Research Report
KTC-99-56

ANALYSIS OF TRAFFIC ACCIDENT DATA IN KENTUCKY (1994 - 1998)

by

Kenneth R. Agent
Transportation Research Engineer

and

Jerry G. Pigman
Transportation Research Engineer

Kentucky Transportation Center
College of Engineering
University of Kentucky
Lexington, Kentucky

in cooperation with
Kentucky State Police
Commonwealth of Kentucky

September 1999

TABLE OF CONTENTS

TABLE OF CONTENTS (continued)

LIST OF TABLES

LIST OF TABLES (continued)

LIST OF TABLES (continued)

LIST OF TABLES (continued)

LIST OF TABLES (continued)

LIST OF FIGURES

EXECUTIVE SUMMARY

This report includes an analysis of traffic accident data in Kentucky for the years of 1994 through 1998. A primary objective of this study was to determine average accident statistics for Kentucky highways. Average and critical numbers and rates of accidents were calculated for various types of highways in rural and urban areas. These data can be used in Kentucky's procedure to identify locations that have abnormal rates or numbers of accidents.

The other primary objective of this study was to provide data which can be used in the preparation of the problem identification portion of Kentucky's Annual Highway Safety Plan. County and city accident statistics were analyzed. A summary of results and recommendations in several problem identification areas is presented. These general areas include alcohol involvement, occupant protection, speed, teenage drivers, pedestrians, bicycles, motorcycles, trucks, and vehicle defects. Other areas included in the analysis for which specific recommendations were not made include drug involvement, school bus accidents, and train accidents.

1.0 INTRODUCTION

Several reports have previously been prepared dealing with calculating statewide traffic accident rates for Kentucky (1, 2, 3, 4, 5, 6) and preparation of the problem identification portion of Kentucky's Annual Highway Safety Plan (7, 8, 9, 10, 11, 12). The first report analyzed accident data in 1978. This is the thirteenth report providing a combination of those two report areas (13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24). Traffic accident data for the five-year period of 1994 through 1998 were used in the preparation of this report.

Kentucky has a systematic procedure to identify locations that have had abnormal rates or numbers of traffic accidents. However, before that procedure may be utilized, average accident rates and numbers must be determined for appropriate highway categories and for rural and urban areas. A primary objective of this study was to determine average traffic accident statistics for Kentucky. Those statistics may then be used in the high-accident location identification program to identify locations which should be investigated. Those locations are then inspected, and their accidents are analyzed to determine if a pattern of accidents exist. When applicable, recommendations for improvements can then be presented. A past study involved development of accident reduction factors that may be used in the cost-optimization procedure to rank proposed safety improvements (25).

A highway safety program is prepared each year for Kentucky in order to comply with Section 402, Title 23 of the United States Code. This program includes the identification, programming, budgeting, and evaluation of safety projects having the objective of reducing the number and severity of traffic accidents. The second major objective of this report is to provide data which may be included as the problem identification portion of Kentucky's Annual Highway Safety Plan. Results from this report are used to provide benchmark data for that process.

2.0 PROCEDURE

Accident and volume data bases were used to obtain traffic accident statistics. Traffic accident data are currently obtained from the computer accident file containing all police-reported accidents. This file is obtained from data placed on computer by the Kentucky State Police (KSP). All police agencies in the state are required to send a copy of all traffic accident reports to the KSP. A change starting with the 1994 file involves the exclusion of parking lot accidents from the file. Summaries were prepared from an analysis of the accident data.

Volume data and data describing highway characteristics such as number of lanes were obtained from a computer file containing roadway characteristics data for all state maintained highways. This information was originally obtained from the Statewide Mileage File (SMF). Starting with the 1995 data, data from the Highway Performance Monitoring System (HPMS) file was used. This file gave more current information than could be obtained from the SMF. Data for a five-year period are combined in this report. The 1995 through 1998 data using the HPMS were combined with data from 1994 obtained from the SMF. All data will be based on the HPMS in the future after the transition period where data from both files are combined. The SMF and HPMS were used to obtain the roadway information needed to compute accident rates as a function of various roadway characteristics such as number of lanes.

A computer program using the accident file and the HPMS and Statewide Mileage files was used to calculate rates for the state-maintained system. A separate computer program was used to obtain additional accident summaries considering all reported traffic accidents.

Rates were calculated for: 1) state-maintained roads having known traffic volumes, route numbers, and mileposts and 2) all streets and highways on and off the state-maintained system. Rates were provided in terms of accidents per 100 million vehicle-miles (ACC/100 MVM) where traffic volumes could be determined. Population was used as the measure of exposure in instances where traffic volume data were not available to use as the exposure measure. Population data from the 1990 census have continued to be used.

In addition to average accident rates, critical rates and numbers of accidents are required for the high-accident location program. Both types of rates were calculated. The following formula was used to calculate critical accident rates:

$$A_c = A_a + K(\text{sqrt}(A_a/M)) + 1/(2M) \quad (1)$$

in which

A_c = critical accident rate,
A_a = average accident rate,
sqrt = square root,
K = constant related to level of statistical significance selected (a probability of 0.995 was used wherein K = 2.576), and
M = exposure (for sections, M was in terms of 100 million vehicle-miles (100 MVM); for spots, M was in terms of million vehicles).

To determine the critical number of accidents, the following formula was used:

$$N_c = N_a + K(\text{sqrt}(N_a)) + 0.5 \quad (2)$$

in which

N_c = critical number of accidents and
N_a = average number of accidents.

There are highway safety problem areas (standards) identified by the National Highway Traffic Safety Administration. Problem areas which have been identified for emphasis include alcohol and occupant protection. To identify problems in these areas, as well as other "highway standard" areas, the analyses focused on the following:

1. Statewide Accident Rates,
2. County Accident Statistics,
3. City Accident Statistics,
4. Alcohol-and Drug-Related Accidents,
5. Occupant Protection,
6. Speed-Related Accidents,
7. Teenage Drivers,
8. Pedestrian Accidents,
9. Bicycle Accidents,
10. Motorcycle Accidents,
11. School Bus Accidents,
12. Truck Accidents,
13. Train Accidents,
14. Vehicle Defects, and
15. General Trend Analysis.

3.0 STATEWIDE ACCIDENT RATES

All of the rates referred to in this section apply to state-maintained roads having known traffic volumes, route numbers, and mileposts. Accident rates are given in terms of accidents per 100 million vehicle-miles (ACC/100 MVM). Almost 28,000 miles are included in this category using the HPMS file. This compares to over 70,000 miles of public roads in Kentucky. While only approximately 40 percent of the total miles are state maintained, in 1998 these roads accounted for over 80 percent of the vehicle miles traveled and almost 60 percent of the accidents. The accident rate on the state-maintained system is dramatically less than on the non-state maintained system. The major reason for the higher rate on roads not included in the state maintained

analysis is that accidents which occurred on state-maintained roadways but were not provided with the information necessary to be assigned to a specific location on a roadway could not be included in the state-maintained category. There is a need to improve the procedure for placing route and milepoint information on the accident report.

A comparison of 1994 , 1995, 1996, 1997 and 1998 accident statistics on streets and highways having known traffic volumes, route numbers, and mileposts is shown in Table 1. The number of accidents on the state-maintained road system was lower in 1998 compared to the average of the previous four years. The number of accidents associated with state-maintained roads was lower in 1998 than in any of the previous four years. The combination of the increase in the vehicle-miles driven with the decrease in the number of accidents resulted in a 13.6 percent decrease in the accident rate in 1998 compared to the previous four-year average. The overall accident rate in 1998 was 186 accidents per 100 million vehicle-miles (ACC/100 MVM). This represents a decrease from the previous accident rates. The accident rates for the previous four years varied from 214 to 217 ACC/100 MVM.

The fatal accident rate showed a smaller decrease (5.7 percent) in 1998 compared to the previous four-year average. The fatal accident rate in 1998 was the lowest of the five years. There has been a general long term trend of a decreasing fatal accident rate. The fatal accident rate of 1.76 ACC/100 MVM in 1993 compares to 1.52 ACC/100 MVM in 1998. The injury accident rate decreased by 15.5 percent in 1998 compared to the previous four-year average. The injury accident rate has remained stable prior to 1998 with the range of 65 to 68 ACC/100 MVM between 1994 and 1997.

An analysis of statewide accident rates as a function of several variables, such as highway system classification, was conducted. Also included is information concerning the percentage of accidents occurring for various road conditions and during darkness. Results are presented in APPENDIX A.

Accident rates required to implement the high-accident spot-improvement program in Kentucky are average rural and urban rates by highway type. The current classification is basically by number of lanes, with an additional separation of four-lane highways (non-interstate or parkway) into divided and undivided categories. Interstates and parkways are classified separately. Rates for rural highways for the five-year period (1994-1998) are listed in Table 2. The rates for urban highways are listed in Table 3. Highways were placed into either the rural or urban category based upon the rural-urban designation denoted on the Statewide Mileage and HPMS files. For sections having a volume, route, and milepost, the rural or urban and highway type classifications were determined. In some cases, the county and route was given but the milepoint was not noted. The number of accidents for each section was then

obtained from the accident file. The total accident rate per 100 million vehicle-miles, as well as injury and fatal accident rates, were calculated.

On rural highways, the small number of one-lane highways had the highest rates (Table 2). One- lane highways also had the highest injury accident rate. The highest fatal accident rate was on two-lane highways. Interstates had the lowest rates, followed closely by parkways. The advantage of median-separated highways is shown when comparing rates for four-lane divided (non-interstate or parkway) and four-lane undivided highways. The overall accident rate for a divided highway (which would not typically have access control) was 40 percent less than for an undivided highway, although the average daily traffic was very similar.

On urban highways, the highest overall accident rates were on three-lane and four-lane undivided highways (Table 3). The same two highway types also had the highest injury accident rates. Urban parkways and two-lane highways had the highest fatal accident rates. The lowest overall accident rate and injury accident rate were on interstates and parkways.

Tables 2 and 3 show that the overall total accident rate on urban highways was about 55 percent higher than that on rural highways. Also, the injury rate on urban highways was 15 percent greater than that for rural highways. However, the fatal accident rate on urban highways was only about one-third that for rural highways.

Variations in accident rates by rural and urban highway-type classifications over the five-year period are listed in Table 4. The overall decrease in accident rates in 1998 compared to the 1994 through 1997 average was shown to have resulted primarily from the large decrease on urban highways. There was a relatively small decrease in the overall accident rate in rural areas (5.1 percent) with a large decrease in urban areas (23.4 percent). Only a small percentage (about 9 percent) of state-maintained mileage was classified as urban. The largest decrease in rates for both rural and urban roadways was in the four-lane undivided category. The next largest decrease was for urban, two lane highways.

Trends in overall accident rates representative of rural and urban areas are shown graphically in Figure 1 for the period 1994 through 1998. In addition, trends in accident rates for types of highways are shown for rural highways (Figure 2) and urban highways (Figure 3). These rates apply to state-maintained roads having known traffic volumes, route numbers, and mileposts.

Average rates listed in Tables 2 and 3 may be used to determine critical accident rates for sections of highway of various lengths. In addition to highway sections, Kentucky's high-accident location procedure uses highway spots, defined as

having a length of 0.3 mile and representing a specific identifiable point on a highway. Statewide accident rates for "spots", by highway-type classification, are listed in Table 5 using 1994 through 1998 data.

The first step in Kentucky's procedure for identifying high-accident locations involves identifying spots and sections that have more than the critical numbers of accidents. Then, the accident rates for those locations are compared to critical accident rates. Statewide averages and critical numbers of accidents for "spots" and 1-mile sections by highway-type classification are presented in Table 6 for 1994 through 1998. Critical numbers of accidents, such as those listed in Table 6, are used to establish the "number of accidents" criterion for determining the initial list of locations. For example, six accidents in this time period would be a critical number of accidents for a 0.3-mile spot on a rural, two-lane highway.

The numbers and rates presented in Tables 2, 3, 5 and 6 could be calculated for various numbers of years. A three-year period is used in some analyses. The data shown in those tables were calculated for a three-year period (1996-1998) with the results shown in APPENDIX B. Data for 0.1 mile spots are also given.

Critical numbers of accidents for various section lengths were determined for each highway type using Equation 2. Results are presented in tables in APPENDIX C. Section lengths up to 20 miles for rural roads and up to 10 miles for urban roads are included. The critical numbers of accidents given in this appendix are for the five-year period of 1994 through 1998.

After the initial list of locations meeting the critical number criterion is compiled, comparisons between accident rates for those locations and critical accident rates are made. Critical accident-rate tables for highway sections for the five-year period of 1994 through 1998 are presented in APPENDIX D. Critical accident rates for the various rural and urban highways were determined as a function of section length and traffic volume (AADT). The rates are listed in units of accidents per 100 MVM and were calculated using Equation 1.

Critical accident-rate tables for "spots" are contained in APPENDIX E. Those rates are presented in units of accidents per million vehicles and also were determined using Equation 1. These rates are for the five-year period of 1994 through 1998.

4.0 COUNTY ACCIDENT STATISTICS

Accident rates were calculated for each county considering 1) only the state-maintained system and 2) all roads within the county. The accident rates are presented in terms of ACC/100 MVM. Total accident rates were calculated for both

categories. Also, using all roads in the county, accident rates were calculated considering fatal accidents only and fatal-or-injury accidents only. Those rates are presented in Table 7. The numbers given represent the accidents reported by the various police agencies in each county. If any agency does not report the accidents they investigate, the number of accidents listed in that county will be lower than the actual number that occurred. Total miles traveled in each county were determined by combining miles traveled on roads having known traffic volumes with those having no recorded volumes. The statewide mileage tape and HPMS file were used to tabulate vehicle-miles traveled by county on roads having traffic volume counts. The difference between the statewide total of vehicle-miles traveled on roads having known traffic volumes compared to the total estimated miles driven in the state was then distributed to each county based upon the proportion of registered vehicles in each county of the total in the state. The total miles driven in each county was then obtained by adding the known miles driven on the state-maintained highway system and the estimated miles driven on the remaining streets and highways.

To assist in the analysis of county accident statistics, county populations in descending order were tabulated and presented in Table 8. The populations use data from the 1990 census. The counties were then grouped into five categories based upon population. Using accidents on all roads in the county, average and critical accident rates were calculated (Table 9). The total accident rate and injury-or-fatal accident rates increased as population increased while the fatal accident rate decreased with increased population. The critical accident rate was calculated using Equation 1. Critical rates (in terms of accidents per 100 million vehicle-miles) were calculated for total accidents, fatal accidents, and injury-or-fatal accidents. The numbers of counties having rates above critical in each population category were determined. The total number was 41 for total accidents, 30 for injury-or-fatal accidents, and one for fatal accidents. The consistency in accident data that has been observed during the past few years is shown in that 35 of the 41 counties determined to have a critical accident rate when total accidents were considered were also identified as having a critical accident rate in the previous report (24).

Table 10 contains a list of numbers of accidents and total accident rates for all counties grouped by population category (considering all roads in the county). Counties within each population category are listed in order of descending accident rate, with the critical rates identified.

Accident rates also were calculated by county considering only the state-maintained system. Those rates, grouped by population category, are presented in Table 11. The rankings of counties in Tables 10 and 11 are similar. In four of the five population categories the same county had the highest rate considering all roads or state-maintained roads. These counties were Pendleton County (in the 10,000 to 14,999 population category), Harrison County (in the 15,000 to 24,999 population

category), Boyle County (in the 25,000 to 50,000 population category) and Fayette County (in the over 50,000 population category) had the highest rate. The exception was the under 10,000 category where Bracken County had the highest rate when all roads were considered while Trimble County had the highest rate for state-maintained roads. When all roads are considered, Fayette County, followed by Jefferson and Harrison Counties, had the highest rates in the state. When only state-maintained roads are considered, Harrison County had the highest rate followed by Fayette, Pendleton, and Boyle Counties. Robertson and Carlisle Counties, which are in the lowest population category, had the lowest rates in the state. Accident rates were higher when all roads were considered compared to rates for only the state-maintained system.

Using accidents on all roads in the county, injury or fatal accident rates are listed in Table 12 in descending order by population category. Counties having critical rates are identified. Counties having the highest rates for their population categories were Owen, Pendleton, Harrison, Perry, and Pike. Pike County had the highest rate in the state while Carlisle County had the lowest rate.

Similar rates for fatal accidents are listed in Table 13. Counties having the highest rates for their population categories were Crittenden, Leslie, Bourbon, Jessamine, and Pike. The highest rates were generally for the smallest counties where there would be more driving on rural roads which would have a speed limit higher than in urban areas. Pike County was the only county identified as having a critical fatal accident rate.

A summary of other miscellaneous accident data used in the problem identification process is presented by county in Table 14. This table includes the number of accidents by county by year; percent change in the 1998 accident total from the previous four-year average; percentages of accidents involving alcohol, drugs, and speeding; percentage of fatal accidents; percentage of injury-or-fatal accidents; and percentage of drivers using safety belts.

5.0 CITY ACCIDENT STATISTICS

Accident statistics were analyzed for cities by using the 1994 through 1998 accident data. The primary group of cities included in the analysis were those having a population over 2,500 that were incorporated and had a police agency. Incorporated cities were eliminated if they did not have a police agency. Incorporated cities in Jefferson County, such as St. Matthews, Jeffersontown, and Shively, were included separately from Louisville because of a desire to analyze accidents for each police reporting agency. Therefore, for Louisville, only the population of the city area was included instead of a metropolitan area population.

Table 15 is a summary of accident rates for cities having populations more than 2,500 that are incorporated and have police agencies. The cities also had to be included in the 1990 census. That table included 113 cities. Rates in terms of ACC/100 MVM are listed for the state-maintained system while rates in terms of accidents per 1,000 population are listed using all streets in the city. The number of accidents in a city on the state-maintained system was obtained using the city code given on either the statewide mileage tape or the HPMS file. The number of accidents in a city on all roads was obtained using the code given on the accident tape. The table notes a few cities in which matches could not be obtained such that data for only the state-maintained system could not be obtained.

Additional statistics are listed for each of those cities in Table 16. Rates for fatal accidents, pedestrian-motor vehicle accidents, bicycle-related motor vehicle accidents, and motorcycle accidents are provided. Those rates are in terms of accidents per 10,000 population. Percentages of accidents involving speeding or alcohol are also listed.

Total accident rates for all cities listed in the 1990 census are summarized in APPENDIX F (Table F-1). A total of 435 cities was listed in the census. Included for the cities were population, number of accidents, and accident rate (accidents per 1,000 population). In order to obtain accident information, a code for the city must be available. No such code was available for 66 of the cities. These were generally the smallest cities.

Accidents on the state-maintained system of highways within a city only accounted for a portion of all the accidents occurring within a city. In many instances, this percentage of accidents on the state-maintained system was only a small percentage of total accidents. Therefore, total accident rates were used to determine critical accident rates for cities. Accident rates on the state-maintained system, by city and by population category, are shown in Table 17. The cities are listed in descending order by accident rate. The cities for which a match could not be obtained using city code listed in the statewide mileage tape or the HPMS file would not be listed in Table 17. Lexington, Richmond, Erlanger, Fort Wright, Williamstown, and Dry Ridge had the highest accident rate on state-maintained streets in their population category. Cities in the 1,000 to 2,499 population category are also included in this table. A total of 160 cities is listed in this table. The average accident rate for all cities in a category is also listed. The overall rates were highest for cities in the population categories between 10,000 and 55,000. The lowest overall rate was for the 1,000 to 2,499 population category. The large range in rates was related in part to the detail of reporting. For example, the higher rate in Lexington compared to Louisville resulted from the Louisville police not reporting the state route number in many cases.

Total accident rates for cities by population category are listed in Table 18. They are tabulated in order of descending accident rates and critical rates are identified. The order of rates for cities is very different in Table 18 compared to Table 17. Thirty-five cities were identified as having total accident rates above critical. Louisville, Bowling Green, Florence, London, and Crestview Hills had the highest total accident rates in their respective population ranges. Fatal accident rates, by city and population category, are listed in Table 19. They also are tabulated in order of descending fatal accident rates. Louisville, Paducah, Danville, Mount Sterling, and Prestonsburg had the highest fatal accident rates in their respective population ranges with no city identified as having a critical fatal accident rate.

6.0 ALCOHOL- AND DRUG-RELATED ACCIDENTS

Alcohol- and drug-related accidents continue to be one of the highest priority problem identification areas and considerable emphasis is being placed on programs to impact those problems. In Kentucky, the number of traffic accidents in which alcohol was listed as a contributing factor on the accident report has averaged about 5,892 per year for the past five years. Alcohol-related fatalities have averaged 252 per year during the past five years (using Fatal Accident Reporting System data). If the cost of an average motor-vehicle accident is used, the estimated annual cost of alcohol-related accidents in Kentucky is in the range of $155 to $241 million depending on the source of the accident cost estimates.

The effectiveness of alcohol enforcement programs has varied throughout the years for various parts of the country. Several enforcement programs have been conducted in Kentucky and evaluations of some of the programs have been documented (26). Results from the programs of increased enforcement in Fayette, McCracken, and Warren counties indicated a significant reduction in alcohol-related accidents during enforcement hours of the program. There were dramatic increases in DUI arrests in the three areas evaluated. Approximately 90 percent of the respondents to a survey questionnaire were in favor of Traffic Alcohol Programs as a means of reducing alcohol-related accidents. Benefit-cost ratios were calculated and were determined as being greater than 1.0 for all areas evaluated. Very similar results were obtained after an impact evaluation of traffic alcohol programs in Jefferson County (27).

The number of alcohol-related accidents has generally decreased over the past several years. In the early 1980's, the annual number of alcohol accidents was over 10,000. In 1984, there were 9,007 alcohol-related accidents (6.6 percent of all accidents). This number decreased to the relatively constant level of from approximately 7,700 to 8,100 from 1985 through 1990. There was then a gradual reduction in alcohol-related accidents to a low of 5,995 in 1994. The first yearly increase since 1990 occurred in 1995 (to 6,163) followed. The number of alcohol-related

accidents decreased to 6,061 in 1996, 6,018 in 1997, and 5,222 in 1998. The 1997 total is a 13.8 percent decrease compared to the previous four-year average and was the lowest number since the first year this trend analysis was started in 1978. Alcohol-related accidents represented 4.6 percent of all accidents during this five-year period. The number of alcohol-related fatalities in 1998 (205) decreased by 22.3 percent over the 1994-1997 average (264). The number in 1997 was the lowest in the five-year period and shows a continuation of a decreasing trend.

To identify alcohol-related accident problem areas, percentages of accidents involving alcohol were summarized for counties and cities as shown in Tables 20 and 21, respectively. In Table 20, number and percentage of accidents involving alcohol were determined by considering all drivers and two age categories (16 through 18 years and 19 through 20 years). This allowed a separate analysis for young drivers. The counties are listed by county population group in order of descending percentages of alcohol accidents for all drivers. Counties in each population category having the highest percentage of accidents, considering all drivers, involving alcohol are Robertson, Casey, Marion, Floyd, and Pike.

The information provided in Table 20 also may be used to determine the counties that have the highest percentages of accidents involving alcohol for young drivers by county population category. The counties identified as having the highest percentages of alcohol-related accidents, considering only young drivers, were not typically the same as those identified when all drivers were considered. For the 16 through 18 years of age category, the counties in each population category having the highest percentages of accidents involving alcohol are Owsley, Magoffin, Marion, Floyd, and Pike and Madison. For the 19 to 20 age category, counties having the highest percentage are Robertson, Henry, Lincoln, Harlan, and Madison. No counties had the highest percentage for each group of drivers (all drivers, ages 16 through 18 and ages 19 and 20).

Table 21 is a summary of number and percentage of accidents involving alcohol for cities. For each population category, cities having the highest percentages of accidents involving alcohol are Lexington, Covington, Newport, Dayton, and Ludlow.

Additional analyses were performed to show the number and rate of alcohol convictions by county (Table 22). Rates are in terms of convictions per 1,000 licensed drivers and convictions per alcohol-related accident. Five years of conviction data (1994 through 1998) were used in the analysis. The conviction data were obtained from driving records maintained by the Division of Drivers Licensing in the Transportation Cabinet. Those same rates are presented in Table 23 with counties grouped by population ranges and rates are listed in order of descending percentages. Counties in each population group having the lowest rates of alcohol convictions per 1,000 licensed drivers were Robertson, Green, Wayne, Oldham, and Marshall.

Counties having the lowest rates of alcohol convictions per alcohol-related accident were Menifee, Green, Marion, Jessamine, and Kenton. Counties having low rates for either convictions per 1,000 licensed drivers or convictions per alcohol-related accident may be candidates for increased enforcement or other special programs (especially if they have a high percentage of alcohol-related accidents). Data in Table 22 show that, statewide, the number of alcohol convictions has remained fairly constant from a low of 29,426 in 1994 to a high of 32,052 in 1997. The number of alcohol convictions in 1998 was identical to the average of the previous four years.

A comparison was also made between the total alcohol arrests and total alcohol convictions, by county, for the three years of 1995 through 1997 (Table 24) which were the only years for which arrest data were available when the analysis was conducted. For past analyses, the arrest data for "driving under the influence" have been obtained from annual Crime in Kentucky reports distributed by the Kentucky State Police. However, starting in 1996, DUI arrest data were not available from the Kentucky State Police for inclusion into this report. Data for 1995, 1996, and 1997 were available from the Administrative Office of the Courts (AOC). Since combining these two data sources would create inconsistent data, the three years of (AOC) data for 1995 through 1997 were used rather than using data which from two different data sources. The AOC included data from every county with the exception of Jefferson County which supplied its own data. The statewide percentage of alcohol convictions per arrest over these three years was 78.0 percent. The percentages varied from a low of 41.2 percent in Owsley County to a high of 97.9 percent in McLean County. The percentages would be affected by the overlapping effects of arrests being made and convictions being prosecuted in different calendar years. Fifty three counties had a conviction percentage over 80 percent with 16 of these counties having a conviction rate over 90 percent. Only seven counties had a conviction rate under 60 percent (Owsley, Monroe, Clay, Gallatin, McCreary, Floyd, and Robertson Counties).

The counties are grouped by population category and are placed in decreasing order of conviction percentage in Table 25. The average conviction percentage did not vary substantially by population category with a range of from 74.5 to 78.9 percent. Counties having the highest conviction percentages in the various population categories were Fayette, Henderson, Grant, Caldwell, and McLean. Counties having the lowest conviction percentages for the various population categories were Kenton, Floyd, Clay, Monroe, and Owsley.

A drunk-driving offense may be reduced to a charge of reckless driving. This could occur when a person is arrested for drunk driving, because of erratic driving behavior, and field sobriety or BAC tests fail to confirm the drunk-driving charge. In addition, the severity of the penalty for drunk driving could influence police officers, and they might reduce a drunk-driving charge to reckless driving. Similarly, in some instances, the judicial system has been responsible for reducing charges from drunk

driving to reckless driving. For those reasons, it was determined that a summary of reckless driving convictions would be beneficial. Numbers of reckless driving convictions and the rate of convictions per 1,000 licensed drivers for each county are presented in Table 26. In the time period of 1994 through 1998 the highest number of convictions was in 1996. The level for 1994 through 1998 has been fairly constant. The number in 1998 was a 4.2 percent decrease from the average number in the previous four years. The highest rates (convictions per 1,000 licensed drivers) occurred in Gallatin, Marion, Bracken, Clinton and Lyon Counties. The lowest rates were in Oldham, Trimble, Spencer and Hancock Counties.

Drugs continue to be listed as a contributing factor in a relatively small percentage of all accidents. However, the number of drug-related accidents increased substantially in 1998 (19.0 percent) compared to the 1994 through 1997 average. The lowest number of drug-related accidents occurred in 1994 with 371 accidents (0.30 percent of all accidents) compared to a high of 535 in 1998 (0.43 percent of all accidents). As may be seen, the percentage of accidents in which drugs are identified as a contributing factor is very small. The number of drug-related injury accidents increased by 22.3 percent in 1998 compared to the 1994-1997 average with a range of from 176 in 1994 to 278 in 1998. The small number of drug-related fatal accidents ranged from 9 in 1994 to 15 in 1996 with an increase of 4.0 percent in 1998 compared to the 1994-1997 average. The data show an increasing trend in drug-related accidents over the five-year study period with a very similar number in 1997 and 1998.

Percentages of accidents involving drugs by county and population category are presented in Table 27. Counties having the highest percentages of drug-related accidents by population category were Robertson, Leslie, Johnson, Knox, and Pike. The data in Table 27 show most of the counties with the highest percentages are in southeast Kentucky. The highest percentage of this type of accident was in Leslie County.

Another summary was prepared to show percentages of accidents involving drugs by city population categories (Table 28). Within each population category, cities having the highest percentages of drug-related accidents were Lexington, Richmond and Covington, Middlesboro, Williamsburg, and Barbourville.

7.0 OCCUPANT PROTECTION

The percentages of drivers of passenger cars involved in traffic accidents who were reported as wearing safety belts were listed by county in Table 14. Those percentages are listed in descending order by county population category in Table 29. Those percentages are for the five-year period of 1994 through 1998. The rates varied from a high of 94.2 percent in Fayette County to a low of 58.2 percent in Monroe

County. Observational surveys have been conducted across the state for several years and have shown substantially lower rates than that reported in the accident data. The data in Table 29 can be used to rank counties but cannot be used for absolute percentages since they are substantially higher than observed levels. Considering the five-year study period, four counties (Fayette, Jefferson, Hardin, and Oldham) had rates over 90 percent while an additional 76 counties had a rate of 80 percent or more. Only five counties (Cumberland, Owsley, Casey, Monroe, and Adair) had usage rates under 70 percent with one county under 60 percent.

It should be noted that a statewide safety belt law was passed with an effective date in July 1994. Prior to the statewide law, local ordinances had been enacted by several cities and counties. The first such ordinances were enacted in Fayette County effective July 1, 1990 and in the city of Louisville effective July 1, 1991. Similar ordinances were adopted in Jefferson County, Murray, Kenton County, Bowling Green, Corbin, Bardstown, and Midway. Observational surveys conducted since enactment of the local ordinances and statewide law have demonstrated their effectiveness in increasing usage rates.

Even though a statewide safety belt law has been passed, there is a need for continued promotion and enforcement of the law. Counties having potential for intensive promotional campaigns are identified in Table 29. Those counties were selected on the basis of their safety belt usage rate, accident rates, and location in the state. Counties having low usage rates were identified with the criterion of selecting one county from within each of the 16 Kentucky State Police Posts' areas of jurisdiction. When possible, an attempt was made to select counties having high accident rates (either total accident rate or injury or fatal accident rate). Also, an attempt was made to select counties which had not been identified in the past couple of years.

The variances of safety belt usage rate reported by passenger car drivers involved in traffic accidents, by year, from 1994 through 1998 are presented in Table 30 along with the relationship between county population and safety belt usage rate. The reported percentage using safety belts has increased steadily from 1994 through 1998. The annual increase had been decreasing prior to 1994 when there was an increase of almost 14 percentage points. This large increase corresponded with the enactment of the statewide safety belt law. It should be noted that the usage rate computed using accident data has been substantially higher than determined from observational surveys. For example, the statewide observational survey for 1998 resulted in a driver usage rate of 54 percent (28) compared to the 91 percent reflected in the accident data. This table also shows the higher usage percentages for counties having over 50,000 population. Counties in the over 50,000 population category had a usage rate about 10 percent higher than for counties in the under 10,000 population category. This difference has been found to be higher in the observation survey.

Safety belts are recognized as an effective method of reducing accident severity. This is confirmed by data presented in Table 31. This table shows that, when a driver of a motor vehicle is wearing a safety belt at the time of an accident, the chance of being fatally injured is reduced by 90 percent compared to not wearing a safety belt. Also, the chance of receiving an incapacitating injury is reduced by 65 percent and the chance of receiving a non-incapacitating injury is reduced by 50 percent. Safety belts will greatly decrease the possibility of injury in accidents involving large deceleration forces, but some injury or complaint of soreness or discomfort may persist. In many instances, use of seat belts will reduce a severe injury to a less severe injury. The category of "possible injury", which involves a complaint of pain without visible signs of injury, decreased only 22 percent (from 8.90 percent for drivers not wearing safety belts to 6.92 percent for drivers wearing safety belts). The chance of receiving either a fatal or incapacitating injury was reduced by 68 percent. This percentage agrees with national statistics concerning the effectiveness of safety belts in reducing fatal or serious injuries. The reductions in accident severity were determined to be statistically significant (probability of 0.99) (29).

The change in accident severity for drivers wearing and not wearing a safety belt is presented in Table 32 for the years 1994 through 1998. The reduction in severity from the use of safety belts has remained consistent. There has been an increase in the severity of injuries to drivers not wearing a safety belt over the time period.

Potential savings associated with increased safety belt usage were estimated and are shown in Table 33. This table lists the annual potential reduction in the number of fatalities, serious injuries (those listed as incapacitating on the accident report), and the associated accident cost savings resulting from that reduction. Those savings are given for driver usage rates from 60 to 100 percent. To obtain the current results, 1998 safety belt statistics and cost estimates recommended by the Federal Highway Administration (30) were used (as shown in the footnote in Table 33). The actual number of fatalities and incapacitating injuries for 1994 through 1998 were used along with the average usage rate over this time period. Also used was the reduction associated with safety belt usage of 90 percent for fatalities and 65 percent for incapacitating injuries. Accident cost estimates were $1,500,000 for a fatality and $39,000 for an incapacitating injury (29). For example, if 70 percent of all drivers involved in accidents in Kentucky wore safety belts, there would be a potential annual reduction of about 128 fatalities and a potential annual reduction in the cost of fatalities and serious injuries of approximately 224 million dollars.

A summary of usage and effectiveness of child safety seats for children under the age of four who were involved in traffic accidents is presented in Table 34. Data are for 1994 through 1998. Age categories in the accident file governed the age

in a child safety seat rather than a seat belt or harness. However, many were coded as wearing a safety belt, so the categories of restraint used were 1) none, 2) safety belt or harness, 3) child safety seat, and 4) any restraint.

Of the 55 fatalities (children age three and under) occurring during the study period, 31 involved use of a restraint. The use of a restraint in over one-half of the fatalities would be related to the very high usage rate and possibly to improper usage. Also, of 719 incapacitating injuries, only 466 involved use of a restraint. A better measure of effectiveness would be the percentage sustaining a specific injury. This analysis revealed the percentages of fatalities and incapacitating and non-incapacitating injuries were much lower for children who were in a child safety seat or safety belt compared to those using no restraint. Comparison of the "any restraint" and "none" categories revealed there was a 85-percent reduction in fatalities for children in restraints, a 79-percent reduction in incapacitating injuries, a 71-percent reduction in non-incapacitating injuries, and a 45-percent reduction in possible injuries.

An analysis of the percentage of children in restraints revealed the percentage was highest for rear-seat locations. A comparison of percent usage by year shows a steady increase in the usage rate. The most recent usage rate using the accident data was 94 percent in 1998. This compares to the usage rate of 80 percent found in the 1998 observational survey (28).

Additional analysis of accident data related to other aspects of safety belt usage is included in APPENDIX G. Accident severity is related to accident type, speed limit, and ejection and usage is related to driver age and sex.

8.0 SPEED-RELATED ACCIDENTS

Speed is one of the most common contributing factors in total accidents and fatal accidents. Speed-related accidents had remained fairly constant over the four years prior to 1998 with a range of 9,725 in 1994 to 10,713 in 1996. The number of speed-related accidents decreased by 11.0 percent in 1998 compared to the previous four years. For the five-year period, speed-related accidents represented 7.7 percent of all accidents, 12.2 percent of injury accidents , and 26.3 percent of fatal accidents. The number of speed-related fatal accidents decreased by 4.4 percent in 1998 compared to the previous four years. The number of speed-related fatal accidents ranged from a high of 230 in 1997 to a low of 175 in 1994. The number of speed-related injury accidents decreased by 8.8 percent in 1998 compared to the previous four years. The number of speed-related injury accidents ranged from a high of 4,494 in 1996 to a low of 4,222 in 1994.

As a means of analyzing speed-related accidents, accidents having "unsafe speed" coded as a contributing factor were summarized by county and population category in Table 35. When arranged in order of decreasing percentages of speed-related accidents, those counties having the highest percentages in each population category were Owen, Garrard, McCreary, Knox, and Pike. There were several counties having a high percentage of speed-related accidents in the southeastern section of the state. A similar summary of accidents involving unsafe speeds for cities was prepared and is presented in Table 36. Those cities having the highest percentages in each population category were Lexington, Hopkinsville, Erlanger, Taylor Mill, and Park Hills.

In addition to accident analysis, the other major area of analysis for unsafe speed was speed convictions. Areas having large percentages of accidents involving speeding and low conviction rates are candidates for increased enforcement. Table 37 presents a summary of speeding convictions by county. Numbers of speed convictions, speed convictions per 1,000 licensed drivers, and speeding convictions per speed-related accident are included. There has been a substantial increase in speeding convictions over the past few years. The average number of speeding convictions increased from 69,552 for 1994 and 1995 to 88,744 for 1996 and 1997 to 98,449 in 1998.

To assist in identifying areas having the potential for increased enforcement, Table 38 was prepared with speeding conviction rates listed in descending order by county population categories. Within each population category, those counties having the lowest speeding conviction rates per 1,000 licensed drivers are Elliott, Jackson, McCreary, Harlan, and Pike. The counties identified as having the lowest rates of speeding convictions per speed-related accident were Elliott, Jackson, Knott, Harlan, and Pike. There was a predominance of counties having high percentages of speed-related accidents and low rates of convictions in the southeastern section of Kentucky.

The percentage of vehicles exceeding the 55-mph speed limit was monitored and reported by the Kentucky Department of Highways on a quarterly basis from 1978 through 1994. This requirement was eliminated with federal legislation passed in 1995 which changed speed limit requirements. The speed monitoring program was then ended. As part of a study of Kentucky speed limits, moving speed data were taken on various highway types (31). Summary of that data for cars and trucks are given in Tables 39 and 40, respectively. The average and 85th percentile speeds are given along with the percent over the current speed limit. The data show the speeds for trucks are less than that for cars and a large percentile of drivers exceed the posted speed limit.

9.0 TEENAGE DRIVERS

A separate analysis was conducted to determine the frequency of accidents involving teenage drivers. A review of driver records show that teenage drivers account for approximately six percent of licensed drivers in Kentucky. However, accident data show that teenage drivers are involved in a much higher percentage of traffic accidents. Using 1998 data, it was found that teenage drivers were involved in about 21 percent of all accidents, 23 percent of injury accidents, and 18 percent of fatal accidents. Teenage drivers (using drivers with an operator's license) are over represented by a factor of 3.7 in all accidents, 4.1 in injury accidents, and 3.2 in fatal accidents.

The involvement rate of teenage drivers compared to all drivers in total and fatal accidents was compared (using 1998 data). Considering all accidents, the rate was 48 accidents per 1,000 drivers for all drivers compared to 174 accidents per 1,000 drivers for teenage drivers. Considering fatal accidents, the rate was 29 fatal accidents per 100,000 drivers for all drivers compared to 93 fatal accidents per 100,000 teenage drivers. These rates again show the over representation of teenage drivers in both total and fatal accidents.

10.0 GENERAL ACCIDENT STATISTICS

Several types of general statistics were developed for use in analyses of specific problem areas. Included were accident trends over a five-year period and several types of statistics for accidents involving pedestrians, bicycles, motorcycles, school buses, trucks, and trains.

10.1 ACCIDENT TREND ANALYSIS

An analysis of accident trends over the five-year period is summarized in Table 41. The 1998 accidents were compared to an average of the preceding four years (1994-1997). There was a decrease in total accidents (3.4 percent) when comparing 1998 to the previous four years. Accidents in parking lots have not been included in the accident tapes starting in 1994.

The highest number of accidents occurred in 1996 (134,558) with the lowest number occurring in 1994 (124,037). The number of fatal accidents and fatalities in 1998 increased compared to the previous four-year average. The number of fatal accidents increased by 4.7 percent while the number of fatalities increased by 3.5 percent. The number of fatalities ranged from 791 in 1994 to 869 in 1998. The number of injury accidents and injuries in 1998 decreased by 4.1 and 4.3 percent respectively

compared to the previous four-year average. The number of injuries varied from 53,519 in 1994 to 56,342 in 1997.

Vehicle-miles traveled has increased steadily over the five-year period. The larger increase in vehicle miles traveled, combined with the decrease in the number of accidents, resulted in a decrease (12.8 percent) in the total accident rate in 1998 compared to the previous four-year average. There were also decreases in the fatal accident rate (5.2 percent) and fatality accident rate (6.4 percent). The total accident rate in 1998 was the lowest for the five-year period. The fatal and fatality accident rates in 1998 were also the lowest in this time period.

Trends in the number of specific types of accidents also are presented in Table 41. Those trends are discussed in the section dealing with that accident category.

There was a total of 646,107 accidents in the five-year period, of which 3,741 (0.6 percent) were fatal accidents and 177,904 (27.5 percent) were injury accidents. Those accidents resulted in 4,227 fatalities and 274,187 injuries. There is a large range used when estimating accident costs. Using accident cost estimates recommended by the Federal Highway Administration (30) yields an average annual cost of approximately 2.3 billion dollars for motor-vehicle accidents in Kentucky for the period 1994 through 1998 with an average cost of a motor-vehicle accident of approximately $17,500. However, using National Safety Council estimates of motor vehicle accident cost, considering economic or comprehensive costs, results in an estimate for 1998 of 3.3 to 5.2 billion dollars for an average cost of $26,400 to $41,000 per accident.

Additional general statistics compiled by county for accidents involving pedestrians, bicycles, motorcycles, school buses, and trucks are included in Table 42. Numbers of accidents and average annual accidents per 10,000 population were included.

10.2 PEDESTRIAN ACCIDENTS

The number of pedestrian accidents decreased by 8.9 percent in 1998 compared to the period 1994 through 1997. The number of accidents has remained fairly constant from 1994 through 1998 with a range of from 1,077 to 1,199. This compares to 1,373 in 1993. Part of the reduction starting in 1994 was probably due to the change in reporting where accidents in parking lots are not included. The data were not available to easily identify the number of pedestrian accidents which has previously occurred in parking lots. Pedestrian collisions are a severe type of accident. In 1998, pedestrian accidents accounted for only 0.9 percent of all accidents but 2.8 percent of injury accidents and 8.4 percent of fatal accidents. The number of injury

accidents decreased by 9.3 percent in 1998 while the number of fatal accidents increased by 10.2 percent in 1998 compared to the 1994-1997 average. Injury accidents ranged from 966 in 1998 to 1,085 in 1996 while fatal accidents ranged from 56 in 1996 to 65 in 1998.

A summary of pedestrian accident statistics by county and population category is presented in Table 43. Numbers of accidents and annual accident rates per 10,000 population are included. From the listing of accident rates in descending order, the following counties had the highest rates in each population category: Wolfe, Washington, Grant, Henderson, and Kenton. A similar analysis was performed for pedestrian accidents by city and population category. Results are summarized in Table 44 and the following cities had the highest rates in their respective population categories: Louisville, Covington, Newport, Dayton, and Springfield. Covington and Newport had substantially higher rates than any other city.

10.3 BICYCLE ACCIDENTS

Numbers and rates of motor-vehicle accidents involving bicycles by county are listed in Table 45. Counties were grouped by population category. The counties having the highest accident rate in each category are Fulton, Caldwell, Scott, Henderson, and Fayette. A similar summary was prepared for cities and the results are presented in Table 46. Cities having the highest rate of bicycle-related accidents in each population category are Louisville, Covington, Newport, Princeton, and Ludlow. The rate in Newport was substantially above any other city.

The number of bicycle accidents decreased in 1998 (13.9 percent) compared to the average of 1994 through 1997. The number of bicycle accidents has ranged from 587 in 1998 to 706 in 1995. This is a severe type of accident. In 1998, while bicycle accidents accounted for 0.5 percent of all accidents, they accounted for 1.4 percent of injury accidents and 1.2 percent of fatal accidents. The number of injury accidents decreased by 13.8 percent in 1998 while the number of fatal accidents increased by 44 percent compared to the 1994-1997 average. The range in injury accidents was from 480 in 1998 to 602 in 1995 while the number of fatal accidents ranged from 4 in 1995 to 10 in 1997.

10.4 MOTORCYCLE ACCIDENTS

County and city statistics for accidents involving motorcycles are presented in Tables 47 and 48, respectively. For each population category, counties having the highest rates for motorcycle accidents per 10,000 population were Gallatin, Leslie, Breathitt, Perry, and Pike (Table 47). From Table 48, those cities having the highest

rates in each population category were Louisville, Bowling Green, Madisonville, Pikeville, and Prestonsburg.

