

Illinois Traffic Stops Statistics Study 2007 Annual Report



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Introduction

Five years ago Illinois launched a significant effort to identify racial bias in police traffic stops. Illinois was one of the first states to require that every law enforcement agency provide annual data about traffic stops conducted in their communities. Data collection began on January 1, 2004 and was originally scheduled to end December 31, 2007. Public Act 094-0997, however, has extended the collection time period, and, in addition, has charged the newly created Racial Profiling Prevention and Data Oversight Board with evaluating the necessity of mandatory data collection. Their recommendation is due no later January 1, 2010.

This document examines data collected during CY 2007, the fourth year of data collection. The reports for 2004, 2005, and 2006 as well as a detailed methodological overview of the project are available at the IDOT website www.dot.il.gov.

Participation

While data collection under the act is mandatory, we continue to have agencies each year that do not submit data, this in spite of significant efforts by IDOT to both facilitate and ensure submission. For 2007 the following ninety-six (96) law enforcement agencies failed to submit data:

ABINDON POLICE	COOK COUNTY FOREST PRESERVE POLICE ¹
ALBANY POLICE	CUBA POLICE
ALTAMONT POLICE	CUMBERLAND COUNTY SHERIFF
ANNA POLICE	DALLAS CITY POLICE
AROMA PARK POLICE	DEER CREEK POLICE
BELGIUM POLICE	DONGOLA POLICE
BELLEFLOWER POLICE	DONNELSON POLICE
BLUFFS POLICE	DOWNNS POLICE
BNSF RAILROAD POLICE	DUNFERMLINE POLICE
BROOKLYN POLICE	EAST ALTON POLICE
BROOKPORT POLICE	EAST ST LOUIS PARK DISTRICT POLICE
BUCKNER POLICE	
BUDA POLICE	
BUNCOMBE POLICE	
CALUMET CITY POLICE	
CHADWICK POLICE	
CISSNA PARK POLICE	
COATSBURG POLICE	
COLUMBUS POLICE	

¹ Data submitted after deadline

EDINBURG POLICE
ELIZABETHTOWN POLICE
ELSAH POLICE
ENFIELD POLICE
ERIE POLICE
FARINA POLICE
FAYETTE COUNTY SHERIFF
FILLMORE POLICE
FORD HEIGHTS POLICE
FOREST PARK POLICE²
FOX RIVER VALLEY GARD POLICE
FYRE LAKE ASSOCIATION
GALATIA POLICE
GOLCONDA POLICE
GOVERNORS STATE UNIVERSITY POLICE
GRAND RIDGE POLICE
GRAND TOWER POLICE
GRIDLEY POLICE
GULFPORT TOWN MARSHALL
HAMILTON COUNTY SHERIFF
HENNEPIN POLICE
IRVINGTON POLICE
JONESBORO POLICE
KEITHSBURG POLICE
KINMUNDY POLICE
LAKE BLOOMINGTON POLICE
LAWRENCE COUNTY SHERIFF
LIVINGSTON POLICE
LOYOLA UNIVERSITY POLICE
LUDLOW POLICE
MAQUON POLICE
MCNABB POLICE
MELROSE PARK POLICE
POCAHONTAS POLICE
ROCKFORD AIRPORT POLICE
ROYALTON POLICE
SAN JOSE POLICE
SHEFFIELD POLICE
SHELDON POLICE
SHIPMAN POLICE
ST. FRANCISVILLE POLICE
ST. PETER POLICE
THOMPSONVILLE POLICE
TOLEDO POLICE
TOULON POLICE
VALIER POLICE
WALNUT POLICE
WAVERLY POLICE
WESTVILLE POLICE

