
1997

INDIANA

CRASH FACTS



Governor's
Council on
—IMPAIRED &—
DANGEROUS
DRIVING

traffic safety quick facts

IN INDIANA IN 1997...

- 940 people were killed in motor vehicle traffic crashes.
- 78,262 people were injured in crashes, and 52,413 of reported crashes involved personal injury and 849 involved fatalities.
- An average of 2.7 people were killed every 24 hours on Indiana highways.
- The fatality rate per 100 million miles of travel was 1.3, down 0.2 from 1996.
- 22.8 percent of the fatal crashes involved alcohol (194 crashes).
- 75 pedestrians were killed, down one from 1996.
- 11 bicyclists were killed, compared with six in 1996.
- 47 motorcyclists were killed, compared with 63 in 1996.
- 83 percent of all motorcyclists (33 drivers and six passengers) killed in crashes were not wearing helmets.
- 49.6 percent of all crashes occurred on city streets and 21.2 percent occurred on county roads.
- 72.3 percent of fatal crashes occurred in rural areas.
- The total number of registered vehicles was 5,343,638, compared to 5,347,748 in 1996 (.08 percent decrease).
- The total number of licensed drivers was 3,923,420 at the end of 1997.

The Governor's Council on Impaired & Dangerous Driving is the public opinion catalyst and the implementing body for statewide action to reduce fatalities and injuries on Indiana roadways. The Council administers state and federal funding through targeted traffic safety grants to state and local organizations which support Indiana traffic safety. These funds are used for grants, public education, crash facts/publications, legislative advocacy, enforcement training, information resources.

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All data, unless otherwise noted, came from analysis of the Indiana State Police Crash Records database. This database contains the crash reports filed by Indiana state and local law enforcement agencies. The production of this publication was made possible through grant #FRS 98-10 Task Project 1 of the Council. The publication was prepared by the Automotive Transportation Center, Institute for Interdisciplinary Engineering Studies, Purdue University, 1293 Potter Building, Room 322, West Lafayette, IN 47907-1293.

Director's Letter

Dear Reader:

Indiana Crash Facts 1997 is a tool to help us understand the relationship between human behavior and preventable death and injury. In researching and exploring the nature of motor vehicle crashes on Hoosier roads, we learn that they are preventable incidents which steal lives, livelihoods and happiness. Traffic crashes remain the number one killer of our teens, the single most preventable cause of death for our younger children and a frightening reality for the nearly one out of two Hoosiers who will be involved in an alcohol-related crash in his lifetime.

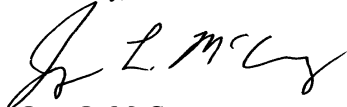
By understanding the nature and circumstances of these crashes, we can save lives and dollars in the future by reducing property damage, personal injury and death. In this book's numbers lies a very important message: traffic safety is up to the individual, but we can influence individual action and therefore save lives through public information, community-based responses and the creation and enforcement of traffic laws.

This year is the first year for the consolidation of the two books, *Indiana Crash Facts* and *Indiana Alcohol Crash Facts*. This combination, under the single title of *Indiana Crash Facts 1997*, should make accessing and understanding the information easier for you, the reader.

This book is compiled by researchers at Purdue University's Automotive Transportation Center, based primarily on data provided by the Indiana State Police and the Fatality Analysis Reporting System (FARS). Researchers have chosen the graphs and tables included in order to present a comprehensive picture of roadway safety in Indiana.

I hope you will find this to be a useful guide to understanding and preventing automobile crashes in our state.

Sincerely,



Jerry L. McCarty

Director

Governor's Council on Impaired & Dangerous Driving

Governor's Commission for a Drug-Free Indiana

Foreword

Indiana Crash Facts 1997. . . is the fifth annual publication of *Indiana Crash Facts*. This year significant changes have been made to the book, including the consolidation of the *Alcohol Crash Facts* and the *Crash Facts* book into one publication. Also, the formats of a few of the tables have been changed from the 1996 publication, making the information contained in tables more useful and understandable. We would appreciate receiving comments on the changes. We anticipate making additional changes and will consider alternatives to the organization of the publication for the 1998 data. If you would like to have some input on these changes, we encourage you to call or write the Automotive Transportation Center, 1293 Potter Engineering Center, West Lafayette, IN 47907-1293, (765) 494-7038, or visit our website at:

<http://airbag.ecn.purdue.edu/atcweb>.

The Indiana Crash Facts books are also available on CD Rom and on the Internet:

http://www.state.in.us/cji/council_commission/crash/overview.html

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Problem Identification

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Overview

Between the years 1988 through 1997, Indiana experienced a 15% decrease in overall fatalities. The period between 1996-1997 alcohol-related fatalities also showed a 10.5% decrease, while the overall alcohol-related fatality rate between 1988-1997 decreased by 38.3%. In addition, between the years 1993-1997, the alcohol-related fatality rate per hundred million vehicle miles traveled (HMVT) decreased 19.5% while the overall fatality rate per HMVT during the same period decreased 9.5%. Nineteen-ninety-seven proved to be one of Indiana's lowest fatality years - 940 deaths, which represents a 4.3% decrease. Collecting and analyzing traffic safety data, which illuminate focal problems, are important steps in the process of improving highway safety. This plan is the result of the Governor's Council on Impaired & Dangerous Driving's resolve to analyze and correctly identify traffic safety problems in Indiana. It includes an analysis of the 1997 Indiana crash data. The goal in producing the problem identification is to highlight traffic safety arenas where progress in reducing the impact on lives and health has been made, and to identify persistent or emerging problems toward which programmatic traffic safety efforts should be focused.

The Governor's Council has chosen the following highway safety indices to be used in fiscal years 2000-2005 in setting goals and measuring the attainment of these goals:

- **To decrease the state fatality rate per 100 MVMT from a baseline of 1.5 in 1996, to 1.06 in the year 2002, and 0.92 in the year 2005 with progress demonstrated on an annual basis.**

Analysis: The 1997 rate was 1.32 per 100 MVMT. Indiana continues to reduce the number of people fatally injured (normalized) in highway crashes and shows better than average results versus the United States average. However, young drivers (particularly males under the age of 21) are twice as likely to be involved in a fatal crash than any other age category. Rural fatal crashes account for 73 percent of the Indiana fatalities. Finally, the low safety belt

usage rate of fatally injured occupants continues to highlight the overall low safety belt usage rate in the State. Improvements in these three areas can offer significant opportunities for a stepwise decrease in fatalities.

Countermeasure Strategies

- Enforce the primary safety belt law.
- Evaluate the effectiveness of the Graduated License Act for younger drivers.
- Continue Operation Pull Over to raise awareness and enforcement in the state.
- Continue the annual safety belt survey to identify current use trends and opportunities to increase the usage of safety belts.
- Identify the over-represented characteristics of drivers in crashes to allow the development of better focused counter-measure programs.
- Provide contributing factor and age-specific data on highway crashes to the individual counties in Indiana.
- Continue to actively monitor and address the areas of railroad crossing, pedestrian/pedalcyclist and motorcycle fatalities and their trends.
- Develop new programs targeting the novice driver, underage drinking and underage access to alcohol.
- **To decrease the state personal injury rate per 100 MVMT from a baseline of 117 in 1996, to 103 in the year 2002, and 95.7 in the year 2005 with progress demonstrated on an annual basis.**

Analysis: The 1997 rate was 111 per 100 MVMT. Indiana continues to reduce the number of people being injured (normalized) in highway crashes. With the newer generation of highway vehicles incorporating increased safety devices (i.e., air bags, ABS brake systems, etc.) and these vehicles gradually replacing older vehicles, Indiana should consider replacing the reporting of this statistic with a new statistic "serious injuries" per 100 MVMT.

This would provide a better indicator of the overall effectiveness of changes in drivers' behavior and automobile safety improvements.

Countermeasure Strategies

- Enforce the primary safety belt law.
- Evaluate the effectiveness of the Graduated License Act for younger drivers.
- Continue Operation Pull Over to raise awareness and enforcement in the state.
- Continue the annual safety belt survey to identify current use trends and opportunities to increase the usage of safety belts.
- Provide contributing factor and age-specific data on highway crashes to the individual counties in Indiana.
- Continue to actively monitor and address the areas of railroad crossing, pedestrian/pedalcyclist and motorcycle fatalities and their trends.
- Introduce the tracking of incapacitating injuries as a methodology to better measure the impact of the primary safety belt law and the increased presence of air bags in vehicles.
- Develop new programs targeting the novice driver, underage drinking and underage access to alcohol.
- **To decrease alcohol-related fatal crashes from a baseline of 0.32 per 100 MVMT in 1996 to 0.20 per 100 MVMT in the year 2002 to 0.167 per 100 MVMT in 2005 with progress demonstrated on an annual basis.**

Analysis: The 1997 rate was 0.28 per 100 MVMT. The message is getting to drivers – if you drink, don't drive. Indiana has not only reduced the rate of alcohol-related crashes but has continued to reduce the actual number of crashes the past five years, including total alcohol-related, personal injury and property damage crashes. However, the 214 alcohol-related fatalities in 1997 continue to represent 22.8 percent of the total number of fatalities (940) for the year.

Countermeasure Strategies

- Continue Operation Pull Over to raise awareness and enforcement in the state.
- Provide contributing factor and age-specific data on highway crashes to the individual counties in Indiana.
- Increase the education of officers to properly identify and accurately report alcohol-related crashes.
- Increase focus on the 21–34 year old driver.
- Encourage the Indiana Legislature to enact 0.08 legislation.
- **To increase the observational safety belt usage rate in passenger cars and mini-vans from 63% (based upon previous weighting process) in 1997 to 73% (revised weighting process) in 1998, 85% by the year 2000, and 90% by the year 2005. To increase overall safety belt usage rate from 53.2% (including pickup trucks and sport utility vehicles) in 1997 to 65% in 1998, 85% by the year 2000, and 90% by the year 2005.**

Analysis: The 1998 results for passenger vehicles were a usage rate of 68.6% with an overall usage rate of 61.8% (including pickup trucks and sport utility vehicles). Consistent with outcomes experienced by other states that have enacted a primary safety belt law, Indiana saw an increase of approximately 10 percent in the usage of safety belts (1998 survey versus the 1997 survey). The effect in 1998 carried over even to pickup truck usage, which increased by eight (8) percent. The legal challenge to the law was not resolved by the Indiana Supreme Court until June 1999. Enforcement of the law by police agencies was deferred until the legal challenge was resolved. Indiana will have a great deal of difficulty in reaching the national objectives of 85% and 90% without the impact of further pro-safety belt legislation and support by law enforcement, prosecutors and the judicial system. Targeted audiences that need to be addressed include the younger drivers (less than 20 years old), male drivers, pickup truck occupants and drivers in the rural areas of Indiana.

Countermeasure Strategies

- Enforce the primary safety belt law.
- Continue Operation Pull Over to raise awareness and enforcement in the state.
- Continue the annual safety belt survey to identify current use trends and opportunities to increase the usage of safety belts. Identify target audiences for increased usage.
- Develop and provide age-specific and county-use data for the individual counties in Indiana.
- **To reduce the involvement rate in fatal crashes of the younger driver (age 16–19) from 0.79 fatal crashes per 1,000 licensed drivers (age 16–19) in 1996 to 0.644 in the year 2000, to 0.622 in the year 2002, and 0.592 in the year 2005 with progress demonstrated on an annual basis.**

Analysis: The 1997 rate was 0.72 fatal crashes per 1,000 licensed drivers (age 16 – 19). While Indiana has made significant progress as measured by the number of fatal crashes of the younger driver, the rate of improvement can be significantly accelerated with the Graduated License Act of 1998. Results from other states that have implemented similar legislation have shown a five to nine percent further reduction in the crash statistics of the younger driver. If Indiana were to achieve similar results, this could save an additional 14 young lives annually.

Countermeasure Strategies

- Evaluate the effectiveness of the Graduated License Act for younger drivers.
- Focus use of Operation Pull Over on the younger driver.
- Develop and provide age-specific and county-use data to the individual counties in Indiana.
- Evaluate the effectiveness of the Graduated Drivers License law for the younger driver.
- Develop new programs targeting the novice driver, underage drinking and underage access to alcohol.

The Governor's Council will continue to address the general areas of public education and awareness of traffic safety issues. Between 1988 and 1993, Indiana achieved significant reductions in the numbers of crashes, fatal crashes and persons killed, especially in the area of motorcycle and alcohol-related crashes. However, these indices increased in 1994 with only minor decreases during the 1995 to 1997 period with the exception of motorcycle crashes. Significant reductions were achieved both in the number of motorcycle fatalities and the number of motorcycle alcohol-related incidents. This suggests that current programs may have achieved their maximum results and the next generation of improvement opportunities should be identified and implemented.

Table 1 summarizes changes in key crash statistics over the 1988-1997 period.

Table 1. Crash Statistics Changes: 1988-1997

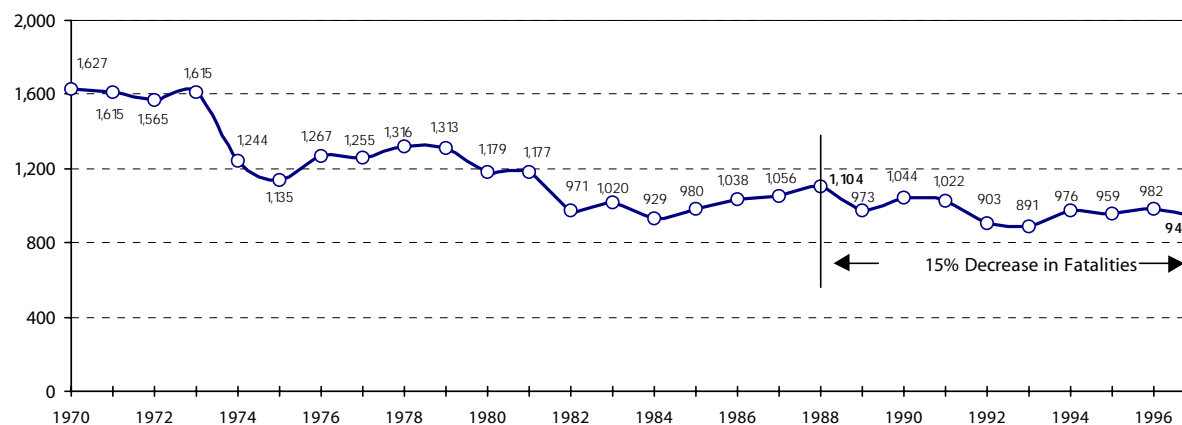
Statistic	Average 1988-92	1993	1994	1995	1996	1997	Average 1993-97	% Change 1996-97	% Change 1988-97
All Crashes	207,642	204,373	213,223	221,027	221,465	220,009	216,019	-0.7%	1.5%
Fatal Crashes	894	782	875	859	870	849	847	-2.4%	-11.7%
Personal Injury Crashes	50,084	50,774	52,476	53,831	52,058	52,413	52,310	0.7%	1.4%
Fatalities	1,009	891	976	959	982	940	950	-4.3%	-14.9%
Total Injuries	73,645	75,614	78,105	80,632	77,339	78,262	77,990	1.2%	3.9%
Serious Injuries	7,201	6,588	6,638	6,889	6,558	6,488	6,632	-1.1%	-16.7%
Pedestrian Fatalities	88	64	83	76	76	75	75	-1.3%	-25.0%
Pedalcyclist Fatalities	19	9	12	14	6	11	10	83.3%	-50.0%
Motorcyclist Fatalities	77	53	65	65	63	47	59	-25.4%	-45.3%
Economic Loss (Billions)	2.449	2.375	2.503	2.549	2.520	2.500	2.490	-0.8%	-3.0%

Figure 1

- *Fatalities have decreased 15 percent since 1988.*

Fatalities decreased 4.3 percent from 982 in 1996 to 940 while, for the nation, fatalities decreased only 0.2 percent (NHTSA, 1998-B). The total economic cost of 1997 traffic crashes in Indiana was estimated, using the NHTSA crash cost model, to be 2.50 billion dollars in 1997 dollars. This was a 0.8 percent decrease in economic loss compared with 1996.

Figure 1. Indiana Traffic Fatalities: 1970-1997



problem identification

Figure 2. Indiana Traffic Crashes–Serious Injuries: 1988-1997

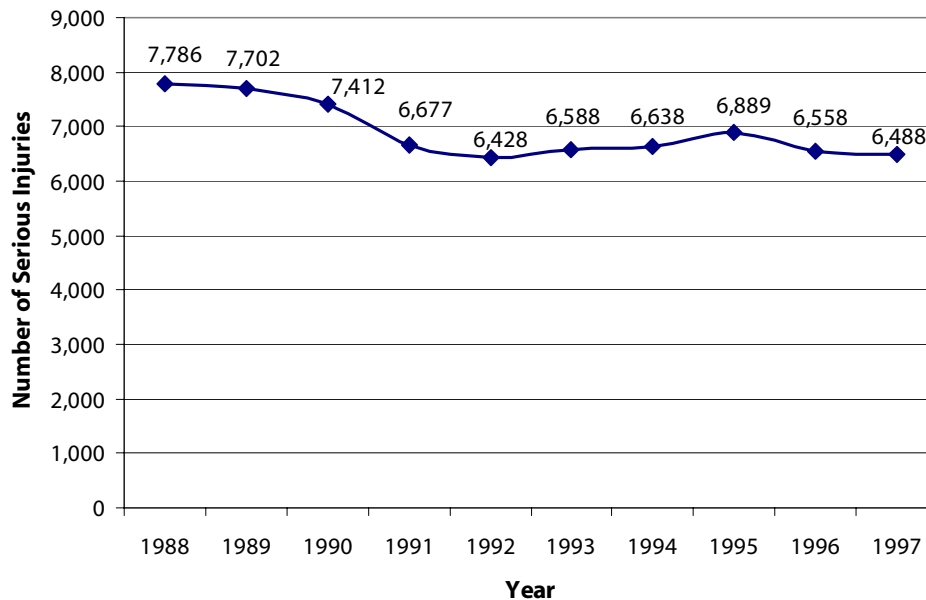


Figure 2

- *Serious injuries declined by 16.7 percent between 1988 and 1997.*

One statistic that has been given greater attention in the past year is the number of serious injuries. As can be seen in Table 1, the number of serious injuries has declined 16.7 percent in the past ten years while the number of total injuries increased by 3.9 percent. This decline in serious injuries could be partially due to increases in safety restraint usage and partly due to improvements, including air bags, in the crashworthiness of newer vehicles. The percentage of injuries that are classified as serious has declined steadily from 10.3 percent in 1988 to 8.3 percent in 1997.

As seen in Figure 3, Indiana’s fatality rates per 100 million vehicle miles traveled (MVMT) declined in 1997 for all crashes and for alcohol-related crashes.

Figure 3. Fatality Rate and Alcohol Fatality Rate per 100 MVMT U.S. vs. Indiana: 1988-1997

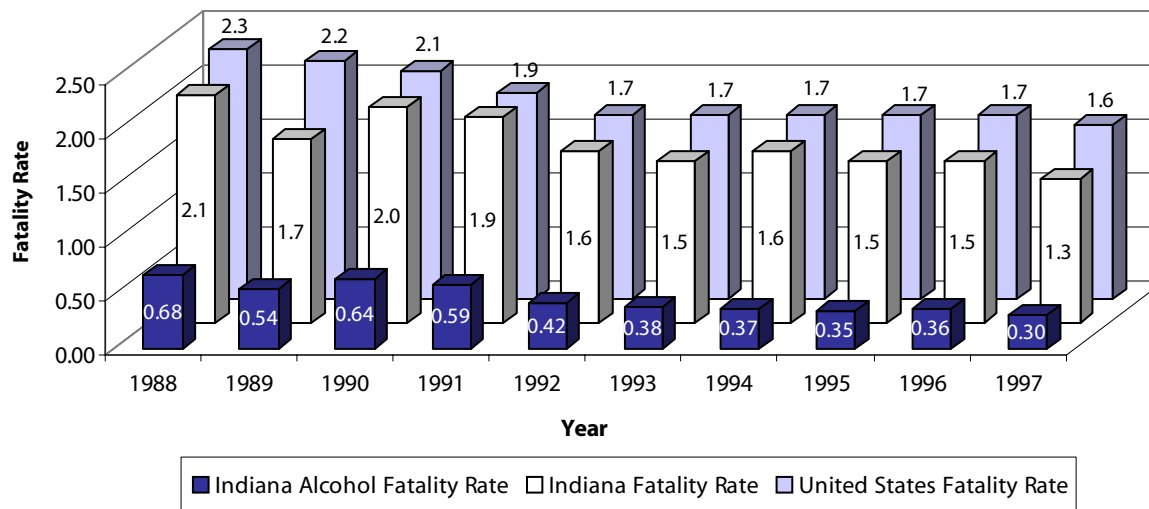


Figure 3

- *Indiana’s fatality rate per 100 million vehicle miles traveled remains below the U.S. average.*
- *The overall fatality rate per 100 MVMT decreased by 10.3 percent in 1997.*
- *The alcohol fatality rate per 100 MVMT decreased by 16.1 percent in 1997.*
- *Between 1993 and 1997, the alcohol-related fatality rate per 100 MVMT decreased by 19.5 percent, while the overall fatality rate per 100 MVMT during the same period decreased by 9.5 percent.*

Problem Drivers

Driver crash involvement varied greatly by driver age. Drivers in the 16- to 19-year-old group made up only 6.2 percent of the State's licensed drivers, but they were involved in 14.9 percent of the total crashes and 13.7 percent of fatal crashes.

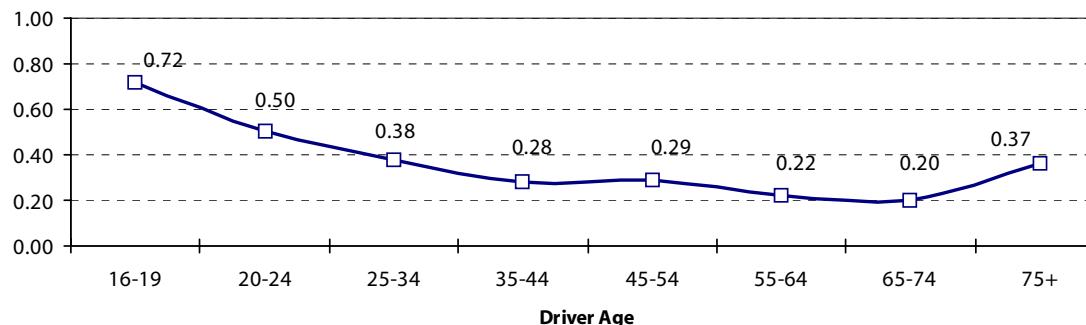
Figure 4

- *Under age 35 and older (over age 75) drivers have the highest fatal crash rates.*
- *Drivers under age 20 have fatal crash rates almost three times the fatal crash rates of drivers between the ages of 35 to 70.*

Drivers under 20 years old were involved in fatal crashes at rates nearly double that of the 25- to 34-year-olds, and almost three times greater than drivers in the over 45 age groups (Figure 4). Drivers in the 16- to 19-year-old age group had a large increase in involvement in fatal crashes over 1995 (from 141 in 1995 to 188 in 1996 and 175 in 1997).

Improving the driving performance of young drivers is crucial to Indiana's efforts to reduce traffic deaths and injuries. In 1995, 65 percent of teenage passenger deaths nationwide occurred in crashes in which another teenager

Figure 4. Drivers in Fatal Crashes by Age per 1,000 Licensed Drivers—1997



was driving (Insurance Institute, 1996). For Indiana, over the 1994-1996 period, 20.3 percent of passengers of all ages who died in crashes did so when riding with a teenage driver, and 67.3 percent (111 of 165) of teenage passenger deaths occurred when another teen was driving. A shocking 41.2 percent (68 of 165) of killed teenage passengers were riding with a driver who was 16 or 17 years old.

In 1997, 24.4 percent of all passenger fatalities occurred in vehicles driven by a teenager; 68.8 percent (44 of 64) of teenage passenger deaths occurred when another teen was driving; 42.2 percent (27 of 64) of these teenage passenger fatalities were riding with a 16- or 17-year-old driver. Of these 27 teenage passenger fatalities, 14 were teens in the same 16-17 age group. The other 13 were all in the 13-15 year age range.

Passage of both the graduated licensing and primary safety belt laws by the Indiana Legislature during 1998 provides the opportunity to significantly reduce this tragic loss of young lives. The limitations in the graduated license law can provide the foundation to further reduce the exposure risk of younger drivers and their passengers. A variety of education, enforcement and evaluation efforts are needed to assure that these laws are successfully implemented.

problem identification

Figure 5. Indiana Fatality Rates for Motor Vehicle Crashes per 100,000 Population–1997

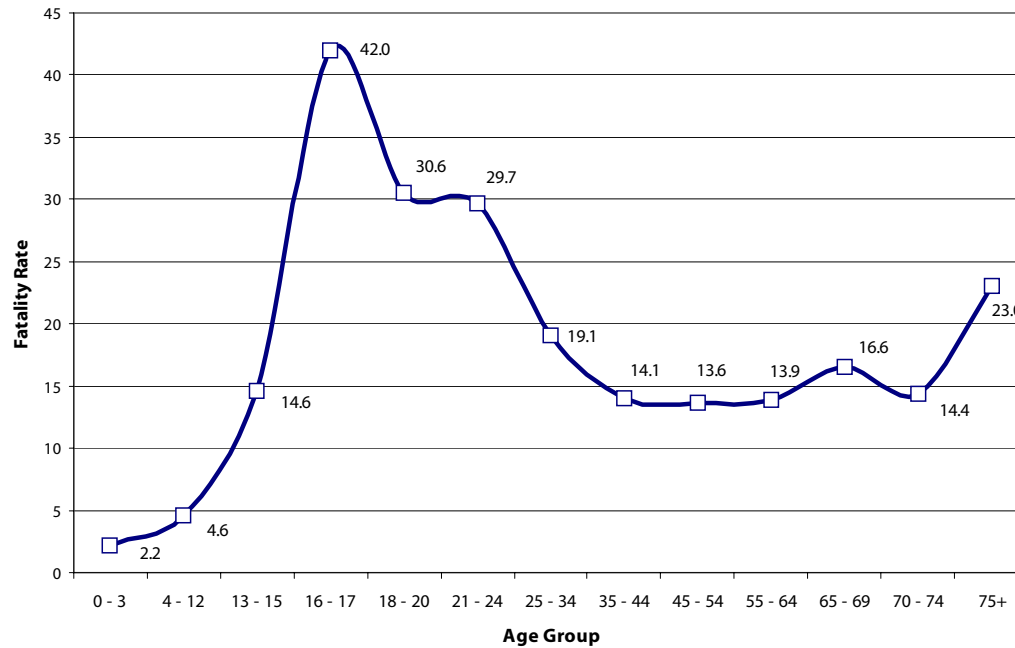


Figure 5

- *Teenagers age 16-17 have the highest fatality rates in motor vehicle crashes.*

As seen in Figure 5, the deadly combination of teenage drivers and teens riding with teens results in a fatality rate per capita for the age 16-17 population, from motor vehicle crashes, which is almost three times the fatality rate of their parents' generation.

The fatality rate for the age 21-24 group is not much lower than that for teenagers. Drivers in the 21 to 34 age group have the highest rates of involvement in alcohol-related crashes and, along with the teenage drivers, have the highest rates of speed-related crashes.

The factors the investigating officer judged were most significant in contributing to crashes vary considerably for drivers of different age groups. Figure 6 displays contributing circumstances for single-vehicle crashes that were frequently cited and sheds light on the types of problem behaviors exhibited by young and older drivers.

Drivers in the 70 years and older age group were also over-represented in both fatal and non-fatal crashes. Both the Governor's Council and the Automotive Transportation Center (ATC) have representatives on a panel appointed by the Commissioner of the Indiana Bureau of Motor Vehicles to examine the issue of driver examinations for older drivers and other drivers with possible impairments.

All age-groups of drivers are more than likely to be involved in multiple-vehicle crashes versus single-vehicle crashes. Figure 7 displays frequently cited contributing

circumstances for multiple-vehicle crashes. It is likely that many of the older-driver crashes attributed to driver inattention are actually due to vision problems or restricted field of view (Owsley, *et al.*, 1998).

The percentage of fatalities that occurred in rural areas varied significantly by age. Young drivers, who tend to transport other young passengers, have a significantly higher percentage of fatal crash involvement in rural areas. This may be due to a greater tendency to travel too fast or to engage in other risky behavior.

Figure 6

- *Young drivers displayed high rates of Driver Inattention.*
- *Drivers under age 21 had the highest rates for Weather-related contributing circumstances.*
- *Drivers age 21–39 had the highest rates of alcohol-impaired crashes.*

Figure 6. Vehicular Contributing Circumstances Rate per Drivers in Crashes by Age Group–Single Vehicle Crashes–1997

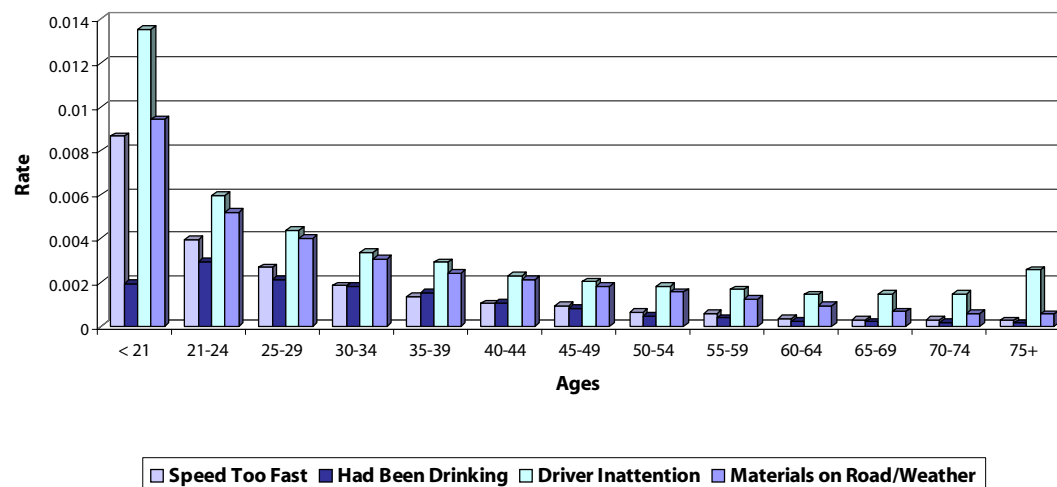
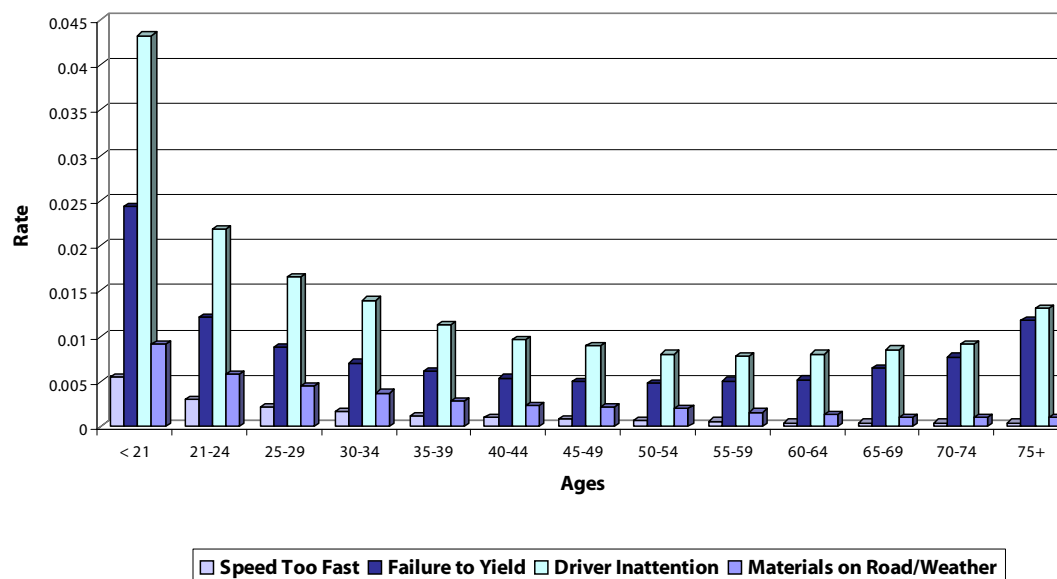


Figure 7

- *Young drivers had high rates of Driver Inattention and Failure to Yield.*

Figure 7. Vehicular Contributing Circumstances Rate per Drivers in Crashes by Age Group–Multiple Vehicle Crashes–1997



problem identification

Figure 8. Percentage of Indiana Fatalities that are Rural by Age Group: 1988-1997

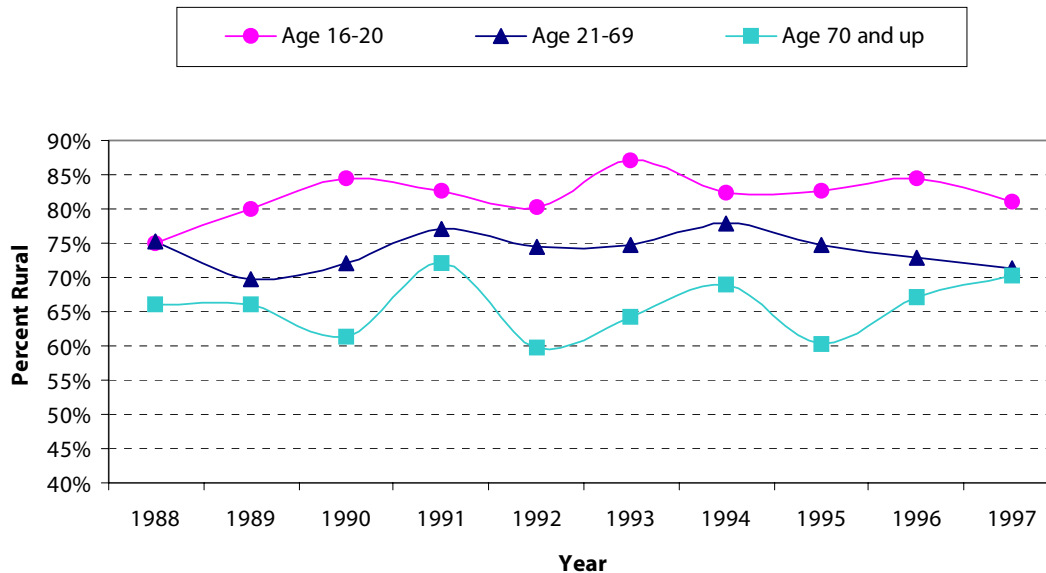


Figure 8

- *The percentage of fatalities that occurred in rural locales is significantly higher for ages 16-20.*

1988-1997 Average	
Age 16-20	82.0%
Age 21-69	74.0%
Age 70 and up	65.6%

Occupant Protection

Occupant protection received considerable promotion over the past several years, including the proper use of child safety restraints. These programs were reinforced with public awareness campaigns designed to increase the proper usage of safety restraints in Indiana. The 1998 roadside observation survey was conducted during September, shortly after the Indiana State Police and many other police departments had begun to enforce the primary safety belt law that went into effect on July 1, 1998 (Besel, Caldanaro, Haley and Thomaz, 1999). The results of this survey suggest that the law and the publicity that followed its passage motivated many motorists to use their safety belts more regularly.

The usage rate for passenger car front-seat occupants increased 10.7 percent from 57.9 percent in 1997 to 68.6

percent in 1998. For all passenger vehicles, including pickups, minivans and large vans, the usage rate increased 10.6 percent from 51.1 percent in 1997 to 61.8 percent in 1998. The usage rate for pickups, although not covered by the new law, increased significantly from 28.1 percent to 38.0 percent. The 1998 rates were adjusted from those reported in 1997 to more accurately reflect the actual travel on Indiana roadways.

Despite reaching an all time high usage level, analysis of safety restraint usage surveys and traffic crash data indicate that certain groups of people are not heeding the message that safety belts save lives. In the 1998 observational survey, female drivers had much higher unweighted rates than male drivers (69.7 percent versus 55.3 percent); likewise, female passenger rates were

higher (63.4 percent) than male passengers (55.3 percent). The Young Adult (ages 16-34) age group had the lowest usage rate as either a driver (57.6 percent) or a front-seat passenger (48.1 percent). Occupants of pickup trucks continue to lag all other passenger vehicle occupants in restraint use. Freeways had the highest usage rates of any roadway classification and, for other roadway classifications, rates were higher in urban than in rural areas.

Based upon analysis of the 576 driver fatalities (excluding motorcyclists) reported during 1997 by Indiana's Fatality Analysis Reporting System (FARS), only 28.0 percent of the drivers killed in traffic crashes were using safety restraints (Table 2). This percentage decreased from 32.2 percent in 1996. For male drivers

killed in crashes, only 22.8 percent were using a safety restraint compared with 40.5 percent of female drivers. The percentage of drivers not restrained was highest (70.1 percent) in the 35- to 44-year-old age group.

One statistic commonly used for comparison purposes is the percentage of fatally injured drivers who were using a safety restraint. Using the safety belt effectiveness model developed by NHTSA, of the 415 fatalities not wearing safety belts, it is estimated that wearing safety belts could have saved 187 lives.

Indiana drivers and passengers of pickup trucks are an audience that has not heeded the message that safety belts save lives. The percentage restrained for both drivers and passengers with either fatal or incapacitating injuries has been substantially higher for passenger cars than for pickup trucks throughout the 1988 to 1997 period.

NHTSA estimates that lap/shoulder belts reduce the risk of fatal injury by 45 percent for passenger cars and, by an even greater degree, 60 percent, for pickup occupants (NHTSA, 1996). The risk of moderate-to-critical injury is reduced by 50 percent for passenger car occupants and by 65 percent for pickup occupants.

A primary reason for the low restraint usage rate for pick-up truck occupants in Indiana is that pick-ups are exempt from the Indiana safety belt law. If the unrestrained occupants of pickup trucks could have been convinced to use appropriate safety restraints at rates equivalent to passenger cars, an estimated 27 lives during each of 1996 and 1997 would have been saved. Amending and enforcing the Indiana safety belt law to include light trucks can save many lives.

ATC has collected safety restraint usage data (1995-1997) on teenagers arriving at and departing from school in recent years. The percentage of drivers and front-seat passengers restrained varied considerably across schools with a high of 75.5% and a low of 10.2%. The median usage rate was 44.0% for drivers and 35.4% for front-

Table 2. Restraint Usage by Age for Driver Fatalities–1997

Age	Number of Drivers			% Restrained			% Not Restrained			% Unknown		
	Male	Fem	Tot	Male	Fem	Tot	Male	Fem	Tot	Male	Fem	Tot
0 - 15	6	0	6	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%	0.0%	0.0%	0.0%
16 - 19	60	21	81	26.7%	42.9%	30.9%	65.0%	57.1%	63.0%	8.3%	0.0%	6.2%
20 - 24	51	19	70	13.7%	47.4%	22.9%	76.5%	42.1%	67.1%	9.8%	10.5%	10.0%
25 - 34	72	34	106	20.8%	29.4%	23.6%	68.1%	70.6%	68.9%	11.1%	0.0%	7.5%
35 - 44	66	21	87	18.2%	19.0%	18.4%	68.2%	76.2%	70.1%	13.6%	4.8%	11.5%
45 - 54	56	22	78	21.4%	50.0%	29.5%	69.6%	31.8%	59.0%	8.9%	18.2%	11.5%
55 - 64	31	18	49	22.6%	38.9%	28.6%	54.8%	50.0%	53.1%	22.6%	11.1%	18.4%
65 - 74	27	16	43	29.6%	56.3%	39.5%	63.0%	37.5%	53.5%	7.4%	6.3%	7.0%
75+	39	17	56	41.0%	52.9%	44.6%	53.8%	47.1%	51.8%	5.1%	0.0%	3.6%
TOTAL	408	168	576	22.8%	40.5%	28.0%	66.7%	53.6%	62.8%	10.5%	6.0%	9.2%

Legend: Fem=Female; Tot=Total

Source: Fatality Analysis Reporting System, NHTSA.

Note: Drivers coded as improperly restrained were classified as "not restrained."

Excluded are drivers of parked vehicles, motorcycles, and mopeds.

seat passengers. The school with the highest usage rate was in a county having a Council supported Youth Education-Enforcement program. For several years, the police have cooperated with teachers in encouraging safety restraint use and also targeted enforcement of safety belt violations on streets near schools and time periods when a high frequency of teenage drivers is expected. The schools with the lowest rates had low enrollments and were located in rural counties. One of these schools, which was located in a county having a Community Traffic Safety Program that emphasized educational traffic safety programs, achieved an increase in the usage rate from 25.4% in 1996 to 50.4% in 1997. Thus, while the usage rates for the teenagers surveyed were far below Indiana averages, certain programs targeted at youth have demonstrated that educational efforts can succeed in raising the usage rates significantly.

The graduated licensing law should have the effect of encouraging safety restraint use by teenage drivers and their passengers. Collection of safety restraint data at school sites and other locations at times when a high frequency of teenage drivers is expected is needed to determine whether this aspect of the law is working. Enhanced enforcement during Operation Pull Over periods targeted at teenage occupants may also be effective in increasing the safety belt usage rates of teens and pre-teens.

A survey conducted by the Automotive Safety Program in 1998 found a child restraint misuse rate of 70.1 percent (Automotive Safety Program, 1999). The percent of children restrained has increased for each age group between 1996 and 1998. In 1998, 97.9 percent of infants under age one were restrained; 98.3 percent of

problem identification

Table 3. Alcohol Crash Statistics Changes: 1988-1997

Statistic	Average						Average 1993-97	% Change 1996-97	% Change 1988-97
	1988-92	1993	1994	1995	1996	1997			
Alcohol-Related (ALC) Crashes	13,257	10,137	9,794	9,995	9,777	9,544	9,849	-2.4%	-36.8%
% ALC Crashes	6.4%	5.0%	4.6%	4.5%	4.4%	4.3%	4.6%	-1.7%	-37.8%
ALC Fatal Crashes	274	199	204	199	209	194	201	-7.2%	-36.8%
% ALC Fatal Crashes	30.6%	25.4%	23.3%	23.2%	24.0%	22.9%	23.7%	-4.9%	-28.4%
ALC Fatalities	311	228	229	226	239	214	227	-10.5%	-38.3%
% ALC Fatalities	30.8%	25.6%	23.5%	23.6%	24.3%	22.8%	23.9%	-6.5%	-27.6%
ALC Injuries	9,111	7,144	6,893	6,889	6,664	6,524	6,823	-2.1%	-38.4%
% ALC Injuries	12.4%	9.4%	8.8%	8.5%	8.6%	8.3%	8.7%	-3.2%	-40.6%

Note: All crashes and injury statistics for 1994 and 1995 were corrected for misclassified private property crashes.

children ages 1-2 and 88.7 percent of children ages 3-4 were restrained. For older children the restraint usage rates were lower: 80.0 percent for ages 5-8 and 77.6 percent for ages 9-15. There has been improvement in usage rates of child safety seats for ages 3-4 children with an increase from 24.8 percent in 1996 to 41.7 percent in 1998.

Crash reports also indicate improvement in the numbers of children who are restrained. In 1988, only 23.1 percent of children under age five, who were killed in car crashes were restrained; in 1997, 50.0 percent were restrained. Similar improvement is found for the 5-11 age group: in 1988, 42.9 percent of children from this age group killed in crashes were restrained. In 1997, this percentage increased to 56.3 percent.

Table 4. Alcohol Concentration of Killed Drivers—1997

Age	0 to 0.009			0.010 to 0.049			0.050 to 0.099			0.100 or Greater			Unknown or Blank			Total		
	Male	Fem	Tot	Male	Fem	Tot	Male	Fem	Tot	Male	Fem	Tot	Male	Fem	Tot	Male	Fem	Tot
10 - 17	15	4	19	1	0	1	1	0	1	0	0	0	22	8	30	39	12	51
18 - 20	13	5	18	1	0	1	1	0	1	10	2	12	15	4	19	40	11	51
21 - 24	10	8	18	2	0	2	3	0	3	11	1	12	12	8	20	38	17	55
25 - 34	23	14	37	0	0	0	1	0	1	29	8	37	19	12	31	72	34	106
35 - 44	19	9	28	1	0	1	2	1	3	26	6	32	18	5	23	66	21	87
45 - 54	22	8	30	0	0	0	1	0	1	13	1	14	20	13	33	56	22	78
55 - 64	16	8	24	0	0	0	0	0	0	4	2	6	11	8	19	31	18	49
65 - 74	16	4	20	0	0	0	0	0	0	2	1	3	9	11	20	27	16	43
75 - 84	7	4	11	0	0	0	0	0	0	1	0	1	19	11	30	27	15	42
85+	3	0	3	0	0	0	0	0	0	0	0	0	8	2	10	11	2	13
Unk	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	1	0	1
TOTAL	144	64	208	5	0	5	9	1	10	97	21	118	153	82	235	408	168	576

Legend: Fem=Female; Tot=Total; Unk=Unknown age

Source: Fatality Analysis Reporting System, NHTSA.

Note: Drivers of Motorcycles, mopeds, minibikes, motorscooters and motorbikes are excluded.

Alcohol Countermeasures

There has been a dramatic decrease in the number of statewide alcohol-related crashes since 1988 (Table 3). In 1988, alcohol-related fatal crashes accounted for 31.9 percent of the total fatal crashes in the state. In 1997, alcohol-related fatal crashes declined to 22.9 percent of all fatal crashes. Alcohol-related injuries have declined 38.4 percent from 10,583 in 1988 to 6,524 in 1997.

Despite these gains, 1997 Indiana FARS data indicated that 23.1 percent of driver (excluding motorcyclists) fatalities had Blood Alcohol Content (BAC) levels over 0.05 (See Table 4). Of younger drivers (those 24 years old or less), 21.0 percent (33/157) of fatalities in crashes tested above zero, down from 31.4 percent in 1995 and 23.0 percent in 1996. This age group accounted for 21.9 percent (28/128) of the alcohol-related fatalities (BAC>0.05) among driver fatalities during crashes. This is true despite the fact that this age group accounts for only 15.0 percent of licensed drivers.

Drivers below the legal drinking age of 21 are still involved in far too many Had Been Drinking crashes. Of the sixteen driver fatalities—excluding motorcyclists—

under the age of 21 whose BAC test results are known, 30.2 percent (16/53) had BAC levels above zero. Only 12.5 percent (2/16) of these Had Been Drinking, under-age-21 killed drivers were female, an indication that underage drinking and driving is primarily a male problem. Overall, 22.5 percent (23/102) of the under-age-21 driver fatalities were female.

Male drivers killed in crashes are much more likely to have BAC levels above the 0.05 level used by Indiana to indicate alcohol impairment. For killed male drivers, whose BAC test results were known, 41.6 percent (106/255) tested greater than 0.05. For killed female drivers whose BAC test results were known, 25.6 percent (22/86) had a BAC greater than 0.05.

Further reductions in alcohol-related crashes will depend upon continued campaigns to promote public awareness of the problem and to increase awareness of what the average citizen can do to help prevent intoxicated driving.

Binge drinking (consumption of five or more drinks on a single occasion) is widely felt to be a useful predictor of driving while intoxicated behavior. The 1997 annual survey of youth drug use in Indiana by the Indiana Prevention Resource Center found that binge drinking, within the previous two week period, decreased significantly for Indiana high school seniors compared to 1996 (Indiana Prevention Resource Center, 1997). However, in the 1998 survey, the percentage of high school seniors engaging in binge drinking jumped from 33.2 percent in 1997 to 37.5 percent (Indiana Prevention Resource Center, 1998). Binge drinking by Indiana high school seniors has consistently been significantly higher than the national average. Indiana high school seniors have reported engaging in a binge-drinking episode within the previous two-week period at higher rates than the nation each year between 1991, when the Indiana survey was initiated, and 1998. The median percentage difference

between Indiana and the nation has been 6.6 percent during this period. Clearly, more needs to be done to educate Indiana youth on the consequences of binge drinking.

The number of drunk driving arrests in Indiana, as well as in other states, is a very small fraction of the number of drunk driving (DWI) incidents. Based on a national survey, it was estimated that there were nearly 123 million episodes of alcohol-impaired driving in the United States in 1993 (Liu, *et al.*, 1997). They also estimated from the survey that the number of alcohol-impaired episodes per year in Indiana was 2,628,257. Based on their estimates of alcohol-impaired episodes divided by the average number of Indiana DWI convictions during 1993 and 1994, the self-reported Indiana impaired driver had about one chance in 70 of being arrested and convicted for drunk driving for any single impaired-driving episode.

DWI convictions increased 2.0 percent in 1996 and 3.1 percent in 1997 following steady declines during the 1990-1995 period. But DWI convictions in 1997 were still 11.2 percent lower than in 1990. The arrests reported to the Indiana Bureau of Motor Vehicles (BMV) as Affidavits of Probable Cause (APCs) are an undercounting, since a number of counties fail to send in APCs for some or essentially all drunk driving arrests. In 1997, only 75.5 percent of the convictions for drunk driving offenses reported to the BMV had an APC on file, down from 81.4 percent in 1996 (ATC, 1998-B). This implies that numerous offenders arrested for drunk driving did not receive an administrative license suspension. A number of studies have demonstrated that a prompt license suspension deters repeat drunk driving. What is not known is the percentage of drunk drivers arrested in Indiana that actually received an administrative license suspension.

problem identification

Table 5. Motorcycle Crash Statistics: 1988-1997

Statistic	Average						Average 1993-97	% Change 1996-97	% Change 1988-97
	1988-92	1993	1994	1995	1996	1997			
Motorcycle (MC) Crashes	2,955	2,251	2,410	2,251	1,844	1,899	2,131	3.0%	-48.4%
MC Fatal Crashes	76	53	65	64	58	45	57	-22.4%	-48.3%
Motorcyclist Fatalities	77	53	65	65	63	47	59	-25.4%	-45.3%
MC Personal Injury Crashes	2,270	1,796	1,977	1,786	1,442	1,450	1,690	0.6%	-49.3%

Note: All crashes and injury 1994 and 1995 statistics were corrected for misclassified private property crashes.

Motorcycle Safety

In spite of the low rates for motorcycle helmet usage, motorcyclist fatalities declined 45.3 percent between 1988 and 1997.

Figure 9. Total Fatalities Related to Motorcycle Crashes: 1985-1997

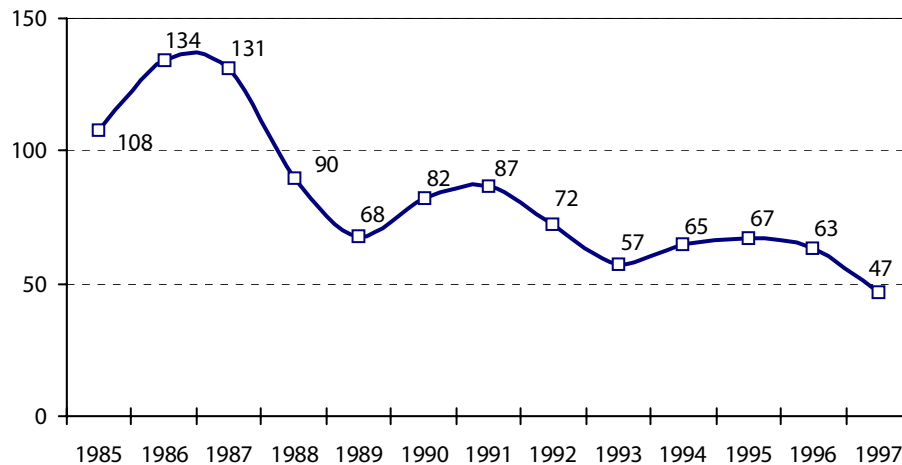


Figure 9

- **Motorcycle crash fatalities declined to a record low of 47 in 1997.**

Speed Too Fast was a contributing circumstance for 28.9 percent of fatal motorcycle crashes; *Had Been Drinking* was a contributing circumstance for 24.4 percent of fatal crashes, up from 22.4 percent in 1996.

Based on 1998 roadside counts of motorcyclists wearing helmets, only 33.4 percent of motorcyclists wear helmets in Indiana (Besel, Caldanaro, Haley and Thomaz, 1999). In 1997, 83 percent (34/47) of motorcyclist fatalities were not helmeted. During the 1988-1997 period, the percentage of killed motorcyclists not helmeted varied between 83.0 and 91.2 percent.

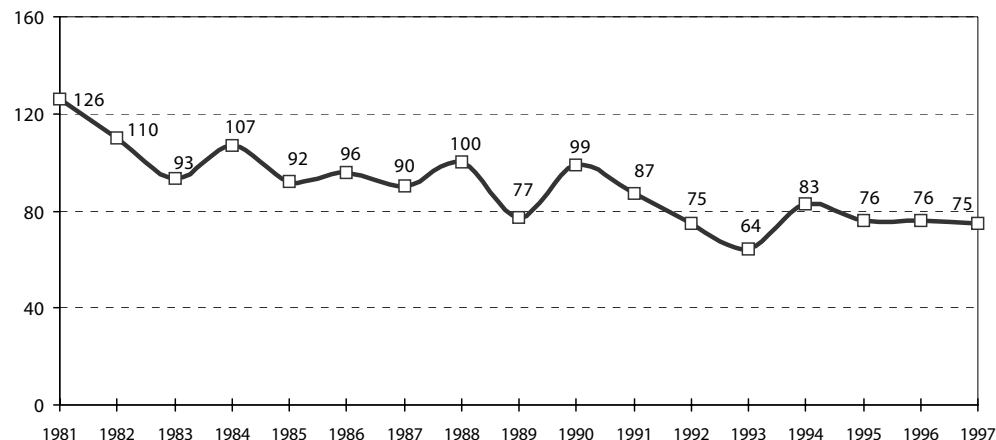
Helmets are estimated by NHTSA to be 29 percent effective in preventing fatal injuries to motorcyclists. For Indiana, if all motorcyclists had worn helmets, it is estimated that 17 lives in 1997 and a total of 174 lives between 1988 and 1997 would have been saved.

Pedestrian and Pedalcyclist Safety

Figure 10

- *After declining during the 1980s, pedestrian fatalities have leveled off at 75 per year.*

Figure 10. Pedestrian Fatalities: 1981-1997



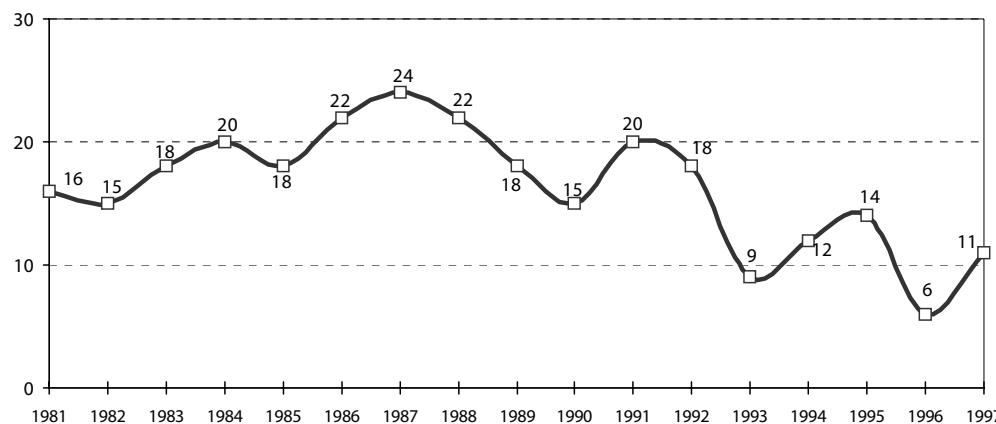
For Indiana during the 1996-1997 period, 47 percent (8/17) of bicyclist fatalities and 58 percent of injured bicyclists were under age 16.

Figure 11

- *Bicyclist fatalities have averaged 10 per year over the past five years compared to 19 per year over the previous five-year period.*

None of the Indiana bicyclist fatalities in 1997 and only one of the 71 bicyclist fatalities during the 1992-1997 period were reported to have been wearing a helmet. Programs to increase awareness of the effectiveness of helmets should be implemented, along with programs to educate drivers on how to behave in the presence of bicyclists.

Figure 11. Bicycle Fatalities: 1981-1997



problem identification

Police Traffic Services

There are numerous instances of information entered as “unknown” in the Indiana State Police Crash Records. For 1996 data, the age of an injured person was “unknown” 8.4 percent of the time; for injured pedestrians, age was unknown for 6.4 percent and for 11.4 percent of injured pedalcyclists. *Road Surface Conditions* were entered as unknown for 16.4 percent of all crashes. For all vehicles involved in a crash, the *Type of Vehicle* was unknown 18.6 percent of the time (ATC, 1998-A). Generally there are lower percentages coded “unknown” for fatal crashes.

A possible reason for the appearance of “unknown” for many of the Crash Report fields is the fact that many crashes are never reported at the time they occur and are thus not investigated by an officer. However, a number of crashes are self-reported by the vehicle owners days after the fact. For 1997, 14.9 percent of crashes were reported only by vehicle owners. Owner Crash Report forms omit most of the fields describing the crash so

“unknown” must be entered into the database for these fields. Perhaps a few revisions should be made to the Owner Crash Report Form to make it more comprehensive in its data fields so that more accurate information can be gathered.

Actually, the 85.1 percent rate for officer-investigated crashes was the highest during the past 10 years with an 81.1 percent rate in 1994—the lowest during the decade. Report rates vary considerably by county with a high of 96.6 percent and a low of 24 percent for 1997. During 1997, seven counties had officer-investigated rates below 60 percent and 21 had rates below 75 percent. The counties with low officer-investigated rates with few exceptions have had low rates throughout the past decade. It is suspected that low officer-investigated rates also leads to under-reporting of crashes, particularly of property damage crashes since owners may fail to submit Owner Crash Report forms if they know or suspect that no Officer’s Vehicle Crash Report will be filed.

The BAC levels for drivers involved in fatal crashes are coded as unknown far too often, even in the FARS database. In 1996, the percentage of drivers involved in fatal crashes tested for BAC with known results was 65.3 percent for killed drivers, down from 69.5 percent in 1995. In 1997, the percent with known BAC declined further to 59.5 percent. For surviving drivers, results in 1997 were known for 45.2 percent, very similar to the 46.0 percent in 1996 and the 44.0 percent in 1995 (NHTSA, 1998-B).

Unsafe speed is a major factor in many fatal crashes in Indiana. NHTSA estimated that there were 243 speed-related fatalities in Indiana during 1997, up from 207 in 1996. The economic cost to Indiana of speed-related crashes in 1997 was estimated by NHTSA as 533 million dollars, up from 506 million in 1996 (NHTSA, 1998-B).

Indiana has continued, voluntarily, to collect speed trend data previously mandated by the Highway Safety Act of 1978. As seen in Figure 12, the percentage of motorists complying with posted highway speed limits has declined for each of the road classifications during the 1982-1998 period (Cochran, 1999).

Figure 12. Motorist Compliance with Posted Speed Limits: 1982-1998

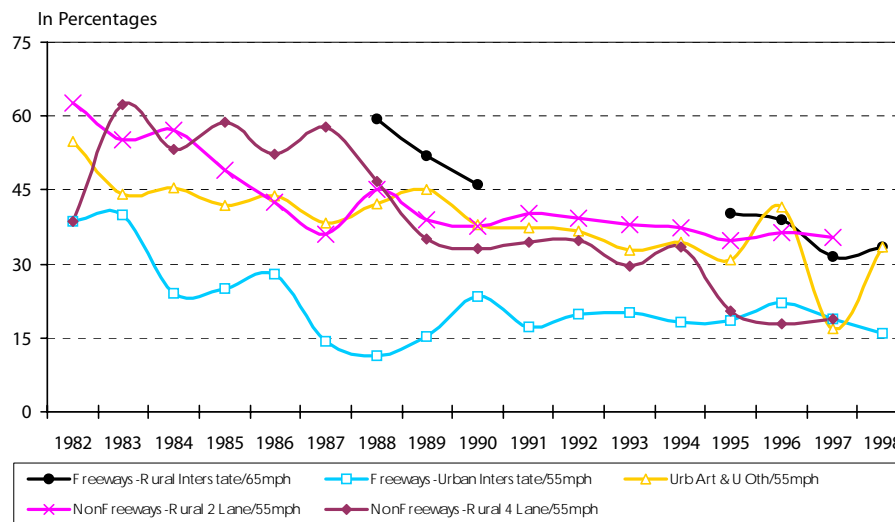


Figure 12

- *Compliance with posted speed limits has declined for each roadway classification.*

Operation Pull Over has been a major effort over the past four years in which police agencies have used media campaigns and targeted enforcement activities to further the achievement of traffic safety goals.

Many county sheriff departments and municipal police departments have increased their enforcement efforts to further the achievement of these goals. Sobriety checkpoints have been utilized by many police agencies, often conducted cooperatively, to increase arrests and public awareness of these traffic safety goals.

The average law enforcement crash response time has increased from 11.9 minutes in 1994 to 14.0 minutes in 1997. This statistic should be examined again for 1998 crashes to isolate the causes of the problem.

Traffic Records

NHTSA's involvement in traffic records has historically been based on the premise that, as a minimum, a state should have a functional statewide records system that is designed to provide data to all state and local government units to help in identifying and correcting traffic safety problems. Data collected through this system should be used as the basis for managing traffic safety programs at all levels.

Indiana has no central record system for traffic safety. Currently, data is maintained under the jurisdiction of the Bureau of Motor Vehicles (BMV), the Emergency Medical Services Commission (EMSC), the Indiana Department of Transportation (INDOT) and the Indiana State Police (ISP), as well as several other State agencies. The BMV collects data concerning the driver and vehicle files (impaired driving probable cause affidavits, impaired driving dispositions, license suspensions and traffic citation dispositions). The INDOT maintains the roadway environment file, while ISP maintains the crash reports file. The EMSC collects information concerning emergency run time and crash victim procedures that

occur at the scene, during the run and upon admittance to the hospital. These various data banks, by the nature of their historic development, contain duplicated materials and non-compatible databases.

Requests by federal, state and local agencies for traffic safety data reveal that available data is not always sufficient in detail to be useful to the agencies. In addition, data is not always readily available for timely use. Moreover, at times, the data is conflicting or confusing.

To remedy this situation, the Governor's Council on Impaired and Dangerous Driving has undertaken an assessment of Indiana's Traffic Records System and contracted with the Automotive Transportation Center of Purdue University to coordinate the traffic records improvement process in Indiana.

Emergency Medical Services

Since the creation of the Emergency Medical Services (EMS) Commission in 1974, emergency medical services in Indiana have been greatly enhanced and improved. Emphasis has been placed on modernizing ambulance equipment, enhancing training of emergency service personnel, improving response time, obtaining more advance lifesaving technology, and coordinating an EMS system statewide.

The EMS Commission has recently revised data collection rules and procedures which should now, for the first time, make available comprehensive injury data for all victims of traffic crashes requiring EMS services.

Highway Environment

For the nation, in 1997, 8.5 percent of the vehicles involved in fatal crashes were large trucks (NHTSA, 1998-B); in Indiana, 13.1 percent of the vehicles involved in fatal crashes were large trucks. Only three of the 50 states had higher rates of large-truck involvement in fatal crashes, and Indiana had substantially more truck traffic than any of these states. Indiana should study what appears to be an increasing problem in large-truck crashes. One of the problems is that Indiana truly is a crossroads state with a very low percentage of the Indiana truck traffic either originating here or having Indiana as the destination. One result of this phenomenon is that relatively few of the large-truck drivers are licensed in Indiana. Cooperation with neighboring states (Illinois, Ohio, Michigan and Kentucky) which also have a high volume of large-truck traffic may be the key to understanding and reducing the toll on Indiana highways.

