2019 IDOT Annual Report

This is the annual traffic stop report prepared for Urbana City Council analyzing the traffic stop data collected by the Urbana Police Department and reported to the Illinois Department of Transportation.

This report contains information from ten years of traffic stops conducted by the Urbana Police Department January 1, 2010 to December 31, 2019. It provides a closer look at the following categories:

- All traffic stops
- Benchmarks
- Officers' decisions to stop
- Outcomes of traffic stops

The preceding five years of data will serve as a baseline and compared to the most recent data, by year, to monitor substantial changes over time. Ten years of data is included in this report for a historical picture of UPD traffic stops.

Please note that some level of human error is possible at every point in the data – from individuals providing data to the officers, to officers reporting data, to representatives entering data, and to the crime analyst querying and analyzing the data. Every effort has been made to ensure the accuracy of the data.

Contents

Introduction

Beginning in January 2004, Illinois police agencies have been required to collect and submit information about traffic stops to the Illinois Department of Transportation (IDOT) on a yearly basis.[1] The IDOT definition for a traffic stop is, "A *traffic stop* occurs when an officer stops a motor vehicle for a violation of the Illinois vehicle code, or for a local traffic violation. The Traffic Stop Study data does not include traffic citations arising from traffic crashes, or in cases in which an officer stops a vehicle that has been linked to a specific crime, such as a vehicle wanted in connection with a robbery."[2]

The information submitted includes the reasons for stops, outcomes of stops, lengths of time of stops, the race of the driver, as well as information on vehicle consent searches and dog sniffs. IDOT compiles this information in an annual report and presents the information for the entire state as well as by agency.

Urbana city council members and citizen groups have been interested in further analysis beyond what is presented in the yearly IDOT report, and UPD traffic stop data has been examined by multiple entities, including a committee established by City Council, the Urbana Traffic Stop Data Task Force committee.[3] The main focus of these analyses has been on *racial disparities*. Racial disparities can be examined at two decision points using the traffic stop data: pre-stop and post-stop. The *decision to stop* analysis relies on a benchmark of the driving population within the jurisdiction. Previous IDOT studies have utilized US Census data for Urbana to establish an adjusted baseline (benchmark), which is simply the racial makeup of the population of individuals aged 14 and over residing in Urbana as counted in the Census. There is questionable reliability for utilizing an adjusted census figure as the baseline, as approximately half of the individuals stopped in Urbana do not reside in Urbana. Therefore, after extensive discussions in 2016 and 2017, the benchmark for this report utilizes the racial breakdown of drivers involved in traffic accidents for the previous three years. Additionally, a veil of darkness analysis is also presented in this report. Decisions made after the stop include the issuance of a warning or citation, asking to perform a consent search, and performing a canine sniff.

The following report presents data from all traffic stops conducted by UPD from January 1, 2010 to December 31, 2019. Particular attention is paid to racial disparities in pre-stop and post-stop decision-making.

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[1] Public Act 096-0658

[2] Alexander Weiss Consulting. 2016. *Illinois Traffic Stop Study: 2015 Annual Report.* Springfield, IL: Illinois Department of Transportation.

[3] The final report from the Traffic Stop Data Task Force can be found here and the statistical tables here.

Section 1. Measuring Traffic Stops

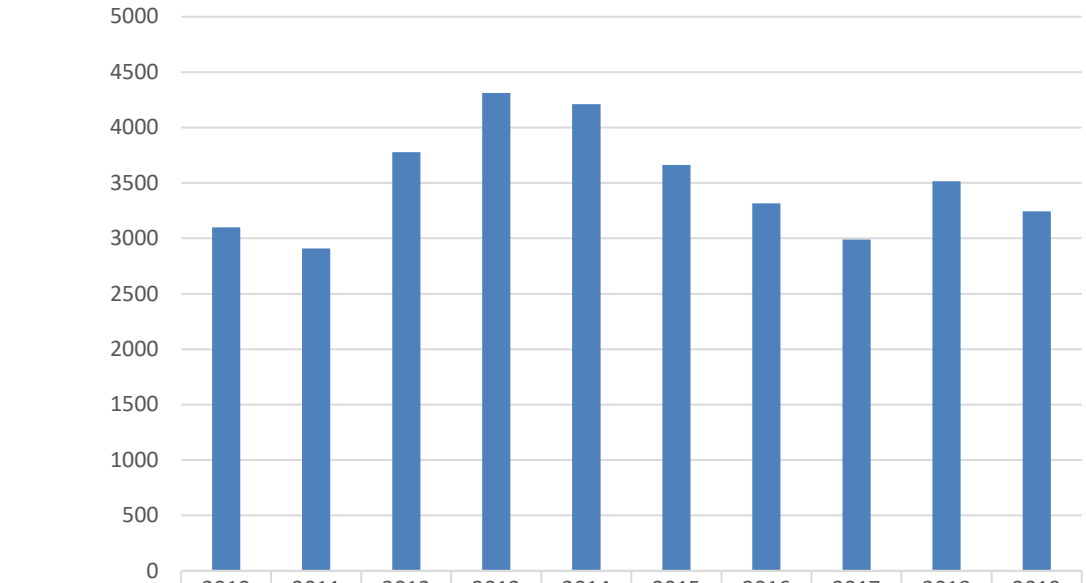
Before beginning a detailed analysis of the traffic stop data, it is important to consider traffic stops as a whole. When a police officer makes the decision to initiate a traffic stop, from that moment on, data is collected that is required by IDOT (i.e., reason for stop, type of moving violation, result of stop, information on searches requested or performed, and the outcome of searches). The Urbana Police Department also collects information for the citation or warning, including information on the driver of the vehicle, information about the vehicle, the location of the violation, and the types of violation (including non-traffic offenses). This information is collected on a traffic citation, warning sheet, or police report, then entered by Police Services Representatives (PSRs) into the Area-Wide Records Management System (ARMS) program.