There has been a decline in the annual number of motorcycle accidents from 1994 to 1997 before an increase in 1998. The numbers over the five-year period from a high of 926 in 1994 to a low of 736 in 1997. There was a slight increase (2.4 percent) in 1998 compared to the 1994 to 1997 average. This is a severe type of accident. Data in 1998 show that motorcycle accidents accounted for 0.7 percent of all accidents but 1.9 percent of injury accidents and 3.4 percent of fatal accidents. The number of injury accidents increased by 1.3 percent while the number of fatal accidents decreased by 3.7 percent in 1998 compared to the 1994-1997 average. The number of injury accidents ranged from 581 in 1996 to 733 in 1994 while the number of fatal accidents ranged from 21 in 1995 to 33 in 1994.

10.5 SCHOOL BUS ACCIDENTS

School bus accident statistics were summarized for counties and cities and results are presented in Tables 49 and 50. Table 49 lists numbers and rates of school bus accidents by county and population category. Counties having the highest rates in each population category are Spencer, Anderson, Montgomery, Jessamine, and Madison. A similar summary was prepared for cities by population categories, as shown in Table 50. Those cities having the highest rates in each population category are Louisville, Hopkinsville, Independence, Monticello, and Shepherdsville. The highest rate was in Monticello.

The trend analysis presented in Table 41 indicates there was a slight decrease in this type of accident in 1998 (1.1 percent) compared to 1994 through 1997. The annual number of this type of accident ranged from a high of 822 in 1997 to a low of 714 in 1994.

10.6 TRUCK ACCIDENTS

Truck accidents included both single unit and combination trucks. A summary of those accidents by county is given in Table 51. Counties having the highest rates in each population category were Gallatin, Webster, Grant, Perry, and Boone. Gallatin, Grant, and Boone Counties have at least one interstate highway. Webster and Perry Counties do not have an interstate highway within their borders, but there is a large amount of coal truck traffic in those counties. Pike County is another county which does not have an interstate but had a high rate due to a large amount of coal truck traffic.

The trend analysis showed there was a decrease in the number of truck accidents in 1998 (15.2 percent) compared to the previous four-year average. The number of truck accidents ranged from a high of 9,975 in 1996 to a low of 7,670 in 1998. The number of injury accidents decreased by 19.4 percent while the number of fatal accidents decreased by 5.9 percent in 1998 compared to the 1994-1997 average. The number of injury accidents ranged from 1,678 in 1998 to 2,292 in 1996 while the number of fatal accidents ranged from 95 in 1996 and 1998 to 108 in 1997. Considering the five year period, truck accidents represent 6.8 percent of all accidents, 5.6 percent of injury accidents, and 13.3 percent of fatal accidents.

10.7 TRAIN ACCIDENTS

A summary of motor vehicle-train accidents by county is presented in Table 52. Counties having the highest rates in each population category were McLean, Lewis, Grant, Oldham and Boyd. The highest rate was in Grant County. There were no train accidents in 47 counties in the five-year period of 1994 through 1998. Several of the counties with the highest rates in their population category were in counties with a large amount of coal production.

The trend analysis for motor vehicles-railroad train accidents is given in Table 41. There was a range in train accidents from 94 in 1995 to 57 in 1997. The number of train accidents in 1998 was 13.3 percent less than the 1994 through 1997 average. The number of injury accidents decreased by 14.5 percent compared to the 1994-1997 average with a range of from 21 in 1996 to 38 in 1995. The number of fatal accidents decreased by 29.4 percent with a range of 3 in 1996 and 1998 to 5 in 1994 and 1995.

10.8 VEHICLE DEFECTS

The requirement for an annual vehicle inspection was repealed in 1978. A summary of the involvement of vehicle defects in accidents before and after repeal of that law is presented in Table 53. The percent of accidents involving a vehicle defect was 5.86 percent before repeal of the vehicle inspection law. The percent increased to 7.09 in the first 19 months after repeal of the law and has averaged 6.42 percent for 1980 through 1998. There has been a general decrease in this percentage since a maximum of 7.55 percent in 1981 with the 5.17 percent in 1997 the lowest since repeal of the vehicle inspection law. Starting in 1993, the percentage of accidents involving a vehicle defect was lower than that noted prior to repeal of the vehicle inspection requirement.

11.0 SUMMARY AND RECOMMENDATIONS

11.1 STATEWIDE ACCIDENT RATES

For the high-accident-location safety improvement program in Kentucky to be successful, procedures for identifying high-accident locations and scheduling improvements must be used. A computer program has been developed to identify high-accident locations. Vital inputs into this program are average and critical accident numbers and rates for rural and urban highway classifications. Various accident rates are presented throughout the report text, tables, and appendices which can be used to implement a safety improvement program.

Each accident must be identified accurately to perform a complete accident analysis. Many accidents which occur on a state-maintained road do not have the necessary route and milepoint information to be included in the detailed analysis. Efforts must be made to increase the number of accident reports having the necessary location information.

11.2 COUNTY AND CITY ACCIDENT STATISTICS

The various types of accident rates calculated and included in this report were used in the analysis of various problem identification areas.

A program has been used to provide funds for the purchase of appropriate signs to bring signing on city and county streets and roadways into compliance with the standards included in the Manual on Uniform Traffic Control Devices. A large number of cities have taken advantage of this program which has been expanded to include counties. Funding for this program has not been provided in the past couple of years. Efforts should be made to renew funding of the program. The following cities have critical accident rates (as shown in Table 18) but have not been included in this signing program. It is recommended that, if funding again becomes available, they be considered as candidates for participation in the program.

1. Richmond
2. Shively
3. Georgetown
4. Crestview Hills
5. Oak Grove
6. Cold Springs
7. Shepherdsville
8. Prestonsburg

9. Harlan
10. Scottsville
11. Grayson
12. Hodgenville
13. Columbia
14. Mt. Vernon

11.3 ALCOHOL-RELATED ACCIDENTS

1. The number of alcohol-related accidents decreased in 1998 compared to the previous four-year average and has decreased farther from the level prior to 1994. There has been an even larger decrease in the number of alcohol-related fatal accidents and fatalities. This may be related to increased enforcement and public information campaigns that have increased public awareness.

As part of the analysis, percentages of alcohol-related accidents were tabulated for counties and cities. In addition, alcohol conviction rates were tabulated by county. Those counties having relatively high percentages of alcohol-related accidents (Table 20) and low average numbers of alcohol convictions per alcohol accident (Table 23) were identified as potential locations where increased enforcement may be beneficial. Counties were also required to have 150 or more alcohol-related accidents during the five-year analysis period to be considered as potential counties for the increased alcohol-related enforcement program. Following is a list of those counties by State Police Post.

Post Number	County
1	Calloway
2	Muhlenberg
3	Logan
4	Bullitt
5	Oldham
6	Bourbon
7	Jessamine
8	Montgomery
9	Johnson
10	Knox
11	Laurel
12	Woodford
13	Perry

Post Number	County
14	Greenup
15	Marion
16	Henderson

2. An analysis was performed for cities similar to that for counties. However, alcohol conviction rates were not available for cities and consideration was given to conviction rates for counties within which a city was located. Again, the criterion of 150 or more alcohol-related accidents within a five-year period was applied (Table 21). The following are candidate cities for a program of increased alcohol enforcement.

1. Louisville,
2. Covington,
3. Owensboro,
4. Newport,
5. Erlanger,
6. Shively, and
7. Florence.

3. Alcohol involvement is a leading factor in fatal accidents. The legal BAC limit should be lowered from 0.10 to 0.08.

11.4 OCCUPANT PROTECTION

1. Even though a statewide safety belt law has been passed, efforts to increase safety belt usage must continue. The various types of safety belt programs which have been conducted in several locations across the state in the past should continue. These programs have the objectives of increasing awareness of risks of traffic accidents, increasing understanding of benefits of safety belt usage, and providing assistance to organizations willing to promote safety belt usage. Enforcement of the statewide law should be another objective of these programs. These types of programs should be implemented on a statewide level. Usage rates and accident rates were considered when choosing candidates for more intensive promotion and enforcement campaigns. Consideration was given to past campaign recommendations and the location in the state (State Police Post). These counties were identified in Table 29. A list of those counties, by State Police Post, follows:

Post Number	County
1	Calloway
2	Muhlenberg

Post Number	County
3	Simpson
4	Nelson
5	Owen
6	Campbell
7	Madison
8	Lewis
9	Pike
10	Knox
11	Wayne
12	Franklin
13	Perry
14	Boyd
15	Adair
16	McLean

2. To maintain up-to-date usage statistics and to monitor the effect of the statewide safety belt law, annual statewide observational surveys should be conducted.

3. The current statewide law allows secondary type of enforcement. Surveys have found that the statewide usage rate has not changed in the past three years, after the initial increase related to the statewide law. To obtain a substantial increase in usage, the current law should be modified to allow primary, rather than secondary, enforcement.

11.5 SPEED-RELATED ACCIDENTS

1. Unsafe speed has been shown to be a primary contributing factor in fatal accidents and a common contributing factor in all accidents. Those counties having high percentages of speed-related accidents (Table 35) and low average number of speeding convictions per speed-related accident (Table 38) were identified as possible locations for increased enforcement. Locations meeting the criteria for accidents and convictions also were required to have at least 150 speed-related accidents during the five-year study period and speed-related accidents were at least 7.5 percent of total accidents. Following is a list of counties (tabulated by State Police Post) recommended for programs of increased speed enforcement (some counties were changed that had been listed for several years):

Post Number	County
1	Marshall
2	Christian
3	Edmonson
4	Larue
5	Henry
6	Pendleton
7	Jackson
8	Powell
9	Magoffin
10	Knox
11	Clay
12	Scott
13	Breathitt
14	Boyd
15	Marion
16	Union

2. By analyzing speed-related accident rates for cities and applying the criterion of at least 150 accidents during the five-year period and speed related accidents were five percent or more of total accidents (Table 36), the following cities were recommended for additional programs of speed enforcement:

1. Lexington,
2. Hopkinsville,
3. Bowling Green,
4. Frankfort,
5. Covington,
6. Richmond,
7. Ashland,
8. Erlanger,
9. Somerset,
10. Florence, and
11. Pikeville.

3. Increased speed enforcement should be implemented on roads which have been identified as having the highest percentage of speed-related accidents. Consideration should be given to the types of roadways which have the highest accident rates. This would indicate more enforcement on rural two-lane and four-lane (non-interstate and parkway) roadways as opposed to interstate and parkways which have much lower accident rates.

4. Federal legislation has changed allowing states to increase speed limits to above the 55 mph and 65 mph limits. Data show current speeds do not reflect speed limits on several types of highways. There is a need to review current speed limits and establish speed limits based on the 85th percentile speed. Recommendations for speed limits on various types of roads in Kentucky have been developed (31).

11.6 TEENAGE DRIVERS

1. Graduated licensing legislation was passed in the 1996 Kentucky legislature as a method to restrict teenage drivers from being exposed to driving environments which surpass their driving experience. The effectiveness of this legislation should be evaluated.

2. The lack of driving experience would be related to the over representation of teenage drivers in traffic accidents. Experience is particularly important when it is necessary to take an evasive maneuver. The use of an advanced technology driving simulator should be considered as a method of allowing teenage drivers to gain experience of real world driving situations without the on-the-road risks.

11.7 GENERAL ACCIDENT STATISTICS

Pedestrians

The accident rate analyses identified Covington and Newport as cities having substantially higher pedestrian accident rates than any other city (Table 44). A study to determine factors contributing to this problem in those cities and recommendations for improved traffic control measures, increased police enforcement, or driver and pedestrian education programs is warranted.

Bicycles

Newport and Covington also had a high accident rate in their population category for this type of accident (Table 46) (as with pedestrian accidents). A study of this type of accident could be included with the previously mentioned study of pedestrian accidents.

Motorcycles

1. Warren County had the second highest rate of accidents in its population category (Table 47) while Bowling Green (which is in Warren County) had the highest rate of this type of accident in its population category (Table 48). Also, Pike County

and Pikeville had the highest rates in their population categories. Evaluations of this type of accident in these counties and cities are warranted.

2. The mandatory motorcycle law was repealed in the last legislature. Observations have shown the helmet usage rate decreased in 1998 (28). The mandatory use of motorcycle helmets should be reenacted.

Truck Accidents

Several counties with a large number of truck accidents were in counties with a large amount of coal truck traffic. Coal trucks are hauling on an extended weight system which allows heavy loads. A recent research report investigated heavy truck involvement in traffic accidents and recommended countermeasures related to the vehicle, driver, or roadway (32). Implementation of these countermeasures should be considered.

Vehicle Defects

The percentage of accidents involving vehicle defects increased after repeal of the vehicle inspection law. It could be concluded that the repeal of that law resulted in additional accidents involving vehicle defects. However, the percentage of accidents involving a vehicle defect has decreased in recent years with the percentage starting in 1993, and continuing through 1998, less than before repeal of the inspection law. A study could be conducted to determine whether the defects that have contributed to accidents since repeal of the vehicle inspection law were of the type that might have been detected under the previous inspection program. That study could also reveal types of inspections necessary to detect defects contributing to accidents.

REFERENCES

1. Agent, K. R.; "Traffic Accidents in Kentucky (1978)," University of Kentucky Transportation Research Program, UKTRP-81-9, June 1981.

2. Agent, K. R.; "Traffic Accident Rates in Kentucky (1980)," University of Kentucky Transportation Research Program, UKTRP-82-11, August 1982.

3. Agent, K. R.; "Traffic Accident Rates in Kentucky (1981)," University of Kentucky Transportation Research Program, UKTRP-83-11, May 1983.

4. Agent, K. R.; "Traffic Accident Rates in Kentucky (1982)," University of Kentucky Transportation Research Program, UKTRP-84-5, March 1984.

5. Salsman, J. M. and Agent, K. R.; "Traffic Accident Rates in Kentucky (1983)," University of Kentucky Transportation Research Program, UKTRP-85-2, January 1985.

6. Agent, K. R.; "Traffic Accident Rates in Kentucky (1984)," University of Kentucky Transportation Research Program, UKTRP-86-1, January 1986.

7. Pigman, J. G. and Agent, K. R.; "Problem Identification for Highway Safety Plan," Report 521, Division of Research, Kentucky Department of Transportation, May 1979.

8. Pigman, J. G.; Agent, K. R.; and Crabtree, J. D.; "Problem Identification for Highway Safety Plan," Report 543, Division of Research, Kentucky Department of Transportation, March 1980.

9. Pigman, J. G.; Agent, K. R.; and Crabtree, J. D.; "Problem Identification for Highway Safety Plan (FY 1982)," University of Kentucky Transportation Research Program, UKTRP-81-5, May 1981.

10. Agent, K. R.; Crabtree, J. D.; and Pigman, J. G.; "Problem Identification for Highway Safety Plan (FY 1983)," University of Kentucky Transportation Research Program, UKTRP-82-5, May 1982.

11. Pigman, J. G.; Agent, K. R.; and Creasey, T.; "Problem Identification for Highway Safety Plan (FY 1984)," University of Kentucky Transportation Research Program, UKTRP-83-19, September 1983.

12. Pigman, J. G.; and Agent, K. R.; "Problem Identification for Highway Safety Plan (FY 1986)," University of Kentucky Transportation Research Program, UKTRP-85-18, August 1985.

13. Agent, K. R. and Pigman, J. G.; "Analysis of Accident Data in Kentucky (1982-1986)", University of Kentucky Transportation Research Program, UKTRP-87-23, September 1987.

14. Agent, K. R. and Pigman, J. G.; "Analysis of Accident Data in Kentucky (1983-1987), Kentucky Transportation Center, University of Kentucky, KTC-88-7, October 1988.

15. Agent, K. R. and Pigman, J. G.; "Analysis of Accident Data in Kentucky (1984-1988)," Kentucky Transportation Center, University of Kentucky, KTC-89-47, October 1989.

16. Agent, K. R. and Pigman, J. G.; "Analysis of Traffic Accident Data in Kentucky (1985-1989)," Kentucky Transportation Center, University of Kentucky, KTC-90-19, September 1990.

17. Agent, K. R. and Pigman, J. G.; " Analysis of Traffic Accident Data in Kentucky (1986-1990)," Kentucky Transportation Center, University of Kentucky, KTC-91-13, September 1991.

18. Agent, K. R. and Pigman, J. G.; "Analysis of Traffic Accident Data in Kentucky (1987-1991)," Kentucky Transportation Center, University of Kentucky, KTC-92-16, September 1992.

19. Agent, K. R. and Pigman, J. G.; "Analysis of Traffic Accident Data in Kentucky (1988-1992)," Kentucky Transportation Center, University of Kentucky, KTC-93-23, September 1993.

20. Agent, K. R. and Pigman, J.G.; "Analysis of Traffic Accident Data in Kentucky (1989-1993)," Kentucky Transportation Center, University of Kentucky, KTC-94-23, September 1994.

21. Agent, K.R. and Pigman, J.G.; "Analysis of Traffic Accident Data in Kentucky (1990-1994)," Kentucky Transportation Center, University of Kentucky, KTC-95-19, September 1995.

22. Agent, K.R. and Pigman, J.G.; "Analysis of Traffic Accident Data in Kentucky (1991-1995)," Kentucky Transportation Center, University of Kentucky, KTC-96-22, September 1996.

23. Agent, K.R. and Pigman, J.G.; "Analysis of Traffic Accident Data in Kentucky (1992-1996)," Kentucky Transportation Center, University of Kentucky, KTC-97-18, September 1997.

24. Agent, K.R. and Pigman, J.G.; "Analysis of Traffic Accident Data in Kentucky (1993-1997)," Kentucky Transportation Center, University of Kentucky, KTC-98-16, September 1998.

25. Agent, K.R.; Stamatiadis, N.; and Jones, S.; "Development of Accident Reduction Factors," Kentucky Transportation Center, KTC-96-13, June 1996.

26. Pigman, J. G. and Agent, K. R.; "Impact Evaluation of Traffic Alcohol Programs: Selected Locations in Kentucky," University of Kentucky Transportation Research Program, UKTRP-84-25, September 1984.

27. Pigman, J. G.; Agent, K. R.; Hardyman, P. L.; Johnson, K. W.; and McCleary, R.; "Impact Evaluation of the Louisville-Shively-Jefferson County Traffic Alcohol Programs," Kentucky Transportation Center, KTC-88-3, October 1988.

28. Agent, K. R.; "1998 Safety Belt Usage Survey and Evaluation of Effectiveness in Kentucky," Kentucky Transportation Center, University of Kentucky, KTC-98-15, September 1998.

29. Natrella, M. G.; Experimental Statistics, National Bureau of Standards Handbook 91, August 1963.

30. FHWA Technical Advisory T 7570.1, June 30, 1988.

31. Agent, K.R.; Pigman, J.G.; and Weber, J.M..; "Evaluation of Speed Limits in Kentucky," Kentucky Transportation Center, University of Kentucky, KTC-97-6, April 1997.

32. Pigman, J.G. and Agent, K.R.; "Heavy Truck Involvement in Traffic Accidents and Related Countermeasures," Kentucky Transportation Center, University of Kentucky, KTC-99-20, March 1999.

TABLE 1. Comparison of 1994, 1995, 1996, 1997 and, 1998 Accidents Rates*

STATISTIC	1994	1995	1996	1997	1994-1997 Average	1998	Percent Change***
Accidents	74,177	76,237	77,928	78,944	76,822	72,561	-5.5
Mileage	27,428	27,981	27,808	27,408	27,656	27,881	0.8
Accidents Per Mile	2.70	2.72	2.80	2.88	2.77	2.60	-6.3
Vehicle Miles (Billion)	34.24	35.66	36.29	36.68	35.72	39.11	9.5
AADT	3,421	3,491	3,575	3,667	3,539	3,843	8.6
Accident Rate**	217	214	215	215	215	186	-13.6
Fatal Accident Rate**	1.59	1.64	1.57	1.65	1.61	1.52	-5.7
Injury Accident Rate**	68	67	65	65	66	56	-15.5

* Data apply to streets and highways having known traffic volumes, route numbers, and mileposts.

** Accidents Rates are given in terms of accidents per 100 million vehicle-miles (ACC/100 MVM).

*** Percent change from 1994-1997 average to 1998.

Table 2. Statewide Rural Accident Rates By Highway Type Classification (1994-1998)

HIGHWAY TYPE	TOTAL MILEAGE*	AADT	ACCIDENTS RATES (ACCIDENTS PER 100 MVM) ALL	INJURY	FATAL
One-Lane	42	660	348	113	0.0
Two-Lane	23,491	1,530	241	87	3.0
Three-Lane	27	6,040	267	91	2.0
Four-Lane Divided (Non-Interstate or Parkway)	428	10,960	108	39	1.4
Four-Lane Undivided	43	14,100	183	50	1.3
Interstate	536	27,090	53	15	0.7
Parkway	560	8,070	62	18	1.1
All	25,128	2,410	171	60	2.2

* Average for the five years.

Table 3. Statewide Urban Accident Rates By Highway Type Classification (1994-1998)

HIGHWAY TYPE	TOTAL MILEAGE*	AADT	ACCIDENTS RATES (ACCIDENTS PER 100 MVM) ALL	INJURY	FATAL
Two-Lane	1,686	6,830	356	95	1.0
Three-Lane	28	12,260	546	126	0.6
Four-Lane Divided (Non-Interstate or Parkway)	357	23,470	297	79	0.6
Four-Lane Undivided	219	19,280	480	122	0.6
Interstate	215	62,780	99	25	0.5
Parkway	49	11,240	100	25	1.1
All	2,574	15,210	266	69	0.7

* Average for the five years.

** Includes small number of one-,five-, and six-lane Highways.

TABLE 4. Comparison of 1994, 1995, 1996, 1997 and, 1998 Accidents Rates By Rural and Urban Highway Type Classification

LOCATION	HIGHWAY TYPE	1994	1995	1996	1997	1994-1997 Average	1998	Percent Change*
Rural	One-Lane	386	445	258	251	335	269	-19.7
	Two-Lane	221	246	242	254	241	241	0.0
	Three-Lane	188	215	261	462	281	262	-7.0
	Four-Lane Divided (Non-Interstate or Parkway)	101	121	112	106	110	102	-7.7
	Four-Lane Undivided	291	201	174	146	203	151	-25.5
	Interstate	55	52	60	52	55	46	-15.3
	Parkway	63	66	68	60	64	54	-16.2
	All	167	176	175	176	173	165	-5.1
Urban	Two-Lane	438	342	341	411	383	279	-27.2
	Three-Lane	298	674	595	586	538	456	-15.4
	Four-Lane Divided	302	298	316	307	306	263	-14.0
	Four-Lane Undivided	652	504	496	460	528	364	-31.0
	Interstate	120	94	106	100	105	84	-19.9
	Parkway	79	94	114	107	99	98	-0.5
	All	313	268	272	276	282	216	-23.4

* Percent change from 1994-1997 to 1998

Table 5. Statewide Accident Rates for "SPOTS" by Highway Type Classification (1994-1998)

RURAL OR URBAN	HIGHWAY TYPE	NUMBER OF ACCIDENTS	NUMBER OF SPOTS*	MILLION VEHICLES PER YEAR	ACCIDENTS PER MILLION VEHICLES PER SPOT
Rural	One-Lane	175	139	0.24	1.04
	Two-Lane	158,237	78,304	0.56	0.72
	Three-Lane	789	89	2.20	0.80
	Four-Lane Divided (Non-Interstate or Parkway)	9,267	1,427	4.00	0.32
	Four-Lane Undivided	2,040	144	5.15	0.55
	Interstate	13,978	1,788	9.89	0.16
	Parkway	5,102	1,868	2.94	0.19
	All Rural	189,588	83,760	0.88	0.51
Urban	Two-Lane	74,906	5,620	2.49	1.07
	Three-Lane	3,407	93	4.47	1.64
	Four-Lane Divided	45,425	1,191	8.57	0.89
	Four-Lane Undivided	37,063	731	7.04	1.44
	Interstate	24,499	718	22.92	0.30
	Parkway	999	163	4.10	0.30
	All Urban**	190,259	8,580	5.55	0.80

* Average for the five years. The length of a spot is defined to be 0.3 mile.
** Includes small number of miles of one-,five-, and six-lane highways.

Table 6. Statewide Average and Critical Numbers of Accidents for "SPOTS" and One-Mile Sections by Highway Type Classification (1994-1998)*

RURAL OR URBAN	HIGHWAY TYPE	ACCIDENTS PER SPOT		ACCIDENTS PER ONE MILE SECTION	
		AVERAGE	CRITICAL NUMBER	AVERAGE	CRITICAL NUMBER
Rural	One-Lane	1.26	5	4.19	10
	Two-Lane	2.02	6	6.74	14
	Three-Lane	8.83	17	29.44	44
	Four-Lane Divided (Non-Interstate or Parkway)	6.50	14	21.65	34
	Four-Lane Undivided	14.17	24	47.22	65
	Interstate	7.82	16	26.06	40
	Parkway	2.73	7	9.10	17
	All Rural	2.26	7	7.54	15
Urban	Two-Lane	13.33	23	44.43	62
	Three-Lane	36.64	53	122.13	151
	Four-Lane Divided	38.14	55	127.14	157
	Four-Lane Undivided	50.71	70	169.05	203
	Interstate	34.11	50	113.70	142
	Parkway	6.13	13	20.43	33
	All Urban**	22.17	35	73.92	97

* The length of a spot is defined to be 0.3 mile.
** Includes small number of miles of one-,five-, and six-lane highways.

Table 7. Accident Rates by County for State-Maintained System and All Roads (1994-1998)

COUNTY	STATE-MAINTAINED		ALL ROADS					
			TOTAL ACCIDENTS		FATAL ACCIDENTS		FATAL OR INJURY ACCIDENTS	
	TOTAL ACCIDENTS	ACCIDENT RATE*	NUMBER	RATE*	NUMBER	RATE*	NUMBER	RATE*
Adair	1,644	219	2,195	245	20	2.2	659	73
Allen	1,281	229	2,046	296	29	4.2	628	91
Anderson	1,538	196	2,145	228	25	2.7	724	77
Ballard	828	205	1,086	226	10	2.1	329	68
Barren	2,862	150	6,309	282	49	2.2	2,017	90
Bath	1,184	167	1,541	194	16	2.0	473	60
Bell	2,072	161	3,816	264	28	1.9	1,194	82
Boone	12,066	239	15,540	271	57	1.0	4,520	79
Bourbon	1,925	225	3,379	333	44	4.3	825	81
Boyd	4,820	237	10,160	416	16	0.7	2,553	105
Boyle	3,088	321	4,691	397	30	2.5	1,187	100
Bracken	824	247	1,186	297	16	4.0	335	84
Breathitt	1,572	212	1,993	235	25	3.0	820	97
Breckinridge	1,110	181	1,301	167	21	2.7	522	67
Bullitt	4,431	144	6,564	183	51	1.4	2,101	59
Butler	1,048	153	1,312	165	23	2.9	467	59
Caldwell	1,282	166	1,921	214	18	2.0	522	58
Calloway	1,979	185	2,809	209	26	1.9	926	69
Campbell	7,701	248	13,843	367	32	0.8	3,176	84
Carlisle	184	72	230	75	7	2.3	88	29
Carroll	1,584	168	2,115	204	17	1.6	571	55
Carter	2,606	166	3,415	190	38	2.1	1,177	66
Casey	597	111	808	123	24	3.7	292	44
Christian	5,721	179	9,698	269	51	1.4	3,074	85
Clark	3,049	163	5,684	263	38	1.8	1,303	60
Clay	1,557	156	1,955	172	38	3.3	820	72
Clinton	499	127	697	148	14	3.0	174	37
Crittenden	831	231	1,075	245	25	5.7	359	82
Cumberland	356	112	507	134	13	3.4	138	37
Daviess	8,451	291	16,965	330	55	1.1	4,330	84
Edmonson	849	191	1,116	208	11	2.1	401	75
Elliott	421	238	493	229	8	3.7	195	91
Estill	1,460	297	1,894	308	14	2.3	592	96
Fayette	30,385	331	58,729	532	120	1.1	13,330	121
Fleming	1,081	209	1,453	225	22	3.4	471	73
Floyd	4,390	201	5,420	219	61	2.5	2,385	96
Franklin	5,826	266	7,677	295	27	1.0	1,818	70
Fulton	646	193	1,096	279	12	3.0	294	75
Gallatin	960	114	1,112	123	9	1.0	399	44
Garrard	1,121	204	1,515	231	21	3.2	463	71
Grant	3,103	162	4,060	194	24	1.1	1,419	68
Graves	3,289	200	5,006	254	41	2.1	1,580	80
Grayson	1,858	151	2,217	154	36	2.5	982	68
Green	967	255	1,331	285	13	2.8	410	88
Greenup	2,888	220	4,091	254	30	1.9	1,255	78
Hancock	656	163	878	184	11	2.3	321	67
Hardin	6,860	141	13,377	238	57	1.0	4,068	72
Harlan	3,167	228	4,013	247	35	2.2	1,348	83
Harrison	1,853	381	2,717	431	18	2.9	677	107
Hart	1,222	75	2,063	117	36	2.0	623	35
Henderson	4,644	196	9,653	349	40	1.4	2,836	103
Henry	1,614	135	1,937	146	25	1.9	617	47
Hickman	424	141	490	141	9	2.6	165	47
Hopkins	5,435	203	8,287	268	34	1.1	2,287	74
Jackson	907	225	1,253	251	15	3.0	438	88
Jefferson	59,214	230	140,180	454	324	1.0	31,910	103
Jessamine	3,279	268	5,874	377	41	2.6	1,401	90
Johnson	2,032	194	2,852	231	30	2.4	1,040	84
Kenton	17,095	300	28,245	416	44	0.6	7,198	106
Knott	1,424	157	1,706	167	31	3.0	700	69

Table 7. Accident Rates by County for State-Maintained System and All Roads (1994-1998)(continued)

	STATE-MAINTAINED		ALL ROADS					
			TOTAL ACCIDENTS		FATAL ACCIDENTS		FATAL OR INJURY ACCIDENTS	
COUNTY	TOTAL ACCIDENTS	ACCIDENT RATE*	NUMBER	RATE*	NUMBER	RATE*	NUMBER	RATE*
Knox	1,998	163	3,545	250	35	2.5	1,303	92
Larue	943	122	1,613	180	19	2.1	450	50
Laurel	5,638	185	7,647	221	63	1.8	2,595	75
Lawrence	1,009	118	1,365	141	26	2.7	527	54
Lee	398	155	532	169	13	4.1	182	58
Leslie	888	143	1,106	158	42	6.0	566	81
Letcher	2,369	211	2,891	219	29	2.2	1,051	80
Lewis	1,122	191	1,480	214	25	3.6	504	73
Lincoln	1,449	156	1,911	175	35	3.2	732	67
Livingston	903	156	1,065	161	10	1.5	378	57
Logan	2,547	230	3,452	261	26	2.0	1,076	81
Lyon	994	105	1,222	122	17	1.7	415	41
McCracken	7,310	238	14,586	403	61	1.7	3,897	108
McCreary	1,099	193	1,346	199	25	3.7	476	70
McLean	923	196	1,075	189	17	3.0	312	55
Madison	8,462	237	12,227	304	77	1.9	3,475	86
Magoffin	1,110	184	1,351	196	20	2.9	654	95
Marion	1,748	256	2,427	295	22	2.7	756	92
Marshall	2,565	129**	3,825	166	45	2.0	1,203	52
Martin	1,299	181	1,496	185	13	1.6	634	78
Mason	2,518	276	4,004	382	22	2.1	920	88
Meade	1,856	195	2,452	214	24	2.1	717	63
Menifee	425	210	505	201	6	2.4	182	73
Mercer	2,085	264	3,194	329	11	1.1	900	93
Metcalfe	760	151	1,044	179	12	2.1	265	46
Monroe	451	104	722	136	16	3.0	214	40
Montgomery	2,290	213	3,693	289	37	2.9	881	69
Morgan	1,244	231	1,488	235	18	2.8	559	88
Muhlenberg	3,510	221	4,824	259	44	2.4	1,542	83
Nelson	2,655	155	5,175	257	43	2.1	1,571	78
Nicholas	449	178	682	220	6	1.9	188	61
Ohio	2,245	152	2,820	169	30	1.8	988	59
Oldham	3,617	201	4,479	209	19	0.9	1,170	55
Owen	899	260	1,155	271	10	2.3	390	91
Owsley	240	144	310	155	9	4.5	107	54
Pendleton	1,366	324	1,918	357	17	3.2	559	104
Perry	3,509	244	5,157	305	40	2.4	1,769	105
Pike	8,306	247	11,529	292	103	2.6	4,870	124
Powell	1,103	138	1,760	196	21	2.3	552	62
Pulaski	6,028	255	8,329	289	56	1.9	2,511	87
Robertson	42	64	58	68	1	1.2	25	29
Rockcastle	1,675	91	2,072	106	29	1.5	791	40
Rowan	3,061	263	3,826	290	20	1.5	1,023	77
Russell	1,285	182	1,621	196	11	1.3	480	58
Scott	3,901	144	6,139	208	42	1.4	1,663	56
Shelby	3,699	162	5,084	200	50	2.0	1,512	59
Simpson	1,196	88	2,571	173	22	1.5	646	43
Spencer	719	221	913	223	13	3.2	282	69
Taylor	2,229	269	3,578	348	23	2.2	742	72
Todd	1,019	230	1,305	243	20	3.7	398	74
Trigg	1,220	162	1,618	190	23	2.7	585	69
Trimble	813	286	966	279	6	1.7	294	85
Union	1,823	250	2,356	275	20	2.3	788	92
Warren	10,215	217	19,805	365	81	1.5	6,033	111
Washington	1,028	191	1,478	234	23	3.6	373	59
Wayne	1,281	192	2,128	261	25	3.1	632	77
Webster	1,269	147	1,909	193	12	1.2	600	61
Whitley	2,459	104	5,011	189	55	2.1	1,672	63
Wolfe	772	150	1,011	177	18	3.2	331	58
Woodford	2,051	166	3,535	248	29	2.0	971	68
STATEWIDE	379,847	209	646,107	301	3,742	1.7	179,809	84

* Accidents per 100 million vehicle-miles (ACC/100 MVM)

** Only 1995 through 1998 data available

Table 8. COUNTY POPULATIONS (1990 CENSUS) IN DESCENDING ORDER

COUNTY	POPULATION	COUNTY	POPULATION	COUNTY	POPULATION
Jefferson	664,937	Meade	24,170	Fleming	12,292
Fayette	225,366	Scott	23,867	Pendleton	12,036
Kenton	142,031	Johnson	23,248	Jackson	11,955
Hardin	89,240	Clay	21,746	Powell	11,686
Daviess	87,189	Taylor	21,146	Larue	11,679
Campbell	83,866	Ohio	21,105	Morgan	11,648
Warren	76,673	Grayson	21,050	Garrard	11,579
Pike	72,583	Rowan	20,353	Monroe	11,401
Christian	68,941	Lincoln	20,045	Butler	11,245
McCracken	62,879	Woodford	19,955	Todd	10,940
Boone	57,589	Montgomery	19,561	Washington	10,441
Madison	57,508	Bourbon	19,236	Green	10,371
Boyd	51,150	Mercer	19,148	Trigg	10,361
Pulaski	49,489	Knott	17,906	Edmonson	10,357
Bullitt	47,567	Wayne	17,468	Bath	9,692
Hopkins	46,126	Mason	16,666	McLean	9,628
Franklin	43,781	Union	16,557	Carroll	9,292
Floyd	43,586	Marion	16,499	Crittenden	9,196
Laurel	43,438	Breckinridge	16,312	Clinton	9,135
Henderson	43,044	Harrison	16,248	Livingston	9,062
Greenup	36,742	Grant	15,737	Owen	9,035
Harlan	36,574	Breathitt	15,703	Metcalfe	8,963
Barren	34,001	McCreary	15,603	Fulton	8,271
Graves	33,550	Adair	15,360	Ballard	7,902
Whitley	33,326	Simpson	15,145	Hancock	7,864
Oldham	33,263	Hart	14,890	Bracken	7,766
Bell	31,506	Rockcastle	14,803	Lee	7,422
Muhlenberg	31,318	Russell	14,716	Spencer	6,801
Calloway	30,735	Allen	14,628	Cumberland	6,784
Jessamine	30,508	Estill	14,614	Nicholas	6,725
Perry	30,283	Anderson	14,571	Lyon	6,624
Nelson	29,710	Casey	14,211	Wolfe	6,503
Knox	29,676	Lawrence	13,998	Elliott	6,455
Clark	29,496	Webster	13,955	Trimble	6,090
Marshall	27,205	Leslie	13,642	Hickman	5,566
Letcher	27,000	Caldwell	13,232	Gallatin	5,393
Boyle	25,641	Magoffin	13,077	Carlisle	5,238
Shelby	24,824	Lewis	13,029	Menifee	5,092
Logan	24,416	Henry	12,823	Owsley	5,036
Carter	24,340	Martin	12,526	Robertson	2,124

TOTAL 3,685,278

Table 9. AVERAGE AND CRITICAL ACCIDENT RATES BY POPULATION CATEGORY (1994-1998 DATA)

POPULATION CATEGORY	NUMBER OF COUNTIES IN CATEGORY	TOTAL POPULATION	TOTAL MILEAGE DRIVEN 100 MVM
UNDER 10,000	26	187,659	119.69
10,000 - 14,999	29	366,706	228.97
15,000 - 24,999	28	543,414	342.06
25,000 - 50,000	24	847,565	496.07
OVER 50,000	13	1,739,952	886.78

POPULATION CATEGORY	TOTAL NUMBER OF ACCIDENTS	ACCIDENTS PER 100 MVM	CRITICAL ACCIDENT RATE (ACC/100 MVM)	NUMBER OF COUNTIES AT OR ABOVE CRITICAL RATE
UNDER 10,000	23,044	193	230	8
10,000 - 14,999	45,096	197	226	11
15,000 - 24,999	82,306	241	266	11
25,000 - 50,000	130,777	264	284	7
OVER 50,000	364,884	411	426	4

POPULATION CATEGORY	TOTAL NUMBER OF FATAL ACCIDENTS	FATAL ACCIDENTS PER 100 MVM	CRITICAL FATAL RATE (ACC/100 MVM)	NUMBER OF COUNTIES AT OR ABOVE CRITICAL RATE
UNDER 10,000	305	2.55	7.38	0
10,000 - 14,999	611	2.67	6.33	0
15,000 - 24,999	788	2.30	5.01	0
25,000 - 50,000	960	1.94	3.82	0
OVER 50,000	1,078	1.22	2.02	1

POPULATION CATEGORY	TOTAL NUMBER OF FATAL OR INJURY ACCIDENTS	FATAL OR INJURY ACCIDENTS PER 100 MVM	CRITICAL FATAL OR INJURY ACCIDENT RATE (ACC/100 MVM)	NUMBER OF COUNTIES AT OR ABOVE CRITICAL RATE
UNDER 10,000	7,192	60.1	81.4	5
10,000 - 14,999	15,094	65.9	82.9	8
15,000 - 24,999	25,064	73.3	87.6	6
25,000 - 50,000	40,025	80.7	92.2	7
OVER 50,000	92,434	104.2	111.4	4

TABLE 10. ACCIDENT RATES BY COUNTY AND POPULATION CATEGORY (IN DESCENDING ORDER WITH CRITICAL RATES IDENTIFIED)(1994-1998 DATA)(ALL ROADS)

COUNTY	NUMBER OF ACCIDENTS	ACCIDENT RATE (ACCIDENTS PER 100 MVM)	
POPULATION CATEGORY UNDER 10,000			
Bracken	1,186	309	*
Trimble	966	292	*
Fulton	1,096	288	*
Owen	1,155	284	*
Crittenden	1,075	256	*
Elliott	493	240	*
Spencer	913	236	*
Ballard	1,086	235	*
Nicholas	682	230	
Menifee	505	212	
Carroll	2,115	208	
Bath	1,541	199	
McLean	1,075	196	
Hancock	878	191	
Metcalfe	1,044	185	
Wolfe	1,011	182	
Lee	532	177	
Livingston	1,065	166	
Owsley	310	162	
Clinton	697	154	
Hickman	490	145	
Cumberland	507	139	
Gallatin	1,112	125	
Lyon	1,222	123	
Carlisle	230	78	
Robertson	58	72	
POPULATION CATEGORY 10,000-14,999			
Pendleton	1,918	376	*
Estill	1,894	323	*
Allen	2,046	311	*
Green	1,331	298	*
Jackson	1,253	263	*
Todd	1,305	253	*
Morgan	1,488	243	*
Washington	1,478	242	*
Garrard	1,515	240	*
Anderson	2,145	238	*
Fleming	1,453	236	*
Lewis	1,480	222	
Caldwell	1,921	221	
Edmonson	1,116	217	
Magoffin	1,351	202	
Powell	1,760	202	
Webster	1,909	199	
Russell	1,621	199	
Trigg	1,618	196	
Martin	1,496	190	
Larue	1,613	185	
Butler	1,312	171	
Leslie	1,106	163	
Henry	1,937	150	
Lawrence	1,365	145	
Monroe	722	142	
Casey	808	128	
Hart	2,063	119	
Rockcastle	2,072	108	
POPULATION CATEGORY 15,000-24,999			
Harrison	2,717	456	*
Mason	4,004	395	*
Taylor	3,578	364	*
Bourbon	3,379	346	*
Mercer	3,194	344	*
Marion	2,427	307	*
Montgomery	3,693	300	*
Rowan	3,826	298	*
Union	2,356	285	*
Logan	3,452	272	*
Wayne	2,128	272	*
Woodford	3,535	257	
Adair	2,195	255	
Breathitt	1,993	242	
Johnson	2,852	240	
Meade	2,452	223	
Scott	6,139	212	
McCreary	1,346	207	
Shelby	5,084	205	
Grant	4,060	198	
Carter	3,415	196	
Lincoln	1,911	182	
Simpson	2,571	177	
Clay	1,955	177	
Breckinridge	1,301	176	
Ohio	2,820	173	
Knott	1,706	172	
Grayson	2,217	159	
POPULATION CATEGORY 25,000-50,000			
Boyle	4,691	416	*
Jessamine	5,874	398	*
Henderson	9,653	361	*
Perry	5,157	316	*
Franklin	7,677	306	*
Pulaski	8,329	302	*
Barren	6,309	292	*
Hopkins	8,287	277	
Bell	3,816	271	
Clark	5,684	271	
Muhlenberg	4,824	269	
Nelson	5,175	267	
Greenup	4,091	266	
Graves	5,006	264	
Knox	3,545	258	
Harlan	4,013	255	
Laurel	7,647	228	
Letcher	2,891	227	
Floyd	5,420	225	
Calloway	2,809	220	
Oldham	4,479	217	
Whitley	5,011	194	
Bullitt	6,564	189	
Marshall	3,825	171	
POPULATION CATEGORY OVER 50,000			
Fayette	58,729	555	*
Jefferson	140,180	472	*
Boyd	10,160	434	*
Kenton	28,245	433	*
McCracken	14,586	419	
Campbell	13,843	383	
Warren	19,805	377	
Daviess	16,965	342	
Madison	12,227	313	
Pike	11,529	303	
Boone	15,540	279	
Christian	9,698	276	
Hardin	13,377	246	

* Critical accident rate

TABLE 11. ACCIDENT RATES BY COUNTY AND POPULATION CATEGORY (IN DESCENDING ORDER WITH CRITICAL RATES IDENTIFIED)(1994-1998 DATA)(STATE-MAINTAINED SYSTEM)

