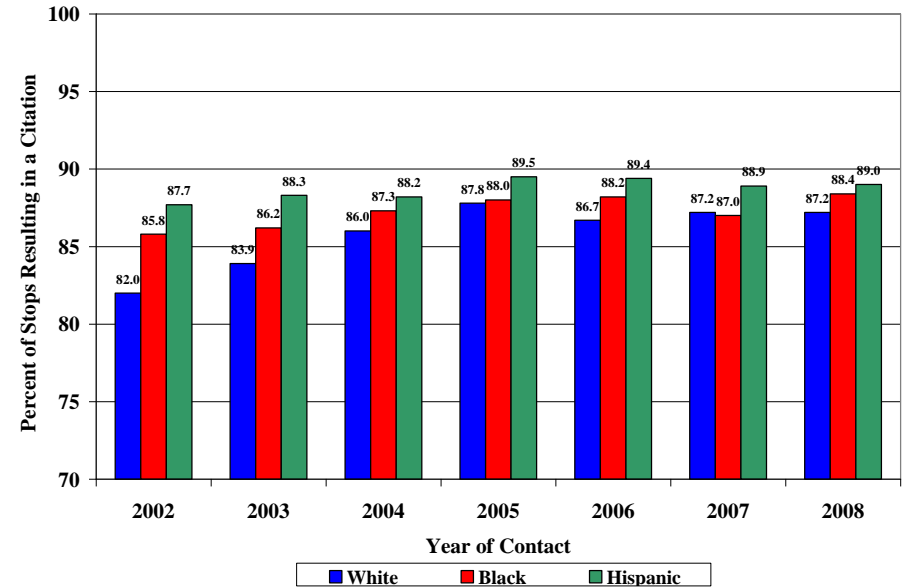


Figure 5.6 displays the department rate of warnings issued to White, Black, and Hispanic drivers between 2002 and 2008. In 2008, the warning rates for Black and Hispanic drivers were slightly higher than the warning rates for White drivers. Across the seven years, the warning rate for White drivers decreased between 2002 and 2005, but increased slightly in the last three years. The warning rates for Black and Hispanic drivers have increased in the past three years. Overall, White drivers had a higher warning rate between 2002 and 2004, but this trend has been reversed in the last two years.

Figure 5:7: Percent of Traffic Stops Resulting in Citations by Race/Ethnicity – Department Wide



The citation rate for White, Black, and Hispanic drivers throughout the department from 2002 to 2008 is reported in Figure 5.7. In 2008, the citation rate for Black and Hispanic drivers was higher than the rate for White drivers. Throughout the seven years of data collection, the citation rates for all groups increased between 2002 and 2004, but have stabilized in the past four years. Hispanic drivers consistently have the highest rate of citations, while White drivers are consistently the least cited group (except 2007).

Figure 5:8: Percent of Traffic Stops Resulting in Arrests by Race/Ethnicity – Department Wide

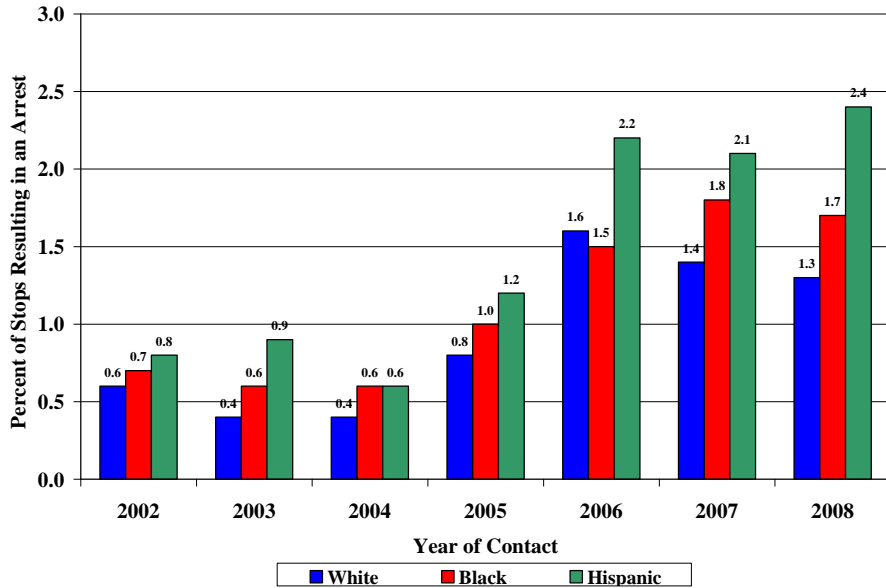
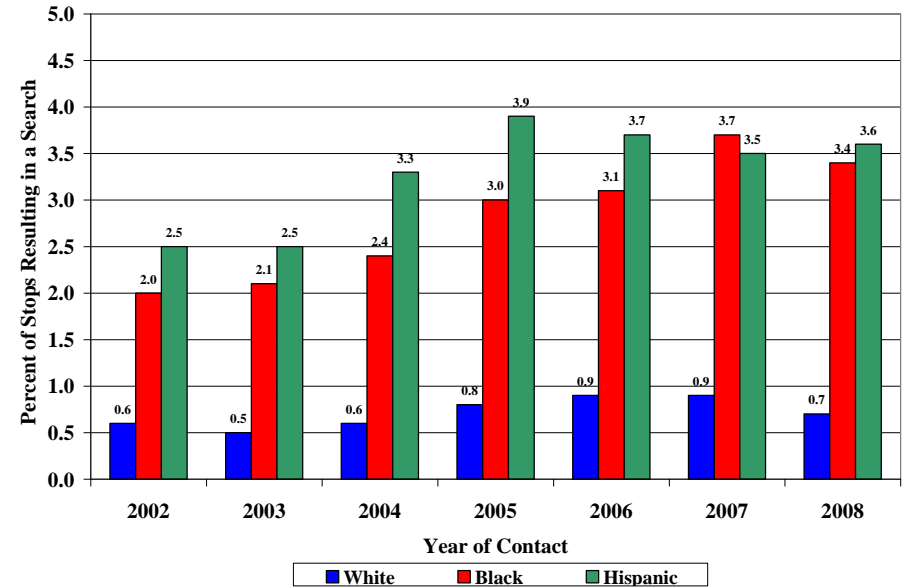


Figure 5.8 displays the arrest rate for White, Black, and Hispanic drivers throughout the department from 2002 to 2008. The overall arrest rates prior to 2006 may have been artificially depressed due to underreporting of arrests in those years. This should not influence the differences across racial/ethnic groups, however. In 2008, the arrest rate was highest for Hispanic drivers, followed by Black and White drivers, respectively, and the difference between the groups expanded. In all years, Hispanic drivers are arrested at a higher rate than the other two groups, with White drivers generally being arrested less frequently (except 2006).

Figure 5:9: Percent of Traffic Stops Resulting in Searches by Race/Ethnicity – Department Wide



The search rate for White, Black, and Hispanic drivers throughout the department from 2002 to 2008 is reported in Figure 5.9. In 2008, the search rate was highest for Hispanic drivers, followed by Black drivers and White drivers. Throughout the seven years of data collection, the search rate of White drivers has been relatively stable, with a slight bump in 2006 and 2007. For Black drivers, the search rate indicates an upward trend since 2002, with the 2008 rate breaking this trend. The search rate for Hispanic drivers also increased in early years of data collection, but has stabilized since 2005. Note, however, that the dramatic differences across racial/ethnic groups in terms of search rates have persisted across time.

Figure 5:10: Percent of Traffic Stops Resulting in Seizures by Race/Ethnicity – Department Wide

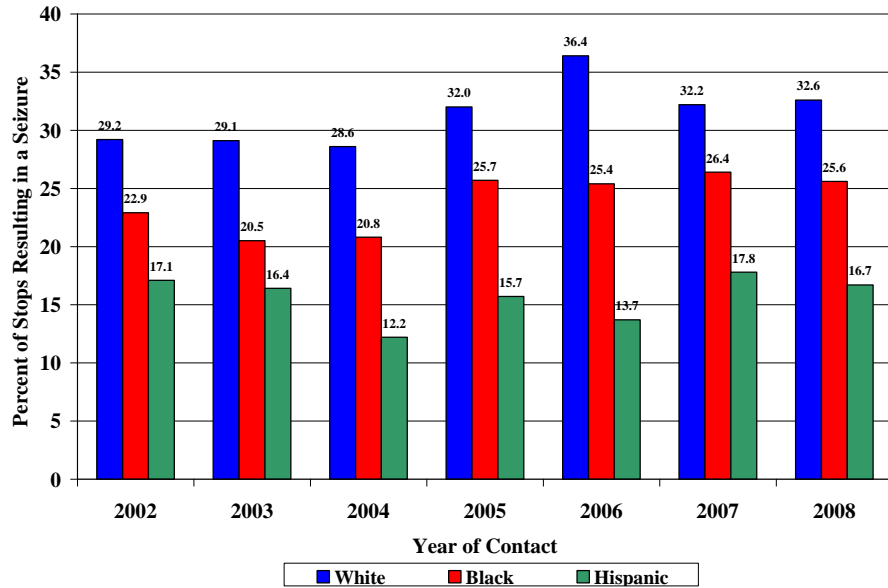


Figure 5.10 documents the seizure rate for White, Black, and Hispanic drivers throughout the department from 2002 to 2008. Again, these seizure rates include discoveries of contraband for searches based on any reason, including mandatory searches. In Section 7, seizure rates based strictly on *discretionary* searches are reported. In 2008, the seizure rate was highest for White drivers, followed by Black drivers and Hispanic drivers, respectively. For White drivers, the 2008 seizure rate mirrors the 2007 seizure rate. In 2008, the seizure rate for Black drivers was comparable to the previous four years, and the seizure rate for Hispanic drivers fell slightly in 2008 compared to 2007. Of note, in all seven years, White drivers are consistently found with contraband at higher rates than either Black or Hispanic drivers.

2002-2008 Temporal Trends - Troops

Figures 5.11 – 5.74 report the seven-year trend of warnings, citations, arrests, and searches for all drivers (black line), White drivers (red line), and non-White (blue line) drivers. Black, Hispanic, and “other” drivers are collapsed into a non-White category for comparisons due to the small number of minorities stopped in some troops. No trends are provided for seizure rates in these troops as some units had low rates of searches, thereby causing instability in the rates. The standard deviation methodology was not used in analyses of the troop trends due to potential instability in the results.⁹ These graphs are also presented without accompanying text due to the ease of interpretation of these graphs coupled with space considerations.

⁹ Standard deviational analyses are available upon request for any of these troops.

