

DRIVING WHILE BLACK AND BROWN IN VERMONT

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TABLE OF CONTENTS

Executive Summary

- I. Introduction
- II. Racial Disparities in Stop Rates
- III. Racial Disparities in Stops of Male Drivers
- IV. Post-Stop Outcomes
 - A. Ticket and Warning Rates
 - B. Arrest Rates
 - C. Search Rates
 - D. “Hit” Rates
- V. Officer Analysis
- VI. Data Quality
- VII. Discussion of Results and Conclusion

References

LIST OF TABLES AND FIGURES

TABLES

- Table 1. Racial Shares of Police Stops and Population in Vermont, 2015
Table 2. Males as Percentage of Traffic Stops
Table 3. All Agencies: Post-Stop Outcomes, 2015
Table 4. Percentage of Incident Reports with Missing/Unknown Data by Agency

FIGURES

- Figure 1. Likelihood of a Traffic Stop Compared to Share of (Driving) Population by Race
Figure 2. By Agency: Black Males in Percentage of Black Stops Relative to White Males as Percentage of White Stops
Figure 3. Ticket Rates by Race/Ethnicity of Driver, 2015 (All Agencies)
Figure 4. Black, Asian, and Hispanic Ticket Rates Relative to White Ticket Rates by County, 2015
Figure 5. Vermont: Arrest Rates by Race/Ethnicity of Driver, 2015
Figure 6. Black and White Arrest Rates by Agency, 2015
Figure 7. Search Rates by Race/Ethnicity, 2015 (All Agencies)
Figure 8. Ratio of Black to White Search Rates For Three Counties, 2015
Figure 9. Ratio of Black to White Search Rates by Agency
Figure 10. Hit Rates, 2015 (All Agencies)
Figure 11. Hit Rates Resulting in Ticket and/or Arrest for Four Agencies
Figure 12. Blacks as share of stops and population by officer (50+ stops)
Figure 13. By Agency: Percentage of Officers with Black Stop Rates 50% or More of Population

APPENDIX A. Additional Tables

- Table A1. Stop Rates by Agency
Table A2. Demographic Data by County from Two Sources
Table A3. Male Stops by Race/Ethnicity and Agency
Table A4. Traffic Data by Agency
Table A5. Traffic Data by County
Table A6. Statistical Tests of Differences in Proportions on Hit Rates for Four Agencies

APPENDIX B. Data Collection and Analysis

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EXECUTIVE SUMMARY

Vermont is perceived to be a political outlier in the United States. It was the first state to outlaw slavery in 1777. And in our more recent history, Vermont was one of the first states to legalize civil unions and to push (unsuccessfully) for a single payer health care system. When it comes to race relations, it is assumed that Vermont is equally liberal and as result, racial bias towards people who are Black and Hispanic, evident in other parts of the country, should largely be absent here.¹

This paper investigates that assumption. In particular, the authors analyze police traffic stop data to assess the extent, if any, of racial disparities in policing. This task is made possible by legislation passed in the Vermont House that required police departments to begin to collect traffic stop data by race as of September 2014.²

Our goal in this study is to examine whether the treatment of Black and Hispanic drivers differs significantly from that of White and Asian drivers. We compiled the dataset used to conduct this analysis from data sent to us by individual law enforcement agencies. A number of agencies were unable to deliver the full dataset because they lacked administrative support to extract the data and provide it in a form that was analyzable. County sheriff's departments were less likely than municipal police agencies to be able to provide the requisite data. Some agencies collected only a few of the required categories of data, and in cases where essential data were missing, results from these agencies could not be included. Finally, in many cases, the collection of race data was incomplete, such that there are a large number of police stops with missing information. Also, the starting date of data collection varied between agencies.

In total, this report is based on data from 29 police agencies. These include 24 out of 44 municipal police agencies. Because our dataset covers the largest towns and cities in Vermont, however, it represents 78% of the total population policed by all municipal police agencies.³ In addition, the dataset includes three out of 14 county sheriff departments as well as the Vermont State Police and University of Vermont police.

In this study, we conducted analysis at four levels: 1) the state, 2) counties, 3) local police agencies, and 4) within-agency at the officer level where data by officer was provided. At the state level, we evaluated racial disparities for 2015, the only year for which we have complete data for all 29 police agencies. In addition, we evaluated racial disparities by county, based on aggregating the 29 agencies included in our data set, also for 2015. The state and county analyses are of particular relevance in understanding the experience of traffic policing from the perspective of Black and Hispanic drivers in Vermont.

¹ In current usage, *Latinx* is the more appropriate term, with the “x” a substitute for the female or male form of this ethnicity. However, because the police and US Census Bureau commonly use the term Hispanic, we use it in this paper as well.

² During the 2014 Session, the Vermont Legislature passed Act 193, which amended 20 V.S.A. § 2366 to make such race data collection mandatory.

³ This estimate is based on the Census Bureau's American Community Survey data on town/city populations.

Finally, we evaluate results for each agency separately using all years for which data was provided. Agency-level data reveal differences in patterns of policing across the state. Due to the limited data available from some of the smaller agencies, we could only make statistically reliable inferences on racial disparities for a restricted set of indicators. Nevertheless, we provide a full summary of traffic stops and outcomes by race for individual agencies in Appendix A, Table A4.

Our study is based on an analysis of several indicators, no single one of which is evidence of racial bias. Rather, the collective results from all of the indicators provide the basis for our summary assessment. The indicators in this study include: 1) stop rates by race compared to racial shares of the population; 2) males as a share of stops by race, 3) the proportion of drivers by race receiving citations; 4) racial differences in arrest rates; 5) racial differences in search rates; and 6) the percentage of searches that yield contraband (the “hit” rate). Where an agency has provided data, we also offer an agency-level analysis of stop behavior by officer.

Among our main findings are the following:

- *Ticket rates:* At the state level, Black and Hispanic drivers are more likely to receive a citation once stopped than are White or Asian drivers.
- *Arrest rates:* At the state level, the Black arrest rate is almost double the White arrest rate. At the agency level, disparities differ. For example, at the high end, Black drivers stopped by Rutland police are 2.6 times more likely to be arrested than White drivers, subsequent to a discretionary stop (excluding arrests on warrant), and in Williston, 2.3 times more likely.
- *Search and “hit” rates:* At the state level, Black drivers are four times more likely to be searched, subsequent to a stop, than White drivers. Hispanics also experience elevated search rates compared to Whites; they are almost three times more likely to be searched. Asian drivers are less likely to be searched than White (or Black and Hispanic) drivers. In contrast to these search rates, Black and Hispanic drivers are less likely than White or Asian drivers to be found with contraband that leads to a citation or an arrest. Officers would appear to have a lower threshold of evidence for searching vehicles with Black and Hispanic drivers. This suggests a problem of over-searching of Black and Hispanic drivers as compared to a possible under-searching of White and Asian drivers. Variations exist at the agency level. However, only a few agencies have sufficient data to make statistically reliable inferences on racial differences in hit rates. Among those that do (Burlington, Rutland, Vermont State Police), hit rates of Black drivers are lower than of White drivers. Hits that result in arrests—indicative of more serious contraband—occur also at a lower rate for Black drivers than White drivers for all of three of these agencies as well as Williston.
- *Stop rates:* Black and Hispanic drivers are stopped at a higher rate than their share of the population while White and Asian drivers are stopped at rates that are below their population shares. Stop rate disparities are often subject to criticism because researchers typically lack precise measures of the driving population. We have sought to overcome that by using accident data on the race of not-at-fault drivers. Also, most of our indicators of racial disparities are based on post-stop outcomes, which do not rely on estimates of the driving population.

- Male drivers are more likely to be stopped than female drivers, regardless of race/ethnicity. But the racial disparities in male shares of stops are notably large. At the agency level, for example, in Middlebury, among Black drivers stopped, 88% are male, while among White drivers stopped, 62% are male. Overall, Black and Hispanic males comprise a larger share of stopped drivers in their racial/ethnic group than do White males, suggesting a possibility that Black and Hispanic males, in particular, are targets of heightened police scrutiny.
- *Officer stop rates of Black drivers:* Twelve agencies provided traffic stop data by officer, allowing us to calculate within-agency disparities in stop rates. The results indicate that the disparity in Black/White stop rates at the agency level cannot, in general, be attributed to the behavior of just a few officers. The data indicate that this behavior is common to many officers, perhaps suggesting more pervasive cultural norms within agencies that contribute to disparities. Of note, in Brandon Police Department, 67% of officers stop Black drivers at a rate that is 50% greater than their share of the population. A sizeable share of officers in Bennington, Manchester, Middlebury, and Winooski also stop Black drivers at rates higher than expected, given population shares. In addition to disparities in stop rates by race by officer, we also found evidence of variation by officer in the completeness of their legally required data reporting.
- *Data quality:* Missing data is a concern. Some agencies were not able to respond to our request for data. Moreover, many agencies have high rates of missing data in key categories. For example, in St. Albans Police Department, race was not recorded in 29% of stops, and in Addison County Sheriff Department, race was missing in 17% of traffic stop incident reports. Missing data undermines efforts to accurately assess the degree of racial disparities in traffic policing.

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I. INTRODUCTION

Vermont is perceived by many to be a political outlier in the United States. It was the first state to outlaw slavery in 1777. And in our more recent history, Vermont was one of the first states to legalize civil unions and to push (unsuccessfully) for a single payer health care system. When it comes to race relations, it is assumed that Vermont is equally liberal and as result, racial bias towards Blacks and Hispanic, evident in other parts of the country, should be absent here.

To test this hypothesis, our study analyzed police traffic stop data to assess the extent, if any, of racial disparities in policing. This task was made possible by legislation passed in the Vermont House of Representatives that required police departments to begin collecting race data on traffic stops as of September 1, 2014. The legislation states that on or before that date, every state, county, and municipal law enforcement agency is required to collect roadside stop data consisting of the following: 1) age, gender, and race of driver, 2) reason for the stop, 3) type of search conducted, if any, 4) evidence located, if any, and 5) outcome of the stop.

The dataset used to carry out this analysis was compiled by the authors in response to traffic data requests made to individual agencies. Many agencies were unable to provide the full dataset because they lacked administrative support to extract the data and provide it in a form that was analyzable. Some agencies collected only a few of the required categories of data, and in cases where essential data were missing, results from these agencies could not be included. County sheriff's departments were less likely than municipal police agencies to be able to provide the requisite data. Finally, in many cases, the collection of race data was incomplete, such that there are a large number of police stops with missing information.⁴ Moreover, the starting date of data collection varied between agencies, and we have incomplete data for the first half of 2016.

In total, this report is based on data from 29 police agencies. These include 24 out of 44 municipal police agencies. Because our dataset covers the largest towns and cities in Vermont, however, it represents 78% of the total population policed by all municipal police agencies.⁵ In addition, the dataset includes three out of 14 county sheriff departments as well as the Vermont State Police and University of Vermont police.

We conducted four levels of analysis. First, we examined outcomes for the entire state, using data for 2015, because that is the only year for which we have complete data from all 29 agencies. We also grouped agencies by county to assess the extent of racial disparities in policing behavior in 2015. In addition, we evaluated results for each agency separately using data from all years available, and these data span 2010 to 2016. Finally, we analyzed data within-agency by officer for the 12 agencies that provided that data.

We examined several indicators for evidence of racial bias. The collective results from all of our indicators provided the basis for our summary assessment. Our indicators include: 1) stop rates by race compared to racial shares of the (driving) population; 2) male shares of stops by race; 3)

⁴ Appendix B of this report offers recommendations for improving agency-level data collection and management to facilitate future analysis and legal compliance.

⁵ This estimate is based on the Census Bureau's American Community Survey (ACS) data on town/city populations.

the proportion of drivers by race receiving citations versus warnings; 4) racial differences in arrest rates; 5) search rates by race; and 6) the percentage of searches that yield contraband (the “hit” rate). Where an agency has provided data, we also conduct an analysis of officer stop behavior by agency, anonymizing the data where necessary.⁶

Our approach in this analysis was to focus on outcomes that are the result of police discretion—that is, where police were in a position to make independent decisions concerning whom to stop, search, ticket, or arrest. We therefore omitted instances of traffic stops that were externally generated as well as arrests based on a warrant. Our intention in this report was to conduct an analysis that was rigorous, focused, and well reasoned. We present the findings in a straightforward and transparent format that allows for public verification and learning.

II. Racial Disparities in Stop Rates

The race of the driver recorded for any traffic stop is based on officer perception because Vermont driver’s licenses do not include this information. In recording the perceived race of the driver, officers choose amongst the following categories: White, Black, Asian, Native American, and Hispanic.⁷ In order to calculate the rate at which drivers are stopped by race/ethnicity, we compute racial shares of traffic stops and compare these to the corresponding racial shares of the population. We used two sources of estimates of the racial shares of the (driving) population: 1) American Community Survey (ACS) population data by race from the U.S. Census Bureau, and 2) Department of Motor Vehicle (DMV) data on race of not-at-fault drivers from accident reports.⁸ Each of these data sources has its weaknesses and strengths. While the ACS population estimates are based on a sound sampling methodology, they do not capture the *driving* population. In contrast, the DMV data has the potential to provide a reasonable estimate of racial shares of the driving population, but a weakness is that race of not-at-fault drivers is missing in 37% of officers’ accident reports from 2010-16.

Table 1 shows data on total stops where race was recorded by the officer, racial shares of stops, and the racial shares of the population and not-at-fault accidents in 2015 for all agencies combined. (Table A1 in Appendix A gives a list of the agencies in the study and racial stop rates by agency).

Table 1 also summarizes statewide racial disparity indexes, calculated using both of our estimates of the driving population. The **Disparity Index** is the ratio of the racial share of stops divided by

⁶ We have examined police stop behavior in Burlington and the Vermont State Police more in depth in separate reports. Those two recent studies are available from the authors (Seguino and Brooks, 2015a, 2015b). The data used in those two reports are part of this larger dataset.

⁷ Drivers perceived to be Native American are a small share of all stops, and therefore due to data limitations, we focus in this study only on White, Black, Asian, and Hispanic drivers.

⁸ For ACS data, at the agency and county level, we used the most recently available 3-year estimates (2011-13) of racial shares of the population as our comparison with racial shares of stops. We used the ACS 1-year estimate for 2015 as the estimate of the racial share of the state population. The number of Whites is calculated as those that identify as White Alone (from Table CO2003) in the ACS, while Blacks are those who identify as Black Alone or in combination with one or more other races. The number of Asians is similarly estimated, and includes Hawaiians and Pacific Islanders. Estimates of the driving population based on DMV accident data are for 2010-16.

the racial share of the driving population. A Disparity Index with a value of 100% indicates that a group is stopped at a rate that is equal to its share of the population—and thus indicates no disparity. A Disparity Index that is less than 100% indicates a group is stopped at a rate that is lower than its share of the population, and conversely, a Disparity Index greater than 100% indicates a group is stopped at a rate higher than expected, given its share of the population.

The data in Table 1 show that White and Asian drivers are stopped at rates less than their estimated shares of the driving population. For example, White drivers comprise 94.4% of all stopped drivers, whereas the point estimate of their share of the population is 95.1% using the ACS and the point estimate of the driving population is 95.4%, using the DMV not-at-fault accident data. In contrast, Black and Hispanic drivers are over-stopped as compared to their share of the population. While point estimates of the share of Black drivers are 1.5% using the ACS and 1.7% using the DMV no-fault accident data, they are almost 3% of stopped drivers.

Table 1. Racial Shares of Police Stops and Population in Vermont, 2015

	White	Black	Asian	Hispanic	Total Stops (when race is recorded)
Total stops	101,443	3,146	1,743	1,082	107,497
Shares of stops	94.4%	2.9%	1.6%	1.0%	
Share of population	95.1%	1.6%	1.8%	NA	
Share of accidents	95.2%	1.8%	2.2%	0.6%	
Disparity Index – ACS	99%	193%	89%	NA	
Disparity Index – DMV data	99%	161%	74%	179%	

Notes: For Hispanic drivers, we only provide the share of stops and accidents, but not the population share because the ACS and Vermont police do not use comparable methods of classifying drivers as Hispanic. The share of accidents is for not-at-fault drivers from the DMV.

The Disparity Index is highest for Black and Hispanic drivers. If we think of our disparity index estimates as bounds, Black drivers are estimated to be stopped at a rate that is between 161% to 193% of their population share and Hispanics are estimated to be stopped at a rate that is 179% of their share of the population. Both of these groups, in other words, are over-stopped relative to what would be expected, given their estimated shares of the driving population.

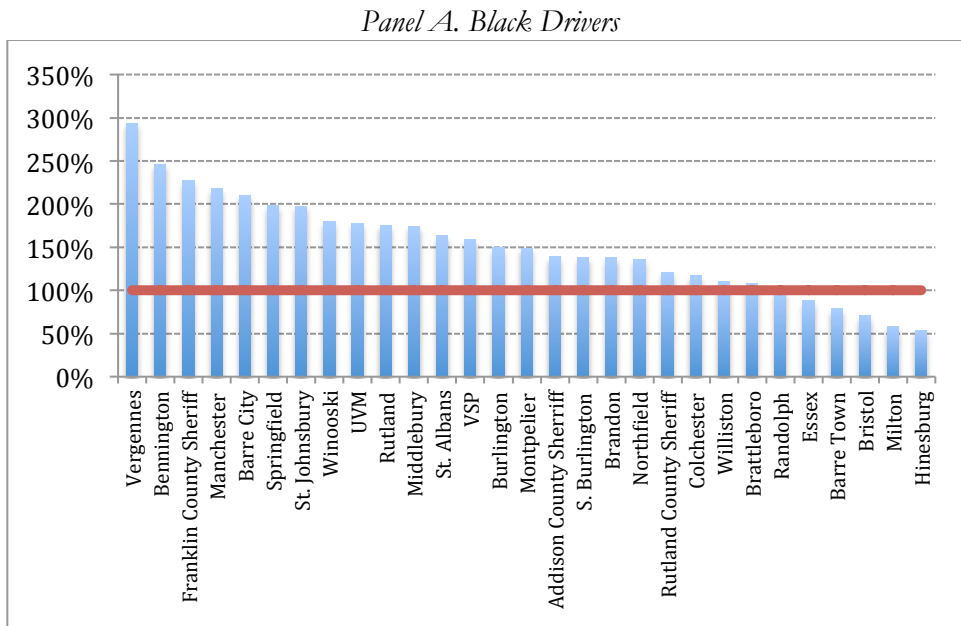
Figure 1 shows detailed stop data by agency for Black and Asian drivers as compared to the county share of the population. In other words, the columns represent the **Disparity Index** by agency. (Hispanics are omitted due to data limitations). The red line in the figure represents parity—that is, it indicates that the Black (Asian) share of stops is equal to the Black (Asian) share of the driving population. The agencies are ranked from highest disparity to lowest, left to right. We use county data as our measure of the driving population for several reasons. First, driving populations are transient across city/town lines. Second, sample sizes for some towns are too small to make reliable estimates. *Panel A*⁹ provides data on the Black share of drivers compared to

⁹ Table A2 in Appendix A shows racial shares of county populations from the ACS and DMV. The number of Blacks, Asians, and Hispanics in the DMV dataset is too low in all but a few counties to make reliable estimates. For

the county driving population. In all but a few towns, the Black stop rate exceeds the Black share of the driving population. At the extreme is Vergennes, where Black drivers are stopped at a rate that is almost 3 times their estimated share of the county population, followed by Bennington, where the Black share of stops is almost 2.5 times greater than their share of the county population.

Data analysis shows that police tend to treat Asian drivers more favorably than Black drivers (*Panel B* in Figure 1). The likelihood of Asian drivers being stopped is below their population share in all but a few agencies. A comparison of *Panels A* and *B* in Figure 1 demonstrates the importance of analyzing minority groups separately.

Figure 1. Likelihood of a Traffic Stop Compared to Share of Population by Race

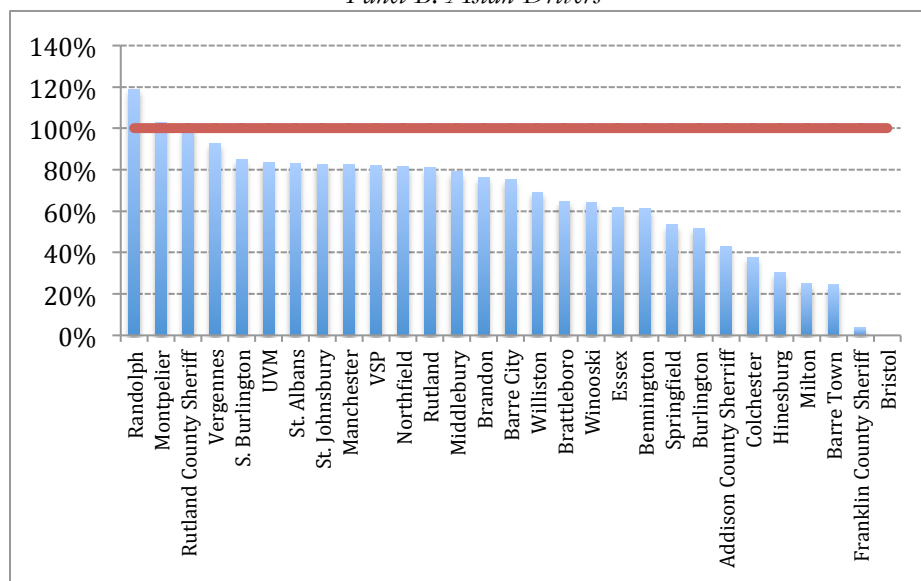


Note: The vertical bars represent the share of Black drivers stopped by agency divided by the county Black share of the driving population, using ACS estimates for all agencies except those in Bennington, Chittenden, and Rutland counties where we use DMV estimates. Also, for Winooski and Burlington, we use city population shares from the 2011-13 ACS, because of the larger Black and Asian populations in these cities, producing a more conservative estimate of stop disparities.¹⁰ VSP is Vermont State Police. UVM is University of Vermont. Estimates are based on all available data for each agency, typically from September 2014 - January 2016, although for some agencies, we have several months of 2016 data and some data for prior years.

those counties that do have sufficient data (20 or more for each racial group), we use the DMV estimates of Black shares if they are higher than ACS estimates in order to produce conservative estimates of racial disparities.

¹⁰ DMV data might have offered a better estimate of the driving population in these municipalities, but in the case of Winooski, over 40% of accident reports were missing race of driver and in Burlington, 32% were missing this data. It should be noted that Black and Asian population shares, using DMV data, are lower than the ACS data, confirming that our estimates of driving disparities in these two cities are conservative.

Panel B. Asian Drivers



III. Racial Disparities in Stops of Male Drivers

The public debate concerning racial disparities in policing, and the criminal justice system more generally, point especially to the disparate treatment of Black and Hispanic men.¹¹ For that reason, it is useful to examine Vermont traffic stop data to identify differences by race and gender. To do this, we compared the male share of traffic stops by race. In the first row of Table 2, we report statewide results for 2015, the only year for which we have complete data from all agencies. We find that males in all racial groups were stopped at a rate higher than female drivers (the male share is above 50% in all cases). However, a larger share of males who are Black or Hispanic are stopped than are White males as compared to females in the respective racial/ethnic groups. The share of stopped Asian drivers who are male is also higher than the corresponding White rate, although the disparity is smaller. In the remainder of Table 2, we summarize the race and gender data by agency and in those rows, we include all the years of data we have available for each agency and exclude those proportions where we lack adequate data.¹²

Black-White disparities in male share of stops are compared in Figure 2, where the vertical bars represent the male shares of Black stops relative to White male shares of White stops. A ratio of 100% indicates there is no disparity, while a ratio greater than 100% indicates that Black males comprise a larger share of stops in their racial group (relative to females in their group) than White males. Agency Black male/white male shares of stops are ranked from highest to lowest, left to right.

As the data in Figure 2 show, Black male drivers are proportionally more likely to be stopped than White male drivers (as a share of all drivers in the racial/ethnic group). More specifically, in all but one of the 23 agencies for which we have data, male drivers who are Black are stopped at a

¹¹ See, for example, Michelle Alexander's *The New Jim Crow* (2010).

¹² Raw numbers of male stops by agency are in Table A3 in Appendix A.

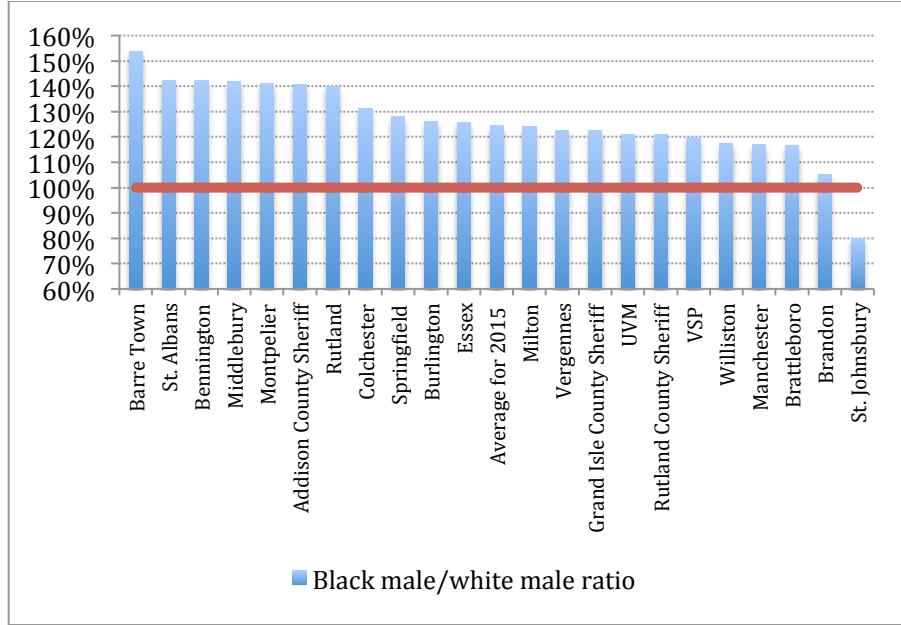
proportionally higher rate than males who are identified as White (and those differences are statistically significant).

Table 2. Males as Percentage of Traffic Stops

Agency	White	Black	Asian	Hispanic
Average for 2015	61.6%	76.7%**	69.4%**	75.1%**
Addison County Sheriff	63.5%	89.4%**	51.1%	65.0%
Barre City	61.0%			
Barre Town	62.8%	96.6%**		
Bennington	59.8%	85.0%**	60.9%	78.3%**
Brandon	63.3%	66.7%		
Brattleboro	55.3%	64.5%*	59.1%	66.7%
Bristol	62.5%			
Burlington	60.1%	75.8%**	70.0%**	67.1%
Colchester	59.2%	77.7%**	58.5%	56.5%
Essex	60.0%	75.4%**	63.2%	73.3%
Grand Isle County Sheriff	63.1%	77.3%		86.2%
Hinesburg	61.1%			
Manchester	60.6%	70.8%	72.2%	80.1%
Middlebury	62.0%	87.9%*	69.6%	
Milton	61.7%	76.5%*	68.0%	48.0%
Montpelier	59.6%	84.0%**	53.2%	83.3%*
Northfield	61.6%			
Randolph	65.7%			
Rutland	58.4%	81.8%**	79.6%**	82.2%**
Rutland County Sheriff	59.0%	71.4%	75.0%	71.1%
Springfield	59.0%	75.5%**	76.0%*	69.1%
St. Albans	57.0%	81.1%**	74.2%	
St. Johnsbury	60.0%	47.9%*	69.7%	
UVM	58.8%	71.2%**	67.4%*	
Vergennes	65.2%	80.0%*	70.6%	81.4%*
VSP	63.3%	75.8%**	70.3%**	77.3%**
Williston	65.2%	80.0%**	70.6%	81.4%**

Note: We omit those cases where the racial group experienced fewer than 20 stops or gender was missing. Data coverage differs depending on the time span of the data made available to the authors. In most cases, the data are from September 2014 through December 2015. Asterisks indicate that the differences between Black, Asian, or Hispanic male share of stops, on the one hand, and White male share of stops, on the other, are statistically significant. A difference (minority – white) with a z-score greater than 3 is shown with ** and a single asterisk is used if the difference has a z-score greater than 2.

Figure 2. By Agency: Black Males as Percentage of Black Stops Relative to White Males as Percentage of White Stops



IV. Post-Stop Outcomes

Police officers and troopers frequently state they do not know the race of a driver before a stop. Once a driver has been stopped, however, the police are in a position to form an assessment of the driver’s race. Therefore, post-stop outcomes are of significant interest. The data in Table 3 summarize post-stop outcomes for 2015 for all agencies in the state. We first discuss ticket and warning rates, then arrest, search, and “hit” rates (the percentage of searches that result in contraband being found). An * identifies the rates for Black, Asian, or Hispanic drivers that are statistically different from the rates calculated for White drivers (with a z-score greater than 2). The statistically significant differences are also shown in bold print.

Table 3. Post-Stop Outcomes, 2015 (All Agencies)

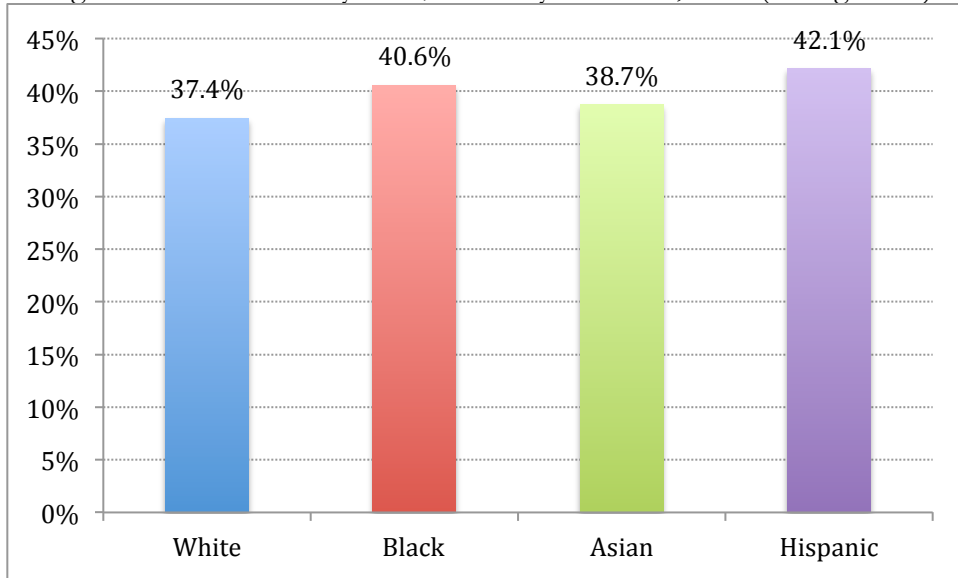
	White	Black	Asian	Hispanic
<i>Warning rate</i>	62.0%	58.9%*	60.6%	56.4%*
<i>Ticket rate</i>	37.4%	40.6%*	38.7%	42.1%*
<i>Arrest rate</i>	1.2%	2.1%*	1.1%	1.3%
<i>Search rates</i>				
Discretionary search rate	0.9%	3.6%*	0.5%	2.6%*
<i>Hit rates (as a % of searches)</i>				
Hit rates (includes all outcomes)	79.4%	72.8%	88.9%	75.0%
Hit rates (outcome = arrest/ticket)	67.0%	56.1%*	88.9%	60.7%
Hit rates (outcome = arrest only)	15.0%	12.3%		

Note: These data are for externally generated stops only. Discretionary searches refer to those that the officer has the sole discretion to initiate. Searches based on a warrant require a judge’s approval and are not included here. Where proportions are missing, the sample sizes are too small for statistical analysis.