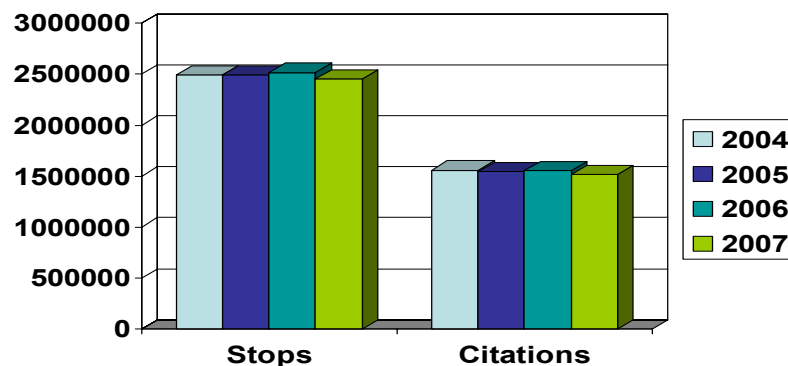
WILSONVILLE POLICE
WINCHESTER POLICE
ZEIGLER POLICE

² Data submitted after deadline

Stop Data Analysis

Our analysis for 2007 is based on data received from 939 law enforcement agencies. These departments reported 2,450,986 stops. Figure 1 illustrates the number of vehicle stops and citations for the past four years.

Figure 1
Summary Stop Data 2004-2007



As can be seen, the data is very similar from year to year, although stops and citations are down slightly in 2007. This indicates two important things. First, it suggests that the data submission and collection is reliable over time. That is, the systems for gathering and reporting the data are working and have been institutionalized. Secondly, this consistency in stops from year to year supports the notion that the mandatory collection of data has not visibly changed officer behavior. Although we do not know the number of stops that were conducted in the years before data collection, it is clear that the “chilling effect” on productivity, which many people predicted, has not occurred on a statewide level.

Agency Performance

In previous reports we analyzed agency performance on four dimensions:

- The comparison (ratio) of stops of minority drivers in a community with the estimated minority driving population of that community
- The reason for the stop
- The outcome of the stop, and
- The distribution by race of consent searches.

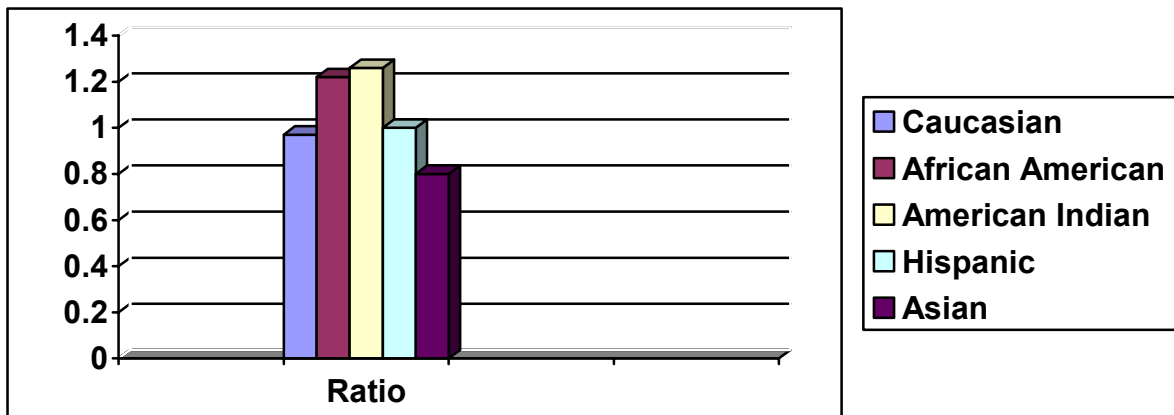
For the 2007 analysis we add new information about the duration of stops and about consent searches.

Ratio Results

In this first analysis we examine whether minority drivers are more or less likely to be stopped than white drivers. This task poses significant methodological challenges.³ Nonetheless, we have developed a reliable and consistent measure that remains instructive. In 2007, the statewide ratio was 1.10. That is, a minority driver was 10 percent more likely to be stopped than a Caucasian driver. This is the lowest level recorded since we began our work in 2004⁴.

The ratio of stops does, however, vary by individual race. This is illustrated in Figure 2.