Indiana's highways seem at times to be primarily construction zones. Recent efforts to reduce the numbers and severity of construction zone crashes seemed to be succeeding. There were 29 fatal crashes in construction zones during 1995. In 1996, fatal crashes in construction zones declined 45 percent to 16 while total crashes in construction zones declined by only six percent from 5,800 to 5,447 crashes. Most of this decline in fatal crashes was accounted for by a decrease from 16 to six on interstate/toll roads. However, in 1997 fatal construction zone crashes increased to 27 and total crashes also increased to 5,899. Police agencies have exerted greater efforts to enforcing traffic laws in construction zones in recent years. It is likely that the pace of highway construction will increase during the next five years due to increased federal funding, so both education and enforcement efforts must be continued to keep Indiana from experiencing sharp increases in construction zone crashes.

problem identification

Focus Opportunities

- The Council will continue to support and sponsor vigorous education, enforcement and evaluation efforts to assure that the graduated licensing, child restraint and primary safety belt laws passed by the Indiana Legislature during 1998 are successfully implemented.
- Amending and enforcing the Indiana safety belt law to include light trucks can save many lives.
- School and community programs that encourage safety restraint use by pre-teens and teenagers are encouraged and subsequently evaluated to determine their effects on restraint usage rates.
- Operation Pull Over serves as an excellent forum to continue to train officers on how to correctly identify safety restraint usage and the importance of enforcement of Indiana's safety restraint laws.
- The Council encourages prosecutors and judges to support the administrative suspension provision of Indiana's drunk driving laws. Continued publicity and strict enforcement and prosecution increase the perception that a person who drinks and drives will be caught, arrested, prosecuted and convicted. A DWI tracking system is needed to perform a thorough and fair evaluation of Indiana's adjudication system for drunk drivers.
- Indiana needs to strongly encourage investigating officers to get BAC test results for all drivers involved in fatal crashes. Coroners likewise need to be reminded to submit blood samples to the Indiana University Toxicology Department that maintains a blood alcohol database. Emergency room staff should be encouraged to comply with Indiana statutes and provide blood samples for surviving drivers to police officers when requested. A publicity campaign on combating drunk driving could include information on the expected role of coroners and emergency room staff.

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Fatalities

Total Economic Loss

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Substantial progress has been made in reducing the number of deaths and injuries on Indiana's highways. An overview of statewide crash statistics is crucial to an understanding of traffic safety in Indiana. This section contains figures and tables which portray a comprehensive picture of the outcomes of crashes. Table 6 summarizes the most common crash statistics for the past 10 years along with the numbers of licensed drivers and registered vehicles. It is important to note that the crash reporting threshold was changed during 1990 from \$200 to \$750 for property damage crashes. This is the most likely reason for the decline in property damage crashes in 1991.

Since increases in population and the numbers of miles driven effect the opportunity for crashes to occur, crash

rates and fatality rates based on miles driven are often better indices of whether motor vehicle travel is becoming safer. Figure 15 and Table 7 summarize fatal crash and fatality rate data for the 1980-1997 period. These rates are based on vehicle miles traveled (VMT) estimates from data collected by the Indiana Department of Transportation (INDOT).

The common outcome indicators of Fatalities, Injuries and Economic Cost of Crashes are the essential statistics that are emphasized in this chapter. The statistics on Serious Injuries are also included in the Indiana Crash Facts for the first time.

Historical data on Indiana motor vehicle fatalities is found in Table 9 and Figures 16 and 17.

When fatal crashes and fatalities occur is an important factor to consider when designing interventions aimed at improving traffic safety. Patterns in fatalities by time of day, day of week and month are displayed in Table 10 and Figures 18 through 22. In 1997, as is true for the average for the previous five-year period, Saturday had the highest number of traffic fatalities with 179.

The Indiana Traffic Safety Time Clock data (see inside back cover) summarizes the frequencies of various fatality and injury statistics for all crashes and alcohol-related crashes.

state outcome data summary

Figure 13

- The number of fatal crashes decreased 2.4 percent from 870 in 1996 to 849 in 1997.
- The number of fatal crashes decreased by 11.7 percent over the past 10 years but has increased by 8.6 percent over the past five years.

Figure 13. Fatal Crashes in Indiana: 1988-1997

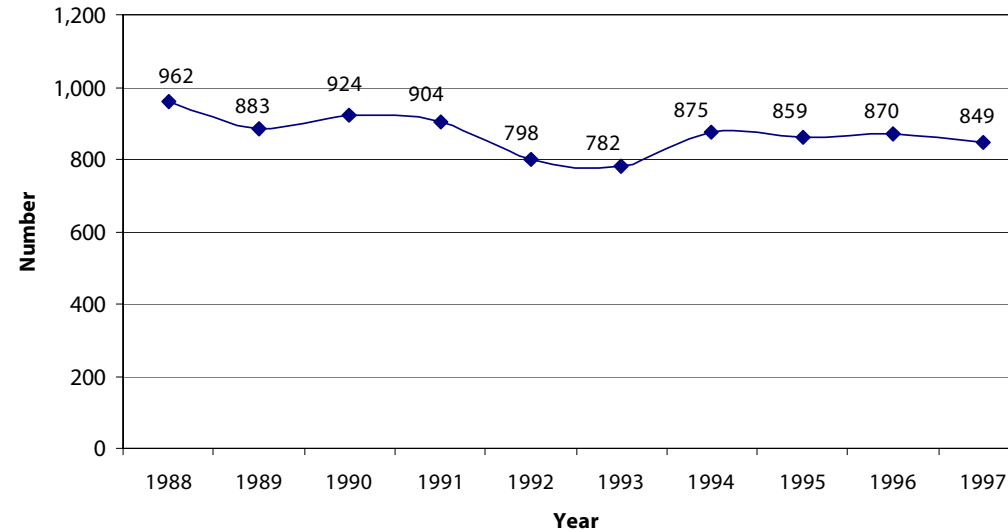
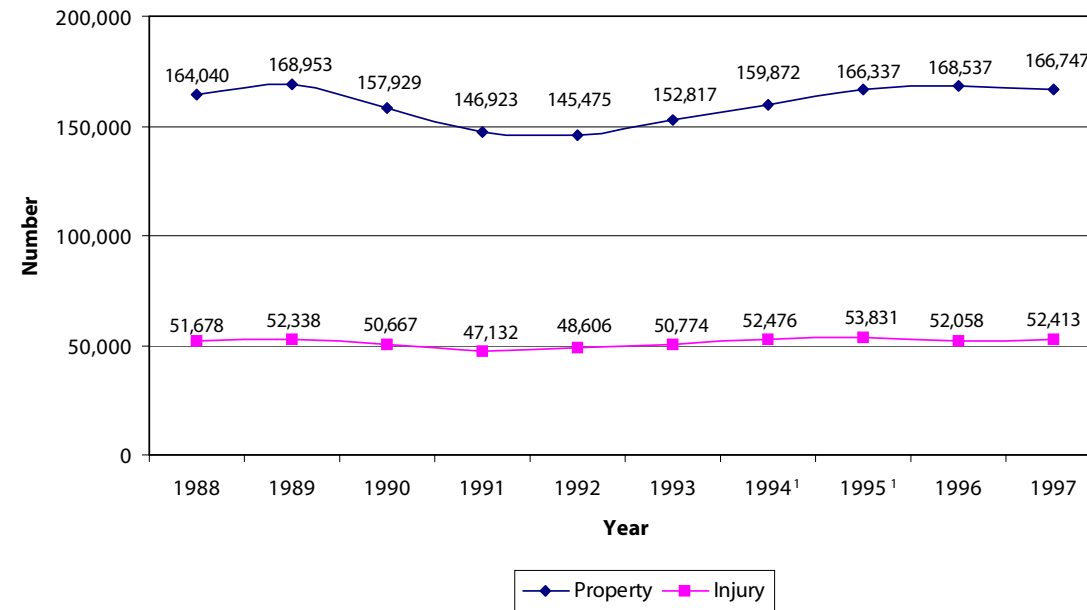


Figure 14

- The total number of reported property damage crashes has increased by 9.1 percent over the past five years.
- The total number of personal injury crashes increased by only 3.2 percent over the past five years.

Figure 14. Personal Injury and Property Damage Crashes: 1988-1997



¹ Corrected for misclassified private property crashes.

Table 6. Crash Severity with Licensed Drivers and Registered Vehicles: 1988-1997

Year	Fatal Crashes	Personal Injury	Property Damage	Total Crashes	Total Fatalities	Total Injuries	Serious Injuries	Licensed* Drivers	Registered* Vehicles
1988	962	51,678	164,040	216,680	1,104	75,360	7,786	3,590,173	4,550,450
1989	883	52,338	168,953	222,174	973	76,447	7,702	3,754,151	4,693,634
1990	924	50,667	157,929	209,520	1,044	74,916	7,412	3,601,167	4,624,591
1991	904	47,132	146,923	194,959	1,022	69,280	6,677	3,744,208	4,740,306
1992	798	48,606	145,475	194,879	903	72,223	6,428	3,800,437	4,839,889
1993	782	50,774	152,817	204,373	891	75,614	6,588	3,790,783	4,953,250
1994	875	52,476 ¹	159,872 ¹	213,223 ¹	976	78,105 ¹	6,638	3,860,329	5,131,673
1995	859	53,831 ¹	166,337 ¹	221,027 ¹	959	80,632 ¹	6,889	3,881,424	5,209,779
1996	870	52,058	168,537	221,465	982	77,339	6,558	3,902,519	5,347,748
1997	849	52,413	166,747	220,009	940	78,262	6,488	3,923,420	5,343,638

*Source: Indiana Bureau of Motor Vehicles

Note: 1995 and 1996 licensed driver numbers estimated from 1994 and 1997 counts.

¹Corrected for misclassified private-property crashes.

According to Indiana State Police Crash Reports, 220,009 traffic crashes were reported in Indiana during 1997 (Table 6). Of these, 849 were fatal crashes in which 940 people died. There were an additional 52,413 personal injury crashes and a total of 78,262 people injured. Compared to 1996, fatalities decreased 4.3 percent from 982 to 940 while, for the nation, fatalities decreased only 0.2 percent in 1997.

While the numbers of licensed drivers has increased by 9.3 percent and the number of registered vehicles has increased by 17.4 percent over the past 10 years, the number of fatalities has declined by 14.9 percent and serious injuries have declined by 16.7 percent over the same period. Improvement in traffic safety has not been so apparent over the past five years. The numbers of licensed drivers has increased by 3.5 percent and registered vehicles by 7.9 percent; fatalities have also increased by 5.5 percent while serious injuries declined by 1.5 percent.

Figure 15. U.S. Fatality Rates and Indiana Fatality Rates: 1980-1997

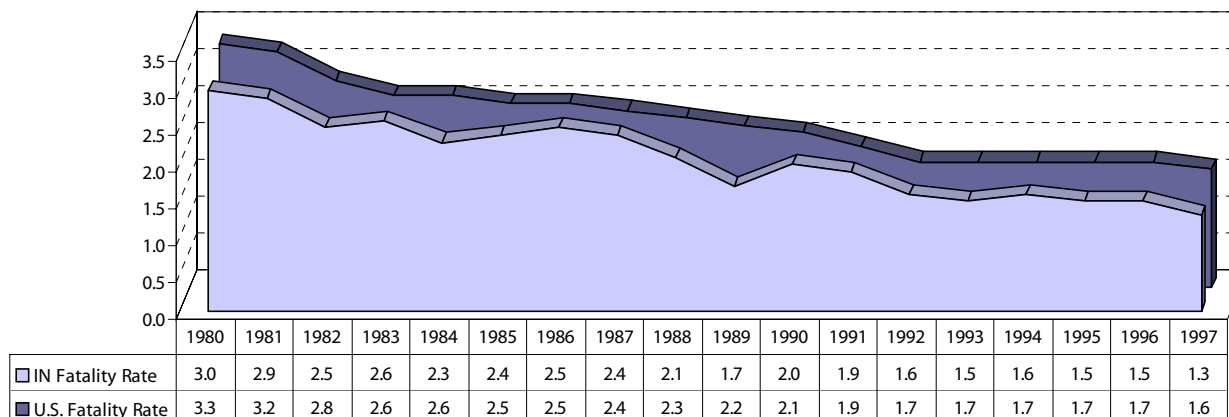


Figure 15

- Indiana's fatality rate of 1.3 fatalities per 100 MVMT remained below the national average of 1.6.

state outcome data summary

The fatality rate of 1.3 fatalities per 100 million VMT (100 MVMT) in 1997 was a decrease of 10.3 percent from 1996 (Table 7). Over the past 10 years, Indiana VMT has increased by 37.9 percent and the 1996 to 1997 increase was 6.8 percent. The Indiana fatality rate per 100 MVMT has decreased by 38.3 percent and the corresponding fatal crash rate has decreased by 36.2 percent over the 10-year period. National increases in VMT have been less than for Indiana with a 26.4 percent 10-year increase and a 3.0 percent increase from 1996 to 1997.

Since 1993 was an exceptionally low year for fatal crashes and fatalities, trends based on the most recent five-year period are much less positive. Between 1993 and 1997 the Indiana fatality rate per 100 MVMT has decreased by 9.5 percent and the fatal crash rate by 7.0 percent. The national decrease in fatality rate per 100 MVMT was 6.3 percent over the five-year period.

Table 7. Indiana and U.S. Fatality Rates per 100 Million Vehicle Miles Traveled: 1980-1997

Year	Indiana					U.S.		
	Billion VMT	Fatal Crashes	Traffic Deaths	Fatality Rate	Fatal Crash Rate	Fatalities	Billion VMT	Fatality Rate
1980	38.7	1,040	1,179	3.0	2.7	51,091	1,527	3.3
1981	38.9	1,022	1,177	2.9	2.6	49,301	1,555	3.2
1982	39.2	849	971	2.5	2.2	43,945	1,595	2.8
1983	39.8	875	1,020	2.6	2.2	42,589	1,653	2.6
1984	41.1	839	929	2.3	2.0	44,257	1,720	2.6
1985	40.8	881	980	2.4	2.2	43,825	1,775	2.5
1986	40.8	993	1,038	2.5	2.4	46,087	1,835	2.5
1987	43.6	957	1,056	2.4	2.2	46,390	1,921	2.4
1988	51.1	962	1,104	2.1	1.9	47,087	2,026	2.3
1989	56.2	883	973	1.7	1.6	45,582	2,096	2.2
1990	53.7	924	1,044	2.0	1.7	44,599	2,144	2.1
1991	54.3	904	1,022	1.9	1.7	41,508	2,172	1.9
1992	57.1	798	903	1.6	1.4	39,250	2,247	1.7
1993	60.5	782	891	1.5	1.3	40,150	2,296	1.7
1994	62.1	875	976	1.6	1.4	40,716	2,358	1.7
1995	64.6	859	959	1.5	1.3	41,817	2,423	1.7
1996	66.0	870	982	1.5	1.3	42,065	2,486	1.7
1997	70.5	849	940	1.3	1.2	41,967	2,560	1.6

Legend: VMT = Vehicle Miles Traveled

VMT Source: Indiana Department of Transportation, Federal Highway Administration.

Example: The Fatality Rate for 1997 was 1.5 traffic fatalities $[940 / (70.5 \times 10)]$ per 100 million vehicle miles traveled.

Also, the Fatal Crash Rate in 1997 was 1.2 $[849 / (70.5 \times 10)]$ per 100 million vehicle miles traveled.

Table 8. Driver and Passenger Fatalities by Motor Vehicle Type–1997

Vehicle Type	Driver		Passenger		Total	
	Count	Percent	Count	Percent	Count	Percent
Passenger Car, Station Wagon	412	67.21%	163	67.63%	575	67.33%
Pickup	94	15.33%	37	15.35%	131	15.34%
Van	33	5.38%	22	9.13%	55	6.44%
Truck	9	1.47%	5	2.07%	14	1.64%
Semi-Tractor (Only)	1	0.16%	0	0.00%	1	0.12%
Semi-Tractor, Trailer	14	2.28%	0	0.00%	14	1.64%
Semi-Tractor, Multiple Trailers	1	0.16%	0	0.00%	1	0.12%
Combination Vehicle	1	0.16%	0	0.00%	1	0.12%
Recreational Vehicle	2	0.33%	1	0.41%	3	0.35%
Bus	0	0.00%	0	0.00%	0	0.00%
School Bus	0	0.00%	0	0.00%	0	0.00%
Police Car	0	0.00%	0	0.00%	0	0.00%
Fire Truck	0	0.00%	0	0.00%	0	0.00%
Ambulance	0	0.00%	0	0.00%	0	0.00%
Motorcycle*	39	6.36%	8	3.32%	47	5.50%
Snowmobile	0	0.00%	0	0.00%	0	0.00%
Farm Equipment	1	0.16%	0	0.00%	1	0.12%
Special Vehicle	0	0.00%	0	0.00%	0	0.00%
Other	5	0.82%	0	0.00%	5	0.59%
Unknown	1	0.16%	5	2.07%	6	0.70%
Total	613		241		854	

*Motorcycle includes motorcycles, mopeds, motor bikes, motor scooters and minibikes.
 Note: Table does not include non-occupants (i.e. pedestrian, bicyclists).

Table 8 summarizes 1997 fatalities of motor vehicle occupants by role (driver or passenger) and type of motor vehicle. The highest percentages of fatalities are for occupants of passenger cars (70.89 percent in 1997). Unfortunately Indiana does not have statistics on numbers of registered vehicles or VMT that correspond to the vehicle-type categories on the crash report. Sport Utility Vehicles (SUV) are not entered in the crash database as an identifiable class and are included in the passenger car class.

The number of fatalities that were occupants of pickup trucks increased from 106 in 1996 to 131 in 1997. The number of fatalities that were occupants of Semi-Tractors also increased from 11 in 1996 to 16 in 1997. On the positive side, the number of motorcyclist fatalities decreased from 63 in 1996 to 47 in 1997.

state outcome data summary

Table 9 provides historical data on the total number of Indiana motor vehicle crash fatalities with a breakdown by rural/urban locale. Wars, gasoline shortages and the resulting price increases and the economic cycle can affect total miles traveled during periods of time and thus impact on the opportunity for crashes. Speed limit changes, improvements in roadway design, changes in average vehicle crashworthiness, traffic law enforcement practices and restraint usage rates also may affect fatalities.

Table 9. Indiana Traffic Fatalities by Locale: 1941-1997

Year	Rural	Urban	Statewide	Year	Rural	Urban	Statewide
1941	1,051	427	1,478	1971	1,205	410	1,615
1942	671	345	1,016	1972	1,157	408	1,565
1943	416	301	717	1973	1,225	390	1,615
1944	469	315	784	1974	868	376	1,244
1945	542	318	860	1975	822	313	1,135
1946	644	351	995	1976	895	372	1,267
1947	759	350	1,109	1977	860	395	1,255
1948	758	313	1,071	1978	893	423	1,316
1949	795	326	1,121	1979	895	418	1,313
1950	818	306	1,124	1980	761	418	1,179
1951	907	340	1,247	1981	787	390	1,177
1952	970	307	1,277	1982	671	300	971
1953	922	354	1,276	1983	714	306	1,020
1954	839	241	1,080	1984	673	256	929
1955	887	262	1,149	1985	679	301	980
1956	944	280	1,224	1986	760	278	1,038
1957	932	244	1,176	1987	729	327	1,056
1958	824	236	1,060	1988	811	293	1,104
1959	848	279	1,127	1989	695	278	973
1960	828	302	1,130	1990	754	290	1,044
1961	822	260	1,082	1991	784	238	1,022
1962	921	312	1,233	1992	662	241	903
1963	1,003	341	1,344	1993	671	220	891
1964	1,042	369	1,411	1994	748	228	976
1965	1,084	433	1,517	1995	710	249	959
1966	1,155	419	1,574	1996	729	253	982
1967	1,176	401	1,577	1997	690	250	940
1968	1,094	429	1,523				
1969	1,244	434	1,678				
1970	1,124	442	1,566				

Figure 16. Percent Rural Fatalities by Year: 1941-1997

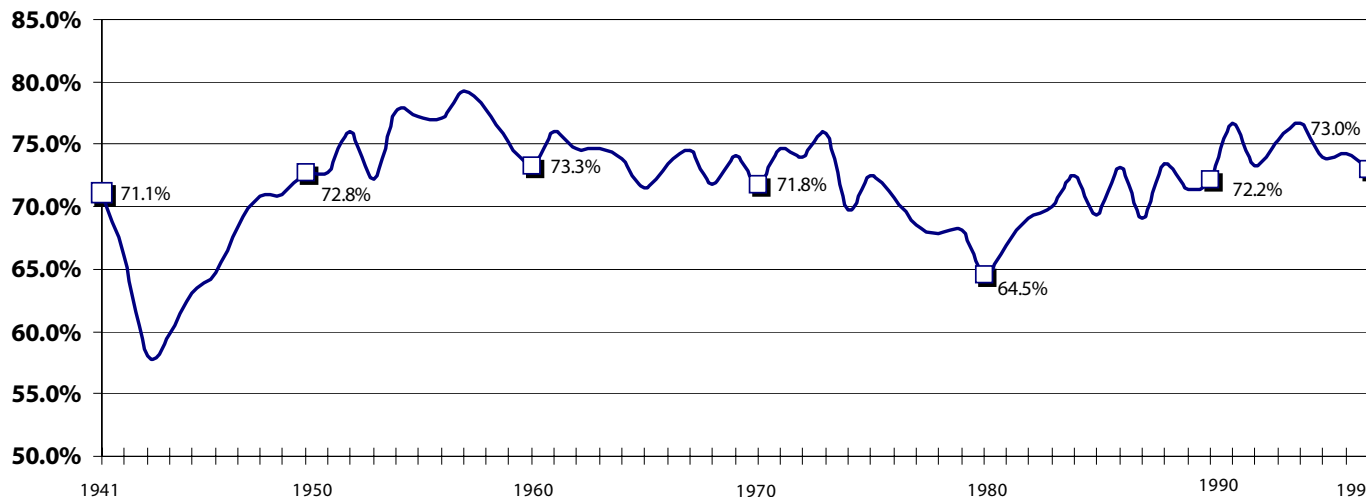


Figure 16

- *Gasoline rationing was the likely reason for the low percentages of rural fatalities between 1942 and 1946.*
- *The opening of many miles of rural interstates during the 1959-1980 period contributed to declines in rural fatalities during that era.*

Figure 17. Indiana Traffic Fatalities: 1941-1997

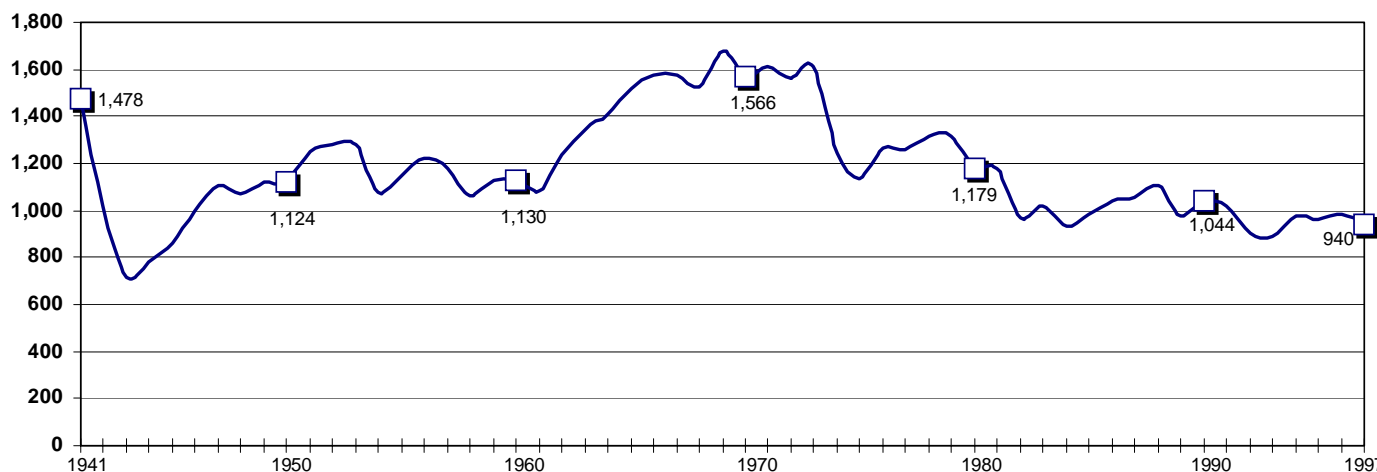


Figure 17

- *Fatalities peaked in 1969 with 1,678. Increased interstate travel, the 1973 oil embargo and lowered speed limits contributed to the decreases during the 1970s.*
- *Fatalities declined 15 percent over the 10-year period of 1988-1997. Increases in safety restraint usage are an important factor in this decline.*

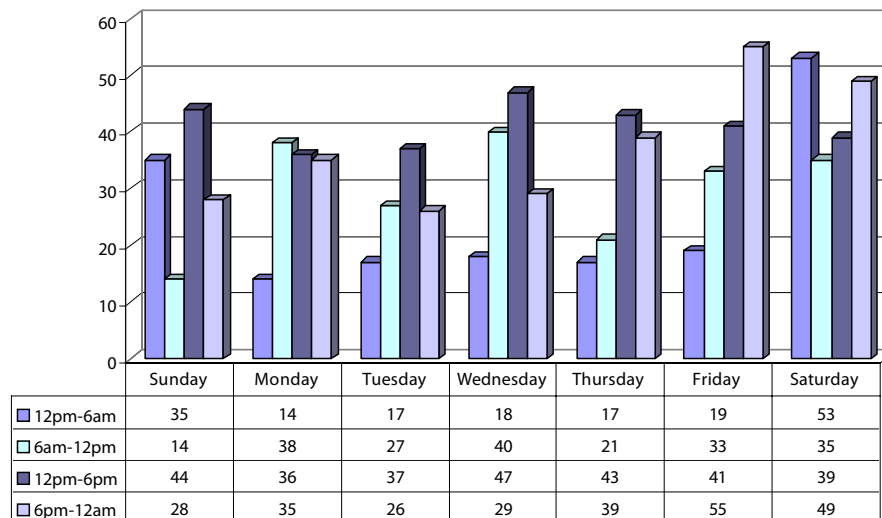
state outcome data summary

Detailed data on 1997 fatalities by one-hour time periods and by day of the week are displayed in Table 10. Figure 18 groups the fatalities by six-hour time periods and facilitates the interpretation of the detail in Table 10. For weekdays (Monday-Friday) the midnight to 6 am period had the fewest fatalities of the six-hour periods. The weekend fatality pattern was distinctively different. The highest frequency of fatalities, per six-hour period (55), occurred on Friday between 6 PM and midnight. The second highest six-hour period was the very next time interval of midnight to 6 AM of Saturday. The fatality time period distributions were very similar in 1995 and 1996 to the 1997 data presented here. An important factor that contributes to this pattern is the higher frequency of fatal alcohol-related crashes during late-night, weekend periods. From 1988 through 1992, there were declines in weekday traffic fatalities followed by increases in fatalities since 1992. Weekend fatalities, which are more likely to be alcohol-related, have shown a different and more positive trend; they have declined 19 percent from 463 in 1990 to 375 in 1997 (Figure 20).

Table 10. Fatalities by Time of Day and Day of Week—1997

Time	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Total
midnight - 1 am	5	2	6	5	5	4	8	35
1 - 2 am	7	2	3	3	6	4	12	37
2 - 3 am	7	3	3	1	4	5	9	32
3 - 4 am	6	0	1	5	0	2	13	27
4 - 5 am	8	2	3	2	1	2	10	28
5 - 6 am	2	5	1	2	1	2	1	14
6 - 7 am	0	5	4	5	4	7	7	32
7 - 8 am	7	6	7	8	4	4	3	39
8 - 9 am	0	7	5	9	2	2	1	26
9 - 10 am	2	4	2	6	2	8	6	30
10 - 11 am	4	6	4	5	3	9	10	41
11 - noon	1	10	5	7	6	3	8	40
noon - 1 pm	4	5	5	8	6	3	6	37
1 - 2 pm	13	5	7	6	9	11	8	59
2 - 3 pm	7	10	3	9	6	6	5	46
3 - 4 pm	7	10	6	7	10	5	8	53
4 - 5 pm	5	2	10	10	8	8	3	46
5 - 6 pm	8	4	6	7	4	8	9	46
6 - 7 pm	4	2	7	2	4	6	8	33
7 - 8 pm	9	8	1	4	7	9	11	49
8 - 9 pm	4	11	4	5	3	2	8	37
9 - 10 pm	3	4	6	4	11	11	7	46
10 - 11 pm	6	2	3	5	8	16	4	44
11 - midnight	2	8	5	9	6	11	11	52
Unknown	4	0	0	1	1	2	3	11
Total	125	123	107	135	121	150	179	940

Figure 18. Fatalities by Day of Week and Time–1997



Note: Unknown Time of Day not included.

Figure 18

- The highest frequency of fatalities, per six-hour period (55), occurred on Friday between 6 PM and midnight.
- The second highest six-hour period was the very next time interval of midnight to 6 AM on Saturday.

Figure 19. Fatalities by Day of Week–1997

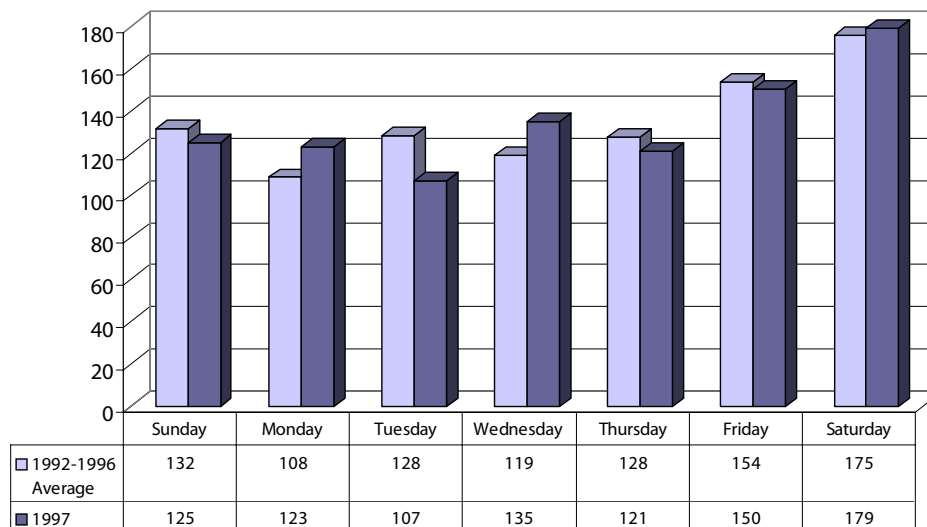


Figure 19

- In 1997, Saturday had the highest number of traffic fatalities with 179.
- Over the 1992-1996 period, Saturday also had the highest average frequency of fatalities with 175.

state outcome data summary

Figure 20

- *Weekend fatalities, which are more likely to be alcohol-related, have declined 19 percent from 463 in 1990 to 375 in 1997.*

Figure 20. Fatalities by Weekday/Weekend by Year: 1988-1997

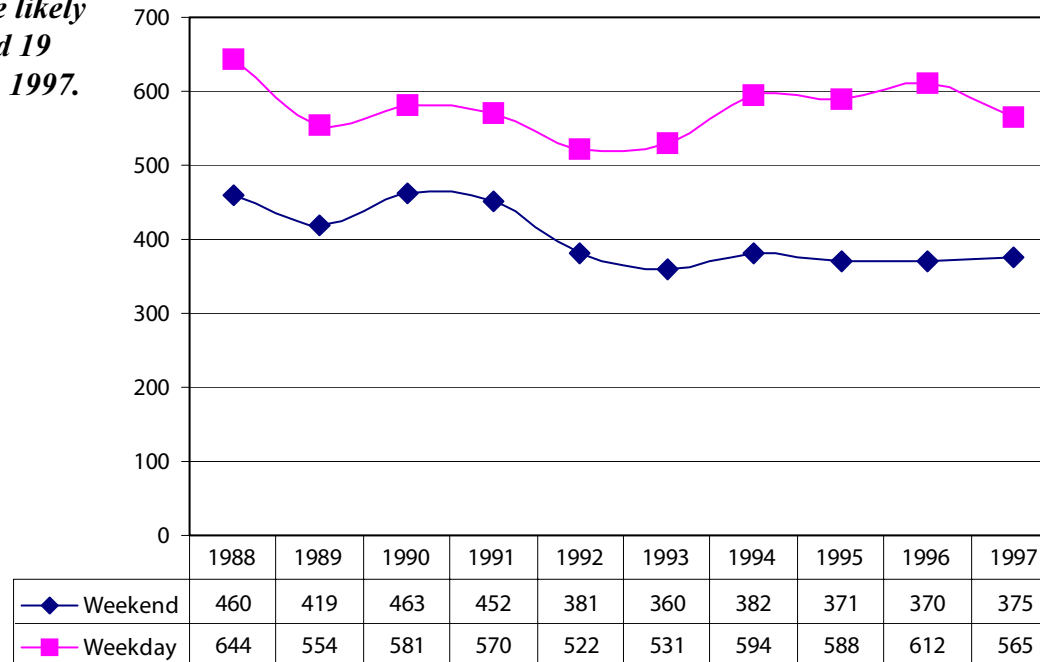
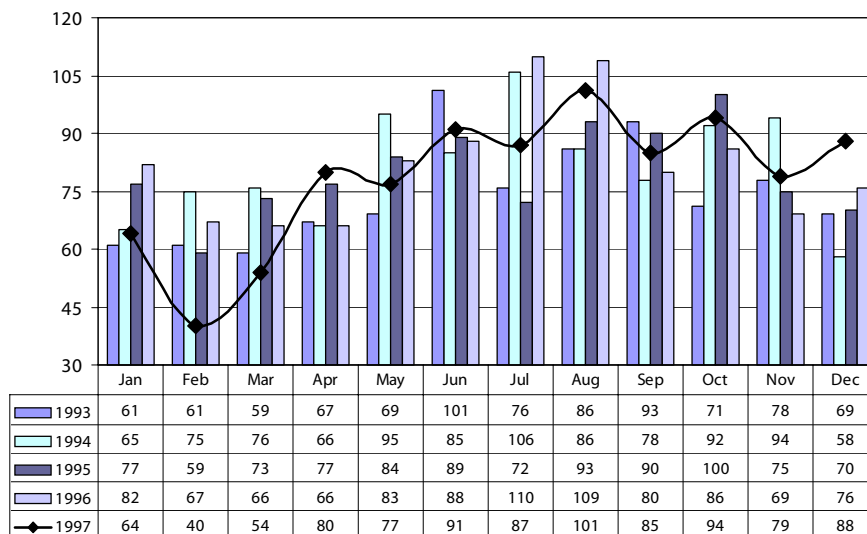


Figure 21. Fatalities by Month and Year: 1993-1997



Figures 21 and 22 display fatality by month information for 1997 and previous years. There were fewer fatalities during the first three months of 1997 than has been typical of recent years. The numbers of fatalities during the next eight months of 1997 were near the average for the five-year period. Fatalities during December of 1997 were higher than any year for the 1993-1996 period.

Figure 21

- *There were fewer fatalities during both February and March of 1997 than during any of the previous four years.*
- *There were more fatalities during both April and December 1997 than during any of the previous four years.*

Figure 22. Fatalities by Month-1997

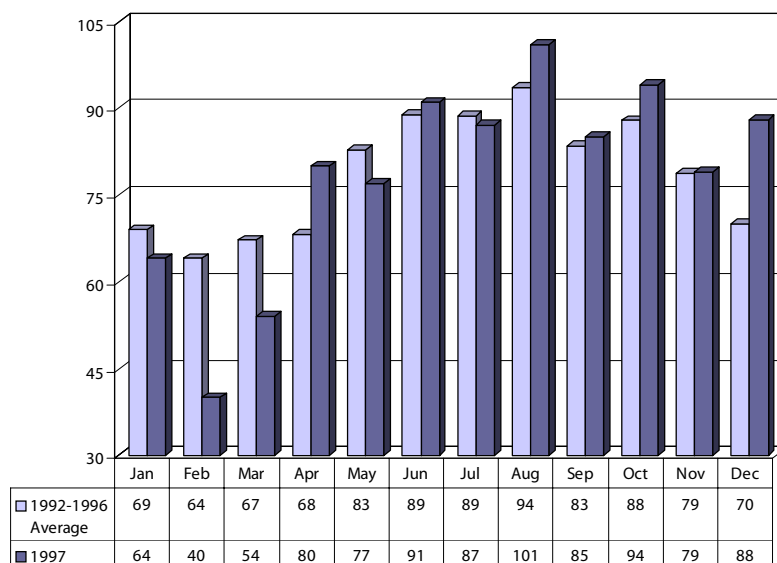


Figure 22

- *The highest number of monthly fatalities (101) occurred during August in 1997.*
- *Over the five-year period of 1993-1997, the June-October period accounted for more fatalities than the rest of the year.*

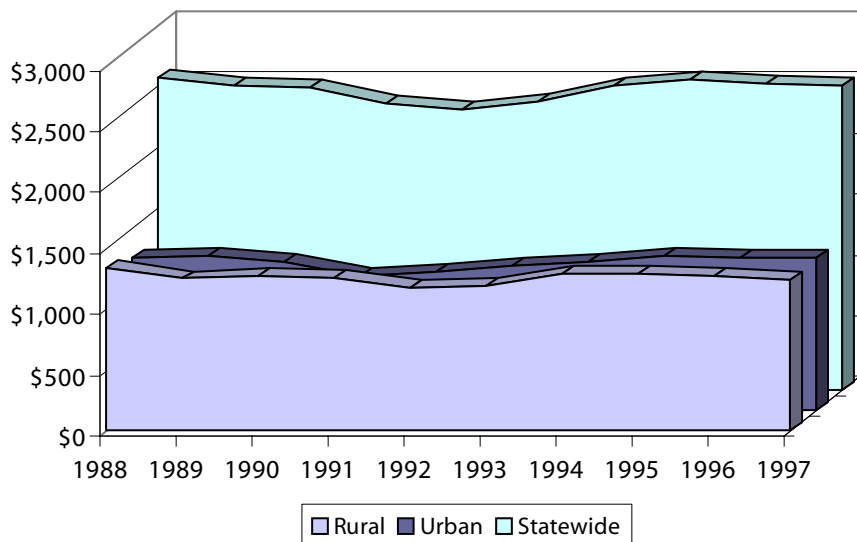
state outcome data summary

The total economic cost of traffic crashes in 1997 was estimated, using the NHTSA Crash Cost Model, to be 2.50 billion dollars in 1997 dollars. This was a 0.8 percent decrease in economic loss from 1996. The NHTSA Crash Cost Model includes a number of factors, including medical and funeral cost, lost wages, legal expenses and damage to property. The largest single factor is loss in market productivity, which includes lost household productivity. For Indiana in 1997, the model yields an average cost for each fatality of \$789,584, \$16,063 for each injured person and \$1,683 for each vehicle involved in a property damage only crash. The model used does not include any cost estimation for crashes and injuries not reported. It does not include any psychological cost component for such factors as pain and suffering or quality of life. All economic loss is expressed in 1997 dollars so no adjustment for inflation is needed in interpreting Table 11, Table 12, Figure 23 or Figure 24. The most striking feature of the Table 11 data, as emphasized by Figure 23 is that, for each year during the 10-year period, the amount of economic loss due to crashes in rural areas was essentially the same as the loss due to crashes in urban areas.

Table 11. Total Economic Loss by Year and Locale: 1988-1997 (In Millions of 1997 Dollars)

Year	Rural		Urban		Statewide
	Dollars	Percent	Dollars	Percent	
1988	\$ 1,328	51.5%	\$ 1,250	48.5%	\$ 2,578
1989	1,242	49.6%	1,263	50.4%	2,505
1990	1,269	50.9%	1,227	49.1%	2,496
1991	1,251	53.0%	1,109	47.0%	2,359
1992	1,166	50.5%	1,143	49.5%	2,309
1993	1,192	50.2%	1,183	49.8%	2,375
1994	1,285	51.3%	1,219	48.7%	2,503
1995	1,286	50.5%	1,263	49.5%	2,549
1996	1,271	50.4%	1,249	49.6%	2,520
1997	1,240	49.6%	1,260	50.4%	2,500

Figure 23. Total Economic Loss by Year and Locale: 1988-1997 (Millions of 1997 Dollars)



Note: Total Economic Loss is the total socioeconomic cost estimated using the NHTSA crash model.

1994 and 1995 numbers are corrected for misclassified private property crashes. For an explanation, see "Private Property Data" in the Glossary.

All economic loss is expressed in millions of 1997 dollars so no adjustment for inflation is needed.

Figure 23

- *Annual Economic Loss has changed very little over the 1988–1997 period.*
- *Each year the rural economic loss has been essentially the same as the urban loss.*

Table 12. Total Economic Loss (in Million Dollars) by Crash Severity: 1988-1997

Year	Rural			Urban			Total		
	Fatalities	Injuries	Vehicles in PD Crashes	Fatalities	Injuries	Vehicles in PD Crashes	Fatalities	Injuries	Vehicles in PD Crashes
1988	\$640.4	\$533.7	\$153.8	\$231.3	\$676.8	\$341.8	\$871.7	\$1,210.5	\$495.6
1989	548.8	533.0	160.4	219.5	694.9	348.4	768.3	1,227.9	508.8
1990	588.2	531.0	150.1	229.0	672.3	325.3	817.2	1,203.3	475.4
1991	619.0	489.8	141.7	187.9	623.0	297.7	806.9	1,112.8	439.4
1992	522.7	502.2	140.9	190.3	657.8	295.2	713.0	1,160.0	436.1
1993	529.8	514.8	147.9	173.7	701.2	307.8	703.5	1,216.0	455.7
1994	590.6	536.4	157.8	180.0	718.2	320.3	770.6	1,254.6	478.1
1995	560.6	558.3	167.3	196.6	736.8	329.8	757.2	1,295.1	497.1
1996	575.6	528.0	167.0	199.8	714.2	335.5	775.4	1,242.2	502.5
1997	544.8	531.2	163.7	197.4	725.9	337.1	742.2	1,257.1	500.8

Note: Total Economic Loss is the total socioeconomic cost estimated using the NHTSA crash cost model.

Legend: PD=Property Damage

In 1997, fatalities were the most significant component of loss in rural areas, accounting for 44.0 percent of the economic loss; this percentage has declined from 48.2 percent of the loss in 1988. For urban areas, injuries contributed the most toward loss with 57.6 percent, a decrease from 54.1 percent in 1988. Overall, the economic loss attributable to fatalities has declined 14.9 percent since 1988 while the loss due to injuries has increased by 3.8 percent. The reporting threshold change for property damage crashes is the likely reason for decreases in losses due to vehicles in crashes from 1990-1992, followed by increases in subsequent years.

Figure 24. Total Economic Loss (in Million Dollars) in Crashes—1997

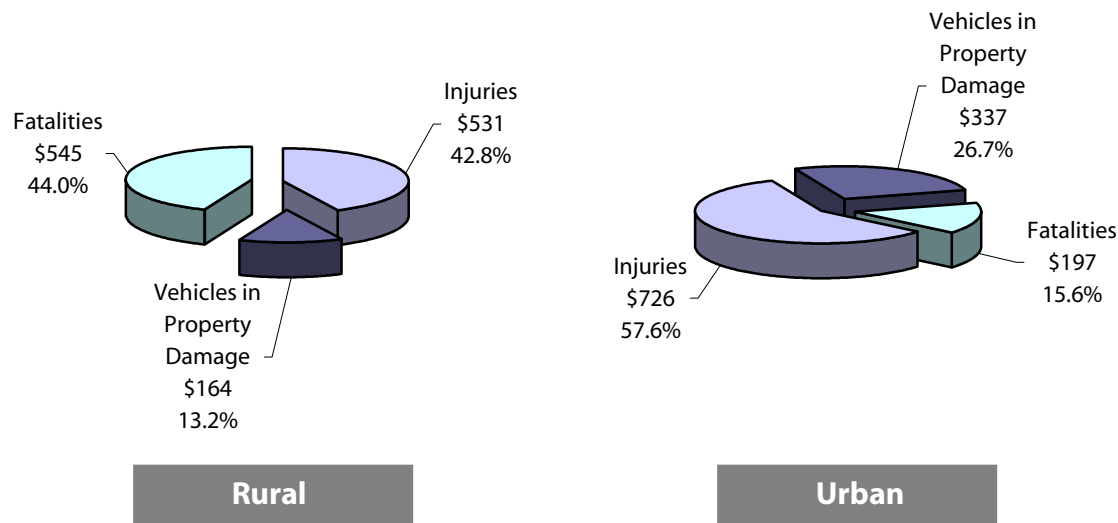


Figure 24

- *In 1997, fatalities were the most significant component of loss in rural areas, accounting for 44.0 percent of the economic loss.*
- *For urban areas, injuries contributed the most toward loss with 57.6 percent.*

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Crashes

TOPICS

Crashes by Contributing Circumstance
Crashes by Light, Road or Weather Conditions
Crashes by Time or Day of Incident
Crashes by Location Type
Crashes by Locale (Rural/Urban)

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Traffic crashes result from the interaction of the driver, the vehicle and the highway environment. One way of organizing the analysis and description of crashes is by asking Who, Why, When and Where questions. The *People* chapter focuses on *Who* was involved in crashes and looks at aspects such as *role* (driver, passenger, bicyclist, pedestrian), the age of person involved, degree of injury and use of safety restraints and helmets.

Many of the tables and figures in this chapter provide detailed information by the severity of the crashes. Crash severity is determined by the most serious outcome of the crash. If at least one person dies as a result of the crash, regardless of the role of that person in the crash, the crash is categorized as *Fatal*. If no one is killed but at least one person was injured, the crash is classified as *Personal Injury* (PI). If no one was reported as either killed or injured in the crash, the crash is classified as *Property Damage* (PD). If the severity of injuries is considered, additional categories of Serious Injury, Moderate Injury and Possible Injury will subdivide the PI category. For example, if no one is killed but at least one person sustained a *serious* injury, the crash is classified as a *Serious Injury* crash. *Serious*, *Moderate* and *Possible* injury are defined in the Glossary.

The first section of this chapter examines *why* the crashes occurred. The primary source of information on what caused a crash is the information provided by the investigating officer as the Primary Contributing Circumstance (PCC) and the Vehicular Contributing Circumstances (VCC) for each vehicle involved in the crash. The *crash type* is one crash characteristic (See Table 14) that is examined by looking at the PCC. Single-vehicle crashes are often associated with a different pattern of circumstances or causes than multiple-vehicle crashes. Tables 15 and 16 provide the information by which comparison of the VCC rates for drivers of different age groups can be made for single-vehicle and multiple-vehicle crashes. Younger drivers were much more likely to have *Speed Too Fast* as a contributing circumstance than older drivers in either single-vehicle or multiple-vehicle crashes.

The environment may also play a role in *why* a crash occurs. The second section of this chapter looks at the contribution that *light*, *road* and *weather* conditions have on crashes and crash severity. For example, in 1997, 28.9 percent of fatal crashes occurred in the dark at a location where there were no streetlights.

The third section of this chapter is concerned with *when* crashes occurred by time of day, day of the week,

weekday versus weekend and month of the year. The 10-year history of holiday fatal crashes is also included as Table 23. Indiana has seen dramatic improvements in fatality rates during holiday periods over the past 10 years.

The last two sections examine several factors related to *where* crashes occur. Travel on limited-access roads such as Interstates and the Indiana Toll Road has continued to be much safer based on vehicle miles traveled rates than travel on other roads. Other roadway factors, such as crashes at intersections (Tables 24 and 25) and traffic controls present at the crash location (Table 26) are also examined. *Stop Signs* were present at 12.2 percent of fatal crash locations while *Stoptlights* were present at only 6.2 percent of fatal crash locations.

Crash characteristics and severity often have different patterns in rural and urban locales. Rural crashes tend to have higher severity; in 1997, 614 (0.71) percent of rural crashes were fatal compared to 235 (0.18 percent) of urban crashes. The 10-year history of multiple-fatality crashes, which tend to occur in a rural locale, is found in Table 28. The percentage of Indiana fatal crashes that had more than one fatality has declined from 11.2 percent in 1998 to 9.2 percent in 1997.

crashes

The Primary and Vehicular Contributing Circumstances are fields on the crash report provided to describe the likely causes of a crash. The grouping of contributing circumstances codes used for the tables in this report are found in the Glossary on page 163. The Primary Contributing Circumstance (PCC) is the major cause of the crash. The investigating officer is instructed to select the one factor that was determined to be the most contributing cause of the crash. The officer is then instructed to assign this contributing circumstance to at least one of the vehicles involved as a Vehicular Contributing Circumstance (VCC). There are instances where no such assignment to a vehicle is made. If the crash is not investigated (as occurred for 14.9 percent of reported crashes in 1997), the primary and vehicular contributing circumstances are entered into the database as “blank.” While the investigating officer may explain the meaning of *Other* on the Crash Report Form, this explanation is not entered into the crash database.

- ***Driver Inattention was the number one cause of all crashes (20.3%), but only 12.4% of fatal crashes.***
- ***Speed Too Fast was the primary cause of fatal crashes.***
- ***Had Been Drinking was the cause of 9.2% of fatal crashes.***

Table 13. Crashes by Primary Contributing Circumstance–1997

Primary Contributing Circumstance	Fatal Crashes	% of Fatal	PI Crashes	% of PI	PD Crashes	% of PD	All Crashes	% of All
Speed Too Fast	134	15.8%	3,571	6.8%	7,282	4.4%	10,987	5.0%
Failure to Yield	105	12.4%	9,999	19.1%	19,886	11.9%	29,990	13.6%
Disregarded Signal/Sign	52	6.1%	3,448	6.6%	4,540	2.7%	8,040	3.7%
Drove Left of Center	104	12.2%	1,295	2.5%	2,358	1.4%	3,757	1.7%
Improper Overtaking	14	1.6%	374	0.7%	1,778	1.1%	2,166	1.0%
Followed Too Closely	6	0.7%	3,708	7.1%	10,330	6.2%	14,044	6.4%
Made Improper Turn	4	0.5%	699	1.3%	3,292	2.0%	3,995	1.8%
Had Been Drinking	78	9.2%	2,243	4.3%	2,592	1.6%	4,913	2.2%
Other Improper Driving	39	4.6%	1,559	3.0%	8,221	4.9%	9,819	4.5%
Mechanical Failure	5	0.6%	982	1.9%	3,088	1.9%	4,075	1.9%
Driver Inattention	105	12.4%	11,197	21.4%	33,343	20.0%	44,645	20.3%
Driver Asleep	27	3.2%	1,015	1.9%	1,289	0.8%	2,331	1.1%
Animals on Roadway	4	0.5%	1,003	1.9%	12,109	7.3%	13,116	6.0%
Roadway Factors	2	0.2%	228	0.4%	614	0.4%	844	0.4%
Material on Roadway/Weather	22	2.6%	2,849	5.4%	10,661	6.4%	13,532	6.2%
Other	115	13.5%	4,685	8.9%	10,725	6.4%	15,525	7.1%
Blank/Unknown	33	3.9%	3,558	6.8%	34,639	20.8%	38,230	17.4%
Total Crashes	849		52,413		166,747		220,009	

Legend: PI=Personal Injury; PD=Property Damage

Table 14. All Crashes by Crash Type & Primary Contributing Circumstance–1997

Contributing Circumstance	Hit-and-Run		Collision		Overturned		Non-Collision		Unknown		Total Number Factors Cited	
	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent
Speed Too Fast	944	5.6%	8,885	5.5%	970	17.5%	149	7.9%	39	0.1%	10,987	5.0%
Failure to Yield	1,480	8.8%	28,289	17.4%	131	2.4%	32	1.7%	58	0.2%	29,990	13.6%
Disregarded Signal/Sign	830	4.9%	7,116	4.4%	66	1.2%	8	0.4%	20	0.1%	8,040	3.7%
Drove Left of Center	662	3.9%	2,956	1.8%	106	1.9%	19	1.0%	14	0.0%	3,757	1.7%
Improper Overtaking	334	2.0%	1,788	1.1%	33	0.6%	6	0.3%	5	0.0%	2,166	1.0%
Followed Too Closely	983	5.8%	12,985	8.0%	30	0.5%	13	0.7%	33	0.1%	14,044	6.4%
Made Improper Turn	456	2.7%	3,491	2.2%	29	0.5%	10	0.5%	9	0.0%	3,995	1.8%
Had Been Drinking	951	5.6%	3,481	2.1%	368	6.6%	84	4.5%	29	0.1%	4,913	2.2%
Other Improper Driving	1,747	10.3%	7,896	4.9%	120	2.2%	29	1.5%	27	0.1%	9,819	4.5%
Mechanical Failure	120	0.7%	3,353	2.1%	245	4.4%	329	17.5%	28	0.1%	4,075	1.9%
Driver Inattention	2,987	17.7%	40,085	24.7%	1,190	21.4%	248	13.2%	135	0.4%	44,645	20.3%
Driver Asleep	73	0.4%	1,918	1.2%	296	5.3%	38	2.0%	6	0.0%	2,331	1.1%
Animals on Roadway	59	0.3%	12,590	7.8%	344	6.2%	81	4.3%	42	0.1%	13,116	6.0%
Roadway Factors	15	0.1%	662	0.4%	98	1.8%	59	3.1%	10	0.0%	844	0.4%
Material on Roadway/Weather	279	1.7%	12,087	7.5%	883	15.9%	225	12.0%	58	0.2%	13,532	6.2%
Other	1,663	9.8%	12,708	7.8%	548	9.9%	519	27.6%	87	0.3%	15,525	7.1%
Blank/Unknown	3,317	19.6%	1,865	1.2%	100	1.8%	31	1.6%	32,917	98.2%	38,230	17.4%
Total Factors Cited	16,900		162,155		5,557		1,880		33,517		220,009	

Note: Non-collision is a crash that does not involve a collision with another motor vehicle, other property or a pedestrian. Types of non-collision crashes include: explosion or fire in vehicle, rollover, immersion, vehicle struck by flying object, etc.

Table 14 displays the Primary Contributing Circumstance by the Crash Type. Each crash is assigned a single crash type by the investigating officer, which results in an undercounting of the number of crashes that involved a collision in which one or more vehicles overturned. If the crash is a *Hit-and-Run*, this category is chosen even if the driver who left the scene is later identified—most hit-and-run crashes would otherwise be classified as a collision. *Collision* is selected if the crash was not *Hit-and-Run* and the first harmful event was the result of a collision between a motor vehicle and another vehicle or object. The choice of *Overturned* implies that the first harmful event was the result of a motor vehicle

overturning. The vehicle could subsequently collide with another vehicle or object. *Non-Collision* includes such cases as a jackknifed semi-tractor/trailer that does not strike anything after jackknifing or a personal injury crash in which an occupant strikes a windshield following a sudden stop but no collision occurs.

- **Driver Inattention was reported as the PCC for 20.3 percent of all crashes and was the largest single factor for each of the Collision-Type categories except for Non-Collisions.**

- **Failure to Yield was the PCC for 17.5 percent of Collision crashes.**
- **Materials on Roadway/Weather was the PCC for 15.9 percent of Overturned crashes and 12.0 percent of Non-Collision crashes.**
- **Speed Too Fast was the PCC for 17.5 percent of Overturned crashes.**

crashes

Table 15a. Vehicular Contributing Circumstance Rate per Drivers in Crashes by Age Group—Single Vehicle Crashes—1997

Vehicular Contributing Circumstance	Driver Age														All Drivers
	<21	21-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+	UNK	
Speed Too Fast	17.6%	14.0%	12.3%	10.4%	8.7%	7.7%	7.8%	6.5%	6.2%	4.8%	4.5%	5.2%	3.8%	6.1%	10.9%
Failure to Yield	0.6%	0.5%	0.7%	0.4%	0.5%	0.3%	0.7%	0.7%	0.7%	0.7%	0.7%	1.1%	1.5%	1.0%	0.6%
Disregarded Signal/Sign	0.5%	0.6%	0.5%	0.5%	0.4%	0.4%	0.4%	0.4%	0.2%	0.7%	0.5%	0.3%	0.8%	0.5%	0.5%
Left of Center	2.2%	2.1%	1.6%	1.8%	1.6%	1.4%	1.1%	1.1%	0.9%	1.0%	0.8%	1.1%	1.6%	3.2%	1.8%
Improper Overtaking	0.4%	0.4%	0.3%	0.3%	0.1%	0.3%	0.3%	0.2%	0.4%	0.1%	0.6%	0.2%	0.4%	0.5%	0.4%
Followed Too Closely	0.5%	0.4%	0.5%	0.4%	0.4%	0.3%	0.5%	0.3%	0.5%	0.2%	0.6%	0.5%	0.5%	0.1%	0.4%
Made Improper Turn	1.0%	0.8%	1.0%	1.1%	1.0%	1.0%	1.1%	0.8%	1.1%	1.6%	1.2%	1.2%	1.4%	1.9%	1.1%
Had Been Drinking	4.0%	10.4%	9.8%	10.3%	9.9%	7.9%	6.9%	4.7%	4.1%	3.3%	3.3%	3.1%	2.2%	1.4%	6.7%
Asleep	3.2%	4.1%	3.4%	2.8%	2.7%	2.5%	2.3%	1.9%	2.2%	2.6%	3.8%	4.1%	4.1%	0.2%	2.8%
Driver Inattention	27.6%	21.0%	20.1%	18.7%	18.7%	17.1%	16.9%	17.5%	18.1%	18.4%	23.5%	25.6%	36.1%	20.9%	21.4%
Other Improper Driving	4.3%	4.4%	4.6%	4.7%	5.3%	5.0%	5.6%	5.0%	6.0%	6.2%	9.7%	8.4%	12.3%	10.8%	5.6%
Mechanical Failure	3.7%	3.2%	3.4%	3.4%	3.1%	3.2%	2.5%	2.8%	3.2%	2.9%	1.8%	3.0%	2.8%	0.7%	3.0%
Animals on Roadway	12.4%	15.9%	17.1%	19.5%	21.9%	22.4%	23.5%	24.2%	24.7%	22.7%	16.8%	13.7%	8.8%	0.5%	16.5%
Roadway Factors	2.4%	1.2%	1.1%	1.0%	1.4%	1.0%	1.2%	1.3%	0.9%	1.5%	0.8%	1.3%	0.9%	0.2%	1.3%
Materials on Road/Weather	19.2%	18.3%	18.4%	17.0%	15.6%	15.7%	15.1%	15.2%	13.4%	12.0%	10.8%	10.4%	7.9%	2.4%	15.4%
Other	10.8%	10.1%	11.1%	10.6%	9.7%	10.5%	9.6%	10.9%	9.9%	9.7%	12.7%	11.9%	11.8%	10.0%	10.5%
Total Drivers in Crashes	15,418	7,741	7,962	6,985	6,817	5,841	4,655	3,328	2,372	1,631	1,173	967	1,428	6,630	72,948

Notes: Highlighting identifies areas where there is an over-representation.

Drivers of parked vehicles excluded.

Legend: UNK=Unknown

Tables 15 and 16 contain information on vehicular contributing circumstances for single-vehicle versus multiple-vehicle crashes. There were 72,948 crashes involving a single moving vehicle and 147,061 multiple-vehicle crashes. Table 15 displays the vehicular contributing circumstance rate per drivers in crashes. Table 15a displays the data for single-vehicle crashes and Table 15b the data for multiple-vehicle crashes. For each of the age group categories, the rates provide a means for comparing driver behavior for drivers that were in reported crashes during 1997. Rates that were significantly higher for some age groups are highlighted in the table. For example, the reporting officer judged that 17.6 percent of these young drivers (age 20 and younger) were

traveling too fast and this significantly contributed to causing the crash, as opposed to 3.8 percent of drivers age 75 and older.

Younger drivers (below age 35) involved in crashes were much more likely to have *Speed Too Fast* as a contributing circumstance than older drivers in either single-vehicle or multiple-vehicle crashes.

- **Young drivers also had higher rates where Materials on Road/Weather was noted, which may mean that either young drivers will risk driving more frequently when there is snow, ice or water on the**

road or they do not adjust their driving patterns to the road conditions.

- **Driver Inattention is cited more frequently for both young drivers and drivers age 70 and older. It is highly likely that the reasons for inattention differ greatly for young and old drivers. In fact, it is hypothesized that the older drivers' failure to see other vehicles entering an intersection or overtaking to pass them on a multi-lane road is**

Table 15b. Vehicular Contributing Circumstance Rate per Drivers in Crashes by Age Group–Multiple Vehicle Crashes–1997

Vehicular Contributing Circumstance	Driver Age														All Drivers
	<21	21-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+	UNK	
Speed Too Fast	3.3%	2.8%	2.5%	2.2%	1.7%	1.6%	1.5%	1.4%	1.2%	1.0%	1.0%	0.9%	0.9%	1.4%	2.1%
Failure to Yield	15.0%	11.5%	9.9%	9.0%	9.0%	8.9%	9.1%	9.4%	10.7%	11.5%	14.9%	18.2%	23.5%	4.7%	11.1%
Disregarded Signal/Sign	3.5%	3.5%	2.8%	2.6%	2.4%	2.1%	2.3%	2.5%	2.6%	3.0%	3.6%	3.7%	5.0%	2.7%	2.9%
Left of Center	1.9%	1.4%	1.4%	1.3%	1.3%	1.1%	1.1%	1.1%	0.9%	1.1%	0.9%	1.1%	1.3%	1.5%	1.3%
Improper Overtaking	1.1%	1.0%	0.9%	0.7%	0.7%	0.7%	0.7%	0.6%	0.6%	0.5%	0.5%	0.5%	0.7%	1.1%	0.8%
Followed Too Closely	8.0%	7.1%	6.5%	6.2%	5.7%	5.1%	4.8%	4.4%	3.8%	3.8%	3.5%	4.1%	3.8%	3.2%	5.7%
Made Improper Turn	1.8%	1.6%	1.4%	1.2%	1.3%	1.5%	1.4%	1.4%	1.4%	1.7%	2.1%	2.1%	2.4%	1.2%	1.5%
Had Been Drinking	0.5%	1.1%	1.4%	1.6%	1.9%	1.6%	1.4%	1.1%	1.0%	0.8%	0.8%	0.4%	0.4%	0.4%	1.1%
Asleep	0.2%	0.3%	0.3%	0.3%	0.2%	0.2%	0.2%	0.2%	0.1%	0.1%	0.2%	0.2%	0.2%	0.1%	0.2%
Driver Inattention	26.6%	20.7%	18.7%	18.0%	16.7%	15.9%	16.3%	15.9%	16.5%	17.7%	19.9%	21.5%	26.3%	7.0%	18.8%
Other Improper Driving	2.6%	2.8%	2.7%	2.7%	2.7%	2.6%	2.8%	2.8%	3.0%	3.0%	3.1%	3.1%	3.3%	2.8%	2.8%
Mechanical Failure	1.4%	1.2%	1.0%	0.9%	1.0%	0.8%	0.8%	0.7%	0.6%	0.6%	0.5%	0.4%	0.5%	0.6%	0.9%
Animals on Roadway	0.2%	0.1%	0.1%	0.1%	0.2%	0.1%	0.1%	0.1%	0.1%	0.1%	0.2%	0.1%	0.1%	0.0%	0.1%
Roadway Factors	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.1%	0.1%	0.0%	0.2%
Materials on Road/Weather	5.6%	5.5%	5.1%	4.8%	4.3%	3.9%	3.9%	3.9%	3.3%	3.0%	2.4%	2.3%	2.0%	0.8%	4.2%
Other	5.3%	5.3%	5.2%	4.8%	5.0%	4.6%	4.6%	4.4%	4.9%	4.5%	5.0%	4.8%	5.1%	1.7%	4.7%
Total Drivers in Crashes	51,277	28,815	32,158	30,205	29,311	25,919	21,022	16,159	12,017	9,327	8,039	7,003	9,955	21,391	302,598

Notes: Highlighting identifies areas where there is an over-representation.

Drivers of parked vehicles excluded.