A. Ticket and Warning Rates

One way to evaluate possible racial differences in post-stop outcomes is to compare the percentage of drivers receiving a citation (ticket) versus a warning. The data in Table 3 and in Figure 3 summarize these data, and show that **Black and Hispanic drivers are more likely to receive tickets than White drivers. Not surprisingly, then, Whites were more likely to receive warnings than other groups** (Table 3).

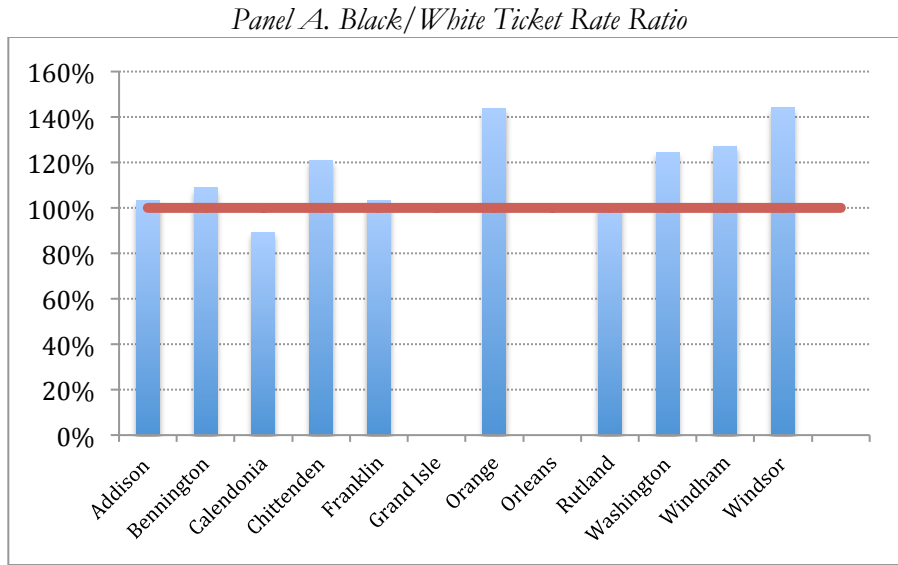
Figure 3. Ticket Rates by Race/Ethnicity of Driver, 2015 (All Agencies)



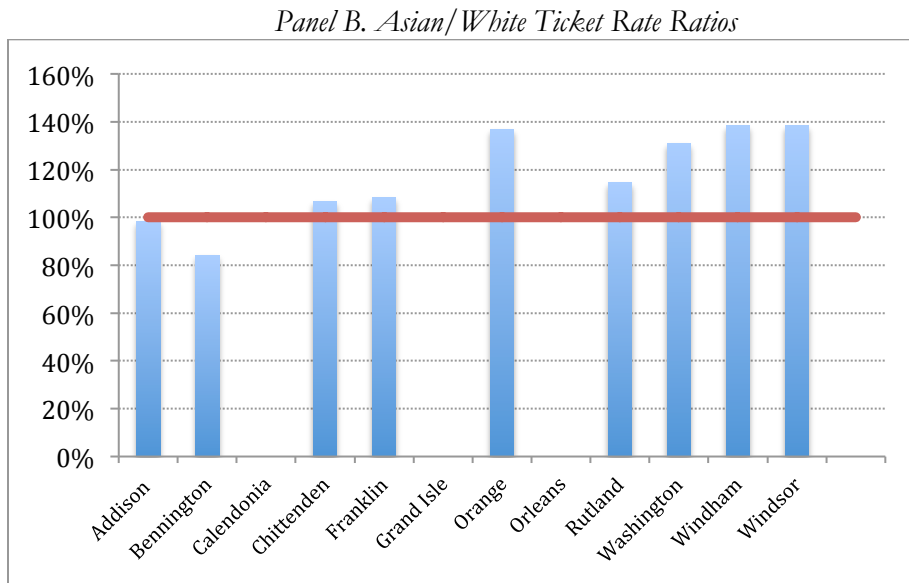
Ticket disparities differ by county and agency, however. Figure 4 shows the ratio of the percentage of Black and Asian drivers compared to White drivers receiving a ticket by county. If minority drivers were ticketed at the same rate as White drivers, that ratio would be 100% (the red line in Figure 4, both panels). In five counties—Chittenden, Orange, Washington, Windham and Windsor—the higher ticketing rate for Black drivers relative to White drivers is statistically significant (*Panel A* in Figure 4).

Panel B in Figure 4 shows Asian/White ticket rate disparities. Fewer counties have adequate data for analysis, but for those that do, almost all reflect disparities in ticket rates. More specifically, Asian drivers are ticketed at a statistically significant higher rate than White drivers in Orange, Washington, Windham and Windsor counties (z-scores greater than 2).

Figure 4. Black and Asian Ticket Rates Relative to White Ticket Rates by County, 2015



Note: These data include VSP barracks with the exception of stops by VSP Headquarters 1 and 2. The data for each barracks is distributed to the county in which the barracks is located. Where the Black count is less than 20, counties are omitted.



Data limitations restrict our ability to analyze ticket rate disparities for Hispanics and Whites at the county level. As more data become available, such analysis will be feasible. Nevertheless, we have calculated ticket rates by agency and county for all racial groups and these can be found in Appendix A, Tables A4 and A5.

B. Arrest Rates

As the data in Table 3 and Figure 5 (below) show, Black drivers in Vermont are more likely to be arrested after a stop than any other racial/ethnic group. In 2015, using statewide data, the Black arrest rate was almost twice the White arrest rate (2.1% for Black drivers compared to 1.2% for White drivers).

The number of arrests of Black, Asian, and Hispanic drivers by individual agency is too low in most agencies to make reliable statistical inferences. Therefore, we show in Figure 6 arrest rates only for four agencies. In this case, the data are for all years available, and the number of observations is large enough (albeit just barely in the case of Rutland) to make comparisons of Black to White drivers. The differences in the arrest rates are statistically significant in Rutland, VSP, and Williston. The difference is not statistically different in the case of Burlington (as we also reported in Seguin and Brooks 2016a).

Figure 5. Vermont: Arrest Rates by Race/Ethnicity of Driver, 2015

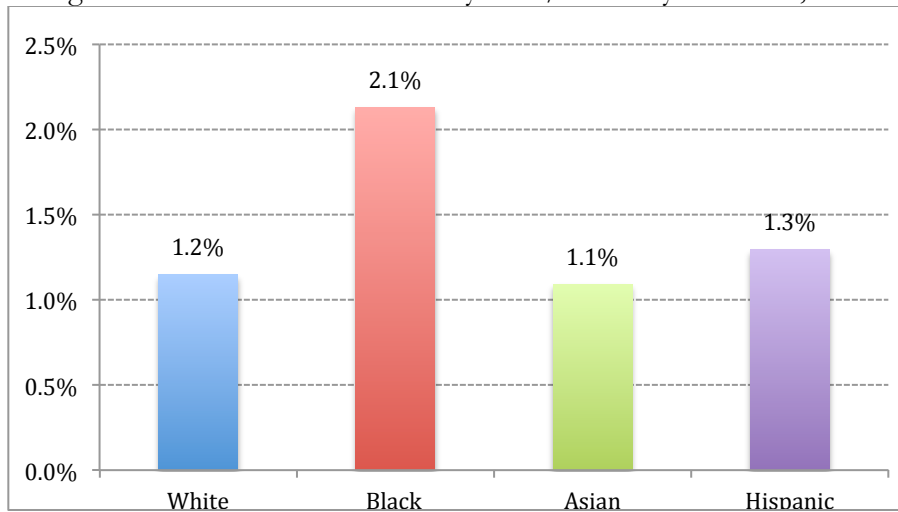
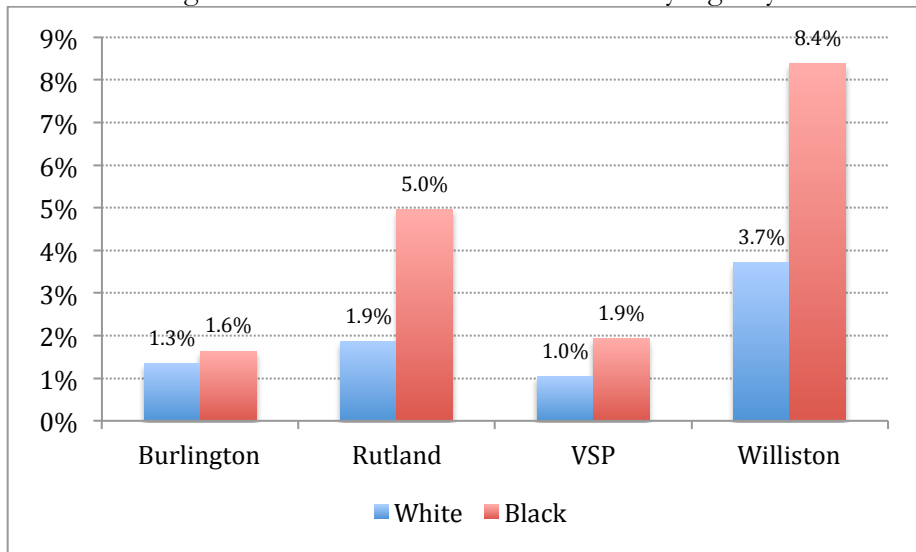


Figure 6. Black and White Arrest Rates by Agency



C. Search Rates

Police incident reports provide information on searches based on three criteria: 1) probable cause, 2) reasonable suspicion (a lower bar of evidence than probable cause), and 3) warrants. A search based on a warrant typically results from an instance in which an officer requests but does not obtain consent, then impounding the vehicle and seeking a warrant from a judge.¹³

We focus here on discretionary searches although the inclusion of searches based on a warrant would not substantially alter our results.¹⁴ As the data in Table 3 and Figure 7 indicate, in 2015 in Vermont, the search rate of Black drivers was 3.6%, a rate that is 4 times that of White drivers.¹⁵ The search rate of drivers that police perceived to be Hispanic was also very high at 2.6%. Asian search rates are lower than of any other racial/ethnic group—60% of the rate at which White drivers are searched. In contrast, Black and Hispanic drivers are 360% and 260% more likely to be searched than White drivers, respectively. **Asians comprise a larger share of the population than Blacks (1.8% compared to 1.6%, according to ACS data), but Vermont police searched Black drivers at a rate that was 7 times the Asian search rate.**

Figure 7. Search Rates by Race/Ethnicity, 2015 (All Agencies)

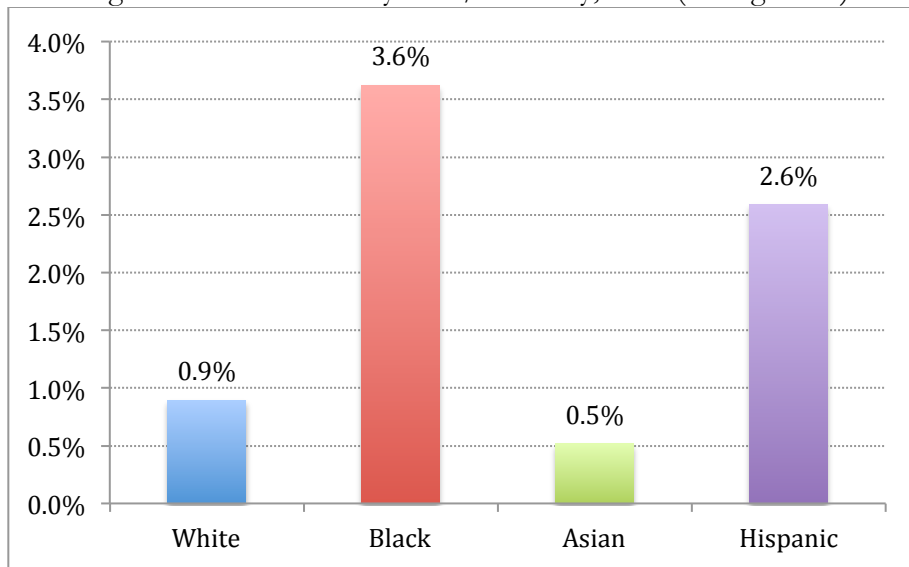


Figure 8 presents data on racial disparities in search rates for three counties—Chittenden, Rutland, and Bennington—for the year 2015. The differences in search rates are statistically significant with z-scores greater than 3 in all three cases.

¹³ Searches based on a warrant are not entirely discretionary since a judge must grant the warrant although such requests are rarely denied.

¹⁴ In the entire dataset, searches on warrant totaled 328. Of those, 10% were of Black drivers, more than 5 times their driving population share. This in itself is noteworthy and bears additional research.

¹⁵ We report agency arrest, search, and hit numbers and rates by agency in Table A4 and by county in Table A5, both in Appendix A. Caution should be used in interpreting these results. That is because in some cases, there is too little data to make reliable statistical inferences. As more data becomes available (for example, using 3 years of data), it will be possible to make statistically reliable inferences about agency arrest, search, and hit rates, even for the smaller agencies.

Figure 8. Ratio of Black to White Search Rates For Three Counties, 2015

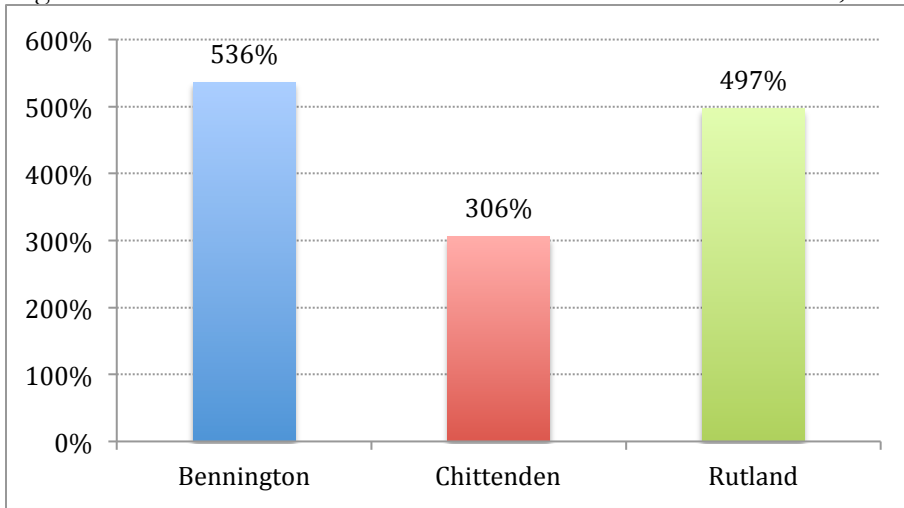
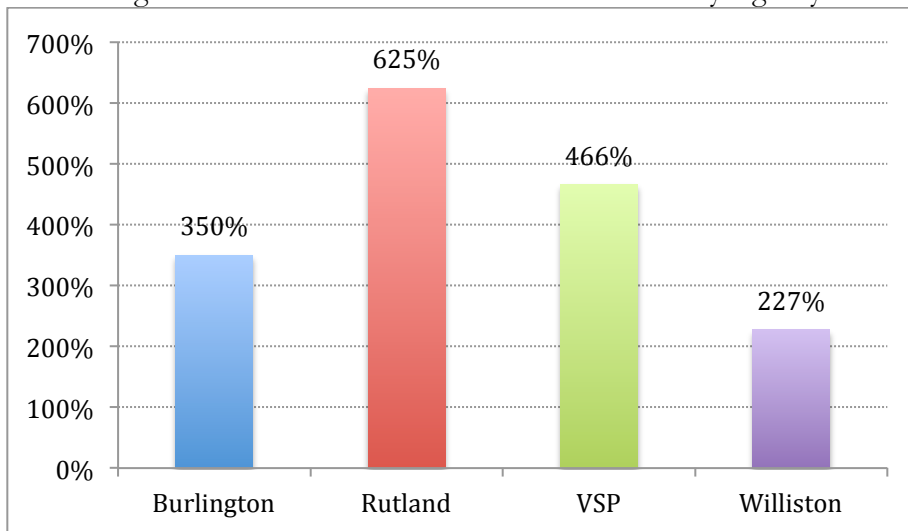


Figure 9 presents data on racial disparities in search rates for four agencies—Burlington, Rutland, Vermont State Police (VSP), and Williston. **The agency with the greatest disparity is Rutland, where Black drivers are searched at a rate that is more than 6 times that of White drivers.** With the exception of VSP, there were too few searches of Asians and Hispanics to report those search rates at either the county or the municipal level.¹⁶

Figure 9. Ratio of Black to White Search Rates by Agency



D. Contraband and “Hit” Rates

A key method for detecting racial bias in policing is the evaluation of differences in the percentage of searches in which contraband is found (in the jargon of researchers, this is called

¹⁶ The Asian/White search rate ratio at the VSP is 80.4%, indicating that Asian drivers are roughly 20% less likely to be searched than White drivers. In contrast, the Hispanic/White search rate ratio is 406.3%. Thus, Asian drivers are the least likely racial/ethnic group to be searched by VSP, while Hispanics are searched at a rate slightly below that of Blacks relative to Whites.

the *hit rate*). In the absence of racial bias, officers would be expected to pursue a search strategy that maximizes the number of successful searches, defined as searches that yield contraband. In that case, one would expect the hit rates to be the same across racial/ethnic groups, although the search rates might differ. If, however, racial bias plays a role in influencing the decision to search (if, for example, officers have a lower threshold of evidence for one group of drivers as compared to another), the hit rate for minority drivers (e.g., Black or Hispanic drivers) would be lower than for White drivers. Another way to view this is that minority hit rates that are lower than White hit rates are an indication that police are over-searching minority drivers and/or under-searching White drivers.

The data provided on hit rates only indicate whether contraband was found or not, but offer no information on what the nature or quantity of the contraband is. To get at this, we examined hit rates in two ways. First, we calculated hit rates only in those cases where a ticket is issued or the driver is arrested (or both). Thus, we ignored those hits where only a warning is issued. The rationale for excluding hits that result in warnings is that the contraband found is likely to have been of a relatively insignificant amount or quality. For example, an underage driver with cigarettes and/or drivers with small amounts of marijuana may only receive warnings. (All three types of hit rates by agency are given in Tables A4 and A5 in the appendix, however). Second, we calculated the hit rate for searches that resulted in an arrest. An arrest subsequent to a search is consistent with contraband that is of a more serious nature or quantity.

Taking the above considerations about contraband into account, Figure 10 shows both hit rates by race for all agencies in 2015. Hit rates that resulted in arrests are reported only for Black and White drivers, due to data size size limitations for Asians and Hispanics. We can, however, report on hit rates that result in either a citation and/or an arrest for all four racial/ethnic groups. It is notable that in that case, **hit rates are lowest for Blacks and Hispanics, the two racial/ethnic groups with the highest search rates. Indeed, the highest hit rate, 89%, is for Asian drivers. This is the group least likely to be searched (Figure 7). The White hit rate is 67%, compared to 56% and 61% for Black and Hispanic searched drivers, respectively.** As noted in Table 3, the only statistically significant difference in hit rates is between White and Black drivers when we count outcomes that are both tickets and/or arrests. **Searched drivers who are Black are less likely to be found with contraband that results in a ticket or arrest.**

Limiting hit rates to only those searches that result in an arrest obviously reduces the hit rate. When warnings and tickets are excluded (Figure 10), the White hit rate falls to 15%, while the Black hit rate falls to 12%, again, lower than the White rate, but not statistically significant at the state level.

Only four agencies have enough hit rate data on which to base statistical inferences—Burlington, Rutland, VSP, and Williston.¹⁷ Data for hits in searches of White and Black drivers that result in a citation and/or arrest are shown in Figure 11. All White-Black differences in hit rates are statistically significant with z-scores that exceed 2.0 with the exception of Williston. That said,

¹⁷ Individual agency hit rates are shown in Table A4, however, revealing a number of instances in which White hit rates exceed those of Black drivers, and thus, it will be important to monitor hit rates at the agency level as more data become available. There is insufficient county-level data because our analysis uses only data for 2015, whereas at the agency level, we use all years of data available.

Williston’s White-Black hit rate differences for all outcomes as well as arrests only are both statistically significant.¹⁸

Figure 10. Hit Rates, 2015 (All Agencies)

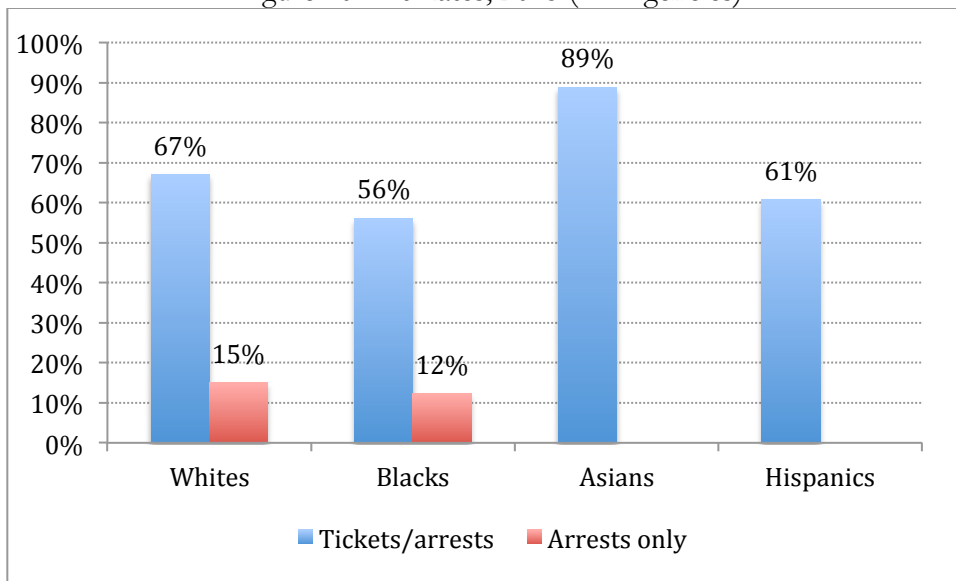
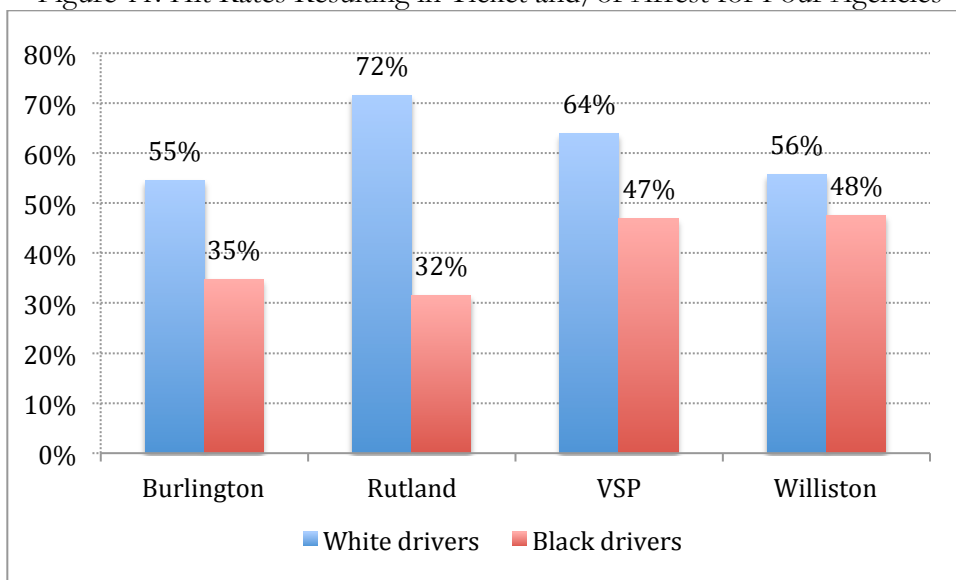


Figure 11. Hit Rates Resulting in Ticket and/or Arrest for Four Agencies



Note: See Table A4 for each agency’s years of coverage, which vary, depending on the data made available to the authors.

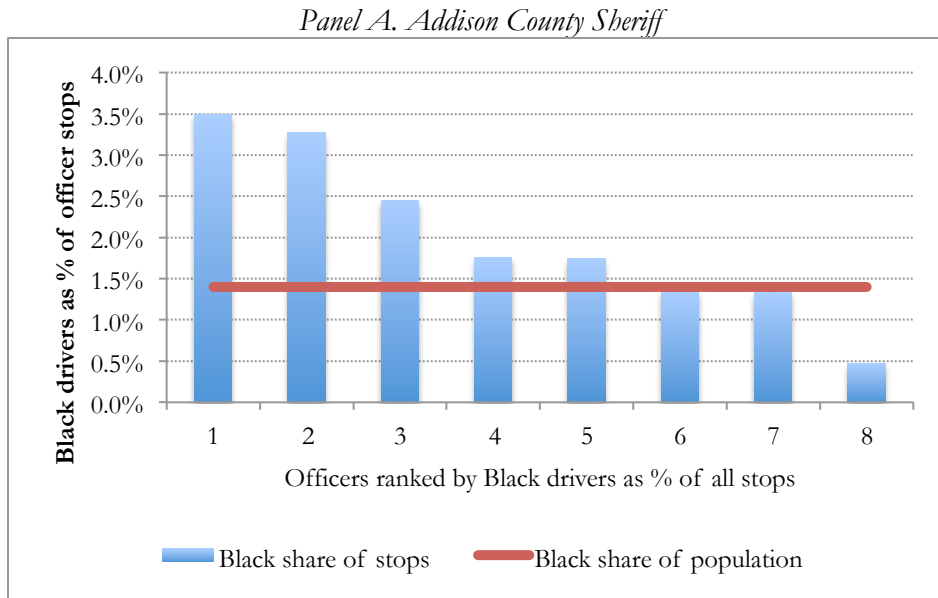
¹⁸ See Table A6 in Appendix A for results of statistical tests of differences of proportion for all four agencies. White-Black differences in hit rates that result in any outcome—a warning, ticket, or arrests—were statistically significant in all four cases as were hit rates that resulted in an arrest. Only VSP had enough data to conduct statistical tests of differences in White-Hispanic hit rate differences. See Seguino and Brooks (2015a) for more details on those tests. As those results show, White hit rates were higher than Hispanic hit rates and the differences were statistically significant with $p < 0.01$.

V. Officer analysis

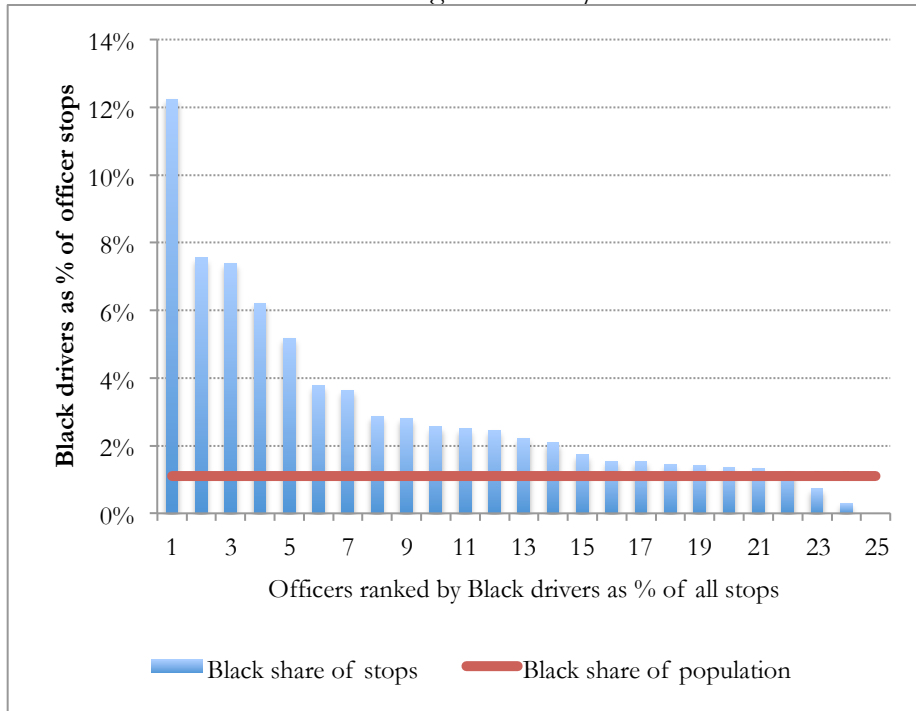
We also analyzed data on officer stop rates by agency. Our goal was to examine the degree to which racial disparities in traffic stops were widespread within an agency or concentrated among a few officers. These patterns hold lessons for the agencies themselves in devising strategies to address racial disparities in traffic policing.

Figure 12 presents stop rates by officer for those agencies that provided data. The red line represents the Black share of the population, based on ACS data or DMV data, whichever is higher, assuming enough data on which to base estimates. We restricted our sample to those officers who had stopped at least 50 vehicles during the period for which we have data. The purpose of this was to avoid erroneous conclusions by including those officers who may only occasionally stop vehicles. Stop rates above the red line reflect over-stopping of Black drivers relative to their share of the population. As can be seen from the figures in *Panels A-K* of Figure 12, at the agency level there is considerable variation in Black stop rates. In most cases, a majority of agency-level officer stop rates exceeded the Black share of the population.

