AN ANALYSIS OF TRAFFIC STOP DATA IN THE CITY OF RIVERSIDE

(Third Year Report)

Submitted to the City of Riverside

by

Larry K. Gaines, Ph.D.
Department of Criminal Justice

March 5, 2004

AN ANALYSIS OF TRAFFIC STOP DATA
IN THE CITY OF RIVERSIDE

This document reports on the analysis of traffic stop data for the Riverside Police Department. The data were collected for the calender year 2003 and represent all reported traffic stops in the City. The data were reported by individual officers who as a result of conducting traffic stops collected demographic information about drivers during stops and the actions taken as a result of the stop. The data were compiled by the department into a database that was used to generate this report. The purpose of this study was to determine if the data pointed to any practices of racial profiling. Thus, the findings here examine the data and provide explanations of any patterns that emerged as a result of the analysis. This report provides discussions, analyses, and data that were used to generate this report. The first section of this report provides some background on the issue of racial profiling.

INTRODUCTION

The current study was conducted in Riverside, California. This study was prompted by a stipulated judgment between the City and the California Office of the Attorney General. The judgment contained a number of changes within the Riverside Police Department affecting administrative and personnel areas. One of the judgment's requirements was that the police department continue to collect and analyze its traffic stop data for a period of five years to determine if any patterns emerged that point to racial profiling. Racial profiling has been defined by the State of California as,

> . . . the practice of detaining a suspect based on a broad set of criteria which casts suspicion on an entire class of people without any individualized suspicion of the

particular person being stopped.

Thus, this study examined traffic stops to determine if there were any patterns of stops where the preponderance of stops were based entirely on race/ethnicity or gender.

As noted, there have been a number of racial profiling or traffic stop studies conducted throughout the United States. Many of the earlier studies attempted to imply that racial profiling existed when a particular minority group was over-represented in the stops made by a police department. In some cases, people have inferred racial biases on the part of the police when parity among racial and ethnic groups did not exist. For example, R.N. Parker was commissioned to examine traffic citation data in 2001, and he used imbalances in the data to infer that racial profiling existed. However, as discussed in this report, there are a number of factors that can result in groups being over-represented in the data.

This document reports on the third year of data analysis. Analysis began two years ago with an examination of the 2001 data. This report essentially follows the methodology developed during the first report. There was scant research and literature on racial profiling at the beginning of this project in 2001. Thus, after careful consideration of police operations, a methodology was developed. Since the initiation of this project, however, there have been a number of studies and scholarly articles examining the issue of racial profiling. A number of these studies have been examined with an effort to see if the methodology used in Riverside could be improved. Essentially, it was determined that the methodology used here was the optimal methodology given the social setting for Riverside. Indeed, the methodology used here is consistent with studies in other jurisdictions including San Diego, Sacramento, and Cincinnati.

Social Setting and Traffic Stop Methodology

It should be noted that there most likely is a need to match methodologies with the social setting of the area being studied when examining traffic stop data. A review of the literature identifies three distinct types of social settings where traffic stop data analyses have occurred: (1) interstate highways or freeways, (2) suburban communities in close proximity to urban centers, and (3) independent urban centers. Riverside is an independent urban center, which has implications for methodology selection as discussed below.

The racial profiling issue came to light with studies in New Jersey and Maryland. In those states, the state police organizations were accused of stopping minorities, particularly African-Americans, at a disproportionately higher rate on the New Jersey Turnpike and Interstate 95 respectively (interstate highways). Troopers in those states were engaged in drug courier profiling and were attempting to interdict drugs passing through or into the states. The drug courier profile they used resulted in a disproportionately higher number of African-Americans being stopped and searched.

The social setting for the New Jersey and Maryland issues were interstate highways or freeways. This represents a unique social setting with a distinctive type of motorists. The universe of motorists included travelers who were on extended journeys and people traversing from one city to another. Researchers attempted to study the pattern of traffic stops by comparing the violation rate of minorities and Whites to the proportion of stops by racial group. However, the composition of the population of drivers that was drawn to compare with the traffic stops was extremely fluid and subject to change both seasonally and over time.

The enforcement and stopping patterns of police officers were also unique compared to

other social settings such as independent urban centers. Here, officers were focusing on one unique problem, drug trafficking and transportation, so they selected to stop individual motorists who met the drug transportation profile. In essence, the social setting and enforcement patterns generally were different from those exhibited in suburban communities in close proximity to urban centers and independent urban centers.

It is important to note that although officers in New Jersey stopped a larger proportion of minorities, the "hit rate" or number of instances where drugs were found was the same for White and Minority drivers (GAO, 2000). This seems to indicate that the decision criteria used by officers to make stops was uniformly applied across racial and ethnic groups. The disproportionality of stops was the result of a larger number of minorities fitting the profile being used by the officers.

The second type of social setting, suburban communities in close proximity to urban centers, represents another unique social and enforcement phenomenon. Only one study of this type of social setting is presently available. Meehan and Ponder (2002) of Oakland University examined the traffic stop patterns in a predominately White city in Michigan. The city shared a border with a predominately African-American city, and thus, the social setting is indicative of many segregated urban-suburban metropolises in the United States. The researchers found that ecology or social setting affected how officers conducted traffic stops. That is, the officers in the predominately White city stopped African-Americans and placed them under surveillance at a much higher rate than White drivers, especially those African-Americans entering the suburban city from the predominately African-American urban areas. The traffic stop patterns here could be characterized as classic "driving while black" stops. The police are more attentive to outside

minority drivers coming into the predominately White city.

This social setting seems to foster a different kind of enforcement pattern. Perceptually, the police appear to have adopted a watchman style orientation toward outsiders (see Gaines and Kappeler, 2003), especially minorities, in an effort to combat crime. They tend to see these outsiders as being criminogenic predators who are responsible for a large portion of crime in their city. The officers adopt tactics that they feel best protect residents from the outsiders. This results in these outsiders, who are predominately minority, being stopped at greater rates. Obviously, the homogeneous population contributes significantly to these perceptions.

Finally, independent urban centers are cities that for the most part are self-contained with an ample supply of all necessary services. This best characterizes the City of Riverside. Riverside is the county seat and is the primary urban hub for the county. Rather than being involved in freeway interdiction or being concerned with possible offenders from other jurisdictions, officers tend to focus on problems within the City's boundaries. Officers tend to be concerned with crime, drug, gun, and gang problems as they occur in Riverside. Riverside officers seem to use problem solving and proactive police tactics to counter perceived, significant crime problems. This hypothesis was to a large extent supported by the data from the first and second years' analyses.

This discussion on the types of ecological conditions or social settings for traffic stop data analysis is presented in an effort to provide context to the current study. That is, although problems have been found in other jurisdictions, the social ecology in some of those jurisdictions is somewhat different from Riverside. Thus, it is inaccurate to generalize problems or findings from other agencies to Riverside.

It is also important to reiterate that more active police tactics, especially in high crime areas, constitute normative behavior by police departments. Nationally, police departments have adopted problem solving, a key component of community policing, which results in officers applying stricter enforcement in problem areas. In recent years, Riverside has developed a drug and gang problem as indicated by the number of assaults and homicides. One of the police responses has been enhanced enforcement.

The following section of this report discusses the methodology used to conduct the third year traffic stop data analysis in Riverside.

METHODOLOGY

The source of data for this analysis is all traffic stops conducted by the Riverside Police Department. When officers make a traffic stop, they provide information or data to the dispatcher who keys the information into a database. Officers have been trained on the system and use established codes to provide data on the following elements: (1) driver's race or ethnicity, (2) driver's gender, (3) broad categories as to the rationale for the stop, (4) disposition of the stop, (5) whether a search was conducted, and (6) whether the search result in the discovery of evidence or contraband. These elements constitute the primary data used for the analysis in this report. It should be noted that the California driver's license does not contain race information. Thus, officers make judgments about a driver's race. Southern California's population is much more multi-cultured than other locales, and there are numerous drivers of a multiple racial and ethnic background making it difficult to accurately discern a given driver's race or ethnic background. This likely introduces some level of error in the race or ethnicity statistics.