This information can be queried and extracted at the level of the stop, the violation, or the person. Unless otherwise noted, the unit of analysis is the traffic stop. Data from all UPD traffic stops conducted after 2012 is also available to the public (at the level of violation), and can be found here: https://data.urbanaillinois.us/

Section 1.1. All Traffic Stops

In the last ten years, UPD has conducted a total of 35,038 traffic stops. The yearly totals have been between 2909 and 4313 vehicles per year, which averages to about 8 to 12 stops per day. Figure 1 presents the yearly number of traffic stops conducted.

Figure 1. Traffic Stops by Year, 20010 -2019



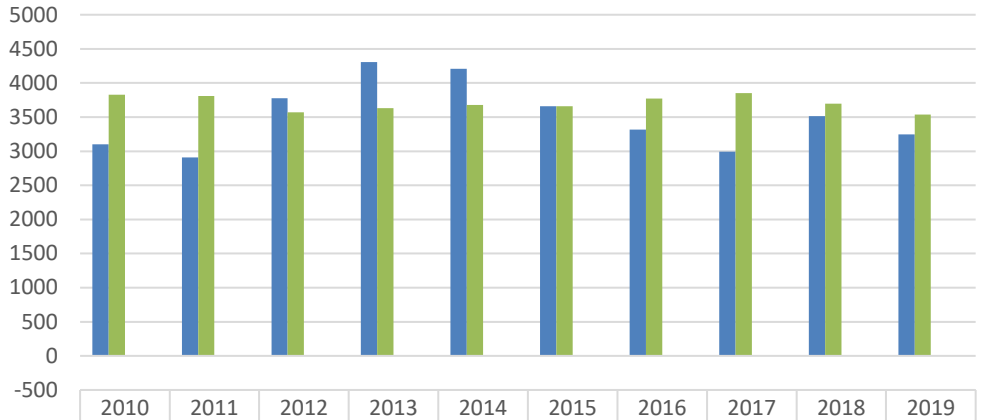
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Number of Stops	3099	2909	3777	4313	4210	3663	3316	2991	3515	3245

While this is informative, no meaningful trends are apparent. To better understand an individual year's traffic stop numbers compared to previous years, Figure 2 compares single years to a rolling five-year average. The rolling five-year average includes the previous five years (for example, in 2010, the five-year average is 2005-2009, and in 2019, the five-year average is 2014-2018). To examine this data further, *standard deviations* and *z-scores* were considered to measure dispersion. Because there will be variance in the number of stops in any given year, this analysis allows us to consider whether this variance is within or outside of a normal range.

The standard deviation statistic was determined using the variance from the mean. The z-score is the number of standard deviations of each year's traffic stops from the rolling five-year average of traffic stops.[4] The most meaningful z-scores in the below table are those that are greater than one, or less than negative one, which indicates that in those years, UPD conducted more or fewer traffic stops than would be expected based on the rolling five-year average.

As shown in Figure 2, in 2013, UPD officers conducted more traffic stops than would be expected, and in 2010, 2011, and 2017, fewer were conducted. In 2012, 2014, 2015, 2016, 2018, and 2019, the number of traffic stops conducted was within the normal range.

Figure 2. Traffic Stops by Year and 5-Year Average, 2010 – 2019



	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Yearly Stops	3099	2909	3777	4305	4210	3659	3315	2991	3515	3245
5-year Average	3829	3811	3571	3632	3679	3660	3772	3853	3696	3538
Stdev	424	453	540	543	587	568	497	365	506	404
z-score	-1.72	-1.99	0.38	1.24	0.91	0.00	-0.92	-2.36	-0.36	-0.73

[4]In a *normal curve*, about 68% of the values will fall within one standard deviation of the mean. About 26% of values will fall within two standard deviations of the mean, and about 4% within three standard deviations of the mean.

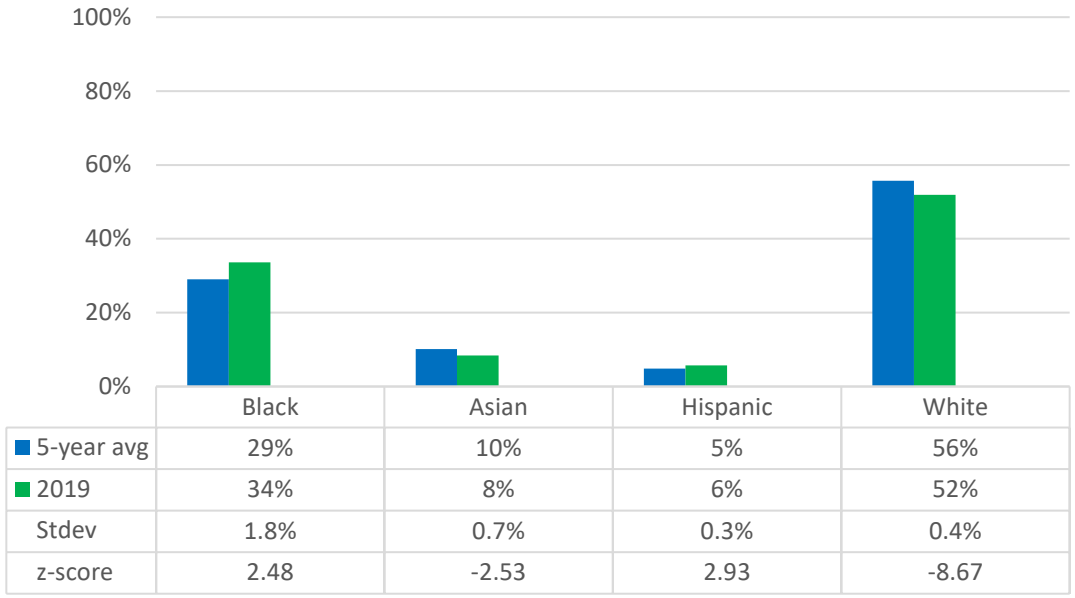
Section 1.2. Demographics of Drivers

The race of the driver is collected in all traffic stops. The percentage by drivers' races of the total number of traffic stops for each year is presented in Table 1. While there is some variation across years, Black and White drivers account for approximately 85% of all traffic stops.