Figure 5:11: Percent of Traffic Stops Resulting in Warnings – Troop J

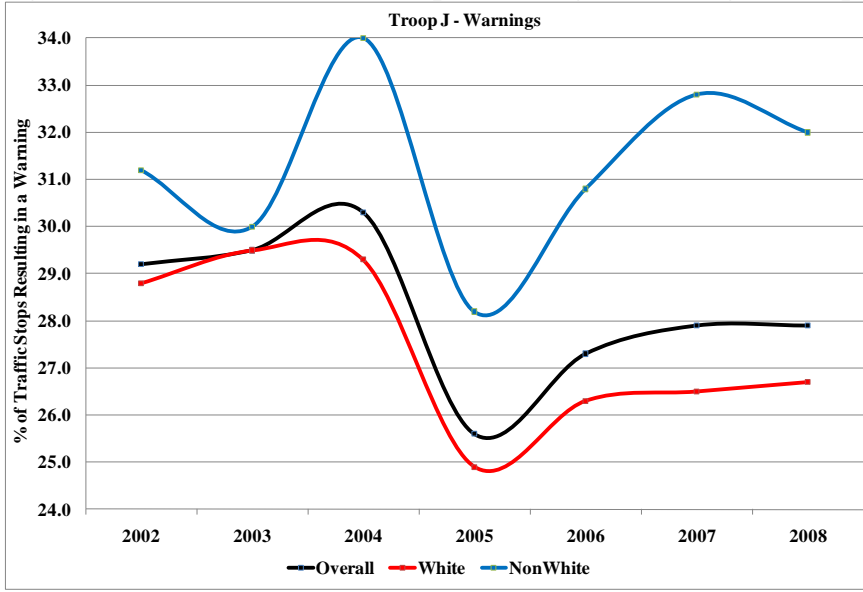


Figure 5:13: Percent of Traffic Stops Resulting in Arrests – Troop J

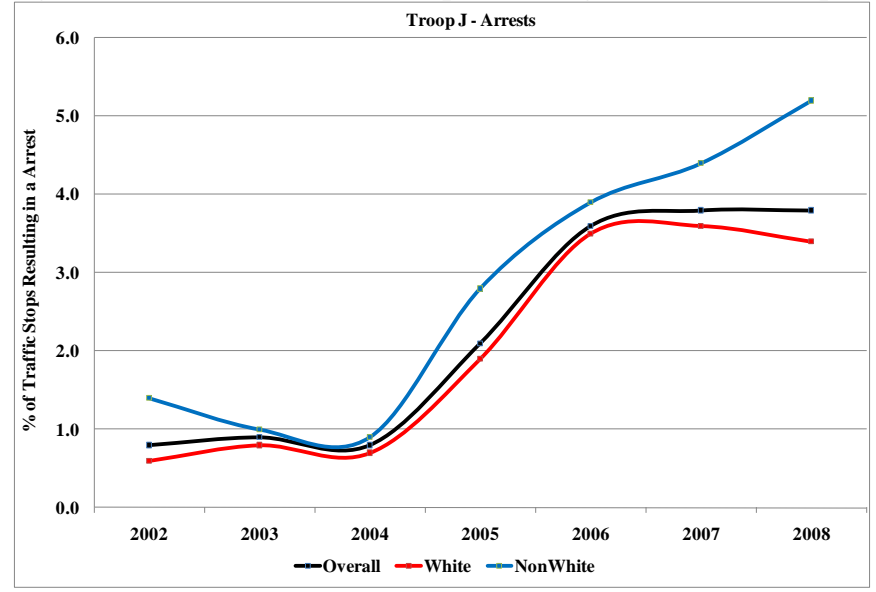


Figure 5:12: Percent of Traffic Stops Resulting in Citations – Troop J

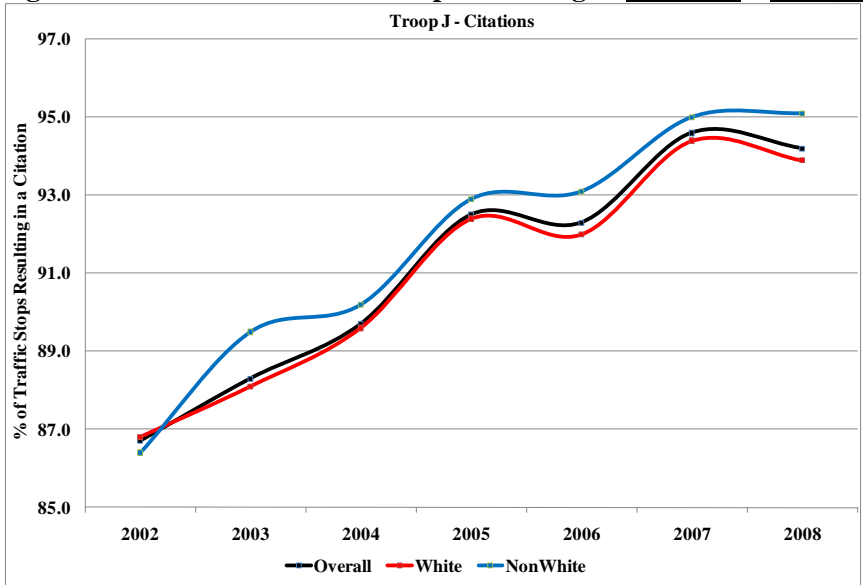


Figure 5:14: Percent of Traffic Stops Resulting in Searches – Troop J

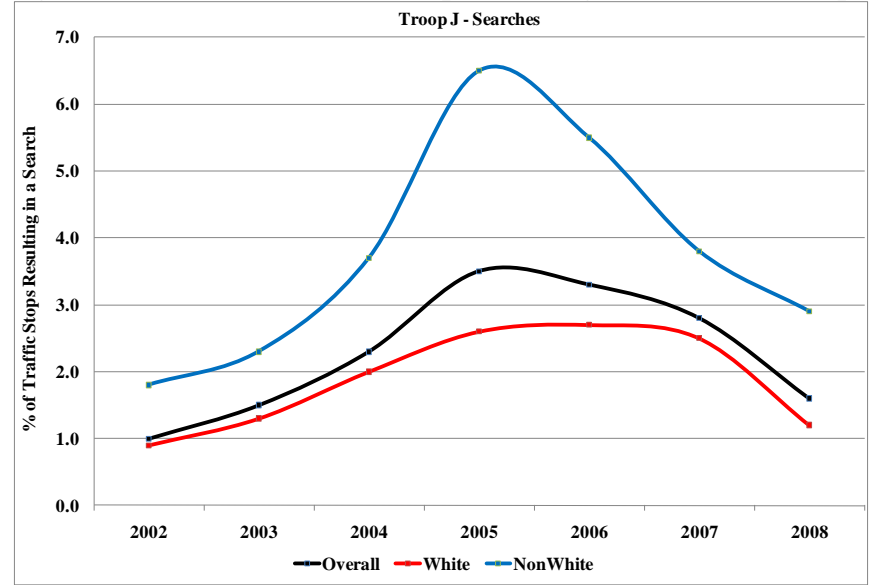


Figure 5:15: Percent of Traffic Stops Resulting in Warnings – Troop K

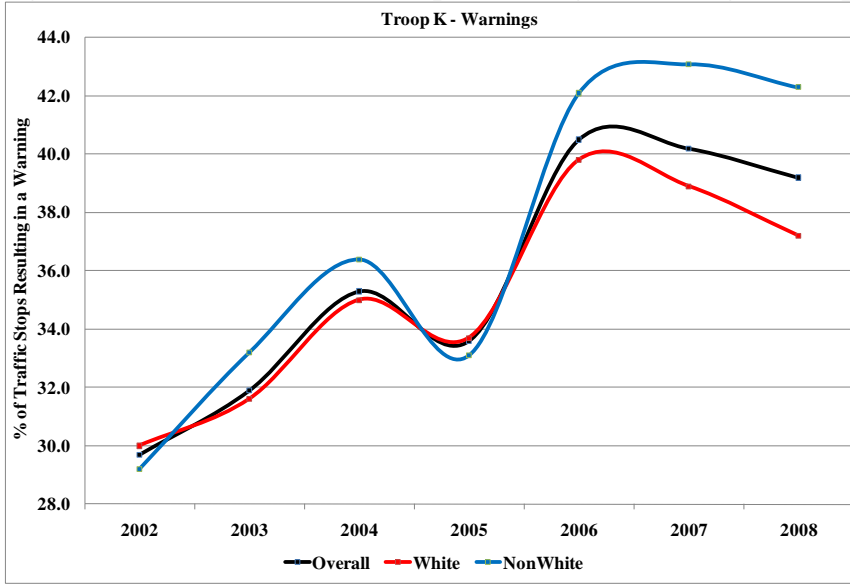


Figure 5:17: Percent of Traffic Stops Resulting in Arrests – Troop K

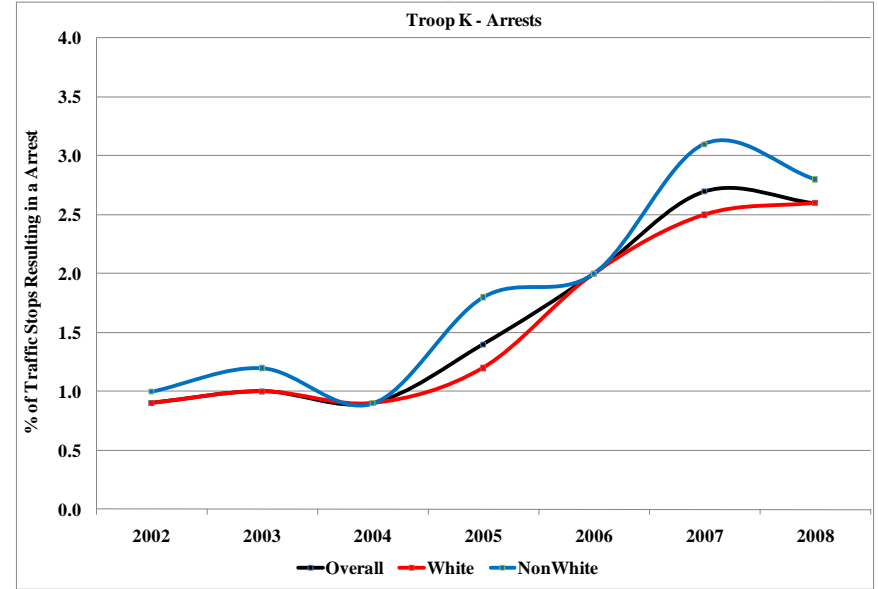


Figure 5:16: Percent of Traffic Stops Resulting in Citations – Troop K

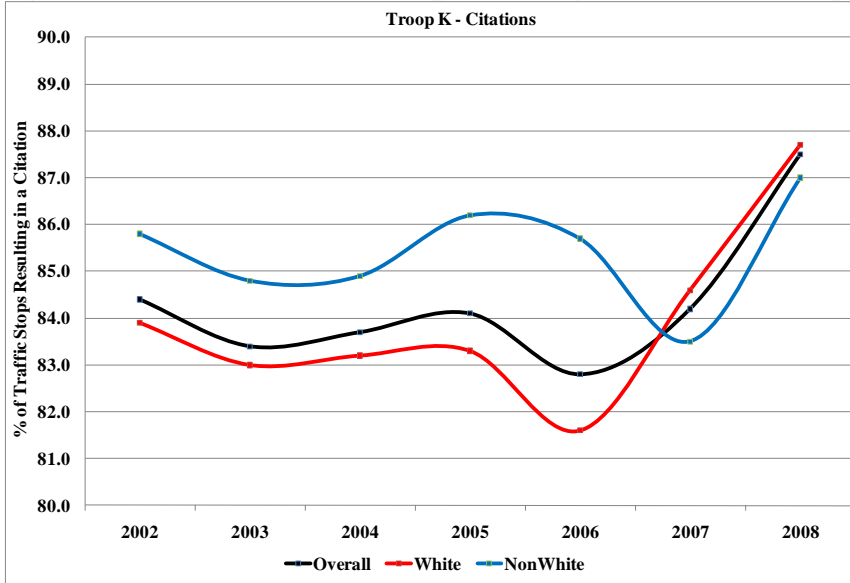


Figure 5:18: Percent of Traffic Stops Resulting in Searches – Troop K

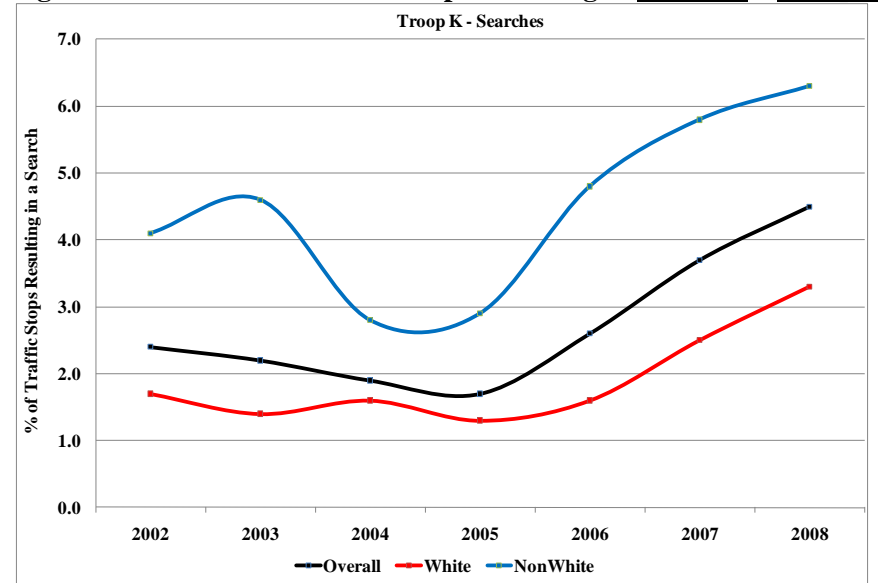


Figure 5:19: Percent of Traffic Stops Resulting in Warnings – Troop L

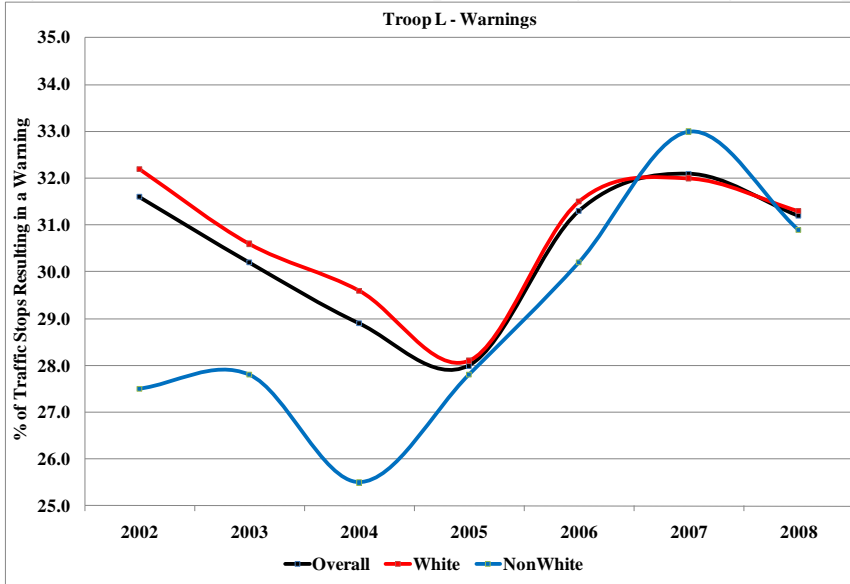


Figure 5:21: Percent of Traffic Stops Resulting in Arrests – Troop L

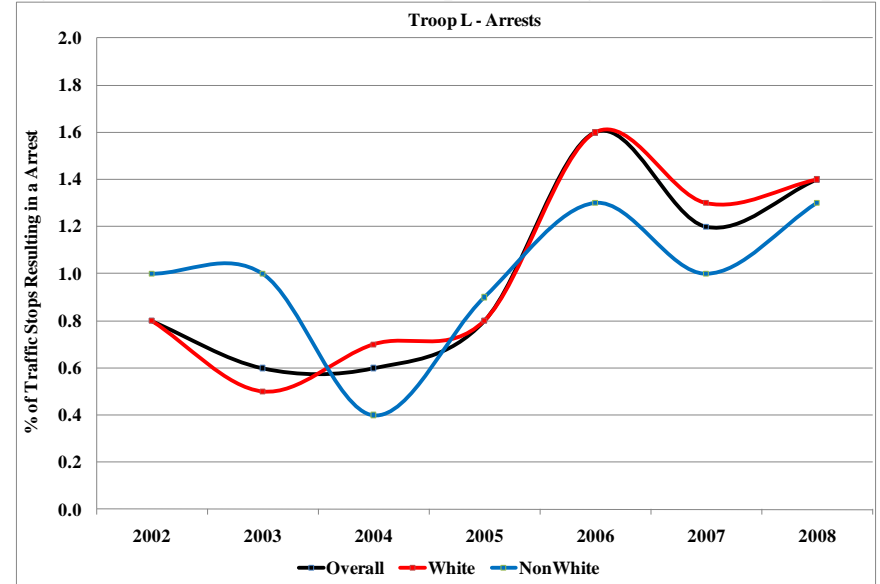


Figure 5:20: Percent of Traffic Stops Resulting in Citations – Troop L

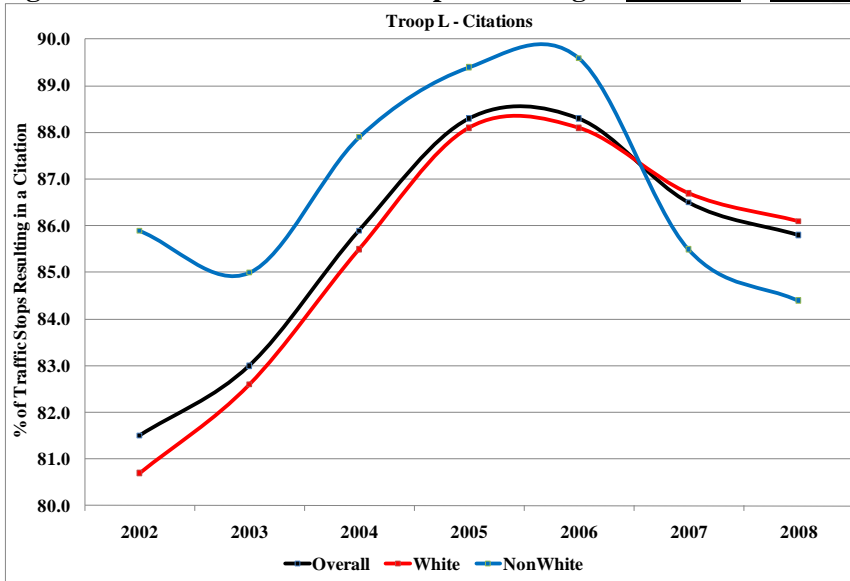


Figure 5:22: Percent of Traffic Stops Resulting in Searches – Troop L

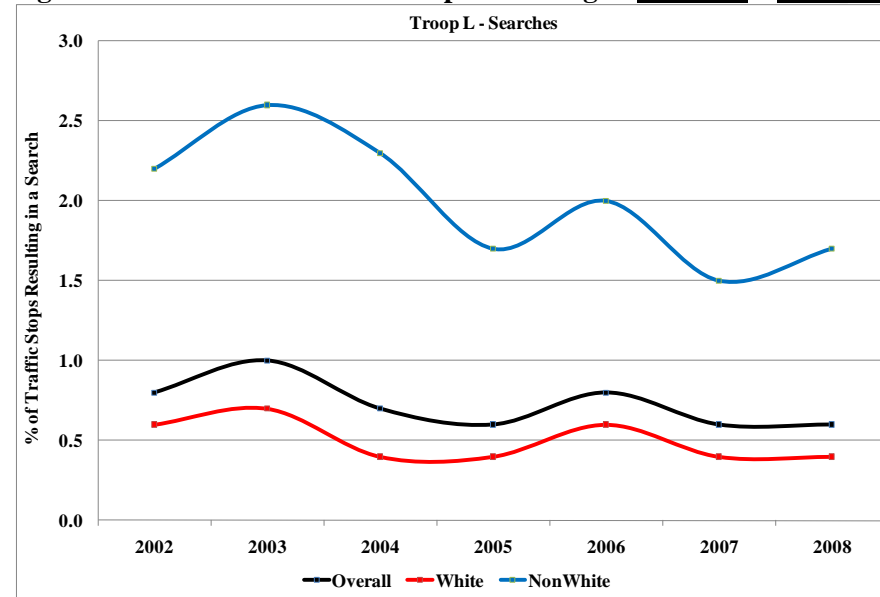


Figure 5:23: Percent of Traffic Stops Resulting in Warnings – Troop M

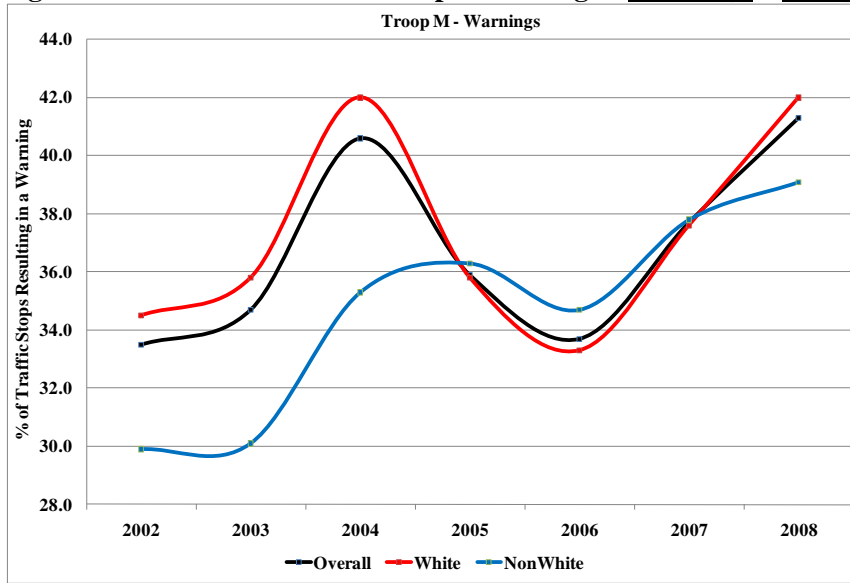


Figure 5:25: Percent of Traffic Stops Resulting in Arrests – Troop M

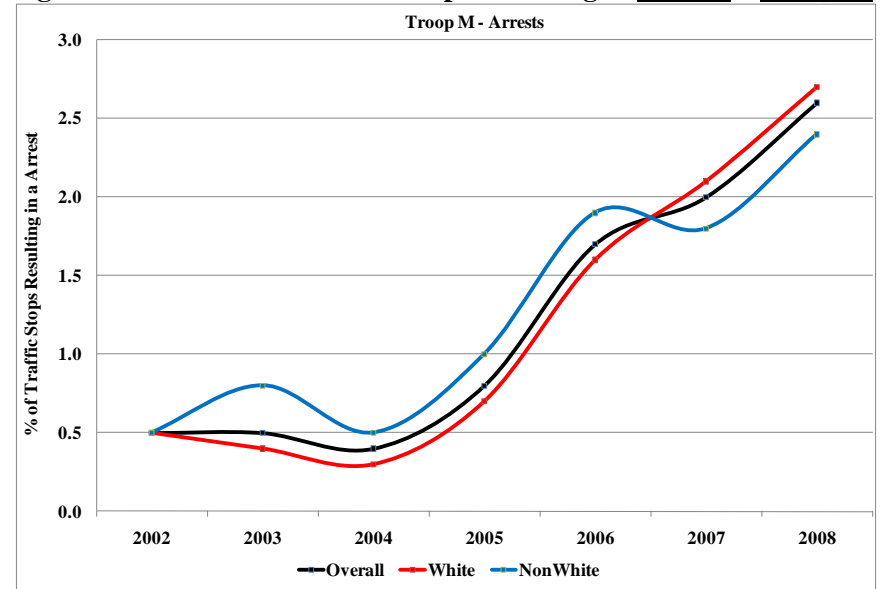


Figure 5:24: Percent of Traffic Stops Resulting in Citations – Troop M

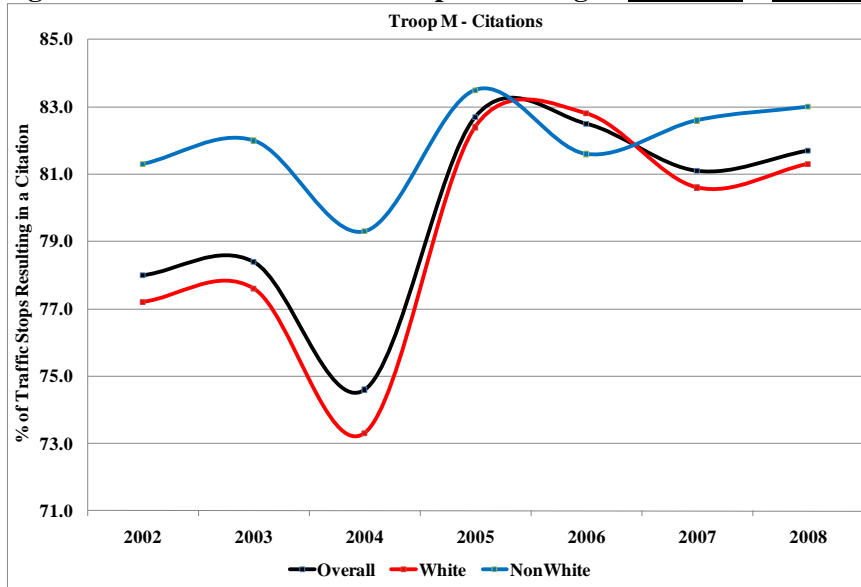


Figure 5:26: Percent of Traffic Stops Resulting in Searches – Troop M

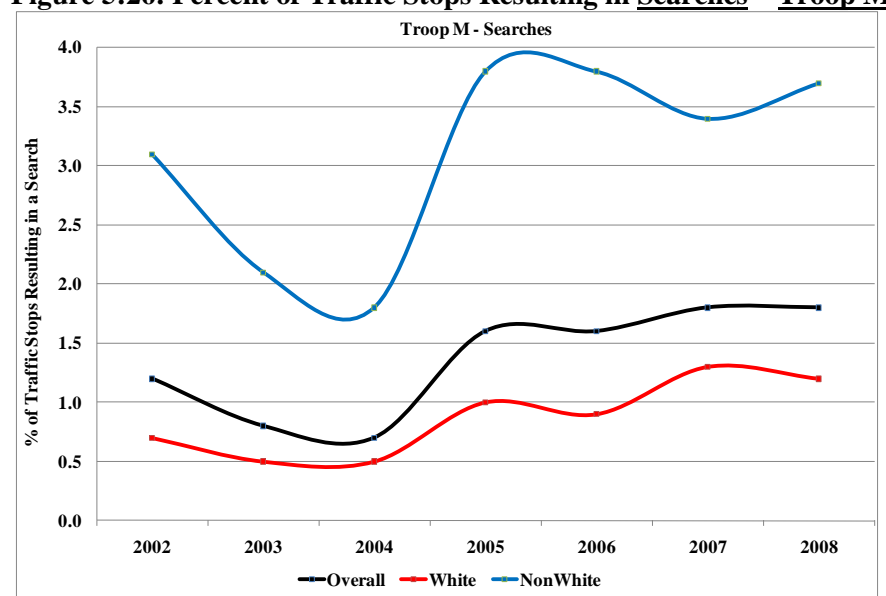


Figure 5:27: Percent of Traffic Stops Resulting in Warnings – Troop F

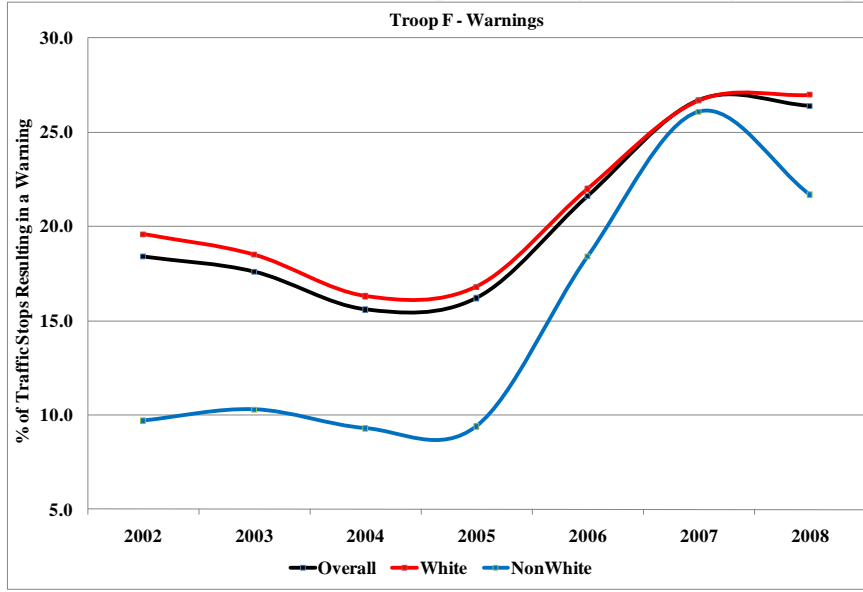


Figure 5:29: Percent of Traffic Stops Resulting in Arrests – Troop F

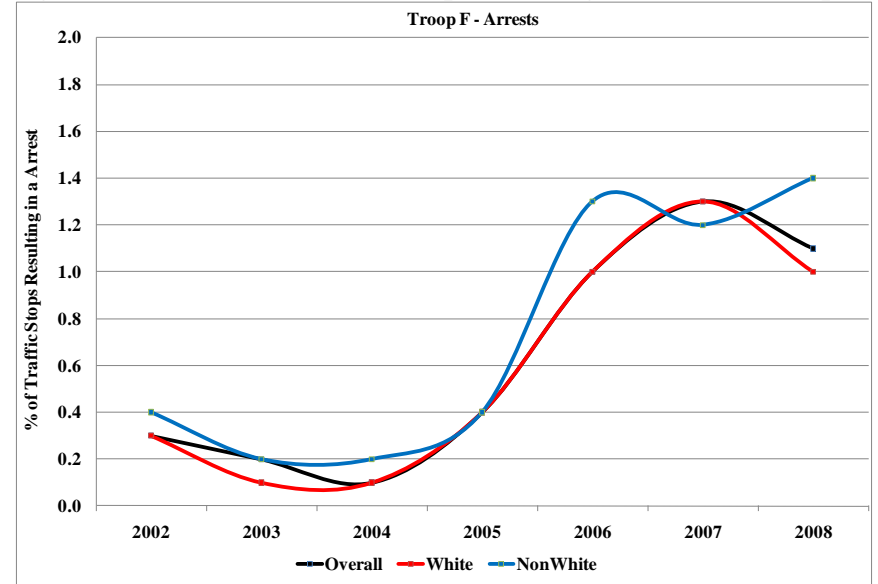


Figure 5:28: Percent of Traffic Stops Resulting in Citations – Troop F

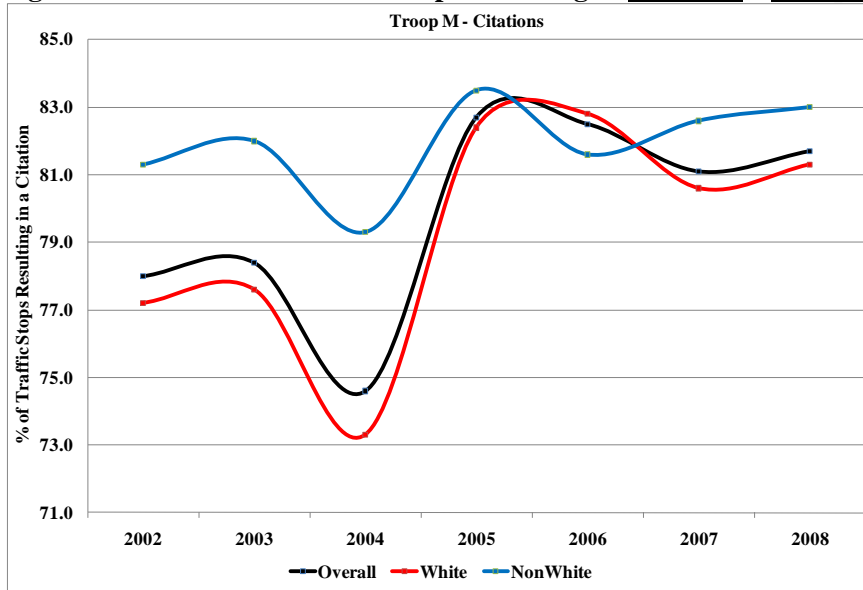


Figure 5:30: Percent of Traffic Stops Resulting in Searches – Troop F

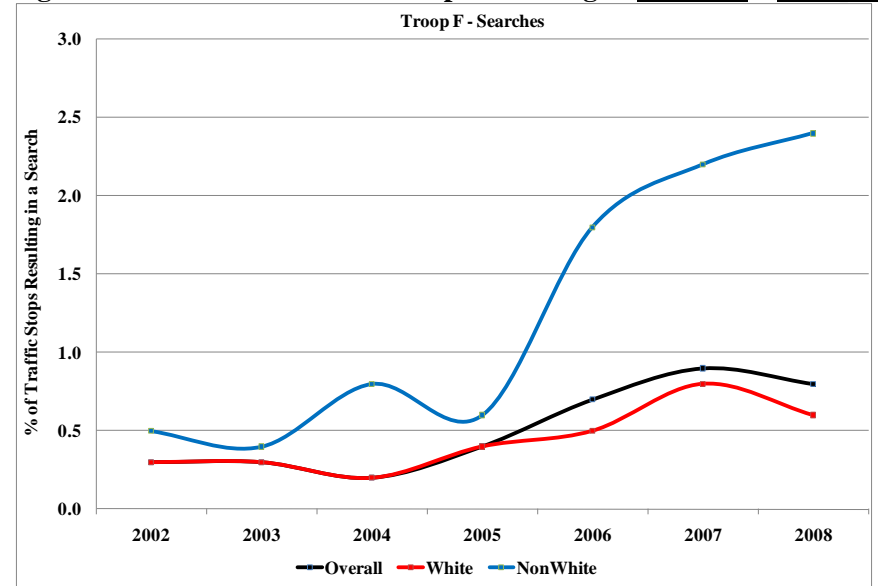


Figure 5:31: Percent of Traffic Stops Resulting in Warnings – Troop N

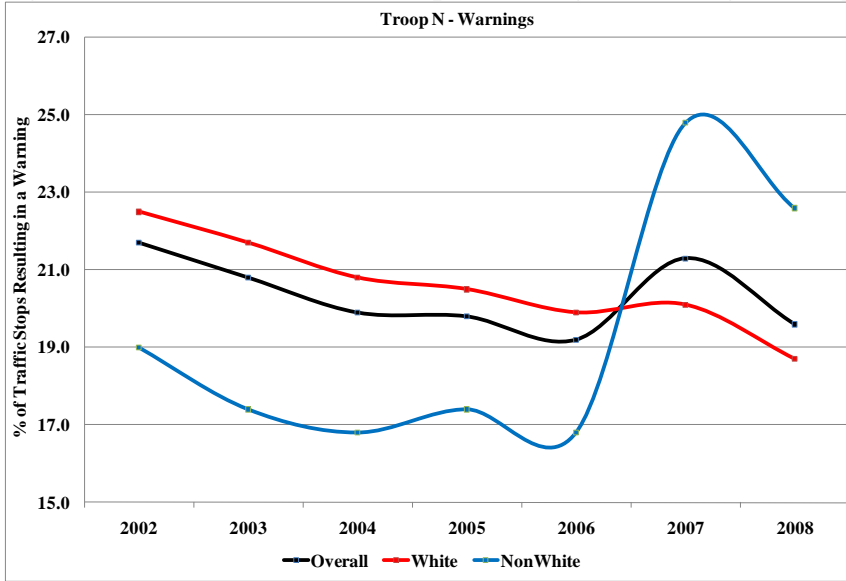


Figure 5:33: Percent of Traffic Stops Resulting in Arrests – Troop N

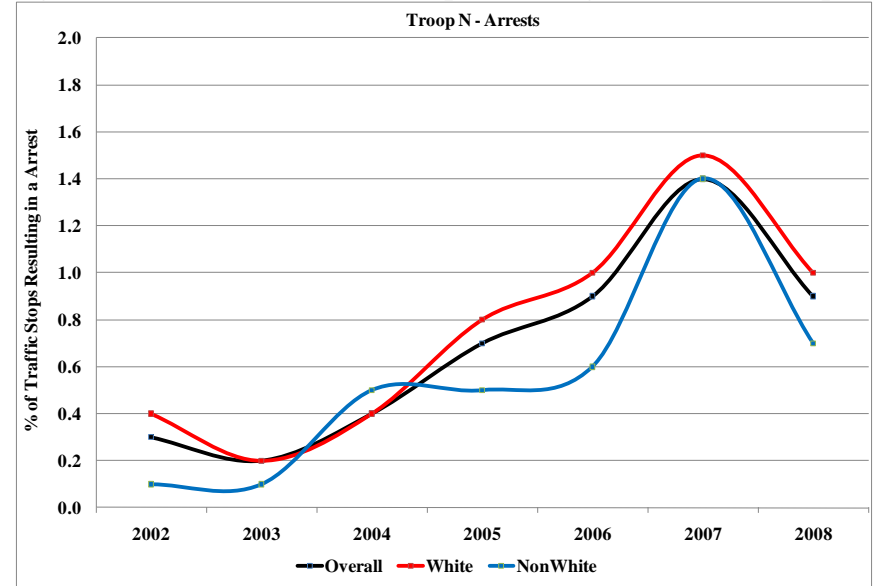


Figure 5:32: Percent of Traffic Stops Resulting in Citations – Troop N

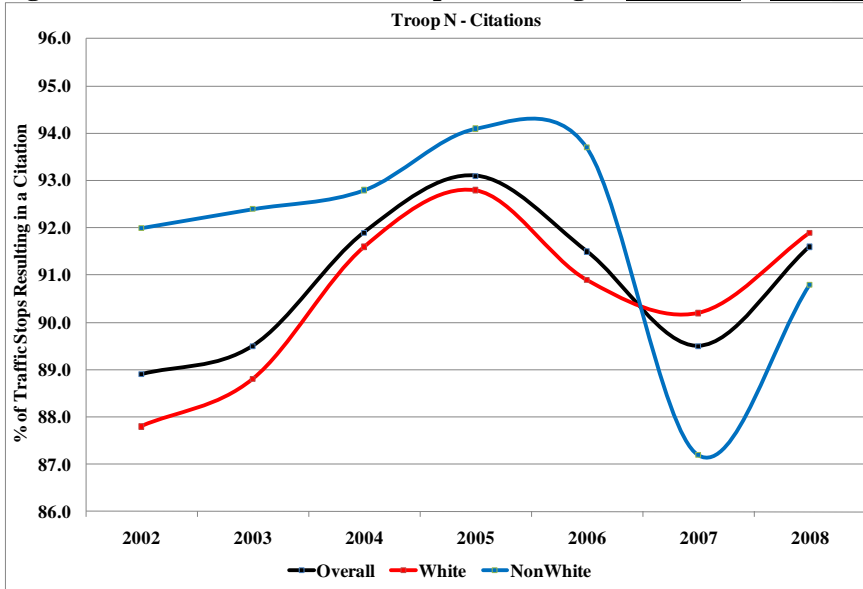


Figure 5:34: Percent of Traffic Stops Resulting in Searches – Troop N

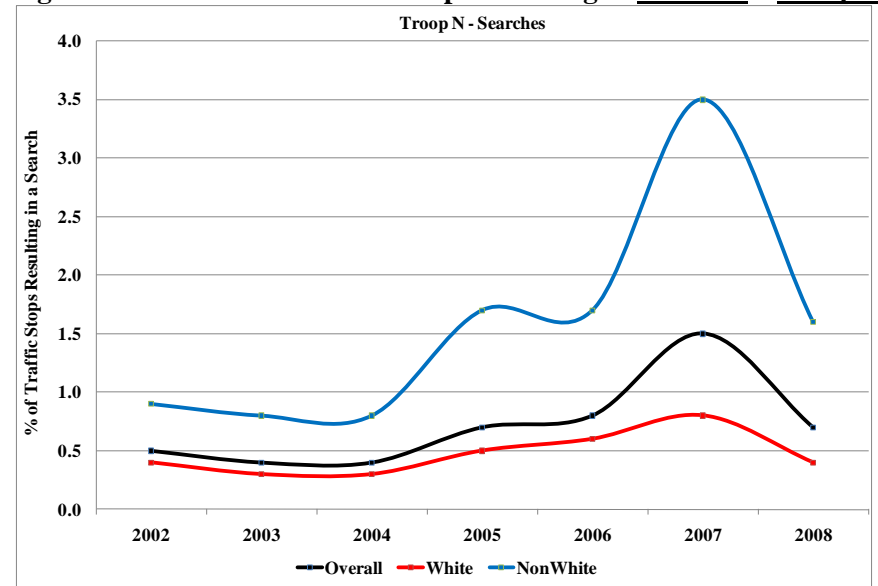


Figure 5:35: Percent of Traffic Stops Resulting in Warnings – Troop P

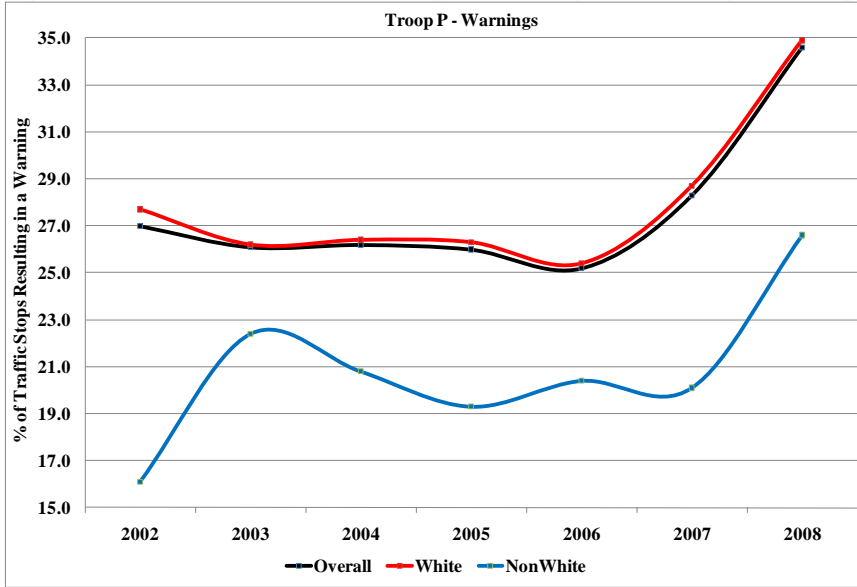


Figure 5:37: Percent of Traffic Stops Resulting in Arrests – Troop P

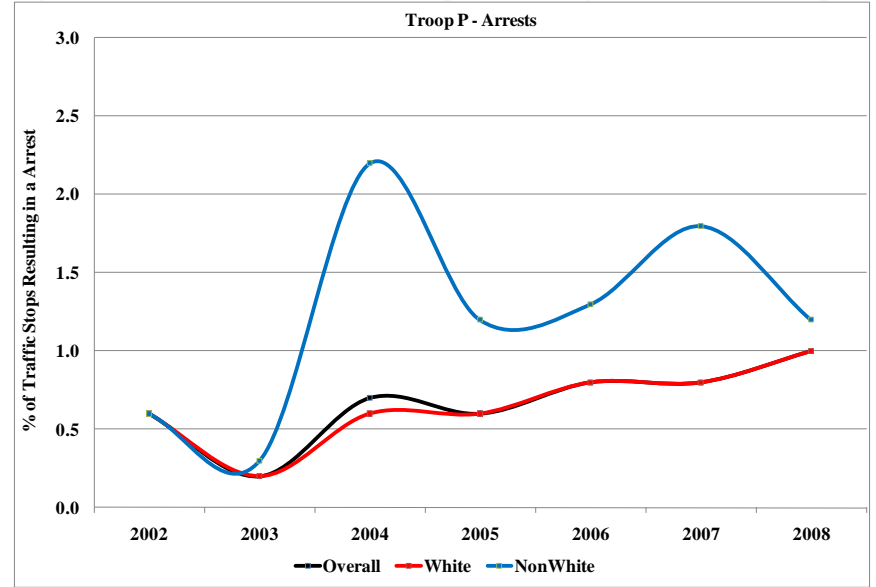


Figure 5:36: Percent of Traffic Stops Resulting in Citations – Troop P

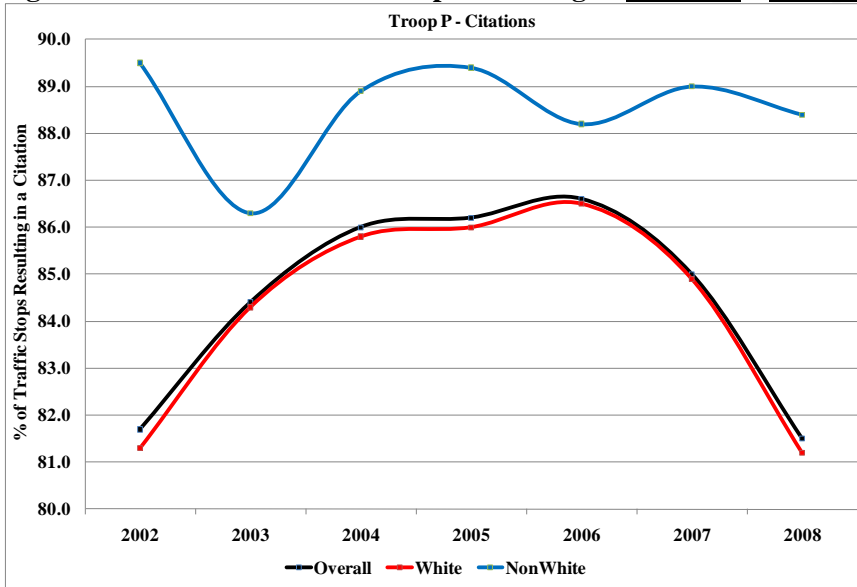


Figure 5:38: Percent of Traffic Stops Resulting in Searches – Troop P

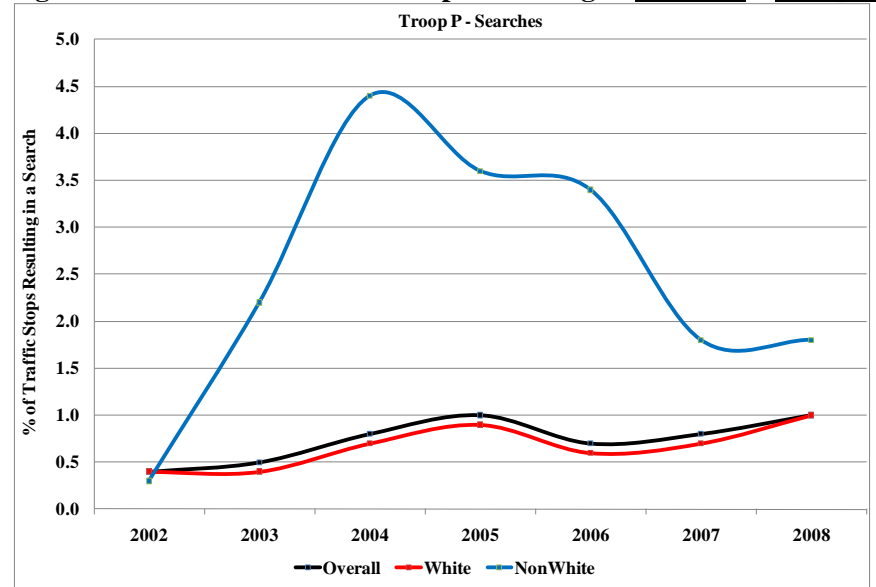


Figure 5:39: Percent of Traffic Stops Resulting in Warnings – Troop R

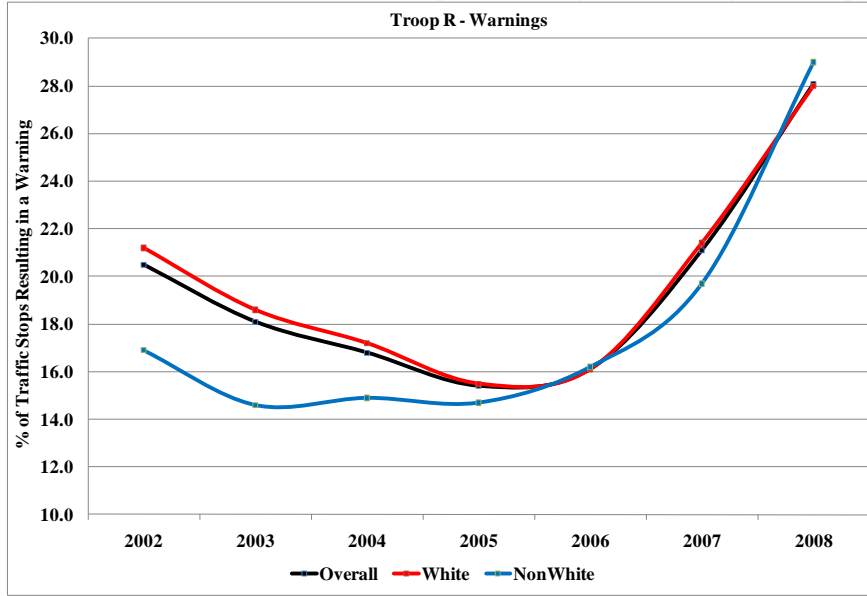


Figure 5:41: Percent of Traffic Stops Resulting in Arrests – Troop R

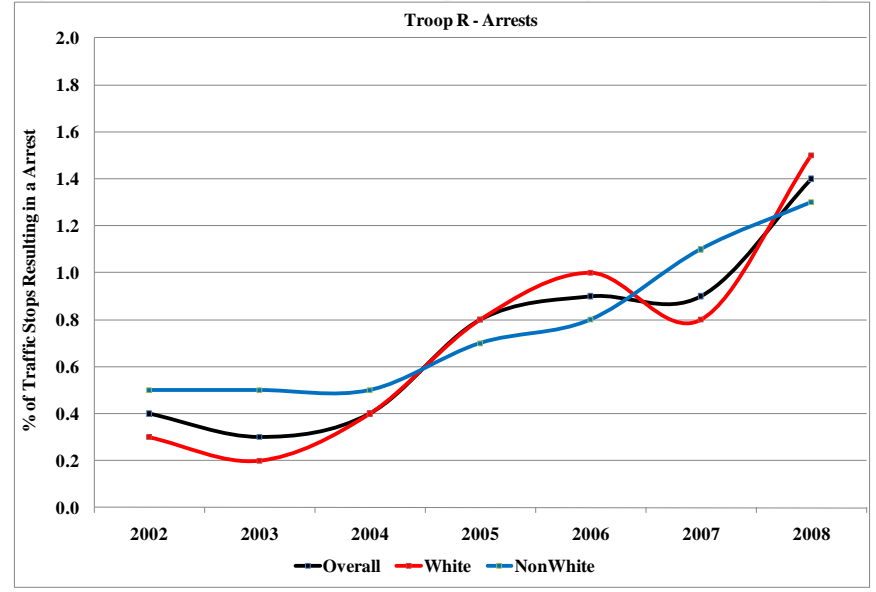


Figure 5:40: Percent of Traffic Stops Resulting in Citations – Troop R

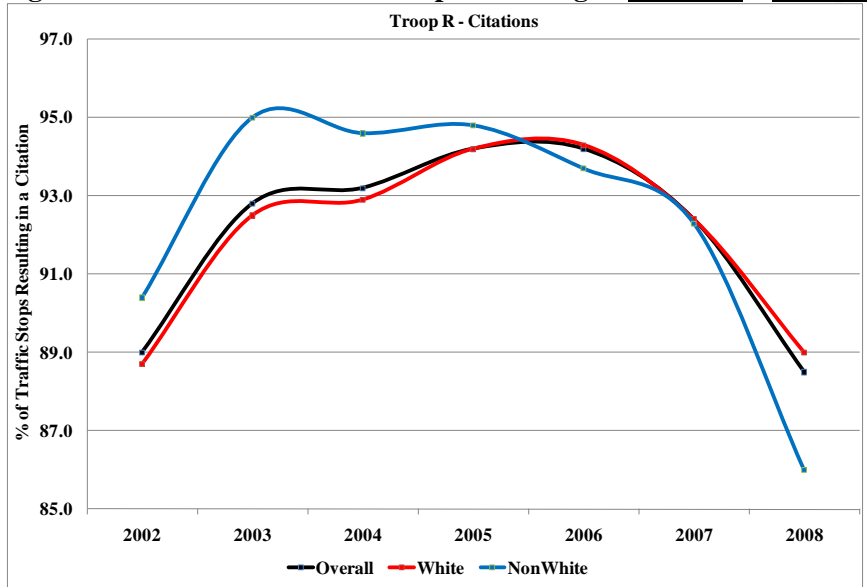


Figure 5:42: Percent of Traffic Stops Resulting in Searches – Troop R

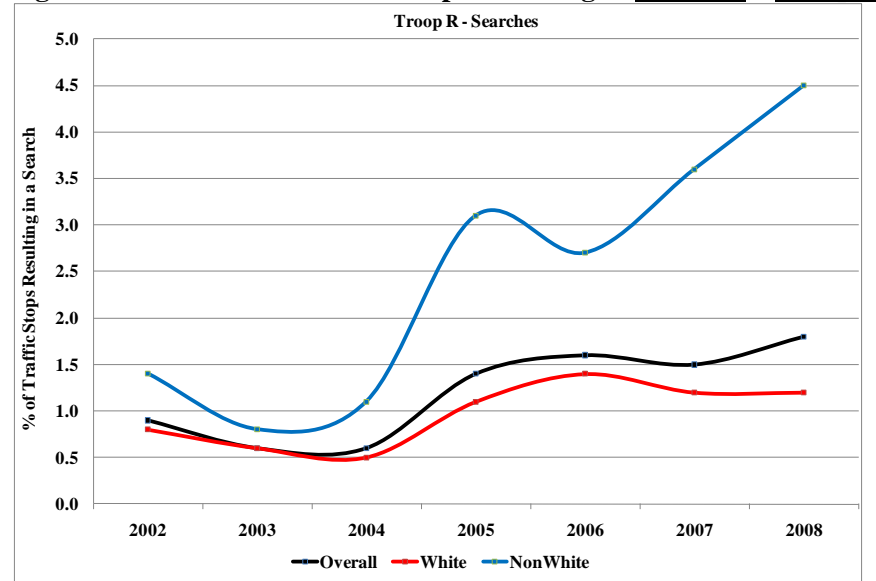


Figure 5:43: Percent of Traffic Stops Resulting in Warnings – Troop A

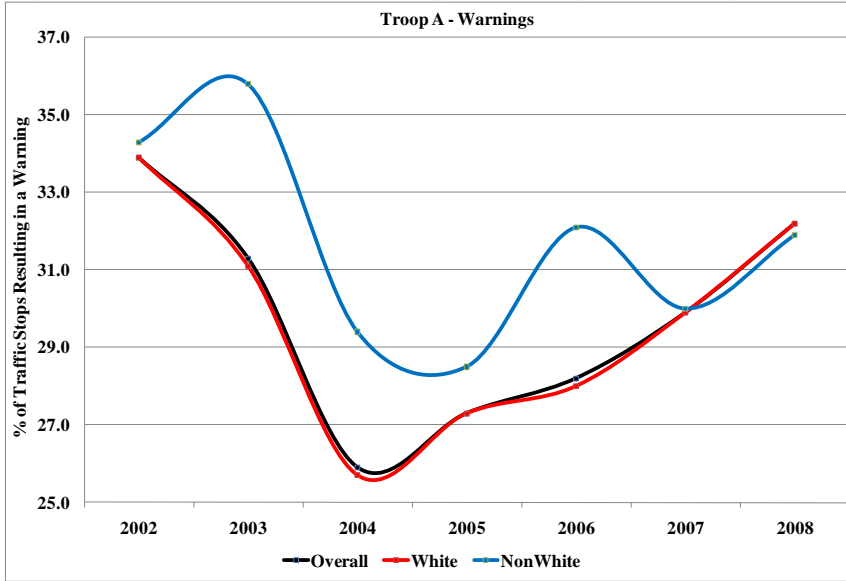


Figure 5:45: Percent of Traffic Stops Resulting in Arrests – Troop A

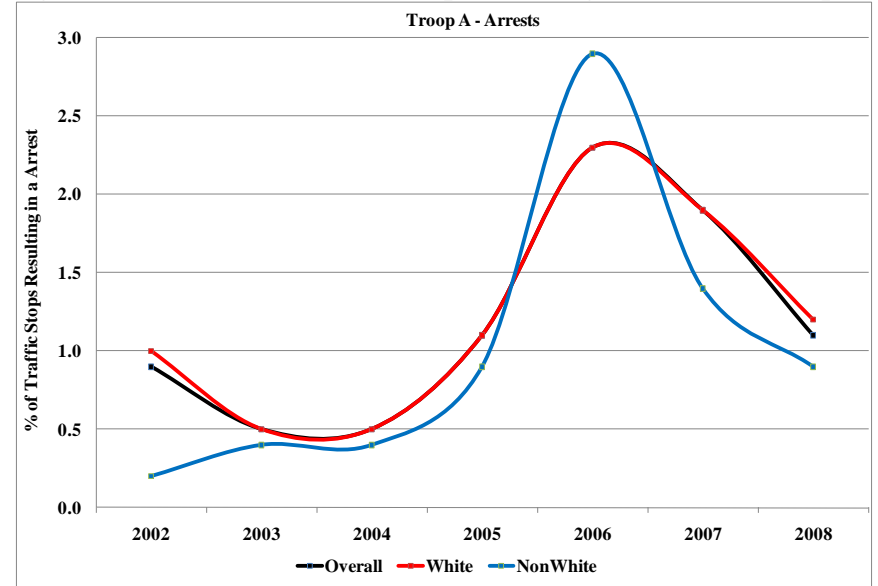


Figure 5:44: Percent of Traffic Stops Resulting in Citations – Troop A

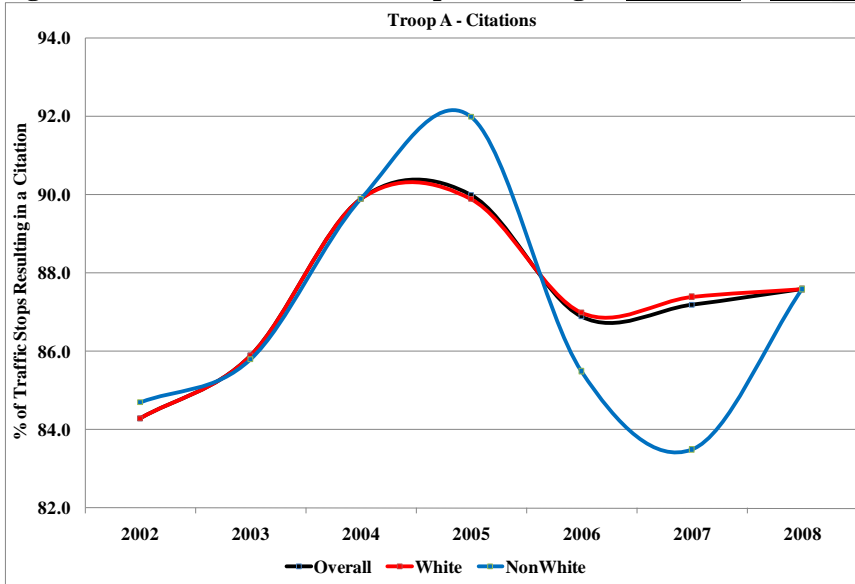


Figure 5:46: Percent of Traffic Stops Resulting in Searches – Troop A

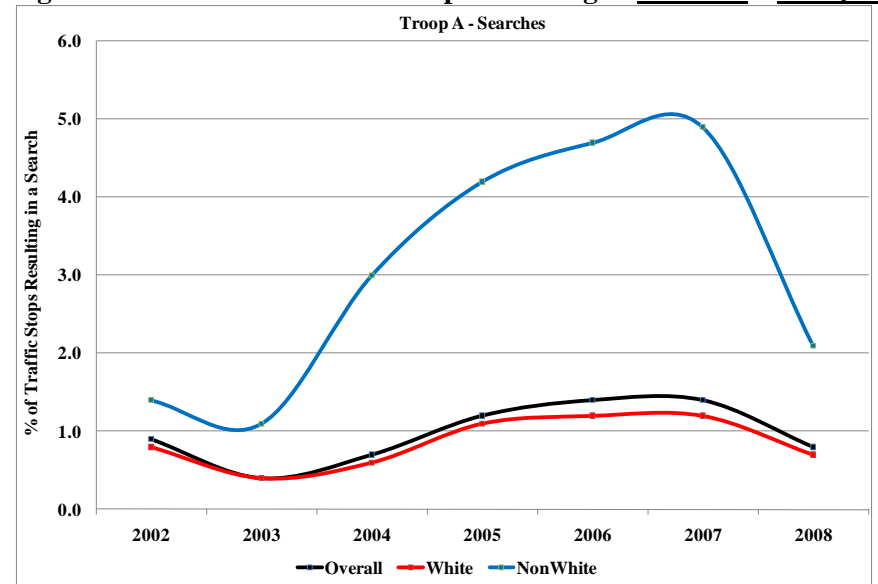


Figure 5:47: Percent of Traffic Stops Resulting in Warnings – Troop G

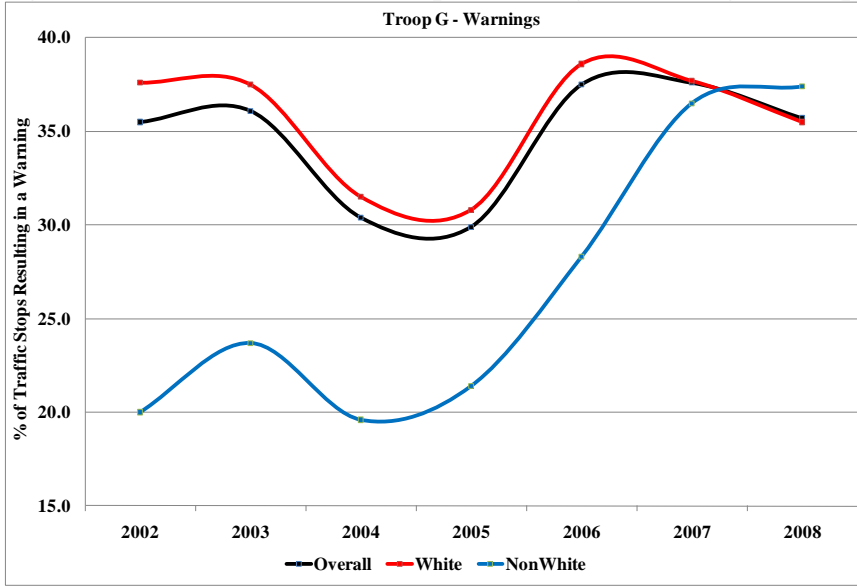


Figure 5:49: Percent of Traffic Stops Resulting in Arrests – Troop G

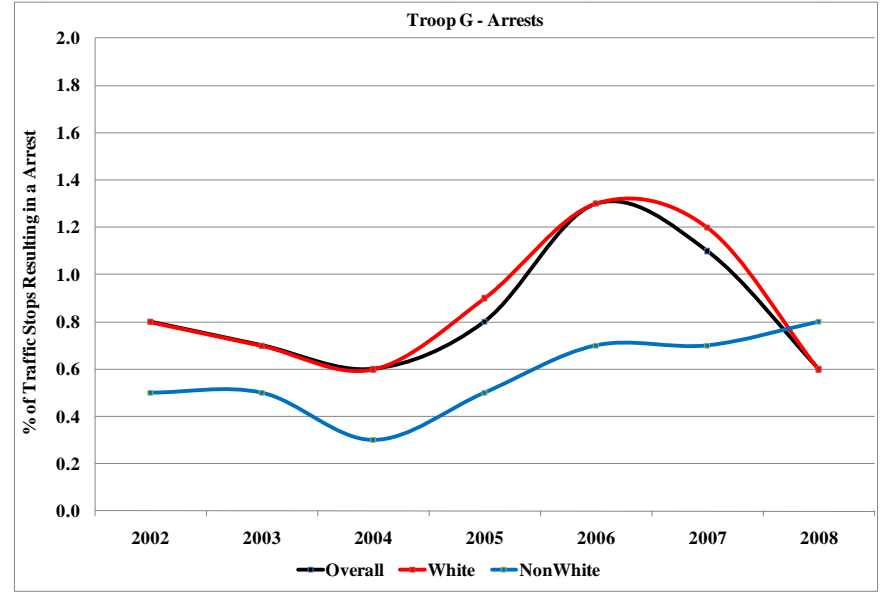


Figure 5:48: Percent of Traffic Stops Resulting in Citations – Troop G

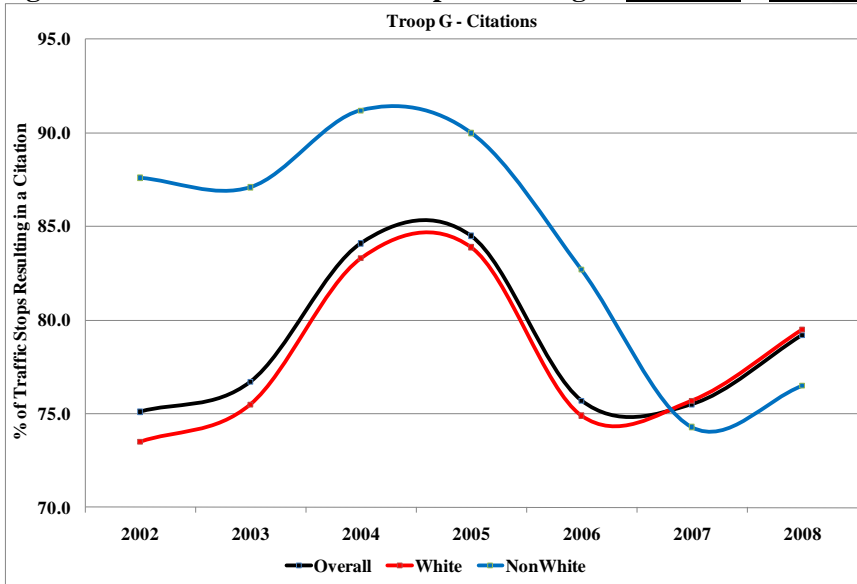


Figure 5:50: Percent of Traffic Stops Resulting in Searches – Troop G

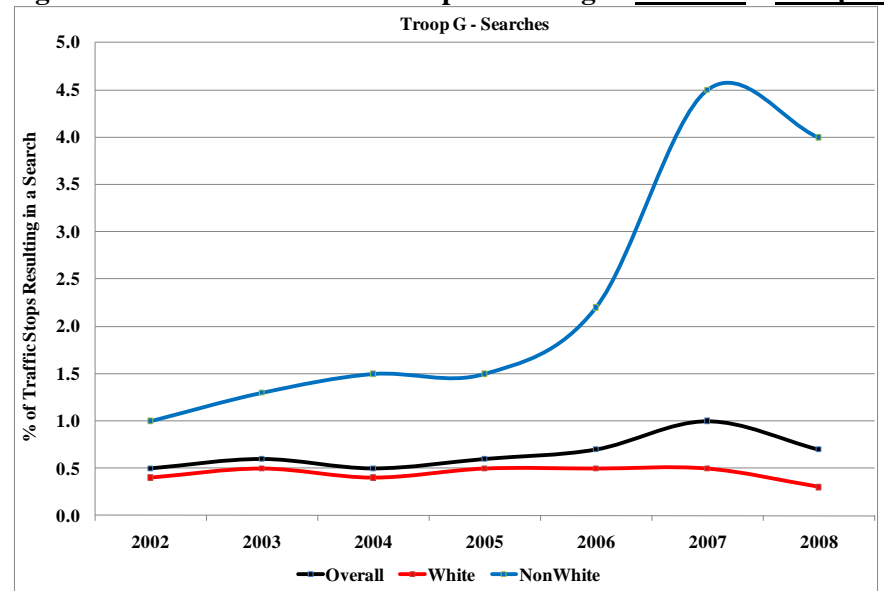


Figure 5:51: Percent of Traffic Stops Resulting in Warnings – Troop H

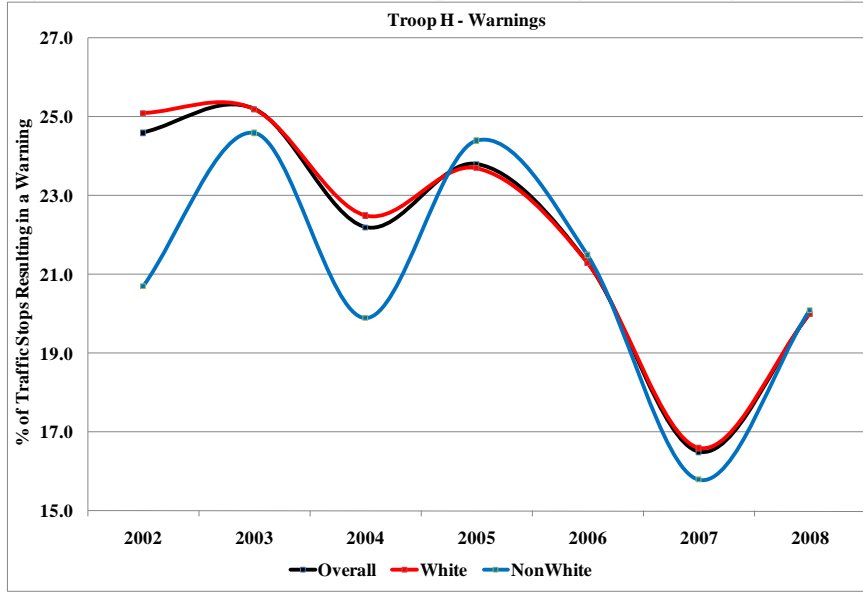


Figure 5:53: Percent of Traffic Stops Resulting in Arrests – Troop H

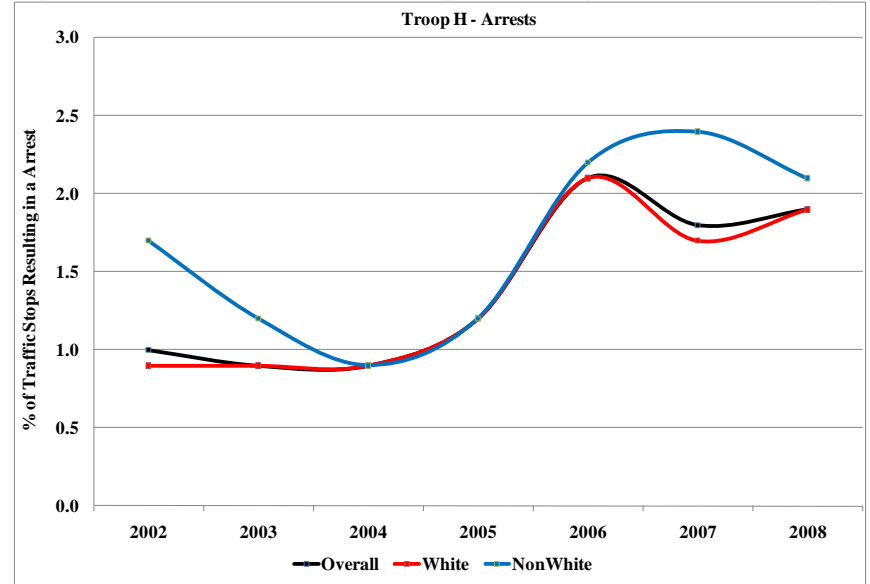


Figure 5:52: Percent of Traffic Stops Resulting in Citations – Troop H

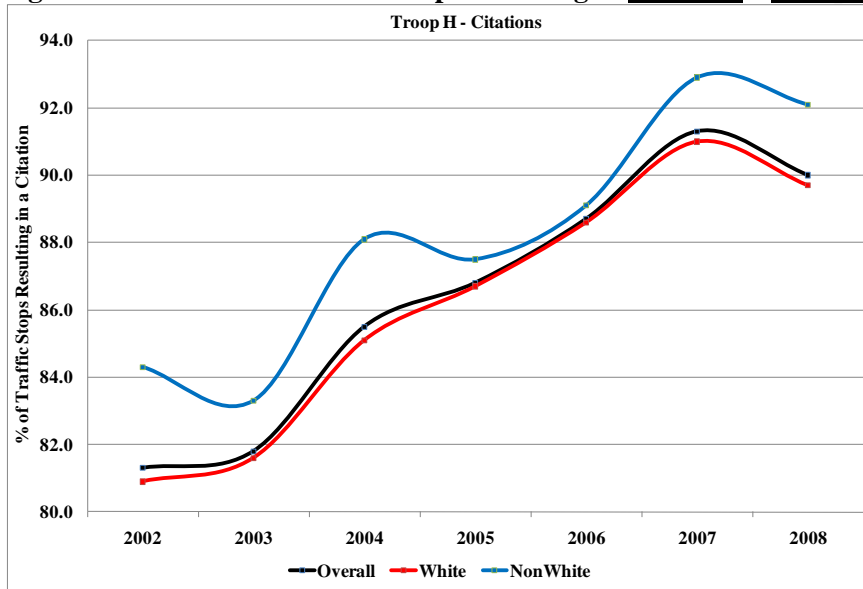


Figure 5:54: Percent of Traffic Stops Resulting in Searches – Troop H

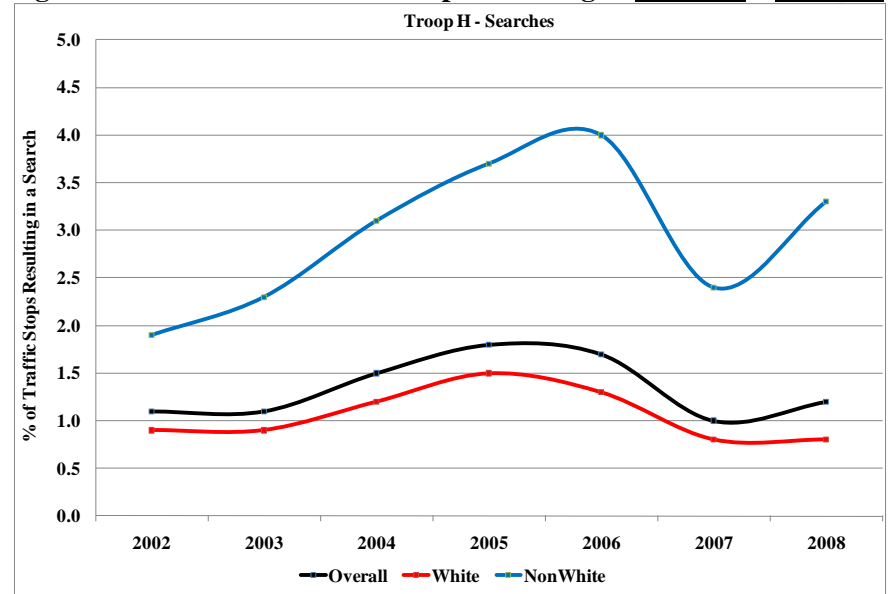


Figure 5:55: Percent of Traffic Stops Resulting in Warnings – Troop C

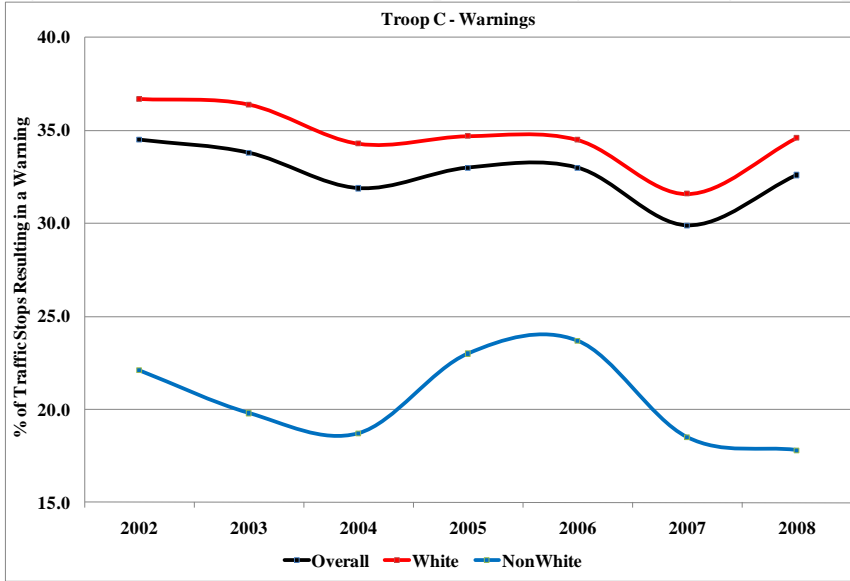


Figure 5:57: Percent of Traffic Stops Resulting in Arrests – Troop C

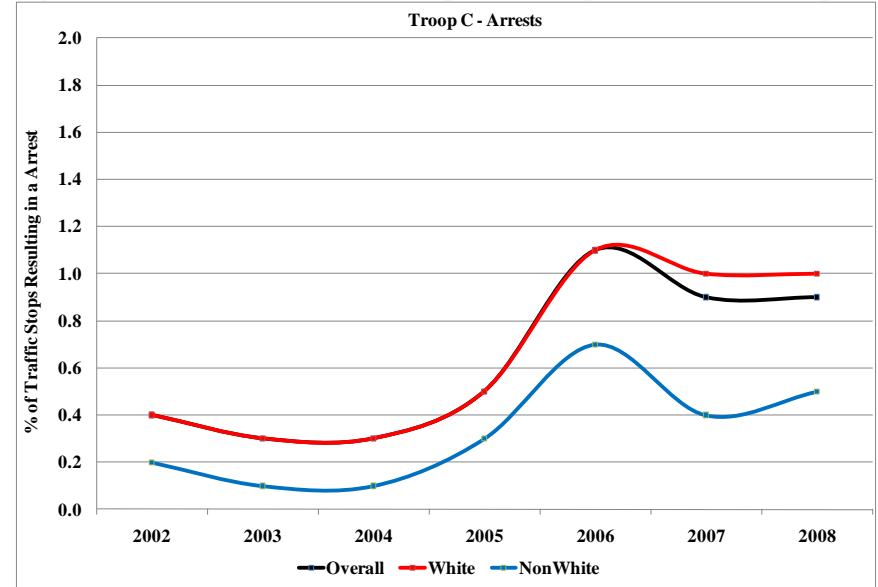


Figure 5:56: Percent of Traffic Stops Resulting in Citations – Troop C

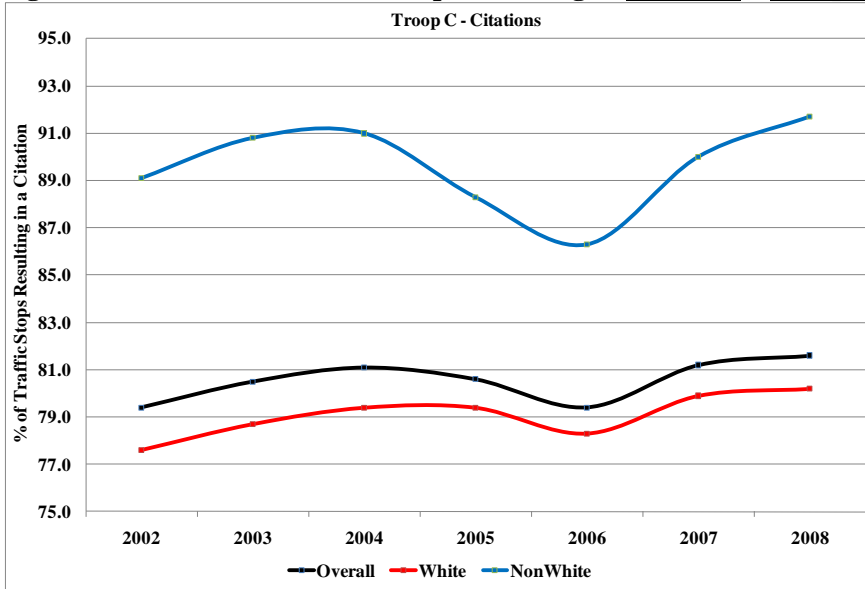


Figure 5:58: Percent of Traffic Stops Resulting in Searches – Troop C

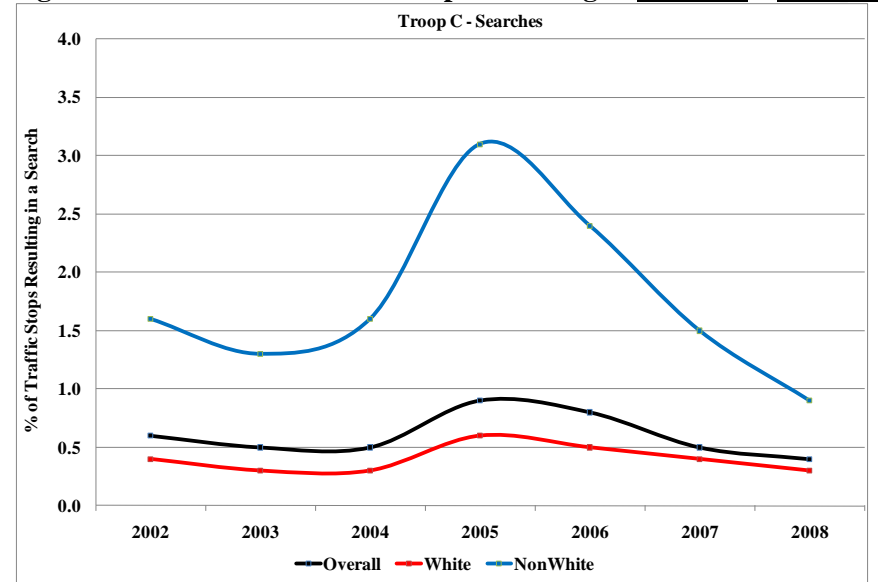


Figure 5:59: Percent of Traffic Stops Resulting in Warnings – Troop D

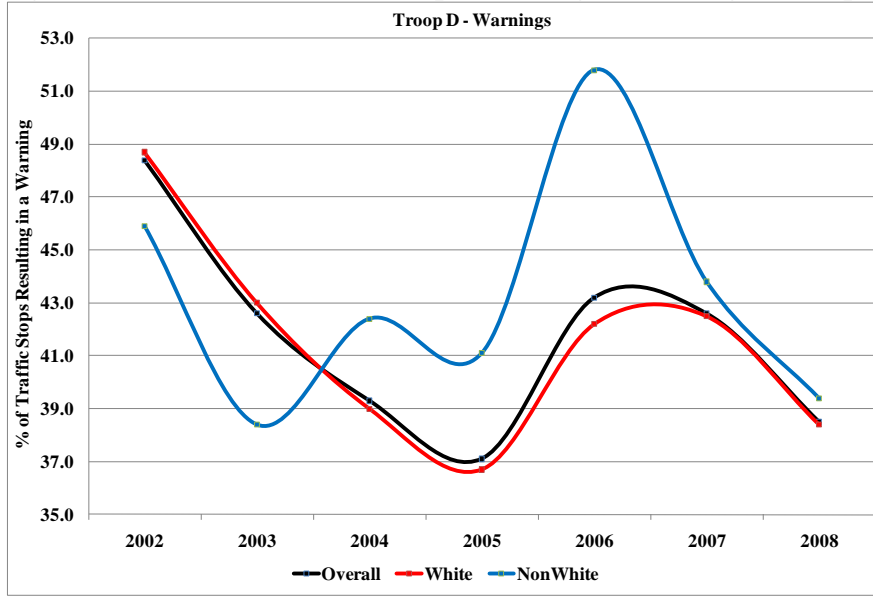


Figure 5:61: Percent of Traffic Stops Resulting in Arrests – Troop D

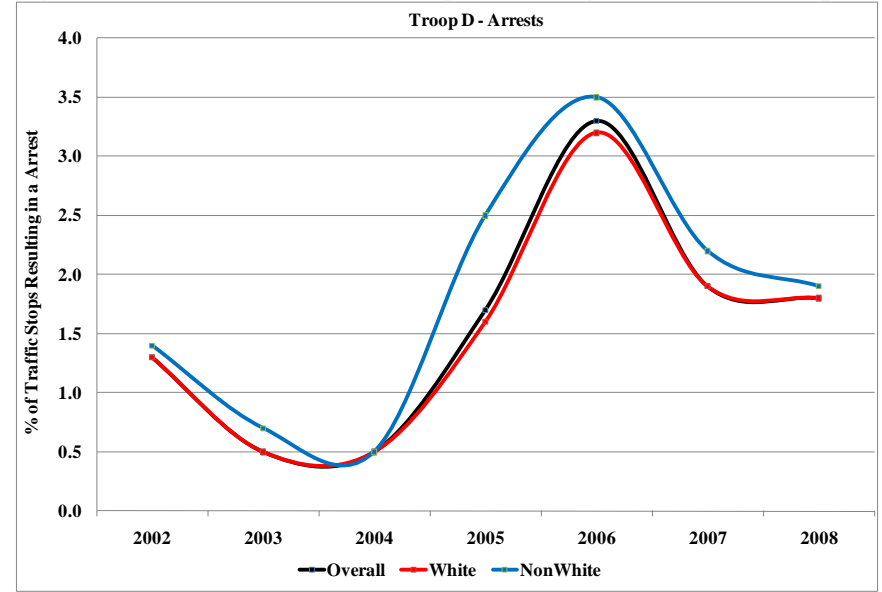


Figure 5:60: Percent of Traffic Stops Resulting in Citations – Troop D

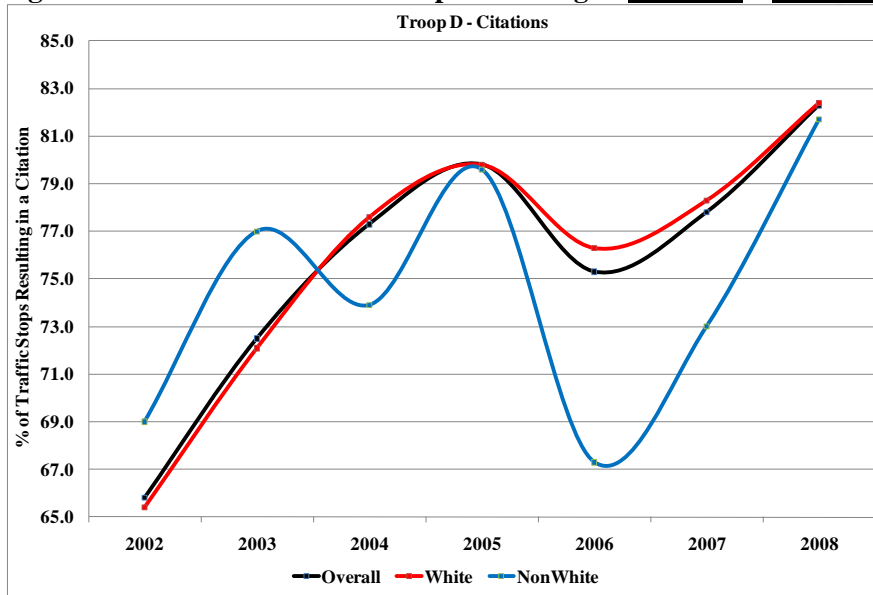


Figure 5:62: Percent of Traffic Stops Resulting in Searches – Troop D

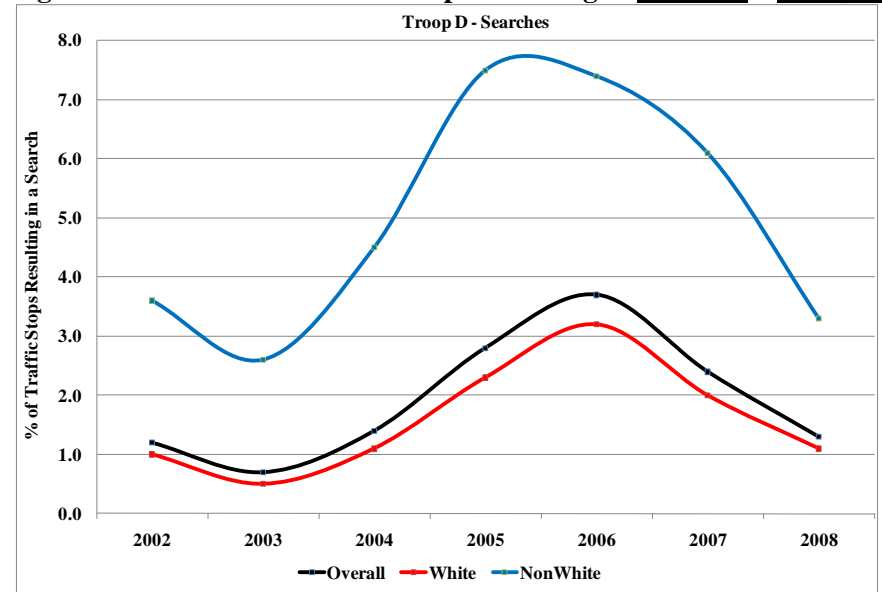


Figure 5:63: Percent of Traffic Stops Resulting in Warnings – Troop E

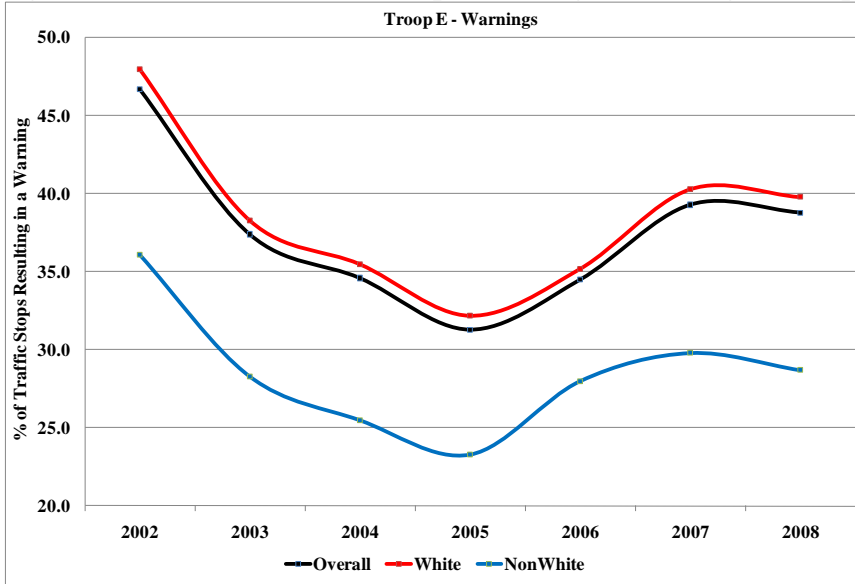


Figure 5:65: Percent of Traffic Stops Resulting in Arrests – Troop E

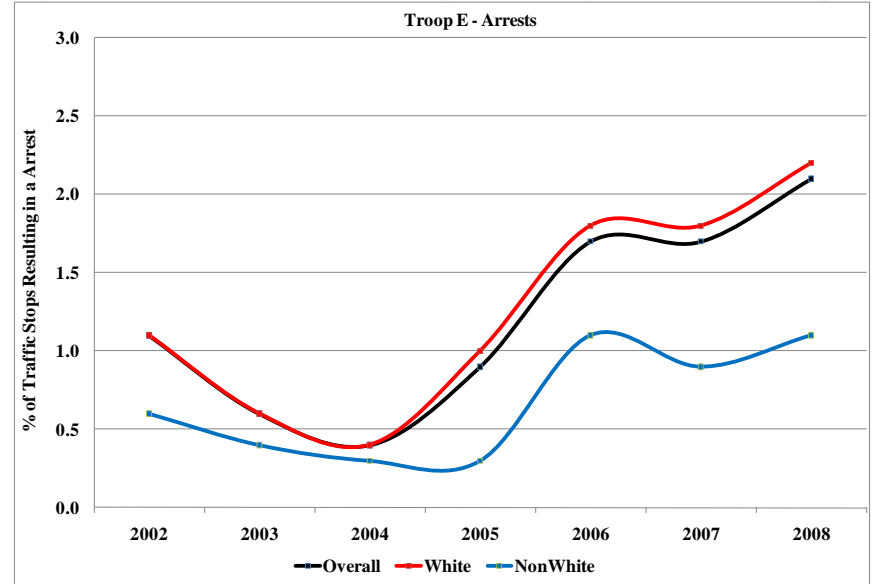


Figure 5:64: Percent of Traffic Stops Resulting in Citations – Troop E

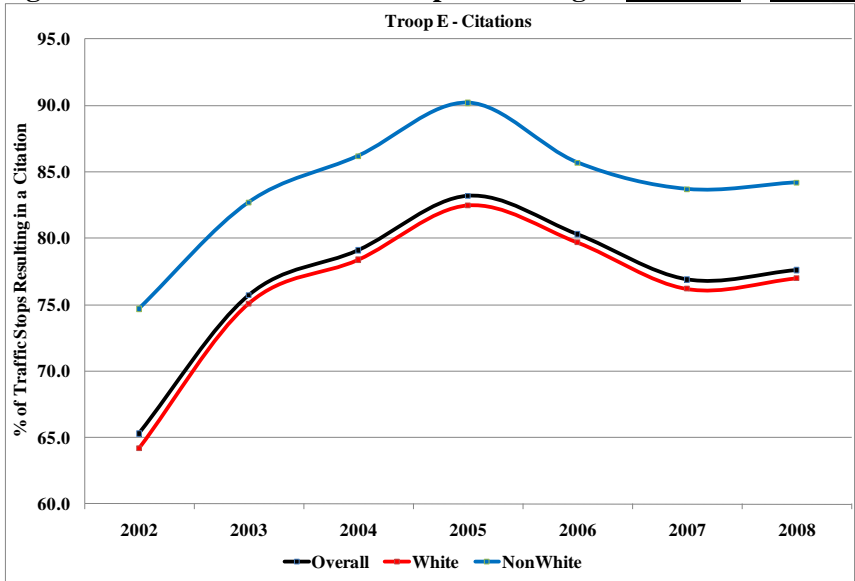


Figure 5:66: Percent of Traffic Stops Resulting in Searches – Troop E

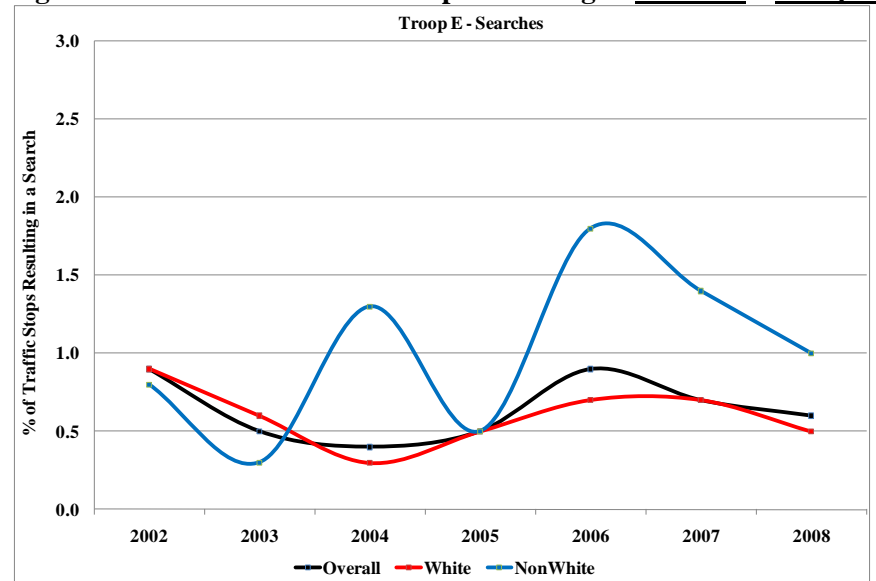


Figure 5:67: Percent of Traffic Stops Resulting in Warnings – Troop B

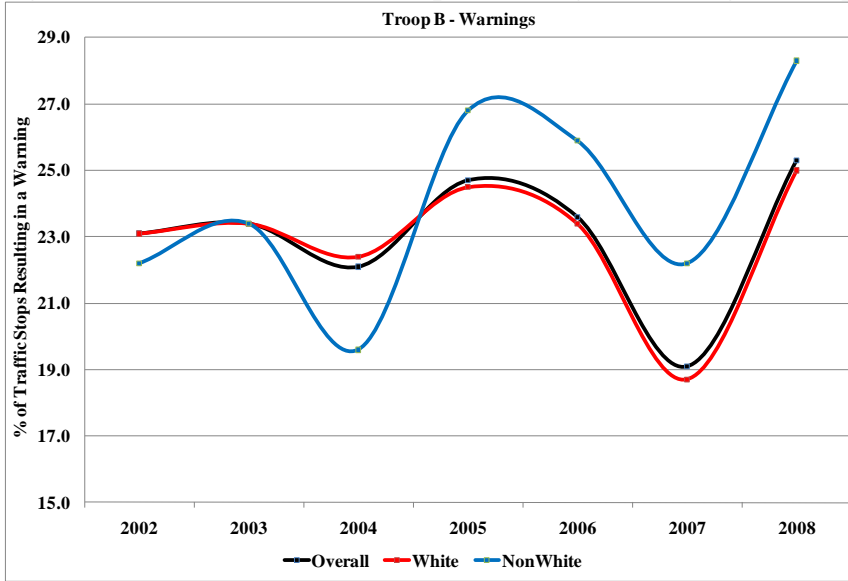


Figure 5:69: Percent of Traffic Stops Resulting in Arrests – Troop B

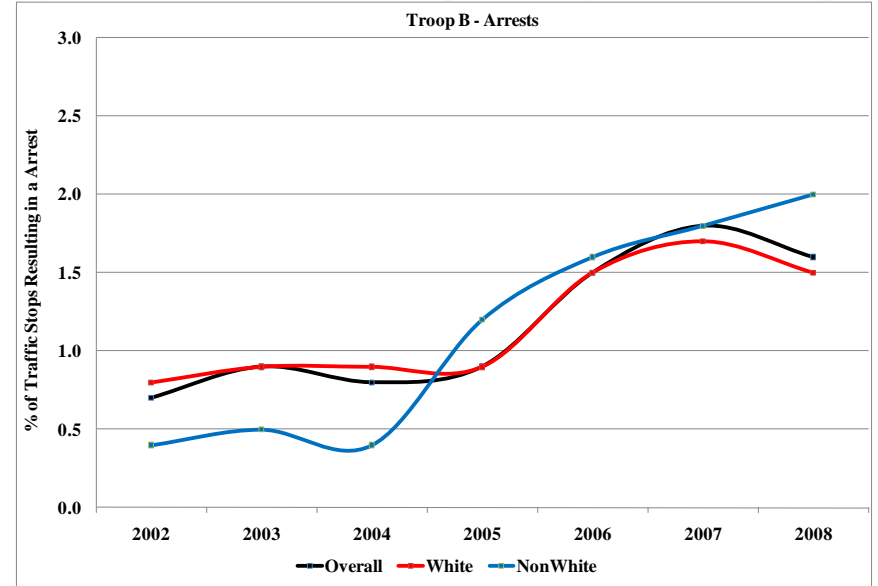


Figure 5:68: Percent of Traffic Stops Resulting in Citations – Troop B

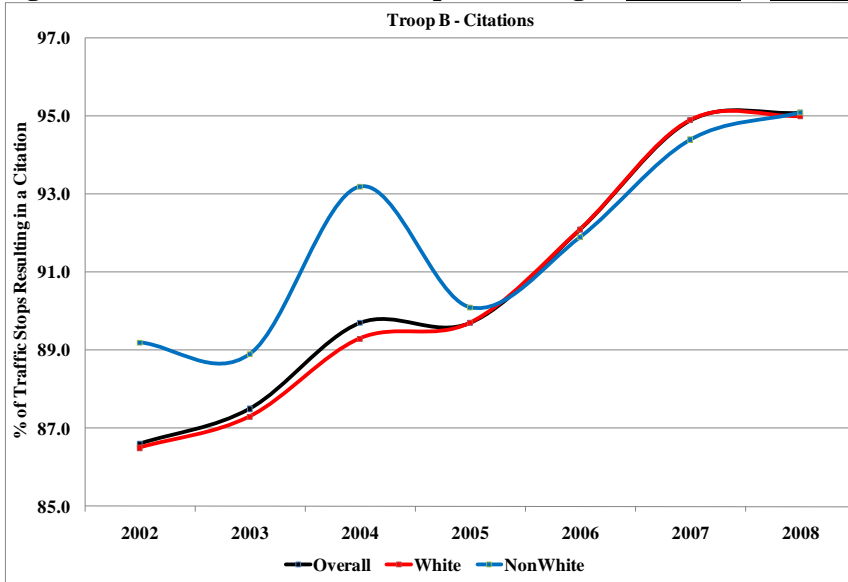


Figure 5:70: Percent of Traffic Stops Resulting in Searches – Troop B

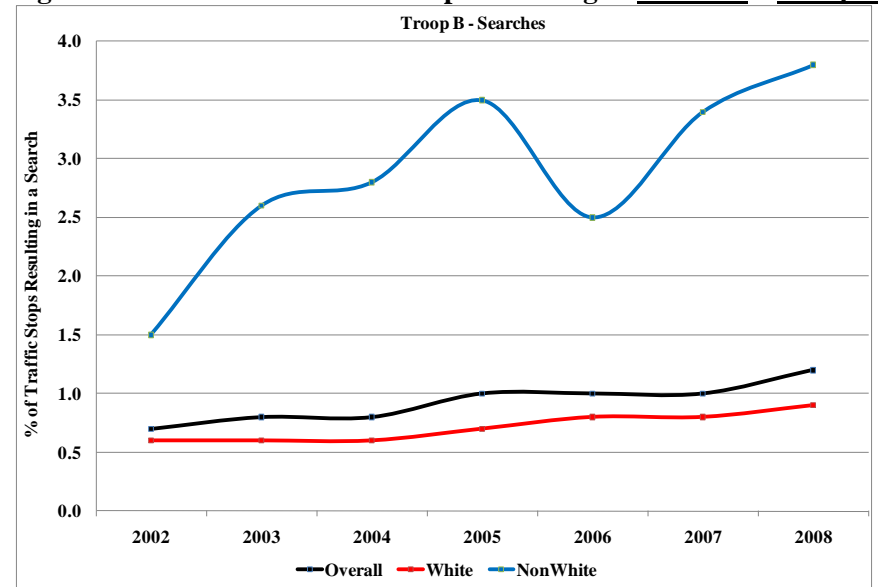


Figure 5:71: Percent of Traffic Stops Resulting in Warnings – Troop T

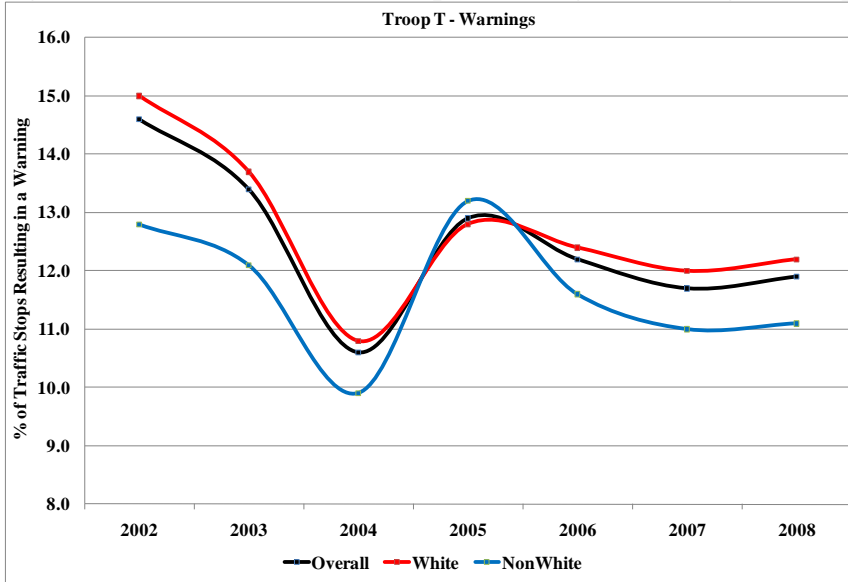


Figure 5:73: Percent of Traffic Stops Resulting in Arrests – Troop T

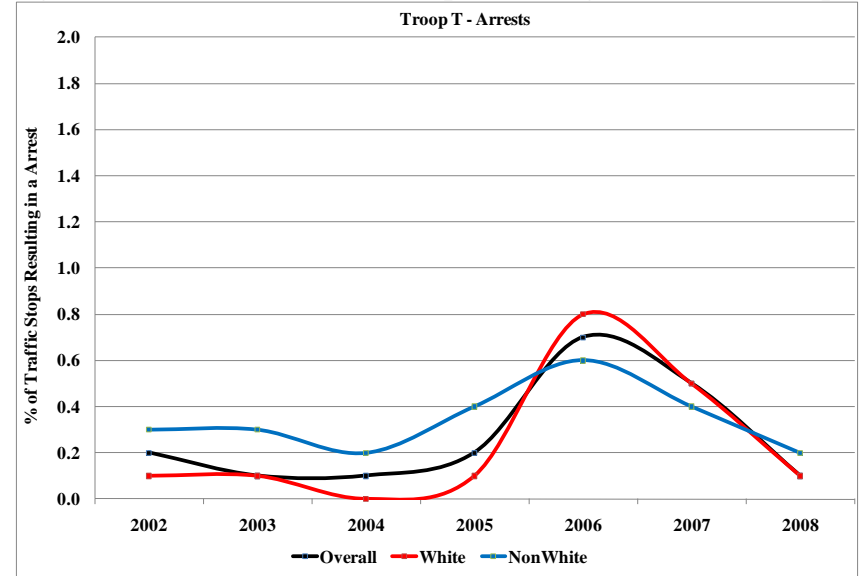


Figure 5:72: Percent of Traffic Stops Resulting in Citations – Troop T

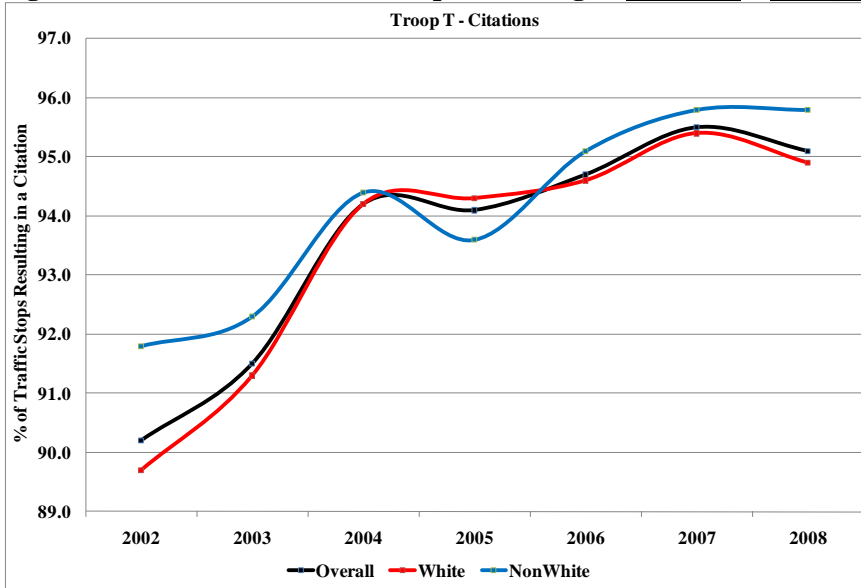
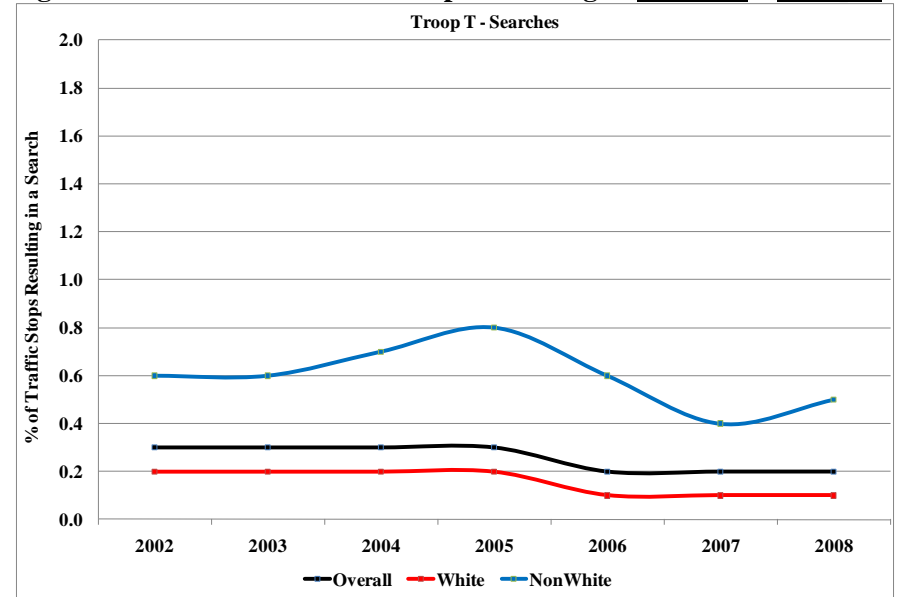