Once the data were collected, it was provided to the researcher by the Riverside Police Department's Attorney General Compliance Task Force Unit. The researcher then worked closely with members of the unit to examine the data and to ensure that data's accuracy. Unit personnel provided explanations and definitions as to the meaning of the data collected in the database.

The methodology used in this report follows the methodology used in the previous two years of analysis. It should be noted that a comprehensive review of the literature was conducted to determine if other data should be collected or other analyses be calculated. Based on this review of the literature, it was determined that the current methodology is consistent with that which is known about traffic stop data analysis. Other studies uniformly use this methodology.

The analysis essentially consisted of three steps. First, the department's overall stops were examined. Second, the total stops were dis-aggregated into stops by traffic officers and pretextual or investigative stops performed primarily by patrol. Each grouping was then analyzed separately. Third, when disparities were identified, explanations for them were investigated. It should be noted that different levels of enforcement do not necessarily constitute racial profiling (see Walker, 2001). There are a number of competing explanations, which should be investigated.

EXAMINATION OF OVERALL TRAFFIC STOP TRENDS

One issue that is of interest is trends of stops across years. This is the third year of examining traffic stops in Riverside and all three years are examined here. Table 1 provides a breakdown of the traffic stops for the Riverside Police Department for the years 2001 through 2003.

Table 1

Annual Comparison of Traffic Stops

	2001	2002	2003	% Change 01-02	% Change 02-03
Total Stops	21,672	23,872	40,976	10.2	71.6
Patrol	15,606	13,973	29,163	-10.5	108.7
Traffic	6,066	9,899	11,813	63.2	19.3

The number of stops conducted by the Riverside Police Department in 2003 increased by 71.6 percent over the previous year. In 2002, there were 23,872 stops, and in 2003, there were a total of 40,976 stops for an overall increase of 17,104 stops. Table 1 indicates that the bulk of the increase in traffic stops was attributable to patrol, although stops made by the traffic unit also increased by 19.3 percent. This represents a significant change over the previous year when there was an overall increase of 10.2 percent and the number of stops made by patrol actually declined.

As noted in Table 1, calendar year 2003 showed a significant increase in the number of stops performed by traffic and patrol. Members of the police department's Attorney General Compliance Task Force Unit advised that administrators had encouraged traffic and patrol units in the department to increase the level of traffic enforcement in the city. This was due to an ever-increasing number of citizen complaints about traffic violations and accidents. For the past two years, traffic officers have concentrated on the enforcement of traffic violations and wrote large numbers of citations. Patrol officers, for the most part, conducted investigative or pretextual stops for the purpose of investigating the possibility of crime. Given the new mandate in the police department and the significant increase in the number of stops conducted by patrol,

it should equate to these officers, traffic and patrol, issuing large numbers of tickets as compared to the past. This is examined later in this report.

The following section examines whether there is racial and ethnic parity with the traffic stops by all officers in the Riverside Police Department.

RACIAL PARITY OF OVERALL TRAFFIC STOP STATISTICS

In order to conduct an analysis as to whether parity across race and ethnic groups existed, population statistics were obtained. The most recent and accurate population statistics available are the 2000 census data. The U.S. Census Bureau substantially changed how it collected data for the 2000 census. The California Department of Finance's Demographic Unit has examined the 2000 census data and broken the data out into more meaningful or useable categories. These statistics are more compatible with how the Riverside Police Department collects race and ethnic information. The census information shows that the City has a population of 255,166. Table 2 contains the population statistics as posted on the California State Census Data Center website the 1990 and the 2000 censuses. Also, a projected 2003 census is provided. These figures were generated by dividing the change from 1990 to 2000 (generate rough yearly changes), multiplying the quotient by three for each of the three years since the census data were actually collected, and adding the three year change to the 2000 census information.

Table 2

Census Information for the City of Riverside

Race or Ethnicity	1990 Census	2000 Census	Projected 2003 Census
White	61.5	45.6	40.8
Hispanic	25.1	38.1	42.0
African-American	7.4	7.1	7.0
American Indian	0.9	0.6	0.5
Asian	4.3	5.6	6.0
Pacific Islander	0.4	0.3	0.3
Other	0.4	0.2	0.1
Two or More Races	NA	2.6	2.6

Table 2 shows that a significant amount of racial and ethnic diversity exists within the City of Riverside, and the magnitude of this diversity changes fairly rapidly. Although in 2000, Whites constituted the largest single group (45.6%), they constituted less than half of the population. Moreover, projected 2003 data indicates that the percentage of Whites in the City of Riverside is currently around 40.8 percent. The next highest group in 2000 was Hispanic, which constituted 38.1 percent of the population. The prorated statistics indicates that Hispanics have now passed Whites as the largest population group with 42 percent of the population. African-Americans, the third largest group, comprised 7.1 percent of the population in 2000, and now it appears that this group constitutes approximately 7.0 percent of the population. Other groups have not changed to any great degree.

These statistics call to question as to which population statistics should be used in examining stop patterns for this study. The 2003 statistics are projected, and therefore, may have

an element of error. On the other hand, it is obvious that the 2000 census data are somewhat outdated and inaccurate. It appears, however, that the projected statistics may be the best measure since Riverside's racial and ethnic population composition has been changing fairly rapidly.

Table 3 provides a breakdown of the population and the number of traffic stops that were conducted.

Table 3

Total Traffic Stops by Population Percentages

Race or Ethnicity	% Population	Number of Stops	% Total Stops
White	40.8	16,154	39.4
Hispanic	42.0	17,167	41.9
African-American	7.0	5,491	13.4
American Indian	0.5	73	0.2
Asian	6.0	1,084	2.6
Pacific Islander	0.3	161	0.4
Other (Including E. Indian)	2.7	846	2.1

There were 40,976 traffic stops in the City of Riverside in 2003. The vast majority of those stops were of Whites, Hispanics, and African-Americans as indicated in Table 3. Of the three main categories of drivers being stopped by the police, it seems that Whites and Hispanics' stops closely approximated their adjusted population statistics. However, African-Americans were significantly over represented. African-Americans represent 7.0 percent of the population and 13.4 percent of the total stops.

It is noteworthy that the proportion of African-Americans stopped has slightly increased

since 2002. In 2002, African-Americans constituted 12.7 percent of all stops, while they made up 13.4 percent of the stops in 2003. The relative proportion of Hispanics in the stop population has increased from 39.9 percent to 41.9 percent this year. Finally, in 2002, 41.3 percent of the stops were for Whites, and 39.4 percent for 2003 were for Whites. Of the major population groups, African-Americans remain the only group to be significantly over-represented in the stop data.

DIS-AGGREGATING TRAFFIC AND PATROL STOPS

A significant part of the research methodology developed two years ago was the dis-aggregation of stops made by traffic officers and patrol officers. It was reasoned that these two units make stops for different purposes. Traffic officers are concerned with traffic law enforcement with a primary purpose of reducing traffic crashes and expediting the flow of traffic. Therefore, they are primarily engaged in low discretion stops where violators are normally ticketed. Patrol, on the other hand, is engaged in high discretion stops where their intention often is to perform a cursory investigation. Such stops are often referred to as pretextual stops since patrol officers often stop motorists for a traffic violation with the purpose of conducting an investigation into other possible criminal activities. Pretextual stops by law enforcement has been reviewed by the United States Supreme Court in Whren v. U.S. (116 S.Ct. 1769, 1996). The Court ruled that such stops were permissible. Therefore, it is informative to examine these two types of stops independently. Data from the previous two years indicated that dis-aggregation of the data is warranted.

Traffic Stops Made By the Traffic Unit

Table 4 provides a breakdown of the traffic stops conducted by the Riverside Police

Department's traffic unit. In addition to the number of stops, the population percentages for each racial and ethnic group are presented.