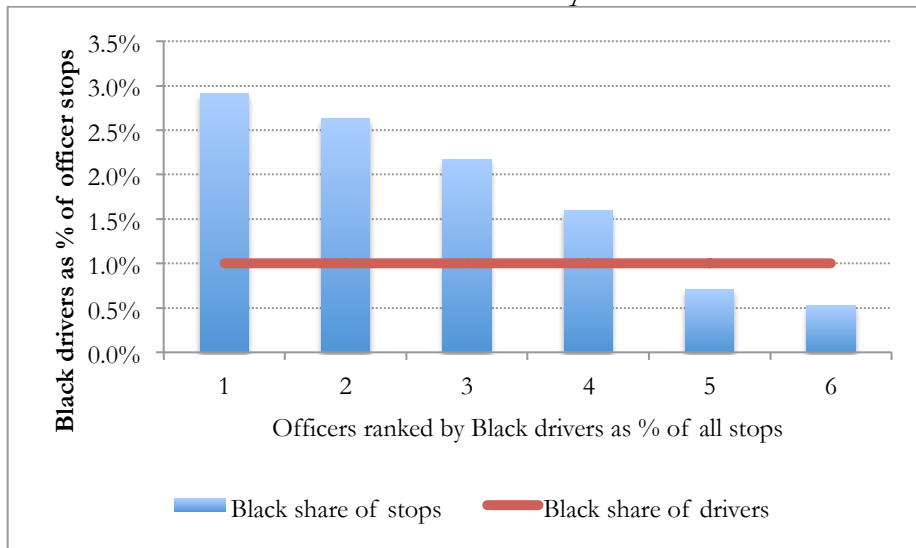
Figure 12. Blacks as Share of Stops and Population by Officer (50+ stops)



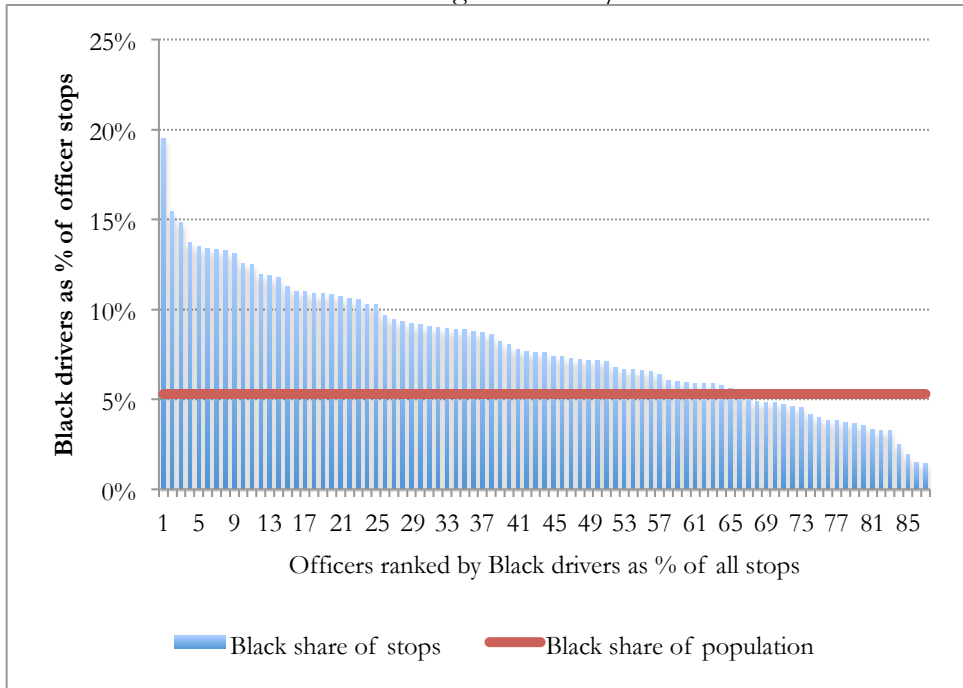
Panel B. Bennington Police Department



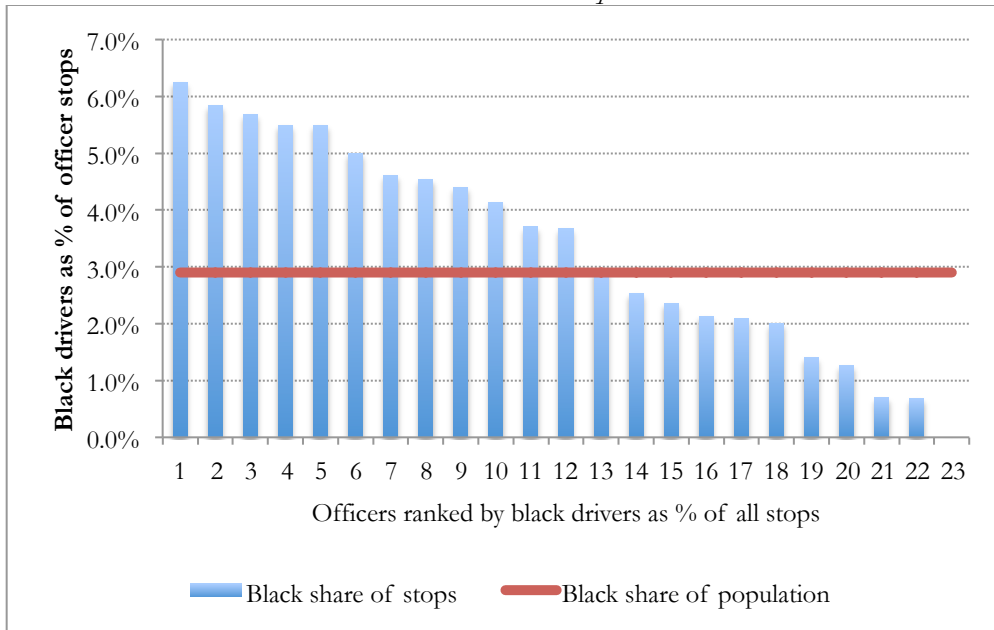
Panel C. Brandon Police Department



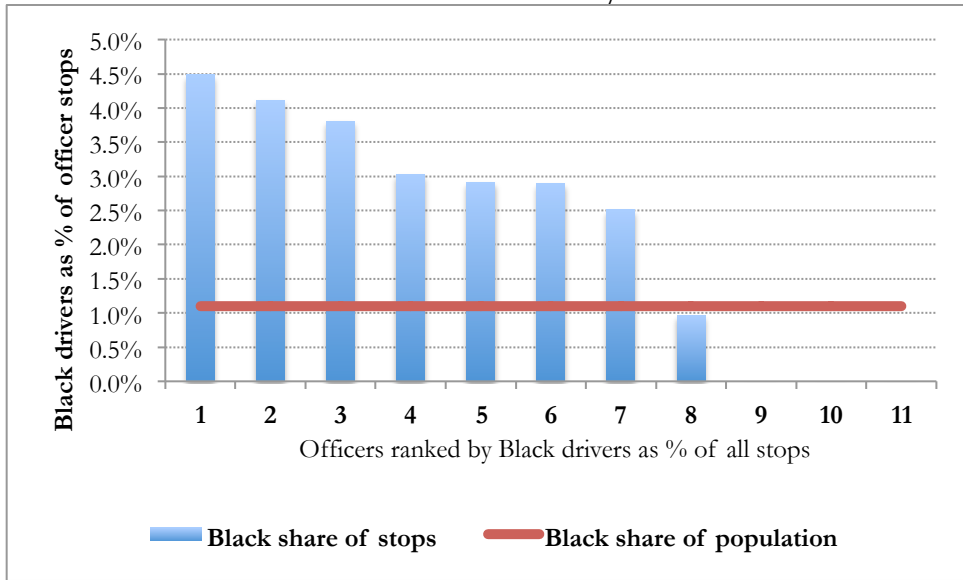
Panel D. Burlington Police Department



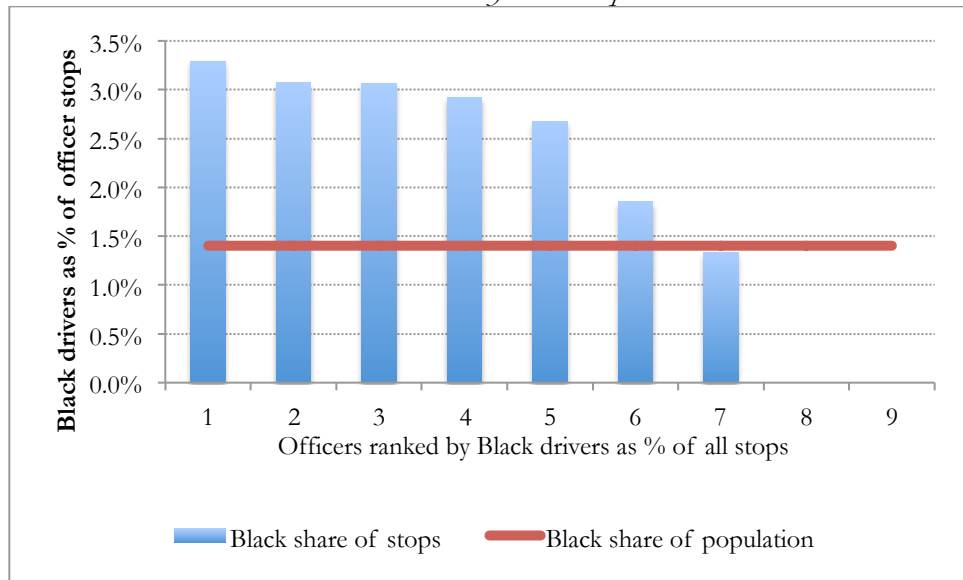
Panel E. Essex Police Department



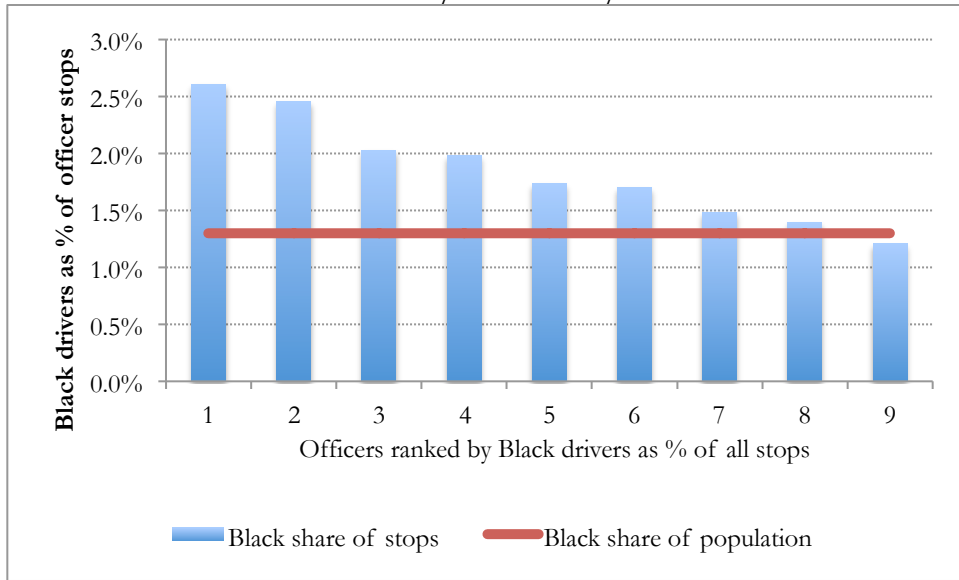
Panel F. Manchester Police Department



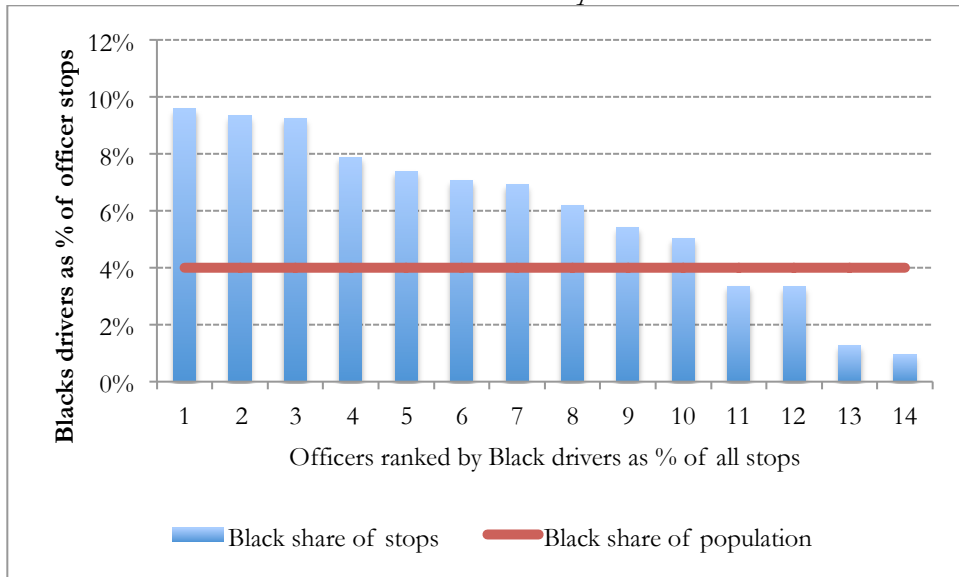
Panel G. Middlebury Police Department



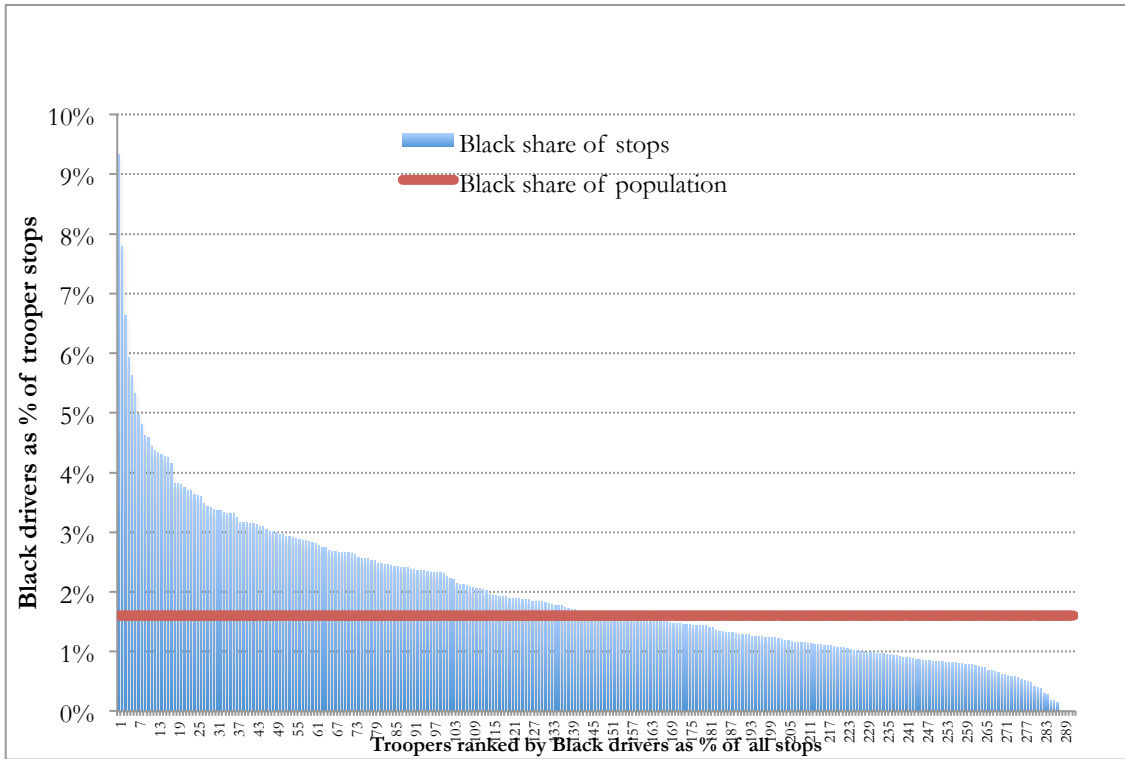
Panel H. Montpelier Police Department



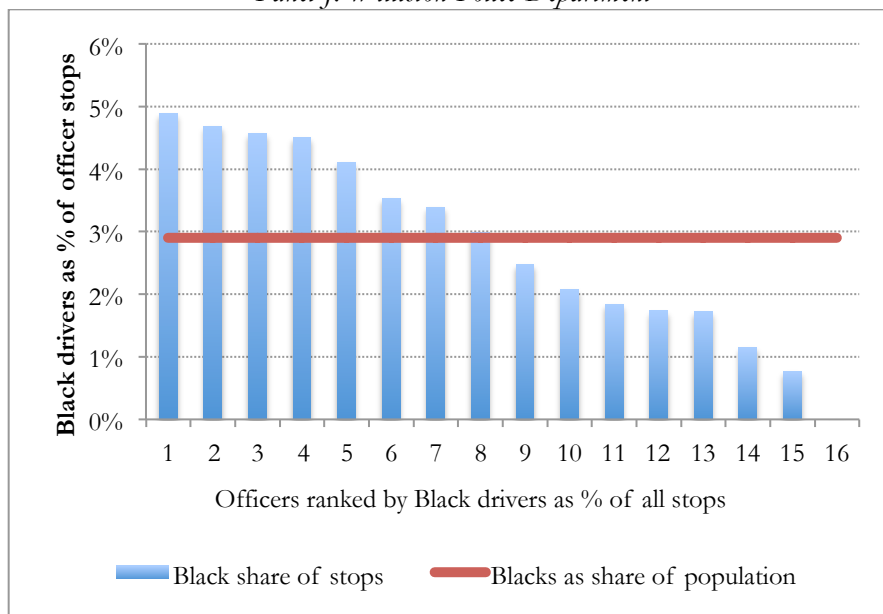
Panel I. UVM Police Department



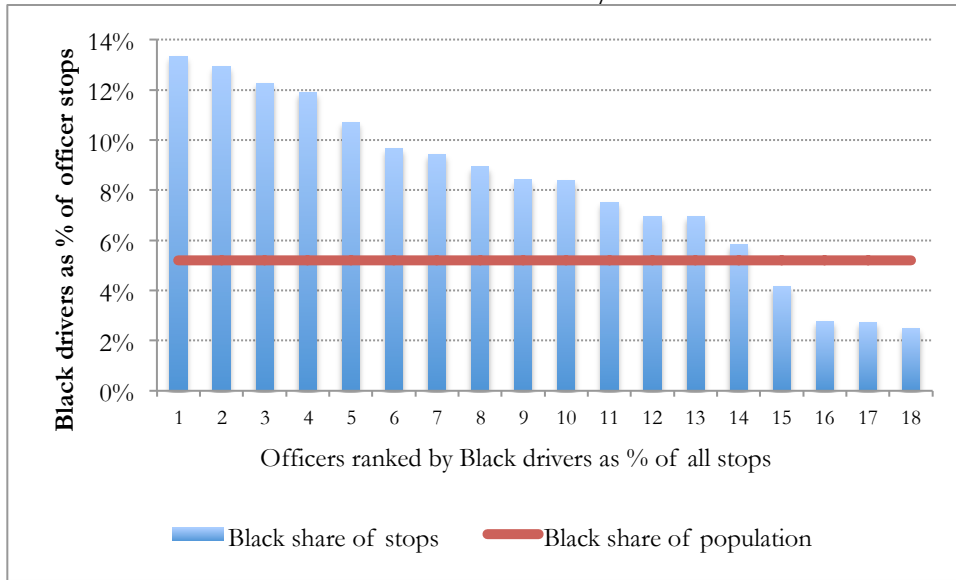
Panel I. Vermont State Police



Panel J. Williston Police Department



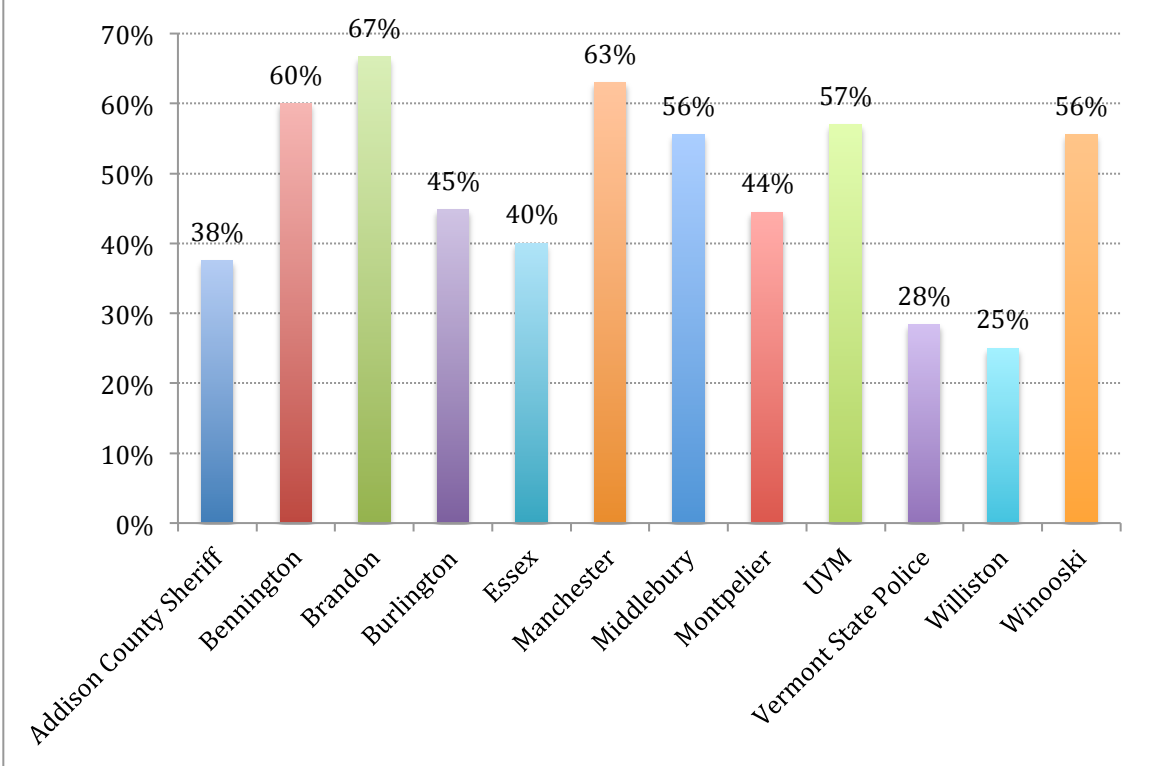
Panel K. Winooski Police Department



Note: Black share of the driving population data are at the county-level from either the ACS or DMV, whichever value is higher, assuming enough data to make reliable estimates. For Winooski and Burlington, we use the ACS estimates of city population, which is higher than the county estimates. In the case of VSP, we use the estimate of the Black share of the state population (Table 2). For UVM, we use the average of Chittenden County and Burlington City populations based on the ACS. Results are reported only for those officers who made 50+ stops during the time period covered by the data. Black share of drivers in all stops is for those stops in which race of driver was recorded.

A useful way to summarize these results is to calculate the percentage of officers in an agency that stop Black drivers at a rate that is 50% or more than their share of the population. Thus for example, let's say the Black share of the population in the jurisdiction a police agency operates in is 3%. In that case, we calculate the percentage of officers in that agency whose share of stopped Black drivers is greater than 4.5%. (This wide margin above the share of the population is chosen to be conservative in identifying officers who have notably high Black stop rates). Those results are shown in Figure 13. **Brandon stands out as the agency with the highest share of officers (67%) that stop Black drivers at a rate that is more than 50% of their share of the population, followed by Manchester (63%) and Bennington (60%).** These results indicate that **the disparity in Black/White stop rates at the agency level cannot be attributed to the isolated behavior of just a few officers.** Rather, one might conclude, after reviewing these data, that there are widespread behavior and practices within agencies contributing to these patterns that will need to be addressed if disparities are to be reduced.

Figure 13. By Agency: Percentage of Officers with Black Stop Rates 50% or More of Population



VI. Data Quality

Data quality depends in part on the completeness of incident reports. Table 4 summarizes the number of incidents for which categories of data were missing or marked “unknown.” (Tables A4 and A5 provide raw data counts on missing data and unknowns). The bottom row of that table shows the percentages missing in the entire dataset. The highest percentage of missing/unknown data—13.0%—is for search outcome—that is, whether or not evidence was found. In 6% of incidents in this dataset, data on searches is missing. The percentage of incidents missing race of driver is also relatively high at about 4.6%. (For a more detailed discussion of research methods and data quality, see Appendix B). At the agency level, percentages of missing data can be much higher. For example, race of the driver was not recorded in almost 30% of St. Albans Police Department incident reports, and was missing in 17% of Addison County Sheriff Department reports. At UVM, reason for the stop was missing for 29% of incidents.

Table 4. Percentage of Incident Reports with Missing/Unknown Data by Agency

Agency	Total Incidents	Race	Reason for Stop	Outcome	Search	Search Outcome
Addison County Sheriff	6,019	17.4%	0.3%	0.3%	0.2%	100.0%
Barre City	576	2.8%	4.5%	3.6%	10.4%	10.9%
Barre Town	2,848	0.1%	0.5%	0.0%	0.3%	0.0%
Bennington	5,062	3.0%	0.4%	0.4%	0.3%	2.7%
Brandon	1,991	10.0%	15.9%	5.7%	7.3%	7.5%
Brattleboro	7,811	11.2%	0.3%	1.1%	1.1%	1.4%
Bristol	567	8.3%	4.2%	3.0%	0.0%	0.0%
Burlington	23,850	4.8%	3.3%	1.2%	1.9%	1.8%
Colchester	6,984	3.2%	1.5%	0.4%	0.0%	0.0%
Essex	4,773	3.1%	2.1%	0.5%	2.0%	2.1%
Grand Isle	4,458	0.2%	0.0%	0.0%	0.0%	0.0%
Hinesburg	896	0.6%	0.0%	0.0%	0.0%	0.0%
Manchester	2,885	3.8%	15.7%	14.4%	19.0%	20.1%
Middlebury	1,423	0.7%	3.8%	0.1%	0.1%	1.6%
Milton	5,619	4.1%	2.2%	1.9%	2.2%	2.2%
Montpelier	4,055	7.6%	5.8%	1.4%	1.3%	1.8%
Northfield	575	0.9%	1.4%	1.6%	1.0%	1.0%
Randolph	242	0.8%	2.1%	0.0%	8.3%	8.3%
Rutland	13,366	2.7%	0.0%	0.0%	0.0%	0.0%
Rutland County Sheriff	4,376	3.7%	8.0%	1.5%	100.0%	100.0%
S. Burlington	11,574	0.5%	0.7%	0.1%	0.2%	0.1%
Springfield	6,280	1.1%	0.0%	0.0%	0.3%	0.0%
St. Albans	7,402	29.4%	6.4%	3.6%	4.0%	100.0%
St. Johnsbury	4,104	2.5%	1.7%	2.8%	1.8%	1.5%
UVM	8,826	1.3%	28.9%	1.7%	1.8%	1.9%
Vergennes	1,789	2.2%	0.8%	7.8%	0.1%	0.6%
Williston	11,424	1.0%	0.9%	1.8%	0.9%	1.0%
Winooski	5,266	5.5%	11.0%	8.8%	8.7%	9.2%
VSP	276,886	1.7%	0.8%	0.8%	0.8%	1.0%
Average		4.6%	4.2%	2.2%	6.0%	13.0%

Note: The data refer to the number of incidents, reflecting the possibility that a stop may result in more than one incident report. Externally generated stops are excluded.

VIII. Discussion and Conclusions

This analysis of racial disparities in traffic policing is one of the first to broadly cover the State of Vermont and was made possible by legislation requiring the collection of race data in traffic stops starting in 2014. We are hopeful that the results will be helpful to law enforcement agencies and public officials to guide efforts to improve the quality of data collection. Most agencies are new to traffic data collection and have some distance to go to improve the quality of that data. Agencies in particular should work to ensure that data in all required categories is collected and to address the problem of missing data in both traffic stop and accident reports.

Based on the data we do have, there is evidence that Black and Hispanic drivers in Vermont face disparate treatment by police in traffic stops as compared to White and, in some cases, Asian drivers. This assessment is made on the basis of analysis of six indicators from traffic stop data for 29 law enforcement agencies: 1) stop rates by race, 2) male shares of stops by race, 3) ticket rates, 4) arrest rates, 5) search rates, and 6) hit rates—the percentage of searches in which contraband is found.

Regarding stop rates, we compared the percentage of each racial group in all stops relative to their share of the (driving) population. To estimate the driving population, we used: 1) estimates of racial population shares from the U.S. Census Bureau’s American Community Survey, and 2) data from the DMV on racial shares of not-at-fault drivers in accidents. **We found that White and Asian drivers are stopped at rates less than their estimated shares of the driving population. This pattern exists at both the state and agency level. We estimate that Black drivers are stopped at rate that is between 161% and 193% of their population share and Hispanics are stopped at a rate that 179% of their share of the driving population. Both of these groups, in other words, are over-stopped relative to what would be expected, given their estimated share of the driving population.** The stop rate is the only indicator that relies on estimates of the driving population. Thus concerns about the precision of estimates of racial shares of the driving population do not apply to the rest of the indicators evaluated in this study.

Males of any race comprise a larger share of stopped drivers than females, a pattern that is well known and widespread across the U.S. **We find, however, that a significantly larger share of Black and Hispanic drivers stopped are male as compared to White or Asian drivers who are male** (Note that this indicator does not rely on estimates of the driving population). In particular, at the state level, while 62% of White stopped drivers are male, among Black drivers, the male share is 77%, and among Hispanic drivers, 75%. This is suggestive of the possibility that Black and Hispanic men in particular are targeted for surveillance, a pattern found in general in the U.S.

Among drivers who are stopped, Black and Hispanic drivers were more likely to receive tickets than White drivers. Not surprisingly, then, Whites were more likely to receive warnings than other groups. This may be suggestive of harsher treatment of Black and Hispanic drivers as compared to White drivers for similar offenses. Other factors may also influence this disparity such as a driver’s prior driving record.¹⁹ The data made available to the authors does not permit a deeper investigation into the causes of the disparities. These data can, however, serve as a signal for individual agencies to explore the possible causes of these disparities.

At the state level, the Black arrest rate is almost double the White arrest rate. At the agency level, disparities differ. For example, at the high end, Black drivers stopped by Rutland police are 2.6 times more likely to be arrested than White drivers, subsequent to a discretionary stop and in Williston, 2.3 times more likely.

¹⁹ In the case of Burlington, for example, Black-White differences in ticket rates are partially explained by a higher percentage of stopped Black drivers driving with a suspended license, according the Burlington Police Department’s internal analysis of data.