Table 1. Race of Drivers in Traffic Stops, 2010 - 2019

	Black	American Indian	Asian	Hispanic	White	Unknown	Total Stops
2010	38.17%	0.06%	9.45%	4.49%	47.82%	0.00%	3099
2011	34.62%	0.03%	8.80%	4.64%	51.91%	0.00%	2909
2012	29.68%	0.13%	8.92%	3.55%	57.72%	0.00%	3777
2013	29.71%	0.19%	11.45%	3.69%	54.94%	0.02%	4305
2014	28.03%	0.29%	10.52%	4.89%	56.27%	0.00%	4210
2015	29.54%	0.14%	10.63%	4.59%	55.10%	0.00%	3659
2016	28.33%	0.27%	10.86%	4.86%	55.69%	0.00%	3315
2017	29.42%	0.20%	9.76%	4.55%	56.07%	0.00%	2991
2018	30.02%	0.26%	8.96%	5.41%	55.35%	0.00%	3515
2019	33.59%	0.31%	8.38%	5.76%	51.96%	0.00%	3245

Figure 3. Race of Drivers in Traffic Stops and 5-Year Average, 2010 – 2019



Section 2. Benchmarks

There has been considerable discussion surrounding the issue of *benchmarks*. To attempt to determine if minority drivers are overrepresented in traffic stops, it is necessary to compare the racial makeup of stopped drivers to the racial makeup of drivers on the roads in Urbana Police Department's jurisdiction. There has been considerable discussion in the literature regarding the limitations of varying techniques of statistical analysis and benchmark methodologies, which can include utilizing Census data, accident data, and observation data. Additionally, the assumption with nearly any baseline calculation is that police law enforcement activities are equally distributed across all roadways in a jurisdiction, which is not the case, as police requests for service and police patrols are geographically concentrated.

Through 2018, the IDOT traffic study utilized the population figures from the decennial Census to create an adjusted figure for the driving population by including all individuals age 14 and older, as a proxy measure for the driving population in a jurisdiction.[5] Table 2 presents the population numbers used for the IDOT traffic study from the 2010 Census. This methodology facilitates comparative analysis among jurisdictions throughout Illinois (e.g., Champaign, Decatur, Springfield, Rantoul, etc.).

Table 2. IDOT Figures Estimating the Urbana Driving Population

	Population	Percent
American Indian/Alaskan Native	55	0.15%
Asian	6925	19.22%
Native Hawaiian/OPI[6]	57	0.16%
Black	5344	14.83%
Hispanic	1853	5.14%
White	21799	60.50%
Total Population	36033	100.00%

However, not everyone 14 and older has access to a vehicle. Furthermore, approximately half of drivers stopped by the Urbana Police Department do not live in Urbana. This raises questions about the validity of using the Census figures as proxy measure of the population of drivers on Urbana roadways. Urbana has a large student population that may not be counted by the Census.

[5] Weiss, A. (2005). *Illinois Traffic Stop Statistics Act: Report for the Year 2014.* Springfield, IL: Illinois Department of Transportation.

[6] UPD does not capture this category.

There are a number of regional employers in Urbana, including Carle Hospital, the University of Illinois, and the County of Champaign. Furthermore, there are sporting events at the U of I that draw thousands of drivers through Urbana.

The Urbana Police Department utilizes an adjusted benchmark using drivers involved in traffic accidents. For accidents that are reported (either through a 911 call, a non-emergency line call, in person at the police department, or if an officer witnesses an accident) that occur within UPD jurisdiction, accident reports are created by officers. The officers collect a great deal of information on the accident report, including race of the drivers. For hit-and-run accidents, the race is entered as unknown, unless witnesses are able to provide the race of the driver. All individuals involved in the accident are entered into ARMS, and this includes their relationship with the vehicle (e.g., driver, passenger, etc.). It should be noted that this process of tracking changed significantly in 2013. Information entered in ARMS prior to 2013 is incomplete, and therefore cannot be used for comparison.

Due to relatively low numbers of traffic accidents, a rolling three-year average is considered for driver demographics. The racial breakdown of drivers for both ticketed and non-ticketed drivers is included in Table 3. Because the decision to write a ticket involves a certain amount of officer discretion, all drivers in traffic accidents are considered for calculating the benchmark.

Traffic accident information is not a perfect indicator of drivers on all Urbana streets. Some people, in their commute to work, home, or leisure activities, may be more likely to travel on accident-prone roadways. Some drivers have riskier driving behavior. There is no discretion on the part of officers on which accidents are reported; however, accidents are likely concentrated by location, so still should be interpreted with caution. While this is a fair representation of all drivers involved in accidents, it is not without error. However, it is a suitable proxy measure for the driving population and likely more accurate compared to the Census population.

Table 3. Drivers Involved in Reported Traffic Accidents, 2013 - 2019

	2013 - 2015	2014 - 2016	2015 - 2017	2016 – 2018	2017 – 2019
Asian	10.04%	10.00%	9.17%	8.47%	8.61%
Black	17.79%	18.20%	19.94%	22.02%	24.41%
Hispanic	3.48%	3.94%	4.31%	4.73%	5.23%
American Indian	0.18%	0.24%	0.24%	0.25%	0.17%
Unknown	1.10%	1.76%	2.21%	1.96%	1.66%
White	67.42%	65.83%	64.10%	62.51%	59.89%