Legend: UNK=Unknown

frequently miscoded as Driver Inattention. Vision factors or physical limitations that reduce the ability to view rear or side mirrors may be the true cause of many of these crashes.

- *Had Been Drinking was most frequently cited for drivers age 21-34 in single-vehicle crashes.*

crashes

Table 16a. Vehicular Contributing Circumstance Rate per Licensed Driver by Age Group—Single Vehicle Crashes—1997

Vehicular Contributing Circumstance	Driver Age													All Drivers
	<21	21-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+	
Speed Too Fast	0.86%	0.40%	0.27%	0.19%	0.14%	0.10%	0.09%	0.07%	0.06%	0.04%	0.03%	0.03%	0.03%	0.20%
Failure to Yield	0.03%	0.01%	0.01%	0.01%	0.01%	0.00%	0.01%	0.01%	0.01%	0.01%	0.00%	0.01%	0.01%	0.01%
Disregarded Signal/Sign	0.03%	0.02%	0.01%	0.01%	0.01%	0.01%	0.01%	0.00%	0.00%	0.01%	0.00%	0.00%	0.01%	0.01%
Left of Center	0.11%	0.06%	0.04%	0.03%	0.02%	0.02%	0.01%	0.01%	0.01%	0.01%	0.00%	0.01%	0.01%	0.03%
Improper Overtaking	0.02%	0.01%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.01%
Followed Too Closely	0.02%	0.01%	0.01%	0.01%	0.01%	0.00%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.01%
Made Improper Turn	0.05%	0.02%	0.02%	0.02%	0.02%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.02%
Had Been Drinking	0.19%	0.30%	0.21%	0.18%	0.15%	0.11%	0.08%	0.05%	0.04%	0.03%	0.02%	0.02%	0.02%	0.12%
Asleep	0.16%	0.12%	0.07%	0.05%	0.04%	0.03%	0.03%	0.02%	0.02%	0.02%	0.02%	0.02%	0.03%	0.05%
Driver Inattention	1.35%	0.60%	0.44%	0.34%	0.29%	0.23%	0.20%	0.18%	0.17%	0.15%	0.15%	0.15%	0.26%	0.40%
Other Improper Driving	0.21%	0.13%	0.10%	0.08%	0.08%	0.07%	0.07%	0.05%	0.06%	0.05%	0.06%	0.05%	0.09%	0.10%
Mechanical Failure	0.18%	0.09%	0.07%	0.06%	0.05%	0.04%	0.03%	0.03%	0.03%	0.02%	0.01%	0.02%	0.02%	0.06%
Animals on Roadway	0.61%	0.45%	0.37%	0.35%	0.34%	0.31%	0.28%	0.25%	0.23%	0.18%	0.11%	0.08%	0.06%	0.31%
Roadway Factors	0.12%	0.03%	0.02%	0.02%	0.02%	0.01%	0.01%	0.01%	0.01%	0.01%	0.00%	0.01%	0.01%	0.02%
Material on Road/Weather	0.94%	0.52%	0.40%	0.31%	0.24%	0.21%	0.18%	0.16%	0.13%	0.10%	0.07%	0.06%	0.06%	0.29%
Other	0.53%	0.29%	0.24%	0.19%	0.15%	0.14%	0.12%	0.11%	0.09%	0.08%	0.08%	0.07%	0.08%	0.19%

Notes: Highlighting identifies areas where there is an over-representation.
Drivers of parked vehicles excluded.

The second Vehicular Contributing Circumstance rate table (Table 16), uses the number of licensed drivers at the end of 1997 for each age group to compute the rates-per-licensed-driver.

Once again, rates which were significantly higher for some age groups than others are highlighted. This table graphically displays the fact that younger drivers have much higher crash rates per licensed drivers than drivers of all other age groups. The reporting officer is also more likely to note one or more contributing circumstances for young drivers than for older drivers.

- **Drivers over age 75 exhibit higher rates for Failure to Yield in multiple-vehicle crashes than all groups except drivers under age 25.**
- **The lower numbers of miles driven by the average older driver results in low rates per licensed driver.**

Crashes by Contributing Circumstance

Table 16b. Vehicular Contributing Circumstance Rate per Licensed Driver by Age Group—Multiple Vehicle Crashes—1997

Vehicular Contributing Circumstance	Driver Age													All Drivers
	<21	21-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+	
Speed Too Fast	0.55%	0.30%	0.22%	0.17%	0.12%	0.10%	0.08%	0.07%	0.06%	0.04%	0.04%	0.04%	0.05%	0.16%
Failure to Yield	2.44%	1.21%	0.88%	0.70%	0.61%	0.54%	0.49%	0.48%	0.51%	0.52%	0.64%	0.77%	1.17%	0.85%
Disregarded Signal/Sign	0.57%	0.37%	0.25%	0.21%	0.16%	0.13%	0.12%	0.12%	0.12%	0.14%	0.15%	0.16%	0.25%	0.23%
Left of Center	0.31%	0.14%	0.12%	0.10%	0.08%	0.07%	0.06%	0.05%	0.04%	0.05%	0.04%	0.05%	0.06%	0.10%
Improper Overtaking	0.17%	0.10%	0.08%	0.05%	0.05%	0.04%	0.04%	0.03%	0.03%	0.02%	0.02%	0.02%	0.03%	0.06%
Followed Too Closely	1.31%	0.75%	0.57%	0.48%	0.38%	0.31%	0.26%	0.22%	0.18%	0.17%	0.15%	0.17%	0.19%	0.44%
Made Improper Turn	0.29%	0.17%	0.12%	0.10%	0.09%	0.09%	0.07%	0.07%	0.07%	0.08%	0.09%	0.09%	0.12%	0.12%
Had Been Drinking	0.09%	0.11%	0.13%	0.12%	0.13%	0.10%	0.08%	0.06%	0.05%	0.03%	0.04%	0.02%	0.02%	0.09%
Asleep	0.04%	0.03%	0.02%	0.02%	0.01%	0.01%	0.01%	0.01%	0.01%	0.00%	0.01%	0.01%	0.01%	0.02%
Driver Inattention	4.33%	2.18%	1.65%	1.40%	1.12%	0.96%	0.89%	0.80%	0.78%	0.80%	0.86%	0.91%	1.31%	1.45%
Other Improper Driving	0.43%	0.30%	0.24%	0.21%	0.18%	0.15%	0.15%	0.14%	0.14%	0.14%	0.13%	0.13%	0.16%	0.21%
Mechanical Failure	0.24%	0.13%	0.09%	0.07%	0.07%	0.05%	0.04%	0.04%	0.03%	0.03%	0.02%	0.02%	0.02%	0.07%
Animals on Roadway	0.03%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.00%	0.01%	0.01%	0.00%	0.01%
Roadway Factors	0.03%	0.02%	0.02%	0.02%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.00%	0.01%	0.01%
Material on Road/Weather	0.91%	0.58%	0.45%	0.37%	0.29%	0.24%	0.21%	0.20%	0.16%	0.14%	0.10%	0.10%	0.10%	0.32%
Other	0.86%	0.56%	0.46%	0.38%	0.34%	0.28%	0.25%	0.22%	0.23%	0.20%	0.21%	0.21%	0.25%	0.37%
Total Licensed Drivers	314,765	272,874	364,568	388,125	435,403	429,754	386,337	320,399	254,616	204,994	186,653	165,331	199,601	3,923,420

Notes: Highlighting identifies areas where there is an over-representation.
Drivers of parked vehicles excluded.

crashes

Table 17. Crashes by Light Conditions and Severity with Fatalities and Injuries–1997

Light Conditions	Fatal Crashes		Personal Injury		Property Damage		Total Crashes		Total			
	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Injuries		Fatalities	
	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent
Daylight	439	51.7%	33,954	64.8%	90,047	54.0%	124,440	56.6%	51,337	65.6%	486	51.7%
Dawn/Dusk	33	3.9%	2,343	4.5%	6,708	4.0%	9,084	4.1%	3,498	4.5%	37	3.9%
Dark/Lights On	112	13.2%	7,129	13.6%	19,293	11.6%	26,534	12.1%	10,667	13.6%	122	13.0%
Dark/Lights Off	12	1.4%	349	0.7%	1,281	0.8%	1,642	0.7%	512	0.7%	15	1.6%
Dark/No Lights	245	28.9%	5,780	11.0%	18,498	11.1%	24,523	11.1%	8,457	10.8%	271	28.8%
Unknown	8	0.9%	2,858	5.5%	30,920	18.5%	33,786	15.4%	3,791	4.8%	9	1.0%
TOTAL	849		52,413	5.5%	166,747		220,009		78,262		940	

Note: Lights On, Lights Off, and Dark/No Lights refer to Street Lights.

- Crashes occurring in the Dark/No Lights condition tend to be more severe: 28.9 percent of fatal crashes versus 11.0 percent for personal injury and 11.1 percent for property damage crashes.

While 51.7 percent of fatal crashes occurred during daylight hours (Table 17), it is likely that a significantly higher proportion of vehicle miles traveled occurred during the same daylight hours. Those crashes that did occur during darkness or in bad weather could often be attributed to the driver’s failure to use precautions, such

as slowing down, appropriate for the driving conditions. The percentage coded as *Unknown* is much higher for Property Damage crashes because a much higher percentage of these crashes are reported only by the vehicle owners.

Figure 25. Crashes by Light Conditions by Severity–1997

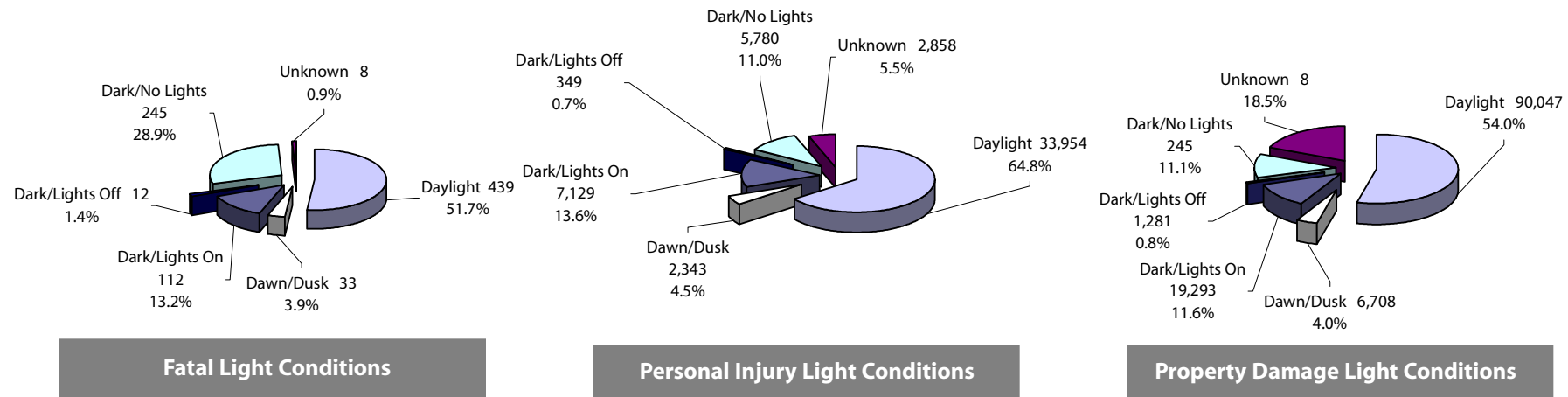


Table 18. Crashes by Road Conditions and Severity with Fatalities and Injuries–1997

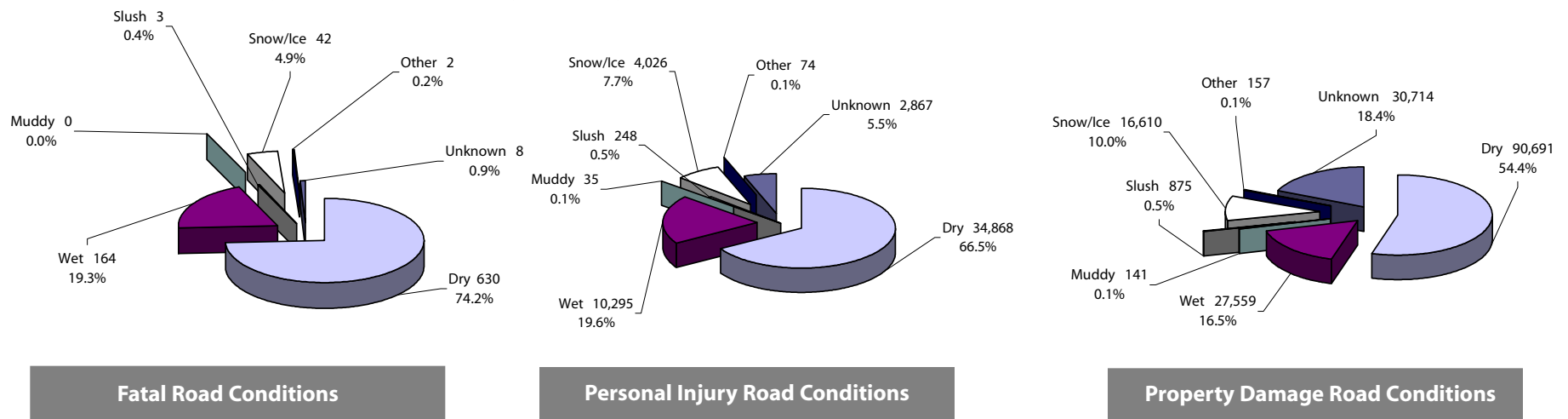
Road Conditions	Fatal Crashes		Personal Injury		Property Damage		Total Crashes		Total			
	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Injuries		Fatalities	
									Count	Percent	Count	Percent
Dry	630	74.2%	34,868	66.5%	90,691	54.4%	126,189	57.4%	52,675	67.3%	694	73.8%
Wet	164	19.3%	10,295	19.6%	27,559	16.5%	38,018	17.3%	15,717	20.1%	185	19.7%
Muddy	0	0.0%	35	0.1%	141	0.1%	176	0.1%	49	0.1%	0	0.0%
Slush	3	0.4%	248	0.5%	875	0.5%	1,126	0.5%	335	0.4%	3	0.3%
Snow/Ice	42	4.9%	4,026	7.7%	16,610	10.0%	20,678	9.4%	5,590	7.1%	47	5.0%
Other	2	0.2%	74	0.1%	157	0.1%	233	0.1%	104	0.1%	2	0.2%
Unknown	8	0.9%	2,867	5.5%	30,714	18.4%	33,589	15.3%	3,792	4.8%	9	1.0%
TOTAL	849		52,413		166,747		220,009		78,262		940	

Road and weather conditions, which can severely affect roadway conditions, played a small role in traffic crashes during 1997 (Table 18). For example, 74.2 percent of fatal crashes and 66.5 percent of personal injury crashes occurred on dry roadway surfaces. Snow or icy road conditions were noted for only 4.9 percent of fatal crashes (Figure 26), which is down from 7.5 percent in

1996. The percentage of fatal crashes that occurred on wet roads, however, increased from 15.9 percent in 1996 to 19.3 percent. More importantly, the actual number of fatal crashes occurring on wet roads increased by 18 percent (from 138 in 1996 to 164 in 1997), while the number of fatal crashes on dry roads decreased by 4.5 percent in 1997.

- **A higher percentage of property damage crashes (10.0%) occurred when road conditions were Snow/Ice than was the case for fatal crashes (4.9%).**

Figure 26. Crashes by Road Conditions by Severity–1997



crashes

Table 19. Crashes by Weather Conditions and Severity with Fatalities and Injuries–1997

Weather Conditions	Fatal Crashes		Personal Injury		Property Damage		Total Crashes		Total			
	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Injuries		Fatalities	
			Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent
Clear	465	54.8%	26,202	50.0%	69,312	41.6%	95,979	43.6%	39,412	50.4%	517	55.0%
Cloudy	232	27.3%	13,608	26.0%	37,889	22.7%	51,729	23.5%	20,426	26.1%	253	26.9%
Rain	101	11.9%	6,553	12.5%	17,189	10.3%	23,843	10.8%	10,057	12.9%	115	12.2%
Snow	27	3.2%	2,397	4.6%	9,359	5.6%	11,783	5.4%	3,420	4.4%	30	3.2%
Sleet/Hail	5	0.6%	463	0.9%	1,473	0.9%	1,941	0.9%	667	0.9%	5	0.5%
Fog/Smoke	11	1.3%	333	0.6%	792	0.5%	1,136	0.5%	494	0.6%	11	1.2%
Unknown	8	0.9%	2,857	5.5%	30,733	18.4%	33,598	15.3%	3,786	4.8%	9	1.0%
TOTAL	849		52,413		166,747		220,009		78,262		940	

Weather conditions have some reporting categories, such as snow, that are very similar to the roadway conditions. However, the weather conditions may be *clear* or *cloudy* if it has ceased snowing while the roadway condition is *snow/ice*. So it is not inconsistent that 5.4 percent of all crashes occurred while snow was falling and 9.4 percent of all crashes are associated with snow or ice on the

roadway. The finding that 5.6 percent of property damage crashes but only 3.2 percent of fatal crashes occurred while it was snowing may be consistent with the hypothesis that more crashes during snowy periods occur at lower speeds. It is also likely that fewer are head-on crashes that tend to be more severe.

Figure 27. Crashes by Weather Conditions by Severity–1997

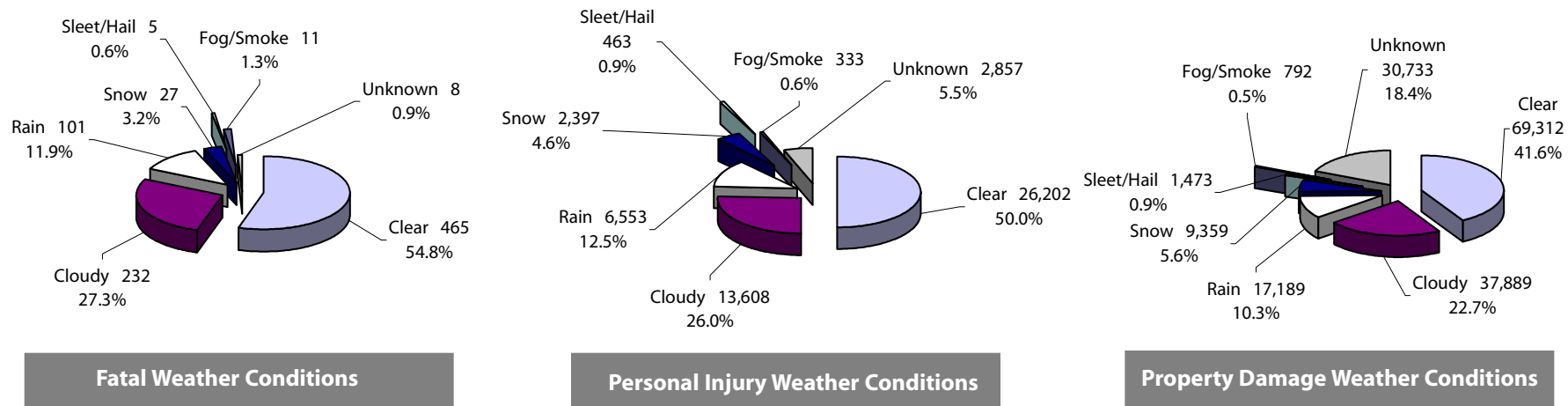


Figure 28. Crashes by Time of Day and Severity–1997

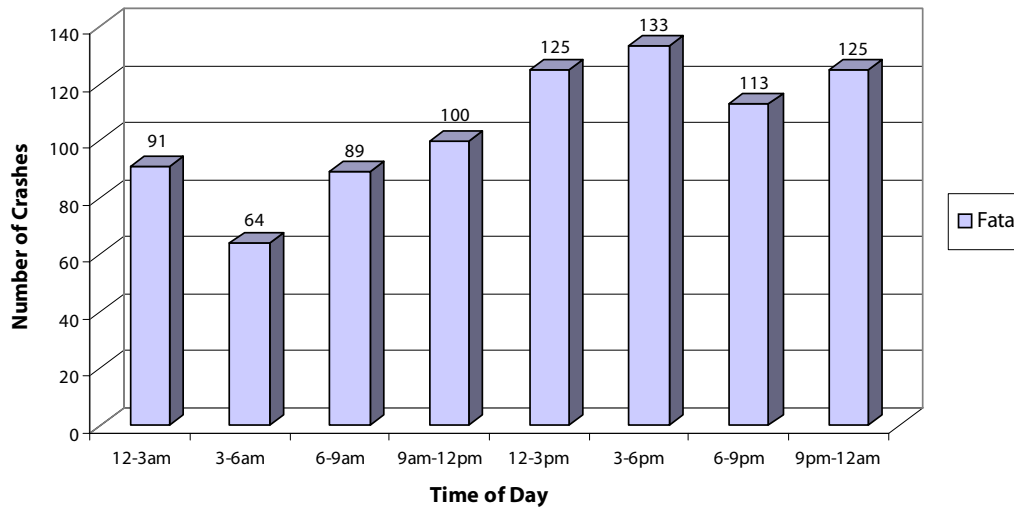
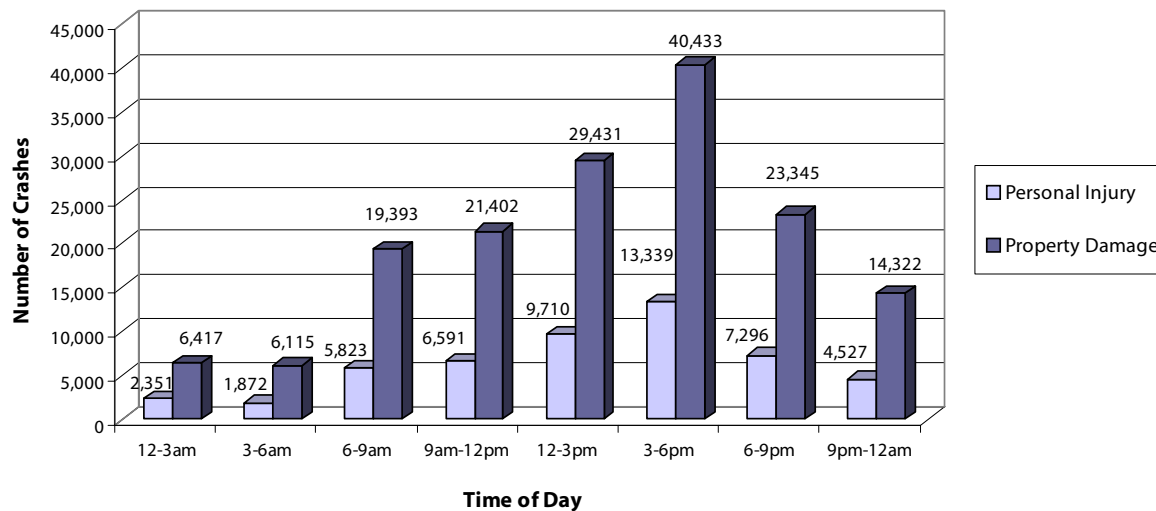


Figure 28

- *The highest frequency for each crash severity category was the 3 to 6 PM time period.*

Figure 28 summarizes the data on when crashes occur by time period during the day using three-hour time intervals.



crashes

Table 20. Crashes by Time of Day and Day of Week by Severity–1997

Time	Sunday			Monday			Tuesday			Wednesday			Thursday			Friday			Saturday			Total		
	Ftl	PI	Tot	Ftl	PI	Tot	Ftl	PI	Tot	Ftl	PI	Tot	Ftl	PI	Tot	Ftl	PI	Tot	Ftl	PI	Tot	Ftl	PI	Tot
midnight - 1 AM	5	205	758	1	76	337	4	89	342	5	96	383	4	99	360	4	125	468	6	231	826	29	921	3,474
1 - 2 AM	6	181	673	2	66	249	3	57	280	3	73	321	5	84	297	4	98	383	10	196	722	33	755	2,925
2 - 3 AM	6	172	571	3	45	160	3	67	241	1	64	245	3	63	259	5	91	348	8	173	636	29	675	2,460
3 - 4 AM	6	199	671	0	40	151	1	55	226	5	63	274	0	68	260	2	90	358	10	191	641	24	706	2,581
4 - 5 AM	8	97	396	2	58	236	3	42	239	2	52	276	1	59	270	2	67	330	9	108	400	27	483	2,147
5 - 6 AM	2	105	352	4	99	522	1	92	494	2	100	543	1	109	512	2	93	529	1	85	371	13	683	3,323
6 - 7 AM	0	88	345	5	183	894	4	205	962	4	210	1,010	4	224	979	7	222	985	6	112	481	30	1,244	5,656
7 - 8 AM	6	82	356	6	452	1,837	7	447	1,968	6	516	2,132	3	472	1,962	4	455	1,972	3	139	632	35	2,563	10,859
8 - 9 AM	0	102	420	7	301	1,413	4	370	1,597	8	384	1,596	2	294	1,336	2	352	1,545	1	213	883	24	2,016	8,790
9 - 10 AM	2	162	709	3	253	1,124	2	273	1,275	6	262	1,159	2	249	1,072	8	289	1,324	5	281	1,184	28	1,769	7,847
10 - 11 AM	4	192	787	4	279	1,254	4	300	1,231	4	294	1,275	3	286	1,234	6	356	1,532	10	377	1,595	35	2,084	8,908
11 - noon	1	245	1,002	9	384	1,600	5	368	1,579	5	384	1,601	6	379	1,589	3	515	2,054	8	463	1,913	37	2,738	11,338
noon - 1 PM	3	393	1,436	5	428	1,823	5	434	1,852	6	421	1,769	6	412	1,807	3	528	2,319	6	520	1,999	34	3,136	13,005
1 - 2 PM	6	410	1,469	5	459	1,844	4	396	1,615	6	362	1,628	8	400	1,656	9	482	2,076	7	490	1,904	45	2,999	12,192
2 - 3 PM	7	415	1,563	10	549	2,162	3	479	1,928	9	511	2,027	6	526	2,034	6	574	2,454	5	521	1,901	46	3,575	14,069
3 - 4 PM	6	473	1,689	9	729	3,111	6	731	2,852	7	712	2,932	9	691	2,879	5	856	3,661	7	470	1,855	49	4,662	18,979
4 - 5 PM	4	428	1,628	2	669	2,691	9	654	2,649	10	677	2,806	7	635	2,594	8	881	3,526	3	503	1,879	43	4,447	17,773
5 - 6 PM	7	409	1,521	4	611	2,597	6	659	2,626	5	636	2,731	4	654	2,612	8	802	3,313	7	459	1,753	41	4,230	17,153
6 - 7 PM	4	330	1,355	2	450	1,780	7	417	1,730	2	451	1,894	4	439	1,881	5	600	2,529	8	397	1,691	32	3,084	12,860
7 - 8 PM	8	248	1,150	8	289	1,234	1	304	1,236	3	296	1,267	7	355	1,486	9	435	1,793	10	369	1,513	46	2,296	9,679
8 - 9 PM	4	229	972	9	245	1,075	4	247	1,081	5	279	1,088	3	273	1,182	2	330	1,560	8	313	1,257	35	1,916	8,215
9 - 10 PM	3	193	871	4	239	911	6	202	898	4	234	988	9	236	1,026	9	367	1,461	6	299	1,256	41	1,770	7,411
10 - 11 PM	6	177	721	2	171	736	3	189	689	4	183	775	8	194	855	14	367	1,432	4	270	1,133	41	1,551	6,341
11 - midnight	2	102	498	7	131	592	3	126	541	7	136	597	6	141	652	9	294	1,198	9	276	1,144	43	1,206	5,222
Unknown	3	110	806	0	145	981	0	111	921	1	124	962	1	113	930	2	144	1,135	2	157	1,067	9	904	6,802
TOTAL	109	5,747	22,719	113	7,351	31,314	98	7,314	31,052	120	7,520	32,279	112	7,455	31,724	138	9,413	40,285	159	7,613	30,636	849	52,413	220,009

Legend: Ftl=Fatal; PI=Personal Injury; Tot=Total

Table 21 displays the percentages of fatal and personal injury crashes by the time of day and day of the week in which these severe crashes occurred. A higher percentage of severe crashes (highlighted areas) tends to be related to when a larger proportion of alcohol-related crashes occur as well (see also Table 81 and Figure 57 on pages 124-125).

The 3-6 PM time period resulted in the lowest distribution of severe crashes (fatal or personal injury) than

for any other three-hour time interval (Table 21). Crashes that occurred during that time period (3-6 PM) tended to be property damage crashes.

For the midnight to 3 AM time period, 1.0 percent of crashes were fatal and 26.5 percent were personal injury. In comparison, for the 3 to 6 PM time period, the percentage fatal was 0.25 with 24.8 percent being personal injury. The day and time period having the highest percentage of fatal crashes (1.4 percent) was Saturday

between 3 and 6 AM.

The day of the week, in 1997, with the highest frequency of fatal crashes was Saturday with 159 (Figure 29). Friday was the day, as also in 1996, with the most personal injury (9,413), property damage (30,734) and total crashes (40,285).

Table 21. Percentage of Fatal or Personal Injury Crashes by Time Period and Day of Week–1997

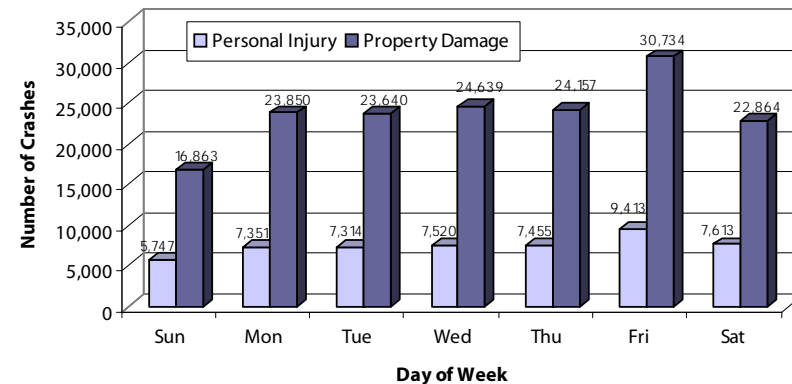
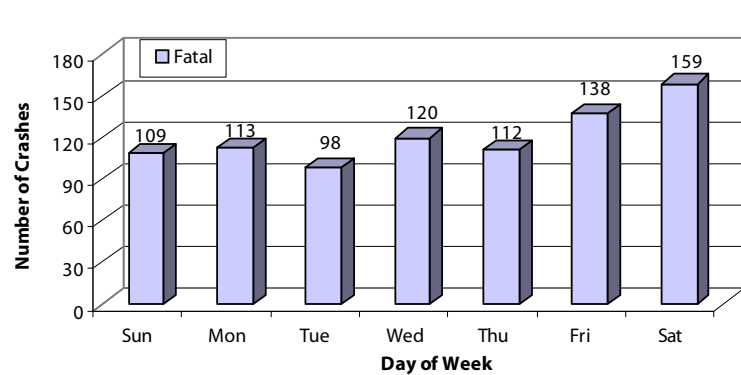
Time Period	Sunday		Monday		Tuesday		Wednesday		Thursday		Friday		Saturday		Total	
	% Ftl	% PI	% Ftl	% PI	% Ftl	% PI	% Ftl	% PI	% Ftl	% PI	% Ftl	% PI	% Ftl	% PI	% Ftl	% PI
Midnight - 3 AM	0.8%	27.9%	0.8%	25.1%	1.2%	24.7%	0.9%	24.6%	1.3%	26.9%	1.1%	26.2%	1.1%	27.5%	1.0%	26.5%
3 - 6 AM	1.1%	28.3%	0.7%	21.7%	0.5%	19.7%	0.8%	19.7%	0.2%	22.6%	0.5%	20.5%	1.4%	27.2%	0.8%	23.3%
6 - 9 AM	0.5%	24.3%	0.4%	22.6%	0.3%	22.6%	0.4%	23.4%	0.2%	23.1%	0.3%	22.9%	0.5%	23.2%	0.4%	23.0%
9 AM- Noon	0.3%	24.0%	0.4%	23.0%	0.3%	23.0%	0.4%	23.3%	0.3%	23.5%	0.3%	23.6%	0.5%	23.9%	0.4%	23.5%
Noon - 3 PM	0.4%	27.3%	0.3%	24.6%	0.2%	24.3%	0.4%	23.9%	0.4%	24.3%	0.3%	23.1%	0.3%	26.4%	0.3%	24.7%
3 - 6 PM	0.4%	27.1%	0.2%	23.9%	0.3%	25.2%	0.3%	23.9%	0.2%	24.5%	0.2%	24.2%	0.3%	26.1%	0.2%	24.7%
6 - 9 PM	0.5%	23.2%	0.5%	24.1%	0.3%	23.9%	0.2%	24.1%	0.3%	23.5%	0.3%	23.2%	0.6%	24.2%	0.4%	23.7%
9 PM - Midnight	0.5%	22.6%	0.6%	24.2%	0.6%	24.3%	0.6%	23.4%	0.9%	22.5%	0.8%	25.1%	0.5%	23.9%	0.7%	23.9%
Unknown	0.4%	13.6%	0.0%	14.8%	0.0%	12.1%	0.1%	12.9%	0.1%	12.2%	0.2%	12.7%	0.2%	14.7%	0.1%	13.3%
Daily Totals	0.5%	25.3%	0.4%	23.5%	0.3%	23.6%	0.4%	23.3%	0.4%	23.5%	0.3%	23.4%	0.5%	24.8%	0.4%	23.8%

Note: Highlighting identifies areas where there is an over-representation.
Legend: Ftl=Fatal; PI=Personal Injury

Figure 29

- Saturday had the highest frequency (159) of fatal crashes.
- Friday had the most personal injury (9,413) and property damage (30,734) crashes.

Figure 29. Crashes by Day of Week and Severity–1997



crashes

Table 22. Crashes by Month and Severity by Rural/Urban Locale–1997

Month	Fatal Crashes			Personal Injury			Property Damage			Total Crashes		
	Rur	Urb	Tot	Rur	Urb	Tot	Rur	Urb	Tot	Rur	Urb	Tot
January	43	14	57	2,048	2,350	4,398	8,266	11,464	19,730	10,357	13,828	24,185
February	25	11	36	1,326	1,808	3,134	4,227	6,805	11,032	5,578	8,624	14,202
March	36	14	50	1,414	2,246	3,660	3,984	7,528	11,512	5,434	9,788	15,222
April	55	16	71	1,561	2,546	4,107	4,060	7,986	12,046	5,676	10,548	16,224
May	46	22	68	1,912	3,036	4,948	5,030	9,161	14,191	6,988	12,219	19,207
June	53	29	82	1,793	2,864	4,657	4,817	8,197	13,014	6,663	11,090	17,753
July	54	21	75	1,944	2,762	4,706	4,403	8,119	12,522	6,401	10,902	17,303
August	65	27	92	1,903	2,855	4,758	4,299	8,235	12,534	6,267	11,117	17,384
September	55	22	77	1,783	2,734	4,517	4,434	8,269	12,703	6,272	11,025	17,297
October	64	25	89	1,999	2,893	4,892	5,922	9,079	15,001	7,985	11,997	19,982
November	56	15	71	1,888	2,350	4,238	7,376	8,772	16,148	9,320	11,137	20,457
December	62	19	81	1,967	2,431	4,398	6,970	9,344	16,314	8,999	11,794	20,793
Total	614	235	849	21,538	30,875	52,413	63,788	102,959	166,747	85,940	134,069	220,009

Note: Highlighting identifies an area where there is an over-representation.

Legend: Rur=Rural; Urb=Urban; Tot=Total

In 1997, January was the month with the greatest frequency of crashes, while the months of August with 92 and October with 89 were the months with the highest number of fatal crashes (Table 22). See the Crashes by Locale section for a discussion of the rural/urban dimensions of Table 22.

There have been significant declines in fatal crashes and fatalities during holiday periods over the 10-year, 1988-1997 period (Table 23). The total number of fatalities has declined from 95 in 1988 to 54 in 1997 and alcohol-related fatalities have declined from 38 to 13 over this period. The percentage of holiday period

alcohol-related fatalities has declined from 40 percent to 24 percent over the 10-year period.

The number of holiday fatalities-per-day, averaged across all holiday periods, has declined from 4.63 per day in 1988 to 2.51 per day in 1997. The overall fatalities per day were 3.02 in 1988 and 2.58 in 1997. For each of the last three years, the holiday period daily fatality rate has been slightly less than the overall daily fatality rate. Alcohol-related fatalities-per-day for holidays have declined from 1.85 in 1988 to 0.60 in 1997. The overall alcohol-related fatalities-per-day were 0.95 in 1988 and 0.59 in 1997.

Over the 10-year period, Christmas and Memorial Day have accounted for the largest number of fatalities (124 each) with a high of 110 fatal crashes over the Memorial Day weekends. Over the 10-year period, alcohol-related fatalities and fatal crashes have been highest for Memorial Day and Labor Day weekends. Operation Pull Over may have contributed to the sharp drop in alcohol-related crashes during these holidays in 1997.

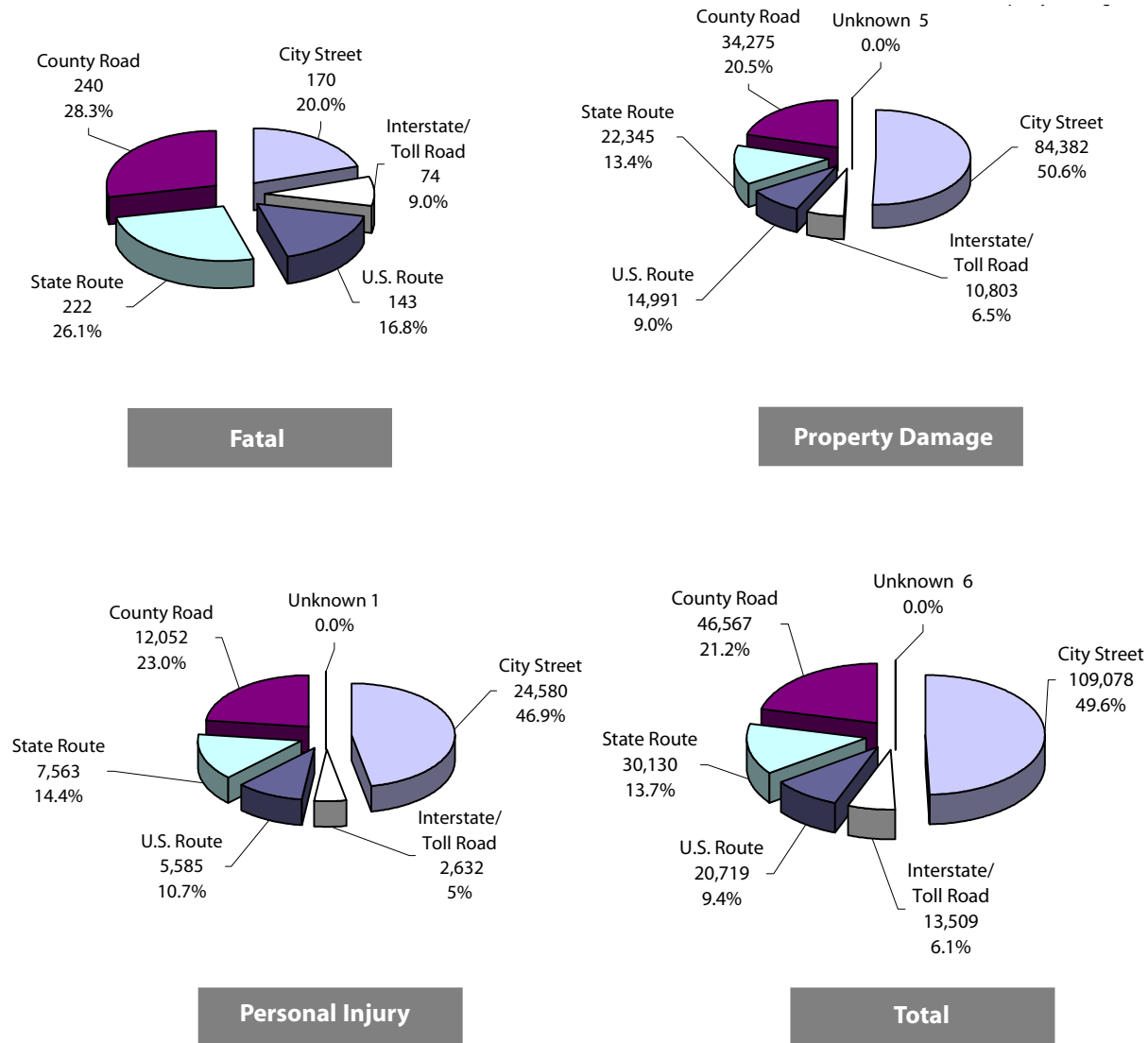
Table 23. Fatal Crashes and Fatalities on Legal Holidays: 1988-1997

Year	Begin	End	Hours	Actual Holiday	All Crashes		Alcohol Related Crashes	
					Fatalities	Fatal Crashes	Fatalities	Fatal Crashes
New Years								
1987/88	6pm 12/31	12am 1/03	78	Fri., 1/01	5	N/A	4	N/A
1988/89	6pm 12/30	12am 1/02	78	Sun., 1/01	5	4	2	2
1989/90	6pm 12/29	12am 1/01	78	Mon., 1/01	6	6	2	2
1990/91	6pm 12/28	12am 1/01	102	Tues., 1/01	7	7	3	3
1991/92	6pm 12/27	12am 1/01	126	Wed., 1/01	10	10	6	6
1992/93	6pm 12/31	12am 1/03	78	Fri., 1/01	6	6	1	1
1993/94	6pm 1/01	12am 1/02	78	Sat., 1/01	8	7	1	1
1994/95	6pm 12/30	12am 1/02	78	Sun., 1/01	10	7	4	3
1995/96	6pm 12/29	12am 1/01	78	Mon., 1/01	2	2	2	2
1996/97	6pm 12/29	12am 1/01	78	Wed., 1/01	8	5	6	3
Ten Year Totals			852		67	54	31	23
Memorial Day								
1988	6pm 5/27	12am 5/30	78	Mon., 5/30	20	14	7	7
1989	6pm 5/26	12am 5/29	78	Mon., 5/29	12	11	4	3
1990	6pm 5/25	12am 5/28	78	Mon., 5/28	15	14	8	7
1991	6pm 5/24	12am 5/27	78	Mon., 5/27	12	11	6	5
1992	6pm 5/22	12am 5/25	78	Mon., 5/25	10	9	3	2
1993	6pm 5/28	12am 5/31	78	Mon., 5/31	7	7	4	4
1994	6pm 5/27	12am 5/30	78	Mon., 5/30	15	13	3	3
1995	6pm 5/26	12am 5/29	78	Mon., 5/29	12	10	3	3
1996	6pm 5/24	12am 5/27	78	Mon., 5/27	15	15	6	6
1997	6pm 5/23	12am 5/26	78	Mon., 5/26	6	6	1	1
Ten Year Totals			780		124	110	45	41
July 4th								
1988	6pm 7/01	12am 7/04	78	Mon., 7/04	13	12	7	6
1989	6pm 6/30	12am 7/04	102	Tues., 7/04	15	14	6	5
1990	6pm 7/03	12am 7/04	30	Wed., 7/04	4	4	0	0
1991	6pm 7/03	12am 7/07	102	Thurs., 7/04	21	19	4	3
1992	6pm 7/03	12am 7/06	78	Sat., 7/04	5	5	2	2
1993	6pm 7/02	12am 7/05	78	Sun., 7/04	13	10	5	3
1994	6pm 7/01	12am 7/04	78	Mon., 7/04	12	10	3	3
1995	6pm 6/30	12am 7/04	102	Tues., 7/04	9	9	3	3
1996	6pm 7/03	12am 7/07	102	Thurs., 7/04	12	9	1	1
1997	6pm 7/03	12am 7/06	78	Fri., 7/04	11	10	1	1
Ten Year Totals			828		115	102	32	27

Year	Begin	End	Hours	Actual Holiday	All Crashes		Alcohol Related Crashes	
					Fatalities	Fatal Crashes	Fatalities	Fatal Crashes
Labor Day								
1988	6pm 9/02	12am 9/05	78	Mon., 9/05	16	14	8	8
1989	6pm 9/01	12am 9/04	78	Mon., 9/04	11	10	5	5
1990	6pm 8/31	12am 9/03	78	Mon., 9/03	15	14	6	5
1991	6pm 8/30	12am 9/02	78	Mon., 9/02	12	12	6	6
1992	6pm 9/04	12am 9/07	78	Mon., 9/07	11	9	5	5
1993	6pm 9/03	12am 9/06	78	Mon., 9/06	8	8	1	1
1994	6pm 9/02	12am 9/05	78	Mon., 9/05	8	8	4	4
1995	6pm 9/01	12am 9/04	78	Mon., 9/04	7	7	2	2
1996	6pm 8/30	12am 9/02	78	Mon., 9/02	11	10	7	6
1997	6pm 8/29	12am 9/01	78	Mon., 9/01	11	11	0	0
Ten Year Totals			780		110	103	44	42
Thanksgiving								
1988	6pm 11/23	12am 11/27	102	Thurs., 11/24	18	17	8	8
1989	6pm 11/22	12am 11/26	102	Thurs., 11/23	13	12	4	4
1990	6pm 11/21	12am 11/25	102	Thurs., 11/22	12	11	4	4
1991	6pm 11/27	12am 12/01	102	Thurs., 11/28	9	8	0	0
1992	6pm 11/25	12am 11/29	102	Thurs., 11/26	6	6	3	3
1993	6pm 11/24	12am 11/28	102	Thurs., 11/25	6	5	1	1
1994	6pm 11/23	12am 11/27	102	Thurs., 11/24	12	12	4	4
1995	6pm 11/22	12am 11/26	102	Thurs., 11/23	4	4	1	1
1996	6pm 11/27	12am 12/01	102	Thurs., 11/28	7	5	3	1
1997	6pm 11/26	12am 11/30	102	Thurs., 11/27	5	5	1	1
Ten Year Totals			1020		92	85	29	27
Christmas								
1988	6pm 12/23	12am 12/26	78	Sun., 12/25	23	13	4	2
1989	6pm 12/22	12am 12/25	78	Mon., 12/25	9	9	3	3
1990	6pm 12/21	12am 12/25	102	Tues., 12/25	21	11	5	4
1991	6pm 12/20	12am 12/25	126	Wed., 12/25	12	11	4	3
1992	6pm 12/24	12am 12/27	78	Fri., 12/25	10	9	4	4
1993	6pm 12/24	12am 12/27	78	Sat., 12/25	5	4	0	0
1994	6pm 12/23	12am 12/26	78	Sun., 12/25	6	6	2	2
1995	6pm 12/22	12am 12/25	78	Mon., 12/25	11	10	4	4
1996	6pm 12/20	12am 12/25	126	Wed., 12/25	14	10	2	2
1997	6pm 12/24	12am 12/28	102	Thurs., 12/25	13	12	4	4
Ten Year Totals			924		124	95	32	28

crashes

Figure 30. Crashes by Roadway Type and Severity–1997



This section and the following section, *Crashes by Locale*, contain crash information related to “where” crashes occurred. Figure 30 displays 1997 frequencies and percentages of totals by crash severity for the roadway types included in the ISP database. Rural county roads were least likely to have such safety features as paved shoulders, visible lane markers, lighting and gradual, banked curves.

Only 6.1 percent of all crashes and 9.0 percent of fatal crashes occurred on Interstates or the Indiana Toll Road. Since the Indiana Department of Transportation estimated that 21.4 percent of all vehicle miles traveled in Indiana during 1997 was on Interstates or the Indiana Toll Road, roadway characteristics such as “limited access” relate positively to traffic safety.

Figure 30

- *Fatal crashes occurred most frequently on rural county roads (28.3 percent).*
- *The highest frequency of property damage (50.6 percent) and total crashes (49.6 percent) was on city streets.*

Table 24. Crashes by Location Type and Severity—1997

Location	Fatal Crashes		Personal Injury		Property Damage		Total Crashes	
	Count	Percent	Count	Percent	Count	Percent	Count	Percent
Intersection	174	20.5%	18,723	35.7%	39,919	23.9%	58,816	26.7%
Driveway Access	14	1.6%	1,109	2.1%	4,041	2.4%	5,164	2.3%
Interchange Area	5	0.6%	427	0.8%	1,424	0.9%	1,856	0.8%
Off Roadway	272	32.0%	9,412	18.0%	21,102	12.7%	30,786	14.0%
Shoulder	40	4.7%	1,198	2.3%	3,831	2.3%	5,069	2.3%
Median	7	0.8%	340	0.6%	889	0.5%	1,236	0.6%
Roadway	334	39.3%	18,297	34.9%	64,988	39.0%	83,619	38.0%
Unknown	3	0.4%	2,907	5.5%	30,553	18.3%	33,463	15.2%
Total	849		52,413		166,747		220,009	

Note: The percentage of fatal crashes occurring at an intersection was 174/849, or 20.5%.

Table 24 provides information on crash location relative to roadway factors. For 38.0 percent of all crashes and 39.3 percent of fatal crashes, the crash initiated on a roadway but not at an intersection, driveway-access, or interchange area. *Off Roadway* crashes, frequently single-vehicle crashes involving collisions with fixed objects such as trees, accounted for 32.0 percent of fatal crashes.

Hit-and-Run crashes (Table 25) tend to have lower severity than other crashes; 0.15 percent of Hit-and-Run crashes were fatal in 1997 versus 0.39 percent fatal for all crashes. Hit-and-Run crashes have somewhat higher percentages than other crashes that are initiated by a roadway collision (48.0 percent for fatals and 46.3 percent for all crashes).

- *The total number of Hit-and-Run crashes increased 3.3 percent from 16,366 in 1996 to 16,900 in 1997.*

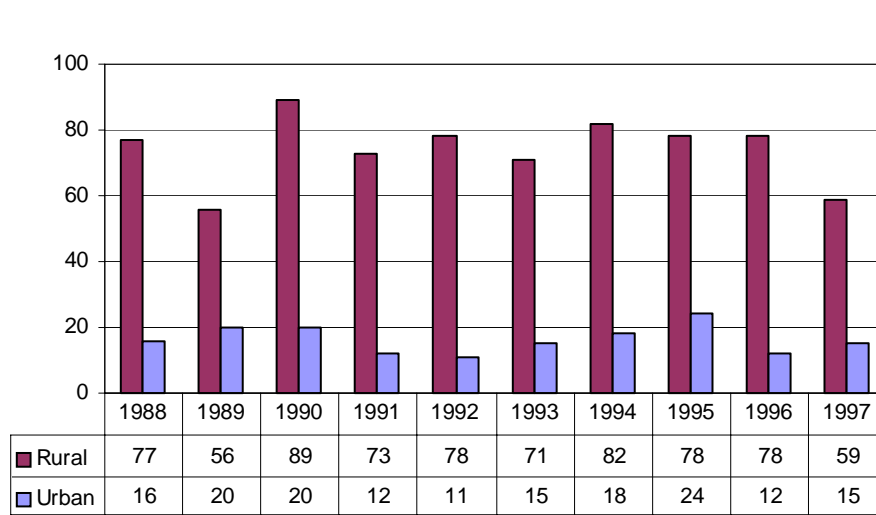
Table 25. Hit-and-Run Crashes by Location Type and Severity—1997

Location	Fatal Crashes		Personal Injury		Property Damage		Total Crashes	
	Count	Percent	Count	Percent	Count	Percent	Count	Percent
Intersection	8	32.0%	1,062	42.4%	3,547	24.7%	4,617	27.3%
Driveway Access	0	0.0%	61	2.4%	415	2.9%	476	2.8%
Interchange Area	0	0.0%	18	0.7%	111	0.8%	129	0.8%
Off Roadway	3	12.0%	309	12.3%	2,653	18.5%	2,965	17.5%
Shoulder	1	4.0%	48	1.9%	723	5.0%	772	4.6%
Median	0	0.0%	5	0.2%	40	0.3%	45	0.3%
Roadway	12	48.0%	996	39.8%	6,816	47.4%	7,824	46.3%
Unknown	1	4.0%	6	0.2%	65	0.5%	72	0.4%
Total	25		2,505		14,370		16,900	

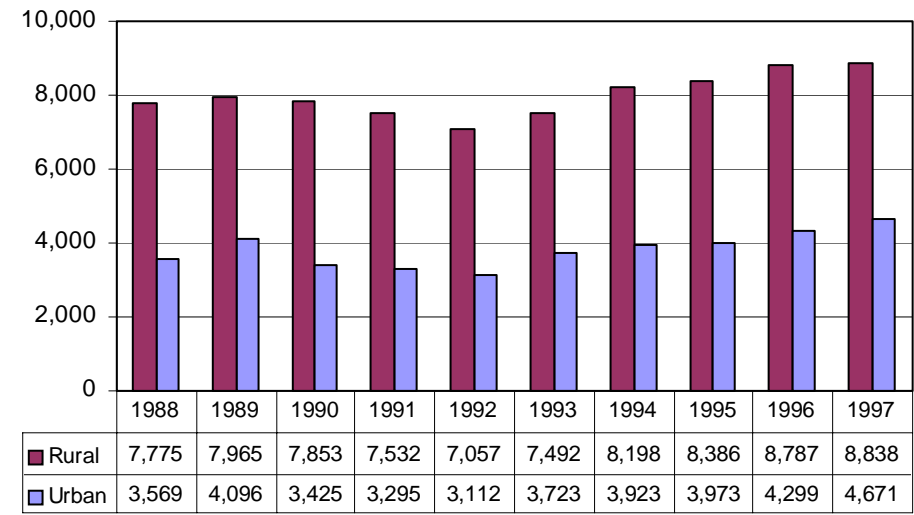
Note: The percentage of fatal hit and run crashes occurring at an intersection was 8/25, or 32.0%.

crashes

Figure 31. Annual Interstate/Toll Road Crashes: 1988-1997

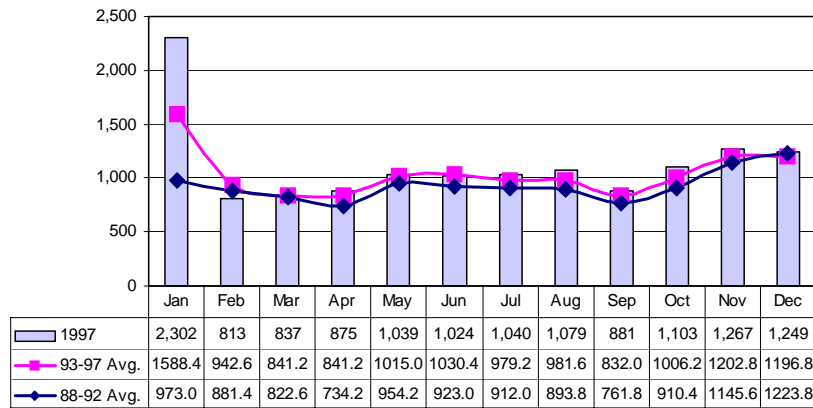


Rural/Urban Fatalities

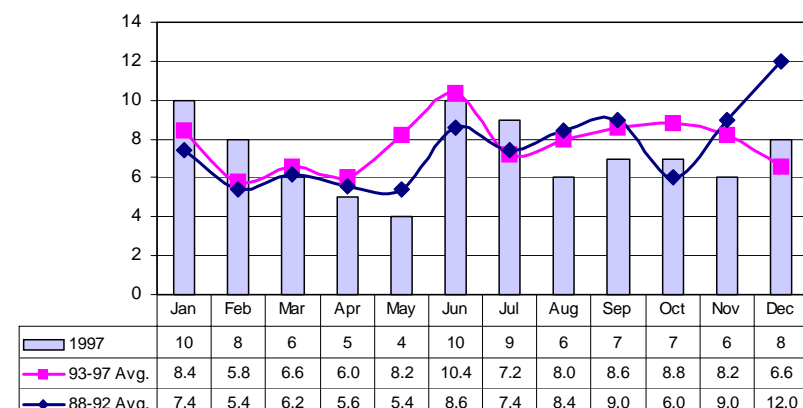


Rural/Urban Crashes

Figure 32. Interstate/Toll Road Crashes by Monthly Average: 1988-1997



Crashes



Fatalities

Figure 31

- *The number of both urban and rural interstate crashes has increased each year from 1993 through 1997.*
- *Rural interstate fatalities have decreased to 59 in 1997 from a high of 89 in 1990.*

The number of both urban and rural interstate crashes has increased each year from 1993 through 1997 (Figure 31). Urban interstate fatalities in 1997 were at the 10-year average of 15. Over the five-year, 1993-1997 period, June was the month with the highest average number of fatalities (10.4) (Figure 32). As seen in Figure 32, during 1997, as has been the case for the past five years, interstate crashes were most frequent during the November-January period. June has had the highest average fatalities over the past five years while December had the highest average for the 1988-1992 period.

Figure 32

- *For 1997, January was the month with the greatest number of interstate crashes.*
- *The highest number of monthly fatalities (10) in 1997 occurred in January and June.*

Table 26. Traffic Controls for all Vehicles by Crash Severity—1997

Traffic Control	Fatal Crashes		Personal Injury		Property Damage		Total Crashes	
	Count	Percent	Count	Percent	Count	Percent	Count	Percent
Officer, Crossing Guard or Flagman	1	0.1%	232	0.4%	512	0.3%	745	0.3%
RR Crossing Gate/Flagman	3	0.4%	55	0.1%	213	0.1%	271	0.1%
RR Crossing Signal	9	1.1%	101	0.2%	220	0.1%	330	0.1%
RR Crossing Sign	12	1.4%	188	0.4%	468	0.3%	668	0.3%
Traffic Control Signal	53	6.2%	10,460	20.0%	23,839	14.3%	34,352	15.6%
Flashing Signal	19	2.2%	586	1.1%	1,124	0.7%	1,729	0.8%
Stop Sign	104	12.2%	7,655	14.6%	17,812	10.7%	25,571	11.6%
Yield Sign	13	1.5%	593	1.1%	1,456	0.9%	2,062	0.9%
Lane Control	450	53.0%	25,422	48.5%	65,847	39.5%	91,719	41.7%
No Passing Zone	141	16.6%	3,741	7.1%	7,383	4.4%	11,265	5.1%
Other Regulatory Signs	58	6.8%	1,684	3.2%	3,944	2.4%	5,686	2.6%
None	42	4.9%	3,002	5.7%	8,731	5.2%	11,775	5.4%
Unknown	35	4.1%	5,184	9.9%	38,894	23.3%	44,113	20.1%

Example: Of the fatal crashes in 1997, 12.2% (104/849) took place at a location that had one or more stop signs. Columns do not total the number of crashes in each category since there may have been more than one traffic control type at the crash location.

The traffic controls operating at the crash location is the location-type variable in Table 26. The most frequently cited traffic control for fatal crashes (53.0 percent) and total crashes (41.7 percent) was lane controls. These include centerline and lane pavement markings, *Keep Right*, *Merge Right* and *Lane Ends* signs. Two traffic controls may be coded for each vehicle in a crash so the lower frequencies for other controls that are employed only at intersections or railroad crossings actually provide more significant information. The fact that Stop Signs were present at 12.2 percent of fatal crash locations and 11.6 percent of total crashes, while Traffic Control Signals (Stoptlights) were present at only 6.2 percent of fatal crash locations and 11.6 percent of total crashes, indicates that Stop Signs are associated with more severe crashes than Stoptlights.

crashes

Figure 33. Rural and Urban Crashes by Severity–1997

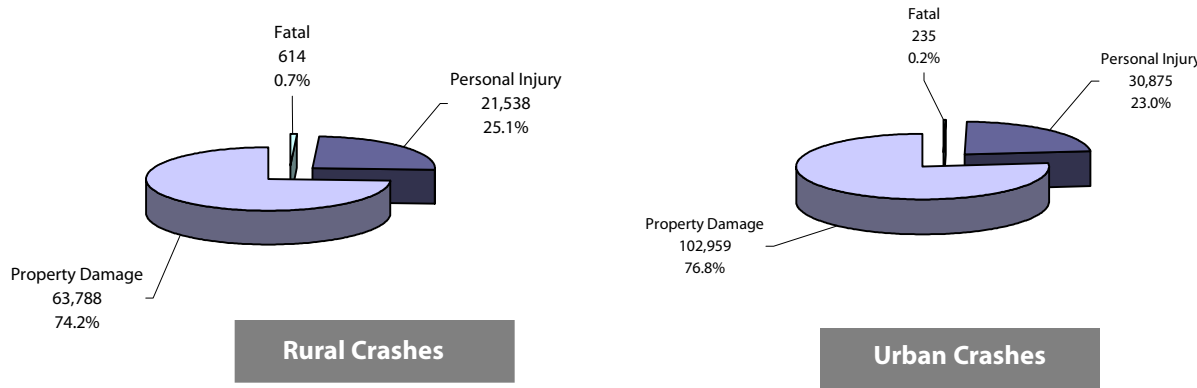


Figure 33

- *In 1997, 614 (0.71 percent) of rural crashes were fatal.*
- *Only 235 (0.18 percent) of urban crashes were fatal.*

The difference in the severity of crashes between the state’s urban and rural areas has been remarkably constant over the past 10 years (See Table 27). The 10-year average of total crashes that occurred in Indiana’s urban areas is 60.8 percent, but 72.8 percent of fatal crashes occurred in the State’s rural areas. In 1997, 60.9 percent of total crashes occurred in Indiana’s urban areas, and 72.3 percent of fatal crashes occurred in the State’s rural areas.

Table 27. Rural and Urban Crashes by Severity: 1988-1997

Year	Rural			Urban			Total Crashes		
	Fatal Crashes	Personal Injury	Property Damage	Fatal Crashes	Personal Injury	Property Damage	Fatal Crashes	Personal Injury	Property Damage
1988	699	21,964	59,899	263	29,714	104,141	962	51,678	164,040
1989	626	22,021	62,879	257	30,317	106,074	883	52,338	168,953
1990	650	21,341	59,090	274	29,326	98,839	924	50,667	157,929
1991	679	19,967	56,231	225	27,165	90,692	904	47,132	146,923
1992	575	20,236	55,770	223	28,370	89,705	798	48,606	145,475
1993	579	20,900	58,685	203	29,874	94,132	782	50,774	152,817
1994	655	21,899	62,259	220	30,577	97,612	875	52,476	159,871
1995	625	22,596	65,767	234	31,235	100,569	859	53,831	166,336
1996	635	21,605	66,011	235	30,453	102,526	870	52,058	168,537
1997	614	21,538	63,788	235	30,875	102,959	849	52,413	166,747

Crashes by Locale (Rural/Urban)

Figure 34. Rural and Urban Crashes by Month–1997

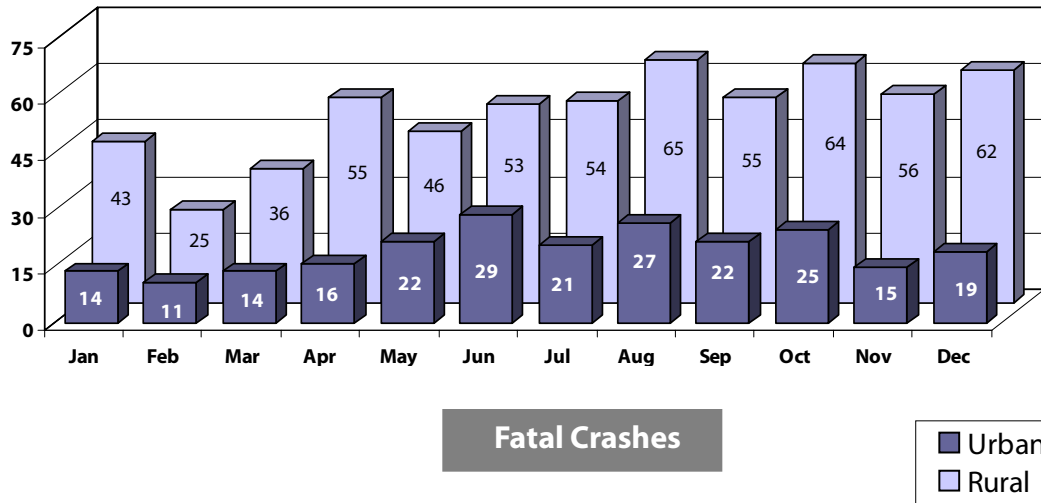
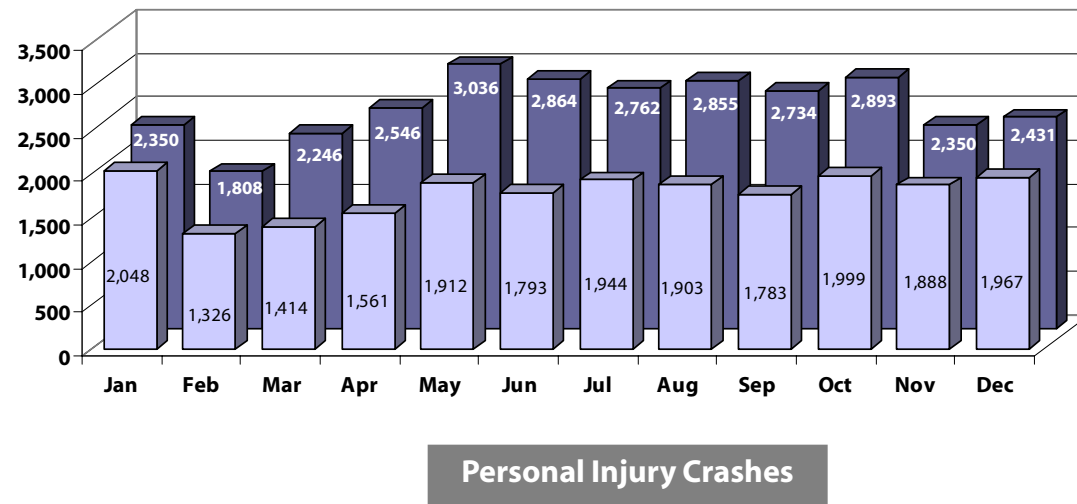


Figure 34 displays the rural/urban breakdown of fatal and personal injury crashes by month for 1997. Similar information for property damage and total crashes is found in Table 22 on page 50. Both rural and urban personal injury crashes were below average during the February-March period.