Table 4

Traffic Officer Stop by Population

Race or Ethnicity	% Population	Number of Stops	% Total Stops
White	40.8	5,358	45.4
Hispanic	42.0	4,547	38.5
African-American	7.0	1,158	9.8
American Indian	0.5	13	0.1
Asian	6.0	397	3.4
Pacific Islander	0.3	34	0.3
Other	2.7	306	2.6

There was a total of 11,813 traffic stops made by the traffic unit. An examination of the data contained in Table 4 shows that the stops conducted by officers assigned to the traffic unit were fairly consistent with the population statistics. White drivers were over-represented in the stops by 4.6 percent, and African-Americans were over-represented by 2.8 percent. On the other hand, Hispanic drivers were under-represented in the stops by 3.5 percent. These differences for all practical purposes are insignificant. Thus, it can be concluded that there are no real differences between racial and ethnic groups in terms of traffic unit enforcement. Furthermore, it was noted earlier in this report that traffic stops by traffic officers had increased by 19.3 percent from the previous year. It does not appear that this increase had any affect on the proportionality of the racial and ethnic groups being stopped.

Another concern voiced relative to the racial profiling controversy relates to the number

of minorities who are searched in relation to non-minority drivers. In 2002, traffic officers made a total of 33 searches out of a total of 9,899 traffic stops. In 2003, the traffic officers conducted 126 searches for an increase of 381 percent from 2002. Thus, searches occurred in about 1.1 percent of the traffic stops. Drugs or weapons were found in eleven or 8.7 percent of the incidents. Thirty-three of the searches were for Whites, while three Asians, four African-Americans, and 86 Hispanics were searched. Thus, the number of searches conducted by traffic officers is insignificant. Nonetheless, it does appear that Hispanics received more attention in this area than other groups.

Another area of consideration is the disposition of traffic stops by the traffic officers. Table 5 provides a breakdown of the disposition of the traffic stops by race and ethnicity.

Table 5

Traffic Stops by Traffic Officers by Ethnicity and Disposition

Disposition	Asian		African-American		Hispanic		Other		Native American	
	Count	%	Count	%	Count	%	Count	%	Count	%
Arrest	3	0.8	19	1.6	200	4.4	1	0.0		
Cite	373	94.0	981	84.7	4,022	88.5	281	91.8	13	100
Field Inter.			3	0.3	1	0.0				
Release	21	5.3	155	13.4	324	7.1	24	7.8		
Report										
Supp. Report										

Table 5 is continued on the next page.

Table 5 Continued

Disposition	Pacific Islander		White		Total	
	Count	%	Count	%	Count	%
Arrest	2	5.9	62	1.2	287	2.2
Cite	29	85.3	4,764	88.9	10,463	90.6
Field Inter.			9	0.2	13	0.2
Release	3	8.8	522	9.7	1,049	8.6
Report						
Supp. Report			1	0.0	1	0.0

There are a number of blank cells in Table 5. This indicates that there were no citizens who received those dispositions. With only a few exceptions, the traffic officers cite or release those citizens they stop. A review of the cite percentages contained in the table shows that the citation rate ranged from a low of 84.7 percent to a high of 94.0 percent. The citation rate for African-Americans was 84.7 percent, Hispanics, 88.5 percent, and Whites, 88.9 percent. There is little difference in the rate of citations across race and ethnicity by the traffic officers, although African-Americans were cited at the lowest rate. In terms of arrest, the percentages ranges from a low of 0.0 percent for Native Americans to a high of 5.9 percent with Pacific Islanders being arrested at the highest rate. The arrest rate for African-Americans was 1.6 percent, Hispanics, 4.4 percent, and Whites, 1.2 percent. These are low percentages across the board.

Another area of interest is the reason for the traffic stop. A vehicle may be stopped for a variety of reasons including an APR (identified as a wanted vehicle/person), violation of penal

code, or a vehicle violation. There was a total of 11,813 stops made by traffic unit officers, and all but five of the stops were for vehicle violations. This indicates that traffic officers remain focused on traffic enforcement.

Traffic Stops Made By the Patrol Unit

The next step in the analysis is to examine the traffic stops made by patrol. It should be noted that stops by other units, such as criminal investigation tactical operations, and drug enforcement, are included in the patrol stops, but their stops, for the most part, account for a insignificant number of the total patrol stops. All units other than traffic were combined since stops by non-traffic units were generally investigative in nature.

In 2002, there were 13,973 investigative stops, while in 2003, there were 29,163. Thus, in 2003, there was an increase of 15,190 stops. This represents a 108.7 percent increase in the number of patrol stops. Discussions with departmental staff about new policies, procedures, and programs revealed that there was a new emphasis on traffic stops due to an increase in the number of citizen complaints relative to traffic violations. In the past, patrol officers concentrated on investigative stops making only a limited number of traffic enforcement stops. In 2003, the proportion of stops devoted to traffic enforcement increased significantly, but their focus remained on investigative stops. It is impossible to distinguish traffic enforcement stops from investigative stops by patrol. Thus, the analysis examines patrol stops as though all are investigative, which does not have an impact on the study's conclusions.

Table 6 provides a breakdown of the patrol or investigative stops in relation to the racial and ethnic makeup of the City of Riverside. Again, the projected population figures are used in this comparison.

Table 6

Patrol or Investigative Stops by Population

Race or Ethnicity	% Population	Number of Stops	% Total Stops
White	40.8	10,796	37.0
Hispanic	42.0	12,620	43.3
African-American	7.0	4,333	14.9
American Indian	0.5	60	0.2
Asian	6.0	687	2.4
Pacific Islander	0.3	127	0.4
Other (Including East Indian)	2.7	540	1.8

As Table 6 indicates, African-Americans were stopped as the result of investigative stops at more than double their population in the City of Riverside. In 2002, African-Americans constituted 14.9 percent of all traffic stops by patrol; thus, the relative proportion of stops for African-Americans has remained approximately the same for the past two years. Patrol traffic stops for Whites declined by 0.9 percent from 2002, and the percentage of Hispanics stopped increased by 1.8 percent. Thus, although the number of stops increased significantly, the relative proportions across race and ethnicity changed only to a minor degree.

Another consideration when examining traffic stop data is the disposition of the traffic stops. The possible dispositions as a result of a traffic stop are: (1) arrest, (2) citation, (3) field interview, and (4) release without further action. Table 7 provides a breakdown of the dispositions.

Table 7

Traffic Stops by Patrol Officers by Ethnicity and Disposition

Disposition	Asian		African-American		Hispanic		Other		Native American	
	Count	%	Count	%	Count	%	Count	%	Count	%
Arrest	22	3.2	449	10.4	1,916	15.2	27	5.0	14	23.3
Cite	334	48.6	1,536	35.4	4,852	38.4	272	50.3	27	45.0
Field Inter.	5	0.7	26	0.6	44	0.3	5	0.9	3	5.0
Release	323	47.0	2,306	53.2	5,769	45.7	233	43.1	13	21.7
Report	2	0.3	15	0.3	34	0.3	2	0.5	1	1.7
Supp. Report	1	0.1	1	0.0	5	0.0	1	0.2	2	3.3

Table 7 is continued.

Disposition	Pacific Islander		White		Total	
	Count	%	Count	%	Count	%
Arrest	15	11.8	918	8.5	3,361	10.3
Cite	47	37.0	4,404	40.8	11,472	43.3
Field Inter.	6	4.7	46	0.4	135	1.7
Release	59	46.5	5,408	50.1	14,111	43.8
Report			20	0.2	74	0.5
Supp. Report					10	0.1

In examining the dispositions, the percent of arrests as a disposition ranged from 3.2 percent to 23.3 percent across racial and ethnic groups. Native Americans were arrested at the highest rate, while Asians were arrested at the lowest rate, which is consistent with the previous year. The percentage of arrests for African-Americans was 10.4, Whites was 8.5, and Hispanics

was 15.2. The arrest rate for 2002 was 4.2 percent, 2.6 percent, and 5.0 percent for these three groups. The arrest rate for these groups has significantly increased over the previous year. Whites and African-Americans were arrested at about the same rate, whereas Hispanics were arrested at a much higher rate. There perhaps are a number of circumstances in driving patterns, offender behavior, and enforcement patterns that explain these minor differences. Arrest rates may have increased with the renewed emphasis on traffic enforcement. It is impossible to determine the exact proportion of these stops that were traffic enforcement-related compared to pretextual stops. Nonetheless, it would seem that a greater emphasis on traffic enforcement would lead to more arrests.