Although searches occur in only a small percentage of stops, racial disparities in search rates serve as a microcosm of disparities in other aspects of policing that are more difficult to accurately capture with the data available. For that reason, search rates are some of the clearest available evidence of racial disparities in policing. **Data indicate that, at the state level, the search rate of Black drivers is 3.6%, a rate that is 4 times that of White drivers. Although Asians comprise a slightly larger share of the population than Blacks (1.8% compared to 1.6%), Vermont police searched Black drivers at a rate that was 7 times the Asian search rate. The search rate of drivers that police perceived to be Hispanic is also very high, at 2.6%.** This difference underscores why studies of racial disparities must be analyzed by racial/ethnic group rather than aggregated into one minority group.

In contrast to the higher search rates of Black and Hispanic drivers, these two racial groups are less likely than White or Asian drivers to be found with contraband that leads to a citation or an arrest. At the state level, the **White hit rate is 67%, compared to 56% and 61% for Black and Hispanic searched drivers, respectively.** Officers would appear to have a lower threshold of evidence for searching vehicles with Black and Hispanic drivers. At the agency level, these disparities can be very wide. For example, in Rutland, the White hit rate is 72%, compared to 32% for Black drivers. In Burlington, White drivers are found with contraband that leads to a citation and/or arrest in 55% of searches, as compared to 35% of Black searches.

What might be the cause of these disparities? Negative stereotypes and implicit bias against Blacks and Hispanics are likely factors that contribute to disparities. Evidence of such bias has been found to be widespread in the U.S. in a number of areas, including in employment, wages, housing, education, school suspensions, and medical services.

An additional factor is the opioid crisis in Vermont, with heightened concerns about drug trafficking in recent years. Police agencies often cite this as an explanation for traffic policing disparities between Black and Hispanic drivers, on the one hand, and White and Asian drivers, on the other. Racial stereotypes are often informed by media portrayals of Blacks and Hispanics as disproportionately involved in drug trafficking. **The data in this report, however, do not support the assumption that Black and Hispanic drivers are more likely to be carrying contraband** because these searches yield a lower relative frequency of contraband than do searches of White or Asian drivers. In fact, the highest percentage of searches that yield contraband is of Asian drivers, the group least likely to be searched.

As a result, police search behavior is suggestive of over-searching of Black and Hispanic drivers, relative to White and Asian drivers. This may be due to officers having a lower threshold of evidence for Black and Hispanic drivers. Unwarranted searches result in resources being diverted from activities that might otherwise promote public safety and support community policing. Beyond issues of efficient use of resources, this is also a justice and fairness issue. Unwarranted searches not only impose significant burdens on drivers subjected to this treatment. They also undermine confidence in law enforcement agencies as a whole.

The astute reader will note that we have found racial disparities in policing for all indicators examined in this analysis—stop, ticket, arrest, search, and hit rates. Vermont is not so different from other states, after all, when it comes to racial bias in policing. A key to tracking progress on eliminating unjustifiable disparities is through the use of data to monitor trends. To that end,

more work needs to be done to improve the quality of the data collected by police agencies in Vermont.

REFERENCES

Alexander, Michelle. (2012). *The New Jim Crow: Mass Incarceration in the Age of Colorblindness*. The New Press.

Seguino, S. and N. Brooks. (2015a). *An Analysis of Racial Disparities in Traffic Policing: Burlington Police Department 2012-15*. University of Vermont and Cornell University.

Seguino, S. and N. Brooks. (2015b). *Racial/Ethnic Disparities in Traffic Stops: Analysis of Vermont State Police Data 2010-15*. University of Vermont and Cornell University.

APPENDIX A. Additional Tables

Table A1. Stop Rates by Agency

Agency	White	Black	Asian	Native American	Hispanic	Total Stops Where Race of Driver Recorded	Unknown
Addison County Sheriff	96.2%	1.9%	0.9%	0.2%	0.8%	100%	21.1%
Barre City	94.8%	2.7%	1.0%	0.1%	1.4%	100%	3.1%
Barre Town	98.2%	1.0%	0.3%	0.0%	0.5%	100%	0.1%
Bennington	94.8%	2.7%	1.0%	0.1%	1.4%	100%	3.1%
Brandon	97.3%	1.5%	0.7%	0.1%	0.4%	100%	11.4%
Brattleboro	96.2%	2.0%	1.0%	0.0%	0.7%	100%	13.2%
Bristol	98.7%	1.0%	0.0%	0.0%	0.4%	100%	9.0%
Burlington	87.2%	7.9%	4.1%	0.1%	0.7%	100%	5.1%
Colchester	94.5%	3.4%	1.4%	0.0%	0.7%	100%	3.3%
Essex	94.1%	2.6%	2.3%	0.1%	1.0%	100%	3.2%
Grand Isle County Sheriff	97.1%	1.5%	0.7%	0.1%	0.7%	100%	0.0%
Hinesburg	96.7%	1.6%	1.1%	0.1%	0.6%	100%	0.0%
Manchester	95.4%	2.4%	1.3%	0.0%	0.9%	100%	4.0%
Middlebury	95.2%	2.4%	1.7%	0.1%	0.7%	100%	0.8%
Milton	97.0%	1.6%	0.9%	0.0%	0.5%	100%	4.2%
Montpelier	95.9%	1.9%	1.3%	0.0%	0.8%	100%	8.5%
Northfield	95.6%	1.8%	1.1%	0.2%	1.4%	100%	0.9%
Randolph	98.3%	0.8%	0.8%	0.0%	0.0%	100%	0.8%
Rutland	95.6%	2.9%	0.7%	0.0%	0.7%	100%	2.8%
Rutland County Sheriff	97.0%	1.2%	0.9%	0.0%	0.9%	100%	3.8%
S. Burlington	91.9%	4.0%	3.2%	0.1%	0.8%	100%	0.5%
Springfield	96.4%	1.8%	0.7%	0.0%	1.1%	100%	0.0%
St. Albans	97.5%	1.5%	0.7%	0.1%	0.2%	100%	44.8%
St. Johnsbury	97.0%	1.8%	0.8%	0.0%	0.3%	100%	2.5%
UVM	91.0%	5.1%	3.1%	0.1%	0.7%	100%	1.3%
Vergennes	91.5%	4.0%	1.9%	0.1%	2.5%	100%	2.2%
VSP	95.6%	2.0%	1.3%	0.1%	0.9%	100%	1.7%
Williston	93.9%	3.2%	1.9%	0.1%	1.0%	100%	1.0%
Winooski	85.5%	9.3%	4.3%	0.1%	0.7%	100%	5.7%

Notes: Racial shares are a percentage of total stops for which race of driver was recorded. “Unknowns” are the percentage of stops in which the race of the driver was missing. As can be seen, drivers perceived to be Native American are a small share of all stops, and therefore due to data limitations, we focus in this study only on White, Black, Asian, and Hispanic drivers.

Table A2. Demographic Data by County From Two Sources

Panel A. American Community Survey (ACS) Data

County	Whites	Blacks	Asians
Addison	96.8%	1.4%	2.1%
Bennington	98.7%	0.6%	1.0%
Caledonia	98.2%	0.8%	1.0%
Chittenden	94.3%	2.7%	3.7%
Essex	No data		
Franklin	98.2%	1.0%	0.8%
Grand Isle	No data		
Lamoille	97.5%	0.7%	0.8%
Orange	98.1%	0.8%	0.7%
Orleans	98.2%	1.0%	0.6%
Rutland	98.5%	0.9%	0.9%
Washington	97.8%	1.3%	1.3%
Windham	97.4%	1.8%	1.5%
Windsor	97.7%	0.9%	1.4%
Total	95.1%	1.6%	1.8%

Note: County population estimates are based on ACS 3 year averages (2011-13) and the statewide estimate (total) is based on the ACS 1-year estimate for 2015.

Panel B. DMV Not-At-Fault Accident Data, 2010-16

County	White		Blacks		Asians		Hispanics		NO DATA		Total no-fault accidents where race is identified
Addison	1,203	97.7%	8	0.6%	9	0.7%	5	0.4%	432	35.1%	1,231
Bennington	1,878	96.6%	21	1.1%	31	1.6%	10	0.5%	609	31.3%	1,944
Caledonia	839	97.4%	5	0.6%	5	0.6%	7	0.8%	206	23.9%	861
Chittenden	13,947	92.8%	434	2.9%	505	3.4%	95	0.6%	5,330	35.5%	15,027
Essex	68	98.6%	1	1.4%	0	0.0%	0	0.0%	14	20.3%	69
Franklin	1,465	97.5%	14	0.9%	13	0.9%	8	0.5%	612	40.7%	1,503
Grand Isle	160	98.2%	1	0.6%	0	0.0%	1	0.6%	60	36.8%	163
Lamoille	1,117	97.7%	7	0.6%	9	0.8%	5	0.4%	418	36.6%	1,143
Orange	415	97.0%	4	0.9%	5	1.2%	4	0.9%	98	22.9%	428
Orleans	747	97.4%	5	0.7%	7	0.9%	4	0.5%	229	29.9%	767
Rutland	2,491	97.5%	25	1.0%	24	0.9%	10	0.4%	1,080	42.3%	2,556
Washington	1,954	97.0%	13	0.6%	29	1.4%	12	0.6%	988	49.1%	2,014
Windham	2,365	96.8%	36	1.5%	29	1.2%	12	0.5%	1,159	47.5%	2,442
Windsor	2,266	97.0%	20	0.9%	34	1.5%	10	0.4%	776	33.2%	2,336
Total	30,915	95.2%	594	1.8%	700	2.2%	183	0.6%	12,011	37.0%	32,484

Source: Vermont Department of Motor Vehicles.

Table A3. Male Stops by Race/Ethnicity and Agency

	White	Black	Asian	Hispanic	Unknown	Total
Addison County Sheriff	3,034	84	23	26	657	3,381
Barre City	334	7	0	0	10	351
Barre Town	1,752	28	7	13	2	1,802
Bennington	2,759	108	28	54	81	3,032
Brandon	1,740	30	11	10	75	1,867
Brattleboro	3,672	91	39	34	507	4,343
Bristol	320	1		2	20	343
Burlington	11,849	1,412	641	106	367	14,388
Colchester	3,778	178	55	26	120	4,158
Essex	2,610	89	67	33	30	2,831
Grand Isle County Sheriff	2,729	51	22	25	1	2,831
Hinesburg	529	9	6	4	0	549
Manchester	1,595	51	26	20	70	1,762
Middlebury	834	29	16	6	6	891
Milton	3,222	65	34	12	13	3,348
Montpelier	2,133	63	25	25	188	2,434
Northfield	334	7	4	5	3	353
Randolph	155	0	2	0	1	158
Rutland	6,693	278	70	74	185	7,301
Rutland County Sheriff	2,361	35	27	27	97	2,547
Springfield	3,572	83	36	47	0	3,739
St. Albans	2,903	73	23	7	1,011	4,019
St. Johnsbury	2,207	34	23	10	54	2,329
UVM	1,817	99	64	6	0	1,988
Vergennes	1,044	56	24	35	28	1,187
VSP	163,967	4,160	2,413	1,959	2,844	175,529
Williston	6,854	272	161	82	54	7,429

Note: Gender of drivers is missing in S. Burlington and Winooski data provided to authors.

Table A4. Traffic Data by Agency

Addison County Sheriff 2014-16

All Years	White	Black	Asian	Hispanic	Unknown	Total
Total Traffic Stops						
<i>Including externally generated stops</i>	4,782	94	45	40	1,047	6,008
<i>Excluding externally generated stops</i>	4,781	94	45	40	1,047	6,007
Outcomes (excl. externally generated stops)						
<i>Ticket</i>	4,761	90	45	40	1,033	5,969
<i>Warning</i>	7	1	0	0	2	10
<i>No Action Taken</i>	0	0	0	0	0	0
<i>Arrest for violation</i>	5	0	0	0	3	8
<i>Arrest for warrant</i>	0	0	0	0	0	0
Searches (excl. externally generated stops)						
<i>Total Stops with No Search</i>	4,760	93	45	38	1,036	5,972
<i>Total Stops with Unknown Search</i>	4	0	0	0	8	12
<i>Total Stops with Search</i>	17	1	0	2	3	23
<i>Search with probable cause</i>	12	0	0	0	2	14
<i>Stops with No contraband found</i>	0	0	0	0	0	0
<i>Stops with Unknown contraband found</i>	12	0	0	0	2	14
<i>Stops with Contraband found</i>	0	0	0	0	0	0
<i>Incidents</i>						
<i>Warning</i>	0	0	0	0	0	0
<i>Ticket</i>	0	0	0	0	0	0
<i>Arrest on violation (excl. arrest on warrant)</i>	0	0	0	0	0	0
<i>Search with reasonable suspicion</i>	5	1	0	2	0	8
<i>Stops with No contraband found</i>	0	0	0	0	0	0
<i>Stops with Unknown contraband found</i>	5	1	0	2	0	8
<i>Stops with Contraband found</i>	0	0	0	0	0	0
<i>Incidents</i>						
<i>Warning</i>	0	0	0	0	0	0
<i>Ticket</i>	0	0	0	0	0	0
<i>Arrest on violation (excl. arrest on warrant)</i>	0	0	0	0	0	0
<i>Search with warrant</i>	0	0	0	0	1	1
<i>Stops with No contraband found</i>	0	0	0	0	0	0
<i>Stops with unknown contraband found</i>	0	0	0	0	1	1
<i>Stops with Contraband found</i>	0	0	0	0	0	0
<i>Incidents</i>						
<i>Warning</i>	0	0	0	0	0	0
<i>Ticket</i>	0	0	0	0	0	0
<i>Arrest on violation (excl. arrest on warrant)</i>	0	0	0	0	0	0
Outcome rates as a % of stops (excl. externally generated stops and arrests on warrant)						
<i>Warning rate</i>	0.1%	1.1%	0.0%	0.0%	0.2%	0.2%
<i>Ticket rate</i>	99.6%	95.7%	100.0%	100.0%	98.7%	99.4%
<i>Arrest rate</i>	0.1%	0.0%	0.0%	0.0%	0.3%	0.1%
<i>Search rates</i>						
<i>Search rate (excl. searches on warrant)</i>	0.4%	1.1%	0.0%	5.0%	0.2%	0.4%
<i>Search rate (incl. searches on warrant)</i>	0.4%	1.1%	0.0%	5.0%	0.3%	0.4%
<i>Hit rates (as a % of searches)</i>						
Hit rates (includes all outcomes)	0.0%	0.0%	-	0.0%	0.0%	0.0%
Hit rates (excl. warnings as outcomes of searches)	0.0%	0.0%	-	0.0%	0.0%	0.0%
Hit rates (outcome = arrest)	0.0%	0.0%	-	0.0%	0.0%	0.0%

Barre City 2014-15

All Years	White	Black	Asian	Hispanic	Unknown	Total
Total Traffic Stops						
<i>Including externally generated stops</i>	572	10	0	3	17	602
<i>Excluding externally generated stops</i>	548	9	0	3	16	576
Outcomes (excl. externally generated stops)						
<i>Ticket</i>	265	6	0	2	0	273
<i>Warning</i>	250	3	0	1	2	256
<i>No Action Taken</i>	0	0	0	0	0	0
<i>Arrest for violation</i>	26	0	0	0	0	26
<i>Arrest for warrant</i>	0	0	0	0	0	0
Searches (excl. externally generated stops)						
<i>Total Stops with No Search</i>	501	9	0	3	1	514
<i>Total Stops with Unknown Search</i>	45	0	0	0	15	60
<i>Total Stops with Search</i>	2	0	0	0	0	2
<i>Search with probable cause</i>	2	0	0	0	0	2
Stops with No contraband found	0	0	0	0	0	0
Stops with Unknown contraband found	0	0	0	0	0	0
Stops with Contraband found	2	0	0	0	0	2
<i>Incidents</i>						
<i>Warning</i>	0	0	0	0	0	0
<i>Ticket</i>	2	0	0	0	0	2
Arrest on violation (excl. arrest on warrant)	0	0	0	0	0	0
<i>Search with reasonable suspicion</i>	0	0	0	0	0	0
Stops with No contraband found	0	0	0	0	0	0
Stops with Unknown contraband found	0	0	0	0	0	0
Stops with Contraband found	0	0	0	0	0	0
<i>Incidents</i>						
<i>Warning</i>	0	0	0	0	0	0
<i>Ticket</i>	0	0	0	0	0	0
Arrest on violation (excl. arrest on warrant)	0	0	0	0	0	0
<i>Search with warrant</i>	0	0	0	0	0	0
Stops with No contraband found	0	0	0	0	0	0
Stops with unknown contraband found	0	0	0	0	0	0
Stops with Contraband found	0	0	0	0	0	0
<i>Incidents</i>						
<i>Warning</i>	0	0	0	0	0	0
<i>Ticket</i>	0	0	0	0	0	0
Arrest on violation (excl. arrest on warrant)	0	0	0	0	0	0
Outcome rates as a % of stops (excl. externally generated stops and arrests on warrant)						
<i>Warning rate</i>	45.6%	33.3%	-	33.3%	12.5%	44.4%
<i>Ticket rate</i>	48.4%	66.7%	-	66.7%	0.0%	47.4%
<i>Arrest rate</i>	4.7%	0.0%	-	0.0%	0.0%	4.5%
<i>Search rates</i>						
<i>Search rate (excl. searches on warrant)</i>	0.4%	0.0%	-	0.0%	0.0%	0.3%
<i>Search rate (incl. searches on warrant)</i>	0.4%	0.0%	-	0.0%	0.0%	0.3%
<i>Hit rates (as a % of searches)</i>						
Hit rates (includes all outcomes)	100.0%	-	-	-	-	100.0%
Hit rates (excl. warnings as outcomes of searches)	100.0%	-	-	-	-	100.0%
Hit rates (outcome = arrest)	0.0%	-	-	-	-	0.0%

Barre Town 2014-16

All Years	White	Black	Asian	Hispanic	Unknown	Total
Total Traffic Stops						
<i>Including externally generated stops</i>	2,796	29	9	14	4	2,852
<i>Excluding externally generated stops</i>	2,792	29	9	14	4	2,848
Outcomes (excl. externally generated stops)						
<i>Ticket</i>	844	14	2	6	1	867
<i>Warning</i>	1,948	15	7	8	3	1,981
<i>No Action Taken</i>	0	0	0	0	0	0
<i>Arrest for violation</i>	0	0	0	0	0	0
<i>Arrest for warrant</i>	0	0	0	0	0	0
Searches (excl. externally generated stops)						
<i>Total Stops with No Search</i>	2,768	29	9	14	4	2,824
<i>Total Stops with Unknown Search</i>	0	0	0	0	0	0
<i>Total Stops with Search</i>	24	0	0	0	0	24
<i>Search with probable cause</i>	17	0	0	0	0	17
<i>Stops with No contraband found</i>	6	0	0	0	0	6
<i>Stops with Unknown contraband found</i>	0	0	0	0	0	0
<i>Stops with Contraband found</i>	11	0	0	0	0	11
<i>Incidents</i>						
<i>Warning</i>	1	0	0	0	0	1
<i>Ticket</i>	10	0	0	0	0	10
<i>Arrest on violation (excl. arrest on warrant)</i>	0	0	0	0	0	0
<i>Search with reasonable suspicion</i>	7	0	0	0	0	7
<i>Stops with No contraband found</i>	0	0	0	0	0	0
<i>Stops with Unknown contraband found</i>	0	0	0	0	0	0
<i>Stops with Contraband found</i>	7	0	0	0	0	7
<i>Incidents</i>						
<i>Warning</i>	0	0	0	0	0	0
<i>Ticket</i>	7	0	0	0	0	7
<i>Arrest on violation (excl. arrest on warrant)</i>	0	0	0	0	0	0
<i>Search with warrant</i>	0	0	0	0	0	0
<i>Stops with No contraband found</i>	0	0	0	0	0	0
<i>Stops with unknown contraband found</i>	0	0	0	0	0	0
<i>Stops with Contraband found</i>	0	0	0	0	0	0
<i>Incidents</i>						
<i>Warning</i>	0	0	0	0	0	0
<i>Ticket</i>	0	0	0	0	0	0
<i>Arrest on violation (excl. arrest on warrant)</i>	0	0	0	0	0	0
Outcome rates as a % of stops (excl. externally generated stops and arrests on warrant)						
<i>Warning rate</i>	69.8%	51.7%	77.8%	57.1%	75.0%	69.6%
<i>Ticket rate</i>	30.2%	48.3%	22.2%	42.9%	25.0%	30.4%
<i>Arrest rate</i>	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
<i>Search rates</i>						
<i>Search rate (excl. searches on warrant)</i>	0.9%	0.0%	0.0%	0.0%	0.0%	0.8%
<i>Search rate (incl. searches on warrant)</i>	0.9%	0.0%	0.0%	0.0%	0.0%	0.8%
<i>Hit rates (as a % of searches)</i>						
<i>Hit rates (includes all outcomes)</i>	75.0%	-	-	-	-	75.0%
<i>Hit rates (excl. warnings as outcomes of searches)</i>	70.8%	-	-	-	-	70.8%
<i>Hit rates (outcome = arrest)</i>	0.0%	-	-	-	-	0.0%

Bennington 2014-16

All Years	White	Black	Asian	Hispanic	Unknown	Total
Total Traffic Stops						
<i>Including externally generated stops</i>	4,789	140	48	75	156	5,208
<i>Excluding externally generated stops</i>	4,653	133	48	71	152	5,057
Outcomes (excl. externally generated stops)						
<i>Ticket</i>	3,813	108	39	56	119	4,135
<i>Warning</i>	730	21	6	13	33	803
<i>No Action Taken</i>	0	0	0	0	0	0
<i>Arrest for violation</i>	93	2	3	2	0	100
<i>Arrest for warrant</i>	0	1	0	0	0	1
Searches (excl. externally generated stops)						
<i>Total Stops with No Search</i>	4,545	117	48	70	151	4,931
<i>Total Stops with Unknown Search</i>	14	1	0	0	0	15
<i>Total Stops with Search</i>	94	15	0	1	1	111
<i>Search with probable cause</i>	55	10	0	1	1	67
Stops with No contraband found	7	2	0	0	0	9
Stops with Unknown contraband found	2	0	0	0	0	2
Stops with Contraband found	43	8	0	1	1	53
<i>Incidents</i>						
<i>Warning</i>	2	0	0	0	0	2
<i>Ticket</i>	33	8	0	1	1	43
Arrest on violation (excl. arrest on warrant)	7	0	0	0	0	7
<i>Search with reasonable suspicion</i>	34	4	0	0	0	38
Stops with No contraband found	6	0	0	0	0	6
Stops with Unknown contraband found	1	0	0	0	0	1
Stops with Contraband found	26	4	0	0	0	30
<i>Incidents</i>						
<i>Warning</i>	1	0	0	0	0	1
<i>Ticket</i>	22	3	0	0	0	25
Arrest on violation (excl. arrest on warrant)	3	1	0	0	0	4
<i>Search with warrant</i>	5	1	0	0	0	6
Stops with No contraband found	1	0	0	0	0	1
Stops with unknown contraband found	0	0	0	0	0	0
Stops with Contraband found	3	1	0	0	0	4
<i>Incidents</i>						
<i>Warning</i>	0	1	0	0	0	1
<i>Ticket</i>	2	0	0	0	0	2
Arrest on violation (excl. arrest on warrant)	1	0	0	0	0	1
Outcome rates as a % of stops (excl. externally generated stops and arrests on warrant)						
<i>Warning rate</i>	15.7%	15.8%	12.5%	18.3%	21.7%	15.9%
<i>Ticket rate</i>	81.9%	81.2%	81.3%	78.9%	78.3%	81.8%
<i>Arrest rate</i>	2.0%	1.5%	6.3%	2.8%	0.0%	2.0%
<i>Search rates</i>						
<i>Search rate (excl. searches on warrant)</i>	1.9%	10.5%	0.0%	1.4%	0.7%	2.1%
<i>Search rate (incl. searches on warrant)</i>	2.0%	11.3%	0.0%	1.4%	0.7%	2.2%
<i>Hit rates (as a % of searches)</i>						
Hit rates (includes all outcomes)	76.4%	85.7%	-	100.0%	100.0%	79.0%
Hit rates (excl. warnings as outcomes of searches)	73.0%	85.7%	-	100.0%	100.0%	75.2%
Hit rates (outcome = arrest)	11.2%	7.1%	-	0.0%	0.0%	10.5%

Brandon 2014-16

All Years	White	Black	Asian	Hispanic	Unknown	Total
Total Traffic Stops						
<i>Including externally generated stops</i>	1,430	22	10	6	167	1,635
<i>Excluding externally generated stops</i>	1,414	22	10	6	166	1,618
Outcomes (excl. externally generated stops)						
<i>Ticket</i>	582	11	2	7	63	665
<i>Warning</i>	971	16	7	3	111	1,108
<i>No Action Taken</i>	25	1	0	0	3	29
<i>Arrest for violation</i>	65	1	2	0	0	68
<i>Arrest for warrant</i>	2	0	0	0	0	2
Searches (excl. externally generated stops)						
<i>Total Stops with No Search</i>	1,293	19	9	6	146	1,473
<i>Total Stops with Unknown Search</i>	85	1	1	0	17	104
<i>Total Stops with Search</i>	36	2	0	0	3	41
<i>Search with probable cause</i>	19	1	0	0	2	22
<i>Stops with No contraband found</i>	6	0	0	0	0	6
<i>Stops with Unknown contraband found</i>	0	0	0	0	0	0
<i>Stops with Contraband found</i>	13	1	0	0	2	16
<i>Incidents</i>						
<i>Warning</i>	0	0	0	0	1	1
<i>Ticket</i>	14	3	0	0	2	19
<i>Arrest on violation (excl. arrest on warrant)</i>	14	0	0	0	0	14
<i>Search with reasonable suspicion</i>	14	1	0	0	1	16
<i>Stops with No contraband found</i>	4	1	0	0	0	5
<i>Stops with Unknown contraband found</i>	0	0	0	0	0	0
<i>Stops with Contraband found</i>	9	0	0	0	1	10
<i>Incidents</i>						
<i>Warning</i>	4	1	0	0	0	5
<i>Ticket</i>	8	0	0	0	1	9
<i>Arrest on violation (excl. arrest on warrant)</i>	4	0	0	0	0	4
<i>Search with warrant</i>	3	0	0	0	0	3
<i>Stops with No contraband found</i>	0	0	0	0	0	0
<i>Stops with unknown contraband found</i>	0	0	0	0	0	0
<i>Stops with Contraband found</i>	0	0	0	0	0	0
<i>Incidents</i>						
<i>Warning</i>	0	0	0	0	0	0
<i>Ticket</i>	0	1	0	0	0	1
<i>Arrest on violation (excl. arrest on warrant)</i>	0	0	0	0	0	0
Outcome rates as a % of stops (excl. externally generated stops and arrests on warrant)						
<i>Warning rate</i>	68.7%	72.7%	70.0%	50.0%	66.9%	68.5%
<i>Ticket rate</i>	41.2%	50.0%	20.0%	116.7%	38.0%	41.1%
<i>Arrest rate</i>	4.6%	4.5%	20.0%	0.0%	0.0%	4.2%
Search rates						
<i>Search rate (excl. searches on warrant)</i>	2.3%	9.1%	0.0%	0.0%	1.8%	2.3%
<i>Search rate (incl. searches on warrant)</i>	2.5%	9.1%	0.0%	0.0%	1.8%	2.5%
Hit rates (as a % of searches)						
<i>Hit rates (includes all outcomes)</i>	133.3%	200.0%	-	-	133.3%	68.4%
<i>Hit rates (excl. warnings as outcomes of searches)</i>	121.2%	150.0%	-	-	100.0%	121.1%
<i>Hit rates (outcome = arrest)</i>	54.5%	0.0%	-	-	0.0%	47.4%

Brattleboro 2014-16

All Years	White	Black	Asian	Hispanic	Unknown	Total
Total Traffic Stops						
<i>Including externally generated stops</i>	6,763	148	68	52	914	7,945
<i>Excluding externally generated stops</i>	6,639	141	67	51	913	7,811
Outcomes (excl. externally generated stops)						
<i>Ticket</i>	1,062	39	10	10	48	1,169
<i>Warning</i>	5,428	95	57	41	850	6,471
<i>No Action Taken</i>	42	0	0	0	5	47
<i>Arrest for violation</i>	30	5	0	0	0	35
<i>Arrest for warrant</i>	0	0	0	0	0	0
Searches (excl. externally generated stops)						
<i>Total Stops with No Search</i>	6,541	136	67	51	903	7,698
<i>Total Stops with Unknown Search</i>	77	2	0	0	10	89
<i>Total Stops with Search</i>	21	3	0	0	0	24
<i>Search with probable cause</i>	5	1	0	0	0	6
<i>Stops with No contraband found</i>	0	0	0	0	0	0
<i>Stops with Unknown contraband found</i>	0	0	0	0	0	0
<i>Stops with Contraband found</i>	5	1	0	0	0	6
<i>Incidents</i>						
<i>Warning</i>	0	0	0	0	0	0
<i>Ticket</i>	2	0	0	0	0	2
<i>Arrest on violation (excl. arrest on warrant)</i>	2	1	0	0	0	3
<i>Search with reasonable suspicion</i>	15	2	0	0	0	17
<i>Stops with No contraband found</i>	5	1	0	0	0	6
<i>Stops with Unknown contraband found</i>	0	0	0	0	0	0
<i>Stops with Contraband found</i>	7	1	0	0	0	8
<i>Incidents</i>						
<i>Warning</i>	0	0	0	0	0	0
<i>Ticket</i>	2	1	0	0	0	3
<i>Arrest on violation (excl. arrest on warrant)</i>	5	0	0	0	0	5
<i>Search with warrant</i>	1	0	0	0	0	1
<i>Stops with No contraband found</i>	0	0	0	0	0	0
<i>Stops with unknown contraband found</i>	0	0	0	0	0	0
<i>Stops with Contraband found</i>	1	0	0	0	0	1
<i>Incidents</i>						
<i>Warning</i>	0	0	0	0	0	0
<i>Ticket</i>	0	0	0	0	0	0
<i>Arrest on violation (excl. arrest on warrant)</i>	0	0	0	0	0	0
Outcome rates as a % of stops (excl. externally generated stops and arrests on warrant)						
<i>Warning rate</i>	81.8%	67.4%	85.1%	80.4%	93.1%	82.8%
<i>Ticket rate</i>	16.0%	27.7%	14.9%	19.6%	5.3%	15.0%
<i>Arrest rate</i>	0.5%	3.5%	0.0%	0.0%	0.0%	0.4%
<i>Search rates</i>						
<i>Search rate (excl. searches on warrant)</i>	0.3%	2.1%	0.0%	0.0%	0.0%	0.3%
<i>Search rate (incl. searches on warrant)</i>	0.3%	2.1%	0.0%	0.0%	0.0%	0.3%
<i>Hit rates (as a % of searches)</i>						
<i>Hit rates (includes all outcomes)</i>	55.0%	66.7%	-	-	-	60.9%
<i>Hit rates (excl. warnings as outcomes of searches)</i>	55.0%	66.7%	-	-	-	56.5%
<i>Hit rates (outcome = arrest)</i>	35.0%	33.3%	-	-	-	34.8%