Figure 34

- *The number of fatal crashes was highest for rural areas during the August-October period and during the summer June-August period for urban areas.*



crashes

Table 28. Frequency of Fatal Crashes by Number of Fatalities and Rural/Urban Locale: 1988-1997

Year	Rur	Urb	Tot	Year	Rur	Urb	Tot	Year	Rur	Urb	Tot	Year	Rur	Urb	Tot
One Person Fatality Crashes				Two Person Fatality Crashes				Three Person Fatality Crashes				Four Person Fatality Crashes			
1988	612	242	854	1988	69	17	86	1988	15	2	17	1988	1	0	1
1989	568	240	808	1989	50	14	64	1989	7	2	9	1989	0	1	1
1990	572	259	831	1990	61	14	75	1990	12	1	13	1990	3	0	3
1991	598	213	811	1991	63	11	74	1991	15	1	16	1991	2	0	2
1992	501	212	713	1992	63	8	71	1992	9	1	10	1992	2	0	2
1993	502	187	689	1993	66	15	81	1993	8	1	9	1993	2	0	2
1994	579	212	791	1994	65	8	73	1994	6	0	6	1994	4	0	4
1995	556	223	779	1995	57	8	65	1995	9	2	11	1995	2	1	3
1996	553	217	770	1996	70	18	88	1996	12	0	12	1996	0	0	0
1997	551	220	771	1997	53	15	68	1997	8	0	8	1997	1	0	1
Five Person Fatality Crashes				Six Person Fatality Crashes				Seven Person Fatality Crashes				Total Fatal Crashes			
1988	1	1	2	1988	0	1	1	1988	1	0	1	1988	699	263	962
1989	0	0	0	1989	1	0	1	1989	0	0	0	1989	626	257	883
1990	0	0	0	1990	2	0	2	1990	0	0	0	1990	650	274	924
1991	0	0	0	1991	0	0	0	1991	1	0	1	1991	679	225	904
1992	0	2	2	1992	0	0	0	1992	0	0	0	1992	575	223	798
1993	1	0	1	1993	0	0	0	1993	0	0	0	1993	579	203	782
1994	1	0	1	1994	0	0	0	1994	0	0	0	1994	655	220	875
1995	1	0	1	1995	0	0	0	1995	0	0	0	1995	625	234	859
1996	0	0	0	1996	0	0	0	1996	0	0	0	1996	635	235	870
1997	1	0	1	1997	0	0	0	1997	0	0	0	1997	614	235	849

Table 28 displays the 10-year history of frequencies of fatal crashes organized by the numbers of fatalities in crashes. The rural/urban breakdown in this table reveals that most multi-fatality crashes occur in a rural locale.

- *Of the 141 crashes with three or more fatalities per crash, 127 (90 percent) occurred in a rural locale.*
- *The percentage of Indiana fatal crashes that had more than one fatality has declined from 11.2 percent in 1988 to 9.2 percent in 1997.*

Table 29. Crashes by Collision With by Severity and Locale–1997

COLLISION WITH ...	Fatal Crashes			Personal Injury			Property Damage			Total Crashes		
	Rur	Urb	Tot	Rur	Urb	Tot	Rur	Urb	Tot	Rur	Urb	Tot
Other Motor Vehicle	311	118	429	10,923	23,675	34,598	25,954	73,083	99,037	37,188	96,876	134,064
Pedestrian	30	39	69	238	1,280	1,518	20	66	86	288	1,385	1,673
Bicyclist	6	8	14	171	954	1,125	36	137	173	213	1,099	1,312
RR Train	9	10	19	43	65	108	63	109	172	115	184	299
Animal Drawn Vehicle	2	0	2	28	15	43	66	29	95	96	44	140
Deer	1	0	1	293	23	316	9,216	724	9,940	9,510	747	10,257
Other Animal	2	1	3	102	21	123	920	184	1,104	1,024	206	1,230
Fixed Object	491	150	641	13,052	6,671	19,723	21,235	12,081	33,316	34,778	18,902	53,680
Other	14	7	21	272	200	472	1,007	829	1,836	1,293	1,036	2,329
TOTAL	866	333	1,199	25,122	32,904	58,026	58,517	87,242	145,759	84,505	120,479	204,984

Note: This report counts collisions, not crashes. A vehicle may collide with an object from more than one category. Also, non-collision crashes are not counted.

Legend: Rur=Rural; Urb=Urban; Tot=Total

Table 29 provides information on the crash frequencies by the category of collision. Collisions occur most frequently with other motor vehicles (134,064), followed by fixed objects (53,680) and deer (10,257). Collisions with deer declined 10.5 percent from 1996 but collisions with other motor vehicles increased by 2.1 percent. Collisions with animal drawn vehicles increased by 20 percent from 117 in 1996.

crashes

Table 30. Fixed Objects Struck–Detailed by Crash Severity and Locale–1997

Type of Fixed Object	Fatal Crashes			Personal Injury			Property Damage			Total Crashes		
	Rur	Urb	Tot	Rur	Urb	Tot	Rur	Urb	Tot	Rur	Urb	Tot
Light Support/Utility Pole	60	25	85	1,784	1,451	3,235	2,627	2,070	4,697	4,471	3,546	8,017
Guard Rail/Median	32	17	49	1,060	622	1,682	2,394	1,349	3,743	3,486	1,988	5,474
Impact Attenuator	0	1	1	18	26	44	57	43	100	75	70	145
Sign Post	30	12	42	655	538	1,193	1,513	1,186	2,699	2,198	1,736	3,934
Tree	117	26	143	2,267	783	3,050	2,939	1,100	4,039	5,323	1,909	7,232
Building/Wall	6	8	14	124	378	502	166	702	868	296	1,088	1,384
Curbing	5	27	32	144	1,260	1,404	289	1,783	2,072	438	3,070	3,508
Fence	42	5	47	1,025	318	1,343	2,273	940	3,213	3,340	1,263	4,603
Bridge Support	7	3	10	167	90	257	292	181	473	466	274	740
Culvert/Drainage Structure	27	5	32	682	129	811	818	233	1,051	1,527	367	1,894
Snow Embankment	0	0	0	85	35	120	240	98	338	325	133	458
Earth Embankment/Ditch	165	17	182	4,248	650	4,898	5,594	892	6,486	10,007	1,559	11,566
Fire Hydrant	0	2	2	19	103	122	53	316	369	72	421	493
Traffic Signal	0	0	0	9	56	65	25	118	143	34	174	208
Mailbox	14	1	15	440	94	534	1,113	364	1,477	1,567	459	2,026
Other Fixed Object	10	5	15	574	401	975	1,070	911	1,981	1,654	1,317	2,971
Total	515	154	669	13,301	6,934	20,235	21,463	12,286	33,749	35,279	19,374	54,653

Note: This report counts fixed objects struck, not crashes. There may have been more than one fixed object in some crashes.

Legend: Rur=Rural; Urb=Urban; Tot=Total

Table 30 provides detailed information on collisions with fixed objects. The numbers reported are slightly higher than the collision with fixed object category of Table 44 since a crash may involve a collision with more than one type of fixed object. The highest frequency category for each severity category is Earth Embankment/Ditch. Note that 86.5 percent of these collisions occurred in a rural locale. Also note that only one of the 145 collisions (0.7 percent) with an impact attenuator was a fatal crash which attests to the life-saving value of these devices. In contrast, 143 of 7,234 (2 percent) of collisions with trees were fatal crashes.

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Although crashes occur for a wide variety of reasons, driver actions often play an important role. The *Drivers* section contains specific information about drivers in Indiana crashes in 1997 and includes demographic factors such as age, gender and physical condition. Also included in this chapter is information on passengers, pedestrians and bicyclists. Information on restraint usage and its impact on occupant safety is in the final section of the chapter.

The risk of being in a crash, or a fatal crash, decreases as drivers get older, with the exception of the oldest drivers. Drivers in the 75 years and older age group are over-represented in fatal crashes.

The number of pedestrians killed in 1997, 75, was one less than in 1996. Pedestrian fatalities have declined steadily since 1981 when 126 pedestrians were killed.

Bicyclist fatalities decreased from 14 in 1995 to six in 1996, but increased to 11 in 1997. The trend for bicyclist fatalities has been decreasing since the peak year of 1987 when there were 24 fatalities.

Equipment changes over the last twenty years have made vehicles and roadways safer. Most important of these changes are safety belts including shoulder straps, airbags and child safety seats. Indiana's 1998 observed safety belt usage rate for all passenger vehicles was 61.8 percent, well below the 1997 national average of 69 percent. NHTSA has estimated that 45 percent of deaths to front-seat passenger car occupants could be prevented if they were properly secured by lap and shoulder belts. The risk of moderate-to-critical injury would also be reduced by 50 percent. The combination of air bags and lap-shoulder belts could prevent 50 percent of deaths. For light truck occupants, safety belts reduce the risk of fatal injury by 60 percent and moderate-to-critical injury by 65 percent.

The ISP Crash database includes information on the safety restraint usage for all drivers involved in reported crashes, but only includes information on passengers if they were killed or injured. There is, however, a high percentage of missing information on the safety restraint usage of drivers, particularly in instances when they are

not killed or injured or a crash report was not submitted by a police agency.

The final tables in this chapter summarize the findings of the 1998 Indiana Observational Safety Belt Survey. The usage rate for front-seat occupants of passenger cars increased 10.7 percent from 57.9 percent in September of 1997 to 68.6 percent in September 1998.

Drivers overall had a slightly higher unweighted usage rate of 61.0 percent than front-seat passengers (57.9 percent). Female drivers had higher usage rates (69.6 percent) than male drivers (55.3 percent). Likewise, the female passenger rate was 63.4 percent compared to 46.6 percent for male front-seat passengers.

Occupants of pickup trucks continue to lag behind all other passenger vehicle occupants in restraint usage.

Freeways had the highest usage rates of any roadway classification and, for other roadway classification, rates were higher in urban areas than in rural areas.

people

Table 31 gives detailed information on fatalities by age, gender and role (driver, passenger, pedestrian, etc.). Occupants of animal-drawn vehicles were included in the vehicle passenger counts and all occupants of parked vehicles were classified as passengers. Of the 95 age 16-20 motor vehicle driver fatalities in 1997, 86.3 percent occurred in rural locations. For drivers 65 and older, only 67.7 percent died in rural fatal crashes. Rural crashes accounted for 48 of 52 (92.3 percent) of the non-motorcycle passenger fatalities under age 16.

Tables 32 gives similar information as Table 31 for injured persons. While 73.4 percent of all fatalities occurred in a rural locale, only 42.3 percent of those reported as injured were involved in a rural crash. As was the case for fatalities, a higher percentage of young driver injuries occurred in a rural locale (50.5 percent for drivers ages 16-20 and 57.1 percent for drivers under age 16), than for drivers of other age groups. Overall, 43.6 percent of driver injuries occurred in rural crashes. Only 37.0 percent of injuries to drivers 65 and older occurred in a rural locale. Only 13.9 percent of bicyclist injuries and 16.9 percent of pedestrian injuries were the result of rural crashes.

Table 31. Age, Role and Gender for Fatalities by Locale—1997

Age	Vehicle ¹						Motorcycle ²						Bicyclist			Pedestrian			Total ³ Fatalities		
	Driver			Passenger			Driver			Passenger			Male	Fem	Tot ³	Male	Fem	Tot ³	Male	Fem	Tot ³
	Male	Fem	Tot ³	Male	Fem	Tot ³	Male	Fem	Tot ³	Male	Fem	Tot ³	Male	Fem	Tot ³	Male	Fem	Tot ³	Male	Fem	Tot ³
0-3	0	0	0	3	3	6	0	0	0	0	0	0	0	0	0	0	0	0	3	3	6
4-12	0	0	0	11	7	18	0	0	0	0	0	0	1	0	1	1	2	3	13	9	22
13-15	4	0	4	14	10	24	2	0	2	0	0	0	0	0	0	0	2	2	20	12	32
16-17	31	9	40	12	7	19	1	0	1	0	0	0	1	0	1	2	1	3	47	17	64
18-20	32	10	42	10	5	15	3	0	3	0	0	0	0	0	0	2	0	2	47	15	62
21-24	34	15	49	21	1	22	3	0	3	0	1	1	0	0	0	1	0	1	59	17	76
25-34	55	22	77	19	8	27	4	0	4	1	0	1	0	0	0	6	1	7	85	31	116
35-44	55	16	71	8	7	15	5	0	5	0	1	1	1	1	2	5	0	5	74	25	99
45-54	42	16	59	5	3	8	1	0	1	0	0	0	0	0	0	2	0	2	50	19	70
55-64	20	12	32	1	4	5	2	0	2	0	1	1	0	0	0	1	1	2	24	18	42
65-69	14	4	18	3	3	6	0	0	0	0	0	0	0	0	0	1	0	1	18	7	25
70-74	5	7	12	2	3	5	0	0	0	0	0	0	0	0	0	0	0	0	7	10	17
75+	27	8	35	4	12	16	1	0	1	0	0	0	0	0	0	3	1	4	35	21	56
TOTAL	320	119	440	113	73	187	22	0	22	1	3	4	3	1	4	24	9	33	483	205	690
0-3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	0	1
4-12	0	0	0	1	0	1	0	0	0	1	0	1	2	0	2	6	2	8	10	2	12
13-15	1	0	1	2	1	3	0	0	0	0	0	0	1	0	1	1	0	1	5	1	6
16-17	2	3	5	2	3	5	0	0	0	1	1	2	0	0	0	1	0	1	5	7	12
18-20	7	1	8	5	1	6	2	0	2	0	0	0	0	0	0	1	0	1	15	2	17
21-24	5	3	8	4	1	5	4	0	4	0	0	0	0	0	0	1	0	1	14	4	18
25-34	20	10	30	3	3	6	5	0	5	1	1	2	2	0	2	3	0	3	34	14	48
35-44	11	5	16	6	3	9	3	0	3	0	0	0	1	1	2	4	2	6	25	11	36
45-54	12	6	18	1	0	1	3	0	3	0	0	0	0	0	0	5	5	10	21	11	32
55-64	12	5	17	0	4	4	0	0	0	0	0	0	0	0	0	6	0	6	18	9	27
65-69	4	0	4	0	4	4	0	0	0	0	0	0	0	0	0	1	1	2	5	5	10
70-74	4	4	8	0	1	1	0	0	0	0	0	0	0	0	0	1	0	1	5	5	10
75+	10	9	19	0	1	1	0	0	0	0	0	0	0	0	0	1	0	1	11	10	21
TOTAL	88	46	134	24	22	46	17	0	17	2	2	4	6	1	7	32	10	42	169	81	250

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¹Vehicle includes any motor vehicle except motorcycles, mopeds, motorized bicycles, motor scooters, and minibikes.
²Motorcycle includes motorcycles, mopeds, motorized bicycles, motor scooters and minibikes.
³Totals include persons of unknown age and/or gender.
 Note: Tables count fatalities, not crashes.
 Legend: Fem=Female; Tot=Total.

Table 32. Age, Role and Gender for Total Injuries by Locale–1997

Age	Vehicle ¹						Motorcycle ²						Bicyclist			Pedestrian			Total ³		
	Driver			Passenger			Driver			Passenger			Male	Fem	Tot ³	Male	Fem	Tot ³	Male	Fem	Tot ³
	Male	Fem	Tot ³	Male	Fem	Tot ³	Male	Fem	Tot ³	Male	Fem	Tot ³	Male	Fem	Tot ³	Male	Fem	Tot ³	Male	Fem	Tot ³
0 - 3	1	0	1	226	219	447	0	0	0	0	1	1	1	2	3	3	1	4	231	223	456
4 - 12	10	2	12	770	869	1,679	8	1	9	4	1	5	42	15	58	27	20	47	861	908	1,810
13 - 15	43	37	80	503	679	1,195	32	7	39	3	2	5	21	3	24	19	14	33	621	742	1,376
16 - 17	1,260	1,179	2,442	611	703	1,322	19	4	23	1	5	6	5	2	7	11	5	16	1,907	1,898	3,816
18 - 20	1,420	1,122	2,545	554	475	1,030	63	4	67	4	9	13	7	3	10	12	8	20	2,060	1,621	3,685
21 - 24	1,197	1,008	2,209	369	343	715	74	6	80	1	4	5	3	3	6	21	9	30	1,665	1,373	3,045
25 - 34	2,346	2,114	4,464	445	568	1,015	109	13	123	4	16	20	6	2	8	33	13	46	2,943	2,726	5,676
35 - 44	1,936	1,648	3,590	262	409	672	137	9	146	0	11	11	6	4	10	23	6	29	2,364	2,087	4,458
45 - 54	1,190	1,104	2,296	154	341	496	73	5	78	0	14	14	5	2	7	18	9	29	1,440	1,475	2,920
55 - 64	632	526	1,160	69	232	301	36	3	39	1	3	4	2	1	3	5	4	9	745	769	1,516
65 - 69	239	181	421	34	104	139	4	1	5	0	0	0	1	1	2	4	1	5	282	288	572
70 - 74	197	182	379	34	134	168	1	1	2	0	0	0	1	0	1	2	2	4	235	319	554
75+	314	258	573	42	197	239	4	0	4	1	0	1	0	0	0	1	3	4	362	458	821
TOTAL	10,811	9,391	20,239	4,268	5,559	11,682	561	54	616	19	69	88	104	39	150	181	98	291	15,944	15,210	33,066
0 - 3	2	1	3	280	327	614	0	0	0	0	0	0	0	0	0	26	16	42	308	344	659
4 - 12	8	6	14	1,067	1,210	2,327	8	1	9	3	5	8	265	92	362	256	164	423	1,607	1,478	3,143
13 - 15	27	25	53	367	673	1,046	39	13	52	1	9	10	106	37	143	61	51	114	601	808	1,418
16 - 17	851	1,075	1,932	467	769	1,249	41	1	42	8	6	14	40	8	48	45	37	82	1,452	1,896	3,367
18 - 20	1,322	1,624	2,951	500	776	1,284	81	4	85	4	7	11	48	16	64	43	35	78	1,998	2,462	4,473
21 - 24	1,306	1,544	2,851	410	575	990	89	8	97	4	4	8	37	7	44	55	39	94	1,901	2,177	4,084
25 - 34	2,613	3,144	5,765	604	942	1,555	200	9	209	2	12	14	63	14	78	91	72	164	3,573	4,193	7,785
35 - 44	2,168	2,733	4,907	313	722	1,040	129	18	148	2	12	14	43	13	60	86	42	131	2,741	3,540	6,300
45 - 54	1,527	1,827	3,357	162	598	764	91	6	97	1	7	8	21	5	26	55	38	94	1,857	2,481	4,346
55 - 64	919	977	1,897	74	391	466	18	1	19	0	2	2	9	2	11	29	26	55	1,049	1,399	2,450
65 - 69	379	351	730	31	176	209	6	0	6	0	0	0	2	4	6	11	8	19	429	539	970
70 - 74	306	349	655	51	182	235	4	0	4	0	2	2	4	0	4	8	10	18	373	543	918
75+	448	505	954	77	289	367	1	0	1	0	1	1	5	0	5	12	10	22	543	805	1,350
TOTAL	11,919	14,208	26,186	4,646	8,119	15,765	713	61	777	26	74	102	661	203	926	804	570	1,430	18,769	23,235	45,186

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¹Vehicle includes any motor vehicle except motorcycles, mopeds, motorized bicycles, motor scooters, and minibikes.

²Motorcycle includes motorcycles, mopeds, motorized bicycles, motor scooters and minibikes.

³Totals include persons of unknown age and/or gender.

Note: Tables count injuries, not crashes.

Legend: Fem=Female; Tot=Total.

The ISP crash reporting process consists of several different records within the master crash file. In the preparation of the various tables and figures for the Crash Book, different record fields are used to create the various tables and figures. Table 1, where injuries are first reported, extracts its data from the environmental record file. Table 32 extracts its data from the driver record file, the pedestrian record file and the injured record file. In the completion of the crash form by the investigating officer (or it could be self-reported) and/or in the data entry process, differences in counts are the result of data entry and/or missing data. For example, the officer may have indicated that there were three people injured (in the environmental file) but details were only entered on two of the injured (injured file). In the case of 1997 data, there were 10 discrepancies.

people

Table 33. Age, Role and Gender for Serious Injuries by Locale–1997

Age	Vehicle ¹						Motorcycle ²						Bicyclist			Pedestrian			Total Serious ³ Injuries		
	Driver			Passenger			Driver			Passenger			Male	Fem	Tot ³	Male	Fem	Tot ³	Male	Fem	Tot ³
	Male	Fem	Tot ³	Male	Fem	Tot ³	Male	Fem	Tot ³	Male	Fem	Tot ³									
0-3	0	0	0	17	20	37	0	0	0	0	0	0	0	0	0	0	1	1	17	21	38
4-12	2	0	2	63	62	127	3	0	3	0	0	0	9	3	12	6	5	11	83	70	155
13-15	7	3	10	62	59	124	11	4	15	1	0	1	2	1	3	4	2	6	87	69	159
16-17	145	104	250	83	80	166	4	1	5	1	0	1	1	0	1	3	1	4	237	186	427
18-20	213	105	318	93	50	143	23	0	23	0	1	1	2	0	2	1	1	2	332	157	489
21-24	187	85	273	62	39	101	20	5	25	0	0	0	0	0	0	8	4	12	277	133	411
25-34	318	197	515	70	72	142	44	1	45	1	5	6	1	1	2	7	3	10	441	279	720
35-44	234	166	400	45	44	89	53	1	54	0	4	4	1	1	2	3	2	5	336	218	554
45-54	183	102	286	23	35	58	26	0	26	0	3	3	1	0	1	8	2	10	241	142	384
55-64	79	70	149	4	27	31	8	1	9	0	0	0	1	1	2	1	1	2	93	100	193
65-69	32	26	58	3	8	11	2	0	2	0	0	0	0	0	0	2	0	2	39	34	73
70-74	17	19	36	3	22	25	0	0	0	0	0	0	1	0	1	0	1	1	21	42	63
75+	47	36	83	5	22	27	1	0	1	0	0	0	0	0	0	1	1	2	54	59	113
TOTAL	1,466	918	2,388	553	567	1,151	196	13	209	3	13	16	19	8	27	44	24	68	2,281	1,543	3,859
0-3	0	0	0	5	6	11	0	0	0	0	0	0	0	0	0	5	5	10	10	11	21
4-12	0	1	1	38	29	67	1	1	2	0	0	0	27	7	35	49	28	77	115	66	182
13-15	3	1	4	28	21	50	4	1	5	1	1	2	11	1	12	14	7	21	61	32	94
16-17	41	44	86	24	24	48	3	0	3	0	2	2	3	2	5	7	3	10	78	75	154
18-20	77	68	145	36	33	70	14	0	14	0	0	0	1	0	1	8	6	14	136	107	244
21-24	103	57	160	30	31	61	20	1	21	2	0	2	4	0	4	10	7	17	169	96	265
25-34	198	148	346	51	47	99	49	2	51	0	3	3	5	1	6	21	16	38	324	217	543
35-44	146	133	279	28	38	66	30	5	36	0	2	2	4	1	5	13	7	20	221	186	408
45-54	115	88	203	6	26	32	19	1	20	0	3	3	1	0	1	11	15	26	152	133	285
55-64	62	36	98	1	22	23	4	0	4	0	0	0	3	1	4	10	7	17	80	66	146
65-69	32	19	51	2	8	10	0	0	0	0	0	0	0	0	0	2	1	3	36	28	64
70-74	29	18	47	3	9	12	0	0	0	0	0	0	1	0	1	2	2	4	35	29	64
75+	38	34	72	4	9	13	1	0	1	0	0	0	1	0	1	3	2	5	47	45	92
TOTAL	848	649	1,498	268	318	605	147	11	159	3	11	14	63	13	80	160	109	273	1,489	1,111	2,629

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¹Vehicle includes any motor vehicle except motorcycles, mopeds, motorized bicycles, motor scooters and minibikes.

²Motorcycle includes motorcycles, mopeds, motorized bicycles, motor scooters and minibikes.

³Totals include persons of unknown age and/or gender.

Note: Tables count serious injuries, not crashes.

Legend: Fem=Female; Tot=Total.

Table 33 provides information for persons seriously injured in a crash in 1997. While 42.3 percent of all injuries occurred in a rural locale, 59.5 percent of those reported as seriously injured were involved in a rural

crash. As with other crash types, a higher percentage of young crashes occurred in a rural locale (71.5 percent for drivers of 16-20), than for urban crashes (61.5 percent of serious injuries occurred in rural crashes). However, only 51.0 percent of serious injuries to drivers 65 and older occurred in a rural locale.

Table 34. Percentage of Injuries that are Serious by Locale, Age, Role and Gender–1997

Age	Vehicle ¹						Motorcycle ²						Bicyclist			Pedestrian			Total Serious ³ Injuries			
	Driver			Passenger			Driver			Passenger			Male	Fem	Tot ³	Male	Fem	Tot ³	Male	Fem	Tot ³	
	Male	Fem	Tot ³	Male	Fem	Tot ³	Male	Fem	Tot ³	Male	Fem	Tot ³	Male	Fem	Tot ³	Male	Fem	Tot ³	Male	Fem	Tot ³	
0 - 3	0.0%	NA	0.0%	7.5%	9.1%	8.3%	NA	NA	NA	NA	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%	25.0%	7.4%	9.4%	8.3%	R U R A L
4 - 12	20.0%	0.0%	16.7%	8.2%	7.1%	7.6%	37.5%	0.0%	33.3%	0.0%	0.0%	0.0%	21.4%	20.0%	20.7%	22.2%	25.0%	23.4%	9.6%	7.7%	8.6%	
13 - 15	16.3%	8.1%	12.5%	12.3%	8.7%	10.4%	34.4%	57.1%	38.5%	33.3%	0.0%	20.0%	9.5%	33.3%	12.5%	21.1%	14.3%	18.2%	14.0%	9.3%	11.6%	
16 - 17	11.5%	8.8%	10.2%	13.6%	11.4%	12.6%	21.1%	25.0%	21.7%	100%	0.0%	16.7%	20.0%	0.0%	14.3%	27.3%	20.0%	25.0%	12.4%	9.8%	11.2%	
18 - 20	15.0%	9.4%	12.5%	16.8%	10.5%	13.9%	36.5%	0.0%	34.3%	0.0%	11.1%	7.7%	28.6%	0.0%	20.0%	8.3%	12.5%	10.0%	16.1%	9.7%	13.3%	
21 - 24	15.6%	8.4%	12.4%	16.8%	11.4%	14.1%	27.0%	83.3%	31.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	38.1%	44.4%	40.0%	16.6%	9.7%	13.5%	
25 - 34	13.6%	9.3%	11.5%	15.7%	12.7%	14.0%	40.4%	7.7%	36.6%	25.0%	31.3%	30.0%	16.7%	50.0%	25.0%	21.2%	23.1%	21.7%	15.0%	10.2%	12.7%	
35 - 44	12.1%	10.1%	11.1%	17.2%	10.8%	13.2%	38.7%	11.1%	37.0%	NA	36.4%	36.4%	16.7%	25.0%	20.0%	13.0%	33.3%	17.2%	14.2%	10.4%	12.4%	
45 - 54	15.4%	9.2%	12.5%	14.9%	10.3%	11.7%	35.6%	0.0%	33.3%	NA	21.4%	21.4%	20.0%	0.0%	14.3%	44.4%	22.2%	34.5%	16.7%	9.6%	13.2%	
55 - 64	12.5%	13.3%	12.8%	5.8%	11.6%	10.3%	22.2%	33.3%	23.1%	0.0%	0.0%	0.0%	50.0%	100%	66.7%	20.0%	25.0%	22.2%	12.5%	13.0%	12.7%	
65 - 69	13.4%	14.4%	13.8%	8.8%	7.7%	7.9%	50.0%	0.0%	40.0%	NA	NA	NA	0.0%	0.0%	0.0%	50.0%	0.0%	40.0%	13.8%	11.8%	12.8%	
70 - 74	8.6%	10.4%	9.5%	8.8%	16.4%	14.9%	0.0%	0.0%	0.0%	NA	NA	NA	100%	NA	100%	0.0%	50.0%	25.0%	8.9%	13.2%	11.4%	
75+	15.0%	14.0%	14.5%	11.9%	11.2%	11.3%	25.0%	NA	25.0%	0.0%	NA	0.0%	NA	NA	NA	100%	33.3%	50.0%	14.9%	12.9%	13.8%	
Unk	7.7%	16.7%	11.9%	10.3%	9.4%	3.1%	100%	NA	100%	NA	0.0%	0.0%	0.0%	100%	9.1%	0.0%	0.0%	0.0%	10.1%	10.2%	3.4%	
TOTAL	13.6%	9.8%	11.8%	13.0%	10.2%	9.9%	34.9%	24.1%	33.9%	15.8%	18.8%	18.2%	18.3%	20.5%	18.0%	24.3%	24.5%	23.4%	14.3%	10.1%	11.7%	
0 - 3	0.0%	0.0%	0.0%	1.8%	1.8%	1.8%	NA	NA	NA	NA	NA	NA	NA	NA	NA	19.2%	31.3%	23.8%	3.2%	3.2%	3.2%	U R B A N
4 - 12	0.0%	16.7%	7.1%	3.6%	2.4%	2.9%	12.5%	100.0%	22.2%	0.0%	0.0%	0.0%	10.2%	7.6%	9.7%	19.1%	17.1%	18.2%	7.2%	4.5%	5.8%	
16 - 17	4.8%	4.1%	4.5%	5.1%	3.1%	3.8%	7.3%	0.0%	7.1%	0.0%	33.3%	14.3%	7.5%	25.0%	10.4%	15.6%	8.1%	12.2%	5.4%	4.0%	4.6%	
18 - 20	5.8%	4.2%	4.9%	7.2%	4.3%	5.5%	17.3%	0.0%	16.5%	0.0%	0.0%	0.0%	2.1%	0.0%	1.6%	18.6%	17.1%	17.9%	6.8%	4.3%	5.5%	
21 - 24	7.9%	3.7%	5.6%	7.3%	5.4%	6.2%	22.5%	12.5%	21.6%	50.0%	0.0%	25.0%	10.8%	0.0%	9.1%	18.2%	17.9%	18.1%	8.9%	4.4%	6.5%	
25 - 34	7.6%	4.7%	6.0%	8.4%	5.0%	6.4%	24.5%	22.2%	24.4%	0.0%	25.0%	21.4%	7.9%	7.1%	7.7%	23.1%	22.2%	23.2%	9.1%	5.2%	7.0%	
35 - 44	6.7%	4.9%	5.7%	8.9%	5.3%	6.3%	23.3%	27.8%	24.3%	0.0%	16.7%	14.3%	9.3%	7.7%	8.3%	15.1%	16.7%	15.3%	8.1%	5.3%	6.5%	
45 - 54	7.5%	4.8%	6.0%	3.7%	4.3%	4.2%	20.9%	16.7%	20.6%	0.0%	42.9%	37.5%	4.8%	0.0%	3.8%	20.0%	39.5%	27.7%	8.2%	5.4%	6.6%	
55 - 64	6.7%	3.7%	5.2%	1.4%	5.6%	4.9%	22.2%	0.0%	21.1%	NA	0.0%	0.0%	33.3%	50.0%	36.4%	34.5%	26.9%	30.9%	7.6%	4.7%	6.0%	
65 - 69	8.4%	5.4%	7.0%	6.5%	4.5%	4.8%	0.0%	NA	0.0%	NA	NA	NA	0.0%	0.0%	0.0%	18.2%	12.5%	15.8%	8.4%	5.2%	6.6%	
70 - 74	9.5%	5.2%	7.2%	5.9%	4.9%	5.1%	0.0%	NA	0.0%	NA	0.0%	0.0%	25.0%	NA	25.0%	25.0%	20.0%	22.2%	9.4%	5.3%	7.0%	
75+	8.5%	6.7%	7.5%	5.2%	3.1%	3.5%	100%	NA	100%	NA	0.0%	0.0%	20.0%	NA	20.0%	25.0%	20.0%	22.7%	8.7%	5.6%	6.8%	
TOTAL	7.1%	4.6%	5.7%	5.8%	3.9%	3.8%	20.6%	18.0%	20.5%	11.5%	14.9%	13.7%	9.5%	6.4%	8.6%	19.9%	19.1%	19.1%	7.9%	4.8%	5.8%	

¹Vehicle includes any motor vehicle except motorcycles, mopeds, motorized bicycles, motor scooters and minibikes.

²Motorcycle includes motorcycles, mopeds, motorized bicycles, motor scooters and minibikes.

³Totals include persons of unknown age and/or gender.

Note: Tables count injuries, not crashes.

Legend: Fem=Female; Tot=Total.

for rural crashes and 20.5 percent of the time for urban crashes. Similarly, bicyclist injuries were judged to be serious 18.0 percent of the time for rural crashes and 8.6 percent of the time for urban crashes.

people

Table 35. Crashes by Driver Age, Gender and Crash Severity–1997

Age	Fatal Crashes			Personal Injury			Property Damage			Total Crashes*		
	Male	Fem	Tot	Male	Fem	Tot	Male	Fem	Tot	Male	Fem	Tot
<15	4	0	4	114	53	168	147	93	242	265	146	414
15	5	1	6	133	90	223	233	176	410	371	267	639
16	38	14	52	1,994	1,796	3,797	5,209	4,015	9,241	7,241	5,825	13,090
17	23	10	33	2,291	1,885	4,182	6,154	4,576	10,741	8,468	6,471	14,956
18	37	13	50	2,277	1,741	4,023	6,267	4,020	10,294	8,581	5,774	14,367
19	33	7	40	1,866	1,463	3,331	5,226	3,525	8,766	7,125	4,995	12,137
20	27	7	34	1,722	1,303	3,029	4,771	3,252	8,029	6,520	4,562	11,092
21	30	12	42	1,589	1,157	2,749	4,359	2,976	7,344	5,978	4,145	10,135
22	26	7	33	1,332	1,054	2,388	4,016	2,933	6,964	5,374	3,994	9,385
23	29	9	38	1,327	995	2,325	3,670	2,534	6,218	5,026	3,538	8,581
24	23	3	26	1,274	989	2,264	3,611	2,546	6,165	4,908	3,538	8,455
25-34	208	79	287	11,195	8,962	20,183	33,651	23,088	56,840	45,054	32,129	77,310
35-44	194	47	241	9,419	7,671	17,114	29,249	21,197	50,533	38,862	28,915	67,888
45-54	153	51	205	6,287	4,946	11,242	20,230	13,442	33,717	26,670	18,439	45,164
55-64	71	30	101	3,661	2,634	6,303	11,820	7,087	18,943	15,552	9,751	25,347
65-74	44	27	71	2,631	1,846	4,480	7,753	4,852	12,631	10,428	6,725	17,182
75-84	32	23	55	1,381	1,058	2,441	3,786	3,103	6,900	5,199	4,184	9,396
85+	15	3	18	300	244	546	841	582	1,423	1,156	829	1,987
Unknown	2	0	14	695	434	2,959	5,650	3,649	25,048	6,347	4,083	28,021
Total	994	343	1,350	51,488	40,321	93,747	156,643	107,646	280,449	209,125	148,310	375,546

*Total includes drivers whose gender is unknown.

Note: Drivers of parked vehicles are excluded.

Legend: Fem=Female; Tot=Total

Male drivers had higher crash rates than female drivers in Indiana for 1997. During 1997, males, who made up 51 percent of the licensed driving population, were 58.5 percent of drivers when the gender of the driver is known (Table 35), and 74 percent of the drivers in fatal crashes. For young drivers in fatal crashes the gender difference was slightly greater with only 23 percent of the under age 25 drivers in fatal crashes being female.

Table 36. Crashes by Driver Age Group and Gender—1997

Age and Gender	All Crashes				Alcohol-Related Crashes				
	Fatal	Personal	Property	Total	Fatal	Personal	Property	Total	
	Crashes	Injury	Damage	Crashes	Crashes	Injury	Damage	Crashes	
	%	%	%	%	%	%	%	%	
<21	Male	167	10,397	28,007	38,571	31	525	637	1,193
	% Total	12.4%	11.1%	10.0%	10.3%	11.8%	8.2%	9.1%	8.7%
	Female	52	8,331	19,657	28,040	3	257	217	477
	% Total	3.9%	8.9%	7.0%	7.5%	1.1%	4.0%	3.1%	3.5%
	Total	219	18,753	47,723	66,695	34	782	854	1,670
% Total	16.2%	20.0%	17.0%	17.8%	12.9%	12.3%	12.2%	12.2%	
21-34	Male	316	16,717	49,307	66,340	90	2,018	2,099	4,207
	% Total	23.4%	17.8%	17.6%	17.7%	34.2%	31.7%	29.9%	30.8%
	Female	110	13,157	34,077	47,344	14	667	649	1,330
	% Total	8.1%	14.0%	12.2%	12.6%	5.3%	10.5%	9.3%	9.8%
	Total	426	29,909	83,531	113,866	104	2,689	2,751	5,544
% Total	31.6%	31.9%	29.8%	30.3%	39.5%	42.2%	39.2%	40.6%	
35-54	Male	347	15,706	49,479	65,532	84	1,681	1,902	3,667
	% Total	25.7%	16.8%	17.6%	17.4%	31.9%	26.4%	27.1%	26.9%
	Female	98	12,617	34,639	47,354	12	623	675	1,310
	% Total	7.3%	13.5%	12.4%	12.6%	4.6%	9.8%	9.6%	9.6%
	Total	446	28,356	84,250	113,052	96	2,309	2,579	4,984
% Total	33.0%	30.2%	30.0%	30.1%	36.5%	36.3%	36.8%	36.5%	
55+	Male	162	7,973	24,200	32,335	17	387	463	867
	% Total	12.0%	8.5%	8.6%	8.6%	6.5%	6.1%	6.6%	6.4%
	Female	83	5,782	15,624	21,489	10	120	146	276
	% Total	6.1%	6.2%	5.6%	5.7%	3.8%	1.9%	2.1%	2.0%
	Total	245	13,770	39,897	53,912	27	507	610	1,144
% Total	18.1%	14.7%	14.2%	14.4%	10.3%	8.0%	8.7%	8.4%	
Total	Male	994	51,488	156,643	209,125	223	4,631	5,140	9,994
	% Total	73.6%	54.9%	55.9%	55.7%	84.8%	72.7%	73.3%	73.3%
	Female	343	40,321	107,646	148,310	39	1,677	1,702	3,418
	% Total	25.4%	43.0%	38.4%	39.5%	14.8%	26.3%	24.3%	25.1%
	Total	1,350	93,747	280,449	375,546	263	6,368	7,010	13,641
% Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	

Age 21-34 males were most likely to be a driver in an alcohol-related crash (Table 36). Of all drivers involved in alcohol-related crashes, 4,207 or 30.8 percent were males in this age range. Almost 20 percent of all drivers in crashes were under age 21. Drivers in this age group were involved in 12.2 percent of alcohol-related crashes.

Note: This report counts drivers, not crashes. Drivers of parked vehicles are excluded. Totals include drivers whose age or gender is unknown.
Example: Of all drivers involved in alcohol-related crashes in the State, 8.7% (1,193/13,641) were male drivers under the age of 21.
Also, of all drivers involved in fatal alcohol-related crashes 11.8% (31/263) were male drivers under the age of 21.

people

Table 37. Crashes by Driver Age Group, Gender and Time of Day–1997

Age and Gender		Time Period					Total Crashes
		12-5:59 AM	6-11:59 AM	12-5:59 PM	6-11:59 PM	Unknown	
<21	Male	2,283	7,000	17,744	10,712	832	38,571
	% Total	5.9%	18.1%	46.0%	27.8%	2.2%	
	Female	1,102	5,352	13,714	7,243	629	28,040
	% Total	3.9%	19.1%	48.9%	25.8%	2.2%	
	Total	3,391	12,369	31,491	17,981	1,463	66,695
% Total	5.1%	18.5%	47.2%	27.0%	2.2%		
21-34	Male	6,025	15,837	28,555	14,568	1,355	66,340
	% Total	9.1%	23.9%	43.0%	22.0%	2.0%	
	Female	2,248	12,615	22,671	8,846	964	47,344
	% Total	4.7%	26.6%	47.9%	18.7%	2.0%	
	Total	8,284	28,493	51,311	23,446	2,332	113,866
% Total	7.3%	25.0%	45.1%	20.6%	2.0%		
35-54	Male	4,197	17,503	29,229	13,190	1,413	65,532
	% Total	6.4%	26.7%	44.6%	20.1%	2.2%	
	Female	1,736	12,849	23,182	8,438	1,149	47,354
	% Total	3.7%	27.1%	49.0%	17.8%	2.4%	
	Total	5,939	30,402	52,483	21,652	2,576	113,052
% Total	5.3%	26.9%	46.4%	19.2%	2.3%		
55+	Male	1,009	9,693	15,820	5,071	742	32,335
	% Total	3.1%	30.0%	48.9%	15.7%	2.3%	
	Female	392	6,178	11,622	2,733	564	21,489
	% Total	1.8%	28.7%	54.1%	12.7%	2.6%	
	Total	1,402	15,897	27,486	7,815	1,312	53,912
% Total	2.6%	29.5%	51.0%	14.5%	2.4%		
Total	Male	13,793	51,527	94,161	44,678	4,966	209,125
	% Total	6.6%	24.6%	45.0%	21.4%	2.4%	
	Female	5,576	37,938	73,138	27,873	3,785	148,310
	% Total	3.8%	25.6%	49.3%	18.8%	2.6%	
	Total	21,368	92,861	173,671	77,209	10,437	375,546
% Total	5.7%	24.7%	46.2%	20.6%	2.8%		

Male drivers had a much higher frequency of crashes during the midnight to 6 AM time period than females (Table 37). For all ages, male drivers had 6.6 percent of their crashes during these late nighttime hours versus 3.6 percent for female drivers. For drivers age 21-34, male drivers had 9.1 percent of their crashes during late nighttime hours versus 4.8 percent for female drivers.

Note: This report counts drivers, not crashes. Drivers of parked vehicles are excluded. Totals include drivers whose age or gender is unknown. Of all male drivers under age 21 involved in crashes in the state, 46.0% (17,744/38,571) were involved in crashes between 12 PM and 5:59 PM.

Table 38. Percentage of Crashes by Driver Age and Time of Day–1997

Age	12:00 AM 2:59 AM	3:00 AM 5:59 AM	6:00 AM 8:59 AM	9:00 AM 11:59 AM	12:00 PM 2:59 PM	3:00 PM 5:59 PM	6:00 PM 8:59 PM	9:00 PM 11:59 PM	UNK
<16	4.4%	1.3%	7.0%	11.0%	18.8%	28.8%	19.3%	7.2%	2.2%
16-17	2.2%	0.7%	10.2%	7.8%	16.1%	32.5%	17.0%	11.5%	2.1%
18-20	4.3%	2.2%	8.6%	10.4%	18.5%	27.7%	15.5%	10.3%	2.5%
21-24	4.5%	3.8%	10.9%	11.7%	18.9%	26.1%	13.5%	8.3%	2.2%
25-29	3.7%	3.5%	12.9%	12.6%	18.0%	26.8%	13.1%	7.2%	2.2%
30-34	3.0%	3.0%	13.4%	13.5%	18.9%	26.5%	13.2%	6.5%	2.1%
35-54	2.4%	2.8%	13.0%	13.9%	19.4%	27.0%	12.8%	6.3%	2.4%
55-64	1.5%	2.2%	11.7%	17.2%	21.9%	26.6%	11.5%	5.0%	2.4%
65-69	1.1%	0.9%	9.0%	21.0%	25.5%	25.2%	11.2%	3.5%	2.6%
70-74	0.6%	0.7%	8.5%	21.7%	27.2%	26.1%	9.3%	3.2%	2.7%
75-79	0.7%	0.3%	6.9%	22.8%	27.3%	27.0%	9.5%	3.0%	2.6%
80+	0.9%	0.7%	6.7%	23.2%	29.7%	26.2%	7.7%	2.4%	2.4%
Unknowr	4.7%	3.3%	9.4%	11.0%	16.1%	22.8%	13.1%	9.4%	10.1%
TOTAL	3.0%	2.6%	11.4%	13.3%	19.3%	26.9%	13.2%	7.3%	2.9%

Note: Highlighting indicates an area where there is over-representation.

Table 39. Percentage of Fatal Crashes by Driver Age and Time of Day–1997

Age	12:00 AM 2:59 AM	3:00 AM 5:59 AM	6:00 AM 8:59 AM	9:00 AM 11:59 AM	12:00 PM 2:59 PM	3:00 PM 5:59 PM	6:00 PM 8:59 PM	9:00 PM 11:59 PM	UNK
<16	0.0%	10.0%	10.0%	20.0%	10.0%	20.0%	20.0%	10.0%	0.0%
16-17	3.5%	0.0%	8.2%	14.1%	12.9%	23.5%	15.3%	21.2%	1.2%
18-20	12.9%	6.5%	8.9%	9.7%	12.9%	16.9%	11.3%	20.2%	0.8%
21-24	14.4%	8.6%	5.8%	11.5%	10.8%	16.5%	16.5%	14.4%	1.4%
25-29	9.0%	9.0%	13.9%	12.5%	11.1%	20.1%	13.2%	10.4%	0.7%
30-34	13.3%	7.0%	17.5%	10.5%	14.0%	16.1%	9.8%	11.9%	0.0%
35-54	8.1%	6.7%	11.4%	12.8%	16.1%	19.5%	13.0%	11.4%	0.9%
55-64	5.9%	5.0%	9.9%	14.9%	26.7%	19.8%	9.9%	7.9%	0.0%
65-69	0.0%	4.8%	7.1%	16.7%	23.8%	14.3%	19.0%	14.3%	0.0%
70-74	0.0%	0.0%	0.0%	31.0%	27.6%	24.1%	6.9%	10.3%	0.0%
75-79	0.0%	0.0%	10.7%	42.9%	21.4%	7.1%	10.7%	7.1%	0.0%
80+	0.0%	2.2%	6.7%	24.4%	31.1%	17.8%	4.4%	11.1%	2.2%
Unknowr	7.1%	7.1%	14.3%	7.1%	0.0%	0.0%	21.4%	42.9%	0.0%
TOTAL	8.4%	6.1%	10.7%	13.9%	16.0%	18.4%	12.7%	13.1%	0.7%

Note: Highlighting indicates an area where there is over-representation.

Tables 38 and 39 provide percentages of crashes by three-hour time periods for drivers grouped by age. For example, of all the crashes involving age 16-17 drivers, 32.5 percent occurred during the late afternoon 3-6 PM time period. For this same age group, 23.5 percent of their fatal crash involvement also occurred during the 3-6 PM time period. Percentages are highlighted if, for the driver age group, the percentage of crash involvement is higher than for the average for all drivers. Note that older drivers (age 65 and older) had higher percentages of both fatal crashes and total crashes during the mid-day 9 AM-12 PM and 12 PM-3 PM periods than other drivers. Also note that drivers age 16-17 have higher percentages of both fatal crashes and total crashes during the 3 PM to 12 AM time periods and ages 21-24 drivers had higher percentages of both fatal crashes and total crashes during the midnight to 6 AM periods.

people

Table 40. Driver Physical Status by Age–1997

Age	Normal	Had Been Drinking	Physical Handicaps	Illness	Fatigued	Asleep	Medication/ Drugs	Unknown	Total
<15	354	5	0	0	0	0	1	54	414
15	547	10	0	0	0	0	0	82	639
16	11,320	60	4	7	13	13	10	1,663	13,090
17	12,901	134	3	15	22	20	13	1,848	14,956
18	12,209	227	5	16	36	43	16	1,815	14,367
19	10,317	238	5	11	29	44	10	1,483	12,137
20	9,326	247	4	10	32	37	9	1,427	11,092
21	8,451	350	4	13	21	27	4	1,265	10,135
22	7,803	346	4	7	12	13	3	1,197	9,385
23	7,101	305	5	10	17	20	6	1,117	8,581
24	7,076	312	3	7	14	15	3	1,025	8,455
25-34	63,817	2,814	40	93	133	152	81	10,180	77,310
35-44	55,636	2,370	59	113	105	92	102	9,411	67,888
45-54	37,353	1,017	49	117	62	59	46	6,461	45,164
55-64	20,917	352	37	81	24	24	20	3,892	25,347
65-74	14,119	152	46	75	25	29	15	2,721	17,182
75-84	7,680	34	31	60	22	12	11	1,546	9,396
85+	1,579	33	14	12	6	5	2	336	1,987
Unknown	964	64	4	4	1	1	4	26,979	28,021
Total	289,470	9,070	317	651	574	606	356	74,502	375,546

Note: Drivers of parked vehicles are excluded.

Teenage drivers were more likely than older drivers to be reported as being fatigued, asleep or affected by medication or drugs when involved in a crash. Drivers ages 18 to 20 were the most likely to be reported as being fatigued or asleep (Table 40). Drivers age 21-24 were most likely to be reported as *Had Been Drinking*.

Table 41. Drivers in Crashes by Age Group and Severity—1997

Age	Number of Licensed Drivers	Percent of Total Drivers	Percent of Total Drivers in Crashes	Percent of Drivers in Age Group Involved in Crashes	Number of Drivers Involved in Crashes	Drivers in Fatal Crashes	Drivers in Injury Crashes	Drivers in Property Damage Crashes
<15	0	0.00%	0.110%	N/A	414	4	168	242
15	0	0.00%	0.170%	N/A	639	6	223	410
16	41,030	1.05%	3.49%	31.9%	13,090	52	3,797	9,241
17	63,100	1.61%	3.98%	23.7%	14,956	33	4,182	10,741
18	69,705	1.78%	3.83%	20.6%	14,367	50	4,023	10,294
19	69,343	1.77%	3.23%	17.5%	12,137	40	3,331	8,766
20	71,587	1.82%	2.95%	15.5%	11,092	34	3,029	8,029
21	63,964	1.63%	2.70%	15.8%	10,135	42	2,749	7,344
22	67,394	1.72%	2.50%	13.9%	9,385	33	2,388	6,964
23	69,920	1.78%	2.28%	12.3%	8,581	38	2,325	6,218
24	71,596	1.82%	2.25%	11.8%	8,455	26	2,264	6,165
25-34	752,693	19.18%	20.59%	10.3%	77,310	287	20,183	56,840
35-44	865,157	22.05%	18.08%	7.8%	67,888	241	17,114	50,533
45-54	706,736	18.01%	12.03%	6.4%	45,164	205	11,242	33,717
55-64	459,610	11.71%	6.75%	5.5%	25,347	101	6,303	18,943
65-74	351,984	8.97%	4.58%	4.9%	17,182	71	4,480	12,631
75+	199,601	5.09%	3.03%	5.7%	11,383	73	2,987	8,323
Unknown	0	0.00%	7.46%	N/A	28,021	14	2,959	25,048
Total	3,923,420				375,546	1,350	93,747	280,449

Legend: N/A=Not Applicable

Note: Drivers of parked vehicles excluded.

Driver crash involvement varied greatly by driver age. At first glance (see Tables 41 and 42), younger drivers (under age 20) seem to make up only a small percentage (14.8 percent) of the total crash problem. However, when crash involvement is controlled for exposure based on licensed drivers, the picture changes drastically. Table 42

provides detailed crash involvement data by age for under age 25 drivers. The number of drivers age 65 and above involved in fatal crashes decreased from 164 in 1996 to 144 in 1997, while the number of 16-year-old drivers in fatal crashes increased from 41 in 1996 to 52 in 1997.

people

Table 42. Total Crashes and Fatal Crashes per Licensed Driver by Age–1997

Age	Drivers in Fatal Crashes	% of Total Drivers in Fatal Crashes	Drivers in All Crashes	% of Total Drivers in All Crashes	Licensed Drivers	% of Licensed Drivers	Drivers in Fatal Crashes per 1,000 Licensed Drivers	Drivers in All Crashes per 1,000 Licensed Drivers
0-15	10	0.7%	1,053	0.3%	0	0.0%	N/A	N/A
16-19	175	13.0%	54,550	14.5%	243,178	6.2%	0.72	224.3
20-24	173	12.8%	47,648	12.7%	344,461	8.8%	0.50	138.3
25-34	287	21.3%	77,310	20.6%	752,693	19.2%	0.38	102.7
35-44	241	17.9%	67,888	18.1%	865,157	22.1%	0.28	78.5
45-54	205	15.2%	45,164	12.0%	706,736	18.0%	0.29	63.9
55-64	101	7.5%	25,347	6.7%	459,610	11.7%	0.22	55.1
65-74	71	5.3%	17,182	4.6%	351,984	9.0%	0.20	48.8
75+	73	5.4%	11,383	3.0%	199,601	5.1%	0.37	57.0
Unknown	14	1.0%	28,021	7.5%	0	0.0%	N/A	N/A
TOTAL	1,350	100.0%	375,546	100.0%	3,923,420	100.0%	0.34	95.7

Note: Drivers of parked vehicles are excluded.

Legend: N/A=Not Applicable

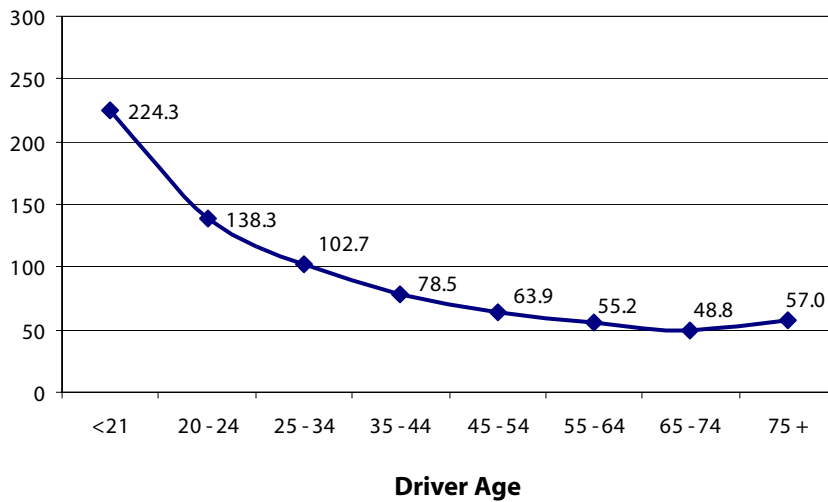
As shown in Table 42, drivers in the 16- to 19-year-old age group made up only 6.2 percent of the State’s licensed drivers while they accounted for 14.5 percent of the total drivers in crashes and 13.0 percent of the drivers in fatal crashes.

Drivers under 20 years old were involved in crashes at rates per 1,000 licensed drivers more than double that of the 25- to 34-year-olds, and four times greater than drivers in the over 45 age groups. Drivers in the 20- to

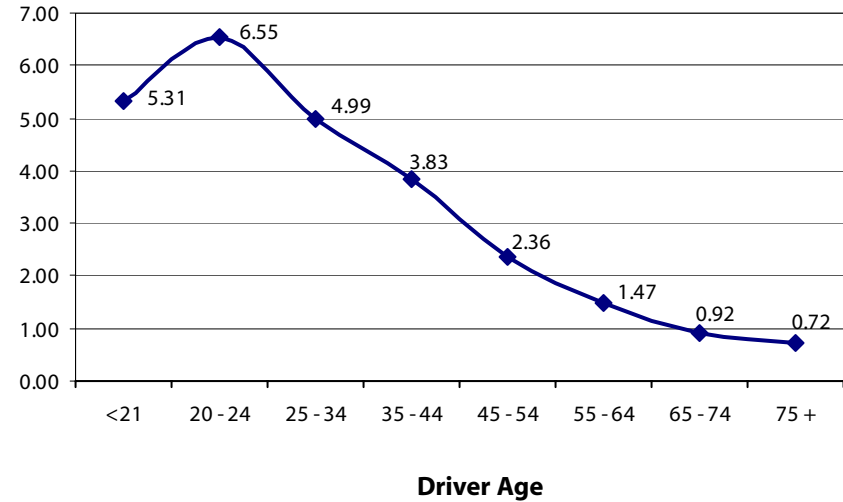
24-year-old group also have higher total crash rates and fatal crash rates than drivers age 25 and older, including the drivers age 75 and older. The age involvement patterns are similar for fatal crashes with the exception of an increase in fatal crash involvement for the oldest group of drivers. Drivers under 20 years old were involved in fatal crashes at rates almost double that of the 25- to 34-year-olds, and three times greater than drivers in the over 44 age groups.

Drivers in the 16- to 19-year-old age group had a large increase in involvement in fatal crashes over 1995 (from 141 in 1995 to 188 in 1996 and 175 in 1997). The fatal crash involvement rate per 1,000 licensed drivers was 0.72 in 1997 versus 0.61 in 1995 for these young drivers.

Figure 35. Crash Rates per 1,000 Licensed Drivers by Age Group–1997



Total Crashes



Alcohol Crashes

Figure 36. Fatal Crashes per 1,000 Licensed Drivers by Age Group–1997

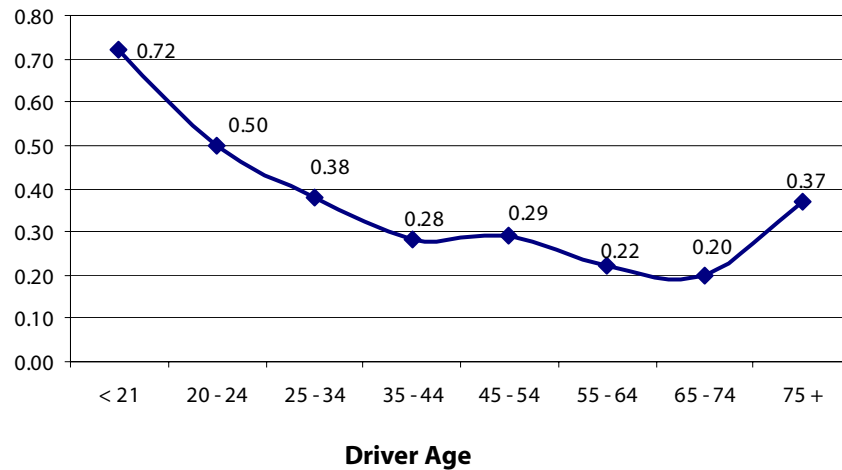


Figure 35

- Drivers under 20 years old were involved in crashes at rates four times greater than drivers age 45+.

Figure 36

- Drivers under 20 years old were involved in fatal crashes at rates three times greater than drivers age 45+.

people

Table 43. In-State and Out-of-State Drivers in Indiana Crashes by Month–1997

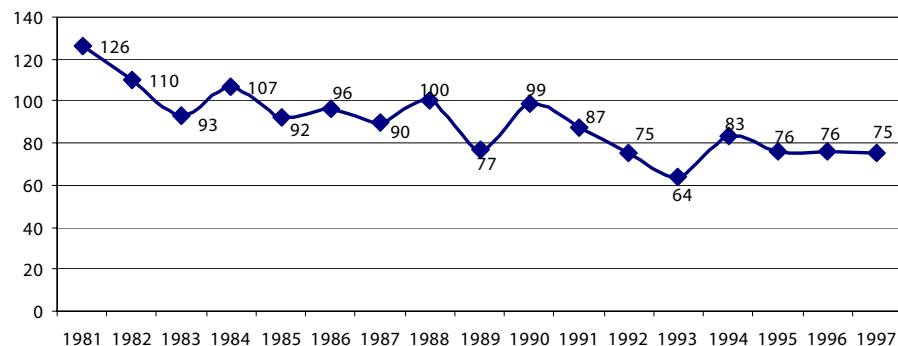
Month	Indiana			Out-of-State			Unknown			Total		
	Ftly	Oth	Tot	Ftly	Oth	Tot	Ftly	Oth	Tot	Ftly	Oth	Tot
January	34	33,115	33,149	6	2,979	2,985	1	3,966	3,967	41	40,060	40,101
February	24	19,605	19,629	2	1,549	1,551	1	2,343	2,344	27	23,497	23,524
March	33	21,900	21,933	4	1,819	1,823	1	2,627	2,628	38	26,346	26,384
April	50	23,547	23,597	3	1,970	1,973	2	2,794	2,796	55	28,311	28,366
May	44	27,975	28,019	3	2,325	2,328	0	3,325	3,325	47	33,625	33,672
June	47	25,166	25,213	11	2,257	2,268	1	3,080	3,081	59	30,503	30,562
July	47	24,619	24,666	2	2,693	2,695	3	2,708	2,711	52	30,020	30,072
August	55	24,920	24,975	1	2,538	2,539	6	2,944	2,950	62	30,402	30,464
September	47	25,257	25,304	6	2,246	2,252	4	2,909	2,913	57	30,412	30,469
October	55	28,660	28,715	5	2,773	2,778	3	2,944	2,947	63	34,377	34,440
November	41	27,637	27,678	7	2,700	2,707	4	2,806	2,810	52	33,143	33,195
December	55	28,604	28,659	4	2,713	2,717	1	2,920	2,921	60	34,237	34,297
Total	532	311,005	311,537	54	28,562	28,616	27	35,366	35,393	613	374,933	375,546

Note: Drivers of parked vehicles are excluded.

Legend: Ftly=Fatalities; Oth=Other; Tot=Total

Table 43 provides information on drivers in crashes by whether the driver had an Indiana or out-of-state driver's license. There were 54 *Out-of-State* licensed drivers killed in Indiana crashes in 1997, a decrease from 69 in 1996.

Figure 37. Pedestrian Fatalities by Year: 1981-1997



Pedestrian and bicyclist involvement in crashes is outlined by month, time of day, day of week and crash severity.