The rate of the issuance of citations across the racial and ethnic groups ranged from 35.4 percent for African-Americans to 50.3 for those in the Other category. The cite rate for the three primary groups was: African-American (35.4%), Hispanic (38.4%), and White (40.8%). The range of citation rates for the three primary groups was 5.4 percent. Of the three primary groups, Whites were cited at the highest rate.

Most people who were stopped as a result of a patrol traffic stop were released. The range for those released was 21.7 percent to 53.2 percent. African-Americans were released at the highest rate, while Native Americans were released at the lowest rate, which is consistent with the previous year. Whites were released at a rate of 50.1 percent and Hispanics were released at a rate of 45.7 percent. The differences in the release rates are minor. Only 7.5 percentage points separate African-Americans, Hispanics, and Whites.

An examination of the other dispositions that can occur as a result of a traffic stop (field interrogation, report, and supplemental report) revealed only minor differences. For the most

part, these dispositions were seldom utilized by officers.

As noted above there was a significant increase in the number of patrol traffic stops in 2003 over the previous year. The reason given for this increase was a renewed emphasis on traffic enforcement to reduce the number of traffic violations. This issue is examined in Table 8.

Table 8

Comparison of Citation Rates for 2002 and 2003

Racial/Ethnic Group	2002 Citation Rate	2003 Citation Rate	Difference
Asian	37.8	48.6	10.8
African-American	24.6	35.4	10.8
Hispanic	27.1	38.4	11.3
Other	36.3	50.4	13.9
Native American	43.2	45.0	1.8
Pacific Islander	38.9	37.0	-1.9
White	28.4	40.8	12.4
Total	27.8	43.3	15.5

As noted in Table 8, the overall percentage of citations increased from 27.8 percent in 2002 to 43.3 in 2003 for an increase of 15.5 percent. There was only one group, Pacific Islander, where the citation rate declined. With the exception of Pacific Islander and Native American, the citation rate increased by a minimum of 10.8 percent. These increases lend credence to the argument that stops increased as a result of a new emphasis on traffic enforcement. However, as noted above, the number of traffic stops increased by 207.8 percent from 2002. It does not appear that traffic enforcement accounted for all of the increase in stops. Patrol officers have increased the number of investigative stops.

Another issue that is raised frequently in traffic stop studies is the nature of police searches of vehicles. Table 9 provides a breakdown of the search behavior and their outcomes across racial and ethnic groups.

Table 9

Patrol Searches by Racial and Ethnic Group

	No Search	Negative Results Search	Drugs	Weapons	Other	Hit Rate
Asian	638 (92.9%)	44	5			10.2
African-American	3,463 (79.9%)	790	68	6	6	9.2
Hispanic	9,846 (78.0%)	2,509	201	32	32	9.6
Other	360 (89.6%)	45	5	3	3	19.6
Native American	46 (76.7%)	12	2			14.3
Pacific Islander	107 (84.3%)	8	1		1	20.0
White	8,807 (81.6%)	1,739	204	23	23	12.6

Before discussing the findings contained in Table 9, it is important to discuss the circumstances in which police officers search vehicles. When performing patrol stops, officers can perform a search for three reasons. First, officers can receive permission to conduct a search. Often, officers request permission to conduct a search and the driver agrees to the search. Second, an officer can conduct a search as a result of probable cause. If an officer observes a crime or the fruits of a crime, the officer may make an arrest and have probable cause to conduct a search. Finally, if the officer tows or impounds the vehicle as the result of a violation, the officer may conduct an inventory search to record or secure valuables that are contained in the vehicle. Searches as a result of this latter category are contained in these statistics, but they may not be pertinent to traffic stops.

It appears that Native Americans are searched at a higher rate (23.3%) relative to other

racial or ethnic groups. Hispanics had a search rate of 22.0 percent, Whites (18.4%), and African-Americans (20.1%). The difference in search rates do not appear to be dramatic indicating any racial profiling problems.

Another issue relative to searches is hit rate. Hit rate refers to the percentage of searches where drugs, weapons, or other contraband were found as a result of the search. The relative hit rates are provided in Table 9. The largest hit rate was for the Other category (19.6%), but there were only 56 searches conducted on this group. Otherwise, the hit rates ranged from a low of 9.2 percent (African-American) to 14.3 percent (Native American). There were relative minor differences in the hit rates for the three primary groups (range of 3.4%). However, it should be noted that the hit rates for all the groups except were extremely low. In other words, of the 5,772 searches conducted by patrol officers, only 486 resulted in drugs, 64 in weapons, and 65 in other contraband or evidence. This equates to an overall hit rate of 10.7 percent. This hit rate may be exaggerated since in calculating the hit rate each incident where a weapon, drugs, or other contraband was found was counted as a unique search. In some cases, a search may have led to the discovery of more than one type of contraband. These calculations assume that each "hit" ws for a unique individual.

Another area of interest is the reason why officers conducted traffic stops. Table 10 provides a breakdown of the general reasons why stops were made.

Table 10

Reason for Traffic Stop by Race or Ethnic Grouping

Race/Ethnicity	APR	Municipal Code	Penal Code	Vehicle Violation
Asian	6 (0.9%)	2 (0.3%)		679 (98.8%)
African-American	22 (0.5%)	4 (0.1%)	12 (0.3%)	4,295 (99.1%)
Hispanic	68 (0.5%)	8 (0.1%)	27 (0.2%)	12,517 (99.2%)
Native-American				60 (100%)
Pacific Islander	1 (0.8%)			126 (99.2%)
White	59 (0.5%)	10 (0.1%)	15 (0.1%)	10,712 (99.2%)
Other	4 (0.7%)			536 (99.3%)

The data contained in Table 9 show that the overwhelming majority of stops were the result of a traffic violation. The percentage of stops across racial and ethnic groups for a traffic violation ranged from 98.8 percent to 100 percent. The data do not reveal any patterns that suggest that racial profiling is occurring. It does show that officers investigate a large number of vehicles as a result of traffic violations.

EXAMINATION OF THE NATURE OF TRAFFIC STOPS

An examination of the data presented in the previous section of this report shows that African-Americans are over-represented in the traffic stop data. That is, when a group is over-represented in traffic stops, racial profiling is only one of several possible explanations. An analysis of the previous two years' data led to the conclusion that over-representation of African-Americans was the result of enforcement patterns coinciding with crime and disorder problems. This hypothesis is again investigated.

Community policing and problem solving dictates that police spend greater efforts in

those areas that have the highest crime. This philosophy is further imbued as police respond to calls for service. That is, the police, who to some extent are incident driven, spend greater amounts of time in those areas that produce the highest number of calls for service. Thus, it is cogent to examine the relationship between calls for services and a variety of crimes and other police activities.

The first step in this process was to compute the relationship between the traffic stops and a variety of police activities including: 1) calls for service, 2) Part I Violent Crime, 3) Part I Property Crime, and 4) calls related to drug activities. Part I crimes were used because they are collected by the Federal Bureau of Investigation as part of the national crime reports, and they represent the most serious crime in a community. Calls for service were used since they represent the best measure of police activities in any area. Finally, drug calls were included, because they represent a good proxy measure of disorder in a community or neighborhood.

The relationship between traffic stops and these activities were examined using a correlational analysis. A correlation shows the relationship between two variables and can range from -1.0 to 1.0. A high positive number indicates a strong relationship. A high negative number shows a strong inverse relationship. Correlational coefficients around 0.0 show a weak or no relationship. The numbers of traffic stops and these police activities for each of the 133 police reporting districts were used as the units of analysis. The correlations were:

1) Traffic stops and calls for service .835

2) Traffic stops and Part I Violent Crime .903

3) Traffic stops and Part I Property Crimes .627

4) Traffic stops and calls related to drug activities .827

The range of correlations was from .627 to .903. The highest correlation was for Part I Violent Crime, which is consistent with last year's findings. The lowest was for Part I Property Crime, which is also consistent with last year's data. All of these coefficients represent extremely high correlations. They show that traffic stops are occurring in areas with a high level of crime and requests for police intervention. This is consistent with the outcomes of studies in other cities such as Sacramento and San Diego, and it is consistent with aggressive policing.