Figure 2
Stop Ratios by Race



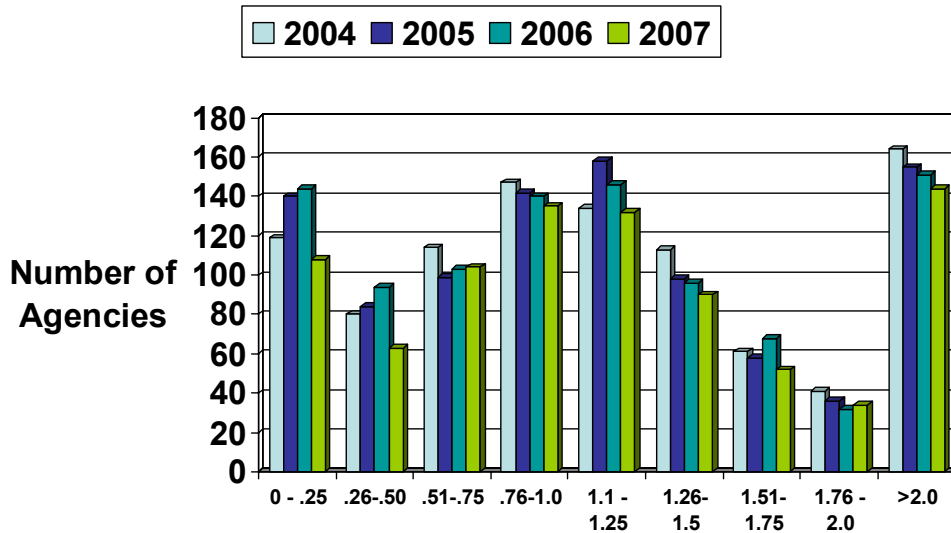
As we can see the ratios for Caucasian, Hispanic, and Asian drivers are at or below 1. Ratios for African American and American Indian drivers exceed 1.

We also examined the distribution of ratios across all of the agencies. Figure 3 illustrates the number of agencies in each of the ratio categories for the past four years.

³ For a detailed description of our methodological approach see the 2004 Annual Report

⁴ A ratio of 1 would indicate that the percentage of minority drivers stopped by police is equal to the estimated minority driving population.

Figure 3
Distribution of Ratios
2004 - 2007



There are a number of important aspects of this analysis. First, the majority of agencies (58%) have ratios less than 1.25⁵. During 2007, the percentage of agencies with ratios of greater than 2 (15%) remains stable, but the number of agencies reporting with ratios greater than 2 decreased. Appendix one contains the ratio data for each agency for the years 2004 to 2007.

Reason for Stop

The second part of our analysis examines the reason for the traffic stop. Our working hypothesis is that if race is not a factor in the decision to stop a vehicle, then the reasons for the stop should be relatively similar across the races. For 2007 the marginal distributions are as follows:

Reason for Stop	Caucasian	Minority
Moving	75.6%	70.17%
Equipment	17.2%	19.33%
License/Registration	7.2%	10.51%

⁵ A ratio of 1.25 indicates that a minority driver is about 25% more likely to be stopped than a Caucasian driver. A ratio of 2 indicates that a minority driver is twice as likely to be stopped.

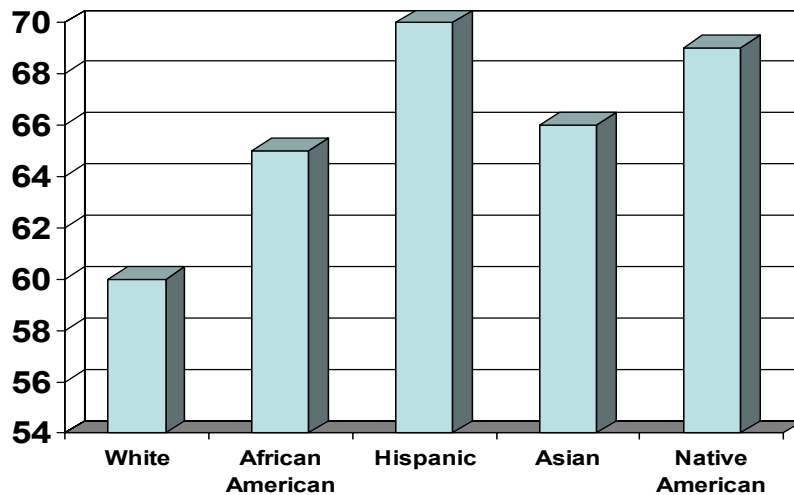
This table illustrates the percentage of stops within each race for the three classifications of violation. For example, 75.6% of the Caucasian drivers that were stopped were stopped for a moving violation, and 70.17% of minority drivers were stopped for a moving violation. Two important observations emerge from this data. First, the distribution of reasons within the races is quite similar across the races. Second, this distribution has been relatively unchanged since data collection began.