Bristol 2014-16

All Years	White	Black	Asian	Hispanic	Unknown	Total
Total Traffic Stops						
<i>Including externally generated stops</i>	519	5	0	2	50	576
<i>Excluding externally generated stops</i>	513	5	0	2	47	567
Outcomes (excl. externally generated stops)						
<i>Ticket</i>	368	2	0	2	39	411
<i>Warning</i>	122	2	0	0	5	129
<i>No Action Taken</i>	3	0	0	0	0	3
<i>Arrest for violation</i>	5	0	0	0	0	5
<i>Arrest for warrant</i>	2	0	0	0	0	2
Searches (excl. externally generated stops)						
<i>Total Stops with No Search</i>	513	5	0	2	47	567
<i>Total Stops with Unknown Search</i>	0	0	0	0	0	0
<i>Total Stops with Search</i>	0	0	0	0	0	0
<i>Search with probable cause</i>	0	0	0	0	0	0
<i>Stops with No contraband found</i>	0	0	0	0	0	0
<i>Stops with Unknown contraband found</i>	0	0	0	0	0	0
<i>Stops with Contraband found</i>	0	0	0	0	0	0
<i>Incidents</i>						
<i>Warning</i>	0	0	0	0	0	0
<i>Ticket</i>	0	0	0	0	0	0
<i>Arrest on violation (excl. arrest on warrant)</i>	0	0	0	0	0	0
<i>Search with reasonable suspicion</i>	0	0	0	0	0	0
<i>Stops with No contraband found</i>	0	0	0	0	0	0
<i>Stops with Unknown contraband found</i>	0	0	0	0	0	0
<i>Stops with Contraband found</i>	0	0	0	0	0	0
<i>Incidents</i>						
<i>Warning</i>	0	0	0	0	0	0
<i>Ticket</i>	0	0	0	0	0	0
<i>Arrest on violation (excl. arrest on warrant)</i>	0	0	0	0	0	0
<i>Search with warrant</i>	0	0	0	0	0	0
<i>Stops with No contraband found</i>	0	0	0	0	0	0
<i>Stops with unknown contraband found</i>	0	0	0	0	0	0
<i>Stops with Contraband found</i>	0	0	0	0	0	0
<i>Incidents</i>						
<i>Warning</i>	0	0	0	0	0	0
<i>Ticket</i>	0	0	0	0	0	0
<i>Arrest on violation (excl. arrest on warrant)</i>	0	0	0	0	0	0
Outcome rates as a % of stops (excl. externally generated stops and arrests on warrant)						
<i>Warning rate</i>	23.8%	40.0%	-	0.0%	10.6%	22.8%
<i>Ticket rate</i>	71.7%	40.0%	-	100.0%	83.0%	72.5%
<i>Arrest rate</i>	1.0%	0.0%	-	0.0%	0.0%	0.9%
<i>Search rates</i>						
<i>Search rate (excl. searches on warrant)</i>	0.0%	0.0%	-	0.0%	0.0%	0.0%
<i>Search rate (incl. searches on warrant)</i>	0.0%	0.0%	-	0.0%	0.0%	0.0%
<i>Hit rates (as a % of searches)</i>						
<i>Hit rates (includes all outcomes)</i>	-	-	-	-	-	-
<i>Hit rates (excl. warnings as outcomes of searches)</i>	-	-	-	-	-	-
<i>Hit rates (outcome = arrest)</i>	-	-	-	-	-	-

Burlington 2012-15

All Years	White	Black	Asian	Hispanic	Unknown	Total
Total Traffic Stops						
<i>Including externally generated stops</i>	18,226	1,651	859	142	1,070	21,948
<i>Excluding externally generated stops</i>	17,545	1,591	832	139	1,024	21,131
Outcomes (excl. externally generated stops)						
<i>Ticket</i>	5,571	671	238	47	309	6,836
<i>Warning</i>	13,709	1,151	662	111	767	16,400
<i>No Action Taken</i>	4	0	0	0	1	5
<i>Arrest for violation</i>	235	26	10	0	9	280
<i>Arrest for warrant</i>	28	3	0	0	0	31
Searches (excl. externally generated stops)						
<i>Total Stops with No Search</i>	17,153	1,520	817	137	952	20,579
<i>Total Stops with Unknown Search</i>	225	23	13	0	61	322
<i>Total Stops with Search</i>	167	48	2	2	11	230
<i>Search with probable cause</i>	100	35	0	2	7	144
<i>Stops with No contraband found</i>	16	11	0	2	1	30
<i>Stops with Unknown contraband found</i>	0	0	0	0	0	0
<i>Stops with Contraband found</i>	78	20	0	0	6	104
<i>Incidents</i>						
<i>Warning</i>	33	7	0	2	5	47
<i>Ticket</i>	42	11	0	0	2	55
<i>Arrest on violation (excl. arrest on warrant)</i>	19	2	0	0	1	22
<i>Search with reasonable suspicion</i>	41	11	1	0	1	54
<i>Stops with No contraband found</i>	21	8	1	0	0	30
<i>Stops with Unknown contraband found</i>	0	0	0	0	0	0
<i>Stops with Contraband found</i>	19	3	0	0	1	23
<i>Incidents</i>						
<i>Warning</i>	10	1	0	0	1	12
<i>Ticket</i>	11	3	0	0	0	14
<i>Arrest on violation (excl. arrest on warrant)</i>	5	0	0	0	0	5
<i>Search with warrant</i>	26	2	1	0	3	32
<i>Stops with No contraband found</i>	3	1	0	0	0	4
<i>Stops with unknown contraband found</i>	0	0	0	0	0	0
<i>Stops with Contraband found</i>	15	1	1	0	0	17
<i>Incidents</i>						
<i>Warning</i>	2	0	0	0	0	2
<i>Ticket</i>	9	0	1	0	0	10
<i>Arrest on violation (excl. arrest on warrant)</i>	2	1	0	0	0	3
Outcome rates as a % of stops (excl. externally generated stops and arrests on warrant)						
<i>Warning rate</i>	78.1%	72.3%	79.6%	79.9%	74.9%	77.6%
<i>Ticket rate</i>	31.8%	42.2%	28.6%	33.8%	30.2%	32.4%
<i>Arrest rate</i>	1.3%	1.6%	1.2%	0.0%	0.9%	1.3%
<i>Search rates</i>						
<i>Search rate (excl. searches on warrant)</i>	0.8%	2.9%	0.1%	1.4%	0.8%	0.9%
<i>Search rate (incl. searches on warrant)</i>	1.0%	3.0%	0.2%	1.4%	1.1%	1.1%
<i>Hit rates (as a % of searches)</i>						
<i>Hit rates (includes all outcomes)</i>	85.1%	52.2%	0.0%	100.0%	112.5%	64.1%
<i>Hit rates (excl. warnings as outcomes of searches)</i>	54.6%	34.8%	0.0%	0.0%	37.5%	48.5%
<i>Hit rates (outcome = arrest)</i>	17.0%	4.3%	0.0%	0.0%	12.5%	13.6%

Colchester 2014-15

All Years	White	Black	Asian	Hispanic	Unknown	Total
Total Traffic Stops						
<i>Including externally generated stops</i>	6,504	236	97	46	230	7,113
<i>Excluding externally generated stops</i>	6,386	229	94	46	226	6,981
Outcomes (excl. externally generated stops)						
<i>Ticket</i>	2,096	73	31	10	44	2,254
<i>Warning</i>	4,260	151	62	36	180	4,689
<i>No Action Taken</i>	0	0	0	0	1	1
<i>Arrest for violation</i>	8	1	0	0	0	9
<i>Arrest for warrant</i>	1	0	0	0	0	1
Searches (excl. externally generated stops)						
<i>Total Stops with No Search</i>	6,313	225	92	46	226	6,902
<i>Total Stops with Unknown Search</i>	1	0	0	0	0	1
<i>Total Stops with Search</i>	72	4	2	0	0	78
<i>Search with probable cause</i>	42	3	2	0	0	47
Stops with No contraband found	7	1	0	0	0	8
Stops with Unknown contraband found	0	0	0	0	0	0
Stops with Contraband found	35	2	2	0	0	39
<i>Incidents</i>						
<i>Warning</i>	4	0	0	0	0	4
<i>Ticket</i>	31	2	2	0	0	35
Arrest on violation (excl. arrest on warrant)	0	0	0	0	0	0
<i>Search with reasonable suspicion</i>	29	1	0	0	0	30
Stops with No contraband found	8	0	0	0	0	8
Stops with Unknown contraband found	0	0	0	0	0	0
Stops with Contraband found	18	1	0	0	0	19
<i>Incidents</i>						
<i>Warning</i>	4	0	0	0	0	4
<i>Ticket</i>	14	0	0	0	0	14
Arrest on violation (excl. arrest on warrant)	0	1	0	0	0	1
<i>Search with warrant</i>	1	0	0	0	0	1
Stops with No contraband found	0	0	0	0	0	0
Stops with unknown contraband found	0	0	0	0	0	0
Stops with Contraband found	0	0	0	0	0	0
<i>Incidents</i>						
<i>Warning</i>	0	0	0	0	0	0
<i>Ticket</i>	0	0	0	0	0	0
Arrest on violation (excl. arrest on warrant)	0	0	0	0	0	0
Outcome rates as a % of stops (excl. externally generated stops and arrests on warrant)						
<i>Warning rate</i>	66.7%	65.9%	66.0%	78.3%	79.6%	67.2%
<i>Ticket rate</i>	32.8%	31.9%	33.0%	21.7%	19.5%	32.3%
<i>Arrest rate</i>	0.1%	0.4%	0.0%	0.0%	0.0%	0.1%
<i>Search rates</i>						
<i>Search rate (excl. searches on warrant)</i>	1.1%	1.7%	2.1%	0.0%	0.0%	1.1%
<i>Search rate (incl. searches on warrant)</i>	1.1%	1.7%	2.1%	0.0%	0.0%	1.1%
<i>Hit rates (as a % of searches)</i>						
Hit rates (includes all outcomes)	74.6%	75.0%	100.0%	-	-	75.3%
Hit rates (excl. warnings as outcomes of searches)	63.4%	75.0%	100.0%	-	-	64.9%
Hit rates (outcome = arrest)	0.0%	25.0%	0.0%	-	-	1.3%

Essex 2014-15

All Years	White	Black	Asian	Hispanic	Unknown	Total
Total Traffic Stops						
<i>Including externally generated stops</i>	4,535	135	112	46	156	4,984
<i>Excluding externally generated stops</i>	4,353	118	106	45	148	4,770
Outcomes (excl. externally generated stops)						
<i>Ticket</i>	905	31	28	18	12	994
<i>Warning</i>	3,421	87	78	27	127	3,740
<i>No Action Taken</i>	0	0	0	0	0	0
<i>Arrest for violation</i>	8	0	0	0	0	8
<i>Arrest for warrant</i>	3	0	0	0	0	3
Searches (excl. externally generated stops)						
<i>Total Stops with No Search</i>	4,316	117	104	42	73	4,652
<i>Total Stops with Unknown Search</i>	19	0	0	0	75	94
<i>Total Stops with Search</i>	18	1	2	3	0	24
<i>Search with probable cause</i>	18	0	2	3	0	23
Stops with No contraband found	3	0	0	0	0	3
Stops with Unknown contraband found	0	0	0	0	0	0
Stops with Contraband found	14	0	2	3	0	19
<i>Incidents</i>						
<i>Warning</i>	6	0	0	0	0	6
<i>Ticket</i>	5	0	2	3	0	10
Arrest on violation (excl. arrest on warrant)	0	0	0	0	0	0
<i>Search with reasonable suspicion</i>	0	1	0	0	0	1
Stops with No contraband found	0	0	0	0	0	0
Stops with Unknown contraband found	0	0	0	0	0	0
Stops with Contraband found	0	1	0	0	0	1
<i>Incidents</i>						
<i>Warning</i>	0	0	0	0	0	0
<i>Ticket</i>	0	1	0	0	0	1
Arrest on violation (excl. arrest on warrant)	0	0	0	0	0	0
<i>Search with warrant</i>	0	0	0	0	0	0
Stops with No contraband found	0	0	0	0	0	0
Stops with unknown contraband found	0	0	0	0	0	0
Stops with Contraband found	0	0	0	0	0	0
<i>Incidents</i>						
<i>Warning</i>	0	0	0	0	0	0
<i>Ticket</i>	0	0	0	0	0	0
Arrest on violation (excl. arrest on warrant)	0	0	0	0	0	0
Outcome rates as a % of stops (excl. externally generated stops and arrests on warrant)						
<i>Warning rate</i>	78.6%	73.7%	73.6%	60.0%	85.8%	78.4%
<i>Ticket rate</i>	20.8%	26.3%	26.4%	40.0%	8.1%	20.8%
<i>Arrest rate</i>	0.2%	0.0%	0.0%	0.0%	0.0%	0.2%
<i>Search rates</i>						
<i>Search rate (excl. searches on warrant)</i>	0.4%	0.8%	1.9%	6.7%	0.0%	0.5%
<i>Search rate (incl. searches on warrant)</i>	0.4%	0.8%	1.9%	6.7%	0.0%	0.5%
<i>Hit rates (as a % of searches)</i>						
Hit rates (includes all outcomes)	61.1%	100.0%	100.0%	100.0%	-	83.3%
Hit rates (excl. warnings as outcomes of searches)	27.8%	100.0%	100.0%	100.0%	-	45.8%
Hit rates (outcome = arrest)	0.0%	0.0%	0.0%	0.0%	-	0.0%

Grand Isle Sheriff 2014-16

All Years	White	Black	Asian	Hispanic	Unknown	Total
Total Traffic Stops						
<i>Including externally generated stops</i>	4,349	67	32	29	1	4,478
<i>Excluding externally generated stops</i>	4,327	66	32	29	1	4,455
Outcomes (excl. externally generated stops)						
<i>Ticket</i>	694	15	9	10	0	728
<i>Warning</i>	3,624	51	23	19	1	3,718
<i>No Action Taken</i>	0	0	0	0	0	0
<i>Arrest for violation</i>	8	0	0	0	0	8
<i>Arrest for warrant</i>	1	0	0	0	0	1
Searches (excl. externally generated stops)						
<i>Total Stops with No Search</i>	4,322	65	32	29	1	4,449
<i>Total Stops with Unknown Search</i>	0	0	0	0	0	0
<i>Total Stops with Search</i>	5	1	0	0	0	6
<i>Search with probable cause</i>	4	0	0	0	0	4
<i>Stops with No contraband found</i>	0	0	0	0	0	0
<i>Stops with Unknown contraband found</i>	0	0	0	0	0	0
<i>Stops with Contraband found</i>	4	0	0	0	0	4
<i>Incidents</i>						
<i>Warning</i>	0	0	0	0	0	0
<i>Ticket</i>	4	0	0	0	0	4
<i>Arrest on violation (excl. arrest on warrant)</i>	0	0	0	0	0	0
<i>Search with reasonable suspicion</i>	1	1	0	0	0	2
<i>Stops with No contraband found</i>	0	1	0	0	0	1
<i>Stops with Unknown contraband found</i>	0	0	0	0	0	0
<i>Stops with Contraband found</i>	1	0	0	0	0	1
<i>Incidents</i>						
<i>Warning</i>	0	0	0	0	0	0
<i>Ticket</i>	1	0	0	0	0	1
<i>Arrest on violation (excl. arrest on warrant)</i>	0	0	0	0	0	0
<i>Search with warrant</i>	0	0	0	0	0	0
<i>Stops with No contraband found</i>	0	0	0	0	0	0
<i>Stops with unknown contraband found</i>	0	0	0	0	0	0
<i>Stops with Contraband found</i>	0	0	0	0	0	0
<i>Incidents</i>						
<i>Warning</i>	0	0	0	0	0	0
<i>Ticket</i>	0	0	0	0	0	0
<i>Arrest on violation (excl. arrest on warrant)</i>	0	0	0	0	0	0
Outcome rates as a % of stops (excl. externally generated stops and arrests on warrant)						
<i>Warning rate</i>	83.8%	77.3%	71.9%	65.5%	100.0%	83.5%
<i>Ticket rate</i>	16.0%	22.7%	28.1%	34.5%	0.0%	16.3%
<i>Arrest rate</i>	0.2%	0.0%	0.0%	0.0%	0.0%	0.2%
Search rates						
<i>Search rate (excl. searches on warrant)</i>	0.1%	1.5%	0.0%	0.0%	0.0%	0.1%
<i>Search rate (incl. searches on warrant)</i>	0.1%	1.5%	0.0%	0.0%	0.0%	0.1%
Hit rates (as a % of searches)						
<i>Hit rates (includes all outcomes)</i>	100.0%	0.0%	-	-	-	83.3%
<i>Hit rates (excl. warnings as outcomes of searches)</i>	100.0%	0.0%	-	-	-	83.3%
<i>Hit rates (outcome = arrest)</i>	0.0%	0.0%	-	-	-	0.0%

Hinesburg 2014-16

All Years	White	Black	Asian	Hispanic	Unknown	Total
Total Traffic Stops						
<i>Including externally generated stops</i>	887	14	11	5	0	917
<i>Excluding externally generated stops</i>	866	14	10	5	0	895
Outcomes (excl. externally generated stops)						
<i>Ticket</i>	568	12	5	4	0	589
<i>Warning</i>	296	2	5	1	0	304
<i>No Action Taken</i>	0	0	0	0	0	0
<i>Arrest for violation</i>	2	0	0	0	0	2
<i>Arrest for warrant</i>	0	0	0	0	0	0
Searches (excl. externally generated stops)						
<i>Total Stops with No Search</i>	860	14	10	5	0	889
<i>Total Stops with Unknown Search</i>	0	0	0	0	0	0
<i>Total Stops with Search</i>	6	0	0	0	0	6
<i>Search with probable cause</i>	3	0	0	0	0	3
<i>Stops with No contraband found</i>	1	0	0	0	0	1
<i>Stops with Unknown contraband found</i>	0	0	0	0	0	0
<i>Stops with Contraband found</i>	2	0	0	0	0	2
<i>Incidents</i>						
<i>Warning</i>	0	0	0	0	0	0
<i>Ticket</i>	2	0	0	0	0	2
<i>Arrest on violation (excl. arrest on warrant)</i>	0	0	0	0	0	0
<i>Search with reasonable suspicion</i>	3	0	0	0	0	3
<i>Stops with No contraband found</i>	1	0	0	0	0	1
<i>Stops with Unknown contraband found</i>	0	0	0	0	0	0
<i>Stops with Contraband found</i>	2	0	0	0	0	2
<i>Incidents</i>						
<i>Warning</i>	0	0	0	0	0	0
<i>Ticket</i>	2	0	0	0	0	2
<i>Arrest on violation (excl. arrest on warrant)</i>	0	0	0	0	0	0
<i>Search with warrant</i>	0	0	0	0	0	0
<i>Stops with No contraband found</i>	0	0	0	0	0	0
<i>Stops with unknown contraband found</i>	0	0	0	0	0	0
<i>Stops with Contraband found</i>	0	0	0	0	0	0
<i>Incidents</i>						
<i>Warning</i>	0	0	0	0	0	0
<i>Ticket</i>	0	0	0	0	0	0
<i>Arrest on violation (excl. arrest on warrant)</i>	0	0	0	0	0	0
Outcome rates as a % of stops (excl. externally generated stops and arrests on warrant)						
<i>Warning rate</i>	34.2%	14.3%	50.0%	20.0%	-	34.0%
<i>Ticket rate</i>	65.6%	85.7%	50.0%	80.0%	-	65.8%
<i>Arrest rate</i>	0.2%	0.0%	0.0%	0.0%	-	0.2%
<i>Search rates</i>						
<i>Search rate (excl. searches on warrant)</i>	0.7%	0.0%	0.0%	0.0%	-	0.7%
<i>Search rate (incl. searches on warrant)</i>	0.7%	0.0%	0.0%	0.0%	-	0.7%
<i>Hit rates (as a % of searches)</i>						
<i>Hit rates (includes all outcomes)</i>	66.7%	-	-	-	-	66.7%
<i>Hit rates (excl. warnings as outcomes of searches)</i>	66.7%	-	-	-	-	66.7%
<i>Hit rates (outcome = arrest)</i>	0.0%	-	-	-	-	0.0%

Manchester 2014-16

All Years	White	Black	Asian	Hispanic	Unknown	Total
Total Traffic Stops						
<i>Including externally generated stops</i>	2,466	62	34	22	102	2,686
<i>Excluding externally generated stops</i>	2,461	62	34	22	102	2,681
Outcomes (excl. externally generated stops)						
<i>Ticket</i>	339	17	7	8	13	384
<i>Warning</i>	1,914	41	27	15	73	2,070
<i>No Action Taken</i>	3	0	0	0	0	3
<i>Arrest for violation</i>	6	0	0	0	0	6
<i>Arrest for warrant</i>	0	0	0	0	0	0
Searches (excl. externally generated stops)						
<i>Total Stops with No Search</i>	1,980	51	32	19	77	2,159
<i>Total Stops with Unknown Search</i>	466	10	2	2	24	504
<i>Total Stops with Search</i>	15	1	0	1	1	18
<i>Search with probable cause</i>	10	1	0	1	1	13
Stops with No contraband found	3	0	0	0	1	4
Stops with Unknown contraband found	0	0	0	0	0	0
Stops with Contraband found	7	1	0	1	0	9
<i>Incidents</i>						
<i>Warning</i>	4	0	0	0	0	4
<i>Ticket</i>	9	1	0	1	0	11
Arrest on violation (excl. arrest on warrant)	0	0	0	0	0	0
<i>Search with reasonable suspicion</i>	4	0	0	0	0	4
Stops with No contraband found	1	0	0	0	0	1
Stops with Unknown contraband found	0	0	0	0	0	0
Stops with Contraband found	3	0	0	0	0	3
<i>Incidents</i>						
<i>Warning</i>	2	0	0	0	0	2
<i>Ticket</i>	2	0	0	0	0	2
Arrest on violation (excl. arrest on warrant)	0	0	0	0	0	0
<i>Search with warrant</i>	1	0	0	0	0	1
Stops with No contraband found	0	0	0	0	0	0
Stops with unknown contraband found	0	0	0	0	0	0
Stops with Contraband found	1	0	0	0	0	1
<i>Incidents</i>						
<i>Warning</i>	0	0	0	0	0	0
<i>Ticket</i>	1	0	0	0	0	1
Arrest on violation (excl. arrest on warrant)	0	0	0	0	0	0
Outcome rates as a % of stops (excl. externally generated stops and arrests on warrant)						
<i>Warning rate</i>	77.8%	66.1%	79.4%	68.2%	71.6%	77.2%
<i>Ticket rate</i>	13.8%	27.4%	20.6%	36.4%	12.7%	14.3%
<i>Arrest rate</i>	0.2%	0.0%	0.0%	0.0%	0.0%	0.2%
<i>Search rates</i>						
<i>Search rate (excl. searches on warrant)</i>	0.6%	1.6%	0.0%	4.5%	1.0%	0.6%
<i>Search rate (incl. searches on warrant)</i>	0.6%	1.6%	0.0%	4.5%	1.0%	0.7%
<i>Hit rates (as a % of searches)</i>						
Hit rates (includes all outcomes)	121.4%	100.0%	-	100.0%	0.0%	70.6%
Hit rates (excl. warnings as outcomes of searches)	78.6%	100.0%	-	100.0%	0.0%	76.5%
Hit rates (outcome = arrest)	0.0%	0.0%	-	0.0%	0.0%	0.0%

Middlebury 2014-16

All Years	White	Black	Asian	Hispanic	Unknown	Total
Total Traffic Stops						
<i>Including externally generated stops</i>	1,233	32	21	9	11	1,306
<i>Excluding externally generated stops</i>	1,203	30	21	9	10	1,273
Outcomes (excl. externally generated stops)						
<i>Ticket</i>	496	12	6	4	3	521
<i>Warning</i>	802	20	17	6	7	852
<i>No Action Taken</i>	1	0	0	0	0	1
<i>Arrest for violation</i>	44	1	0	0	0	45
<i>Arrest for warrant</i>	1	0	0	0	0	1
Searches (excl. externally generated stops)						
<i>Total Stops with No Search</i>	1,162	30	21	9	10	1,232
<i>Total Stops with Unknown Search</i>	1	0	0	0	0	1
<i>Total Stops with Search</i>	40	0	0	0	0	40
<i>Search with probable cause</i>	31	0	0	0	0	31
Stops with No contraband found	11	0	0	0	0	11
Stops with Unknown contraband found	0	0	0	0	0	0
Stops with Contraband found	19	0	0	0	0	19
<i>Incidents</i>						
<i>Warning</i>	6	0	0	0	0	6
<i>Ticket</i>	24	0	0	0	0	24
Arrest on violation (excl. arrest on warrant)	7	0	0	0	0	7
<i>Search with reasonable suspicion</i>	8	0	0	0	0	8
Stops with No contraband found	3	0	0	0	0	3
Stops with Unknown contraband found	0	0	0	0	0	0
Stops with Contraband found	4	0	0	0	0	4
<i>Incidents</i>						
<i>Warning</i>	0	0	0	0	0	0
<i>Ticket</i>	4	0	0	0	0	4
Arrest on violation (excl. arrest on warrant)	1	0	0	0	0	1
<i>Search with warrant</i>	1	0	0	0	0	1
Stops with No contraband found	0	0	0	0	0	0
Stops with unknown contraband found	0	0	0	0	0	0
Stops with Contraband found	0	0	0	0	0	0
<i>Incidents</i>						
<i>Warning</i>	0	0	0	0	0	0
<i>Ticket</i>	0	0	0	0	0	0
Arrest on violation (excl. arrest on warrant)	0	0	0	0	0	0
Outcome rates as a % of stops (excl. externally generated stops and arrests on warrant)						
<i>Warning rate</i>	66.7%	66.7%	81.0%	66.7%	70.0%	66.9%
<i>Ticket rate</i>	41.2%	40.0%	28.6%	44.4%	30.0%	40.9%
<i>Arrest rate</i>	3.7%	3.3%	0.0%	0.0%	0.0%	3.5%
<i>Search rates</i>						
<i>Search rate (excl. searches on warrant)</i>	3.2%	0.0%	0.0%	0.0%	0.0%	3.1%
<i>Search rate (incl. searches on warrant)</i>	3.3%	0.0%	0.0%	0.0%	0.0%	3.1%
<i>Hit rates (as a % of searches)</i>						
Hit rates (includes all outcomes)	107.7%	-	-	-	-	59.0%
Hit rates (excl. warnings as outcomes of searches)	92.3%	-	-	-	-	92.3%
Hit rates (outcome = arrest)	20.5%	-	-	-	-	20.5%

Milton 2014-16

All Years	White	Black	Asian	Hispanic	Unknown	Total
Total Traffic Stops						
<i>Including externally generated stops</i>	5,270	85	51	25	239	5,670
<i>Excluding externally generated stops</i>	5,228	85	50	25	229	5,617
Outcomes (excl. externally generated stops)						
<i>Ticket</i>	1,120	22	8	9	55	1,214
<i>Warning</i>	4,000	61	42	15	164	4,282
<i>No Action Taken</i>	1	0	0	0	0	1
<i>Arrest for violation</i>	9	0	0	0	0	9
<i>Arrest for warrant</i>	1	0	0	0	0	1
Searches (excl. externally generated stops)						
<i>Total Stops with No Search</i>	5,095	81	49	24	208	5,457
<i>Total Stops with Unknown Search</i>	105	2	1	1	16	125
<i>Total Stops with Search</i>	28	2	0	0	5	35
<i>Search with probable cause</i>	19	0	0	0	1	20
Stops with No contraband found	1	0	0	0	0	1
Stops with Unknown contraband found	0	0	0	0	0	0
Stops with Contraband found	18	0	0	0	1	19
<i>Incidents</i>						
<i>Warning</i>	0	0	0	0	0	0
<i>Ticket</i>	17	0	0	0	1	18
Arrest on violation (excl. arrest on warrant)	1	0	0	0	0	1
<i>Search with reasonable suspicion</i>	6	2	0	0	2	10
Stops with No contraband found	2	0	0	0	1	3
Stops with Unknown contraband found	0	0	0	0	0	0
Stops with Contraband found	4	2	0	0	1	7
<i>Incidents</i>						
<i>Warning</i>	0	1	0	0	0	1
<i>Ticket</i>	4	1	0	0	1	6
Arrest on violation (excl. arrest on warrant)	0	0	0	0	0	0
<i>Search with warrant</i>	3	0	0	0	2	5
Stops with No contraband found	0	0	0	0	0	0
Stops with unknown contraband found	0	0	0	0	0	0
Stops with Contraband found	2	0	0	0	2	4
<i>Incidents</i>						
<i>Warning</i>	0	0	0	0	0	0
<i>Ticket</i>	2	0	0	0	2	4
Arrest on violation (excl. arrest on warrant)	0	0	0	0	0	0
Outcome rates as a % of stops (excl. externally generated stops and arrests on warrant)						
<i>Warning rate</i>	76.5%	71.8%	84.0%	60.0%	71.6%	76.2%
<i>Ticket rate</i>	21.4%	25.9%	16.0%	36.0%	24.0%	21.6%
<i>Arrest rate</i>	0.2%	0.0%	0.0%	0.0%	0.0%	0.2%
<i>Search rates</i>						
<i>Search rate (excl. searches on warrant)</i>	0.5%	2.4%	0.0%	0.0%	1.3%	0.5%
<i>Search rate (incl. searches on warrant)</i>	0.5%	2.4%	0.0%	0.0%	2.2%	0.6%
<i>Hit rates (as a % of searches)</i>						
Hit rates (includes all outcomes)	88.0%	100.0%	-	-	66.7%	86.7%
Hit rates (excl. warnings as outcomes of searches)	88.0%	50.0%	-	-	66.7%	83.3%
Hit rates (outcome = arrest)	4.0%	0.0%	-	-	0.0%	3.3%