Section 2.1 Disparity Ratios

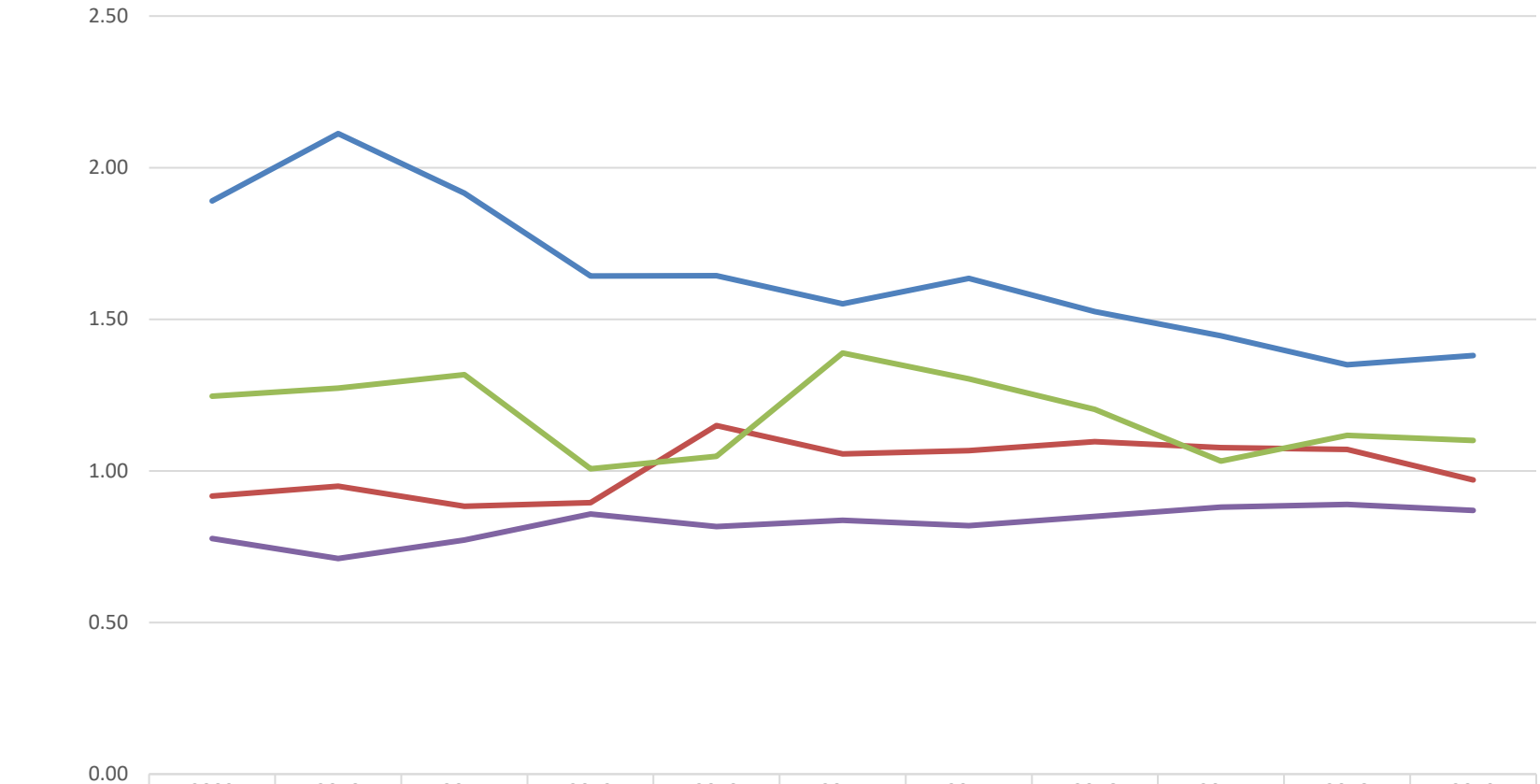
These figures are then used as the denominator to create the disparity ratio, as shown in Figure 4. Ratios larger than one indicate that a given racial group is stopped at higher rate than would be expected based on the estimated population of drivers, and ratios lower than one indicate that racial group is stopped at a lower rate than would be expected.

Figure 4 uses the average of all drivers involved in traffic accidents from 2013-2015 for the benchmark for 2008 – 2015[7] stops, the average from 2014 – 2016 accidents for 2016 stops, and so forth.

As shown below, the disparity ratio for Asian drivers has increased over time. The disparity ratio for Black drivers has decreased from a high of 2 to about 1.4; the Black disparity ratio is consistently higher than other races. The White disparity ratio is usually slightly above or below 0.80. The American Indian ratio is not reported as the percentage of stops is less than 0.5% of all drivers, and the Hispanic ratio fluctuates considerably due to the low number of stops of Hispanic drivers (with a range of 135 – 209 per year). This should be interpreted with caution, as a small increase in the number of stops would cause a large change in the ratio.

[7] This assumes that the driving population did not change significantly from 2004 – 2012, which may or may not be the case, but due to data limitations, this is the best estimate.

Figure 4. Traffic Stop Disparity Ratios by Year



	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Black	1.89	2.11	1.92	1.64	1.64	1.55	1.63	1.53	1.45	1.35	1.38
Asian	0.92	0.95	0.88	0.90	1.15	1.06	1.07	1.10	1.08	1.07	0.97
Hispanic	1.25	1.27	1.32	1.01	1.05	1.39	1.30	1.20	1.03	1.12	1.10
White	0.78	0.71	0.77	0.86	0.82	0.84	0.82	0.85	0.88	0.89	0.87

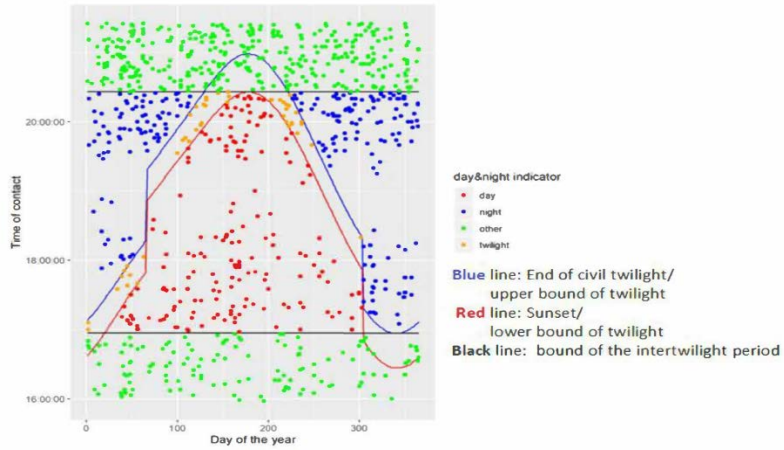
Section 2.2 Veil of Darkness

A *veil of darkness* analysis [8]helps to fill potential gap in population and accident data benchmarks by using the traffic data itself as a benchmark. The logic for this analysis is that if there is any racial discrimination at the point of the stop, its effect will be neutralized if the police cannot identify the race of drivers. To conduct this analysis, only the subset of stops that occur between the intertwilight period are considered, and classified into "day" or "night" stops. The revolution of earth around the sun will delay or advance the time of sunset on different days of the year. Clock times in the intertwilight period can be classified as daytime in certain days of the year and as nighttime in other days of the year. Using the time of sunset as a boundary of day and night, then the earliest sunset will be the lower bound of the inter-twilight period, and the latest sunset will be the upper bound of the intertwilight period.