Another source of information is to examine suspect and victim information. When a crime or offense is committed, police officers are dispatched to the scene. Once on the scene, they take an offense report. The offense report contains information about victims and suspects. Suspect information is not always collected since the crime may have occurred and there was not victim or witness present; e.g., burglary. Table 11 contains a breakdown of victim and suspect information that was collected from offense reports as well as the prorated population statistics.

Table 11

Suspect and Victim Information and Population Statistics

Race/Ethnic Cateory	Number of Suspects	% of Total Suspects	Number of Victims	% of Total Victims	Population %
Asian	275	1.0	856	2.9	6.0
African-American	5,036	18.1	3006	10.1	7.0
Hispanic	12,107	43.6	9,360	31.4	42.0
Native American	98	0.3	135	0.5	0.5
Other	952	3.4	2,964	9.9	0.1
Pacific Islander	86	0.3	87	0.3	0.3
White	9,244	33.3	13,418	45.0	40.8

As can be seen in Table 11, African-Americans constituted 18.1 percent of the suspects and 7.0 percent of the population. They are over-represented in the suspect population by more than 2.5 times their population. Whites were under-represented and Hispanics were represented at about their proportion in the population. In terms of victimization, African-Americans were over-represented at twice their composition in the population. Hispanics and Whites were slightly under-represented. The data indicate that African-Americans have a higher rate of criminality and victimization relative to other population groups. This may result in police officers stopping larger numbers of African-Americans when they perform investigative traffic stops.

Another way to examine this issue is to investigate the relationship between traffic stops and suspect information. The suspect race and traffic stop race were broken down by police reporting districts, and correlations were computed. The results of the correlations are as follows:

1) African-American suspects and traffic stops .909

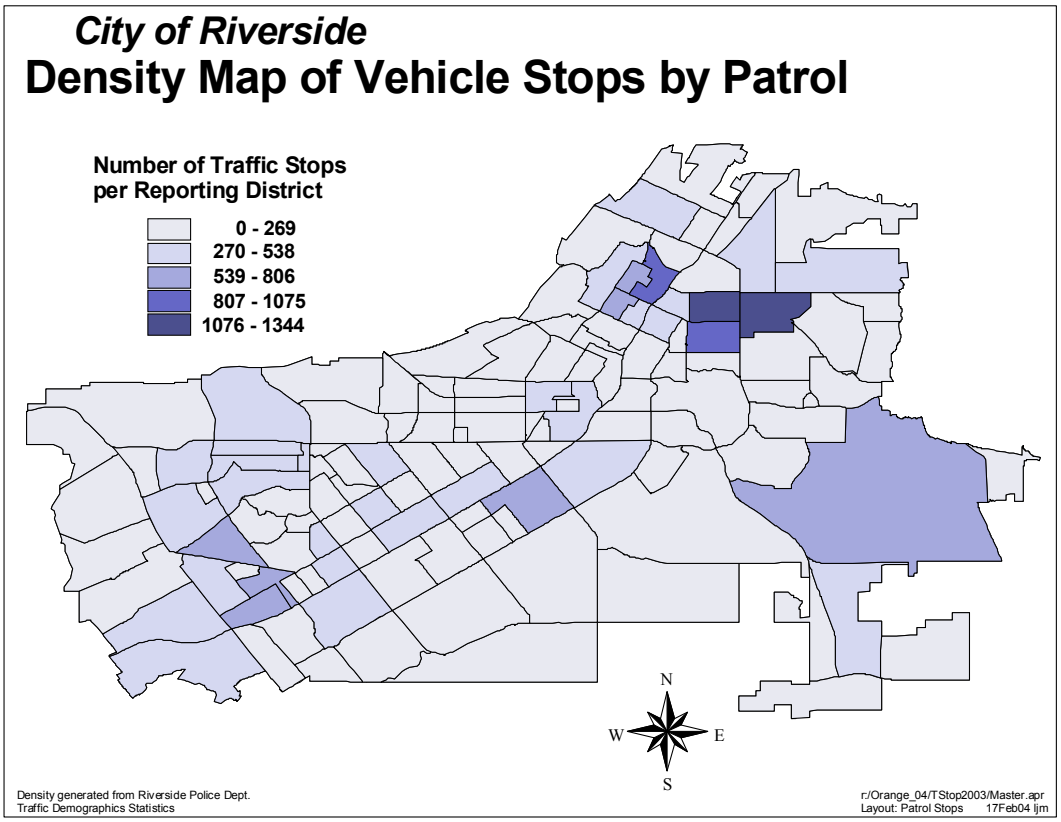
2) Hispanic suspects and traffic stops .911

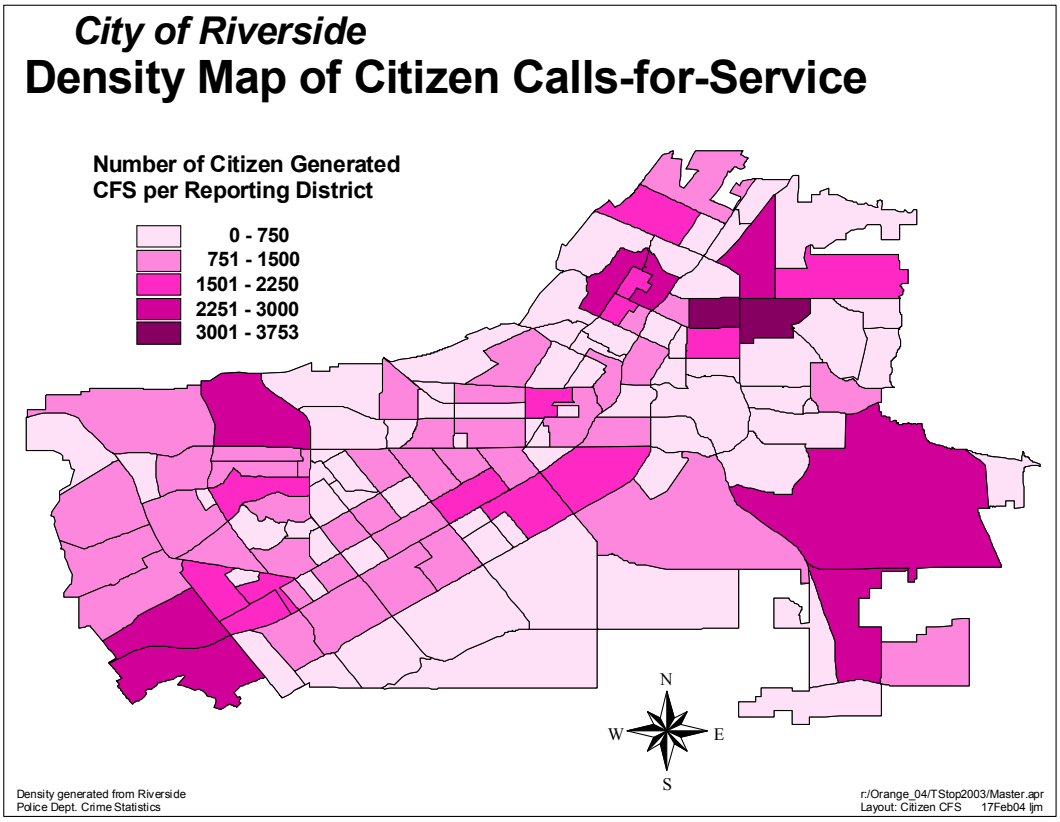
3) White suspects and traffic stops .818

The resultant correlations were extremely high demonstrating a significantly high relationship. That is, they show that traffic stops of African-Americans occurred in police reporting districts where there was an equivalent proportion of African-American suspects. The same occurred for Hispanics and Whites. This shows that the police are stopping suspects (by race) where they appear to be committing a larger number of crimes.