Montpelier 2014-16

All Years	White	Black	Asian	Hispanic	Unknown	Total
Total Traffic Stops						
<i>Including externally generated stops</i>	2,945	59	40	27	259	3,330
<i>Excluding externally generated stops</i>	2,890	58	40	25	255	3,268
Outcomes (excl. externally generated stops)						
<i>Ticket</i>	898	28	9	7	75	1,017
<i>Warning</i>	2,599	44	38	17	227	2,925
<i>No Action Taken</i>	2	0	0	0	0	2
<i>Arrest for violation</i>	50	0	0	1	0	51
<i>Arrest for warrant</i>	3	0	0	0	0	3
Searches (excl. externally generated stops)						
<i>Total Stops with No Search</i>	2,848	56	40	23	250	3,217
<i>Total Stops with Unknown Search</i>	30	2	0	2	5	39
<i>Total Stops with Search</i>	12	0	0	0	0	12
<i>Search with probable cause</i>	11	0	0	0	0	11
Stops with No contraband found	1	0	0	0	0	1
Stops with Unknown contraband found	0	0	0	0	0	0
Stops with Contraband found	10	0	0	0	0	10
<i>Incidents</i>						
<i>Warning</i>	5	0	0	0	0	5
<i>Ticket</i>	2	0	0	0	0	2
Arrest on violation (excl. arrest on warrant)	8	0	0	0	0	8
<i>Search with reasonable suspicion</i>	0	0	0	0	0	0
Stops with No contraband found	0	0	0	0	0	0
Stops with Unknown contraband found	0	0	0	0	0	0
Stops with Contraband found	0	0	0	0	0	0
<i>Incidents</i>						
<i>Warning</i>	0	0	0	0	0	0
<i>Ticket</i>	0	0	0	0	0	0
Arrest on violation (excl. arrest on warrant)	0	0	0	0	0	0
<i>Search with warrant</i>	1	0	0	0	0	1
Stops with No contraband found	0	0	0	0	0	0
Stops with unknown contraband found	0	0	0	0	0	0
Stops with Contraband found	1	0	0	0	0	1
<i>Incidents</i>						
<i>Warning</i>	0	0	0	0	0	0
<i>Ticket</i>	3	0	0	0	0	3
Arrest on violation (excl. arrest on warrant)	0	0	0	0	0	0
Outcome rates as a % of stops (excl. externally generated stops and arrests on warrant)						
<i>Warning rate</i>	89.9%	75.9%	95.0%	68.0%	89.0%	89.5%
<i>Ticket rate</i>	31.1%	48.3%	22.5%	28.0%	29.4%	31.1%
<i>Arrest rate</i>	1.7%	0.0%	0.0%	4.0%	0.0%	1.6%
<i>Search rates</i>						
<i>Search rate (excl. searches on warrant)</i>	0.4%	0.0%	0.0%	0.0%	0.0%	0.3%
<i>Search rate (incl. searches on warrant)</i>	0.4%	0.0%	0.0%	0.0%	0.0%	0.4%
<i>Hit rates (as a % of searches)</i>						
Hit rates (includes all outcomes)	136.4%	-	-	-	-	90.9%
Hit rates (excl. warnings as outcomes of searches)	90.9%	-	-	-	-	90.9%
Hit rates (outcome = arrest)	72.7%	-	-	-	-	72.7%

Northfield 2014-16

All Years	White	Black	Asian	Hispanic	Unknown	Total
Total Traffic Stops						
<i>Including externally generated stops</i>	587	10	6	8	5	616
<i>Excluding externally generated stops</i>	545	10	6	8	5	574
Outcomes (excl. externally generated stops)						
<i>Ticket</i>	54	1	1	0	0	56
<i>Warning</i>	464	9	5	8	2	488
<i>No Action Taken</i>	13	0	0	0	0	13
<i>Arrest for violation</i>	8	0	0	0	0	8
<i>Arrest for warrant</i>	0	0	0	0	0	0
Searches (excl. externally generated stops)						
<i>Total Stops with No Search</i>	530	10	6	8	2	556
<i>Total Stops with Unknown Search</i>	3	0	0	0	3	6
<i>Total Stops with Search</i>	12	0	0	0	0	12
<i>Search with probable cause</i>	5	0	0	0	0	5
<i>Stops with No contraband found</i>	2	0	0	0	0	2
<i>Stops with Unknown contraband found</i>	0	0	0	0	0	0
<i>Stops with Contraband found</i>	3	0	0	0	0	3
<i>Incidents</i>						
<i>Warning</i>	1	0	0	0	0	1
<i>Ticket</i>	1	0	0	0	0	1
<i>Arrest on violation (excl. arrest on warrant)</i>	1	0	0	0	0	1
<i>Search with reasonable suspicion</i>	5	0	0	0	0	5
<i>Stops with No contraband found</i>	1	0	0	0	0	1
<i>Stops with Unknown contraband found</i>	0	0	0	0	0	0
<i>Stops with Contraband found</i>	4	0	0	0	0	4
<i>Incidents</i>						
<i>Warning</i>	1	0	0	0	0	1
<i>Ticket</i>	3	0	0	0	0	3
<i>Arrest on violation (excl. arrest on warrant)</i>	0	0	0	0	0	0
<i>Search with warrant</i>	2	0	0	0	0	2
<i>Stops with No contraband found</i>	0	0	0	0	0	0
<i>Stops with unknown contraband found</i>	1	0	0	0	0	1
<i>Stops with Contraband found</i>	0	0	0	0	0	0
<i>Incidents</i>						
<i>Warning</i>	0	0	0	0	0	0
<i>Ticket</i>	0	0	0	0	0	0
<i>Arrest on violation (excl. arrest on warrant)</i>	0	0	0	0	0	0
Outcome rates as a % of stops (excl. externally generated stops and arrests on warrant)						
<i>Warning rate</i>	85.1%	90.0%	83.3%	100.0%	40.0%	85.0%
<i>Ticket rate</i>	9.9%	10.0%	16.7%	0.0%	0.0%	9.8%
<i>Arrest rate</i>	1.5%	0.0%	0.0%	0.0%	0.0%	1.4%
<i>Search rates</i>						
<i>Search rate (excl. searches on warrant)</i>	1.8%	0.0%	0.0%	0.0%	0.0%	1.7%
<i>Search rate (incl. searches on warrant)</i>	2.2%	0.0%	0.0%	0.0%	0.0%	2.1%
<i>Hit rates (as a % of searches)</i>						
<i>Hit rates (includes all outcomes)</i>	70.0%	-	-	-	-	70.0%
<i>Hit rates (excl. warnings as outcomes of searches)</i>	50.0%	-	-	-	-	50.0%
<i>Hit rates (outcome = arrest)</i>	10.0%	-	-	-	-	10.0%

Randolph 2014-16

All Years	White	Black	Asian	Hispanic	Unknown	Total
Total Traffic Stops						
<i>Including externally generated stops</i>	284	2	2	0	4	292
<i>Excluding externally generated stops</i>	236	2	2	0	2	242
Outcomes (excl. externally generated stops)						
<i>Ticket</i>	205	2	1	0	1	209
<i>Warning</i>	23	0	1	0	1	25
<i>No Action Taken</i>	0	0	0	0	0	0
<i>Arrest for violation</i>	8	0	0	0	0	8
<i>Arrest for warrant</i>	0	0	0	0	0	0
Searches (excl. externally generated stops)						
<i>Total Stops with No Search</i>	209	2	1	0	1	213
<i>Total Stops with Unknown Search</i>	18	0	1	0	1	20
<i>Total Stops with Search</i>	9	0	0	0	0	9
<i>Search with probable cause</i>	7	0	0	0	0	7
<i>Stops with No contraband found</i>	2	0	0	0	0	2
<i>Stops with Unknown contraband found</i>	0	0	0	0	0	0
<i>Stops with Contraband found</i>	5	0	0	0	0	5
<i>Incidents</i>						
<i>Warning</i>	0	0	0	0	0	0
<i>Ticket</i>	4	0	0	0	0	4
<i>Arrest on violation (excl. arrest on warrant)</i>	1	0	0	0	0	1
<i>Search with reasonable suspicion</i>	2	0	0	0	0	2
<i>Stops with No contraband found</i>	1	0	0	0	0	1
<i>Stops with Unknown contraband found</i>	0	0	0	0	0	0
<i>Stops with Contraband found</i>	1	0	0	0	0	1
<i>Incidents</i>						
<i>Warning</i>	0	0	0	0	0	0
<i>Ticket</i>	1	0	0	0	0	1
<i>Arrest on violation (excl. arrest on warrant)</i>	0	0	0	0	0	0
<i>Search with warrant</i>	0	0	0	0	0	0
<i>Stops with No contraband found</i>	0	0	0	0	0	0
<i>Stops with unknown contraband found</i>	0	0	0	0	0	0
<i>Stops with Contraband found</i>	0	0	0	0	0	0
<i>Incidents</i>						
<i>Warning</i>	0	0	0	0	0	0
<i>Ticket</i>	0	0	0	0	0	0
<i>Arrest on violation (excl. arrest on warrant)</i>	0	0	0	0	0	0
Outcome rates as a % of stops (excl. externally generated stops and arrests on warrant)						
<i>Warning rate</i>	9.7%	0.0%	50.0%	-	50.0%	10.3%
<i>Ticket rate</i>	86.9%	100.0%	50.0%	-	50.0%	86.4%
<i>Arrest rate</i>	3.4%	0.0%	0.0%	-	0.0%	3.3%
Search rates						
<i>Search rate (excl. searches on warrant)</i>	3.8%	0.0%	0.0%	-	0.0%	3.7%
<i>Search rate (incl. searches on warrant)</i>	3.8%	0.0%	0.0%	-	0.0%	3.7%
Hit rates (as a % of searches)						
<i>Hit rates (includes all outcomes)</i>	66.7%	-	-	-	-	66.7%
<i>Hit rates (excl. warnings as outcomes of searches)</i>	66.7%	-	-	-	-	66.7%
<i>Hit rates (outcome = arrest)</i>	11.1%	-	-	-	-	11.1%

Rutland 2011-15

All Years	White	Black	Asian	Hispanic	Unknown	Total
Total Traffic Stops						
<i>Including externally generated stops</i>	12,596	372	100	99	352	13,519
<i>Excluding externally generated stops</i>	11,502	343	89	90	338	12,362
Outcomes (excl. externally generated stops)						
<i>Ticket</i>	7,999	231	61	55	302	8,648
<i>Warning</i>	3,284	95	28	26	36	3,469
<i>No Action Taken</i>	2	0	0	0	0	2
<i>Arrest for violation</i>	214	17	0	8	0	239
<i>Arrest for warrant</i>	0	0	0	1	0	1
Searches (excl. externally generated stops)						
<i>Total Stops with No Search</i>	11,394	322	89	89	338	12,232
<i>Total Stops with Unknown Search</i>	0	0	0	0	0	0
<i>Total Stops with Search</i>	108	21	0	1	0	130
<i>Search with probable cause</i>	74	11	0	1	0	86
<i>Stops with No contraband found</i>	8	7	0	0	0	15
<i>Stops with Unknown contraband found</i>	0	0	0	0	0	0
<i>Stops with Contraband found</i>	59	3	0	1	0	63
<i>Incidents</i>						
<i>Warning</i>	1	0	0	0	0	1
<i>Ticket</i>	50	3	0	1	0	54
<i>Arrest on violation (excl. arrest on warrant)</i>	8	0	0	0	0	8
<i>Search with reasonable suspicion</i>	28	8	0	0	0	36
<i>Stops with No contraband found</i>	7	4	0	0	0	11
<i>Stops with Unknown contraband found</i>	0	0	0	0	0	0
<i>Stops with Contraband found</i>	18	3	0	0	0	21
<i>Incidents</i>						
<i>Warning</i>	3	0	0	0	0	3
<i>Ticket</i>	10	3	0	0	0	13
<i>Arrest on violation (excl. arrest on warrant)</i>	5	0	0	0	0	5
<i>Search with warrant</i>	6	2	0	0	0	8
<i>Stops with No contraband found</i>	3	0	0	0	0	3
<i>Stops with unknown contraband found</i>	0	0	0	0	0	0
<i>Stops with Contraband found</i>	1	1	0	0	0	2
<i>Incidents</i>						
<i>Warning</i>	0	0	0	0	0	0
<i>Ticket</i>	0	1	0	0	0	1
<i>Arrest on violation (excl. arrest on warrant)</i>	1	0	0	0	0	1
Outcome rates as a % of stops (excl. externally generated stops and arrests on warrant)						
<i>Warning rate</i>	28.6%	27.7%	31.5%	28.9%	10.7%	28.1%
<i>Ticket rate</i>	69.5%	67.3%	68.5%	61.1%	89.3%	70.0%
<i>Arrest rate</i>	1.9%	5.0%	0.0%	8.9%	0.0%	1.9%
<i>Search rates</i>						
<i>Search rate (excl. searches on warrant)</i>	0.9%	5.5%	0.0%	1.1%	0.0%	1.0%
<i>Search rate (incl. searches on warrant)</i>	0.9%	6.1%	0.0%	1.1%	0.0%	1.1%
<i>Hit rates (as a % of searches)</i>						
<i>Hit rates (includes all outcomes)</i>	75.5%	31.6%	-	100.0%	-	68.9%
<i>Hit rates (excl. warnings as outcomes of searches)</i>	71.6%	31.6%	-	100.0%	-	65.6%
<i>Hit rates (outcome = arrest)</i>	12.7%	0.0%	-	0.0%	-	10.7%

Rutland County Sheriff 2015-16

All Years	White	Black	Asian	Hispanic	Unknown	Total
Total Traffic Stops						
<i>Including externally generated stops</i>	4,095	51	38	38	162	4,384
<i>Excluding externally generated stops</i>	4,088	51	38	38	161	4,376
Outcomes (excl. externally generated stops)						
<i>Ticket</i>	2,137	31	25	20	94	2,307
<i>Warning</i>	1,866	20	12	17	65	1,980
<i>No Action Taken</i>	1	0	0	0	0	1
<i>Arrest for violation</i>	21	0	1	0	1	23
<i>Arrest for warrant</i>	0	0	0	0	0	0
Searches (excl. externally generated stops)						
<i>Total Stops with No Search</i>	0	0	0	0	0	0
<i>Total Stops with Unknown Search</i>	4,088	51	38	38	161	4,376
<i>Total Stops with Search</i>	0	0	0	0	0	0
<i>Search with probable cause</i>	0	0	0	0	0	0
<i>Stops with No contraband found</i>	0	0	0	0	0	0
<i>Stops with Unknown contraband found</i>	0	0	0	0	0	0
<i>Stops with Contraband found</i>	0	0	0	0	0	0
<i>Incidents</i>						
<i>Warning</i>	0	0	0	0	0	0
<i>Ticket</i>	0	0	0	0	0	0
<i>Arrest on violation (excl. arrest on warrant)</i>	0	0	0	0	0	0
<i>Search with reasonable suspicion</i>	0	0	0	0	0	0
<i>Stops with No contraband found</i>	0	0	0	0	0	0
<i>Stops with Unknown contraband found</i>	0	0	0	0	0	0
<i>Stops with Contraband found</i>	0	0	0	0	0	0
<i>Incidents</i>						
<i>Warning</i>	0	0	0	0	0	0
<i>Ticket</i>	0	0	0	0	0	0
<i>Arrest on violation (excl. arrest on warrant)</i>	0	0	0	0	0	0
<i>Search with warrant</i>	0	0	0	0	0	0
<i>Stops with No contraband found</i>	0	0	0	0	0	0
<i>Stops with unknown contraband found</i>	0	0	0	0	0	0
<i>Stops with Contraband found</i>	0	0	0	0	0	0
<i>Incidents</i>						
<i>Warning</i>	0	0	0	0	0	0
<i>Ticket</i>	0	0	0	0	0	0
<i>Arrest on violation (excl. arrest on warrant)</i>	0	0	0	0	0	0
Outcome rates as a % of stops (excl. externally generated stops and arrests on warrant)						
<i>Warning rate</i>	45.6%	39.2%	31.6%	44.7%	40.4%	45.2%
<i>Ticket rate</i>	52.3%	60.8%	65.8%	52.6%	58.4%	52.7%
<i>Arrest rate</i>	0.5%	0.0%	2.6%	0.0%	0.6%	0.5%
<i>Search rates</i>						
<i>Search rate (excl. searches on warrant)</i>	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
<i>Search rate (incl. searches on warrant)</i>	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
<i>Hit rates (as a % of searches)</i>						
<i>Hit rates (includes all outcomes)</i>	-	-	-	-	-	-
<i>Hit rates (excl. warnings as outcomes of searches)</i>	-	-	-	-	-	-
<i>Hit rates (outcome = arrest)</i>	-	-	-	-	-	-

S. Burlington 2013-15

All Years	White	Black	Asian	Hispanic	Unknown	Total
Total Traffic Stops						
<i>Including externally generated stops</i>	10,587	465	366	93	58	11,569
<i>Excluding externally generated stops</i>	10,530	460	361	93	58	11,502
Outcomes (excl. externally generated stops)						
<i>Ticket</i>	3,984	152	123	35	31	4,325
<i>Warning</i>	6,476	298	240	58	28	7,100
<i>No Action Taken</i>	0	1	0	0	0	1
<i>Arrest for violation</i>	123	8	0	0	0	131
<i>Arrest for warrant</i>	3	0	0	0	0	3
Searches (excl. externally generated stops)						
<i>Total Stops with No Search</i>	10,464	442	358	92	58	11,414
<i>Total Stops with Unknown Search</i>	16	1	2	0	0	19
<i>Total Stops with Search</i>	50	17	1	1	0	69
<i>Search with probable cause</i>	31	6	0	0	0	37
Stops with No contraband found	3	1	0	0	0	4
Stops with Unknown contraband found	0	0	0	0	0	0
Stops with Contraband found	27	5	0	0	0	32
<i>Incidents</i>						
<i>Warning</i>	7	4	0	0	0	11
<i>Ticket</i>	12	1	0	0	0	13
Arrest on violation (excl. arrest on warrant)	8	0	0	0	0	8
<i>Search with reasonable suspicion</i>	13	7	1	1	0	22
Stops with No contraband found	5	3	1	0	0	9
Stops with Unknown contraband found	0	0	0	0	0	0
Stops with Contraband found	7	3	0	0	0	10
<i>Incidents</i>						
<i>Warning</i>	4	1	0	0	0	5
<i>Ticket</i>	2	1	0	0	0	3
Arrest on violation (excl. arrest on warrant)	1	1	0	0	0	2
<i>Search with warrant</i>	6	4	0	0	0	10
Stops with No contraband found	1	1	0	0	0	2
Stops with unknown contraband found	0	0	0	0	0	0
Stops with Contraband found	5	2	0	0	0	7
<i>Incidents</i>						
<i>Warning</i>	2	1	0	0	0	3
<i>Ticket</i>	3	0	0	0	0	3
Arrest on violation (excl. arrest on warrant)	0	1	0	0	0	1
Outcome rates as a % of stops (excl. externally generated stops and arrests on warrant)						
<i>Warning rate</i>	61.5%	64.8%	66.5%	62.4%	48.3%	61.7%
<i>Ticket rate</i>	37.8%	33.0%	34.1%	37.6%	53.4%	37.6%
<i>Arrest rate</i>	1.2%	1.7%	0.0%	0.0%	0.0%	1.1%
<i>Search rates</i>						
<i>Search rate (excl. searches on warrant)</i>	0.4%	2.8%	0.3%	1.1%	0.0%	0.5%
<i>Search rate (incl. searches on warrant)</i>	0.5%	3.7%	0.3%	1.1%	0.0%	0.6%
<i>Hit rates (as a % of searches)</i>						
Hit rates (includes all outcomes)	77.3%	61.5%	0.0%	0.0%	-	71.2%
Hit rates (excl. warnings as outcomes of searches)	52.3%	23.1%	0.0%	0.0%	-	44.1%
Hit rates (outcome = arrest)	20.5%	7.7%	0.0%	0.0%	-	16.9%

Springfield 2014-16

All Years	White	Black	Asian	Hispanic	Unknown	Total
Total Traffic Stops						
<i>Including externally generated stops</i>	6,126	112	47	69	0	6,354
<i>Excluding externally generated stops</i>	6,053	110	47	68	0	6,278
Outcomes (excl. externally generated stops)						
<i>Ticket</i>	789	17	4	10	0	820
<i>Warning</i>	5,232	93	43	56	0	5,424
<i>No Action Taken</i>	11	0	0	0	0	11
<i>Arrest for violation</i>	15	0	0	0	0	15
<i>Arrest for warrant</i>	4	0	0	2	0	6
Searches (excl. externally generated stops)						
<i>Total Stops with No Search</i>	6,013	106	47	68	0	6,234
<i>Total Stops with Unknown Search</i>	0	0	0	0	0	0
<i>Total Stops with Search</i>	40	4	0	0	0	44
<i>Search with probable cause</i>	9	2	0	0	0	11
Stops with No contraband found	3	0	0	0	0	3
Stops with Unknown contraband found	0	0	0	0	0	0
Stops with Contraband found	4	2	0	0	0	6
<i>Incidents</i>						
<i>Warning</i>	1	1	0	0	0	2
<i>Ticket</i>	3	1	0	0	0	4
Arrest on violation (excl. arrest on warrant)	0	0	0	0	0	0
<i>Search with reasonable suspicion</i>	29	2	0	0	0	31
Stops with No contraband found	5	0	0	0	0	5
Stops with Unknown contraband found	0	0	0	0	0	0
Stops with Contraband found	22	2	0	0	0	24
<i>Incidents</i>						
<i>Warning</i>	5	0	0	0	0	5
<i>Ticket</i>	15	2	0	0	0	17
Arrest on violation (excl. arrest on warrant)	2	0	0	0	0	2
<i>Search with warrant</i>	2	0	0	0	0	2
Stops with No contraband found	1	0	0	0	0	1
Stops with unknown contraband found	0	0	0	0	0	0
Stops with Contraband found	0	0	0	0	0	0
<i>Incidents</i>						
<i>Warning</i>	0	0	0	0	0	0
<i>Ticket</i>	0	0	0	0	0	0
Arrest on violation (excl. arrest on warrant)	0	0	0	0	0	0
Outcome rates as a % of stops (excl. externally generated stops and arrests on warrant)						
<i>Warning rate</i>	86.4%	84.5%	91.5%	82.4%	-	86.4%
<i>Ticket rate</i>	13.0%	15.5%	8.5%	14.7%	-	13.1%
<i>Arrest rate</i>	0.2%	0.0%	0.0%	0.0%	-	0.2%
<i>Search rates</i>						
<i>Search rate (excl. searches on warrant)</i>	0.6%	3.6%	0.0%	0.0%	-	0.7%
<i>Search rate (incl. searches on warrant)</i>	0.7%	3.6%	0.0%	0.0%	-	0.7%
<i>Hit rates (as a % of searches)</i>						
Hit rates (includes all outcomes)	68.4%	100.0%	-	-	-	71.4%
Hit rates (excl. warnings as outcomes of searches)	52.6%	75.0%	-	-	-	54.8%
Hit rates (outcome = arrest)	5.3%	0.0%	-	-	-	4.8%

St. Albans 2014-16

All Years	White	Black	Asian	Hispanic	Unknown	Total
Total Traffic Stops						
<i>Including externally generated stops</i>	4,557	73	31	10	2,064	6,735
<i>Excluding externally generated stops</i>	4,414	69	30	10	2,028	6,551
Outcomes (excl. externally generated stops)						
<i>Ticket</i>	1,857	40	8	3	596	2,504
<i>Warning</i>	2,910	46	21	7	1,444	4,428
<i>No Action Taken</i>	2	0	0	0	0	2
<i>Arrest for violation</i>	170	3	1	0	14	188
<i>Arrest for warrant</i>	6	0	0	0	1	7
Searches (excl. externally generated stops)						
<i>Total Stops with No Search</i>	4,220	65	30	9	1,912	6,236
<i>Total Stops with Unknown Search</i>	158	3	0	1	115	277
<i>Total Stops with Search</i>	36	1	0	0	1	38
<i>Search with probable cause</i>	20	0	0	0	1	21
Stops with No contraband found	0	0	0	0	0	0
Stops with Unknown contraband found	20	0	0	0	1	21
Stops with Contraband found	0	0	0	0	0	0
<i>Incidents</i>						
<i>Warning</i>	0	0	0	0	0	0
<i>Ticket</i>	0	0	0	0	0	0
Arrest on violation (excl. arrest on warrant)	0	0	0	0	0	0
<i>Search with reasonable suspicion</i>	9	1	0	0	0	10
Stops with No contraband found	0	0	0	0	0	0
Stops with Unknown contraband found	9	1	0	0	0	10
Stops with Contraband found	0	0	0	0	0	0
<i>Incidents</i>						
<i>Warning</i>	0	0	0	0	0	0
<i>Ticket</i>	0	0	0	0	0	0
Arrest on violation (excl. arrest on warrant)	0	0	0	0	0	0
<i>Search with warrant</i>	7	0	0	0	0	7
Stops with No contraband found	0	0	0	0	0	0
Stops with unknown contraband found	7	0	0	0	0	7
Stops with Contraband found	0	0	0	0	0	0
<i>Incidents</i>						
<i>Warning</i>	0	0	0	0	0	0
<i>Ticket</i>	0	0	0	0	0	0
Arrest on violation (excl. arrest on warrant)	0	0	0	0	0	0
Outcome rates as a % of stops (excl. externally generated stops and arrests on warrant)						
<i>Warning rate</i>	65.9%	66.7%	70.0%	70.0%	71.2%	67.6%
<i>Ticket rate</i>	42.1%	58.0%	26.7%	30.0%	29.4%	38.2%
<i>Arrest rate</i>	3.9%	4.3%	3.3%	0.0%	0.7%	2.9%
<i>Search rates</i>						
<i>Search rate (excl. searches on warrant)</i>	0.7%	1.4%	0.0%	0.0%	0.0%	0.5%
<i>Search rate (incl. searches on warrant)</i>	0.8%	1.4%	0.0%	0.0%	0.0%	0.6%
<i>Hit rates (as a % of searches)</i>						
Hit rates (includes all outcomes)	0.0%	0.0%	-	-	0.0%	0.0%
Hit rates (excl. warnings as outcomes of searches)	0.0%	0.0%	-	-	0.0%	0.0%
Hit rates (outcome = arrest)	0.0%	0.0%	-	-	0.0%	0.0%

St. Johnsbury 2015-16

All Years	White	Black	Asian	Hispanic	Unknown	Total
Total Traffic Stops						
<i>Including externally generated stops</i>	3,948	74	33	13	105	4,173
<i>Excluding externally generated stops</i>	3,883	71	33	13	102	4,102
Outcomes (excl. externally generated stops)						
<i>Ticket</i>	950	21	12	5	23	1,011
<i>Warning</i>	2,839	47	19	3	68	2,976
<i>No Action Taken</i>	0	0	0	0	0	0
<i>Arrest for violation</i>	0	0	0	0	0	0
<i>Arrest for warrant</i>	0	0	0	0	0	0
Searches (excl. externally generated stops)						
<i>Total Stops with No Search</i>	3,781	68	32	9	92	3,982
<i>Total Stops with Unknown Search</i>	58	2	1	4	7	72
<i>Total Stops with Search</i>	44	1	0	0	3	48
<i>Search with probable cause</i>	23	0	0	0	1	24
Stops with No contraband found	13	0	0	0	0	13
Stops with Unknown contraband found	0	0	0	0	0	0
Stops with Contraband found	9	0	0	0	0	9
<i>Incidents</i>						
<i>Warning</i>	2	0	0	0	0	2
<i>Ticket</i>	2	0	0	0	0	2
Arrest on violation (excl. arrest on warrant)	0	0	0	0	0	0
<i>Search with reasonable suspicion</i>	15	0	0	0	2	17
Stops with No contraband found	3	0	0	0	0	3
Stops with Unknown contraband found	0	0	0	0	0	0
Stops with Contraband found	12	0	0	0	2	14
<i>Incidents</i>						
<i>Warning</i>	6	0	0	0	0	6
<i>Ticket</i>	4	0	0	0	0	4
Arrest on violation (excl. arrest on warrant)	0	0	0	0	0	0
<i>Search with warrant</i>	6	1	0	0	0	7
Stops with No contraband found	2	0	0	0	0	2
Stops with unknown contraband found	0	0	0	0	0	0
Stops with Contraband found	3	0	0	0	0	3
<i>Incidents</i>						
<i>Warning</i>	0	0	0	0	0	0
<i>Ticket</i>	1	0	0	0	0	1
Arrest on violation (excl. arrest on warrant)	0	0	0	0	0	0
Outcome rates as a % of stops (excl. externally generated stops and arrests on warrant)						
<i>Warning rate</i>	73.1%	66.2%	57.6%	23.1%	66.7%	72.5%
<i>Ticket rate</i>	24.5%	29.6%	36.4%	38.5%	22.5%	24.6%
<i>Arrest rate</i>	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
<i>Search rates</i>						
<i>Search rate (excl. searches on warrant)</i>	1.0%	0.0%	0.0%	0.0%	2.9%	1.0%
<i>Search rate (incl. searches on warrant)</i>	1.1%	1.4%	0.0%	0.0%	2.9%	1.2%
<i>Hit rates (as a % of searches)</i>						
Hit rates (includes all outcomes)	36.8%	-	-	-	0.0%	56.1%
Hit rates (excl. warnings as outcomes of searches)	15.8%	-	-	-	0.0%	14.6%
Hit rates (outcome = arrest)	0.0%	-	-	-	0.0%	0.0%