Figure 37

- *Pedestrian fatalities have declined steadily since 1981.*

While overall, 3.3 percent of pedestrian crashes involved a fatality, during evening and nighttime periods the odds that a pedestrian crash will be fatal increases. The highest frequency of pedestrian crashes occurred in 1997 during the late-afternoon, 3-6 PM time period (639), but with a total of 10 fatal crashes during the period, the percentage of pedestrian crashes that were fatal was only 1.6 percent. The highest frequency of fatal pedestrian crashes was 19 during the 9 PM to midnight period. The percentage fatal was 8.7 percent during these late-evening hours. An even higher percentage of fatal crashes—11.8 percent (11/93)—occurred during the midnight to 3 AM period.

Table 44. Crashes Involving Pedestrians by Time of Day and Day of Week—1997

Time	Sun		Mon		Tue		Wed		Thu		Fri		Sat		Total	
	Ftl	Tot	Ftl	Tot	Ftl	Tot	Ftl	Tot	Ftl	Tot	Ftl	Tot	Ftl	Tot	Ftl	Tot
midnight - 3am	1	20	1	7	2	7	0	11	2	10	2	14	3	22	11	93
3am - 6am	1	8	1	6	0	3	1	9	0	6	0	7	1	12	4	51
6am - 9am	0	8	2	41	1	39	1	52	0	38	1	33	0	9	5	221
9am - noon	0	19	0	28	0	31	1	30	1	41	0	36	1	41	3	226
noon - 3pm	1	41	2	54	0	56	1	59	0	52	2	47	1	62	7	371
3pm - 6pm	0	40	2	106	3	91	2	118	1	104	1	112	1	65	10	639
6pm - 9pm	2	38	1	66	3	75	3	74	3	77	2	77	3	53	17	463
9pm - midnight	2	26	2	17	4	29	2	24	5	31	2	41	2	47	19	219
Unknown	0	1	0	2	0	8	0	7	0	4	0	2	0	7	0	31
Total	7	201	11	327	13	339	11	384	12	363	10	369	12	318	76	2,314

See Glossary for definition of a pedestrian crash.

Table counts fatal crashes, not fatalities.

Legend: Ftl=Fatal; Tot=Total

people

Table 45. Crashes Involving Pedestrians by Month and Severity with Fatalities and Injuries by Rural/Urban Locale–1997

Month	Pedestrians									Non-Pedestrians														
	Fatal Crashes			Personal Injury			Property Damage			Total Crashes			Fatalities			Injuries			Fatalities			Injuries		
	Rur	Urb	Tot	Rur	Urb	Tot	Rur	Urb	Tot	Rur	Urb	Tot	Rur	Urb	Tot	Rur	Urb	Tot	Rur	Urb	Tot	Rur	Urb	Tot
January	2	2	4	24	109	133	7	10	17	33	121	154	3	2	5	29	105	134	0	0	0	4	5	9
February	1	2	3	21	103	124	8	8	16	30	113	143	1	2	3	23	95	118	0	0	0	2	1	3
March	1	2	3	25	113	138	4	14	18	30	129	159	1	2	3	20	101	121	0	0	0	3	1	4
April	4	4	8	23	142	165	4	22	26	31	168	199	4	4	8	20	122	142	0	0	0	2	5	7
May	4	3	7	22	165	187	6	18	24	32	186	218	4	3	7	17	145	162	0	0	0	2	5	7
June	5	5	10	30	174	204	8	16	24	43	195	238	5	5	10	24	137	161	1	0	1	3	4	7
July	4	3	7	26	175	201	5	20	25	35	198	233	4	3	7	18	135	153	0	0	0	1	3	4
August	3	4	7	40	169	209	6	20	26	49	193	242	3	4	7	40	131	171	0	0	0	3	2	5
September	4	4	8	33	159	192	8	7	15	45	170	215	4	4	8	28	134	162	0	0	0	2	5	7
October	1	4	5	24	164	188	4	21	25	29	189	218	1	4	5	23	149	172	0	0	0	2	4	6
November	4	3	7	22	99	121	3	13	16	29	115	144	3	3	6	19	94	113	0	0	0	1	2	3
December	1	6	7	32	92	124	8	12	20	41	110	151	0	6	6	30	82	112	1	0	1	1	1	2
Total	34	42	76	322	1,664	1,986	71	181	252	427	1,887	2,314	33	42	75	291	1,430	1,721	2	0	2	26	38	64

Note: Non-pedestrian includes all others involved in a pedestrian crash. See Glossary for definition of a pedestrian crash.
 Legend: Rur=Rural; Urb=Urban; Tot=Total

There were 2,314 crashes involving pedestrians in 1997, a decline of 4.3 percent from 2,417 in 1996. Of all pedestrian crashes, 3.3 percent were fatal (Table 45). *Property Damage* pedestrian crashes occurred when a pedestrian was cited as a cause for the crash but no pedestrian was reported as killed or injured.

Although pedestrian crashes made up only 1.1 percent of all crashes, they contributed to 9.0 percent of all fatal crashes and 7.9 percent of all fatalities. While most of the crashes (81.5 percent) were concentrated in urban locales, 44.1 percent of fatal crashes involving pedestrians occurred in rural locales. The result is a rural fatal crash rate of 8.0 fatal pedestrian crashes per 100 pedestrian crashes, almost four times the urban rate of 2.2 fatal pedestrian crashes per 100 pedestrian crashes.

Figure 38. Crashes Involving Pedestrians by Month–1997

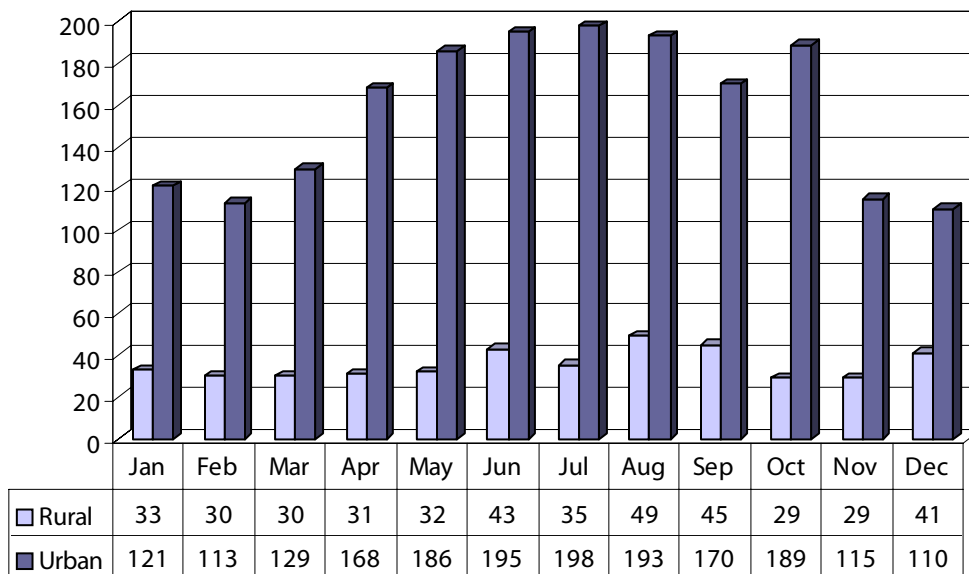


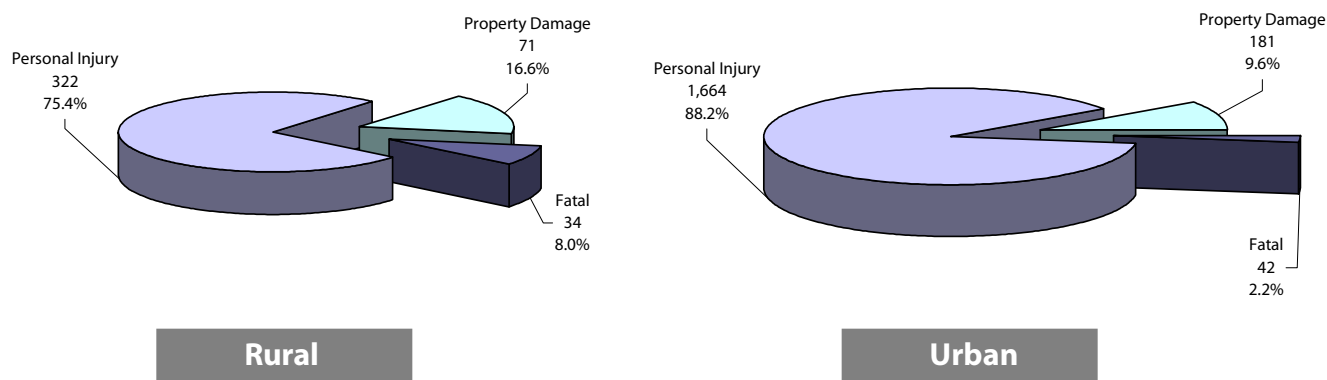
Figure 38

- *Urban pedestrian crashes have higher frequencies during the warmer months between April and October.*

Figure 39

- *In urban locales, 2.2 percent of pedestrian crashes were fatal; in rural locales the percentage fatal was 8.0 percent.*
- *In urban locales, 88.2 percent of pedestrian crashes were personal injury; in rural locales the percentage for personal injury was 75.4 percent.*

Figure 39. Crashes Involving Pedestrians by Severity–1997



people

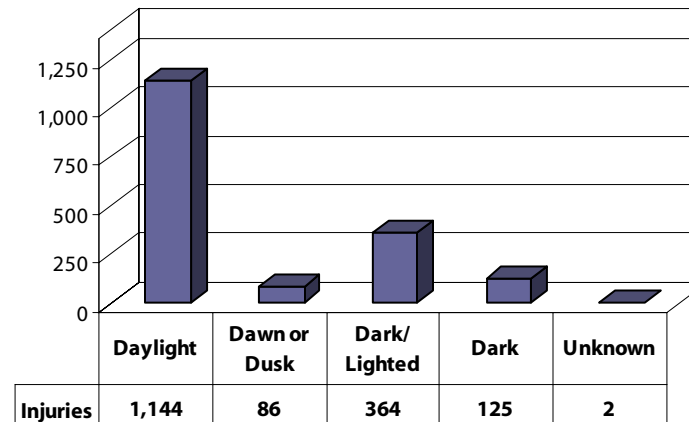
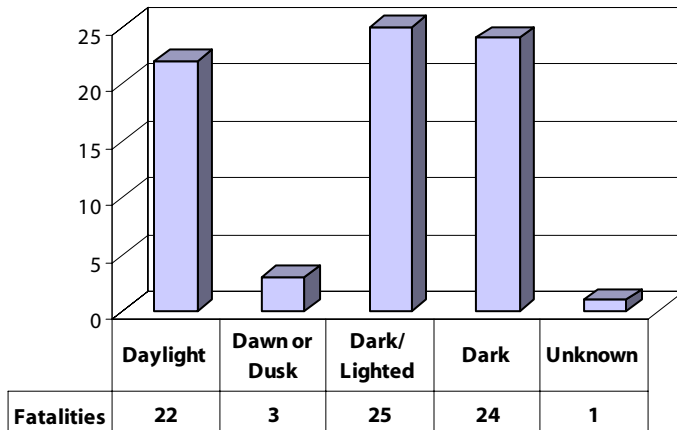
Table 46. Pedestrian Fatalities and Injuries by Age and Light Condition—1997

Age	Daylight		Dawn/ Dusk		Dark/ Lighted		Dark		Unknown		Totals		
	Ftl	Inj	Ftl	Inj	Ftl	Inj	Ftl	Inj	Ftl	Inj	Ftl	Inj	Total
0 - 4	0	79	0	8	0	12	1	0	1	0	2	99	101
5 - 9	6	253	0	19	0	19	2	4	0	0	8	295	303
10 - 14	4	169	0	11	0	22	1	8	0	1	5	211	216
15 - 19	1	130	0	15	3	58	2	18	0	0	6	221	227
20 - 24	0	77	1	7	1	51	1	22	0	0	3	157	160
25 - 34	2	114	0	5	3	60	5	31	0	0	10	210	220
35 - 44	2	94	0	4	6	52	3	10	0	0	11	160	171
45 - 54	1	69	0	4	6	41	5	9	0	0	12	123	135
55 - 64	1	36	0	5	5	18	2	5	0	0	8	64	72
65 - 74	2	30	1	2	1	5	0	9	0	0	4	46	50
75 - 84	1	16	0	1	0	2	2	0	0	0	3	19	22
85+	2	4	0	1	0	2	0	0	0	0	2	7	9
Unknown	0	73	1	4	0	22	0	9	0	1	1	109	110
Total	22	1,144	3	86	25	364	24	125	1	2	75	1,721	1,796

See Glossary for definition of a pedestrian crash.

Legend: Ftl=Fatalities; Inj=Injuries

Figure 40. Pedestrian Fatalities and Injuries by Light Conditions—1997



Children under age 15 were 20.0 percent (15 of 75) of the pedestrians killed in 1997 (Table 46), up from 10.5 percent (eight of 76) in 1996. An even greater percentage of injured pedestrians, 35.2 percent (605 of 1,721), were under age 15. The severity of pedestrian injuries was greater when the light conditions were dark. Thirty-two percent of the pedestrian fatalities occurred under dark conditions, but only seven percent of the injuries. During daylight the opposite was true—29 percent of the fatalities and 66.5 percent of the injuries to pedestrians occurred during daylight.

The odds that a pedestrian struck in a crash will die is much greater for older pedestrians. For pedestrians age 75 and older, 16.1 percent (five of 31) suffered fatal injuries; for children under age 15, 2.4 percent (15 of 620) suffered fatal injuries.

Figure 40

- *While most pedestrian injuries occurred during daylight conditions, the most fatalities occurred under dark/lighted and dark conditions.*

Figure 41. Crashes by Pedestrian Action–1997

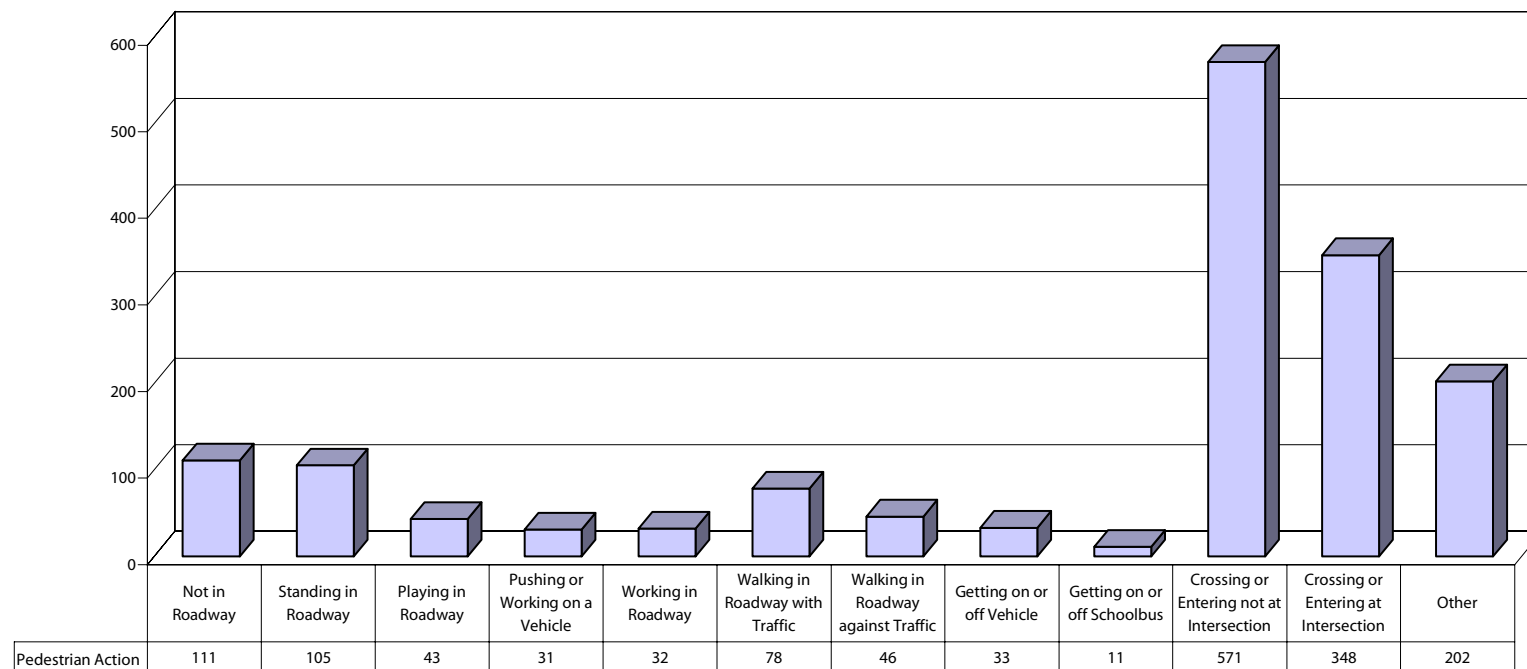


Figure 41

- *The highest frequency of pedestrian crashes occurred when a pedestrian crossed or entered the roadway at a location other than an intersection.*
- *More crashes (78) occurred when a pedestrian was walking in the roadway in the same direction as traffic than when walking against traffic (46).*

people

Bicyclist fatalities have averaged 10 per year over the past five years compared to 19 per year over the previous five-year period. More analysis is needed to identify the reasons for this reduction. There are no data available on the numbers of Indiana bicyclists by year, how much they utilize a bicycle, what times of the day or the roadways on which they choose to travel. There have been significant increases in the numbers of miles of bikeways in Indiana that may have diverted bicycle travel to safer roadways.

The number of bicyclist fatalities for children under age 16 has declined from 11 in 1989 and nine in 1988 to four in both 1996 and 1997. This may be the result of less overall dependence on bicycles as a mode of transportation by children, or it may be the payoff from numerous bicycle safety programs targeted at school-age children.

No data is available on the observed usage of bicyclist's helmets but none of the Indiana bicyclist fatalities in 1997 and only one of the 70 bicyclist fatalities during the 1992-1997 period were reported to have been wearing a helmet.

Figure 42. Bicyclist Fatalities by Year: 1981-1997

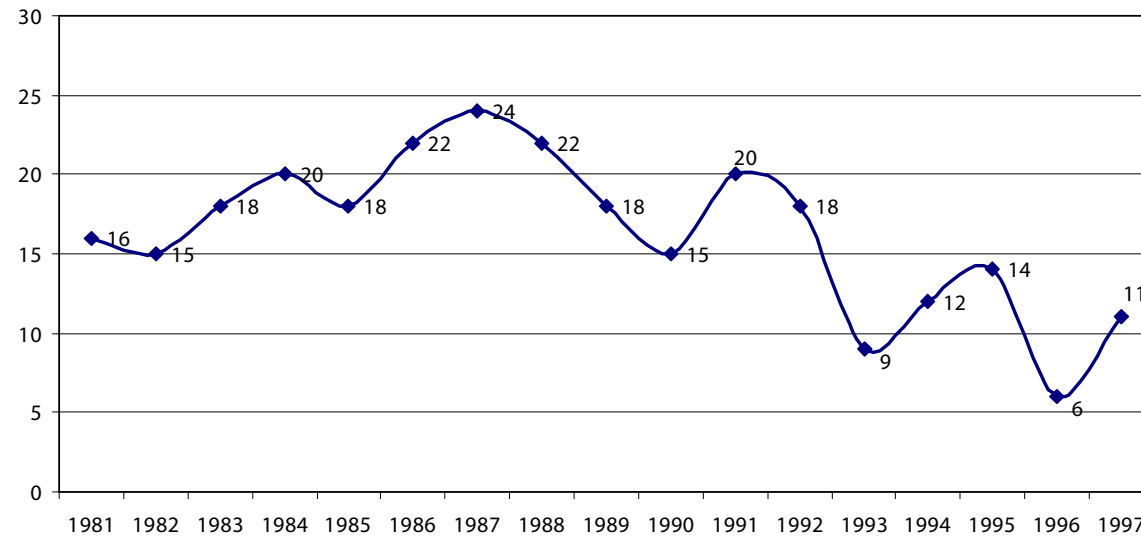


Figure 42

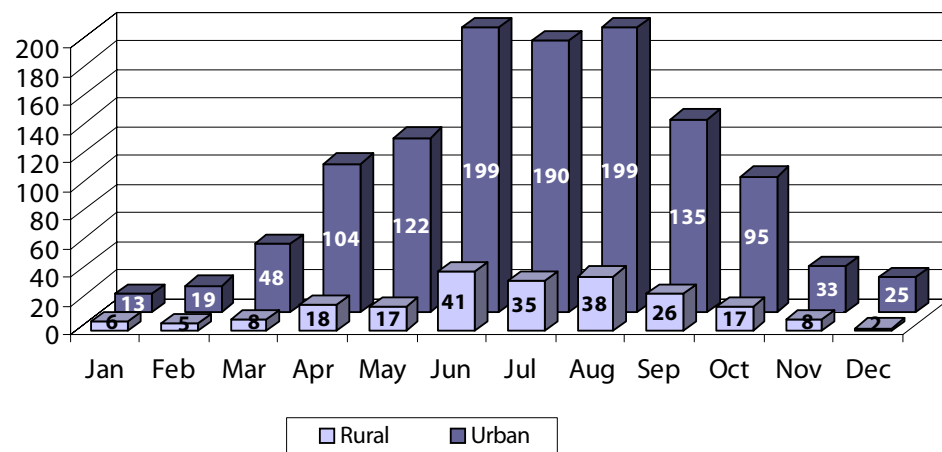
- *Bicyclist fatalities decreased from 14 in 1995 to six in 1996, but increased to 11 in 1997.*
- *The trend for bicyclist fatalities has been decreasing since the peak year of 1987 when there were 24 fatalities.*

Table 47. Bicycle Crashes by Month and Severity by Rural/Urban Locale–1997

Month	Personal Injury									Property Damage									Total Crashes									Bicyclists									Non-Bicyclists								
	Fatal Crashes			Injury			Damage			Total			Fatalities			Injuries			Fatalities			Injuries			Fatalities			Injuries																	
	Rur	Urb	Tot	Rur	Urb	Tot	Rur	Urb	Tot	Rur	Urb	Tot	Rur	Urb	Tot	Rur	Urb	Tot	Rur	Urb	Tot	Rur	Urb	Tot	Rur	Urb	Tot	Rur	Urb	Tot															
January	0	0	0	5	9	14	1	4	5	6	13	19	0	0	0	2	8	10	0	0	0	3	1	4																					
February	0	0	0	5	17	22	0	2	2	5	19	24	0	0	0	5	15	20	0	0	0	0	2	2																					
March	0	0	0	6	41	47	2	7	9	8	48	56	0	0	0	6	35	41	0	0	0	0	7	7																					
April	1	1	2	14	93	107	3	10	13	18	104	122	1	1	2	8	79	87	0	0	0	6	16	22																					
May	0	1	1	14	109	123	3	12	15	17	122	139	0	1	1	10	95	105	0	0	0	4	17	21																					
June	3	1	4	34	169	203	4	29	33	41	199	240	2	1	3	30	148	178	1	0	1	10	26	36																					
July	0	2	2	33	165	198	2	23	25	35	190	225	0	2	2	30	151	181	0	0	0	5	17	22																					
August	1	2	3	29	172	201	8	25	33	38	199	237	1	2	3	25	155	180	0	0	0	9	24	33																					
September	0	1	1	20	120	140	6	14	20	26	135	161	0	0	0	19	114	133	0	1	1	2	10	12																					
October	0	0	0	14	90	104	3	5	8	17	95	112	0	0	0	12	81	93	0	0	0	2	9	11																					
November	2	0	2	3	31	34	3	2	5	8	33	41	0	0	0	2	27	29	2	0	2	2	4	6																					
December	0	0	0	1	21	22	1	4	5	2	25	27	0	0	0	1	18	19	0	0	0	0	4	4																					
Total	7	8	15	178	1,037	1,215	36	137	173	221	1,182	1,403	4	7	11	150	926	1,076	3	1	4	43	137	180																					

Legend: Rur=Rural; Urb=Urban; Tot=Total
 See definitions for the definition of a bicycle crash.

Figure 43. Bicycle Crashes by Month by Rural/Urban Locale–1997



There were 1,403 crashes involving bicyclists, 15 or 1.1 percent of which were fatal (Table 47). These crashes made up only 0.64 percent of all crashes, but accounted for 1.8 percent of all fatal crashes. Bicyclists were 1.2 percent of all fatalities. This was lower than the national percentage of 1.4 percent in 1997. Over 84 percent of bicyclist crashes occurred in urban areas.

Figure 43

- Like pedestrian crashes, bicycle crashes occurred most frequently in the warmer months between April and October.

people

Bicycle crashes occurred most frequently during the afternoon hours with the peak frequency of 194 between 5 and 6 PM (Table 48).

Table 48. Bicycle Crashes by Time of Day and Day of Week–1997

Time	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Total
midnight - 1 am	3	0	0	0	3	0	1	7
1 - 2 am	1	0	1	0	2	0	1	5
2 - 3 am	0	0	0	0	1	0	1	2
3 - 4 am	0	0	0	0	0	0	0	0
4 - 5 am	0	1	0	0	1	0	1	3
5 - 6 am	0	1	2	1	2	1	1	8
6 - 7 am	0	1	1	3	5	2	1	13
7 - 8 am	1	9	8	7	6	4	0	35
8 - 9 am	0	3	5	3	1	5	3	20
9 - 10 am	2	7	5	3	4	4	6	31
10 - 11 am	1	5	6	3	6	6	3	30
11 - noon	7	7	10	8	12	9	4	57
noon - 1 pm	12	13	10	11	8	10	16	80
1 - 2 pm	2	12	13	6	13	12	14	72
2 - 3 pm	12	10	14	16	22	19	16	109
3 - 4 pm	3	22	27	16	26	26	18	138
4 - 5 pm	15	23	26	27	26	31	24	172
5 - 6 pm	21	32	25	31	36	32	17	194
6 - 7 pm	8	20	29	23	24	30	15	149
7 - 8 pm	4	14	25	21	19	15	9	107
8 - 9 pm	9	6	14	7	12	15	5	68
9 - 10 pm	6	3	4	7	8	5	8	41
10 - 11 pm	3	2	2	2	3	6	7	25
11 - midnight	2	1	0	3	1	1	3	11
Unknown	2	7	2	5	2	3	5	26
Total	114	199	229	203	243	236	179	1,403

See Glossary for the definition of a bicycle crash.

Table 49. Bicyclist Fatalities or Injuries by Age, Gender and Injury Severity–1997

Age	Fatalities			Serious			Moderate			Possible			Total*		
	Male	Fem	Tot	Male	Fem	Tot	Male	Fem	Tot	Male	Fem	Tot	Male	Fem	Tot
0 - 4	0	0	0	1	0	1	5	2	7	4	0	4	10	2	12
5 - 9	3	0	3	14	6	21	81	34	117	48	16	65	146	56	206
10 - 14	1	0	1	31	5	36	116	39	156	98	37	136	246	81	329
15 - 19	1	0	1	11	3	14	58	15	73	51	12	63	121	30	151
20 - 24	0	0	0	5	0	5	35	10	45	17	9	26	57	19	76
25 - 34	2	0	2	6	2	8	29	4	33	34	10	45	71	16	88
35 - 44	2	2	4	5	2	7	14	10	27	30	5	36	51	19	74
45 - 54	0	0	0	2	0	2	7	2	9	17	5	22	26	7	33
55 - 64	0	0	0	4	2	6	5	1	6	2	0	2	11	3	14
65 - 74	0	0	0	2	0	2	4	3	7	2	2	4	8	5	13
75 - 84	0	0	0	1	0	1	0	0	0	2	0	2	3	0	3
85+	0	0	0	0	0	0	1	0	1	1	0	0	2	0	2
Unknown	0	0	0	2	1	6	10	3	38	10	2	42	22	6	86
Total*	9	2	11	84	21	109	365	123	519	316	98	447	774	244	1,087

*Total includes persons whose gender is unknown.

Legend: Fem=Female; Tot=Total.

See Glossary for the definition of a bicycle crash.

For Indiana in 1997, 36 percent (four of 11) of bicyclist fatalities and 50 percent of injured bicyclists were under age 15 (Table 49). Bicyclist injuries tend to be more severe than those of vehicle occupants. Over 10.3 percent (109/1076) of bicyclist injuries were categorized as *Serious* as compared to 8.3 percent for all persons seriously injured in crashes.

Bicyclist fatalities and injuries have been predominately male. Over the five-year period of 1992-1996, 82 percent of the bicyclist fatalities and 72 percent of the bicyclists injured were male. In 1997, 82 percent (nine of 11) of bicyclist fatalities and 71 percent of injured bicyclists were male.

One factor that may contribute to the severity of the injuries and the number of fatalities suffered by bicyclists is their failure to wear helmets.

people

One statistic commonly used for comparison purposes is the percentage of fatally injured drivers who were using a safety restraint. Based upon analysis of the 576 driver fatalities (excluding motorcyclists) reported during 1997 by Indiana's Fatality Analysis Reporting System (FARS), only 28.1 percent (162/576) of the driver fatalities in traffic crashes were using safety restraints (Table 50). This percentage decreased from 32.4 percent in 1996. For passenger fatalities, 26.9 percent (60/223) were restrained, a slight decline from 27.8 percent in 1996.

Table 50. Fatalities by Restraint Usage–1997

Type of Restraint	Driver		Passenger		Unknown		Total	
	Count	Percent	Count	Percent	Count	Percent	Count	Percent
Child Safety Seat	0	0.0%	2	0.9%	0	0.0%	2	0.2%
Child Safety Seat Improperly Used	0	0.0%	1	0.4%	0	0.0%	1	0.1%
Shoulder Belt	1	0.2%	0	0.0%	0	0.0%	1	0.1%
Lap and Shoulder Belt	141	24.5%	49	22.0%	0	0.0%	190	23.7%
Lap Belt	17	3.0%	8	3.6%	0	0.0%	25	3.1%
Safety Belt Improperly Used	0	0.0%	1	0.4%	0	0.0%	1	0.1%
Restraint Used - Type Unknown	3	0.5%	2	0.9%	0	0.0%	5	0.6%
None Used or Not Applicable	361	62.7%	146	65.5%	1	50.0%	508	63.4%
Unknown	53	9.2%	14	6.3%	1	50.0%	68	8.5%
Subtotal	576		223		2		801	
Motorcyclist, mopeds, minibikes, buggies, motorscooters, and all terrain vehicles							49	
Pedestrians and Bicyclists							86	
Total							936	

Source: Fatality Analysis Reporting System, NHTSA
Example: During 1997, 141 of 576 or 24.5% of the driver fatalities were restrained by both lap and shoulder belts.

Figure 44

- Only 24.5 percent of fatally injured drivers were properly restrained by both a lap belt and a shoulder strap.
- Only 22.9 percent of fatally injured passengers were restrained by both a lap belt and a shoulder strap or a Child Safety Seat.

Figure 44. Fatalities by Restraint Usage–1997

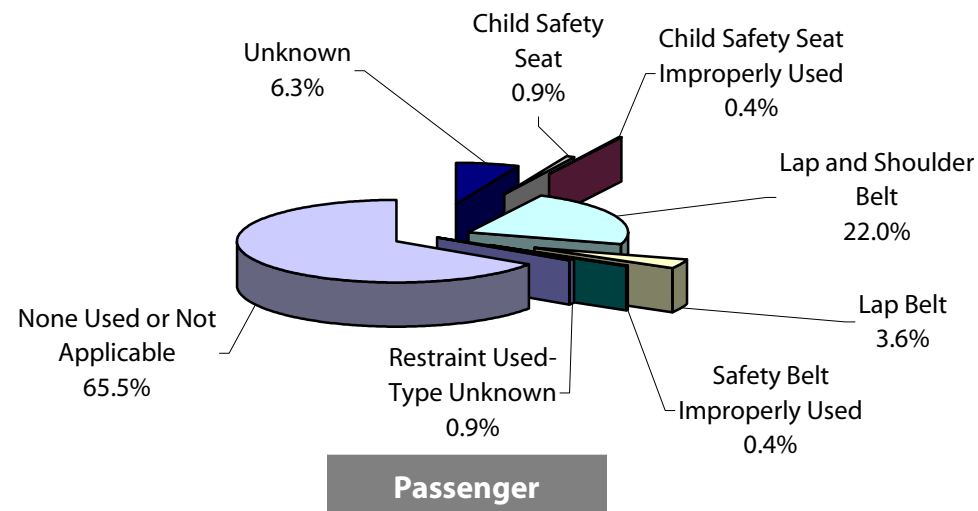
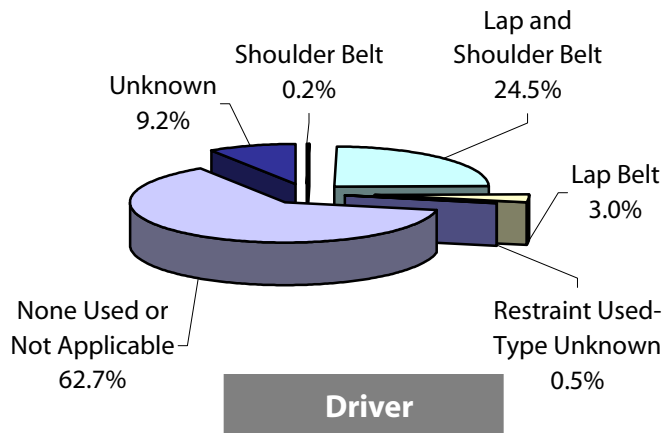


Table 51. Drivers by Age and Restraint Usage–1997

Age	Fatal Injuries							Serious Injuries						
	No Restraint Used		Unknown		Restraint Used		Total	No Restraint Used		Unknown		Restraint Used		Total
	Count	Percent	Count	Percent	Count	Percent		Count	Percent	Count	Percent	Count	Percent	
<21	129	66.2%	14	7.2%	52	26.7%	195	957	58.9%	63	3.9%	604	37.2%	1,624
21-34	155	69.8%	24	10.8%	43	19.4%	222	922	54.7%	106	6.3%	657	39.0%	1,685
35-54	132	67.0%	17	8.6%	48	24.4%	197	617	44.1%	103	7.4%	678	48.5%	1,398
55+	91	48.7%	22	11.8%	74	39.6%	187	252	34.0%	36	4.9%	453	61.1%	741
Unknown	1	100.0%	0	0.0%	0	0.0%	1	55	51.9%	9	8.5%	42	39.6%	106
Total	508	63.3%	77	9.6%	217	27.1%	802	2,803	50.5%	317	5.7%	2,434	43.8%	5,554

Source: Fatality Analysis Reporting System, NHTSA

Note: Motorcycles, mopeds, motorbikes, minibikes, and motorscooters are excluded. Drivers of parked vehicles excluded.

Example: For occupants under age 21 who were fatally injured, 52 of 195, or 26.7% were restrained.

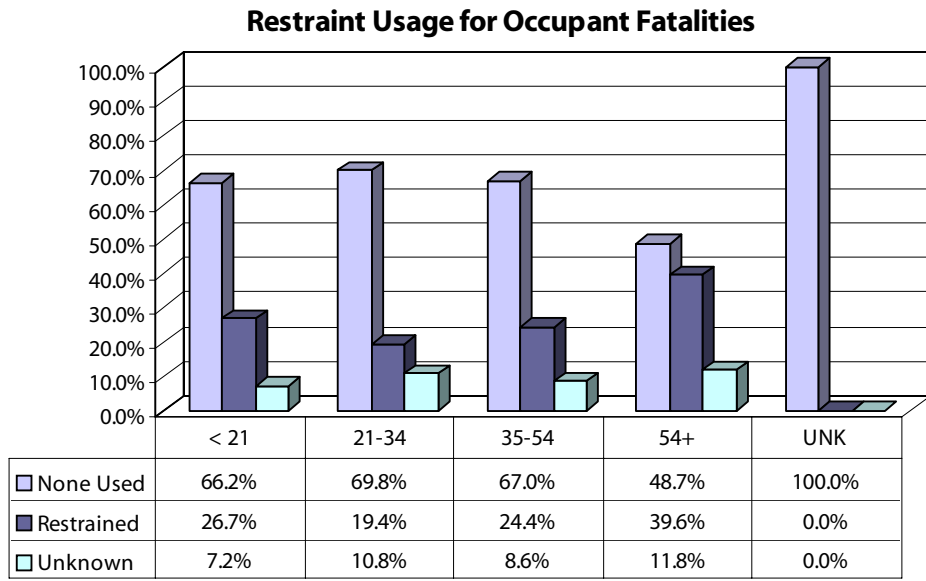
A small number of injured people cannot be accounted for due to the fact that they cannot be linked to a vehicle type in the original dataset.

Age	Moderate Injuries						
	No Restraint Used		Unknown		Restraint Used		Total
	Count	Percent	Count	Percent	Count	Percent	
<21	3,070	44.7%	257	3.7%	3,544	51.6%	6,871
21-34	2,151	43.6%	192	3.9%	2,592	52.5%	4,935
35-54	1,341	37.1%	157	4.3%	2,115	58.5%	3,613
55+	659	30.1%	82	3.7%	1,448	66.1%	2,189
Unknown	155	40.4%	17	4.4%	212	55.2%	384
TOTAL	7,376	41.0%	705	3.9%	9,911	55.1%	17,992

When safety restraint usage of all killed or injured occupants in crashes is examined, fatalities age 21-34 had the lowest percentage of use with 19.4 percent (Table 51). For occupants sustaining *serious* injuries, those under age 21 had the lowest percentage of restraint use (37.2 percent). The under age 21 group was also the *moderate injury* group with the lowest percentage of restraint use (51.6 percent). Note that the percentage restrained increased as the injury severity level decreased. (See Glossary for definitions of Serious and Moderate Injuries.)

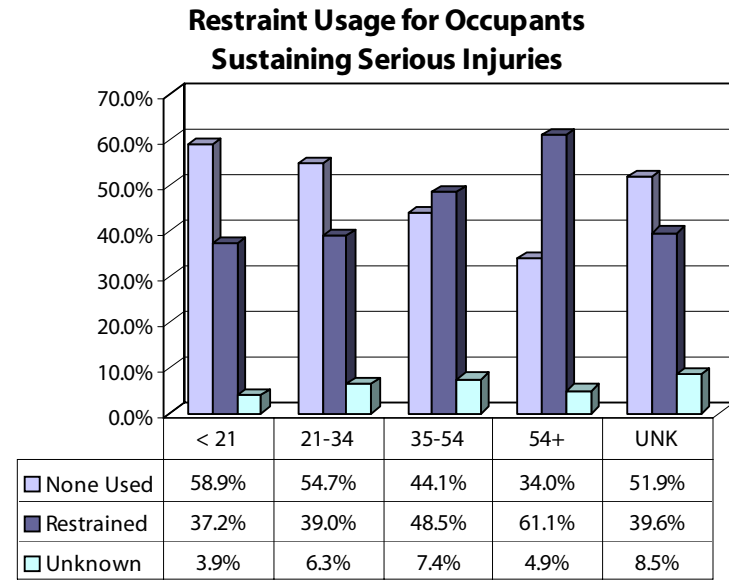
people

Figure 45. Drivers by Age and Restraint Usage–1997



Legend: UNK=Unknown

A small number of injured people cannot be accounted for due to the fact that they cannot be linked to a vehicle type in the original dataset.



Restraint Usage for Occupants Sustaining Moderate Injuries

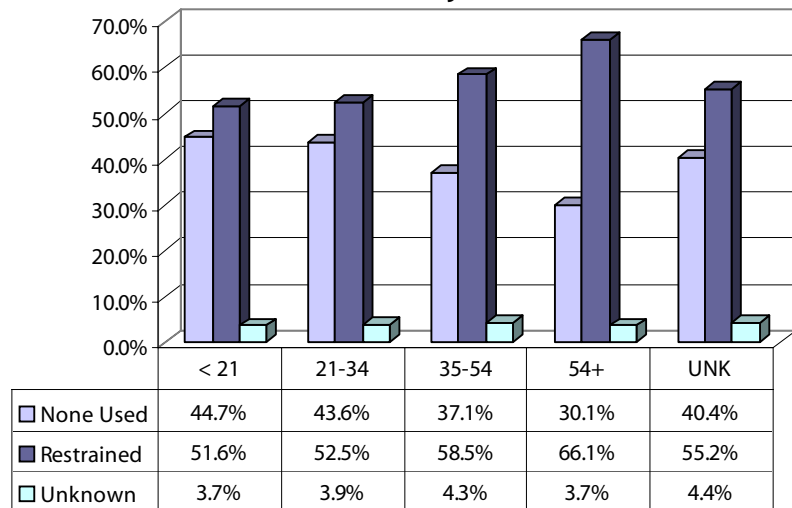


Table 52. Driver Safety Restraint by Age and Gender: 1994-1997

		State Summary											
		1994			1995			1996			1997		
Age and Gender		Yes	No	Unk	Yes	No	Unk	Yes	No	Unk	Yes	No	Unk
<21	Male	19,201	5,647	12,663	22,260	6,117	13,947	21,514	5,168	11,541	22,068	5,083	11,021
	%	51.2%	15.1%	33.8%	52.6%	14.5%	33.0%	56.3%	13.5%	30.2%	57.8%	13.3%	28.9%
	Female	14,491	2,796	8,462	17,159	2,730	9,332	16,675	2,269	7,864	17,612	2,575	7,808
	%	56.3%	10.9%	32.9%	58.7%	9.3%	31.9%	62.2%	8.5%	29.3%	62.9%	9.2%	27.9%
	Sub-total*	33,709	8,449	21,168	39,439	8,851	23,343	38,211	7,446	19,465	39,712	7,668	18,871
%	53.2%	13.3%	33.4%	55.1%	12.4%	32.6%	58.7%	11.4%	29.9%	59.9%	11.6%	28.5%	
21-34	Male	38,395	9,387	23,475	42,296	9,083	23,556	40,443	8,041	19,920	39,941	7,403	18,352
	%	53.9%	13.2%	32.9%	56.4%	12.1%	31.4%	59.1%	11.8%	29.1%	60.8%	11.3%	27.9%
	Female	28,717	3,926	16,181	31,834	3,852	16,683	30,434	3,121	13,809	31,006	3,361	12,928
	%	58.8%	8.0%	33.1%	60.8%	7.4%	31.9%	64.3%	6.6%	29.2%	65.6%	7.1%	27.3%
	Sub-total*	67,151	13,321	39,744	74,187	12,949	40,334	70,924	11,170	33,838	71,010	10,778	31,384
%	55.9%	11.1%	33.1%	58.2%	10.2%	31.6%	61.2%	9.6%	29.2%	62.7%	9.5%	27.7%	
35-54	Male	35,000	6,458	21,497	39,620	6,492	22,393	39,444	5,620	19,500	40,619	5,708	18,627
	%	55.6%	10.3%	34.1%	57.8%	9.5%	32.7%	61.1%	8.7%	30.2%	62.5%	8.8%	28.7%
	Female	25,697	2,505	15,031	30,017	2,631	15,913	29,768	2,242	13,682	31,129	2,540	13,636
	%	59.4%	5.8%	34.8%	61.8%	5.4%	32.8%	65.1%	4.9%	29.9%	65.8%	5.4%	28.8%
	Sub-total*	60,742	8,969	36,618	69,686	9,127	38,396	69,257	7,870	33,274	71,810	8,250	32,363
%	57.1%	8.4%	34.4%	59.5%	7.8%	32.8%	62.7%	7.1%	30.1%	63.9%	7.3%	28.8%	
55+	Male	17,443	2,964	11,914	19,840	2,988	12,530	19,554	2,588	10,499	19,798	2,452	9,988
	%	54.0%	9.2%	36.9%	56.1%	8.5%	35.4%	59.9%	7.9%	32.2%	61.4%	7.6%	31.0%
	Female	12,012	1,112	7,980	13,357	1,095	8,347	12,912	876	6,763	13,770	1,033	6,680
	%	56.9%	5.3%	37.8%	58.6%	4.8%	36.6%	62.8%	4.3%	32.9%	64.1%	4.8%	31.1%
	Sub-total*	29,469	4,079	19,950	33,211	4,086	20,939	32,486	3,466	17,327	33,600	3,491	16,718
%	55.1%	7.6%	37.3%	57.0%	7.0%	36.0%	61.0%	6.5%	32.5%	62.4%	6.5%	31.1%	

*Sub-total includes persons whose gender is unknown.

Legend: Unk=Unknown Restraint Use.

Note: Drivers of parked vehicles are excluded. Motorcycles, mopeds, minibikes and motorscooters are excluded.

Source: ISP Crash Data

people

Table 53. Occupant Safety Restraint Usage in Crashes by Injury Severity: 1994-1997

Severity of Injury	1994			1995			1996			1997		
	Yes	No	Unk	Yes	No	Unk	Yes	No	Unk	Yes	No	Unk
Fatal	224	524	61	227	504	68	244	523	64	217	508	77
<i>% of Fatalities</i>	27.7%	64.8%	7.5%	28.4%	63.1%	8.5%	29.4%	62.9%	7.7%	27.1%	63.3%	9.6%
Serious	2,257	2,963	373	2,474	3,018	361	2,463	2,806	296	2,434	2,803	317
<i>% of Serious Injuries</i>	40.4%	53.0%	6.7%	42.3%	51.6%	6.2%	44.3%	50.4%	5.3%	43.8%	50.5%	5.7%
Moderate	9,260	8,391	921	9,843	8,599	844	9,557	7,682	728	9,911	7,376	705
<i>% of Moderate Injuries</i>	49.9%	45.2%	5.0%	51.0%	44.6%	4.4%	53.2%	42.8%	4.1%	55.1%	41.0%	3.9%
Other Injuries	29,609	10,454	1,935	31,926	10,734	1,989	31,630	9,526	1,772	33,071	9,373	1,671
<i>% of Other Injuries</i>	70.5%	24.9%	4.6%	71.5%	24.0%	4.5%	73.7%	22.2%	4.1%	75.0%	21.2%	3.8%
Total Restraint Use	41,350	22,332	3,290	44,470	22,855	3,262	43,894	20,537	2,860	45,633	20,060	2,770
<i>% of Total Occupants</i>	61.7%	33.3%	4.9%	63.0%	32.4%	4.6%	65.2%	30.5%	4.3%	66.7%	29.3%	4.0%

Example: In 1997 in the State, 63.3% [508/(508+217+77)] of occupants in fatal crashes were restrained.

Overall in 1997, 29.3% of occupants involved in crashes used restraints.

Note: Drivers of parked vehicles are excluded. Motorcyclists, mopeds, motorscooters, minibikes and motorbikes are excluded.

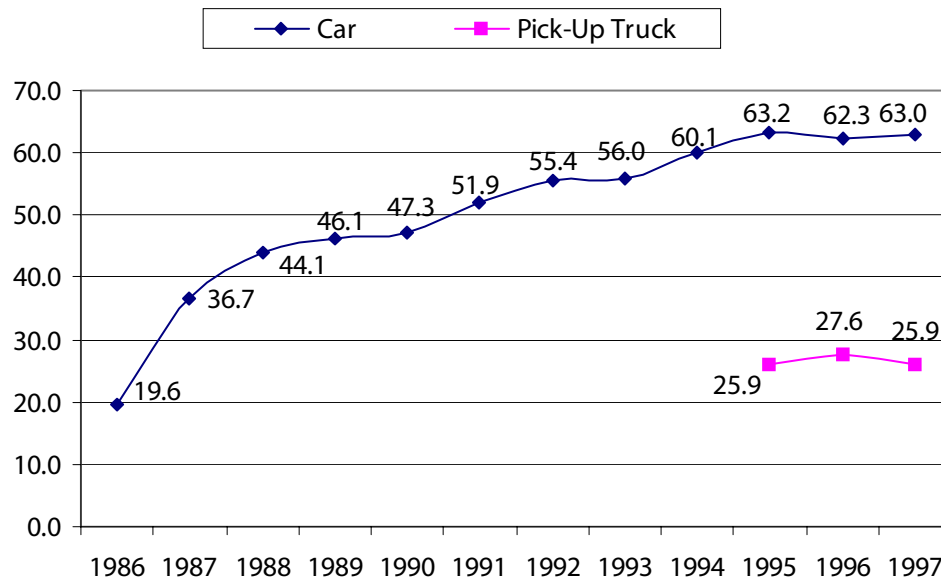
A small number of injured people cannot be accounted for due to the fact that they cannot be linked to a vehicle type in the original dataset.

Legend: Unk-Unknown Restraint Use

Source: ISP Crash Data

Table 52 presents safety restraint usage for all drivers in crashes and uses the same format as tables in previous *Crash Facts* Books. The reason that the percentages unknown are so much higher than those in Table 51 is because uninjured drivers and non-investigated crashes contribute to the data. Uninjured drivers are also hypothesized to be less truthful when asked by the investigating officer whether they and any passengers were using safety restraints.

Figure 46. Safety Belt Usage: 1986-1997



Source: Roadside Observation Survey of Safety Belt and Motorcycle Helmet Use in Indiana, 1998

Figure 46

- The restraint usage rate was more than twice as great for passenger cars than for pickups each year from 1995 through 1997.
- After gradually increasing from 1988 to 1995, the safety belt usage rate stayed fairly constant from 1995 through 1997.

For 1994 and earlier observational surveys, reporting was confined to passenger cars. In 1995, the survey was modified to permit reporting for a wider variety of vehicle types, including minivans, sport utility vehicles and pickup trucks. Large passenger vans were included in 1998. The observations were weighted based on estimates of passenger vehicle miles traveled (VMT) for different roadway types. The roadway types were taken from the FHWA functional classes—a classification system that is based upon the type of service the street or highway is intended to provide. The VMT data was gathered by the Indiana Department of Transportation during 1997. The sample design, weighting and observational procedures are found in the final report (Besel, Caldanaro, Haley and Thomaz, 1999), which is available from the Governor’s Council on Impaired & Dangerous Driving.

The findings for the 1998 observational survey, as summarized in Table 54, indicate that the usage rate for front-seat occupants of passenger cars increased 10.7 percent from 57.9 percent in September 1997 to 68.6 percent in September 1998. For all passenger vehicles the increase in usage was very similar: 10.7 percent increase from 51.1 percent in 1997 to 61.8 percent in 1998.

Occupants of pickup trucks continued to lag behind all other passenger vehicle occupants in restraint use. Overall only 38.0 percent (33.5 percent unweighted) of pickup occupants were restrained. This may reflect the fact that these vehicles are still exempt from Indiana safety belt laws.

Table 54. Safety Belt Usage Summary

Vehicle Type	1997		1998		Relative Precision	95 Percent Confidence Interval	97 - 98 Change in Weighted % Restrained
	Percent Restrained Weighted	Percent Restrained Unweighted	Percent Restrained Weighted	Percent Restrained Unweighted			
Cars	57.9%	60.4%	68.6%	67.7%	1.5%	66.6% - 70.6%	10.7%
Pickups	28.1%	29.7%	38.0%	33.5%	2.7%	36.0% - 40.0%	9.9%
Other Pass.	NA	62.4%	65.3%	64.9%	1.6%	63.3% - 67.3%	NA
All Pass.	51.1%	54.7%	61.8%	60.3%	1.3%	60.2% - 63.4%	10.6%

Legend: Other Pass. = Large Vans, Mini-vans and Sport Utility Vehicles; Large vans not included in 1997 data.

All Pass. = All non-commercial passenger vehicles

Source: Roadside Observation Survey of Safety Belt and Motorcycle Helmet Use in Indiana, 1998

people

The analysis of restraint usage patterns for drivers versus passengers and males versus females in Table 55 includes all sites and is based upon unweighted usage rates. Drivers overall had a slightly higher unweighted usage rate of 61.0 percent than front-seat passengers (57.9 percent). Female drivers had higher usage rates (69.6 percent) than male drivers (55.3 percent). Likewise, the female passenger rate was 63.4 percent compared to 46.6 percent for male front-seat passengers. Note that 88 percent of pickup truck drivers were male and these male pickup drivers had only a 33.0 percent usage rate. Male pickup passengers had the lowest restraint usage rate (22.1 percent) of any subgroup.

When examined by vehicle type, 1998 data reveal that occupants of pickup trucks continue to lag behind all other passenger vehicle occupants in restraint usage. This may reflect the fact that these vehicles are still exempt from Indiana safety belt laws. Large vans, however, which would in most instances be covered by the law, show just a 40.0 percent unweighted restraint usage. This is an area of concern, but large vans comprised only 1.8 percent of vehicles observed. Since pickup trucks comprised 20.4 percent of vehicles observed, improvement in belt usage by their occupants would have more impact upon overall usage numbers and have greater potential for saving lives and reducing serious injuries.

Overall safety belt usage rates for the other vehicle types are much higher. Mini-van occupants exhibited the highest unweighted usage rate (70.5 percent); they were followed by car occupants (67.7 percent) and sport utility vehicle occupants (62.4 percent). The difference in usage by occupants of sport utility vehicles and pickup trucks is striking since such vehicles are often very similar in size and use. As previously noted, some of this difference may be attributed to the very high percentage of male pickup truck drivers; most of the difference is attributable to the exclusion of pickups from the Indiana restraint laws.

Table 55. Indiana 1998 Unweighted Restraint Usage by Vehicle Type, Gender and Role

Vehicle Type	All Drivers				Front-Seat Passengers				Eligible Occupants
	NR	U	R	Percent Restrained	NR	U	R	Percent Restrained	Percent Restrained
Cars	5,155	205	11,404	68.9%	1,701	131	2,972	63.6%	67.7%
Pickups	3,698	145	1,912	34.1%	956	25	428	30.9%	33.5%
Mini-vans	835	66	2,027	70.8%	283	53	648	69.6%	70.5%
Large Vans	288	39	187	39.4%	94	9	68	42.0%	40.0%
SUV	837	49	1,411	62.8%	245	37	387	61.2%	62.4%
All Pass.	10,813	504	16,941	61.0%	3,279	255	4,503	57.9%	60.3%
	Female Drivers				Female Front-Seat Passengers				Both
Cars	2,238	38	5,641	71.6%	1,018	70	2,152	67.9%	70.5%
Pickups	385	5	276	41.8%	461	9	280	37.8%	39.7%
Mini-vans	347	19	1,053	75.2%	178	31	464	72.3%	74.3%
Large Vans	77	8	81	51.3%	48	3	47	49.5%	50.6%
SUV	301	9	621	67.4%	151	18	278	64.8%	66.5%
All Pass.	3,348	79	7,672	69.6%	1,856	131	3,221	63.4%	67.7%
	Male Drivers				Male Front-Seat Passengers				Both
Cars	2,883	53	5,685	66.4%	643	29	764	54.3%	64.7%
Pickups	3,287	42	1,618	33.0%	476	9	135	22.1%	31.8%
Mini-vans	481	14	955	66.5%	98	11	161	62.2%	65.8%
Large Vans	209	13	103	33.0%	44	1	17	27.9%	32.2%
SUV	529	18	778	59.5%	89	9	100	52.9%	58.7%
All Pass.	7,389	140	9,139	55.3%	1,350	59	1,177	46.6%	54.1%

Note: Drivers and passengers with unknown gender included in totals.

Legend: R= Restrained; NR=Not Restrained; U=Unknown Restraint; All Pass.=All non-commercial Passenger vehicles; SUV=Sport Utility Vehicles

Source: Roadside Observation Survey of Safety Belt and Motorcycle Helmet Use in Indiana, 1998.

Table 56. Indiana 1998 Unweighted Restraint Usage by Age and Role

Drivers

Vehicle Type	Young (16-34)		Mid-Adult (35-54)		Older Adult (55+)	
	Count	Percent Restrained	Count	Percent Restrained	Count	Percent Restrained
Cars	6,489	64.1%	6,430	70.7%	3,615	74.2%
Pickups	1,917	31.0%	2,555	35.5%	1,119	35.6%
Mini-vans	659	70.9%	1,706	70.7%	505	71.1%
Large Vans	68	29.4%	301	41.5%	121	39.1%
SUV	921	60.4%	1,068	63.1%	258	69.7%
All Pass.	10,054	57.6%	12,060	61.9%	5,618	65.3%

The Young Adult (ages 16-34) age group had the lowest usage rate as either a driver (57.6 percent) or a front-seat passenger (48.1 percent). The group with the highest usage rate was Older Adult passengers at 71.1 percent.

Passengers

Vehicle Type	Child (6-15)		Young (16-34)		Mid-Adult (35-54)		Older Adult (55+)	
	Count	Percent Restrained	Count	Percent Restrained	Count	Percent Restrained	Count	Percent Restrained
Cars	370	57.7%	1,687	53.2%	1,332	66.2%	1,315	76.4%
Pickups	126	37.7%	441	20.5%	544	31.9%	268	41.3%
Mini-vans	144	73.8%	224	61.8%	377	68.2%	201	80.1%
Large Van	15	60.0%	33	22.6%	69	35.3%	45	59.1%
SUV	72	63.2%	231	53.6%	242	64.5%	103	69.1%
All Pass.	727	57.7%	2,616	48.1%	2,564	58.2%	1,932	71.1%

Note: Restraint Usage unknown not included.

Legend: All Pass. = All non-commercial passenger vehicles; SUV = Sport Utility Vehicles

Source: Roadside Observation Survey of Safety Belt and Motorcycle Helmet Use in Indiana, 1998.

people

Overall, restraint usage rates were higher in urban areas with the largest difference observed for local roads and streets. Freeways had the highest usage rates of any roadway class and rates varied little between rural (71.6 percent) and urban locations (71.5 percent).

The roadway types are taken from the FHWA functional classes—a classification system that is based upon the type of service the street or highway is intended to provide. (See Roadway Classes in the Glossary.)

The State is divided into three population stratas. Strata 1 encompasses the largest counties (there are four counties) that account for one-third of the population of the state. Strata 2 encompasses the next largest counties (19) that account for the second one-third of the population. Strata 3 encompasses the remaining counties (69) that account for the last one-third of the state’s population.

For each of the VMT strata groups, there were practically no differences among the usage rates for the different classes of urban roads, excluding urban freeways, but there were large differences between strata groups for each of these roadway classes. The usage rates for Medium VMT counties were higher than for Low VMT counties, and rates for High VMT counties were higher than for Medium VMT counties. For rural roadways, there were significant overall differences by class with arterials having the highest rates (61.6 percent), followed by collectors with 53.7 percent and local roads with 42.8 percent. The differences between strata groups were much smaller than for urban roadways for each roadway class but had the same large, medium, small VMT order.

Table 57. Indiana 1998 Weighted Restraint Usage by Roadway Class, Strata and Vehicle Type

Vehicle Type	Rural Roads				Urban Roads			
	County VMT Strata			Entire State	County VMT Strata			Entire State
	High	Medium	Low		High	Medium	Low	
Rural Freeways								
Cars	77.8%	86.2%	74.6%	79.7%	75.7%	73.4%	87.5%	75.7%
Pickups	46.5%	49.6%	42.6%	46.0%	52.5%	43.4%	28.6%	50.1%
Other Pass.	69.3%	82.0%	67.5%	73.4%	74.7%	71.6%	64.9%	73.8%
All Pass.	70.9%	78.0%	66.2%	71.6%	72.3%	67.1%	75.0%	71.5%
Rural Arterials								
Cars	72.6%	73.3%	68.3%	70.3%	72.6%	67.4%	58.1%	69.2%
Pickups	34.1%	36.2%	34.8%	35.0%	47.5%	36.3%	27.0%	41.4%
Other Pass.	69.0%	73.6%	60.6%	65.3%	69.9%	65.2%	57.1%	66.8%
All Pass.	64.7%	64.6%	59.4%	61.6%	68.8%	60.9%	49.4%	63.8%
Rural Collectors								
Cars	72.6%	62.0%	60.7%	63.0%	71.5%	58.8%	65.4%	66.9%
Pickups	39.2%	31.2%	24.9%	29.3%	47.6%	27.5%	15.3%	37.1%
Other Pass.	68.4%	66.0%	53.2%	59.9%	73.8%	55.4%	44.4%	64.2%
All Pass.	64.8%	54.8%	49.6%	53.7%	69.1%	51.3%	52.0%	61.4%
Rural Local Roads								
Cars	52.6%	56.4%	48.9%	50.8%	67.4%	71.1%	57.0%	67.0%
Pickups	37.9%	14.4%	20.6%	20.8%	48.8%	35.8%	14.4%	40.3%
Other Pass.	45.9%	60.4%	42.5%	46.7%	64.5%	64.7%	62.4%	64.3%
All Pass.	47.2%	46.8%	41.0%	42.8%	65.0%	64.6%	51.9%	63.1%
Urban Freeways								
Urban Arterials								
Urban Collectors								
Urban Local Streets								

Other Pass. = Large Vans, Mini-vans and Sport/Utility Vehicles

All Pass. = All non-commercial passenger vehicles

Source: Roadside Observation Survey of Safety Belt and Motorcycle Helmet Use in Indiana, 1998

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Vehicles

TOPICS

General Categories of Vehicles

Motorcycle Crashes

Trucks

School Bus Crashes

Train Crashes

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Traffic safety is not confined to automobile travel. School buses, motorcycles, large trucks and railroad trains all interact with passenger vehicles on Indiana's roadways, sometimes with tragic results. This section outlines vehicle types involved in crashes in 1997, and includes demographic data about these crashes.

Indiana has made good progress in reducing the number of motorcycle crashes and motorcyclist fatalities. The number of fatal motorcycle crashes declined to 45 in 1997 with 47 motorcyclist fatalities. There have also been significant reductions in alcohol-related motorcycle crashes (see Table 59). There have been decreases in the numbers of registered motorcycles (8.5 percent) and the number of drivers with motorcycle endorsements (1.6 percent) over the 1988 to 1997 period, so some of the decreases in crashes and fatalities may be

due to less exposure to risk of crashes. It is also possible that there are fewer inexperienced motorcycle drivers traveling on Indiana roads.

Added to the *1997 Crash Facts* is a table (Table 66) providing contributing circumstance information for pickup truck crashes. The increase in numbers of pickups and fatalities involving occupants of pickup trucks is the reason for focusing attention on crashes involving pickups.

The crashes included in Tables 67 and 68 include all that involve one or more large trucks (excluding pickups) that can be described as *single-unit* or *in-line* or a semi-tractor that is not connected to a trailer. The crashes included in Tables 69 and 70 include all that involve one or more large semi trucks that are pulling one or more

trailers. This is a different way of organizing truck crash information than that used in previous years of *Crash Facts*.

The 832 school bus crashes reported in 1997 represent a decrease of 12.3 percent from the 949 school bus crashes in 1996. The total number of injuries, however, increased from 405 in 1996 to 481, and the number of fatalities rose from zero to 4.

There were 299 crashes involving motor vehicles and trains in 1997, down from 342 in 1995 and 319 in 1996. Over 6 percent (19/299) of these crashes resulted in 25 fatalities. These numbers represent small decreases from the 21 fatal crashes with 28 fatalities reported in 1996.

vehicles

Table 58. Vehicles Involved in Crashes by Vehicle Type and Severity–1997

Vehicle Type	Fatal Crashes		Personal Injury		Property Damage		Total Crashes	
	Count	Percent	Count	Percent	Count	Percent	Count	Percent
Passenger Car, Station Wagon	768	56.72%	61,669	65.52%	149,565	52.71%	212,002	55.90%
Pickup	229	16.91%	12,392	13.16%	35,097	12.37%	47,718	12.58%
Van	96	7.09%	6,559	6.97%	17,724	6.25%	24,379	6.43%
Truck	50	3.69%	2,503	2.66%	7,896	2.78%	10,449	2.76%
Semi-Tractor (Only)	8	0.59%	127	0.13%	361	0.13%	496	0.13%
Semi-Tractor, Trailer	113	8.35%	1,765	1.88%	6,390	2.25%	8,268	2.18%
Semi-Tractor, Multiple Trailers	7	0.52%	34	0.04%	134	0.05%	175	0.05%
Combination Vehicle	3	0.22%	48	0.05%	169	0.06%	220	0.06%
Recreational Vehicle	4	0.30%	106	0.11%	278	0.10%	388	0.10%
Bus	2	0.15%	136	0.14%	552	0.19%	690	0.18%
School Bus	3	0.22%	156	0.17%	663	0.23%	822	0.22%
Police Car	1	0.07%	381	0.40%	1,064	0.37%	1,446	0.38%
Fire Truck	1	0.07%	29	0.03%	123	0.04%	153	0.04%
Ambulance	2	0.15%	47	0.05%	128	0.05%	177	0.05%
Motorcycle*	46	3.40%	1,483	1.58%	377	0.13%	1,906	0.50%
Snowmobile	0	0.00%	3	0.00%	3	0.00%	6	0.00%
Farm Equipment	2	0.15%	55	0.06%	145	0.05%	202	0.05%
Special Vehicle	4	0.30%	111	0.12%	432	0.15%	547	0.14%
Other	8	0.59%	138	0.15%	315	0.11%	461	0.12%
Unknown	7	0.52%	6,387	6.79%	62,355	21.97%	68,749	18.13%
Total	1,354	100.00%	94,129	100.00%	283,771	100.00%	379,254	100.00%

*Motorcycle includes motorcycles, mopeds, motor bikes, motor scooters and minibikes.