COUNTY	NUMBER OF ACCIDENTS	ACCIDENT RATE (ACCIDENTS PER 100 MVM)	
POPULATION CATEGORY UNDER 10,000			
Trimble	813	286	*
Owen	899	260	*
Bracken	824	247	*
Elliott	421	238	*
Crittenden	831	231	*
Spencer	719	221	*
Menifee	425	210	*
Ballard	828	205	*
McLean	923	196	
Fulton	646	193	
Nicholas	449	178	
Carroll	1,584	168	
Bath	1,184	167	
Hancock	656	163	
Livingston	903	156	
Lee	398	155	
Metcalfe	760	151	
Wolfe	772	150	
Owsley	240	144	
Hickman	424	141	
Clinton	499	127	
Gallatin	960	114	
Cumberland	356	112	
Lyon	994	105	
Carlisle	184	72	
Robertson	42	64	
POPULATION CATEGORY 10,000-14,999			
Pendleton	1,366	324	*
Estill	1,460	297	*
Green	967	255	*
Morgan	1,244	231	*
Todd	1,019	230	*
Allen	1,281	229	*
Jackson	907	225	*
Fleming	1,081	209	*
Garrard	1,121	204	*
Anderson	1,538	196	*
Washington	1,028	191	*
Lewis	1,122	191	*
Edmonson	849	191	*
Magoffin	1,110	184	
Russell	1,285	182	
Martin	1,299	181	
Caldwell	1,282	166	
Trigg	1,220	162	
Butler	1,048	153	
Webster	1,269	147	
Leslie	888	143	
Powell	1,103	138	
Henry	1,614	135	
Larue	943	122	
Lawrence	1,009	118	
Casey	597	111	
Monroe	451	104	
Rockcastle	1,675	91	
Hart	1,222	75	
POPULATION CATEGORY 15,000-24,999			
Harrison	1,853	381	*
Mason	2,518	276	*
Taylor	2,229	269	*
Mercer	2,085	264	*
Rowan	3,061	263	*
Marion	1,748	256	*
Union	1,823	250	*
Logan	2,547	230	*
Bourbon	1,925	225	*
Adair	1,644	219	*
Montgomery	2,290	213	
Breathitt	1,572	212	
Meade	1,856	195	
Johnson	2,032	194	
McCreary	1,099	193	
Wayne	1,281	192	
Breckinridge	1,110	181	
Woodford	2,051	166	
Carter	2,606	166	
Grant	3,103	162	
Shelby	3,699	162	
Knott	1,424	157	
Lincoln	1,449	156	
Clay	1,557	156	
Ohio	2,245	152	
Grayson	1,858	151	
Scott	3,901	144	
Simpson	1,196	88	
POPULATION CATEGORY 25,000-50,000			
Boyle	3,088	321	*
Jessamine	3,279	268	*
Franklin	5,826	266	*
Pulaski	6,028	255	*
Perry	3,509	244	*
Harlan	3,167	228	*
Muhlenberg	3,510	221	*
Greenup	2,888	220	*
Letcher	2,369	211	
Hopkins	5,435	203	
Floyd	4,390	201	
Oldham	3,617	201	
Graves	3,289	200	
Henderson	4,644	196	
Laurel	5,638	185	
Calloway	1,979	185	
Clark	3,049	163	
Knox	1,998	163	
Bell	2,072	161	
Nelson	2,655	155	
Barren	2,862	150	
Bullitt	4,431	144	
Marshall	2,565	129	**
Whitley	2,459	104	
POPULATION CATEGORY OVER 50,000			
Fayette	30,385	331	*
Kenton	17,095	300	*
Daviess	8,451	291	*
Campbell	7,701	248	
Pike	8,306	247	
Boone	12,066	239	
McCracken	7,310	238	
Madison	8,462	237	
Boyd	4,820	237	
Jefferson	59,214	230	
Warren	10,215	217	
Christian	5,721	179	
Hardin	6,860	141	

* Critical accident rate

** Only 1995 through 1997 data available for this county

TABLE 12. INJURY OR FATAL ACCIDENT RATES BY COUNTY AND POPULATION CATEGORY (IN DESCENDING ORDER WITH CRITICAL RATES IDENTIFIED) (1994-1998 DATA)(ALL ROADS)

COUNTY	NUMBER OF ACCIDENTS	ACCIDENT RATE (ACCIDENTS PER 100 MVM)	
POPULATION CATEGORY UNDER 10,000			
Owen	390	96	*
Elliott	195	95	*
Trimble	294	89	*
Bracken	335	87	*
Crittenden	359	85	*
Fulton	294	77	
Menifee	182	76	
Spencer	282	73	
Ballard	329	71	
Hancock	321	70	
Nicholas	188	64	
Bath	473	61	
Lee	182	61	
Livingston	378	59	
Wolfe	331	59	
McLean	312	57	
Carroll	571	56	
Owsley	107	56	
Hickman	165	49	
Metcalfe	265	47	
Gallatin	399	45	
Lyon	415	42	
Clinton	174	38	
Cumberland	138	38	
Robertson	25	31	
Carlisle	88	30	
POPULATION CATEGORY 10,000-14,999			
Pendleton	559	110	*
Estill	592	101	*
Magoffin	654	98	*
Allen	628	95	*
Green	410	92	*
Jackson	438	92	*
Morgan	559	91	*
Leslie	566	83	*
Martin	634	80	
Anderson	724	80	
Edmonson	401	78	
Fleming	471	77	
Todd	398	77	
Lewis	504	76	
Garrard	463	73	
Trigg	585	71	
Powell	552	63	
Webster	600	62	
Washington	373	61	
Butler	467	61	
Caldwell	522	60	
Russell	480	59	
Lawrence	527	56	
Larue	450	52	
Henry	617	48	
Casey	292	46	
Monroe	214	42	
Rockcastle	791	41	
Hart	623	36	
POPULATION CATEGORY 15,000-24,999			
Harrison	677	114	*
Breathitt	820	100	*
Mercer	900	97	*
Marion	756	96	*
Union	788	95	*
Mason	920	91	*
Johnson	1,040	87	
Logan	1,076	85	
Bourbon	825	84	
Wayne	632	81	
Rowan	1,023	80	
Adair	659	76	
Taylor	742	76	
Clay	820	74	
McCreary	476	73	
Montgomery	881	72	
Woodford	971	71	
Breckinridge	522	71	
Lincoln	732	70	
Grayson	982	70	
Knott	700	70	
Grant	1,419	69	
Carter	1,177	68	
Meade	717	65	
Ohio	988	61	
Shelby	1,512	61	
Scott	1,663	57	
Simpson	646	44	
POPULATION CATEGORY 25,000-50,000			
Perry	1,769	108	*
Henderson	2,836	106	*
Boyle	1,187	105	*
Floyd	2,385	99	*
Knox	1,303	95	*
Jessamine	1,401	95	*
Barren	2,017	93	*
Pulaski	2,511	91	
Harlan	1,348	86	
Muhlenberg	1,542	86	
Bell	1,194	85	
Graves	1,580	83	
Greenup	1,255	82	
Letcher	1,051	82	
Nelson	1,571	81	
Laurel	2,595	77	
Hopkins	2,287	76	
Franklin	1,818	73	
Calloway	926	72	
Whitley	1,672	65	
Clark	1,303	62	
Bullitt	2,101	61	
Oldham	1,170	57	
Marshall	1,203	54	
POPULATION CATEGORY OVER 50,000			
Pike	4,870	128	*
Fayette	13,330	126	*
Warren	6,033	115	*
McCracken	3,897	112	*
Kenton	7,198	110	
Boyd	2,553	109	
Jefferson	31,910	107	
Madison	3,475	89	
Campbell	3,176	88	
Daviess	4,330	87	
Christian	3,074	87	
Boone	4,520	81	
Hardin	4,068	75	

* Critical accident rate

TABLE 13. FATAL ACCIDENT RATES BY COUNTY AND POPULATION CATEGORY (IN DESCENDING ORDER WITH CRITICAL RATES IDENTIFIED)(1994-1998 DATA)(ALL ROADS)

COUNTY	NUMBER OF ACCIDENTS	ACCIDENT RATE (ACCIDENTS PER 100 MVM)
POPULATION CATEGORY UNDER 10,000		
Crittenden	25	6.0
Owsley	9	4.7
Lee	13	4.3
Bracken	16	4.2
Elliott	8	3.9
Cumberland	13	3.6
Spencer	13	3.4
Fulton	12	3.2
Wolfe	18	3.2
McLean	17	3.1
Clinton	14	3.1
Hickman	9	2.7
Owen	10	2.5
Menifee	6	2.5
Hancock	11	2.4
Carlisle	7	2.4
Ballard	10	2.2
Metcalfe	12	2.1
Bath	16	2.1
Nicholas	6	2.0
Trimble	6	1.8
Lyon	17	1.7
Carroll	17	1.7
Livingston	10	1.6
Robertson	1	1.2
Gallatin	9	1.0
POPULATION CATEGORY 10,000-14,999		
Leslie	42	6.2
Allen	29	4.4
Todd	20	3.9
Washington	23	3.8
Casey	24	3.8
Lewis	25	3.7
Fleming	22	3.6
Pendleton	17	3.3
Garrard	21	3.3
Jackson	15	3.1
Monroe	16	3.1
Magoffin	20	3.0
Butler	23	3.0
Green	13	2.9
Morgan	18	2.9
Anderson	25	2.8
Lawrence	26	2.8
Trigg	23	2.8
Powell	21	2.4
Estill	14	2.4
Larue	19	2.2
Caldwell	18	2.1
Hart	36	2.1
Edmonson	11	2.1
Henry	25	1.9
Martin	13	1.6
Rockcastle	29	1.5
Russell	11	1.3
Webster	12	1.2
POPULATION CATEGORY 15,000-24,999		
Bourbon	44	4.5
McCreary	25	3.9
Clay	38	3.4
Lincoln	35	3.3
Wayne	25	3.2
Knott	31	3.1
Breathitt	25	3.0
Montgomery	37	3.0
Harrison	18	3.0
Marion	22	2.8
Breckinridge	21	2.8
Grayson	36	2.6
Johnson	30	2.5
Union	20	2.4
Adair	20	2.3
Taylor	23	2.3
Carter	38	2.2
Mason	22	2.2
Meade	24	2.2
Logan	26	2.1
Woodford	29	2.1
Shelby	50	2.0
Ohio	30	1.8
Rowan	20	1.6
Scott	42	1.5
Simpson	22	1.5
Mercer	11	1.2
Grant	24	1.2
POPULATION CATEGORY 25,000-50,000		
Jessamine	41	2.8
Boyle	30	2.7
Knox	35	2.6
Floyd	61	2.5
Perry	40	2.4
Muhlenberg	44	2.4
Letcher	29	2.3
Barren	49	2.3
Nelson	43	2.2
Harlan	35	2.2
Graves	41	2.2
Whitley	55	2.1
Pulaski	56	2.0
Bell	28	2.0
Greenup	30	2.0
Calloway	26	2.0
Marshall	45	2.0
Laurel	63	1.9
Clark	38	1.8
Henderson	40	1.5
Bullitt	51	1.5
Franklin	27	1.1
Hopkins	34	1.1
Oldham	19	0.9
POPULATION CATEGORY OVER 50,000		
Pike	103	2.7 *
Madison	77	2.0
McCracken	61	1.8
Warren	81	1.5
Christian	51	1.5
Fayette	120	1.1
Daviess	55	1.1
Jefferson	324	1.1
Hardin	57	1.0
Boone	57	1.0
Campbell	32	0.9
Kenton	44	0.7
Boyd	16	0.7

* Critical accident rate

TABLE 14. MISCELLANEOUS ACCIDENT DATA FOR EACH COUNTY

COUNTY	NUMBER OF ACCIDENTS BY YEAR 1994	1995	1996	1997	1998	1994-1997 AVERAGE	1998 PERCENT CHANGE*	PERCENT OF ACCIDENTS INVOLVING ALCOHOL	PERCENT OF ACCIDENTS INVOLVING DRUGS	PERCENT FATAL ACCIDENTS	PERCENT INJURY OR FATAL ACCIDENTS	PERCENT OF DRIVERS USING SAFETY BELTS	PERCENT OF ACCIDENTS INVOLVING SPEEDING
Adair	439	431	432	452	441	439	0.6	4.5	0.4	0.91	30.0	69.6	6.1
Allen	434	392	377	399	444	401	10.9	5.5	0.5	1.42	30.7	78.0	6.6
Anderson	367	418	434	484	442	426	3.8	6.6	0.2	1.17	33.8	80.6	10.5
Ballard	196	218	217	229	226	215	5.1	6.8	0.6	0.92	30.3	80.8	10.4
Barren	1,143	1,182	1,262	1,394	1,328	1,245	6.6	4.2	0.3	0.78	32.0	79.4	6.8
Bath	254	307	367	308	305	309	-1.3	6.0	0.3	1.04	30.7	79.8	11.0
Bell	894	786	758	778	600	804	-25.4	5.1	1.5	0.73	31.3	82.6	8.7
Boone	3,029	2,724	3,290	3,160	3,337	3,051	9.4	3.5	0.2	0.37	29.1	89.1	8.1
Bourbon	635	658	653	716	717	666	7.7	5.9	0.6	1.30	24.4	80.9	10.5
Boyd	2,009	1,960	2,122	2,060	2,009	2,038	-1.4	3.1	0.4	0.16	25.1	87.4	7.8
Boyle	957	927	891	951	965	932	3.6	3.2	0.2	0.64	25.3	88.0	7.1
Bracken	227	206	253	250	250	234	6.8	4.7	0.2	1.35	28.2	74.6	7.8
Breathitt	343	395	421	405	429	391	9.7	6.1	1.0	1.25	41.1	81.5	9.3
Breckinridge	259	233	225	343	241	265	-9.1	5.1	0.2	1.61	40.1	81.1	6.8
Bullitt	1,362	1,331	1,341	1,235	1,295	1,317	-1.7	5.8	0.4	0.78	32.0	85.6	6.2
Butler	275	279	249	249	260	263	-1.1	5.6	0.8	1.75	35.6	80.5	7.2
Caldwell	382	406	414	374	345	394	-12.4	4.4	0.4	0.94	27.2	82.5	9.6
Calloway	310	907	683	501	408	600	-32.0	5.2	0.2	0.93	33.0	81.4	5.9
Campbell	2,712	2,791	2,949	2,717	2,674	2,792	-4.2	4.9	0.3	0.23	22.9	87.7	5.9
Carlisle	26	36	42	38	88	36	147.9	5.7	0.4	3.04	38.3	86.1	11.7
Carroll	403	445	405	461	401	429	-6.4	6.5	0.4	0.80	27.0	80.1	11.1
Carter	598	643	710	723	741	669	10.8	5.7	0.5	1.11	34.5	80.5	12.7
Casey	147	104	119	269	169	160	5.8	10.3	1.1	2.97	36.1	68.9	12.5
Christian	1,826	1,866	2,052	2,066	1,888	1,953	-3.3	5.0	0.2	0.53	31.7	89.6	9.9
Clark	1,032	1,053	1,222	1,215	1,162	1,131	2.8	5.0	0.5	0.67	22.9	86.8	7.1
Clay	283	360	391	443	478	369	29.5	5.8	1.3	1.94	41.9	78.7	10.0
Clinton	132	153	134	136	142	139	2.3	4.9	0.7	2.01	25.0	70.7	4.0
Crittenden	208	198	225	193	251	206	21.8	6.7	1.0	2.33	33.4	77.2	8.1
Cumberland	106	113	96	127	65	111	-41.2	4.9	0.0	2.56	27.2	69.3	4.9
Daviess	3,299	3,313	3,508	3,403	3,442	3,381	1.8	4.2	0.4	0.32	25.5	87.4	5.5
Edmonson	227	240	194	235	220	224	-1.8	4.8	0.5	0.99	35.9	82.6	14.7
Elliott	79	122	90	84	118	94	25.9	12.2	0.6	1.62	39.6	75.7	20.3
Estill	312	376	347	423	436	365	19.6	7.1	0.5	0.74	31.3	78.6	14.1
Fayette	10,579	11,337	11,884	12,710	12,219	11,628	5.1	4.0	0.3	0.20	22.7	94.2	5.1
Fleming	278	266	306	305	298	289	3.2	5.8	0.3	1.51	32.4	76.7	8.7
Floyd	1,098	1,114	1,043	1,079	1,086	1,084	0.2	6.8	1.0	1.13	44.0	83.8	14.1
Franklin	1,523	1,475	1,627	1,563	1,489	1,547	-3.7	4.5	0.3	0.35	23.7	86.5	10.5
Fulton	227	217	228	203	221	219	1.0	5.7	0.4	1.09	26.8	75.2	4.6
Gallatin	178	240	249	215	230	221	4.3	6.3	0.4	0.81	35.9	84.4	18.4
Garrard	205	210	274	424	402	278	44.5	5.9	0.4	1.39	30.6	83.0	21.2
Grant	770	819	749	858	864	799	8.1	4.0	0.3	0.59	35.0	84.7	15.8
Graves	962	962	1,031	1,053	998	1,002	-0.4	4.5	0.3	0.82	31.6	85.6	8.3
Grayson	494	416	453	395	459	440	4.4	5.5	0.5	1.62	44.3	78.5	10.6
Green	249	268	244	294	276	264	4.6	5.7	0.1	0.98	30.8	83.2	4.9
Greenup	839	786	871	845	750	835	-10.2	5.6	0.6	0.73	30.7	85.3	9.0
Hancock	169	168	157	189	195	171	14.2	6.5	0.3	1.25	36.6	78.0	7.7
Hardin	2,583	2,629	2,838	2,769	2,558	2,705	-5.4	3.2	0.2	0.43	30.4	91.2	6.7
Harlan	826	863	755	806	763	813	-6.1	5.7	0.7	0.87	33.6	81.6	14.8
Harrison	553	526	522	572	544	543	0.1	4.5	0.3	0.66	24.9	82.6	5.4
Hart	466	433	407	329	428	409	4.7	4.2	0.3	1.75	30.2	87.7	6.5
Henderson	1,906	1,921	1,971	1,897	1,958	1,924	1.8	3.7	0.2	0.41	29.4	89.9	7.0
Henry	407	392	371	398	369	392	-5.9	7.9	0.4	1.29	31.9	78.1	17.9
Hickman	100	94	78	122	96	99	-2.5	8.8	0.8	1.84	33.7	79.7	10.6
Hopkins	1,622	1,626	1,593	1,697	1,749	1,635	7.0	3.1	0.3	0.41	27.6	89.6	10.4
Jackson	246	238	234	262	273	245	11.4	7.0	1.6	1.20	35.0	79.8	14.0
Jefferson	27,619	28,586	31,122	29,609	23,244	29,234	-20.5	3.6	0.1	0.23	22.8	91.8	3.5
Jessamine	1,028	1,076	1,316	1,266	1,188	1,172	1.4	5.1	0.3	0.70	23.9	87.2	7.7
Johnson	577	626	578	510	561	573	-2.1	6.6	1.5	1.05	36.5	82.6	8.9
Kenton	5,891	5,576	5,817	5,539	5,422	5,706	-5.0	5.0	0.3	0.16	25.5	88.3	7.2
Knott	357	314	346	324	365	335	8.9	7.2	0.7	1.82	41.0	83.7	10.7
Knox	647	697	694	769	738	702	5.2	5.5	1.6	0.99	36.8	80.8	15.6

TABLE 14. MISCELLANEOUS ACCIDENT DATA FOR EACH COUNTY (continued)

COUNTY	NUMBER OF ACCIDENTS BY YEAR 1994	1995	1996	1997	1998	1994-1997 AVERAGE	1998 PERCENT CHANGE*	PERCENT OF ACCIDENTS INVOLVING ALCOHOL	PERCENT OF ACCIDENTS INVOLVING DRUGS	PERCENT FATAL ACCIDENTS	PERCENT INJURY OR FATAL ACCIDENTS	PERCENT OF DRIVERS USING SAFETY BELTS	PERCENT OF ACCIDENTS INVOLVING SPEEDING
Larue	290	319	325	321	358	314	14.1	4.8	0.1	1.18	27.9	80.8	9.4
Laurel	1,309	1,409	1,595	1,665	1,669	1,495	11.7	3.9	1.0	0.82	33.9	86.9	9.0
Lawrence	277	261	235	282	310	264	17.5	6.4	0.6	1.90	38.6	78.2	11.2
Lee	106	99	82	129	116	104	11.5	7.0	0.9	2.44	34.2	77.9	15.2
Leslie	193	211	195	265	242	216	12.0	9.8	2.4	3.80	51.2	75.0	16.3
Letcher	564	565	595	577	590	575	2.6	6.1	1.0	1.00	36.4	82.3	10.7
Lewis	271	237	314	332	326	289	13.0	6.7	0.2	1.69	34.1	71.0	9.2
Lincoln	403	353	349	398	408	376	8.6	7.5	0.3	1.83	38.3	75.2	20.7
Livingston	217	238	211	180	219	212	3.5	7.3	1.0	0.94	35.5	83.1	10.0
Logan	679	697	696	712	668	696	-4.0	4.7	0.2	0.75	31.2	80.3	7.3
Lyon	236	241	254	262	229	248	-7.8	4.7	0.4	1.39	34.0	84.3	11.6
McCracken	2,966	3,067	2,989	2,927	2,637	2,987	-11.7	4.3	0.4	0.42	26.7	88.1	5.1
McCreary	252	288	275	271	260	272	-4.2	7.3	0.7	1.86	35.4	81.7	21.0
McLean	198	154	218	272	233	211	10.7	4.9	0.5	1.58	29.0	83.1	12.1
Madison	1,978	2,346	2,667	2,590	2,646	2,395	10.5	5.7	0.4	0.63	28.4	85.7	13.6
Magoffin	235	291	273	297	255	274	-6.9	9.2	1.0	1.48	48.4	80.3	11.7
Marion	468	528	479	480	472	489	-3.4	10.4	0.2	0.91	31.1	75.6	8.7
Marshall	777	736	778	757	777	762	2.0	4.7	0.5	1.18	31.5	83.7	7.9
Martin	358	335	278	222	303	298	1.6	5.7	1.5	0.87	42.4	81.8	12.1
Mason	826	728	824	820	806	800	0.8	4.9	0.2	0.55	23.0	78.9	6.1
Meade	463	478	505	484	522	483	8.2	6.6	0.3	0.98	29.2	86.6	9.1
Menifee	115	80	92	114	104	100	3.7	8.7	0.2	1.19	36.0	71.2	21.2
Mercer	631	600	649	652	662	633	4.6	4.6	0.5	0.34	28.2	82.3	12.7
Metcalfe	210	196	215	232	191	213	-10.4	4.1	0.1	1.15	25.4	72.7	7.0
Monroe	155	98	163	145	161	140	14.8	6.6	0.4	2.22	29.6	58.2	6.8
Montgomery	720	743	798	726	706	747	-5.5	5.4	0.3	1.00	23.9	82.2	7.1
Morgan	254	294	313	317	310	295	5.3	5.2	0.2	1.21	37.6	81.8	16.4
Muhlenberg	902	923	1,026	988	985	960	2.6	3.2	0.5	0.91	32.0	82.6	10.3
Nelson	1,027	980	1,080	1,081	1,007	1,042	-3.4	5.4	0.2	0.83	30.4	86.7	8.8
Nicholas	104	107	133	175	163	130	25.6	10.1	0.7	0.88	27.6	78.4	11.6
Ohio	543	618	576	577	506	579	-12.5	4.6	0.3	1.06	35.0	84.5	9.4
Oldham	923	872	877	892	915	891	2.7	3.3	0.3	0.42	26.1	90.6	8.4
Owen	229	197	230	268	231	231	0.0	6.6	0.1	0.87	33.8	78.7	21.6
Owsley	66	75	59	64	46	66	-30.3	11.3	0.6	2.90	34.5	62.0	10.6
Pendleton	353	373	415	385	392	382	2.8	5.8	0.1	0.89	29.1	81.5	10.8
Perry	1,026	1,027	1,074	1,019	1,011	1,037	-2.5	5.4	0.8	0.78	34.3	85.6	8.4
Pike	2,283	2,381	2,286	2,269	2,310	2,305	0.2	6.0	0.9	0.89	42.2	85.0	21.6
Powell	302	359	406	343	350	353	-0.7	5.5	0.6	1.19	31.4	80.5	9.8
Pulaski	1,504	1,572	1,712	1,753	1,788	1,635	9.3	3.5	0.4	0.67	30.1	85.5	7.7
Robertson	10	11	11	17	9	12	-26.5	13.8	1.7	1.72	43.1	70.4	17.2
Rockcastle	396	368	395	441	472	400	18.0	5.2	0.7	1.40	38.2	76.7	11.0
Rowan	727	749	743	813	794	758	4.7	3.9	0.3	0.52	26.7	85.4	11.4
Russell	323	359	304	338	297	331	-10.3	6.4	0.6	0.68	29.6	77.6	5.6
Scott	1,011	1,179	1,309	1,392	1,248	1,223	2.1	3.7	0.2	0.68	27.1	89.5	8.5
Shelby	876	1,043	1,106	1,036	1,023	1,015	0.8	4.4	0.2	0.98	29.7	86.4	8.7
Simpson	520	472	469	540	570	500	13.9	4.0	0.6	0.86	25.1	81.4	5.6
Spencer	129	183	205	187	209	176	18.8	6.7	0.1	1.42	30.9	79.2	13.4
Taylor	620	720	720	796	722	714	1.1	3.9	0.4	0.64	20.7	78.1	5.3
Todd	242	254	270	269	270	259	4.3	5.6	0.5	1.53	30.5	76.8	12.6
Trigg	297	321	368	320	312	327	-4.4	4.1	0.3	1.42	36.2	86.1	7.7
Trimble	169	174	212	209	202	191	5.8	5.8	0.3	0.62	30.4	81.4	14.9
Union	480	481	485	438	472	471	0.2	6.0	0.3	0.85	33.4	81.1	12.4
Warren	3,710	3,927	3,973	4,125	4,070	3,934	3.5	3.9	0.4	0.41	30.5	89.3	9.8
Washington	274	327	272	293	312	292	7.0	5.7	0.2	1.56	25.2	78.4	9.7
Wayne	404	364	434	461	465	416	11.8	4.4	0.4	1.17	29.7	73.3	7.1
Webster	342	350	394	398	425	371	14.6	4.3	0.5	0.63	31.4	88.0	9.1
Whitley	899	998	1,032	1,053	1,029	996	3.4	4.1	0.6	1.10	33.4	83.3	15.1
Wolfe	183	181	217	248	182	207	-12.2	6.1	0.4	1.78	32.7	83.1	12.1
Woodford	708	668	767	721	671	716	-6.3	6.2	0.3	0.82	27.5	88.4	11.0
STATEWIDE	124,037	127,653	134,558	134,161	125,698	130,102	-3.4	4.5	0.4	0.58	27.8	87.5	7.7

* Percent change in the 1998 accident total from the previous four-year total

TABLE 15. ACCIDENT RATES FOR INCORPORATED CITIES HAVING POPULATION OVER 2,500 (FOR STATE-MAINTAINED SYSTEM AND ALL ROADS FOR 1994-1998 DATA)

		STATE-MAINTAINED SYSTEM		ALL ROADS	
CITY	POPULATION	TOTAL ACCIDENTS	ACCIDENT RATE*	TOTAL ACCIDENTS	ACCIDENT RATE**
Louisville	269,063	23,550	285	78,783	59
Lexington	225,366	11,315	785	58,225	52
Owensboro	53,549	2,183	775	12,105	45
Covington	43,264	5,258	468	11,014	51
Bowling Green	40,641	4,482	677	14,602	72
Hopkinsville	29,809	2,319	340	6,119	41
Paducah	27,256	1,743	338	9,425	69
Frankfort	25,968	2,324	436	4,872	38
Henderson	25,945	1,536	265	6,693	52
Ashland	23,622	1,665	535	6,056	51
Jeffersontown	23,221	335	812	4,525	39
Richmond	21,155	1,243	920	6,168	58
Radcliff	19,772	616	256	3,031	31
Newport	18,871	2,181	689	4,494	48
Florence	18,624	2,524	894	8,128	87
Elizabethtown	18,167	1,895	390	6,095	67
Madisonville	16,200	990	670	4,358	54
Fort Thomas	16,032	118	204	1,170	15
Erlanger	15,979	1,343	1,203	3,821	48
Saint Matthews	15,800	663	809	4,660	59
Winchester	15,799	917	399	3,496	44
Shively	15,535	680	983	4,845	62
Murray	14,439	455	255	1,013	14
Nicholasville	13,603	516	267	3,023	44
Danville	12,420	730	643	3,483	56
Glasgow	12,351	502	216	3,288	53
Georgetown	11,414	673	567	3,123	55
Middlesboro	11,328	635	310	1,815	32
Somerset	10,733	924	455	4,004	75
Independence	10,444	224	198	1,613	31
Mayfield	9,935	582	656	2,334	47
Campbellsville	9,577	718	464	2,577	54
Berea	9,126	532	525	1,392	31
Paris	8,730	454	310	1,747	40
Morehead	8,357	443	644	1,571	38
Edgewood	8,143	1	35	874	22
Lyndon	8,037	***	***	75	2
Flatwoods	7,799	90	408	676	17
Villa Hills	7,739	***	***	354	9
Franklin	7,607	269	254	1,338	35
Russellville	7,454	737	439	1,717	46
Fort Mitchell	7,438	48	773	1,472	40
Corbin	7,419	449	339	2,150	58
Harrodsburg	7,335	672	828	1,779	49
Versailles	7,269	480	376	1,474	41
Maysville	7,169	610	320	2,559	71
Bellevue	6,997	167	228	1,122	32
Princeton	6,940	319	261	1,087	31
Elsmere	6,847	***	***	837	24
Bardstown	6,801	399	211	2,391	70
Dayton	6,576	***	***	563	17
Fort Wright	6,570	150	1,220	1,942	59
Cynthiana	6,497	509	871	1,335	41
Pikeville	6,324	623	307	2,003	63
Shelbyville	6,238	849	367	1,871	60
Lawrenceburg	5,911	329	474	755	26
London	5,757	865	538	3,048	106
Lebanon	5,695	430	608	1,234	43
Alexandria	5,592	1,225	503	1,302	47
Taylor Mill	5,530	***	***	1,261	46
Williamsburg	5,493	125	92	951	35
Hazard	5,416	144	170	2,230	82
Mount Sterling	5,362	569	379	1,788	67
Monticello	5,357	220	168	1,238	46

TABLE 15. ACCIDENT RATES FOR INCORPORATED CITIES HAVING POPULATION OVER 2,500 (FOR STATE-MAINTAINED SYSTEM AND ALL ROADS FOR 1994-1998 DATA)(continued)

CITY	POPULATION	STATE-MAINTAINED SYSTEM TOTAL ACCIDENTS	STATE-MAINTAINED SYSTEM ACCIDENT RATE*	ALL ROADS TOTAL ACCIDENTS	ALL ROADS ACCIDENT RATE**
Mount Washington	5,226	111	141	930	36
Middletown	5,016	***	***	206	8
Central City	4,979	287	367	1,050	42
Leitchfield	4,965	276	136	349	14
Shepherdsville	4,805	328	442	1,681	70
Ludlow	4,736	17	705	493	21
Greenville	4,689	364	471	905	39
Paintsville	4,354	155	121	1,296	60
Scottsville	4,278	519	645	1,116	52
Highland Heights	4,223	319	178	934	44
Wilmore	4,215	126	582	257	12
Providence	4,123	119	292	354	17
Russell	4,014	85	388	921	46
Benton	3,899	557	282	875	45
Lagrange	3,853	197	491	902	47
Columbia	3,845	463	354	938	49
Morganfield	3,776	328	815	691	37
Carrollton	3,715	151	347	754	41
Barbourville	3,658	227	453	802	44
Vine Grove	3,586	216	407	402	22
Prestonsburg	3,558	271	338	1,236	70
Grayson	3,510	209	565	908	52
Lancaster	3,421	201	810	591	35
Park Hills	3,321	***	***	250	15
Marion	3,320	254	376	519	31
Southgate	3,266	19	63	448	27
Lakeside Park	3,131	291	568	437	28
Dawson Springs	3,129	128	466	307	20
Cumberland	3,112	53	98	283	18
Fulton	3,078	233	317	524	34
Flemingsburg	3,071	85	180	425	28
Williamstown	3,023	30	850	674	45
Graymoor	2,911	***	***	74	5
Beaver Dam	2,904	692	266	560	39
Cold Springs	2,880	322	493	1,026	71
Springfield	2,875	280	425	583	41
Oak Grove	2,863	***	***	1,041	73
Tompkinsville	2,861	100	251	513	36
Irvine	2,836	153	438	651	46
Stanton	2,795	90	219	487	35
Jenkins	2,751	124	253	382	28
Hodgenville	2,721	132	221	677	50
Hickman	2,689	13	45	180	13
Stanford	2,686	64	70	290	22
Harlan	2,686	268	350	848	63
Mount Vernon	2,654	138	331	641	48
Crestview Hills	2,546	***	***	996	78
Hartford	2,532	51	164	160	13
Calvert City	2,531	126	157	334	26

* Accidents per 100 million vehicle-miles.
** Accidents per 1,000 population.
*** No data available.

TABLE 16. MISCELLANEOUS ACCIDENT DATA FOR INCORPORATED CITIES HAVING POPULATION OVER 2,500 (1994-1998 DATA FOR ALL ROADS)

CITY	POPULATION	FATAL ACCIDENTS		PEDESTRIAN MOTOR VEHICLE ACCIDENTS		BICYCLE-RELATED MOTOR VEHICLE ACCIDENTS		MOTORCYCLE ACCIDENTS		PERCENT OF ACCIDENTS INVOLVING SPEEDING	PERCENT OF ACCIDENTS INVOLVING ALCOHOL
		NUMBER	RATE*	NUMBER	RATE*	NUMBER	RATE*	NUMBER	RATE*		
Louisville	269,063	140	1.04	1,381	10.30	744	5.50	357	2.7	2.7	3.3
Lexington	225,366	116	1.03	636	5.60	454	4.00	253	2.2	5.0	4.0
Owensboro	53,549	16	0.60	91	3.40	116	4.30	68	2.5	3.2	3.3
Covington	43,264	9	0.42	313	14.50	123	5.70	37	1.7	5.1	5.4
Bowling Green	40,641	26	1.28	94	4.60	59	2.90	92	4.5	6.5	2.7
Hopkinsville	29,809	10	0.67	68	4.60	40	2.70	29	1.9	8.9	3.9
Paducah	27,256	26	1.91	58	4.30	44	3.20	51	3.7	3.5	3.1
Frankfort	25,968	7	0.54	36	2.80	22	1.70	26	2.0	6.1	3.3
Henderson	25,945	14	1.08	63	4.90	64	4.90	45	3.5	3.7	2.8
Ashland	23,622	3	0.25	55	4.70	41	3.50	39	3.3	5.1	2.0
Jeffersontown	23,221	5	0.43	22	1.90	18	1.60	11	0.9	3.8	2.5
Richmond	21,155	11	1.04	44	4.20	28	2.60	30	2.8	5.1	4.5
Radcliff	19,772	6	0.61	23	2.30	18	1.80	24	2.4	2.3	3.7
Newport	18,871	4	0.42	129	13.70	87	9.20	25	2.6	4.2	5.7
Florence	18,624	14	1.50	54	5.80	38	4.10	32	3.4	5.1	2.5
Elizabethtown	18,167	6	0.66	20	2.20	21	2.30	28	3.1	3.7	1.5
Madisonville	16,200	6	0.74	29	3.60	37	4.60	36	4.4	4.3	1.9
Fort Thomas	16,032	2	0.25	14	1.70	5	0.60	5	0.6	7.3	4.1
Erlanger	15,979	9	1.13	29	3.60	32	4.00	16	2.0	9.1	4.2
Saint Matthews	15,800	5	0.63	27	3.40	15	1.90	9	1.1	2.2	2.1
Winchester	15,799	5	0.63	32	4.10	24	3.00	12	1.5	2.5	3.6
Shively	15,535	11	1.42	46	5.90	35	4.50	23	3.0	3.6	3.9
Murray	14,439	4	0.55	10	1.40	8	1.10	9	1.2	2.1	3.1
Nicholasville	13,603	8	1.18	34	5.00	18	2.60	7	1.0	3.7	4.5
Danville	12,420	12	1.93	30	4.80	16	2.60	20	3.2	4.6	2.0
Glasgow	12,351	5	0.81	18	2.90	24	3.90	15	2.4	2.9	2.3
Georgetown	11,414	9	1.58	19	3.30	14	2.50	17	3.0	4.4	2.3
Middlesboro	11,328	1	0.18	18	3.20	14	2.50	4	0.7	4.2	4.7
Somerset	10,733	10	1.86	19	3.50	9	1.70	13	2.4	5.8	1.6
Independence	10,444	5	0.96	22	4.20	5	1.00	8	1.5	6.0	5.5
Mayfield	9,935	7	1.41	27	5.40	12	2.40	8	1.6	2.2	2.3
Campbellsville	9,577	2	0.42	20	4.20	7	1.50	6	1.3	3.7	2.8
Berea	9,126	4	0.88	11	2.40	11	2.40	5	1.1	4.7	2.9
Paris	8,730	4	0.92	21	4.80	12	2.70	9	2.1	5.1	4.1
Morehead	8,357	3	0.72	13	3.10	8	1.90	4	1.0	3.2	1.8
Edgewood	8,143	0	0.00	3	0.70	7	1.70	1	0.2	4.3	2.7
Lyndon	8,037	0	0.00	0	0.00	0	0.00	0	0.0	0.0	0.0
Flatwoods	7,799	0	0.00	11	2.80	9	2.30	1	0.3	3.7	3.0
Villa Hills	7,739	0	0.00	0	0.00	4	1.00	5	1.3	7.6	5.4
Franklin	7,607	4	1.05	9	2.40	10	2.60	6	1.6	3.2	3.1
Russellville	7,454	2	0.54	13	3.50	10	2.70	19	5.1	5.5	2.4
Fort Mitchell	7,438	1	0.27	12	3.20	6	1.60	10	2.7	7.4	4.1
Corbin	7,419	9	2.43	13	3.50	9	2.40	6	1.6	6.0	2.3
Harrodsburg	7,335	4	1.09	17	4.60	8	2.20	6	1.6	4.1	3.5
Versailles	7,269	2	0.55	20	5.50	7	1.90	10	2.8	4.5	3.4
Maysville	7,169	5	1.39	21	5.90	8	2.20	8	2.2	5.0	2.8
Bellevue	6,997	1	0.29	26	7.40	15	4.30	7	2.0	3.9	3.7
Princeton	6,940	1	0.29	13	3.70	18	5.20	8	2.3	4.2	2.3
Elsmere	6,847	0	0.00	8	2.30	11	3.20	2	0.6	6.2	3.7
Bardstown	6,801	3	0.88	19	5.60	15	4.40	10	2.9	2.5	2.9
Dayton	6,576	0	0.00	29	8.80	10	3.00	3	0.9	4.4	6.0
Fort Wright	6,570	2	0.61	11	3.30	4	1.20	8	2.4	6.8	3.6
Cynthiana	6,497	1	0.31	16	4.90	11	3.40	6	1.8	1.9	2.5
Pikeville	6,324	9	2.85	19	6.00	2	0.60	17	5.4	8.6	4.1
Shelbyville	6,238	9	2.89	16	5.10	9	2.90	9	2.9	4.8	2.6
Lawrenceburg	5,911	1	0.34	7	2.40	4	1.40	8	2.7	2.1	4.1
London	5,757	8	2.78	10	3.50	4	1.40	9	3.1	4.8	2.0
Lebanon	5,695	0	0.00	16	5.60	8	2.80	4	1.4	4.5	3.6
Alexandria	5,592	6	2.15	11	3.90	3	1.10	6	2.1	4.5	3.2
Taylor Mill	5,530	2	0.72	6	2.20	1	0.40	3	1.1	10.1	4.3
Williamsburg	5,493	6	2.18	3	1.10	3	1.10	3	1.1	6.5	2.7
Hazard	5,416	4	1.48	15	5.50	5	1.80	9	3.3	3.4	2.6

TABLE 16. MISCELLANEOUS ACCIDENT DATA FOR INCORPORATED CITIES HAVING POPULATION OVER 2,500 (1994-1998 DATA FOR ALL ROADS)(continued)

CITY	POPULATION	FATAL ACCIDENTS		PEDESTRIAN MOTOR VEHICLE ACCIDENTS		BICYCLE-RELATED MOTOR VEHICLE ACCIDENTS		MOTORCYCLE ACCIDENTS		PERCENT OF ACCIDENTS INVOLVING SPEEDING	PERCENT OF ACCIDENTS INVOLVING ALCOHOL
		NUMBER	RATE*	NUMBER	RATE*	NUMBER	RATE*	NUMBER	RATE*		
Mount Sterling	5,362	10	3.73	18	6.70	4	1.50	5	1.9	3.2	3.6
Monticello	5,357	3	1.12	9	3.40	7	2.60	4	1.5	5.5	2.8
Mount Washington	5,226	0	0.00	6	2.30	1	0.40	3	1.1	4.9	4.5
Middletown	5,016	0	0.00	0	0.00	0	0.00	0	0.0	0.0	0.0
Central City	4,979	7	2.81	8	3.20	4	1.60	5	2.0	4.0	2.5
Leitchfield	4,965	2	0.81	10	4.00	2	0.80	5	2.0	4.9	2.3
Shepherdsville	4,805	14	5.83	11	4.60	1	0.40	9	3.7	4.1	3.6
Ludlow	4,736	0	0.00	13	5.50	12	5.10	3	1.3	1.6	7.9
Greenville	4,689	5	2.13	8	3.40	3	1.30	3	1.3	6.4	1.8
Paintsville	4,354	11	5.05	14	6.40	7	3.20	6	2.8	2.1	2.6
Scottsville	4,278	5	2.34	10	4.70	2	0.90	7	3.3	4.3	3.1
Highland Heights	4,223	1	0.47	4	1.90	6	2.80	3	1.4	7.5	3.3
Wilmore	4,215	0	0.00	2	0.90	2	0.90	3	1.4	8.2	1.2
Providence	4,123	2	0.97	0	0.00	3	1.50	1	0.5	6.5	3.7
Russell	4,014	2	1.00	3	1.50	3	1.50	4	2.0	2.5	2.0
Benton	3,899	1	0.51	3	1.50	2	1.00	3	1.5	4.0	1.9
Lagrange	3,853	2	1.04	10	5.20	5	2.60	0	0.0	4.9	2.3
Columbia	3,845	2	1.04	7	3.60	4	2.10	7	3.6	3.5	2.1
Morganfield	3,776	0	0.00	7	3.70	4	2.10	2	1.1	6.8	2.2
Carrollton	3,715	2	1.08	4	2.20	7	3.80	6	3.2	2.8	5.6
Barbourville	3,658	3	1.64	11	6.00	1	0.50	1	0.5	7.5	2.4
Vine Grove	3,586	1	0.56	1	0.60	1	0.60	1	0.6	10.7	5.0
Prestonsburg	3,558	11	6.18	8	4.50	2	1.10	8	4.5	4.3	3.5
Grayson	3,510	2	1.14	4	2.30	1	0.60	2	1.1	2.9	2.0
Lancaster	3,421	3	1.75	6	3.50	4	2.30	2	1.2	5.2	3.4
Park Hills	3,321	0	0.00	3	1.80	1	0.60	1	0.6	17.2	6.8
Marion	3,320	1	0.60	6	3.60	1	0.60	0	0.0	3.5	2.5
Southgate	3,266	0	0.00	8	4.90	2	1.20	2	1.2	2.5	2.9
Lakeside Park	3,131	0	0.00	2	1.30	1	0.60	1	0.6	6.6	2.7
Dawson Springs	3,129	1	0.64	3	1.90	5	3.20	2	1.3	6.2	4.2
Cumberland	3,112	0	0.00	0	0.00	1	0.60	1	0.6	8.5	3.5
Fulton	3,078	3	1.95	5	3.20	6	3.90	2	1.3	4.8	3.6
Flemingsburg	3,071	2	1.30	9	5.90	0	0.00	2	1.3	3.3	3.8
Williamstown	3,023	4	2.65	4	2.60	2	1.30	4	2.6	9.2	2.4
Graymoor	2,911	0	0.00	0	0.00	0	0.00	0	0.0	0.0	0.0
Beaver Dam	2,904	2	1.38	2	1.40	1	0.70	4	2.8	2.3	3.6
Cold Springs	2,880	1	0.69	6	4.20	2	1.40	4	2.8	4.2	3.6
Springfield	2,875	2	1.39	13	9.00	0	0.00	4	2.8	3.1	3.1
Oak Grove	2,863	0	0.00	0	0.00	0	0.00	0	0.0	0.0	0.0
Tompkinsville	2,861	3	2.10	4	2.80	2	1.40	5	3.5	3.1	3.3
Irvine	2,836	1	0.71	6	4.20	3	2.10	4	2.8	5.7	4.6
Stanton	2,795	3	2.15	3	2.10	2	1.40	2	1.4	3.9	4.1
Jenkins	2,751	2	1.45	6	4.40	0	0.00	2	1.5	5.0	5.0
Hodgenville	2,721	4	2.94	3	2.20	2	1.50	3	2.2	4.9	2.7
Hickman	2,689	0	0.00	2	1.50	4	3.00	0	0.0	3.3	5.0
Stanford	2,686	2	1.49	2	1.50	0	0.00	3	2.2	7.9	4.1
Harlan	2,686	1	0.74	7	5.20	2	1.50	2	1.5	3.7	1.8
Mount Vernon	2,654	2	1.51	6	4.50	1	0.80	1	0.8	4.8	3.0
Crestview Hills	2,546	0	0.00	0	0.00	0	0.00	0	0.0	0.0	0.0
Hartford	2,532	2	1.58	1	0.80	1	0.80	0	0.0	3.8	0.6
Calvert City	2,531	3	2.37	3	2.40	1	0.80	3	2.4	7.5	3.0
STATEWIDE	1,487,023	733	0.99	4,151	5.6	2,552	3.43	1,702	2.3	4.3	3.3