Another way to examine this issue is to visually compare the geographical locations of

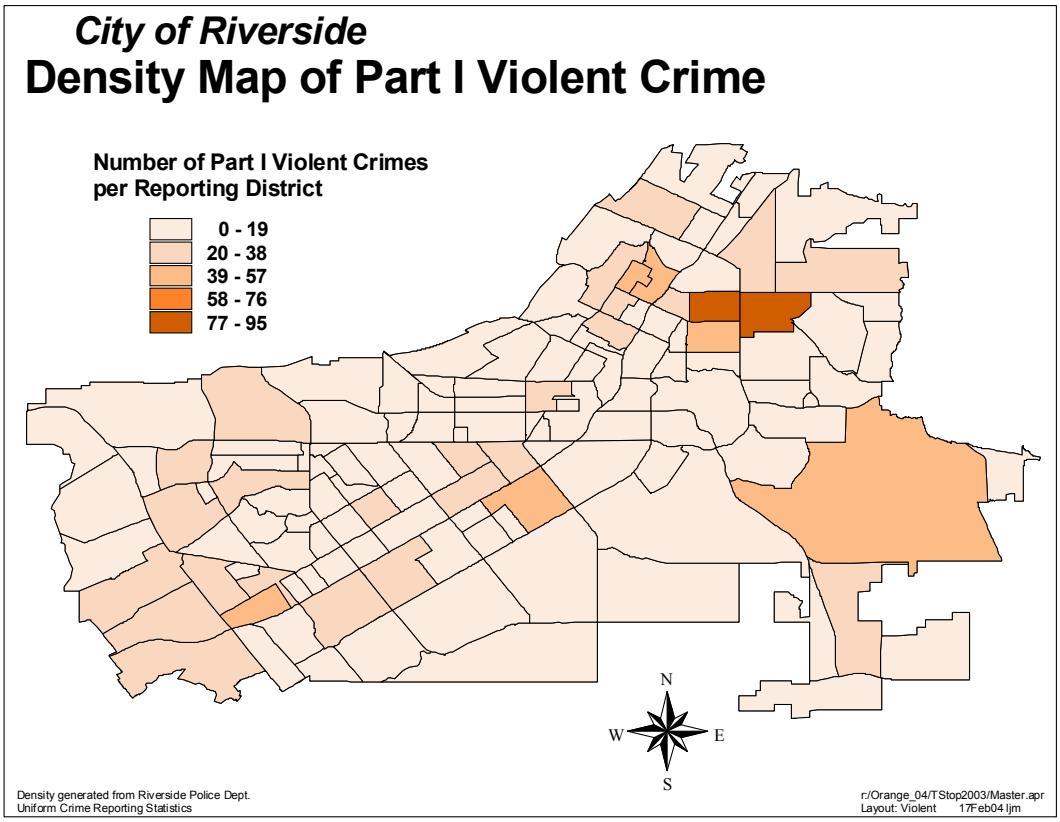
each of police activities including types of crime and calls with police traffic stops. To accomplish this, traffic stops, calls for service, Part I Violent Crime, Part I Property Crime, and calls related to drug activities were mapped. The first map shows the density of traffic stops in Riverside. The darker areas are where larger numbers of stops occurred.



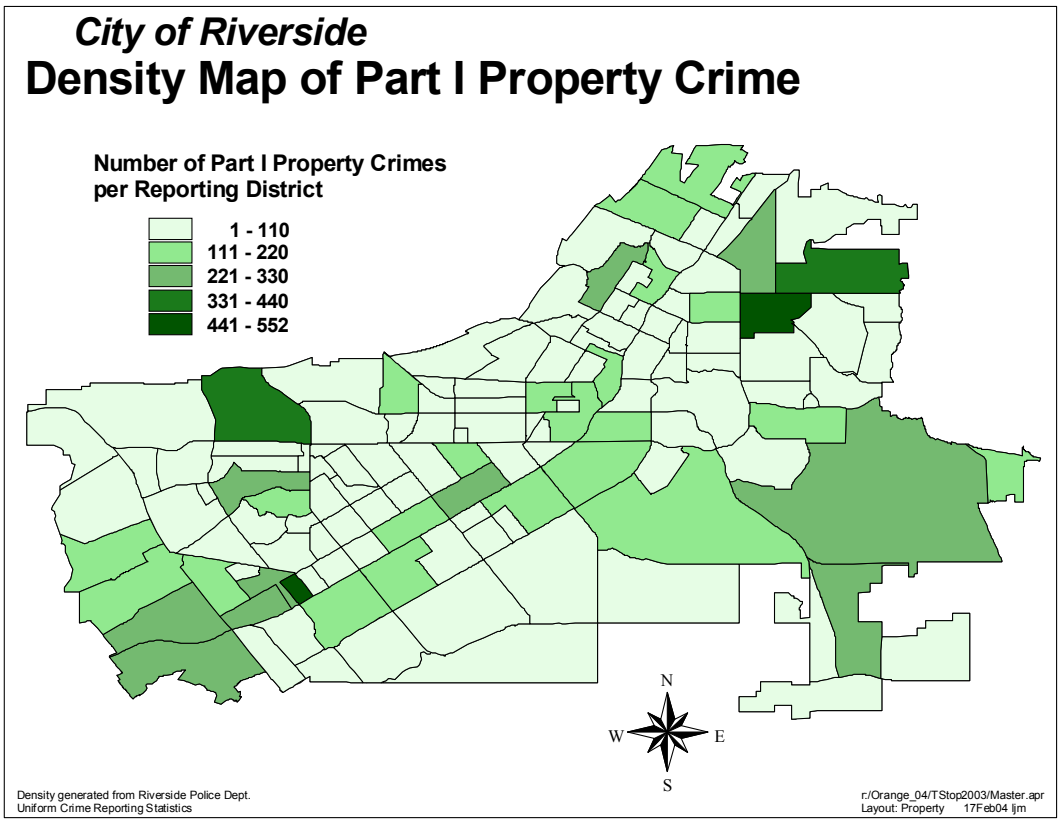


The next map shows the density of citizen calls for service. Comparing the dark areas in the two maps shows that density of patrol traffic stops are consistent with the density of calls for service to the police department.

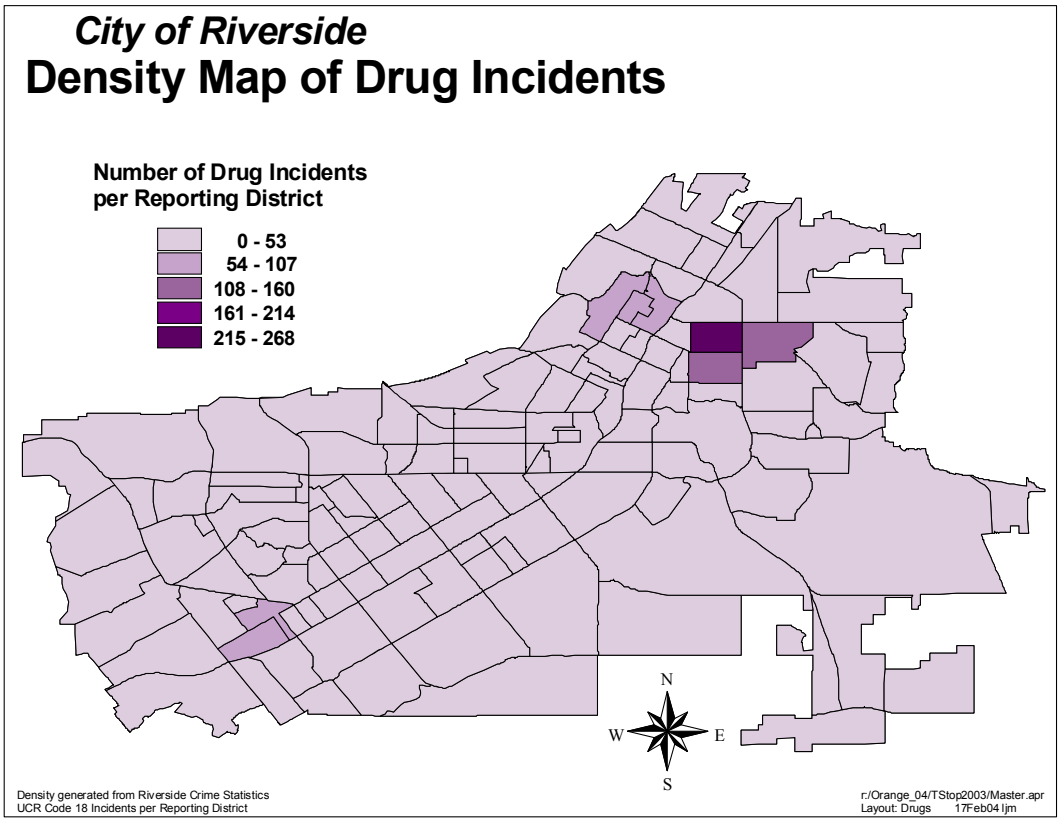
The next map displays the density of Part I violent crime that occurred in Riverside in 2003. The primary violent crimes are homicide, rape, assault, and robbery. Note that the dark areas contained in the below map are consistent with the darker areas in the traffic stop map and the calls for service map demonstrating a consistent pattern.