Note: Totals are not the number of crashes, but the number of vehicles in crashes.

Parked vehicles excluded. Driverless moving vehicles included.

Table does not include non-occupants (i.e. pedestrians, bicyclists).

Table 58 contains data on the numbers and percentages of types of vehicles involved in crashes. Passenger cars were 56.72 percent of the vehicles involved in fatal crashes and 55.90 percent of the vehicles involved in all crashes. Semi-tractors with one or more trailers were 8.87 percent of the vehicles in fatal crashes but only 2.23 percent of the vehicles in all crashes. This indicates that crashes

involving large trucks with trailers are much more likely to be involved in fatal crashes than crashes involving only passenger vehicles. Table 8 on page 25 provides 1997 driver and passenger fatality information for the same vehicle type groups.

Table 59. Motorcycle Crash Data: 1992-1997

All Crashes												
Severity	1992	Rate	1993	Rate	1994	Rate	1995	Rate	1996	Rate	1997	Rate
Fatal	69	0.32	53	0.24	65	0.29	64	0.28	58	0.26	45	0.21
Personal Injury	1,784	8.40	1,796	8.22	1,937 ¹	8.67	1,786 ¹	7.83	1,443	6.51	1,450	6.74
Property Damage	426	2.01	402	1.84	408 ¹	1.83	401 ¹	1.76	343	1.55	404	1.88
Total Crashes	2,279	10.73	2,251	10.30	2,410¹	10.79	2,251¹	9.86	1,844	8.32	1,899	8.82
% Fatal	3.0%		2.4%		2.7%		2.8%		3.1%		2.4%	
% Personal Injury	78.3%		79.8%		80.4%		79.3%		78.3%		76.4%	
% Property Damage	18.7%		17.9%		16.9%		17.8%		18.6%		21.3%	
Alcohol-Related Crashes												
Severity	1992	Rate	1993	Rate	1994	Rate	1995	Rate	1996	Rate	1997	Rate
Fatal	21	0.10	16	0.07	17	0.08	20	0.09	17	0.08	15	0.07
Personal Injury	250	1.18	185	0.85	205 ¹	0.92	187 ¹	0.82	178	0.80	173	0.79
Property Damage	20	0.09	17	0.08	22 ¹	0.10	18 ¹	0.08	23	0.10	19	0.09
Total Alcohol-Related	291	1.37	218	1.00	244¹	1.09	225¹	0.99	218	0.98	207	0.95
% of All Fatal	30.4%		30.2%		26.2%		31.3%		29.3%		33.3%	
% of All Personal Injury	14.0%		10.3%		10.6%		10.5%		12.3%		11.9%	
% of All Property Damage	4.7%		4.2%		5.4%		4.5%		6.7%		4.7%	
% of Total Crashes	12.8%		9.7%		10.1%		10.0%		11.8%		10.9%	

Note: Rates are expressed per 1000 licensed motorcycle drivers.

Table includes motorcycles, mopeds, motor bikes, motor scooters and minibikes.

Licensed Driver Source: Indiana Bureau of Motor Vehicles, 1997.

¹Corrected for misclassified private property crashes. See Personal Property in Glossary for explanation.

Between 1988 and 1993, there was a significant and steady decrease in motorcycle crashes (Table 60). The total number of crashes dropped from 3,683 in 1988 to 2,251 in 1993, a reduction of 39 percent. Fatal and personal injury crashes saw nearly 40 percent reductions as well. With the exception of 1994, this trend has continued. Although from 1996 to 1997 the total number of motorcycle crashes increased by 3.0 percent, and non-fatal injury crashes increased 0.5 percent, fatal crashes decreased by 22.4 percent.

While motorcycle crashes made up only 0.86 percent of total crashes in 1997, motorcycle fatal crashes represented 5.3 percent of the total fatal crashes, down from 6.7 percent in 1996. This percentage has decreased from 1988 when 9.0 percent of the fatal crashes involved a motorcycle.

There have also been significant reductions in alcohol-related motorcycle crashes. As seen in Table 59, alcohol-related crashes have declined 28.9 percent between 1992 and 1997 as compared to a 16.7 percent decline in all motorcycle crashes during the same period. However, in 1997, 10.9 percent of all motorcycle crashes were alcohol-related while for all crashes only 4.3 percent were alcohol-related (See Table 3). Alcohol is also a significant problem in fatal motorcycle crashes with 33.3 percent alcohol-related in 1997 compared to 22.8 percent alcohol-related for all fatal crashes. Table 60 also presents crash rate data for motorcycle crashes. The crash rates are based on the number of licensed motorcycle drivers at the end of the year.

vehicles

Table 60. Motorcycle Crashes by Severity: 1988-1997

Year	Registered Cycles	Licensed Cyclists	Fatal Crashes		Personal Injury		Property Damage		Total Crashes
			Count	Percent	Count	Percent	Count	Percent	
1988	104,159	218,792	87	2.4%	2,859	77.6%	737	20.0%	3,683
1989	96,729	224,110	66	2.2%	2,289	74.9%	701	22.9%	3,056
1990	93,982	221,491	80	2.7%	2,261	76.7%	608	20.6%	2,949
1991	96,390	228,570	78	2.8%	2,157	76.8%	575	20.5%	2,810
1992	94,765	212,310	69	3.0%	1,784	78.3%	426	18.7%	2,279
1993	95,267	218,462	53	2.4%	1,796	79.8%	402	17.9%	2,251
1994	97,017	223,306	65	2.7%	1,937 ¹	80.4%	408 ¹	16.9%	2,410¹
1995	95,936	228,236	64	2.8%	1,786 ¹	79.3%	401 ¹	17.8%	2,251¹
1996	96,052	221,758	58	3.1%	1,443	78.3%	343	18.6%	1,844
1997	95,298	215,279	45	2.4%	1,450	76.4%	404	21.3%	1,899

Note: Table includes motorcycles, mopeds, motor bikes, motor scooters and minibikes.

Example: In 1997, 45 of 1,899 or 2.4% of motorcycle crashes were fatal crashes.

¹Corrected for misclassified private property crashes. See Private Property in Glossary for explanation.

Table 61 presents information on *when* motorcycle crashes and motorcycle fatal crashes occur. Motorcycle traffic in Indiana is concentrated during weekend and afternoon periods. The annual observational survey of helmet usage conducted in conjunction with the Indiana Safety Belt survey has consistently, over the 1994 – 1998 period, found higher levels of motorcycle travel during these periods. The peak days in 1997 for motorcycle fatal crashes were Sunday with 13 and Saturday with 12. Saturday had the most total motorcycle crashes with 381 followed by Friday (315) and Sunday (295). The week-end period from 6 PM Friday to 6 AM Monday accounted for 28 of the 45 motorcycle fatal crashes.

The noon to 3 PM and 9 PM to midnight periods each accounted for 11 fatal motorcycle crashes. The highest frequency of total motorcycle crashes was 504 during the 3 PM to 6 PM period, but the percentage fatal during this period was only 1.0 percent. During the 9 PM to midnight period, the percentage fatal was 4.8 percent. Friday, Saturday and Sunday between 3 and 6 PM were the highest 3-hour periods for total crashes.

Table 61. Motorcycle Crashes by Time of Day and Day of Week–1997

Time	Sun		Mon		Tue		Wed		Thu		Fri		Sat		Total		
	Ftl	Tot	Ftl	Tot	Ftl	Tot	Ftl	Tot	Ftl	Tot	Ftl	Tot	Ftl	Tot	Ftl	Tot	% Ftl
midnight - 3am	2	22	0	11	0	12	0	7	0	12	0	18	1	26	3	108	2.8%
3am - 6am	0	8	0	1	0	8	0	4	0	6	0	2	0	11	0	40	0.0%
6am - 9am	0	3	0	12	1	16	0	12	1	14	0	14	0	15	2	86	2.3%
9am - noon	2	28	0	15	0	18	0	19	0	21	0	22	2	41	4	164	2.4%
noon - 3pm	3	64	3	40	0	42	2	53	0	36	0	54	3	82	11	371	3.0%
3pm - 6pm	2	82	0	59	0	72	1	51	0	65	1	88	1	87	5	504	1.0%
6pm - 9pm	2	52	1	40	0	54	0	36	0	44	2	58	3	74	8	358	2.2%
9pm - midnight	2	30	2	23	1	32	1	27	2	31	1	50	2	38	11	231	4.8%
Unknown	0	6	0	4	0	3	0	6	1	2	0	9	0	7	1	37	2.7%
Total	13	295	6	205	2	257	4	215	4	231	4	315	12	381	45	1,899	2.4%

Example: Of the 1,899 motorcycle crashes that occurred in 1997, 2.4% (45/1,899) were fatal.

Legend: Ftl=Fatal; Tot=Total

Table 62. Motorcycle Crashes by Light Condition and Severity–1997

Light Condition	Fatal Crashes		Personal Injury		Property Damage		Total Crashes	
	Count	Percent	Count	Percent	Count	Percent	Count	Percent
Daylight	24	53.3%	995	68.6%	286	70.8%	1,305	68.7%
Dawn or dusk	2	4.4%	66	4.6%	18	4.5%	86	4.5%
Darkness	18	40.0%	384	26.5%	97	24.0%	499	26.3%
Not stated	1	2.2%	5	0.3%	3	0.7%	9	0.5%
Total	45	100.0%	1,450	100.0%	404	100.0%	1,899	100.0%

Tables 62 and 63 contain information related to why motorcycle crashes occur. Darkness is related to increasing severity of motorcycle crashes with 40.0 percent of fatal motorcycle crashes occurring in the dark as compared to 26.5 percent of personal injury and 24.0 percent of property damage crashes.

Speed Too Fast was a contributing circumstance for 28.9 percent of fatal motorcycle crashes, down from 32.8 percent in 1996; *Had Been Drinking* was a contributing circumstance for 24.4 percent of fatal crashes, up from 22.4 percent in 1996.

In 1997, 83.0 percent (39 of 47) of motorcyclist fatalities were not helmeted (Table 64). During the 1988-1997 period this percentage of fatalities not helmeted varied between 83 and 91 percent.

Helmets are estimated by NHTSA to be 29 percent effective in preventing fatal injuries to motorcyclists. If all motorcyclists involved in Indiana crashes had worn helmets, it is estimated that 17 lives in 1997 and a total of 174 lives between 1988 and 1997 would have been saved.

Motorcycle crashes of all severity types peak during the summer months and are infrequent from November through February. In 1997, 55.6 of fatal motorcycle crashes occurred in rural areas, down from 69.0 percent in 1996 (Table 65).

Table 63. Motorcycle Crashes by Contributing Circumstance–1997

Contributing Circumstance	Fatal Crashes		Personal Injury		Property Damage		Total Crashes	
	Count	Percent	Count	Percent	Count	Percent	Count	Percent
Speed Too Fast	13	28.9%	205	14.1%	31	7.7%	249	13.1%
Failed to Yield	10	22.2%	210	14.5%	56	13.9%	276	14.5%
Disregarded Signal/Sign	3	6.7%	33	2.3%	7	1.7%	43	2.3%
Drove Left of Center	4	8.9%	37	2.6%	7	1.7%	48	2.5%
Improper Passing	2	4.4%	34	2.3%	13	3.2%	49	2.6%
Followed Too Closely	1	2.2%	51	3.5%	29	7.2%	81	4.3%
Made Improper Turn	0	0.0%	32	2.2%	4	1.0%	36	1.9%
Had Been Drinking	11	24.4%	121	8.3%	14	3.5%	146	7.7%
Driver Asleep	0	0.0%	4	0.3%	1	0.2%	5	0.3%
Driver Inattention	9	20.0%	515	35.5%	168	41.6%	692	36.4%
Other Improper Driving	1	2.2%	40	2.8%	26	6.4%	67	3.5%
Mechanical Failure	1	2.2%	47	3.2%	16	4.0%	64	3.4%
Animals on Roadway	0	0.0%	57	3.9%	13	3.2%	70	3.7%
Roadway Factors	0	0.0%	69	4.8%	17	4.2%	86	4.5%
Materials on Roadway/Weather	0	0.0%	55	3.8%	23	5.7%	78	4.1%
Other	6	13.3%	213	14.7%	57	14.1%	276	14.5%

Note: See Glossary for an explanation of groupings of Contributing Circumstance.

Example: Speed Too Fast was a Contributing Circumstance for 249 of 1,899 or 13.1% of motorcycle crashes in 1997.

Note: Total column percentages may not equal 100%. More than one contributing circumstance can be cited per crash.

vehicles

Table 64. Motorcycle Crashes by Helmet Use: 1988-1997

Year	Cyclist Fatalities Without Helmet						Cyclist Fatalities Wearing Helmet						Total Cyclist Fatalities		
	Driver		Passenger		Total		Driver		Passenger		Total		Driver	Pass.	Total
	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent			
1988	66	84.6%	7	87.5%	73	84.9%	12	15.4%	1	12.5%	13	15.1%	78	8	86
1989	57	93.4%	5	71.4%	62	91.2%	4	6.6%	2	28.6%	6	8.8%	61	7	68
1990	63	90.0%	10	100.0%	73	91.3%	7	10.0%	0	0.0%	7	8.8%	70	10	80
1991	58	81.7%	10	100.0%	68	84.0%	13	18.3%	0	0.0%	13	16.0%	71	10	81
1992	54	85.7%	7	100.0%	61	87.1%	9	14.3%	0	0.0%	9	12.9%	63	7	70
1993	38	82.6%	7	100.0%	45	84.9%	8	17.4%	0	0.0%	8	15.1%	46	7	53
1994	50	83.3%	5	100.0%	55	84.6%	10	16.7%	0	0.0%	10	15.4%	60	5	65
1995	49	83.1%	6	100.0%	55	84.6%	10	16.9%	0	0.0%	10	15.4%	59	6	65
1996	46	85.2%	8	88.9%	54	85.7%	8	14.8%	1	11.1%	9	14.3%	54	9	63
1997	33	84.6%	6	75.0%	39	83.0%	6	15.4%	2	25.0%	8	17.0%	39	8	47

Note: Cycles includes motorcycles, motor bikes, minibikes, motor scooters and mopeds.

Legend: Pass.=Passenger

Example: In 1997, 33 of 39 or 84.6% of fatally injured motorcycle drivers were not wearing a helmet.

Figure 47

- *Both fatal and personal injury crashes have higher frequencies during the warmer months between May and October.*

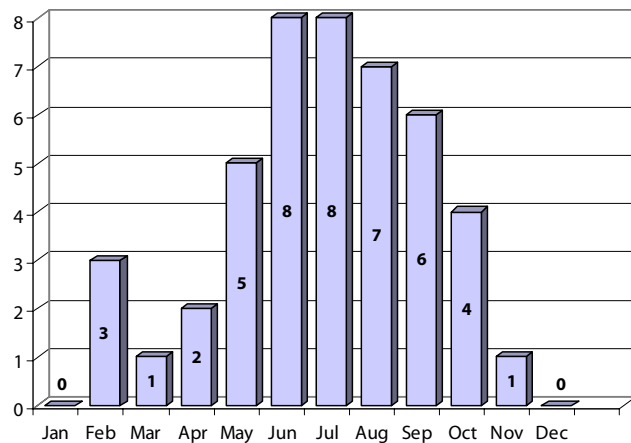
Table 65. Motorcycle Crashes by Month and Severity with Fatalities and Injuries by Rural/Urban Locale–1997

Month	Motorcyclists Only									Non-Motorcyclists														
	Fatal Crashes			Personal Injury			Property Damage			Total Crashes			Fatalities			Injuries			Fatalities			Injuries		
	Rur	Urb	Tot	Rur	Urb	Tot	Rur	Urb	Tot	Rur	Urb	Tot	Rur	Urb	Tot	Rur	Urb	Tot	Rur	Urb	Tot	Rur	Urb	Tot
January	0	0	0	3	5	8	1	5	6	4	10	14	0	0	0	3	4	7	0	0	0	0	1	1
February	3	0	3	5	8	13	2	5	7	10	13	23	3	0	3	6	8	14	0	0	0	1	0	1
March	1	0	1	20	39	59	1	13	14	22	52	74	1	0	1	20	42	62	0	0	0	1	4	5
April	1	1	2	37	77	114	6	21	27	44	99	143	1	1	2	38	83	121	0	0	0	2	5	7
May	1	4	5	45	91	136	14	26	40	60	121	181	1	4	5	53	101	154	0	0	0	3	9	12
June	4	4	8	112	140	252	23	42	65	139	186	325	4	5	9	129	157	286	1	0	1	15	17	32
July	6	2	8	140	166	306	20	58	78	166	226	392	7	2	9	171	181	352	0	0	0	10	11	21
August	4	3	7	105	128	233	24	38	62	133	169	302	4	3	7	119	144	263	0	0	0	8	5	13
September	4	2	6	86	87	173	13	39	52	103	128	231	4	2	6	94	95	189	0	0	0	3	7	10
October	0	4	4	59	68	127	13	25	38	72	97	169	0	4	4	67	74	141	0	0	0	7	9	16
November	1	0	1	7	13	20	3	8	11	11	21	32	1	0	1	8	14	22	0	0	0	0	0	0
December	0	0	0	5	4	9	0	4	4	5	8	13	0	0	0	5	4	9	0	0	0	0	2	2
Total	25	20	45	624	826	1,450	120	284	404	769	1,130	1,899	26	21	47	713	907	1,620	1	0	1	50	70	120

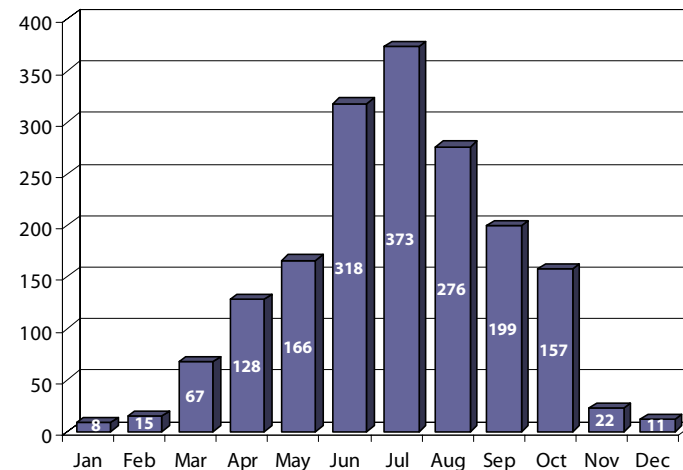
Note: Crashes include motorcycles, motor bikes, minibikes, motor scooters and mopeds.

Ledgend: Rur=Rural; Urb=Urban; Tot=Total

Figure 47. Motorcycle Crashes by Month–1997



Fatal Crashes



Personal Injury

vehicles

Table 66. Pickup Truck Crashes by Vehicular Contributing Circumstance and Severity–1997

Contributing Circumstance	Pickup Trucks								Other Vehicles							
	Fatal Crashes		Personal Injury		Property Damage		Total Crashes		Fatal Crashes		Personal Injury		Property Damage		Total Crashes	
	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent
Speed Too Fast	36	9.5%	1,000	5.0%	2,082	3.7%	3,118	4.0%	19	7.1%	558	3.4%	1,143	2.7%	1,720	2.9%
Failed to Yield	33	8.7%	2,563	12.7%	5,253	9.3%	7,849	10.2%	29	10.8%	2,440	15.1%	4,772	11.1%	7,241	12.2%
Disregarded Signal/Sign	22	5.8%	913	4.5%	1,241	2.2%	2,176	2.8%	25	9.3%	851	5.3%	1,130	2.6%	2,006	3.4%
Drove Left of Center	46	12.1%	478	2.4%	911	1.6%	1,435	1.9%	30	11.2%	381	2.4%	672	1.6%	1,083	1.8%
Improper Passing	2	0.5%	132	0.7%	553	1.0%	687	0.9%	1	0.4%	106	0.7%	470	1.1%	577	1.0%
Followed Too Closely	3	0.8%	1,196	5.9%	3,441	6.1%	4,640	6.0%	2	0.7%	1,212	7.5%	3,308	7.7%	4,522	7.6%
Made Improper Turn	1	0.3%	185	0.9%	883	1.6%	1,069	1.4%	2	0.7%	165	1.0%	786	1.8%	953	1.6%
Had Been Drinking	43	11.3%	961	4.8%	1,176	2.1%	2,180	2.8%	8	3.0%	385	2.4%	560	1.3%	953	1.6%
Driver Asleep	10	2.6%	264	1.3%	332	0.6%	606	0.8%	4	1.5%	79	0.5%	118	0.3%	201	0.3%
Driver Inattention	32	8.4%	3,942	19.6%	11,723	20.7%	15,697	20.3%	27	10.1%	3,162	19.5%	9,995	23.3%	13,184	22.2%
Other Improper Driving	16	4.2%	390	1.9%	2,385	4.2%	2,791	3.6%	13	4.9%	303	1.9%	2,032	4.7%	2,348	4.0%
Mechanical Failure	3	0.8%	303	1.5%	1,023	1.8%	1,329	1.7%	4	1.5%	233	1.4%	659	1.5%	896	1.5%
Animals on Roadway	1	0.3%	211	1.0%	2,532	4.5%	2,744	3.6%	1	0.4%	28	0.2%	70	0.2%	99	0.2%
Roadway Factors	1	0.3%	66	0.3%	206	0.4%	273	0.4%	0	0.0%	20	0.1%	90	0.2%	110	0.2%
Materials on Roadway/Weather	15	3.9%	1,149	5.7%	4,304	7.6%	5,468	7.1%	14	5.2%	585	3.6%	2,294	5.3%	2,893	4.9%
Other	25	6.6%	1,198	6.0%	3,295	5.8%	4,518	5.8%	10	3.7%	739	4.6%	2,417	5.6%	3,166	5.3%
Blank/Unknown	91	23.9%	5,153	25.6%	15,421	27.2%	20,665	26.8%	79	29.5%	4,937	30.5%	12,455	29.0%	17,471	29.4%
Total	380	100.0%	20,104	100.0%	56,761	100.0%	77,245	100.0%	268	100.0%	16,184	100.0%	42,971	100.0%	59,423	100.0%

Note: See Glossary for an explanation of groupings of Contributing Circumstance.
Example: Of the 380 fatal crashes involving pickup trucks, 36 or 9.5% were due to Speed Too Fast.

The crashes involving one or more large trucks that can be described as *single-unit* or *in-line*, or is a semi-tractor that is not connected to a trailer, are analyzed in Tables 67 and 68. Only 37.2 percent of these crashes occurred in a rural locale but 78.0 percent of the fatal crashes involving these vehicles were rural. Only 0.5 percent of these crashes were *fatal* with 23.6 percent *personal injury* and 75.9 *property damage*. Of the fatalities in these crashes, 76.6 percent were not occupants of a single-unit truck. A slightly lower percentage of injuries (69.0 percent) were not occupants of a single-unit truck. Note that 93.3 percent (14/15) of the single-unit truck occupants who were killed were involved in a rural crash.

Table 67. Crashes Involving Single-Unit Trucks by Month and Severity with Fatalities and Injuries by Rural/Urban Locale–1997

Month	In Single-Unit Truck									Not in Single-Unit Truck														
	Fatal Crashes			Personal Injury			Property Damage			Total Crashes			Fatalities			Injuries			Fatalities			Injuries		
	Rur	Urb	Tot	Rur	Urb	Tot	Rur	Urb	Tot	Rur	Urb	Tot	Rur	Urb	Tot	Rur	Urb	Tot	Rur	Urb	Tot	Rur	Urb	Tot
January	1	0	1	101	111	212	395	622	1,017	497	733	1,230	0	0	0	59	41	100	1	0	1	79	101	180
February	0	0	0	55	82	137	159	305	464	214	387	601	0	0	0	33	32	65	0	0	0	48	75	123
March	4	1	5	52	104	156	172	361	533	228	466	694	2	0	2	31	43	74	2	1	3	58	109	167
April	3	2	5	65	113	178	195	418	613	263	533	796	2	0	2	37	40	77	1	2	3	56	127	183
May	2	3	5	94	141	235	209	448	657	305	592	897	1	1	2	55	62	117	1	2	3	82	145	227
June	8	0	8	93	134	227	251	422	673	352	556	908	2	0	2	59	52	111	8	0	8	92	154	246
July	3	1	4	111	134	245	205	427	632	319	562	881	1	0	1	54	56	110	2	1	3	129	121	250
August	6	0	6	90	143	233	263	437	700	359	580	939	1	0	1	53	51	104	6	0	6	83	156	239
September	3	0	3	108	118	226	231	457	688	342	575	917	0	0	0	55	41	96	3	0	3	108	133	241
October	4	2	6	92	178	270	270	508	778	366	688	1,054	2	0	2	50	75	125	2	2	4	113	197	310
November	5	1	6	98	117	215	290	442	732	393	560	953	3	0	3	56	44	100	2	1	3	90	129	219
December	7	3	10	92	126	218	292	434	726	391	563	954	0	0	0	51	47	98	9	3	12	109	120	229
Total	46	13	59	1,051	1,501	2,552	2,932	5,281	8,213	4,029	6,795	10,824	14	1	15	593	584	1,177	37	12	49	1,047	1,567	2,614

Legend: Rur=Rural; Urb=Urban; Tot=Total

Table 68. Large Single-Unit Truck Crashes by Vehicular Contributing Circumstance and Severity–1997

Contributing Circumstance	Large, Single-Unit Trucks									Other Vehicles								
	Fatal Crashes		Personal Injury		Property Damage		Total Crashes		Fatal Crashes		Personal Injury		Property Damage		Total Crashes			
	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent		
Speed Too Fast	7	6.6%	210	4.8%	351	2.6%	568	3.2%	3	3.8%	188	4.6%	260	2.3%	451	2.9%		
Failed to Yield	15	14.2%	514	11.7%	1,012	7.6%	1,541	8.7%	13	16.5%	535	13.0%	986	8.6%	1,534	9.8%		
Disregarded Signal/Sign	2	1.9%	191	4.4%	244	1.8%	437	2.5%	2	2.5%	201	4.9%	258	2.2%	461	2.9%		
Drove Left of Center	10	9.4%	100	2.3%	165	1.2%	275	1.5%	8	10.1%	101	2.5%	134	1.2%	243	1.5%		
Improper Passing	0	0.0%	34	0.8%	175	1.3%	209	1.2%	0	0.0%	39	0.9%	171	1.5%	210	1.3%		
Followed Too Closely	1	0.9%	256	5.8%	760	5.7%	1,017	5.7%	0	0.0%	287	7.0%	749	6.5%	1,036	6.6%		
Made Improper Turn	1	0.9%	40	0.9%	306	2.3%	347	1.9%	1	1.3%	40	1.0%	252	2.2%	293	1.9%		
Had Been Drinking	5	4.7%	150	3.4%	173	1.3%	328	1.8%	3	3.8%	88	2.1%	115	1.0%	206	1.3%		
Driver Asleep	2	1.9%	48	1.1%	58	0.4%	108	0.6%	2	2.5%	29	0.7%	36	0.3%	67	0.4%		
Driver Inattention	15	14.2%	894	20.4%	3,151	23.7%	4,060	22.8%	14	17.7%	804	19.5%	2,611	22.7%	3,429	21.8%		
Other Improper Driving	1	0.9%	105	2.4%	887	6.7%	993	5.6%	2	2.5%	109	2.6%	782	6.8%	893	5.7%		
Mechanical Failure	2	1.9%	113	2.6%	380	2.9%	495	2.8%	1	1.3%	68	1.7%	244	2.1%	313	2.0%		
Animals on Roadway	0	0.0%	24	0.5%	304	2.3%	328	1.8%	0	0.0%	7	0.2%	10	0.1%	17	0.1%		
Roadway Factors	0	0.0%	18	0.4%	74	0.6%	92	0.5%	0	0.0%	3	0.1%	42	0.4%	45	0.3%		
Materials on Roadway/Weather	3	2.8%	232	5.3%	820	6.2%	1,053	5.9%	5	6.3%	163	4.0%	580	5.0%	748	4.8%		
Other	11	10.4%	281	6.4%	991	7.4%	1,283	7.2%	6	7.6%	226	5.5%	702	6.1%	934	5.9%		
Blank/Unknown	31	29.2%	1,177	26.8%	3,469	26.0%	4,677	26.3%	19	24.1%	1,226	29.8%	3,577	31.1%	4,822	30.7%		
Total	106	100.0%	4,387	100.0%	13,320	100.0%	17,813	100.0%	79	100.0%	4,114	100.0%	11,509	100.0%	15,702	100.0%		

Note: See Glossary for an explanation of groupings of Contributing Circumstance.

vehicles

Table 69. Crashes Involving Large Trucks with Trailers by Month and Severity with Fatalities and Injuries by Rural/Urban Locale–1997

Month	Fatal Crashes									Personal Injury			Property Damage			Total Crashes			In Truck with Trailer						Not in Truck with Trailer					
	Fatal Crashes			Personal Injury			Property Damage			Total Crashes			Fatalities			Injuries			Fatalities			Injuries								
	Rur	Urb	Tot	Rur	Urb	Tot	Rur	Urb	Tot	Rur	Urb	Tot	Rur	Urb	Tot	Rur	Urb	Tot	Rur	Urb	Tot	Rur	Urb	Tot						
January	10	2	12	140	80	220	507	362	869	657	444	1,101	0	0	0	50	15	65	10	2	12	153	87	240						
February	6	2	8	74	57	131	187	228	415	267	287	554	2	0	2	31	13	44	5	2	7	72	63	135						
March	5	0	5	53	59	112	171	231	402	229	290	519	2	0	2	28	18	46	5	0	5	49	71	120						
April	9	1	10	90	51	141	198	272	470	297	324	621	2	0	2	51	11	62	7	1	8	66	53	119						
May	9	0	9	68	68	136	242	271	513	319	339	658	2	0	2	29	13	42	8	0	8	86	97	183						
June	1	2	3	76	64	140	246	293	539	323	359	682	1	0	1	29	20	49	0	3	3	72	72	144						
July	11	2	13	74	68	142	207	273	480	292	343	635	0	0	0	32	14	46	13	3	16	89	76	165						
August	5	2	7	72	52	124	216	266	482	293	320	613	1	0	1	39	16	55	5	2	7	83	43	126						
September	9	2	11	75	50	125	229	262	491	313	314	627	3	0	3	30	12	42	8	2	10	77	104	181						
October	8	2	10	91	61	152	287	263	550	386	326	712	0	0	0	36	20	56	8	2	10	85	75	160						
November	6	1	7	84	42	126	258	268	526	348	311	659	1	0	1	26	11	37	6	1	7	89	52	141						
December	8	1	9	80	61	141	241	261	502	329	323	652	0	0	0	28	11	39	8	1	9	80	76	156						
Total	87	17	104	977	713	1,690	2,989	3,250	6,239	4,053	3,980	8,033	14	0	14	409	174	583	83	19	102	1,001	869	1,870						

Legend: Rur=Rural; Urb=Urban; Tot=Total

Table 70. Large Trucks with Trailer Crashes by Vehicular Contributing Circumstance and Severity–1997

Contributing Circumstance	Large Trucks with Trailers										Other Vehicles							
	Fatal Crashes		Personal Injury		Property Damage		Total Crashes		Fatal Crashes		Personal Injury		Property Damage		Total Crashes			
	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent		
Speed Too Fast	12	5.8%	268	9.0%	484	4.7%	764	5.7%	9	5.2%	210	7.8%	300	3.9%	519	4.9%		
Failed to Yield	16	7.8%	207	6.9%	474	4.6%	697	5.2%	18	10.5%	218	8.1%	482	6.2%	718	6.8%		
Disregarded Signal/Sign	9	4.4%	90	3.0%	121	1.2%	220	1.6%	10	5.8%	96	3.6%	102	1.3%	208	2.0%		
Drove Left of Center	20	9.7%	65	2.2%	129	1.3%	214	1.6%	25	14.5%	73	2.7%	119	1.5%	217	2.0%		
Improper Passing	2	1.0%	29	1.0%	157	1.5%	188	1.4%	2	1.2%	32	1.2%	162	2.1%	196	1.8%		
Followed Too Closely	1	0.5%	184	6.2%	501	4.9%	686	5.1%	1	0.6%	182	6.8%	384	5.0%	567	5.3%		
Made Improper Turn	0	0.0%	49	1.6%	404	3.9%	453	3.4%	0	0.0%	44	1.6%	241	3.1%	285	2.7%		
Had Been Drinking	4	1.9%	55	1.8%	55	0.5%	114	0.8%	11	6.4%	86	3.2%	60	0.8%	157	1.5%		
Driver Asleep	8	3.9%	60	2.0%	102	1.0%	170	1.3%	5	2.9%	44	1.6%	48	0.6%	97	0.9%		
Driver Inattention	24	11.7%	519	17.4%	2,205	21.5%	2,748	20.4%	25	14.5%	450	16.7%	1,521	19.6%	1,996	18.8%		
Other Improper Driving	10	4.9%	181	6.1%	1010	9.8%	1,201	8.9%	12	7.0%	170	6.3%	885	11.4%	1,067	10.1%		
Mechanical Failure	3	1.5%	89	3.0%	397	3.9%	489	3.6%	1	0.6%	44	1.6%	212	2.7%	257	2.4%		
Animals on Roadway	0	0.0%	10	0.3%	287	2.8%	297	2.2%	0	0.0%	2	0.1%	6	0.1%	8	0.1%		
Roadway Factors	2	1.0%	8	0.3%	48	0.5%	58	0.4%	1	0.6%	5	0.2%	37	0.5%	43	0.4%		
Materials on Roadway/Weather	3	1.5%	155	5.2%	591	5.8%	749	5.6%	6	3.5%	153	5.7%	418	5.4%	577	5.4%		
Other	14	6.8%	210	7.0%	995	9.7%	1,219	9.1%	16	9.3%	162	6.0%	502	6.5%	680	6.4%		
Blank/Unknown	78	37.9%	808	27.1%	2,297	22.4%	3,183	23.7%	30	17.4%	722	26.8%	2,266	29.3%	3,018	28.4%		
Total	206	100.0%	2,987	100.0%	10,257	100.0%	13,450	100.0%	172	100.0%	2,693	100.0%	7,745	100.0%	10,610	100.0%		

Note: See Glossary for an explanation of groupings of Contributing Circumstance.

Table 71. School Bus Crashes by Month and Severity with Fatalities and Injuries–1997

Month	Fatal Crashes			Personal Injury			Property Damage			Total Crashes			Out of Bus						In Bus					
	Rur	Urb	Tot	Rur	Urb	Tot	Rur	Urb	Tot	Rur	Urb	Tot	Fatalities			Injuries			Fatalities			Injuries		
													Rur	Urb	Tot	Rur	Urb	Tot	Rur	Urb	Tot	Rur	Urb	Tot
January	0	0	0	10	9	19	44	69	113	54	78	132	0	0	0	19	13	32	0	0	0	6	5	11
February	0	0	0	1	10	11	26	29	55	27	39	66	0	0	0	3	9	12	0	0	0	1	2	3
March	0	0	0	4	13	17	17	46	63	21	59	80	0	0	0	5	28	33	0	0	0	1	6	7
April	0	0	0	7	13	20	20	39	59	27	52	79	0	0	0	34	59	93	0	0	0	3	7	10
May	0	0	0	8	9	17	27	38	65	35	47	82	0	0	0	15	33	48	0	0	0	3	3	6
June	0	0	0	2	2	4	5	16	21	7	18	25	0	0	0	2	1	3	0	0	0	0	2	2
July	0	0	0	1	0	1	1	3	4	2	3	5	0	0	0	4	0	4	0	0	0	0	0	0
August	1	1	2	2	4	6	9	15	24	12	20	32	1	1	2	5	2	7	0	0	0	0	3	3
September	0	0	0	4	7	11	26	53	79	30	60	90	0	0	0	12	59	71	0	0	0	2	4	6
October	0	0	0	12	11	23	31	59	90	43	70	113	0	0	0	29	19	48	0	0	0	7	6	13
November	0	0	0	6	8	14	17	33	50	23	41	64	0	0	0	14	8	22	0	0	0	4	4	8
December	1	1	2	5	7	12	19	31	50	25	39	64	1	1	2	16	19	35	0	0	0	2	2	4
Total	2	2	4	62	93	155	242	431	673	306	526	832	2	2	4	158	250	408	0	0	0	29	44	73

Legend: Rur=Rural; Urb=Urban; Tot=Total

It is interesting to compare the statistics in Table 69 (Large Trucks with Trailers) with Table 67 that provided crash statistics on large trucks without trailers. Higher percentages of the crashes, for each severity level, occur in a rural locale for large trucks with trailers than for crashes involving large trucks without trailers. Thus, it is likely that higher speeds associated with rural crashes may explain other differences between these two sets of crashes. It is also likely that more of the fatal large truck crashes, which are related to drowsy driving, occurred on rural roads. Unfortunately, such crashes are undercounted since the investigating officer may have insufficient evidence to conclude that a driver fell asleep or was impaired by drowsiness.

The percentage of crashes involving large trucks with trailers that were *fatal* was 1.3 percent, or almost three times the fatal percentage for crashes involving large trucks without trailers. The percentage of crashes involving large trucks with trailers that was *personal injury* was 21.1 percent, slightly less than the 23.6 percent *personal injury* crashes involving large trucks without trailers. Of the fatalities in crashes involving large trucks with trailers, 87.9 percent were not occupants of a single-unit truck. A slightly lower percentage of injuries (76.2 percent) were not occupants of a single-unit truck. Note that 100 percent (14/14) of the occupants of large trucks with trailers who were killed were involved in a rural crash.

There were 4 fatalities (up from zero in 1996) in the 832 school bus crashes that were reported in 1997 (Table 71). However, the total number of school bus crashes decreased 12.3 percent from the 949 that were reported in 1996. The total number of injuries did increase from 405 in 1996 to 481 in 1997. Of the 481 injured persons, only 73 (15.2 percent) were occupants of a school bus.

vehicles

Figure 48

- The month of January had the highest number of school bus crashes in both rural and urban locales.

Figure 48. School Bus Crashes by Month–1997

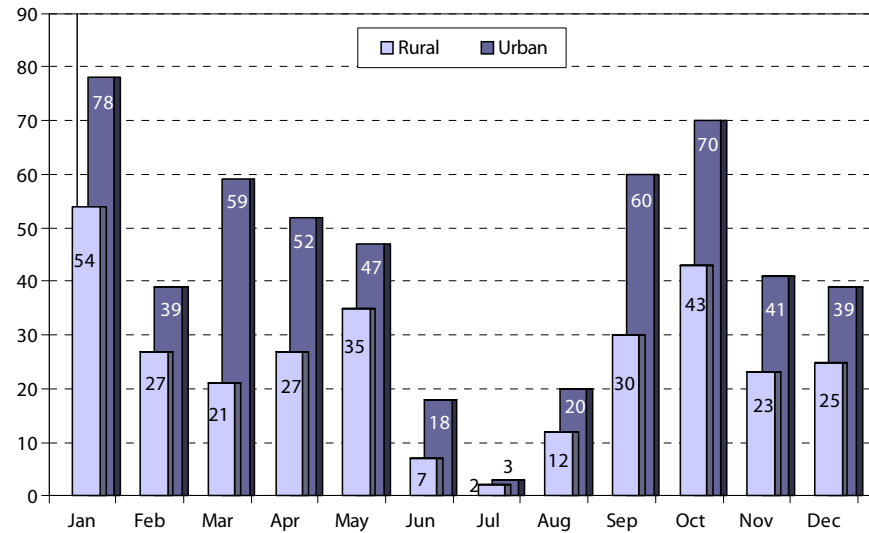


Table 72. School Bus Crashes–Vehicular Contributing Circumstance and Severity–1997

Contributing Circumstance	School Bus								Other Vehicles							
	Fatal Crashes		Personal Injury		Property Damage		Total Crashes		Fatal Crashes		Personal Injury		Property Damage		Total Crashes	
	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent
Speed Too Fast	1	12.5%	8	2.9%	31	2.8%	40	2.9%	2	22.2%	9	3.2%	34	3.2%	45	3.4%
Failure to Yield	2	25.0%	29	10.5%	85	7.8%	116	8.4%	2	22.2%	35	12.6%	90	8.5%	127	9.5%
Disregarded Signal/Sign	0	0.0%	8	2.9%	15	1.4%	23	1.7%	0	0.0%	10	3.6%	19	1.8%	29	2.2%
Drove Left of Center	1	12.5%	8	2.9%	31	2.8%	40	2.9%	1	11.1%	12	4.3%	29	2.8%	42	3.1%
Improper Overtaking	0	0.0%	1	0.4%	13	1.2%	14	1.0%	0	0.0%	2	0.7%	14	1.3%	16	1.2%
Followed too Closely	0	0.0%	22	7.9%	37	3.4%	59	4.3%	0	0.0%	23	8.3%	53	5.0%	76	5.7%
Made Improper Turn	0	0.0%	5	1.8%	46	4.2%	51	3.7%	0	0.0%	3	1.1%	37	3.5%	40	3.0%
Had Been Drinking	0	0.0%	1	0.4%	5	0.5%	6	0.4%	0	0.0%	2	0.7%	5	0.5%	7	0.5%
Driver Asleep	0	0.0%	3	1.1%	0	0.0%	3	0.2%	0	0.0%	4	1.4%	0	0.0%	4	0.3%
Driver Inattention	0	0.0%	52	18.8%	281	25.7%	333	24.1%	0	0.0%	66	23.8%	270	25.6%	336	25.1%
Other Improper Driving	0	0.0%	5	1.8%	46	4.2%	51	3.7%	0	0.0%	4	1.4%	44	4.2%	48	3.6%
Mechanical Failure	0	0.0%	5	1.8%	14	1.3%	19	1.4%	0	0.0%	6	2.2%	19	1.8%	25	1.9%
Animals on Roadway	0	0.0%	0	0.0%	2	0.2%	2	0.1%	0	0.0%	1	0.4%	0	0.0%	1	0.1%
Roadway Factors	0	0.0%	0	0.0%	4	0.4%	4	0.3%	0	0.0%	1	0.4%	3	0.3%	4	0.3%
Material on Roadway/Weather	0	0.0%	16	5.8%	66	6.0%	82	5.9%	1	11.1%	18	6.5%	70	6.6%	89	6.6%
Other	0	0.0%	19	6.9%	90	8.2%	109	7.9%	1	11.1%	13	4.7%	85	8.1%	99	7.4%
Blank/Unknown	4	50.0%	95	34.3%	329	30.0%	428	31.0%	2	22.2%	68	24.5%	282	26.8%	352	26.3%
Total	8	100.0%	277	100.0%	1,095	100.0%	1,380	100.0%	9	100.0%	277	100.0%	1,054	100.0%	1,340	100.0%

Note: See Glossary for an explanation of groupings of Contributing Circumstance.

Table 73. Railroad/Motor Vehicle Crashes by Contributing Circumstance and Severity–1997

Contributing Circumstance	Fatal Crashes		Personal Injury		Property Damage		Total Crashes	
	Count	Percent	Count	Percent	Count	Percent	Count	Percent
Speed Too Fast	1	5.3%	6	5.6%	8	4.7%	15	5.0%
Failed to Yield	6	31.6%	36	33.3%	36	20.9%	78	26.1%
Disregarded Signal/sign	10	52.6%	30	27.8%	27	15.7%	67	22.4%
Drove Left of Center	0	0.0%	1	0.9%	4	2.3%	5	1.7%
Improper Passing	0	0.0%	1	0.9%	3	1.7%	4	1.3%
Followed Too Closely	0	0.0%	1	0.9%	2	1.2%	3	1.0%
Made Improper Turn	0	0.0%	0	0.0%	8	4.7%	8	2.7%
Had Been Drinking	3	15.8%	18	16.7%	13	7.6%	34	11.4%
Driver Asleep	0	0.0%	1	0.9%	2	1.2%	3	1.0%
Driver Inattention	9	47.4%	54	50.0%	71	41.3%	134	44.8%
Other Improper Driving	1	5.3%	4	3.7%	4	2.3%	9	3.0%
Mechanical Failure	0	0.0%	2	1.9%	7	4.1%	9	3.0%
Animals on Roadway	0	0.0%	0	0.0%	1	0.6%	1	0.3%
Roadway Factors	0	0.0%	1	0.9%	2	1.2%	3	1.0%
Materials on Roadway/Weather	0	0.0%	3	2.8%	9	5.2%	12	4.0%
Other	3	15.8%	14	13.0%	37	21.5%	54	18.1%

There were 299 crashes involving motor vehicles and trains in 1997, down from 342 in 1995 and 319 in 1996. However, 19 of these crashes resulted in 25 fatalities. These represent small decreases from 21 fatal crashes with 28 fatalities in 1996. *Driver Inattention or Asleep* was noted as a contributing factor for 44.8 percent of all crashes involving trains and 47.4 percent of fatal crashes involving trains (Table 73).

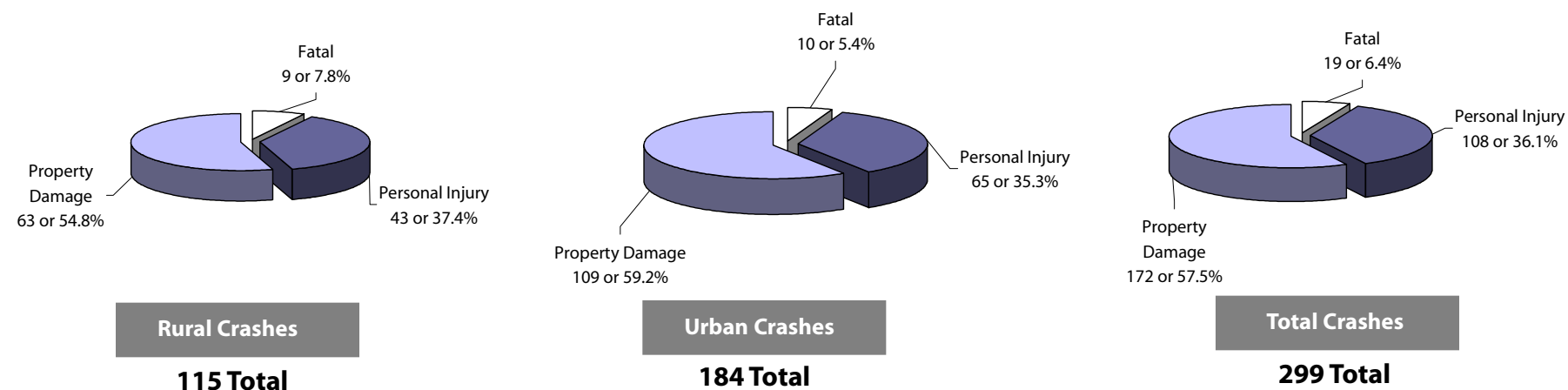
Note: See Glossary for an explanation of groupings of Contributing Circumstance.

Example: Speed Too Fast was a Contributing Circumstance for 15 of the 299 or 5.0% of train crashes in 1997.

Note: Total column percentages may not equal 100%. More than one contributing circumstance can be cited per crash.

- **Disregarding Signal/Sign was cited for 52.6 percent of fatal crashes involving trains.**

Figure 49. Railroad/Motor Vehicle Crashes by Severity–1997



vehicles

Most 1997 crashes (61.9 percent) involving a motor vehicle and a train occurred during *daylight* conditions. An even higher percentage (73.7 percent) of fatal crashes involving trains occurred during *daylight* conditions. In fact, none of the fatal crashes occurred under unlighted conditions.

Table 74. Railroad/Motor Vehicle Crashes by Light Conditions and Severity—1997

Light Condition	Fatal Crashes		Personal Injury		Property Damage		Total Crashes	
	Count	Percent	Count	Percent	Count	Percent	Count	Percent
Daylight	14	73.7%	63	58.3%	108	62.8%	185	61.9%
Dawn or Dusk	1	5.3%	4	3.7%	5	2.9%	10	3.3%
Dark, Street Lights On	4	21.1%	24	22.2%	35	20.3%	63	21.1%
Dark, Street Lights Off	0	0.0%	1	0.9%	2	1.2%	3	1.0%
Dark, No Street Lights	0	0.0%	16	14.8%	21	12.2%	37	12.4%
Unknown	0	0.0%	0	0.0%	1	0.6%	1	0.3%
Total	19	100.0%	108	100.0%	172	100.0%	299	100.0%

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TOPICS

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This section contains information about alcohol-related crashes, including:

- *Crashes by Severity*
- *Fatalities and Injuries*
- *Blood Alcohol Concentration*
- *Time of Day and Day of Week*
- *Roadway Type*
- *Motorcycle and Pedestrian Crashes*

An alcohol-related crash is a crash in which the investigating officer reported one or more of the following:

- *primary contributing circumstance for the crash as alcoholic beverages, or*
- *vehicular contributing circumstance for one or more of the involved vehicles as alcoholic beverages, or*
- *a blood alcohol concentration of greater than 0.05 percent for one or more of the drivers involved in the crash.*

BAC (blood alcohol concentration) measures grams of ethanol per 100 ml. of blood, or 210 liters of breath. It is reported as a percentage. For example, 0.10, Indiana's current legal level for *per se* intoxication, would denote 0.10 percent alcohol within a person's blood.

Indiana drivers continue to be involved in fewer alcohol-related crashes as measured by both the number of licensed drivers and the miles driven by these drivers (figures 50 and 51). In 1997, although only 4.3 percent of all crashes were alcohol-related, 22.8 percent of the fatal crashes were alcohol-related (Table 75). While this percentage has decreased from 24.0 percent in 1996, it continues to be one of the major contributors to accidental deaths in Indiana. As seen in Figures 53 and 54,

8.3 percent of all injuries and 22.8 percent of all fatalities were in alcohol-related crashes. Overall, Indiana drivers were involved in the fewest number of alcohol-related crashes that resulted in a record low number of alcohol-related injuries and alcohol-related fatalities. Alcohol countermeasure efforts such as Operation Pull Over appear to be having a significant role in contributing to the improvement.

The Fatality Analysis Reporting System (FARS), having more complete information for fatal crashes, is used for data on the BAC levels of killed drivers. 1997 Indiana FARS data indicated that over 23.0 percent of the driver fatalities (excluding motorcyclists) in crashes had BAC levels greater than zero (BAC levels between zero and 0.009 are coded as zero in the FARS database), while over 22.2 percent had BAC levels over 0.05 percent (Table 82). Of those tested and whose test results are known, 39.0 percent (133 of 341) had BAC levels greater than zero (0.01 BAC) and 37.5 percent (128 of 341) had BAC levels greater than 0.05 (Table 82). Drivers between ages 25 and 34 had the highest number of alcohol-related fatalities (38 driver fatalities), followed by the 35 to 44 age group (36 driver fatalities). Of younger drivers (those 24 years old or younger), 21.0 percent (33 of 157) of fatalities in crashes tested above zero (0.01 BAC), a decrease from 31.4 percent in 1996. This age group accounted for 21.9 percent (28 of 128) of the alcohol-related fatalities among driver fatalities during crashes where the reported BAC level was greater than 0.05. This age group accounts for only 15.0 percent of licensed drivers. For these young drivers, the number of killed drivers with higher BACs (0.10 or greater) increased from 23 in 1996 to 24 in 1997.

Drivers below the legal drinking age of 21 are still at greater risk of being involved in alcohol-related crashes.

Analysis of the 1997 FARS data indicated that, of the drivers, excluding motorcyclists, under the age of 21 who were killed in a traffic crash and whose BAC test results are known, 30.2 percent (16 of 53) had BAC levels above zero (Table 82). Only 12.5 percent (2 of 16) of these under-age-21 killed drivers were female, an indication that underage drinking and driving is primarily a male problem. Overall, 22.5 percent (23) of the under-age-21 driver fatalities were female.

As seen in Table 83, the numbers of all drivers in crashes with BAC levels greater than 0.05 increased from 6,428 in 1988 to 7,062 in 1990. Between 1990 and 1997 this statistic has dropped by 21.8 percent to 5,521. Only the 35-44 age group has shown significant increase since 1990.

Drinking and driving for motorcyclists showed significant improvement in 1997. Both total motorcycle driver and motorcycle driver alcohol-related fatalities were reduced in 1997. Of the 40 motorcycle drivers who were fatalities in a traffic crash, and whose BAC test results are known, 14 had BAC levels above zero (.01 or greater). The number of motorcycle driver fatalities where the driver's BAC exceeded 0.10 declined from 28 in 1990 to 15 in each year from 1994 through 1996, and dropped to 12 in 1997 (Table 84).

For pedestrian fatalities, whose BAC test results are known, 14 (46.7 percent) of 30 had BAC levels of .01 or greater. However, 58.3 percent of the fatalities were not tested and thus the statistics could be misleading. The number of pedestrian fatalities with high BAC levels (above 0.10) declined from 27 in 1990 to 13 in 1996 and 1997 (Table 85).

alcohol

Figure 50. Indiana Crash Rates per 1,000 Licensed Drivers: 1988-1997

Total Crashes

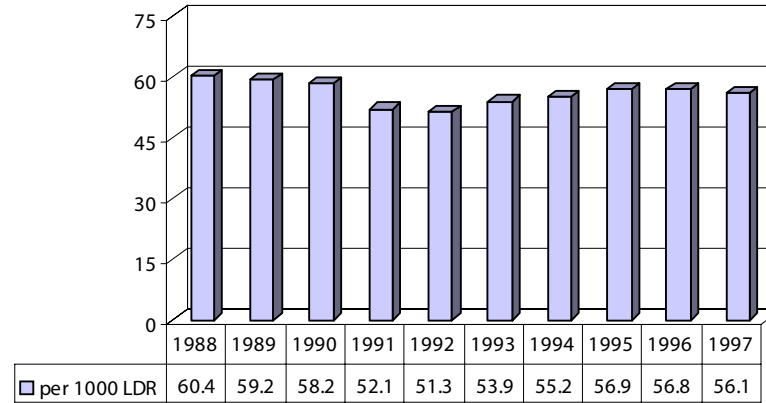


Figure 50

- *A 42 percent decrease since 1988.*
- *A record low involvement in alcohol-related crashes.*

Alcohol-Related Crashes

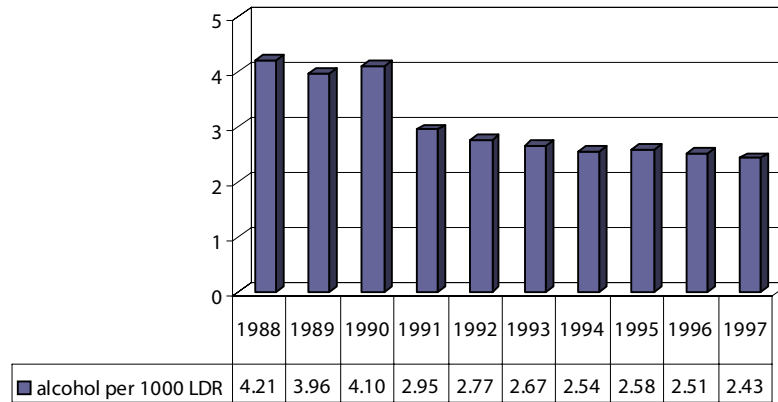
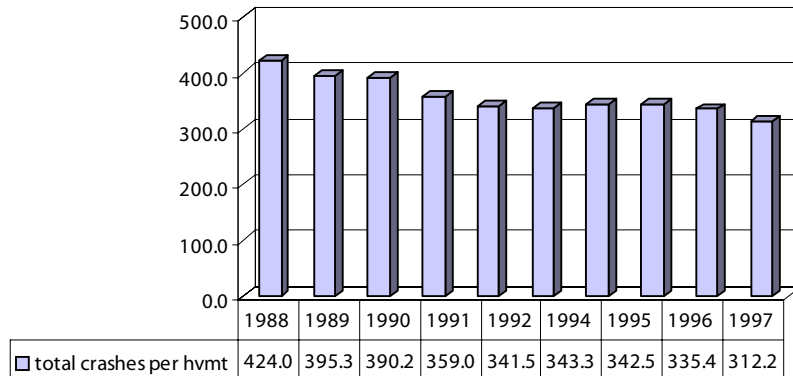


Figure 51. Indiana Crash Rates per 100 MVMT: 1988-1997

Total Crashes



Alcohol-Related Crashes

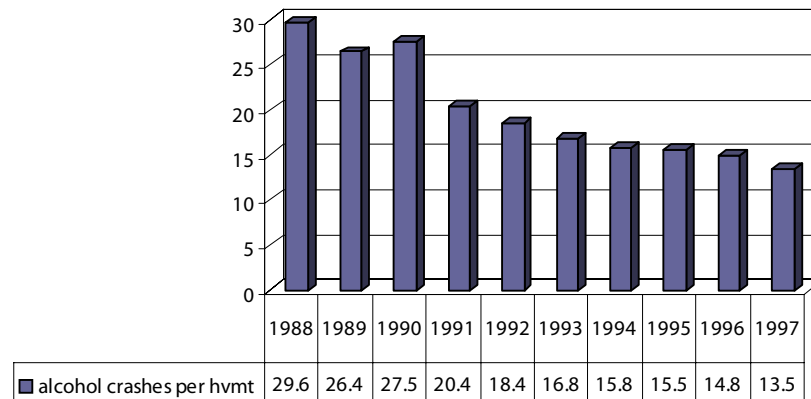


Figure 51

- *A 65.9 percent reduction since 1988.*
- *A record low involvement in alcohol-related crashes.*

alcohol

Table 75. Total Crash and Alcohol-Related Crash Data: 1993-1997

CRASH TYPE	1993			1994 ¹			1995 ¹			1996		
	Number	LD Rate	VMT Rate	Number	LD Rate	VMT Rate	Number	LD Rate	VMT Rate	Number	LD Rate	VMT Rate
All Crashes												
TOTAL	204,373	53.913	338.02	213,223	55.234	343.31	221,027	56.945	342.46	221,465	56.749	335.40
Fatal	782	0.206	1.29	875	0.227	1.41	859	0.221	1.33	870	0.223	1.32
Personal Injury	50,774	13.394	83.98	52,476	13.594	84.49	53,831	13.869	83.41	52,058	13.340	78.84
Property Damage	152,817	40.313	252.75	159,872	41.414	257.41	166,337	42.855	257.72	168,537	43.187	255.24
Fatalities	891	0.235	1.47	976	0.253	1.57	959	0.247	1.49	982	0.252	1.49
Injuries	75,614	19.947	125.06	78,105	20.233	125.76	80,632	20.774	124.93	77,339	19.818	117.13
% Fatal	0.38			0.41			0.39			0.39		
% Personal Injury	24.84			24.84			24.35			23.51		
% Property Damage	74.77			74.77			75.26			76.10		
Alcohol-Related Crashes												
TOTAL	10,137	2.674	16.77	9,794	2.537	15.77	9,995	2.575	15.49	9,777	2.505	14.81
Fatal	199	0.052	0.33	204	0.053	0.33	199	0.051	0.31	209	0.054	0.32
Personal Injury	4,807	1.268	7.95	4,680	1.212	7.54	4,637	1.195	7.18	4,526	1.160	6.85
Property Damage	5,131	1.354	8.49	4,910	1.272	7.91	5,159	1.329	7.99	5,042	1.292	7.64
Fatalities	228	0.060	0.38	229	0.059	0.37	226	0.058	0.35	239	0.061	0.36
Injuries	7,144	1.885	11.82	6,893	1.786	11.10	6,889	1.775	10.67	6,664	1.708	10.09
% Fatal	1.96			2.08			1.99			2.14		
% Personal Injury	47.42			47.78			46.39			46.29		
% Property Damage	50.62			50.13			51.62			51.57		
% of all Crashes	5.0			4.6			4.5			4.4		
% of all Fatal	25.4			23.3			23.2			24.0		
% of all Personal Injury	9.5			8.9			8.6			8.7		
% of all Property Damage	3.4			3.1			3.1			3.0		
VEHICLE MILES TRAVELED (in hundred millions)	604.61			621.08			645.41			660.30		
LICENSED DRIVERS (in thousands)	3790.78			3860.33			3881.42			3902.52		

LD Rates are expressed per 1000 licensed drivers. VMT Rates are expressed per 100 million vehicle miles traveled.

Licensed Driver Source: Bureau of Motor Vehicles.

Vehicle Miles Traveled Source: Indiana Department of Transportation.

¹ Corrected for misclassified private property crashes.

1995 and 1996 licensed driver numbers estimated from 1994 and 1997 counts.

Actual 1995 and 1996 licensed driver numbers unavailable.