The plot below in Figure 5 shows the distribution of traffic stops conducted near the twilight, which is the period between the blue line and the red line. The period between the two black lines is the inter-twilight period (defined as "civil twilight"). The twilight period itself is excluded due to difficulties in judging visibility. The vertical gaps in the plot are caused by the shift of daylight-saving time.

The traffic stops occurring earlier than the lower bound of twilight will be labeled as day, indicated by red dots; traffic stops that occur later than the upper bound of twilight are labeled as night and indicated by blue dots. Those in the twilight are colored with orange and are excluded from the analysis. The period of interest is that which could be both day and night depending on the date, which means it must be inside the inter-twilight period. Any traffic stops that occur outside of the inter-twilight period were excluded from the analysis, and indicated by green dots.

Figure 5. Veil of Darkness Plot, 2012 - 2019

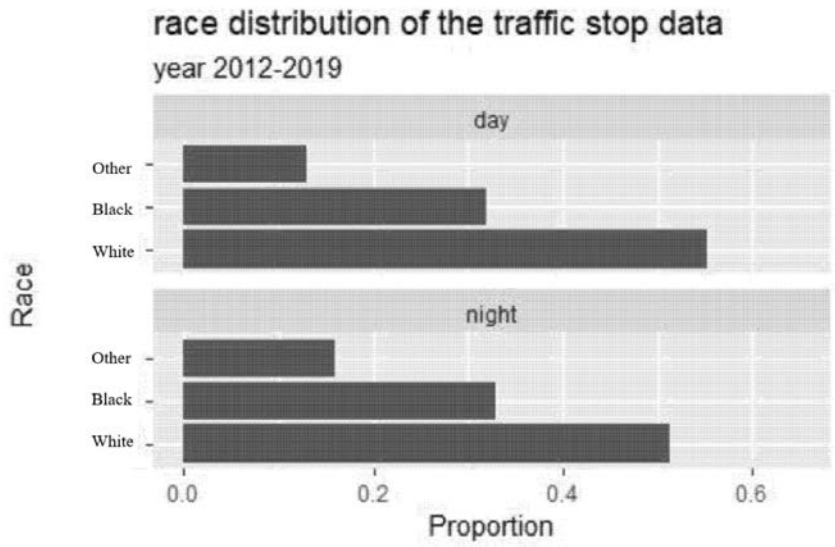


[8] Analysis performed by Timothy Chin, Qingxuan Kong, Siddharth Ahuja, Sih-Yi Lin, Xuan Lin at the University of Illinois (Statistics 427).

This type of analysis assumes the racial distribution of drivers on the street will be constant throughout the year at the same time of day, regardless of the level of light. During the darkness, the visibility of the officers is significantly reduced and officers are less likely to be able to identify the race of drivers prior to initiating a traffic stop. The traffic stop data at night works as an ideal benchmark for day stops because its racial distribution is intuitively similar with the data at the same time when there is sunlight.

Only 7% of all traffic stops met the criteria for inclusion in the veil of darkness analysis. For each year, there are only 40 to 160 cases at day and about 110 to 340 cases at night. While there is some difference across years, the low sample size is sensitive to a few stops creating a large impact on the outcome. To account for this, as shown in Figure 6, we aggregated the stop data from 2012 to 2019. Comparing the race distribution of stopped drivers (day vs. night), there is no meaningful difference across races, and therefore no evidence of racial discrimination as measured with the veil of darkness.

Figure 6. Veil of Darkness Analysis, 2012 – 2019



Section 3. Decision to Stop

There are two different points to examine potential disparities in traffic stops. The first is at the decision to stop a vehicle, and the second is at the decision(s) made after the vehicle is stopped (e.g., warning vs. citation, requesting consent to search, etc.). Section 3 focuses on the decision to stop, and Sections 4, 5, and 6 on the outcomes of the stop.

Section 3.1. Reason for Stops

For each traffic citation or warning, an officer must indicate not only his or her motivation for initiating the stop, but also the reason for the stop. These reasons include moving violations, equipment violations, license/registration violations, and commercial violations. Table 4 illustrates the percentages of traffic stops by reason. Moving violations consistently represent over 60% of all stops, and for the last three years, comprise over 71% of all stops. Drivers are stopped for equipment violations in 18 – 26% of stops, and for license/registration violations in 6 – 14% of stops. Notably, the percentage of stops for license and registration violations increased in 2019. Commercial violations represent a very small percentage of all stops, with none since 2011, and are excluded from analysis.

Table 4. Traffic Stops by Reason, 2010 - 2019

	Moving Violation	Equipment Violation	License/Reg Violation	Total Stops
2010	65.09%	25.04%	9.42%	3099
2011	70.30%	19.87%	9.49%	2909
2012	73.44%	19.46%	7.10%	3777
2013	67.76%	21.86%	10.38%	4305
2014	68.55%	21.50%	9.95%	4210
2015	71.41%	19.16%	9.43%	3659
2016	73.63%	18.16%	8.21%	3315
2017	71.15%	20.93%	7.92%	2991
2018	68.13%	23.39%	8.48%	3514
2019	65.02%	21.20%	13.78%	3245

Table 5 presents the racial breakdown of reasons for traffic stops for moving violations, equipment violations, and license/registration violations, disaggregated by year.

License/registration violations have more variation across all minority races, and a higher percentage of stops for Black drivers are license/registration violations when compared to other races. This percentage increased in 2019, and license/registration violations represented 210 out of 1090 stops for Black drivers.