UVM 2011-15

All Years	White	Black	Asian	Hispanic	Unknown	Total
Total Traffic Stops						
<i>Including externally generated stops</i>	7,952	449	270	62	113	8,846
<i>Excluding externally generated stops</i>	7,929	448	269	62	113	8,821
Outcomes (excl. externally generated stops)						
<i>Ticket</i>	1,628	100	35	16	23	1,802
<i>Warning</i>	6,048	341	229	45	82	6,745
<i>No Action Taken</i>	1	0	0	0	0	1
<i>Arrest for violation</i>	111	5	2	0	0	118
<i>Arrest for warrant</i>	2	0	0	0	0	2
Searches (excl. externally generated stops)						
<i>Total Stops with No Search</i>	7,661	431	262	59	105	8,518
<i>Total Stops with Unknown Search</i>	144	2	5	1	6	158
<i>Total Stops with Search</i>	124	15	2	2	2	145
<i>Search with probable cause</i>	86	4	1	1	0	92
Stops with No contraband found	13	0	0	0	0	13
Stops with Unknown contraband found	0	0	0	0	0	0
Stops with Contraband found	68	3	1	1	0	73
<i>Incidents</i>						
<i>Warning</i>	25	1	0	0	0	26
<i>Ticket</i>	36	2	1	1	0	40
Arrest on violation (excl. arrest on warrant)	7	0	0	0	0	7
<i>Search with reasonable suspicion</i>	24	10	1	0	2	37
Stops with No contraband found	9	2	0	0	0	11
Stops with Unknown contraband found	0	0	0	0	0	0
Stops with Contraband found	11	5	1	0	2	19
<i>Incidents</i>						
<i>Warning</i>	2	1	0	0	0	3
<i>Ticket</i>	7	3	1	0	2	13
Arrest on violation (excl. arrest on warrant)	2	1	0	0	0	3
<i>Search with warrant</i>	14	1	0	1	0	16
Stops with No contraband found	0	0	0	0	0	0
Stops with unknown contraband found	0	0	0	0	0	0
Stops with Contraband found	9	0	0	0	0	9
<i>Incidents</i>						
<i>Warning</i>	1	0	0	0	0	1
<i>Ticket</i>	5	0	0	0	0	5
Arrest on violation (excl. arrest on warrant)	3	0	0	0	0	3
Outcome rates as a % of stops (excl. externally generated stops and arrests on warrant)						
<i>Warning rate</i>	76.3%	76.1%	85.1%	72.6%	72.6%	76.5%
<i>Ticket rate</i>	20.5%	22.3%	13.0%	25.8%	20.4%	20.4%
<i>Arrest rate</i>	1.4%	1.1%	0.7%	0.0%	0.0%	1.3%
<i>Search rates</i>						
<i>Search rate (excl. searches on warrant)</i>	1.4%	3.1%	0.7%	1.6%	1.8%	1.5%
<i>Search rate (incl. searches on warrant)</i>	1.6%	3.3%	0.7%	3.2%	1.8%	1.6%
<i>Hit rates (as a % of searches)</i>						
Hit rates (includes all outcomes)	71.8%	57.1%	100.0%	100.0%	100.0%	71.3%
Hit rates (excl. warnings as outcomes of searches)	47.3%	42.9%	100.0%	100.0%	100.0%	48.8%
Hit rates (outcome = arrest)	8.2%	7.1%	0.0%	0.0%	0.0%	7.8%

Vergennes 2015

All Years	White	Black	Asian	Hispanic	Unknown	Total
Total Traffic Stops						
<i>Including externally generated stops</i>	1,619	72	34	43	39	1,807
<i>Excluding externally generated stops</i>	1,602	70	34	43	39	1,788
Outcomes (excl. externally generated stops)						
<i>Ticket</i>	812	39	22	30	9	912
<i>Warning</i>	766	30	12	13	30	851
<i>No Action Taken</i>	6	0	0	0	0	6
<i>Arrest for violation</i>	14	1	0	0	0	15
<i>Arrest for warrant</i>	2	0	0	0	0	2
Searches (excl. externally generated stops)						
<i>Total Stops with No Search</i>	1,559	67	34	41	39	1,740
<i>Total Stops with Unknown Search</i>	2	0	0	0	0	2
<i>Total Stops with Search</i>	41	3	0	2	0	46
<i>Search with probable cause</i>	27	2	0	2	0	31
<i>Stops with No contraband found</i>	1	0	0	0	0	1
<i>Stops with Unknown contraband found</i>	0	0	0	0	0	0
<i>Stops with Contraband found</i>	26	1	0	2	0	29
<i>Incidents</i>						
<i>Warning</i>	0	0	0	0	0	0
<i>Ticket</i>	25	1	0	2	0	28
<i>Arrest on violation (excl. arrest on warrant)</i>	1	0	0	0	0	1
<i>Search with reasonable suspicion</i>	11	1	0	0	0	12
<i>Stops with No contraband found</i>	2	0	0	0	0	2
<i>Stops with Unknown contraband found</i>	1	0	0	0	0	1
<i>Stops with Contraband found</i>	6	0	0	0	0	6
<i>Incidents</i>						
<i>Warning</i>	1	0	0	0	0	1
<i>Ticket</i>	5	0	0	0	0	5
<i>Arrest on violation (excl. arrest on warrant)</i>	0	0	0	0	0	0
<i>Search with warrant</i>	3	0	0	0	0	3
<i>Stops with No contraband found</i>	0	0	0	0	0	0
<i>Stops with unknown contraband found</i>	0	0	0	0	0	0
<i>Stops with Contraband found</i>	3	0	0	0	0	3
<i>Incidents</i>						
<i>Warning</i>	0	0	0	0	0	0
<i>Ticket</i>	2	0	0	0	0	2
<i>Arrest on violation (excl. arrest on warrant)</i>	0	0	0	0	0	0
Outcome rates as a % of stops (excl. externally generated stops and arrests on warrant)						
<i>Warning rate</i>	47.8%	42.9%	35.3%	30.2%	76.9%	47.6%
<i>Ticket rate</i>	50.7%	55.7%	64.7%	69.8%	23.1%	51.0%
<i>Arrest rate</i>	0.9%	1.4%	0.0%	0.0%	0.0%	0.8%
<i>Search rates</i>						
<i>Search rate (excl. searches on warrant)</i>	2.4%	4.3%	0.0%	4.7%	0.0%	2.4%
<i>Search rate (incl. searches on warrant)</i>	2.6%	4.3%	0.0%	4.7%	0.0%	2.6%
<i>Hit rates (as a % of searches)</i>						
<i>Hit rates (includes all outcomes)</i>	84.2%	33.3%	-	100.0%	-	81.4%
<i>Hit rates (excl. warnings as outcomes of searches)</i>	81.6%	33.3%	-	100.0%	-	79.1%
<i>Hit rates (outcome = arrest)</i>	2.6%	0.0%	-	0.0%	-	2.3%

Vermont State Police 2010-15

All Years	White	Black	Asian	Hispanic	Unknown	Total
Total Traffic Stops						
<i>Including externally generated stops</i>	265,899	5,727	3,604	2,620	4,809	282,659
<i>Excluding externally generated stops</i>	259,896	5,554	3,562	2,568	4,717	276,297
Outcomes (excl. externally generated stops)						
<i>Ticket</i>	95,786	2,348	1,713	1,145	2,003	102,995
<i>Warning</i>	159,791	3,054	1,817	1,369	2,350	168,381
<i>No Action Taken</i>	35	0	0	0	3	38
<i>Arrest for violation</i>	2,684	107	21	39	8	2,859
<i>Arrest for warrant</i>	59	6	0	3	0	68
Searches (excl. externally generated stops)						
<i>Total Stops with No Search</i>	255,408	5,233	3,521	2,452	4,306	270,920
<i>Total Stops with Unknown Search</i>	1,786	47	12	13	375	2,233
<i>Total Stops with Search</i>	2,702	274	29	103	36	3,144
<i>Search with probable cause</i>	1,883	169	17	59	17	2,145
Stops with No contraband found	135	23	0	10	0	168
Stops with Unknown contraband found	22	3	0	0	0	25
Stops with Contraband found	1,633	137	16	49	16	1,851
<i>Incidents</i>						
<i>Warning</i>	293	39	0	18	5	355
<i>Ticket</i>	857	63	8	22	9	959
Arrest on violation (excl. arrest on warrant)	482	35	8	10	2	537
<i>Search with reasonable suspicion</i>	658	84	11	43	17	813
Stops with No contraband found	228	40	4	19	11	302
Stops with Unknown contraband found	3	0	0	0	0	3
Stops with Contraband found	387	34	6	17	5	449
<i>Incidents</i>						
<i>Warning</i>	102	11	1	6	0	120
<i>Ticket</i>	165	13	5	8	3	194
Arrest on violation (excl. arrest on warrant)	122	8	0	3	2	135
<i>Search with warrant</i>	161	21	1	1	2	186
Stops with No contraband found	9	4	0	0	0	13
Stops with unknown contraband found	3	0	0	0	0	3
Stops with Contraband found	131	17	1	1	1	151
<i>Incidents</i>						
<i>Warning</i>	9	3	0	0	1	13
<i>Ticket</i>	34	5	0	0	0	39
Arrest on violation (excl. arrest on warrant)	85	9	1	1	0	96
Outcome rates as a % of stops (excl. externally generated stops and arrests on warrant)						
<i>Warning rate</i>	61.5%	55.0%	51.0%	53.3%	49.8%	60.9%
<i>Ticket rate</i>	36.9%	42.3%	48.1%	44.6%	42.5%	37.3%
<i>Arrest rate</i>	1.0%	1.9%	0.6%	1.5%	0.2%	1.0%
<i>Search rates</i>						
<i>Search rate (excl. searches on warrant)</i>	1.0%	4.6%	0.8%	4.0%	0.7%	1.1%
<i>Search rate (incl. searches on warrant)</i>	1.0%	4.9%	0.8%	4.0%	0.8%	1.1%
<i>Hit rates (as a % of searches)</i>						
Hit rates (includes all outcomes)	79.5%	66.8%	78.6%	65.7%	61.8%	77.8%
Hit rates (excl. warnings as outcomes of searches)	64.0%	47.0%	75.0%	42.2%	47.1%	61.7%
Hit rates (outcome = arrest)	23.8%	17.0%	28.6%	12.7%	11.8%	22.7%

Williston 2012-15

All Years	White	Black	Asian	Hispanic	Unknown	Total
Total Traffic Stops						
<i>Including externally generated stops</i>	11,063	381	223	116	121	11,904
<i>Excluding externally generated stops</i>	10,622	358	213	110	113	11,416
Outcomes (excl. externally generated stops)						
<i>Ticket</i>	3,102	131	74	46	13	3,366
<i>Warning</i>	6,922	188	135	57	96	7,398
<i>No Action Taken</i>	0	0	0	0	0	0
<i>Arrest for violation</i>	394	30	4	5	0	433
<i>Arrest for warrant</i>	11	0	0	0	0	11
Searches (excl. externally generated stops)						
<i>Total Stops with No Search</i>	10,237	332	213	104	108	10,994
<i>Total Stops with Unknown Search</i>	92	5	0	2	4	103
<i>Total Stops with Search</i>	293	21	0	4	1	319
<i>Search with probable cause</i>	187	12	0	4	0	203
<i>Stops with No contraband found</i>	22	2	0	2	0	26
<i>Stops with Unknown contraband found</i>	11	0	0	0	0	11
<i>Stops with Contraband found</i>	150	9	0	2	0	161
<i>Incidents</i>						
<i>Warning</i>	32	1	0	1	0	34
<i>Ticket</i>	78	8	0	1	0	87
<i>Arrest on violation (excl. arrest on warrant)</i>	38	0	0	0	0	38
<i>Search with reasonable suspicion</i>	87	9	0	0	0	96
<i>Stops with No contraband found</i>	8	2	0	0	0	10
<i>Stops with Unknown contraband found</i>	2	0	0	0	0	2
<i>Stops with Contraband found</i>	74	2	0	0	0	76
<i>Incidents</i>						
<i>Warning</i>	32	0	0	0	0	32
<i>Ticket</i>	27	2	0	0	0	29
<i>Arrest on violation (excl. arrest on warrant)</i>	10	0	0	0	0	10
<i>Search with warrant</i>	19	0	0	0	1	20
<i>Stops with No contraband found</i>	2	0	0	0	1	3
<i>Stops with unknown contraband found</i>	0	0	0	0	0	0
<i>Stops with Contraband found</i>	17	0	0	0	0	17
<i>Incidents</i>						
<i>Warning</i>	1	0	0	0	0	1
<i>Ticket</i>	8	0	0	0	0	8
<i>Arrest on violation (excl. arrest on warrant)</i>	8	0	0	0	0	8
Outcome rates as a % of stops (excl. externally generated stops and arrests on warrant)						
<i>Warning rate</i>	65.2%	52.5%	63.4%	51.8%	85.0%	64.8%
<i>Ticket rate</i>	29.2%	36.6%	34.7%	41.8%	11.5%	29.5%
<i>Arrest rate</i>	3.7%	8.4%	1.9%	4.5%	0.0%	3.8%
Search rates						
<i>Search rate (excl. searches on warrant)</i>	2.6%	5.9%	0.0%	3.6%	0.0%	2.6%
<i>Search rate (incl. searches on warrant)</i>	2.8%	5.9%	0.0%	3.6%	0.9%	2.8%
Hit rates (as a % of searches)						
<i>Hit rates (includes all outcomes)</i>	79.2%	52.4%	-	50.0%	-	79.3%
<i>Hit rates (excl. warnings as outcomes of searches)</i>	55.8%	47.6%	-	25.0%	-	54.8%
<i>Hit rates (outcome = arrest)</i>	17.5%	0.0%	-	0.0%	-	16.1%

Winooski 2012-15

All Years	White	Black	Asian	Hispanic	Unknown	Total
Total Traffic Stops						
<i>Including externally generated stops</i>	4,236	460	210	36	283	5,225
<i>Excluding externally generated stops</i>	4,185	457	210	36	281	5,169
Outcomes (excl. externally generated stops)						
<i>Ticket</i>	950	106	43	7	48	1,154
<i>Warning</i>	2,802	290	153	28	183	3,456
<i>No Action Taken</i>	17	1	0	0	2	20
<i>Arrest for violation</i>	121	12	5	0	11	149
<i>Arrest for warrant</i>	6	1	1	0	0	8
Searches (excl. externally generated stops)						
<i>Total Stops with No Search</i>	3,753	389	197	33	234	4,606
<i>Total Stops with Unknown Search</i>	343	50	12	2	41	448
<i>Total Stops with Search</i>	89	18	1	1	6	115
<i>Search with probable cause</i>	22	3	0	0	2	27
Stops with No contraband found	4	0	0	0	0	4
Stops with Unknown contraband found	0	0	0	0	0	0
Stops with Contraband found	18	3	0	0	1	22
<i>Incidents</i>						
<i>Warning</i>	6	1	0	0	1	8
<i>Ticket</i>	5	1	0	0	0	6
Arrest on violation (excl. arrest on warrant)	7	1	0	0	0	8
<i>Search with reasonable suspicion</i>	56	13	0	1	4	74
Stops with No contraband found	18	6	0	0	2	26
Stops with Unknown contraband found	0	0	0	0	0	0
Stops with Contraband found	37	7	0	1	2	47
<i>Incidents</i>						
<i>Warning</i>	20	5	0	0	1	26
<i>Ticket</i>	6	1	0	1	0	8
Arrest on violation (excl. arrest on warrant)	8	1	0	0	1	10
<i>Search with warrant</i>	11	2	1	0	0	14
Stops with No contraband found	2	0	0	0	0	2
Stops with unknown contraband found	0	0	0	0	0	0
Stops with Contraband found	4	1	1	0	0	6
<i>Incidents</i>						
<i>Warning</i>	1	0	0	0	0	1
<i>Ticket</i>	0	1	1	0	0	2
Arrest on violation (excl. arrest on warrant)	3	0	0	0	0	3
Outcome rates as a % of stops (excl. externally generated stops and arrests on warrant)						
<i>Warning rate</i>	67.0%	63.5%	72.9%	77.8%	65.1%	66.9%
<i>Ticket rate</i>	22.7%	23.2%	20.5%	19.4%	17.1%	22.3%
<i>Arrest rate</i>	2.9%	2.6%	2.4%	0.0%	3.9%	2.9%
<i>Search rates</i>						
<i>Search rate (excl. searches on warrant)</i>	1.9%	3.5%	0.0%	2.8%	2.1%	2.0%
<i>Search rate (incl. searches on warrant)</i>	2.1%	3.9%	0.5%	2.8%	2.1%	2.2%
<i>Hit rates (as a % of searches)</i>						
Hit rates (includes all outcomes)	66.7%	62.5%	-	100.0%	50.0%	68.3%
Hit rates (excl. warnings as outcomes of searches)	33.3%	25.0%	-	100.0%	16.7%	31.7%
Hit rates (outcome = arrest)	19.2%	12.5%	-	0.0%	16.7%	17.8%

Note: Hit rates reflect the possibility that there may be more than one outcome, such as more than one ticket, or a ticket and an arrest, and so forth. As a result, in some cases, the reader will note that the hit rate exceeds 100%.

Table A5. Traffic Data by County, 2015

2015	White	Black	Asian	Hispanic	Unknown	Total
Total Traffic Stops						
<i>Including externally generated stops</i>	8,584	209	111	108	1,210	10,222
<i>Excluding externally generated stops</i>	8,481	205	110	108	1,209	10,113
Outcomes (excl. externally generated stops)						
<i>Ticket</i>	5,643	141	72	76	1,005	6,937
<i>Warning</i>	2,799	60	38	33	192	3,122
<i>No Action Taken</i>	10	0	0	0	0	10
<i>Arrest for violation</i>	73	2	0	0	3	78
<i>Arrest for warrant</i>	4	0	0	0	0	4
Searches (excl. externally generated stops)						
<i>Total Stops with No Search</i>	8,350	197	110	105	1,203	9,965
<i>Total Stops with Unknown Search</i>	21	0	0	0	4	25
<i>Total Stops with Search</i>	110	8	0	3	2	123
<i>Search with probable cause</i>	76	5	0	2	1	84
Stops with No contraband found	9	0	0	0	0	9
Stops with Unknown contraband found	2	0	0	0	0	2
Stops with Contraband found	64	4	0	2	1	71
<i>Incidents</i>						
<i>Warning</i>	4	0	0	0	0	4
<i>Ticket</i>	59	4	0	2	1	66
Arrest on violation (excl. arrest on warrant)	8	0	0	0	0	8
<i>Search with reasonable suspicion</i>	26	2	0	1	0	29
Stops with No contraband found	3	0	0	0	0	3
Stops with Unknown contraband found	5	1	0	1	0	7
Stops with Contraband found	13	0	0	0	0	13
<i>Incidents</i>						
<i>Warning</i>	2	0	0	0	0	2
<i>Ticket</i>	12	0	0	0	0	12
Arrest on violation (excl. arrest on warrant)	0	0	0	0	0	0
<i>Search with warrant</i>	8	1	0	0	1	10
Stops with No contraband found	0	0	0	0	0	0
Stops with unknown contraband found	0	0	0	0	1	1
Stops with Contraband found	7	1	0	0	0	8
<i>Incidents</i>						
<i>Warning</i>	0	0	0	0	0	0
<i>Ticket</i>	3	1	0	0	0	4
Arrest on violation (excl. arrest on warrant)	2	0	0	0	0	2
Outcome rates as a % of stops (excl. externally generated stops and arrests on warrant)						
<i>Warning rate</i>	33.0%	29.3%	34.5%	30.6%	15.9%	30.9%
<i>Ticket rate</i>	66.5%	68.8%	65.5%	70.4%	83.1%	68.6%
<i>Arrest rate</i>	0.9%	1.0%	0.0%	0.0%	0.2%	0.8%
<i>Search rates</i>	1.3%	3.9%	0.0%	2.8%	0.2%	1.2%
<i>Search rate (excl. searches on warrant)</i>	1.2%	3.4%	0.0%	2.8%	0.1%	1.1%
<i>Search rate (incl. searches on warrant)</i>	1.3%	3.9%	0.0%	2.8%	0.2%	1.2%
<i>Hit rates (as a % of searches)</i>						
Hit rates (includes all outcomes)	83.3%	57.1%	-	66.7%	100.0%	74.3%
Hit rates (excl. warnings as outcomes of searches)	77.5%	57.1%	-	66.7%	100.0%	76.1%
Hit rates (outcome = arrest)	7.8%	0.0%	-	0.0%	0.0%	7.1%

Note: Agencies include Addison County Sheriff, Bristol, Middlebury, Vergennes, and VSP New Haven Barracks.

Bennington County

2015	White	Black	Asian	Hispanic	Unknown	Total
Total Traffic Stops						
<i>Including externally generated stops</i>	7,623	222	95	116	178	8,234
<i>Excluding externally generated stops</i>	7,397	207	95	110	172	7,981
Outcomes (excl. externally generated stops)						
<i>Ticket</i>	3,512	107	38	57	73	3,787
<i>Warning</i>	3,676	90	54	53	90	3,963
<i>No Action Taken</i>	2	0	0	0	0	2
<i>Arrest for violation</i>	94	5	3	2	0	104
<i>Arrest for warrant</i>	0	1	0	0	0	1
Searches (excl. externally generated stops)						
<i>Total Stops with No Search</i>	7,015	183	93	108	155	7,554
<i>Total Stops with Unknown Search</i>	256	6	2	1	15	280
<i>Total Stops with Search</i>	126	18	0	1	2	147
<i>Search with probable cause</i>	86	15	0	1	2	104
Stops with No contraband found	6	1	0	0	1	8
Stops with Unknown contraband found	1	0	0	0	0	1
Stops with Contraband found	72	14	0	1	1	88
<i>Incidents</i>						
<i>Warning</i>	3	0	0	0	0	3
<i>Ticket</i>	58	10	0	1	1	70
Arrest on violation (excl. arrest on warrant)	12	4	0	0	0	16
<i>Search with reasonable suspicion</i>	34	3	0	0	0	37
Stops with No contraband found	8	0	0	0	0	8
Stops with Unknown contraband found	1	0	0	0	0	1
Stops with Contraband found	23	2	0	0	0	25
<i>Incidents</i>						
<i>Warning</i>	2	0	0	0	0	2
<i>Ticket</i>	18	2	0	0	0	20
Arrest on violation (excl. arrest on warrant)	3	0	0	0	0	3
<i>Search with warrant</i>	6	0	0	0	0	6
Stops with No contraband found	1	0	0	0	0	1
Stops with unknown contraband found	0	0	0	0	0	0
Stops with Contraband found	4	0	0	0	0	4
<i>Incidents</i>						
<i>Warning</i>	0	0	0	0	0	0
<i>Ticket</i>	2	0	0	0	0	2
Arrest on violation (excl. arrest on warrant)	2	0	0	0	0	2
Outcome rates as a % of stops (excl. externally generated stops and arrests on warrant)						
<i>Warning rate</i>	49.7%	43.5%	56.8%	48.2%	52.3%	49.7%
<i>Ticket rate</i>	47.5%	51.7%	40.0%	51.8%	42.4%	47.5%
<i>Arrest rate</i>	1.3%	2.4%	3.2%	1.8%	0.0%	1.3%
<i>Search rates</i>	1.7%	8.7%	0.0%	0.9%	1.2%	1.8%
<i>Search rate (excl. searches on warrant)</i>	1.6%	8.7%	0.0%	0.9%	1.2%	1.8%
<i>Search rate (incl. searches on warrant)</i>	1.7%	8.7%	0.0%	0.9%	1.2%	1.8%
<i>Hit rates (as a % of searches)</i>						
Hit rates (includes all outcomes)	80.0%	88.9%	-	100.0%	50.0%	80.1%
Hit rates (excl. warnings as outcomes of searches)	75.8%	88.9%	-	100.0%	50.0%	77.3%
Hit rates (outcome = arrest)	12.5%	22.2%	-	0.0%	0.0%	13.5%

Note: Agencies include Bennington, Manchester, and VSP Shaftsbury Barracks.

Caledonia County

2015	White	Black	Asian	Hispanic	Unknown	Total
Total Traffic Stops						
<i>Including externally generated stops</i>	4,494	74	31	21	84	4,704
<i>Excluding externally generated stops</i>	4,398	72	31	21	83	4,605
Outcomes (excl. externally generated stops)						
<i>Ticket</i>	1,436	21	14	7	17	1,495
<i>Warning</i>	2,865	49	16	11	58	2,999
<i>No Action Taken</i>	0	0	0	0	0	0
<i>Arrest for violation</i>	12	0	0	0	0	12
<i>Arrest for warrant</i>	0	0	0	0	0	0
Searches (excl. externally generated stops)						
<i>Total Stops with No Search</i>	4,296	69	31	19	75	4,490
<i>Total Stops with Unknown Search</i>	65	2	0	2	8	77
<i>Total Stops with Search</i>	37	1	0	0	0	38
<i>Search with probable cause</i>	22	0	0	0	0	22
Stops with No contraband found	10	0	0	0	0	10
Stops with Unknown contraband found	0	0	0	0	0	0
Stops with Contraband found	7	0	0	0	0	7
<i>Incidents</i>						
<i>Warning</i>	3	0	0	0	0	3
<i>Ticket</i>	3	0	0	0	0	3
Arrest on violation (excl. arrest on warrant)	0	0	0	0	0	0
<i>Search with reasonable suspicion</i>	13	0	0	0	0	13
Stops with No contraband found	3	0	0	0	0	3
Stops with Unknown contraband found	0	0	0	0	0	0
Stops with Contraband found	10	0	0	0	0	10
<i>Incidents</i>						
<i>Warning</i>	4	0	0	0	0	4
<i>Ticket</i>	4	0	0	0	0	4
Arrest on violation (excl. arrest on warrant)	0	0	0	0	0	0
<i>Search with warrant</i>	2	1	0	0	0	3
Stops with No contraband found	0	0	0	0	0	0
Stops with unknown contraband found	0	0	0	0	0	0
Stops with Contraband found	1	0	0	0	0	1
<i>Incidents</i>						
<i>Warning</i>	0	0	0	0	0	0
<i>Ticket</i>	1	0	0	0	0	1
Arrest on violation (excl. arrest on warrant)	0	0	0	0	0	0
Outcome rates as a % of stops (excl. externally generated stops and arrests on warrant)						
<i>Warning rate</i>	65.1%	68.1%	51.6%	52.4%	69.9%	65.1%
<i>Ticket rate</i>	32.7%	29.2%	45.2%	33.3%	20.5%	32.5%
<i>Arrest rate</i>	0.3%	0.0%	0.0%	0.0%	0.0%	0.3%
<i>Search rates</i>	0.8%	1.4%	0.0%	0.0%	0.0%	0.8%
<i>Search rate (excl. searches on warrant)</i>	0.8%	0.0%	0.0%	0.0%	0.0%	0.8%
<i>Search rate (incl. searches on warrant)</i>	0.8%	1.4%	0.0%	0.0%	0.0%	0.8%
<i>Hit rates (as a % of searches)</i>						
Hit rates (includes all outcomes)	40.0%	-	-	-	-	48.6%
Hit rates (excl. warnings as outcomes of searches)	20.0%	-	-	-	-	20.0%
Hit rates (outcome = arrest)	0.0%	-	-	-	-	0.0%

Note: Agencies include St. Johnsbury and VSP St. Johnsbury Barracks.

Chittenden County

2015	White	Black	Asian	Hispanic	Unknown	Total
Total Traffic Stops						
<i>Including externally generated stops</i>	28,306	1,482	829	269	1,081	31,967
<i>Excluding externally generated stops</i>	27,520	1,426	805	263	1,050	31,064
Outcomes (excl. externally generated stops)						
<i>Ticket</i>	7,628	478	238	79	232	8,655
<i>Warning</i>	19,643	950	567	182	783	22,125
<i>No Action Taken</i>	7	0	0	0	2	9
<i>Arrest for violation</i>	333	31	6	1	4	375
<i>Arrest for warrant</i>	19	2	1	0	0	22
Searches (excl. externally generated stops)						
<i>Total Stops with No Search</i>	25,709	1,242	735	235	910	28,831
<i>Total Stops with Unknown Search</i>	267	20	10	4	113	414
<i>Total Stops with Search</i>	244	37	4	8	7	300
<i>Search with probable cause</i>	153	19	2	6	3	183
Stops with No contraband found	26	6	0	4	1	37
Stops with Unknown contraband found	0	0	0	0	0	0
Stops with Contraband found	124	13	2	2	2	143
<i>Incidents</i>						
<i>Warning</i>	28	4	0	1	0	33
<i>Ticket</i>	85	10	2	1	2	100
Arrest on violation (excl. arrest on warrant)	26	0	0	0	0	26
<i>Search with reasonable suspicion</i>	75	17	1	2	4	99
Stops with No contraband found	25	7	1	0	2	35
Stops with Unknown contraband found	0	0	0	0	0	0
Stops with Contraband found	46	9	0	1	2	58
<i>Incidents</i>						
<i>Warning</i>	15	3	0	0	1	19
<i>Ticket</i>	32	6	1	1	1	41
Arrest on violation (excl. arrest on warrant)	4	2	0	0	0	6
<i>Search with warrant</i>	16	1	1	0	0	18
Stops with No contraband found	3	1	0	0	0	4
Stops with unknown contraband found	0	0	0	0	0	0
Stops with Contraband found	10	0	1	0	0	11
<i>Incidents</i>						
<i>Warning</i>	2	0	0	0	0	2
<i>Ticket</i>	5	0	1	0	0	6
Arrest on violation (excl. arrest on warrant)	2	0	0	0	0	2
Outcome rates as a % of stops (excl. externally generated stops and arrests on warrant)						
<i>Warning rate</i>	71.4%	66.6%	70.4%	69.2%	74.6%	71.2%
<i>Ticket rate</i>	27.7%	33.5%	29.6%	30.0%	22.1%	27.9%
<i>Arrest rate</i>	1.2%	2.2%	0.7%	0.4%	0.4%	1.2%
<i>Search rates</i>	0.9%	2.6%	0.5%	3.0%	0.7%	1.0%
<i>Search rate (excl. searches on warrant)</i>	0.8%	2.5%	0.4%	3.0%	0.7%	0.9%
<i>Search rate (incl. searches on warrant)</i>	0.9%	2.6%	0.5%	3.0%	0.7%	1.0%
<i>Hit rates (as a % of searches)</i>						
Hit rates (includes all outcomes)	83.3%	69.4%	100.0%	37.5%	57.1%	71.3%
Hit rates (excl. warnings as outcomes of searches)	64.5%	50.0%	100.0%	25.0%	42.9%	61.3%
Hit rates (outcome = arrest)	13.2%	5.6%	0.0%	0.0%	0.0%	11.3%

Note: Agencies include Burlington, Colchester, Essex, Hinesburg, Milton, S. Burlington, Williston, Winooski, and VSP Williston Barracks.