* Accidents Per 10,000 Population

TABLE 17. ACCIDENT RATES ON STATE-MAINTAINED STREETS BY CITY AND POPULATION CATEGORY (1994-1998)

POPULATION CATAGORY	NUMBER OF CITIES	AVERAGE RATE ACC/100 MVM	CITY	NUMBER OF ACCIDENTS (1994-1998)	AVERAGE RATE ACC/100 MVM
OVER 200,000	2	359	Lexington	11,315	785
			Louisville	23,550	285
20,000-55,000	10	475	Richmond	1,243	920
			Jeffersontown	335	812
			Owensboro	2,183	775
			Bowling Green	4,482	677
			Ashland	1,665	535
			Covington	5,258	468
			Frankfort	2,324	436
			Hopkinsville	2,319	340
			Paducah	1,743	338
			Henderson	1,536	265
10,000-19,999	18	491	Erlanger	1,343	1,203
			Shively	680	983
			Florence	2,524	894
			Saint Matthews	663	809
			Newport	2,181	689
			Madisonville	990	670
			Danville	730	643
			Georgetown	673	567
			Somerset	924	455
			Winchester	917	399
			Elizabethtown	1,895	390
			Middlesboro	635	310
			Nicholasville	516	267
			Radcliff	616	256
			Murray	455	255
			Glasgow	502	216
			Fort Thomas	118	204
			Independence	224	198
5,000-9,999	30	385	Fort Wright	150	1,220
			Cynthiana	509	871
			Harrodsburg	672	828
			Fort Mitchell	48	773
			Mayfield	582	656
			Morehead	443	644
			Lebanon	430	608
			London	865	538
			Berea	532	525
			Alexandria	1,225	503
			Lawrenceburg	329	474
			Campbellsville	718	464
			Russellville	737	439
			Flatwoods	90	408
			Mount Sterling	569	379
			Versailles	480	376
			Shelbyville	849	367
			Corbin	449	339
			Maysville	610	320
			Paris	454	310
			Pikeville	623	307
			Princeton	319	261
			Franklin	269	254
			Bellevue	167	228
			Bardstown	399	211
			Hazard	144	170
			Monticello	220	168
			Mount Washington	111	141
			Williamsburg	125	92
			Edgewood	1	35

TABLE 17. ACCIDENT RATES ON STATE-MAINTAINED STREETS BY CITY AND POPULATION CATEGORY (1994-1998)(continued)

POPULATION CATAGORY	NUMBER OF CITIES	AVERAGE RATE ACC/100 MVM	CITY	NUMBER OF ACCIDENTS (1994-1998)	AVERAGE RATE ACC/100 MVM
2,500-4,999	43	310	Williamstown	30	850
			Morganfield	328	815
			Lancaster	201	810
			Ludlow	17	705
			Scottsville	519	645
			Wilmore	126	582
			Lakeside Park	291	568
			Grayson	209	565
			Cold Springs	322	493
			Lagrange	197	491
			Greenville	364	471
			Dawson Springs	128	466
			Barbourville	227	453
			Shepherdsville	328	442
			Irvine	153	438
			Springfield	280	425
			Vine Grove	216	407
			Russell	85	388
			Marion	254	376
			Central City	287	367
			Columbia	463	354
			Harlan	268	350
			Carrollton	151	347
			Prestonsburg	271	338
			Mount Vernon	138	331
			Fulton	233	317
			Providence	119	292
			Benton	557	282
			Beaver Dam	692	266
			Jenkins	124	253
			Tompkinsville	100	251
			Hodgenville	132	221
			Stanton	90	219
			Flemingsburg	85	180
			Highland Heights	319	178
			Hartford	51	164
			Calvert City	126	157
			Leitchfield	276	136
			Paintsville	155	121
			Cumberland	53	98
			Stanford	64	70
			Southgate	19	63
			Hickman	13	45
1,000-2,499	59	228	Dry Ridge	230	723
			Raceland	60	635
			Greensburg	80	632
			Walton	108	516
			Loyall	8	483
			Falmouth	228	482
			Eminence	104	452
			Sturgis	65	414
			Uniontown	24	393
			Owenton	148	385
			Albany	362	385
			Evarts	106	383
			Hardinsburg	61	364
			Livermore	34	354
			Salyersville	98	353
			Brandenburg	225	353
			West Liberty	143	346

TABLE 17. ACCIDENT RATES ON STATE-MAINTAINED STREETS BY CITY AND POPULATION CATEGORY (1994-1998)(continued)

POPULATION CATAGORY	NUMBER OF CITIES	AVERAGE RATE ACC/100 MVM	CITY	NUMBER OF ACCIDENTS (1994-1998)	AVERAGE RATE ACC/100 MVM
1,000-2,499 (cont.)	59	228	Vanceburg	68	329
			Owingsville	83	318
			Junction City	25	305
			Earlington	73	276
			South Shore	655	270
			Edmonton	60	267
			Pineville	94	266
			Louisa	74	256
			Lacenter	51	256
			Manchester	298	250
			Elkton	109	246
			Sebree	36	240
			Clay City	41	239
			Nortonville	41	238
			Jackson	39	237
			Cave City	313	235
			Carlisle	33	222
			Olive Hill	68	214
			Warsaw	36	213
			Russell Springs	296	208
			Lewisport	17	207
			Liberty	107	200
			Cadiz	173	195
			Beattyville	92	189
			Cloverport	63	185
			Clinton	63	185
			Auburn	93	182
			Augusta	478	170
			Morgantown	101	168
			Catlettsburg	197	157
			Eddyville	124	144
			Anchorage	41	139
			Lebanon Junction	11	132
			Horse Cave	48	119
			Jamestown	38	114
			Clay	18	110
			Worthington	3	85
			Burgin	10	80
			Burkesville	35	64
			Whitesburg	8	56
			Munfordville	102	51
			Muldraugh	14	36

TABLE 18. TOTAL ACCIDENT RATES BY CITY AND POPULATION CATEGORY (IN DESCENDING ORDER)
(1994-1998 DATA)(ALL ROADS)

CITY	NUMBER OF ACCIDENTS (1994-1998)	ANNUAL ACCIDENT RATE (ACCIDENTS PER 1000 POPULATION)	
POPULATION CATEGORY OVER 200,000			
Louisville	78,783	58.6	*
Lexington	58,225	51.7	
POPULATION CATEGORY 20,000-55,000			
Bowling Green	14,602	71.9	*
Paducah	9,425	69.2	*
Richmond	6,168	58.3	*
Henderson	6,693	51.6	
Ashland	6,056	51.3	
Covington	11,014	50.9	
Owensboro	12,105	45.2	
Hopkinsville	6,119	41.1	
Jeffersontown	4,525	39.0	
Frankfort	4,872	37.5	
POPULATION CATEGORY 10,000-19,999			
Florence	8,128	87.3	*
Somerset	4,004	74.6	*
Elizabethtown	6,095	67.1	*
Shively	4,845	62.4	*
Saint Matthews	4,660	59.0	*
Danville	3,483	56.1	*
Georgetown	3,123	54.7	*
Madisonville	4,358	53.8	*
Glasgow	3,288	53.2	
Erlanger	3,821	47.8	
Newport	4,494	47.6	
Nicholasville	3,023	44.4	
Winchester	3,496	44.3	
Middlesboro	1,815	32.0	
Independence	1,613	30.9	
Radcliff	3,031	30.7	
Fort Thomas	1,170	14.6	
Murray	1,013	14.0	
POPULATION CATEGORY 5,000-9,999			
London	3,048	105.9	*
Hazard	2,230	82.3	*
Maysville	2,559	71.4	*
Bardstown	2,391	70.3	*
Mount Sterling	1,788	66.7	*
Pikeville	2,003	63.3	*
Shelbyville	1,871	60.0	*
Fort Wright	1,942	59.1	*
Corbin	2,150	58.0	*
Campbellsville	2,577	53.8	*
Harrodsburg	1,779	48.5	*
Mayfield	2,334	47.0	
Alexandria	1,302	46.6	
Monticello	1,238	46.2	
Russellville	1,717	46.1	
Taylor Mill	1,261	45.6	
Lebanon	1,234	43.3	
Cynthiana	1,335	41.1	
Versailles	1,474	40.6	
Paris	1,747	40.0	
Fort Mitchell	1,472	39.6	
Morehead	1,571	37.6	
Mount Washington	930	35.6	
Franklin	1,338	35.2	
Williamsburg	951	34.6	
Bellevue	1,122	32.1	
Princeton	1,087	31.3	
Berea	1,392	30.5	
Lawrenceburg	755	25.5	
Elsmere	837	24.4	
Edgewood	874	21.5	
Flatwoods	676	17.3	
Dayton	563	17.1	
Villa Hills	354	9.1	
Middletown	206	8.2	
Lyndon	75	1.9	

CITY	NUMBER OF ACCIDENTS (1994-1998)	ANNUAL ACCIDENT RATE (ACCIDENTS PER 1000 POPULATION)	
POPULATION CATEGORY 2,500-4,999			
Crestview Hills	996	78.2	*
Oak Grove	1,041	72.7	*
Cold Springs	1,026	71.3	*
Shepherdsville	1,681	70.0	*
Prestonsburg	1,236	69.5	*
Harlan	848	63.1	*
Paintsville	1,296	59.5	*
Scottsville	1,116	52.2	*
Grayson	908	51.7	*
Hodgenville	677	49.8	*
Columbia	938	48.8	*
Mount Vernon	641	48.3	*
Lagrange	902	46.8	
Irvine	651	45.9	
Russell	921	45.9	
Benton	875	44.9	
Williamstown	674	44.6	
Highland Heights	934	44.2	
Barbourville	802	43.8	
Central City	1,050	42.2	
Springfield	583	40.6	
Carrollton	754	40.6	
Beaver Dam	560	38.6	
Greenville	905	38.6	
Morganfield	691	36.6	
Tompkinsville	513	35.9	
Stanton	487	34.8	
Lancaster	591	34.6	
Fulton	524	34.0	
Marion	519	31.3	
Lakeside Park	437	27.9	
Jenkins	382	27.8	
Flemingsburg	425	27.7	
Southgate	448	27.4	
Calvert City	334	26.4	
Vine Grove	402	22.4	
Stanford	290	21.6	
Ludlow	493	20.8	
Dawson Springs	307	19.6	
Cumberland	283	18.2	
Providence	354	17.2	
Park Hills	250	15.1	
Leitchfield	349	14.1	
Hickman	180	13.4	
Hartford	160	12.6	
Wilmore	257	12.2	
Graymoor	74	5.1	

* Critical accident rate

TABLE 19. FATAL ACCIDENT RATES BY CITY AND POPULATION CATEGORY (IN DESCENDING ORDER WITH CRITICAL RATES IDENTIFIED)(1994-1998 DATA)(ALL ROADS)

CITY	NUMBER OF ACCIDENTS (1994-1998)	ANNUAL ACCIDENT RATE (ACCIDENTS PER 10,000 POPULATION)
POPULATION CATEGORY OVER 200,000		
Louisville	140	1.04
Lexington	116	1.03
POPULATION CATEGORY 20,000-55,000		
Paducah	26	1.91
Bowling Green	26	1.28
Henderson	14	1.08
Richmond	11	1.04
Hopkinsville	10	0.67
Owensboro	16	0.60
Frankfort	7	0.54
Jeffersontown	5	0.43
Covington	9	0.42
Ashland	3	0.25
POPULATION CATEGORY 10,000-19,999		
Danville	12	1.93
Somerset	10	1.86
Georgetown	9	1.58
Florence	14	1.50
Shively	11	1.42
Nicholasville	8	1.18
Erlanger	9	1.13
Independence	5	0.96
Glasgow	5	0.81
Madisonville	6	0.74
Elizabethtown	6	0.66
Saint Matthews	5	0.63
Winchester	5	0.63
Radcliff	6	0.61
Murray	4	0.55
Newport	4	0.42
Fort Thomas	2	0.25
Middlesboro	1	0.18
POPULATION CATEGORY 5,000-9,999		
Mount Sterling	10	3.73
Shelbyville	9	2.89
Pikeville	9	2.85
London	8	2.78
Corbin	9	2.43
Williamsburg	6	2.18
Alexandria	6	2.15
Hazard	4	1.48
Mayfield	7	1.41
Maysville	5	1.39
Monticello	3	1.12
Harrodsburg	4	1.09
Franklin	4	1.05
Paris	4	0.92
Berea	4	0.88
Bardstown	3	0.88
Morehead	3	0.72
Taylor Mill	2	0.72
Fort Wright	2	0.61
Versailles	2	0.55
Russellville	2	0.54
Campbellsville	2	0.42
Lawrenceburg	1	0.34
Cynthiana	1	0.31
Bellevue	1	0.29
Princeton	1	0.29
Fort Mitchell	1	0.27
POPULATION CATEGORY 2,500-4,999		
Prestonsburg	11	6.18
Shepherdsville	14	5.83
Paintsville	11	5.05
Hodgenville	4	2.94
Central City	7	2.81
Williamstown	4	2.65
Calvert City	3	2.37
Scottsville	5	2.34
Stanton	3	2.15
Greenville	5	2.13
Tompkinsville	3	2.10
Fulton	3	1.95
Lancaster	3	1.75
Barbourville	3	1.64
Hartford	2	1.58
Mount Vernon	2	1.51
Stanford	2	1.49
Jenkins	2	1.45
Springfield	2	1.39
Beaver Dam	2	1.38
Flemingsburg	2	1.30
Grayson	2	1.14
Carrollton	2	1.08
Lagrange	2	1.04
Columbia	2	1.04
Russell	2	1.00
Providence	2	0.97
Leitchfield	2	0.81
Harlan	1	0.74
Irvine	1	0.71
Cold Springs	1	0.69
Dawson Springs	1	0.64
Marion	1	0.60
Vine Grove	1	0.56
Benton	1	0.51
Highland Heights	1	0.47

* Critical accident rate

TABLE 20. ACCIDENTS INVOLVING ALCOHOL BY COUNTY AND POPULATION CATEGORY
(IN ORDER OF DECREASING PERCENTAGES)

	NUMBER OF ALCOHOL-RELATED ACCIDENTS (1994-1998)			PERCENT OF TOTAL ACCIDENTS INVOLVING ALCOHOL		
COUNTY	ALL	AGES 16-18	AGES 19-20	ALL	AGES 16-18	AGES 19-20
			POPULATION CATEGORY UNDER 10,000			
Robertson	8	0	1	13.8	0.0	12.5
Elliott	60	7	2	12.2	6.4	3.1
Owsley	35	7	4	11.3	12.1	10.5
Nicholas	69	5	5	10.1	3.6	7.7
Hickman	43	3	0	8.8	3.0	0.0
Menifee	44	4	6	8.7	4.2	8.5
Livingston	78	2	2	7.3	1.0	1.9
Lee	37	2	4	7.0	2.5	6.8
Ballard	74	3	8	6.8	1.4	7.8
Crittenden	72	4	4	6.7	1.6	3.6
Spencer	61	3	6	6.7	1.7	5.3
Owen	76	1	7	6.6	0.4	6.2
Carroll	138	11	13	6.5	3.2	7.0
Hancock	57	1	3	6.5	0.6	3.3
Gallatin	70	2	6	6.3	1.5	5.6
Wolfe	62	4	10	6.1	3.1	8.1
Bath	93	8	7	6.0	3.6	3.9
Trimble	56	4	2	5.8	1.9	2.4
Fulton	62	3	3	5.7	1.6	3.1
Carlisle	13	2	2	5.7	5.1	11.8
Cumberland	25	3	2	4.9	2.9	4.0
McLean	53	4	5	4.9	2.0	4.3
Clinton	34	0	1	4.9	0.0	1.3
Bracken	56	7	4	4.7	3.3	4.3
Lyon	57	8	5	4.7	4.7	5.6
Metcalfe	43	0	3	4.1	0.0	3.2
			POPULATION CATEGORY 10,000 - 14,999			
Casey	83	4	6	10.3	2.7	6.5
Leslie	108	5	7	9.8	3.2	5.3
Magoffin	124	16	12	9.2	7.2	8.1
Henry	153	8	16	7.9	2.6	8.7
Estill	134	7	16	7.1	1.8	5.9
Jackson	88	7	12	7.0	3.1	7.8
Lewis	99	14	12	6.7	5.6	7.9
Monroe	48	9	7	6.6	4.8	8.5
Anderson	142	14	16	6.6	3.2	7.9
Lawrence	88	7	9	6.4	3.6	7.2
Russell	103	12	8	6.4	4.0	5.6
Garrard	90	4	8	5.9	1.6	5.5
Pendleton	111	13	6	5.8	3.5	3.1
Fleming	84	4	10	5.8	1.3	5.8
Martin	86	4	11	5.7	1.4	6.3
Green	76	3	5	5.7	1.2	3.5
Washington	84	7	5	5.7	2.0	3.2
Butler	74	8	5	5.6	2.3	3.6
Todd	73	7	4	5.6	2.8	2.8
Powell	97	8	10	5.5	2.4	4.8
Allen	112	9	7	5.5	2.3	3.0
Morgan	77	3	2	5.2	1.2	1.1
Rockcastle	107	9	4	5.2	2.8	1.8
Edmonson	54	3	2	4.8	1.3	1.4
Larue	78	10	6	4.8	2.9	3.0
Caldwell	84	7	3	4.4	1.8	1.7
Webster	83	11	10	4.3	3.0	4.9
Hart	86	10	10	4.2	3.0	5.2
Trigg	67	5	4	4.1	1.8	2.4
			POPULATION CATEGORY 15,000 - 24,999			
Marion	253	27	17	10.4	4.9	5.9
Lincoln	144	13	17	7.5	3.8	8.3
McCreary	98	6	7	7.3	2.3	4.2
Knott	123	5	6	7.2	1.9	3.0
Johnson	189	9	17	6.6	1.8	4.8
Meade	162	14	9	6.6	2.3	3.3
Woodford	220	19	20	6.2	3.1	5.5
Breathitt	121	7	9	6.1	2.2	4.3
Union	142	13	12	6.0	2.3	4.7

TABLE 20. ACCIDENTS INVOLVING ALCOHOL BY COUNTY AND POPULATION CATEGORY
(IN ORDER OF DECREASING PERCENTAGES) (continued)

	NUMBER OF ALCOHOL-RELATED ACCIDENTS (1994-1998)			PERCENT OF TOTAL ACCIDENTS INVOLVING ALCOHOL		
COUNTY	ALL	AGES 16-18	AGES 19-20	ALL	AGES 16-18	AGES 19-20
			POPULATION CATEGORY 15,000 - 24,999 (continued)			
Bourbon	201	13	6	5.9	2.2	1.9
Clay	113	9	7	5.8	2.9	3.2
Carter	196	11	25	5.7	1.8	5.9
Grayson	121	8	7	5.5	1.9	2.8
Montgomery	198	17	22	5.4	2.4	4.8
Breckinridge	67	1	3	5.1	0.3	1.8
Mason	195	17	17	4.9	2.5	4.5
Logan	162	12	11	4.7	1.6	3.0
Ohio	131	9	7	4.6	1.9	2.2
Mercer	148	10	14	4.6	1.5	4.1
Harrison	122	10	14	4.5	1.7	4.9
Adair	98	11	8	4.5	2.4	3.3
Wayne	94	15	11	4.4	3.2	4.3
Shelby	223	11	22	4.4	1.3	4.6
Simpson	104	5	3	4.0	1.0	1.1
Grant	161	8	10	4.0	1.0	2.6
Taylor	141	15	14	3.9	1.9	3.0
Rowan	149	13	16	3.9	2.0	2.6
Scott	230	9	13	3.7	0.9	1.9
			POPULATION CATEGORY 25,000 - 50,000			
Floyd	366	34	27	6.8	3.7	4.4
Letcher	176	11	16	6.1	2.6	4.8
Bullitt	380	19	21	5.8	1.3	2.9
Harlan	229	20	29	5.7	2.7	6.4
Greenup	231	10	20	5.6	1.2	4.4
Knox	196	10	12	5.5	1.5	2.8
Perry	281	17	23	5.4	1.9	3.7
Nelson	281	33	22	5.4	2.8	3.5
Calloway	147	11	15	5.2	1.7	3.7
Jessamine	302	16	22	5.1	1.5	3.1
Bell	196	13	13	5.1	2.3	3.4
Clark	283	24	23	5.0	2.4	3.9
Marshall	181	11	7	4.7	1.2	1.9
Graves	227	17	18	4.5	1.6	3.4
Franklin	347	18	26	4.5	1.6	3.4
Barren	265	20	24	4.2	1.6	3.4
Whitley	205	15	18	4.1	1.6	3.3
Laurel	295	28	15	3.9	2.1	1.7
Henderson	359	21	19	3.7	1.2	2.0
Pulaski	295	24	23	3.5	1.5	2.3
Oldham	150	8	19	3.3	0.7	4.3
Muhlenberg	156	10	12	3.2	1.0	2.2
Boyle	151	8	10	3.2	1.0	2.1
Hopkins	258	23	13	3.1	1.4	1.4
			POPULATION CATEGORY OVER 50,000			
Pike	689	48	44	6.0	2.5	3.4
Madison	696	48	84	5.7	2.5	4.8
Kenton	1415	73	98	5.0	1.5	3.4
Christian	482	24	35	5.0	1.6	3.0
Campbell	673	33	43	4.9	1.4	2.8
McCracken	620	45	39	4.3	1.6	2.4
Daviess	705	58	51	4.2	1.6	2.6
Fayette	2357	107	180	4.0	1.5	2.4
Warren	770	75	61	3.9	2.0	2.0
Jefferson	5099	236	344	3.6	1.2	2.4
Boone	548	37	43	3.5	1.2	2.4
Hardin	434	19	36	3.2	0.8	2.2
Boyd	314	27	22	3.1	1.5	2.0

TABLE 21. ACCIDENTS INVOLVING ALCOHOL BY CITY AND POPULATION CATEGORY(IN ORDER OF DECREASING PRECENTAGES)(1994-1998 DATA)

CITY	NUMBER OF ALCOHOL-RELATED ACCIDENTS	PERCENTAGE OF ACCIDENTS INVOLVING ALCOHOL
POPULATION CATEGORY OVER 200,000		
Lexington	2,331	4.0
Louisville	2,569	3.3
POPULATION CATEGORY 20,000-55,000		
Covington	590	5.4
Richmond	276	4.5
Hopkinsville	237	3.9
Owensboro	404	3.3
Frankfort	162	3.3
Paducah	291	3.1
Henderson	188	2.8
Bowling Green	400	2.7
Jeffersontown	113	2.5
Ashland	122	2.0
POPULATION CATEGORY 10,000-19,999		
Newport	256	5.7
Independence	88	5.5
Middlesboro	86	4.7
Nicholasville	136	4.5
Erlanger	159	4.2
Fort Thomas	48	4.1
Shively	188	3.9
Radcliff	113	3.7
Winchester	125	3.6
Murray	31	3.1
Florence	207	2.5
Georgetown	71	2.3
Glasgow	74	2.3
Saint Matthews	96	2.1
Danville	68	2.0
Madisonville	83	1.9
Somerset	66	1.6
Elizabethtown	91	1.5
POPULATION CATEGORY 5,000-9,999		
Dayton	34	6.0
Villa Hills	19	5.4
Mount Washington	42	4.5
Taylor Mill	54	4.3
Fort Mitchell	60	4.1
Pikeville	83	4.1
Paris	72	4.1
Lawrenceburg	31	4.1
Elsmere	31	3.7
Bellevue	41	3.7
Fort Wright	70	3.6
Mount Sterling	65	3.6
Lebanon	45	3.6
Harrodsburg	62	3.5
Versailles	50	3.4
Alexandria	42	3.2
Franklin	41	3.1
Flatwoods	20	3.0
Berea	41	2.9
Bardstown	69	2.9
Campbellsville	72	2.8
Monticello	35	2.8
Maysville	72	2.8
Edgewood	24	2.7
Williamsburg	26	2.7
Shelbyville	49	2.6
Hazard	57	2.6
Cynthiana	33	2.5
Russellville	42	2.4
Corbin	49	2.3
Mayfield	54	2.3
Princeton	25	2.3
London	60	2.0
Morehead	28	1.8
Lyndon	0	0.0
Middletown	0	0.0
POPULATION CATEGORY 2,500-4,999		
Ludlow	39	7.9
Park Hills	17	6.8
Carrollton	42	5.6
Vine Grove	20	5.0
Jenkins	19	5.0
Hickman	9	5.0
Irvine	30	4.6
Dawson Springs	13	4.2
Stanford	12	4.1
Stanton	20	4.1
Flemingsburg	16	3.8
Providence	13	3.7
Fulton	19	3.6
Shepherdsville	60	3.6
Beaver Dam	20	3.6
Cold Springs	37	3.6
Cumberland	10	3.5
Prestonsburg	43	3.5
Lancaster	20	3.4
Highland Heights	31	3.3
Tompkinsville	17	3.3
Springfield	18	3.1
Scottsville	35	3.1
Mount Vernon	19	3.0
Calvert City	10	3.0
Southgate	13	2.9
Lakeside Park	12	2.7
Hodgenville	18	2.7
Paintsville	34	2.6
Marion	13	2.5
Central City	26	2.5
Barbourville	19	2.4
Williamstown	16	2.4
Lagrange	21	2.3
Leitchfield	8	2.3
Morganfield	15	2.2
Columbia	20	2.1
Grayson	18	2.0
Russell	18	2.0
Benton	17	1.9
Harlan	15	1.8
Greenville	16	1.8
Wilmore	3	1.2
Hartford	1	0.6
Graymoor	0	0.0
Crestview Hills	0	0.0
Oak Grove	0	0.0

TABLE 22. SUMMARY OF ALCOHOL CONVICTIONS BY COUNTY (1994-1998 DATA)

COUNTY	1994	1995	1996	1997	1998	TOTAL ALCOHOL CONVICTIONS (FIVE YEARS)	ANNUAL AVERAGE ALCOHOL CONVICTIONS PER 1,000 LICENSED DRIVERS	ALCOHOL CONVICTIONS PER ALCOHOL-RELATED ACCIDENT
Adair	132	177	158	157	140	764	14.1	7.8
Allen	64	83	96	100	106	449	8.2	4.0
Anderson	106	110	133	137	149	635	9.8	4.5
Ballard	50	72	119	122	86	449	15.0	6.1
Barren	203	226	262	286	248	1,225	9.7	4.6
Bath	80	68	56	69	59	332	9.2	3.6
Bell	391	427	380	444	312	1,954	23.6	10.0
Boone	471	504	481	641	613	2,710	9.9	4.9
Bourbon	161	217	169	161	136	844	12.6	4.2
Boyd	295	285	325	264	339	1,508	8.7	4.8
Boyle	176	147	131	164	130	748	8.2	5.0
Bracken	42	61	58	47	47	255	9.1	4.6
Breathitt	146	140	97	129	119	631	13.7	5.2
Breckinridge	51	66	73	88	100	378	6.1	5.6
Bullitt	335	375	497	475	414	2,096	10.0	5.5
Butler	91	115	94	113	116	529	12.7	7.1
Caldwell	95	104	77	80	71	427	9.1	5.1
Calloway	214	202	297	296	253	1,262	11.2	8.6
Campbell	575	620	615	845	912	3,567	12.2	5.3
Carlisle	32	34	37	31	40	174	8.9	13.4
Carroll	196	214	163	199	152	924	27.9	6.7
Carter	270	250	170	167	177	1,034	12.1	5.3
Casey	90	106	162	190	172	720	15.0	8.7
Christian	466	486	560	753	856	3,121	18.7	6.5
Clark	250	288	281	367	320	1,506	13.5	5.3
Clay	120	149	195	187	235	886	13.8	7.8
Clinton	207	152	110	81	105	655	20.5	19.3
Crittenden	50	51	40	43	49	233	7.2	3.2
Cumberland	54	48	61	58	61	282	12.1	11.3
Daviess	690	633	597	608	664	3,192	10.2	4.5
Edmonson	35	47	52	53	37	224	5.7	4.1
Elliott	34	32	31	44	49	190	9.1	3.2
Estill	102	91	106	130	112	541	10.9	4.0
Fayette	2,218	2,636	2,485	2,443	2,308	12,090	14.3	5.1
Fleming	62	66	65	63	37	293	6.4	3.5
Floyd	344	380	366	320	404	1,814	13.3	5.0
Franklin	353	422	473	431	417	2,096	12.8	6.0
Fulton	90	146	136	115	114	601	24.5	9.7
Gallatin	62	68	55	66	84	335	13.9	4.8
Garrard	73	76	73	78	83	383	8.2	4.3
Grant	301	201	245	249	188	1,184	16.4	7.4
Graves	303	245	255	255	251	1,309	10.5	5.8
Grayson	146	166	142	152	199	805	10.0	6.7
Green	20	20	22	37	35	134	3.5	1.8
Greenup	276	233	273	291	258	1,331	10.2	5.8
Hancock	37	38	32	51	72	230	7.6	4.0
Hardin	579	588	640	615	601	3,023	10.3	7.0
Harlan	386	430	470	484	393	2,163	20.5	9.4
Harrison	94	127	201	164	107	693	11.4	5.7
Hart	106	105	146	109	109	575	10.4	6.7
Henderson	437	427	456	412	358	2,090	13.4	5.8
Henry	136	162	181	193	143	815	16.1	5.3
Hickman	26	42	24	29	40	161	8.5	3.7
Hopkins	368	435	454	416	324	1,997	12.4	7.7
Jackson	116	77	104	123	93	513	12.5	5.8
Jefferson	4,338	4,139	4,191	3,947	3,676	20,291	8.8	4.0
Jessamine	220	263	245	223	206	1,157	9.3	3.8
Johnson	142	163	165	177	146	793	10.2	4.2
Kenton	902	745	905	1,000	929	4,481	9.0	3.2
Knott	113	122	127	162	108	632	12.2	5.1
Knox	268	286	319	342	298	1,513	16.1	7.7
Larue	72	108	75	72	58	385	8.3	4.9
Laurel	540	589	447	501	634	2,711	16.4	9.2
Lawrence	122	145	94	131	126	618	12.4	7.0

TABLE 22. SUMMARY OF ALCOHOL CONVICTIONS BY COUNTY (1994-1998 DATA) (continued)

COUNTY	1994	1995	1996	1997	1998	TOTAL ALCOHOL CONVICTIONS (FIVE YEARS)	ANNUAL AVERAGE ALCOHOL CONVICTIONS PER 1,000 LICENSED DRIVERS	ALCOHOL CONVICTIONS PER ALCOHOL-RELATED ACCIDENT
Lee	42	55	57	72	42	268	11.3	7.2
Leslie	81	89	63	112	59	404	10.0	3.7
Letcher	236	178	138	152	151	855	10.2	4.9
Lewis	103	101	66	112	127	509	11.4	5.1
Lincoln	106	150	128	118	95	597	8.1	4.1
Livingston	71	94	125	128	81	499	14.1	6.4
Logan	210	155	193	173	173	904	10.2	5.6
Lyon	74	102	105	77	68	426	16.4	7.5
McCracken	838	877	771	703	683	3,872	16.5	6.2
McCreary	157	87	129	91	124	588	11.6	6.0
McLean	43	34	48	56	40	221	6.2	4.2
Madison	894	987	741	859	784	4,265	19.8	6.1
Magoffin	144	121	152	113	88	618	14.8	5.0
Marion	129	196	126	163	104	718	12.5	2.8
Marshall	152	124	137	168	223	804	7.2	4.4
Martin	109	98	91	102	79	479	11.8	5.6
Mason	139	159	165	164	135	762	13.2	3.9
Meade	175	226	290	301	272	1,264	16.3	7.8
Menifee	30	21	19	23	25	118	5.9	2.7
Mercer	98	126	183	156	151	714	9.7	4.8
Metcalfe	75	44	40	77	57	293	9.0	6.8
Monroe	36	60	55	61	44	256	6.5	5.3
Montgomery	203	162	155	159	138	817	11.0	4.1
Morgan	70	62	72	107	91	402	10.3	5.2
Muhlenberg	282	269	251	201	181	1,184	10.8	7.6
Nelson	239	218	217	243	233	1,150	9.2	4.1
Nicholas	34	28	46	45	59	212	8.5	3.1
Ohio	118	148	157	166	109	698	9.1	5.3
Oldham	160	110	128	161	147	706	4.8	4.7
Owen	58	47	24	43	50	222	6.7	2.9
Owsley	31	30	32	43	32	168	10.4	4.8
Pendleton	72	81	80	79	93	405	8.6	3.6
Perry	425	472	356	413	288	1,954	19.5	7.0
Pike	544	561	447	656	427	2,635	11.5	3.8
Powell	147	112	97	110	113	579	13.5	6.0
Pulaski	309	362	371	390	366	1,798	9.4	6.1
Robertson	4	1	6	13	7	31	4.2	3.9
Rockcastle	189	183	269	261	200	1,102	21.0	10.3
Rowan	316	301	289	290	251	1,447	22.5	9.7
Russell	175	138	158	177	158	806	14.2	7.8
Scott	143	113	177	242	211	886	8.5	3.9
Shelby	204	225	219	349	271	1,268	12.2	5.7
Simpson	136	133	159	153	193	774	14.1	7.4
Spencer	30	49	46	59	50	234	6.4	3.8
Taylor	177	157	168	214	177	893	11.4	6.3
Todd	32	46	47	104	87	316	8.3	4.3
Trigg	94	109	129	100	123	555	12.8	8.3
Trimble	42	38	23	34	56	193	7.1	3.4
Union	158	158	178	166	133	793	14.8	5.6
Warren	926	862	1,041	1,251	1,109	5,189	18.0	6.7
Washington	56	65	52	50	48	271	7.3	3.2
Wayne	71	73	60	81	85	370	6.0	3.9
Webster	73	54	55	38	65	285	5.8	3.4
Whitley	182	183	149	211	227	952	9.0	4.6
Wolfe	73	65	61	82	68	349	15.1	5.6
Woodford	187	233	180	200	210	1,010	12.3	4.6
TOTAL	29,426	30,162	30,270	32,052	29,839	151,749	11.5	5.2

TABLE 23. ALCOHOL CONVICTION RATES IN DECREASING ORDER (BY COUNTY POPULATION CATEGORIES) (1994-1998)

POPULATION	COUNTY	ANNUAL AVERAGE ALCOHOL CONVICTIONS PER 1,000 LICENSED DRIVERS	COUNTY	ALCOHOL CONVICTIONS PER ALCOHOL-RELATED ACCIDENT
UNDER 10,000	Carroll	27.9	Clinton	19.3
	Fulton	24.5	Carlisle	13.4
	Clinton	20.5	Cumberland	11.3
	Lyon	16.4	Fulton	9.7
	Wolfe	15.1	Lyon	7.5
	Ballard	15.0	Lee	7.2
	Livingston	14.1	Metcalfe	6.8
	Gallatin	13.9	Carroll	6.7
	Mason	13.2	Livingston	6.4
	Cumberland	12.1	Ballard	6.1
	Lee	11.3	Wolfe	5.6
	Owsley	10.4	Owsley	4.8
	Bath	9.2	Gallatin	4.8
	Bracken	9.1	Bracken	4.6
	Elliott	9.1	Hancock	4.0
	Metcalfe	9.0	Mason	3.9
	Carlisle	8.9	Robertson	3.9
	Hickman	8.5	Spencer	3.8
	Nicholas	8.5	Hickman	3.7
	Hancock	7.6	Bath	3.6
	Crittenden	7.2	Trimble	3.4
	Trimble	7.1	Crittenden	3.2
	Owen	6.7	Elliott	3.2
	Spencer	6.4	Nicholas	3.1
	Menifee	5.9	Owen	2.9
	Robertson	4.2	Menifee	2.7
10,000 - 14,999	Rockcastle	21.0	Rockcastle	10.3
	Henry	16.1	Casey	8.7
	Casey	15.0	Trigg	8.3
	Magoffin	14.8	Russell	7.8
	Russell	14.2	Butler	7.1
	Powell	13.5	Lawrence	7.0
	Trigg	12.8	Hart	6.7
	Butler	12.7	McCreary	6.0
	Jackson	12.5	Powell	6.0
	Lawrence	12.4	Jackson	5.8
	McCreary	11.6	Monroe	5.3
	Lewis	11.4	Henry	5.3
	Estill	10.9	Morgan	5.2
	Hart	10.4	Lewis	5.1
	Morgan	10.3	Caldwell	5.1
	Leslie	10.0	Magoffin	5.0
	Anderson	9.8	Larue	4.9
	Caldwell	9.1	Anderson	4.5
	Pendleton	8.6	Todd	4.3
	Todd	8.3	Garrard	4.3
	Larue	8.3	Edmonson	4.1
	Garrard	8.2	Estill	4.0
	Allen	8.2	Allen	4.0
	Washington	7.3	Leslie	3.7
	Monroe	6.5	Pendleton	3.6
	Fleming	6.4	Fleming	3.5
	Webster	5.8	Webster	3.4
	Edmonson	5.7	Washington	3.2
	Green	3.5	Green	1.8
15,000 - 24,999	Rowan	22.5	Rowan	9.7
	Grant	16.4	Clay	7.8
	Meade	16.3	Meade	7.8
	Union	14.8	Adair	7.8
	Adair	14.1	Simpson	7.4
	Simpson	14.1	Grant	7.4
	Clay	13.8	Grayson	6.7
	Breathitt	13.7	Taylor	6.3

TABLE 23. ALCOHOL CONVICTION RATES IN DECREASING ORDER (BY COUNTY POPULATION CATEGORIES) (1994-1998) (continued)

POPULATION	COUNTY	ANNUAL AVERAGE ALCOHOL CONVICTIONS PER 1,000 LICENSED DRIVERS	COUNTY	ALCOHOL CONVICTIONS PER ALCOHOL-RELATED ACCIDENT
15,000 - 24,999 (cont.)	Bourbon	12.6	Shelby	5.7
	Marion	12.5	Harrison	5.7
	Woodford	12.3	Breckinridge	5.6
	Shelby	12.2	Union	5.6
	Knott	12.2	Logan	5.6
	Carter	12.1	Martin	5.6
	Martin	11.8	Ohio	5.3
	Taylor	11.4	Carter	5.3
	Harrison	11.4	Breathitt	5.2
	Montgomery	11.0	Knott	5.1
	Logan	10.2	Mercer	4.8
	Johnson	10.2	Woodford	4.6
	Grayson	10.0	Bourbon	4.2
	Mercer	9.7	Johnson	4.2
	Ohio	9.1	McLean	4.2
	Scott	8.5	Lincoln	4.1
	Lincoln	8.1	Montgomery	4.1
	McLean	6.2	Wayne	3.9
	Breckinridge	6.1	Scott	3.9
	Wayne	6.0	Marion	2.8
25,000 - 49,999	Bell	23.6	Bell	10.0
	Harlan	20.5	Harlan	9.4
	Madison	19.8	Laurel	9.2
	Perry	19.5	Calloway	8.6
	Laurel	16.4	Hopkins	7.7
	Knox	16.1	Knox	7.7
	Clark	13.5	Muhlenberg	7.6
	Henderson	13.4	Perry	7.0
	Floyd	13.3	Madison	6.1
	Franklin	12.8	Pulaski	6.1
	Hopkins	12.4	Franklin	6.0
	Calloway	11.2	Henderson	5.8
	Muhlenberg	10.8	Graves	5.8
	Graves	10.5	Greenup	5.8
	Greenup	10.2	Bullitt	5.5
	Letcher	10.2	Clark	5.3
	Bullitt	10.0	Floyd	5.0
	Barren	9.7	Boyle	5.0
	Pulaski	9.4	Letcher	4.9
	Jessamine	9.3	Oldham	4.7
	Nelson	9.2	Whitley	4.6
	Whitley	9.0	Barren	4.6
	Boyle	8.2	Nelson	4.1
	Oldham	4.8	Jessamine	3.8
OVER 50,000	Christian	18.7	Hardin	7.0
	Warren	18.0	Warren	6.7
	McCracken	16.5	Christian	6.5
	Fayette	14.3	McCracken	6.2
	Campbell	12.2	Campbell	5.3
	Pike	11.5	Fayette	5.1
	Hardin	10.3	Boone	4.9
	Daviess	10.2	Boyd	4.8
	Boone	9.9	Daviess	4.5
	Kenton	9.0	Marshall	4.4
	Jefferson	8.8	Jefferson	4.0
	Boyd	8.7	Pike	3.8
	Marshall	7.2	Kenton	3.2

TABLE 24. PERCENTAGE OF DRIVERS CONVICTED OF DUI ARREST (BY COUNTY) (1995-1997)

COUNTY	TOTAL DUI ARRESTS*	TOTAL DUI CONVICTIONS**	CONVICTION PERCENTAGE
Adair	675	492	72.9
Allen	340	279	82.1
Anderson	490	380	77.6
Ballard	397	313	78.8
Barren	1,014	774	76.3
Bath	240	193	80.4
Bell	1,634	1,251	76.6
Boone	2,085	1,626	78.0
Bourbon	759	547	72.1
Boyd	1,177	874	74.3
Boyle	602	442	73.4
Bracken	192	166	86.5
Breathitt	564	366	64.9
Breckinridge	252	227	90.1
Bullitt	1,863	1,347	72.3
Butler	361	322	89.2
Caldwell	274	261	95.3
Calloway	1,017	795	78.2
Campbell	2,337	2,080	89.0
Carlisle	117	102	87.2
Carroll	737	576	78.2
Carter	752	587	78.1
Casey	584	458	78.4
Christian	2,252	1,799	79.9
Clark	1,117	936	83.8
Clay	1,063	531	50.0
Clinton	527	343	65.1
Crittenden	137	134	97.8
Cumberland	241	167	69.3
Daviess	2,277	1,838	80.7
Edmonson	215	152	70.7
Elliott	158	107	67.7
Estill	459	327	71.2
Fayette	8,184	7,564	92.4
Fleming	205	194	94.6
Floyd	1,831	1,066	58.2
Franklin	1,951	1,326	68.0
Fulton	481	397	82.5
Gallatin	351	189	53.8
Garrard	303	227	74.9
Grant	731	695	95.1
Graves	1,036	755	72.9
Grayson	502	460	91.6
Green	122	79	64.8
Greenup	902	797	88.4
Hancock	142	121	85.2
Hardin	2,077	1,843	88.7
Harlan	1,583	1,384	87.4
Harrison	596	492	82.6
Hart	458	360	78.6
Henderson	1,330	1,295	97.4
Henry	650	536	82.5
Hickman	116	95	81.9
Hopkins	1,461	1,305	89.3
Jackson	458	304	66.4
Jefferson	16,533 ***	12,277	74.3 ***
Jessamine	906	731	80.7
Johnson	827	505	61.1
Kenton	4,069	2,650	65.1
Knott	584	411	70.4
Knox	1,201	947	78.9
Larue	289	255	88.2

TABLE 24. PERCENTAGE OF DRIVERS CONVICTED OF DUI ARREST (BY COUNTY) (1995-1997)
(continued)

COUNTY	TOTAL DUI ARRESTS*	TOTAL DUI CONVICTIONS**	CONVICTION PERCENTAGE
Laurel	1,863	1,537	82.5
Lawrence	599	370	61.8
Lee	261	184	70.5
Leslie	411	264	64.2
Letcher	572	468	81.8
Lewis	302	279	92.4
Lincoln	435	396	91.0
Livingston	413	347	84.0
Logan	686	521	75.9
Lyon	328	284	86.6
McCracken	2,841	2,351	82.8
McCreary	563	307	54.5
McLean	141	138	97.9
Madison	3,397	2,587	76.2
Magoffin	446	386	86.5
Marion	706	485	68.7
Marshall	490	429	87.6
Martin	429	291	67.8
Mason	519	488	94.0
Meade	1,064	817	76.8
Menifee	95	63	66.3
Mercer	541	465	86.0
Metcalfe	254	161	63.4
Monroe	354	176	49.7
Montgomery	552	476	86.2
Morgan	300	241	80.3
Muhlenberg	787	721	91.6
Nelson	779	678	87.0
Nicholas	194	119	61.3
Ohio	572	471	82.3
Oldham	558	399	71.5
Owen	151	114	75.5
Owsley	255	105	41.2
Pendleton	320	240	75.0
Perry	1,663	1,241	74.6
Pike	2,323	1,664	71.6
Powell	429	319	74.4
Pulaski	1,558	1,123	72.1
Robertson	34	20	58.8
Rockcastle	1,055	713	67.6
Rowan	940	880	93.6
Russell	634	473	74.6
Scott	746	532	71.3
Shelby	1,064	793	74.5
Simpson	493	445	90.3
Spencer	193	154	79.8
Taylor	647	539	83.3
Todd	240	197	82.1
Trigg	427	338	79.2
Trimble	145	95	65.5
Union	549	502	91.4
Warren	4,039	3,154	78.1
Washington	207	167	80.7
Wayne	264	214	81.1
Webster	166	147	88.6
Whitley	779	543	69.7
Wolfe	271	208	76.8
Woodford	742	613	82.6
TOTAL	118,574	92,484	78.0

* Obtained from Administrative Office of the Courts (except for Jefferson County)
** Obtained from Division of Driver Licensing of KY Transportation Cabinet
*** Using the lower number of arrests obtained by KSP as a result of their "hierarchy" analysis results in a conviction percentage of 79.6 percent.