Outcome of the Stop

The third component of the analysis is the outcome of the stop. We examine the extent to which race influences the disposition of the contact. The three post-stop measures (outcome, duration and consent search) are important because they are not related to the benchmark, and the officer has, by this point, drawn a perception of the race of the driver.

In Illinois in 2007 minority drivers were about 7 percent more likely to be cited on a traffic stop than Caucasian drivers. This is down from 2006, when minorities were about 10 percent more likely to be cited. Citation rates also tend to vary by individual race. The following figure shows the percentage of drivers cited by race.

Figure 4
Percentage of Drivers Cited by Race (2007)



These data are quite consistent with traffic stop data analyzed in a recent report by the United States Department of Justice.⁶ In this study of traffic stops nationwide, dispositions also differed by race. The results appear in the following table.

Race/ Hispanic Origin	Percentage of Drivers Ticketed
White (non-Hispanic)	56.2%
Black/African American	55.8%
Hispanic/Latino	65%
Other	63.6%

Duration of Stop

Beginning in January 2007, police officers included data about the duration of traffic stops. The purpose of adding this data element was to test whether minority drivers are subjected to longer stops than Caucasian drivers.

In our analysis we included two measures of average duration, the *mean* and *median*.⁷ The mean is calculated by summing the total time for all traffic stops and then dividing by the number of stops. The median is derived by taking the times for all the stops and placing them in order. The median represents the value **in the middle** of the ordered distribution.

Because of the manner in which these measures are constructed the mean tends to be more sensitive to extreme values. Consider the following example.

An agency conducts hypothetically ten stops, and the durations are as follows:

Stop	Duration (minutes)
1	18
2	15
3	12
4	20
5	67
6	15
7	11
8	13
9	12
10	20

The mean duration for this agency would be 20.3 minutes (203 / 10). But note that nine of the ten stops were twenty minutes or less, and thus the mean is not a very good

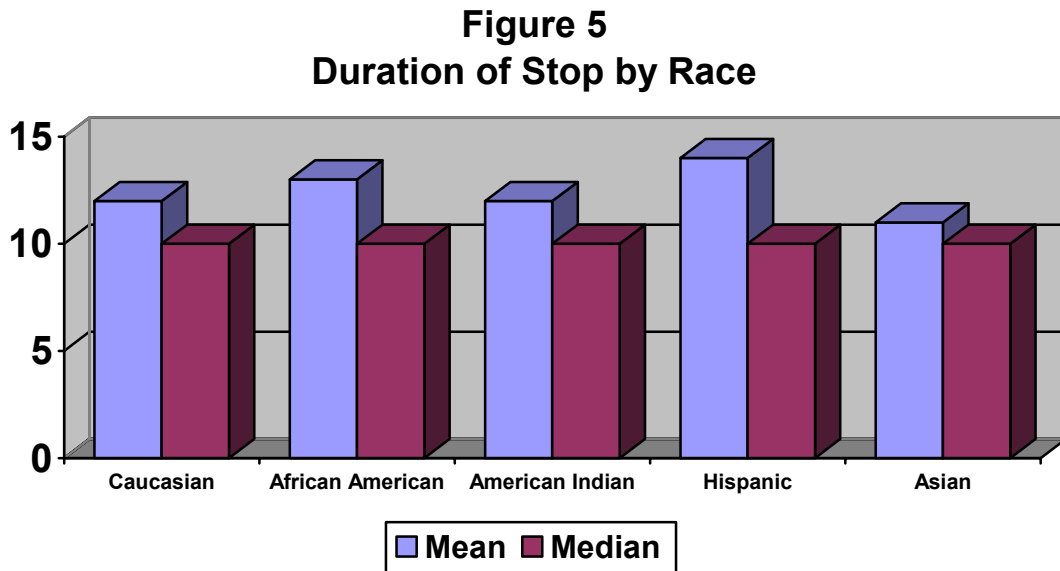
⁶ Matthew R. Durose, Erica Smith, and Patrick Langan. *Contacts between Police and Public, 2005*. Bureau of Justice Statistics, April 2007.