Franklin County

2015	White	Black	Asian	Hispanic	Unknown	Total
Total Traffic Stops						
<i>Including externally generated stops</i>	5,453	103	66	24	1,087	6,733
<i>Excluding externally generated stops</i>	5,316	100	65	23	1,073	6,577
Outcomes (excl. externally generated stops)						
<i>Ticket</i>	2,263	44	30	9	322	2,668
<i>Warning</i>	3,125	60	34	13	724	3,956
<i>No Action Taken</i>	1	0	0	0	0	1
<i>Arrest for violation</i>	149	3	2	1	11	166
<i>Arrest for warrant</i>	4	0	0	0	0	4
Searches (excl. externally generated stops)						
<i>Total Stops with No Search</i>	5,154	98	65	23	982	6,322
<i>Total Stops with Unknown Search</i>	134	2	0	0	91	227
<i>Total Stops with Search</i>	28	0	0	0	0	28
<i>Search with probable cause</i>	19	0	0	0	0	19
Stops with No contraband found	4	0	0	0	0	4
Stops with Unknown contraband found	11	0	0	0	0	11
Stops with Contraband found	4	0	0	0	0	4
<i>Incidents</i>						
<i>Warning</i>	1	0	0	0	0	1
<i>Ticket</i>	3	0	0	0	0	3
Arrest on violation (excl. arrest on warrant)	0	0	0	0	0	0
<i>Search with reasonable suspicion</i>	7	0	0	0	0	7
Stops with No contraband found	0	0	0	0	0	0
Stops with Unknown contraband found	6	0	0	0	0	6
Stops with Contraband found	1	0	0	0	0	1
<i>Incidents</i>						
<i>Warning</i>	0	0	0	0	0	0
<i>Ticket</i>	1	0	0	0	0	1
Arrest on violation (excl. arrest on warrant)	0	0	0	0	0	0
<i>Search with warrant</i>	2	0	0	0	0	2
Stops with No contraband found	0	0	0	0	0	0
Stops with unknown contraband found	2	0	0	0	0	2
Stops with Contraband found	0	0	0	0	0	0
<i>Incidents</i>						
<i>Warning</i>	0	0	0	0	0	0
<i>Ticket</i>	0	0	0	0	0	0
Arrest on violation (excl. arrest on warrant)	0	0	0	0	0	0
Outcome rates as a % of stops (excl. externally generated stops and arrests on warrant)						
<i>Warning rate</i>	58.8%	60.0%	52.3%	56.5%	67.5%	60.1%
<i>Ticket rate</i>	42.6%	44.0%	46.2%	39.1%	30.0%	40.6%
<i>Arrest rate</i>	2.8%	3.0%	3.1%	4.3%	1.0%	2.5%
<i>Search rates</i>	0.5%	0.0%	0.0%	0.0%	0.0%	0.4%
<i>Search rate (excl. searches on warrant)</i>	0.5%	0.0%	0.0%	0.0%	0.0%	0.4%
<i>Search rate (incl. searches on warrant)</i>	0.5%	0.0%	0.0%	0.0%	0.0%	0.4%
<i>Hit rates (as a % of searches)</i>						
Hit rates (includes all outcomes)	19.2%	-	-	-	-	19.2%
Hit rates (excl. warnings as outcomes of searches)	15.4%	-	-	-	-	15.4%
Hit rates (outcome = arrest)	0.0%	-	-	-	-	0.0%

Note: Agencies include St. Albans and VSP St. Albans Barracks.

Grand Isle County

2015	White	Black	Asian	Hispanic	Unknown	Total
Total Traffic Stops						
<i>Including externally generated stops</i>	2,662	33	20	17	1	2,733
<i>Excluding externally generated stops</i>	2,653	32	20	17	1	2,723
Outcomes (excl. externally generated stops)						
<i>Ticket</i>	430	7	5	4	0	446
<i>Warning</i>	2,220	25	15	13	1	2,274
<i>No Action Taken</i>	0	0	0	0	0	0
<i>Arrest for violation</i>	3	0	0	0	0	3
<i>Arrest for warrant</i>	0	0	0	0	0	0
Searches (excl. externally generated stops)						
<i>Total Stops with No Search</i>	2,649	31	20	17	1	2,718
<i>Total Stops with Unknown Search</i>	0	0	0	0	0	0
<i>Total Stops with Search</i>	4	1	0	0	0	5
<i>Search with probable cause</i>	3	0	0	0	0	3
Stops with No contraband found	0	0	0	0	0	0
Stops with Unknown contraband found	0	0	0	0	0	0
Stops with Contraband found	3	0	0	0	0	3
<i>Incidents</i>						
<i>Warning</i>	0	0	0	0	0	0
<i>Ticket</i>	3	0	0	0	0	3
Arrest on violation (excl. arrest on warrant)	0	0	0	0	0	0
<i>Search with reasonable suspicion</i>	1	1	0	0	0	2
Stops with No contraband found	0	1	0	0	0	1
Stops with Unknown contraband found	0	0	0	0	0	0
Stops with Contraband found	1	0	0	0	0	1
<i>Incidents</i>						
<i>Warning</i>	0	0	0	0	0	0
<i>Ticket</i>	1	0	0	0	0	1
Arrest on violation (excl. arrest on warrant)	0	0	0	0	0	0
<i>Search with warrant</i>	0	0	0	0	0	0
Stops with No contraband found	0	0	0	0	0	0
Stops with unknown contraband found	0	0	0	0	0	0
Stops with Contraband found	0	0	0	0	0	0
<i>Incidents</i>						
<i>Warning</i>	0	0	0	0	0	0
<i>Ticket</i>	0	0	0	0	0	0
Arrest on violation (excl. arrest on warrant)	0	0	0	0	0	0
Outcome rates as a % of stops (excl. externally generated stops and arrests on warrant)						
<i>Warning rate</i>	83.7%	78.1%	75.0%	76.5%	100.0%	83.5%
<i>Ticket rate</i>	16.2%	21.9%	25.0%	23.5%	0.0%	16.4%
<i>Arrest rate</i>	0.1%	0.0%	0.0%	0.0%	0.0%	0.1%
<i>Search rates</i>	0.2%	3.1%	0.0%	0.0%	0.0%	0.2%
<i>Search rate (excl. searches on warrant)</i>	0.2%	3.1%	0.0%	0.0%	0.0%	0.2%
<i>Search rate (incl. searches on warrant)</i>	0.2%	3.1%	0.0%	0.0%	0.0%	0.2%
<i>Hit rates (as a % of searches)</i>						
Hit rates (includes all outcomes)	100.0%	0.0%	-	-	-	80.0%
Hit rates (excl. warnings as outcomes of searches)	100.0%	0.0%	-	-	-	80.0%
Hit rates (outcome = arrest)	0.0%	0.0%	-	-	-	0.0%

Note: The only agency for this county is Grand Isle Sheriff Department.

Orange County

2015	White	Black	Asian	Hispanic	Unknown	Total
Total Traffic Stops						
<i>Including externally generated stops</i>	4,273	72	53	42	28	4,468
<i>Excluding externally generated stops</i>	4,213	71	53	41	26	4,404
Outcomes (excl. externally generated stops)						
<i>Ticket</i>	1,858	45	32	22	6	1,963
<i>Warning</i>	2,326	25	20	17	20	2,408
<i>No Action Taken</i>	5	0	0	0	0	5
<i>Arrest for violation</i>	22	1	1	2	0	26
<i>Arrest for warrant</i>	0	0	0	0	0	0
Searches (excl. externally generated stops)						
<i>Total Stops with No Search</i>	4,173	67	53	39	26	4,358
<i>Total Stops with Unknown Search</i>	9	0	0	0	0	9
<i>Total Stops with Search</i>	31	4	0	2	0	37
<i>Search with probable cause</i>	21	4	0	2	0	27
Stops with No contraband found	0	0	0	0	0	0
Stops with Unknown contraband found	0	0	0	0	0	0
Stops with Contraband found	21	4	0	2	0	27
<i>Incidents</i>						
<i>Warning</i>	0	1	0	0	0	1
<i>Ticket</i>	16	2	0	0	0	18
Arrest on violation (excl. arrest on warrant)	5	1	0	2	0	8
<i>Search with reasonable suspicion</i>	8	0	0	0	0	8
Stops with No contraband found	2	0	0	0	0	2
Stops with Unknown contraband found	0	0	0	0	0	0
Stops with Contraband found	6	0	0	0	0	6
<i>Incidents</i>						
<i>Warning</i>	0	0	0	0	0	0
<i>Ticket</i>	6	0	0	0	0	6
Arrest on violation (excl. arrest on warrant)	0	0	0	0	0	0
<i>Search with warrant</i>	2	0	0	0	0	2
Stops with No contraband found	0	0	0	0	0	0
Stops with unknown contraband found	0	0	0	0	0	0
Stops with Contraband found	2	0	0	0	0	2
<i>Incidents</i>						
<i>Warning</i>	0	0	0	0	0	0
<i>Ticket</i>	0	0	0	0	0	0
Arrest on violation (excl. arrest on warrant)	2	0	0	0	0	2
Outcome rates as a % of stops (excl. externally generated stops and arrests on warrant)						
<i>Warning rate</i>	55.2%	35.2%	37.7%	41.5%	76.9%	54.7%
<i>Ticket rate</i>	44.1%	63.4%	60.4%	53.7%	23.1%	44.6%
<i>Arrest rate</i>	0.5%	1.4%	1.9%	4.9%	0.0%	0.6%
<i>Search rates</i>	0.7%	5.6%	0.0%	4.9%	0.0%	0.8%
<i>Search rate (excl. searches on warrant)</i>	0.7%	5.6%	0.0%	4.9%	0.0%	0.8%
<i>Search rate (incl. searches on warrant)</i>	0.7%	5.6%	0.0%	4.9%	0.0%	0.8%
<i>Hit rates (as a % of searches)</i>						
Hit rates (includes all outcomes)	93.1%	100.0%	-	100.0%	-	94.3%
Hit rates (excl. warnings as outcomes of searches)	93.1%	75.0%	-	100.0%	-	91.4%
Hit rates (outcome = arrest)	17.2%	25.0%	-	100.0%	-	22.9%

Note: Agencies included are Randolph and VSP Bradford Barracks.

Orleans County

2015	White	Black	Asian	Hispanic	Unknown	Total
Total Traffic Stops						
<i>Including externally generated stops</i>	2,068	13	21	10	16	2,128
<i>Excluding externally generated stops</i>	2,044	13	21	10	16	2,104
Outcomes (excl. externally generated stops)						
<i>Ticket</i>	703	7	10	5	9	734
<i>Warning</i>	1,333	6	11	5	7	1,362
<i>No Action Taken</i>	0	0	0	0	0	0
<i>Arrest for violation</i>	4	0	0	0	0	4
<i>Arrest for warrant</i>	0	0	0	0	0	0
Searches (excl. externally generated stops)						
<i>Total Stops with No Search</i>	2,037	13	21	10	16	2,097
<i>Total Stops with Unknown Search</i>	4	0	0	0	0	4
<i>Total Stops with Search</i>	3	0	0	0	0	3
<i>Search with probable cause</i>	2	0	0	0	0	2
Stops with No contraband found	0	0	0	0	0	0
Stops with Unknown contraband found	0	0	0	0	0	0
Stops with Contraband found	1	0	0	0	0	1
<i>Incidents</i>						
<i>Warning</i>	0	0	0	0	0	0
<i>Ticket</i>	1	0	0	0	0	1
Arrest on violation (excl. arrest on warrant)	0	0	0	0	0	0
<i>Search with reasonable suspicion</i>	0	0	0	0	0	0
Stops with No contraband found	0	0	0	0	0	0
Stops with Unknown contraband found	0	0	0	0	0	0
Stops with Contraband found	0	0	0	0	0	0
<i>Incidents</i>						
<i>Warning</i>	0	0	0	0	0	0
<i>Ticket</i>	0	0	0	0	0	0
Arrest on violation (excl. arrest on warrant)	0	0	0	0	0	0
<i>Search with warrant</i>	1	0	0	0	0	1
Stops with No contraband found	0	0	0	0	0	0
Stops with unknown contraband found	0	0	0	0	0	0
Stops with Contraband found	1	0	0	0	0	1
<i>Incidents</i>						
<i>Warning</i>	0	0	0	0	0	0
<i>Ticket</i>	1	0	0	0	0	1
Arrest on violation (excl. arrest on warrant)	0	0	0	0	0	0
Outcome rates as a % of stops (excl. externally generated stops and arrests on warrant)						
<i>Warning rate</i>	65.2%	46.2%	52.4%	50.0%	43.8%	64.7%
<i>Ticket rate</i>	34.4%	53.8%	47.6%	50.0%	56.3%	34.9%
<i>Arrest rate</i>	0.2%	0.0%	0.0%	0.0%	0.0%	0.2%
<i>Search rates</i>	0.1%	0.0%	0.0%	0.0%	0.0%	0.1%
<i>Search rate (excl. searches on warrant)</i>	0.1%	0.0%	0.0%	0.0%	0.0%	0.1%
<i>Search rate (incl. searches on warrant)</i>	0.1%	0.0%	0.0%	0.0%	0.0%	0.1%
<i>Hit rates (as a % of searches)</i>						
Hit rates (includes all outcomes)	50.0%	-	-	-	-	50.0%
Hit rates (excl. warnings as outcomes of searches)	50.0%	-	-	-	-	50.0%
Hit rates (outcome = arrest)	0.0%	-	-	-	-	0.0%

Note: The only agency represented in this table is VSP Derby Barracks.

Rutland County

2015	White	Black	Asian	Hispanic	Unknown	Total
Total Traffic Stops						
<i>Including externally generated stops</i>	12,563	277	116	131	319	13,406
<i>Excluding externally generated stops</i>	11,894	263	110	128	306	12,701
Outcomes (excl. externally generated stops)						
<i>Ticket</i>	6,138	138	65	68	152	6,561
<i>Warning</i>	5,682	123	45	57	162	6,069
<i>No Action Taken</i>	21	0	0	0	3	24
<i>Arrest for violation</i>	192	12	1	6	0	211
<i>Arrest for warrant</i>	3	0	0	0	0	3
Searches (excl. externally generated stops)						
<i>Total Stops with No Search</i>	8,452	209	78	94	196	9,029
<i>Total Stops with Unknown Search</i>	3,346	43	31	32	106	3,558
<i>Total Stops with Search</i>	96	11	1	2	4	114
<i>Search with probable cause</i>	72	8	1	2	3	86
Stops with No contraband found	6	2	0	0	0	8
Stops with Unknown contraband found	0	0	0	0	0	0
Stops with Contraband found	60	6	1	2	3	72
<i>Incidents</i>						
<i>Warning</i>	5	1	0	0	1	7
<i>Ticket</i>	50	7	1	2	3	63
Arrest on violation (excl. arrest on warrant)	19	0	0	1	0	20
<i>Search with reasonable suspicion</i>	19	2	0	0	1	22
Stops with No contraband found	3	1	0	0	0	4
Stops with Unknown contraband found	0	0	0	0	0	0
Stops with Contraband found	13	1	0	0	1	15
<i>Incidents</i>						
<i>Warning</i>	6	1	0	0	0	7
<i>Ticket</i>	9	1	0	0	1	11
Arrest on violation (excl. arrest on warrant)	5	0	0	0	0	5
<i>Search with warrant</i>	5	1	0	0	0	6
Stops with No contraband found	0	0	0	0	0	0
Stops with unknown contraband found	0	0	0	0	0	0
Stops with Contraband found	3	1	0	0	0	4
<i>Incidents</i>						
<i>Warning</i>	1	0	0	0	0	1
<i>Ticket</i>	0	2	0	0	0	2
Arrest on violation (excl. arrest on warrant)	2	0	0	0	0	2
Outcome rates as a % of stops (excl. externally generated stops and arrests on warrant)						
<i>Warning rate</i>	47.8%	46.8%	40.9%	44.5%	52.9%	47.8%
<i>Ticket rate</i>	51.6%	52.5%	59.1%	53.1%	49.7%	51.7%
<i>Arrest rate</i>	1.6%	4.6%	0.9%	4.7%	0.0%	1.7%
<i>Search rates</i>	0.8%	4.2%	0.9%	1.6%	1.3%	0.9%
<i>Search rate (excl. searches on warrant)</i>	0.8%	3.8%	0.9%	1.6%	1.3%	0.9%
<i>Search rate (incl. searches on warrant)</i>	0.8%	4.2%	0.9%	1.6%	1.3%	0.9%
<i>Hit rates (as a % of searches)</i>						
Hit rates (includes all outcomes)	103.3%	100.0%	100.0%	150.0%	125.0%	80.6%
Hit rates (excl. warnings as outcomes of searches)	91.2%	80.0%	100.0%	150.0%	100.0%	91.7%
Hit rates (outcome = arrest)	26.4%	0.0%	0.0%	50.0%	0.0%	23.1%

Note: Agencies include Brandon, Rutland, Rutland County Sheriff, and VSP Rutland Barracks.

Washington County

2015	White	Black	Asian	Hispanic	Unknown	Total
Total Traffic Stops						
<i>Including externally generated stops</i>	9,764	229	133	89	185	10,400
<i>Excluding externally generated stops</i>	9,408	226	132	87	183	10,036
Outcomes (excl. externally generated stops)						
<i>Ticket</i>	3,809	114	70	42	49	4,084
<i>Warning</i>	5,843	120	64	43	147	6,217
<i>No Action Taken</i>	15	0	0	0	0	15
<i>Arrest for violation</i>	132	2	1	0	0	135
<i>Arrest for warrant</i>	0	0	0	1	0	1
Searches (excl. externally generated stops)						
<i>Total Stops with No Search</i>	9,270	221	131	84	166	9,872
<i>Total Stops with Unknown Search</i>	61	2	0	1	17	81
<i>Total Stops with Search</i>	77	3	1	2	0	83
<i>Search with probable cause</i>	54	3	1	0	0	58
Stops with No contraband found	4	0	0	0	0	4
Stops with Unknown contraband found	0	0	0	0	0	0
Stops with Contraband found	49	3	1	0	0	53
<i>Incidents</i>						
<i>Warning</i>	10	0	0	0	0	10
<i>Ticket</i>	34	2	1	0	0	37
Arrest on violation (excl. arrest on warrant)	11	1	0	0	0	12
<i>Search with reasonable suspicion</i>	18	0	0	2	0	20
Stops with No contraband found	5	0	0	1	0	6
Stops with Unknown contraband found	0	0	0	0	0	0
Stops with Contraband found	12	0	0	1	0	13
<i>Incidents</i>						
<i>Warning</i>	2	0	0	0	0	2
<i>Ticket</i>	11	0	0	1	0	12
Arrest on violation (excl. arrest on warrant)	0	0	0	0	0	0
<i>Search with warrant</i>	5	0	0	0	0	5
Stops with No contraband found	0	0	0	0	0	0
Stops with unknown contraband found	1	0	0	0	0	1
Stops with Contraband found	2	0	0	0	0	2
<i>Incidents</i>						
<i>Warning</i>	0	0	0	0	0	0
<i>Ticket</i>	3	0	0	0	0	3
Arrest on violation (excl. arrest on warrant)	1	0	0	0	0	1
Outcome rates as a % of stops (excl. externally generated stops and arrests on warrant)						
<i>Warning rate</i>	62.1%	53.1%	48.5%	49.4%	80.3%	61.9%
<i>Ticket rate</i>	40.5%	50.4%	53.0%	48.3%	26.8%	40.7%
<i>Arrest rate</i>	1.4%	0.9%	0.8%	0.0%	0.0%	1.3%
<i>Search rates</i>	0.8%	1.3%	0.8%	2.3%	0.0%	0.8%
<i>Search rate (excl. searches on warrant)</i>	0.8%	1.3%	0.8%	2.3%	0.0%	0.8%
<i>Search rate (incl. searches on warrant)</i>	0.8%	1.3%	0.8%	2.3%	0.0%	0.8%
<i>Hit rates (as a % of searches)</i>						
Hit rates (includes all outcomes)	94.4%	100.0%	100.0%	50.0%	-	84.6%
Hit rates (excl. warnings as outcomes of searches)	77.8%	100.0%	100.0%	50.0%	-	78.2%
Hit rates (outcome = arrest)	15.3%	33.3%	0.0%	0.0%	-	15.4%

Note: Agencies include Barre City, Barre Town, Montpelier, Northfield, and VSP Middlesex Barracks.

Windham County

2015	White	Black	Asian	Hispanic	Unknown	Total
Total Traffic Stops						
<i>Including externally generated stops</i>	8,881	265	170	145	613	10,074
<i>Excluding externally generated stops</i>	8,684	259	168	144	612	9,867
Outcomes (excl. externally generated stops)						
<i>Ticket</i>	2,424	92	65	43	13	2,637
<i>Warning</i>	6,182	163	99	98	597	7,139
<i>No Action Taken</i>	1	0	0	0	0	1
<i>Arrest for violation</i>	62	4	2	2	0	70
<i>Arrest for warrant</i>	1	0	0	0	0	1
Searches (excl. externally generated stops)						
<i>Total Stops with No Search</i>	8,590	243	163	139	610	9,745
<i>Total Stops with Unknown Search</i>	13	0	2	0	2	17
<i>Total Stops with Search</i>	81	16	3	5	0	105
<i>Search with probable cause</i>	54	6	2	3	0	65
Stops with No contraband found	3	1	0	0	0	4
Stops with Unknown contraband found	2	0	0	0	0	2
Stops with Contraband found	48	5	2	3	0	58
<i>Incidents</i>						
<i>Warning</i>	5	1	0	2	0	8
<i>Ticket</i>	28	2	0	0	0	30
Arrest on violation (excl. arrest on warrant)	14	2	2	1	0	19
<i>Search with reasonable suspicion</i>	19	10	1	2	0	32
Stops with No contraband found	5	4	0	1	0	10
Stops with Unknown contraband found	0	0	0	0	0	0
Stops with Contraband found	14	6	1	1	0	22
<i>Incidents</i>						
<i>Warning</i>	7	2	0	1	0	10
<i>Ticket</i>	5	2	1	0	0	8
Arrest on violation (excl. arrest on warrant)	2	2	0	0	0	4
<i>Search with warrant</i>	8	0	0	0	0	8
Stops with No contraband found	1	0	0	0	0	1
Stops with unknown contraband found	0	0	0	0	0	0
Stops with Contraband found	7	0	0	0	0	7
<i>Incidents</i>						
<i>Warning</i>	1	0	0	0	0	1
<i>Ticket</i>	3	0	0	0	0	3
Arrest on violation (excl. arrest on warrant)	3	0	0	0	0	3
Outcome rates as a % of stops (excl. externally generated stops and arrests on warrant)						
<i>Warning rate</i>	71.2%	62.9%	58.9%	68.1%	97.5%	72.4%
<i>Ticket rate</i>	27.9%	35.5%	38.7%	29.9%	2.1%	26.7%
<i>Arrest rate</i>	0.7%	1.5%	1.2%	1.4%	0.0%	0.7%
<i>Search rates</i>	0.9%	6.2%	1.8%	3.5%	0.0%	1.1%
<i>Search rate (excl. searches on warrant)</i>	0.8%	6.2%	1.8%	3.5%	0.0%	1.0%
<i>Search rate (incl. searches on warrant)</i>	0.9%	6.2%	1.8%	3.5%	0.0%	1.1%
<i>Hit rates (as a % of searches)</i>						
Hit rates (includes all outcomes)	83.6%	68.8%	100.0%	80.0%	-	82.5%
Hit rates (excl. warnings as outcomes of searches)	67.1%	50.0%	100.0%	20.0%	-	62.9%
Hit rates (outcome = arrest)	21.9%	25.0%	66.7%	20.0%	-	23.7%

Note: Agencies include Brattleboro and VSP Brattleboro and Rockingham Barracks.

Windsor County

2015	White	Black	Asian	Hispanic	Unknown	Total
Total Traffic Stops						
<i>Including externally generated stops</i>	7,859	215	111	99	161	8,445
<i>Excluding externally generated stops</i>	7,748	211	110	96	161	8,326
Outcomes (excl. externally generated stops)						
<i>Ticket</i>	1,629	64	32	30	53	1,808
<i>Warning</i>	6,062	146	77	66	100	6,451
<i>No Action Taken</i>	3	0	0	0	0	3
<i>Arrest for violation</i>	43	1	0	0	1	45
<i>Arrest for warrant</i>	4	0	0	0	0	4
Searches (excl. externally generated stops)						
<i>Total Stops with No Search</i>	7,682	206	109	91	153	8,241
<i>Total Stops with Unknown Search</i>	10	0	1	0	7	18
<i>Total Stops with Search</i>	56	5	0	5	1	67
<i>Search with probable cause</i>	40	3	0	5	0	48
Stops with No contraband found	0	0	0	0	0	0
Stops with Unknown contraband found	0	0	0	0	0	0
Stops with Contraband found	36	3	0	5	0	44
<i>Incidents</i>						
<i>Warning</i>	4	2	0	0	0	6
<i>Ticket</i>	20	1	0	5	0	26
Arrest on violation (excl. arrest on warrant)	12	0	0	0	0	12
<i>Search with reasonable suspicion</i>	13	1	0	0	1	15
Stops with No contraband found	4	1	0	0	0	5
Stops with Unknown contraband found	0	0	0	0	0	0
Stops with Contraband found	8	0	0	0	1	9
<i>Incidents</i>						
<i>Warning</i>	2	0	0	0	0	2
<i>Ticket</i>	5	0	0	0	0	5
Arrest on violation (excl. arrest on warrant)	1	0	0	0	1	2
<i>Search with warrant</i>	3	1	0	0	0	4
Stops with No contraband found	0	0	0	0	0	0
Stops with unknown contraband found	0	0	0	0	0	0
Stops with Contraband found	3	1	0	0	0	4
<i>Incidents</i>						
<i>Warning</i>	0	0	0	0	0	0
<i>Ticket</i>	0	0	0	0	0	0
Arrest on violation (excl. arrest on warrant)	3	1	0	0	0	4
Outcome rates as a % of stops (excl. externally generated stops and arrests on warrant)						
<i>Warning rate</i>	78.2%	69.2%	70.0%	68.8%	62.1%	77.5%
<i>Ticket rate</i>	21.0%	30.3%	29.1%	31.3%	32.9%	21.7%
<i>Arrest rate</i>	0.6%	0.5%	0.0%	0.0%	0.6%	0.5%
<i>Search rates</i>	0.7%	2.4%	0.0%	5.2%	0.6%	0.8%
<i>Search rate (excl. searches on warrant)</i>	0.7%	1.9%	0.0%	5.2%	0.6%	0.8%
<i>Search rate (incl. searches on warrant)</i>	0.7%	2.4%	0.0%	5.2%	0.6%	0.8%
<i>Hit rates (as a % of searches)</i>						
Hit rates (includes all outcomes)	83.0%	75.0%	-	100.0%	100.0%	84.1%
Hit rates (excl. warnings as outcomes of searches)	71.7%	25.0%	-	100.0%	100.0%	71.4%
Hit rates (outcome = arrest)	24.5%	0.0%	-	0.0%	100.0%	22.2%

Note: Agencies include Springfield and VSP Royalton Barracks.

Table A6. Statistical Tests for Differences in Proportions of Hit Rates for Four Agencies

	Burlington		Rutland		VSP		Williston	
	Difference in proportions (White-Black)	z-score	Difference in proportions (White-Black)	z-score	Difference in proportions (White-Black)	z-score	Difference in proportions (White-Black)	z-score
Warnings, arrests, tickets	32.9%	4.83***	43.9%	3.96***	12.7%	4.86***	26.8%	3.37***
Tickets/arrests	19.8%	2.42**	40.0%	3.52***	17.0%	5.59***	8.2%	0.73
Arrests only	12.7%	2.22**	12.7%	1.73*	6.8%	2.54**	17.5%	2.10**

Note: The null hypothesis is that Black drivers are not treated worse than White drivers (or, more precisely, the difference in proportions, e.g., difference in hit rates, is zero). *** indicates p-value of less than 0.01 (i.e., 1%); ** indicates a p-value of less than 0.05; and * indicates a p-value less than 0.10. The p-value is the probability of obtaining the difference in proportions found in the data if the null hypothesis is true. Therefore, for example, p-values of less than 0.01 allow us to say that it is very unlikely that the differences found between White and Black outcomes is due to statistical randomness.

APPENDIX B:

Data Collection and Analysis

The research summarized in this report relies on data supplied by law enforcement agencies throughout the State of Vermont. Data variables were renamed for consistency across agencies. For example, some categorized a search as “action,” reason for stop as “contact,” and so on. Although many variables were obviously in the same category, other categories took additional analysis and scrutiny to determine their meaning. Assumptions were made by the researchers, which may introduce errors in the data analysis.

Also, police agencies across the state have different data collection software or processes. When the data was sent to the researchers, it was converted from the proprietary agency system into an Excel spreadsheet. This makes data analysis time-consuming and every conversion increases the risk of error.

A challenging issue regarding data quality was missing data. Data points were missing and in some cases, data on legally required variables were also missing. For some agencies, these problems rendered the data unusable and these agencies were excluded from the analysis.

We converted officer names, when supplied, to code numbers to preserve anonymity. Other than stop rates, the researchers did not analyze the data by individual officer. It was evident, however, that some officers failed to collect the legally required information about the driver; others listed variables in the incorrect categories. These errors at the source could introduce errors into the research process.

One issue that emerged in this analysis was how to handle stops that result in more than one outcome. For example, a driver may be given a ticket only, or a ticket and a warning, or two tickets, and so on. In some agencies, each of these is recorded as a separate incident. For those agencies that provided incident numbers, we were able to differentiate between stops and incidents, which helps to avoid double counting of stops. There is likely some variation in how agencies handle this and greater uniformity again would be helpful to ensure accurate results when analyzing the data.

Recommendations for Managing Data Collection

As the effort to understand and track racial disparities in traffic policing goes forward, several steps could help law enforcement agencies and researchers obtain the most accurate data and, hence, highest quality research findings:

- a) Standardize the variable names for all required information collected across all Vermont police agencies.
- b) Phase out the diverse proprietary software systems for reporting traffic stop data and create a standardized system for data collection and reporting.
- c) Differentiate between stops versus incidents.
- d) Include information about the importance of accurate data collection and recording in ongoing police training, including at the Vermont Police Academy. Included in this training could be reporting by the researchers on the results of the traffic stop data.
- e) Collect data on race of searched passengers and contraband found.

- f) Collect data on year of vehicle to allow analysis of data for possible patterns of “poverty-profiling.”
- g) Develop categories of contraband to allow researchers to assess severity of “hits” and include these in incident reports.