TABLE 25. DUI ARREST CONVICTION RATES BY COUNTY AND POPULATION CATEGORY (IN DESCENDING ORDER) (1995-1997)

POPULATION CATEGORY	AVERAGE CONVICTION PERCENTAGE	COUNTY	TOTAL ARRESTS	TOTAL CONVICTIONS	CONVICTION PERCENTAGE
UNDER 10,000	74.5	McLean	141	138	97.9
		Crittenden	137	134	97.8
		Carlisle	117	102	87.2
		Lyon	328	284	86.6
		Bracken	192	166	86.5
		Hancock	142	121	85.2
		Livingston	413	347	84.0
		Fulton	481	397	82.5
		Hickman	116	95	81.9
		Bath	240	193	80.4
		Spencer	193	154	79.8
		Ballard	397	313	78.8
		Carroll	737	576	78.2
		Wolfe	271	208	76.8
		Owen	151	114	75.5
		Lee	261	184	70.5
		Cumberland	241	167	69.3
		Elliott	158	107	67.7
		Menifee	95	63	66.3
		Trimble	145	95	65.5
		Clinton	527	343	65.1
		Metcalfe	254	161	63.4
		Nicholas	194	119	61.3
		Robertson	34	20	58.8
		Gallatin	351	189	53.8
		Owsley	255	105	41.2
10,000-14,999	75.8	Caldwell	274	261	95.3
		Fleming	205	194	94.6
		Lewis	302	279	92.4
		Butler	361	322	89.2
		Webster	166	147	88.6
		Larue	289	255	88.2
		Magoffin	446	386	86.5
		Henry	650	536	82.5
		Todd	240	197	82.1
		Allen	340	279	82.1
		Washington	207	167	80.7
		Morgan	300	241	80.3
		Trigg	427	338	79.2
		Hart	458	360	78.6
		Casey	584	458	78.4
		Anderson	490	380	77.6
		Pendleton	320	240	75.0
		Garrard	303	227	74.9
		Russell	634	473	74.6
		Powell	429	319	74.4
		Estill	459	327	71.2
		Edmonson	215	152	70.7
		Martin	429	291	67.8
		Rockcastle	1055	713	67.6
		Jackson	458	304	66.4
		Green	122	79	64.8
		Leslie	411	264	64.2
		Lawrence	599	370	61.8
		Monroe	354	176	49.7
15,000-24,999	77.5	Grant	731	695	95.1
		Mason	519	488	94.0
		Rowan	940	880	93.6
		Grayson	502	460	91.6
		Union	549	502	91.4
		Lincoln	435	396	91.0

TABLE 25. DUI ARREST CONVICTION RATES BY COUNTY AND POPULATION CATEGORY (IN DESCENDING ORDER) (1995-1997) (continued)

POPULATION CATEGORY	AVERAGE CONVICTION PERCENTAGE	COUNTY	TOTAL ARRESTS	TOTAL CONVICTIONS	CONVICTION PERCENTAGE
15,000-24,999 (continued)		Simpson	493	445	90.3
		Breckinridge	252	227	90.1
		Montgomery	552	476	86.2
		Mercer	541	465	86.0
		Taylor	647	539	83.3
		Woodford	742	613	82.6
		Harrison	596	492	82.6
		Ohio	572	471	82.3
		Wayne	264	214	81.1
		Carter	752	587	78.1
		Meade	1064	817	76.8
		Logan	686	521	75.9
		Shelby	1064	793	74.5
		Adair	675	492	72.9
		Bourbon	759	547	72.1
		Scott	746	532	71.3
		Knott	584	411	70.4
		Marion	706	485	68.7
		Breathitt	564	366	64.9
		Johnson	827	505	61.1
		McCreary	563	307	54.5
		Clay	1063	531	50.0
25,000-50,000	78.2	Henderson	1330	1295	97.4
		Muhlenberg	787	721	91.6
		Hopkins	1461	1305	89.3
		Greenup	902	797	88.4
		Marshall	490	429	87.6
		Harlan	1583	1384	87.4
		Nelson	779	678	87.0
		Clark	1117	936	83.8
		Laurel	1863	1537	82.5
		Letcher	572	468	81.8
		Jessamine	906	731	80.7
		Knox	1201	947	78.9
		Calloway	1017	795	78.2
		Bell	1634	1251	76.6
		Barren	1014	774	76.3
		Perry	1663	1241	74.6
		Boyle	602	442	73.4
		Graves	1036	755	72.9
		Bullitt	1863	1347	72.3
		Pulaski	1558	1123	72.1
		Oldham	558	399	71.5
		Whitley	779	543	69.7
		Franklin	1951	1326	68.0
		Floyd	1831	1066	58.2
OVER 50,000	78.9	Fayette	8184	7564	92.4
		Campbell	2337	2080	89.0
		Hardin	2077	1843	88.7
		McCracken	2841	2351	82.8
		Daviess	2277	1838	80.7
		Christian	2252	1799	79.9
		Warren	4039	3154	78.1
		Boone	2085	1626	78.0
		Madison	3397	2587	76.2
		Jefferson	16533	12277	74.3
		Boyd	1177	874	74.3
		Pike	2323	1664	71.6
		Kenton	4069	2650	65.1

TABLE 26. SUMMARY OF RECKLESS DRIVING CONVICTIONS BY COUNTY (1994-1998 DATA)

COUNTY	RECKLESS DRIVING CONVICTIONS PER CALENDAR YEAR 1994	1995	1996	1997	1998	TOTAL RECKLESS DRIVING CONVICTIONS (FIVE YEARS)	ANNUAL AVERAGE RECKLESS DRIVING CONVICTIONS PER 1,000 LICENSED DRIVERS
Adair	27	33	23	15	21	119	2.2
Allen	8	10	14	22	20	74	1.3
Anderson	18	20	41	17	24	120	1.8
Ballard	19	17	32	17	12	97	3.2
Barren	84	76	97	108	85	450	3.6
Bath	5	11	8	10	1	35	1.0
Bell	33	29	32	49	45	188	2.3
Boone	154	176	137	108	120	695	2.5
Bourbon	36	56	45	31	16	184	2.7
Boyd	70	70	74	59	68	341	2.0
Boyle	35	26	32	30	39	162	1.8
Bracken	26	23	32	20	17	118	4.2
Breathitt	45	26	21	12	11	115	2.5
Breckinridge	12	23	15	29	29	108	1.7
Bullitt	61	90	103	84	94	432	2.1
Butler	11	19	10	12	14	66	1.6
Caldwell	27	32	20	24	31	134	2.9
Calloway	22	30	85	39	40	216	1.9
Campbell	111	118	145	150	155	679	2.3
Carlisle	5	7	19	8	9	48	2.5
Carroll	10	28	19	18	16	91	2.7
Carter	53	50	47	21	42	213	2.5
Casey	16	14	28	25	31	114	2.4
Christian	78	97	115	133	84	507	3.0
Clark	19	26	31	21	16	113	1.0
Clay	20	28	38	29	30	145	2.3
Clinton	26	15	26	36	30	133	4.2
Crittenden	9	6	14	7	14	50	1.5
Cumberland	13	12	14	15	15	69	2.9
Daviess	81	114	88	88	122	493	1.6
Edmonson	7	20	18	16	7	68	1.7
Elliott	8	10	3	3	9	33	1.6
Estill	26	21	21	23	27	118	2.4
Fayette	503	568	626	513	437	2,647	3.1
Fleming	18	20	24	5	13	80	1.7
Floyd	26	17	58	79	77	257	1.9
Franklin	38	46	64	109	141	398	2.4
Fulton	7	12	20	7	12	58	2.4
Gallatin	24	39	23	24	20	130	5.4
Garrard	13	27	20	17	24	101	2.2
Grant	22	25	38	30	32	147	2.0
Graves	48	43	34	40	24	189	1.5
Grayson	26	22	50	34	47	179	2.2
Green	17	9	8	3	20	57	1.5
Greenup	32	56	67	46	59	260	2.0
Hancock	5	0	1	6	15	27	0.9
Hardin	116	162	183	200	179	840	2.9
Harlan	43	74	88	100	64	369	3.5
Harrison	24	40	54	29	29	176	2.9
Hart	15	13	19	19	18	84	1.5
Henderson	46	55	44	65	64	274	1.8
Henry	8	13	9	18	11	59	1.2
Hickman	3	10	4	1	9	27	1.4
Hopkins	51	88	64	76	57	336	2.1
Jackson	10	15	16	5	15	61	1.5
Jefferson	1,358	1,358	1,218	1,353	1,162	6,449	2.8
Jessamine	24	44	33	37	35	173	1.4
Johnson	40	48	33	38	25	184	2.4
Kenton	263	270	326	333	297	1,489	3.0
Knott	22	19	10	3	12	66	1.3
Knox	65	60	78	78	60	341	3.6
Larue	17	19	23	17	16	92	2.0
Laurel	58	73	77	46	51	305	1.8

TABLE 26. SUMMARY OF RECKLESS DRIVING CONVICTIONS BY COUNTY (1994-1998 DATA) (continued)

COUNTY	RECKLESS DRIVING CONVICTIONS PER CALENDAR YEAR 1994	1995	1996	1997	1998	TOTAL RECKLESS DRIVING CONVICTIONS (FIVE YEARS)	ANNUAL AVERAGE RECKLESS DRIVING CONVICTIONS PER 1,000 LICENSED DRIVERS
Lawrence	23	40	23	24	16	126	2.5
Lee	9	23	4	6	8	50	2.1
Leslie	16	23	18	10	6	73	1.8
Letcher	22	22	12	19	15	90	1.1
Lewis	11	21	19	12	15	78	1.7
Lincoln	39	39	38	22	34	172	2.3
Livingston	37	17	27	17	10	108	3.1
Logan	42	37	34	34	41	188	2.1
Lyon	10	18	33	23	19	103	4.0
McCracken	75	97	120	112	91	495	2.1
McCreary	46	29	38	25	26	164	3.2
McLean	9	9	5	13	9	45	1.3
Madison	36	58	83	40	55	272	1.3
Magoffin	23	33	38	23	11	128	3.1
Marion	61	66	79	60	37	303	5.3
Marshall	20	22	30	18	24	114	1.0
Martin	18	15	19	19	4	75	1.8
Mason	16	26	24	21	31	118	2.0
Meade	34	42	54	63	66	259	3.3
Menifee	3	6	3	8	7	27	1.3
Mercer	14	24	32	33	20	123	1.7
Metcalfe	23	11	13	21	22	90	2.8
Monroe	19	27	14	22	25	107	2.7
Montgomery	24	32	18	23	25	122	1.6
Morgan	8	7	20	14	18	67	1.7
Muhlenberg	46	39	57	39	34	215	2.0
Nelson	64	72	56	63	51	306	2.4
Nicholas	16	14	31	20	14	95	3.8
Ohio	21	26	18	23	27	115	1.5
Oldham	14	16	12	13	12	67	0.5
Owen	11	6	6	11	7	41	1.2
Owsley	9	15	10	9	10	53	3.3
Pendleton	40	24	30	21	24	139	3.0
Perry	68	57	45	40	39	249	2.5
Pike	78	117	112	115	84	506	2.2
Powell	10	17	14	16	13	70	1.6
Pulaski	90	85	86	98	120	479	2.5
Robertson	6	6	8	5	1	26	3.5
Rockcastle	34	27	56	41	43	201	3.8
Rowan	41	62	59	34	33	229	3.6
Russell	26	16	12	16	7	77	1.4
Scott	37	44	58	76	57	272	2.6
Shelby	20	12	21	22	40	115	1.1
Simpson	22	14	15	9	15	75	1.4
Spencer	6	5	3	0	9	23	0.6
Taylor	45	39	54	33	40	211	2.7
Todd	8	9	9	17	15	58	1.5
Trigg	17	32	39	23	23	134	3.1
Trimble	1	6	3	3	1	14	0.5
Union	35	19	22	15	15	106	2.0
Warren	130	123	167	210	191	821	2.8
Washington	18	9	11	14	10	62	1.7
Wayne	22	22	26	10	25	105	1.7
Webster	5	12	8	14	19	58	1.2
Whitley	27	42	34	45	54	202	1.9
Wolfe	6	5	18	12	13	54	2.3
Woodford	50	43	31	25	38	187	2.3
TOTAL	5,778	6,357	6,688	6,384	6,038	31,245	2.4

TABLE 27. PERCENTAGE OF ACCIDENTS INVOLVING DRUGS BY COUNTY AND POPULATION CATEGORY (IN ORDER OF DECREASING PERCENTAGES) (1994-1998 DATA)(ALL ROADS)

COUNTY	NUMBER OF ACCIDENTS	PERCENT OF TOTAL ACCIDENTS
POPULATION CATEGORY UNDER 10,000		
Robertson	1	1.7
Livingston	11	1.0
Crittenden	11	1.0
Lee	5	0.9
Hickman	4	0.8
Clinton	5	0.7
Nicholas	5	0.7
Owsley	2	0.6
Ballard	7	0.6
Elliott	3	0.6
McLean	5	0.5
Fulton	4	0.4
Carlisle	1	0.4
Gallatin	4	0.4
Carroll	9	0.4
Wolfe	4	0.4
Lyon	5	0.4
Hancock	3	0.3
Bath	4	0.3
Trimble	3	0.3
Bracken	2	0.2
Menifee	1	0.2
Spencer	1	0.1
Metcalfe	1	0.1
Owen	1	0.1
Cumberland	0	0.0
POPULATION CATEGORY 10,000-14,999		
Leslie	27	2.4
Jackson	20	1.6
Martin	23	1.5
Casey	9	1.1
Magoffin	14	1.0
Butler	11	0.8
Rockcastle	15	0.7
Lawrence	8	0.6
Russell	9	0.6
Powell	10	0.6
Allen	10	0.5
Estill	10	0.5
Webster	9	0.5
Edmonson	6	0.5
Todd	7	0.5
Henry	7	0.4
Garrard	6	0.4
Monroe	3	0.4
Caldwell	7	0.4
Hart	7	0.3
Fleming	5	0.3
Trigg	5	0.3
Morgan	3	0.2
Anderson	4	0.2
Washington	3	0.2
Lewis	3	0.2
Larue	1	0.1
Green	1	0.1
Pendleton	2	0.1
POPULATION CATEGORY 15,000-24,999		
Johnson	44	1.5
Clay	25	1.3
Breathitt	20	1.0
Knott	12	0.7
McCreary	9	0.7
Simpson	15	0.6
Bourbon	19	0.6
Carter	16	0.5
Mercer	17	0.5
Grayson	10	0.5
Adair	9	0.4
Taylor	14	0.4
Wayne	8	0.4
Woodford	9	0.3
Lincoln	6	0.3
Rowan	13	0.3
Meade	8	0.3
Ohio	8	0.3
Harrison	9	0.3
Union	7	0.3
Montgomery	10	0.3
Grant	11	0.3
Marion	4	0.2
Breckinridge	2	0.2
Mason	10	0.2
Scott	10	0.2
Logan	8	0.2
Shelby	8	0.2
POPULATION CATEGORY 25,000-50,000		
Knox	58	1.6
Bell	59	1.5
Letcher	30	1.0
Floyd	54	1.0
Laurel	78	1.0
Perry	40	0.8
Harlan	29	0.7
Greenup	24	0.6
Whitley	29	0.6
Marshall	18	0.5
Muhlenberg	25	0.5
Clark	28	0.5
Bullitt	23	0.4
Pulaski	30	0.4
Oldham	14	0.3
Graves	17	0.3
Jessamine	19	0.3
Hopkins	21	0.3
Barren	17	0.3
Franklin	21	0.3
Calloway	6	0.2
Henderson	22	0.2
Nelson	9	0.2
Boyle	11	0.2
POPULATION CATEGORY OVER 50,000		
Pike	99	0.9
Warren	74	0.4
Boyd	45	0.4
Daviess	68	0.4
Madison	47	0.4
McCracken	61	0.4
Fayette	162	0.3
Campbell	37	0.3
Kenton	97	0.3
Christian	20	0.2
Boone	37	0.2
Hardin	29	0.2
Jefferson	188	0.1

TABLE 28. PERCENTAGE OF ACCIDENTS INVOLVING DRUGS BY CITY AND POPULATION CATEGORY (IN ORDER OF DECREASING PERCENTAGES)(1994-1998 DATA)

CITY	NUMBER OF DRUG-RELATED ACCIDENTS	PERCENTAGE OF ACCIDENTS INVOLVING DRUGS
POPULATION CATEGORY OVER 200,000		
Lexington	160	0.3
Louisville	93	0.1
POPULATION CATEGORY 20,000-55,000		
Richmond	22	0.4
Covington	44	0.4
Bowling Green	47	0.3
Owensboro	40	0.3
Ashland	17	0.3
Paducah	30	0.3
Hopkinsville	11	0.2
Frankfort	10	0.2
Henderson	15	0.2
Jeffersontown	3	0.1
POPULATION CATEGORY 10,000-19,999		
Middlesboro	32	1.8
Winchester	21	0.6
Newport	16	0.4
Nicholasville	11	0.4
Madisonville	12	0.3
Fort Thomas	4	0.3
Erlanger	10	0.3
Radcliff	9	0.3
Somerset	13	0.3
Danville	6	0.2
Shively	8	0.2
Florence	17	0.2
Glasgow	8	0.2
Murray	1	0.1
Georgetown	3	0.1
Independence	1	0.1
Elizabethtown	3	0.0
Saint Matthews	0	0.0
POPULATION CATEGORY 5,000-9,999		
Williamsburg	12	1.3
London	20	0.7
Elsmere	5	0.6
Harrodsburg	11	0.6
Corbin	10	0.5
Fort Mitchell	7	0.5
Fort Wright	9	0.5
Franklin	7	0.5
Hazard	9	0.4
Paris	7	0.4
Pikeville	9	0.4
Russellville	5	0.3
Flatwoods	2	0.3
Morehead	4	0.3
Berea	4	0.3
Monticello	4	0.3
Mount Washington	3	0.3
Edgewood	3	0.3
Campbellsville	8	0.3
Maysville	8	0.3
Princeton	3	0.3
Bardstown	5	0.2
Mount Sterling	3	0.2
Bellevue	2	0.2
Cynthiana	3	0.2
Shelbyville	3	0.2
Taylor Mill	3	0.2
Lebanon	2	0.2
Alexandria	3	0.2
Versailles	2	0.1
Mayfield	2	0.1
Lawrenceburg	0	0.0
Dayton	0	0.0
Villa Hills	0	0.0
Lyndon	0	0.0
Middletown	0	0.0
POPULATION CATEGORY 2,500-4,999		
Barbourville	13	1.6
Jenkins	5	1.3
Paintsville	15	1.2
Ludlow	5	1.0
Leitchfield	3	0.9
Prestonsburg	11	0.9
Providence	3	0.8
Cumberland	2	0.7
Flemingsburg	3	0.7
Fulton	3	0.6
Williamstown	4	0.6
Mount Vernon	4	0.6
Beaver Dam	3	0.5
Irvine	3	0.5
Highland Heights	4	0.4
Carrollton	3	0.4
Greenville	4	0.4
Central City	4	0.4
Scottsville	5	0.4
Grayson	4	0.4
Harlan	3	0.4
Tompkinsville	2	0.4
Stanford	1	0.3
Springfield	2	0.3
Dawson Springs	1	0.3
Lagrange	3	0.3
Russell	3	0.3
Marion	1	0.2
Lancaster	1	0.2
Vine Grove	1	0.2
Benton	2	0.2
Shepherdsville	4	0.2
Morganfield	1	0.1
Columbia	1	0.1
Cold Springs	0	0.0
Park Hills	0	0.0
Wilmore	0	0.0
Stanton	0	0.0
Lakeside Park	0	0.0
Hodgenville	0	0.0
Hickman	0	0.0
Southgate	0	0.0
Hartford	0	0.0
Calvert City	0	0.0
Oak Grove	0	0.0
Graymoor	0	0.0
Crestview Hills	0	0.0

TABLE 29. SAFETY BELT USAGE (DRIVERS OF PASSENGER CARS INVOLVED IN ACCIDENTS BY COUNTY AND POPULATION CATEGORY) (IN DESCENDING ORDER)(1994-1998)

COUNTY	PERCENT SEAT BELT USAGE	
POPULATION CATEGORY UNDER 10,000		
Carlisle	86.1	
Gallatin	84.4	
Lyon	84.3	
McLean	83.1	*
Wolfe	83.1	
Livingston	83.1	
Trimble	81.4	
Ballard	80.8	
Carroll	80.1	
Bath	79.8	
Hickman	79.7	
Spencer	79.2	
Owen	78.7	*
Nicholas	78.4	
Hancock	78.0	
Lee	77.9	
Crittenden	77.2	
Elliott	75.7	
Fulton	75.2	
Bracken	74.6	
Metcalfe	72.7	
Menifee	71.2	
Clinton	70.7	
Robertson	70.4	
Cumberland	69.3	
Owsley	62.0	
POPULATION CATEGORY 10,000-14,999		
Webster	88.0	
Hart	87.7	
Trigg	86.1	
Green	83.2	
Garrard	83.0	
Edmonson	82.6	
Caldwell	82.5	
Martin	81.8	
Morgan	81.8	
Pendleton	81.5	
Larue	80.8	
Anderson	80.6	
Butler	80.5	
Powell	80.5	
Magoffin	80.3	
Jackson	79.8	
Estill	78.6	
Washington	78.4	
Lawrence	78.2	
Henry	78.1	
Allen	78.0	
Russell	77.6	
Todd	76.8	
Rockcastle	76.7	
Fleming	76.7	
Leslie	75.0	
Lewis	71.0	*
Casey	68.9	
Monroe	58.2	
POPULATION CATEGORY 15,000-24,999		
Scott	89.5	
Woodford	88.4	
Meade	86.6	
Shelby	86.4	
Rowan	85.4	
Grant	84.7	
Ohio	84.5	
Knott	83.7	
Harrison	82.6	
Johnson	82.6	
Mercer	82.3	
Montgomery	82.2	
McCreary	81.7	
Breathitt	81.5	
Simpson	81.4	*
Union	81.1	
Breckinridge	81.1	
Bourbon	80.9	
Carter	80.5	
Logan	80.3	
Mason	78.9	
Clay	78.7	
Grayson	78.5	
Taylor	78.1	
Marion	75.6	
Lincoln	75.2	
Wayne	73.3	*
Adair	69.6	*
POPULATION CATEGORY 25,000-50,000		
Oldham	90.6	
Henderson	89.9	
Hopkins	89.6	
Boyle	88.0	
Jessamine	87.2	
Laurel	86.9	
Clark	86.8	
Nelson	86.7	*
Franklin	86.5	*
Bullitt	85.6	
Perry	85.6	*
Graves	85.6	
Pulaski	85.5	
Greenup	85.3	
Floyd	83.8	
Marshall	83.7	
Whitley	83.3	
Muhlenberg	82.6	*
Bell	82.6	
Letcher	82.3	
Harlan	81.6	
Calloway	81.4	*
Knox	80.8	*
Barren	79.4	
POPULATION CATEGORY OVER 50,000		
Fayette	94.2	
Jefferson	91.8	
Hardin	91.2	
Christian	89.6	
Warren	89.3	
Boone	89.1	
Kenton	88.3	
McCracken	88.1	
Campbell	87.7	*
Daviess	87.4	
Boyd	87.4	*
Madison	85.7	*
Pike	85.0	*

* Counties with potential for intensive promotional campaigns. Selected based on safety belt usage, accident rates, location in state (one in each KSP post) and dates of past campaign recommendations.

TABLE 30. CHANGE IN SAFETY BELT USAGE FOR 1994-1998 (PASSENGER CAR DRIVERS INVOLVED IN ACCIDENTS) BY POPULATION CATEGORY

	PERCENT USAGE					
	POPULATION CATEGORY					
YEAR	UNDER 10,000-	10,000- 14,999-	15,000- 24,999-	25,000- 50,000-	OVER 50,000-	ALL
1994	62.6	62.6	66.7	71.9	85.7	78.4
1995	79.5	81.7	83.8	87.3	90.7	88.2
1996	83.2	83.2	85.6	89.0	91.9	89.8
1997	82.8	84.5	86.9	89.2	92.3	90.2
1998	83.7	85.3	87.0	89.9	92.7	90.6
All	79.3	80.5	82.8	86.2	90.8	87.7

TABLE 31. ACCIDENT SEVERITY VERSUS SAFETY BELT USAGE (ALL DRIVERS)*

	NOT WEARING SAFETY BELT		WEARING SAFETY BELT			
TYPE OF INJURY	NUMBER	PERCENT	NUMBER	PERCENT	PERCENT REDUCTION	
Fatal	1,820	0.73	567	0.07	90	**
Incapacitating	12,732	5.09	14,617	1.79	65	**
Non-Incapacitating	21,534	8.61	34,857	4.28	50	**
Possible Injury	22,258	8.90	56,364	6.92	22	**
Fatal or Incapacitating	14,552	5.82	15,184	1.86	68	**

* Based on 1994 through 1998 accident data. Total sample size for not wearing a safety belt was 250,037 compared to 814,565 for wearing a safety belt

** Statistically significant reduction (probability of 0.99).

TABLE 32. CHANGE IN SEVERITY OF INJURIES BY YEAR (1994-1998 DATA)

Type of Injury	PERCENTAGE DRIVERS SUSTAINING A GIVEN INJURY				
	1994	1995	1996	1997	1998
			NOT WEARING SAFETY BELT		
Fatal	0.80	1.46	1.59	1.62	2.16
Incapacitating	5.52	8.30	8.03	8.19	9.72
Non-Incapacitating	9.29	13.06	13.47	14.42	15.72
Possible Injury	9.60	10.64	10.78	10.84	11.25
			WEARING SAFETY BELT		
Fatal	0.07	0.07	0.07	0.07	0.12
Incapacitating	1.87	1.88	1.74	1.69	1.74
Non-Incapacitating	4.32	4.48	4.57	4.65	4.83
Possible Injury	7.24	7.34	7.12	7.29	6.03

TABLE 33. POTENTIAL REDUCTION IN TRAFFIC ACCIDENT FATALITIES AND ACCIDENT SAVINGS FROM INCREASE IN DRIVER SAFETY BELT USAGE*

DRIVER USAGE RATE (PERCENT)	POTENTIAL ANNUAL REDUCTION IN NUMBER OF		ANNUAL ACCIDENT SAVINGS (MILLION $) FROM REDUCTION IN		
	FATALITIES	SERIOUS INJURIES**	FATALITIES	SERIOUS INJURIES	TOTAL
60	81	273	63.0	10.6	73.6
70	128	826	192.0	32.2	224.2
80	213	1,380	319.5	53.8	373.1
90	298	1,934	447.0	75.4	522.4
100	383	2,488	574.5	97.0	671.5

* Based on increase from the 55 percent usage rate determined from the 1994-1998 surveys, the precent reductions in Table 31, and accident cost estimates recommended by the Federal Highway Administration (30). These costs are $1,500,000 for a fatality and $39,000 for an incapacitating injury. The actual number of fatalties and incapacitation injuries for 1994 - 1998 were used along with the average usage rate over this time period.

** Serious injuries were defined as those listed as incapacitating on the accident report.

TABLE 34. USAGE AND EFFECTIVENESS OF CHILD SAFETY SEATS (1994-1998 ACCIDENT DATA FOR CHILDREN AGE THREE AND UNDER)

			RESTRAINT USED		
VARIABLE	CATAGORY	NONE	SAFETY BELT	CHILD SEAT	ANY RESTRAINT
Number	Fatal	24	6	25	31
With	Incapacitating	253	272	194	466
Given	Non-Incapacitating	542	619	783	1,402
Injury	Possible Injury	655	1,721	1,506	3,227
	None Detected	3,586	17,326	22,766	40,092
Percent	Fatal	0.47	0.03	0.10	0.07
With	Incapacitating	5.00	1.36	0.77	1.03
Given	Non-Incapacitating	10.71	3.10	3.10	3.10
Injury	Possible Injury	12.94	8.63	5.96	7.14
	None Detected	70.87	86.87	90.08	88.66
Percent	Middle Front	22.12	46.46	31.42	77.88
Usage	Right Front	14.82	55.70	29.48	85.18
By Seat	Left Rear	4.98	31.84	63.18	95.02
Position	Middle Rear	6.02	23.26	70.73	93.98
	Right Rear	4.60	28.62	66.78	95.40
	All Positions	10.06	39.67	50.27	89.94
Percent With Given Injury By Seat Position					
(Middle Front)	Fatal	0.29	0.00	0.14	0.06
	Incapacitating	3.98	1.57	0.68	1.21
	Non-Incapacitating	10.00	3.47	3.69	3.56
	Possible Injury	13.40	10.73	6.29	8.94
	None Detected	72.33	84.23	89.20	86.24
(Right Front)	Fatal	0.38	0.03	0.12	0.06
	Incapacitating	5.47	1.67	0.96	1.42
	Non-Incapacitating	11.13	4.30	3.23	3.93
	Possible Injury	13.12	9.92	7.23	8.99
	None Detected	69.90	84.08	88.47	85.60
(Left Rear)	Fatal	1.30	0.03	0.10	0.08
	Incapacitating	5.86	0.85	0.74	0.77
	Non-Incapacitating	11.50	0.44	3.17	2.25
	Possible Injury	10.85	5.77	5.61	5.66
	None Detected	70.50	92.91	90.38	91.23
(Middle Rear)	Fatal	0.76	0.00	0.11	0.08
	Incapacitating	3.54	0.92	0.90	0.91
	Non-Incapacitating	9.87	0.00	2.71	2.04
	Possible Injury	13.67	7.47	6.14	6.47
	None Detected	72.15	91.62	90.14	90.50
(Right Rear)	Fatal	0.36	0.06	0.07	0.07
	Incapacitating	5.01	1.01	0.60	0.72
	Non-Incapacitating	10.02	3.10	3.08	3.09
	Possible Injury	12.52	6.61	5.23	5.65
	None Detected	72.09	89.22	91.01	90.47
YEAR	1994	1,513	4,201	5,282	9,483
	1995	873	4,547	5,342	9,889
	1996	663	4,156	5,334	9,490
	1997	593	3,327	4,379	7,706
	1998	584	3,713	4,937	8,650

TABLE 35. PERCENTAGE OF ACCIDENTS INVOLVING UNSAFE SPEED BY COUNTY AND POPULATION CATEGORY (IN ORDER OF DECREASING PERCENTAGES) (1994-1998 DATA)

COUNTY	NUMBER OF ACCIDENTS	PERCENT OF TOTAL ACCIDENTS
POPULATION CATEGORY UNDER 10,000		
Owen	249	21.6
Menifee	107	21.2
Elliott	100	20.3
Gallatin	205	18.4
Robertson	10	17.2
Lee	81	15.2
Trimble	144	14.9
Spencer	122	13.4
McLean	130	12.1
Wolfe	122	12.1
Carlisle	27	11.7
Nicholas	79	11.6
Lyon	142	11.6
Carroll	234	11.1
Bath	169	11.0
Hickman	52	10.6
Owsley	33	10.6
Ballard	113	10.4
Livingston	107	10.0
Crittenden	87	8.1
Bracken	93	7.8
Hancock	68	7.7
Metcalfe	73	7.0
Cumberland	25	4.9
Fulton	50	4.6
Clinton	28	4.0
POPULATION CATEGORY 10,000-14,999		
Garrard	321	21.2
Henry	347	17.9
Morgan	244	16.4
Leslie	180	16.3
Edmonson	164	14.7
Estill	268	14.1
Jackson	175	14.0
Todd	164	12.6
Casey	101	12.5
Martin	181	12.1
Magoffin	158	11.7
Lawrence	153	11.2
Rockcastle	227	11.0
Pendleton	207	10.8
Anderson	226	10.5
Powell	172	9.8
Washington	144	9.7
Caldwell	184	9.6
Larue	152	9.4
Lewis	136	9.2
Webster	173	9.1
Fleming	126	8.7
Trigg	125	7.7
Butler	95	7.2
Monroe	49	6.8
Allen	135	6.6
Hart	134	6.5
Russell	90	5.6
Green	65	4.9
POPULATION CATEGORY 15,000-24,999		
McCreary	283	21.0
Lincoln	396	20.7
Grant	641	15.8
Carter	434	12.7
Mercer	406	12.7
Union	291	12.4
Rowan	435	11.4
Woodford	389	11.0
Knott	182	10.7
Grayson	236	10.6
Bourbon	355	10.5
Clay	195	10.0
Ohio	264	9.4
Breathitt	186	9.3
Meade	222	9.1
Johnson	255	8.9
Shelby	444	8.7
Marion	210	8.7
Scott	522	8.5
Logan	251	7.3
Wayne	151	7.1
Montgomery	262	7.1
Breckinridge	88	6.8
Mason	246	6.1
Adair	134	6.1
Simpson	144	5.6
Harrison	148	5.4
Taylor	190	5.3
POPULATION CATEGORY 25,000-50,000		
Knox	553	15.6
Whitley	758	15.1
Harlan	594	14.8
Floyd	765	14.1
Letcher	309	10.7
Franklin	803	10.5
Hopkins	862	10.4
Muhlenberg	495	10.3
Laurel	688	9.0
Greenup	367	9.0
Nelson	454	8.8
Bell	331	8.7
Oldham	375	8.4
Perry	432	8.4
Graves	413	8.3
Marshall	304	7.9
Jessamine	455	7.7
Pulaski	640	7.7
Clark	403	7.1
Boyle	335	7.1
Henderson	678	7.0
Barren	432	6.8
Bullitt	405	6.2
Calloway	166	5.9
POPULATION CATEGORY OVER 50,000		
Pike	2,488	21.6
Madison	1,666	13.6
Christian	962	9.9
Warren	1,938	9.8
Boone	1,265	8.1
Boyd	788	7.8
Kenton	2,022	7.2
Hardin	896	6.7
Campbell	814	5.9
Daviess	929	5.5
McCracken	747	5.1
Fayette	2,981	5.1
Jefferson	4,966	3.5

TABLE 36. PERCENTAGE OF ACCIDENTS INVOLVING UNSAFE SPEED BY CITY AND POPULATION CATEGORY (IN ORDER OF DECREASING PERCENTAGES)(1994-1998 DATA)

CITY	NUMBER OF ACCIDENTS (1994-1998)	PERCENT OF TOTAL ACCIDENTS
POPULATION CATEGORY OVER 200,000		
Lexington	2,936	5.0
Louisville	2,131	2.7
POPULATION CATEGORY 20,000-55,000		
Hopkinsville	544	8.9
Bowling Green	945	6.5
Frankfort	298	6.1
Covington	561	5.1
Richmond	314	5.1
Ashland	307	5.1
Jeffersontown	170	3.8
Henderson	248	3.7
Paducah	330	3.5
Owensboro	387	3.2
POPULATION CATEGORY 10,000-19,999		
Erlanger	349	9.1
Fort Thomas	85	7.3
Independence	97	6.0
Somerset	231	5.8
Florence	413	5.1
Danville	160	4.6
Georgetown	138	4.4
Madisonville	186	4.3
Middlesboro	76	4.2
Newport	190	4.2
Nicholasville	112	3.7
Elizabethtown	228	3.7
Shively	173	3.6
Glasgow	94	2.9
Winchester	86	2.5
Radcliff	69	2.3
Saint Matthews	102	2.2
Murray	21	2.1
POPULATION CATEGORY 5,000-9,999		
Taylor Mill	127	10.1
Pikeville	172	8.6
Villa Hills	27	7.6
Fort Mitchell	109	7.4
Fort Wright	132	6.8
Williamsburg	62	6.5
Elsmere	52	6.2
Corbin	128	6.0
Monticello	68	5.5
Russellville	95	5.5
Paris	89	5.1
Maysville	127	5.0
Mount Washington	46	4.9
London	146	4.8
Shelbyville	89	4.8
Berea	66	4.7
Versailles	67	4.5
Alexandria	59	4.5
Lebanon	55	4.5
Dayton	25	4.4
Edgewood	38	4.3
Princeton	46	4.2
Harrodsburg	73	4.1
Bellevue	44	3.9
Flatwoods	25	3.7
Campbellsville	96	3.7
Hazard	75	3.4
Mount Sterling	57	3.2
Morehead	50	3.2
Franklin	43	3.2
Bardstown	60	2.5
Mayfield	51	2.2
Lawrenceburg	16	2.1
Cynthiana	26	1.9
POPULATION CATEGORY 2,500-4,999		
Park Hills	43	17.2
Vine Grove	43	10.7
Williamstown	62	9.2
Cumberland	24	8.5
Wilmore	21	8.2
Stanford	23	7.9
Calvert City	25	7.5
Highland Heights	70	7.5
Barbourville	60	7.5
Morganfield	47	6.8
Lakeside Park	29	6.6
Providence	23	6.5
Greenville	58	6.4
Dawson Springs	19	6.2
Irvine	37	5.7
Lancaster	31	5.2
Jenkins	19	5.0
Lagrange	44	4.9
Leitchfield	17	4.9
Hodgenville	33	4.9
Fulton	25	4.8
Mount Vernon	31	4.8
Scottsville	48	4.3
Prestonsburg	53	4.3
Cold Springs	43	4.2
Shepherdsville	69	4.1
Central City	42	4.0
Benton	35	4.0
Stanton	19	3.9
Hartford	6	3.8
Harlan	31	3.7
Columbia	33	3.5
Marion	18	3.5
Flemingsburg	14	3.3
Hickman	6	3.3
Springfield	18	3.1
Tompkinsville	16	3.1
Grayson	26	2.9
Carrollton	21	2.8
Southgate	11	2.5
Russell	23	2.5
Beaver Dam	13	2.3
Paintsville	27	2.1
Ludlow	8	1.6

TABLE 37. SUMMARY OF SPEEDING CONVICTIONS BY COUNTY (1994-1998 DATA)

COUNTY	1994	1995	1996	1997	1998	TOTAL SPEEDING CONVICTIONS (FIVE YEARS)	ANNUAL AVERAGE SPEEDING CONVICTIONS PER 1,000 LICENSED DRIVERS	SPEEDING CONVICTIONS PER SPEED-RELATED ACCIDENT
Adair	407	208	452	269	381	1,717	31.8	12.8
Allen	103	296	312	284	291	1,286	23.4	9.5
Anderson	710	795	1,424	1,505	1,608	6,042	92.9	26.7
Ballard	139	273	126	171	176	885	29.5	7.8
Barren	394	480	852	717	783	3,226	25.6	7.5
Bath	79	56	313	283	239	970	27.0	5.7
Bell	265	450	372	357	398	1,842	22.2	6.1
Boone	1,817	2,203	2,054	2,325	2,920	11,319	41.3	8.9
Bourbon	611	574	685	324	729	2,923	43.7	8.2
Boyd	1,384	1,422	1,452	1,487	1,525	7,270	42.1	9.2
Boyle	468	509	773	695	881	3,326	36.3	9.9
Bracken	283	604	541	396	478	2,302	82.2	24.8
Breathitt	60	86	58	153	96	453	9.8	2.4
Breckinridge	117	96	101	137	150	601	9.7	6.8
Bullitt	461	1,061	1,499	1,224	812	5,057	24.0	12.5
Butler	231	374	534	661	723	2,523	60.4	26.6
Caldwell	260	326	625	533	359	2,103	44.8	11.4
Calloway	191	434	708	302	431	2,066	18.4	12.4
Campbell	1,804	1,520	1,966	2,353	2,480	10,123	34.7	12.4
Carlisle	109	250	192	145	188	884	45.3	32.7
Carroll	871	685	742	628	572	3,498	105.5	14.9
Carter	555	506	464	495	587	2,607	30.6	6.0
Casey	76	117	110	168	207	678	14.1	6.7
Christian	804	767	803	910	671	3,955	23.7	4.1
Clark	735	617	684	431	527	2,994	26.8	7.4
Clay	52	56	348	243	757	1,456	22.8	7.5
Clinton	110	92	95	114	72	483	15.1	17.3
Crittenden	122	59	100	41	53	375	11.6	4.3
Cumberland	126	89	142	115	88	560	23.9	22.4
Daviess	1,432	1,410	1,854	2,255	2,522	9,473	30.2	10.2
Edmonson	118.0	82	186	136	74	596	15.1	3.6
Elliott	7	0	0	6	4	17	0.8	0.2
Estill	142	138	134	190	136	740	15.0	2.8
Fayette	8,012	9,540	9,559	9,309	9,682	46,102	54.7	15.5
Fleming	171	141	222	221	203	958	20.9	7.6
Floyd	218	152	167	291	475	1,303	9.6	1.7
Franklin	722	1,516	1,989	2,292	1,683	8,202	50.1	10.2
Fulton	97	128	70	68	157	520	21.2	10.4
Gallatin	286	611	805	571	365	2,638	109.4	12.9
Garrard	144	70	255	230	133	832	17.8	2.6
Grant	1,003	750	885	771	1,024	4,433	61.6	6.9
Graves	593	354	427	878	592	2,844	22.7	6.9
Grayson	111	148	255	328	714	1,556	19.3	6.6
Green	53	31	71	86	67	308	8.1	4.7
Greenup	387	525	645	563	464	2,584	19.8	7.0
Hancock	99	90	135	140	344	808	26.6	11.9
Hardin	2,185	2,690	4,228	4,647	4,593	18,343	62.3	20.5
Harlan	95	110	125	129	109	568	5.4	1.0
Harrison	383	308	409	246	366	1,712	28.1	11.6
Hart	442	406	417	317	355	1,937	35.1	14.5
Henderson	1,021	929	1,218	1,171	1,489	5,828	37.3	8.6
Henry	562	614	1,133	1,173	1,103	4,585	90.3	13.2
Hickman	111	136	74	180	249	750	39.6	14.4
Hopkins	1,020	1,219	1,158	641	1,231	5,269	32.6	6.1
Jackson	6	18	12	23	14	73	1.8	0.4
Jefferson	10,378	10,724	10,686	9,602	14,161	55,551	24.2	11.2
Jessamine	448	439	769	1,063	2,071	4,790	38.7	10.5
Johnson	105	87	178	133	176	679	8.7	2.7
Kenton	1,551	2,730	3,437	3,777	3,450	14,945	30.2	7.4
Knott	110	55	125	41	17	348	6.7	1.9
Knox	340	357	538	566	531	2,332	24.8	4.2
Larue	248	201	182	154	238	1,023	22.1	6.7
Laurel	884	843	1,591	1,524	1,549	6,391	38.6	9.3
Lawrence	318	503	544	400	504	2,269	45.7	14.8

TABLE 37. SUMMARY OF SPEEDING CONVICTIONS BY COUNTY (1993-1997 DATA)(continued)