Figure 5:74: Percent of Traffic Stops Resulting in Searches – Troop T



SUMMARY

Traffic Stop Outcomes – Department Wide

- The 2008 warning rate was more than two standard deviations above the six-year average. Despite this, throughout the seven years of data collection, the rates of warnings issued have been relatively stable, ranging from a low of 24.6% in 2005 to a high of 27.6% in 2008.
- The 2008 citation rate was within one standard deviation of the six-year average. There are two trends evident based on the six years of data collection. Between 2002 and 2005, there was a steady increase in citation rates, from a low of 83.0% to a high of 88.1% in 2005. Since 2006, the citation rate has been relatively stable.
- The 2008 arrest rate was within one standard deviation of the six-year average and slightly less than the 2007 rate. The seven-year trend indicates that there was a considerable increase in the arrest rate between 2004 and 2006. This increase is likely due to known problems with the underreporting of arrests prior to 2006. Therefore, firm conclusions regarding this upward trend cannot be made.
- The 2008 search rate was within one standard deviation of the six-year average and slightly less than the 2007 rate. The seven-year trend indicates relative stability in the past four years after an increase in 2005. Similar to the arrest rate, however, there were some data collection problems prior to 2006, which may have resulted in an underreporting of searches throughout the department.
- The 2008 seizure rate was within one standard deviation of the six-year average and similar to the 2007 seizure rate. Note that the seizure rate includes the discovery of contraband from searches made for any reason.

Traffic Stop Outcomes by Race/Ethnicity – Department Wide

- Warnings: The 2008 warning rate for Black and Hispanic drivers was slightly higher than the warning rate for White drivers. Across the seven years, the warning rate for White drivers decreased between 2002 and 2005, but increased slightly in the last three years. The warning rate for Black and Hispanic drivers has increased in the past three years.
- Citations: The 2008 citation rate for Black and Hispanic drivers was higher than the rate for White drivers. Throughout the seven years of data collection, the citation rate for all groups increased between 2002 and 2004, but has stabilized in the past four years. Hispanic drivers consistently have the highest rate of citations, while White drivers are consistently the least cited group (except 2007).
- Arrests: The 2008 arrest rate was highest for Hispanic drivers, followed by Black and White drivers, respectively, and the difference between these groups expanded. In all years, Hispanic drivers are arrested at a higher rate than the other two groups, with White drivers generally being arrested less frequently (except 2006). The arrest rate prior to 2006 may have been artificially lowered due to data collection limitations in those years. Consistent across all seven years of data

collection, however, are the large discrepancies in the arrest rate for individual racial/ethnic groups.

- Searches: The 2008 search rate was highest for Hispanic drivers, followed by Black drivers and White drivers, respectively. Throughout the seven years of data collection, the search rate of White drivers has been relatively stable, with a slight bump in 2006 and 2007. For Black drivers, the search rate indicates an upward trend since 2002, with the 2008 rate breaking this trend. The search rate for Hispanic drivers also increased in early years of data collection, but has stabilized since 2005. Consistent across all seven years of data collection are the large discrepancies in the search rate for individual racial/ethnic groups.
- Seizures: The 2008 seizure rate was highest for White drivers, followed by Black drivers and Hispanic drivers, respectively. For White drivers, the 2008 seizure rate mirrors the 2007 seizure rate. In 2008, the seizure rate for Black drivers was comparable to the previous four years, and the seizure rate for Hispanic drivers fell slightly in 2008 compared to 2007. Of note, in all seven years, White drivers are consistently found with contraband at a higher rate than either Black or Hispanic drivers, and consistent across all seven years of data collection are the large discrepancies in the seizure rates for individual racial/ethnic groups.

The temporal trends of the search and seizure rates for White drivers indicate a lower rate of search, but a higher rate of seizure compared to Black and Hispanic drivers. In all years examined, White drivers had the lowest rates of searches, but the highest rates of seizures; conversely, Black and Hispanic drivers experienced a higher rate of searches, but a lower rate of seizures. There are a number of possible explanations for these racial disparities in post-stop outcomes. The rates presented in this section are simply descriptive and do not take into account other legitimate factors that may contribute to these racial/ethnic differences. As a result, any interpretation of these findings must be made with caution.

6. ANALYSES OF TRAFFIC STOP OUTCOMES

OVERVIEW

This section further examines traffic stop outcomes during member-initiated traffic stops conducted in 2008. Building on the descriptive statistics reported in Section 3, this section reports the results of statistical significance testing conducted on warnings, citations, arrests, and searches at the department, area, troop, and station levels. Two sets of analyses are the focal point of this section: 1) analyses examining the relationship between traffic stop outcomes and driver characteristics (i.e., drivers' race/ethnicity and gender) and 2) more sophisticated multivariate analyses on warnings, citations, arrests, and searches are summarized. Tables 6.1 & 6.2 document statistically significant differences between racial/ethnic and gender groups for warnings, citations, arrests, and searches across the department, area, and troop levels. All analyses are conducted using the chi-square statistic.¹⁰ Table 6.3 reports statistically significant differences between White and non-White drivers at the station level for warnings, citations, arrests, and searches. These traffic stop outcomes are further explored in hierarchical multivariate statistical analyses presented in Tables 6.4 & 6.5.

BIVARIATE ANALYSES OF TRAFFIC STOP OUTCOMES

All bivariate analyses were based on two comparisons. In separate analyses, drivers' race/ethnicity and drivers' gender were analyzed in relation to all four traffic stop outcomes (i.e., warnings, citations, arrests, and searches). Drivers' race/ethnicity is represented by three categories: White, Black, and Hispanic. Given the relatively small number traffic stops involving drivers identified as Middle Eastern, Asian, Native American, unknown, or missing, analyses of these stops are not reported. Analyses involving drivers' gender reflect all traffic stops in which drivers' gender was recorded. For each organizational unit, the tables report the total number of stops for each race/ethnicity and gender group and the percent of drivers from each group that were warned, cited, arrested, or searched. Statistically significant relationships are indicated with an asterisk.¹¹

¹⁰ In Tables 6.1– 6.3, the asterisks indicate statistically significant differences in the outcomes received by racial/ethnic and gender groups based on bivariate chi-square associations. Chi-square statistics are based on the differences between groups while considering 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. Multivariate analyses address this limitation of bivariate analyses and also use asterisks to signify statistical significance (see Tables 6.4 & 6.5). These asterisks, however, represent statistical significance when other factors believed to influence the outcome of stops are taken into account.

¹¹ The asterisk is only included in the first group of the comparison. For example, if the relationship between racial/ethnic groups (i.e., White, Black, and Hispanic drivers) and warnings was statistically significant, an asterisk is placed beside the rate of warning for White drivers. The correct interpretation of this result is that the rate of warnings significantly differs between the three races/ethnicities, and the actual rate of warnings for each group should be consulted for the rank order of the groups. For each group, the number of asterisks indicates

Table 6.1 illustrates the variation in post-stop outcomes (i.e., warnings, citations, arrests, and searches) by drivers' race/ethnicity and gender for both the department and area levels. Across the department, there were statistically significant differences between drivers' race/ethnicity in all traffic stop outcomes, based on bivariate analyses. Of the Hispanic and Black motorists stopped, 28.8% and 29.1%, respectively, received warnings compared to 27.9% of White drivers stopped. Conversely, Hispanic drivers (89.0%) had slightly higher rates of citations (89.0%), compared to White (87.2%) and Black (88.4%) drivers. In regard to arrests, the rates incrementally increased when comparing White drivers (1.3%), Black drivers (1.7%), and Hispanic drivers (2.4%). The largest differences across racial/ethnic groups were found for searches. Of all Black and Hispanic drivers stopped, 3.6% were searched for both racial groups, compared to only 0.8% of White drivers stopped. All statistically significant results reported in Table 6.1 occurred at the 0.001 level indicating that these differences reflect a statistical difference between the groups 99.9% of the time. Based solely on the statistical significance, these results suggest that a difference exists in the rate of warnings, citations, arrests, and searches depending on the race of the driver. It is important to recognize, however, that chi-square analyses do not consider other variables when determining statistical significance. In other words, the chi-square test does not measure other factors potentially associated with the likelihood of receiving post-stop outcomes; rather, it only considers the race/ethnicity of the driver. Further, these statistical tests are influenced by the large sample size. Consequently, the results of these analyses should be interpreted with 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.

Drivers' gender also produced statistically significant results when examining the data for the entire department. Statistically significant differences were reported for male and female drivers in regard to arrests and searches at the 0.001 level. Of all the male drivers stopped, 1.6% were arrested, compared to 0.7% of all female drivers stopped. Male drivers were also significantly more likely to be searched (1.4% of male drivers stopped) compared to female drivers (.05% of female drivers stopped). As with the racial differences reported above, these results do not consider the impact of any other factors and should not be considered definitive evidence of disparity. Unlike previous years, there were no differences amongst male and female drivers with regard to warnings and citations.

Area level data differences in traffic stop outcomes based on racial/ethnic characteristics are also displayed in Table 6.1. Analyses of warnings indicate racial/ethnic differences in all areas. At least one minority group received proportionately more warnings in Areas I and IV. All areas except the Bureau of Patrol demonstrated statistically significant racial/ethnic differences in rates of citations. No clear trend can be discerned from these results as the statistical significance level and rank ordering of the racial/ethnic groups varied by areas. For arrests, three of the five areas reported statistically significant differences across racial/ethnic groups. In all three areas, minority drivers received proportionately higher rates of arrest. Finally, all five areas demonstrated statistically significant racial/ethnic differences

the degree of statistical significance as described at the bottom of all tables in this section. Statistical significance is reported at the 0.05, 0.01, and 0.001 levels.

in search rates, with minority drivers consistently being searched proportionately more frequently in all areas compared to White drivers.

Analyses of drivers' gender also demonstrated statistically significant differences. As demonstrated in Table 6.1, Area I reported statistically significant differences across gender for warnings, and Area II indicated statistically significant differences for citations. Statistically significant differences across gender groups were also evident in all five areas for both arrests and searches. In all cases, male drivers were arrested and searched disproportionately more than female drivers. Although these general patterns held across areas, there are specific differences in the rates across areas, reported in Table 6.1.

Again, it is important to recognize that racial/ethnic or gender differences are not evidence of bias policing because other factors related to these traffic stop outcomes were not considered in these analyses. Refer to the multivariate analyses for more definitive conclusions regarding the existence of racial/ethnic and/or gender differences in traffic stop outcomes.

Table 6.1: 2007 Stop Outcomes by Race and Gender for Department and Areas

| | Drivers | Total # of stops | % drivers warned | % drivers cited | % drivers arrested | % drivers searched |
|-------------------------|----------------|-------------------------|-------------------------|------------------------|---------------------------|---------------------------|
| PSP Dept | White | 232,021 | 27.9*** | 87.2*** | 1.3*** | 0.8*** |
| | Black | 24,884 | 28.8 | 88.4 | 1.7 | 3.6 |
| | Hispanic | 9,789 | 29.4 | 89.0 | 2.4 | 3.6 |
| | Male | 188,230 | 27.6 | 87.6 | 1.6*** | 1.4*** |
| | Female | 90,087 | 27.6 | 87.6 | 0.7 | 0.5 |
| AREA I | White | 38,304 | 35.0*** | 87.0** | 2.6*** | 1.7*** |
| | Black | 8,177 | 40.5 | 86.1 | 3.3 | 5.8 |
| | Hispanic | 4,055 | 39.5 | 88.1 | 3.6 | 4.5 |
| | Male | 35,833 | 36.3** | 87.1 | 3.3*** | 3.2*** |
| | Female | 17,093 | 35.1 | 87.0 | 1.5 | 1.2 |
| AREA II | White | 39,002 | 26.6 | 86.4** | 1.1 | 0.8*** |
| | Black | 3,100 | 27.6 | 86.7 | 1.4 | 4.0 |
| | Hispanic | 1,700 | 25.6 | 89.2 | 1.2 | 2.9 |
| | Male | 30,972 | 26.3 | 86.5* | 1.3*** | 1.4*** |
| | Female | 14,667 | 26.1 | 87.3 | 0.5 | 0.4 |
| AREA III | White | 61,178 | 28.8 | 85.7* | 1.2*** | 0.7*** |
| | Black | 3,861 | 29.6 | 85.4 | 1.3 | 3.4 |
| | Hispanic | 1,444 | 29.6 | 83.2 | 3.2 | 6.5 |
| | Male | 45,537 | 28.8 | 85.6 | 1.6*** | 1.3*** |
| | Female | 22,736 | 28.7 | 86.0 | 0.6 | 0.4 |
| AREA IV | White | 52,853 | 34.6*** | 83.5*** | 1.6 | 0.7*** |
| | Black | 3,261 | 31.3 | 87.6 | 1.7 | 3.4 |
| | Hispanic | 841 | 26.0 | 87.5 | 1.9 | 2.3 |
| | Male | 39,515 | 33.7 | 84.2 | 1.9*** | 1.1*** |
| | Female | 19,314 | 34.2 | 83.7 | 0.8 | 0.4 |
| BUREAU OF PATROL | White | 40,612 | 12.2 | 94.9 | 0.1*** | 0.1*** |
| | Black | 6,483 | 12.9 | 94.5 | 0.2 | 0.7 |
| | Hispanic | 1,748 | 11.2 | 96.4 | 0.3 | 0.7 |
| | Male | 36,318 | 12.1 | 95.1 | 0.1* | 0.1*** |
| | Female | 16,253 | 11.6 | 95.2 | 0.1 | 0.2 |

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

Table 6.2 displays differences in traffic stop outcomes by drivers' race/ethnicity and gender at the troop level. Twelve of the sixteen troops experienced statistically significant racial/ethnic differences in warnings. Of the twelve troops with statistically significant differences, eight troops had at least one minority group with the highest rate of warnings, while in the other four troops White drivers received disproportionately more warnings. For citations, twelve of the sixteen troops reported a statistically significant difference between racial/ethnic groups. Of the twelve troops with statistically significant differences, seven troops reported at least one minority group with the highest rate of citations. In regard to arrests, six of sixteen troops reported statistically significant differences across racial/ethnic groups, with minority drivers ranking highest in the rate of arrest in all six organizational units. In addition, fourteen of the sixteen troops demonstrated statistically significant racial/ethnic differences in the rate of searches, and in all cases, minority groups received proportionately more searches compared to White drivers. In some troops, the differences between races/ethnicities were quite large.

Table 6.2 also reports differences in traffic stop outcomes by drivers' gender at the troop level. One of the sixteen troops reported statistically significant differences in warnings; in this troop, male drivers received proportionately more warnings compared to female drivers. For citations, five of the sixteen troops indicated statistically significant differences in the citation rate between male and female drivers. Male drivers received disproportionately more citations in two of the five troops with statistically significant differences. All sixteen troops demonstrated statistically significant gender differences in rates of arrest – male drivers were arrested disproportionately more frequently than female drivers in all sixteen troops. Finally, fifteen of the sixteen troops indicated statistically significant differences in search rates for male and female drivers. In all of these troops, male drivers were searched disproportionately more frequently compared to female drivers.

Table 6.3 presents the results of bivariate analyses between drivers' race/ethnicity and traffic stop outcomes at the station level for 2008. In contrast to information provided in Tables 6.1 & 6.2, the racial/ethnic categories presented in Table 6.3 are restricted to White and non-White because the number of stops of some racial/ethnic groups is too small for individual comparisons at the station level. The "non-White" category includes Black, Black Hispanic, White Hispanic, Native American, Middle Eastern, and Asian drivers. Analyses examining the relationship between drivers' gender and traffic stops outcomes at the station level are not reported, however are available from the author(s) upon request.

Table 6.2: 2007 Stop Outcomes by Race and Gender for Troops (p. 1 of 3)

| | Drivers | Total # of Stops | % drivers warned | % drivers cited | % drivers arrested | % drivers searched |
|-----------------------------|----------------|-----------------------------|-----------------------------|----------------------------|-------------------------------|-------------------------------|
| Area I, Troop J | White | 9,231 | 26.7*** | 93.9 | 3.4*** | 1.2*** |
| | Black | 1,179 | 30.1 | 94.4 | 5.4 | 3.3 |
| | Hispanic | 1,187 | 35.6 | 95.5 | 6.1 | 3.5 |
| | Male | 7,908 | 28.6* | 94.0 | 4.6*** | 2.0*** |
| | Female | 3,997 | 26.5 | 94.5 | 2.3 | 0.8 |
| Area I, Troop K | White | 10,390 | 37.2*** | 87.7*** | 2.6 | 3.4*** |
| | Black | 4,789 | 44.5 | 85.7 | 3.1 | 7.3 |
| | Hispanic | 861 | 44.5 | 89.0 | 2.7 | 8.1 |
| | Male | 11,767 | 39.7 | 87.4 | 3.2*** | 5.7*** |
| | Female | 5,449 | 38.1 | 87.5 | 1.3 | 2.2 |
| Area I, Troop L | White | 5,037 | 31.3 | 86.1* | 1.4 | 0.4 |
| | Black | 374 | 32.5 | 81.6 | 0.9 | 2.7 |
| | Hispanic | 350 | 34.7 | 85.6 | 2.2 | 1.1 |
| | Male | 2,926 | 31.1 | 85.9 | 1.7*** | 0.8 |
| | Female | 5,776 | 31.4 | 85.6 | 0.8 | 0.4 |
| Area I, Troop M | White | 11,355 | 42.0 | 81.3 | 2.7 | 1.3*** |
| | Black | 1,655 | 39.0 | 82.6 | 2.8 | 4.5 |
| | Hispanic | 1,471 | 41.5 | 82.5 | 2.6 | 4.4 |
| | Male | 10,382 | 41.3 | 82.1* | 3.1*** | 2.5*** |
| | Female | 4,721 | 41.3 | 80.1 | 1.5 | 0.7 |
| Area II, Troop F | White | 14,674 | 27.0** | 84.1** | 1.0* | 0.7*** |
| | Black | 819 | 23.3 | 87.4 | 1.8 | 4.4 |
| | Hispanic | 318 | 21.1 | 89.3 | 1.9 | 2.2 |
| | Male | 10,901 | 26.7 | 84.1* | 1.3*** | 1.1*** |
| | Female | 5,541 | 25.9 | 85.4 | 0.6 | 0.3 |
| Area II, Troop N | White | 9,649 | 18.7*** | 91.9*** | 1.0 | 0.4*** |
| | Black | 1,477 | 26.3 | 88.8 | 0.9 | 2.5 |
| | Hispanic | 903 | 22.9 | 91.4 | 0.7 | 2.0 |
| | Male | 8,648 | 20.0 | 91.2** | 1.2*** | 0.9*** |
| | Female | 4,033 | 18.9 | 92.6 | 0.3 | 0.3 |

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

Table 6.2: 2007 Stop Outcomes by Race and Gender for Troops (p. 2 of 3)

| | Drivers | Total # of Stops | % drivers warned | % drivers cited | % drivers arrested | % drivers searched |
|--------------------------|----------|------------------|------------------|-----------------|--------------------|--------------------|
| Area II, Troop P | White | 7,431 | 34.9* | 81.2* | 1.0 | 1.1 |
| | Black | 132 | 28.0 | 90.2 | 1.5 | 2.3 |
| | Hispanic | 118 | 26.3 | 86.4 | 1.7 | 2.5 |
| | Male | 5,271 | 34.3 | 82.1 | 1.1* | 1.5*** |
| | Female | 2,495 | 35.2 | 80.4 | 0.6 | 0.4 |
| Area II, Troop R | White | 7,248 | 28.0*** | 89.0*** | 1.5 | 1.3*** |
| | Black | 672 | 35.7 | 80.5 | 1.9 | 7.1 |
| | Hispanic | 361 | 36.0 | 84.8 | 1.7 | 5.8 |
| | Male | 6,152 | 27.9 | 88.1 | 1.8*** | 2.3*** |
| | Female | 2,598 | 28.6 | 89.5 | 0.6 | 0.8 |
| Area III, Troop A | White | 18,578 | 32.2* | 87.6 | 1.2 | 0.8*** |
| | Black | 621 | 36.4 | 85.7 | 1.0 | 3.4 |
| | Hispanic | 94 | 22.3 | 90.4 | 3.2 | 1.1 |
| | Male | 13,233 | 31.8 | 87.8 | 1.4*** | 1.0*** |
| | Female | 6,343 | 33.0 | 87.3 | 0.6 | 0.4 |
| Area III, Troop G | White | 20,185 | 35.5*** | 79.5*** | 0.6*** | 0.3*** |
| | Black | 1,319 | 40.3 | 75.9 | 0.5 | 2.7 |
| | Hispanic | 476 | 43.1 | 69.1 | 2.5 | 11.8 |
| | Male | 15,356 | 36.1 | 78.6** | 0.7*** | 1.0*** |
| | Female | 7,455 | 34.9 | 80.4 | 0.3 | 0.2 |
| Area III, Troop H | White | 22,415 | 20.0 | 89.7** | 1.9** | 0.9*** |
| | Black | 1,921 | 20.1 | 91.9 | 2.0 | 4.0 |
| | Hispanic | 874 | 23.1 | 90.2 | 3.5 | 4.2 |
| | Male | 16,948 | 19.8 | 90.2 | 2.5*** | 1.6*** |
| | Female | 8,938 | 20.4 | 89.7 | 0.9 | 0.4 |
| Area IV, Troop C | White | 14,911 | 34.6*** | 80.2*** | 1.0 | 0.3*** |
| | Black | 817 | 21.5 | 90.2 | 0.5 | 1.3 |
| | Hispanic | 406 | 13.5 | 94.3 | 0.2 | 1.7 |
| | Male | 11,721 | 32.2 | 82.2*** | 1.0** | 0.6*** |
| | Female | 5,193 | 33.6 | 80.0 | 0.6 | 0.1 |

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

Table 6.2: 2007 Stop Outcomes by Race and Gender for Troops (p. 3 of 3)

| | Drivers | Total # of Stops | % drivers warned | % drivers cited | % drivers arrested | % drivers searched |
|-----------------------------|-----------------------------|---------------------|---------------------|--------------------|-----------------------|-----------------------|
| Area IV, Troop D | White | 14,589 | 38.4 | 82.4** | 1.8 | 1.2*** |
| | Black | 943 | 41.3 | 80.6 | 2.2 | 4.2 |
| | Hispanic | 167 | 41.3 | 73.1 | 3.6 | 4.8 |
| | Male | 10,544 | 38.3 | 82.2 | 2.2*** | 1.7*** |
| | Female | 5,545 | 39.0 | 82.6 | 0.9 | 0.7 |
| | Area IV, Troop E | White | 11,261 | 39.8*** | 77.0** | 2.2 |
| Black | | 520 | 31.7 | 82.9 | 1.3 | 2.3 |
| Hispanic | | 173 | 35.8 | 81.5 | 2.3 | 0.0 |
| Male | | 8,273 | 39.2 | 77.5 | 2.6*** | 0.7** |
| Female | | 4,128 | 37.8 | 77.9 | 1.0 | 0.3 |
| Area IV, Troop B | | White | 12,092 | 25.0*** | 95.0 | 1.5** |
| | Black | 981 | 29.7 | 94.7 | 2.2 | 4.9 |
| | Hispanic | 95 | 34.7 | 94.7 | 5.3 | 4.2 |
| | Male | 8,977 | 25.2 | 95.1 | 1.9*** | 1.5*** |
| | Female | 4,448 | 25.6 | 94.9 | 0.9 | 0.6 |
| | Area V, Troop T | White | 40,612 | 12.2 | 94.9** | 0.1*** |
| Black | | 6,483 | 12.9 | 94.5 | 0.2 | 0.7 |
| Hispanic | | 1,748 | 11.2 | 96.4 | 0.3 | 0.7 |
| Male | | 36,318 | 12.1 | 95.1 | 0.1** | 0.2*** |
| Female | | 16,253 | 11.6 | 95.2 | 0.1 | 0.1 |

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

Table 6.3: 2007 Stop Outcomes by Race for Station (p. 1 of 5)

| | Drivers | Total # of Stops | % drivers warned | % drivers cited | % drivers arrested | % drivers searched |
|------------------------|-----------|------------------|------------------|-----------------|--------------------|--------------------|
| AREA I, Troop J | | | | | | |
| Avondale | White | 2,521 | 40.5** | 94.9 | 2.2 | 1.5* |
| | Non-White | 995 | 45.4 | 96.3 | 3.3 | 2.8 |
| Embreeville | White | 2,353 | 23.5 | 93.8** | 1.6*** | 1.5*** |
| | Non-White | 796 | 24.0 | 96.4 | 4.3 | 3.6 |
| Ephrata | White | 940 | 25.6* | 94.1 | 1.3 | 0.6* |
| | Non-White | 149 | 34.9 | 95.3 | 2.7 | 2.7 |
| Lancaster | White | 3,431 | 19.1 | 93.2 | 6.2** | 0.9*** |
| | Non-White | 721 | 21.4 | 92.0 | 9.3 | 2.8 |
| AREA I, Troop K | | | | | | |
| Media | White | 2,174 | 43.8*** | 81.3*** | 3.7** | 6.0*** |
| | Non-White | 989 | 51.5 | 72.3 | 6.2 | 14.4 |
| Philadelphia | White | 6,904 | 33.9*** | 90.0 | 1.8 | 2.8*** |
| | Non-White | 5,299 | 40.2 | 89.5 | 2.2 | 5.2 |
| Skippack | White | 1,485 | 42.2*** | 87.3 | 4.2 | 2.2*** |
| | Non-White | 365 | 52.3 | 88.5 | 3.3 | 6.3 |
| AREA I, Troop L | | | | | | |
| Frackville | White | 748 | 25.5 | 87.7 | 2.4 | 0.9 |
| | Non-White | 129 | 22.5 | 92.2 | 2.3 | 0.8 |
| Hamburg | White | 1,310 | 32.8*** | 91.5** | 0.1 | 0.3 |
| | Non-White | 351 | 19.1 | 96.6 | 0.3 | 0.3 |
| Jonestown | White | 2,582 | 28.2** | 82.0** | 2.7 | 0.8*** |
| | Non-White | 550 | 33.3 | 75.8 | 2.0 | 3.3 |
| Reading | White | 1,427 | 35.4*** | 87.2** | 0.6 | 0.0** |
| | Non-White | 192 | 48.4 | 80.2 | 1.6 | 0.5 |
| Schuylkill Haven | White | 1,284 | 34.5 | 86.3 | 0.6 | 0.2 |
| | Non-White | 132 | 35.6 | 87.9 | 0.0 | 0.0 |
| AREA I, Troop M | | | | | | |
| Belfast | White | 1,897 | 26.3 | 87.0 | 1.2 | 0.7** |
| | Non-White | 619 | 24.1 | 87.2 | 0.5 | 2.1 |
| Bethlehem | White | 971 | 36.6 | 85.8* | 2.5 | 2.8*** |
| | Non-White | 386 | 39.6 | 80.6 | 3.6 | 9.1 |
| Dublin | White | 3,056 | 52.4 | 77.9*** | 4.0 | 1.0* |
| | Non-White | 379 | 48.3 | 85.8 | 2.4 | 2.1 |
| Fogelsville | White | 3,378 | 48.1 | 76.7 | 1.3 | 1.6*** |
| | Non-White | 1,242 | 49.7 | 78.2 | 1.6 | 4.8 |
| Trevoise | White | 2,081 | 33.6 | 86.4 | 4.5 | 1.1*** |
| | Non-White | 1,094 | 32.4 | 85.8 | 4.1 | 2.8 |

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

Table 6.3: 2007 Stop Outcomes by Race for Station (p. 2 of 5)

| | Drivers | Total # of Stops | % drivers warned | % drivers cited | % drivers arrested | % drivers searched |
|-------------------------|-----------|------------------|------------------|-----------------|--------------------|--------------------|
| AREA II, Troop F | | | | | | |
| Coudersport | White | 2,186 | 53.6 | 59.6 | 1.7 | 0.8 |
| | Non-White | 38 | 47.4 | 71.1 | 2.6 | 2.6 |
| Emporium | White | 727 | 33.0 | 74.6 | 0.6 | 0.3 |
| | Non-White | 15 | 26.7 | 86.7 | 0.0 | 0.0 |
| Lamar | White | 2,417 | 24.5 | 85.5 | 1.4 | 0.6* |
| | Non-White | 579 | 22.5 | 88.6 | 1.0 | 1.4 |
| Mansfield | White | 975 | 41.2 | 72.6 | 1.2 | 0.2*** |
| | Non-White | 96 | 31.2 | 77.1 | 2.1 | 7.3 |
| Milton | White | 2,782 | 12.9 | 96.5 | 0.2 | 0.1* |
| | Non-White | 475 | 11.6 | 97.9 | 0.2 | 0.6 |
| Montoursville | White | 1,683 | 14.1*** | 92.6*** | 0.6*** | 1.1*** |
| | Non-White | 165 | 25.5 | 82.4 | 6.1 | 13.9 |
| Selinsgrove | White | 2,484 | 22.8 | 89.3 | 1.0 | 0.4 |
| | Non-White | 216 | 17.6 | 90.3 | 1.9 | 0.5 |
| Stonington | White | 1,555 | 28.4 | 87.2 | 1.6 | 2.0 |
| | Non-White | 49 | 28.6 | 89.8 | 0.0 | 0.0 |
| AREA II, Troop N | | | | | | |
| Bloomsburg | White | 1,676 | 14.2 | 96.9 | 0.3 | 0.2* |
| | Non-White | 553 | 12.5 | 98.4 | 0.4 | 0.7 |
| Fern Ridge | White | 2,397 | 7.9 | 95.1 | 1.3* | 0.1 |
| | Non-White | 763 | 9.0 | 96.7 | 0.3 | 0.3 |
| Hazelton | White | 1,036 | 29.2 | 85.9 | 0.6 | 1.7* |
| | Non-White | 354 | 29.9 | 85.3 | 1.1 | 4.5 |
| Lehighton | White | 1,778 | 14.0 | 92.7 | 0.7 | 0.1 |
| | Non-White | 171 | 15.2 | 93.6 | 0.0 | 0.0 |
| Swiftwater | White | 2,787 | 29.8*** | 87.9** | 1.6 | 0.6*** |
| | Non-White | 1,166 | 35.3 | 84.5 | 1.0 | 2.8 |
| AREA II, Troop P | | | | | | |
| Laporte | White | 1,552 | 23.0 | 85.9 | 0.3 | 0.1 |
| | Non-White | 29 | 31.0 | 82.8 | 0.0 | 0.0 |
| Shickshinny | White | 962 | 26.4 | 92.9 | 1.6 | 0.2 |
| | Non-White | 54 | 24.1 | 92.6 | 0.0 | 0.0 |
| Towanda | White | 3,024 | 54.5 | 66.1 | 0.6 | 2.1 |
| | Non-White | 87 | 50.6 | 72.4 | 0.0 | 1.1 |
| Tunkhannock | White | 1,085 | 24.6 | 94.7 | 1.6 | 0.6 |
| | Non-White | 54 | 16.7 | 98.1 | 1.9 | 0.0 |
| Wyoming | White | 813 | 8.9 | 96.9 | 2.0 | 0.6*** |
| | Non-White | 106 | 12.3 | 95.3 | 2.8 | 4.7 |

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

Table 6.3: 2007 Stop Outcomes by Race for Station (p. 3 of 5)

| | Drivers | Total # of Stops | % drivers warned | % drivers cited | % drivers arrested | % drivers searched |
|--------------------------|-----------|------------------|------------------|-----------------|--------------------|--------------------|
| AREA II, Troop R | | | | | | |
| Blooming Grove | White | 2,283 | 38.8* | 88.0*** | 1.6 | 1.3*** |
| | Non-White | 410 | 45.1 | 81.2 | 1.7 | 5.4 |
| Dunmore | White | 2,110 | 24.1 | 86.6 | 1.1 | 1.1*** |
| | Non-White | 413 | 24.7 | 84.5 | 1.7 | 6.5 |
| Gibson | White | 1,687 | 23.3 | 89.9 | 1.1 | 0.9*** |
| | Non-White | 564 | 22.2 | 89.0 | 0.7 | 3.4 |
| Honesdale | White | 1,204 | 20.1 | 94.4 | 2.2 | 2.2 |
| | Non-White | 79 | 27.8 | 91.1 | 1.3 | 1.3 |
| AREA III, Troop A | | | | | | |
| Ebensburg | White | 4,689 | 26.1* | 85.8 | 1.6 | 0.3 |
| | Non-White | 220 | 19.5 | 89.5 | 0.0 | 0.5 |
| Greensburg | White | 4,005 | 46.0 | 84.7 | 1.5 | 0.6 |
| | Non-White | 180 | 50.6 | 77.2 | 0.6 | 4.4*** |
| Indiana | White | 4,103 | 29.2 | 88.4 | 0.4 | 0.7 |
| | Non-White | 282 | 33.3 | 88.7 | 0.7 | 1.1 |
| Kiski Valley | White | 3,409 | 25.7 | 89.2 | 1.2 | 2.0* |
| | Non-White | 226 | 28.8 | 88.5 | 2.7 | 4.0 |
| Somerset (A) | White | 2,418 | 35.2 | 92.8 | 1.0 | 0.3* |
| | Non-White | 44 | 43.2 | 100.0 | 0.0 | 2.3 |
| AREA III, Troop G | | | | | | |
| Bedford | White | 2,491 | 44.5*** | 75.2*** | 0.5 | 0.2 |
| | Non-White | 220 | 32.3 | 89.5 | 0.0 | 0.0 |
| Hollidaysburg | White | 1,748 | 43.1*** | 77.7*** | 0.3* | 0.6*** |
| | Non-White | 297 | 65.7 | 45.5 | 1.3 | 21.2 |
| Huntingdon | White | 2,012 | 48.6*** | 69.7*** | 1.0 | 0.4*** |
| | Non-White | 111 | 64.9 | 46.8 | 0.9 | 8.1 |
| Lewiston | White | 5,057 | 24.7*** | 89.3*** | 0.8 | 0.5*** |
| | Non-White | 518 | 32.4 | 84.4 | 1.5 | 3.7 |
| McConnellsburg | White | 2,587 | 53.0*** | 60.3*** | 0.3 | 0.1 |
| | Non-White | 647 | 40.6 | 73.0 | 0.2 | 0.2 |
| Philipsburg | White | 2,251 | 35.7 | 80.1 | 0.7 | 0.1* |
| | Non-White | 144 | 30.6 | 84.0 | 0.7 | 0.7 |
| Rockview | White | 4,084 | 22.2 | 87.8 | 0.3 | 0.2*** |
| | Non-White | 644 | 24.7 | 86.0 | 0.9 | 2.0 |

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

Table 6.3: 2007 Stop Outcomes by Race for Station (p. 4 of 5)

| | Drivers | Total # of Stops | % drivers warned | % drivers cited | % drivers arrested | % drivers searched |
|--------------------------|-----------|------------------|------------------|-----------------|--------------------|--------------------|
| AREA III, Troop H | | | | | | |
| Carlisle | White | 6,771 | 12.4 | 94.5** | 3.4 | 0.9** |
| | Non-White | 968 | 11.4 | 96.6 | 2.5 | 1.9 |
| Chambersburg | White | 3,382 | 34.7 | 89.4* | 1.0 | 1.1*** |
| | Non-White | 492 | 36.8 | 92.7 | 1.2 | 5.3 |
| Gettysburg | White | 2,072 | 31.7** | 73.9** | 2.7 | 1.1 |
| | Non-White | 367 | 24.5 | 80.7 | 3.5 | 2.2 |
| Harrisburg | White | 2,456 | 18.5*** | 93.7*** | 0.9 | 0.4*** |
| | Non-White | 574 | 25.1 | 89.4 | 1.4 | 4.7 |
| Lykens | White | 2,128 | 33.5 | 73.2 | 1.0 | 0.9 |
| | Non-White | 46 | 43.5 | 71.7 | 0.0 | 2.2 |
| Newport | White | 2,483 | 12.4 | 94.7 | 0.5 | 0.3 |
| | Non-White | 239 | 13.0 | 95.4 | 0.0 | 0.8 |
| York | White | 3,173 | 11.5 | 94.1 | 1.5* | 1.4*** |
| | Non-White | 735 | 13.7 | 93.7 | 3.0 | 4.4 |
| AREA IV, Troop C | | | | | | |
| Clarion | White | 1,764 | 36.3*** | 77.9*** | 0.5 | 0.3** |
| | Non-White | 481 | 22.9 | 88.8 | 0.2 | 1.5 |
| Clearfield | White | 2,915 | 22.3*** | 93.5** | 0.4 | 0.2 |
| | Non-White | 695 | 12.1 | 96.5 | 0.1 | 0.3 |
| Dubois | White | 2,247 | 24.6*** | 85.3*** | 0.6 | 0.1** |
| | Non-White | 450 | 15.3 | 95.1 | 0.4 | 0.9 |
| Kane | White | 1,575 | 41.5*** | 76.1 | 2.6 | 1.9 |
| | Non-White | 87 | 20.7 | 85.1 | 2.3 | 2.3 |
| Punxsutawney | White | 2,451 | 45.5** | 72.5* | 0.9** | 0.2*** |
| | Non-White | 90 | 28.9 | 84.4 | 4.4 | 3.3 |
| Ridgway | White | 2,472 | 29.3 | 80.9 | 1.6 | 0.1 |
| | Non-White | 85 | 29.4 | 75.3 | 0.0 | 0.0 |
| Tionesta | White | 1,536 | 53.7*** | 65.6* | 0.5 | 0.1*** |
| | Non-White | 66 | 30.3 | 80.3 | 0.0 | 4.5 |
| AREA IV, Troop D | | | | | | |
| Beaver | White | 2,712 | 28.3 | 92.2 | 1.2 | 1.1*** |
| | Non-White | 327 | 31.5 | 91.7 | 2.1 | 3.7 |
| Butler | White | 4,665 | 51.4 | 76.4 | 2.2 | 0.9*** |
| | Non-White | 278 | 46.8 | 80.6 | 2.5 | 3.2 |
| Kittanning | White | 2,630 | 32.9 | 77.6 | 2.0 | 2.7 |
| | Non-White | 205 | 29.3 | 81.5 | 1.5 | 3.9 |
| Mercer | White | 2,243 | 44.5 | 82.2*** | 0.1** | 0.7*** |
| | Non-White | 473 | 48.4 | 72.9 | 0.8 | 4.0 |
| New Castle | White | 2,375 | 24.8 | 88.3 | 2.9 | 0.4* |
| | Non-White | 181 | 30.9 | 89.5 | 3.9 | 1.7 |

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

Table 6.3: 2007 Stop Outcomes by Race for Station (p. 5 of 5)

| | Drivers | Total # of Stops | % drivers warned | % drivers cited | % drivers arrested | % drivers searched |
|----------------------------------|----------------|-----------------------------|-----------------------------|----------------------------|-------------------------------|-------------------------------|
| AREA IV, Troop E | | | | | | |
| Corry | White | 1,365 | 34.9 | 76.7 | 1.9 | 0.4 |
| | Non-White | 22 | 36.4 | 81.8 | 0.0 | 0.0 |
| Erie | White | 3,004 | 41.8 | 79.1 | 2.9 | 0.4* |
| | Non-White | 337 | 38.9 | 80.4 | 1.8 | 1.5 |
| Franklin | White | 1,512 | 63.1*** | 63.4** | 2.5 | 0.3 |
| | Non-White | 132 | 42.4 | 75.0 | 1.5 | 0.8 |
| Girard | White | 2,073 | 35.0* | 80.5* | 2.2 | 0.9 |
| | Non-White | 245 | 26.9 | 86.1 | 1.2 | 1.6 |
| Meadville | White | 2,326 | 28.3*** | 82.1*** | 0.4 | 0.3 |
| | Non-White | 350 | 14.3 | 91.4 | 0.3 | 0.6 |
| Warren | White | 1,019 | 40.9 | 72.6* | 3.9 | 1.1 |
| | Non-White | 16 | 50.0 | 50.0 | 0.0 | 0.0 |
| AREA IV, Troop B | | | | | | |
| Belle Vernon | White | 1,065 | 25.1 | 96.5 | 1.7 | 1.3 |
| | Non-White | 134 | 28.4 | 94.0 | 0.7 | 3.0 |
| Pittsburgh | White | 3,574 | 30.9 | 97.0 | 0.3*** | 0.4*** |
| | Non-White | 524 | 31.3 | 98.1 | 1.5 | 1.9 |
| Uniontown | White | 3,378 | 24.5** | 91.5 | 3.4 | 1.8*** |
| | Non-White | 262 | 32.4 | 88.5 | 4.6 | 10.7 |
| Washington | White | 3,353 | 12.1** | 97.1 | 0.9 | 0.4*** |
| | Non-White | 344 | 17.7 | 95.9 | 1.5 | 2.0 |
| Waynesburg | White | 736 | 56.5 | 90.2 | 1.1 | 1.0*** |
| | Non-White | 56 | 51.8 | 94.6 | 1.8 | 7.1 |
| Bureau of Patrol, Troop T | | | | | | |
| Bowmansville | White | 5,027 | 8.6 | 98.1 | 0.1 | 0.2*** |
| | Non-White | 1,650 | 10.0 | 97.9 | 0.2 | 1.5 |
| Everett | White | 9,294 | 10.4* | 94.5*** | 0.1* | 0.0 |
| | Non-White | 3,312 | 9.1 | 96.0 | 0.2 | 0.0 |
| Gibsonia | White | 4,552 | 14.1 | 92.6 | 0.0* | 0.0 |
| | Non-White | 854 | 12.4 | 94.0 | 0.1 | 0.1 |
| Highspire | White | 19 | 26.3 | 73.7 | 0.0 | 0.0 |
| | Non-White | 2 | 0.0 | 100.0 | 0.0 | 0.0 |
| King of Prussia | White | 5,024 | 16.3 | 92.2 | 0.1 | 0.2*** |
| | Non-White | 1,599 | 16.1 | 92.6 | 0.3 | 1.3 |
| New Stanton | White | 4,312 | 10.6 | 94.7 | 0.0*** | 0.0* |
| | Non-White | 686 | 11.4 | 94.2 | 0.4 | 0.3 |
| Newville | White | 6,377 | 18.3** | 96.8 | 0.1 | 0.0** |
| | Non-White | 276 | 15.5 | 97.1 | 0.1 | 0.2 |
| Pocono | White | 3,231 | 9.5 | 94.6 | 0.1 | 0.1 |
| | Non-White | 619 | 9.9 | 95.3 | 0.0 | 0.3 |
| Somerset (T) | White | 3,034 | 5.7 | 95.8 | 0.2 | 0.3 |
| | Non-White | 1,204 | 4.7 | 96.6 | 0.2 | 0.7 |

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

Tables 6.1 - 6.3 illustrate the wide variation in traffic stop outcomes across drivers' racial/ethnic and gender groups at the department, area, troop, and station levels for 2008. It is important to reiterate, however, that the relationships reported in the previous tables are bivariate relationships and thus do not statistically control for other relevant legal and extralegal factors that might influence officer decision-making. Therefore, the information provided in these tables cannot be used to assess 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 – 6.3 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, it cannot be the sole source of information used to examine whether or not discriminatory practices exist.

MULTIVARIATE ANALYSES IN TRAFFIC STOP OUTCOMES

A multivariate statistical model takes many different factors/variables into account when attempting to understand a particular behavior or outcome, such as the outcomes associated with traffic stops. 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.

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, vehicle characteristics, stop characteristics, reasons for the stop, other legal variables, and Trooper characteristics have all been hypothesized to influence post-stop outcomes. Multivariate analyses examine the independent effect of these predictor variables, while controlling for the influence of the other variables. For example, the influence of drivers' race/ethnicity can be examined while holding constant the predictive power of drivers' age, reason for the stop, time of day, etc.

Multivariate analyses are conducted on information collected at one level and reflect a one-to-one ratio between variables. In other words, all variables within the dataset are independent of other variables. Traffic stop data, however, do not conform to this rule because both traffic stop and Trooper characteristics are hypothesized to influence traffic stop outcomes, and one Trooper generally initiates more than one traffic stop. For example, one Trooper may initiate hundreds or thousands of traffic stops throughout the year thus creating a one-to-many ratio between Trooper characteristics and other traffic stop characteristics. Traffic stop datasets include information from two sources: 1) the traffic stop encounter information, such as traffic stop outcomes, driver characteristics, stop characteristics, etc., and 2) organizational information representing the aggregated characteristics of the Troopers within that unit (i.e., PSP stations), such as the average level of Trooper's education within each station, or the average Trooper age within each station, etc. A special type of multivariate modeling, referred to as hierarchical linear and nonlinear

modeling (bi-level modeling), is required for data reflecting more than one level of aggregation, such as traffic stops.¹²

These bi-level models are interpreted in a similar fashion to other multivariate models. The information of note is contained in two values produced from the analyses: 1) the coefficient, or predicted log-odds, and 2) the odds ratio for each independent variable in the model. The coefficient represents an additive expression of a particular variable. In the “coefficient” column, the asterisk reveals whether or not a significant relationship exists between the independent variable (e.g., male drivers) and the dependent variable (e.g., warnings). If an asterisk is not present, the relationship is not considered statistically significant. Due to the extremely large number of traffic stops at level 1, the statistical significance of the relationships is assessed at the 0.001 level. The coefficient is also accompanied by a sign (i.e., positive or negative), which indicates the direction of the relationship. For example, a positive sign on the “driver male” variable would indicate that male drivers were *more* likely than female drivers to receive a particular outcome, while a negative sign would indicate that males were *less* likely than females to receive a particular outcome.

The second important piece of information from the model is the odds ratio. The odds ratio indicates the strength of the relationship.¹³ For example, an odds ratio of 3.0 indicates that the presence of the variable (e.g., a male driver) roughly leads to three times the likelihood of receiving the outcome (e.g., a warning).¹⁴ 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 due to the large sample size. Therefore, the odds ratio is important to consider when determining the amount of influence particular factors have over the post-stop outcomes.

¹² Using data at two or more levels of aggregation introduces a statistical dilemma where regression residuals for the level 1 cases (traffic stops) within the same level 2 units (station characteristics) may be correlated (i.e., are more similar than level 1 cases taken from independent stations). 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 , which 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). To properly model the relationship between variables in a bi-level model, the traffic stop variables would be included at level 1 and the station characteristics (i.e., aggregated Trooper characteristics) would be included at level 2. Due to confidentiality restrictions, it is not possible to locate each traffic stop within a PSP station and link that information with a specific Trooper. Therefore, Trooper characteristics are included in the bi-level model at level 1.

¹³ Technically, this odds ratio is a form of log-odds but the interpretation of this value is not intuitively straightforward; therefore, this type of coefficient is usually exponentiated to allow for interpretation in terms of odds (Liao, 1994). 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.

¹⁴ For negative relationships, the odds ratio is presented as $1/\text{Exp}(b)$, for easier interpretation.

Multivariate Findings

Tables 6.4 & 6.5 display the results of four separate bi-level multivariate models that predict warnings, citations, arrests, and searches, respectively. These models demonstrate which factors influenced whether a particular traffic stop outcome was issued, other factors being equal. For each of these models, multiple independent variables were included that could potentially influence officers' actions. It is believed that each of these variables has the potential to influence officer behavior, and therefore must be statistically controlled to examine the variables of interest (i.e., drivers' race/ethnicity).¹⁵ As shown in the left hand column of Tables 6.4 & 6.5, the predictor variables at Level 1 included:

- Driver characteristics (values for each variable are in parentheses):
 - Race/ethnicity (four dichotomous variables: White, Black, Hispanic, other; White is the excluded comparison category in the analyses)
 - Gender (0=female; 1 = male)
 - Age (in years)
 - County residency where stop occurred (0=no; 1 = yes)
 - Pennsylvania residency (0= no; 1 = yes)
- Vehicle characteristics:
 - Vehicle registration (1 = PA registration; 0 = out-of-state registration)
 - Number of passengers in the vehicle (range = 0-5)
- Stop characteristics:
 - Daytime (0= nighttime; 1 = daytime)
 - Rush hour (0=no; 1=rush hour)
 - Weekday (0=weekend; 1 = weekday)
 - Summer (0=January – May & September – December; 1 = June, July & August)
 - Interstate (0=state road, county road, other; 1 = interstate)
- Legal variables:
 - Reason for the stop (0=other moving violations, equipment violations, pre-existing information, registration violations, license violations, special traffic enforcement programs, and “other” reasons not previously indicated; 1 = speeding)
 - Number of reasons for the stop (range = 1 - 6)
 - Evidence found during a search (0 = no evidence; 1 = any evidence)
- Trooper characteristics:
 - Gender (0=female; 1 = male)
 - Race/ethnicity (0=Non-White; 1 = White)
 - Experience (0=more than 5 years experience; 1 = less than 5 years)

¹⁵ Some variables were excluded from the models for comparison purposes. For example, drivers' race was captured in the model as Black, Hispanic, and “other.” The “other” category included Native American, Asian/Pacific Islander, and Middle Eastern. White was excluded from the model for comparison purposes. The effects of race/ethnicity variables reported in the models are *in comparison to Whites*. For examples, the odds ratio represents the likelihood of a Black driver being issued a citation compared to a White driver. The other dichotomous variables in the models were simply compared against their opposite (e.g., male drivers compared to female drivers).