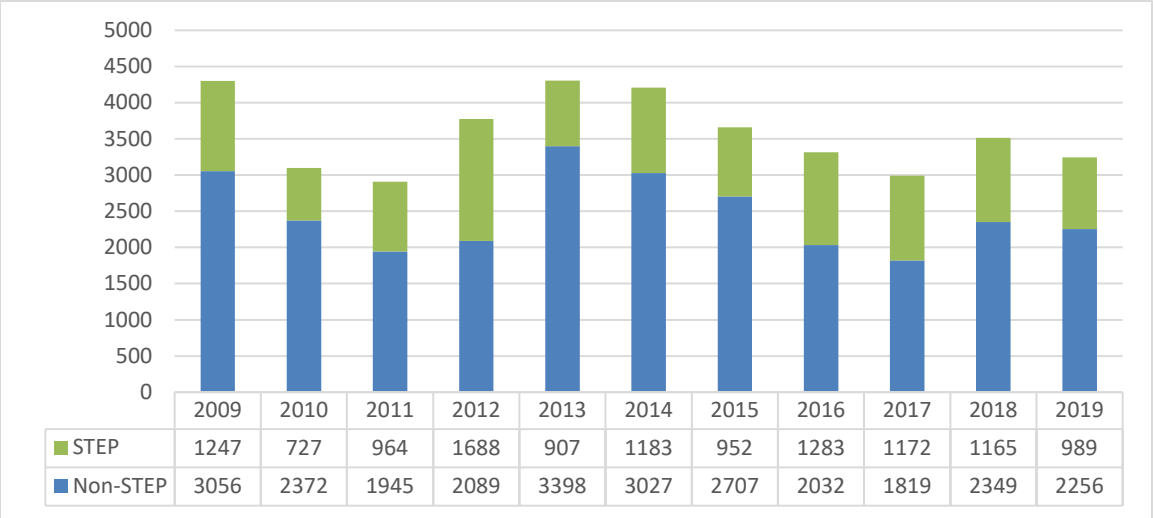
Table 5. Race of Drivers of Stopped Vehicles, by Year, 2010 - 2019

Moving Violations	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Asian	78.84%	75.00%	77.15%	70.39%	69.07%	68.12%	67.78%	68.15%	69.84%	68.75%
Black	55.20%	61.07%	63.96%	58.95%	60.76%	63.83%	71.03%	66.36%	59.62%	54.77%
Hispanic	66.19%	68.89%	71.64%	57.86%	69.90%	74.40%	80.75%	68.38%	72.11%	68.98%
White	70.11%	75.76%	77.94%	72.56%	72.27%	75.84%	75.51%	74.48%	72.19%	70.76%
Equipment Violations	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Asian	19.11%	22.27%	19.88%	23.12%	24.38%	26.22%	24.44%	25.68%	26.35%	22.43%
Black	31.19%	25.62%	25.25%	26.66%	25.93%	23.50%	21.51%	23.07%	30.90%	25.96%
Hispanic	23.02%	19.26%	16.42%	25.16%	22.82%	20.24%	12.42%	27.21%	22.11%	20.86%
White	21.52%	15.70%	16.51%	18.86%	18.57%	15.38%	15.66%	18.37%	18.82%	17.85%
License/Registration Violations	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Asian	2.05%	2.73%	2.97%	6.49%	6.55%	5.66%	7.78%	6.16%	3.81%	8.82%
Black	12.51%	12.71%	10.79%	14.39%	13.31%	12.67%	7.45%	10.57%	9.48%	19.27%
Hispanic	10.79%	11.11%	11.94%	16.98%	7.28%	5.36%	6.83%	4.41%	5.79%	10.16%
White	8.30%	8.34%	5.55%	8.58%	9.16%	8.78%	8.83%	7.16%	9.00%	11.39%

Section 3.2 STEP and Non-STEP Stops

Considering stops from the Selective Traffic Enforcement Program (STEP) separately from regular patrol stops allows for another avenue of analysis. Approximately 31% of all traffic stops conducted from 2010 – 2019 were STEP traffic stops. As shown in Figure 7, the number of STEP stops varied significantly from 1668 – 727 per year.

Figure 7. STEP and Non-STEP Traffic Stops by Year



STEP and non-STEP stops also vary in disparity ratios, as shown in Table 6. The disparity is higher for minorities in non-STEP traffic stops. Black drivers have the highest disparity in both categories in nearly all years, indicating Black drivers are more likely than expected to be stopped based on the driving population. These results echo the overall disparity ratio, but disaggregating by stop type allows for a better understanding of where the highest levels of disparity exist. The locations of STEP details were reevaluated in 2018 and were relocated to areas of concentration of traffic accidents, particularly accidents with injuries. This has been the driver of the decrease in the overall disparity ratio.

Table 6. Disparity Ratios of Step and Non-STEP Traffic Stops, by Race and Year

STEP Stops	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Asian	1.12	1.05	0.95	1.03	0.89	0.83	0.70	0.78	0.83	1.02
Black	1.68	1.42	1.29	1.17	1.18	1.07	1.44	1.40	0.85	0.83
Hispanic	1.13	1.09	0.79	1.00	1.61	1.04	1.31	1.01	1.01	0.79
White	0.82	0.90	0.96	0.97	0.96	1.03	0.93	0.94	1.11	1.36
Non-STEP Stops	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Asian	0.93	0.85	0.92	1.21	1.15	1.18	1.35	1.27	1.19	0.95
Black	2.24	2.15	1.91	1.77	1.69	1.83	1.58	1.47	1.60	1.61
Hispanic	1.32	1.43	1.18	1.06	1.30	1.39	1.13	1.05	1.17	1.23
White	0.68	0.71	0.77	0.78	0.79	0.75	0.80	0.84	0.78	0.76

Section 4. Outcomes of Traffic Stops

Analyzing information for decisions that are made after the stop is initiated is an ideal way to measure potential racial bias. These types of analyses require no guesswork about the benchmark – the comparison population is the stopped drivers. The below analysis presents the final outcome of the stop – a traffic ticket, a traffic warning ticket, and an outcome more serious than a traffic violation alone. These are traffic stops that result in a police report rather than simply a citation or warning, and are discussed in more detail in Section 4.1. Table 7 presents the outcomes of traffic stops, by year. In eight of the last ten years, over half of all stops resulted in a ticket and about 36% – 45% of stops result in the issuance of a warning only. More serious outcomes have occurred in between 3% and 9 % of stops. In 2019, about 49% of stops resulted in a warning, 45% in a citation, and 5.39% were had more serious outcomes.