COUNTY	1994	1995	1996	1997	1998	TOTAL SPEEDING CONVICTIONS (FIVE YEARS)	ANNUAL AVERAGE SPEEDING CONVICTIONS PER 1,000 LICENSED DRIVERS	SPEEDING CONVICTIONS PER SPEED-RELATED ACCIDENT
Lee	28	41	28	20	32	149	6.3	1.8
Leslie	81	185	205	322	451	1,244	30.9	6.9
Letcher	92	77	85	146	72	472	5.6	1.5
Lewis	291	207	159	379	356	1,392	31.0	10.2
Lincoln	269	365	529	331	541	2,035	27.7	5.1
Livingston	143	260	476	344	358	1,581	44.7	14.8
Logan	373	318	634	767	575	2,667	30.1	10.6
Lyon	235	294	674	601	632	2,436	93.7	17.2
McCracken	728	1,311	1,599	1,614	1,934	7,186	30.6	9.6
McCreary	130	112	201	212	195	850	16.8	3.0
McLean	200	162	201	292	162	1,017	28.7	7.8
Madison	810	1,065	1,378	1,242	1,471	5,966	27.7	3.6
Magoffin	55	25	73	74	39	266	6.4	1.7
Marion	343	278	473	328	271	1,693	29.5	8.1
Marshall	489	629	815	962	929	3,824	34.1	12.6
Martin	73	35	15	25	22	170	4.2	0.9
Mason	277	284	330	615	496	2,002	34.8	8.1
Meade	237	294	353	464	376	1,724	22.3	7.8
Menifee	11	10	7	6	24	58	2.9	0.5
Mercer	366	446	645	546	436	2,439	33.3	6.0
Metcalfe	191	115	230	271	250	1,057	32.4	14.5
Monroe	12	30	22	18	31	113	2.9	2.3
Montgomery	148	99	168	194	333	942	12.7	3.6
Morgan	154	123	379	277	366	1,299	33.2	5.3
Muhlenberg	633	680	542	519	469	2,843	26.0	5.7
Nelson	474	443	516	608	678	2,719	21.7	6.0
Nicholas	175	131	114	92	108	620	24.8	7.8
Ohio	295	449	617	654	305	2,320	30.2	8.8
Oldham	963	980	763	838	970	4,514	30.8	12.0
Owen	122	132	84	67	76	481	14.5	1.9
Owsley	4	6	1	0	3	14	0.9	0.4
Pendleton	583	309	542	497	339	2,270	48.5	11.0
Perry	267	363	592	886	417	2,525	25.2	5.8
Pike	370	196	184	185	272	1,207	5.3	0.5
Powell	184	152	217	280	427	1,260	29.4	7.3
Pulaski	768	667	759	1,018	1,051	4,263	22.2	6.7
Robertson	20	33	22	15	18	108	14.7	10.8
Rockcastle	454	438	428	349	602	2,271	43.2	10.0
Rowan	545	796	769	680	643	3,433	53.4	7.9
Russell	180	71	119	98	113	581	10.2	6.5
Scott	469	662	1,198	1,651	1,710	5,690	54.4	10.9
Shelby	615	1,022	1,237	1,304	1,246	5,424	52.4	12.2
Simpson	201	247	251	362	333	1,394	25.3	9.7
Spencer	84	240	272	230	190	1,016	27.7	8.3
Taylor	431	362	763	505	418	2,479	31.8	13.0
Todd	178	154	182	212	116	842	22.2	5.1
Trigg	227	369	369	323	316	1,604	36.9	12.8
Trimble	84	59	41	64	59	307	11.3	2.1
Union	301	222	258	365	254	1,400	26.1	4.8
Warren	1,695	1,328	1,563	2,047	2,391	9,024	31.3	4.7
Washington	521	426	399	774	456	2,576	69.4	17.9
Wayne	58	21	49	62	55	245	4.0	1.6
Webster	130	65	203	130	116	644	13.2	3.7
Whitley	181	126	289	295	318	1,209	11.4	1.6
Wolfe	254	479	652	862	1,703	3,950	171.4	32.4
Woodford	1,784	1,519	1,824	1,712	1,898	8,737	106.4	22.5
TOTAL	66,132	72,972	88,508	89,322	98,449	415,383	31.8	8.9

TABLE 38. SPEEDING CONVICTION RATES IN DECREASING ORDER (BY COUNTY POPULATION CATEGORIES) (1994-1998)

POPULATION CATEGORY	COUNTY	ANNUAL AVERAGE SPEEDING CONVICTIONS PER 1,000 LICENSED DRIVERS	COUNTY	SPEEDING CONVICTIONS PER SPEED-RELATED ACCIDENT
UNDER 10,000	Wolfe	171.4	Carlisle	33.6
	Gallatin	109.4	Bracken	25.8
	Carroll	105.5	Wolfe	20.9
	Lyon	93.7	Cumberland	19.6
	Bracken	82.2	Clinton	15.3
	Carlisle	45.3	Livingston	14.6
	Livingston	44.7	Carroll	13.5
	Hickman	39.6	Lyon	12.7
	Metcalfe	32.4	Metcalfe	12.7
	Ballard	29.5	Robertson	11.4
	McLean	28.7	Gallatin	11.0
	Spencer	27.7	Hickman	10.7
	Bath	27.0	Spencer	9.4
	Hancock	26.6	Hancock	8.3
	Nicholas	24.8	Ballard	8.2
	Cumberland	23.9	Nicholas	8.0
	Fulton	21.2	McLean	7.7
	Clinton	15.1	Fulton	7.4
	Robertson	14.7	Bath	5.0
	Owen	14.5	Crittenden	4.9
	Crittenden	11.6	Trimble	2.3
	Trimble	11.3	Owen	2.2
	Lee	6.3	Lee	0.6
	Menifee	2.9	Owsley	0.5
	Owsley	0.9	Menifee	0.4
	Elliott	0.8	Elliott	0.2
10,000-14,999	Anderson	92.9	Anderson	24.1
	Henry	90.3	Butler	23.7
	Washington	69.4	Washington	17.6
	Butler	60.4	Hart	14.7
	Pendleton	48.5	Pendleton	12.6
	Caldwell	44.8	Trigg	11.3
	Rockcastle	43.2	Henry	11.3
	Trigg	36.9	Caldwell	10.1
	Hart	35.1	Lawrence	9.4
	Morgan	33.2	Rockcastle	9.2
	Lewis	31.0	Allen	7.9
	Leslie	30.9	Fleming	7.7
	Powell	29.4	Powell	7.3
	Allen	23.4	Russell	6.3
	Todd	22.2	Casey	5.9
	Fleming	20.9	Todd	5.6
	Garrard	17.8	Morgan	4.8
	Edmonson	15.1	Green	4.4
	Estill	15.0	Webstèr	3.7
	Casey	14.1	Garrard	3.1
	Lawrence	13.7	Edmonson	2.9
	Webster	13.2	Estill	2.9
	Larue	10.9	Lewis	2.5
	Russell	10.2	Leslie	2.1
	Green	8.1	Monroe	2.0
	Magoffin	6.4	Magoffin	1.9
	Martin	4.2	Martin	1.2
	Monroe	2.9	Larue	1.1
	Jackson	1.8	Jackson	0.4
15,000 - 24,999	Woodford	22.5	Woodford	24.6
	Taylor	13.0	Taylor	13.5
	Adair	12.8	Harrison	13.0
	Shelby	12.2	Adair	11.7
	Harrison	11.6	Shelby	11.3
	Scott	10.9	Logan	10.7
	Logan	10.6	Scott	9.0
	Simpson	9.7	Simpson	8.7
	Ohio	8.8	Mason	7.7
	Bourbon	8.2	Ohio	7.7
	Mason	8.1	Bourbon	7.4

TABLE 38. SPEEDING CONVICTION RATES IN DECREASING ORDER (BY COUNTY POPULATION CATEGORIES) (1994-1998) (continued)

POPULATION CATEGORY	COUNTY	ANNUAL AVERAGE SPEEDING CONVICTIONS PER 1,000 LICENSED DRIVERS	COUNTY	SPEEDING CONVICTIONS PER SPEED-RELATED ACCIDENT
15,000 - 24,999	Rowan	7.9	Rowan	7.3
(cont'd)	Marion	7.8	Marion	7.3
	Meade	7.8	Meade	7.1
	Clay	7.5	Grant	6.8
	Grant	6.9	Mercer	6.4
	Breckinridge	6.8	Carter	6.3
	Grayson	6.6	Union	5.0
	Mercer	6.0	Breckinridge	4.7
	Carter	6.0	Lincoln	4.7
	Lincoln	5.1	Grayson	4.1
	Union	4.8	Clay	4.0
	Montgomery	3.6	McCreary	2.7
	Johnson	2.7	Montgomery	2.7
	Breathitt	2.4	Johnson	2.5
	Knott	1.9	Breathitt	2.3
	Wayne	1.6	Wayne	1.6
	McCreary	0.9	Knott	0.6
25,000 - 50,000	Laurel	138.0	Bullitt	12.5
	Franklin	50.1	Calloway	12.4
	Knox	44.9	Oldham	12.0
	Jessamine	38.7	Jessamine	10.5
	Henderson	37.3	Franklin	10.2
	Boyle	36.3	Boyle	9.9
	Marshall	34.1	Laurel	9.3
	Hopkins	32.6	Henderson	8.6
	Oldham	30.8	Barren	7.5
	Clark	26.8	Clark	7.4
	Muhlenberg	26.0	Greenup	7.0
	Barren	25.6	Graves	6.9
	Perry	25.2	Pulaski	6.7
	Bullitt	24.0	Bell	6.1
	Graves	22.7	Hopkins	6.1
	Bell	22.2	Nelson	6.0
	Pulaski	22.2	Perry	5.8
	Nelson	21.7	Muhlenberg	5.7
	Greenup	19.8	Knox	4.2
	Calloway	18.4	Marshall	3.6
	Whitley	11.4	Floyd	1.7
	Floyd	9.6	Whitley	1.6
	Letcher	5.6	Letcher	1.5
	Harlan	5.4	Harlan	1.0
OVER 50,000	Hardin	62.3	Hardin	20.5
	Fayette	54.7	Fayette	15.5
	Boyd	42.1	McCracken	12.6
	Boone	41.3	Campbell	12.4
	Campbell	34.7	Jefferson	11.2
	Warren	31.3	Daviess	10.2
	McCracken	30.6	Madison	9.6
	Daviess	30.2	Boyd	9.2
	Kenton	30.2	Boone	8.9
	Madison	27.7	Kenton	7.4
	Jefferson	24.2	Warren	4.7
	Christian	23.7	Christian	4.1
	Pike	5.3	Pike	0.5

TABLE 39. MOVING SPEED DATA FOR VARIOUS HIGHWAY TYPES (CARS)

HIGHWAY TYPE AND SPEED LIMIT	SAMPLE SIZE	SPEED (MPH)		PERCENT OVER SPEED LIMIT
		AVERAGE	85TH PERCENTILE	
Interstate 65 mph	11,780	68.0	72.9	70.1
Interstate 55 mph	3,885	61.4	66.7	86.0
Interstate 50 mph	163	55.8	60.8	84.0
Parkway Four Lane 65 mph	10,642	68.4	73.6	70.5
Parkway Two Lane 55 mph	1,589	62.8	68.5	90.5
Four Lane Non-Interstate or Parkway 55 mph	11,052	59.3	64.5	76.8
Two Lane Full Width Shoulder 55 mph	4,081	58.7	64.2	71.3
Two Lane Without Full Width Shoulder 55 mph	5,385	55.9	61.6	54.2

TABLE 40. MOVING SPEED DATA FOR VARIOUS HIGHWAY TYPES (TRUCKS)

HIGHWAY TYPE AND SPEED LIMIT	SAMPLE SIZE	SPEED (MPH) AVERAGE	SPEED (MPH) 85TH PERCENTILE	PERCENT OVER SPEED LIMIT
Interstate 65 mph	5,029	64.2	68.7	37.3
Interstate 55 mph	1,533	59.4	64.6	75.4
Interstate 50 mph	99	55.4	59.8	87.9
Parkway Four Lane 65 mph	3,067	64.9	69.7	45.4
Parkway Two Lane 55 mph	213	58.3	64.1	70.9
Four Lane Non-Interstate or Parkway 55 mph	1,918	56.7	61.9	60.8
Two Lane Full Width Shoulder 55 mph	595	56.5	62.1	58.5
Two Lane Without Full Width Shoulder 55 mph	673	53.6	59.7	41.2

TABLE 41. Accident Trend Analysis (1994 - 1998)

Accident Statistic	Number in Given Year				4-Year Average		1998 Percent
	1994	1995	1996	1997	1994-97	1998	Change*
Total Accidents	124,037	127,653	134,558	134,161	130,102	125,698	-3.4
Fatal Accidents	706	739	738	782	741	776	4.7
Fatalities	791	856	846	865	840	869	3.5
Injury Accidents	34,643	35,916	36,434	36,516	35,877	34,395	-4.1
Injuries	53,519	55,465	55,909	56,342	55,309	52,952	-4.3
Fatal and Injury Accidents	35,364	36,655	37,182	37,298	36,625	35,171	-4.0
Licensed Drivers (Millions)	2.52	2.54	2.57	2.57	2.55	2.63	3.1
Registered Vehicles (Millions)	2.78	2.93	2.97	3.01	2.92	3.20	9.5
Total Vehicle Miles (Billions)	39.823	41.095	42.471	44.863	42.063	46.577	10.7
Total Acc/100 MVM	311	311	317	299	310	270	-12.8
Fatal Acc/100 MVM	1.77	1.80	1.74	1.74	1.76	1.67	-5.2
Fatalities/100 MVM	1.99	2.08	1.99	1.93	2.00	1.87	-6.4
Injuries/100 MVM	134	135	130	126	131	114	-13.1
Speed Related Accidents	9,725	10,013	10,713	10,435	10,222	9,099	-11.0
Speed Related Injury Accidents	4,222	4,474	4,494	4,488	4,420	4,030	-8.8
Speed Related Fatal Accidents	175	182	208	230	199	190	-4.4
Speed Convictions	66,132	72,972	88,508	89,572	79,296	98,662	24.4
Alcohol Related Accidents	5,995	6,163	6,061	6,018	6,059	5,222	-13.8
Alcohol Related Injury Accidents	2,883	3,048	2,955	2,949	2,959	2,482	-16.1
Alcohol Related Fatal Accidents	259	236	242	206	236	187	-20.7
Alcohol Related Fatalities	287	278	256	234	264	205	-22.3
DUI Arrests	**	38,943	39,064	40,567	59,287	**	**
DUI Convictions	29,426	30,222	30,283	32,106	30,509	30,506	-0.0
DUI Conviction Percentage	**	77.6	77.5	79.1	58.6	**	**
DUI Arrests/ Alcohol Related Fatalities	**	140	153	173	116.5	**	**
Drug Related Accidents	371	406	489	533	450	535	19.0
Drug Related Injury Accidents	176	208	248	277	227	278	22.3
Drug Related Fatal Accidents	9	12	15	14	13	13	4.0
Pedestrian Related Accidents	1,145	1,199	1,197	1,190	1,183	1,077	-8.9
Pedestrian Related Injury Accidents	1,037	1,081	1,085	1,057	1,065	966	-9.3
Pedestrian Related Fatal Accidents	60	58	56	62	59	65	10.2
Bicycle/Motor Vehicle Related Accidents	664	706	695	662	682	587	-13.9
Bicycle Related Injury Accidents	557	602	557	512	557	480	-13.8
Bicycle Related Fatal Accidents	5	4	6	10	6.25	9	44.0
Motorcycle Related Accidents	926	852	747	736	815	835	2.4
Motorcycle Related Injury Accidents	733	677	581	565	639	647	1.3
Motorcycle Related Fatal Accidents	33	21	25	29	27	26	-3.7
School Bus Accidents	714	788	810	822	784	775	-1.1
School Bus Injury Accidents	114	145	93	150	126	144	14.7
School Bus Fatal Accidents	2	2	2	6	3	4	33.3
Truck Accidents	8,919	9,055	9,975	8,249	9,050	7,670	-15.2
Truck Injury Accidents	2,026	2,156	2,292	1,852	2,082	1,678	-19.4
Truck Fatal Accidents	99	102	95	108	101	95	-5.9
Train Accidents	93	94	79	57	81	70	-13.3
Train Injury Accidents	35	38	21	23	29	25	-14.5
Train Fatal Accidents	5	5	3	4	4	3	-29.4

* Percent change from 1994-1997 average to 1998.

** Data comparable to 1995 through 1997 not available.

Table 42. NUMBER OF ACCIDENTS AND RATES BY ACCIDENT TYPE FOR EACH COUNTY

	PEDESTRIAN ACCIDENTS		BICYCLE ACCIDENTS		MOTORCYCLE ACCIDENTS		SCHOOL BUS ACCIDENTS		TRUCK ACCIDENTS	
	NUMBER*	RATE**	NUMBER*	RATE**	NUMBER*	RATE**	NUMBER*	RATE**	NUMBER*	RATE**
Adair	11	1.4	7	0.9	20	2.6	15	2.0	115	15.0
Allen	12	1.6	6	0.8	17	2.3	11	1.5	112	15.3
Anderson	11	1.5	9	1.2	17	2.3	26	3.6	143	19.6
Ballard	4	1.0	1	0.3	9	2.3	3	0.8	127	32.1
Barren	23	1.4	30	1.8	49	2.9	19	1.1	439	25.8
Bath	8	1.7	1	0.2	11	2.3	8	1.7	105	21.7
Bell	39	2.5	19	1.2	19	1.2	31	2.0	313	19.9
Boone	101	3.5	61	2.1	88	3.1	76	2.6	1590	55.2
Bourbon	22	2.3	13	1.4	18	1.9	24	2.5	208	21.6
Boyd	73	2.9	55	2.2	74	2.9	49	1.9	727	28.4
Boyle	33	2.6	16	1.2	29	2.3	17	1.3	270	21.1
Bracken	6	1.5	1	0.3	8	2.1	8	2.1	69	17.8
Breathitt	20	2.5	1	0.1	30	3.8	16	2.0	134	17.1
Breckinridge	7	0.9	6	0.7	11	1.3	7	0.9	81	9.9
Bullitt	35	1.5	12	0.5	46	1.9	69	2.9	533	22.4
Butler	8	1.4	2	0.4	9	1.6	8	1.4	65	11.6
Caldwell	16	2.4	18	2.7	15	2.3	10	1.5	120	18.1
Calloway	24	1.6	11	0.7	29	1.9	18	1.2	157	10.2
Campbell	246	5.9	133	3.2	81	1.9	60	1.4	850	20.3
Carlisle	2	0.8	2	0.8	2	0.8	1	0.4	24	9.2
Carroll	12	2.6	7	1.5	19	4.1	13	2.8	211	45.4
Carter	18	1.5	4	0.3	33	2.7	28	2.3	244	20.0
Casey	4	0.6	3	0.4	8	1.1	7	1.0	52	7.3
Christian	87	2.5	57	1.7	64	1.9	78	2.3	656	19.0
Clark	43	2.9	27	1.8	30	2.0	46	3.1	374	25.4
Clay	14	1.3	5	0.5	15	1.4	28	2.6	127	11.7
Clinton	7	1.5	2	0.4	3	0.7	5	1.1	45	9.9
Crittenden	10	2.2	1	0.2	5	1.1	8	1.7	58	12.6
Cumberland	4	1.2	0	0.0	0	0.0	3	0.9	30	8.8
Daviess	114	2.6	133	3.1	119	2.7	60	1.4	909	20.9
Edmonson	9	1.7	2	0.4	9	1.7	15	2.9	77	14.9
Elliott	7	2.2	0	0.0	13	4.0	0	0.0	27	8.4
Estill	12	1.6	8	1.1	16	2.2	12	1.6	57	7.8
Fayette	640	5.7	456	4.0	257	2.3	297	2.6	3134	27.8
Fleming	14	2.3	3	0.5	10	1.6	9	1.5	103	16.8
Floyd	44	2.0	13	0.6	69	3.2	62	2.8	487	22.3
Franklin	40	1.8	24	1.1	42	1.9	39	1.8	431	19.7
Fulton	10	2.4	11	2.7	5	1.2	4	1.0	74	17.9
Gallatin	5	1.9	4	1.5	13	4.8	5	1.9	166	61.6
Garrard	8	1.4	5	0.9	15	2.6	9	1.6	82	14.2
Grant	26	3.3	9	1.1	24	3.1	25	3.2	352	44.7
Graves	46	2.7	17	1.0	32	1.9	35	2.1	311	18.5
Grayson	14	1.3	3	0.3	26	2.5	13	1.2	171	16.2
Green	10	1.9	2	0.4	9	1.7	10	1.9	57	11.0
Greenup	30	1.6	22	1.2	25	1.4	18	1.0	217	11.8
Hancock	2	0.5	5	1.3	6	1.5	5	1.3	84	21.4
Hardin	61	1.4	49	1.1	96	2.2	68	1.5	783	17.5
Harlan	52	2.8	19	1.0	17	0.9	22	1.2	308	16.8
Harrison	19	2.3	12	1.5	20	2.5	14	1.7	173	21.3
Hart	9	1.2	4	0.5	10	1.3	19	2.6	223	30.0
Henderson	76	3.5	72	3.3	74	3.4	39	1.8	626	29.1
Henry	8	1.2	7	1.1	13	2.0	18	2.8	192	29.9
Hickman	3	1.1	1	0.4	5	1.8	4	1.4	37	13.3
Hopkins	40	1.7	49	2.1	76	3.3	35	1.5	594	25.8
Jackson	8	1.3	2	0.3	15	2.5	16	2.7	65	10.9
Jefferson	1903	5.7	1043	3.1	620	1.9	782	2.4	9129	27.5
Jessamine	41	2.7	23	1.5	28	1.8	65	4.3	333	21.8
Johnson	24	2.1	10	0.9	21	1.8	24	2.1	172	14.8
Kenton	437	6.2	220	3.1	123	1.7	153	2.2	2063	29.0
Knott	11	1.2	5	0.6	24	2.7	20	2.2	163	18.2

Table 42. NUMBER OF ACCIDENTS AND RATES BY ACCIDENT TYPE FOR EACH COUNTY (continued)

	PEDESTRIAN ACCIDENTS		BICYCLE ACCIDENTS		MOTORCYCLE ACCIDENTS		SCHOOL BUS ACCIDENTS		TRUCK ACCIDENTS	
	NUMBER*	RATE**	NUMBER*	RATE**	NUMBER*	RATE**	NUMBER*	RATE**	NUMBER*	RATE**
Knox	36	2.4	10	0.7	40	2.7	31	2.1	164	11.1
Larue	7	1.2	3	0.5	5	0.9	10	1.7	103	17.6
Laurel	36	1.7	15	0.7	39	1.8	54	2.5	655	30.2
Lawrence	14	2.0	2	0.3	13	1.9	11	1.6	144	20.6
Lee	3	0.8	2	0.5	7	1.9	6	1.6	33	8.9
Leslie	9	1.3	3	0.4	24	3.5	21	3.1	111	16.3
Letcher	19	1.4	2	0.1	30	2.2	35	2.6	367	27.2
Lewis	14	2.1	3	0.5	7	1.1	14	2.1	92	14.1
Lincoln	10	1.0	6	0.6	19	1.9	11	1.1	127	12.7
Livingston	7	1.5	3	0.7	15	3.3	5	1.1	63	13.9
Logan	18	1.5	12	1.0	29	2.4	27	2.2	333	27.3
Lyon	2	0.6	1	0.3	11	3.3	0	0.0	159	48.0
McCracken	84	2.7	53	1.7	107	3.4	68	2.2	786	25.0
McCreary	5	0.6	3	0.4	14	1.8	15	1.9	53	6.8
McLean	4	0.8	6	1.2	9	1.9	6	1.2	76	15.8
Madison	73	2.5	44	1.5	69	2.4	81	2.8	930	32.3
Magoffin	11	1.7	3	0.5	12	1.8	12	1.8	78	11.9
Marion	22	2.7	9	1.1	20	2.4	21	2.5	114	13.8
Marshall	17	1.2	11	0.8	42	3.1	11	0.8	271	19.9
Martin	6	1.0	1	0.2	16	2.6	11	1.8	157	25.1
Mason	22	2.6	9	1.1	20	2.4	19	2.3	271	32.5
Meade	12	1.0	6	0.5	23	1.9	10	0.8	111	9.2
Menifee	3	1.2	1	0.4	7	2.7	3	1.2	24	9.4
Mercer	19	2.0	10	1.0	19	2.0	21	2.2	187	19.5
Metcalfe	4	0.9	1	0.2	8	1.8	11	2.5	77	17.2
Monroe	8	1.4	2	0.4	10	1.8	6	1.1	29	5.1
Montgomery	26	2.7	6	0.6	11	1.1	41	4.2	222	22.7
Morgan	4	0.7	1	0.2	16	2.7	17	2.9	60	10.3
Muhlenberg	24	1.5	8	0.5	34	2.2	37	2.4	324	20.7
Nelson	34	2.3	21	1.4	33	2.2	35	2.4	255	17.2
Nicholas	3	0.9	1	0.3	5	1.5	4	1.2	26	7.7
Ohio	7	0.7	6	0.6	19	1.8	16	1.5	214	20.3
Oldham	29	1.7	16	1.0	19	1.1	40	2.4	338	20.3
Owen	7	1.5	0	0.0	11	2.4	6	1.3	67	14.8
Owsley	4	1.6	0	0.0	2	0.8	4	1.6	29	11.5
Pendleton	8	1.3	3	0.5	17	2.8	13	2.2	140	23.3
Perry	41	2.7	17	1.1	64	4.2	57	3.8	467	30.8
Pike	98	2.7	14	0.4	171	4.7	74	2.0	1375	37.9
Powell	9	1.5	5	0.9	11	1.9	9	1.5	99	16.9
Pulaski	42	1.7	20	0.8	42	1.7	58	2.3	472	19.1
Robertson	1	0.9	0	0.0	0	0.0	0	0.0	5	4.7
Rockcastle	12	1.6	3	0.4	9	1.2	16	2.2	211	28.5
Rowan	16	1.6	11	1.1	26	2.6	17	1.7	204	20.0
Russell	8	1.1	3	0.4	10	1.4	7	1.0	82	11.1
Scott	30	2.5	19	1.6	39	3.3	41	3.4	443	37.1
Shelby	30	2.4	13	1.0	23	1.9	33	2.7	375	30.2
Simpson	12	1.6	10	1.3	13	1.7	4	0.5	292	38.6
Spencer	6	1.8	2	0.6	12	3.5	16	4.7	38	11.2
Taylor	26	2.5	10	0.9	15	1.4	11	1.0	149	14.1
Todd	9	1.6	3	0.5	11	2.0	5	0.9	96	17.6
Trigg	4	0.8	2	0.4	13	2.5	6	1.2	120	23.2
Trimble	8	2.6	1	0.3	9	3.0	3	1.0	67	22.0
Union	13	1.6	11	1.3	18	2.2	14	1.7	189	22.8
Warren	111	2.9	67	1.7	144	3.8	89	2.3	1206	31.5
Washington	17	3.3	0	0.0	7	1.3	15	2.9	91	17.4
Wayne	11	1.3	10	1.1	14	1.6	30	3.4	78	8.9
Webster	5	0.7	4	0.6	6	0.9	10	1.4	225	32.2
Whitley	29	1.7	12	0.7	26	1.6	42	2.5	467	28.0
Wolfe	10	3.1	3	0.9	10	3.1	7	2.2	73	22.5
Woodford	26	2.6	8	0.8	30	3.0	23	2.3	275	27.6

* Five-Year (1993-1997) Total.

** Rates are annual accidents per 10,000 population.

TABLE 43. PEDESTRIAN ACCIDENT RATES BY COUNTY AND POPULATION CATEGORY (IN ORDER OF DECREASING PERCENTAGES) (1994-1998 DATA)(ALL ROADS)

COUNTY	NUMBER OF ACCIDENTS	ANNUAL ACCIDENT RATE (ACCIDENTS PER 10,000 POP.)
POPULATION CATEGORY UNDER 10,000		
Wolfe	10	3.1
Trimble	8	2.6
Carroll	12	2.6
Fulton	10	2.4
Crittenden	10	2.2
Elliott	7	2.2
Gallatin	5	1.9
Spencer	6	1.8
Bath	8	1.7
Owsley	4	1.6
Owen	7	1.5
Bracken	6	1.5
Clinton	7	1.5
Livingston	7	1.5
Menifee	3	1.2
Cumberland	4	1.2
Hickman	3	1.1
Ballard	4	1.0
Nicholas	3	0.9
Metcalfe	4	0.9
Robertson	1	0.9
Carlisle	2	0.8
McLean	4	0.8
Lee	3	0.8
Lyon	2	0.6
Hancock	2	0.5
POPULATION CATEGORY 10,000-14,999		
Washington	17	3.3
Caldwell	16	2.4
Fleming	14	2.3
Lewis	14	2.1
Lawrence	14	2.0
Green	10	1.9
Edmonson	9	1.7
Magoffin	11	1.7
Todd	9	1.6
Estill	12	1.6
Allen	12	1.6
Rockcastle	12	1.6
Anderson	11	1.5
Powell	9	1.5
Butler	8	1.4
Monroe	8	1.4
Garrard	8	1.4
Pendleton	8	1.3
Jackson	8	1.3
Leslie	9	1.3
Henry	8	1.2
Larue	7	1.2
Hart	9	1.2
Russell	8	1.1
Martin	6	1.0
Trigg	4	0.8
Morgan	4	0.7
Webster	5	0.7
Casey	4	0.6
POPULATION CATEGORY 15,000-24,999		
Grant	26	3.3
Montgomery	26	2.7
Marion	22	2.7
Woodford	26	2.6
Mason	22	2.6
Breathitt	20	2.5
Taylor	26	2.5
Scott	30	2.5
Shelby	30	2.4
Harrison	19	2.3
Bourbon	22	2.3
Johnson	24	2.1
Mercer	19	2.0
Rowan	16	1.6
Simpson	12	1.6
Union	13	1.6
Logan	18	1.5
Carter	18	1.5
Adair	11	1.4
Clay	14	1.3
Wayne	11	1.3
Grayson	14	1.3
Knott	11	1.2
Lincoln	10	1.0
Meade	12	1.0
Breckinridge	7	0.9
Ohio	7	0.7
McCreary	5	0.6
POPULATION CATEGORY 25,000-50,000		
Henderson	76	3.5
Clark	43	2.9
Harlan	52	2.8
Jessamine	41	2.7
Perry	41	2.7
Graves	46	2.7
Boyle	33	2.6
Bell	39	2.5
Knox	36	2.4
Nelson	34	2.3
Floyd	44	2.0
Franklin	40	1.8
Hopkins	40	1.7
Oldham	29	1.7
Laurel	36	1.7
Whitley	29	1.7
Pulaski	42	1.7
Calloway	24	1.6
Greenup	30	1.6
Muhlenberg	24	1.5
Bullitt	35	1.5
Barren	23	1.4
Letcher	19	1.4
Marshall	17	1.2
POPULATION CATEGORY OVER 50,000		
Kenton	437	6.2
Campbell	246	5.9
Jefferson	1,903	5.7
Fayette	640	5.7
Boone	101	3.5
Warren	111	2.9
Boyd	73	2.9
Pike	98	2.7
McCracken	84	2.7
Daviess	114	2.6
Christian	87	2.5
Madison	73	2.5
Hardin	61	1.4

TABLE 44. PEDESTRIAN ACCIDENT RATES BY CITY AND POPULATION CATEGORY
(IN ORDER OF DECREASING PERCENTAGES)(1994-1998 DATA)

CITY	NUMBER OF ACCIDENTS (1994-1998)	ANNUAL ACCIDENT RATE (ACCIDENTS PER 10,000 POPULATION)
POPULATION CATEGORY OVER 200,000		
Louisville	1,381	10.3
Lexington	636	5.6
POPULATION CATEGORY 20,000-55,000		
Covington	313	14.5
Henderson	63	4.9
Ashland	55	4.7
Bowling Green	94	4.6
Hopkinsville	68	4.6
Paducah	58	4.3
Richmond	44	4.2
Owensboro	91	3.4
Frankfort	36	2.8
Jeffersontown	22	1.9
POPULATION CATEGORY 10,000-19,999		
Newport	129	13.7
Shively	46	5.9
Florence	54	5.8
Nicholasville	34	5.0
Danville	30	4.8
Independence	22	4.2
Winchester	32	4.1
Erlanger	29	3.6
Madisonville	29	3.6
Somerset	19	3.5
Saint Matthews	27	3.4
Georgetown	19	3.3
Middlesboro	18	3.2
Glasgow	18	2.9
Radcliff	23	2.3
Elizabethtown	20	2.2
Fort Thomas	14	1.7
Murray	10	1.4
POPULATION CATEGORY 5,000-9,999		
Dayton	29	8.8
Bellevue	26	7.4
Mount Sterling	18	6.7
Pikeville	19	6.0
Maysville	21	5.9
Bardstown	19	5.6
Lebanon	16	5.6
Hazard	15	5.5
Versailles	20	5.5
Mayfield	27	5.4
Shelbyville	16	5.1
Cynthiana	16	4.9
Paris	21	4.8
Harrodsburg	17	4.6
Campbellsville	20	4.2
Alexandria	11	3.9
Princeton	13	3.7
Corbin	13	3.5
Russellville	13	3.5
London	10	3.5
Monticello	9	3.4
Fort Wright	11	3.3
Fort Mitchell	12	3.2
Morehead	13	3.1
Flatwoods	11	2.8
Lawrenceburg	7	2.4
Franklin	9	2.4
Berea	11	2.4
Elsmere	8	2.3
Mount Washington	6	2.3
Taylor Mill	6	2.2
Williamsburg	3	1.1
Edgewood	3	0.7
POPULATION CATEGORY 2,500-4,999		
Springfield	13	9.0
Paintsville	14	6.4
Barbourville	11	6.0
Flemingsburg	9	5.9
Ludlow	13	5.5
Harlan	7	5.2
Lagrange	10	5.2
Southgate	8	4.9
Scottsville	10	4.7
Shepherdsville	11	4.6
Prestonsburg	8	4.5
Mount Vernon	6	4.5
Jenkins	6	4.4
Cold Springs	6	4.2
Irvine	6	4.2
Leitchfield	10	4.0
Morganfield	7	3.7
Columbia	7	3.6
Marion	6	3.6
Lancaster	6	3.5
Greenville	8	3.4
Central City	8	3.2
Fulton	5	3.2
Tompkinsville	4	2.8
Williamstown	4	2.6
Calvert City	3	2.4
Grayson	4	2.3
Hodgenville	3	2.2
Carrollton	4	2.2
Stanton	3	2.1
Dawson Springs	3	1.9
Highland Heights	4	1.9
Park Hills	3	1.8
Benton	3	1.5
Russell	3	1.5
Hickman	2	1.5
Stanford	2	1.5
Beaver Dam	2	1.4
Lakeside Park	2	1.3
Wilmore	2	0.9
Hartford	1	0.8
Vine Grove	1	0.6

TABLE 45. BICYCLE ACCIDENT RATES BY COUNTY AND POPULATION CATEGORY (IN ORDER OF DECREASING PERCENTAGES) (1994-1998 DATA)

COUNTY	NUMBER OF ACCIDENTS	ANNUAL ACCIDENT RATE (ACCIDENTS PER 10,000 POP.)
POPULATION CATEGORY UNDER 10,000		
Fulton	11	2.7
Gallatin	4	1.5
Carroll	7	1.5
Hancock	5	1.3
McLean	6	1.2
Wolfe	3	0.9
Carlisle	2	0.8
Livingston	3	0.7
Spencer	2	0.6
Lee	2	0.5
Clinton	2	0.4
Hickman	1	0.4
Menifee	1	0.4
Bracken	1	0.3
Ballard	1	0.3
Nicholas	1	0.3
Lyon	1	0.3
Trimble	1	0.3
Metcalfe	1	0.2
Crittenden	1	0.2
Bath	1	0.2
Elliott	0	0.0
Cumberland	0	0.0
Owen	0	0.0
Owsley	0	0.0
Robertson	0	0.0
POPULATION CATEGORY 10,000-14,999		
Caldwell	18	2.7
Anderson	9	1.2
Estill	8	1.1
Henry	7	1.1
Garrard	5	0.9
Powell	5	0.9
Allen	6	0.8
Webster	4	0.6
Todd	3	0.5
Hart	4	0.5
Magoffin	3	0.5
Lewis	3	0.5
Larue	3	0.5
Fleming	3	0.5
Pendleton	3	0.5
Casey	3	0.4
Russell	3	0.4
Rockcastle	3	0.4
Leslie	3	0.4
Butler	2	0.4
Trigg	2	0.4
Edmonson	2	0.4
Monroe	2	0.4
Green	2	0.4
Lawrence	2	0.3
Jackson	2	0.3
Morgan	1	0.2
Martin	1	0.2
Washington	0	0.0
POPULATION CATEGORY 15,000-24,999		
Scott	19	1.6
Harrison	12	1.5
Bourbon	13	1.4
Simpson	10	1.3
Union	11	1.3
Grant	9	1.1
Marion	9	1.1
Mason	9	1.1
Wayne	10	1.1
Rowan	11	1.1
Logan	12	1.0
Shelby	13	1.0
Mercer	10	1.0
Johnson	10	0.9
Taylor	10	0.9
Adair	7	0.9
Woodford	8	0.8
Breckinridge	6	0.7
Ohio	6	0.6
Lincoln	6	0.6
Knott	5	0.6
Montgomery	6	0.6
Meade	6	0.5
Clay	5	0.5
McCreary	3	0.4
Carter	4	0.3
Grayson	3	0.3
Breathitt	1	0.1
POPULATION CATEGORY 25,000-50,000		
Henderson	72	3.3
Hopkins	49	2.1
Clark	27	1.8
Barren	30	1.8
Jessamine	23	1.5
Nelson	21	1.4
Boyle	16	1.2
Greenup	22	1.2
Bell	19	1.2
Perry	17	1.1
Franklin	24	1.1
Harlan	19	1.0
Graves	17	1.0
Oldham	16	1.0
Pulaski	20	0.8
Marshall	11	0.8
Whitley	12	0.7
Calloway	11	0.7
Laurel	15	0.7
Knox	10	0.7
Floyd	13	0.6
Bullitt	12	0.5
Muhlenberg	8	0.5
Letcher	2	0.1
POPULATION CATEGORY OVER 50,000		
Fayette	456	4.0
Campbell	133	3.2
Jefferson	1,043	3.1
Kenton	220	3.1
Daviess	133	3.1
Boyd	55	2.2
Boone	61	2.1
Christian	57	1.7
McCracken	53	1.7
Warren	67	1.7
Madison	44	1.5
Hardin	49	1.1
Pike	14	0.4

TABLE 46. BICYCLE ACCIDENT RATES BY CITY AND POPULATION CATEGORY
(IN ORDER OF DECREASING PERCENTAGES)(1994-1998 DATA)

CITY	NUMBER OF ACCIDENTS (1994-1998)	ANNUAL ACCIDENT RATE (ACCIDENTS PER 10,000 POPULATION)
POPULATION CATEGORY OVER 200,000		
Louisville	744	5.5
Lexington	454	4.0
POPULATION CATEGORY 20,000-55,000		
Covington	123	5.7
Henderson	64	4.9
Owensboro	116	4.3
Ashland	41	3.5
Paducah	44	3.2
Bowling Green	59	2.9
Hopkinsville	40	2.7
Richmond	28	2.6
Frankfort	22	1.7
Jeffersontown	18	1.6
POPULATION CATEGORY 10,000-19,999		
Newport	87	9.2
Madisonville	37	4.6
Shively	35	4.5
Florence	38	4.1
Erlanger	32	4.0
Glasgow	24	3.9
Winchester	24	3.0
Nicholasville	18	2.6
Danville	16	2.6
Georgetown	14	2.5
Middlesboro	14	2.5
Elizabethtown	21	2.3
Saint Matthews	15	1.9
Radcliff	18	1.8
Somerset	9	1.7
Murray	8	1.1
Independence	5	1.0
Fort Thomas	5	0.6
POPULATION CATEGORY 5,000-9,999		
Princeton	18	5.2
Bardstown	15	4.4
Bellevue	15	4.3
Cynthiana	11	3.4
Elsmere	11	3.2
Dayton	10	3.0
Shelbyville	9	2.9
Lebanon	8	2.8
Paris	12	2.7
Russellville	10	2.7
Monticello	7	2.6
Franklin	10	2.6
Corbin	9	2.4
Berea	11	2.4
Mayfield	12	2.4
Flatwoods	9	2.3
Maysville	8	2.2
Harrodsburg	8	2.2
Versailles	7	1.9
Morehead	8	1.9
Hazard	5	1.8
Edgewood	7	1.7
Fort Mitchell	6	1.6
Mount Sterling	4	1.5
Campbellsville	7	1.5
London	4	1.4
Lawrenceburg	4	1.4
Fort Wright	4	1.2
Alexandria	3	1.1
Williamsburg	3	1.1
Villa Hills	4	1.0
Pikeville	2	0.6
Taylor Mill	1	0.4
Mount Washington	1	0.4
POPULATION CATEGORY 2,500-4,999		
Ludlow	12	5.1
Fulton	6	3.9
Carrollton	7	3.8
Dawson Springs	5	3.2
Paintsville	7	3.2
Hickman	4	3.0
Highland Heights	6	2.8
Lagrange	5	2.6
Lancaster	4	2.3
Columbia	4	2.1
Irvine	3	2.1
Morganfield	4	2.1
Central City	4	1.6
Providence	3	1.5
Russell	3	1.5
Hodgenville	2	1.5
Harlan	2	1.5
Stanton	2	1.4
Tompkinsville	2	1.4
Cold Springs	2	1.4
Greenville	3	1.3
Williamstown	2	1.3
Southgate	2	1.2
Prestonsburg	2	1.1
Benton	2	1.0
Wilmore	2	0.9
Scottsville	2	0.9
Leitchfield	2	0.8
Calvert City	1	0.8
Mount Vernon	1	0.8
Hartford	1	0.8
Beaver Dam	1	0.7
Lakeside Park	1	0.6
Park Hills	1	0.6
Vine Grove	1	0.6
Marion	1	0.6
Cumberland	1	0.6
Grayson	1	0.6
Barbourville	1	0.5
Shepherdsville	1	0.4

TABLE 47. MOTORCYCLE ACCIDENT RATES BY COUNTY AND POPULATION CATEGORY (IN ORDER OF DECREASING PERCENTAGES) (1994-1998 DATA)

COUNTY	NUMBER OF ACCIDENTS	ANNUAL ACCIDENT RATE (ACCIDENTS PER 10,000 POP.)
POPULATION CATEGORY UNDER 10,000		
Gallatin	13	4.8
Carroll	19	4.1
Elliott	13	4.0
Spencer	12	3.5
Lyon	11	3.3
Livingston	15	3.3
Wolfe	10	3.1
Trimble	9	3.0
Menifee	7	2.7
Owen	11	2.4
Ballard	9	2.3
Bath	11	2.3
Bracken	8	2.1
McLean	9	1.9
Lee	7	1.9
Metcalfe	8	1.8
Hickman	5	1.8
Nicholas	5	1.5
Hancock	6	1.5
Fulton	5	1.2
Crittenden	5	1.1
Owsley	2	0.8
Carlisle	2	0.8
Clinton	3	0.7
Cumberland	0	0.0
Robertson	0	0.0
POPULATION CATEGORY 10,000-14,999		
Leslie	24	3.5
Pendleton	17	2.8
Morgan	16	2.7
Martin	16	2.6
Garrard	15	2.6
Jackson	15	2.5
Trigg	13	2.5
Anderson	17	2.3
Allen	17	2.3
Caldwell	15	2.3
Estill	16	2.2
Todd	11	2.0
Henry	13	2.0
Lawrence	13	1.9
Powell	11	1.9
Magoffin	12	1.8
Monroe	10	1.8
Edmonson	9	1.7
Green	9	1.7
Fleming	10	1.6
Butler	9	1.6
Russell	10	1.4
Hart	10	1.3
Washington	7	1.3
Rockcastle	9	1.2
Lewis	7	1.1
Casey	8	1.1
Webster	6	0.9
Larue	5	0.9

COUNTY	NUMBER OF ACCIDENTS	ANNUAL ACCIDENT RATE (ACCIDENTS PER 10,000 POP.)
POPULATION CATEGORY 15,000-24,999		
Breathitt	30	3.8
Scott	39	3.3
Grant	24	3.1
Woodford	30	3.0
Carter	33	2.7
Knott	24	2.7
Adair	20	2.6
Rowan	26	2.6
Harrison	20	2.5
Grayson	26	2.5
Logan	29	2.4
Mason	20	2.4
Marion	20	2.4
Union	18	2.2
Mercer	19	2.0
Bourbon	18	1.9
Lincoln	19	1.9
Meade	23	1.9
Shelby	23	1.9
Johnson	21	1.8
McCreary	14	1.8
Ohio	19	1.8
Simpson	13	1.7
Wayne	14	1.6
Taylor	15	1.4
Clay	15	1.4
Breckinridge	11	1.3
Montgomery	11	1.1
POPULATION CATEGORY 25,000-50,000		
Perry	64	4.2
Henderson	74	3.4
Hopkins	76	3.3
Floyd	69	3.2
Marshall	42	3.1
Barren	49	2.9
Knox	40	2.7
Boyle	29	2.3
Muhlenberg	34	2.2
Letcher	30	2.2
Nelson	33	2.2
Clark	30	2.0
Graves	32	1.9
Bullitt	46	1.9
Franklin	42	1.9
Calloway	29	1.9
Jessamine	28	1.8
Laurel	39	1.8
Pulaski	42	1.7
Whitley	26	1.6
Greenup	25	1.4
Bell	19	1.2
Oldham	19	1.1
Harlan	17	0.9
POPULATION CATEGORY OVER 50,000		
Pike	171	4.7
Warren	144	3.8
McCracken	107	3.4
Boone	88	3.1
Boyd	74	2.9
Daviess	119	2.7
Madison	69	2.4
Fayette	257	2.3
Hardin	96	2.2
Campbell	81	1.9
Christian	64	1.9
Jefferson	620	1.9
Kenton	123	1.7