⁷ The program used to conduct the duration analysis rounds all values to the next lowest whole number.

indicator of the “center” of this distribution. The mean in this example is being driven by the extremely long time recorded for stop number five. By contrast, the median value for this set is 15 minutes, arguably a better indicator of the typical traffic stop.

Our analysis of statewide data indicated very little difference by race on the duration measure. The mean duration for Caucasian drivers was 12 minutes; for minority drivers 13 minutes. The median time (10 minutes) was equal across the categories.

The following chart shows the mean and median duration times by individual race.



Consent Searches

The final area of our analysis examines consent searches. Consent searches are an important element in the examination of bias in traffic stops. Police officers have many legal justifications for searching motor vehicles without a warrant. Courts have, in general, given police officers wide latitude in conducting such searches, because when the vehicle is “released” any evidence in the vehicle may be unrecoverable. We are particularly interested in discretionary searches, those in which the decision to request a search is largely that of the individual officer.

In the three prior reports we have demonstrated that consent searches are applied disproportionately by race in Illinois. In this year’s report we have additional data to further examine this question.

The first new data examines the consent process. In the past we only counted the number of consent searches *conducted*. We were unable, therefore, to determine whether the differential consent search outcome was, in fact, due to differential refusal rates. Beginning with the 2007 report we are able to resolve that issue.

In 2007 police officers in Illinois requested 26765 consent searches. Those requests were granted by 24312 drivers (91%). Police officers actually performed 23395 consent searches, or in 96% of the cases in which consent was given.⁸

In the statewide data we found very similar experience across races relative to refusal. Caucasian drivers agreed to consent searches 91.45% of the time, while minority drivers agreed 90.31%. We also obtained the consent rates by individual race. This data is described below. As can be seen there is little evidence to suggest that differential search rates can be explained by differential consent rates.

	Caucasian	African American	American Indian	Hispanic	Asian
Requested	12261	9395	29	4801	270
Granted	11213	8478	26	4340	246
Percentage	91.45%	90.23%	89.65%	90.39%	91.11%

We now examine the relationship between race and the consent searches that were actually conducted. In 2007 police officers in Illinois conducted 23395 consent searches. A consent search was conducted during less than one percent of all the traffic stops. Moreover, the number of consent searches conducted in 2007 is down by 17% when compared with 2006.

As in past years, in 2007 consent searches were conducted disproportionately by race. The following table illustrates this relationship. As we can see, a Hispanic driver is 2.4 times as likely to be the subject of a consent search as a Caucasian driver, and an African-American driver is about 3 times as likely as a Caucasian driver⁹.

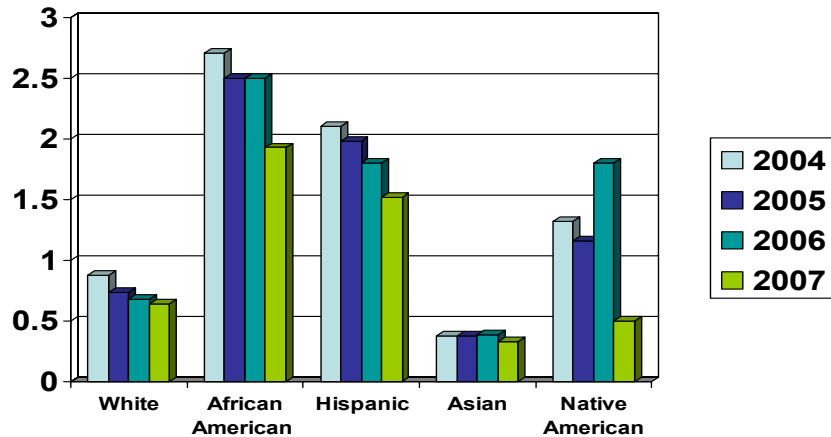
	Caucasian	African American	American Indian	Hispanic	Asian
Stops	1682594	419021	4820	272964	70949
Consent Searches	10826	8123	24	4173	240
Percentage	.64	1.93	.5	1.52	.33
Ratio		3.01	.78	2.38	.52

⁸ It is not clear why, after having been granted consent, an officer would not conduct a search. There were a few cases in which consent was “granted” but had not been requested.