- Education (range 1-6: 1=high school, 2=some college, no degree, 3=Associate's degree, 4=4 year degree, 5=1-2 years graduate level, 6= > 2 years graduate level)
- Assignment (0= non-Patrol; 1 = Patrol)

Warnings

As reported in Table 6.4, the results of the bi-level model for warnings indicated several statistically significant results. *Black drivers were 1.1 times more likely to be warned compared with White drivers, even when other potentially relevant variables were considered. Drivers of "other" race/ethnicity were 1.3 times less likely to be warned compared to White drivers.* Although these racial/ethnic differences are statistically significant, the strength of these relationships indicates they are not *substantively* important differences. Similarly, although driver gender, age, and residency also show statistically significant relationships with the likelihood of receiving a warning, their small odds ratios indicate marginal substantive significance.

Bi-level analyses of warnings also indicated that traffic stops initiated during the daytime were 1.2 times less likely to result in a warning compared to traffic stop initiated in non-daytime hours. Stops occurring on a weekday were 1.1 times more likely to result in a warning compared to a traffic stop occurring on a weekend. Again, however, these statistically significant findings are substantively unimportant.

The strongest predictors of the likelihood of receiving a warning during a traffic stop were the legal variables. Specifically, traffic stops initiated as a result of speeding were 2.2 times less likely to result in a warning compared to traffic stops initiated for non-speeding reasons. Conversely, for each additional reason for the stop, the likelihood of a warning increased 4.4 times.

Finally, the only Trooper characteristic that achieved statistical significance was patrol assignment. Based on the bi-level models, Troopers not assigned to patrol were 2.2 times more likely to issue a warning compared to Troopers assigned to patrol.

Collectively, these results suggest slight racial/ethnic differences in the likelihood of receiving warnings, but indicate that Troopers' decisions to issue warnings are most strongly based on legal factors rather than driver or Trooper characteristics.

Table 6.4: HLM Analyses Predicting WARNINGS and CITATIONS during all traffic stops in 2008

| Level 1 Variables (N=275,236) Level 2 Variables (N=90) | <u>Model 1: Warning</u> | | <u>Model 2: Citation</u> | |
|---|-------------------------|------------|--------------------------|------------|
| | Coefficient | Odds Ratio | Coefficient | Odds Ratio |
| Intercept | -1.43* | 4.14 | 0.17 | -- |
| <u>Driver Characteristics</u> | | | | |
| Black | 0.11* | 1.12 | -0.15 | -- |
| Hispanic | -0.08 | -- | 0.01 | -- |
| Other Race | -0.26* | 1.30 | 0.35* | 1.42 |
| Male | -0.05* | 1.05 | 0.10* | 1.11 |
| Age | 0.00* | 1.00 | -0.02* | 1.02 |
| County resident | 0.12* | 1.13 | -0.15* | 1.16 |
| PA resident | 0.06 | -- | 0.03 | -- |
| <u>Vehicle Characteristics</u> | | | | |
| PA registration | 0.08 | -- | 0.07 | -- |
| Number of Passengers | 0.02 | -- | 0.00 | -- |
| <u>Stop Characteristics</u> | | | | |
| Daytime | -0.14* | 1.15 | 0.53* | 1.70 |
| Rush hour | -0.01 | -- | 0.06 | -- |
| Weekday | 0.12* | 1.13 | -0.10* | 1.11 |
| Summer | 0.00 | -- | 0.01 | -- |
| Interstate | -0.04 | -- | 0.09 | -- |
| <u>Legal variables</u> | | | | |
| Speeding is reason for the stop | -0.79* | 2.20 | 1.13* | 3.10 |
| Number of reasons for stop | 1.49* | 4.44 | 0.50* | 1.65 |
| Evidence found during search | -0.38 | -- | -1.58* | 4.85 |
| <u>Trooper variables</u> | | | | |
| Male | -0.12 | -- | -0.31 | -- |
| White | -0.21 | -- | -0.07 | -- |
| Less than 5 years experience | 0.06 | -- | 0.31* | 1.36 |
| Education scale | 0.03 | -- | -0.03 | -- |
| Patrol assignment | -0.77* | 2.16 | 1.21* | 3.35 |

NOTE: * $p \leq .0001$

The log odds for negative coefficients is calculated as $1/\exp(b)$.

Citations

Table 6.4 also identifies statistically significant variables related to the likelihood of receiving a citation. *Black and Hispanic drivers were equally likely to be cited compared to White drivers in similar situations.* In contrast, drivers of “other” race/ethnicity and male drivers were 1.4 and 1.1 times more likely to be cited compared to White drivers and female drivers, respectively. Drivers’ age and county residency were also statistically significant predictors of the likelihood of receiving citations, but in a negative direction (younger drivers and drivers who did not reside in the county in which they were stopped were more likely to be cited).

Other findings include: traffic stops initiated during daytime hours were 1.7 times more likely to result in a citation compared to non-daytime traffic stops; traffic stops for speeding were 3.1 times more likely to result in a citation compared to non-speeding based traffic stops; the likelihood of being cited increased 1.7 times for every additional reason for the stop; and traffic stops resulting in the discovery of contraband were 4.9 times less likely to result in a citation compared to traffic stops in which no contraband was discovered (but more likely to result in arrest, see Table 6.5). Finally, traffic stops initiated by Troopers with less than five years experience and those assigned to a patrol function were 1.4 and 3.4 times more likely, respectively, to result in citations compared to traffic stops initiated by more experienced and non-patrol assigned Troopers.

Collectively, these results demonstrate that Troopers’ decisions to issue citations are most often based on legal factors and not drivers’ or Troopers’ characteristics.

Arrests

A third bi-level model was computed for arrests and reported in Table 6.5. For arrests, there were no statistically significant racial differences for Black and Hispanic drivers when other factors were simultaneously considered. In other words, Black and Hispanic drivers were equally likely as White drivers to be arrested given similar circumstances surrounding the traffic stop. *Therefore, even though the rates of arrests were higher for Black and Hispanic drivers compared to Whites, once the factors associated with the traffic stops were considered, there were no racial/ethnic disparities in arrests.* In contrast drivers of “other” race/ethnicity were 2.1 times less likely to be arrested compared to White drivers.

Male drivers were 1.8 times more likely to be arrested compared to female drivers in similar situations. Drivers that lived in the county where the traffic stop occurred, or lived within the state of Pennsylvania were 1.5 and 2.2 times more likely to be arrested compared to non-county and non-state residents, respectively. Traffic stops involving vehicles with Pennsylvania registration were 2.3 times less likely to end in an arrest, and fewer passengers in the vehicle indicated a 1.2 times lower likelihood of arrest.

Stop characteristics were also associated with arrest. As reported in Table 6.5, traffic stops initiated during the daytime, during rush hour, or on a weekday were all less likely to result in an arrest compared to non-daytime, non-rush hour, and weekend traffic stops. Daytime traffic stops were the strongest of these variables, as they were 9.0 times less likely to result in an arrest. Rush hour and weekday traffic stops were 2.3 and 2.1 times less likely to end in an arrest, respectively.

All three legal variables measured were statistically related to arrests. By a significant margin, traffic stop resulting in the discovery of contraband were more likely to end in an arrest (over 200 times more likely). Traffic stops initiated due to speeding were 3.9 times *less* likely to end in an arrest compared to non-speeding traffic stops, while the likelihood of arrest increased 1.5 times for each additional reason for the stop form. No Trooper characteristics were significantly associated with arrests.

Collectively, these results demonstrate that the most severe sanction issued during traffic stops (i.e., arrests) are based on legal factors and not drivers’ race/ethnicity, or Trooper characteristics.

Table 6.5: HLM Analyses Predicting ARRESTS and SEARCHES during all traffic stops in 2008

| Level 1 Variables (N=275,236) | <u>Model 1: Arrest</u> | | <u>Model 2: Search</u> | |
|---------------------------------------|------------------------|------------|------------------------|------------|
| Level 2 Variables (N=90) | Coefficient | Odds Ratio | Coefficient | Odds Ratio |
| Intercept | -3.39* | 29.67 | -4.29* | 72.97 |
| <u>Driver Characteristics</u> | | | | |
| Black | -0.02 | -- | 1.10* | 3.00 |
| Hispanic | 0.27 | -- | 0.97* | 2.64 |
| Other Race | -0.76* | 2.14 | -0.45 | -- |
| Male | 0.60* | 1.82 | 0.98* | 2.66 |
| Age | 0.00 | -- | -0.04* | 1.04 |
| County resident | 0.37* | 1.45 | 0.08 | -- |
| PA resident | 0.29 | 2.19 | -0.12 | -- |
| <u>Vehicle Characteristics</u> | | | | |
| PA registration | -0.47 | 2.27 | -0.52* | 1.68 |
| Number of Passengers | -0.15* | 1.16 | 0.09* | 1.09 |
| <u>Stop Characteristics</u> | | | | |
| Daytime | -2.20* | 9.03 | -0.63* | 1.88 |
| Rush hour | -0.81* | 2.25 | -0.24* | 1.27 |
| Weekday | -0.75* | 2.12 | 0.05 | -- |
| Summer | 0.14 | -- | 0.00 | -- |
| Interstate | -0.63* | 1.88 | 0.37* | 1.45 |
| <u>Legal variables</u> | | | | |
| Speeding is reason for the stop | -1.37* | 3.94 | -1.36* | 3.90 |
| Number of reasons for stop | 0.41* | 1.51 | 0.71* | 2.03 |
| Evidence found during search | 5.30* | 200.34 | -- | -- |
| <u>Trooper variables</u> | | | | |
| Male | 0.06 | -- | 0.46 | -- |
| White | 0.32 | -- | 0.48 | -- |
| Less than 5 years experience | -0.25 | -- | -0.03 | -- |
| Education scale | 0.01 | -- | 0.00 | -- |
| Patrol assignment | -0.15 | -- | -0.83* | 2.29 |

NOTE: * $p \leq .0001$

The log odds for negative coefficients is calculated as $1/\exp(b)$.

Searches

In Table 6.5, the bi-level model examining searches is reported. In contrast to the previous models predicting citations and arrests, racial/ethnic differences were identified. *Specifically, Black drivers were 3.0 times more likely to be searched compared White drivers. Likewise, Hispanic drivers were 2.6 times more likely than White drivers to be searched. These differences existed even after controlling for other measured legal and extralegal factors.* In addition, male drivers were 2.7 times more likely to be searched compared to female drivers. Finally, younger

drivers were slightly more likely to be searched, but the substantive effects of this relationship are marginal.

Traffic stops involving vehicle with Pennsylvania registration were 1.7 times less likely to result in a search compared to traffic stops involving vehicles with out-of-state registration, and there was a slightly higher likelihood of search if there were more passengers in the vehicle. Traffic stops initiated during the daytime and rush hour were 1.9 and 1.3 times *less* likely to result in a search compared to traffic stops initiated during non-daytime hours and non-rush hours, respectively. Traffic stops initiated on interstates were 1.5 times more likely to result in searches compared to non-interstate traffic stops.

Similar to arrests, traffic stops initiated due to speeding were 3.9 times *less* likely to result in searches compared to traffic stops initiated for non-speeding reasons. Conversely, the likelihood of a search increased 2.0 times for every additional reason for the stop noted on the form (i.e., multiple reasons for the stop were more likely to result in searches). Finally, traffic stops initiated by Troopers assigned to a patrol function were 2.3 times *less* likely to conduct searches compared to traffic stops initiated by Troopers not assigned to patrol.

Collectively, these results demonstrate that racial/ethnic differences in the rates of searches cannot be explained by the legal and extralegal factors captured on the traffic stop forms. Given similar situations (as measured on the traffic stop form), Black and Hispanic drivers are significantly more likely to be searched compared to White drivers. More detailed analyses examining searches and seizures are provided in Section 7.

SECTION SUMMARY

This summary highlights the bivariate and multivariate analyses of warnings, citations, arrests, and searches issued to drivers during member-initiated traffic stops conducted in 2008. When reviewing these results, it is important to remember that the bivariate analyses only consider two variables at a time (e.g., the race/ethnicity of the driver or the drivers' gender and the traffic 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 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. Conclusions based on any multivariate analyses are limited to the variables in the model, and do not consider the potential of a misspecified model. Misspecified models occur when important, pertinent variables related to the dependent variables are not included in the model. Thus, multivariate analyses can only 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

- At the department level, racial/ethnic and gender based statistically significant differences were noted for warnings, citations, arrests, and searches
 - Warnings:

- Of the Hispanic and Black motorists stopped, 28.8% and 29.1%, respectively, received warnings compared to 27.9% of White drivers stopped.
 - Unlike previous years, there were no statistically significant differences between male and female drivers on the rates of warnings.
 - Citations:
 - Hispanic drivers (89.0%) had slightly higher rates of citations (89.0%), compared to White (87.2%) and Black (88.4%) drivers.
 - Unlike previous years, there were no statistically significant differences between male and female drivers on the rates of citations.
 - Arrests:
 - In regard to arrests, the rates incrementally increased when comparing White drivers (1.3%), Black drivers (1.7%), and Hispanic drivers (2.4%).
 - Male drivers were arrested more frequently (1.6% of male drivers stopped) compared to female drivers (0.7%)
 - Searches:
 - The largest racial/ethnic differences are found for searches
 - Of all Black and Hispanic drivers stopped, 3.6% were searched for both racial groups, compared to only 0.8% of White drivers stopped.
 - Male drivers (1.4%) were searched more frequently compared to female drivers (0.5%)
- These patterns and trends varied somewhat at the area level and more so at the troop and station levels.
- Racial, ethnic, and gender differences are not alone evidence of bias policing because other factors related to traffic stop outcomes were not considered in these analyses
- PSP supervisors should review these findings for the best understanding of trends in racial/ethnic and gender disparities in stop outcomes within their jurisdictions

Multivariate Analyses

- Multivariate statistical models take many different factors into account when attempting to explain traffic stop outcomes. 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. The findings summarized below represent the independent effects on traffic stop outcomes when other factors are statistically controlled.
- **Warnings**
 - Black drivers were 1.1 times *more* likely to be warned compared to White drivers
 - Drivers of “other” race/ethnicity were 1.3 times *less* likely to be warned compared to White drivers
 - Traffic stops initiated as a result of speeding were 2.2 times *less* likely to result in a warning compared to traffic stops initiated for other non-speeding reasons.
 - For each additional reason for the stop (traffic infraction), the likelihood of a warning *increased* 4.4 times
 - Troopers not assigned to patrol were 2.2 times *more* likely to issue warnings compared to traffic stops involving Troopers assigned to other functions

Collectively, these results suggest slight, but substantively unimportant, racial/ethnic differences in the likelihood of receiving warnings, but indicate that Troopers' decisions to issue warnings are most strongly based on legal factors rather than driver or Trooper characteristics.

- **Citations**

- Black and Hispanic drivers were *equally likely* to be cited compared to White drivers in similar situations.
- Drivers of “other” race/ethnicity were 1.4 times more likely to be cited, compared to White drivers.
- Male drivers were 1.1 times *more* likely to be cited compared to female drivers
- Younger drivers were *more* likely to be cited compared to older drivers.
- Traffic stops initiated during daytime hours were 1.7 times *more* likely to result in a citation.
- Traffic stops initiated due to speeding were 3.1 times *more* likely to result in a citation compared to stops initiated for non-speeding reasons.
- The likelihood of being cited *increased* 1.7 times for every additional reason for the stop.
- Traffic stops resulting in the discovery of contraband were 5.9 times *less* likely to result in a citation compared to stops with contraband discoveries (but more likely to result in arrest).
- Traffic stops initiated by Troopers with less than five years experience and those assigned to a patrol function were 1.4 and 3.4 times more likely, respectively, to result in citations compared to traffic stops initiated by more experienced and non-patrol assigned Troopers.

Collectively, these results demonstrate that Troopers' decisions to issue citations are most often based on legal factors and not drivers' or Troopers' characteristics.

- **Arrests**

- There were no statistically significant racial differences for Black and Hispanic drivers when other factors were simultaneously considered. In other words, Black and Hispanic drivers were equally likely as White drivers to be arrested given similar circumstances surrounding the traffic stop.
- Drivers of “other” race/ethnicity were 2.1 times less likely to be arrested compared to White drivers.
- Male drivers were 1.8 times more likely than female drivers to be arrested.
- Drivers that lived in the county where the traffic stop occurred, or lived within the state of Pennsylvania were 1.5 and 2.2 times more likely to be arrested compared to non-county and non-state residents, respectively.
- Traffic stops involving vehicles with Pennsylvania registration were 2.3 times less likely to end in an arrest, and fewer passengers in the vehicle indicated a 1.2 times lower likelihood of arrest.
- Stop characteristics were also associated with arrest. Traffic stops initiated during the daytime, during rush hour, or on a weekday were all less likely to result in an arrest compared to non-daytime, non-rush hour, and weekend traffic stops.

- Traffic stops resulting in the discovery of contraband were over 200 times *more* likely to end in arrest compared to traffic stops without contraband discoveries
- Traffic stops initiated due to speeding were 3.9 times *less* likely to end in arrests compared to stops initiated for other reasons
- The likelihood of arrest *increased* 1.5 times for each additional reason for the stop

Collectively, these results demonstrate that the most severe sanction issued during traffic stops (i.e., arrest) is based on legal factors and not drivers' race/ethnicity, or Troopers' characteristics.

- **Searches**

- Black and Hispanic drivers were 3.0 and 2.6 times *more* likely to be searched compared to White drivers, respectively.
- Male drivers were 2.7 times *more* likely to be searched compared to female drivers.
- Younger drivers were slightly *more* likely to be searched compared to older drivers, but the substantive effects of this relationship are marginal
- Traffic stops involving vehicle with Pennsylvania registration were 1.7 times less likely to result in a search compared to traffic stops involving vehicles with out-of-state registration, and there was a slightly higher likelihood of search if there were more passengers in the vehicle.
- Traffic stops initiated during the daytime and rush hour were 1.9 and 1.3 times *less* likely to result in a search compared to traffic stops initiated during non-daytime hours and non-rush hours, respectively.
- Traffic stops initiated on interstates were 1.5 times more likely to result in searches compared to non-interstate traffic stops.
- Traffic stops initiated due to speeding were 3.9 times *less* likely to result in searches compared to traffic stops initiated for non-speeding reasons.
- The likelihood of a search increased 2.0 times for every additional reason for the stop noted on the form.
- Traffic stops initiated by Troopers assigned to a patrol function were 2.3 times *less* likely to conduct searches compared to traffic stops initiated by Troopers not assigned to patrol.

Collectively, these results demonstrate that racial/ethnic differences in the rates of searches cannot be explained by the legal and extralegal factors captured on the traffic stop forms. Given similar situations (as measured on the traffic stop form), Black and Hispanic drivers are significantly more likely to be searched compared to White drivers.

7. SEARCH AND SEIZURE

DRAFT

OVERVIEW

The material presented in this section focuses specifically on motor vehicle and person searches conducted during traffic stops, and subsequent seizures of contraband. As reported in Section 6, searches are the only post-stop outcomes conducted by PSP troopers that have unexplained racial and ethnic disparities. After statistically controlling for some of the other relevant legal and extralegal factors, Black and Hispanic drivers were approximately 3.0 and 2.6 times more likely than Whites to be searched. The purpose of the analyses presented in this section is to further examine searches and seizures conducted by PSP troopers. The descriptive statistics for the search and seizure rates of the department, areas, troops, and stations are presented in an earlier section of this report (see Section 3, Tables 3.8 and 3.9).

In Tables 7.1 and 7.2, the different types of searches conducted at the department, area, troop, and station levels. For additional analyses, the types of searches are collapsed into three categories: Type I (mandatory), Type II (probable cause/reasonable suspicion), and Type III (consent). Using these three search types, Table 7.3 documents the search rates for different types of drivers and troopers. Tables 7.4 and 7.5 report the different types of contraband seized by department, area, troop, and station, while Tables 7.6 – 7.9 report search success rates. Finally, Tables 7.10 – 7.12 presents a series of analyses focused specifically on consent searches. This section concludes with a summary of the main findings on PSP's search and seizure rates.

SEARCH RATES

As reported in Sections 3 and 5, 1.1% of all member-initiated traffic stops during the one-year period under review resulted in a search of the vehicle and/or driver. Despite the statistical infrequency with which PSP Troopers conduct searches, the physical and psychological intrusion of a person or vehicle search merits further scrutiny of this type of coercive police action.

TYPES OF SEARCHES

Table 7.1 documents the number of searches and the percentage of searches for each reason indicated on the Contact Data Report (e.g., incident to arrest, inventory, warrant, plain view, canine alert, drug odor, consent, reasonable suspicion/probable cause, and other) by department, area, and troop. Troopers may have indicated that a search was conducted for multiple reasons. As a result, the sum of percentages across search categories reported in Table 7.1 may exceed 100%. In addition, the last column in Table 7.1 indicates the percentage of searches that were conducted based *only* on drivers' consent. This column partially duplicates information provided in the "consent" column, but excludes searches that were conducted based on consent in addition to another reason. Although specific information regarding the reason for the search is provided at the station level in Table 7.2, due to the small number of searches conducted in many stations, these percentages need to be interpreted with caution.

As shown in Table 7.1, 64.2% of drivers gave their consent to be searched at the department level in 2008. A smaller percentage of searched drivers, however, were searched based *solely* on consent (34.2%). This is consistent with data from previous years that also indicated consent

was the most common reason for searches during traffic stops. The second most frequently recorded reason for a search was inventory (22.5% of searches), followed by the odor of drugs (16.1%), incident to arrest (14.6%), reasonable suspicion or probable cause (7.9%), plain view (7.2%), canine alerts (1.8%), and search warrant (1.5%). For 9.7% of searches, the “other” category was indicated as the reason for the search. The exact reasons for “other,” however, are unknown.

Table 7.1 also illustrates the different reasons for searches across areas and troops. For example, 82.8% of searches conducted in the Bureau of Patrol were based on consent, compared to only 47.8% of searches conducted in Area I. At the troop level, 94.2% of the searches in Troop G were based on consent, compared to less than half of the searches in Troop K (43.8%) Similar variation in reasons for searches is evident at the station level (shown in Table 7.2) but comparisons of the percentages in this table should be interpreted cautiously due to the small number of searches in many stations.

DRAFT

Table 7.1: Reasons for Search by Department, Area, and Troop

| | # of Searches | % Incident to Arrest | % Inventory | % Search Warrant | % Plain View | % Canine Alert | % Drug Odor | % Consent | % Reas. Susp./ Prob. Cause | % Other | % Consent Only |
|-------------------------|---------------|----------------------|-------------|------------------|--------------|----------------|-------------|-----------|----------------------------|---------|----------------|
| PSP Dept. | 3,110 | 14.6 | 22.5 | 1.5 | 7.2 | 1.8 | 16.1 | 64.2 | 7.9 | 9.7 | 34.2 |
| AREA I | 1,337 | 15.0 | 44.1 | 0.7 | 4.8 | 1.0 | 12.3 | 47.8 | 5.9 | 7.0 | 23.7 |
| Troop J | 191 | 24.1 | 27.2 | -- | 9.9 | -- | 23.6 | 55.5 | 6.8 | 5.8 | 22.5 |
| Troop K | 795 | 12.5 | 53.5 | 0.8 | 3.6 | 0.6 | 10.1 | 43.8 | 6.2 | 4.8 | 22.3 |
| Troop L | 56 | 23.2 | 1.8 | 1.8 | 8.9 | 5.4 | 17.9 | 67.9 | 5.4 | 8.9 | 39.3 |
| Troop M | 295 | 14.2 | 38.0 | 0.7 | 3.7 | 2.0 | 10.2 | 49.8 | 4.7 | 13.6 | 25.4 |
| AREA II | 490 | 10.2 | 2.7 | 3.1 | 5.9 | 2.9 | 17.8 | 81.4 | 7.1 | 14.5 | 46.1 |
| Troop F | 143 | 21.0 | 0.7 | 6.3 | 9.8 | 2.8 | 20.3 | 75.5 | 7.0 | 14.7 | 33.6 |
| Troop N | 96 | 6.2 | 1.0 | 3.1 | 3.1 | 6.2 | 19.8 | 85.4 | 9.4 | 17.7 | 45.8 |
| Troop P | 86 | 4.7 | 1.2 | 1.2 | 3.5 | 1.2 | 9.3 | 80.2 | 3.5 | 15.1 | 64.0 |
| Troop R | 165 | 6.1 | 6.1 | 1.2 | 5.5 | 1.8 | 18.8 | 84.8 | 7.9 | 12.1 | 47.9 |
| AREA III | 654 | 13.5 | 7.8 | 1.8 | 12.8 | 2.1 | 16.4 | 73.1 | 9.8 | 9.5 | 43.9 |
| Troop A | 163 | 11.7 | 3.1 | -- | 33.7 | 3.1 | 12.3 | 55.8 | 5.5 | 6.7 | 29.4 |
| Troop G | 173 | 3.5 | 2.3 | 2.9 | 2.9 | 0.6 | 5.8 | 94.2 | 4.0 | 5.2 | 79.2 |
| Troop H | 318 | 19.8 | 13.2 | 2.2 | 7.5 | 2.5 | 24.2 | 70.4 | 15.1 | 13.2 | 32.1 |
| AREA IV | 530 | 20.4 | 7.4 | 1.7 | 8.1 | 1.7 | 22.8 | 75.1 | 10.6 | 11.1 | 38.5 |
| Troop C | 74 | 14.9 | 2.7 | 1.4 | 5.4 | 4.1 | 21.6 | 79.7 | 10.8 | 20.3 | 40.5 |
| Troop D | 223 | 23.8 | 12.6 | 1.8 | 9.9 | 0.4 | 27.4 | 70.9 | 9.4 | 9.9 | 36.3 |
| Troop E | 72 | 18.1 | 4.2 | 5.6 | 5.6 | 4.2 | 16.7 | 76.4 | 16.7 | 15.3 | 33.3 |
| Troop B | 161 | 19.3 | 3.7 | -- | 8.1 | 1.2 | 19.9 | 78.3 | 9.3 | 6.8 | 42.9 |
| Bureau of Patrol | 99 | 8.1 | 8.1 | 1.0 | 3.0 | 5.1 | 21.2 | 82.8 | 13.1 | 17.2 | 30.3 |
| Troop T | 99 | 8.1 | 8.1 | 1.0 | 3.0 | 5.1 | 21.2 | 82.8 | 13.1 | 17.2 | 30.3 |

Table 7.2: Reasons for Search by Station (p. 1 of 4)

| | # of Searches | % Incident to Arrest | % Inventory | % Search Warrant | % Plain View | % Canine Alert | % Drug Odor | % Consent | % Reas. Susp./ Prob. Cause | % Other | % Consent Only |
|------------------|---------------|----------------------|-------------|------------------|--------------|----------------|-------------|-----------|----------------------------|---------|----------------|
| AREA I | | | | | | | | | | | |
| Troop J | | | | | | | | | | | |
| Avondale | 66 | 27.3 | 33.3 | -- | 9.1 | -- | 15.2 | 54.5 | 4.5 | 3.0 | 24.2 |
| Embreeville | 64 | 21.9 | 35.9 | -- | 6.2 | -- | 21.9 | 54.7 | 12.5 | 10.9 | 20.3 |
| Ephrata | 10 | 30.0 | 10.0 | -- | 10.0 | -- | 50.0 | 80.0 | -- | -- | 10.0 |
| Lancaster | 51 | 21.6 | 11.8 | -- | 15.7 | -- | 31.4 | 52.9 | 3.9 | 3.9 | 25.5 |
| Troop K | | | | | | | | | | | |
| Media | 273 | 10.6 | 53.8 | 1.5 | 7.0 | 0.4 | 9.5 | 39.2 | 2.6 | 8.8 | 22.3 |
| Philadelphia | 466 | 11.8 | 56.9 | 0.4 | 1.5 | 0.9 | 9.9 | 45.7 | 7.7 | 2.8 | 21.0 |
| Skippack | 56 | 26.8 | 23.2 | -- | 5.4 | -- | 14.3 | 50.0 | 10.7 | 1.8 | 32.1 |
| Troop L | | | | | | | | | | | |
| Frackville | 8 | 62.5 | -- | -- | 25.0 | -- | 25.0 | 37.5 | -- | 12.5 | -- |
| Hamburg | 5 | -- | -- | -- | -- | -- | -- | 100.0 | 20.0 | 20.0 | 60.0 |
| Jonestown | 39 | 17.9 | -- | 2.6 | 7.7 | 7.7 | 17.9 | 69.2 | 2.6 | 5.1 | 48.7 |
| Reading | 1 | -- | -- | -- | -- | -- | -- | -- | -- | 100.0 | -- |
| Schuylkill Haven | 3 | 33.3 | 33.3 | -- | -- | -- | 33.3 | 66.7 | 33.3 | -- | -- |
| Troop M | | | | | | | | | | | |
| Belfast | 26 | 11.5 | 23.1 | -- | 7.7 | 3.8 | 15.4 | 53.8 | -- | 11.5 | 38.5 |
| Bethlehem | 62 | 12.9 | 35.5 | 1.6 | -- | 3.2 | 11.3 | 48.4 | 4.8 | 9.7 | 27.4 |
| Dublin | 38 | 28.9 | 23.7 | -- | 2.6 | -- | 13.2 | 57.9 | 5.3 | 31.6 | 15.8 |
| Fogelsville | 115 | 11.3 | 53.9 | 0.9 | 5.2 | 2.6 | 7.8 | 42.6 | 2.6 | 12.2 | 17.4 |
| Treose | 54 | 13.0 | 24.1 | -- | 3.7 | -- | 9.3 | 59.3 | 11.1 | 9.3 | 40.7 |
| AREA II | | | | | | | | | | | |
| Troop F | | | | | | | | | | | |
| Coudersport | 18 | -- | -- | -- | -- | -- | 11.1 | 66.7 | 16.7 | 38.9 | 38.9 |
| Emporium | 2 | -- | -- | 50.0 | 50.0 | -- | -- | 100.0 | -- | 100.0 | -- |
| Lamar | 22 | -- | -- | 4.5 | 4.5 | 9.1 | 9.1 | 90.9 | 18.2 | 9.1 | 59.1 |
| Mansfield | 9 | -- | -- | -- | -- | 11.1 | -- | 100.0 | 22.2 | 11.1 | 66.7 |
| Milton | 7 | 42.9 | -- | -- | -- | -- | 14.3 | 57.1 | -- | 28.6 | 28.6 |
| Montoursville | 42 | 19.0 | 2.4 | 11.9 | 26.2 | 2.4 | 21.4 | 78.6 | -- | 11.9 | 28.6 |

Table 7.2: Reasons for Search by Station (p. 2 of 4)

| | # of Searches | % Incident to Arrest | % Inventory | % Search Warrant | % Plain View | % Canine Alert | % Drug Odor | % Consent | % Reas. Susp./ Prob. Cause | % Other | % Consent Only |
|------------------------|---------------|----------------------|-------------|------------------|--------------|----------------|-------------|-----------|----------------------------|---------|----------------|
| AREA II (cont.) | | | | | | | | | | | |
| Selinsgrove | 12 | -- | -- | 8.3 | -- | -- | 33.3 | 75.0 | 8.3 | 16.7 | 50.0 |
| Stonington | 31 | 61.3 | -- | 3.2 | 3.2 | -- | 35.5 | 61.3 | -- | 3.2 | 6.5 |
| Troop N | | | | | | | | | | | |
| Bloomsburg | 7 | 14.3 | -- | -- | -- | -- | 14.3 | 57.1 | -- | 57.1 | 14.3 |
| Fern Ridge | 4 | -- | -- | -- | -- | -- | 25.0 | 100.0 | 50.0 | -- | 25.0 |
| Hazleton | 34 | 8.8 | 2.9 | -- | 5.9 | 5.9 | 26.5 | 76.5 | 14.7 | 35.3 | 20.6 |
| Lehighton | 2 | -- | -- | -- | -- | -- | -- | 100.0 | -- | -- | 100.0 |
| Swiftwater | 49 | 4.1 | -- | 6.1 | 2.0 | 8.2 | 16.3 | 93.9 | 4.1 | 2.0 | 67.3 |
| Troop P | | | | | | | | | | | |
| Laporte | 2 | -- | 50.0 | -- | 50.0 | -- | 50.0 | 50.0 | -- | -- | -- |
| Shickshinny | 2 | -- | -- | -- | -- | -- | 100.0 | -- | -- | -- | -- |
| Towanda | 65 | 1.5 | -- | -- | -- | -- | 3.1 | 84.6 | 3.1 | 16.9 | 75.4 |
| Tunkhannock | 7 | 28.6 | -- | 14.3 | 28.6 | -- | 14.3 | 42.9 | -- | -- | 28.6 |
| Wyoming | 10 | 10.0 | -- | -- | -- | 10.0 | 20.0 | 100.0 | 10.0 | 20.0 | 40.0 |
| Troop R | | | | | | | | | | | |
| Blooming Grove | 51 | 3.9 | 13.7 | -- | 7.8 | -- | 15.7 | 86.3 | 9.8 | 3.9 | 49.0 |
| Dunmore | 51 | 7.8 | -- | 2.0 | 2.0 | 3.9 | 19.6 | 82.4 | 9.8 | 13.7 | 47.1 |
| Gibson | 35 | 2.9 | 2.9 | -- | 5.7 | -- | 14.3 | 85.7 | 2.9 | 22.9 | 54.3 |
| Honesdale | 28 | 10.7 | 7.1 | 3.6 | 7.1 | 3.6 | 28.6 | 85.7 | 7.1 | 10.7 | 39.3 |
| AREA III | | | | | | | | | | | |
| Troop A | | | | | | | | | | | |
| Ebensburg | 15 | 13.3 | -- | -- | -- | -- | 13.3 | 73.3 | 13.3 | 20.0 | 40.0 |
| Greensburg | 31 | 16.1 | -- | -- | 6.5 | 6.5 | 25.8 | 83.9 | 9.7 | 3.2 | 38.7 |
| Indiana | 31 | 6.5 | 16.1 | -- | 9.7 | -- | 16.1 | 74.2 | 6.5 | 12.9 | 51.6 |
| Kiski Valley | 77 | 11.7 | -- | -- | 62.3 | 3.9 | 6.5 | 28.6 | -- | 3.9 | 13.0 |
| Somerset (A) | 9 | 11.1 | -- | -- | 22.2 | -- | -- | 100.0 | 22.2 | -- | 44.4 |

Table 7.2: Reasons for Search by Station (p. 3 of 4)

| | # of Searches | % Incident to Arrest | % Inventory | % Search Warrant | % Plain View | % Canine Alert | % Drug Odor | % Consent | % Reas. Susp./ Prob. Cause | % Other | % Consent Only |
|-------------------------|---------------|----------------------|-------------|------------------|--------------|----------------|-------------|-----------|----------------------------|---------|----------------|
| AREA III (cont.) | | | | | | | | | | | |
| Troop G | | | | | | | | | | | |
| Bedford | 6 | -- | -- | 16.7 | -- | -- | 33.3 | 83.3 | 16.7 | 16.7 | 50.0 |
| Hollidaysburg | 74 | -- | -- | -- | -- | -- | -- | 98.6 | -- | 1.4 | 98.6 |
| Huntingdon | 17 | 5.9 | -- | 5.9 | 5.9 | 5.9 | 17.6 | 100.0 | 5.9 | 11.8 | 64.7 |
| Lewistown | 46 | 2.2 | 2.2 | 4.3 | 4.3 | -- | 2.2 | 87.0 | 2.2 | 4.3 | 76.1 |
| McConnellsburg | 4 | 25.0 | 25.0 | -- | 25.0 | -- | 50.0 | 100.0 | 25.0 | 25.0 | -- |
| Philipsburg | 3 | -- | -- | -- | -- | -- | 33.3 | 100.0 | 66.7 | -- | -- |
| Rockview | 23 | 13.0 | 8.7 | 4.3 | 4.3 | -- | 4.3 | 91.3 | 4.3 | 8.7 | 65.2 |
| Troop H | | | | | | | | | | | |
| Carlisle | 80 | 22.5 | 20.0 | 5.0 | 12.5 | 3.8 | 40.0 | 67.5 | 13.8 | 7.5 | 11.2 |
| Chambersburg | 63 | 7.9 | 27.0 | 1.6 | 1.6 | 3.2 | 11.1 | 69.8 | 15.9 | 9.5 | 28.6 |
| Gettysburg | 30 | 73.3 | 3.3 | 3.3 | 20.0 | -- | 63.3 | 13.3 | 60.0 | 13.3 | 13.3 |
| Harrisburg | 38 | -- | 10.5 | 2.6 | -- | 7.9 | 7.9 | 84.2 | 5.3 | 21.1 | 57.9 |
| Lykens | 21 | 28.6 | 4.8 | -- | 4.8 | -- | 9.5 | 66.7 | 14.3 | 23.8 | 28.6 |
| Newport | 9 | -- | -- | -- | 11.1 | -- | 22.2 | 88.9 | 11.1 | 33.3 | 33.3 |
| York | 77 | 15.6 | 3.9 | -- | 6.5 | -- | 15.6 | 88.3 | 3.9 | 13.0 | 15.9 |
| AREA IV | | | | | | | | | | | |
| Troop C | | | | | | | | | | | |
| Clarion | 13 | 15.4 | -- | -- | 7.7 | 7.7 | -- | 69.2 | -- | 46.2 | 30.8 |
| Clearfield | 8 | -- | -- | -- | 12.5 | 12.5 | 37.5 | 100.0 | 25.0 | -- | 25.0 |
| Dubois | 6 | 16.7 | -- | -- | -- | -- | 33.3 | 66.7 | 16.7 | 33.3 | -- |
| Kane | 32 | 25.0 | 6.2 | -- | 6.2 | -- | 21.9 | 75.0 | 6.2 | 6.2 | 62.5 |
| Punxsutawney | 7 | -- | -- | -- | -- | 14.3 | 14.3 | 100.0 | -- | 14.3 | 57.1 |
| Ridgway | 3 | -- | -- | -- | -- | -- | 33.3 | 66.7 | -- | 66.7 | -- |
| Tionesta | 5 | -- | -- | 20.0 | -- | -- | 40.0 | 100.0 | 60.0 | 40.0 | -- |
| Troop D | | | | | | | | | | | |
| Beaver | 43 | 34.9 | -- | -- | 7.0 | -- | 20.9 | 67.4 | 4.7 | 7.0 | 37.2 |
| Butler | 53 | 7.5 | 5.7 | -- | 9.4 | -- | 13.2 | 90.6 | 5.7 | 13.2 | 49.1 |
| Kittanning | 79 | 30.4 | 29.1 | 3.8 | 16.5 | 1.3 | 50.6 | 60.8 | 16.5 | 5.1 | 20.3 |
| Mercer | 35 | 2.9 | 2.9 | 2.9 | 2.9 | -- | 8.6 | 85.7 | 5.7 | 14.3 | 65.7 |

Table 7.2: Reasons for Search by Station (p. 4 of 4)

| | # of Searches | % Incident To Arrest | % Inventory | % Search Warrant | % Plain View | % Canine Alert | % Drug Odor | % Consent | % Reas. Susp./ Prob. Cause | % Other | % Consent Only |
|-------------------------|---------------|----------------------|-------------|------------------|--------------|----------------|-------------|-----------|----------------------------|---------|----------------|
| AREA IV (cont.) | | | | | | | | | | | |
| New Castle | 13 | 69.2 | 7.7 | -- | -- | -- | 15.4 | 23.1 | 7.7 | 23.1 | -- |
| Troop E | | | | | | | | | | | |
| Corry | 5 | 80.0 | 40.0 | -- | 40.0 | -- | 20.0 | -- | 40.0 | 20.0 | -- |
| Erie | 18 | 5.6 | -- | 5.6 | 5.6 | -- | 11.1 | 88.9 | 5.6 | 33.3 | 38.9 |
| Franklin | 6 | 16.7 | -- | -- | -- | -- | -- | 100.0 | -- | -- | 83.3 |
| Girard | 22 | 9.1 | -- | 9.1 | -- | -- | 18.2 | 86.4 | 22.7 | 13.6 | 31.8 |
| Meadville | 10 | 20.0 | -- | -- | 10.0 | 30.0 | 30.0 | 70.0 | 10.0 | -- | 40.0 |
| Warren | 11 | 27.3 | 9.1 | 9.1 | -- | -- | 18.2 | 63.6 | 27.3 | 9.1 | 9.1 |
| Troop B | | | | | | | | | | | |
| Belle Vernon | 18 | -- | -- | -- | 16.7 | -- | -- | 94.4 | 5.6 | 5.6 | 72.2 |
| Pittsburgh | 24 | 16.7 | 4.2 | -- | -- | -- | 37.5 | 83.3 | 16.7 | 8.3 | 37.5 |
| Uniontown | 89 | 23.6 | 5.6 | -- | 11.2 | 2.2 | 20.2 | 74.2 | 9.0 | 6.7 | 36.0 |
| Washington | 19 | 1538 | -- | -- | -- | -- | 21.1 | 84.2 | 5.3 | -- | 57.9 |
| Waynesburg | 11 | 27.3 | -- | -- | -- | -- | 9.1 | 63.6 | 9.1 | 18.2 | 36.4 |
| Bureau of Patrol | | | | | | | | | | | |
| Troop T | | | | | | | | | | | |
| Bowmansville | 34 | 5.9 | 5.9 | -- | 5.9 | 5.9 | 17.6 | 88.2 | 14.7 | 17.6 | 41.2 |
| Everett | 3 | -- | -- | -- | -- | 33.3 | -- | 66.7 | 33.3 | 66.7 | 33.3 |
| Gibsonia | 3 | 33.3 | 33.3 | -- | -- | -- | 33.3 | 100.0 | -- | 33.3 | -- |
| Highspire | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| King of Prussia | 29 | 10.3 | 17.2 | -- | 3.4 | -- | 17.2 | 72.4 | 10.3 | 24.1 | 20.7 |
| New Stanton | 4 | -- | -- | -- | -- | -- | 75.0 | 100.0 | -- | -- | 25.0 |
| Newville | 4 | -- | -- | -- | -- | -- | 25.0 | 100.0 | 25.0 | -- | 50.0 |
| Pocono | 6 | 16.7 | -- | -- | -- | -- | 50.0 | 66.7 | 16.7 | 16.7 | 16.7 |
| Somerset (T) | 16 | 6.2 | -- | 6.2 | -- | 12.5 | 12.5 | 87.5 | 12.5 | -- | 31.2 |

While examining the specific reasons for searches is instructive, this information is better analyzed when collapsed into discrete categories or types of searches. For the analyses reported in Table 7.3 below, searches were divided into three categories based on the presumed level of officer discretion for different situations. The first search category (Type I) includes searches that are required by PSP policy and are therefore mandatory for Troopers to perform. Type I searches include searches incident to arrest, searches based on a pre-existing warrant, and inventory searches. The second search category (Type II) includes searches that are not mandatory but, rather, are based on suspicion and officer discretion. Specifically, Type II searches include plain view searches, canine alert searches, drug odor searches, reasonable suspicion, probable cause, and “other” unspecified reasons. The third search category (Type III) includes searches that are based solely on consent.¹⁶ If a search was based on multiple reasons, it was assigned to the search category with the least officer discretion (e.g., if a search is based on a canine alert [Type II] and consent [Type III], it was defined as a Type II search). Therefore, the analyses below examining the success rates for Type I, II, and III searches are mutually exclusive.

The influences of drivers’ characteristics and Troopers’ characteristics are examined within these three categories of searches and are reported in Table 7.3. The results indicate significant differences in the percentages of search types across racial/ethnic groups. Unlike the previous year, in 2008 there were no significant racial/ethnic differences in mandatory searches. Hispanics were significantly less likely to be searched for probable cause/reasonable suspicion and significantly more likely to be searched based solely on consent compared to Whites and Blacks.

Drivers who were less than 25 years old were significantly more likely to be searched for probable cause/reasonable suspicion reasons, while drivers over 25 years old were more likely to be searched for mandatory reasons compared to younger drivers. The use of solely consent searches (Type III), however, did not significantly vary by drivers’ age. A considerably larger percentage of Pennsylvania residents were searched for mandatory (Type I) reasons, while a larger percentage of non-Pennsylvania residents were searched for consent reasons.

There were also differences in the reasons for a search based on Troopers’ characteristics. White Troopers were significantly less likely to conduct searches for mandatory reasons and significantly more likely to conduct searches based on consent compared to non-White Troopers. There were no statistically significant differences between White and non-White Troopers on probable cause/reasonable suspicion searches. There were also differences in the types of searches conducted across Troopers’ gender, experience, and education. Female Troopers were significantly more likely to conduct searches for mandatory reasons compared to male Troopers, while male Troopers were significantly more likely than their female counterparts to conduct searches based solely on consent. In addition, more experienced Troopers were more likely to conduct consent searches and searches based on probable cause/reasonable suspicion and less likely to conduct mandatory searches compared to Troopers with less than five years of experience. Finally, Troopers with 2 or 4 year degrees

¹⁶ Type II and III categories have been slightly changed from previous reports. In the current report, only searches based solely on consent are captured as Type III searches.

were significantly more likely to conduct mandatory searches and less likely to conduct probable cause/reasonable suspicion searches compared to Troopers with no college degree. Unlike the previous year, there were no statistically significant differences on consent searches based on the Trooper's education level. The reasons for these differences may be assignment based – this explanation cannot be directly assessed in the bivariate analyses reported in Table 7.3.

Table 7.3 Reasons for Search (by search type) by Driver and Trooper Characteristics

| | Total # of Searches | Type I: % Mandatory Searches | Type II: % Probable cause/reasonable suspicion Searches | Type III: % Consent Searches |
|-------------------------------------|----------------------------|-------------------------------------|--|-------------------------------------|
| All Drivers | 3,110 | 35.3 | 30.3 | 34.3 |
| By Drivers' Characteristics | | | | |
| White Driver | 1,795 | 35.0 | 32.1*** | 32.8*** |
| Black Driver | 889 | 36.7 | 31.0 | 32.3 |
| Hispanic Driver | 356 | 34.0 | 20.8 | 45.2 |
| Male Driver | 2,667 | 34.0*** | 30.8 | 35.2** |
| Female Driver | 439 | 43.7 | 27.3 | 28.9 |
| Driver under 25 years old | 1,791 | 28.1*** | 36.5*** | 35.4 |
| Driver over 25 years old or older | 1,315 | 40.6 | 25.7 | 33.6 |
| Driver PA Resident | 2,375 | 40.3*** | 30.6 | 29.1*** |
| Driver Non-PA Resident | 731 | 19.4 | 29.3 | 51.3 |
| By Troopers' Characteristics | | | | |
| White Trooper | 2,896 | 34.4*** | 30.6 | 35.0* |
| Non-White Trooper | 185 | 45.9 | 27.6 | 26.5 |
| Male Trooper | 2,978 | 34.7* | 30.5 | 34.8* |
| Female Trooper | 103 | 46.6 | 28.2 | 25.2 |
| <5 years experience | 1,636 | 41.7*** | 28.1** | 30.3*** |
| >5 years experience | 1,445 | 27.7 | 33.1 | 39.2 |
| No College Degree | 677 | 30.3** | 38.4*** | 31.3 |
| 2 Year Degree | 717 | 38.6 | 27.9 | 33.5 |
| 4 Year Degree or more | 1,686 | 35.5 | 28.3 | 36.2 |

NOTE: * p < .05, ** p < .01, *** p < .001

TYPES OF SEIZURES

Table 7.4 documents the types of evidence and/or contraband confiscated during searches conducted by PSP Troopers. In 2008, there were 853 seizures of contraband resulting from 3,110 searches (27.4% of searches resulted in the discovery of contraband). A majority of

the contraband seized was drugs (74.6%), followed distantly by “other” (12.0%)¹⁷, cash (10.2%), and alcohol (10.0). Note that a single search could produce multiple types of contraband seized; therefore, the sum of percentages in the various categories in Table 7.4 may exceed 100%. Table 7.4 also documents the differences in the types of evidence seized across areas and troops. The trend displayed at the department level was, with few exceptions, consistent across area and troop levels. More fluctuation was evident at the station level (shown in Table 7.5), particularly in locations with small numbers of contraband seizures.

Table 7.4: Types of Evidence Seized by Department, Area, and Troop

| | # of Seizures | % Cash | % Drugs | % Vehicle | % Weapons | % Stolen Prop. | % Alcohol | % Other |
|------------------|---------------|--------|---------|-----------|-----------|----------------|-----------|---------|
| PSP Dept. | 853 | 10.2 | 74.6 | 4.8 | 4.9 | 2.5 | 10.0 | 12.0 |
| AREA I | 344 | 9.6 | 73.8 | 5.8 | 6.1 | 2.0 | 12.8 | 8.7 |
| Troop J | 69 | 5.8 | 68.1 | -- | 4.3 | 1.4 | 24.6 | 11.6 |
| Troop K | 216 | 9.7 | 76.4 | 6.0 | 7.4 | 2.8 | 8.3 | 6.5 |
| Troop L | 9 | 22.2 | 44.4 | -- | -- | -- | 11.1 | 33.3 |
| Troop M | 50 | 12.0 | 76.0 | 14.0 | 4.0 | -- | 16.0 | 10.0 |
| AREA II | 139 | 15.1 | 81.3 | 6.5 | 5.0 | 5.0 | 7.9 | 7.2 |
| Troop F | 47 | 25.5 | 72.3 | 8.5 | 4.3 | 6.4 | 6.4 | 12.8 |
| Troop N | 24 | 25.0 | 83.3 | 12.5 | 4.2 | -- | 8.3 | -- |
| Troop P | 19 | 5.3 | 78.9 | 10.5 | -- | 10.5 | 15.8 | -- |
| Troop R | 49 | 4.1 | 89.8 | -- | 8.2 | 4.1 | 6.1 | 8.2 |
| AREA III | 173 | 9.8 | 68.2 | 4.0 | 2.3 | 1.7 | 11.0 | 19.1 |
| Troop A | 36 | 11.1 | 69.4 | 2.8 | 2.8 | -- | 2.8 | 27.8 |
| Troop G | 52 | 19.2 | 53.8 | 5.8 | -- | 3.8 | 1.9 | 36.5 |
| Troop H | 85 | 3.5 | 76.5 | 3.5 | 3.5 | 1.2 | 20.0 | 4.7 |
| AREA IV | 171 | 5.8 | 79.5 | 1.2 | 5.8 | 1.8 | 5.3 | 15.2 |
| Troop C | 22 | 9.1 | 86.4 | 4.5 | 4.5 | 4.5 | 9.1 | 9.1 |
| Troop D | 73 | 4.1 | 76.7 | -- | 6.8 | 1.4 | 4.1 | 23.3 |
| Troop E | 20 | 15.0 | 65.0 | 5.0 | 5.0 | 5.0 | 15.0 | 10.0 |
| Troop B | 56 | 3.6 | 85.7 | -- | 5.4 | -- | 1.8 | 8.9 |
| B. Patrol | 26 | 23.1 | 57.7 | 11.5 | -- | 3.8 | 7.7 | 11.5 |
| Troop T | 26 | 23.1 | 57.7 | 11.5 | -- | 3.8 | 7.7 | 11.5 |

¹⁷ The “other” category includes contraband that does not fit in the other given categories but was not specified on the original CDR. The CDR X-press does include a field where Troopers may manually enter this information. The most frequent type of “other” contraband indicated was drug paraphernalia.