Table 7. Most Serious Outcome of Traffic Stops by Year

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Ticket	51.27%	53.52%	58.06%	48.80%	50.64%	53.54%	57.44%	55.10%	52.62%	48.66%
Warning	40.14%	37.99%	35.61%	45.27%	44.96%	41.35%	39.40%	40.59%	43.65%	45.39%
More Serious	8.58%	8.49%	6.33%	5.92%	4.39%	5.11%	3.17%	4.31%	3.47%	5.39%
Total Stops	3099	2909	3777	4305	4210	3659	3315	2991	3514	3245

Table 8 presents the outcome by race. This data is available at a more detailed level than is reported by the IDOT traffic study, allowing for consideration of the most serious outcome of the traffic violation, including warning, citation, and incidents more serious than traffic violations.

It should be noted that the number of traffic stops that result in an outcome more serious than a traffic violation are relatively low (179 in 2019), so a variation in a few traffic stops can seem like a large increase in percentage. Similarly, when disaggregating by race and then disaggregating by outcome, this results in low numbers for some of the categories. For example, relatively few Hispanic drivers are pulled over when compared to other races (190 in 2018). There is considerable variation over the years in the outcomes for Hispanic drivers, but because the number of Hispanic drivers stopped is low, a difference of just a few drivers would have a large impact on the percentage.

Table 8. Outcomes of Traffic Stops by Race and by Year

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Citation Total	**1588**	**1556**	**2192**	**2096**	**2128**	**1957**	**1899**	**1646**	**1848**	**1579**
Asian	63.48%	58.98%	63.50%	51.32%	52.37%	53.73%	51.67%	53.77%	54.60%	52.57%
Black	48.18%	48.36%	53.70%	41.20%	45.00%	48.10%	55.59%	53.52%	45.69%	41.19%
Hispanic	46.04%	46.67%	50.75%	62.26%	63.11%	60.71%	66.46%	61.76%	58.42%	47.06%
White	51.82%	56.62%	60.00%	51.46%	52.13%	55.85%	58.72%	55.69%	55.68%	53.14%
Warning Total	**1243**	**1105**	**1341**	**1945**	**1885**	**1510**	**1302**	**1211**	**1526**	**1489**
Asian	34.13%	38.67%	36.20%	47.06%	44.70%	45.50%	48.06%	45.55%	44.76%	46.32%
Black	38.63%	37.34%	32.74%	46.76%	46.78%	41.72%	38.34%	38.75%	46.73%	48.17%
Hispanic	18.71%	25.19%	31.34%	27.04%	31.55%	31.55%	28.57%	33.82%	36.32%	44.92%
White	44.53%	39.47%	37.16%	45.33%	45.17%	41.12%	39.17%	41.20%	42.31%	44.37%
More Serious Total	**266**	**247**	**239**	**255**	**185**	**187**	**105**	**129**	**122**	**175**
Asian	2.39%	2.34%	0.30%	1.62%	2.93%	0.77%	0.28%	0.68%	0.63%	1.10%
Black	13.19%	14.30%	13.56%	12.04%	8.22%	10.18%	6.07%	7.73%	7.20%	10.55%
Hispanic	35.25%	28.15%	17.91%	10.69%	5.34%	7.74%	4.97%	4.41%	4.74%	7.49%
White	3.64%	3.91%	2.84%	3.21%	2.70%	3.03%	2.11%	3.10%	1.80%	2.49%

Table 9 presents the disparity ratio for each traffic stop outcome, calculated using the percentage of drivers of each race stopped for each year. There is some variation over time for citations, but generally, Black drivers are less likely than expected to receive citations and White drivers are more likely than expected to receive citations. Over time, Hispanic drivers have been less likely than expected to receive warnings. In 2019, Hispanic drivers were 23% less likely to receive a warning ticket than would be expected based on the stopped population. Black and Hispanic drivers are more likely than expected to have a traffic stop resulting in an outcome that is more serious than a traffic violation. In 2014 - 2019, the total number of traffic stops with more serious outcomes ranged from 105 – 187 annually.

Table 9. Disparity Ratios of Outcomes of Traffic Stops by Race and by Year

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Citation Total	**1588**	**1556**	**2192**	**2096**	**2128**	**1957**	**1899**	**1646**	**1848**	**1579**
Asian	1.24	1.10	1.09	1.05	1.04	1.00	0.90	0.98	1.04	1.08
Black	0.94	0.90	0.93	0.85	0.89	0.90	0.97	0.97	0.87	0.85
Hispanic	0.90	0.87	0.87	1.28	1.25	1.14	1.16	1.12	1.11	0.97
White	1.01	1.06	1.03	1.06	1.03	1.04	1.03	1.01	1.06	1.09
Warning Total	**1243**	**1105**	**1341**	**1945**	**1885**	**1510**	**1302**	**1211**	**1526**	**1489**
Asian	0.85	1.02	1.02	1.04	1.00	1.10	1.22	1.12	1.03	1.08
Black	0.96	0.98	0.92	1.03	1.04	1.01	0.98	0.96	1.08	1.01
Hispanic	0.47	0.66	0.88	0.60	0.70	0.76	0.73	0.84	0.84	0.77
White	1.11	1.04	1.05	1.00	1.01	1.00	1.00	1.02	0.97	1.00
More Serious Total	**266**	**247**	**239**	**255**	**185**	**187**	**105**	**129**	**122**	**175**
Asian	0.28	0.28	0.05	0.27	0.67	0.15	0.09	0.16	0.18	0.29
Black	1.54	1.68	2.14	2.03	1.87	1.99	1.92	1.81	2.07	1.94
Hispanic	4.11	3.32	2.83	1.81	1.22	1.51	1.57	1.03	1.36	1.33
White	0.42	0.46	0.45	0.54	0.61	0.59	0.67	0.72	0.52	0.61

Section 4.1. More Serious than Traffic Violations

This section presents information on crimes that are more serious than traffic violations. The unit of analysis for this section is by offense/violation, not by stop. Because of the nature of police reports, one stop could have multiple offenses/violations included. This analysis includes all incidents recorded on the police report; the incidents are disaggregated by (1) offenses that, absent more serious charges, would result in just a traffic citation, and (2) more serious offenses. For example, if someone was stopped for speeding and the officer discovered the driver had a warrant, the driver would be arrested. Both speeding and the warrant would be listed on the police report, and in the below analysis, speeding would be a traffic offense and the warrant would be a more serious offense. A police report is created when a crime beyond a moving violation occurs, as well as driving under the influence of drugs or alcohol, driving under revoked license/registration, or driving without insurance.