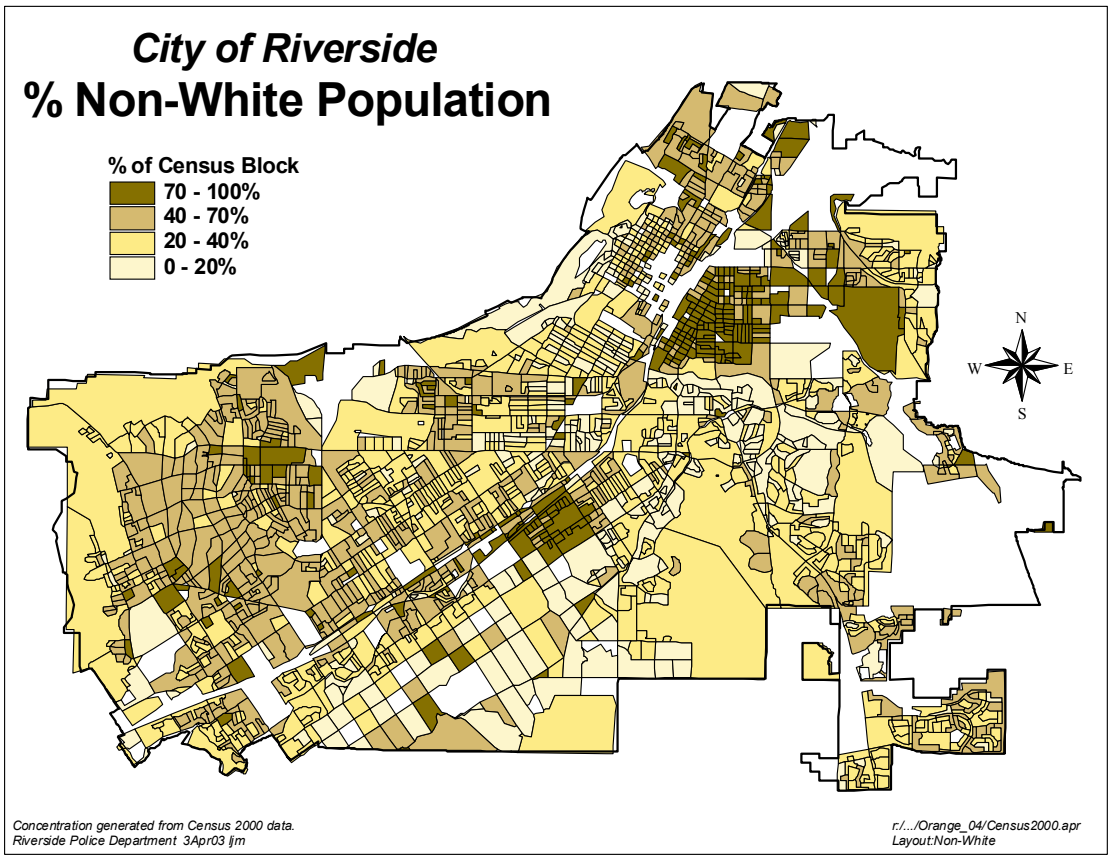
The next map shows the density of FBI Part I property crime. These crimes include burglaries, larcenies, and auto theft. Again, the shaded areas in this map are consistent with the above maps.



The following map shows the density of drug incidents. This includes calls to the police relative to drug problems and arrests made by police officers for drug offenses. Again, the shaded areas are consistent with other crime and patrol traffic stops.



The last map, which is provided below, shows the population density for minorities in the City of Riverside. The maps showing the various crimes and police activities were based on police reporting districts, while the minority or non-white population was based on U.S. Census Bureau census tracts. Therefore, the unit of measurement or spatial divisions do not match, but they do overlap and provide an idea of the patterns of minority residence in relation to the above crime and police activity maps.



Given the information contained in the maps and the correlational analyses presented above, it substantiates that the police are making traffic stops in areas where there are a number of crime and disorder problems, and to a large extent, these areas overlap minority neighborhoods.

SUMMARY DISCUSSION OF RACE DATA

The above sections of this report examine traffic stops in the City of Riverside within the context of race and ethnicity. The purpose of the examination is to investigate the possibility of officers engaging in racial profiling. Before summarizing the findings, it is important to again discuss the mechanics of racial profiling. As noted previously in this report, the California

Legislature has defined racial profiling as,

> . . . the practice of detaining a suspect based on a broad set of criteria which casts suspicion on an entire class of people without any individualized suspicion of the particular person being stopped.

This definition does not mean that police officers must have parity across different groups of people when conducting traffic stops, although some have attempted to suggest that this is an accurate way of determining if racial profiling exists. Rather, the language in the law prevents the police from stopping citizens solely based on a broad set of criteria such as race, gender, or ethnicity. Obviously, such a requirement is extremely difficult to prove or disprove. In other words, the decision to stop a vehicle is an individual officer decision, and only the officer knows and understands his or her rationale when stopping the vehicle. It should also be noted that officers do not arbitrarily stop vehicles as all stops are made once a violation of a law has been observed by the officer.

When disparity occurs in traffic stops across race, gender, or ethnicity, it behooves administrators to investigate to determine if there are plausible explanations for such discrepancies. This essentially occurred here. This research attempted to examine traffic stops and account for any patterns that emerged.

The first step was to examine all traffic stops conducted by officers. These results indicated that some groups were stopped more frequently than others. Second, traffic stops by patrol and other street units were dis-aggregated from those conducted by the traffic unit. This was done because traffic officers, in general, have a different motivation making traffic stops. An examination of the traffic unit stops showed that racial and ethnic groups were represented

fairly proportionately in the number of stops.

An examination of the stops by patrol found that African-Americans were over-represented in terms of their population. Once this finding was established, efforts were made to discover any reasons or causes of this phenomenon. An examination of prior studies, especially those in Sacramento and San Diego, revealed that the rationale for such discrepancies was the result of police enforcement patterns. That is, police departments tend to employ higher levels of policing in areas where the highest levels of crime, disorder, and calls for service occur. This was investigated in Riverside by comparing a variety of crime measures with traffic stops. The analysis revealed that police officers tended to make the greatest number of traffic stops in high crime areas. Although this finding does not disprove that racial profiling exists, it does substantiate logical and acceptable reasons for some levels of disparity.

In summary, it appears that the over-representation of minorities in traffic stops is the result of enforcement patterns interacting with crime patterns. The data supports this phenomenon. There is nothing in the data to suggest that officers in Riverside are engaging in any form of racial profiling as defined by the California Legislature.

TRAFFIC STOPS AND GENDER

One of the issues in the Stipulated Judgment was whether there were any disparities in the rate of stops based on gender. Table 12 provides 2003 traffic stop data aggregated by gender.

Table 12

Traffic Stops by Gender

STOPS BY UNIT	FEMALE	MALE
Traffic	5,281	6,532
Patrol	7,182	21,981
Total	12,463	28,513

During the 2003 calender year, there was a total of 12,463 females and 28,513 males stopped by Riverside police officers. Since only 30.4 percent of the traffic stops were for females, it appears that they are under-represented in the traffic stops based on their representation in the population. The is consistent with the previous year when females constituted 31.7 percent of the traffic stops by the department.