Table 7.5: Types of Evidence Seized by Station (p. 1 of 3)

| | # of Seizures | % Cash | % Drugs | % Vehicle | % Weapons | % Stolen Prop. | % Alcohol | % Other |
|------------------|------------------|-----------|------------|--------------|--------------|----------------------|--------------|------------|
| AREA I | | | | | | | | |
| Troop J | | | | | | | | |
| Avondale | 22 | -- | 68.2 | -- | -- | -- | 27.3 | 13.6 |
| Embreeville | 12 | 16.7 | 75.0 | -- | -- | -- | 16.7 | 8.3 |
| Ephrata | 6 | -- | 50.0 | -- | -- | -- | 50.0 | 16.7 |
| Lancaster | 29 | 6.9 | 69.0 | -- | 10.3 | 3.4 | 20.7 | 10.3 |
| Troop K | | | | | | | | |
| Media | 69 | 4.3 | 72.5 | 4.3 | 5.8 | 2.9 | 17.4 | 4.3 |
| Philadelphia | 124 | 13.7 | 75.8 | 8.1 | 8.9 | 3.2 | 3.2 | 8.1 |
| Skippack | 23 | 4.3 | 91.3 | -- | 4.3 | -- | 8.7 | 4.3 |
| Troop L | | | | | | | | |
| Frackville | 2 | -- | 50.0 | -- | -- | -- | -- | 50.0 |
| Hamburg | 1 | -- | -- | -- | -- | -- | -- | 100.0 |
| Jonestown | 6 | 33.3 | 50.0 | -- | -- | -- | 16.7 | 16.7 |
| Reading | 0 | -- | -- | -- | -- | -- | -- | -- |
| Schuylkill Haven | 0 | -- | -- | -- | -- | -- | -- | -- |
| Troop M | | | | | | | | |
| Belfast | 3 | -- | 66.7 | -- | -- | -- | 33.3 | 33.3 |
| Bethlehem | 5 | 20.0 | 60.0 | 20.0 | -- | -- | 40.0 | -- |
| Dublin | 10 | -- | 90.0 | 10.0 | -- | -- | 30.0 | -- |
| Fogelsville | 27 | 18.5 | 74.1 | 18.5 | 7.4 | -- | 7.4 | 11.1 |
| Trevoise | 5 | -- | 80.0 | -- | -- | -- | -- | 20.0 |
| AREA II | | | | | | | | |
| Troop F | | | | | | | | |
| Coudersport | 3 | -- | 33.3 | -- | -- | -- | 66.7 | -- |
| Emporium | 2 | -- | -- | 50.0 | 50.0 | 50.0 | -- | 50.0 |
| Lamar | 5 | 60.0 | 80.0 | 20.0 | -- | -- | -- | 40.0 |
| Mansfield | 2 | -- | 50.0 | 50.0 | -- | -- | -- | 50.0 |
| Milton | 1 | -- | 100.0 | 100.0 | -- | -- | -- | -- |
| Montoursville | 24 | 33.3 | 87.5 | -- | 4.2 | -- | -- | -- |
| Selinsgrove | 5 | 20.0 | 60.0 | -- | -- | 20.0 | 20.0 | -- |
| Stonington | 5 | -- | 60.0 | -- | -- | 20.0 | -- | 40.0 |

Table 7.5: Types of Evidence Seized by Station (p. 2 of 3)

| | # of Seizures | % Cash | % Drugs | % Vehicle | % Weapons | % Stolen Prop. | % Alcohol | % Other |
|-----------------|---------------|--------|---------|-----------|-----------|----------------|-----------|---------|
| Troop N | | | | | | | | |
| Bloomsburg | 2 | -- | 50.0 | -- | -- | -- | 50.0 | -- |
| Fern Ridge | 1 | -- | -- | -- | -- | -- | 100.0 | -- |
| Hazleton | 6 | 33.3 | 100.0 | 16.7 | -- | -- | -- | -- |
| Lehighton | 0 | -- | -- | -- | -- | -- | -- | -- |
| Swiftwater | 15 | 26.7 | 86.7 | 13.3 | 6.7 | -- | -- | -- |
| Troop P | | | | | | | | |
| Laporte | 1 | -- | -- | -- | -- | 100.0 | -- | -- |
| Shickshinny | 0 | -- | -- | -- | -- | -- | -- | -- |
| Towanda | 9 | -- | 100.0 | -- | -- | -- | -- | -- |
| Tunkhannock | 5 | 20.0 | 60.0 | 40.0 | -- | 20.0 | 40.0 | -- |
| Wyoming | 4 | -- | 75.0 | -- | -- | -- | 25.0 | -- |
| Troop R | | | | | | | | |
| Blooming Grove | 14 | 7.1 | 85.7 | -- | 7.1 | -- | 14.3 | 7.1 |
| Dunmore | 14 | 0 | 85.7 | -- | 7.1 | 7.1 | 7.1 | -- |
| Gibson | 9 | -- | 88.9 | -- | 11.1 | 11.1 | -- | 11.1 |
| Honesdale | 12 | 8.3 | 100.0 | -- | 8.3 | -- | -- | 16.7 |
| AREA III | | | | | | | | |
| Troop A | | | | | | | | |
| Ebensburg | 1 | -- | 100.0 | -- | -- | -- | -- | -- |
| Greensburg | 11 | 18.2 | 72.7 | 9.1 | -- | -- | -- | 27.3 |
| Indiana | 8 | -- | 87.5 | -- | 12.5 | -- | -- | 12.5 |
| Kiski Valley | 12 | 16.7 | 58.3 | -- | -- | -- | -- | 33.3 |
| Somerset (A) | 4 | -- | 50.0 | -- | -- | -- | 25.0 | 50.0 |
| Troop G | | | | | | | | |
| Bedford | 1 | -- | -- | -- | -- | -- | -- | 100.0 |
| Hollidaysburg | 18 | 5.6 | 27.8 | -- | -- | -- | -- | 77.8 |
| Huntingdon | 6 | 33.3 | 50.0 | 33.3 | -- | 16.7 | -- | 16.7 |
| Lewistown | 22 | 31.8 | 81.8 | 4.5 | -- | -- | -- | 9.1 |
| McConnellsburg | 2 | -- | 50.0 | -- | -- | -- | 50.0 | -- |
| Philipsburg | 0 | -- | -- | -- | -- | -- | -- | -- |
| Rockview | 3 | -- | 33.3 | -- | -- | 33.3 | -- | 33.3 |
| Troop H | | | | | | | | |
| Carlisle | 37 | 2.7 | 78.4 | 5.4 | -- | 2.7 | 21.6 | 2.7 |
| Chambersburg | 10 | 10.0 | 70.0 | 10.0 | -- | -- | -- | 30.0 |
| Gettysburg | 8 | -- | 50.0 | -- | 12.5 | -- | 62.5 | -- |
| Harrisburg | 4 | 25.0 | 75.0 | -- | -- | -- | 25.0 | -- |
| Lykens | 6 | -- | 83.3 | -- | 33.3 | -- | -- | -- |
| Newport | 2 | -- | 50.0 | -- | -- | -- | 50.0 | -- |
| York | 18 | -- | 88.9 | -- | -- | -- | 11.1 | -- |

Table 7.5: Types of Evidence Seized by Station (p. 3 of 3)

| | # of Seizures | % Cash | % Drugs | % Vehicle | % Weapons | % Stolen Prop. | % Alcohol | % Other |
|-------------------------|---------------|--------|---------|-----------|-----------|----------------|-----------|---------|
| AREA IV | | | | | | | | |
| Troop C | | | | | | | | |
| Clarion | 3 | -- | 33.3 | -- | -- | 33.3 | 33.3 | -- |
| Clearfield | 6 | 16.7 | 100.0 | -- | -- | -- | -- | 16.7 |
| Dubois | 1 | 100.0 | 100.0 | -- | -- | -- | -- | -- |
| Kane | 9 | -- | 88.9 | 11.1 | 11.1 | -- | 11.1 | -- |
| Punxsutawney | 2 | -- | 100.0 | -- | -- | -- | -- | -- |
| Ridgway | 1 | -- | 100.0 | -- | -- | -- | -- | 100.0 |
| Tionesta | 0 | -- | -- | -- | -- | -- | -- | -- |
| Troop D | | | | | | | | |
| Beaver | 7 | 14.3 | 85.7 | -- | -- | -- | -- | 14.3 |
| Butler | 22 | 4.5 | 68.2 | -- | 4.5 | 4.5 | -- | 45.5 |
| Kittanning | 38 | 2.6 | 84.2 | -- | 5.3 | -- | 7.9 | 10.5 |
| Mercer | 3 | -- | 33.3 | -- | 33.3 | -- | -- | 66.7 |
| New Castle | 3 | -- | 66.7 | -- | 33.3 | -- | -- | -- |
| Troop E | | | | | | | | |
| Corry | 2 | -- | 50.0 | 50.0 | -- | -- | 50.0 | -- |
| Erie | 6 | 16.7 | 66.7 | -- | -- | -- | -- | 33.3 |
| Franklin | 1 | -- | -- | -- | -- | -- | 100.0 | -- |
| Girard | 7 | 28.6 | 71.4 | -- | -- | 14.3 | 14.3 | -- |
| Meadville | 3 | -- | 66.7 | -- | 33.3 | -- | -- | -- |
| Warren | 1 | -- | 100.0 | -- | -- | -- | -- | -- |
| Troop B | | | | | | | | |
| Belle Vernon | 5 | -- | 100.0 | -- | -- | -- | -- | -- |
| Pittsburgh | 4 | 25.0 | 100.0 | -- | -- | -- | -- | -- |
| Uniontown | 41 | 2.4 | 82.9 | -- | 7.3 | -- | 2.4 | 9.8 |
| Washington | 6 | -- | 83.3 | -- | -- | -- | -- | 16.7 |
| Waynesburg | 0 | -- | -- | -- | -- | -- | -- | -- |
| Bureau of Patrol | | | | | | | | |
| Troop T | | | | | | | | |
| Bowmansville | 5 | 20.0 | 80.0 | 20.0 | -- | -- | -- | -- |
| Everett | 1 | -- | 100.0 | -- | -- | -- | -- | -- |
| Gibsonia | 1 | -- | -- | 100.0 | -- | 100.0 | -- | -- |
| Highspire | -- | -- | -- | -- | -- | -- | -- | -- |
| King of Prussia | 6 | -- | 66.7 | -- | -- | -- | -- | 33.3 |
| New Stanton | 0 | -- | -- | -- | -- | -- | -- | -- |
| Newville | 0 | -- | -- | -- | -- | -- | -- | -- |
| Pocono | 3 | -- | 100.0 | -- | -- | -- | 33.3 | -- |
| Somerset (T) | 10 | 50.0 | 30.0 | 10.0 | -- | -- | 10.0 | 10.0 |

NOTE: Highspire conducted no searches.

SEARCH SUCCESS RATES

As described in previous final reports, the discovery of contraband during person and vehicle searches is an important outcome to consider when examining potential bias by police officers. Often referred to as search “success rates,” or “hit rates” (i.e., the percent of searches conducted that produce contraband and/or resulted in arrest), some researchers use the “outcome test” to identify racial and ethnic disparities by examining differential outcomes in search success rates (Knowles, Persico, & Todd, 2001; Ayres, 2001). Racial/ethnic comparisons of hit rates are calculated by dividing the percent of searches in which officers seize some type of contraband (e.g., drugs, illegal weapons, etc.) by the number of total searches (Fridell, 2004; Ramirez et al., 2000). Some researchers have suggested that if drivers are searched strictly based on legal factors and suspicions unrelated to race, one would expect similar percentages of searches resulting in seizures across racial groups (Knowles, Persico, & Todd, 2001; Ayres, 2001). The application of the outcome test to police searches is based on the notion that if officers are profiling minority drivers based on racial prejudice, they will continue to search minorities even when the returns (i.e., the discovery of contraband) are smaller for minorities than the returns for searching Whites (Anwar & Fang, 2006). Conversely, if no bias exists, over a period of time a state of equilibrium will be achieved in which the police will search racial groups proportionate to their actual possession of contraband. The need to include multiple variables (i.e., multivariate model) is removed by reliance on the principle of equilibrium.

As with other analytical techniques, limitations exist that limit the conclusions that can be drawn from the outcome test (Engel, 2008; Engel & Tillyer, 2008). The outcome test is only appropriate for an analysis of traffic stops that result in a probable cause/reasonable suspicion search; therefore, mandatory and consent searches should not be considered. In addition, any racial/ethnic disparities in search success rates discovered using this method do not necessarily imply officer bias. Notwithstanding the limitations of the outcome test, it does provide an alternative method to assess post-stop outcomes. Nevertheless, no definitive conclusions about racial bias can be drawn from these comparisons based on the limitations of this technique (for details, see Engel, 2008; Engel & Tillyer, 2008).

Search Success Rates by Reason for Search

Prior to examining search success rates by race/ethnicity, this section documents the variation in search success rates by the reason for search. Based on PSP policies, Troopers have little discretion over some types of searches (e.g., inventory searches, searches incident to arrest, searches based on a preexisting warrant). Furthermore, it is likely that different reasons for searches might lead to varying search success rates. Table 7.6 explores this possibility by documenting the overall search success rate, and the success rates for each specific type of search at both the department and area levels. Department-wide, the overall search success rate is 27.4% (i.e., 27.4% of searches conducted during member-initiated traffic stops result in the discovery of contraband). This rate, however, varies dramatically across search types, as exemplified by the range from 87.0% success for search warrant searches to 12.5% success for searches based on “other” reasons. Searches based on inventory and “other” unspecified reason were the least likely to be successful in terms of

discovering contraband, with success rates at 18.0% and 12.5%, respectively. Searches likely to be moderately successful included: consent (30.2%), incident to arrest (34.6%), and reasonable suspicion/probable cause (40.1%). Note, however, that when searches conducted solely based on consent are examined, the hit rates decreases to 22.3%. In slightly over half of the searches conducted for canine alerts (51.8%) contraband was seized. In nearly half (45.7) of searches based on the odor of drugs contraband was seized. Not surprisingly, searches based on search warrants (87.0%) and plain view (70.4%) were the most likely to be successful in terms of seizing contraband. These patterns remain relatively consistent across geographical areas within the department.

DRAFT

Table 7.6: Search Success Rates by Reasons for Search for Department and Areas

| | Overall Search Success Rate | Incident to Arrest Success Rate | Inventory Success Rate | Search Warrant Success Rate | Plain View Success Rate | Canine Alert Success Rate | Drug Odor Success Rate | Consent Success Rate | Reas. Susp./ PC Success Rate | Other Reason Success Rate | Consent Only Success Rate |
|-------------------------|------------------------------------|--|-------------------------------|------------------------------------|--------------------------------|----------------------------------|-------------------------------|-----------------------------|-------------------------------------|----------------------------------|----------------------------------|
| PSP Dept. | 27.4 | 34.6 | 18.0 | 87.0 | 70.4 | 51.8 | 45.7 | 30.2 | 40.1 | 12.5 | 22.3 |
| AREA I | 25.7 | 35.0 | 17.8 | 88.9 | 90.6 | 28.6 | 44.2 | 30.4 | 49.4 | 8.5 | 26.2 |
| AREA II | 28.4 | 34.0 | 15.4 | 93.3 | 89.7 | 71.4 | 46.0 | 28.8 | 31.4 | 15.5 | 19.0 |
| AREA III | 26.5 | 33.0 | 21.6 | 83.3 | 39.3 | 50.0 | 53.3 | 27.8 | 29.7 | 12.9 | 21.6 |
| AREA IV | 32.3 | 34.3 | 15.4 | 77.8 | 90.7 | 55.6 | 42.1 | 34.9 | 42.9 | 15.3 | 22.5 |
| BUREAU OF PATROL | 26.3 | 50.0 | 25.0 | 100.0 | 33.3 | 60.0 | 38.1 | 26.8 | 46.2 | 11.8 | 10.0 |

NOTE: Search success rates are measured as the percent of searches that resulted in a seizure of contraband; thus all search success rate entries in the table are percentages.

* Five or fewer searches conducted for this reason; interpret percentage with caution.

Information regarding the search success rates of different types of searches is further summarized below. In Table 7.7, search success rates for each type of search (collapsed by level of officer discretion) are displayed. Again, types of searches are classified as follows: Type I includes mandatory searches that are required by PSP policy (searches incident to arrest, searches based on a pre-existing warrant, and inventory searches), Type II includes searches that are not mandatory but, rather, are based on officer discretion (plain view searches, canine alert searches, drug odor searches, and reasonable suspicion or probable cause searches), and Type III includes searches that are based only on consent. As illustrated in this table, Type II probable cause/reasonable suspicion searches were the most successful in terms of recovering contraband (34.5%), while Type III consent searches were the least successful (22.4%). The success rate patterns were slightly different across areas. Searches conducted by Troopers assigned to Area II and the Bureau of Patrol were most successful in recovering contraband during mandatory searches, while Areas I and IV reported the most seizures during probable cause/reasonable suspicion searches. With the exception of Area I, consent search success rates were the lowest across all areas when compared to Type I and Type II searches.

Table 7.7: Search Type Success Rates by Department and Areas

| | Overall Search Success Rate | Type I: Mandatory Search Success Rate | Type II: Probable cause/reasonable suspicion Search Success Rate | Type III: Consent Search Success Rate |
|-------------------------|------------------------------------|--|---|--|
| PSP Dept. | 27.4 | 26.0 | 34.5 | 22.4 |
| AREA I | 25.7 | 21.9 | 35.1 | 26.1 |
| AREA II | 28.4 | 40.8 | 34.6 | 19.0 |
| AREA III | 26.5 | 30.3 | 29.9 | 21.7 |
| AREA IV | 32.3 | 34.6 | 40.9 | 22.5 |
| Bureau of Patrol | 26.3 | 37.5 | 27.1 | 15.2 |

NOTE: Search success rates are measured as the percent of searches that resulted in a seizure of contraband; thus all search success rate entries in the table are percentages.

Search Success Rates by Drivers' and Troopers' Characteristics

It is also important to examine whether the search success rates vary based on drivers' and Troopers' characteristics. As noted previously, however, only Type II searches should be analyzed for purposes of the "outcome test," as these searches are the only ones that are based solely on officer discretion (i.e., are not mandatory to perform or require compliance by citizens in the form of giving consent). Therefore, information regarding only the Type II search success rates is reported in Table 7.8 below.

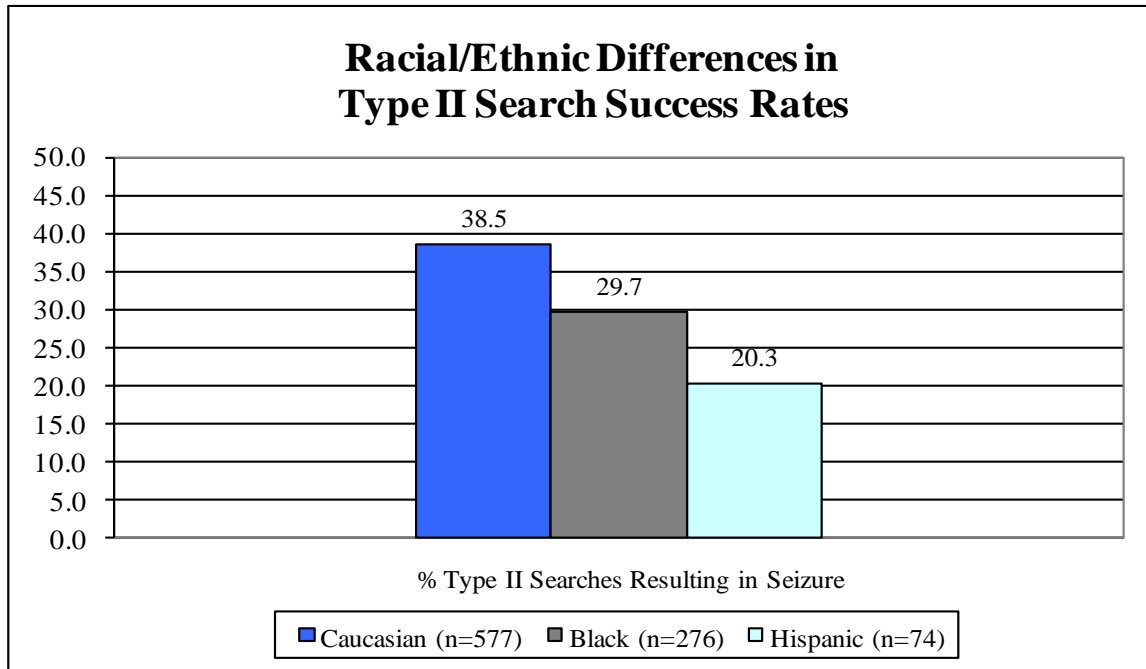
Table 7.8: Probable cause/reasonable suspicion Search Success Rates by Driver & Trooper Characteristics

| | Total # Searches | Total # of Type II Probable cause/reasonable suspicion Searches | Type II: Probable cause/reasonable suspicion Search Success Rate |
|-------------------------------------|------------------|---|--|
| All Drivers | 3,110 | 941 | 34.5 |
| By Drivers' Characteristics | | | |
| White Driver | 1,795 | 577 | 38.5*** |
| Black Driver | 889 | 276 | 29.7 |
| Hispanic Driver | 356 | 74 | 20.3 |
| Male Driver | 2,667 | 821 | 35.2 |
| Female Driver | 439 | 120 | 30.0 |
| Driver under 25 years old | 1,791 | 480 | 36.5 |
| Driver over 25 years old or older | 1,315 | 461 | 32.5 |
| Driver PA Resident | 2,375 | 727 | 36.0 |
| Driver Non-PA Resident | 731 | 214 | 29.4 |
| By Troopers' Characteristics | | | |
| White Trooper | 2,896 | 886 | 34.8 |
| Non-White Trooper | 185 | 51 | 29.4 |
| Male Trooper | 2,978 | 908 | 35.0* |
| Female Trooper | 103 | 29 | 17.2 |
| Less than 5 years experience | 1,636 | 459 | 35.7 |
| 5 years experience or more | 1,445 | 478 | 33.3 |
| No College Degree | 677 | 260 | 26.2** |
| 2 Year Degree | 717 | 200 | 34.0 |
| 4 Year Degree or more | 1,686 | 477 | 39.2 |

NOTE: * $p < .05$, ** $p < .01$, *** $p < .001$

Table 7.8 shows that there are significant differences in the probable cause/reasonable suspicion search success rates across some driver and Trooper characteristics. As shown in this table, and graphically displayed in Figure 7.1 below, the results of the outcome test for race/ethnicity indicate that White drivers who are searched for probable cause/reasonable suspicion reasons were significantly more likely to be found in possession of contraband compared to searched Black and Hispanic drivers. Specifically, 38.5% of probable cause/reasonable suspicion searches of White drivers were successful, compared to 29.7% of searches of Black drivers, and only 20.3% of searches of Hispanic drivers.

Figure 7.1: Racial/Ethnic Differences in Type II Search Success Rates



NOTE: Differences across the racial/ethnic groups presented in this figure are statistically significant at $p \leq .001$

No statistically significant differences in Type II search success rates are evident based on other driver characteristics. That is, unlike previous years that have shown statistically significant differences in search success rates based on driver gender, age, and residency, the analyses of the 2008 data shown no statistically significant differences between the search success rates of males and females, younger and older drivers, and Pennsylvania residents and out of state drivers. Statistically significant differences in probable cause/reasonable suspicion search success rates also exist based on some Troopers' characteristics, although race is not one of them. Specifically, male Troopers and Troopers with 2 and 4-year degrees are more likely to discover contraband during probable cause/reasonable suspicion searches than are their female and less educated counterparts.

In summary, despite the earlier findings that Blacks and Hispanics were significantly more likely than Whites to be searched during traffic stops with PSP Troopers, probable cause/reasonable suspicion search success rates indicate Blacks and Hispanics were significantly less likely than Whites to be found in possession of contraband. This finding is consistent with findings from other state and local police agencies across the country, as well as previous reports issued for the PSP. Based on the same discrepancy in earlier reports, nine focus groups were conducted with PSP Troopers in 2005 to better understand patterns and practices related to search and seizure during traffic stops, specifically these racial and ethnic disparities for searches and search success rates. The goal of these focus groups was to document the most effective techniques related to search and seizure in order to improve and potentially alter departmental training and reduce the racial/ethnic disparities reported in the Year 2 Final Report. Focus group participants from the PSP, along with focus groups conducted with officers from other state police agencies including the Ohio State Highway

Patrol, Nebraska State Patrol, and Arizona Department of Public Safety offered several insightful and plausible interpretations for the inconsistent search success rates across racial/ethnic groups. Specifically, focus group 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 (possibly including race or race-related stereotypes) rather than the totality of circumstances, 3) a limited understanding of cultural differences in behaviors across racial/ethnic groups, and 4) different drug trafficking methods (e.g., hidden compartments) used across racial/ethnic groups.

These insights led to the following recommendations, originally included in the *Years 3 & 4 Final Report*, and reiterated in the *Year 5 and Year 6 Reports*:

1. Better training for Troopers is needed regarding the complexities of interactions with members of different racial/ethnic groups. The use of racial/ethnic characteristics and/or the reliance on “gut instincts” and “sixth sense” to inform search decisions must be eradicated within the PSP. The best opportunity to do this is to demonstrate through academy and criminal interdiction training the ineffective nature of these types of practices.
2. The discussion of racial profiling as a component of the training curriculum should continually 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, some research indicates that racial and ethnic differences exist in cues of suspicion that officers are trained to identify when determining who to search (for review, see Engel & Johnson, 2006). Therefore, 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.

Portions of these recommendations have been implemented by the PSP; however, racial/ethnic disparities in search and seizure rates persist.

Specific categories of Type II search success rates were further explored in an effort to better understand these racial/ethnic disparities. Table 7.9 reports the search success rates by race/ethnicity for specific types of searches contained within the larger Type II search category. Specifically, racial/ethnic differences in search success rates based on drug odor searches, plain view, canine alert, probable cause, and other reasons are reported. As shown, search success rates are fairly comparable across racial/ethnic groups for searches based on plain view and “other” reasons. More noticeable and statistically significant differences are evident for searches based on drug odor, canine alerts, and probable cause. Specifically, for searches based on drug odor, 49.7% of searches of White drivers resulted in the seizure of contraband, compared to 38.5% of Black drivers and 36.8% of Hispanic drivers. Similarly, for canine alert searches, 76.5% of searches of White drivers resulted in the seizure of

contraband, compared to 43.3% of Black drivers and 14.3% of Hispanic drivers. Finally, 45.1% of probable cause searches of White drivers resulted in the seizure of contraband, compared to 39.7% of Black drivers and just 12.0% of Hispanic drivers. Although these differences are based on a small number of searches, they are deserving of further scrutiny.

As noted in previous reports, it is plausible that Troopers hold different thresholds for reasonable suspicion either overtly or subconsciously for different racial/ethnic groups. For example, Smith and Alpert (2007) proposed a theory of police behavior, rooted in social-psychological research on stereotypes, which suggests that officers have unintentional but biased response to minority citizens. Specifically, they suggest that police may develop subconscious, cognitive scripts based on exposure to societal or media conceptions about particular groups, vicarious experiences, and their own personal contacts with groups that they repeatedly encounter in situations involving criminal activity (see also, Smith, Makarios, & Alpert, 2006). These scripts are easily recalled in individual stops and may cause officers to be more likely to be suspicious of specific minority group members. It has been argued that this differential assessment of suspicion therefore can affect police decision making and produce disparate outcomes among racial/ethnic groups.

When applied to searches, the social conditioning theory would suggest that some of the racial/ethnic disparity in probable cause search success rates could be due to Troopers relying on these cognitive scripts that unintentionally cause them to differentially assess the suspiciousness of stops with members of different racial/ethnic groups. If an officer's suspicion is subconsciously triggered more often in situations with minority drivers, this may contribute to lower search success rates of these drivers. Additional focus groups conducted in other agencies that focus very specifically on understanding these racial/ethnic disparities may provide additional insights and possible alternatives for reducing these disparities (e.g., through specialized trainings, supervisory oversight, etc.). These research findings will be made available to the PSP to continually improve their understanding and training surrounding issues of potential racial bias.

Table 7.9: Racial/Ethnic Differences in Probable cause/reasonable suspicion Search Success Rates by Reason for Search

| | # Drug Odor Searches | Drug Odor Search Success Rate | # Plain View Searches | Plain View Search Success Rate | # Canine Alert Searches | Canine Search Success Rate | # Probable Cause Searches | Probable Cause Search Success Rate | # Other Searches | Other Search Success Rate |
|-----------------|-----------------------------|--------------------------------------|------------------------------|---------------------------------------|--------------------------------|-----------------------------------|----------------------------------|---|-------------------------|----------------------------------|
| White Driver | 326 | 49.7* | 169 | 69.2 | 17 | 76.5* | 144 | 45.1** | 167 | 12.6 |
| Black Driver | 130 | 38.5 | 44 | 70.5 | 30 | 43.3 | 73 | 39.7 | 108 | 13.9 |
| Hispanic Driver | 38 | 36.8 | 9 | 88.9 | 7 | 14.3 | 25 | 12.0 | 23 | 4.3 |

NOTE: * p < .05, ** p < .01, *** p < .001

SPOTLIGHT ON CONSENT SEARCHES

As noted previously, a substantial percentage of PSP searches in 2007 were based *solely* on drivers' consent (34.2%).¹⁸ Yet, of the reasons identified on the Contact Data Report, "solely consent" is one of the least productive search reasons in terms of discovering contraband. Only 22.3% of searches based solely on consent resulted in the discovery of contraband. Examining whether consent search success rates vary by race/ethnicity, however, is complex. As noted above, it is unwise to utilize the outcome test to assess racial/ethnic bias in consent searches, because ultimately it is the citizen, not the officer, who has final discretion over whether or not these types of searches are conducted (citizens always have the right to refuse). As such, one of the underlying assumptions of the outcome test – that officers have full discretion over whether or not to conduct searches – is violated. Despite these limitations, in order to allow the PSP to better understand consent searches and their productivity, analyses examining racial/ethnic differences in consent search success rates are provided with the strong caveat that this information cannot be used to assess officer bias. This section includes: 1) an overview of consent searches, 2) an examination of driver and Trooper differences in requests for consent and granting/obtaining consent to search, and 3) an analysis of racial/ethnic differences in consent search success rates.

As demonstrated in Figure 7.2 below, of the 278,323 traffic stops initiated by PSP Troopers in 2008, 2,126 drivers (0.8%) were asked for consent to search.

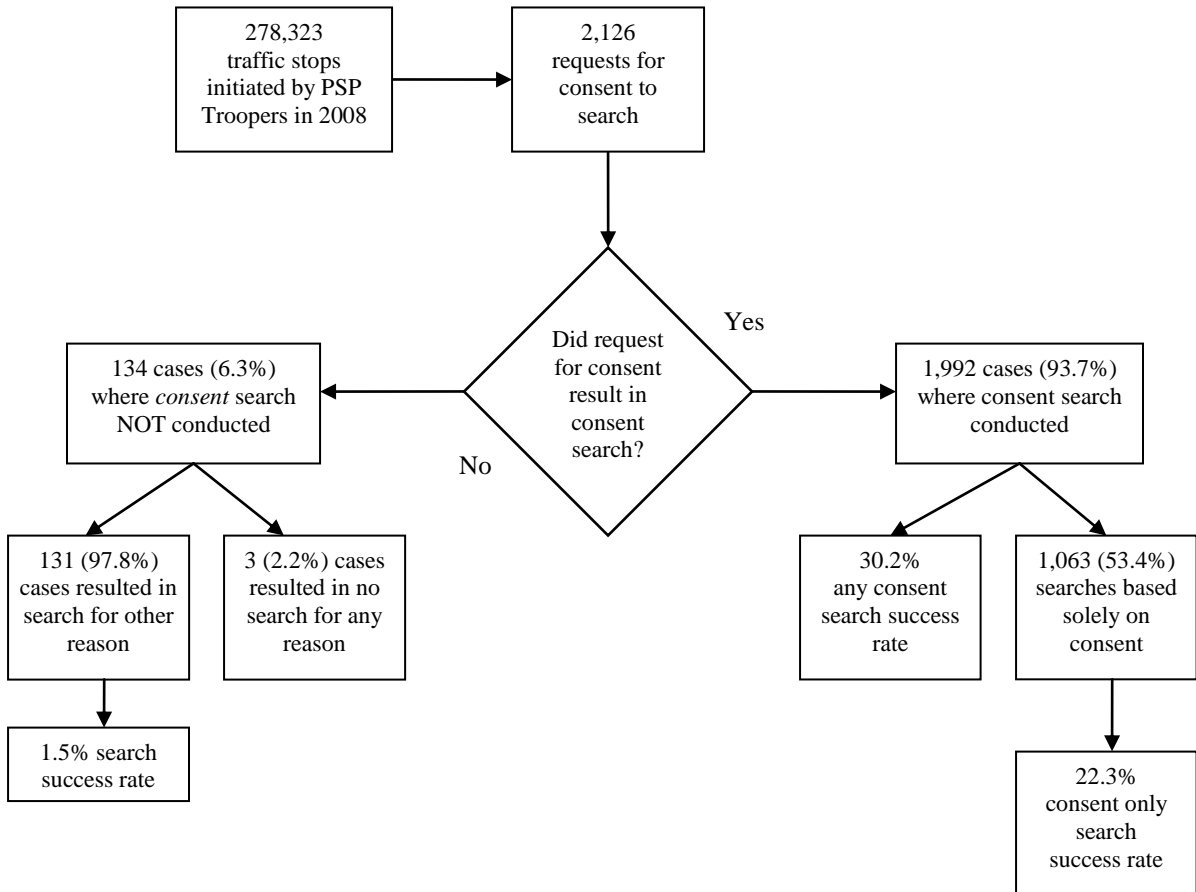
- Of these 2,126 requests, 93.7% (1,992 requests) resulted in a consent search being conducted, while only 6.3% (134) did not. That is, an overwhelming majority of drivers gave their consent to be searched when asked by Troopers.
- Of the 1,992 consent searches that were conducted, 601 resulted in the discovery of contraband (i.e., 30.2% search success rate).
- Of the 1,992 consent searches that were conducted, 53.4% (1,063 searches) were based *solely* on consent; that is, there was no other reason indicated by the Trooper for the search. Of these 1,063 searches based *solely* on consent, 237 resulted in the discovery of contraband (i.e., 22.3% search success rate).
- Of the 134 consent search requests that did not result in consent searches, nearly all (97.8%) resulted in a search for a different reason (131 searches). Specifically, the overwhelming majority (96.2%) of these searches were conducted based on "other" reasons.¹⁹ In these cases, the search success rate was substantially lower than in the cases of searches based on consent. Specifically, only 1.5% of the 131 searches where consent was refused but the search was conducted based on another reason resulted in the discovery of contraband. The "other" coding in these cases is not specific to any individual station or troop; rather this coding applies across the department. It is therefore, imperative to have a better understand of what specifically is contained in this "other" reason category.

¹⁸ PSP Troopers' heavy reliance on the use of consent searches is due, in part, to the unique case law in Pennsylvania guiding vehicular searches, which does not allow searches based on probable cause without a search warrant.

¹⁹ Again, the exact reasons for "other" are unknown to the UC research team.

- The search success rate for the remaining three search requests is not calculable because these search requests did not result in a search being conducted for any other reason.

Figure 7.2: 2007 PSP Requests for Consent and Consent Searches



Driver and Trooper Differences in Requests for Consent

As noted above, of the 278,323 traffic stops initiated by PSP Troopers in 2008, 2,126 drivers (0.8%) were asked for consent to search. As shown in Table 7.10, there are significant differences based on driver and Trooper characteristics in who is asked for consent to search and who requests consent to search.

First, an examination of the drivers' race/ethnicity in Table 7.10 indicates that certain racial/ethnic groups were significantly more likely than others to be asked for consent to search. Specifically, 2.5% of Black drivers and 2.6% of Hispanic drivers were asked for

consent to search, compared to only 0.5% of White drivers. These racial/ethnic differences are also graphically displayed in Figure 7.3 below.

Furthermore, Table 7.10 also reveals significant differences in requests for consent based on drivers' gender, age, and residency. Specifically, male drivers, drivers 25 or younger, and out-of-state drivers were significantly more likely to be asked for consent to search than females, drivers older than 25, and Pennsylvania residents.

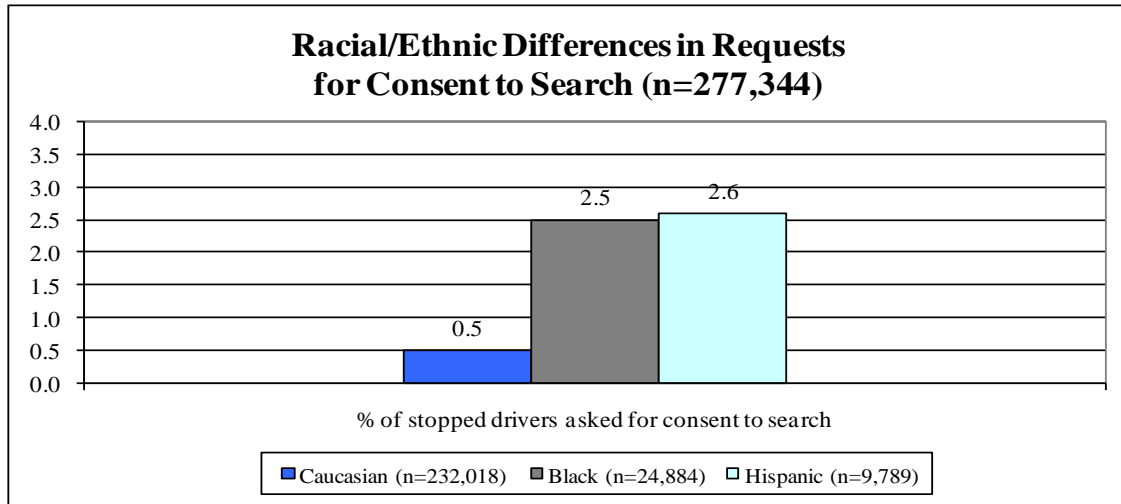
Table 7.10 also shows some significant differences in requests for consent based on Trooper race/ethnicity, experience and education. White Troopers, less experienced Troopers, and more educated Troopers were significantly more likely to ask for consent to search compared to Non-White, more experienced and less educated Troopers.

Table 7.10: Trooper and Driver Differences in Requests for Consent

| | Total # Requests for Consent to Search | % of Stops Resulting in Request for Consent to Search |
|-------------------------------------|--|---|
| All Drivers | 2,126 | 0.8 |
| By Drivers' Characteristics | | |
| White Driver | 1,212 | 0.5*** |
| Black Driver | 611 | 2.5 |
| Hispanic Driver | 257 | 2.6 |
| Male Driver | 1,860 | 1.0*** |
| Female Driver | 266 | 0.3 |
| Driver 25 years old or under | 972 | 1.2*** |
| Driver over 25 years old | 1,154 | 0.6 |
| Driver PA Resident | 1,504 | 0.7*** |
| Driver Non-PA Resident | 622 | 0.9 |
| By Troopers' Characteristics | | |
| White Trooper | 1,995 | 0.8* |
| Non-White Trooper | 122 | 0.6 |
| Male Trooper | 2,045 | 0.8 |
| Female Trooper | 72 | 0.7 |
| Less than 5 years experience | 1,052 | 1.0*** |
| 5 years experience or more | 1,065 | 0.6 |
| No College Degree | 456 | 0.5*** |
| 2 Year Degree | 460 | 0.7 |
| 4 Year Degree or more | 1,200 | 0.9 |

NOTE: * $p < .05$, ** $p < .01$, *** $p < .001$

Figure 7.3: Racial/Ethnic Differences in Requests for Consent to Search (n=277,344)



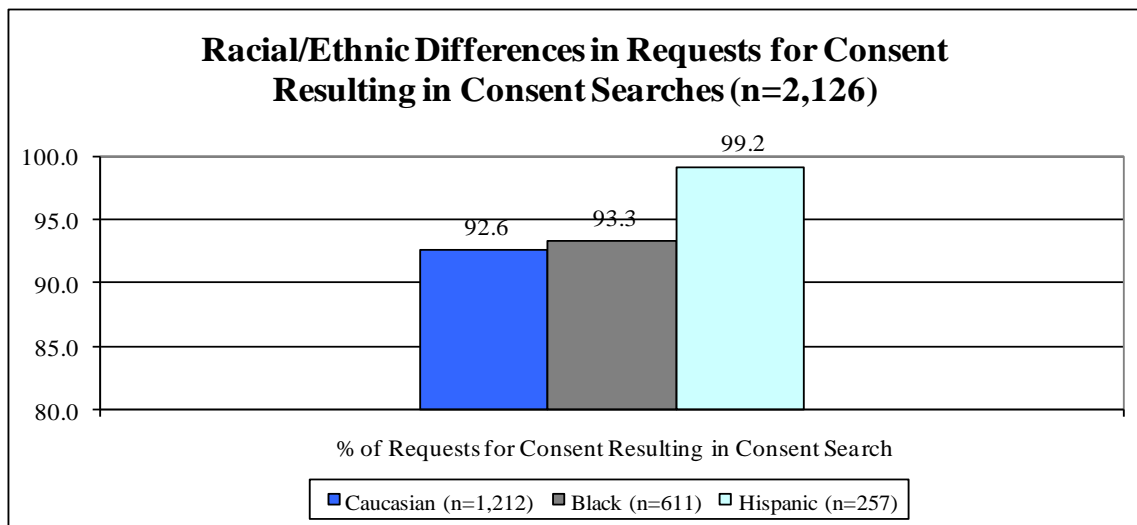
NOTE: Differences across the racial/ethnic groups presented in this figure are statistically significant at $p \leq .001$

Driver and Trooper Differences in Granting and Obtaining Consent

Figure 7.4 and Table 7.11 below compares the percentages of drivers who gave their consent to be searched based on driver characteristics. As shown, significant differences in the rates of granting consent are evident based on driver race/ethnicity, age, and residency.

Specifically, Hispanics were significantly more likely to grant consent than Whites or Blacks, older drivers were significantly more likely than younger drivers to comply with requests for consent to search, and Pennsylvania residents were significantly less likely to grant consent to search than out-of-state residents. Table 7.11 also documents the differences in obtaining consent across different types of Troopers. Similar to previous years, different types of Troopers were not more or less likely to obtain consent from drivers with but one exception: male Troopers were more likely than female Troopers to obtain consent from drivers.

Figure 7.4: Racial/Ethnic Differences in Requests for Consent Resulting in Consent Search (n=2,126)



NOTE: Differences across the racial/ethnic groups presented in this figure are statistically significant at $p \leq .001$

Table 7.11: Trooper and Driver Differences in Granting and Obtaining Consent

| | Total # Requests for Consent to Search | % Consent Requests Resulting in Consent Search |
|-------------------------------------|---|---|
| All Drivers | 2,126 | 93.7 |
| By Drivers' Characteristics | | |
| White Driver | 1,212 | 92.6*** |
| Black Driver | 611 | 93.3 |
| Hispanic Driver | 257 | 99.2 |
| Male Driver | 1,860 | 93.9 |
| Female Driver | 266 | 92.5 |
| Driver 25 years old or under | 972 | 91.5*** |
| Driver over 25 years old | 1,154 | 95.6 |
| Driver PA Resident | 1,504 | 93.0* |
| Driver Non-PA Resident | 622 | 95.3 |
| By Troopers' Characteristics | | |
| White Trooper | 1,995 | 93.5 |
| Non-White Trooper | 122 | 96.7 |
| Male Trooper | 2,045 | 93.9* |
| Female Trooper | 72 | 87.5 |
| Less than 5 years experience | 1,052 | 94.5 |
| 5 years experience or more | 1,065 | 92.9 |
| No College Degree | 456 | 94.7 |
| 2 Year Degree | 460 | 94.8 |
| 4 Year Degree or more | 1,200 | 92.8 |

NOTE: * $p < .05$, ** $p < .01$, *** $p < .001$

Table 7.12 documents the differences across driver and Trooper characteristics in search success rates for searches based solely on consent and based on any consent (i.e., consent searches including additional reasons identified for the search). As shown in Table 7.12, White drivers who were searched based solely on consent and any consent were significantly more likely to be found in possession of contraband compared to Black and Hispanic drivers, with the differences between White and Hispanic drivers being particularly dramatic. Specifically, 26.4% of searches of Whites based solely on consent were successful, compared to 19.2% of searches of Black drivers, and only 14.4% of searches of Hispanic drivers. The search success rates were somewhat higher for searches based on any consent (i.e., consent searches also based upon another reason for search). Searches of Whites, however, were still significantly more likely to result in the discovery of contraband (35.3%), compared to searches of Blacks (27.4%) and Hispanics (15.7%).

Table 7.12 also shows that consent searches of younger drivers and Pennsylvania residents were significantly more likely to result in the discovery of contraband compared to searches of older and out-of-state drivers. Some differences in consent search success rates were also evident based on Trooper characteristics, although no statistically significant differences exist by Trooper’s race/ethnicity or gender. Troopers with less experience were less likely than Troopers with more than 5 years experience to be successful in recovering contraband during searches based solely and partially on consent. Troopers with no college degree were also significantly more likely to discover contraband during consent-only and any consent searches than Troopers with 2 or 4-year degrees.

Table 7.12: Consent Search Success Rates by Driver and Trooper Characteristics

| | Total # Searches | Total # of Consent Only Searches | Consent Only Search Success Rate | Total # of Any Consent Searches | Any Consent Search Success Rate |
|--------------------------------|------------------|----------------------------------|----------------------------------|---------------------------------|---------------------------------|
| All Drivers | 3,110 | 1,063 | 22.3 | 1,992 | 30.2 |
| Driver Characteristics | | | | | |
| White Driver | 1,795 | 588 | 26.4*** | 1,122 | 35.3*** |
| Black Driver | 889 | 286 | 19.2 | 570 | 27.4 |
| Hispanic Driver | 356 | 160 | 14.4 | 255 | 15.7 |
| Male Driver | 2,667 | 939 | 21.6 | 1,746 | 30.2 |
| Female Driver | 439 | 124 | 27.4 | 246 | 30.1 |
| Driver 25 years old or under | 1,791 | 463 | 24.6 | 889 | 34.4*** |
| Driver over 25 years old | 1,315 | 600 | 20.5 | 1,103 | 26.7 |
| Driver PA Resident | 2,375 | 690 | 24.6* | 1,399 | 33.0*** |
| Driver Non-PA Resident | 731 | 373 | 18.0 | 593 | 23.6 |
| Trooper Characteristics | | | | | |
| White Trooper | 2,896 | 1,009 | 22.4 | 1,865 | 30.3 |
| Non-White Trooper | 185 | 49 | 18.4 | 118 | 27.1 |
| Male Trooper | 2,978 | 1,032 | 22.3 | 1,920 | 30.2 |
| Female Trooper | 103 | 26 | 19.2 | 63 | 27.0 |
| Less than 5 years experience | 1,636 | 494 | 18.6** | 977 | 26.9** |
| 5 years experience or more | 1,445 | 564 | 25.4 | 1,006 | 33.2 |
| No College Degree | 677 | 212 | 37.3*** | 432 | 38.2*** |
| 2 Year Degree | 717 | 240 | 16.7 | 436 | 26.8 |
| 4 Year Degree or more | 1,686 | 606 | 19.1 | 1,114 | 28.3 |

NOTE: * $p < .05$, ** $p < .01$, *** $p < .001$

It is possible that consent searches of minority drivers are less successful in terms of discovering contraband compared to Whites because “guilty” minority drivers are more likely to decline search requests when asked. Examinations of consent search requests when no search was conducted, however, suggest that this is unlikely. In 2008, a very small percentage of all drivers refuse consent and analyses of consent search requests by

race/ethnicity indicated that it is White drivers who were significantly more likely to refuse to consent to search when compared to Blacks and Whites. Therefore, it is highly unlikely that the explanation for the differences in search success rates for consent searches is that “guilty” minority drivers are avoiding detection by refusing consent. What appears more plausible is that the same causes for the racial/ethnic disparities in search success rates for probable cause/reasonable suspicion searches also pervade consent searches. Unfortunately, traffic stop data are very limited in their ability to offer causal explanations for racial/ethnic disparities.

SUMMARY

- For the year 2008, PSP Troopers conducted 3,110 searches, or 1.1% of all stops.
- In 2008, 64.2% of searches by Troopers were conducted based on drivers’ consent. In addition, 34.2% of searched drivers were searched based solely on consent.
- The next most common reasons for a search included: inventory (22.5%), drug odor (16.1%), incident to arrest (14.6% of searches), other (9.7%), reasonable suspicion or probable cause (7.9%), and plain view (7.2%).
- Racial/ethnic differences in the types of searches (i.e., mandatory, probable cause/reasonable suspicion, and consent) conducted by PSP Troopers were evident:
 - Unlike in 2007, there were no significant racial/ethnic differences in mandatory searches in 2008.
 - Hispanics, when compared to Whites and Blacks, were least likely to be searched for probable cause/reasonable suspicion but most likely to be searched based solely on consent.
- In 2008, 853 of the 3,110 searches resulted in the seizure of contraband (27.4%).
- A majority of the contraband seized was drugs (74.6%), followed distantly by “other” (12.0%), cash (10.2%), and alcohol (10.0%).
- Search success rates varied dramatically across the type of search authority.
 - Searches based on inventory and “other” unspecified reason were the least likely to be successful in terms of discovering contraband, with success rates at 18.0% and 12.5%, respectively.
 - Searches likely to be moderately successful included: consent (30.2%), incident to arrest (34.6%), and reasonable suspicion/probable cause (40.1%). Note, however, that when searches conducted solely based on consent are examined, the hit rates decreases to 22.3%.
 - In slightly over half of the searches conducted for canine alerts (51.8%) contraband was seized. In nearly half (45.7) of searches based on the odor of drugs, contraband was seized
 - Searches based on search warrants (87.0%) and plain view (70.4%) were the most likely to be successful in terms of seizing contraband.

- Type II probable cause/reasonable suspicion searches were the most successful in terms of recovering contraband (34.5%), while Type III consent-only searches were the least successful (22.4%). The search success rate for mandatory Type I searches was 26.0%.
- Probable cause/reasonable suspicion (Type II) searches of minority drivers were less successful in recovering contraband compared to searches of White drivers. Specifically, 38.5% of probable cause/reasonable suspicion searches of White drivers resulted in the seizure of contraband, compared to 29.7% of searches of Black drivers, and only 20.3% of searches of Hispanic drivers.
 - An examination of specific categories of Type II search success rates reveals that statistically significant racial/ethnic differences in search success rates exist for searches based on drug odor, canine alerts, and probable cause.
 - Drug odor: 49.7% of searches of White drivers resulted in the seizure of contraband, compared to 38.5% and 36.8% of Black and White drivers, respectively.
 - Canine alert: 76.5% of searches of White drivers resulted in the seizure of contraband, compared to 43.3% of Black drivers and 14.3% of Hispanic drivers.
 - Probable cause: 45.1% of searches of White drivers resulted in the seizure of contraband, compared to 39.7% of Black drivers and just 12.0% of Hispanic drivers.
- Of the 278,323 traffic stops initiated by PSP Troopers in 2008, 2,126 drivers (0.8%) were asked for consent to search.
 - Of these 2,126 requests, 93.7% (1,992 requests) resulted in a consent search being conducted, while only 6.3% (134) did not.
 - Of the 1,992 consent searches that were conducted, 601 resulted in the discovery of contraband (i.e., 30.2% search success rate).
 - Of the 1,992 consent searches that were conducted, 53.4% (1,063 searches) were based *solely* on consent; that is, there was no other reason indicated by the Trooper for the search. Of these 1,063 searches based *solely* on consent, 237 resulted in the discovery of contraband (i.e., 22.3% search success rate).
 - Of the 134 consent search requests that did not result in consent searches, nearly all (97.8%) resulted in a search for a different reason (131 searches). Specifically, the overwhelming majority (96.2%) of these searches were conducted based on “other” reasons. In these cases, the search success rate was substantially lower than in the cases of searches based on consent. Specifically, only 1.5% of the 131 searches where consent was refused but the search was conducted based on another reason resulted in the discovery of contraband.
- Black (2.5%) and Hispanic (2.6%) drivers were significantly more likely than White (0.5%) drivers to be asked for consent to search.

- Hispanics were significantly more likely to grant consent (99.2% of requests granted) when compared to Whites (92.6%) or Blacks (93.3%).
- Consent search success rates by race/ethnicity are provided with the strong caveats that they be used for purposes of internal comparisons and training only, and that *no definitive conclusions about racial bias be drawn from these comparisons.*
 - White drivers who were searched based solely on consent and any consent were significantly more likely to be found in possession of contraband compared to searched Black and Hispanic drivers.
- These findings cannot be used to determine the legality of and/or the presence of discrimination in individual searches conducted by PSP Troopers.

8. CONCLUSIONS & RECOMMENDATIONS

OVERVIEW

The final section of this report summarizes the major findings provided within each of the sections of this report and documents the UCPI team's recommendations for consideration by PSP officials.

SUMMARY

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, 2008 – December 31, 2008. These data represent the seventh year of data collection for the Project on Police-Citizen Contacts. Information was collected on either the written Contact Data Form or by the electronic CDR X-press system and collated into one dataset for analysis. As of December 2008, over 99% of the data collected was transmitted using the CDR X-press system. Of the 278,323 CDR and CDR X-press forms included in the final data set, only 0.6% had one or more items missing or invalid, which is considerably lower than the recommended 5% threshold. This low rate is likely due to the widespread implementation of the CDR X-press and the conscientious efforts of PSP supervisors.

Basic descriptive analyses were conducted on the 278,323 officer-initiated traffic stops and reported at the department, area, troop, and station levels. Some of the trends in these descriptive findings are summarized below:

- Across the department, characteristics of the stop included:
 - The most frequent violation observed prior to traffic stops was speeding (68.6%) with an average amount over the limit of 19.2 mph. Other less common observed violations included: moving violations (16.7%), equipment inspections (9.8%), and registration (4.5%)
- Across the department, the racial/ethnic characteristics of the drivers were:
 - White (83.4%), Black (8.9%), Hispanic (3.5%), Middle Eastern (2.0%), and Asian/Pacific Islander (1.8%)
- Across the department, traffic stop outcomes can be summarized by the following characteristics:
 - 27.6% of stops resulted in a warning, 87.6% resulted in a citation, 1.3% resulted in arrest, and 1.1% resulted in a search of either the occupant(s) and/or the vehicle
 - Of the searches conducted, 27.4% resulted in the discovery of contraband

In addition to analyzing the 2008 traffic stops, data collected between 2002 and 2008 at the department and troop levels were also analyzed.²⁰ It is important to note that the following results are descriptive and, even when based on statistical testing, cannot be used to determine the causes of the trends reported. Key findings of the department-level traffic stop temporal analyses include:

²⁰ No area level rates were reported due to the changes in organizational structure in 2008.

- Department-wide, the 2008 rate of traffic stops involving Black drivers was more than one standard deviation above the six-year average for that organizational unit. The departmental rate of traffic stops was primarily influenced by rates of Black drivers stopped in Troops R and B, which were more than three standard deviations above their six-year average.
- Department-wide, the 2008 rate of traffic stops involving Hispanic drivers was within one standard deviation of the six-year average.
- Troop-level trends for stops of Black and Hispanic drivers can be found in Section 4.

It is important to note that the available data simply be used to determine why the department or specific organizational units reported increases in the percentage of stops that were of Black or Hispanic drivers. Some factors potentially responsible for upward trends include:

- Changes in the racial/ethnic composition of residential populations serviced by those organizational units which have altered the racial/ethnic composition of drivers eligible to be stopped
- Alterations to the reporting patterns by PSP troopers
- Other changes in travel patterns that differentially impact the percentages of minority drivers on particular roadways
- Adjustments to PSP deployment patterns and manpower allocation to address changes in reported criminal patterns and calls for service, resulting in higher concentrations of Troopers in areas where minorities are more likely to travel and/or violate the law
- Trooper behavior toward minority drivers may have changed across time.

Trend analyses were also conducted for traffic stop outcomes between 2002 and 2008. Using the same standard deviation methodology employed for the temporal analyses of traffic stops, the 2008 rate of all traffic stop outcomes was compared to the six-year average:

- The 2008 warning rate was more than two standard deviations above the six-year average. Despite this, throughout the seven years of data collection, the rates of warnings issued have been relatively stable.
- The 2008 citation rate was within one standard deviation of the six-year average. Between 2002 and 2005, there was a steady increase in citation rates, but the citation rate has been relatively stable since 2006.
- The 2008 arrest rate was within one standard deviation of the six-year average and slightly less than the 2007 rate. The seven-year trend indicates that there was a considerable increase in the arrest rate between 2004 and 2006. This increase, however, is likely due to known problems with the underreporting of arrests prior to 2006. Therefore, firm conclusions regarding this upward trend cannot be made.
- The 2008 search rate was within one standard deviation of the six-year average and slightly less than the 2007 rate. The seven-year trend indicates relative stability in the past four years after an increase in 2005. Similar to the arrest rate, however, there were some data collection problems prior to 2006, which may have resulted in an underreporting of searches throughout the department.
- The 2008 seizure rate was within one standard deviation of the six-year average and similar to the 2007 seizure rate.

The rate of traffic stop outcomes within racial/ethnic groups was also compared over time:

- Warnings: The 2008 warning rate for Black and Hispanic drivers was slightly higher than the warning rate for White drivers. The past three years have seen an increase in the warning rates for White, Black, and Hispanic drivers.
- Citations: Throughout the seven years of data collection, the citation rate for all groups increased between 2002 and 2004, but has stabilized in the past four years. Hispanic drivers consistently have the highest rate of citations, while White drivers are consistently the least cited group (except 2007).
- Arrests: The 2008 arrest rate was highest for Hispanic drivers, followed by Black and White drivers, respectively, and the difference between these groups expanded. In all years, Hispanic drivers were arrested at a higher rate than Blacks and Whites, with White drivers generally being arrested the least often (except 2006). The arrest rate prior to 2006 may have been artificially lowered due to data collection limitations in those years.
- Searches: The 2008 search rate was highest for Hispanic drivers, followed by Black drivers and White drivers, respectively. Consistent across all seven years of data collection are the relative stability of the search rate of White drivers and the large discrepancies in the search rates between minority drivers and White drivers.
- Seizures: Continuing a trend that has been evident in all seven years of data collection, the 2008 seizure rate was highest for White drivers, followed by Black drivers and Hispanic drivers, respectively.

There are a number of possible explanations for these racial disparities in post-stop outcomes. As a result, any interpretation of these findings must be made with caution.

In addition to the trend analyses of stop outcomes, the 2008 post-stop outcomes were examined in detail. This process involved both bivariate analyses and multivariate analyses of warnings, citations, arrests, and searches issued to drivers during member-initiated traffic stops conducted in 2008. .

Bivariate Analyses

- At the department level, statistically significant racial/ethnic differences were noted for warnings, citations, arrests, and searches.
 - Black and Hispanic motorists were slightly more likely than White drivers to receive warnings.
 - Hispanic drivers had slightly higher rates of citations compared to White and Black drivers.
 - Black and Hispanic drivers had higher rates of arrest compared to White drivers.
 - The largest racial/ethnic differences are found for searches: Black and Hispanic drivers had significantly higher rates of searches (3.6% for both groups), compared to only 0.8% of White drivers.
- These patterns and trends varied somewhat at the area level and more so at the troop and station levels.

- When reviewing these results, it is important to remember that the bivariate analyses only consider two variables at a time. As a result, the interpretation of these findings, which indicate racial/ethnic differences, should be made with caution and cannot determine the existence of racial bias

Multivariate Analyses

Multivariate analyses are better suited to make substantive claims about the results of post-stop outcomes due to their consideration of more than one factor simultaneously. Nevertheless, multivariate analyses are limited by the type and amount of data collected. Conclusions based on any multivariate analyses are limited to the variables in the model, and do not consider the potential of a misspecified model. Misspecified models occur when pertinent variables related to the dependent variables are not included in the model. Thus, multivariate analyses can only demonstrate racial/ethnic disparities that exist after statistically controlling for other factors that might influence officer decision making that are measured with these data. The findings summarized below represent the independent effects of driver race/ethnicity on traffic stop outcomes when other factors are statistically controlled.

- **Warnings**
 - Black drivers were 1.1 times *more* likely to be warned compared to White drivers, while drivers of “other” race/ethnicity were 1.3 times *less* likely to be warned compared to White drivers
 - Traffic stops initiated as a result of speeding were 2.2 times *less* likely to result in a warning compared to traffic stops initiated for other non-speeding reasons.
 - For each additional reason for the stop (traffic infraction), the likelihood of a warning *increased* 4.4 times

Collectively, these results suggest slight, but substantively unimportant, racial/ethnic differences in the likelihood of receiving warnings, but indicate that Troopers’ decisions to issue warnings are most strongly based on legal factors rather than driver or Trooper characteristics.