TABLE 48. MOTORCYCLE ACCIDENT RATES BY CITY AND POPULATION CATEGORY (IN ORDER OF DECREASING PERCENTAGES)(1994-1998 DATA)

CITY	NUMBER OF ACCIDENTS (1994-1998)	ANNUAL ACCIDENT RATE (ACCIDENTS PER 10,000 POPULATION)
POPULATION CATEGORY OVER 200,000		
Louisville	357	2.7
Lexington	253	2.2
POPULATION CATEGORY 20,000-55,000		
Bowling Green	92	4.5
Paducah	51	3.7
Henderson	45	3.5
Ashland	39	3.3
Richmond	30	2.8
Owensboro	68	2.5
Frankfort	26	2.0
Hopkinsville	29	1.9
Covington	37	1.7
Jeffersontown	11	0.9
POPULATION CATEGORY 10,000-19,999		
Madisonville	36	4.4
Florence	32	3.4
Danville	20	3.2
Elizabethtown	28	3.1
Shively	23	3.0
Georgetown	17	3.0
Newport	25	2.6
Glasgow	15	2.4
Radcliff	24	2.4
Somerset	13	2.4
Erlanger	16	2.0
Winchester	12	1.5
Independence	8	1.5
Murray	9	1.2
Saint Matthews	9	1.1
Nicholasville	7	1.0
Middlesboro	4	0.7
Fort Thomas	5	0.6
POPULATION CATEGORY 5,000-9,999		
Pikeville	17	5.4
Russellville	19	5.1
Hazard	9	3.3
London	9	3.1
Bardstown	10	2.9
Shelbyville	9	2.9
Versailles	10	2.8
Lawrenceburg	8	2.7
Fort Mitchell	10	2.7
Fort Wright	8	2.4
Princeton	8	2.3
Maysville	8	2.2
Alexandria	6	2.1
Paris	9	2.1
Bellevue	7	2.0
Mount Sterling	5	1.9
Cynthiana	6	1.8
Corbin	6	1.6
Harrodsburg	6	1.6
Franklin	6	1.6
Mayfield	8	1.6
Monticello	4	1.5
Lebanon	4	1.4
Villa Hills	5	1.3
Campbellsville	6	1.3
Mount Washington	3	1.1
Williamsburg	3	1.1
Taylor Mill	3	1.1
Berea	5	1.1
Morehead	4	1.0
Dayton	3	0.9
Elsmere	2	0.6
Flatwoods	1	0.3
Edgewood	1	0.2
POPULATION CATEGORY 2,500-4,999		
Prestonsburg	8	4.5
Shepherdsville	9	3.7
Columbia	7	3.6
Tompkinsville	5	3.5
Scottsville	7	3.3
Carrollton	6	3.2
Beaver Dam	4	2.8
Paintsville	6	2.8
Irvine	4	2.8
Springfield	4	2.8
Cold Springs	4	2.8
Williamstown	4	2.6
Calvert City	3	2.4
Stanford	3	2.2
Hodgenville	3	2.2
Leitchfield	5	2.0
Central City	5	2.0
Russell	4	2.0
Jenkins	2	1.5
Harlan	2	1.5
Benton	3	1.5
Wilmore	3	1.4
Highland Heights	3	1.4
Stanton	2	1.4
Greenville	3	1.3
Dawson Springs	2	1.3
Fulton	2	1.3
Flemingsburg	2	1.3
Ludlow	3	1.3
Southgate	2	1.2
Lancaster	2	1.2
Morganfield	2	1.1
Grayson	2	1.1
Mount Vernon	1	0.8
Cumberland	1	0.6
Lakeside Park	1	0.6
Park Hills	1	0.6
Vine Grove	1	0.6
Barbourville	1	0.5
Providence	1	0.5

TABLE 49. SCHOOL BUS ACCIDENT RATES BY COUNTY AND POPULATION CATEGORY (IN ORDER OF DECREASING PERCENTAGES) (1994-1998 DATA)

COUNTY	NUMBER OF ACCIDENTS	ANNUAL ACCIDENT RATE (ACCIDENTS PER 10,000 POP.)
POPULATION CATEGORY UNDER 10,000		
Spencer	16	4.7
Carroll	13	2.8
Metcalfe	11	2.5
Wolfe	7	2.2
Bracken	8	2.1
Gallatin	5	1.9
Crittenden	8	1.7
Bath	8	1.7
Lee	6	1.6
Owsley	4	1.6
Hickman	4	1.4
Hancock	5	1.3
Owen	6	1.3
McLean	6	1.2
Menifee	3	1.2
Nicholas	4	1.2
Livingston	5	1.1
Clinton	5	1.1
Fulton	4	1.0
Trimble	3	1.0
Cumberland	3	0.9
Ballard	3	0.8
Carlisle	1	0.4
Elliott	0	0.0
Lyon	0	0.0
Robertson	0	0.0
POPULATION CATEGORY 10,000-14,999		
Anderson	26	3.6
Leslie	21	3.1
Washington	15	2.9
Morgan	17	2.9
Edmonson	15	2.9
Henry	18	2.8
Jackson	16	2.7
Hart	19	2.6
Pendleton	13	2.2
Rockcastle	16	2.2
Lewis	14	2.1
Green	10	1.9
Martin	11	1.8
Magoffin	12	1.8
Larue	10	1.7
Lawrence	11	1.6
Estill	12	1.6
Garrard	9	1.6
Fleming	9	1.5
Allen	11	1.5
Caldwell	10	1.5
Powell	9	1.5
Webster	10	1.4
Butler	8	1.4
Trigg	6	1.2
Monroe	6	1.1
Casey	7	1.0
Russell	7	1.0
Todd	5	0.9
POPULATION CATEGORY 15,000-24,999		
Montgomery	41	4.2
Wayne	30	3.4
Scott	41	3.4
Grant	25	3.2
Shelby	33	2.7
Clay	28	2.6
Bourbon	24	2.5
Marion	21	2.5
Mason	19	2.3
Carter	28	2.3
Woodford	23	2.3
Logan	27	2.2
Mercer	21	2.2
Knott	20	2.2
Johnson	24	2.1
Breathitt	16	2.0
Adair	15	2.0
McCreary	15	1.9
Rowan	17	1.7
Harrison	14	1.7
Union	14	1.7
Ohio	16	1.5
Grayson	13	1.2
Lincoln	11	1.1
Taylor	11	1.0
Breckinridge	7	0.9
Meade	10	0.8
Simpson	4	0.5
POPULATION CATEGORY 25,000-50,000		
Jessamine	65	4.3
Perry	57	3.8
Clark	46	3.1
Bullitt	69	2.9
Floyd	62	2.8
Letcher	35	2.6
Whitley	42	2.5
Laurel	54	2.5
Nelson	35	2.4
Muhlenberg	37	2.4
Oldham	40	2.4
Pulaski	58	2.3
Graves	35	2.1
Knox	31	2.1
Bell	31	2.0
Franklin	39	1.8
Henderson	39	1.8
Hopkins	35	1.5
Boyle	17	1.3
Harlan	22	1.2
Calloway	18	1.2
Barren	19	1.1
Greenup	18	1.0
Marshall	11	0.8
POPULATION CATEGORY OVER 50,000		
Madison	81	2.8
Fayette	297	2.6
Boone	76	2.6
Jefferson	782	2.4
Warren	89	2.3
Christian	78	2.3
Kenton	153	2.2
McCracken	68	2.2
Pike	74	2.0
Boyd	49	1.9
Hardin	68	1.5
Daviess	60	1.4
Campbell	60	1.4

TABLE 50. SCHOOL BUS ACCIDENT RATES BY CITY AND POPULATION CATEGORY
(IN ORDER OF DECREASING PERCENTAGES)(1994-1998 DATA)

CITY	NUMBER OF ACCIDENTS (1994-1998)	ANNUAL ACCIDENT RATE (ACCIDENTS PER 10,000 POPULATION)
POPULATION CATEGORY OVER 200,000		
Louisville	472	3.5
Lexington	294	2.6
POPULATION CATEGORY 20,000-55,000		
Hopkinsville	58	3.9
Richmond	37	3.5
Ashland	34	2.9
Covington	61	2.8
Bowling Green	55	2.7
Paducah	31	2.3
Henderson	26	2.0
Frankfort	21	1.6
Jeffersontown	17	1.5
Owensboro	36	1.3
POPULATION CATEGORY 10,000-19,999		
Independence	30	5.7
Nicholasville	38	5.6
Somerset	24	4.5
Shively	30	3.9
Winchester	29	3.7
Georgetown	18	3.2
Madisonville	20	2.5
Florence	22	2.4
Radcliff	19	1.9
Danville	12	1.9
Middlesboro	11	1.9
Elizabethtown	15	1.7
Newport	14	1.5
Saint Matthews	9	1.1
Erlanger	8	1.0
Glasgow	5	0.8
Murray	5	0.7
Fort Thomas	1	0.1
POPULATION CATEGORY 5,000-9,999		
Monticello	20	7.5
Mount Sterling	19	7.1
Hazard	19	7.0
London	19	6.6
Taylor Mill	14	5.1
Alexandria	13	4.6
Bardstown	14	4.1
Versailles	15	4.1
Mayfield	20	4.0
Shelbyville	12	3.8
Russellville	13	3.5
Maysville	12	3.3
Harrodsburg	12	3.3
Paris	14	3.2
Lawrenceburg	9	3.0
Corbin	11	3.0
Mount Washington	7	2.7
Lebanon	7	2.5
Pikeville	6	1.9
Campbellsville	8	1.7
Morehead	7	1.7
Edgewood	7	1.7
Cynthiana	5	1.5
Williamsburg	4	1.5
Fort Wright	4	1.2
Princeton	4	1.2
Villa Hills	4	1.0
Elsmere	3	0.9
Berea	4	0.9
Flatwoods	3	0.8
Dayton	2	0.6
Franklin	2	0.5
Fort Mitchell	2	0.5
Bellevue	1	0.3
POPULATION CATEGORY 2,500-4,999		
Shepherdsville	13	5.4
Grayson	8	4.6
Highland Heights	8	3.8
Jenkins	5	3.6
Irvine	5	3.5
Prestonsburg	6	3.4
Carrollton	6	3.2
Columbia	6	3.1
Harlan	4	3.0
Stanford	4	3.0
Lancaster	5	2.9
Tompkinsville	4	2.8
Paintsville	6	2.8
Lakeside Park	4	2.6
Wilmore	5	2.4
Scottsville	5	2.3
Vine Grove	4	2.2
Barbourville	4	2.2
Springfield	3	2.1
Morganfield	4	2.1
Greenville	4	1.7
Hickman	2	1.5
Stanton	2	1.4
Beaver Dam	2	1.4
Cumberland	2	1.3
Flemingsburg	2	1.3
Williamstown	2	1.3
Dawson Springs	2	1.3
Central City	3	1.2
Providence	2	1.0
Lagrange	2	1.0
Ludlow	2	0.8
Park Hills	1	0.6
Fulton	1	0.6
Marion	1	0.6
Leitchfield	1	0.4

TABLE 51. TRUCK ACCIDENT RATES BY COUNTY AND POPULATION CATEGORY (IN ORDER OF DECREASING PERCENTAGES) (1994-1998 DATA)

COUNTY	NUMBER OF ACCIDENTS	ANNUAL ACCIDENT RATE (ACCIDENTS PER 10,000 POP.)
POPULATION CATEGORY UNDER 10,000		
Gallatin	166	61.6
Lyon	159	48.0
Carroll	211	45.4
Ballard	127	32.1
Wolfe	73	22.5
Trimble	67	22.0
Bath	105	21.7
Hancock	84	21.4
Fulton	74	17.9
Bracken	69	17.8
Metcalfe	77	17.2
McLean	76	15.8
Owen	67	14.8
Livingston	63	13.9
Hickman	37	13.3
Crittenden	58	12.6
Owsley	29	11.5
Spencer	38	11.2
Clinton	45	9.9
Menifee	24	9.4
Carlisle	24	9.2
Lee	33	8.9
Cumberland	30	8.8
Elliott	27	8.4
Nicholas	26	7.7
Robertson	5	4.7
POPULATION CATEGORY 10,000-14,999		
Webster	225	32.2
Hart	223	30.0
Henry	192	29.9
Rockcastle	211	28.5
Martin	157	25.1
Pendleton	140	23.3
Trigg	120	23.2
Lawrence	144	20.6
Anderson	143	19.6
Caldwell	120	18.1
Todd	96	17.6
Larue	103	17.6
Washington	91	17.4
Powell	99	16.9
Fleming	103	16.8
Leslie	111	16.3
Allen	112	15.3
Edmonson	77	14.9
Garrard	82	14.2
Lewis	92	14.1
Magoffin	78	11.9
Butler	65	11.6
Russell	82	11.1
Green	57	11.0
Jackson	65	10.9
Morgan	60	10.3
Estill	57	7.8
Casey	52	7.3
Monroe	29	5.1
POPULATION CATEGORY 15,000-24,999		
Grant	352	44.7
Simpson	292	38.6
Scott	443	37.1
Mason	271	32.5
Shelby	375	30.2
Woodford	275	27.6
Logan	333	27.3
Union	189	22.8
Montgomery	222	22.7
Bourbon	208	21.6
Harrison	173	21.3
Ohio	214	20.3
Carter	244	20.0
Rowan	204	20.0
Mercer	187	19.5
Knott	163	18.2
Breathitt	134	17.1
Grayson	171	16.2
Adair	115	15.0
Johnson	172	14.8
Taylor	149	14.1
Marion	114	13.8
Lincoln	127	12.7
Clay	127	11.7
Breckinridge	81	9.9
Meade	111	9.2
Wayne	78	8.9
McCreary	53	6.8
POPULATION CATEGORY 25,000-50,000		
Perry	467	30.8
Laurel	655	30.2
Henderson	626	29.1
Whitley	467	28.0
Letcher	367	27.2
Hopkins	594	25.8
Barren	439	25.8
Clark	374	25.4
Bullitt	533	22.4
Floyd	487	22.3
Jessamine	333	21.8
Boyle	270	21.1
Muhlenberg	324	20.7
Oldham	338	20.3
Bell	313	19.9
Marshall	271	19.9
Franklin	431	19.7
Pulaski	472	19.1
Graves	311	18.5
Nelson	255	17.2
Harlan	308	16.8
Greenup	217	11.8
Knox	164	11.1
Calloway	157	10.2
POPULATION CATEGORY OVER 50,000		
Boone	1,590	55.2
Pike	1,375	37.9
Madison	930	32.3
Warren	1,206	31.5
Kenton	2,063	29.0
Boyd	727	28.4
Fayette	3,134	27.8
Jefferson	9,129	27.5
McCracken	786	25.0
Daviess	909	20.9
Campbell	850	20.3
Christian	656	19.0
Hardin	783	17.5

TABLE 52. MOTOR VEHICLE-TRAIN ACCIDENT RATES BY COUNTY AND POPULATION CATEGORY (IN ORDER OF DECREASING PERCENTAGES) (1994-1998 DATA)

COUNTY	NUMBER OF ACCIDENTS	ANNUAL ACCIDENT RATE (ACCIDENTS PER 10,000 POP.)
POPULATION CATEGORY UNDER 10,000		
McLean	3	0.62
Hancock	2	0.51
Carroll	2	0.43
Hickman	1	0.36
Lyon	1	0.30
Cumberland	1	0.29
Lee	1	0.27
Ballard	1	0.25
Fulton	1	0.24
Owen	0	0.00
Trimble	0	0.00
Owsley	0	0.00
Robertson	0	0.00
Spencer	0	0.00
Metcalfe	0	0.00
Nicholas	0	0.00
Crittenden	0	0.00
Menifee	0	0.00
Livingston	0	0.00
Gallatin	0	0.00
Elliott	0	0.00
Clinton	0	0.00
Carlisle	0	0.00
Bath	0	0.00
Bracken	0	0.00
Wolfe	0	0.00
POPULATION CATEGORY 10,000-14,999		
Lewis	6	0.92
Anderson	5	0.69
Webster	4	0.57
Todd	3	0.55
Hart	4	0.54
Magoffin	3	0.46
Lawrence	3	0.43
Pendleton	2	0.33
Rockcastle	2	0.27
Estill	1	0.14
Henry	1	0.11
Larue	0	0.00
Martin	0	0.00
Monroe	0	0.00
Powell	0	0.00
Morgan	0	0.00
Russell	0	0.00
Trigg	0	0.00
Leslie	0	0.00
Casey	0	0.00
Jackson	0	0.00
Green	0	0.00
Garrard	0	0.00
Fleming	0	0.00
Edmonson	0	0.00
Caldwell	0	0.00
Butler	0	0.00
Allen	0	0.00
Washington	0	0.00
POPULATION CATEGORY 15,000-24,999		
Grant	15	1.91
Mercer	7	0.73
Lincoln	6	0.60
McCreary	4	0.51
Scott	5	0.42
POPULATION CATEGORY 15,000-24,999 (cont.)		
Shelby	5	0.40
Woodford	4	0.40
Simpson	2	0.26
Breathitt	2	0.25
Harrison	2	0.25
Ohio	2	0.19
Johnson	2	0.17
Logan	2	0.16
Mason	1	0.12
Knott	1	0.11
Grayson	1	0.10
Meade	1	0.08
Union	0	0.00
Taylor	0	0.00
Rowan	0	0.00
Montgomery	0	0.00
Carter	0	0.00
Marion	0	0.00
Clay	0	0.00
Breckinridge	0	0.00
Bourbon	0	0.00
Adair	0	0.00
Wayne	0	0.00
POPULATION CATEGORY 25,000-50,000		
Oldham	16	0.96
Floyd	17	0.78
Harlan	11	0.60
Bell	9	0.57
Hopkins	13	0.56
Knox	8	0.54
Muhlenberg	8	0.51
Whitley	7	0.42
Marshall	5	0.37
Perry	5	0.33
Pulaski	6	0.24
Letcher	3	0.22
Bullitt	5	0.21
Nelson	2	0.13
Calloway	2	0.13
Barren	2	0.12
Henderson	2	0.09
Laurel	2	0.09
Clark	1	0.07
Jessamine	1	0.07
Graves	1	0.06
Greenup	1	0.05
Franklin	1	0.05
Boyle	0	0.00
POPULATION CATEGORY OVER 50,000		
Boyd	11	0.43
Pike	15	0.41
Warren	11	0.29
Jefferson	77	0.23
Daviess	7	0.16
Boone	4	0.14
Christian	4	0.12
Kenton	8	0.11
Hardin	5	0.11
Madison	3	0.10
McCracken	3	0.10
Campbell	3	0.07
Fayette	7	0.06

TABLE 53. ACCIDENTS INVOLVING VEHICLE DEFECT BEFORE AND AFTER REPEAL OF VEHICLE INSPECTION LAW

TIME PERIOD	TOTAL NUMBER OF ACCIDENTS*	NUMBER OF ACCIDENTS INVOLVING VEHICLE DEFECTS	PERCENT OF ALL ACCIDENTS INVOLVING VEHICLE DEFECTS
October 1976 - May 1978 (20 Months Before Repeal of Law)	246,500	14,440	5.06
June 1978 - December 1979 (19 Months After Repeal of Law)	233,155	16,527	7.09
1980 - 1984	624,861**	46,397	7.43
1985 - 1989	701,119**	46,552	6.64
1990 - 1994	663,504**	40,393	6.09
1995 - 1998	506,407**	27,000	5.33

* Does not include accidents in which the vehicle defect code was unknown.

** Total accidents based on factor obtained from previous year's data.

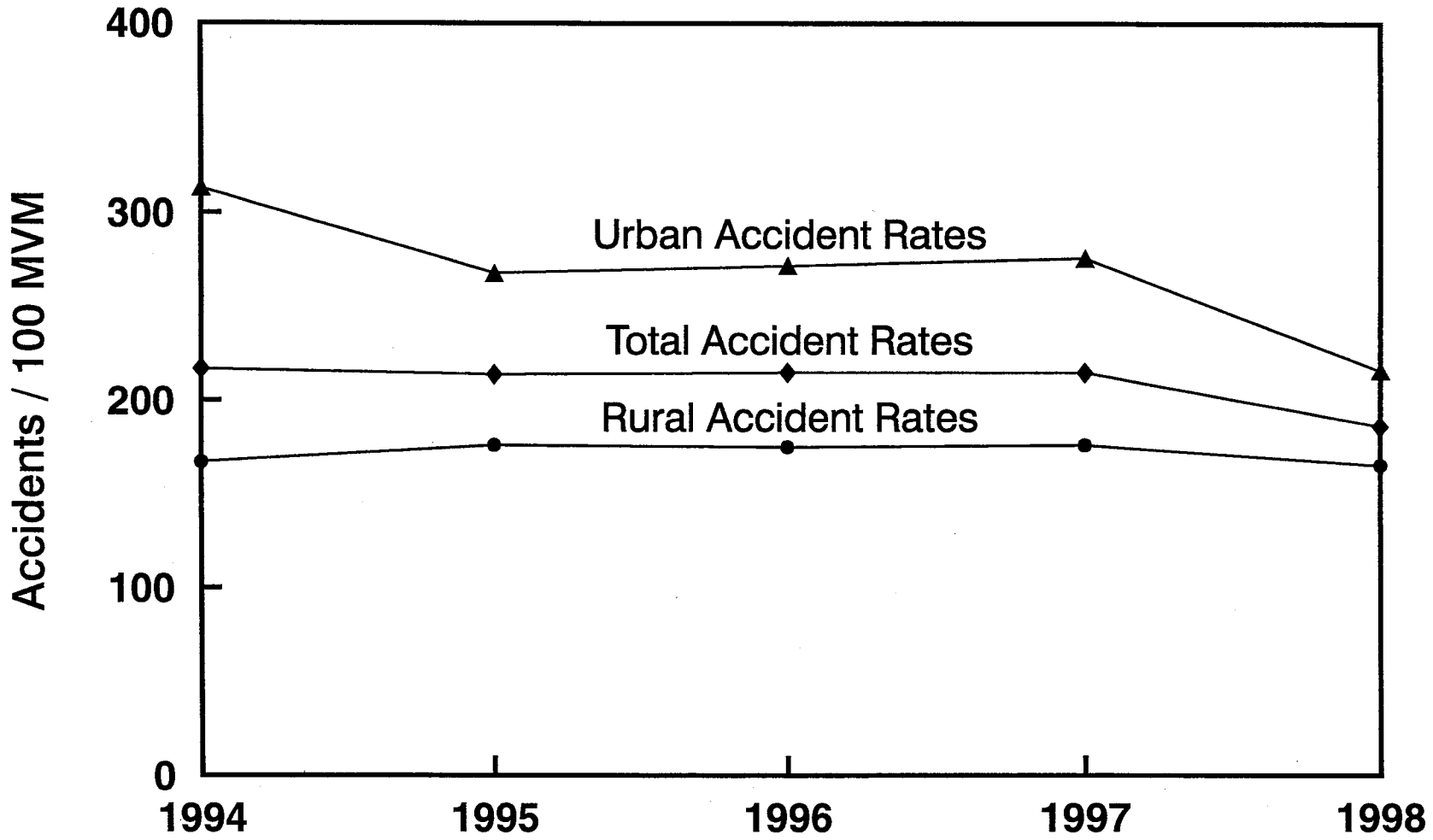

Figure 1. Trends in Accident Rates
(State Maintained Roads)

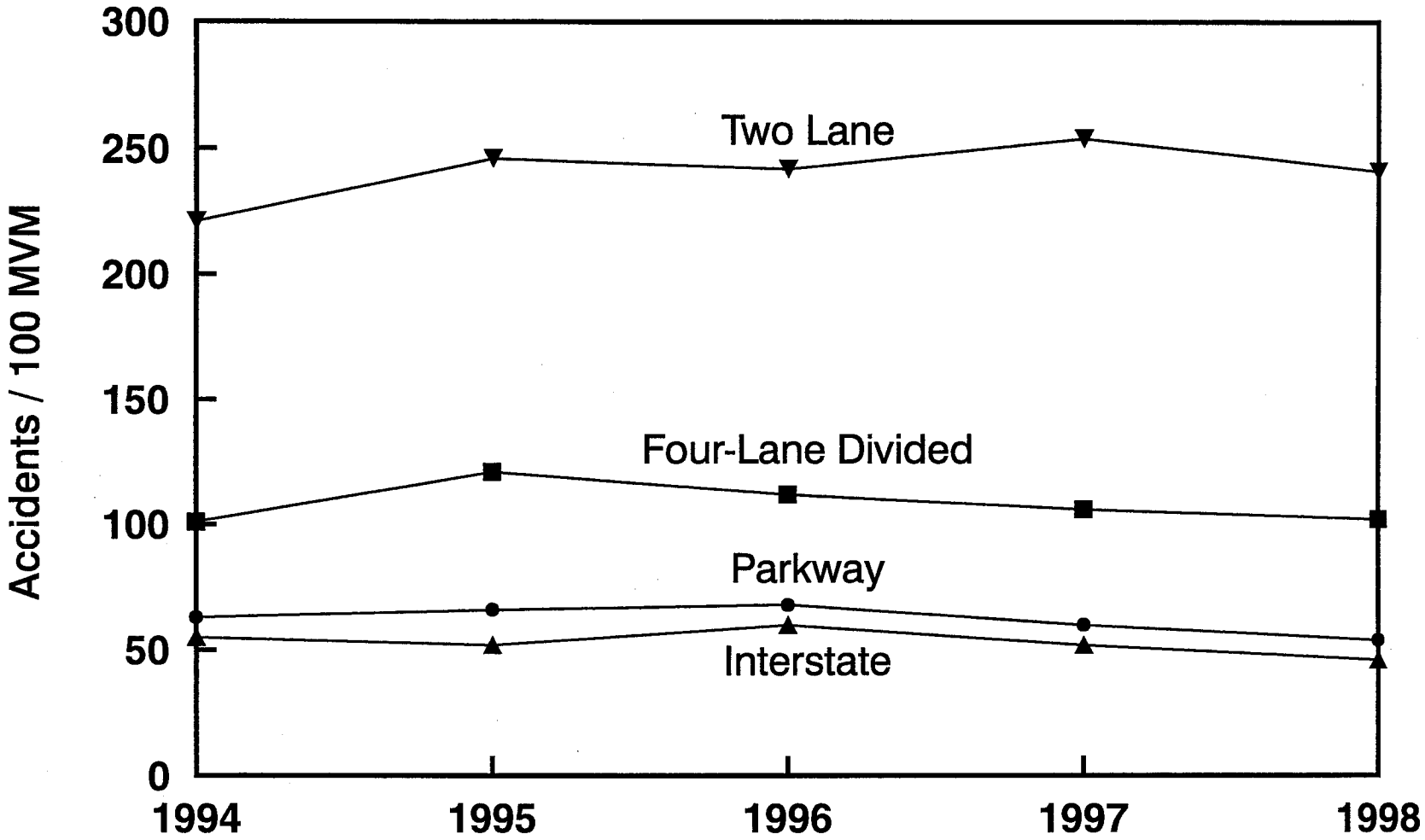

Figure 2. Trends in Rural Accident Rates
(State Maintained Roads)

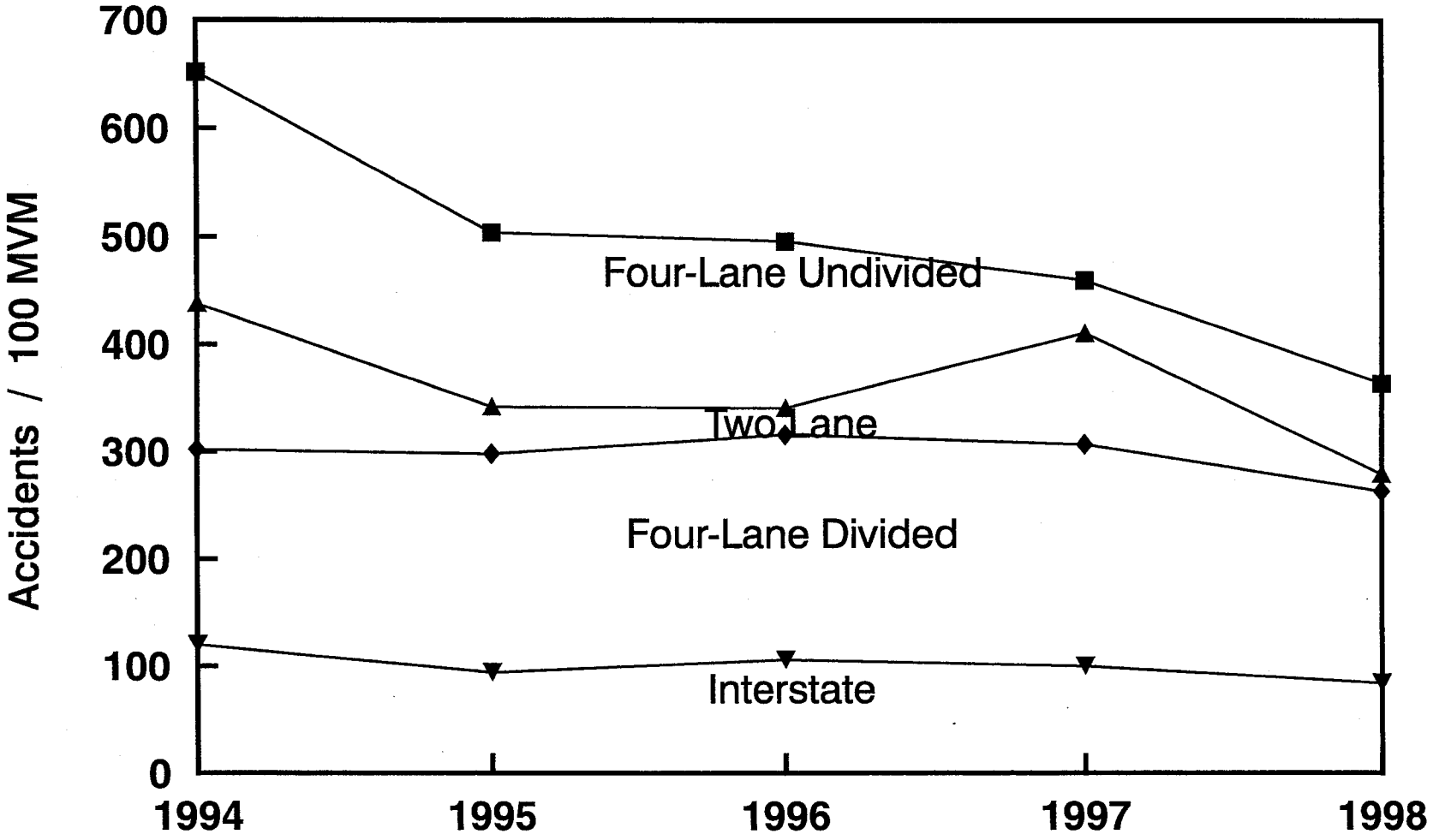

Figure 3. Trends in Urban Accident Rates
(State Maintained Roads)

APPENDIX A

STATEWIDE ACCIDENT RATES AS A FUNCTION OF SEVERAL VARIABLES

Highways are grouped into various system classifications. Three common types of groupings include: 1) functional classification, 2) federal-aid system, and 3) administrative classification. Statewide accident rates were determined for each of those groupings. Following is a summary of the findings.

Average statewide rates by functional classification are listed in Table A-1. Highways were grouped into a rural or urban category and then into systems such as arterial, collector, and local. Rates were determined considering all accidents, injury accidents only, and fatal accidents only. The highest overall accident rates were for urban minor arterials followed by urban principal arterials (non-interstate or freeway). The lowest overall rate was for rural principal arterials (interstate) followed by urban principal arterials (interstate and other freeway). The rural principal arterials (non-interstate) and rural local system also had relatively low total accident rates. Injury accident rates for the various categories were ordered similar to overall accident rates. However, the ordering for the fatal accident rates was different. The highest fatal accident rates were for rural collectors and minor arterials. The lowest fatal accident rates was for urban interstates with several other urban classifications, as well as rural interstates, having a low rate.

Statewide accident rates by federal-aid system are shown in Table A-2. The highest rate was for the federal-aid urban system and the lowest rate was for the interstate system. The federal-aid primary (non-interstate), federal-aid secondary (rural), and non-federal-aid systems had relatively similar rates.

Statewide accident rates by administrative classification are listed in Table A-3. The rate for the primary system was lowest with the rate for the secondary system highest. Rates for the rural secondary and unclassified systems were between these two levels and were almost identical.

The benefits of providing a median and increasing the median width are shown in Table A-4. The accident rate for rural highways having four or more lanes which are divided and have a median width of less than 30 feet is less than that for an undivided highway. The accident rate is decreased significantly more when comparing a highway which is divided with a median width of more than 30 feet to a highway having a median width of less than 30 feet.

The effect of access control is described in Table A-5. The large reduction in the accident rate for highways having full control of access compared to those with partial or no access control is shown. However, the accident rate for partial control of access is closer to no access control than to full access control.

An analysis of accident rates for rural highways by federal-aid system and terrain is presented in Table A-6. Each county was given a terrain classification as either flat, rolling, or mountainous since a classification was not available for each road segment. Considering the entire system, the lowest rate was for flat terrain. The rates

for mountainous and rolling terrains were very similar with the rate for mountainous terrain slightly higher.

Rates by rural-urban designation are shown in Table A-7. The lowest rate was for rural areas. The rate for small urban areas was almost identical to that for urbanized areas, although the average traffic volume was much higher in urbanized areas. The presence of more freeway-type highways in the urbanized areas may account for this finding.

The summary of accident rates by route signing identifier reveals that US-signed routes have a rate very similar to that for state-marked routes, with interstates having a much lower rate (Table A-8). Although the geometric features on the US-signed routes would be expected to be superior than on state-marked routes, the US-signed routes have a higher average volume which may partially account for the similar accident rate.

The relationship between accident rate and traffic volume (average annual daily traffic) for various federal-aid highway classifications is illustrated in Table A-9. For interstates, which have high design criteria, the accident rate was fairly constant up until the volume range of over 40,000 vehicles per day where an increase occurred. For each of the other highway classifications (except non-federal aid), the highest rate was for the lowest volume category (AADT under 1,000). One reason for a high rate at low-volume locations is the fact that a few accidents may increase the rate substantially. Lower volume roads also are constructed to less stringent design standards, which could contribute to a higher accident rate. For the federal-aid urban and secondary categories and non-federal aid category, there was a general decrease in accident rate as volume increased. There was no definite pattern for the federal-aid primary classification.

The percentage of accidents occurring during wet or snow or icy pavement conditions or during darkness by rural or urban highway type classification is given in Table A-10. The overall percentage of accidents occurring during wet pavement conditions was 24 percent on both rural and urban roadways. This percentage tended to be lowest on interstates. There were large variations in the percentage of accidents occurring on the various highway types during snow or icy conditions. This percentage would change by year depending on the amount of snowfall any given year. The percentage on rural roads (6.0 percent) was substantially higher than that on urban roads (3.5 percent). The highest percentages were on interstates and parkways with the highest being about 12 percent. There were also large variations in the percentage of accidents occurring during darkness. The percentage was higher on rural roads (31 percent) than urban roads (23 percent). The highest percentages were on rural interstates and parkways with the highest being 41 percent. This would be expected given the level of nighttime driving on these types of roadways.

TABLE A-1. STATEWIDE ACCIDENT RATES BY FUNCTIONAL CLASSIFICATION (1994-1998 DATA)

LOCATION	FUNCTIONAL CLASSIFICATION	AVERAGE TOTAL MILAGE	AVERAGE AADT	ACCIDENT RATES (ACC PER 100 MVM) ALL	INJURY	FATAL
Rural	Principal Arterial, Interstate	536	27,093	53	15	0.7
	Principal Arterial, Other Freeway	1,955	7,656	124	43	1.7
	Minor Arterial	1,640	4,100	223	75	2.8
	Major Collector	7,013	2,175	260	93	3.2
	Minor Collector	9,404	718	271	104	3.3
	Local System	4,598	512	201	71	2.1
Urban	Principal Arterial, Interstate	217	63,346	98	24	0.5
	Principal Arterial, Other Freeway	91	22,566	102	25	0.4
	Other Principal Arterial	610	18,715	392	101	0.7
	Minor Arterial	957	9,685	394	106	1.0
	Collector	559	4,251	282	79	0.8
	Local System	120	2,190	277	65	1.5

TABLE A-2. STATEWIDE ACCIDENT RATES BY FEDERAL-AID SYSTEM (1994-1998 DATA)

FEDERAL-AID SYSTEM	ACCIDENTS	TOTAL MILEAGE	AVERAGE AADT	ACCIDENT RATES (ACC PER 100 MVM)
Interstate	38,476	754	37,515	75
Federal-Aid Primary (other than Interstate)	112,109	3,217	9,596	201
Federal-Aid Urban	109,052	1,674	8,919	400
Federal-Aid Second (Rural Only)	76,472	7,160	2,256	275
Non-Federal Aid	36,119	10,490	712	279

TABLE A-3. STATEWIDE ACCIDENT RATES BY ADMINISTRATIVE CLASSIFICATION (1994-1998 DATA)

ADMINISTRATIVE CLASSIFICATION	ACCIDENTS	TOTAL MILEAGE	AVERAGE AADT	ACCIDENT RATES (ACC PER 100 MVM)
Primary	154,010	4,354	13,824	140
Secondary	157,929	8,277	3,198	327
Rural Secondary	49,582	12,155	799	280
Unclassified	8,491	2,308	712	283

TABLE A-4. STATEWIDE ACCIDENT RATES BY MEDIAN TYPE (RURAL ROADS)
(WITH FOUR OR MORE LANES (1994-1998 DATA)

MEDIAN TYPE	ACCIDENTS	TOTAL MILEAGE	AVERAGE AADT	ACCIDENT RATES (ACC PER 100 MVM)
Undivided	2,326	67	16,841	112
Divided, Median Less Than 30 Feet, No Barrier	4,405	222	11,221	97
Divided, Median Greater Than 30 Feet, No Barrier	23,241	1,237	16,890	61

TABLE A-5. STATEWIDE ACCIDENT RATES BY ACCESS CONTROL (1994-1998 DATA)

ACCESS CONTROL	ACCIDENTS	TOTAL MILEAGE	AVERAGE AADT	ACCIDENT RATES (ACC PER 100 MVM)
Full Control	47,650	1,454	24,124	74
Partial Control	19,584	672	8,228	194
No Control	311,730	25,399	2,287	294

TABLE A-6. STATEWIDE ACCIDENT RATES FOR RURAL HIGHWAYS BY FEDERAL-AID SYSTEM AND TERRAIN (1994-1998 DATA)

FEDERAL-AID SYSTEM	ACCIDENT RATES (ACC/100MVM) BY TERRAIN CLASSIFICATION		
	FLAT	ROLLING	MOUNTAINOUS
Interstate	59	60	52
Federal-Aid Primary	163	150	158
Federal-Aid Secondary	220	274	311
Non Federal-Aid	212	268	270
All	168	183	200

TABLE A-7. STATEWIDE ACCIDENT RATES BY RURAL-URBAN DESIGNATION (1994-1998 DATA)

AREA TYPE	ACCIDENTS	TOTAL MILEAGE	AVERAGE AADT	ACCIDENT RATES (ACC PER 100 MVM)
Rural	189,633	25,131	2,414	171
Small Urban Area	57,321	1,103	10,141	281
Urbanized Area	132,945	1,199	21,265	286

TABLE A-8. STATEWIDE ACCIDENT RATES BY ROUTE SIGNING IDENTIFER (1994-1998 DATA)

ROUTE SIGNING IDENTIFIER	ACCIDENTS	TOTAL MILEAGE	AVERAGE AADT	ACCIDENT RATES (ACC PER 100 MVM)
Interstate	38,526	755	37,625	74
US	128,276	3,536	7,511	265
State	211,385	23,051	1,851	272

TABLE A-9. RELATIONSHIP BETWEEN ACCIDENT RATE AND TRAFFIC VOLUME (1994-1998 DATA)

VOLUME RANGE (AADT)	ACCIDENT RATES (ACC PER 100 MVM)				
	INTERSTATE	FEDERAL-AID PRIMARY	FEDERAL-AID URBAN	FEDERAL-AID SECONDARY	NON-FEDERAL AID
0-999	*	890	1,064	409	295
1,000-2,499	*	338	402	284	330
2,500-4,999	*	204	447	245	229
5,000-9,999	63	150	341	238	183
10,000-19,999	62	178	387	200	102
20,000-29,999	56	245	431	198	154
30,000-39,999	58	347	443	*	*
40,000 or more	88	235	459	*	*

* No data in this volume range.

TABLE A-10. PERCENTAGE OF ACCIDENTS OCCURING DURING WET OR SNOW OR ICE PAVEMENT CONDITIONS OR DURING DARKNESS BY RURAL AND URBAN HIGHWAY TYPE CLASSIFICATION (1993-1997 DATA)

LOCATION	HIGHWAY TYPE	PERCENT OF ALL ACCIDENTS		
		WET	SNOW OR ICE	DARKNESS
Rural	One-Lane	28	2.9	25
	Two-Lane	24	5.5	30
	Three-Lane	23	3.3	25
	Four-Lane Divided (Non-Interstate or Parkway)	21	5.1	28
	Four-Lane Undivided	23	2.6	21
	Interstate	16	11.5	39
	Parkway	27	10.8	41
	All Rural	24	6.0	31
Urban	Two-Lane	25	3.4	22
	Three-Lane	25	2.3	24
	Four-Lane Divided (Non-Interstate or Parkway)	24	2.8	21
	Four-Lane Undivided	25	2.1	20
	Interstate	21	7.1	30
	Parkway	20	9.5	31
	All Urban	24	3.5	23

APPENDIX B

ACCIDENT DATA FOR THREE-YEAR PERIOD (1996-1998)

Table B-1. Statewide Rural Accident Rates By Highway Type Classification (1996-1998)

HIGHWAY TYPE	TOTAL MILEAGE*	AADT	ACCIDENTS RATES (ACCIDENTS PER 100 MVM) ALL	INJURY	FATAL
One-Lane	15	1,240	260	54	0.0
Two-Lane	23,387	1,520	246	87	3.1
Three-Lane	28	5,060	324	109	2.6
Four-Lane Divided (Non-Interstate or Parkway)	459	11,090	107	39	1.5
Four-Lane Undivided	47	15,140	157	41	1.0
Interstate	526	28,400	52	14	0.7
Parkway	567	8,430	60	16	0.9
All	25,028	2,440	172	59	2.2

* Average for the three years.

Table B-2. Statewide Urban Accident Rates By Highway Type Classification (1996-1998)

HIGHWAY TYPE	TOTAL MILEAGE*	AADT	ACCIDENTS RATES (ACCIDENTS PER 100 MVM) ALL	INJURY	FATAL
Two-Lane	1,733	6,800	339	89	1.0
Three-Lane	31	12,360	545	126	0.7
Four-Lane Divided (Non-Interstate or Parkway)	363	23,100	294	78	0.7
Four-Lane Undivided	242	19,340	440	112	0.6
Interstate	229	63,910	96	23	0.5
Parkway	51	11,620	106	26	0.9
All	2,671	15,430	254	65	0.7

* Average for the three years.

** Includes small number of one-,five-, and six-lane Highways.

Preceding Page Blank

Table B-3. Statewide Accident Rates for "SPOTS" by Highway Type Classification (1996-1998)

RURAL OR URBAN	HIGHWAY TYPE	NUMBER OF ACCIDENTS	NUMBER OF SPOTS*	MILLION VEHICLES PER YEAR	ACCIDENTS PER MILLION VEHICLES PER SPOT
Rural	One-Lane	53	50	0.45	0.78
	Two-Lane	95,517	77,957	0.55	0.74
	Three-Lane	503	93	1.85	0.97
	Four-Lane Divided (Non-Interstate or Parkway)	5,932	1,529	4.05	0.32
	Four-Lane Undivided	1,221	157	5.52	0.47
	Interstate	8,538	1,752	10.37	0.16
	Parkway	3,158	1,890	3.08	0.18
	All Rural	114,922	83,428	0.89	0.51
Urban	Two-Lane	43,730	5,776	2.48	1.02
	Three-Lane	2,292	104	4.51	1.64
	Four-Lane Divided	27,030	1,210	8.43	0.88
	Four-Lane Undivided	22,545	807	7.06	1.32
	Interstate	15,407	764	23.33	0.29
	Parkway	692	170	4.24	0.32
	All Urban**	114,511	8,903	5.63	0.76

* Average for the three years. The length of a spot is defined to be 0.3 mile.
** Includes small number of miles of one-,five-, and six-lane highways.