Table 76. Alcohol-Related Crashes by Severity: 1988-1997

Year	Alcohol Crashes	% of All Crashes	Alcohol Fatal Crashes	% of Fatal Crashes	Alcohol Personal Injury Crashes	% of Personal Injury Crashes
1988	15,105	7.0%	307	31.9%	7,059	13.7%
1989	14,857	6.7%	271	30.7%	6,750	12.9%
1990	14,750	7.0%	297	32.1%	6,610	13.0%
1991	11,056	5.7%	283	31.3%	5,018	10.6%
1992	10,517	5.4%	211	26.4%	4,881	10.0%
1993	10,137	5.0%	199	25.4%	4,807	9.5%
1994	9,794	0.5%	204	23.3%	4,680	0.9%
1995	9,995	0.5%	199	23.2%	4,637	0.9%
1996	9,777	4.4%	209	24.0%	4,526	8.7%
1997	9,544	4.3%	194	22.9%	4,408	8.4%

- *Alcohol-related crashes continue to show a decrease in both the absolute numbers and the percentage of all crashes.*

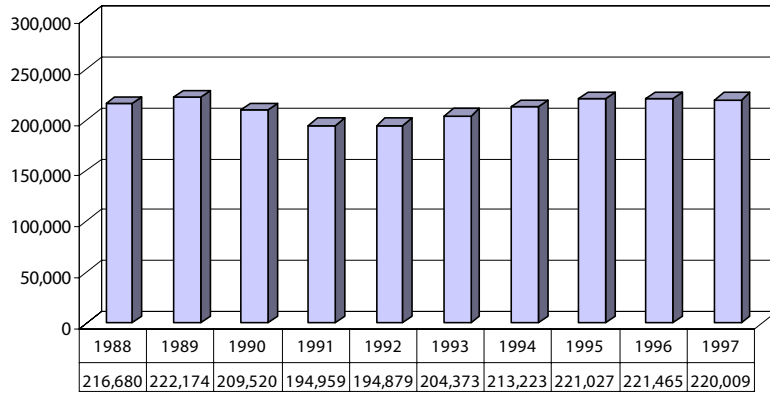
Table 75

Your chance of being involved in an alcohol-related crash is about 4 in every 100 highway crashes but:

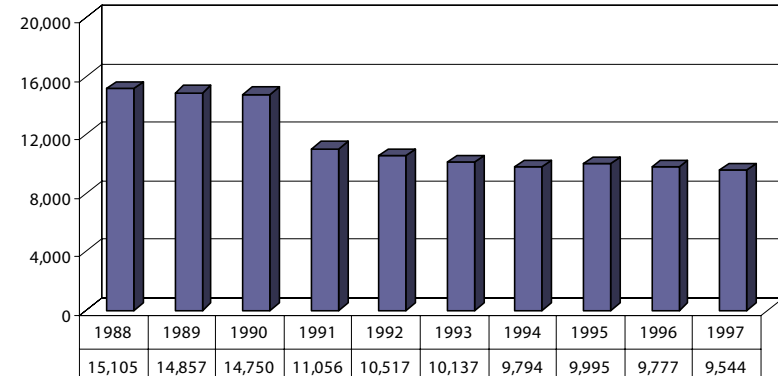
- *Alcohol-related crashes result in a 1.9 times greater likelihood of a personal injury occurring versus a non-alcohol-related crash.*
- *Alcohol-related crashes result in a 58.7 times greater likelihood of a fatality occurring versus a non-alcohol-related crash.*

alcohol

Figure 52. Total Crashes and Alcohol-Related Crashes: 1988-1997



Total Crashes



Alcohol-Related Crashes

Table 77

Great strides have been made over the past ten years to reduce the number of people being injured or killed as a result of an alcohol-involved crash, however:

- *Improvements were much more dramatic in the first five years (1988–1992) than in the most recent five years (1993–1997).*

Table 77. Alcohol-Related Fatalities and Injuries: 1988-1997

Year	Alcohol Fatalities	Total Fatalities	% Alcohol Fatalities	Alcohol Injuries	Total Injuries	% Alcohol Injuries
1988	347	1,104	31.4%	10,583	75,360	14.0%
1989	305	973	31.3%	10,124	76,447	13.2%
1990	341	1,044	32.7%	9,980	74,916	13.3%
1991	321	1,022	31.4%	7,540	69,280	10.9%
1992	242	903	26.8%	7,327	72,223	10.1%
1993	228	891	25.6%	7,144	75,614	9.4%
1994	229	976	23.5%	6,893	78,105	8.8%
1995	226	959	23.6%	6,889	80,632	8.5%
1996	239	982	24.3%	6,664	77,339	8.6%
1997	214	940	22.8%	6,524	78,262	8.3%

Figure 53. Alcohol-Related Fatalities: 1988-1997

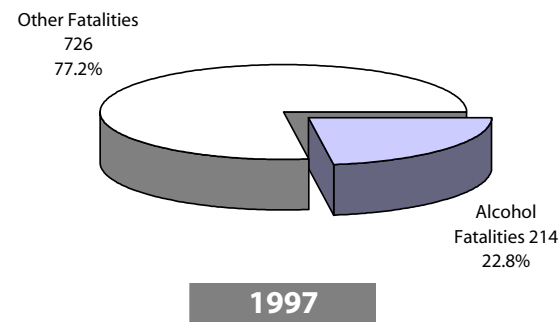
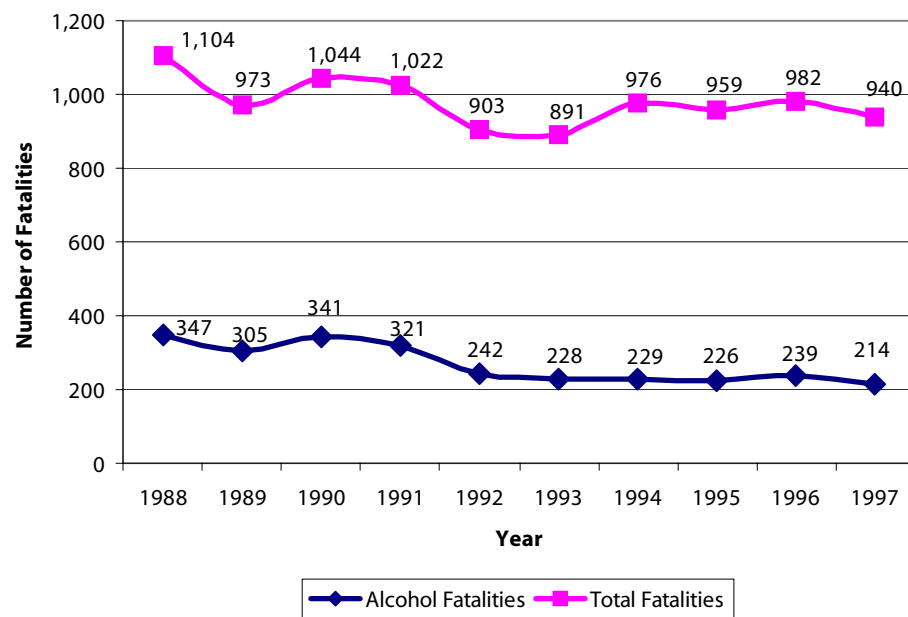
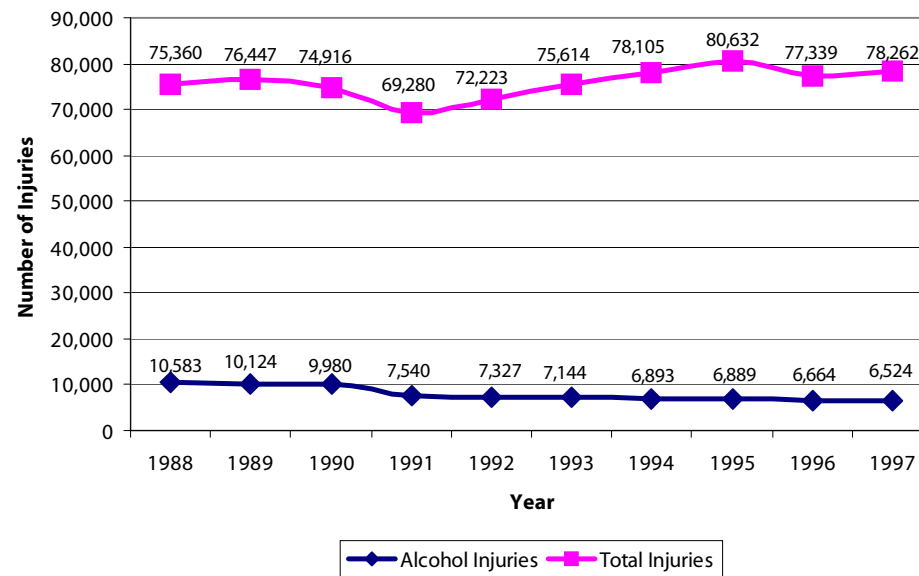
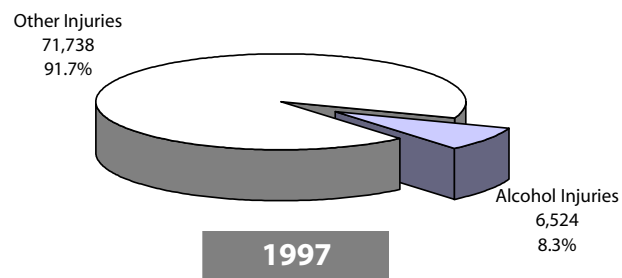


Figure 54. Alcohol-Related Injuries: 1988-1997



alcohol

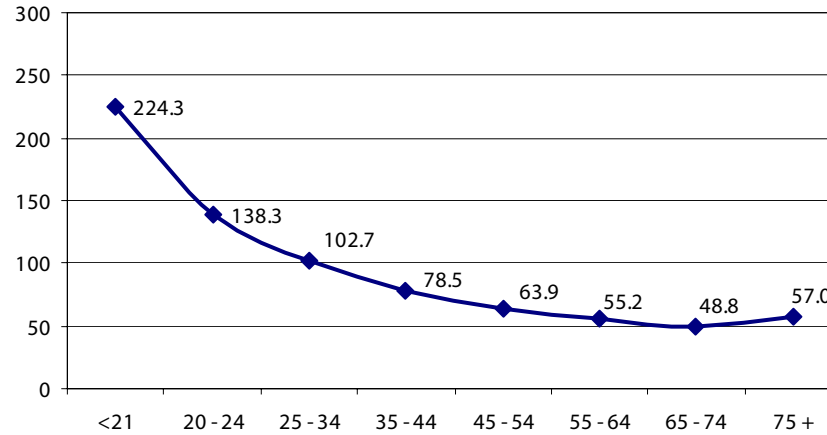
Figure 55

Younger drivers (16- to 19-year-old drivers) continue to be involved in a significantly higher percentage of crashes versus the more experienced driver.

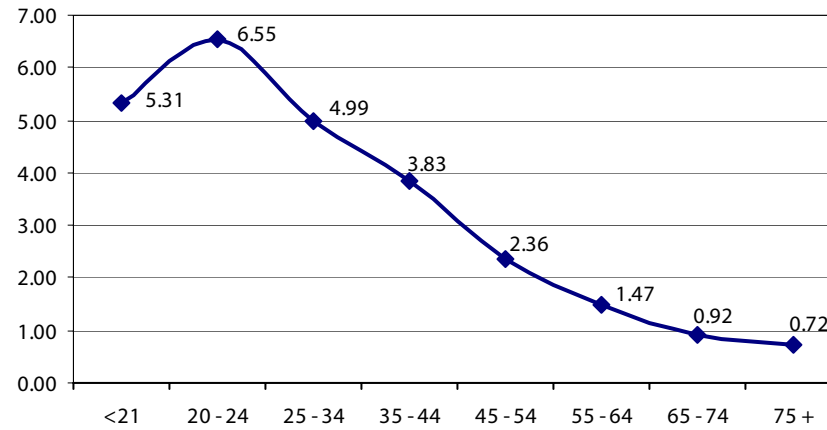
In interpreting this graph, the fact that there were 5.31 alcohol-related crashes per 1,000 licensed drivers involving a young driver (<21) does not mean that the younger driver had been consuming alcohol. If the crash involved two or more vehicles and the investigating officer indicated alcohol as a contributing circumstance, all of the drivers involved in the crash would have been considered to be involved in an alcohol-related crash.

- *The younger driver continues to be involved in a high frequency of alcohol-related crashes.*

Figure 55. Crash Rate per 1,000 Licensed Drivers by Age–1997



Total Crashes



Alcohol Crashes

Table 78. Distribution of Driver Ages in Alcohol-Related Crashes: 1993-1997

Driver Age	1993		1994		1995		1996		1997	
	Drivers	LDVR	Drivers	LDVR	Drivers	LDVR	Drivers	LDVR	Drivers	LDVR
<21	1,586	296,492	1,575	299,069	1,623	304,304	1,616	309,538	1,679	314,765
% Alcohol	10.9%		10.9%		10.9%		11.6%		12.2%	
% of LDVR		0.5%		0.5%		0.5%		0.5%		0.5%
21-34	6,875	1,103,733	6,751	1,092,589	6,571	1,070,287	5,971	1,047,984	5,578	1,025,567
% Alcohol	47.4%		46.8%		43.9%		43.0%		40.6%	
% of LDVR		0.6%		0.6%		0.6%		0.6%		0.5%
35-54	4,567	1,435,794	4,577	1,494,939	5,146	1,520,611	4,817	1,546,283	5,015	1,571,893
% Alcohol	31.5%		31.8%		34.4%		34.7%		36.5%	
% of LDVR		0.3%		0.3%		0.3%		0.3%		0.3%
55+	1,139	954,764	1,154	973,732	1,205	986,222	1,470	998,713	1,151	1,011,195
% Alcohol	7.8%		8.0%		8.1%		10.6%		8.4%	
% of LDVR		0.1%		0.1%		0.1%		0.1%		0.1%
Total Drivers	14,514	3,790,783	14,412	3,860,329	14,955	3,881,424	13,874	3,902,519	13,739	3,923,420

Note: Drivers of parked vehicles excluded.

1995 and 1996 licensed driver numbers estimated from 1994 and 1997 counts. Actual 1995 and 1996 licensed driver numbers unavailable.

Example: Of the drivers in alcohol-related crashes for 1997, 12.2% (1,679 divided by 13,739) were drivers under age 21.

The percentage of all drivers under age 21 that were involved in alcohol-related crashes is 0.5% (1,679 divided by 314,765) of licensed drivers.

*Totals include unknowns. Legend: LDVR=Licensed Drivers

Table 78

There is an increasing number of underage (legal age to drink) drivers involved in alcohol-related crashes. In interpreting this table, the fact that 12.2% of the drivers involved in alcohol-related crashes were under age 21 does not mean that the younger driver had been consuming alcohol. If the crash involved two or more vehicles and the investigating officer indicated alcohol as a contributing circumstance, all of the drivers involved in the crash would have been considered to be involved in an alcohol-related crash.

- **1,679 drivers under the age of 21 were involved in alcohol-related crashes that resulted in 12.2 percent of all alcohol-related crashes.**
- **The five-year trend shows an increasing percent of young drivers (<21) involved in alcohol-related crashes (from 10.9 percent in 1993 to 12.2 percent in 1997).**

alcohol

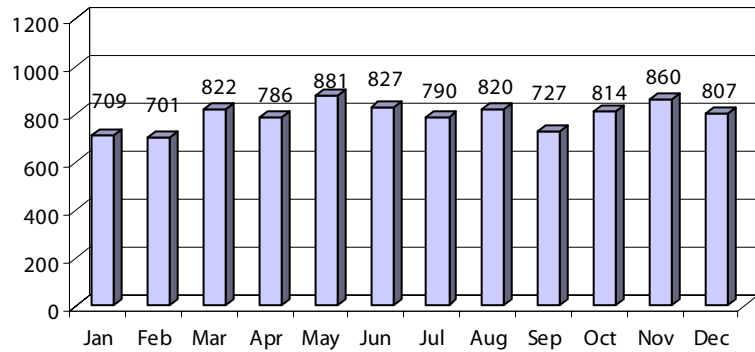
Table 79

The investigating officer has the ability to enter more than one contributing factor to the crash. In the 9,544 crashes, alcohol was listed as the primary cause in 4,913 crashes (51.48 percent—a slight increase over 1996). In the remaining alcohol-related crashes, alcohol was listed as a secondary contributing circumstance. In these cases, the secondary contributing circumstance (*i.e.*, driver inattention, failure to yield, disregarding signal/sign, left of center, material on road, animals present on roadway, etc.) is an excellent identifier of the effects of alcohol in reducing the driver’s ability to react to a situation.

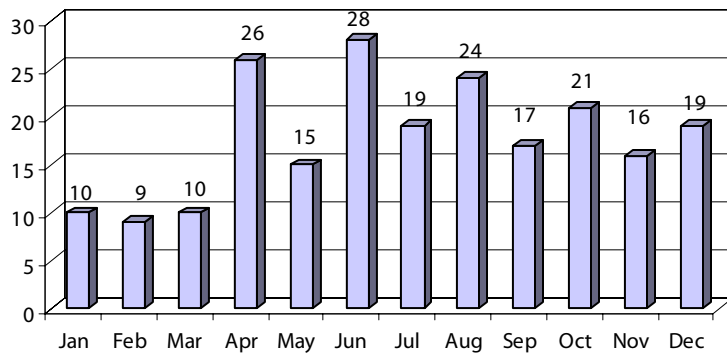
Table 79. Alcohol-Related Crashes by Contributing Circumstance—1997

Contributing Circumstance	Total	Percent	Fatalities	Injuries
Alcoholic Beverages	4,913	51.48%	83	3,148
Illegal Drugs	8	0.08%	0	5
Prescription Drugs	6	0.06%	0	0
Driver Apparently Asleep	187	1.96%	3	124
Driver Inattention	942	9.87%	17	546
Driver Illness	15	0.16%	1	8
Unsafe Speed	760	7.96%	45	622
Failure to Yield Right-of-Way	508	5.32%	8	500
Disregarded Signal/Sign	262	2.75%	4	278
Left of Center	367	3.85%	16	385
Improper Passing	50	0.52%	1	33
Improper Turning	107	1.12%	0	58
Improper Lane Usage	271	2.84%	4	121
Following Too Closely	215	2.25%	2	162
Unsafe Backing	74	0.78%	0	13
Wrong Way on One Way	25	0.26%	11	29
Pedestrian Actions	20	0.21%	4	17
Passenger Distractions	12	0.13%	0	16
Violation of License Restrictions	5	0.05%	0	1
Engine Failure or Defective	11	0.12%	0	10
Accelerator Failure or Defective	2	0.02%	0	1
Brake Failure or Defective	22	0.23%	0	14
Tire Failure or Defective	25	0.26%	0	9
Headlight Defective or Not On	5	0.05%	0	1
Other Lights Defective	0	0.00%	0	0
Steering Failure	8	0.08%	0	7
Oversize/Overweight	0	0.00%	0	0
Insecure/Leaky Load	5	0.05%	0	0
Tow Hitch Failure	2	0.02%	0	1
Animal(s) Present on Roadway	123	1.29%	0	65
Glare	6	0.06%	0	2
Loose Surface Material	8	0.08%	0	5
Material on Surface (Weather)	160	1.68%	1	77
Holes/Ruts in Surface	1	0.01%	0	2
Shoulder Defective	0	0.00%	0	0
Road Under Construction	2	0.02%	0	1
Obstruction Not Marked	1	0.01%	0	1
View Obstructed By a Vehicle	7	0.07%	0	3
View Obstructed By Other	9	0.09%	0	8
Other	275	2.88%	8	179
Jackknifing	0	0.00%	0	0
Unknown	125	1.31%	6	72
TOTAL	9,544	100.00%	214	6,524

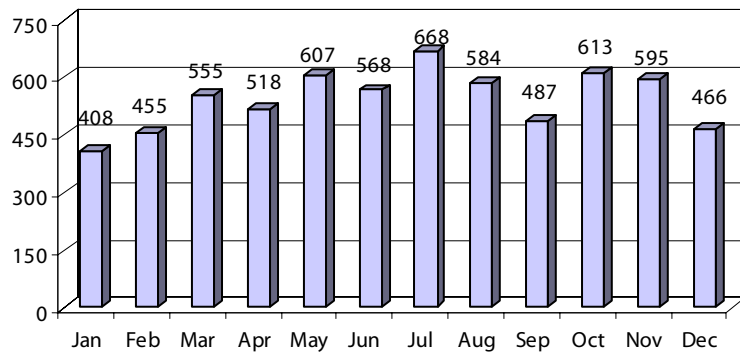
Figure 56. Alcohol-Related Crashes, Fatalities and Injuries by Month–1997



Total Crashes



Fatalities



Persons Injured

Table 80. Alcohol-Related Crashes, Fatalities and Injuries by Month–1997

Month	Total Crashes	Fatalities	Persons Injured
January	709	10	408
February	701	9	455
March	822	10	555
April	786	26	518
May	881	15	607
June	827	28	568
July	790	19	668
August	820	24	584
September	727	17	487
October	814	21	613
November	860	16	595
December	807	19	466
Total	9,544	214	6,524

alcohol

Table 81

Not surprising is the fact that the majority of crashes occur after the close of the traditional business day and continue into the early morning hours.

- *41.5 percent of the 9,544 alcohol-related crashes occurred between 5 PM Friday evening and 4 AM Sunday morning. This 35-hour period represents only 20.8 percent of the total hours in a week.*

Table 81. Alcohol-Related Crashes by Time of Day and Day of Week with Fatalities and Injuries–1997

Time	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Total	Injuries	Fatalities
midnight - 1 am	155	54	59	78	73	82	176	677	457	18
1 - 2 am	174	44	53	62	52	81	173	639	393	19
2 - 3 am	155	22	54	47	67	88	197	630	422	16
3 - 4 am	230	13	44	47	56	100	219	709	451	19
4 - 5 am	98	11	16	27	27	29	92	300	180	11
5 - 6 am	58	9	13	11	14	16	39	160	116	1
6 - 7 am	31	7	7	12	15	14	30	116	77	3
7 - 8 am	20	15	9	11	12	15	30	112	72	5
8 - 9 am	9	5	11	10	8	8	22	73	37	0
9 - 10 am	15	4	12	4	11	17	21	84	51	1
10 - 11 am	14	10	9	14	10	14	27	98	73	2
11 - noon	9	16	11	27	15	22	31	131	89	4
noon - 1 pm	15	17	23	21	19	26	44	165	115	2
1 - 2 pm	28	23	10	18	21	37	42	179	135	4
2 - 3 pm	30	28	22	24	23	45	58	230	154	3
3 - 4 pm	51	23	51	47	28	55	69	324	225	6
4 - 5 pm	56	42	59	56	47	70	94	424	278	3
5 - 6 pm	57	55	48	71	58	106	109	504	432	3
6 - 7 pm	65	48	72	64	59	121	105	534	390	11
7 - 8 pm	73	72	60	65	74	110	108	562	396	18
8 - 9 pm	59	70	77	71	76	120	117	590	421	13
9 - 10 pm	77	80	58	102	67	172	130	686	486	15
10 - 11 pm	79	87	75	81	91	177	113	703	470	14
11 - midnight	58	75	77	87	96	171	166	730	474	18
Unknown	44	12	13	19	13	24	59	184	130	5
Total	1,660	842	943	1,076	1,032	1,720	2,271	9,544	6,524	214

Figure 57: Alcohol-Related Crashes by Time of Day and Day of Week–1997

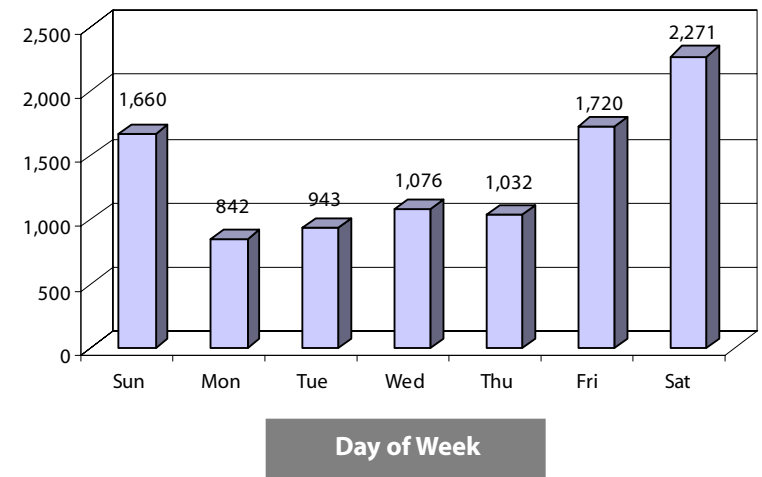
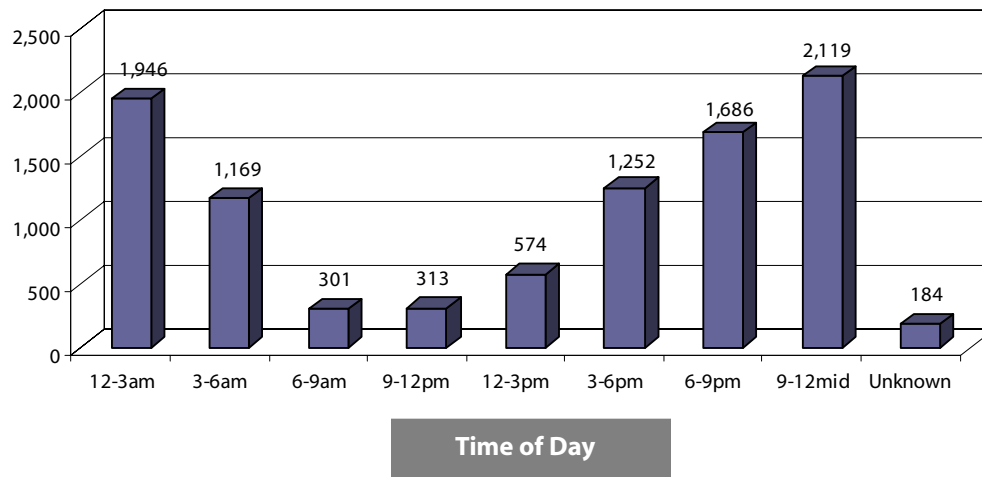
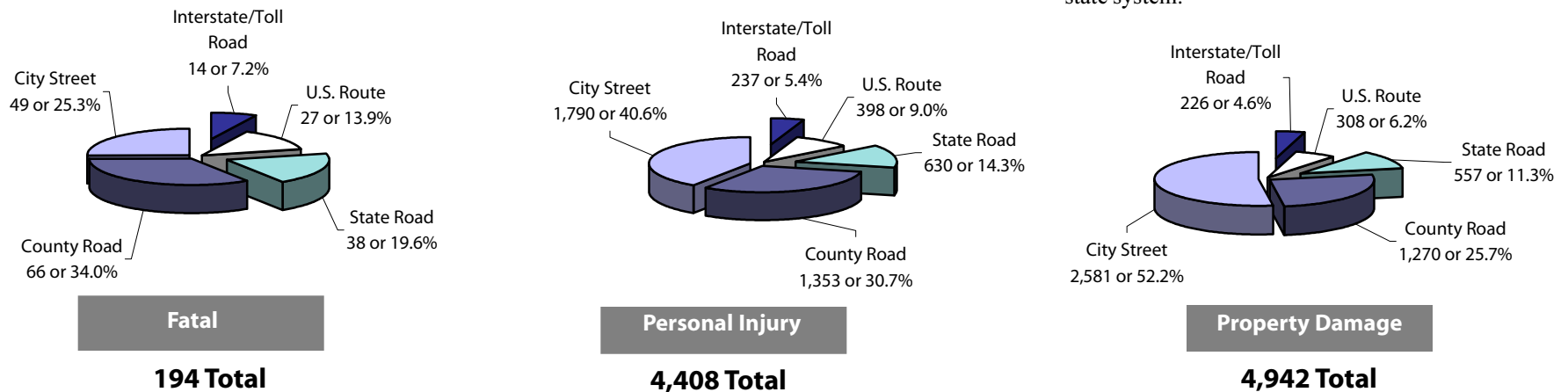


Figure 58

The majority of alcohol-related crashes, injuries and fatalities occur on city and county roads. Fatal alcohol-related crashes occurring on interstate roadways represented only 7.2 percent of the alcohol fatalities and yet 21.4 percent of all miles driven in Indiana (as estimated by INDOT) are driven on the Indiana interstate system.

Figure 58: Alcohol-Related Crashes by Severity and Roadway Type–1997



alcohol

Table 82

Of the 576 drivers that were killed in motor vehicle crashes in 1997, BAC tests were conducted on 341 or 59 percent of those drivers. Of the killed drivers that were tested, 39 percent showed the presence of alcohol in the blood stream.

- 20.5 percent of the killed drivers had a BAC of 0.10 or greater.
- 16 drivers killed in 1997 were under the legal drinking age and showed presence of alcohol in their system. 12 of those drivers had BAC levels of 0.10 or greater. In 1996 the comparable numbers were 18 and 9 drivers, respectively.
- Male drivers continue to be significantly over-represented.
- The 25 to 34 and 35 to 44 age groups represent the majority of killed drivers for both male and female drivers.

Table 82. Alcohol-Related BAC Test Results for Killed Drivers by Age and Gender–1997

Age	0.0 to 0.009			0.010 to 0.049			0.050 to 0.099			0.100 or Greater			Unknown or Blank			Total		
	Male	Fem	Tot	Male	Fem	Tot	Male	Fem	Tot	Male	Fem	Tot	Male	Fem	Tot	Male	Fem	Tot
10 - 15	1	0	1	0	0	0	0	0	0	0	0	0	5	0	5	6	0	6
16	11	2	13	0	0	0	0	0	0	0	0	0	10	4	14	21	6	27
17	3	2	5	1	0	1	1	0	1	0	0	0	7	4	11	12	6	18
18	3	4	7	1	0	1	0	0	0	2	0	2	5	2	7	11	6	17
19	4	0	4	0	0	0	1	0	1	4	2	6	7	1	8	16	3	19
20	6	1	7	0	0	0	0	0	0	4	0	4	3	1	4	13	2	15
21	4	2	6	0	0	0	1	0	1	4	0	4	6	3	9	15	5	20
22	1	4	5	2	0	2	2	0	2	1	0	1	1	1	2	7	5	12
23	2	2	4	0	0	0	0	0	0	4	0	4	3	3	6	9	5	14
24	3	0	3	0	0	0	0	0	0	2	1	3	2	1	3	7	2	9
25 - 34	23	14	37	0	0	0	1	0	1	29	8	37	19	12	31	72	34	106
35 - 44	19	9	28	1	0	1	2	1	3	26	6	32	18	5	23	66	21	87
45 - 54	22	8	30	0	0	0	1	0	1	13	1	14	20	13	33	56	22	78
55 - 64	16	8	24	0	0	0	0	0	0	4	2	6	11	8	19	31	18	49
65 - 74	16	4	20	0	0	0	0	0	0	2	1	3	9	11	20	27	16	43
75 - 84	7	4	11	0	0	0	0	0	0	1	0	1	19	11	30	27	15	42
85+	3	0	3	0	0	0	0	0	0	0	0	0	8	2	10	11	2	13
TOTAL	144	64	208	5	0	5	9	1	10	97	21	118	153	82	235	408	168	576

Legend: Fem=Female; Tot=Total
Source: Fatality Analysis Reporting System, NHTSA.
Note: Drivers of motorcycles, mopeds, minibikes, motorscooters, and motorbikes are excluded.

Figure 59. BAC Test Results for Killed Drivers–1997

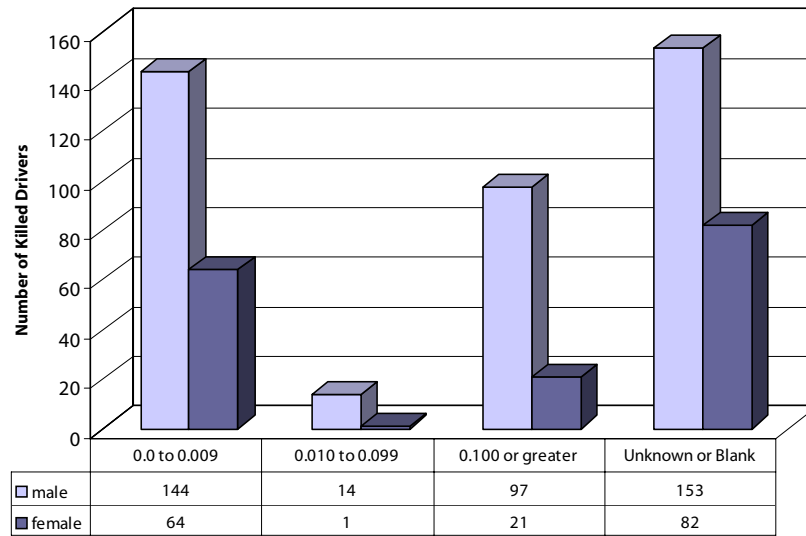
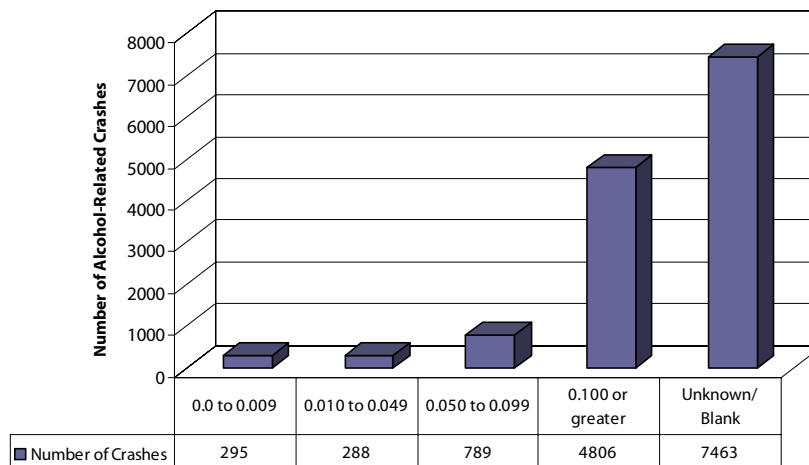


Figure 60. Driver BAC in Alcohol-Related Crashes–1997



alcohol

Table 83. Drivers with BAC Greater Than 0.05 by Age Group: 1988-1997

Age	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
10 - 17	226	188	186	136	103	104	108	101	109	118
18 - 20	737	687	739	641	544	479	445	441	399	462
21 - 24	1,354	1,274	1,306	1,171	1,144	1,098	1,119	998	800	821
25 - 34	2,336	2,374	2,683	2,419	2,337	2,139	2,153	2,006	1,677	1,691
35 - 44	1,005	1,090	1,227	1,265	1,352	1,379	1,398	1,400	1,309	1,418
45 - 54	398	467	458	442	538	526	576	614	531	640
55 - 64	226	263	249	209	237	235	242	236	208	210
65 - 74	90	103	93	110	112	105	123	119	92	103
75 - 84	19	17	20	16	11	26	31	20	24	18
85+	25	21	18	29	16	3	6	12	14	20
Unknown	12	18	83	42	17	40	31	22	15	20
Total	6,428	6,502	7,062	6,480	6,411	6,134	6,232	5,969	5,178	5,521

Note: Drivers of parked vehicles excluded.

Figure 61. Drivers with BAC Greater than 0.05: 1988-1997

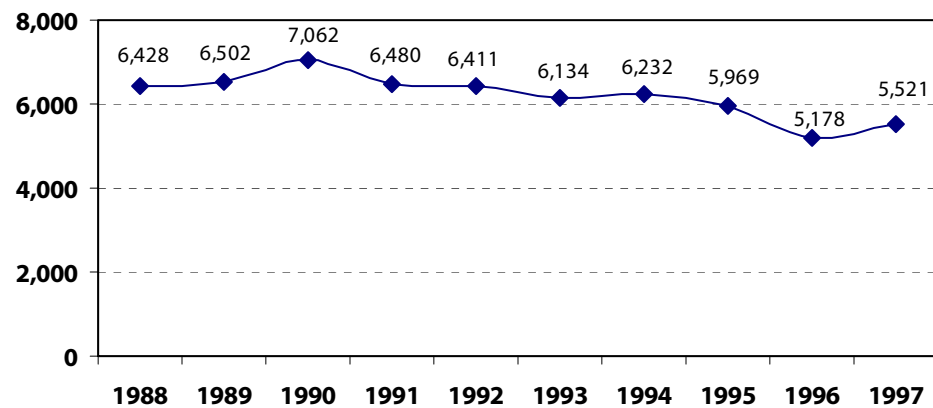


Table 83

- 580 drivers under 21 years old were involved in alcohol-related crashes and had a BAC greater than 0.05. This corresponds to a crash approximately every 16 hours.

Table 84. Motorcycle Driver Fatalities by BAC Test Results: 1988-1997

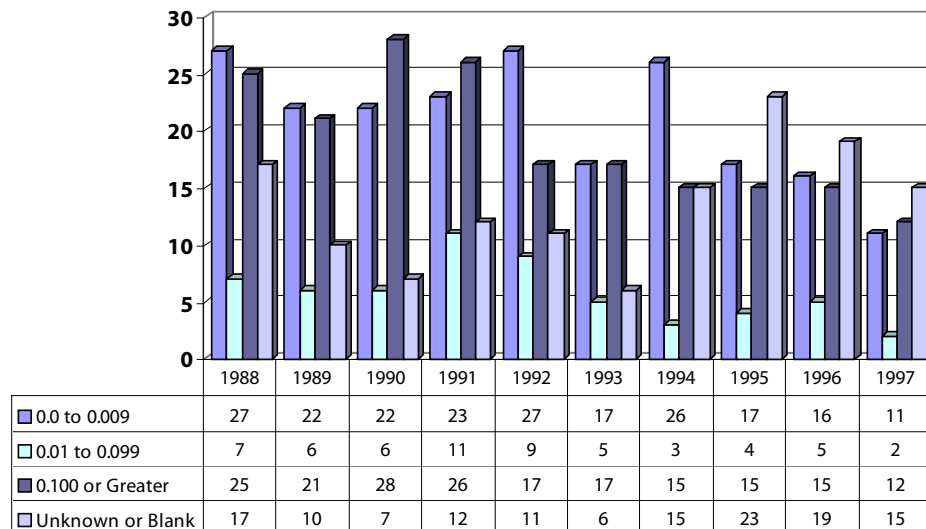
Year	0.0 to 0.009	0.01 to 0.049	0.05 to 0.099	0.100 or Greater	Unknown or Blank	Total
1988	27	1	6	25	17	76
1989	22	1	5	21	10	59
1990	22	3	3	28	7	63
1991	23	4	7	26	12	72
1992	27	4	5	17	11	64
1993	17	4	1	17	6	45
1994	26	1	2	15	15	59
1995	17	3	1	15	23	59
1996	16	2	3	15	19	55
1997	11	1	1	12	15	40

Note: Drivers of mopeds, motorized bicycles, motor scooters and minibikes are excluded.
 Source: Fatality Analysis Reporting System, NHTSA.

Table 84

- 1997 represented the fewest number of both motorcycle driver and motorcycle driver alcohol-related fatalities over the past ten years.

Figure 62. Motorcycle Driver Fatalities by BAC Test Results: 1988-1997



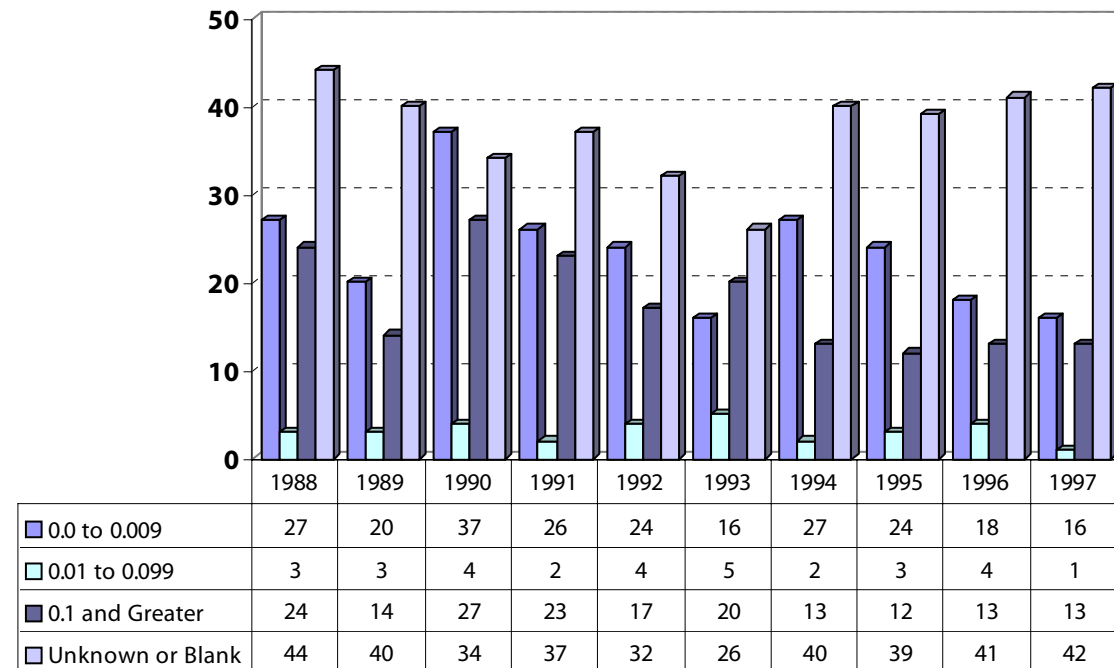
alcohol

Table 85: Pedestrian Fatalities by BAC Test Results: 1988-1997

Year	0.0 to 0.009	0.01 to 0.099	0.1 and Greater	Unknown or Blank	Total
1988	27	3	24	44	98
1989	20	3	14	40	77
1990	37	4	27	34	102
1991	26	2	23	37	88
1992	24	4	17	32	77
1993	16	5	20	26	67
1994	27	2	13	40	82
1995	24	3	12	39	78
1996	18	4	13	41	76
1997	16	1	13	42	72

Source: Fatality Analysis Reporting System, NHTSA.

Figure 63: Pedestrian Fatalities by BAC Test Results: 1988-1997



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This section contains county data on crashes, including:

- *Crash Severity*
- *Fatal Crashes and Fatalities by Month*
- *Economic Loss*
- *Crash Rates per Licensed Driver, per Capita and by Age Group*
- *Alcohol-Related Crashes including Rate per Licensed Driver*
- *Probable Cause Affidavits and DWI Convictions including Rate per Licensed Driver*
- *Alcohol-Related Crashes 1993-1997*

As part of the redesign of this year's *Crash Book*, county data has been captured in one chapter versus being dispersed throughout the entire book. As a result, it allows for easier access to the data and comparisons with other counties' performance.

However, as comparisons are made between counties, care must be given for county population differences and other unique attributes of a county such as rural versus urban, location of a college or university, a commuting county, commercial motor vehicle traffic, etc. Also the impact of one major crash within a county that results in several injuries or fatalities can also alter the interpretation of the data. For that reason, it is important to evaluate county performance over time. In many cases, additional data is provided to allow for a better comparison with

1997 data. When the additional data is identified as the five-year weighted average for 1993-1997, the most recent data is more heavily weighted than the older data. Also, "yearly percentage of change" is shown. This change is shown as a percentage and indicates the annual rate of change of that particular performance indicator over the five-year period (1993-1997). Only by looking at the particular category can the reader determine whether an increase in the statistic is favorable or unfavorable. Additionally, "Percent of State Average" has been shown where available to also allow a comparison within the State of Indiana. By providing the historical data, the yearly percentage of change and the 1997 data, the reader is in a better position to evaluate the performance of specific counties.

Additionally provided in the county crash section is specific data on crashes, including severity as measured by economic loss in the county, personal injuries and fatalities. Fatal crashes are shown by month of the year and also by driver age.

Where appropriate, specific comments are made for the individual table or figure. The last table (95) provides county data for registered vehicles, licensed drivers, population estimates and miles traveled (VMT). This data is used to calculate many of the indices presented in this chapter.

county data

Table 86. Crash Severity by County–1997

County	Total Crashes						Alcohol-Related Crashes					
	1993-1997 Total Crashes	1993-1997 Weighted Average	1993-1997 Percent Change	Fatal Crashes	Personal Injury	Property Damage	1993-1997 Total Crashes	1993-1997 Weighted Average	1993-1997 Percent Change	Fatal Crashes	Personal Injury	Property Damage
ADAMS	886	921	0.0%	8	202	676	29	28	1.0%	0	10	19
ALLEN	13,598	13,395	1.0%	29	2,988	10,581	606	583	0.0%	7	267	332
BARTHOLOMEW	2,258	2,374	0.0%	19	639	1,600	107	103	0.0%	5	54	48
BENTON	191	192	1.0%	2	37	152	8	6	-11.0%	1	3	4
BLACKFORD	382	427	-1.0%	3	84	295	8	13	-21.0%	0	3	5
BOONE	1,385	1,340	5.0%	10	258	1,117	49	51	4.0%	1	24	24
BROWN	544	518	2.0%	3	128	413	37	29	12.0%	0	19	18
CARROLL	590	613	1.0%	2	131	457	42	34	0.0%	0	22	20
CASS	1,798	1,754	4.0%	13	392	1,393	66	71	-9.0%	2	31	33
CLARK	3,498	3,487	3.0%	10	977	2,511	138	166	-2.0%	2	73	63
CLAY	876	951	-1.0%	7	187	682	26	34	-7.0%	1	16	9
CLINTON	1,129	1,108	1.0%	5	286	838	59	58	-3.0%	1	31	27
CRAWFORD	297	280	3.0%	1	82	214	5	8	-22.0%	0	2	3
DAVISS	872	849	3.0%	8	238	626	39	49	1.0%	0	22	17
DEARBORN	1,715	1,600	5.0%	5	450	1,260	124	104	6.0%	2	68	54
DECATUR	811	805	3.0%	8	197	606	38	41	-11.0%	0	20	18
DEKALB	1,394	1,412	3.0%	2	274	1,118	43	53	-10.0%	0	22	21
DELAWARE	4,301	4,498	0.0%	19	1,019	3,263	193	192	-1.0%	2	77	114
DUBOIS	1,452	1,413	3.0%	3	354	1,095	79	79	-4.0%	1	38	40
ELKHART	7,832	7,270	6.0%	34	1,870	5,928	310	315	1.0%	13	148	149
FAYETTE	985	993	2.0%	4	208	773	46	56	-7.0%	2	15	29
FLOYD	2,510	2,459	3.0%	3	634	1,873	117	133	-4.0%	0	60	57
FOUNTAIN	563	591	2.0%	6	119	438	43	35	7.0%	2	21	20
FRANKLIN	676	635	5.0%	7	159	510	41	41	0.0%	2	23	16
FULTON	588	630	1.0%	8	115	465	33	38	-8.0%	3	15	15
GIBSON	1,068	1,042	2.0%	2	241	825	41	48	-8.0%	0	15	26
GRANT	2,621	2,700	2.0%	5	522	2,094	107	111	-2.0%	0	45	62
GREENE	898	973	-1.0%	2	257	639	37	44	-12.0%	0	26	11
HAMILTON	4,523	4,367	6.0%	12	1,043	3,468	110	120	-6.0%	1	49	60
HANCOCK	1,639	1,518	4.0%	9	438	1,192	48	54	-4.0%	3	28	17
HARRISON	1,255	1,211	4.0%	5	291	959	48	50	-6.0%	3	30	15
HENDRICKS	2,647	2,509	6.0%	11	577	2,059	91	94	-5.0%	3	31	57
HENRY	1,398	1,477	1.0%	2	317	1,079	54	62	-4.0%	1	16	37
HOWARD	2,737	2,768	2.0%	12	751	1,974	129	127	3.0%	2	60	67
HUNTINGTON	1,377	1,299	5.0%	10	314	1,053	47	47	-4.0%	2	20	25
JACKSON	1,610	1,678	2.0%	7	379	1,224	75	74	-6.0%	2	34	39
JASPER	1,073	1,048	3.0%	7	229	837	44	43	9.0%	2	19	23
JAY	750	754	2.0%	4	163	583	30	28	-9.0%	0	18	12
JEFFERSON	1,096	1,063	3.0%	7	245	844	53	57	-3.0%	1	25	27
JENNINGS	850	851	4.0%	6	192	652	31	43	-11.0%	2	10	19
JOHNSON	2,853	2,880	5.0%	8	670	2,175	123	126	4.0%	2	52	69
KNOX	1,437	1,457	0.0%	3	368	1,066	55	71	-11.0%	0	23	32
KOSCIUSKO	2,507	2,591	2.0%	17	571	1,919	124	137	-1.0%	3	62	59
LAGRANGE	1,115	1,052	4.0%	9	199	907	44	47	-6.0%	0	24	20
LAKE	20,748	19,592	3.0%	59	5,142	15,547	982	947	2.0%	11	471	500
LAPORTE	4,549	4,209	4.0%	27	1,201	3,321	281	264	2.0%	11	129	141
LAWRENCE	1,497	1,527	0.0%	14	410	1,073	88	81	5.0%	4	40	44
MADISON	4,641	4,833	1.0%	18	1,148	3,475	192	205	-2.0%	3	91	98
MARION	34,609	34,226	1.0%	77	8,623	25,909	1,262	1319	-3.0%	14	539	709
MARSHALL	1,631	1,667	3.0%	10	372	1,249	79	82	-4.0%	3	44	32

Table 86 provides a listing of the number of total crashes in that county and also categorizes the crashes by fatal, personal injury and property damage. For comparison purposes, the time-weighted averages (1993-1997) are shown for total crashes and alcohol-related crashes. Additionally, the percent change for that time period is identified. If, for example, the rate of change for total crashes is 4.0%, this indicates that on the average, the number of crashes increased by approximately 4.0 percent annually over the last five years. Likewise, a negative number indicates that the number of crashes occurring annually in that category actually decreased by that annual percentage over the last five years.

Table 86. Crash Severity by County–1997 (cont.)

County	Total Crashes						Alcohol-Related Crashes					
	Total Crashes	1993-1997 Weighted Average	1993-1997 Percent Change	Fatal Crashes	Personal Injury	Property Damage	Total Crashes	1993-1997 Weighted Average	1993-1997 Percent Change	Fatal Crashes	Personal Injury	Property Damage
MARTIN	336	335	0.0%	2	89	245	14	20	-11.0%	0	7	7
MIAMI	1,117	1,131	1.0%	9	221	887	52	55	-6.0%	3	20	29
MONROE	4,481	4,359	4.0%	13	1,029	3,439	140	138	-3.0%	6	67	67
MONTGOMERY	1,265	1,287	0.0%	9	318	938	58	54	3.0%	2	34	22
MORGAN	1,665	1,657	1.0%	11	436	1,218	81	77	6.0%	4	38	39
NEWTON	415	409	1.0%	3	87	325	23	27	-4.0%	1	9	13
NOBLE	1,780	1,688	4.0%	13	322	1,445	68	78	-3.0%	3	29	36
OHIO	229	204	10.0%	2	51	176	19	16	16.0%	0	10	9
ORANGE	622	605	5.0%	6	118	498	17	16	7.0%	3	5	9
OWEN	643	642	2.0%	7	126	510	27	28	2.0%	1	12	14
PARKE	470	520	1.0%	2	116	352	28	29	-2.0%	1	15	12
PERRY	603	628	2.0%	1	133	469	20	25	-3.0%	1	9	10
PIKE	397	374	7.0%	1	87	309	19	20	5.0%	0	14	5
PORTER	4,848	4,606	4.0%	23	1,296	3,529	192	213	-4.0%	4	101	87
POSEY	523	565	-1.0%	4	123	396	32	31	-4.0%	0	13	19
PULASKI	538	545	4.0%	2	89	447	22	25	-9.0%	0	16	6
PUTNAM	1,230	1,201	1.0%	3	260	967	47	50	-11.0%	1	16	30
RANDOLPH	647	709	0.0%	4	127	516	30	33	-8.0%	1	12	17
RIPLEY	878	853	4.0%	8	188	682	44	44	-2.0%	1	25	18
RUSH	554	553	0.0%	4	144	406	28	28	-11.0%	1	12	15
SAINT JOSEPH	10,075	10,006	3.0%	21	2,604	7,450	538	558	1.0%	7	267	264
SCOTT	741	773	1.0%	1	197	543	34	37	1.0%	0	17	17
SHELBY	1,409	1,386	2.0%	7	347	1,055	81	85	-4.0%	0	20	61
SPENCER	678	658	2.0%	3	143	532	41	44	1.0%	0	17	24
STARKE	748	758	4.0%	9	190	549	41	48	0.0%	2	22	17
STEBEN	1,665	1,645	4.0%	3	342	1,320	61	62	-3.0%	2	33	26
SULLIVAN	495	498	2.0%	1	82	412	5	6	19.0%	0	2	3
SWITZERLAND	337	345	3.0%	3	68	266	24	19	7.0%	1	13	10
TIPPECANOE	6,319	6,415	2.0%	16	1,160	5,143	255	263	2.0%	3	98	154
TIPTON	392	414	-1.0%	4	99	289	8	11	-16.0%	1	3	4
UNION	240	240	3.0%	2	51	187	13	10	-5.0%	1	9	3
VANDERBURGH	6,812	6,908	1.0%	16	1,681	5,115	347	338	-3.0%	7	165	175
VERMILLION	535	559	2.0%	3	118	414	35	36	2.0%	1	18	16
VIGO	4,777	4,995	2.0%	17	1,133	3,627	206	229	-6.0%	3	83	120
WABASH	1,142	1,205	3.0%	10	247	885	56	55	-2.0%	3	25	28
WARREN	230	256	1.0%	1	40	189	11	11	-4.0%	0	4	7
WARRICK	1,406	1,399	3.0%	12	290	1,104	67	70	0.0%	2	23	42
WASHINGTON	905	834	6.0%	7	221	677	53	52	4.0%	2	26	25
WAYNE	2,735	2,754	3.0%	8	750	1,977	134	130	1.0%	3	65	66
WELLS	799	794	4.0%	4	181	614	23	28	2.0%	2	9	12
WHITE	1,029	1,073	2.0%	4	167	858	39	45	-15.0%	0	17	22
WHITLEY	1,039	1,044	2.0%	8	251	780	50	52	-2.0%	1	23	26
INDIANA	220,009	2,366		849	52,413	166,747	9,544	106		194	4,408	4,942

county data

Table 87. Fatal Crashes and Fatalities by County and Month–1997

County	January		February		March		April		May		June		July		August		September		October		November		December		Total		1993-1997		
	Crashes	Fatalities	Crashes	Fatalities	Crashes	Fatalities	Crashes	Fatalities	Crashes	Fatalities	Crashes	Fatalities	Crashes	Fatalities	Crashes	Fatalities	Crashes	Fatalities	Crashes	Fatalities	Crashes	Fatalities	Crashes	Fatalities	Crashes	Fatalities	Fatalities	Wtd. Avg.	Percent of Change
ADAMS	0	0	0	0	0	0	1	1	1	1	0	0	0	0	1	1	0	0	1	1	2	2	2	2	8	8	5.53	11%	
ALLEN	1	1	3	4	0	0	3	3	3	3	3	5	3	5	4	4	2	3	5	5	1	1	1	1	29	35	37.00	-3%	
BARTHOLOMEW	0	0	0	0	2	2	1	1	2	6	2	2	3	3	0	0	3	5	0	0	2	2	4	4	19	25	17.00	15%	
BENTON	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	2	2.07	6%	
BLACKFORD	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	3	3	2.73	13%	
BOONE	1	1	1	1	0	0	1	1	1	1	1	1	1	1	0	0	1	1	1	1	1	1	1	2	10	11	9.93	8%	
BROWN	1	1	1	1	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	3	3	4.33	-2%	
CARROLL	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	1	1	0	0	0	0	0	2	2	4.73	-4%	
CASS	1	1	0	0	0	0	1	1	4	4	1	1	2	2	1	2	1	1	2	2	0	0	0	0	13	14	8.47	2%	
CLARK	1	1	0	0	0	0	2	2	0	0	3	3	0	0	2	2	0	0	1	1	0	0	1	1	10	10	9.80	-15%	
CLAY	0	0	0	0	0	0	0	0	0	0	0	0	2	2	2	2	1	1	1	1	1	1	0	0	7	7	6.20	55%	
CLINTON	2	2	0	0	0	0	0	0	0	0	1	1	0	0	1	1	1	1	0	0	0	0	0	0	5	5	7.33	-3%	
CRAWFORD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1	1	1.87	-11%	
DAVISS	1	1	0	0	1	1	0	0	2	4	1	1	1	1	0	0	0	0	0	0	0	0	2	2	8	10	7.60	7%	
DEARBORN	1	1	0	0	0	0	0	0	0	3	4	0	0	0	0	0	0	0	0	0	1	3	0	0	5	8	7.53	6%	
DECATUR	1	1	0	0	1	1	1	1	2	2	1	1	0	0	1	1	1	1	0	0	0	0	0	0	8	8	7.60	11%	
DEKALB	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1	1	0	0	0	0	2	2	8.20	-27%	
DELAWARE	2	2	1	1	0	0	2	2	1	1	1	1	5	7	2	2	1	1	3	3	0	0	1	1	19	21	18.93	1%	
DUBOIS	1	1	1	1	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	3	3	3.53	-13%	
ELKHART	1	1	1	1	1	1	5	5	3	3	3	5	1	1	4	5	4	5	6	6	4	4	4	1	34	38	34.93	6%	
FAYETTE	0	0	1	2	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	1	1	0	0	4	5	3.47	42%	
FLOYD	0	0	0	0	0	0	0	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	3	3	7.20	-17%	
FOUNTAIN	0	0	0	0	0	0	1	1	0	0	2	2	1	1	0	0	0	0	1	1	0	0	1	1	6	6	4.87	13%	
FRANKLIN	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1	1	1	1	2	2	1	1	1	1	7	7	6.07	13%	
FULTON	0	0	0	0	1	1	0	0	1	1	1	1	2	3	2	2	1	1	0	0	0	0	0	0	8	9	7.93	6%	
GIBSON	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	1	0	0	0	0	2	2	4.73	-18%	
GRANT	0	0	0	0	1	1	0	0	1	1	1	1	0	0	0	0	0	0	1	1	1	1	1	0	5	5	9.53	-6%	
GREENE	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	2	2	4.73	-34%	
HAMILTON	3	3	0	0	0	0	0	0	1	1	2	2	0	0	1	1	1	1	2	2	1	1	1	1	12	12	11.20	-1%	
HANCOCK	1	1	0	0	2	4	1	1	1	1	2	2	0	0	1	1	0	0	0	0	1	1	0	0	9	11	8.47	5%	
HARRISON	0	0	0	0	0	0	0	0	1	2	1	1	0	0	2	2	0	0	0	0	0	0	0	1	1	5	6	7.07	4%
HENDRICKS	0	0	0	0	2	2	0	0	2	3	1	2	0	0	0	0	0	0	3	3	2	3	1	1	11	14	13.07	10%	
HENRY	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	2	2	7.80	-32%	
HOWARD	1	1	0	0	1	1	0	0	1	2	3	3	0	0	1	1	0	0	2	2	1	1	2	2	12	13	10.20	-4%	
HUNTINGTON	3	4	0	0	1	1	0	0	0	0	0	0	0	0	1	1	0	0	2	2	1	2	2	2	10	12	11.60	10%	
JACKSON	0	0	0	0	0	0	1	2	0	0	1	1	1	1	0	0	2	2	2	2	0	0	0	0	7	8	8.33	5%	
JASPER	0	0	1	1	0	0	0	0	1	1	1	1	0	0	0	0	1	1	0	0	2	2	1	1	7	7	6.67	-5%	
JAY	0	0	0	0	1	1	0	0	0	0	0	0	0	0	2	2	0	0	1	1	0	0	0	0	4	4	4.33	-5%	
JEFFERSON	0	0	1	1	0	0	2	2	1	1	0	0	0	0	1	1	0	0	1	1	1	1	0	0	7	7	6.60	4%	
JENNINGS	0	0	1	1	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	2	2	1	1	6	6	5.47	-5%	
JOHNSON	0	0	0	0	1	1	1	1	0	0	1	1	1	1	1	1	0	0	2	2	0	0	1	1	8	8	7.33	-8%	
KNOX	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	3	3	6.33	-21%	
KOSCIUSKO	1	1	0	0	3	3	1	1	0	0	1	1	2	2	1	1	0	0	4	4	2	2	2	2	17	17	19.00	5%	
LAGRANGE	0	0	0	0	0	0	1	1	1	1	1	1	0	0	0	0	1	1	0	0	1	1	4	4	9	9	10.20	6%	
LAKE	4	4	2	2	2	2	5	6	6	6	6	7	6	7	7	7	5	5	7	7	4	4	5	6	59	63	61.47	-3%	

Table 87 shows the number of fatal crashes and the number of fatalities by month for 1997. The farthest right-hand two columns allow a comparison of the 1997 fatalities with similar number for the 1993–1997 period. Again, a yearly percentage of change is also shown. For example, an 11% change indicates that fatalities have increased an average of 11% per year over the past five years through 1997.

- *Nearly 50% of the fatalities occur in the five-month period from June through October.*

Table 87. Fatal Crashes and Fatalities by County and Month—1997 (cont.)