There was little difference in the stop rate for males and females by the traffic officers. Females constituted 44.7 percent and males comprised 55.7 percent of the stops made by traffic officers. Females were slightly under-represented in the traffic stops since they constitute slightly over 50 percent of the population. It appears that gender has little impact on low discretion traffic stops.

The data indicate that females also are under-represented in stops by patrol. Females constituted 24.6 percent of the stops made by patrol officers. This distribution may be the result of several factors. First, patrol officers may see females less as suspects as compared to males. Females tend to be less involved in crime. Second, females are less likely to be driving during the later hours of the day as compared to males when a larger number of traffic stops are made. Third, females nationally are involved in less crime and generally have a better driving record

than their male counterparts.

Another issue regarding gender is the question of whether there are disparities in the number of searches of females. Table 13 provides information relative to the number of stops and searches by gender.

Table 13

Searches by Gender

SEARCHES BY UNIT	FEMALE		MALE	
	Percent Searched	Search Outcome	Percent Searched	Search Outcome
Patrol	11.1	15.0	22.6	10.0
Traffic	0.5	12.5	1.6	7.8
Total	6.6	14.9	17.8	9.9

The above table shows the percent of persons stopped who were searched by gender and unit making the stops, and the percentage of searches that resulted in the discovery of drugs, weapons, or other contraband (Search Outcome). As noted in the above table, females were searched at about half the rate as compared to males. It is interesting that the proportion of searches for males and females by traffic officers was significantly lower than for the searches conducted by the patrol unit. For the year, they performed a total of 126 searches. This attests to their traffic enforcement function.

On the other hand, patrol conducted a total of 5,772 searches. Last year, patrol conducted 2,397 searches for an increase of 240.8 percent. This is a fairly dramatic increase since the total number of patrol stops increased by on 108.7 percent from the previous year.

Regardless, it is expected that patrol would be involved in a larger number of searches relative to traffic as a result of their conducting a number of investigative or pretextual stops. Additionally, the aggregate number of searches conducted by patrol should increase this year due to a significant increase in the number of stops. These data do not indicate anything out of the ordinary. Moreover, only 6.4 percent of all stops resulted in a search indicating that only a relatively few searches were conducted.

Another issue regarding gender was the disposition of the stops. The department collected data using the following categories: arrest, citation, field interrogation, release, report, and supplemental report. Table 14 presents these dispositions by gender.

Table 14

Disposition by Gender

Disposition	Female			Male		
	Patrol	Traffic	Total	Patrol	Traffic	Total
Arrest	7.6	1.3	5.0	12.8	3.3	10.6
Citation	46.5	90.2	65.0	37.0	87.3	45.5
Field Interrogation	0.2	0.2	0.2	0.5	0.1	0.4
Release	45.3	8.3	29.6	49.4	9.4	40.2
Report Taken	0.2	0.0	0.1	0.2	0.0	0.2
Supplemental Report	0.0	0.0	0.0	0.0	0.0	0.0

An examination of the data contained in the above table shows that males are arrested more frequently than females by both patrol and traffic, but not by a substantial margin. It also shows that females are cited at a higher rate than males by both patrol and traffic, and conversely, males are released at a slightly higher rate. These statistics, perhaps, can be

explained by the fact that patrol, and to a lessor degree, traffic, are involved in more investigative stops for males than females.

Based on the data, it does not appear that gender plays a role in police officers' decision making when deciding to make a traffic stop. For the most part, females were under-represented in stops, arrests, and searches. They were, however, cited at a greater frequency. These findings are consistent with the expected outcomes as discussed above.

RESULTS OF INDIVIDUAL TRAFFIC STOPS

As noted early in this study, the motivation for pretextual or investigative traffic stops is to attempt to discover drugs, weapons, and contraband. Such discoveries allow police officers to make criminal cases and to solve crimes. They also contribute to taking weapons and drugs off the street. Traffic stops also prevent crime since criminals know that the police are diligent and the probability of apprehension is greater. Thus, it is worthy to explore some of the cases made by the police as a result of traffic stops. The following are cases made by Riverside police officers as a result of traffic stops;

Case #1

A vehicle was stopped for vehicle code violations. The adult driver was a parolee and the juvenile passenger on probation and in possession of methamphetamine. The officer also noticed several suspicious items in the vehicle and, with follow-up, was able to identify the victim of a car burglary several blocks from the traffic stop. The victim identified the property in the suspect's vehicle as the property stolen from his vehicle. Both suspects were arrested.

Case #2

Officers attempted to stop two bicyclists for riding on the sidewalk, a violation of a municipal code ordinance. One of the bicyclists attempted to divert attention from the other. The officers pursued the first cyclist on foot and took him into custody without incident. The bicyclist was in possession of ten individually packaged baggies of methamphetamine, weighing approximately one gram each. The bicyclist was arrested for possession of methamphetamine for sale.

Case #3

A traffic stop was made on a vehicle for driving without headlights during hours of darkness, however, when the vehicle came to a stop, the driver fled on foot. After a short foot pursuit, the driver was taken into custody. The driver was found to be in possession of a homemade master key and the vehicle was reported as stolen.

Case #4

During a traffic stop for vehicle code violations, the vehicle driver was found to be a parolee and in possession of a rock of cocaine. He was arrested and booked at the jail. Following booking, jail personnel conducted a strip search and located an additional 20 rocks of cocaine concealed in the suspects rectum. Additional charges were filed.

Case #5

During a traffic stop for vehicle code violations, the driver was found to have a suspended driver license. The driver and passengers consented to a search of the vehicle and their persons. One occupant was found in possession of counterfeited ten-dollar bills, the second was in possession of methamphetamine and the third had marijuana. All were arrested.

Case #6

During a traffic stop for vehicle code violations, the driver was found to have a suspended driver license. In response to the officer's question, the driver admitted to having a loaded .25 caliber handgun and a collapsible police baton in the vehicle. The suspect was arrested.

Case #7

An officer attempted a traffic stop for vehicle code violations. When the vehicle came to a stop, the occupants fled from the vehicle on foot. The driver, a previously convicted felon, was detained and found in possession of ammunition and burglary tools. The automobile was found to be a reported stolen vehicle. The driver was arrested.

Case #8

During a traffic stop of a vehicle for driving with a loud radio, the driver was found to be a parolee and the passenger on probation. The officers discovered over one ounce of methamphetamine, pay-owe sheets and $6,800 in cash, reflecting narcotics sales activity. The officers also located a loaded .40 caliber pistol in the vehicle. Both occupants were arrested.

Case #9

During a traffic stop for a vehicle code violation, the officer obtained consent to search the vehicle from the driver. The officer located a can with a false bottom and, inside, recovered about forty-five grams of methamphetamine and thirty-five grams of marijuana. Scales and packaging material were found in a bag and the driver was in possession of over five hundred dollars. During an interview the driver admitted engaging in the sale of methamphetamine. He

was currently on probation for the sale of marijuana and had been released from jail within the last week. The suspect was arrested.

Case #10

During a traffic stop for vehicle code violations, the driver was found to be under the influence of a controlled substance. The driver's two-year-old child was also in the car. During a search incident to the driver's arrest for driving while under the influence, the officers located methamphetamine in the baby's diaper bag. Child Protective Services was summoned and took custody of the baby. The driver was arrested.

These cases demonstrate that traffic stops can contribute to the apprehension of criminals and drug dealers in the City of Riverside. To some extent, they support traffic stop activities.

SUMMARY

This document reports on an examination of the traffic stops for the Riverside Police Department to determine if there were any patterns of racial profiling. The report is divided into two major areas: race/ethnicity and gender. After an extensive examination of the data, there is no evidence that the Riverside Police Department is engaging in racial profiling. Although there is evidence that African-Americans are over-represented in the department's traffic stops, it appears that this is the result of police officers engaging in higher levels of enforcement in high crime areas.