⁹ Our analysis actually measures whether the vehicle was searched and not the driver or passengers. It is based on the race of the driver of that vehicle.

We can also examine these outcomes over the last four years (Figure 6). Interestingly, the percentage of drivers subject to consent searches has dropped in each category during each of the four years of the study.

Figure 6
Percentage of Drivers Consent Searched by
Race
2004-2007



Finally, we examine the last new data element for 2007. During the first three years of our study agencies were asked to provide information regarding whether a consent search resulted in a seizure of contraband, defined as drugs, drug paraphernalia, weapons, stolen property or “other” contraband. While many agencies provided this data, it was not made a mandatory data field until 2007. Knowing whether or not contraband is found allows us to calculate the “hit rate”, or the likelihood that a consent search results in the seizure of contraband.

In 2007 when the vehicle of a Caucasian driver was consent searched, police officers found contraband **24.56%** of the time. By contrast when a vehicle driven by a minority driver was consent searched, officers found contraband **12.93%** of the time. Thus although minority drivers are about 2.5 times as likely as Caucasian drivers to be the subject of a consent search, they are half as likely to have contraband in their vehicle.. This pattern is quite consistent with results found in other similar studies.¹⁰

¹⁰ • McCorkle, R.C. 2003 A.B. 500: Traffic Stop Data Collection Study. Carson City, NV: Office of the Attorney General (found that blacks searched at more than twice the rate of white drivers but the hit rate for blacks and Hispanics was lower than for whites

Another way to think about the relationship between race and hit rate is to calculate the *conditional probability*. That is, we calculate the probability of finding contraband given the probability of having been consent searched. For Caucasian drivers the conditional probability of finding contraband, given the probability of being searched is 41%. For minority drivers the conditional probability is 8%.¹¹

Summary

This is the fourth annual report of the Illinois Traffic Stops Statistics Study. There are several important conclusions that can be drawn based on this and previous year's studies.

- There has been steady progress in the development and implementation of data collection protocols. Most agencies have institutionalized this collection. The introduction of new data elements in 2007 was accomplished smoothly.
- The ratio of minority drivers stopped to the minority driving population has improved each year. That is, the percentage of minority drivers stopped by the police is getting closer to the estimated driving population.
- Law enforcement agencies continue to pay careful attention to this issue and many have introduced policies and procedures to correct deficiencies.
- Our newest measure of post-stop performance, duration of stop, suggests that traffic stops of minority drivers consume about the same time as for Caucasian drivers.
- The number of consent searches in Illinois continues to decline, but minority drivers are still more likely to be consent searched than Caucasian drivers. Differential refusal rates do not appear to contribute to this difference.
- Police officers conducting consent searches are far more likely to find contraband in a vehicle driven by a Caucasian driver than by a minority driver.

and Asians). • Zingraff, M.T. Mason, H.M. Smith, W.R., Tomastovic-Devey, D. (found that blacks are more likely to be searched than whites but contraband is less likely to be found in searches of vehicles operated by black drivers). • Lamberth, J. 2003, Racial Profiling Data Analysis, final report for the San Antonio Police Department. Chadds Ford, PA Lamberth Consulting (found that black and Hispanic drivers are more likely to be searched than white or Asian drivers yet contraband is consistently found at lower rates for black and Hispanic drivers). • Washington State Police, (WSP), 2001. Report to the Legislature on Routine Traffic Stop Data. Olympia: Washington State Police (found that nonwhite drivers are searched at a disproportionately higher rate than whites, and that contraband was more likely to be found in vehicles with white drivers).

¹¹ Conditional probability is calculated by dividing the probability of finding contraband by the probability of being consent searched.