Table 10 details the offenses associated with police reports from traffic stops in which the outcome was more serious than a traffic violation from 2019. Offenses that occurred fewer than 5 times were excluded. In Table 10, the unit of analysis is the violation, not the stop. Each stop that is more serious than a traffic violation typically has more than one violation – if a traffic violation occurs with another, more serious offense, both charges will be listed on the police report, and each would be included in the below table.

Table 10. Offenses from Police Reports Resulting from Traffic Stops, 2019

Traffic Offenses	
Operate Uninsured Motor Vehicle	59
Driving Under Suspended License	43
Traffic Sign/Signal Violation	26
Lighting Violation (Taillights, Headlights, Rear Registration Light)	23
No Driver's License	21
Failure To Signal	14
Speeding	12
Expired Registration	12
Improper Lane Usage	8
More Serious Offenses	
Driving Under Revoked License	46
Cancel/Suspend/Revoked Registration	36
Warrant	29
Cannabis Offenses (all)	25
Driving Under The Influence (drugs & alcohol)	21
Controlled Substance (all)	14
Drug Paraphernalia & Equipment	11
Illegal Transportation Of Liquor	10
Fleeing or Attempting to Allude Police (including aggravated offenses)	7
Weapons Offenses (all)	5
Obstructing Justice	5

Section 5. Searches During Traffic Stops

Searches, including vehicle, driver, and canine sniffs, can be performed for a number of reasons, including probable cause, reasonable suspicion, incident to arrest, drug dog alert, and consent. IDOT has collected data since 2004 as to whether a consent search was performed, and data has been collected since 2007 on whether a consent search was performed, and whether contraband was found. Contraband includes drugs, alcohol or paraphernalia; weapons; stolen property; or other illegal items.[9] Additionally, data has been collected since 2012 on whether a canine search was conducted, whether the canine alerted, and whether contraband was found.

Section 5.1. Consent Searches

A total of 173 consent searches have been performed during traffic stops from 2010 to 2019, as displayed in Table 11. Because consent searches are conducted as a very small proportion of all traffic stops, it is difficult to draw meaningful conclusions from the data.

Table 11. Consent Searches Performed by Year, by Race, 2010 - 2019

	Total Stops	Total Consent Searches	% of All Stops	White	Black	Hispanic	Asian
2010	3079	7	0.23%	4	3	0	0
2011	2830	16	0.57%	4	11	1	0
2012	3751	11	0.29%	7	5	0	0
2013	4294	23	0.54%	10	10	3	0
2014	4205	26	0.62%	13	13	0	0
2015	3659	10	0.27%	5	4	1	0
2016	3317	10	0.30%	3	7	0	0
2017	2990	14	0.47%	7	6	1	0
2018	3504	23	0.66%	11	10	2	0
2019	3245	33	1.02%	9	22	2	0

As shown in Table 12, from 2012 - 2019, UPD officers have searched 173 vehicles by consent. Contraband was found in approximately 34% of searches, and this varies by race and by year. Black drivers are searched more often and have contraband found at lower rates. However, because the numbers of searches are so small, further analysis is not presented.

[9] Weiss, A. (2005). *Illinois Traffic Stop Statistics Act: Report for the Year 2014.* Springfield, IL: Illinois Department of Transportation.

Table 12. Contraband Found in Consent Searches, 2012 – 2018

	Searches of White Drivers	Contraband Found in Consent Searches of White Drivers	Searches of Black Drivers	Contraband Found in Consent Searches of Black Drivers
2012	7	3	5	0
2013	10	5	10	1
2014	13	5	13	6
2015	5	3	4	1
2016	3	1	7	4
2017	7	1	6	1
2018	11	1	10	4
2019	9	4	22	9
Overall	65	35.38%	77	33.77%

Section 5.2. Dog Sniffs

In 2012, IDOT began collecting data on dog sniffs. This includes information on whether a dog sniff was performed, whether the dog alerted, if the vehicle was subsequently searched, and if contraband was found during the search. As presented in Tables 13 and 14, dog sniffs have been performed in approximately 1% of all traffic stops, and the dog has alerted in 96.44% of all cases. Contraband was found approximately 63% of subsequent searches.[10]

Table 13. Dog Sniffs and Subsequent Searches by Year and Race, 2012 - 2018

	Total Stops	Canine Sniffs	% of All Stops	White	Black	Hispanic	Asian
2012	3751	29	0.77%	12	16	1	0
2013	4274	46	1.08%	19	25	2	0
2014	4195	57	1.36%	22	33	1	1
2015	3650	38	1.04%	16	20	2	0
2016	3314	17	0.51%	7	10	0	0
2017	2990	14	0.47%	6	4	3	1
2018	3504	24	0.68%	7	14	3	0
2019	3245	36	1.11%	14	22	0	0

[10] One potential reason the alert rate is higher than the rate at which contraband is found is likely due to "shake," or small amounts of drug debris, that do not lead to enforcement action.

Table 14. Dog Sniffs and Subsequent Search Results by Race, 2012 - 2019

	Total	Dog Alerts	Contraband Found
Total Sniffs	261	95.02%	63.71%
Asian	2	100.00%	100.00%
Black	136	94.12%	64.06%
White	111	93.69%	62.50%
Hispanic	11	90.91%	90.00%

As with consent searches, dog sniffs are performed during traffic stops with Black drivers at higher rates. However, because dog sniffs are performed in such a small percent of all traffic stops, further analysis is not presented.