- **Citations**
 - Black and Hispanic drivers were *equally likely* to be cited compared to White drivers in similar situations, while drivers of “other” race/ethnicity were 1.4 times more likely than White drivers to be cited.
 - Traffic stops initiated due to speeding were 3.1 times *more* likely to result in a citation compared to stops initiated for non-speeding reasons.
 - The likelihood of being cited *increased* 1.7 times for every additional reason for the stop.
 - Traffic stops resulting in the discovery of contraband were 5.9 times *less* likely to result in a citation compared to stops with contraband discoveries (but more likely to result in arrest).

Collectively, these results demonstrate that Troopers' decisions to issue citations are most strongly influenced by legal factors and not drivers' or Troopers' characteristics.

- **Arrests**
 - There were no statistically significant racial differences for Black and Hispanic drivers when other factors were simultaneously considered. In other words, Black and Hispanic drivers were equally likely as White drivers to be arrested given similar circumstances surrounding the traffic stop.
 - Drivers of "other" race/ethnicity were 2.1 times less likely to be arrested compared to White drivers.
 - Traffic stops resulting in the discovery of contraband were over 200 times *more* likely to end in arrest compared to traffic stops without contraband discoveries
 - Traffic stops initiated due to speeding were 3.9 times *less* likely to end in arrests compared to stops initiated for other reasons
 - The likelihood of arrest *increased* 1.5 times for each additional reason for the stop

Collectively, these results demonstrate that the most severe sanction issued during traffic stops (i.e., arrest) is based on legal factors and not drivers' race/ethnicity, or Troopers' characteristics.

- **Searches**
 - Black and Hispanic drivers were 3.0 and 2.6 times *more* likely to be searched compared to White drivers, respectively.
 - Traffic stops involving vehicle with Pennsylvania registration were 1.7 times less likely to result in a search compared to traffic stops involving vehicles with out-of-state registration.
 - Traffic stops initiated due to speeding were 3.9 times *less* likely to result in searches compared to traffic stops initiated for non-speeding reasons.
 - The likelihood of a search increased 2.0 times for every additional reason for the stop noted on the form.

Collectively, these results demonstrate that racial/ethnic differences in the rates of searches cannot be explained by the legal and extralegal factors captured on the traffic stop forms. Given similar situations (as measured on the traffic stop form), Black and Hispanic drivers are significantly more likely to be searched compared to White drivers.

Search and Seizure

Due in part to the persistent racial/ethnic disparities evident in searches and search success rates, further analyses were conducted on 2008 search and seizure activity.

- For the year 2008, PSP Troopers conducted 3,110 searches, or 1.1% of all stops. The majority of these searches (64.2%) were conducted based on drivers' consent. In addition, 34.2% of searched drivers were searched based solely on consent.

- Other less common reasons for a search included: inventory (22.5%), drug odor (16.1%), incident to arrest (14.6% of searches), other (9.7%), reasonable suspicion or probable cause (7.9%), and plain view (7.2%).
- Racial/ethnic differences in the types of searches (i.e., mandatory, probable cause/reasonable suspicion, and consent) conducted by PSP Troopers were evident:
 - Hispanics, when compared to Whites and Blacks, were least likely to be searched for probable cause/reasonable suspicion but most likely to be searched based solely on consent.
 - Unlike in 2007, there were no significant racial/ethnic differences in mandatory searches in 2008.
- In 2008, 853 of the 3,110 searches resulted in the seizure of contraband (27.4%). A majority of the contraband seized was drugs (74.6%), followed distantly by “other” (12.0%), cash (10.2%), and alcohol (10.0%).
- Search success rates varied dramatically across the type of search authority.
 - Type II probable cause/reasonable suspicion searches were the most successful in terms of recovering contraband (34.5%), while Type III consent-only searches were the least successful (22.4%). The search success rate for mandatory Type I searches was 26.0%.
- Probable cause/reasonable suspicion (Type II) searches of minority drivers were less successful in recovering contraband compared to searches of White drivers. Specifically, 38.5% of probable cause/reasonable suspicion searches of White drivers resulted in the seizure of contraband, compared to 29.7% of searches of Black drivers, and only 20.3% of searches of Hispanic drivers.
 - An examination of specific categories of Type II search success rates reveals that statistically significant racial/ethnic differences in search success rates exist for searches based on drug odor, canine alerts, and probable cause.
- Of the 278,323 traffic stops initiated by PSP Troopers in 2008, 2,126 drivers (0.8%) were asked for consent to search.
 - Of these 2,126 requests, 93.7% resulted in a consent search being conducted.
 - Of the 1,992 consent searches that were conducted, 601 resulted in the discovery of contraband (i.e., 30.2% search success rate).
 - Of the 1,992 consent searches that were conducted, 53.4% were based *solely* on consent. Of these 1,063 searches, 22.3% resulted in the discovery of contraband.
 - Of the 134 consent search requests that did not result in consent searches, nearly all (97.8%) resulted in a search for a different reason. The overwhelming majority (96.2%) of these searches were conducted based on “other” reasons. In these cases, the search success rate was substantially lower than in the cases of searches based on consent, as only 1.5% of the 131 searches where consent was refused but the search was conducted based on another reason resulted in the discovery of contraband.

- Black (2.5%) and Hispanic (2.6%) drivers were significantly more likely than White (0.5%) drivers to be asked for consent to search. Similarly, Hispanics were significantly more likely to grant consent (99.2% of requests granted) when compared to Whites (92.6%) or Blacks (93.3%).
- Consent search success rates by race/ethnicity are provided with the strong caveats that they be used for purposes of internal comparisons and training only, and that *no definitive conclusions about racial bias be drawn from these comparisons*.
 - White drivers who were searched based solely on consent and any consent were significantly more likely to be found in possession of contraband compared to searched Black and Hispanic drivers.

Collectively these results demonstrate that Blacks and Hispanics motorists who were searched based on probable cause/reasonable suspicion or consent were significantly less likely than searched Whites to be found in possession of contraband. These statistical analyses, however, cannot be used to determine the legality of and/or the presence of officer bias in individual searches conducted by PSP Troopers.

RECOMMENDATIONS

Over the past eight years of data collection and analysis, the PSP has implemented a series of policy and training changes based on a series of recommendations provided by this research team. In this respect, the Pennsylvania State Police established an innovative and professional approach to understanding and addressing racial/ethnic disparities in traffic stop outcomes. The persistent racial/ethnic disparities in searches and seizures, however, indicate that additional work is still needed to ensure that PSP Troopers display equitable treatment across racial/ethnic groups and maintain their legitimacy among the citizens of the Pennsylvania Commonwealth.

When the results of this Year 7 Report are viewed in context of the previous reports, there are a number of consistent patterns. First, across these seven years of data, there has been no consistent evidence to suggest that PSP Troopers disproportionately stop minority motorists. Second, there has been continual improvement in the data collection process over time. Third, there has been a continual effort by PSP administrators to promote and measure equitable treatment across racial/ethnic groups. Fourth, nearly all of the racial/ethnic disparities in traffic stop outcomes have decreased and/or been eliminated over time. This is likely due to: 1) increased scrutiny in traffic stops, 2) advances in training, 3) administrative priorities placed on equitable treatment, 4) increased field supervisory oversight, and 5) increased reliability and validity of the traffic stop data itself.

Despite the above noted advances, there has been a persistent findings of racial/ethnic disparities involving discretionary and consent searches, and the seizure of contraband during these searches. This is the only consistently problematic issue in the reported data analyses. A series of recommendations were advanced in the Year 6 (2007) Report. As the UCPI research team continues to believe the implementation of these recommendations are

necessary to address the lingering racial/ethnic disparities in the PSP search and seizure activities, several of the following recommendations are repeated verbatim.

- **It is recommended that more advanced analyses be conducted at the troop and station levels that will pinpoint the exact locations where the largest racial/ethnic disparities in searches exist.** These types of analyses often cannot be conducted on one year of data because there are too few searches and/or seizures for all racial/ethnic groups within stations to provide meaningful comparisons. It is possible, however, to drill down to the station level when multiple years of data are combined. Therefore, it is the recommendation of this research team that the data from 2006 – 2010 be combined to perform more specific analyses examining searches and seizures at the station level. Once the stations with the highest racial/ethnic disparities in search and seizure rates are identified, the possible explanations regarding these elevated disparities can be examined.
- **Once the stations with the highest racial/ethnic disparities in search and seizure rates are identified as described above, it is recommended that PSP supervisors conduct interviews with PSP Troopers who excel at interdiction and work in those stations to better understand the likely sources for these disparities.** The primary goal for supervisors would be to more specifically discuss and better understand from Troopers' perspectives why there are consistent racial/ethnic disparities in search and seizure rates.
- **In addition to internally gathering information from PSP Troopers, it is recommended that the commanders of the stations and troops identified be directly interviewed by PSP administrators.** The purpose of these interviews is to gain a better understanding of the patterns and practices within those locations. There are several possible explanations for these elevated rates that can only be determined based on local knowledge of the area and additional information that is not included in the Contact Data Reports.
- **Continued monitoring of racial/ethnic disparities in traffic stop outcomes, particularly searches and seizures, remains necessary. PSP should continue to collect and analyze traffic stop data.** By comparing multiple years of traffic stop data, it is possible to determine the relative effectiveness of any new policies and training on the rates of searches and seizures of minority drivers. Further, continual monitoring of traffic stops provides valuable information to the organization, while simultaneously institutionalizing a culture within the organization that inspires fair and equitable policing.

It is obvious that PSP officials remain committed to both the traffic stop data collection effort and the larger goals of reducing racial/ethnic disparities in traffic stops and post-stop outcomes. They also have demonstrated the importance of providing legitimate and unbiased policing services to citizens of the Commonwealth of Pennsylvania.

This commitment has been demonstrated by their ongoing data collection effort, which is currently in its ninth year, and contractually scheduled for an additional two years. This

report, as well as previous final reports, has documented that racial and ethnic disparities in traffic stops and post-stop outcomes are rare within the PSP. While racial/ethnic disparities in search and seizure rates remain an area of concern, these patterns mirror those reported in multiple jurisdictions across the country. This suggests that rather than individual police officer bias, there are larger cultural and/or organizational explanations for these disparities. Academics and practitioners around the country are continuing to examine these issues, and the PSP is at the forefront of this important research.

9. REFERENCES

- Anwar, S., & Fang, H. (2006). An alternative test of racial prejudice in motor vehicles searches: Theory and evidence. *American Economic Review*, 127-151.
- Ayres, I. (2001). *Pervasive Prejudice? Unconventional Evidence of Racial and Gender Discrimination*. Chicago: The University of Chicago Press.
- Becker, G.S. (1957). *The Economics of Discrimination*. Chicago: University of Chicago Press.
- Cole, D. (1999). *No Equal Justice: Race and Class in the American Criminal Justice System*. New York: The New Press.
- Engel, R.S. (2008). A critique of the “outcome test” in racial profiling research. *Justice Quarterly*.
- Engel, R.S., Calnon, J.M., Liu, L., Johnson, R.R. (2004). *Project on Police-Citizen Contacts: Year 1 Final Report*. Harrisburg, PA: Pennsylvania State Police. [On-line]. Available: <http://www.psp.pa.us>.
- Engel, R.S. & Johnson, R. (2006). Toward a better understanding of racial and ethnic disparities in search and seizure rates. *Journal of Criminal Justice*, 34, 605-617.
- Engel, R.S. & Tillyer, R. (2008). Searching for equilibrium: The tenuous nature of the outcome test. *Justice Quarterly*.
- Engel, R.S., Tillyer, R. & Cherkauskas, J.C. (2008). *Project on Police-Citizen Contacts: Final Report 2006*. University of Cincinnati, Submitted to the Commissioner of the Pennsylvania State Police.
- Fridell, L. (2004). *By the Numbers: A Guide for Analyzing Race Data from Vehicle Stops*. Washington, D.C.: Police Executive Research Forum.
- Fridell, L., Lunney, R., Diamond, D. & Kubu, B. (2001). *Racially Biased Policing: A Principled Response*. Washington, D.C.: Police Executive Research Forum.
- Guo, G. & Zhao, H. (2000). Multilevel modeling for binary data. *Annual Review of Sociology*, 26, 441-462.
- Harris, D. A. (2002). *Profiles in Injustice: Why Racial Profiling cannot work*. New York: The New Press.
- Knowles, J., Persico, N., & Todd, P. (2001). Racial bias in motor vehicle searches: Theory and evidence. *The Journal of Political Economy*, 109, 203-229.

- Liao, T.F. (1994). *Interpreting Probability Models: Logit, Probit, and Other Generalized Linear Models*. Thousand Oaks, CA: Sage.
- Ramirez, D., McDevitt, J., & Farrell, A. (2000). *A Resource Guide on Racial Profiling Data Collection Systems: Promising Practices and Lessons Learned*. Washington, D.C.: U.S. Department of Justice.
- Raudenbush, S.W. & Bryk, A.S. (2002). *Hierarchical Linear Models, 2nd Edition*. Newbury Park, CA: Sage.
- Smith, M.R. & Alpert, G.P. (2007). Explaining police bias: A theory of social conditioning and illusory correlation. *Criminal Justice & Behavior*, 34, 1262-1283.
- Smith, M.R., Makarios, M., & Alpert, G.P. (2006). Differential suspicion: Theory specification and gender effects in the traffic stop context. *Justice Quarterly*, 23, 271-295.

10. APPENDIX A: TRAFFIC STOPS 2002 – 2008 BY STATION

DRAFT

Appendix A features a series of figures (Figures 10.1 – 10.32) documenting the stopping trends of Black and Hispanic drivers by PSP Troopers at the station level between 2002 and 2008. This information is intended to supplement the information in Section 4 regarding the stopping trends of Black and Hispanic drivers at the department and troop level. The graphs in Appendix A were not constructed using the standard deviation methodology utilized for examining the trends at the department and troop level in Section 4. The graphs provided here simply report the rate of traffic stops by race/ethnicity between 2002 and 2008.²¹

As described in Section 4, temporal analyses are best used to summarize the rate of activity (i.e., the rate of traffic stops of a selected group) within organizational units across time. This section exclusively uses this type of analysis to compare the rate of traffic stops of Black and Hispanic citizens within one organizational unit. In this manner, the rates from year to year in a jurisdiction are comparable. In effect, differences between organizational units are considered in these analyses and do not influence the results. As a result, the strength of documenting temporal trends is to examine differences within organizational units across time.

The research team purposefully does not offer a value assessment of the 2008 rate in relation to the six-year average. In other words, the research team does not assign a “cutoff value” for an acceptable rate of traffic stops. The graphs demonstrating temporal values are strictly a tool to assess trends over time in the rate of traffic stops and to identify organizational units that are experiencing noticeable increases in their rate of traffic stops of Black or Hispanic drivers. There are numerous factors beyond the scope of this methodology that may be directly related to changes in the rate of traffic stops. For example:

- changes in the traffic population within that jurisdiction
- alterations to the reporting patterns by PSP troopers
- adjustments in PSP traffic stop behaviors
- differences in deployment patterns across time
- modifications of manpower allocation

Any single factor or a combination of these factors may influence the rate of traffic stops of minority drivers in any year and result in an increase or decrease in the rates reported in the graphs below. The following graphs are to be interpreted with caution and cannot be used as evidence of overt biased policing by the PSP or any of its organizational units. While no definitive conclusions regarding bias in traffic stops can be ascertained from the following graphs, they do offer a basic picture of the traffic stopping trends by organizational unit.

²¹ Additional standard deviation analyses at the station level are available from the authors upon request.

Figure 10:1: Percent of Traffic Stops Involving Black Drivers – Troop J

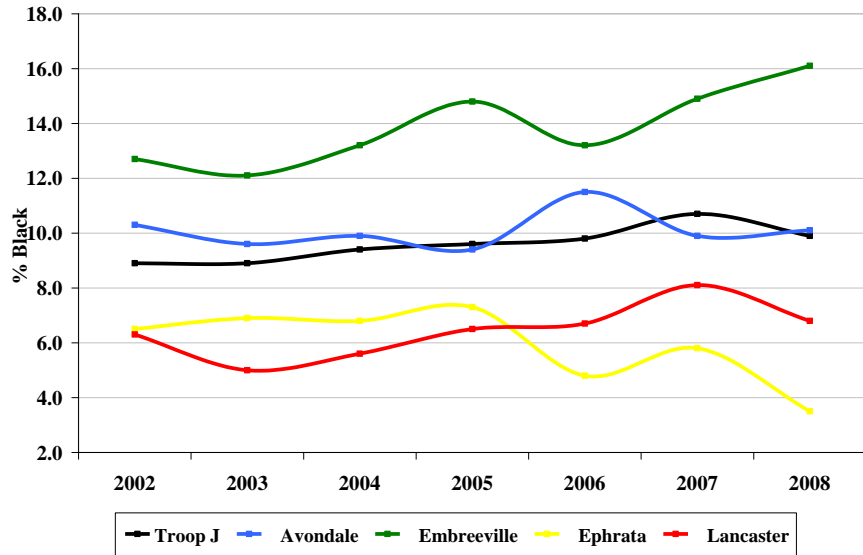


Figure 10:3: Percent of Traffic Stops Involving Black Drivers – Troop K

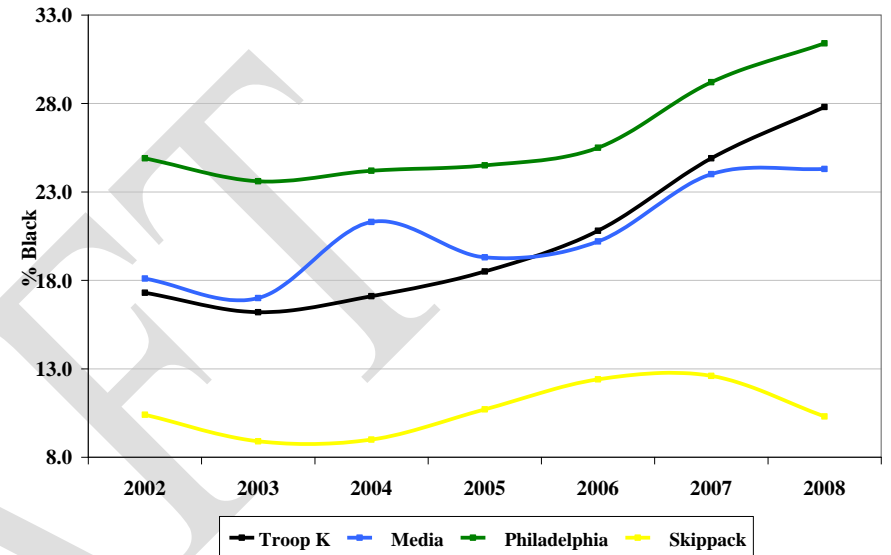


Figure 10:2: Percent of Traffic Stops Involving Hispanic Drivers – Troop J

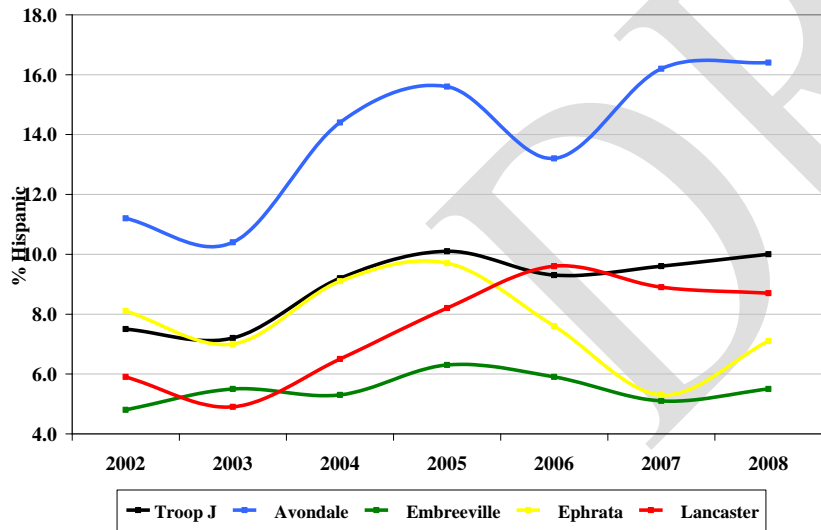


Figure 10:4: Percent of Traffic Stops Involving Hispanic Drivers – Troop K

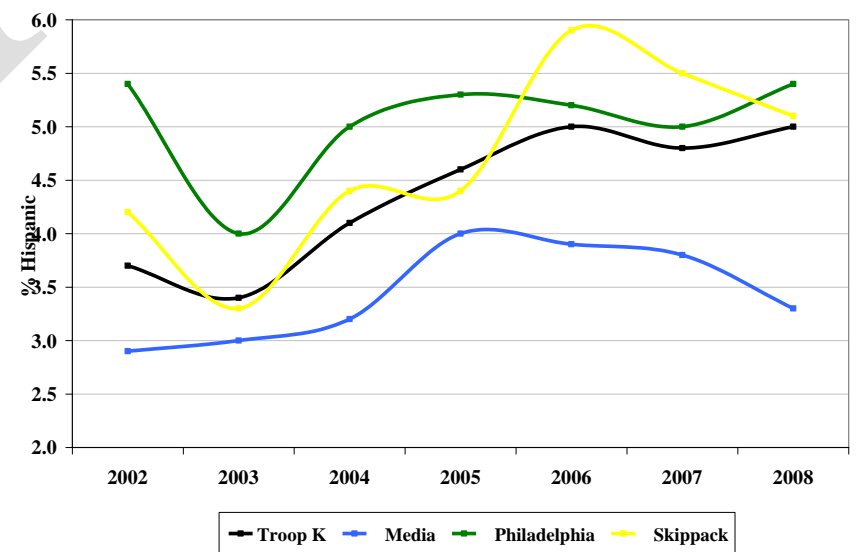


Figure 10:5: Percent of Traffic Stops Involving Black Drivers – Troop L

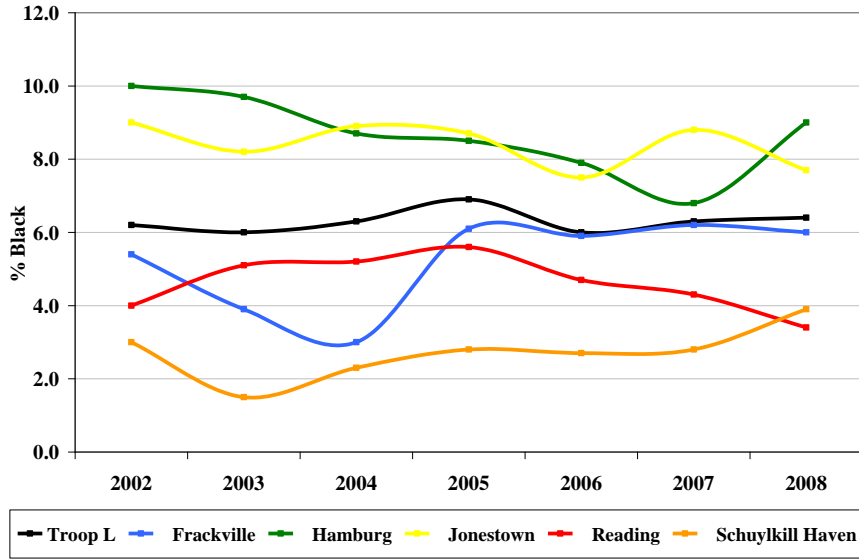


Figure 10:7: Percent of Traffic Stops Involving Black Drivers – Troop M

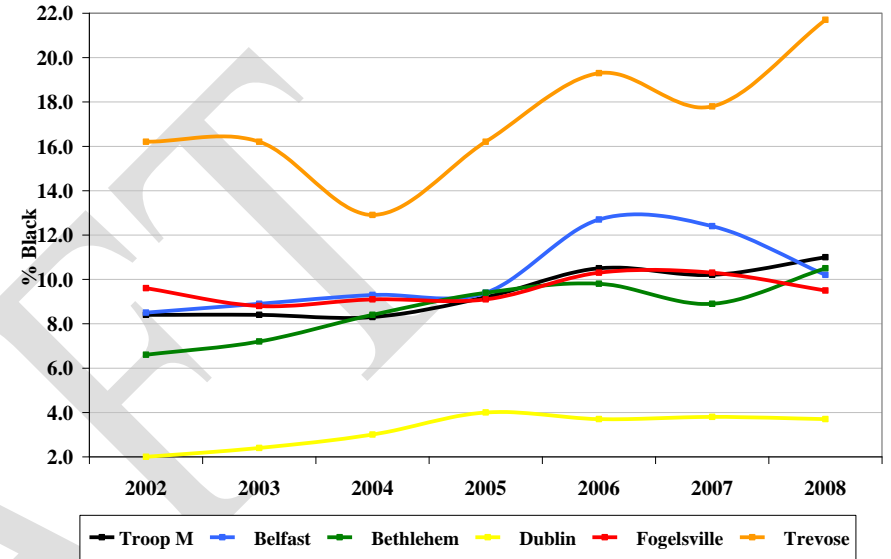


Figure 10:6: Percent of Traffic Stops Involving Hispanic Drivers – Troop L

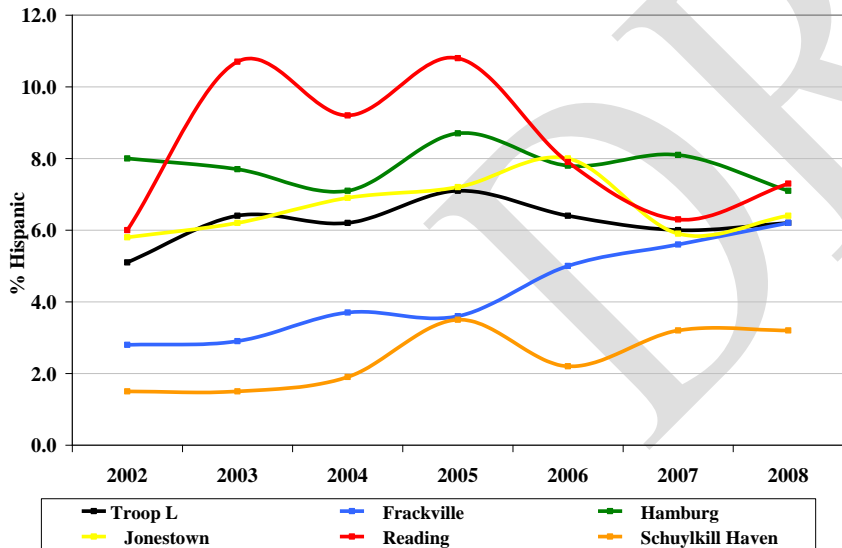


Figure 10:8: Percent of Traffic Stops Involving Hispanic Drivers – Troop M

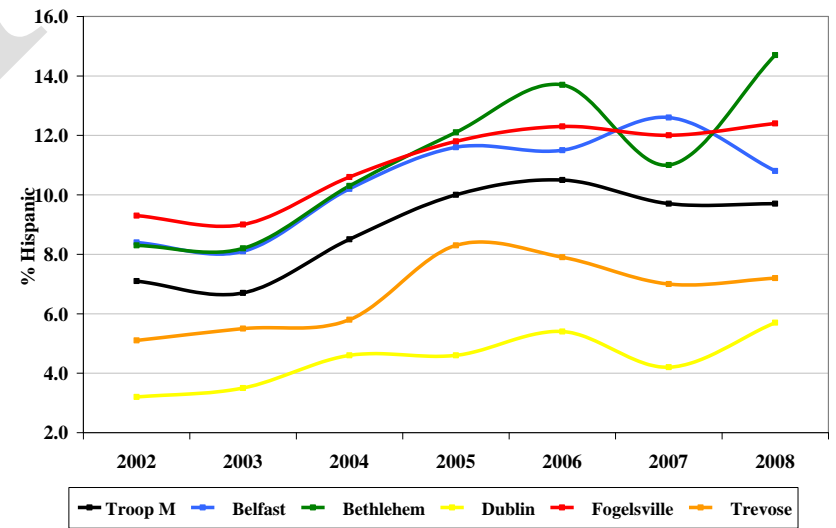


Figure 10:9: Percent of Traffic Stops Involving Black Drivers – Troop F

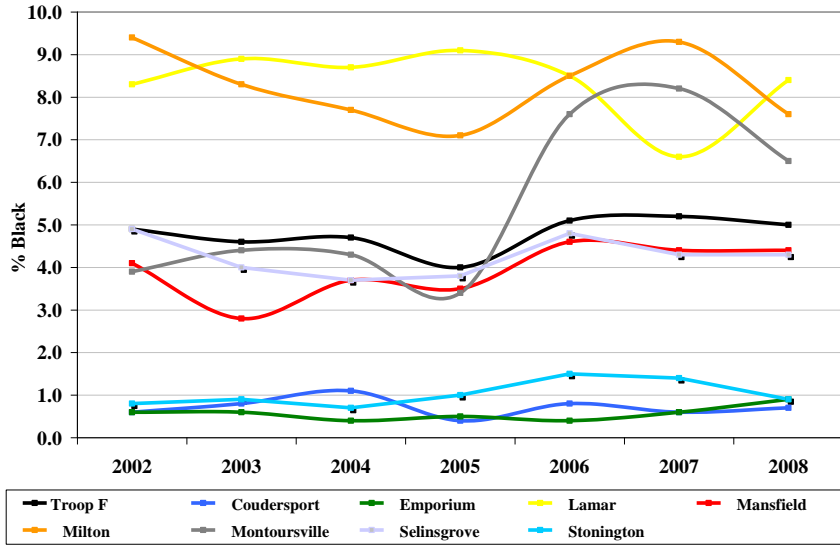


Figure 10:11: Percent of Traffic Stops Involving Black Drivers – Troop N

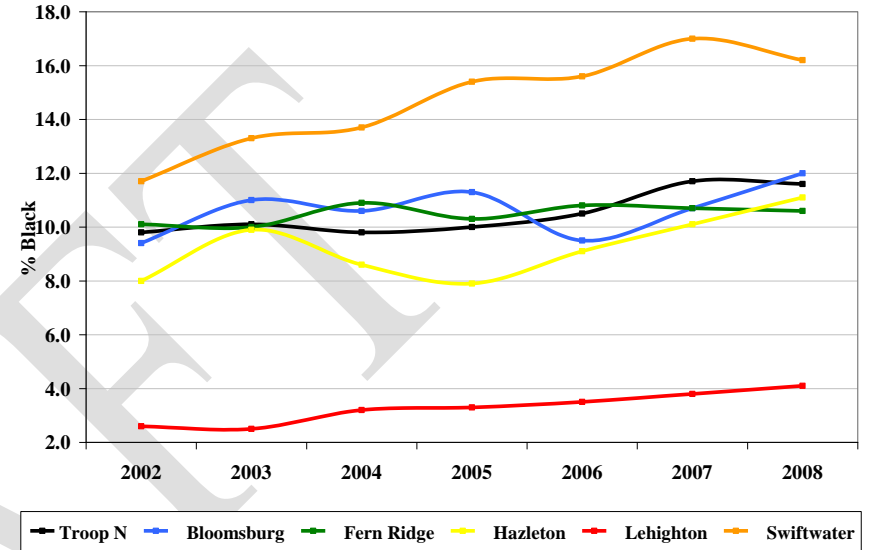


Figure 10:10: Percent of Traffic Stops Involving Hispanic Drivers – Troop F

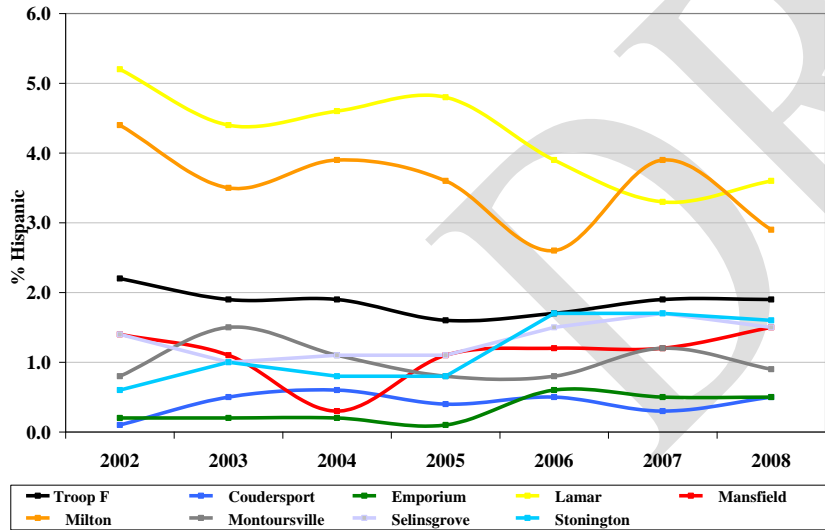


Figure 10:12: Percent of Traffic Stops Involving Hispanic Drivers – Troop N

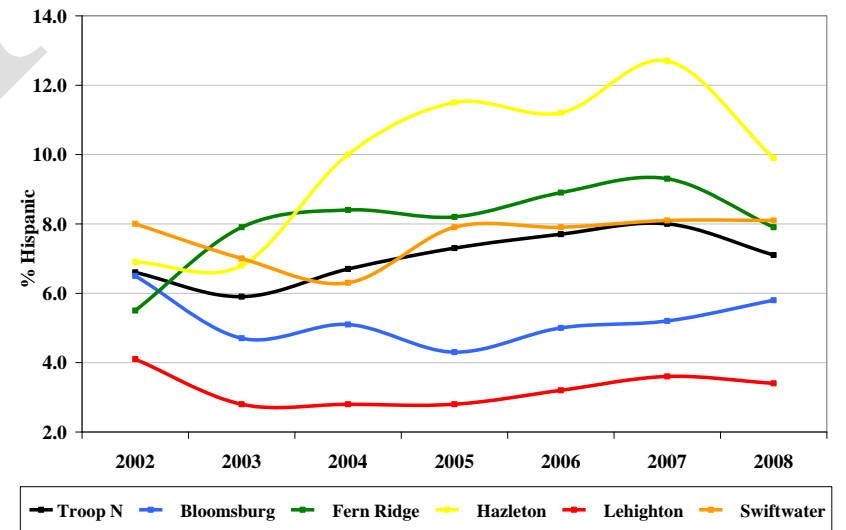


Figure 10:13: Percent of Traffic Stops Involving Black Drivers – Troop P

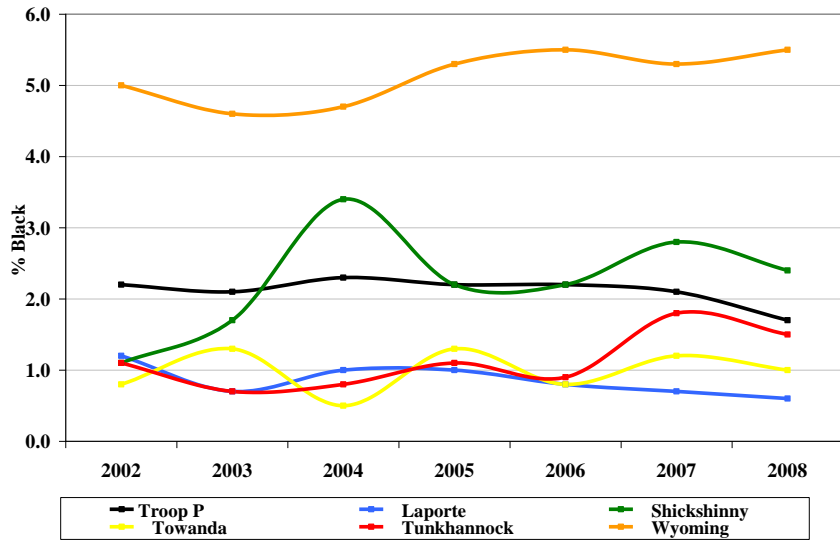


Figure 10:15: Percent of Traffic Stops Involving Black Drivers – Troop R

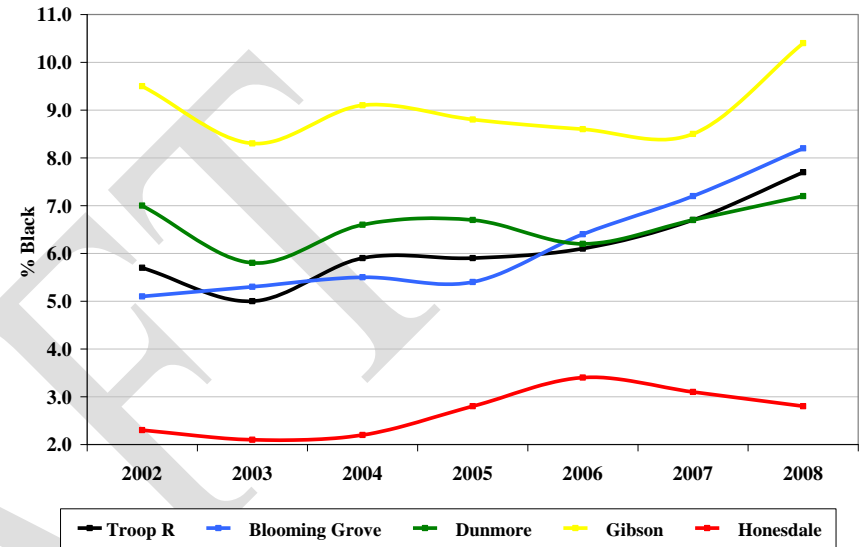


Figure 10:14: Percent of Traffic Stops Involving Hispanic Drivers – Troop P

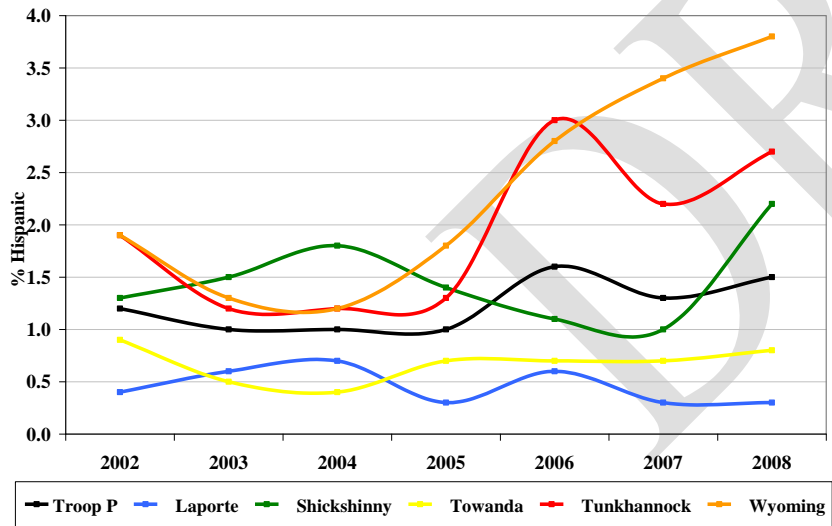


Figure 10:16: Percent of Traffic Stops Involving Hispanic Drivers – Troop R

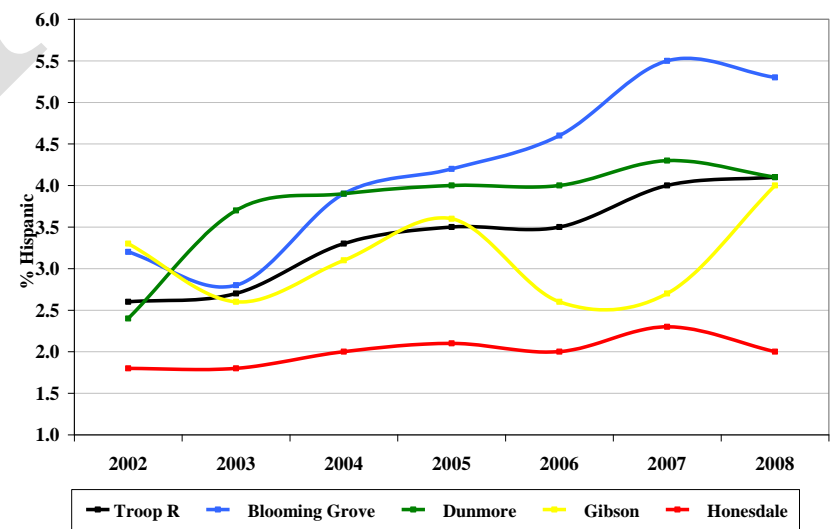


Figure 10:17: Percent of Traffic Stops Involving Black Drivers – Troop A

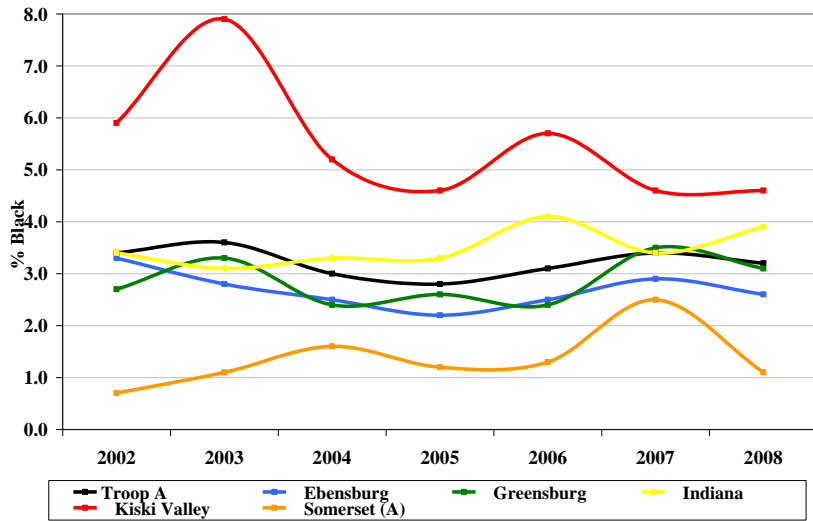


Figure 10:19: Percent of Traffic Stops Involving Black Drivers – Troop G

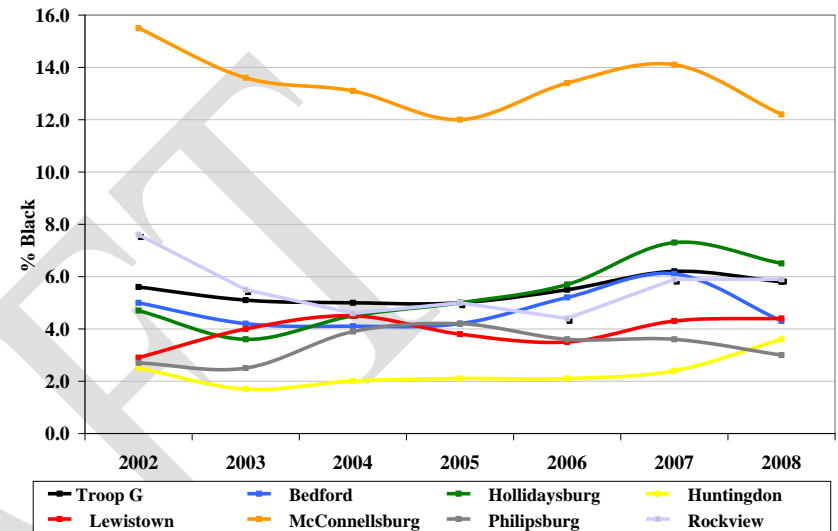


Figure 10:18: Percent of Traffic Stops Involving Hispanic Drivers – Troop A

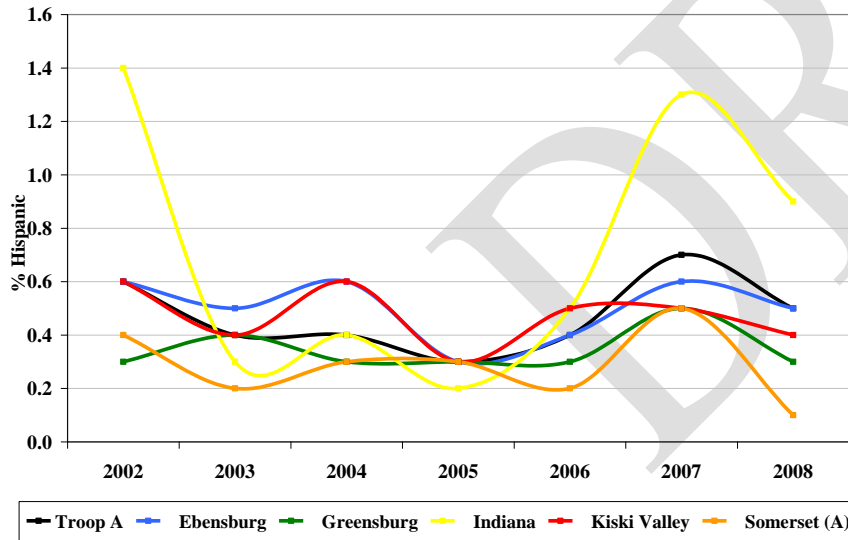


Figure 10:20: Percent of Traffic Stops Involving Hispanic Drivers – Troop G

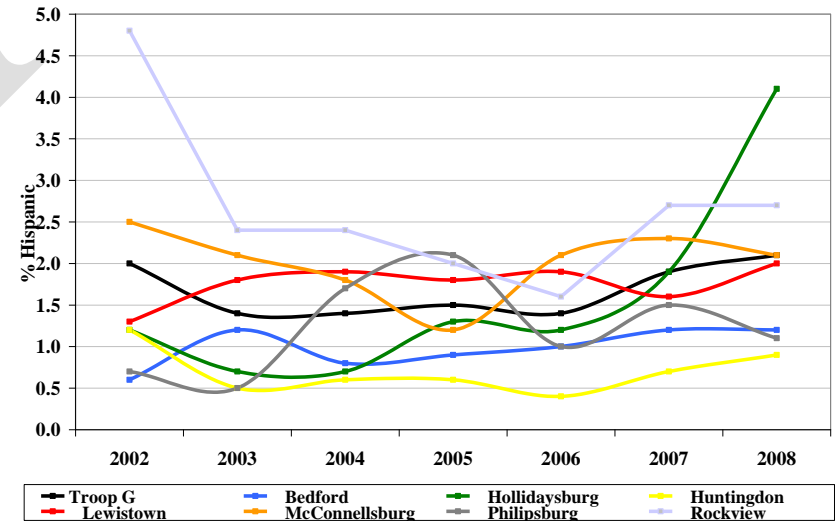


Figure 10:21: Percent of Traffic Stops Involving Black Drivers – Troop H

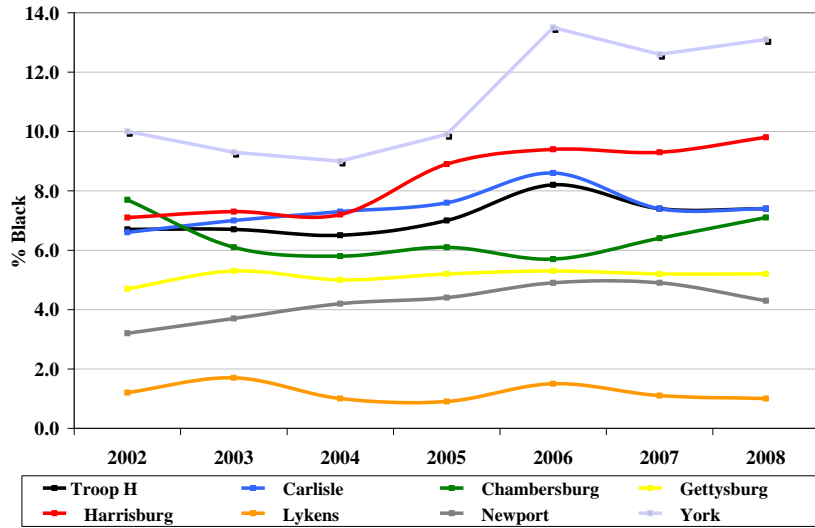


Figure 10:23: Percent of Traffic Stops Involving Black Drivers – Troop C

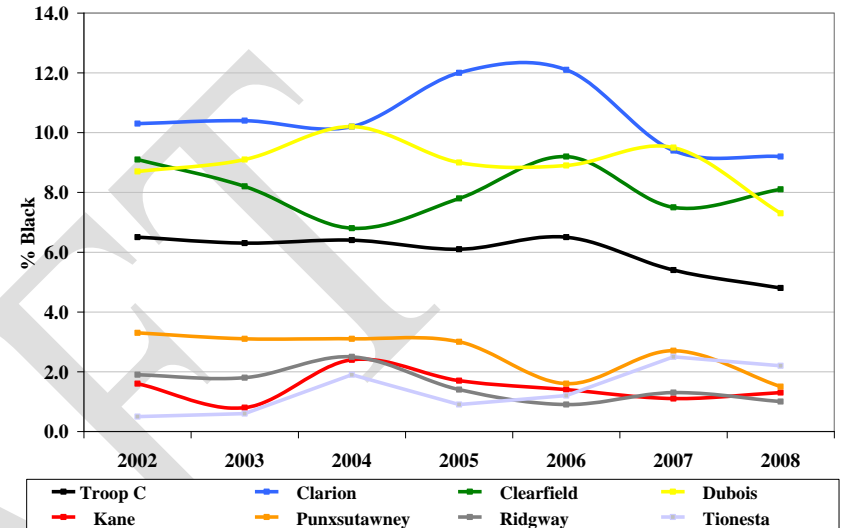


Figure 10:22: Percent of Traffic Stops Involving Hispanic Drivers – Troop H

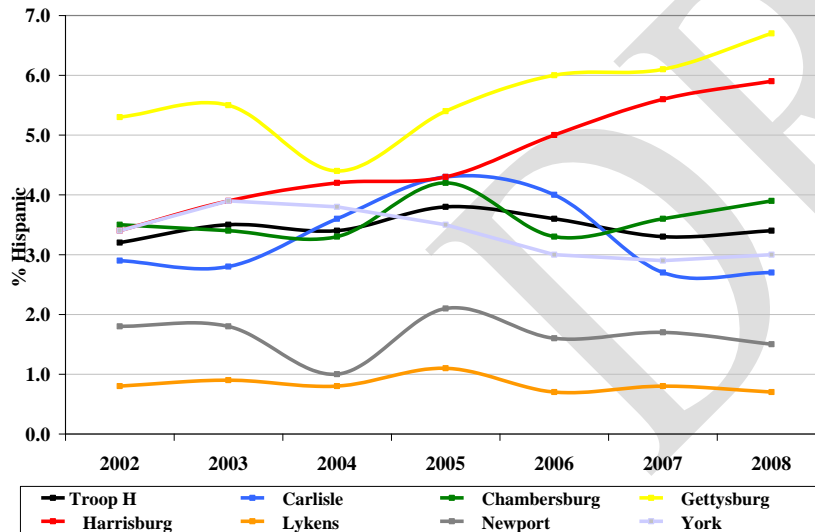


Figure 10:24: Percent of Traffic Stops Involving Hispanic Drivers – Troop C

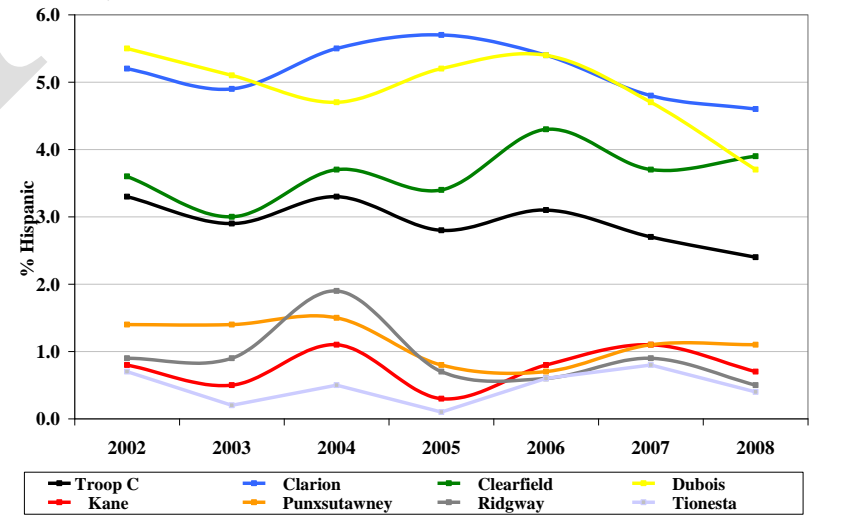


Figure 10:25: Percent of Traffic Stops Involving Black Drivers – Troop D

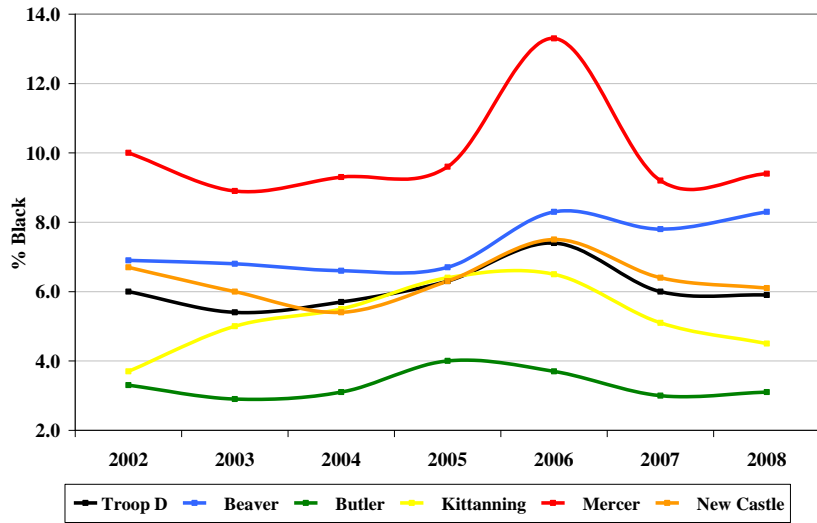


Figure 10:27: Percent of Traffic Stops Involving Black Drivers – Troop E

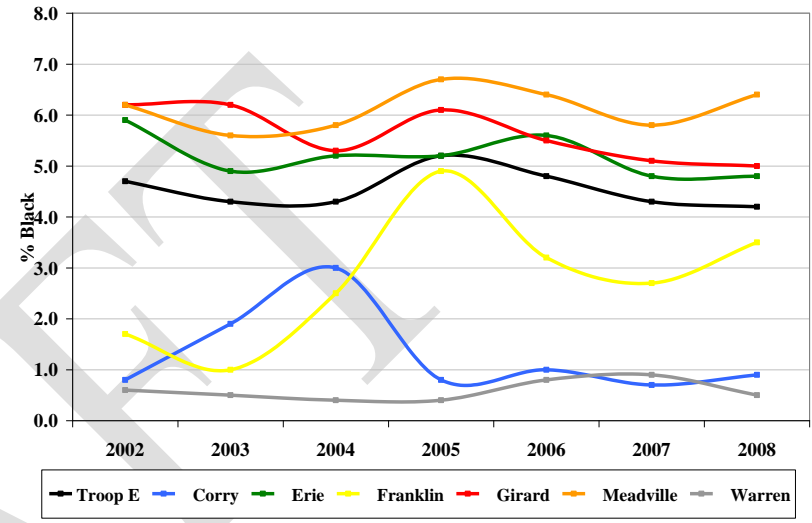


Figure 10:26: Percent of Traffic Stops Involving Hispanic Drivers – Troop D

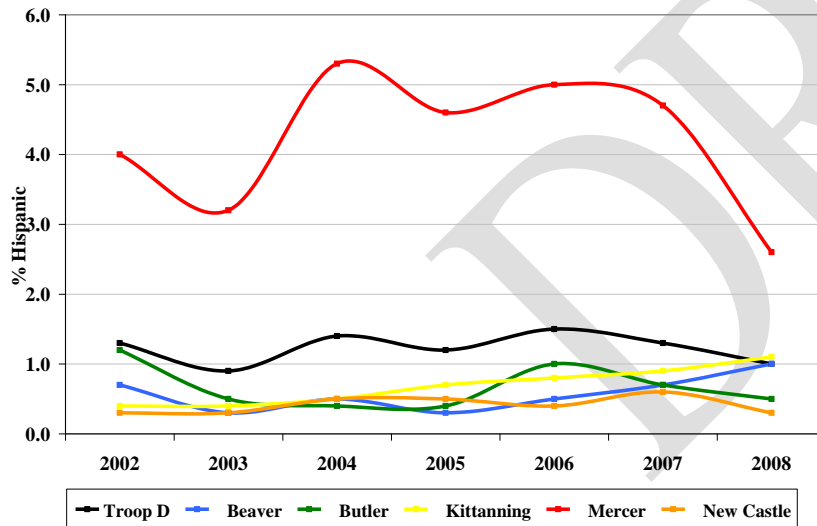


Figure 10:28: Percent of Traffic Stops Involving Hispanic Drivers – Troop E

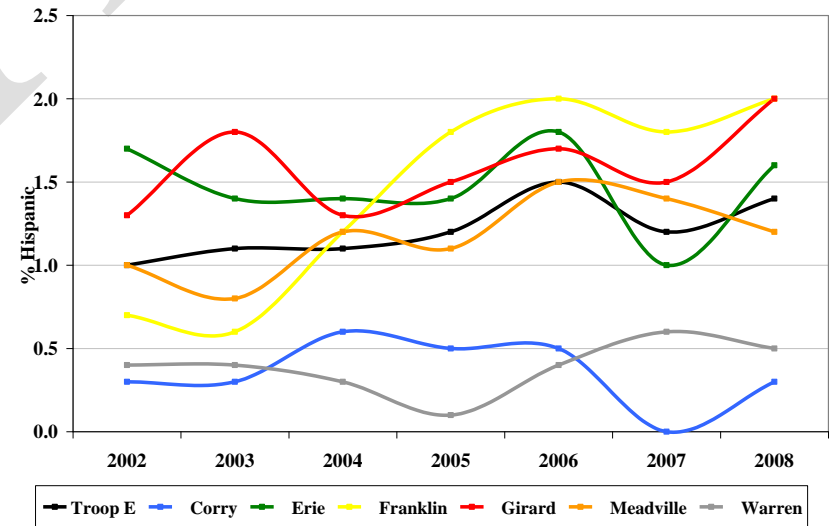


Figure 10:29: Percent of Traffic Stops Involving Black Drivers – Troop B

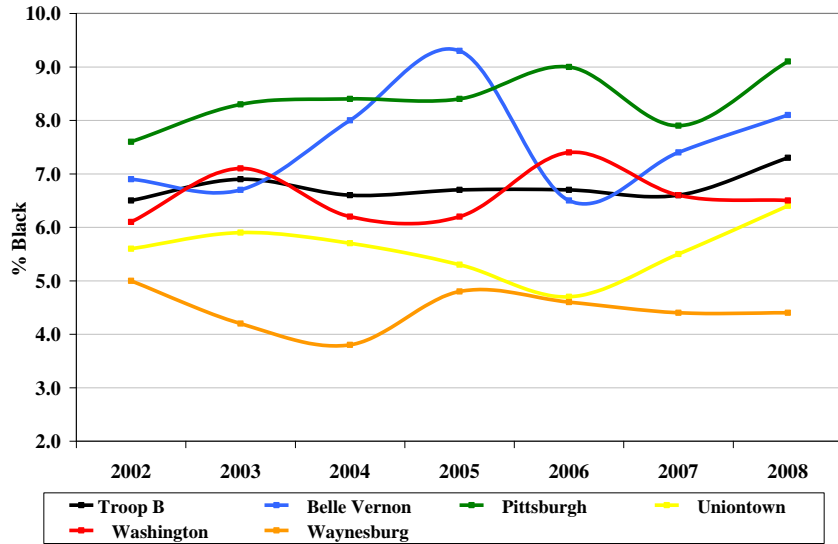


Figure 10:31: Percent of Traffic Stops Involving Black Drivers – Troop T

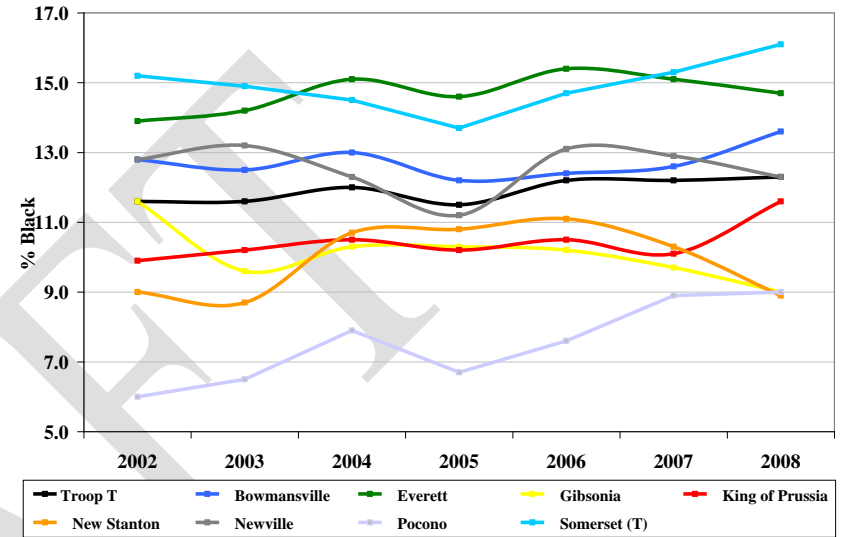


Figure 10:30: Percent of Traffic Stops Involving Hispanic Drivers – Troop B

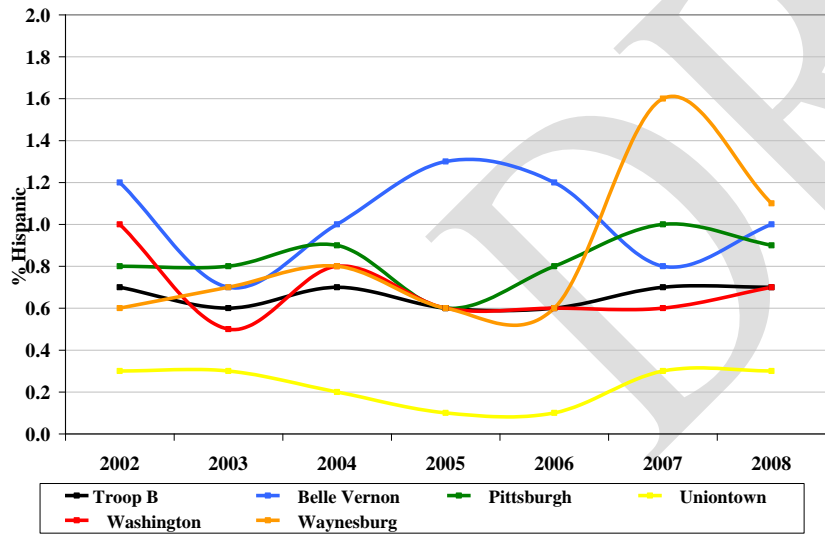
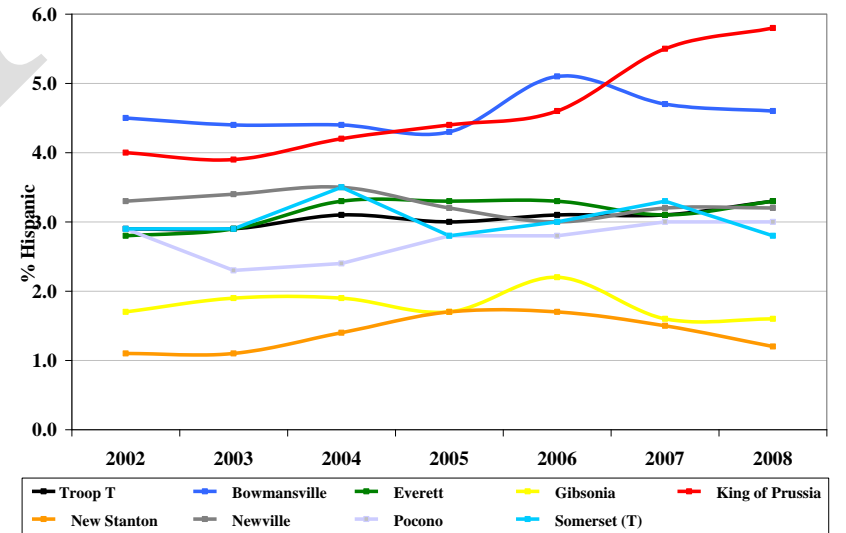