Table B-4. Statewide Average and Critical Numbers of Accidents for "SPOTS" and One-Mile Sections by Highway Type Classification (1996-1998)*

RURAL OR URBAN	HIGHWAY TYPE	ACCIDENTS PER SPOT		ACCIDENTS PER ONE MILE SECTION	
		AVERAGE	CRITICAL NUMBER	AVERAGE	CRITICAL NUMBER
Rural	One-Lane	1.06	4	3.53	9
	Two-Lane	1.23	5	4.08	10
	Three-Lane	5.39	12	17.96	29
	Four-Lane Divided (Non-Interstate or Parkway)	3.88	9	12.93	23
	Four-Lane Undivided	7.79	15	25.98	40
	Interstate	4.87	11	16.24	27
	Parkway	1.67	6	5.57	12
	All Rural	1.38	5	4.59	11
Urban	Two-Lane	7.57	15	25.24	39
	Three-Lane	22.13	35	73.75	96
	Four-Lane Divided	22.35	35	74.48	97
	Four-Lane Undivided	27.95	42	93.17	119
	Interstate	20.16	32	67.20	89
	Parkway	4.06	10	13.55	24
	All Urban**	12.86	23	42.88	60

* The length of a spot is defined to be 0.3 mile.
** Includes small number of miles of one-,five-, and six-lane highways.

Table B-5. Statewide Accident Rates for 0.1 Mile "SPOTS" by Highway Type Classification (1996-1998)

RURAL OR URBAN	HIGHWAY TYPE	NUMBER OF ACCIDENTS	NUMBER OF SPOTS*	MILLION VEHICLES PER YEAR	ACCIDENTS PER MILLION VEHICLES PER SPOT
Rural	One-Lane	53	150	0.45	0.26
	Two-Lane	95,517	233,870	0.55	0.25
	Three-Lane	503	280	1.85	0.32
	Four-Lane Divided (Non-Interstate or Parkway)	5,932	4,587	4.05	0.11
	Four-Lane Undivided	1,221	470	5.52	0.16
	Interstate	8,538	5,257	10.37	0.05
	Parkway	3,158	5,670	3.08	0.06
	All Rural	114,922	250,283	0.89	0.17
Urban	Two-Lane	43,730	17,328	2.48	0.34
	Three-Lane	2,292	311	4.51	0.55
	Four-Lane Divided	27,030	3,629	8.43	0.29
	Four-Lane Undivided	22,545	2,420	7.06	0.44
	Interstate	15,407	2,293	23.33	0.10
	Parkway	692	511	4.24	0.11
	All Urban**	114,511	26,708	5.63	0.25

* Average for the three years. The length of a spot is defined to be 0.1 mile.
** Includes small number of miles of one-,five-, and six-lane highways.

Table B-6. Statewide Average and Critical Numbers of Accidents for 0.1 Mile "SPOTS" and One-Mile Sections by Highway Type Classification (1996-1998)*

RURAL OR URBAN	HIGHWAY TYPE	ACCIDENTS PER SPOT		ACCIDENTS PER ONE MILE SECTION	
		AVERAGE	CRITICAL NUMBER	AVERAGE	CRITICAL NUMBER
Rural	One-Lane	0.35	2	3.53	9
	Two-Lane	0.41	3	4.08	10
	Three-Lane	1.80	6	17.96	29
	Four-Lane Divided (Non-Interstate or Parkway)	1.29	5	12.93	23
	Four-Lane Undivided	2.60	7	25.98	40
	Interstate	1.62	5	16.24	27
	Parkway	0.56	3	5.57	12
	All Rural	0.46	3	4.59	11
Urban	Two-Lane	2.52	7	25.24	39
	Three-Lane	7.38	15	73.75	96
	Four-Lane Divided	7.45	15	74.48	97
	Four-Lane Undivided	9.32	18	93.17	119
	Interstate	6.72	14	67.20	89
	Parkway	1.35	5	13.55	24
	All Urban**	4.29	10	42.88	60

* The length of a spot is defined to be 0.1 mile.
** Includes small number of miles of one-,five-, and six-lane highways.

TABLE B-7. CRITICAL ACCIDENT RATES FOR 0.1 MILE "SPOTS" ON RURAL ONE-LANE, TWO-LANE AND THREE-LANE HIGHWAYS (THREE-YEAR PERIOD)(1996-1998)

AADT	CRITICAL ACCIDENT RATE (ACC/MV) BY HIGHWAY TYPE		
	ONE-LANE	TWO-LANE	THREE-LANE
100	8.80	8.71	9.29
500	2.95	2.90	3.20
1,000	1.97	1.94	2.17
2,500	1.24	1.21	1.38
5,000	0.91	0.89	1.03
7,500	0.78	0.76	0.89
10,000	0.70	0.68	0.81
15,000	0.61	0.60	0.71
20,000	0.56	0.55	0.65

TABLE B-8. CRITICAL ACCIDENT RATES FOR 0.1 MILE "SPOTS" ON RURAL FOUR-LANE HIGHWAYS, INTERSTATES, AND PARKWAYS (THREE-YEAR PERIOD)(1996-1998)

AADT	CRITICAL ACCIDENT RATE (ACC/MV) BY HIGHWAY TYPE			
	FOUR-LANE DIVIDED (NON-INTERSTATE AND PARKWAY)	FOUR-LANE UNDIVIDED	INTERSTATE	PARKWAY
500	2.18	2.47	1.74	1.83
1,000	1.38	1.60	1.06	1.12
2,500	0.81	0.97	0.58	0.62
5,000	0.57	0.69	0.39	0.42
10,000	0.41	0.52	0.27	0.30
15,000	0.35	0.44	0.22	0.25
20,000	0.32	0.40	0.20	0.22
30,000	0.27	0.35	0.17	0.19
40,000	0.25	0.33	0.15	0.17
50,000	0.23	0.31	0.14	0.15

TABLE B-9. CRITICAL ACCIDENT RATES FOR 0.1 MILE "SPOTS" ON URBAN TWO-LANE AND THREE-LANE HIGHWAYS (THREE-YEAR PERIOD)(1996-1998)

AADT	CRITICAL ACCIDENT RATE (ACC/MV) BY HIGHWAY TYPE	
	TWO-LANE	THREE-LANE
500	3.28	4.05
1,000	2.23	2.83
2,500	1.43	1.89
5,000	1.07	1.46
7,500	0.93	1.28
10,000	0.84	1.17
15,000	0.74	1.05
20,000	0.68	0.98
30,000	0.62	0.90
40,000	0.58	0.85

TABLE B-10. CRITICAL ACCIDENT RATES FOR 0.1 MILE "SPOTS" ON URBAN FOUR-LANE HIGHWAYS, INTERSTATES, AND PARKWAYS (THREE-YEAR PERIOD)(1996-1998)

AADT	CRITICAL ACCIDENT RATE (ACC/MV) BY HIGHWAY TYPE			
	FOUR-LANE DIVIDED (NON-INTERSTATE AND PARKWAY)	FOUR-LANE UNDIVIDED	INTERSTATE	PARKWAY
1,000	2.07	2.53	1.34	1.38
5,000	0.97	1.26	0.54	0.57
10,000	0.75	1.00	0.39	0.41
15,000	0.66	0.89	0.33	0.35
20,000	0.61	0.83	0.30	0.32
30,000	0.55	0.75	0.26	0.27
40,000	0.51	0.71	0.23	0.25
50,000	0.49	0.68	0.22	0.23
60,000	0.47	0.66	0.21	0.22
70,000	0.45	0.64	0.20	0.21
80,000	0.44	0.63	0.19	0.21
90,000	0.43	0.62	0.19	0.20
100,000	0.43	0.61	0.18	0.20

APPENDIX C

CRITICAL "NUMBERS OF ACCIDENTS" TABLES

TABLE C-1. CRITICAL NUMBERS OF ACCIDENT RATES ON RURAL HIGHWAYS BY HIGHWAY TYPE AND SECTION LENGTH (1994-1998)

	CRITICAL NUMBERS OF ACCIDENT FOR THE GIVEN SECTION LENGTH (MILES)						
HIGHWAY TYPE	0.4	1	2	5	10	15	20
One-Lane	6	10	16	33	59	84	108
Two-Lane	7	14	23	49	89	127	165
Three-Lane	21	44	79	179	339	496	652
Four-Lane Divided (Non-Interstate and Parkway)	17	34	61	136	255	372	487
Four-Lane Undivided	31	65	120	276	529	777	1,024
InterState	19	40	71	160	303	442	580
Parkway	9	17	30	63	116	167	217

TABLE C-2. CRITICAL NUMBERS OF ACCIDENT RATES ON URBAN HIGHWAYS BY HIGHWAY TYPE AND SECTION LENGTH (1994-1998)

	CRITICAL NUMBERS OF ACCIDENT FOR THE GIVEN SECTION LENGTH (MILES)					
HIGHWAY TYPE	0.4	1	2	5	8	10
Two-Lane	29	62	114	261	405	499
Three-Lane (Non-Interstate and Parkway)	67	151	285	675	1,058	1,312
Four-Lane Divided	70	157	296	701	1,100	1,364
Four-Lane Undivided	89	203	386	921	1,448	1,797
InterState	63	142	267	630	988	1,224
Parkway	16	33	58	129	197	242

APPENDIX D

CRITICAL ACCIDENT RATE TABLES FOR HIGHWAY SECTIONS

TABLE D-1. CRITICAL ACCIDENT RATES FOR RURAL ONE-LANE SECTIONS (FIVE-YEAR PERIOD)(1994-1998)

	CRITICAL ACCIDENT RATE (ACC/100 MVM) FOR THE GIVEN SECTION LENGTH (MILES)				
AADT	0.5	1	2	5	10
100	2,486	1,746	1,280	905	731
200	1,746	1,280	978	731	613
300	1,448	1,088	852	656	562
400	1,280	978	779	613	532
500	1,168	905	731	583	512
700	1,027	812	668	546	486
1,000	905	731	613	512	463
1,500	795	656	562	481	441
2,000	731	613	532	463	429
2,500	688	583	512	450	420
3,000	656	562	497	441	413

TABLE D-2. CRITICAL ACCIDENT RATES FOR RURAL TWO-LANE SECTIONS (FIVE-YEAR PERIOD)(1994-1998)

	CRITICAL ACCIDENT RATE (ACC/100 MVM) FOR THE GIVEN SECTION LENGTH (MILES)					
AADT	0.5	1	2	5	10	20
100	2,111	1,450	1,039	714	564	463
300	1,187	872	668	500	421	366
500	942	714	564	439	378	337
1,000	714	564	463	378	337	308
1,500	619	500	421	352	319	296
2,000	564	463	395	337	308	288
3,000	500	421	366	319	296	279
4,000	463	395	349	308	288	274
5,000	439	378	337	301	283	270
7,000	407	356	322	291	276	266
8,000	395	349	316	288	274	264
9,000	386	342	312	285	272	263
10,000	378	337	308	283	270	262

TABLE D-3. CRITICAL ACCIDENT RATES FOR RURAL THREE-LANE SECTIONS (FIVE-YEAR PERIOD)(1994-1998)

	CRITICAL ACCIDENT RATE (ACC/100 MVM) FOR THE GIVEN SECTION LENGTH (MILES)				
AADT	0.5	1	2	3	5
100	2,209	1,527	1,101	928	763
300	1,255	928	715	626	540
500	1,000	763	606	540	475
1,000	763	606	501	456	412
1,500	664	540	456	420	385
2,000	606	501	430	399	369
3,000	540	456	399	374	350
4,000	501	430	381	360	338
5,000	475	412	369	350	331
6,000	456	399	360	342	325
7,000	442	389	353	337	321
8,000	430	381	347	332	317
9,000	420	374	342	328	314
10,000	412	369	338	325	312

TABLE D-4. CRITICAL ACCIDENT RATES FOR RURAL FOUR-LANE DIVIDED SECTIONS (NON-INTERSTATE AND PARKWAY) (FIVE-YEAR PERIOD)(1994-1998)

	CRITICAL ACCIDENT RATE (ACC/100 MVM) FOR THE GIVEN SECTION LENGTH (MILES)				
AADT	0.5	1	2	5	10
500	615	444	334	245	202
1,000	444	334	262	202	174
2,500	308	245	202	167	149
5,000	245	202	174	149	137
7,500	218	184	161	141	132
10,000	202	174	154	137	128
15,000	184	161	145	132	125
20,000	174	154	140	128	122
30,000	161	145	134	125	120
40,000	154	140	131	122	118
50,000	149	137	128	121	117

TABLE D-5. CRITICAL ACCIDENT RATES FOR RURAL FOUR-LANE UNDIVIDED SECTIONS (FIVE-YEAR PERIOD)(1994-1998)

	CRITICAL ACCIDENT RATE (ACC/100 MVM) FOR THE GIVEN SECTION LENGTH (MILES)				
AADT	0.5	1	2	5	10
500	810	604	469	358	304
1,000	604	469	380	304	268
2,500	436	358	304	259	236
5,000	358	304	268	236	221
7,500	324	281	252	226	214
10,000	304	268	243	221	210
20,000	268	243	225	210	202
30,000	252	232	217	205	198
40,000	243	225	213	202	196
50,000	236	221	210	200	195

TABLE D-6. CRITICAL ACCIDENT RATES FOR RURAL INTERSTATE SECTIONS (FIVE-YEAR PERIOD)(1994-1998)

	CRITICAL ACCIDENT RATE (ACC/100 MVM) FOR THE GIVEN SECTION LENGTH (MILES)					
AADT	0.5	1	2	5	10	20
500	439	303	219	151	120	99
1,000	303	219	164	120	99	85
2,500	198	151	120	94	81	73
5,000	151	120	99	81	73	67
7,500	131	107	90	76	69	64
10,000	120	99	85	73	67	63
20,000	99	85	75	67	63	60
30,000	90	79	71	64	61	58
40,000	85	75	69	63	60	58
50,000	81	73	67	62	59	57

TABLE D-7. CRITICAL ACCIDENT RATES FOR RURAL PARKWAY SECTIONS (FIVE-YEAR PERIOD)(1994-1998)

	CRITICAL ACCIDENT RATE (ACC/100 MVM) FOR THE GIVEN SECTION LENGTH (MILES)					
AADT	0.5	1	2	5	10	20
400	534	367	264	182	144	118
700	394	280	208	150	122	104
1,000	329	239	182	134	112	97
1,500	272	203	158	120	102	90
2,000	239	182	144	112	97	86
3,000	203	158	128	102	90	82
4,000	182	144	118	97	86	79
5,000	168	134	112	93	84	77
7,000	150	122	104	88	80	75
10,000	134	112	97	84	77	73
20,000	112	97	86	77	73	69
40,000	97	86	79	73	69	67

TABLE D-8. CRITICAL ACCIDENT RATES FOR URBAN TWO-LANE SECTIONS (FIVE-YEAR PERIOD)(1994-1998)

	CRITICAL ACCIDENT RATE (ACC/100 MVM) FOR THE GIVEN SECTION LENGTH (MILES)				
AADT	0.5	1	2	5	10
500	1,186	920	744	595	523
1,000	920	744	625	523	473
2,500	700	595	523	460	429
5,000	595	523	473	429	408
7,500	550	491	451	416	398
10,000	523	473	438	408	393
15,000	491	451	423	398	386
20,000	473	438	414	393	382
30,000	451	423	403	386	377
40,000	438	414	397	382	374
50,000	429	408	393	379	372

TABLE D-9. CRITICAL ACCIDENT RATES FOR URBAN THREE-LANE SECTIONS (FIVE-YEAR PERIOD)(1994-1998)

	CRITICAL ACCIDENT RATE (ACC/100 MVM) FOR THE GIVEN SECTION LENGTH (MILES)				
AADT	0.5	1	2	5	10
500	1,547	1,231	1,019	839	751
1,000	1,231	1,019	875	751	690
2,500	967	839	751	674	636
5,000	839	751	690	636	610
7,500	783	712	663	620	598
10,000	751	690	647	610	591
15,000	712	663	628	598	583
20,000	690	647	617	591	578
30,000	663	628	604	583	572
40,000	647	617	596	578	568
50,000	636	610	591	574	566

TABLE D-10. CRITICAL ACCIDENT RATES FOR URBAN FOUR-LANE DIVIDED SECTIONS (NON-INTERSTATE AND PARKWAY) (FIVE-YEAR PERIOD)(1994-1998)

	CRITICAL ACCIDENT RATE (ACC/100 MVM) FOR THE GIVEN SECTION LENGTH (MILES)				
AADT	0.5	1	2	5	10
1,000	816	653	543	449	403
2,500	612	515	449	392	364
5,000	515	449	403	364	344
10,000	449	403	372	344	330
15,000	420	383	358	335	324
20,000	403	372	349	330	320
25,000	392	364	344	326	318
30,000	383	358	340	324	316
40,000	372	349	334	320	313
50,000	364	344	330	318	312
60,000	358	340	327	316	310

TABLE D-11. CRITICAL ACCIDENT RATES FOR URBAN FOUR-LANE UNDIVIDED SECTIONS (FIVE-YEAR PERIOD)(1994-1998)

	CRITICAL ACCIDENT RATE (ACC/100 MVM) FOR THE GIVEN SECTION LENGTH (MILES)				
AADT	0.5	1	2	5	10
1,000	1,126	926	790	673	615
2,500	876	756	673	601	565
5,000	756	673	615	565	540
10,000	673	615	575	540	523
15,000	637	590	558	529	515
20,000	615	575	547	523	510
25,000	601	565	540	518	507
30,000	590	558	535	515	505
40,000	575	547	528	510	501
50,000	565	540	523	507	499
60,000	558	535	519	505	498

TABLE D-12. CRITICAL ACCIDENT RATES FOR URBAN INTERSTATE SECTIONS (FIVE-YEAR PERIOD)(1994-1998)

	CRITICAL ACCIDENT RATE (ACC/100 MVM) FOR THE GIVEN SECTION LENGTH (MILES)				
AADT	0.5	1	2	5	10
1,000	423	317	247	190	162
5,000	230	190	162	138	127
10,000	190	162	143	127	119
20,000	162	143	130	119	113
30,000	150	135	124	115	110
40,000	143	130	121	113	109
50,000	138	127	119	111	108
60,000	135	124	117	110	107
70,000	132	122	115	109	106
80,000	130	121	114	109	106
90,000	128	120	114	108	106
100,000	127	119	113	108	105

TABLE D-13. CRITICAL ACCIDENT RATES FOR URBAN PARKWAY SECTIONS (FIVE-YEAR PERIOD)(1994-1998)

	CRITICAL ACCIDENT RATE (ACC/100 MVM) FOR THE GIVEN SECTION LENGTH (MILES)					
AADT	0.5	1	2	5	10	20
500	590	424	317	231	190	163
1,000	424	317	248	190	163	144
2,500	292	231	190	156	139	127
5,000	231	190	163	139	127	119
7,500	205	173	151	131	122	115
10,000	190	163	144	127	119	113
15,000	173	151	135	122	115	111
20,000	163	144	130	119	113	109
30,000	151	135	125	115	111	107
40,000	144	130	121	113	109	106
90,000	129	120	114	109	106	104
50,000	139	127	119	112	108	106

APPENDIX E

CRITICAL ACCIDENT RATE TABLES FOR "SPOTS"
(SPOT IS DEFINED AS 0.3 MILE IN LENGTH)

TABLE E-1. CRITICAL ACCIDENT RATES FOR "SPOTS" ON RURAL ONE-LANE, TWO-LANE AND THREE-LANE HIGHWAYS (FIVE-YEAR PERIOD)(1994-1998)

AADT	CRITICAL ACCIDENT RATE (ACC/MV) BY HIGHWAY TYPE		
	ONE-LANE	TWO-LANE	THREE-LANE
100	9.93	8.58	8.93
500	4.34	3.56	3.76
1,000	3.26	2.61	2.78
2,500	2.38	1.85	1.99
5,000	1.96	1.50	1.62
7,500	1.79	1.35	1.46
10,000	1.68	1.26	1.37
15,000	1.56	1.16	1.26
20,000	1.49	1.10	1.20

TABLE E-2. CRITICAL ACCIDENT RATES FOR "SPOTS" ON RURAL FOUR-LANE HIGHWAYS, INTERSTATES, AND PARKWAYS (FIVE-YEAR PERIOD)(1994-1998)

AADT	CRITICAL ACCIDENT RATE (ACC/MV) BY HIGHWAY TYPE			
	FOUR-LANE DIVIDED (NON-INTERSTATE AND PARKWAY)	FOUR-LANE UNDIVIDED	INTERSTATE	PARKWAY
500	2.39	3.10	1.79	1.91
1,000	1.67	2.24	1.20	1.30
2,500	1.11	1.55	0.75	0.83
5,000	0.86	1.24	0.56	0.62
10,000	0.69	1.02	0.43	0.48
15,000	0.62	0.93	0.38	0.42
20,000	0.57	0.88	0.34	0.39
30,000	0.53	0.82	0.31	0.35
40,000	0.50	0.78	0.29	0.33
50,000	0.48	0.76	0.27	0.31

TABLE E-3. CRITICAL ACCIDENT RATES FOR "SPOTS" ON URBAN TWO-LANE AND THREE-LANE HIGHWAYS (FIVE-YEAR PERIOD)(1994-1998)

AADT	CRITICAL ACCIDENT RATE (ACC/MV) BY HIGHWAY TYPE	
	TWO-LANE	THREE-LANE
500	4.41	5.64
1,000	3.32	4.36
2,500	2.43	3.29
5,000	2.01	2.79
7,500	1.83	2.57
10,000	1.72	2.44
15,000	1.60	2.29
20,000	1.52	2.20
30,000	1.44	2.09
40,000	1.39	2.03

TABLE E-4. CRITICAL ACCIDENT RATES FOR "SPOTS" ON URBAN FOUR-LANE HIGHWAYS, INTERSTATES, AND PARKWAYS (FIVE-YEAR PERIOD)(1994-1998)

AADT	CRITICAL ACCIDENT RATE (ACC/MV) BY HIGHWAY TYPE			
	FOUR-LANE DIVIDED (NON-INTERSTATE AND PARKWAY)	FOUR-LANE UNDIVIDED	INTERSTATE	PARKWAY
1,000	2.96	4.00	1.62	1.62
5,000	1.75	2.52	0.82	0.82
10,000	1.49	2.19	0.66	0.66
15,000	1.37	2.05	0.59	0.59
20,000	1.31	1.97	0.55	0.55
30,000	1.23	1.87	0.50	0.50
40,000	1.18	1.81	0.47	0.47
50,000	1.15	1.77	0.45	0.45
60,000	1.13	1.74	0.44	0.44
70,000	1.11	1.72	0.43	0.43
80,000	1.09	1.70	0.42	0.42
90,000	1.08	1.68	0.41	0.41
100,000	1.07	1.67	0.41	0.41

APPENDIX F

TOTAL ACCIDENT RATES FOR ALL INCORPORATED CITIES

TABLE F-1. ACCIDENTS AND ACCIDENT RATES FOR ALL CITIES LISTED IN THE 1990 CENSUS (1994-1998 DATA)

CITY	POPULATION	NUMBER OF ACCIDENTS (93-97)	ANNUAL ACCIDENTS PER 1000 POPULATION	CITY	POPULATION	NUMBER OF ACCIDENTS (93-97)	ACCIDENTS PER 1000 POPULATION
Adairville	906	40	9	Calhoun	854	93	22
Albany	2,062	478	46	Calvert City	2,531	334	26
Alexandria	5,592	1,302	47	Camargo	1,022	48	9
Allen	229	152	133	Cambridge	193	1	1
Anchorage	2,082	138	13	Campbellsburg	604	66	22
Arlington	449	13	6	Campbellsville	9,577	2,577	54
Ashland	23,622	6,056	51	Campton	484	415	172
Auburn	1,273	113	18	Caneyville	549	102	37
Audubon Park	1,520	60	8	Carlisle	1,639	304	37
Augusta	1,336	132	20	Carrollton	3,715	754	41
Bancroft	582	1	0	Carrsville	98	3	6
Barbourmeade	1,402	*	*	Catlettsburg	2,231	558	50
Barbourville	3,658	802	44	Cave City	1,953	485	50
Bardstown	6,801	2,391	70	Centertown	383	36	19
Bardwell	819	61	15	Central City	4,979	1,050	42
Barlow	706	44	13	Cherrywood Village	340	2	1
Beattyville	1,131	196	35	Clarkson	611	106	35
Beaver Dam	2,904	560	39	Clay	1,173	121	21
Bedford	761	172	45	Clay City	1,276	*	*
Beechwood Village	1,263	4	1	Clinton	1,720	*	*
Bellefonte	838	93	22	Cloverport	1,207	35	6
Bellemeade	927	1	0	Coal Run	262	385	294
Bellevue	6,997	1,122	32	Cold Springs	2,880	1,026	71
Bellewood	329	*	*	Columbia	3,845	938	49
Benham	717	38	11	Columbus	252	13	10
Benton	3,899	875	45	Concord	65	4	12
Berea	9,126	1,392	31	Corbin	7,419	2,150	58
Berry	240	20	17	Corinth	137	115	168
Blaine	271	9	7	Corydon	790	100	25
Bloomfield	845	105	25	Covington	43,264	11,014	51
Blue Ridge Manor	565	3	1	Crab Orchard	825	104	25
Bonnieville	300	49	33	Crescent Park	364	136	75
Booneville	232	134	116	Crescent Springs	2,179	854	78
Bowling Green	40,641	14,602	72	Crestview	356	11	6
Bradfordsville	199	46	46	Crestview Hills	2,546	996	78
Brandenburg	1,857	550	59	Crestwood	1,435	421	59
Bremen	267	61	46	Crittenden	731	365	100
Briarwood	658	*	*	Crofton	699	94	27
Broadfields	273	*	*	Crossgate	261	1	1
Brodhead	1,140	9	2	Cumberland	3,112	283	18
Bromley	1,137	111	20	Cynthiana	6,497	1,335	41
Brooksville	670	181	54	Danville	12,420	3,483	56
Brownsboro Farm	670	2	1	Dawson Springs	3,129	307	20
Brownsboro Village	361	3	2	Dayton	6,576	563	17
Brownsville	897	266	59	Dixon	552	167	61
Burgin	1,009	19	4	Dover	297	21	14
Burkesville	1,815	338	37	Drakesboro	565	61	22
Burnside	695	80	23	Druid Hills	305	1	1
Butler	625	97	31	Dry Ridge	1,601	918	115
Cadiz	2,148	561	52	Earlington	1,833	181	20

TABLE F-1. ACCIDENTS AND ACCIDENT RATES FOR ALL CITIES LISTED IN THE 1990 CENSUS (1994-1998 DATA)(Continued)

CITY	POPULATION	NUMBER OF ACCIDENTS (93-97)	ANNUAL ACCIDENTS PER 1000 POPULATION	CITY	POPULATION	NUMBER OF ACCIDENTS (93-97)	ACCIDENTS PER 1000 POPULATION
Eddyville	1,889	177	19	Hardinsburg	1,906	243	26
Edgewood	8,143	874	22	Harlan	2,686	848	63
Edmonton	1,477	396	54	Harrodsburg	7,335	1,779	49
Ekron	110	11	20	Hartford	2,532	160	13
Elizabethtown	18,167	6,095	67	Hawesville	998	175	35
Elkhorn City	813	135	33	Hazard	5,416	2,230	82
Elkton	1,789	290	32	Hazel	460	34	15
Elsmere	6,847	837	24	Henderson	25,945	6,693	52
Eminence	2,055	164	16	Hickman	2,689	180	13
Erlanger	15,979	3,821	48	Hickory Hill	152	15	20
Eubank	354	31	18	Highland Heights	4,223	934	44
Evarts	1,063	174	33	Hindman	798	217	54
Ewing	268	22	16	Hiseville	220	18	16
Fairfield	142	10	14	Hodgenville	2,721	677	50
Fairmeade	280	*	*	Hollyvilla	649	1	0
Fairview	119	42	71	Hopkinsville	29,809	6,119	41
Falmouth	2,378	491	41	Horse Cave	2,284	175	15
Ferguson	934	36	8	Houston Acres	496	*	*
Flatwoods	7,799	676	17	Hurstbourne Acres	1,072	10	2
Flemingsburg	3,071	425	28	Hustonville	313	51	33
Florence	18,624	8,128	87	Hyden	375	159	85
Fordsville	522	69	26	Independence	10,444	1,613	31
Forest Hills	454	24	11	Indian Hills	1,074	49	9
Fort Mitchell	7,438	1,472	40	Inez	511	177	69
Fort Thomas	16,032	1,170	15	Irvine	2,836	651	46
Fort Wright	6,570	1,942	59	Irvington	1,180	71	12
Fountain Run	259	29	22	Island	446	47	21
Frankfort	25,968	4,872	38	Jackson	2,466	737	60
Franklin	7,607	1,338	35	Jamestown	1,641	146	18
Fredonia	490	50	20	Jeffersontown	23,221	4,525	39
Frenchburg	625	97	31	Jeffersonville	1,854	127	14
Fulton	3,078	524	34	Jenkins	2,751	382	28
Gamaliel	462	17	7	Junction City	1,983	116	12
Georgetown	11,414	3,123	55	Keeneland	393	2	1
Germantown	213	51	48	Kenton Vale	358	7	4
Ghent	365	40	22	Kevil	337	62	37
Glasgow	12,351	3,288	53	Kingsley	399	4	2
Glencoe	257	38	30	Kuttawa	535	69	26
Glenview Manor	197	3	3	Lacenter	1,040	155	30
Goose Creek	321	*	*	Lafayette	106	7	13
Grand Rivers	351	40	23	Lagrange	3,853	902	47
Gratz	65	14	43	Lakeside Park	3,131	437	28
Graymoor	2,911	74	5	Lancaster	3,421	591	35
Grayson	3,510	908	52	Latonia Lakes	410	25	12
Greensburg	1,990	520	52	Lawrenceburg	5,911	755	26
Greenup	1,158	210	36	Lebanon	5,695	1,234	43
Greenville	4,689	905	39	Lebanon Junction	1,741	229	26
Guthrie	1,504	154	21	Leitchfield	4,965	349	14
Hanson	450	62	28	Lewisburg	772	66	17
Hardin	595	56	19	Lewisport	1,778	86	10

TABLE F-1. ACCIDENTS AND ACCIDENT RATES FOR ALL CITIES LISTED IN THE 1990 CENSUS (1994-1998 DATA)(Continued)

CITY	POPULATION	NUMBER OF ACCIDENTS (93-97)	ANNUAL ACCIDENTS PER 1000 POPULATION	CITY	POPULATION	NUMBER OF ACCIDENTS (93-97)	ACCIDENTS PER 1000 POPULATION
Lexington	225,366	58,225	52	New Castle	893	100	22
Liberty	1,937	254	26	New Haven	796	74	19
Lincolnshire	125	1	2	Newport	18,871	4,494	48
Livermore	1,534	133	17	Nicholasville	13,603	3,023	44
Livingston	241	8	7	Norbourne Estates	461	3	1
London	5,757	3,048	106	North Middletown	602	35	12
Lone Oak	465	234	101	Northfield	898	72	16
Loretto	820	91	22	Nortonville	1,209	129	21
Louisa	1,990	443	45	Oak Grove	2,863	1,041	73
Louisville	269,063	78,783	59	Oakland	202	9	9
Loyall	1,100	70	13	Olive Hill	1,809	349	39
Ludlow	4,736	493	21	Owensboro	53,549	12,105	45
Lynch	1,166	54	9	Owenton	1,306	256	39
Lyndon	8,037	75	2	Owingsville	1,491	274	37
Lynnview	1,017	37	7	Paducah	27,256	9,425	69
Mackville	200	22	22	Paintsville	4,354	1,296	60
Madisonville	16,200	4,358	54	Paris	8,730	1,747	40
Manchester	1,634	591	72	Park City	549	62	23
Marion	3,320	519	31	Park Hills	3,321	250	15
Martin	694	212	61	Parkway Village	707	17	5
Mayfield	9,935	2,334	47	Pembroke	640	48	15
Maysville	7,169	2,559	71	Perryville	815	60	15
Mchenry	414	41	20	Pewee Valley	1,283	190	30
Mckee	870	218	50	Pikeville	6,324	2,003	63
Meadowvale	798	67	17	Pineville	2,198	548	50
Meadowview Estates	259	1	1	Pippa Passes	195	77	79
Melbourne	660	33	10	Plantation	830	2	1
Mentor	169	14	17	Pleasureville	761	39	10
Middlesboro	11,328	1,815	32	Plum Springs	361	3	2
Middletown	5,016	206	8	Plymouth Village	162	1	1
Midway	1,290	125	19	Powderly	748	97	26
Millersburg	937	89	19	Prestonsburg	3,558	1,236	70
Milton	563	227	81	Prestonville	205	33	32
Minor Lane Heights	1,675	21	3	Princeton	6,940	1,087	31
Mockingbird Valley	177	21	24	Providence	4,123	354	17
Monterey	164	21	26	Raceland	2,256	192	17
Monticello	5,357	1,238	46	Radcliff	19,772	3,031	31
Moorland	467	12	5	Ravenna	804	51	13
Morehead	8,357	1,571	38	Richmond	21,155	6,168	58
Morganfield	3,776	691	37	Riverwood	506	1	0
Morgantown	2,284	586	51	Robinswood	250	1	1
Mortons Gap	987	66	13	Rochester	191	1	1
Mount Olivet	384	9	5	Rockport	385	14	7
Mount Sterling	5,362	1,788	67	Rolling Fields	593	4	1
Mount Vernon	2,654	641	48	Rolling Hills	1,135	32	6
Mount Washington	5,226	930	36	Russell	4,014	921	46
Muldraugh	1,376	248	36	Russell Springs	2,363	742	63
Munfordville	1,556	393	51	Russellville	7,454	1,717	46
Murray	14,439	1,013	14	Sacramento	563	61	22
Nebo	227	28	25	Sadieville	255	15	12

TABLE F-1. ACCIDENTS AND ACCIDENT RATES FOR ALL CITIES LISTED IN THE 1990 CENSUS (1994-1998 DATA)(Continued)

CITY	POPULATION	NUMBER OF ACCIDENTS (93-97)	ANNUAL ACCIDENTS PER 1000 POPULATION
Saint Charles	316	29	18
Saint Matthews	15,800	4,660	59
Saint Regis Park	1,756	5	1
Salem	770	60	16
Salt Lick	342	95	56
Salyersville	1,917	334	35
Sanders	231	18	16
Sandy Hook	548	117	43
Sardis	171	21	25
Science Hill	628	24	8
Scottsville	4,278	1,116	52
Sebree	1,510	178	24
Seneca Gardens	684	3	1
Sharpsburg	315	57	36
Shelbyville	6,238	1,871	60
Shepherdsville	4,805	1,681	70
Shively	15,535	4,845	62
Silver Grove	1,102	125	23
Simpsonville	907	106	23
Slaughters	235	14	12
Smithfield	115	20	35
Smithland	384	62	32
Smiths Grove	703	67	19
Somerset	10,733	4,004	75
Sonora	295	70	48
South Carrollton	202	60	59
South Parkview	214	*	*
South Shore	1,318	143	22
Southgate	3,266	448	27
Sparta	133	20	30
Springfield	2,875	583	41
Springlee	451	2	1
Stamping Ground	698	43	12
Stanford	2,686	290	22
Stanton	2,795	487	35
Strathmoor Gardens	300	*	*
Strathmoor Manor	391	*	*
Strathmoor Village	361	*	*
Sturgis	2,184	209	19
Taylor Mill	5,530	1,261	46
Taylorsville	774	141	36
Tompkinsville	2,861	513	36
Trenton	378	20	11
Union	1,001	310	62
Uniontown	1,008	84	17
Upton	719	59	16
Vanceburg	1,713	266	31
Versailles	7,269	1,474	41
Vicco	244	79	65
Villa Hills	7,739	354	9
Vine Grove	3,586	402	22
Visalia	190	44	46
Wallins Creek	261	131	100
Walton	2,034	437	43
Warfield	364	98	54
Warsaw	1,202	123	21
Washington	795	2	1
Water Valley	321	17	11
Waverly	345	41	24
Wayland	359	26	15
Wellington	593	1	0
West Buechel	1,587	544	69
West Liberty	1,887	420	45
West Point	1,216	215	35
Westwood	734	161	44
Wheatcroft	206	9	9
Wheelwright	721	45	13
Whipps Millgate	454	1	0
White Plains	598	57	19
Whitesburg	1,636	506	62
Whitesville	682	115	34
Wickliffe	851	202	48
Wilder	691	618	179
Wildwood	266	2	2
Williamsburg	5,493	951	35
Williamstown	3,023	674	45
Willisburg	223	30	27
Wilmore	4,215	257	12
Winchester	15,799	3,496	44
Windy Hills	2,452	2	0
Wingo	568	64	23
Woodburn	343	29	17
Woodland Hills	714	2	1
Woodlawn	308	15	10
Woodlawn Park	1,099	1	0
Worthington	1,751	61	7
Worthville	191	19	20
Wurtland	1,221	84	14

APPENDIX G

SAFETY BELT SUMMARY DATA

A comparison of the accident severity, in terms of the percentage of drivers sustaining a given injury, and the type of accident is presented in Table G-1. The use of a safety belt was shown to be effective in all types of accidents. As would be expected, some of the largest reductions occurred as a result of wearing a safety belt in the most severe accident types. For example, non-intersection "fixed object", "ran off road", and "overturned in road" accidents were some of the most severe accident types, and there was a large reduction in severity when a safety belt was used when those types of accidents occurred. Reduction in severity was also noted in the less severe accident types. For example, while the severity of rear-end accidents at intersections was relatively low, there was a substantial reduction in the percentage of incapacitating and non-incapacitating injuries related to wearing a safety belt.

Accident severity versus safety belt usage by speed was analyzed and tabulated in Table G-2. It was shown that safety belts are effective in reducing serious injuries for speed limits in the range of 25 to 55 mph. Accident severity was less for the 25-mph speed limit, as would be expected.

The severity of injury versus ejection from the vehicle was investigated, as shown in Table G-3, since a major benefit associated with wearing a safety belt is greatly reducing the chances of ejection from the vehicle. The serious consequences of ejection are shown with the percent of fatalities involving ejection being 54 times that if not ejected. The percent of incapacitating injuries involving ejection was 9 times that if not ejected.

Safety belt usage by age and sex of the driver, as reported in traffic accidents, is shown in Table G-4. Usage for females was above that for males. When age was considered, usage was lowest for the range of 16 through 19 years of age with similar usage rates for the other age ranges. An increase in 1998 compared to 1994 through 1998 is shown. As previously noted, the usage rates reported in the accident data is substantially higher than that found in observational surveys.

TABLE G-1. ACCIDENT SEVERITY VERSUS SAFETY BELT USAGE BY ACCIDENT TYPE
(DRIVERS OF PASSENGER CARS) (1993-1997 DATA)

		NUMBER SUSTAINING A GIVEN INJURY		PERCENTAGE SUSTAINING A GIVEN INJURY		
ACCIDENT TYPE	TYPE OF INJURY	NOT WEARING SAFETY BELT	WEARING SAFETY BELT	NOT WEARING SAFETY BELT	WEARING SAFETY BELT	PERCENT REDUCTION *
Intersection Angle	Fatal	129	119	0.56	0.07	88 **
	Incapacitating	1441	3960	6.26	2.19	65 **
	Non-Incapacitating	2837	9999	12.32	5.52	55 **
	Possible	2504	13993	10.87	7.73	29 **
Intersection Rear End	Fatal	13	6	0.12	0.00	96 **
	Incapacitating	288	1095	2.73	0.89	68 **
	Non-Incapacitating	684	3205	6.49	2.59	60 **
	Possible	913	8494	8.66	6.87	21 **
Intersection Left Turn	Fatal	10	7	0.52	0.05	90 **
	Incapacitating	147	325	7.60	2.50	67 **
	Non-Incapacitating	270	794	13.95	6.12	56 **
	Possible	216	1147	11.16	8.84	21 **
Intersection Fixed Object	Fatal	4	0	0.24	0.00	100 **
	Incapacitating	195	174	11.90	3.51	70 **
	Non-Incapacitating	384	481	23.43	9.70	59 **
	Possible	248	540	15.13	10.89	28 **
Intersection Side Swipe	Fatal	5	3	0.27	0.02	94 **
	Incapacitating	98	207	5.23	1.07	80 **
	Non-Incapacitating	163	504	8.70	2.60	70 **
	Possible	140	908	7.47	4.69	37 **
Non-Intersection Rear End	Fatal	51	33	0.26	0.02	94 **
	Incapacitating	605	2075	3.11	1.04	67 **
	Non-Incapacitating	1331	5905	6.85	2.95	57 **
	Possible	1884	15127	9.69	7.55	22 **
Non-Intersection Head On	Fatal	206	96	10.52	1.53	85 **
	Incapacitating	376	488	19.19	7.76	60 **
	Non-Incapacitating	358	774	18.27	12.32	33 **
	Possible	256	863	13.07	13.73	-5
Non-Intersection Side Swipe	Fatal	205	109	1.10	0.09	92 **
	Incapacitating	1291	2355	6.94	1.99	71 **
	Non-Incapacitating	1766	4947	9.49	4.18	56 **
	Possible	1612	7142	8.67	6.04	30 **
Non-Intersection Vehicle Parked	Fatal	19	3	0.44	0.01	97
	Incapacitating	153	165	3.54	0.77	78 **
	Non-Incapacitating	337	436	7.79	2.02	74 **
	Possible	244	645	5.64	2.99	47 **
Non-Intersection Fixed Object	Fatal	544	138	3.83	0.33	91 **
	Incapacitating	2270	1948	15.98	4.72	70 **
	Non-Incapacitating	3543	5081	24.95	12.31	51 **
	Possible	2070	5349	14.58	12.96	11 **
Non-Intersection Run Off Road	Fatal	284	64	3.27	0.25	92 **
	Incapacitating	1446	1399	16.63	5.37	68 **
	Non-Incapacitating	2297	3870	26.41	14.85	44 **
	Possible	1648	4611	18.95	17.69	7 **
Non-Intersection Overturned in Road	Fatal	64	13	5.22	0.43	92 **
	Incapacitating	229	228	18.69	7.52	60 **
	Non-Incapacitating	320	664	26.12	21.91	16 **
	Possible	231	571	18.86	18.84	0

* A negative sign means the percentage sustaining a given injury while wearing a safety belt was higher than that when not wearing a safety belt.

** Statistically significant change (probability of 0.99).

TABLE G-2. ACCIDENT SEVERITY VERSUS SAFETY BELT USAGE BY SPEED LIMIT (DRIVERS OF PASSENGER CARS)*

SPEED LIMIT (MPH)	TYPE OF INJURY	PERCENT SUSTAINING A GIVEN INJURY		
		NOT WEARING SAFETY BELT	WEARING SAFETY BELT	PERCENT REDUCTION**
25	FATAL	0.15	0.01	88
	INCAPACITATING	2.66	0.69	68
	NON-INCAPACITATING	6.79	2.10	62
	POSSIBLE	7.63	4.11	42
35	FATAL	0.96	0.02	96
	INCAPACITATING	12.83	1.26	88
	NON-INCAPACITATING	26.00	3.66	83
	POSSIBLE	23.51	6.54	70
45	FATAL	0.75	0.04	93
	INCAPACITATING	7.58	1.79	71
	NON-INCAPACITATING	12.84	4.26	62
	POSSIBLE	12.63	7.29	39
55	FATAL	8.08	0.25	96
	INCAPACITATING	33.42	3.43	87
	NON-INCAPACITATING	47.55	8.10	80
	POSSIBLE	33.79	11.12	65

* Based on 1994-1998 accident data.

** A negative sign means the percentage sustaining a given injury while wearing a safety belt was higher than that when not wearing a safety belt.

TABLE G-3. SEVERITY OF INJURY VERSUS EJECTION
(DRIVERS OF PASSENGER CARS)*

TYPE OF INJURY	PERCENT WITH GIVEN INJURY: EJECTED	NOT EJECTED	PERCENT EJECTED/ PERCENT NOT EJECTED
FATAL	9.70	0.18	55
INCAPACITATING	21.07	2.42	9
NON-INCAPACITATING	11.95	5.64	2
POSSIBLE	9.52	7.98	1

* Based on 1994-1998 accident data.

TABLE G-4. SAFETY BELT USAGE BY AGE AND SEX
(DRIVERS OF PASSENGER CARS)

VARIABLE	CATEGORY	PERCENT USAGE: 1994-1998	1998
AGE	16-19	80.6	84.4
	20-24	85.2	88.5
	25-34	87.3	90.0
	35-44	89.1	91.7
	45-54	90.3	93.0
	55-64	89.9	92.8
	65 or older	89.0	92.6
SEX	Male	85.4	88.8
	Female	90.5	92.9