Figure 10:32: Percent of Traffic Stops Involving Hispanic Drivers – Troop T



11. APPENDIX B: TRAFFIC STOPS OUTCOMES 2002 – 2008

DRAFT

Appendix B provides a series of figures (Figures 11.1 – 11.64) reporting the rates of post-stop outcomes (e.g., warnings, citations, arrests, and searches) at the station level between 2002 and 2008. It is intended to supplement the information provided in Section 5. As described in Section 5, temporal analyses are best used to summarize the rate of activity (i.e., the rate of traffic stop outcomes of a selected group) within organizational units across time. This section exclusively uses this type of analysis to compare the rate of traffic stop outcomes of Black and Hispanic citizens within one organizational unit. In this manner, the rates from year to year in a jurisdiction are comparable. In effect, differences between organizational units are considered in these analyses and do not influence the results. As a result, the strength of documenting temporal trends is to examine differences within organizational units across time.

The research team purposefully does not offer a value assessment of the 2008 rate in relation to the six-year average. In other words, the research team does not assign a “cutoff value” for an acceptable rate of traffic stop outcomes. The graphs demonstrating temporal values are strictly a tool to assess trends over time in the rate of traffic stop outcomes and to identify organizational units that are experiencing noticeable increases in their rate of traffic stop outcomes of Black or Hispanic drivers. There are numerous factors beyond the scope of this methodology that may be directly related to changes in the rate of traffic stop outcomes. For example:

- changes in the traffic population within that jurisdiction
- alterations to the reporting patterns by PSP troopers
- adjustments in PSP traffic stop behaviors
- differences in deployment patterns across time
- modifications of manpower allocation

Any single factor or a combination of these factors may influence the rate of traffic stop outcomes of minority drivers in any year and result in an increase or decrease in the rates reported in the graphs below. The following graphs are to be interpreted with caution and cannot be used as evidence of overt biased policing by the PSP or any of its organizational units; however, they do offer a basic picture of the traffic stop outcome trends by organizational unit. Any significant changes in post-stop outcomes within organizational units should be further examined by PSP administrators to determine the likely source of such changes.

For the trends in arrests and searches during traffic stops, it is important to remember that, prior to 2006 there were some data inconsistencies for these outcomes. As documented in the *2003-2004 Final Report*, during focus groups conducted with PSP Troopers in August 2005, it was discovered that there were some problems associated with the ongoing data collection project. Specifically, it became apparent that not all Troopers were completing the Contact Data Reports during all member-initiated stops and were, in particular, underreporting traffic stops resulting in arrests and/or searches that resulted in the discovery of contraband. Upon discovery of these discrepancies, the PSP immediately addressed and corrected these issues. Nevertheless, based on the known problems of underreporting of arrests and searches, firm conclusions regarding trends in these outcomes cannot be made.

Figure 11:1: Percent of Traffic Stops Resulting in a Warning – Troop J

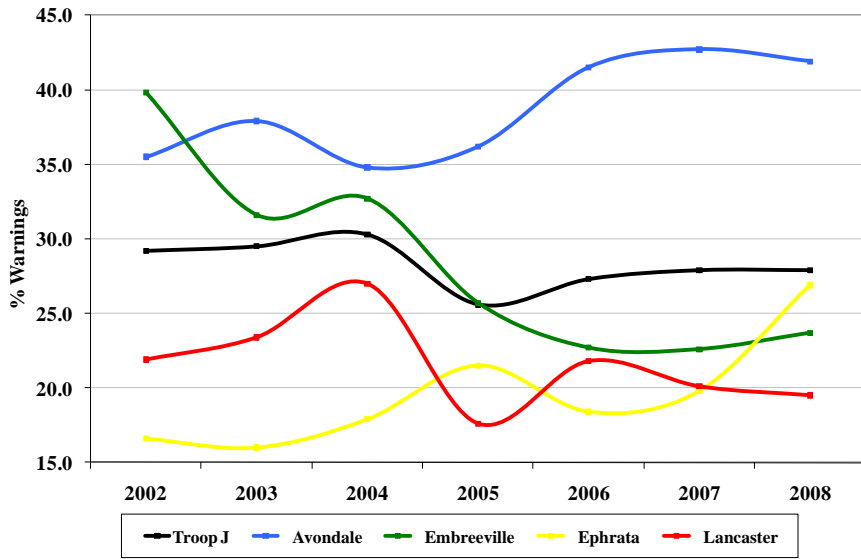


Figure 11:3: Percent of Traffic Stops Resulting in an Arrest – Troop J

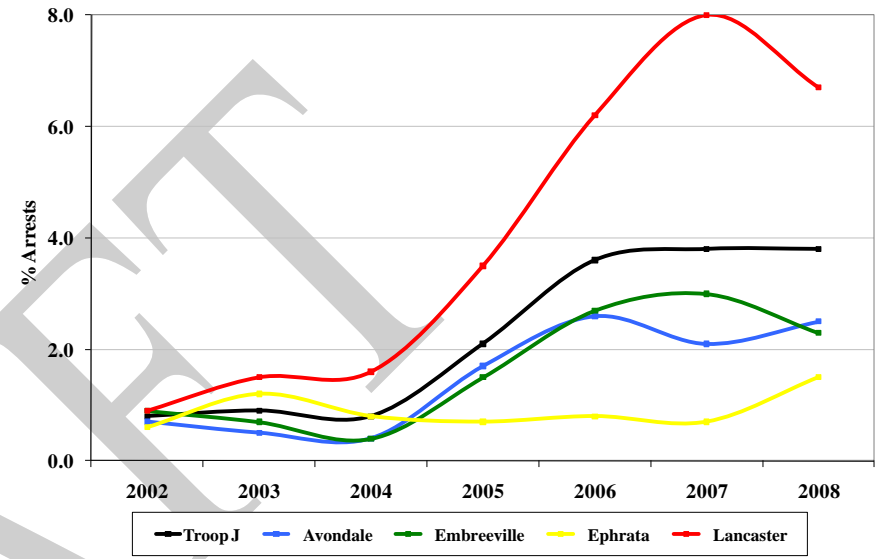


Figure 11:2: Percent of Traffic Stops Resulting in a Citation – Troop J

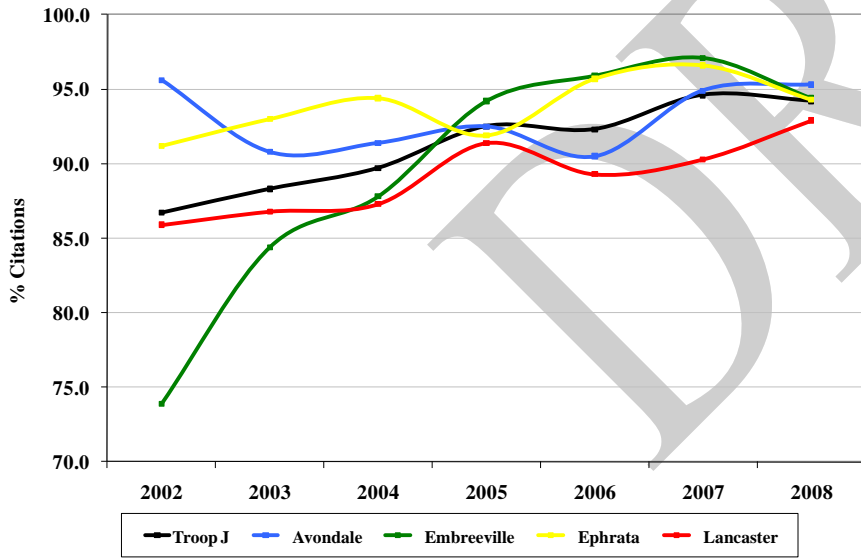


Figure 11:4: Percent of Traffic Stops Resulting in a Search – Troop J

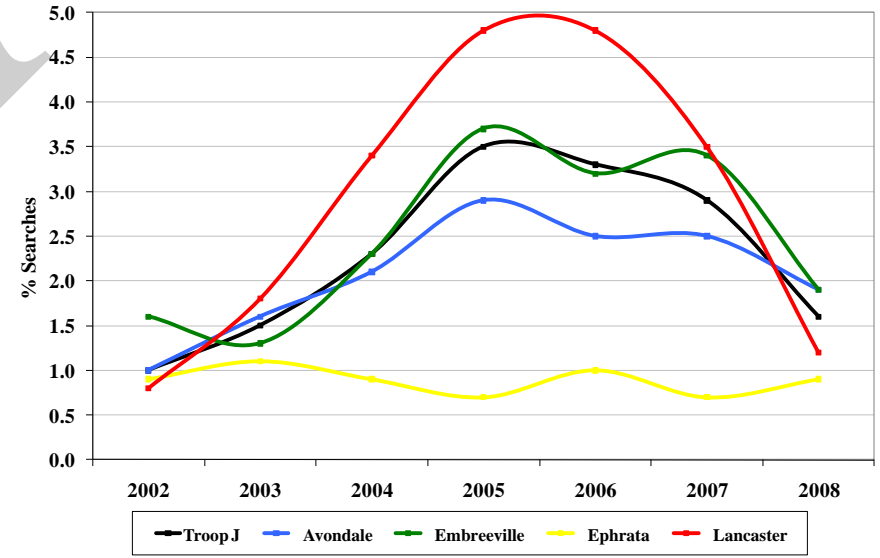


Figure 11:5: Percent of Traffic Stops Resulting in a Warning – Troop K

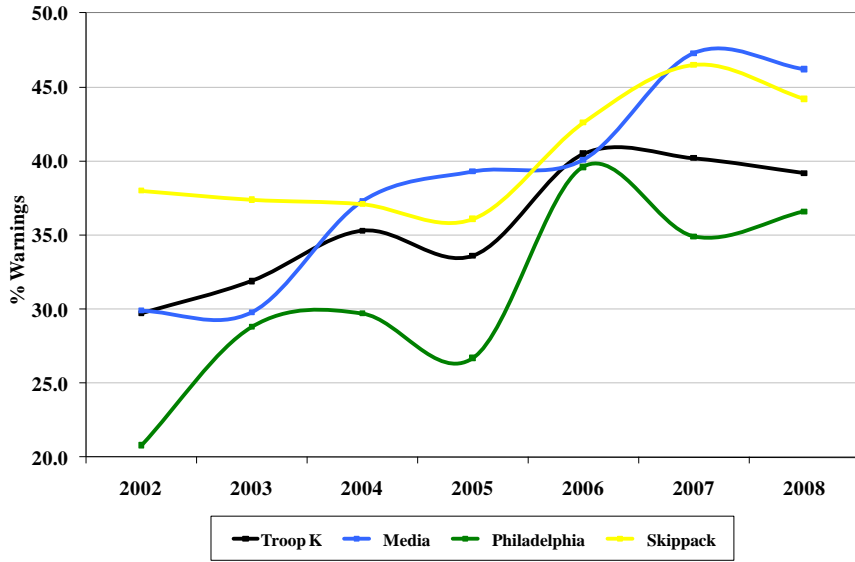


Figure 11:7: Percent of Traffic Stops Resulting in an Arrest – Troop K

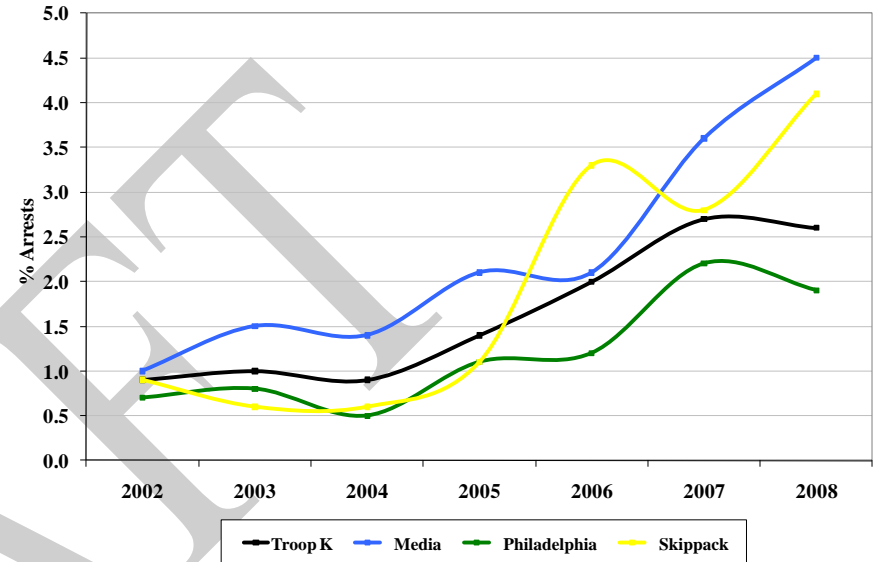


Figure 11:6: Percent of Traffic Stops Resulting in a Citation – Troop K

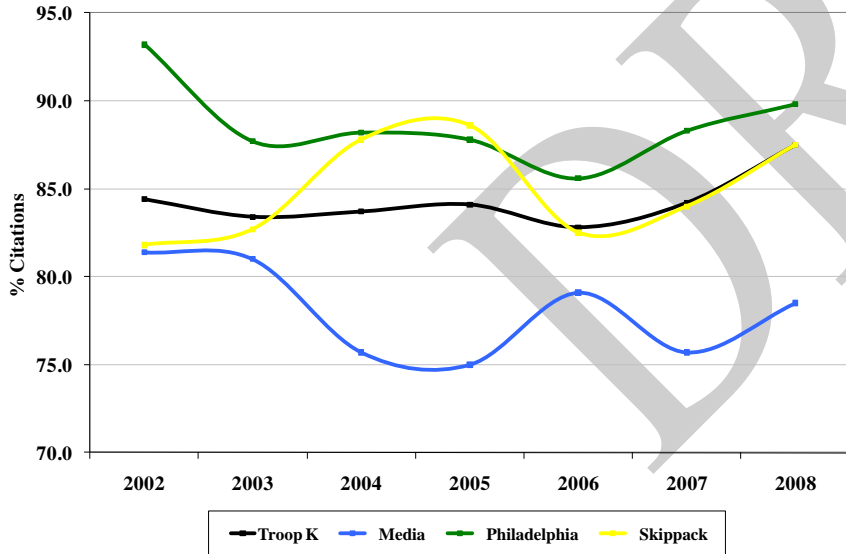


Figure 11:8: Percent of Traffic Stops Resulting in a Search – Troop K

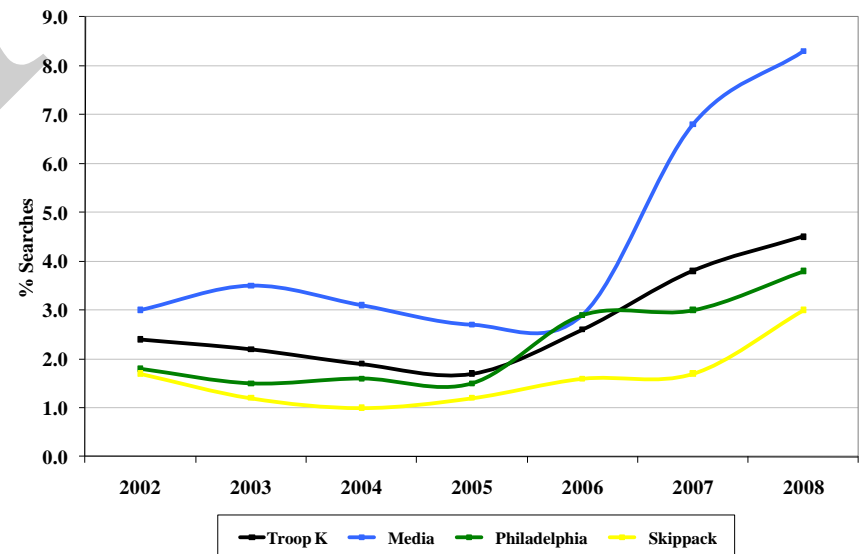


Figure 11:9: Percent of Traffic Stops Resulting in a Warning – Troop L

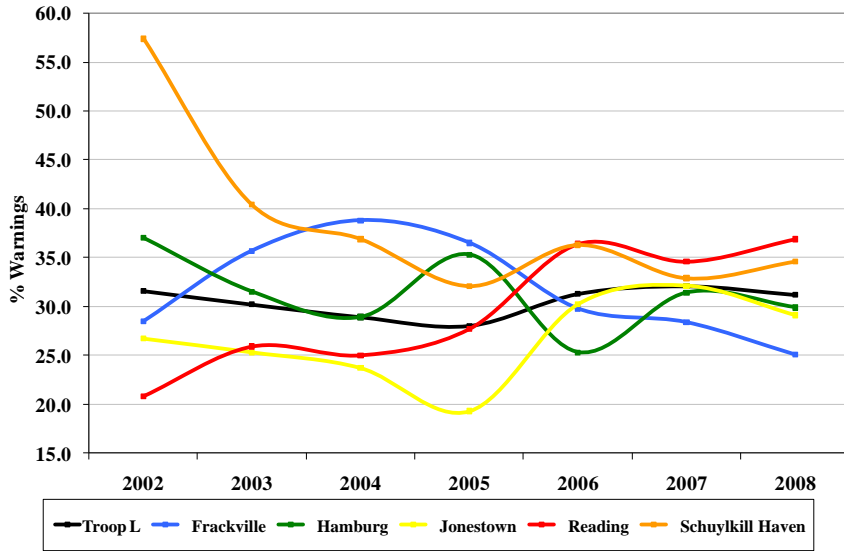


Figure 11:11: Percent of Traffic Stops Resulting in an Arrest – Troop L

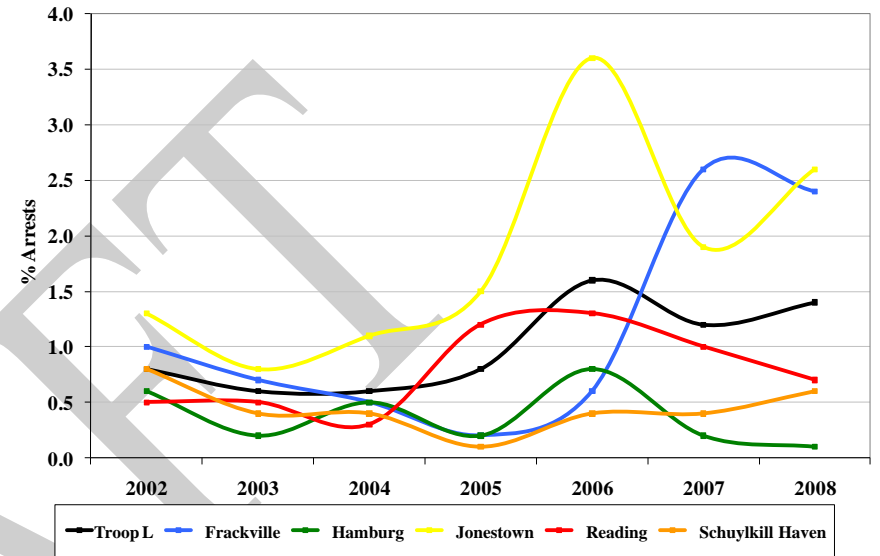


Figure 11:10: Percent of Traffic Stops Resulting in a Citation – Troop L

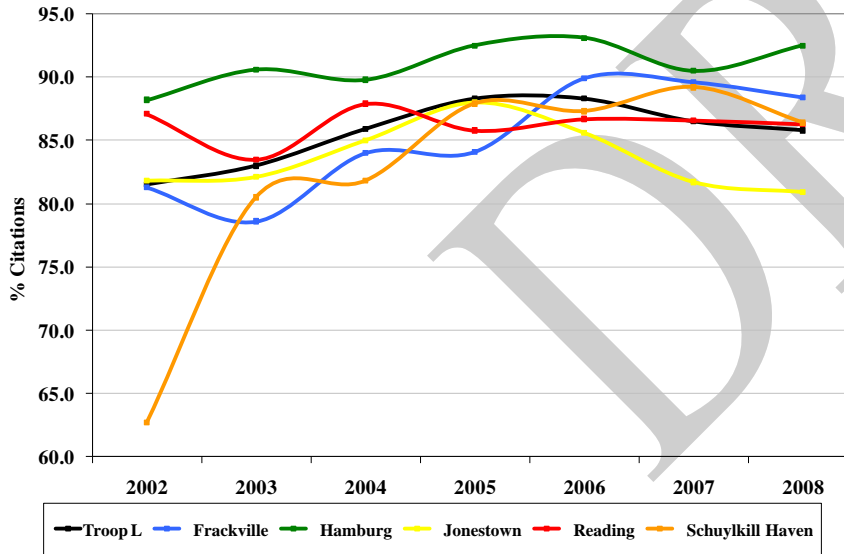


Figure 11:12: Percent of Traffic Stops Resulting in a Search – Troop L

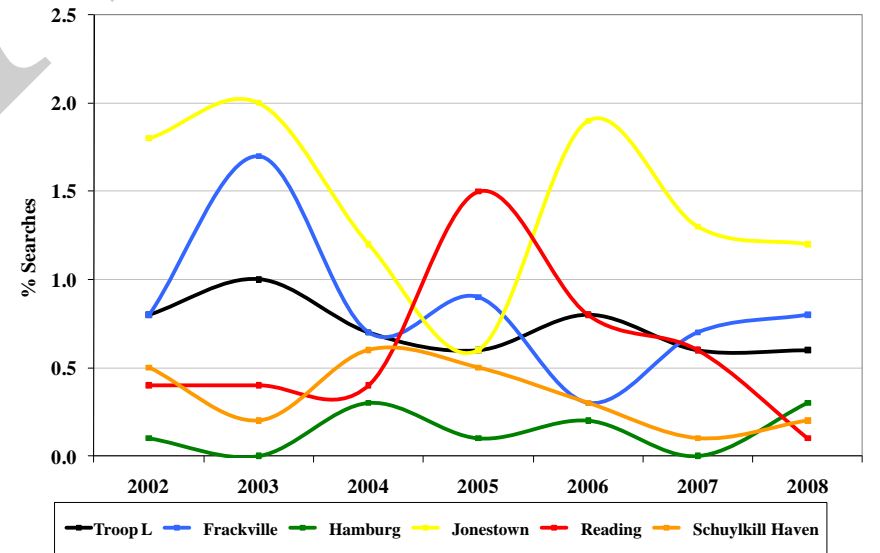


Figure 11:13: Percent of Traffic Stops Resulting in a Warning – Troop M

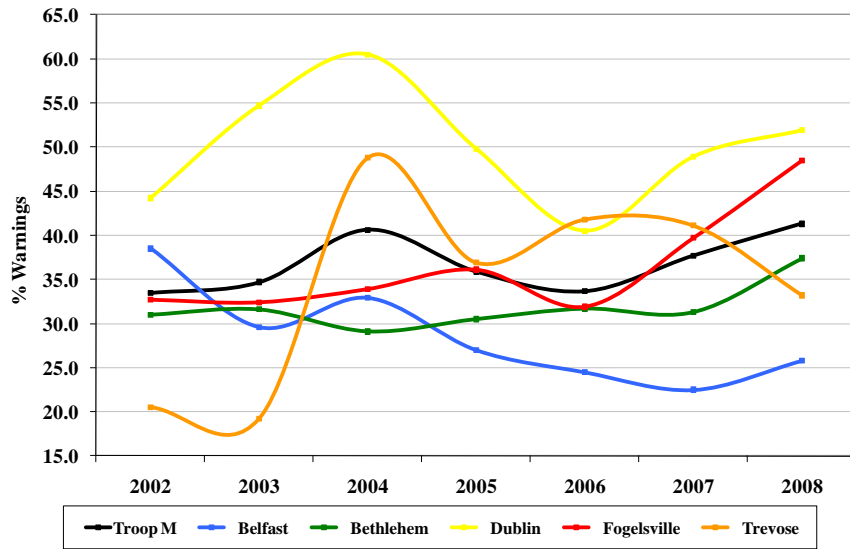


Figure 11:15: Percent of Traffic Stops Resulting in an Arrest – Troop M

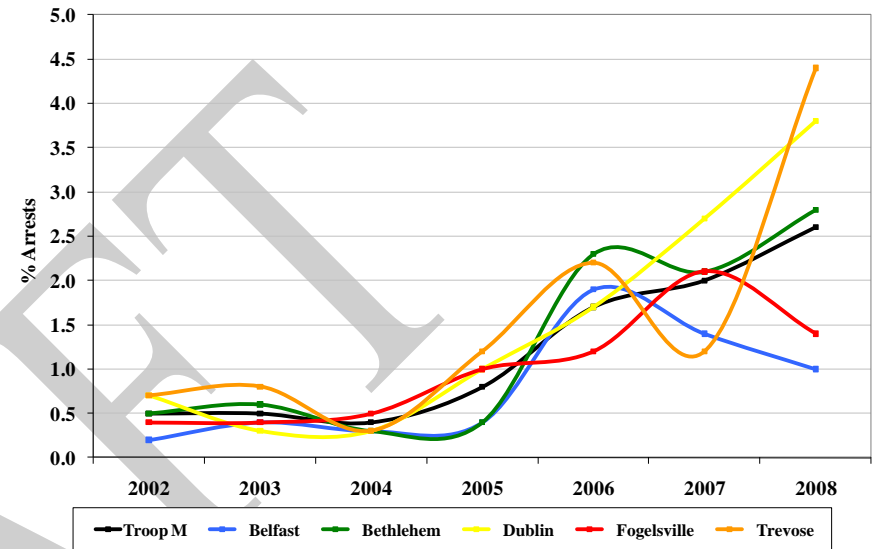


Figure 11:14: Percent of Traffic Stops Resulting in a Citation – Troop M

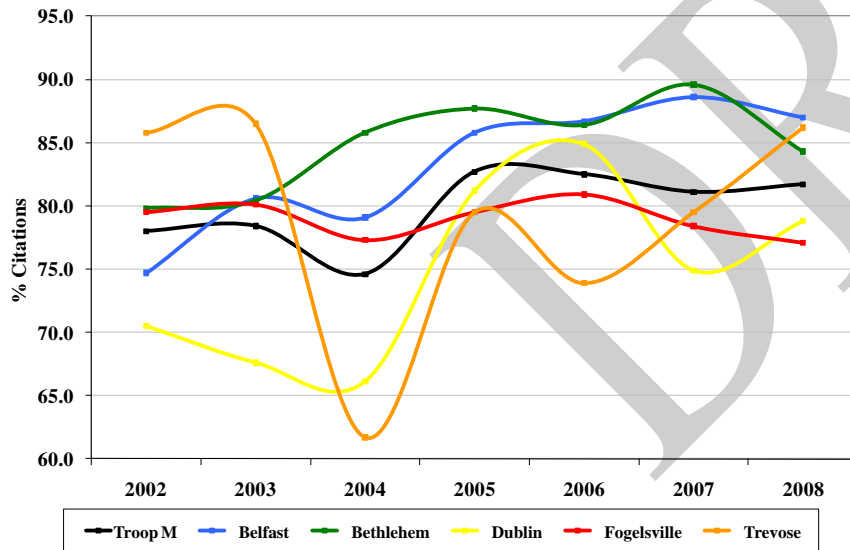


Figure 11:16: Percent of Traffic Stops Resulting in a Search – Troop M

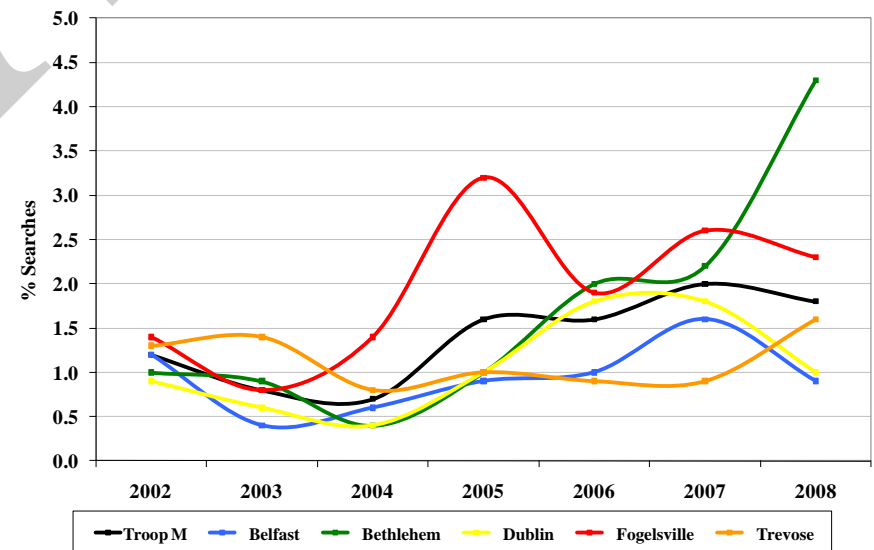


Figure 11:17: Percent of Traffic Stops Resulting in a Warning – Troop F

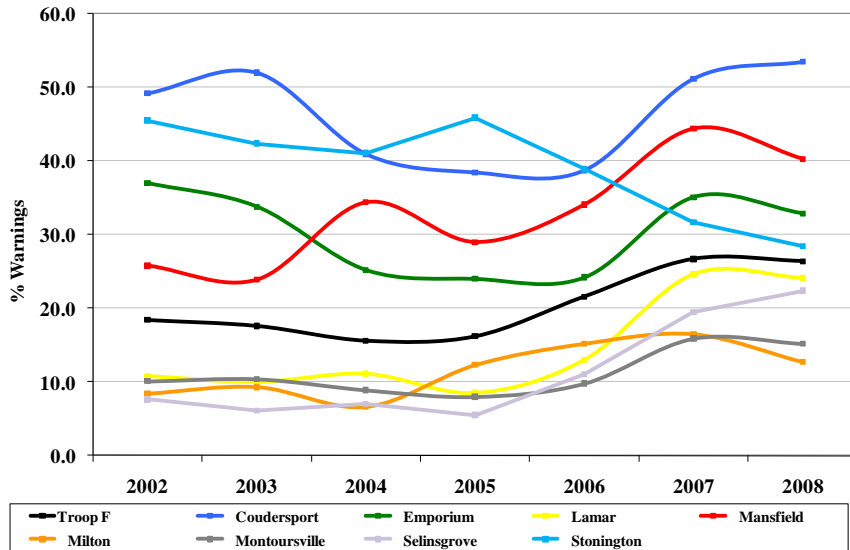


Figure 11:19: Percent of Traffic Stops Resulting in an Arrest – Troop F

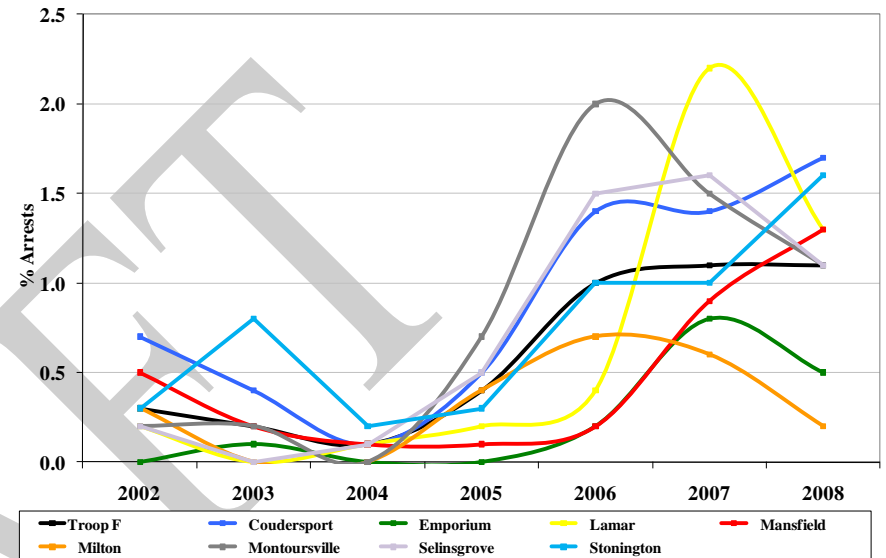


Figure 11:18: Percent of Traffic Stops Resulting in a Citation – Troop F

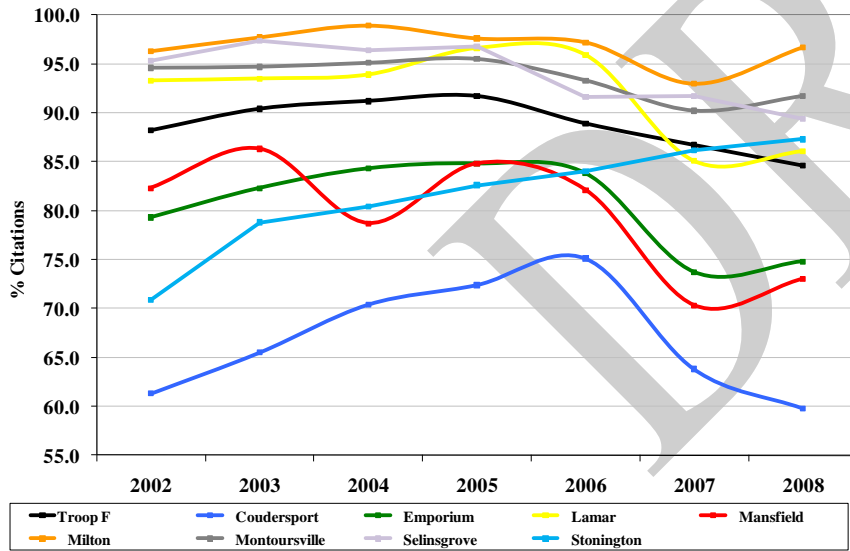


Figure 11:20: Percent of Traffic Stops Resulting in a Search – Troop F

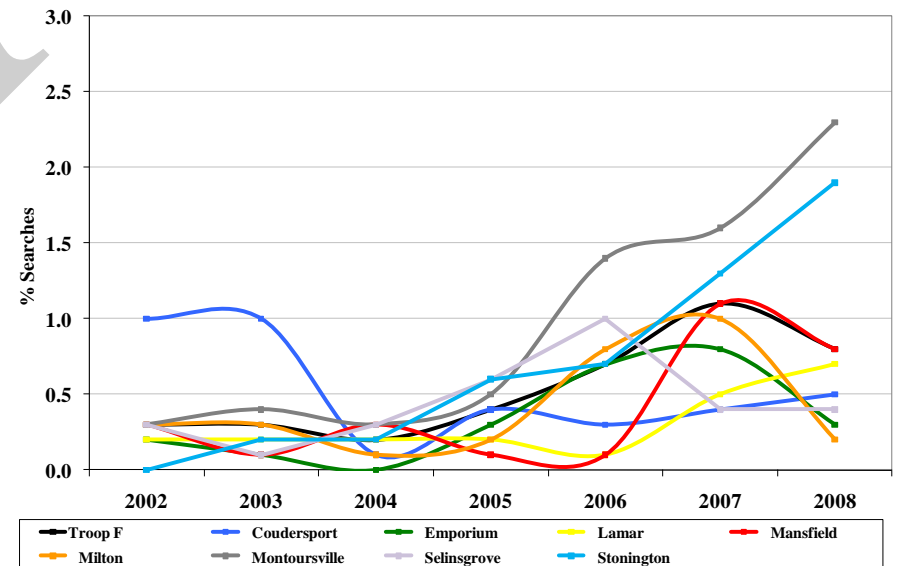


Figure 11:21: Percent of Traffic Stops Resulting in a Warning – Troop N

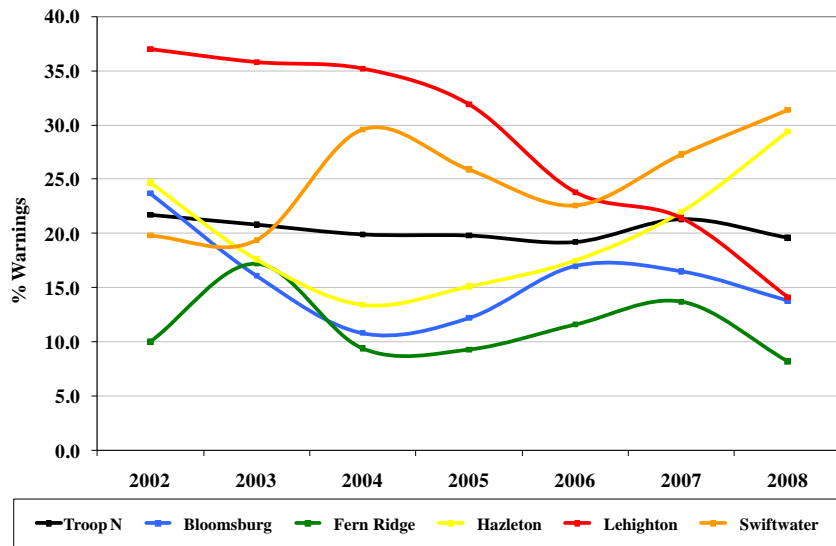


Figure 11:23: Percent of Traffic Stops Resulting in an Arrest – Troop N

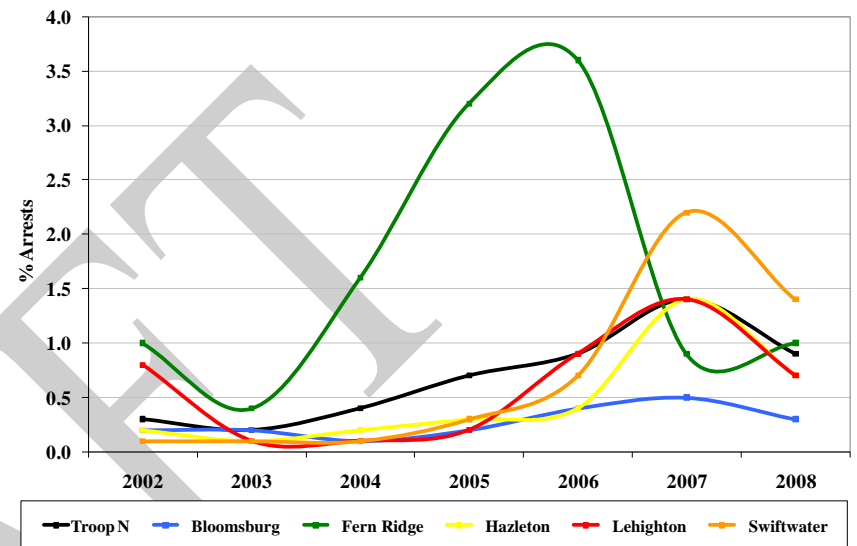


Figure 11:22: Percent of Traffic Stops Resulting in a Citation – Troop N

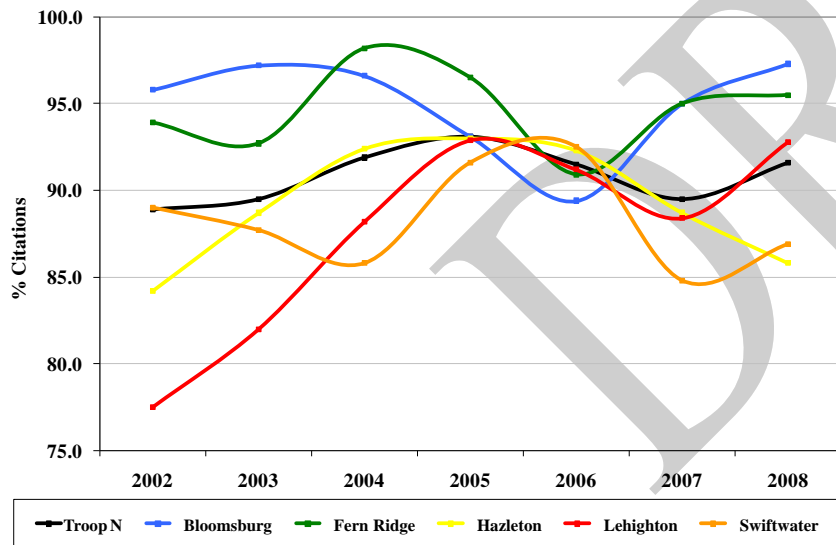


Figure 11:24: Percent of Traffic Stops Resulting in a Search – Troop N

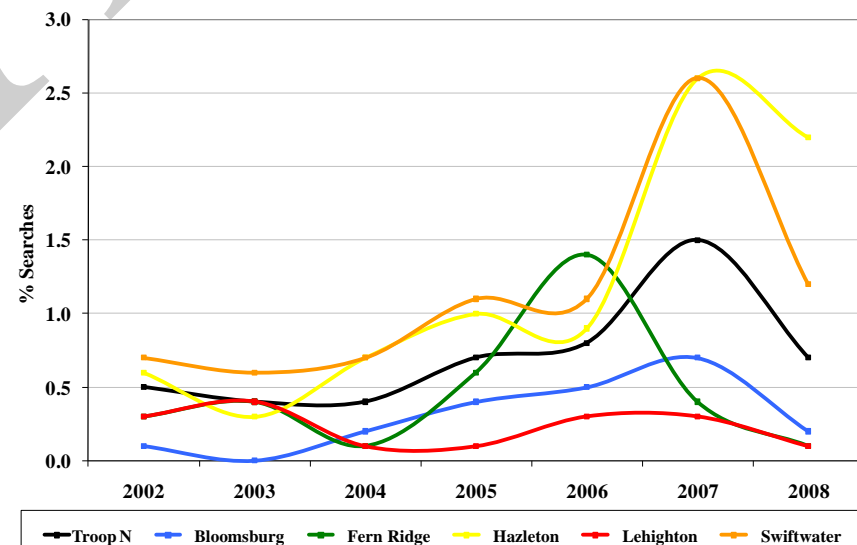


Figure 11:25: Percent of Traffic Stops Resulting in a Warning – Troop P

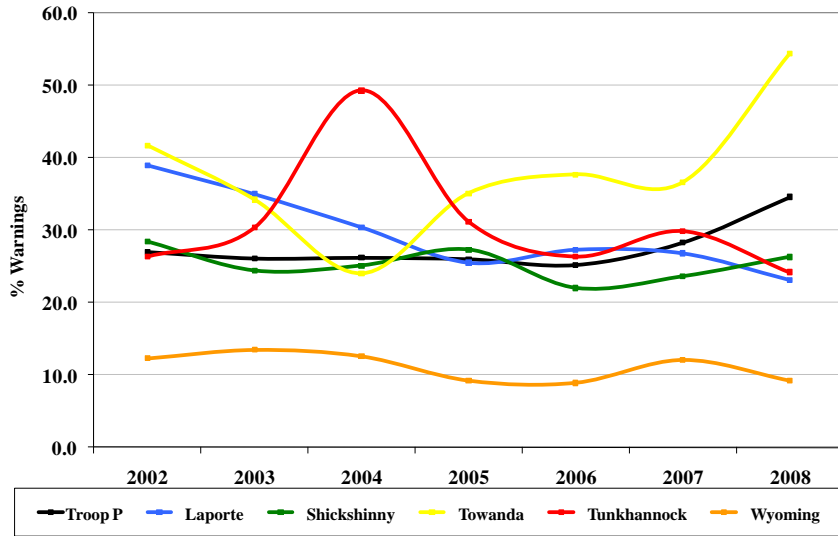


Figure 11:27: Percent of Traffic Stops Resulting in an Arrest – Troop P

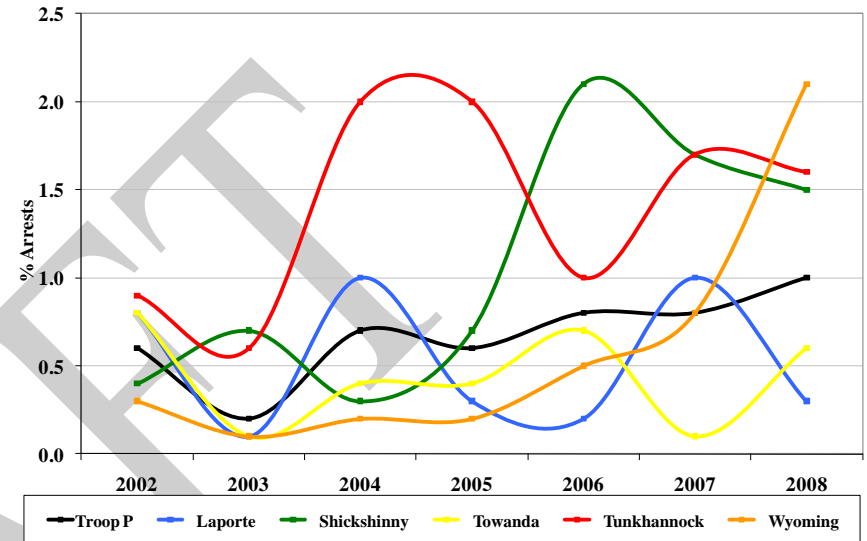


Figure 11:26: Percent of Traffic Stops Resulting in a Citation – Troop P

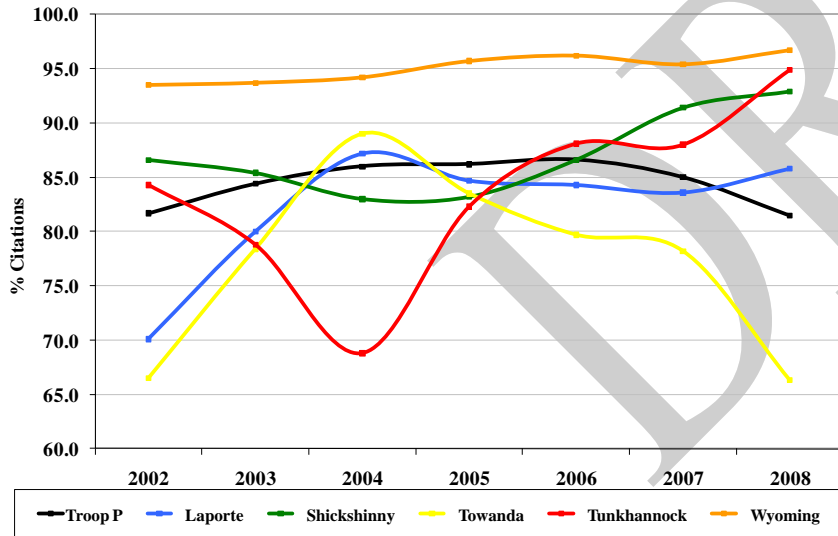


Figure 11:28: Percent of Traffic Stops Resulting in a Search – Troop P

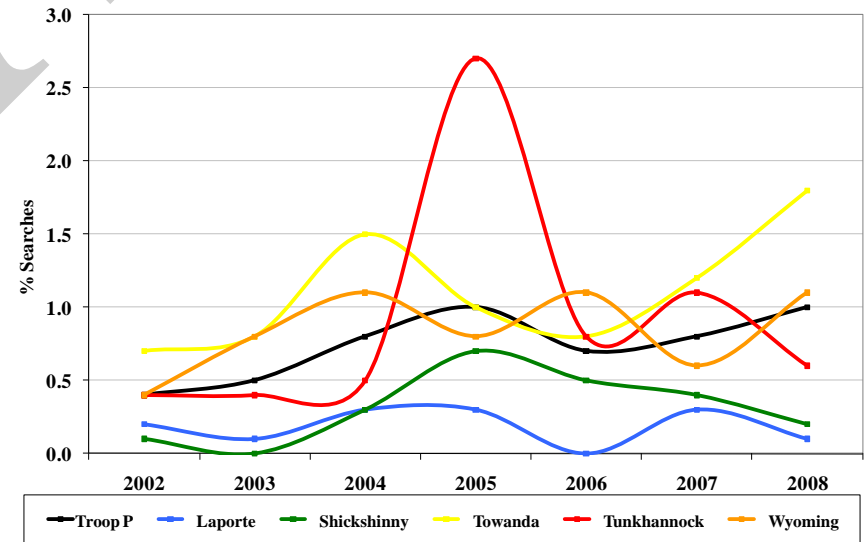


Figure 11:29: Percent of Traffic Stops Resulting in a Warning – Troop R

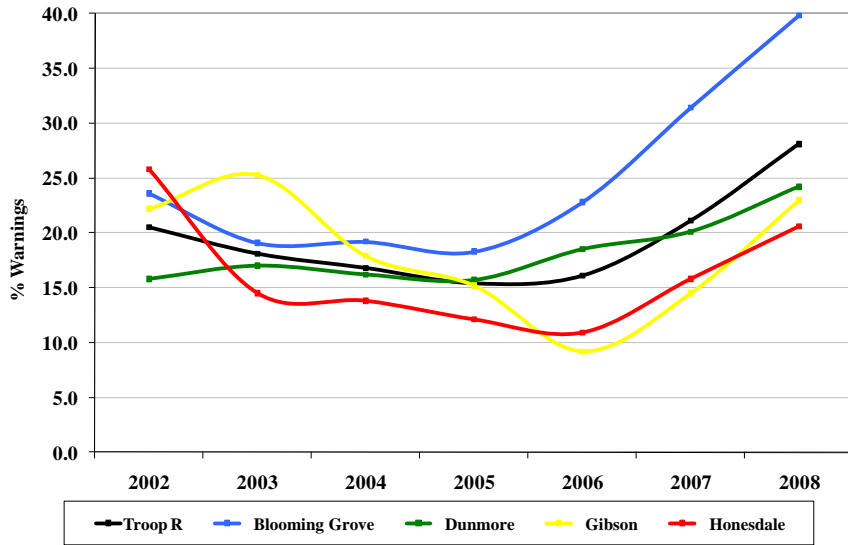


Figure 11:31: Percent of Traffic Stops Resulting in an Arrest – Troop R

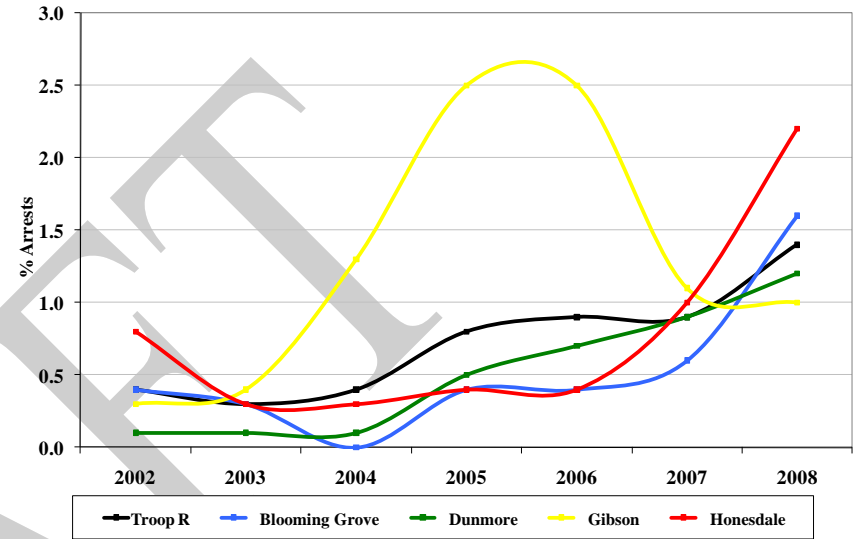


Figure 11:30: Percent of Traffic Stops Resulting in a Citation – Troop R

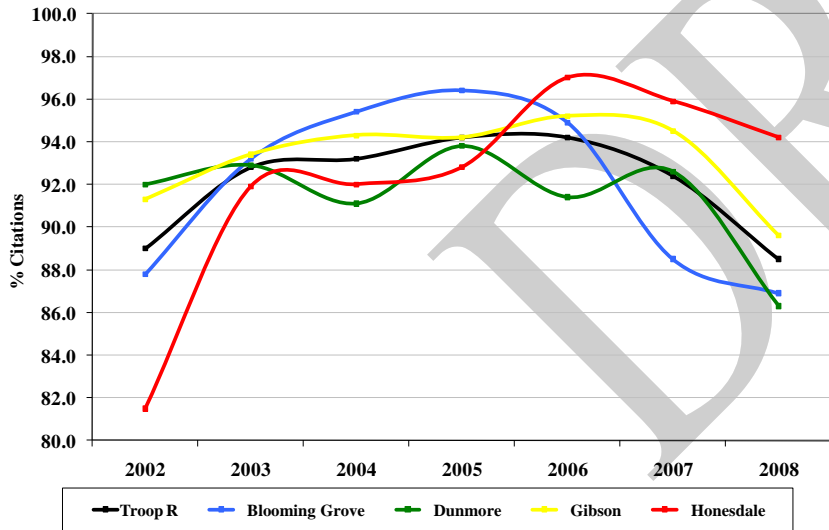


Figure 11:32: Percent of Traffic Stops Resulting in a Search – Troop R

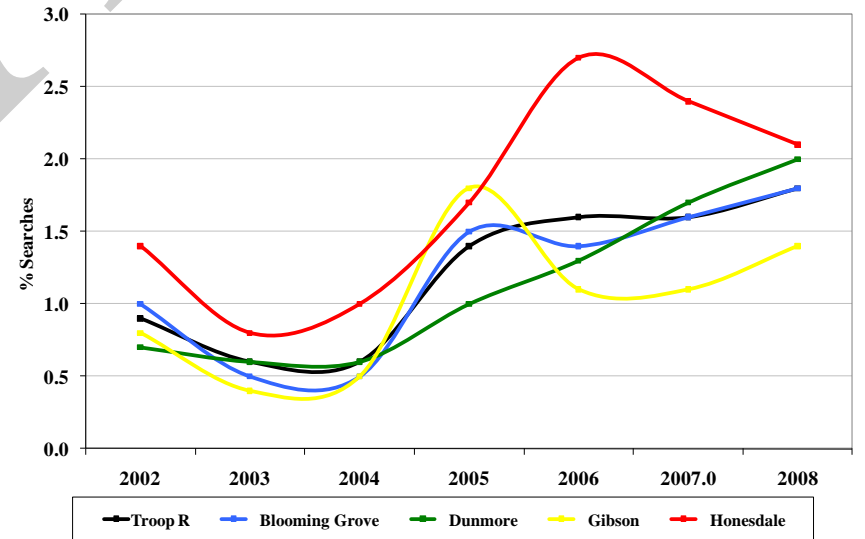


Figure 11:33: Percent of Traffic Stops Resulting in a Warning – Troop A

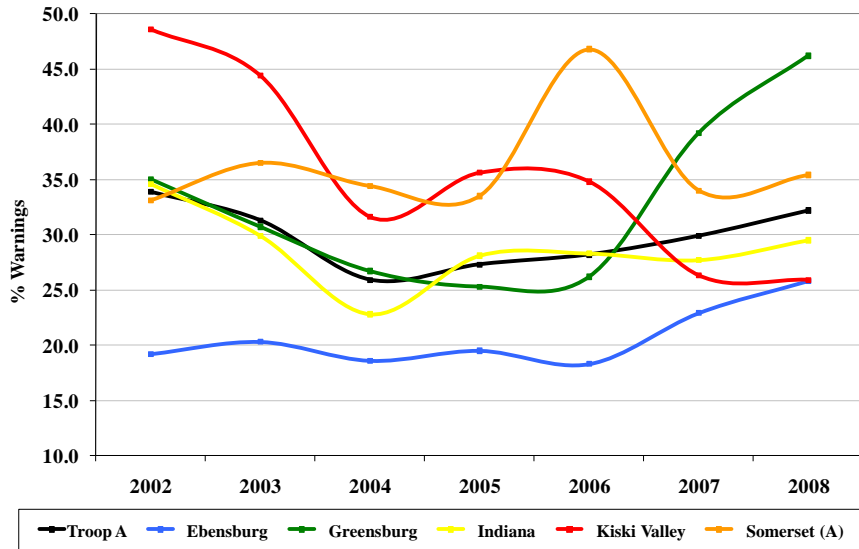


Figure 11:35: Percent of Traffic Stops Resulting in an Arrest – Troop A

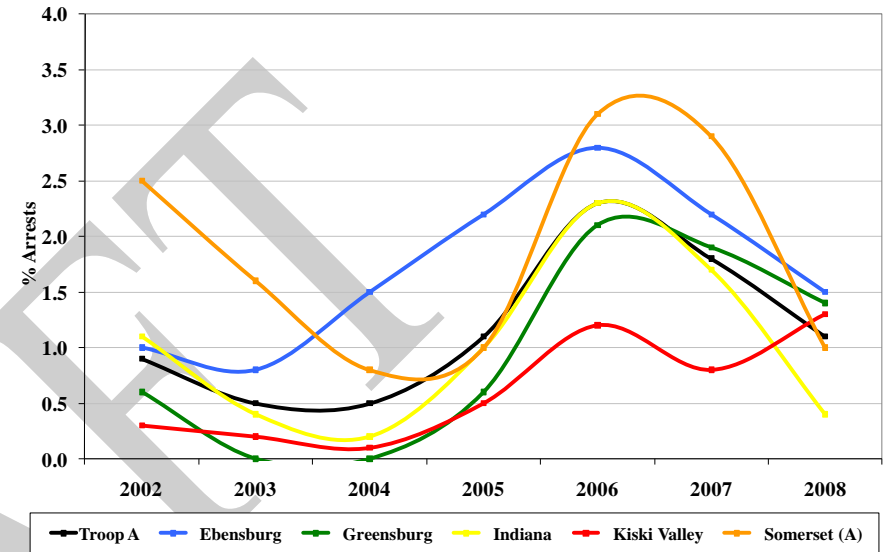


Figure 11:34: Percent of Traffic Stops Resulting in a Citation – Troop A

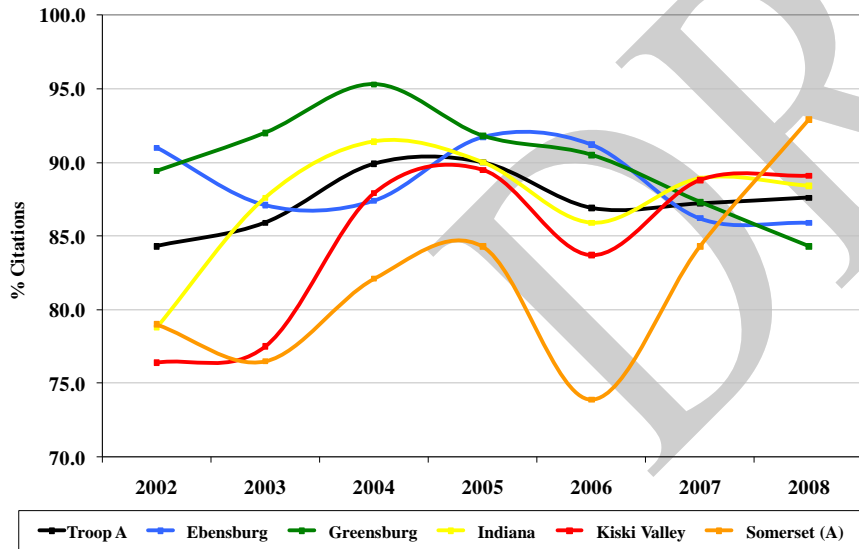


Figure 11:36: Percent of Traffic Stops Resulting in a Search – Troop A

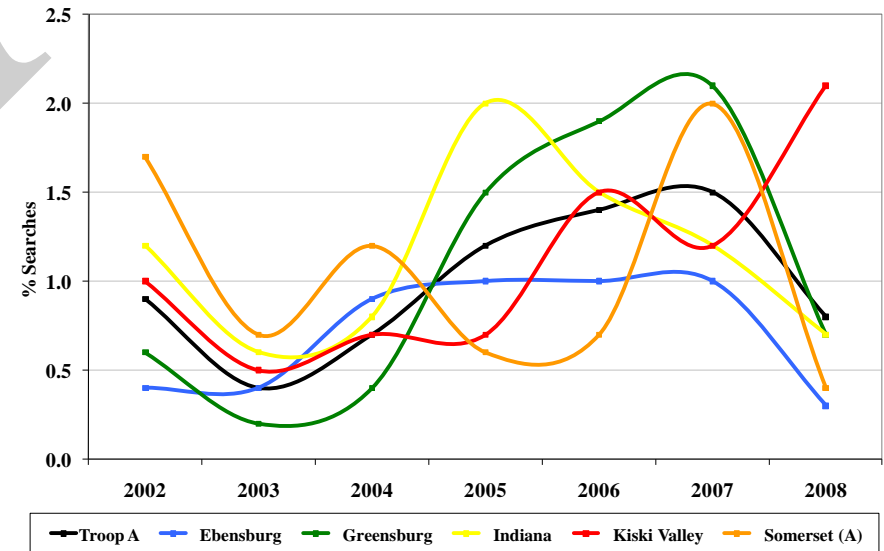


Figure 11:37: Percent of Traffic Stops Resulting in a Warning – Troop G

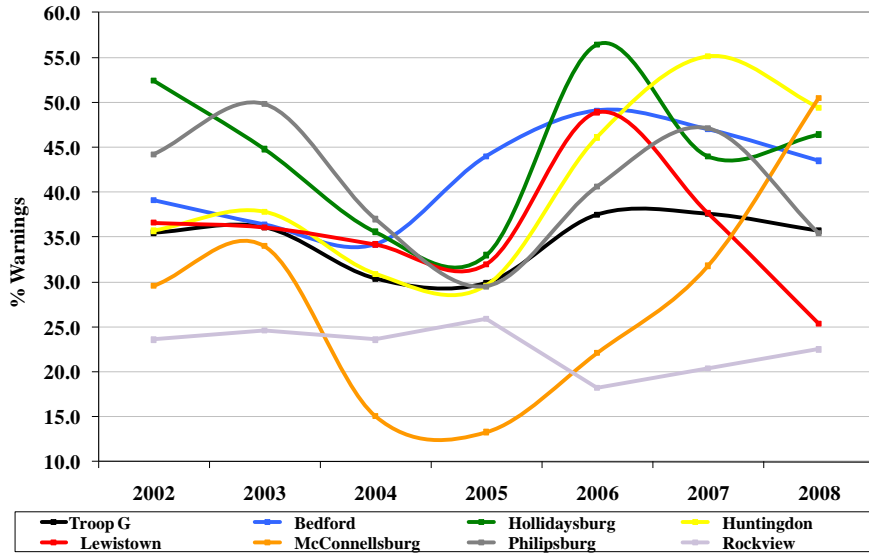


Figure 11:39: Percent of Traffic Stops Resulting in an Arrest – Troop G

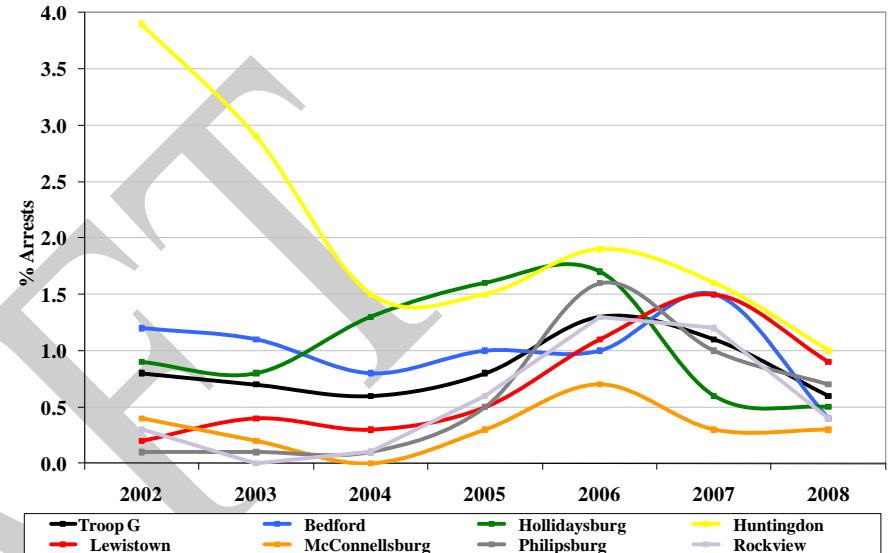


Figure 11:38: Percent of Traffic Stops Resulting in a Citation – Troop G

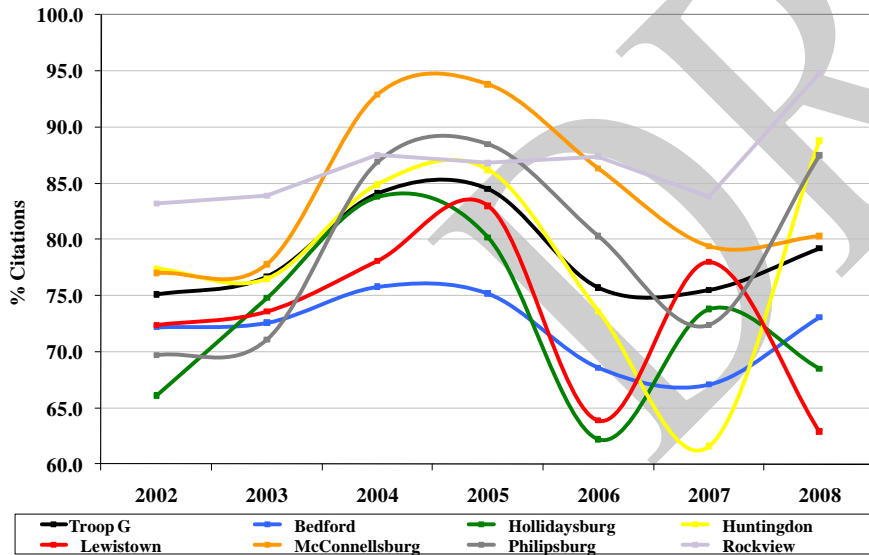


Figure 11:40: Percent of Traffic Stops Resulting in a Search – Troop G

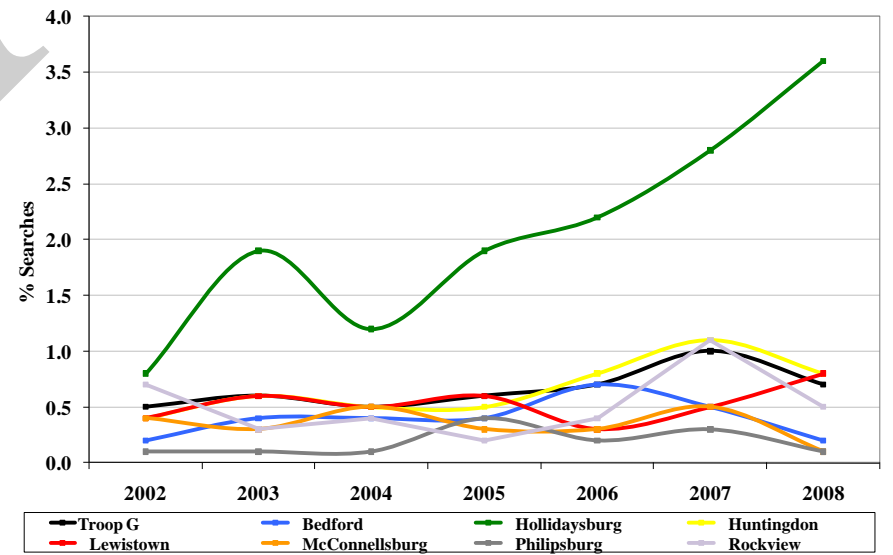


Figure 11:41: Percent of Traffic Stops Resulting in a Warning – Troop H

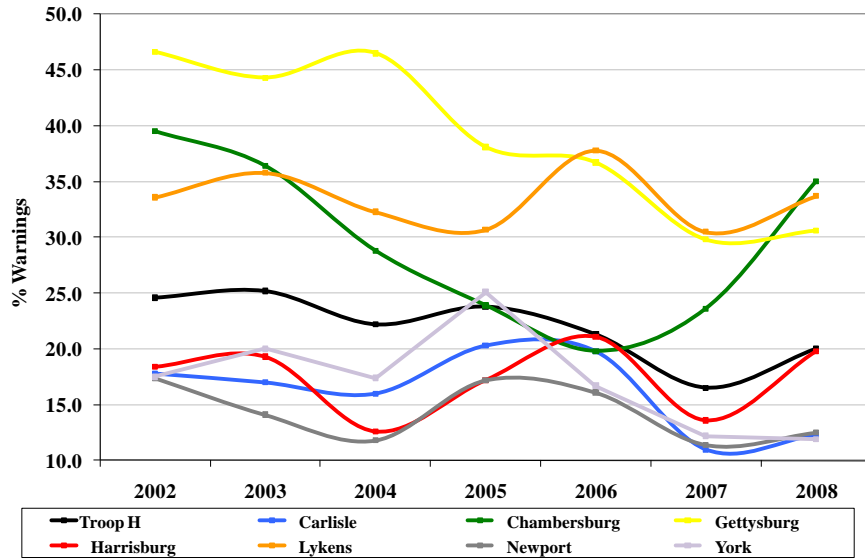


Figure 11:43: Percent of Traffic Stops Resulting in an Arrest – Troop H

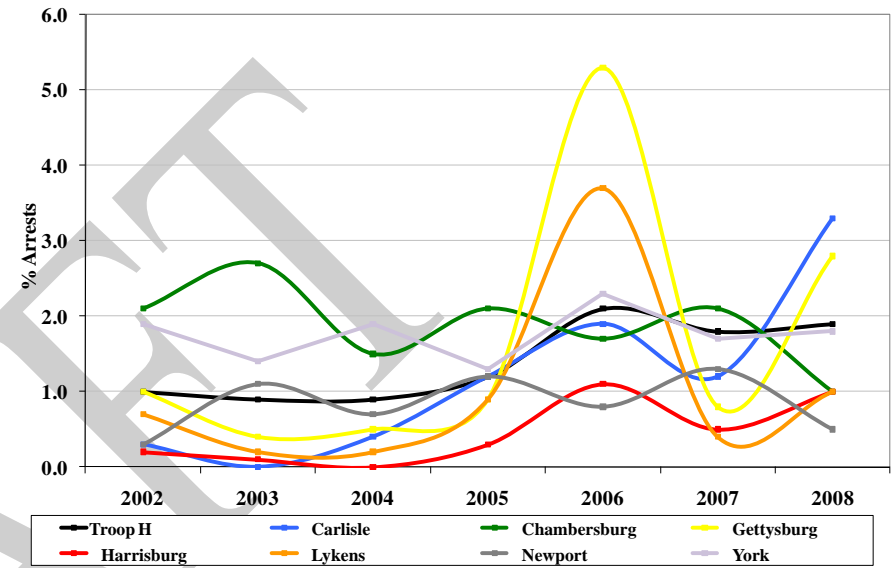


Figure 11:42: Percent of Traffic Stops Resulting in a Citation – Troop H

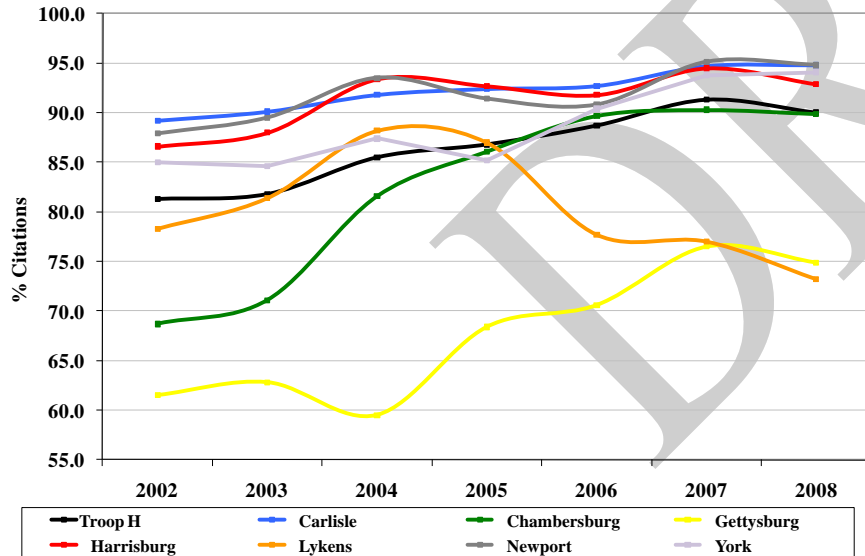


Figure 11:44: Percent of Traffic Stops Resulting in a Search – Troop H

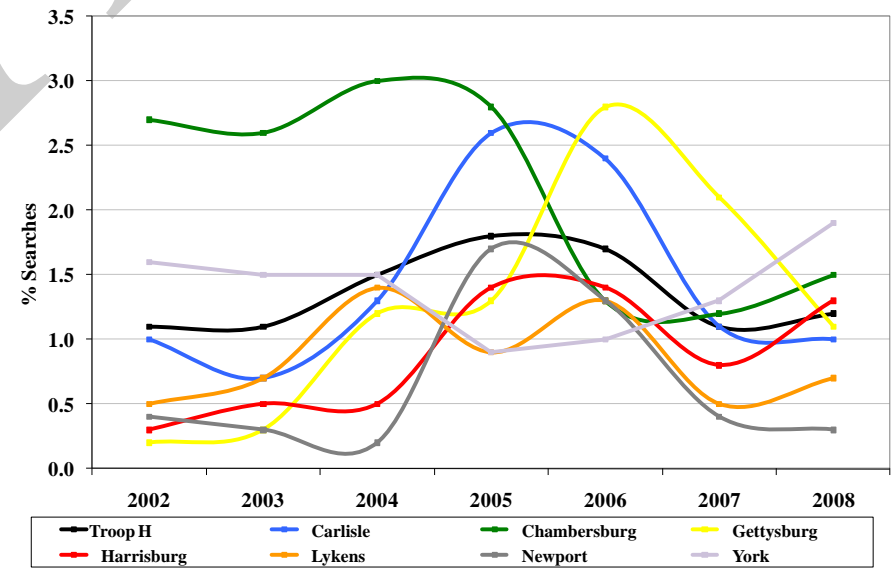


Figure 11:45: Percent of Traffic Stops Resulting in a Warning – Troop C

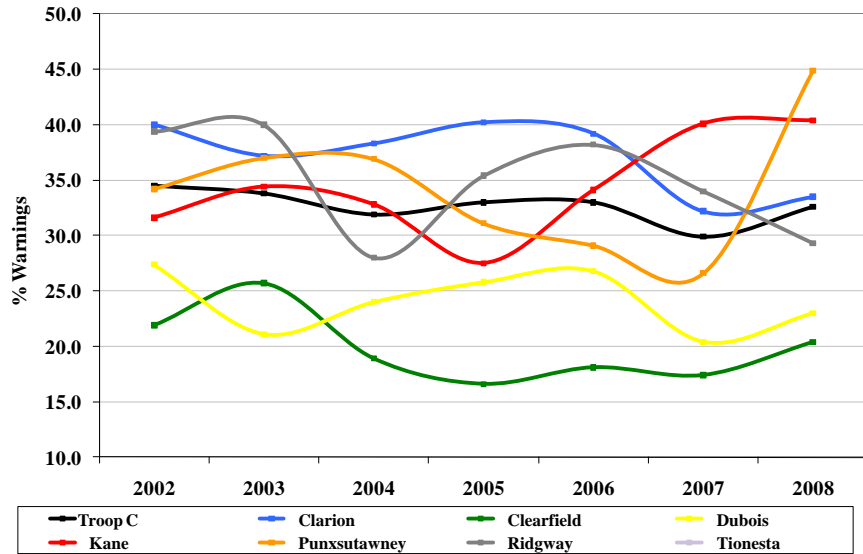


Figure 11:47: Percent of Traffic Stops Resulting in an Arrest – Troop C

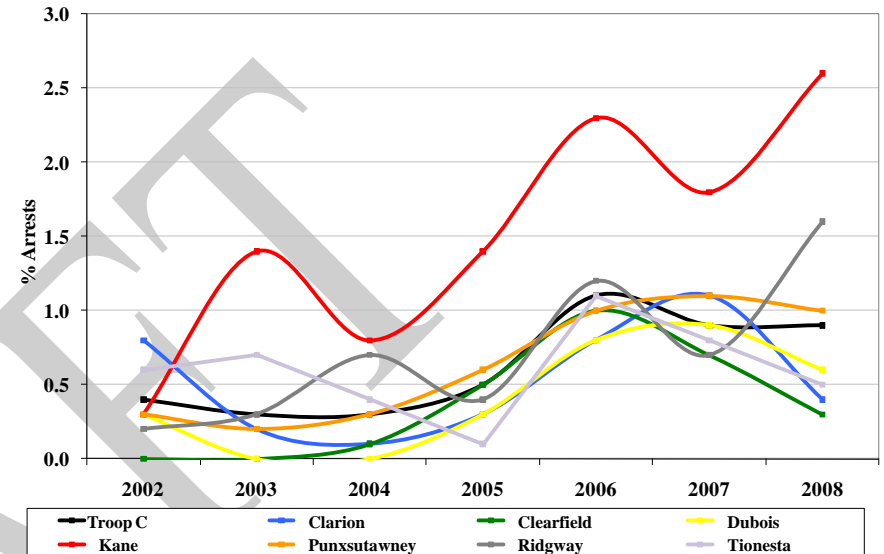


Figure 11:46: Percent of Traffic Stops Resulting in a Citation – Troop C

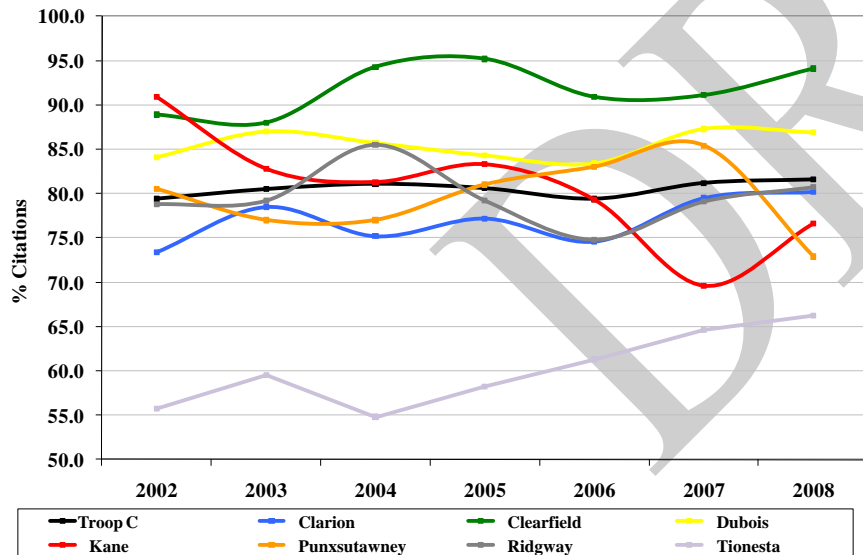


Figure 11:48: Percent of Traffic Stops Resulting in a Search – Troop C

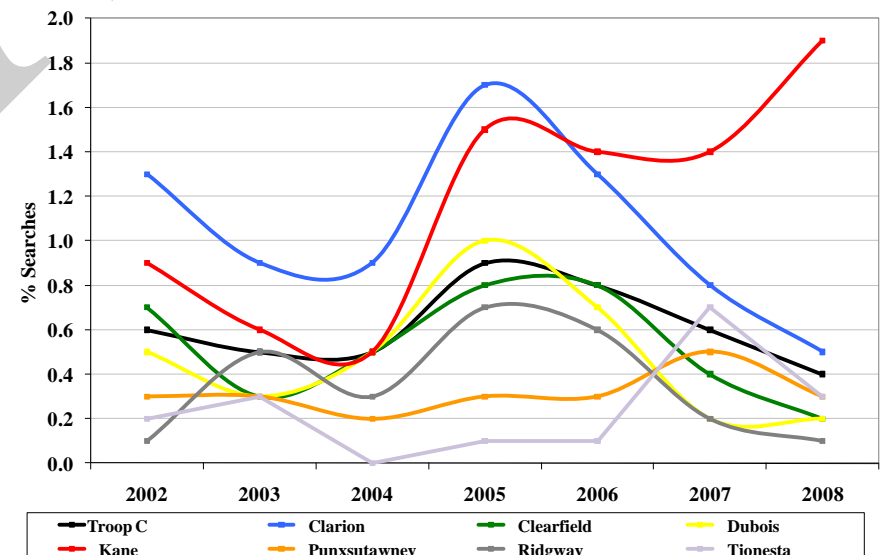


Figure 11:49: Percent of Traffic Stops Resulting in a Warning – Troop D

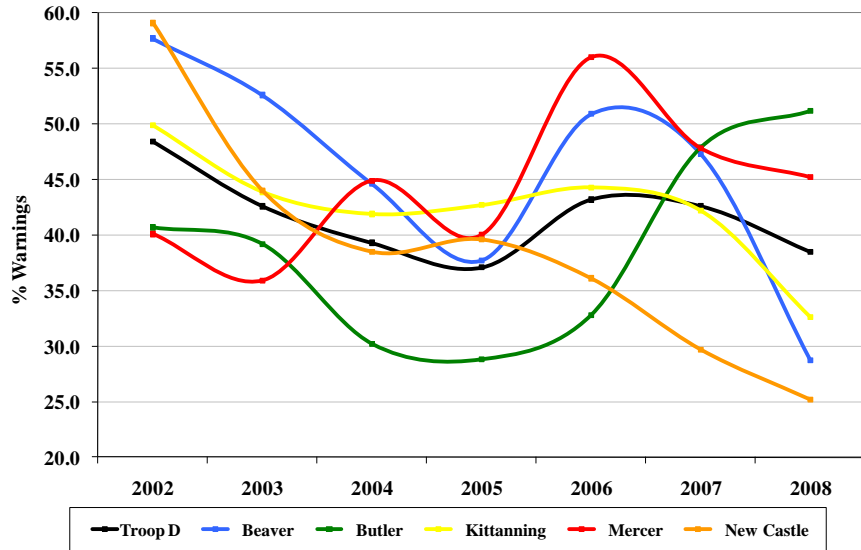


Figure 11:51: Percent of Traffic Stops Resulting in an Arrest – Troop D

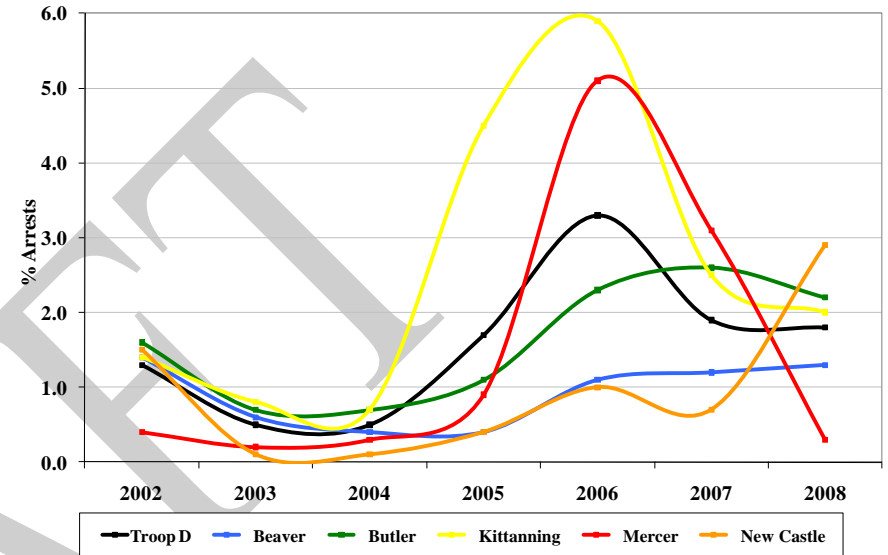


Figure 11:50: Percent of Traffic Stops Resulting in a Citation – Troop D

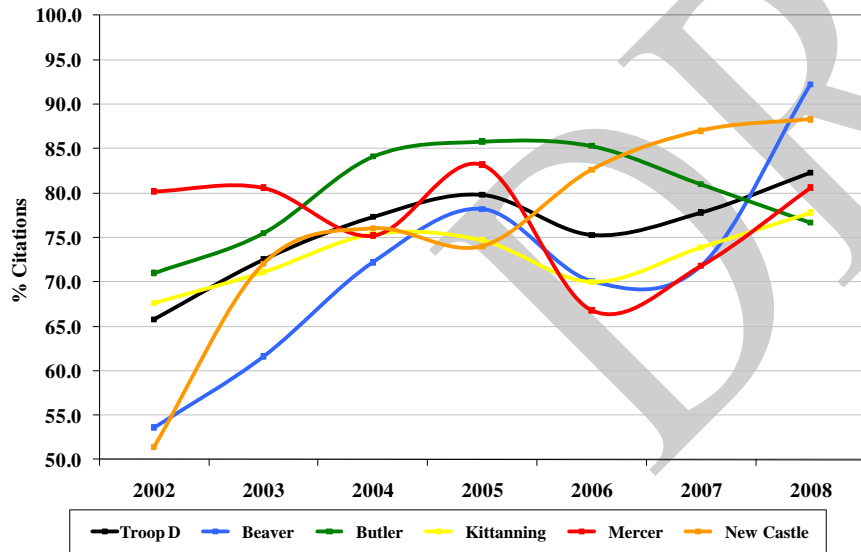


Figure 11:52: Percent of Traffic Stops Resulting in a Search – Troop D

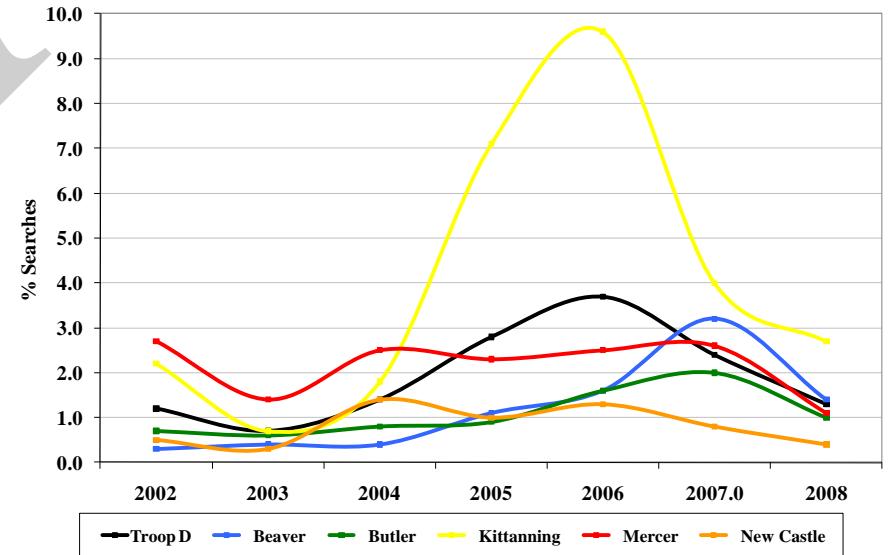


Figure 11:53: Percent of Traffic Stops Resulting in a Warning – Troop E

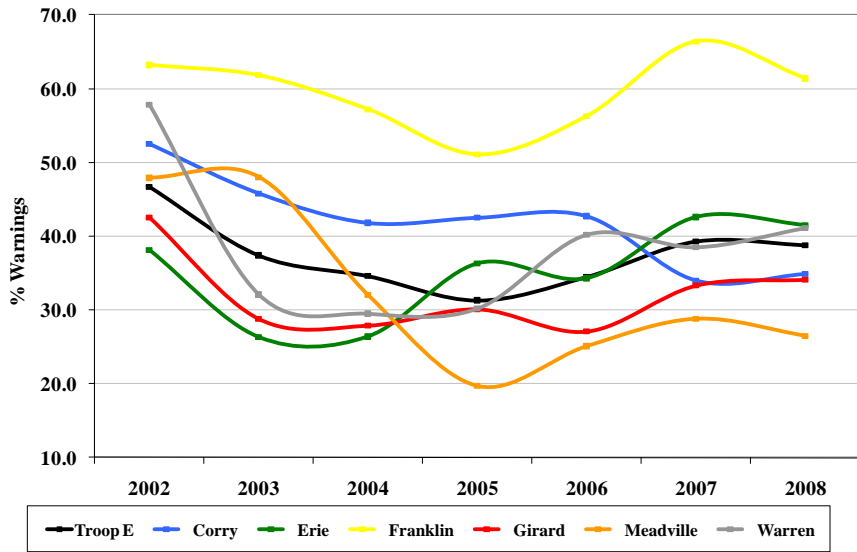


Figure 11:55: Percent of Traffic Stops Resulting in an Arrest – Troop E

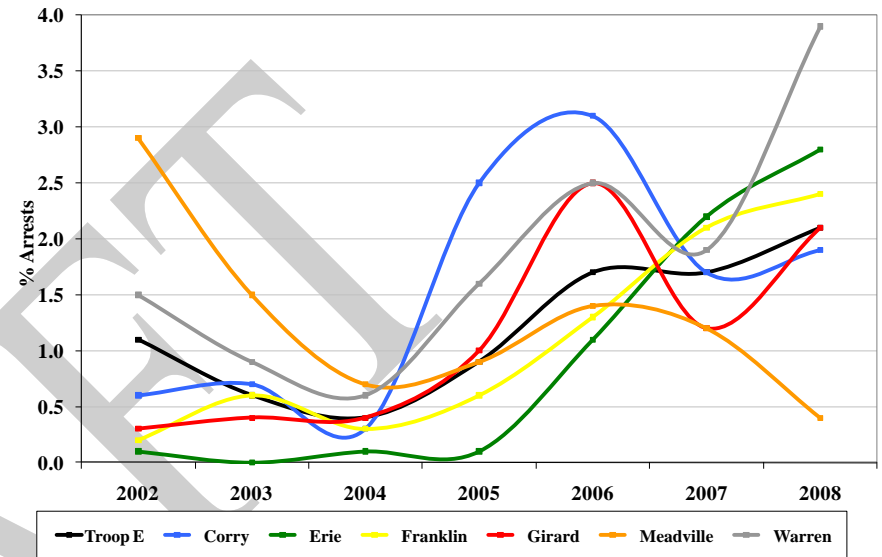


Figure 11:54: Percent of Traffic Stops Resulting in a Citation – Troop E

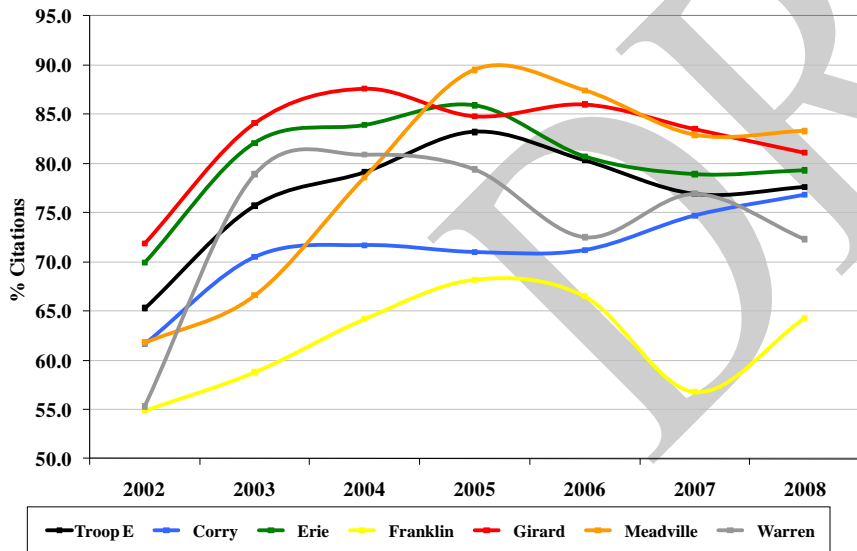


Figure 11:56: Percent of Traffic Stops Resulting in a Search – Troop E

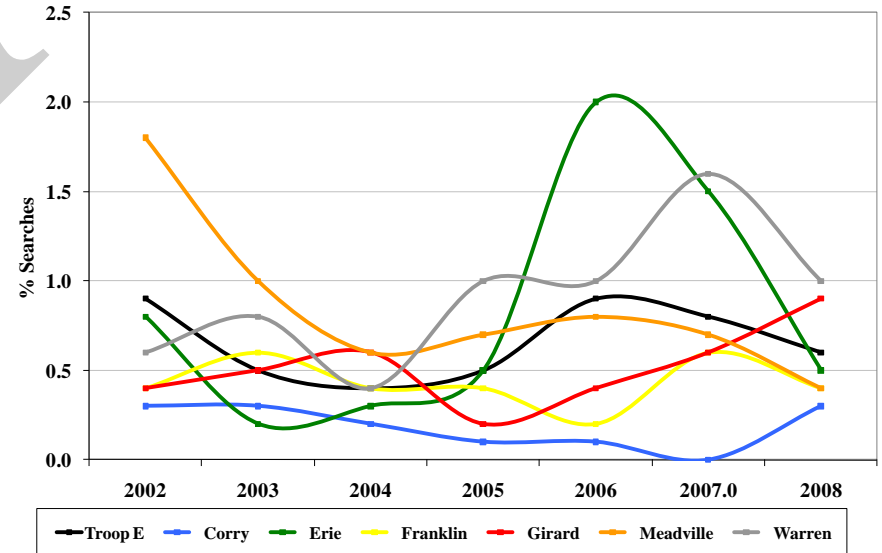


Figure 11:57: Percent of Traffic Stops Resulting in a Warning – Troop B

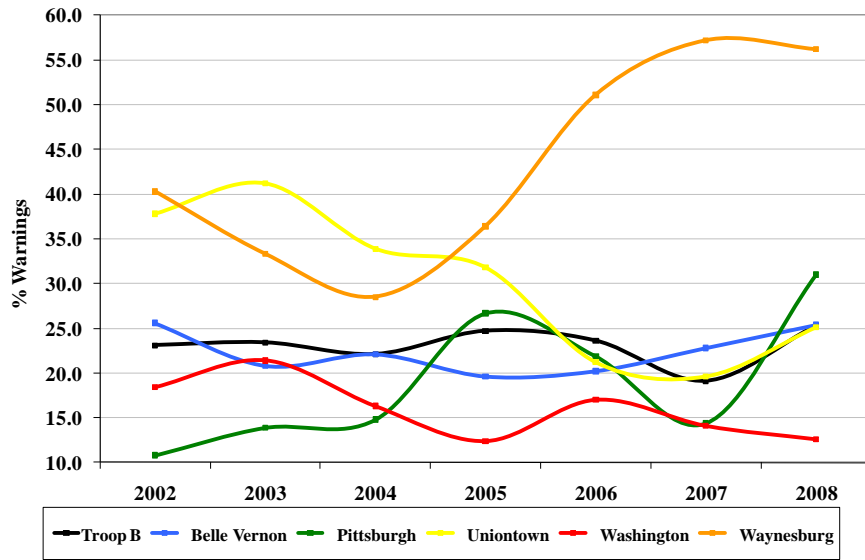


Figure 11:59: Percent of Traffic Stops Resulting in an Arrest – Troop B

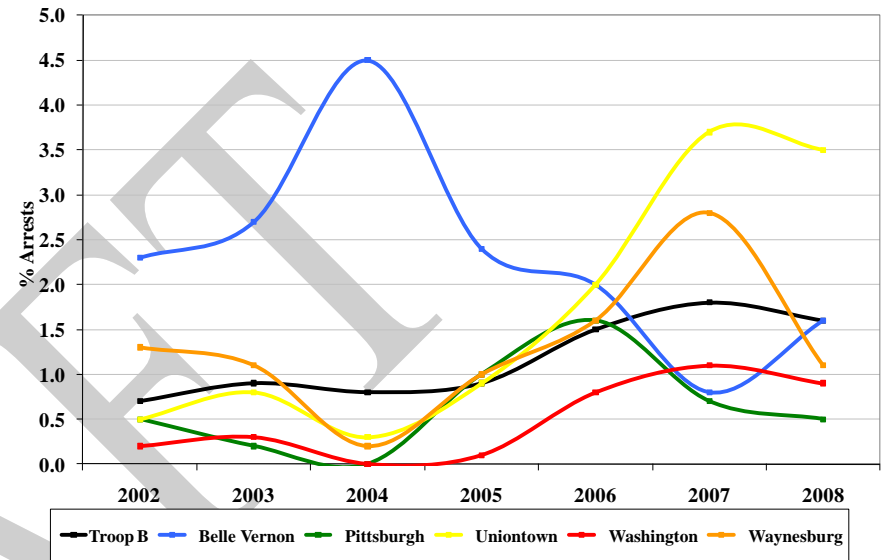


Figure 11:58: Percent of Traffic Stops Resulting in a Citation – Troop B

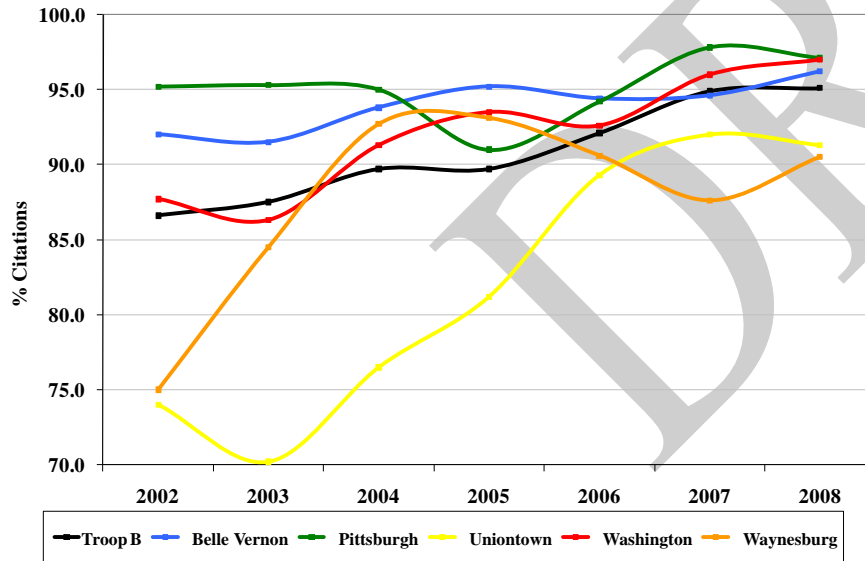


Figure 11:60: Percent of Traffic Stops Resulting in a Search – Troop B

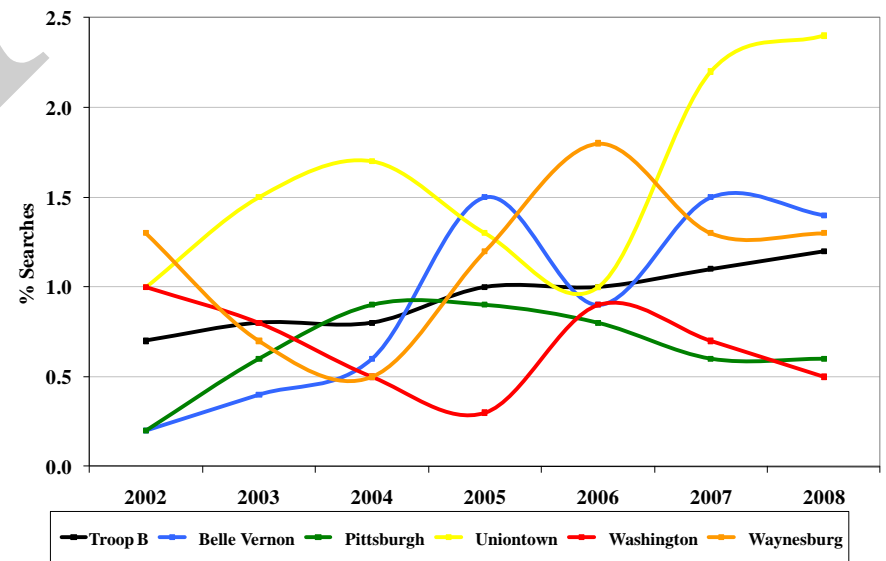


Figure 11:61: Percent of Traffic Stops Resulting in a Warning – Troop T

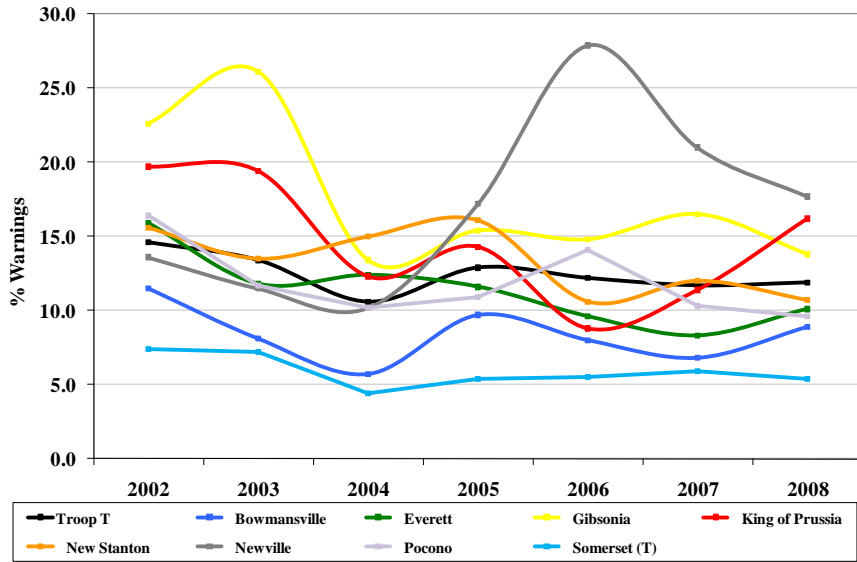


Figure 11:63: Percent of Traffic Stops Resulting in an Arrest – Troop T

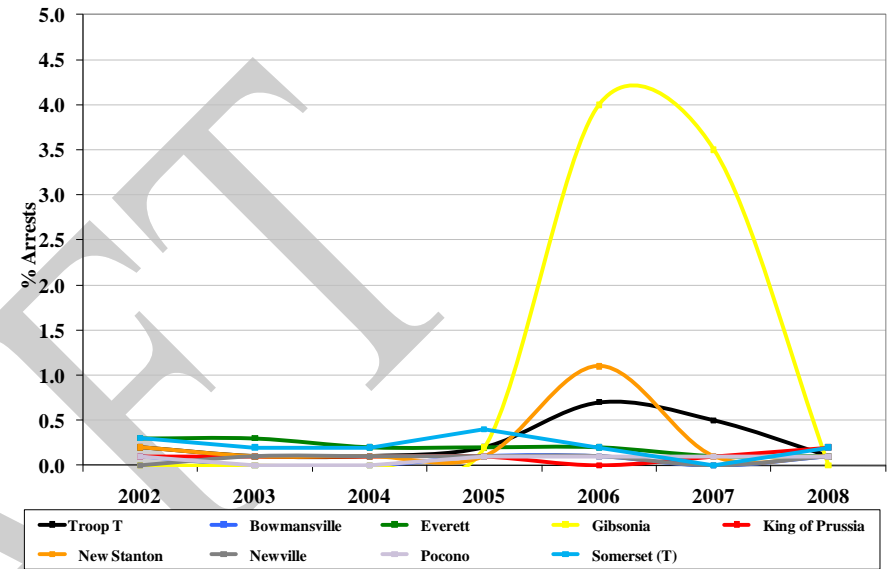


Figure 11:62: Percent of Traffic Stops Resulting in a Citation – Troop T

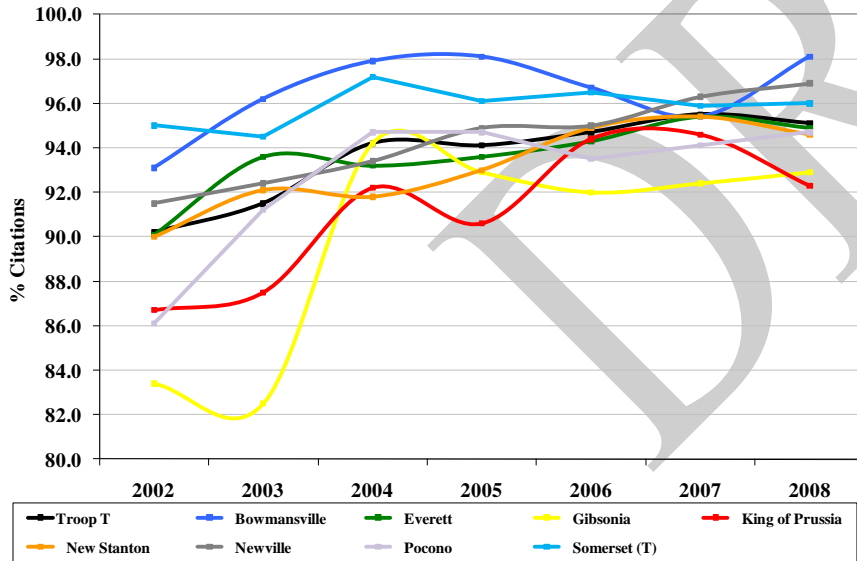


Figure 11:64: Percent of Traffic Stops Resulting in a Search – Troop T