County	January		February		March		April		May		June		July		August		September		October		November		December		Total		1993-1997		
	Crashes	Fatalities	Crashes	Fatalities	Crashes	Fatalities	Crashes	Fatalities	Crashes	Fatalities	Crashes	Fatalities	Crashes	Fatalities	Crashes	Fatalities	Crashes	Fatalities	Crashes	Fatalities	Crashes	Fatalities	Crashes	Fatalities	Crashes	Fatalities	Fatalities Wtd. Avg.	Percent of Change	
LAPORTE	1	1	1	1	0	0	5	6	2	2	2	2	1	1	4	4	2	2	3	3	2	2	4	4	27	28	26.40	-3%	
LAWRENCE	2	2	0	0	2	2	1	1	0	0	0	0	2	2	1	1	4	4	0	0	1	1	1	2	14	15	10.53	-1%	
MADISON	1	1	3	3	2	3	2	2	1	1	2	2	1	1	1	1	2	3	1	2	1	1	1	1	18	21	18.33	8%	
MARION	5	6	6	8	5	5	5	5	5	5	7	8	10	10	10	11	6	6	7	9	5	5	6	6	77	84	82.87	0%	
MARSHALL	0	0	1	1	1	2	2	3	1	1	1	1	0	0	0	0	0	0	1	1	2	2	1	1	10	12	10.67	4%	
MARTIN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0	1	1	2	3	2.87	3%	
MIAMI	0	0	0	0	1	1	0	0	1	1	2	2	2	4	1	1	1	1	0	0	0	0	1	2	9	12	8.93	2%	
MONROE	0	0	1	1	3	3	2	2	1	1	3	4	1	1	0	0	1	1	1	1	0	0	0	0	13	14	12.07	-1%	
MONTGOMERY	1	2	2	2	1	1	1	1	0	0	0	0	0	0	0	0	2	2	1	1	1	1	0	0	9	10	9.00	9%	
MORGAN	1	1	0	0	0	0	3	3	1	1	0	0	0	0	1	1	0	0	1	1	1	1	3	3	11	11	9.27	-2%	
NEWTON	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	1	1	3	3	4.40	-15%	
NOBLE	1	1	0	0	0	0	0	0	0	0	0	0	1	1	4	4	3	5	1	1	1	1	2	2	13	15	12.33	2%	
OHIO	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	2	2	0.60	-42%	
ORANGE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3	0	0	1	1	2	2	6	6	4.87	20%		
OWEN	0	0	0	0	0	0	0	0	1	1	0	0	2	3	1	2	0	0	1	1	1	1	1	2	7	10	5.87	10%	
PARKE	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	2	2	2.93	-20%	
PERRY	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2.67	56%	
PIKE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	1	1	3.13	-3%	
PORTER	1	1	1	1	0	0	0	0	0	0	4	4	3	3	4	5	3	3	3	4	4	4	4	0	0	23	25	23.80	-3%
POSEY	1	1	0	0	1	1	0	0	0	0	1	1	0	0	0	0	0	0	1	1	0	0	0	0	4	4	3.73	7%	
PULASKI	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	2.80	38%	
PUTNAM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	2	1	1	0	0	0	0	0	0	3	4	5.93	-10%	
RANDOLPH	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	1	1	0	0	2	3	0	0	4	5	8.00	5%	
RIPLEY	2	2	0	0	1	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	2	3	2	2	8	9	6.00	14%	
RUSH	0	0	0	0	1	1	2	2	0	0	0	0	1	2	0	0	0	0	0	0	0	0	0	0	4	5	4.00	13%	
SAINT JOSEPH	1	1	0	0	1	1	1	2	1	1	4	4	1	1	1	1	2	2	3	3	1	1	5	5	21	22	26.00	2%	
SCOTT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1	1	4.47	-39%	
SHELBY	1	1	0	0	0	0	0	0	1	1	0	0	1	1	2	2	1	1	0	0	0	0	1	2	7	8	7.27	4%	
SPENCER	1	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	3	3	4.40	-12%	
STARKE	2	4	1	1	1	1	0	0	1	1	0	0	2	2	1	1	0	0	0	0	1	1	0	0	9	11	8.33	7%	
STEBEN	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	3	3	6.53	-18%	
SULLIVAN	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	3.40	-8%	
SWITZERLAND	0	0	0	0	0	0	1	4	0	0	0	0	0	0	2	4	0	0	0	0	0	0	0	0	3	8	3.60	30%	
TIPPECANOE	0	0	0	0	0	0	3	3	2	2	1	1	0	0	1	1	0	0	2	2	4	6	3	3	16	18	17.60	-4%	
TIPTON	0	0	0	0	1	1	1	2	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	1	4	5	4.00	9%	
UNION	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	1	1	0	0	0	0	0	0	2	2	1.40	50%	
VANDERBURGH	1	1	1	1	2	2	2	2	0	0	1	1	0	0	2	2	2	2	1	1	3	3	1	1	16	16	13.53	-4%	
VERMILLION	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	1	1	0	0	0	0	3	3	5.87	0%	
VIGO	0	0	1	1	0	0	1	1	1	1	1	1	4	4	2	2	6	7	0	0	1	1	0	0	17	18	16.47	11%	
WABASH	1	1	0	0	1	1	1	1	1	1	0	0	2	3	2	3	0	0	1	1	0	0	1	1	10	12	11.47	0%	
WARREN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	1	1.67	-91%	
WARRICK	0	0	0	0	1	1	0	0	2	2	2	2	0	0	2	2	0	0	1	1	1	1	3	3	12	12	8.07	-9%	
WASHINGTON	0	0	1	1	1	1	1	1	0	0	0	0	1	2	0	0	1	1	1	1	0	0	1	2	7	9	6.20	16%	
WAYNE	1	3	0	0	1	1	2	2	1	1	0	0	0	0	1	1	0	0	1	1	1	1	0	0	8	10	10.47	6%	
WELLS	0	0	0	0	1	1	1	1	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	4	4	6.07	-7%	
WHITE	2	2	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1	1	0	0	0	0	0	0	4	4	4.27	-16%	
WHITLEY	1	1	0	0	0	0	0	0	1	1	0	0	2	2	1	1	0	0	1	1	0	0	2	2	8	8	6.00	-1%	
INDIANA	57	64	36	40	50	54	71	80	68	77	82	91	75	87	92	101	77	85	89	94	71	79	81	88	849	940			

Legend: Wtd. Avg. = Weighted Average

county data

Table 88. Total Economic Loss for all Reportable Crashes by County—1997

County	1993-1997	1993-1997	1997	1993-1997	1993-1997	1993-1997	1997	1993-1997	1993-1997	1993-1997	1997
	Wtd. Avg.	Wtd. Avg.		Wtd. Avg.	Wtd. Avg.	Wtd. Avg.		Wtd. Avg.	Wtd. Avg.	Wtd. Avg.	
	Total Economic Loss	Total Economic Loss	Economic Loss per Capita	Economic Loss per Capita	Economic Loss per Capita	Economic Loss per Capita	Economic Loss per Million VMT	Economic Loss per Million VMT	Economic Loss per Million VMT	Economic Loss per Million VMT	
	(Millions of Dollars)	(Millions of Dollars)	(Dollars)	(Dollars)	(Dollars)	(Dollars)	(Dollars)	(Dollars)	(Dollars)	(Dollars)	(Dollars)
		% Change			% Change	% of State Avg.			% Change	% of State Avg.	
ADAMS	\$13.3	\$10.9	5.0%	\$405	\$335	4.0%	80%	\$43,610	\$37,117	4.0%	105.8%
ALLEN	\$131.5	\$130.7	1.0%	\$421	\$422	0.0%	101%	\$38,352	\$42,016	-4.0%	119.8%
BARTHOLOMEW	\$40.0	\$34.5	6.0%	\$582	\$508	5.0%	121%	\$45,943	\$44,300	5.0%	126.3%
BENTON	\$2.9	\$3.0	3.0%	\$301	\$316	3.0%	75%	\$15,822	\$17,452	2.0%	49.8%
BLACKFORD	\$5.2	\$5.0	2.0%	\$371	\$353	2.0%	84%	\$33,207	\$33,255	1.0%	94.8%
BOONE	\$18.2	\$17.3	5.0%	\$423	\$412	4.0%	98%	\$20,335	\$20,337	2.0%	58.0%
BROWN	\$6.2	\$7.1	0.0%	\$400	\$463	-1.0%	111%	\$39,175	\$48,296	-2.0%	137.7%
CARROLL	\$5.8	\$7.7	1.0%	\$292	\$394	0.0%	94%	\$22,334	\$31,131	-2.0%	88.8%
CASS	\$24.7	\$19.7	6.0%	\$639	\$509	6.0%	121%	\$58,225	\$49,283	3.0%	140.5%
CLARK	\$38.4	\$38.3	-1.0%	\$412	\$417	-2.0%	100%	\$29,265	\$32,428	-6.0%	92.5%
CLAY	\$12.1	\$11.5	6.0%	\$455	\$437	5.0%	104%	\$29,291	\$29,467	4.0%	84.0%
CLINTON	\$13.3	\$14.4	1.0%	\$401	\$441	0.0%	105%	\$26,240	\$30,042	-1.0%	85.7%
CRAWFORD	\$3.0	\$3.3	-2.0%	\$284	\$319	-3.0%	76%	\$13,783	\$16,864	-7.0%	48.1%
DAVISS	\$15.5	\$13.1	5.0%	\$536	\$459	4.0%	110%	\$48,487	\$49,427	3.0%	140.9%
DEARBORN	\$21.0	\$19.3	3.0%	\$450	\$431	1.0%	103%	\$37,005	\$37,569	-2.0%	107.1%
DECATUR	\$12.9	\$12.5	8.0%	\$508	\$501	7.0%	119%	\$28,394	\$29,206	4.0%	83.3%
DEKALB	\$11.1	\$15.6	-8.0%	\$286	\$412	-9.0%	98%	\$20,843	\$31,643	-11.0%	90.2%
DELAWARE	\$50.8	\$48.6	2.0%	\$432	\$409	3.0%	98%	\$32,540	\$34,563	-7.0%	98.5%
DUBOIS	\$13.2	\$13.1	-1.0%	\$337	\$340	-2.0%	81%	\$27,567	\$30,422	-6.0%	86.7%
ELKHART	\$93.8	\$87.3	6.0%	\$550	\$522	4.0%	125%	\$50,137	\$51,561	0.0%	147.0%
FAYETTE	\$11.2	\$10.3	4.0%	\$430	\$391	4.0%	93%	\$47,696	\$47,325	0.0%	134.9%
FLOYD	\$22.8	\$25.5	-1.0%	\$319	\$364	-2.0%	87%	\$28,383	\$36,571	-8.0%	104.3%
FOUNTAIN	\$8.6	\$7.6	10.0%	\$474	\$416	10.0%	99%	\$33,794	\$30,481	10.0%	86.9%
FRANKLIN	\$10.9	\$9.5	9.0%	\$505	\$453	7.0%	108%	\$39,256	\$37,637	6.0%	107.3%
FULTON	\$10.9	\$10.7	1.0%	\$538	\$536	0.0%	128%	\$40,174	\$42,530	-2.0%	121.3%
GIBSON	\$9.6	\$11.3	-5.0%	\$300	\$354	-5.0%	85%	\$18,731	\$24,119	-8.0%	68.8%
GRANT	\$22.3	\$27.1	-1.0%	\$306	\$369	-1.0%	88%	\$25,338	\$33,832	-6.0%	96.5%
GREENE	\$9.4	\$11.3	-11.0%	\$284	\$346	-12.0%	83%	\$23,179	\$30,651	-15.0%	87.4%
HAMILTON	\$45.7	\$43.7	3.0%	\$295	\$306	-2.0%	73%	\$26,047	\$28,051	-4.0%	80.0%
HANCOCK	\$24.0	\$19.9	4.0%	\$453	\$389	2.0%	93%	\$24,939	\$23,097	-4.0%	65.9%
HARRISON	\$14.3	\$14.7	3.0%	\$419	\$449	1.0%	107%	\$30,297	\$33,964	-1.0%	96.8%
HENDRICKS	\$30.9	\$29.2	7.0%	\$335	\$331	4.0%	79%	\$29,835	\$30,797	2.0%	87.8%
HENRY	\$12.4	\$17.4	-10.0%	\$254	\$357	-10.0%	85%	\$16,933	\$25,577	-14.0%	72.9%
HOWARD	\$34.3	\$31.8	1.0%	\$410	\$381	1.0%	91%	\$39,548	\$40,804	-5.0%	116.3%
HUNTINGTON	\$20.2	\$19.2	7.0%	\$543	\$523	6.0%	125%	\$34,703	\$34,256	5.0%	97.7%
JACKSON	\$19.0	\$19.3	3.0%	\$465	\$481	1.0%	115%	\$31,105	\$33,490	-2.0%	95.5%
JASPER	\$13.3	\$13.3	2.0%	\$464	\$479	0.0%	114%	\$21,374	\$22,510	-1.0%	64.2%
JAY	\$8.8	\$8.6	-1.0%	\$405	\$395	-1.0%	94%	\$31,516	\$32,326	-1.0%	92.2%
JEFFERSON	\$13.8	\$13.4	4.0%	\$442	\$431	3.0%	103%	\$45,183	\$46,853	1.0%	133.6%
JENNINGS	\$11.2	\$11.6	0.0%	\$411	\$444	-2.0%	106%	\$41,181	\$45,749	-2.0%	130.4%
JOHNSON	\$29.6	\$30.3	3.0%	\$277	\$296	0.0%	71%	\$32,015	\$35,730	2.0%	101.9%
KNOX	\$14.3	\$16.5	-6.0%	\$361	\$415	-6.0%	99%	\$27,753	\$34,178	-7.0%	97.4%
KOSCIUSKO	\$32.3	\$34.0	3.0%	\$459	\$493	2.0%	118%	\$41,723	\$49,707	-4.0%	141.7%
LAGRANGE	\$14.0	\$15.1	8.0%	\$428	\$473	6.0%	113%	\$24,364	\$28,813	2.0%	82.2%
LAKE	\$225.3	\$215.3	2.0%	\$470	\$449	2.0%	107%	\$48,644	\$50,062	-1.0%	142.7%
LAPORTE	\$61.0	\$57.0	3.0%	\$559	\$521	3.0%	124%	\$42,994	\$42,696	-1.0%	121.7%
LAWRENCE	\$24.7	\$21.7	2.0%	\$543	\$482	1.0%	115%	\$51,166	\$50,364	-1.0%	143.6%
MADISON	\$55.6	\$54.4	2.0%	\$421	\$411	2.0%	98%	\$38,121	\$40,025	-2.0%	114.1%
MARION	\$356.3	\$353.2	1.0%	\$438	\$433	1.0%	103%	\$36,120	\$39,099	-3.0%	111.5%
MARSHALL	\$21.3	\$21.0	4.0%	\$469	\$470	3.0%	112%	\$29,834	\$31,754	0.0%	90.5%

Table 88 shows the total economic loss by county as the result of motor vehicle crashes. The model for economic loss has been developed by NHTSA and is based upon an “average” loss as the result of a property damage crash, a personal injury crash and a fatal crash. Included in the estimate are lost wages, medical costs and repairs to property damage. This table shows a summary of these costs by county. In addition, weighted averages and percent of change are shown for the 1993-1997 period for further comparison purposes. The table is further detailed and provides economic loss both on a per capita (county population) basis and miles traveled within that county (million VMT). For comparison purposes, weighted averages (1993-1997) and percent of change are also listed. For both the per capita and million VMT statistics, comparisons are made with the state average for the five-year period. For example, 80% of the state average for an economic loss per capita for a county would indicate that the average economic loss suffered in a crash is 80% of the state average. It could be implied that the lower a percentage that the county had, the better the safety performance of that county. On the other hand, a small county with a low number of crashes but with perhaps as few as one or two fatal crashes could result in a very high economic loss. This is based upon the formula that assigns a very high cost with a fatality and a relatively small cost associated with a property damage crash.

Table 88. Total Economic Loss for all Reportable Crashes by County–1997 (cont.)

County	1993-1997	1993-1997	1993-1997	1993-1997	1993-1997	1993-1997	1993-1997	1993-1997	1993-1997	1993-1997	1993-1997
	1997 Total Economic Loss (Millions of Dollars)	Wtd. Avg. Total Economic Loss	Wtd. Avg. Total Economic Loss % Change	1997 Economic Loss per Capita (Dollars)	Wtd. Avg. Economic Loss per Capita (Dollars)	Wtd. Avg. Economic Loss per Capita % Change	Wtd. Avg. Economic Loss per Capita % of State Avg.	1997 Economic Loss per Million VMT (Dollars)	Wtd. Avg. Economic Loss per Million VMT (Dollars)	Wtd. Avg. Economic Loss per Million VMT % Change	Wtd. Avg. Economic Loss per Million VMT % of State Avg.
MARTIN	\$5.0	\$4.8	3.0%	\$478	\$455	3.0%	109%	\$39,652	\$38,197	6.0%	108.9%
MIAMI	\$17.6	\$15.2	2.0%	\$529	\$448	5.0%	107%	\$46,547	\$40,548	4.0%	115.6%
MONROE	\$45.8	\$41.8	2.0%	\$392	\$363	1.0%	87%	\$46,943	\$47,661	-4.0%	135.9%
MONTGOMERY	\$18.0	\$16.7	4.0%	\$495	\$463	4.0%	111%	\$31,417	\$30,747	2.0%	87.7%
MORGAN	\$22.0	\$20.4	-1.0%	\$340	\$327	-3.0%	78%	\$29,044	\$28,590	-3.0%	81.5%
NEWTON	\$5.4	\$6.5	-9.0%	\$367	\$456	-10.0%	109%	\$22,984	\$28,699	-9.0%	81.8%
NOBLE	\$23.5	\$20.6	2.0%	\$561	\$504	1.0%	120%	\$45,065	\$42,717	-3.0%	121.8%
OHIO	\$3.2	\$2.0	7.0%	\$595	\$371	6.0%	89%	\$55,174	\$36,481	11.0%	104.0%
ORANGE	\$8.7	\$7.3	12.0%	\$447	\$383	11.0%	91%	\$43,168	\$38,834	9.0%	110.7%
OWEN	\$12.6	\$9.3	8.0%	\$620	\$468	6.0%	112%	\$61,848	\$48,195	5.0%	137.4%
PARKE	\$5.1	\$5.9	-9.0%	\$310	\$362	-10.0%	86%	\$20,435	\$24,615	-9.0%	70.2%
PERRY	\$5.3	\$6.4	-1.0%	\$273	\$334	-1.0%	80%	\$21,841	\$27,577	0.0%	78.6%
PIKE	\$3.5	\$4.9	5.0%	\$274	\$390	4.0%	93%	\$17,676	\$26,387	2.0%	75.2%
PORTER	\$60.7	\$57.8	2.0%	\$421	\$411	1.0%	98%	\$37,101	\$37,845	-1.0%	107.9%
POSEY	\$7.0	\$7.2	-1.0%	\$262	\$273	-2.0%	65%	\$17,309	\$19,399	-5.0%	55.3%
PULASKI	\$4.7	\$5.3	4.0%	\$359	\$401	3.0%	96%	\$23,444	\$27,452	4.0%	78.3%
PUTNAM	\$11.4	\$12.7	-3.0%	\$339	\$386	-5.0%	92%	\$19,831	\$23,716	-6.0%	67.6%
RANDOLPH	\$8.6	\$11.2	3.0%	\$312	\$410	2.0%	98%	\$24,788	\$34,279	1.0%	97.7%
RIPLEY	\$13.3	\$10.6	6.0%	\$490	\$395	5.0%	94%	\$38,861	\$32,815	3.0%	93.6%
RUSH	\$8.4	\$7.5	4.0%	\$461	\$407	4.0%	97%	\$33,757	\$31,409	4.0%	89.6%
SAINT JOSEPH	\$102.6	\$104.0	3.0%	\$397	\$405	3.0%	97%	\$44,511	\$49,037	-2.0%	139.8%
SCOTT	\$7.5	\$10.7	-11.0%	\$329	\$479	-12.0%	114%	\$25,252	\$39,810	-16.0%	113.5%
SHELBY	\$16.9	\$16.3	1.0%	\$393	\$382	0.0%	91%	\$27,217	\$27,435	0.0%	78.2%
SPENCER	\$6.7	\$7.6	-5.0%	\$324	\$375	-6.0%	90%	\$20,774	\$24,022	-7.0%	68.5%
STARKE	\$14.6	\$12.7	5.0%	\$615	\$548	4.0%	131%	\$60,278	\$55,180	2.0%	157.3%
STEUBEN	\$13.2	\$15.1	-3.0%	\$423	\$502	-5.0%	120%	\$19,884	\$24,797	-7.0%	70.7%
SULLIVAN	\$4.0	\$5.7	1.0%	\$196	\$285	-1.0%	68%	\$13,158	\$19,824	0.0%	56.5%
SWITZERLAND	\$8.4	\$5.0	21.0%	\$977	\$595	19.0%	142%	\$99,146	\$62,103	17.0%	177.1%
TIPPECANOE	\$57.1	\$56.3	1.0%	\$413	\$411	0.0%	98%	\$41,092	\$43,173	-2.0%	123.1%
TIPTON	\$7.2	\$6.6	4.0%	\$440	\$400	3.0%	95%	\$23,791	\$23,228	-1.0%	66.2%
UNION	\$3.4	\$2.7	7.0%	\$469	\$371	6.0%	88%	\$38,955	\$31,792	7.0%	90.6%
VANDERBURGH	\$67.9	\$64.4	1.0%	\$407	\$385	1.0%	92%	\$44,010	\$46,955	-4.0%	133.9%
VERMILLION	\$6.3	\$8.9	0.0%	\$373	\$529	0.0%	126%	\$20,886	\$30,815	1.0%	87.9%
VIGO	\$53.8	\$53.2	4.0%	\$513	\$501	5.0%	120%	\$45,967	\$48,600	2.0%	138.6%
WABASH	\$17.7	\$17.9	0.0%	\$514	\$516	1.0%	123%	\$41,964	\$45,970	-4.0%	131.1%
WARREN	\$2.2	\$3.2	-11.0%	\$275	\$389	-11.0%	93%	\$12,250	\$18,218	-10.0%	51.9%
WARRICK	\$19.6	\$16.2	-1.0%	\$385	\$327	-3.0%	78%	\$33,962	\$30,422	-4.0%	86.7%
WASHINGTON	\$14.4	\$11.3	10.0%	\$531	\$429	8.0%	102%	\$47,054	\$39,994	10.0%	114.0%
WAYNE	\$31.8	\$30.4	6.0%	\$443	\$422	6.0%	101%	\$27,610	\$29,769	-2.0%	84.9%
WELLS	\$9.5	\$10.5	1.0%	\$355	\$397	0.0%	95%	\$31,183	\$37,461	-1.0%	106.8%
WHITE	\$9.7	\$10.3	-5.0%	\$389	\$417	-6.0%	99%	\$21,534	\$21,683	-8.0%	61.8%
WHITLEY	\$14.9	\$12.9	3.0%	\$496	\$436	2.0%	104%	\$33,102	\$30,891	-1.0%	88.1%
INDIANA	\$2,500.1			\$426	\$419			\$35,074			

Note: Total Economic Loss is the total socioeconomic cost estimated using the NHTSA crash model. 1997 population estimates obtained from the U.S. Census Bureau.
Legend: Wtd. Avg. = Weighted Average

county data

Table 89. Crashes by County with Rates per 1,000 Licensed Drivers–1997

County	Total Crashes											Fatal Rates				Injury Rates		
	1997	1993-1997	Yearly%	1997	1993-1997	1997	1993-1997	1997	1993-1997	1997	1993-1997	per 1000	per 1000	per 1000	per 1000	per 1000	per 1000	per 1000
	Total	Wtd. Avg.	Change	per 1000	per 1000	LDVR	LDVR	Million	Million	per Million	per Million	Fatal	LDVR	Capita	MVMT	Personal Injury	LDVR	Capita
ADAMS	886	921	0.000%	27.0	28.0	43.1	44.8	835,556	2.91	3.02	8	0.39	0.24	9.57	202	9.82	6.15	6,151.60
ALLEN	13,598	13,395	0.000%	43.6	42.9	64.4	63.4	9,393,985	3.97	3.91	29	0.14	0.09	3.09	2,988	14.14	9.57	9,574.13
BARTHOLOMEW	2,258	2,374	0.000%	32.9	34.5	45.8	48.1	2,385,336	2.59	2.73	19	0.39	0.28	7.97	639	12.96	9.30	9,296.71
BENTON	191	192	0.005%	20.0	20.1	27.3	27.4	502,173	1.04	1.05	2	0.29	0.21	3.98	37	5.29	3.87	3,871.51
BLACKFORD	382	427	-0.002%	27.2	30.4	37.8	42.2	429,027	2.44	2.73	3	0.30	0.21	6.99	84	8.31	5.99	5,991.44
BOONE	1,385	1,340	0.004%	32.2	31.2	44.6	43.1	2,452,118	2.91	3.02	10	0.32	0.23	4.08	258	8.31	6.00	6,002.09
BROWN	544	518	0.004%	34.9	33.2	48.8	46.4	433,601	3.97	3.91	3	0.27	0.19	6.92	128	11.47	8.21	8,209.86
CARROLL	590	613	0.002%	29.5	30.7	40.6	42.2	711,480	2.59	2.73	2	0.14	0.10	2.81	131	9.02	6.55	6,553.60
CASS	1,798	1,754	0.002%	46.6	45.5	67.1	65.5	1,162,240	1.04	1.05	13	0.49	0.34	11.19	392	14.64	10.16	10,162.55
CLARK	3,498	3,487	0.001%	37.5	37.4	53.5	53.4	3,594,964	2.44	2.73	10	0.15	0.11	2.78	977	14.95	10.48	10,481.48
CLAY	876	951	-0.001%	33.0	35.9	46.7	50.7	1,131,760	2.12	2.30	7	0.37	0.26	6.19	187	9.97	7.05	7,048.36
CLINTON	1,129	1,108	0.001%	34.0	33.3	50.9	49.9	1,388,676	2.23	2.19	5	0.23	0.15	3.60	286	12.88	8.61	8,606.16
CRAWFORD	297	280	0.011%	28.3	26.7	39.5	37.3	596,313	1.36	1.29	1	0.13	0.10	1.68	82	10.90	7.81	7,810.27
DAVISS	872	849	0.004%	30.2	29.4	48.8	47.5	875,814	2.73	2.66	8	0.45	0.28	9.13	238	13.31	8.25	8,249.28
DEARBORN	1,715	1,600	0.003%	36.8	34.3	53.9	50.3	1,554,768	3.02	2.82	5	0.16	0.11	3.22	450	14.14	9.66	9,661.63
DECATUR	811	805	0.004%	32.0	31.8	46.6	46.2	1,244,732	2.12	2.30	8	0.46	0.32	6.43	197	11.31	7.77	7,767.53
DEKALB	1,394	1,412	0.002%	36.0	36.5	51.2	51.9	1,459,019	2.23	2.19	2	0.07	0.05	1.37	274	10.07	7.08	7,076.08
DELAWARE	4,301	4,498	0.000%	36.6	38.2	57.6	60.2	4,277,112	1.36	1.29	19	0.25	0.16	4.44	1,019	13.64	8.66	8,663.12
DUBOIS	1,452	1,413	0.002%	37.1	36.1	52.4	51.0	1,311,857	2.73	2.66	3	0.11	0.08	2.29	354	12.78	9.04	9,044.69
ELKHART	7,832	7,270	0.001%	45.9	42.6	70.9	65.8	5,125,729	3.02	2.82	34	0.31	0.20	6.63	1,870	16.93	10.95	10,953.29
FAYETTE	985	993	0.002%	37.7	38.0	54.9	55.3	643,350	4.19	4.23	4	0.22	0.15	6.22	208	11.59	7.96	7,959.29
FLOYD	2,510	2,459	0.001%	35.1	34.4	52.0	50.9	2,200,780	3.12	3.06	3	0.06	0.04	1.36	634	13.13	8.87	8,871.48
FOUNTAIN	563	591	0.003%	30.9	32.4	42.5	44.7	697,213	2.21	2.32	6	0.45	0.33	8.61	119	8.98	6.53	6,525.91
FRANKLIN	676	635	0.008%	31.3	29.4	48.2	45.3	760,734	2.43	2.29	7	0.50	0.32	9.20	159	11.33	7.37	7,367.25
FULTON	588	630	0.002%	28.9	31.0	41.2	44.2	743,348	2.17	2.32	8	0.56	0.39	10.76	115	8.06	5.65	5,650.83
GIBSON	1,068	1,042	0.002%	33.4	32.6	46.8	45.6	1,404,141	4.19	4.23	2	0.09	0.06	1.42	241	10.55	7.54	7,543.51
GRANT	2,621	2,700	0.001%	36.0	37.1	53.5	55.1	2,411,222	3.12	3.06	5	0.10	0.07	2.07	522	10.66	7.17	7,168.56
GREENE	898	973	-0.001%	27.2	29.4	39.5	42.8	1,111,085	2.21	2.32	2	0.09	0.06	1.80	257	11.31	7.77	7,770.45
HAMILTON	4,523	4,367	0.001%	29.2	28.2	40.5	39.1	4,806,901	2.43	2.29	12	0.11	0.08	2.50	1,043	9.33	6.74	6,738.38
HANCOCK	1,639	1,518	0.003%	30.9	28.6	42.0	38.9	2,636,546	2.17	2.32	9	0.23	0.17	3.41	438	11.22	8.25	8,253.09
HARRISON	1,255	1,211	0.003%	36.9	35.6	50.6	48.8	1,293,134	2.66	2.57	5	0.20	0.15	3.87	291	11.73	8.56	8,559.08
HENDRICKS	2,647	2,509	0.002%	28.7	27.2	28.4	26.9	2,837,495	2.56	2.42	11	0.17	0.12	3.88	577	8.78	6.25	6,251.96
HENRY	1,398	1,477	0.001%	28.6	30.2	27.6	29.2	2,006,283	1.91	2.02	2	0.06	0.04	1.00	317	8.90	6.49	6,487.00
HOWARD	2,737	2,768	0.001%	32.7	33.1	34.9	35.3	2,376,189	3.16	3.19	12	0.20	0.14	5.05	751	12.65	8.98	8,984.76
HUNTINGTON	1,377	1,299	0.004%	37.1	35.0	38.1	36.0	1,594,726	2.37	2.23	10	0.38	0.27	6.27	314	12.01	8.45	8,453.59
JACKSON	1,610	1,678	0.001%	39.4	41.0	39.1	40.8	1,673,517	2.66	2.57	7	0.24	0.17	4.18	379	13.11	9.27	9,270.13
JASPER	1,073	1,048	0.003%	37.4	36.5	34.1	33.3	1,704,778	2.56	2.42	7	0.34	0.24	4.11	229	10.97	7.98	7,979.93
JAY	750	754	0.003%	34.6	34.8	35.6	35.8	765,000	1.91	2.02	4	0.26	0.18	5.23	163	10.48	7.51	7,514.29
JEFFERSON	1,096	1,063	0.003%	35.0	34.0	39.0	37.8	836,771	3.16	3.19	7	0.33	0.22	8.37	245	11.70	7.83	7,829.48
JENNINGS	850	851	0.005%	31.2	31.3	32.0	32.0	745,126	2.37	2.23	6	0.34	0.22	8.05	192	10.83	7.05	7,054.41
JOHNSON	2,853	2,880	0.002%	26.7	26.9	29.2	29.5	2,533,046	3.09	3.11	8	0.11	0.07	3.16	670	8.90	6.27	6,268.24
KNOX	1,437	1,457	0.000%	36.2	36.7	39.3	39.8	1,411,692	2.79	2.83	3	0.11	0.08	0.21	368	13.83	9.27	9,272.79
KOSCIUSKO	2,507	2,591	0.001%	35.6	36.8	35.0	36.2	2,120,980	3.24	3.35	17	0.35	0.24	8.02	571	11.65	8.12	8,115.06
LAGRANGE	1,115	1,052	0.004%	34.1	32.1	42.0	39.6	1,574,319	1.94	1.83	9	0.54	0.28	5.72	199	12.03	6.08	6,082.09
LAKE	20,748	19,592	0.000%	43.3	40.9	59.1	55.8	12,689,220	4.48	4.23	59	0.20	0.12	4.65	5,142	17.54	10.73	10,727.27
LAPORTE	4,549	4,209	0.001%	41.7	38.6	44.8	41.5	3,887,156	3.09	3.11	27	0.38	0.25	6.95	1,201	16.73	11.01	11,010.27
LAWRENCE	1,497	1,527	0.000%	32.9	33.5	33.3	34.0	1,322,583	2.79	2.83	14	0.44	0.31	10.59	410	12.78	9.00	9,003.27
MADISON	4,641	4,833	0.000%	35.2	36.7	37.7	39.3	3,995,936	3.24	3.35	18	0.20	0.14	4.50	1,148	12.80	8.71	8,707.52
MARION	34,609	34,226	0.000%	42.5	42.1	50.5	50.0	27,025,655	1.94	1.83	77	0.15	0.09	2.85	8,623	16.61	10.60	10,597.66
MARSHALL	1,631	1,667	0.002%	36.0	36.8	36.8	37.6	1,956,025	4.48	4.23	10	0.33	0.22	5.11	372	12.46	8.21	8,205.22

Crashes by County with Rates per 1,000 Licensed Drivers

Table 89. Crashes by County with Rates per 1,000 Licensed Drivers–1997 (cont.)

COUNTY	Total Crashes										Fatal Rates				Injury Rates				
	1997	1993-1997	Yearly %	1997	1993-1997	1997	1993-1997	1997	1993-1997	1997	1993-1997	Fatal	per 1000	per	per	Personal	per 1000	per	per
	Total	Wtd. Avg.	Change	per 1000	Wtd. Avg. per 1000	per 1000	Wtd. Avg. per 1000	Million VMT	per Million VMT	Wtd. Avg. per Million VMT	LDVR	LDVR	Capita	MVMT	Injury	LDVR	Capita	MVMT	
MARTIN	336	335	0.000%	32.0	31.9	31.2	31.2	345,469	2.66	2.66	2	0.26	0.19	5.79	89	11.67	8.47	8,468.13	
MIAMI	1,117	1,131	0.001%	33.6	34.1	32.0	32.4	1,035,925	2.95	2.99	9	0.37	0.27	8.69	221	9.06	6.66	6,656.83	
MONROE	4,481	4,359	0.001%	38.4	37.4	51.3	49.9	2,672,998	4.59	4.47	13	0.19	0.11	4.86	1,029	15.01	8.82	8,821.03	
MONTGOMERY	1,265	1,287	0.000%	34.9	35.5	35.7	36.3	1,569,670	2.21	2.25	9	0.35	0.25	5.73	318	12.37	8.76	8,763.95	
MORGAN	1,665	1,657	0.001%	25.7	25.6	25.2	25.1	2,075,278	2.20	2.19	11	0.25	0.17	5.30	436	9.84	6.73	6,729.75	
NEWTON	415	409	0.002%	28.3	27.8	26.7	26.3	643,698	2.66	2.66	3	0.30	0.20	4.66	87	8.57	5.93	5,925.22	
NOBLE	1,780	1,688	0.002%	42.5	40.3	42.7	40.5	1,428,686	2.95	2.99	13	0.44	0.31	9.10	322	11.02	7.68	7,681.66	
OHIO	229	204	0.049%	42.0	37.3	39.8	35.4	158,900	4.59	4.47	2	0.49	0.37	12.59	51	12.54	9.34	9,344.08	
ORANGE	622	605	0.008%	32.1	31.2	32.4	31.5	552,164	2.21	2.25	6	0.45	0.31	10.87	118	8.90	6.09	6,089.38	
OWEN	643	642	0.003%	31.7	31.7	30.5	30.5	558,152	2.20	2.19	7	0.50	0.35	12.54	126	8.97	6.22	6,220.07	
PARKE	470	520	0.002%	28.6	31.6	29.4	32.5	683,775	1.88	2.08	2	0.18	0.12	2.92	116	10.57	7.05	7,053.39	
PERRY	603	628	0.003%	31.2	32.6	31.6	32.9	664,828	2.48	2.59	1	0.07	0.05	1.50	133	9.97	6.89	6,889.05	
PIKE	397	374	0.019%	31.1	29.3	31.1	29.3	542,492	2.00	1.89	1	0.11	0.08	1.84	87	9.59	6.82	6,819.25	
PORTER	4,848	4,606	0.001%	33.6	32.0	33.6	32.0	4,482,365	2.96	2.82	23	0.23	0.16	5.13	1,296	12.99	8.99	8,994.75	
POSEY	523	565	-0.002%	19.6	21.2	19.6	21.2	1,107,980	1.29	1.40	4	0.21	0.15	3.61	123	6.53	4.62	4,617.12	
PULASKI	538	545	0.007%	40.7	41.2	40.7	41.2	549,259	1.88	2.08	2	0.21	0.15	3.64	89	9.26	6.74	6,736.30	
PUTNAM	1,230	1,201	0.001%	36.5	35.6	36.5	35.6	1,574,988	2.48	2.59	3	0.13	0.09	1.90	260	11.59	7.71	7,713.76	
RANDOLPH	647	709	0.000%	23.5	25.8	23.5	25.8	950,510	2.00	1.89	4	0.20	0.15	4.21	127	6.39	4.62	4,621.54	
RIPLEY	878	853	0.005%	32.3	31.4	32.3	31.4	937,663	2.96	2.82	8	0.40	0.29	8.53	188	9.43	6.92	6,917.61	
RUSH	554	553	0.000%	30.4	30.3	30.4	30.3	681,743	1.29	1.40	4	0.31	0.22	5.87	144	11.29	7.90	7,896.47	
SAINT JOSEPH	10,075	10,006	0.000%	39.0	38.8	39.0	38.8	6,315,190	4.37	4.34	21	0.13	0.08	3.33	2,604	15.81	10.09	10,090.83	
SCOTT	741	773	0.001%	32.5	33.9	32.5	33.9	813,716	2.49	2.60	1	0.06	0.04	1.23	197	12.61	8.63	8,633.53	
SHELBY	1,409	1,386	0.001%	32.7	32.1	32.7	32.1	1,701,199	2.27	2.23	7	0.24	0.16	4.11	347	11.81	8.04	8,041.53	
SPENCER	678	658	0.003%	32.8	31.8	32.8	31.8	883,596	2.10	2.04	3	0.21	0.14	3.40	143	9.94	6.91	6,911.55	
STARKE	748	758	0.005%	31.5	31.9	31.5	31.9	663,587	3.09	3.13	9	0.57	0.38	13.56	190	12.07	8.00	7,996.97	
STEBEN	1,665	1,645	0.002%	53.5	52.9	53.5	52.9	1,818,751	4.37	4.34	3	0.13	0.10	1.65	342	15.07	11.00	10,996.08	
SULLIVAN	495	498	0.004%	24.4	24.6	24.4	24.6	832,875	2.49	2.60	1	0.07	0.05	1.20	82	5.74	4.04	4,043.39	
SWITZERLAND	337	345	0.009%	39.0	40.0	39.0	40.0	232,120	2.27	2.23	3	0.53	0.35	12.92	68	12.01	7.87	7,874.02	
TIPPECANOE	6,319	6,415	0.000%	45.7	46.4	45.7	46.4	3,807,070	2.10	2.04	16	0.19	0.12	4.20	1,160	13.55	8.39	8,387.14	
TIPTON	392	414	-0.002%	23.9	25.2	23.9	25.2	829,128	3.09	3.13	4	0.33	0.24	4.82	99	8.16	6.04	6,038.43	
UNION	240	240	0.012%	33.0	33.0	33.0	33.0	239,126	2.75	2.75	2	0.37	0.28	8.36	51	9.50	7.01	7,013.20	
VANDEBURGH	6,812	6,908	0.000%	40.8	41.4	40.8	41.4	4,226,962	4.42	4.48	16	0.14	0.10	3.79	1,681	14.95	10.08	10,075.70	
VERMILLION	535	559	0.004%	31.5	32.9	31.5	32.9	826,410	1.77	1.85	3	0.24	0.18	3.63	118	9.59	6.94	6,942.40	
VIGO	4,777	4,995	0.000%	45.5	47.6	45.5	47.6	3,206,584	4.08	4.27	17	0.25	0.16	5.30	1,133	16.92	10.80	10,796.65	
WABASH	1,142	1,205	0.002%	33.1	34.9	33.1	34.9	1,155,592	2.71	2.86	10	0.41	0.29	8.65	247	10.04	7.15	7,154.24	
WARREN	230	256	0.004%	28.2	31.3	28.2	31.3	492,051	2.75	2.75	1	0.17	0.12	2.03	40	6.95	4.90	4,895.96	
WARRICK	1,406	1,399	0.002%	27.7	27.5	27.7	27.5	1,581,125	4.42	4.48	12	0.32	0.24	7.59	290	7.79	5.71	5,705.18	
WASHINGTON	905	834	0.007%	33.3	30.7	33.3	30.7	838,436	1.77	1.85	7	0.40	0.26	8.35	221	12.51	8.14	8,142.06	
WAYNE	2,735	2,754	0.001%	38.1	38.4	38.1	38.4	3,155,447	4.08	4.27	8	0.16	0.11	2.54	750	15.44	10.45	10,445.68	
WELLS	799	794	0.005%	29.8	29.7	29.8	29.7	834,675	2.71	2.86	4	0.21	0.15	4.79	181	9.38	6.76	6,760.54	
WHITE	1,029	1,073	0.002%	41.1	42.9	41.1	42.9	1,234,126	2.28	2.38	4	0.22	0.16	3.24	167	9.06	6.67	6,669.06	
WHITLEY	1,039	1,044	0.002%	34.7	34.8	34.7	34.8	1,233,201	2.31	2.32	8	0.37	0.27	6.49	251	11.51	8.38	8,375.32	

TOTAL 220,009 2,366
Source: Indiana Bureau of Motor Vehicles.
Legend: Wtd. Avg. = Weighted Average

849 0.22 0.14 4.40 52,413 13.36 8.94 8,937.93

Table 89 shows total crash rates for each county and provides further detail by showing the rates per 1,000 capita, per 1,000 licensed drivers and per million vehicle miles traveled. The table also separates total crashes from

fatal crashes and personal injury crashes. For total crashes, per 1,000 capita, per 1,000 licensed drivers, million vehicle miles traveled and five-year weighted averages are also shown.

county data

Table 90. Drivers in Crashes by Age Group by County–1997

County	1993-1997			1997									
	Wtd. Avg. Drivers Age 16-20 in Crashes per Capita	Wtd. Avg. Yearly % Change	Wtd. Avg. Drivers Age 16-20 in Crashes per Capita	Drivers' Age									
				<21	21-24	25-34	35-44	45-54	55-64	65-74	75+	Unknown	Total
ADAMS	13.64	0%	14.04	339	122	254	226	157	95	67	85	91	1,436
ALLEN	18.58	2%	19.44	4,148	2,382	4,931	4,509	2,911	1,516	1,066	623	2,169	24,255
BARTHOLOMEW	17.18	-3%	16.45	765	353	856	715	496	299	207	116	117	3,924
BENTON	10.56	-1%	10.39	60	26	46	56	34	22	10	12	17	283
BLACKFORD	14.92	-2%	13.86	135	59	117	86	68	49	30	29	27	600
BOONE	15.36	5%	16.76	426	200	443	394	266	144	93	75	187	2,228
BROWN	16.42	2%	16.72	163	79	120	153	106	47	34	16	33	751
CARROLL	13.91	1%	13.17	170	87	172	128	86	72	39	25	29	808
CASS	21.04	5%	21.01	536	310	517	505	299	204	125	128	145	2,769
CLARK	16.47	1%	16.37	1,058	603	1,404	1,188	768	435	290	166	236	6,148
CLAY	18.88	1%	17.96	301	118	244	237	139	95	58	64	76	1,332
CLINTON	17.27	-1%	16.67	348	159	338	279	194	121	74	66	137	1,716
CRAWFORD	10.54	3%	11.93	90	38	86	74	50	26	14	6	21	405
DAVIESS	16.07	2%	17.42	332	112	230	249	171	103	60	65	36	1,358
DEARBORN	17.08	4%	18.03	549	235	516	490	334	204	127	69	95	2,619
DECATUR	16.80	2%	15.03	259	146	266	198	123	87	46	40	66	1,231
DEKALB	15.60	1%	15.41	405	176	436	389	258	124	85	80	232	2,185
DELAWARE	10.12	0%	10.00	1,445	889	1,394	1,192	889	504	380	249	511	7,453
DUBOIS	20.95	2%	21.94	526	210	464	407	258	148	115	78	51	2,257
ELKHART	18.14	4%	19.19	2,224	1,344	2,959	2,393	1,656	948	593	395	870	13,382
FAYETTE	20.31	5%	21.17	406	151	303	244	182	104	93	66	58	1,607
FLOYD	17.30	3%	17.35	830	400	920	797	487	285	174	143	228	4,264
FOUNTAIN	14.23	-1%	13.08	156	74	161	138	92	52	39	33	31	776
FRANKLIN	14.13	-2%	15.09	237	69	181	150	110	70	51	25	37	930
FULTON	15.67	6%	16.45	205	86	144	150	105	57	49	40	38	874
GIBSON	18.37	1%	18.55	367	140	287	304	200	137	125	67	49	1,676
GRANT	12.47	1%	12.07	795	379	787	733	497	328	225	182	294	4,220
GREENE	15.89	0%	15.36	321	126	253	225	162	106	61	57	64	1,375
HAMILTON	15.48	2%	16.10	1,402	696	1,917	1,724	1,041	484	254	158	620	8,296
HANCOCK	14.72	2%	15.62	572	240	588	489	348	201	125	87	175	2,825
HARRISON	18.77	2%	19.49	443	162	362	339	234	100	79	38	51	1,808
HENDRICKS	13.77	5%	14.80	943	361	918	844	549	283	200	94	277	4,469
HENRY	14.30	2%	14.17	470	181	417	359	269	126	143	92	146	2,203
HOWARD	16.47	1%	15.92	912	456	906	908	684	422	293	215	181	4,977
HUNTINGTON	15.97	8%	17.39	460	200	407	341	248	163	103	76	122	2,120
JACKSON	20.51	1%	19.76	534	274	550	403	305	192	150	89	75	2,572
JASPER	14.74	4%	14.74	341	156	301	274	196	121	56	40	68	1,553
JAY	15.43	0%	16.29	246	113	188	169	125	88	57	42	63	1,091
JEFFERSON	14.39	5%	15.45	384	158	325	311	232	133	94	45	62	1,744
JENNINGS	15.55	-1%	14.20	279	139	327	234	152	106	56	40	55	1,388
JOHNSON	13.68	4%	14.18	1,115	434	959	872	599	313	230	133	471	5,126
KNOX	12.67	-2%	12.82	584	217	376	356	280	172	139	101	99	2,324
KOSCIUSKO	18.48	5%	18.88	878	373	800	691	482	264	159	128	110	3,885
LAGRANGE	10.33	0%	10.18	274	141	301	290	226	129	72	38	55	1,526
LAKE	14.36	5%	15.39	5,277	3,440	7,449	7,392	4,923	2,924	1,900	1,083	2,925	37,313
LAPORTE	16.24	3%	17.44	1,254	678	1,506	1,307	913	486	374	246	595	7,359
LAWRENCE	17.63	0%	17.41	537	204	464	432	288	188	121	85	100	2,419
MADISON	15.45	1%	15.15	1,490	721	1,609	1,281	1,037	603	477	337	478	8,033
MARION	14.69	2%	15.55	8,131	6,150	14,932	12,253	7,366	3,962	2,565	1,454	8,675	65,488
MARSHALL	16.96	4%	16.75	487	258	489	416	307	159	107	79	84	2,386

This table shows the ages of drivers involved in highway crashes in 1997. Of particular note is the number of young drivers (under the age of 21) involved in crashes. For that reason, additional information is provided including the crash rate per capita for that age group and the experience of that age group over the past five years. For the majority of counties, the rate of crashes (per capita) involving the younger driver is increasing. The category “unknown” is used as there are instances where the age of the driver is not known.

Table 90. Drivers in Crashes by Age Group by County–1997 (cont.)

County	Wtd. Avg. Drivers Age 16-20 in Crashes per Capita	1993-1997 Wtd. Avg. Yearly % Change	1997 Drivers Age 16-20 in Crashes per Capita	Drivers' Age								Unknown	Total
				<21	21-24	25-34	35-44	45-54	55-64	65-74	75+		
				MARTIN	14.83	-6%	12.81	87	50	106	88		
MIAMI	16.95	5%	17.31	372	154	323	294	219	131	85	67	72	1,717
MONROE	8.57	4%	8.97	1,705	1,239	1,697	1,295	895	475	293	184	430	8,213
MONTGOMERY	15.31	-2%	14.82	390	180	390	355	230	156	88	58	98	1,945
MORGAN	12.73	2%	13.43	617	232	550	455	338	180	104	79	132	2,687
NEWTON	12.17	2%	13.87	136	41	110	102	78	38	27	14	28	574
NOBLE	17.77	2%	19.11	558	272	580	438	311	168	110	80	117	2,634
OHIO	14.88	12%	18.91	67	27	57	43	44	21	12	12	12	295
ORANGE	13.19	2%	13.96	178	88	177	154	110	49	40	36	60	892
OWEN	14.63	6%	14.31	191	81	198	161	116	66	44	25	46	928
PARKE	11.67	1%	10.62	116	48	130	141	74	43	37	17	41	647
PERRY	17.86	3%	18.16	237	77	151	155	118	70	59	46	33	946
PIKE	13.74	9%	14.52	119	51	120	117	69	38	21	21	11	567
PORTER	14.10	5%	14.59	1,557	792	1,581	1,534	1,108	525	302	227	395	8,021
POSEY	10.58	-1%	10.53	177	60	156	149	88	44	25	31	79	809
PULASKI	18.64	8%	19.06	162	68	128	131	68	41	37	21	58	714
PUTNAM	11.65	1%	12.17	386	187	330	317	217	129	86	57	92	1,801
RANDOLPH	11.66	2%	11.61	230	67	164	141	116	78	51	36	44	927
RIPLEY	14.87	4%	14.52	275	141	233	224	133	96	66	51	53	1,272
RUSH	13.25	5%	14.11	185	68	147	139	77	62	42	31	72	823
SAINT JOSEPH	13.14	4%	13.52	2,866	1,719	3,740	3,307	2,211	1,102	829	602	1,450	17,826
SCOTT	17.33	0%	16.73	275	129	246	217	128	89	50	47	46	1,227
SHELBY	16.90	3%	18.15	529	217	417	412	211	165	100	69	108	2,228
SPENCER	15.28	1%	15.00	195	87	206	175	108	55	40	27	27	920
STARKE	13.08	1%	12.42	216	97	200	203	132	80	51	37	28	1,044
STEBEN	19.93	4%	20.76	484	228	518	436	292	141	82	70	91	2,342
SULLIVAN	10.09	0%	10.27	135	54	142	143	80	46	39	33	77	749
SWITZERLAND	17.32	5%	15.33	84	45	77	68	56	31	20	8	23	412
TIPPECANOE	11.01	3%	11.02	2,135	1,591	2,354	1,769	1,206	627	435	276	548	10,941
TIPTON	13.12	4%	13.73	159	55	119	92	72	41	22	23	47	630
UNION	13.84	4%	12.82	67	28	57	53	36	27	22	10	27	327
VANDERBURGH	19.55	2%	20.45	2,370	1,239	2,451	2,234	1,496	865	717	547	894	12,813
VERMILLION	14.11	3%	12.79	144	59	142	143	104	68	44	29	43	776
VIGO	15.82	3%	15.61	1,562	895	1,641	1,357	912	500	390	276	639	8,172
WABASH	14.11	5%	13.01	356	178	286	307	216	142	87	71	83	1,726
WARREN	13.03	7%	12.23	63	27	61	50	38	34	11	10	8	302
WARRICK	15.67	4%	15.61	551	192	431	437	289	173	92	76	74	2,315
WASHINGTON	15.46	3%	15.83	297	126	301	224	169	83	53	38	36	1,327
WAYNE	15.48	2%	15.39	823	420	892	769	521	350	254	187	268	4,484
WELLS	19.31	9%	22.23	365	124	194	217	130	74	63	37	45	1,249
WHITE	19.65	-1%	17.30	285	164	309	270	201	109	75	46	70	1,529
WHITLEY	17.84	3%	18.40	380	134	278	278	173	101	69	54	70	1,537
TOTAL				66,695	36,556	77,310	67,888	45,164	25,347	17,182	11,383	28,021	375,546

Note: Drivers of parked vehicles are excluded.
 Legend: Wtd. Avg. = Weighted Average

county data

Table 91. Probable Cause Affidavits and DWI Convictions by County–1997

County	% APC with Prior Officer		% Conv. with Prior Court		1993-1997 Days Arrest to Disp.					1993-1997 State Average		T6		
	APC	APC	DWI Conv.	APC	T1	T2	% of State Avg.	T3	T4	T5	State Average		% of State Avg.	
ADAMS	108	38.0%	104	77.9%	35	13	13.3	71.0%	142	19	121	107.0	58.2%	20
ALLEN	1,274	0.0%	1,398	89.4%	N/A	14	11.7	62.2%	119	35	155	160.0	87.0%	25
BARTHOLOMEW	406	57.6%	299	94.0%	41	41	46.3	246.8%	203	8	401	389.3	211.6%	16
BENTON	33	30.3%	28	89.3%	39	8	20.7	110.1%	80	10	64	94.0	51.1%	33
BLACKFORD	103	21.4%	136	83.1%	52	37	37.7	200.7%	140	9	200	191.7	104.2%	10
BOONE	240	33.3%	218	91.7%	38	4	16.3	87.0%	183	11	193	210.7	114.5%	24
BROWN	86	11.6%	61	82.0%	34	19	32.3	172.2%	213	11	307	274.3	149.1%	20
CARROLL	98	33.7%	109	62.4%	40	11	9.3	49.7%	143	17	111	97.7	53.1%	80
CASS	256	38.3%	226	90.7%	38	7	7.7	40.8%	125	16	103	121.3	65.9%	26
CLARK	761	43.1%	660	82.9%	35	42	32.7	174.0%	151	13	219	216.7	117.8%	22
CLAY	169	43.2%	196	81.6%	41	16	14.3	76.4%	130	10	232	184.7	100.4%	10
CLINTON	233	0.4%	224	89.7%	N/A	9	7.3	39.1%	122	8	178	153.7	83.5%	30
CRAWFORD	48	10.4%	42	92.9%	N/A	6	23.7	126.1%	117	9	130	108.0	58.7%	40
DAVIESS	100	39.0%	111	84.7%	45	27	27.0	143.8%	170	12	465	370.0	201.1%	15
DEARBORN	378	15.1%	470	54.9%	44	6	5.7	30.2%	139	11	144	166.3	90.4%	18
DECATUR	160	48.8%	155	77.4%	41	32	44.7	237.9%	155	12	175	188.0	102.2%	17
DEKALB	315	39.7%	596	49.0%	38	23	22.0	117.2%	170	8	222	230.3	125.2%	22
DELAWARE	521	52.0%	739	63.6%	62	71	70.0	372.9%	181	19	442	409.0	222.3%	39
DUBOIS	214	19.6%	201	95.0%	46	7	7.3	39.1%	82	9	141	142.0	77.2%	11
ELKHART	1,087	21.8%	968	86.0%	45	8	9.3	49.7%	140	13	173	173.7	94.4%	20
FAYETTE	213	54.9%	184	79.3%	31	19	20.3	108.3%	164	20	194	278.7	151.5%	19
FLOYD	234	6.4%	203	78.8%	41	25	34.0	181.1%	179	11	187	189.0	102.7%	15
FOUNTAIN	137	28.5%	129	81.4%	40	8	8.7	46.2%	92	12	87	91.7	49.8%	42
FRANKLIN	131	37.4%	108	96.3%	46	21	21.7	115.4%	140	11	182	153.3	83.3%	27
FULTON	135	45.9%	107	88.8%	48	34	31.7	168.7%	193	9	180	190.7	103.6%	21
GIBSON	203	33.0%	206	76.7%	44	10	8.7	46.2%	83	19	92	70.7	38.4%	20
GRANT	535	20.4%	432	96.8%	35	4	3.7	19.5%	158	11	171	158.3	86.1%	19
GREENE	92	12.0%	133	75.2%	41	17	17.3	92.3%	161	36	232	197.0	107.1%	49
HAMILTON	719	41.4%	772	91.8%	40	18	19.7	104.8%	174	12	256	247.0	134.3%	19
HANCOCK	349	12.6%	384	91.1%	55	4	6.0	32.0%	153	10	188	190.7	103.6%	25
HARRISON	248	26.6%	143	88.8%	47	31	30.3	161.6%	186	14	241	190.7	103.6%	29
HENDRICKS	583	9.9%	537	92.7%	35	6	5.7	30.2%	139	13	184	243.3	132.3%	23
HENRY	343	18.1%	332	89.5%	39	8	8.0	42.6%	132	12	155	165.7	90.0%	15
HOWARD	507	8.7%	482	83.0%	45	6	8.7	46.2%	114	15	132	116.7	63.4%	25
HUNTINGTON	202	33.2%	199	80.9%	29	6	16.0	85.2%	69	15	54	73.0	39.7%	18
JACKSON	214	1.4%	252	76.2%	N/A	12	9.0	47.9%	108	12	99	111.3	60.5%	26
JASPER	160	25.0%	229	69.4%	37	4	4.7	24.9%	105	8	209	160.7	87.3%	12
JAY	93	57.0%	78	88.5%	35	24	22.3	119.0%	119	10	131	155.0	84.2%	12
JEFFERSON	239	26.8%	231	82.3%	31	5	5.3	28.4%	128	9	156	144.7	78.6%	27
JENNINGS	165	58.8%	210	96.7%	40	32	26.3	140.3%	113	8	209	201.0	109.3%	18
JOHNSON	409	33.5%	546	74.2%	41	15	18.0	95.9%	146	26	316	393.7	214.0%	38
KNOX	218	46.8%	93	89.2%	34	23	27.3	145.6%	170	13	200	195.7	106.4%	57
KOSCIUSKO	371	29.1%	450	81.3%	43	7	6.0	32.0%	157	17	224	179.0	97.3%	23
LAGRANGE	152	36.2%	195	93.8%	39	8	7.3	39.1%	145	14	302	279.0	151.6%	28
LAKE	3,108	3.9%	3,752	77.7%	39	26	30.7	163.4%	174	24	351	334.0	181.5%	25
LAPORTE	633	8.1%	590	88.5%	61	10	6.0	32.0%	135	11	209	191.7	104.2%	29
LAWRENCE	217	41.5%	199	79.9%	35	27	22.3	119.0%	143	18	182	154.3	83.9%	41
MADISON	1,120	19.6%	1,061	80.9%	42	10	10.0	53.3%	168	11	247	241.0	131.0%	63
MARION	3,871	19.9%	3,888	77.6%	50	15	16.3	87.0%	133	13	134	139.7	75.9%	19
MARSHALL	357	38.7%	554	61.9%	42	15	12.0	63.9%	156	8	264	235.0	127.7%	15

The first component of Table 91 shows the number of Affidavits of Probable Cause (APC) reported by the county to the Bureau of Motor Vehicles (BMV). The column labeled “% APC with Prior Officer APC” is the percentage of cases where the officer’s APC arrived before the court APC to BMV. In 1997, the state average was 24.8%, an increase from 1996 (16.7%) and a decrease from 1995 (33.3%). The number of DWI convictions is also shown. Because of the timing of the actual incidents and cases, it is difficult to draw conclusions between these two numbers (APC’s and DWI convictions). The column labeled “% Conv. with Prior Court APC” indicates the percentage of DWI convictions for which a DWI APC had been previously sent to BMV.

- T1= Average days from arrest to officer APC receipt at the Bureau of Motor Vehicles
- T2 = Average days from arrest to court APC disposition
- T3 = Average days from court APC disposition to DWI disposition
- T4 = Average days from court APC disposition to Bureau receipt
- T5 = Average days from arrest to DWI disposition
- T6 = Average days from DWI disposition to Bureau receipt

Probable Cause Affidavits and DWI Convictions by County

Table 91. Probable Cause Affidavits and DWI Convictions by County–1997 (cont.)

County	% APC with Prior Officer		% Conv. with Prior Court		1993-1997 Days Arrest to Disp.			% of State Avg.	1993-1997 State Average			% of State Avg.	T6	
	APC	APC	DWI Conv.	APC	T1	T2	T3		T4	T5	Average			
MARTIN	61	3.3%	101	50.5%	N/A	5	11.3	60.4%	130	13	154	157.0	85.3%	51
MIAMI	201	47.3%	232	87.9%	39	13	21.3	113.6%	118	17	182	187.7	102.0%	29
MONROE	443	26.2%	847	53.5%	41	7	10.3	55.0%	135	12	150	167.3	91.0%	20
MONTGOMERY	193	22.8%	354	52.5%	39	35	36.7	195.3%	123	12	200	161.3	87.7%	10
MORGAN	326	27.0%	739	48.3%	44	7	9.0	47.9%	155	19	176	182.3	99.1%	18
NEWTON	151	19.2%	174	81.6%	47	4	6.7	35.5%	102	12	101	107.7	58.5%	24
NOBLE	360	30.0%	300	93.3%	37	4	3.7	19.5%	139	9	127	135.0	73.4%	19
OHIO	95	38.9%	68	88.2%	37	4	7.0	37.3%	146	18	70	165.7	90.0%	17
ORANGE	137	22.6%	117	94.9%	38	3	12.3	65.7%	123	7	92	96.7	52.5%	9
OWEN	77	22.1%	91	89.0%	45	7	8.7	46.2%	115	15	154	172.3	93.7%	18
PARKE	59	22.0%	44	79.5%	43	17	21.0	111.9%	164	9	146	162.0	88.1%	40
PERRY	17	64.7%	56	19.6%	83	182	142.7	760.0%	129	15	232	197.0	107.1%	59
PIKE	93	53.8%	140	62.9%	32	6	7.7	40.8%	77	10	89	92.0	50.0%	13
PORTER	666	50.2%	665	87.4%	43	35	31.3	166.9%	161	16	201	200.7	109.1%	20
POSEY	170	40.6%	182	62.1%	34	15	24.0	127.9%	116	20	107	94.0	51.1%	32
PULASKI	67	22.4%	66	89.4%	52	23	20.0	106.5%	207	12	208	205.0	111.4%	11
PUTNAM	273	5.1%	249	94.4%	51	8	9.3	49.7%	97	13	89	86.3	46.9%	32
RANDOLPH	202	38.1%	214	90.2%	62	21	27.7	147.4%	174	9	284	332.3	180.6%	13
RIPLEY	175	34.9%	148	66.9%	38	11	10.0	53.3%	159	11	162	140.3	76.3%	26
RUSH	93	34.4%	234	49.1%	42	8	11.7	62.2%	202	17	460	448.7	243.9%	17
ST. JOSEPH	859	41.6%	1,178	70.5%	53	31	20.0	106.5%	87	14	150	132.0	71.7%	20
SCOTT	173	16.2%	148	88.5%	44	7	6.3	33.7%	159	9	160	155.7	84.6%	11
SHELBY	343	1.2%	333	91.9%	N/A	6	11.3	60.4%	162	13	184	204.3	111.1%	20
SPENCER	110	27.3%	89	92.1%	52	8	6.7	35.5%	104	14	103	115.3	62.7%	47
STARKE	211	30.8%	194	87.1%	49	14	12.3	65.7%	138	17	151	130.7	71.0%	22
STEUBEN	184	42.4%	313	64.2%	38	40	29.3	156.3%	144	17	424	352.3	191.5%	23
SULLIVAN	129	32.6%	128	89.1%	42	6	6.3	33.7%	116	10	106	109.3	59.4%	15
SWITZERLAND	55	38.2%	91	50.5%	31	9	7.3	39.1%	114	17	225	161.3	87.7%	19
TIPPECANOE	787	54.4%	1,030	88.6%	48	50	40.3	214.9%	149	30	412	401.0	218.0%	37
TIPTON	64	46.9%	20	85.0%	35	32	23.0	122.5%	166	8	203	195.7	106.4%	47
UNION	53	34.0%	64	85.9%	43	16	20.3	108.3%	137	10	189	327.7	178.1%	14
VANDERBURGH	830	17.6%	725	74.2%	57	5	7.3	39.1%	113	16	88	99.0	53.8%	26
VERMILLION	75	9.3%	81	87.7%	N/A	10	15.7	83.5%	133	13	139	125.0	67.9%	52
VIGO	672	22.2%	731	78.7%	39	3	5.3	28.4%	158	14	167	131.3	71.4%	15
WABASH	219	20.1%	192	84.9%	45	7	10.0	53.3%	177	11	220	210.7	114.5%	15
WARREN	61	1.6%	68	88.2%	N/A	5	5.0	26.6%	133	15	112	92.0	50.0%	38
WARRICK	233	62.2%	228	85.5%	36	32	43.7	232.6%	138	22	244	220.7	119.9%	19
WASHINGTON	189	34.9%	169	92.9%	26	5	9.0	47.9%	128	8	205	260.7	141.7%	15
WAYNE	382	45.3%	406	81.5%	40	11	14.3	76.4%	115	22	119	156.3	85.0%	34
WELLS	70	34.3%	87	75.9%	43	28	21.0	111.9%	128	17	185	154.7	84.1%	15
WHITE	229	4.4%	241	87.6%	49	12	11.3	60.4%	69	11	69	75.7	41.1%	25
WHITLEY	210	17.6%	215	92.6%	36	7	6.3	33.7%	85	7	79	75.0	40.8%	22
INDIANA	32,546	24.8%	36,890	75.5%	44	18			143	15	207			27
OTHER ¹	1	N/A	1,518	N/A	N/A	N/A			N/A	N/A	N/A			N/A

¹ Other are those drivers, with an Indiana license, for which a DWI Conviction was reported to BMV by another state or Indiana U.S. Federal Court.

In addition, the 1993-1997 weighted average results for both T2 (average number of days from arrest to the court APC disposition) and T5 (the average number of days from arrest to DWI disposition) have been included for each county. For comparison purposes, the state averages are provided for both of these criteria. A percentage less than 100% indicates the county takes less time (as compared to the state average) to process that statistic. A percentage greater than 100% indicates that the county takes more time than the state average for processing.

county data

Table 92. Affidavit of Probable Cause (APC) and DWI Convictions by County with Licensed Drivers by County: 1993-1997

County	1993					1994					1995 ¹				
	LDVR	APC	DWI Conv	APC per 1,000 LDVR	DWI Conv per 1,000 LDVR	LDVR	APC	DWI Conv	APC per 1,000 LDVR	DWI Conv per 1,000 LDVR	LDVR	APC	DWI Conv	APC per 1,000 LDVR	DWI Conv per 1,000 LDVR
ADAMS	19,841	117	96	5.90	4.84	20,211	120	109	5.94	5.39	20,327	100	116	4.92	5.71
ALLEN	204,315	1,360	1,560	6.66	7.64	207,898	1,520	1,384	7.31	6.66	209,016	1,418	1,518	6.78	7.26
BARTHOLOMEW	47,697	523	444	10.97	9.31	48,660	317	349	6.51	7.17	48,876	315	296	6.44	6.06
BENTON	7,202	34	51	4.72	7.08	7,273	35	27	4.81	3.71	7,180	45	27	6.27	3.76
BLACKFORD	10,089	52	62	5.15	6.15	10,153	81	59	7.98	5.81	10,139	122	169	12.03	16.67
BOONE	29,274	270	237	9.22	8.10	30,275	211	218	6.97	7.20	30,536	222	199	7.27	6.52
BROWN	9,996	69	48	6.90	4.80	10,422	37	70	3.55	6.72	10,667	35	38	3.28	3.56
CARROLL	14,083	107	118	7.60	8.38	14,207	106	99	7.46	6.97	14,310	94	104	6.57	7.27
CASS	26,781	323	330	12.06	12.32	27,108	275	251	10.14	9.26	26,998	192	212	7.11	7.85
CLARK	60,847	670	1,004	11.01	16.50	62,544	675	636	10.79	10.17	63,481	675	676	10.63	10.65
CLAY	18,187	200	185	11.00	10.17	18,579	146	148	7.86	7.97	18,636	198	170	10.62	9.12
CLINTON	21,772	204	218	9.37	10.01	22,146	203	201	9.17	9.08	22,163	235	232	10.60	10.47
CRAWFORD	7,520	86	63	11.44	8.38	7,594	59	46	7.77	6.06	7,570	46	32	6.08	4.23
DAVISS	17,286	96	119	5.55	6.88	17,516	76	85	4.34	4.85	17,639	91	88	5.16	4.99
DEARBORN	29,025	254	266	8.75	9.16	29,774	250	268	8.40	9.00	30,459	278	313	9.13	10.28
DECATUR	17,020	180	177	10.58	10.40	17,319	165	174	9.53	10.05	17,353	168	158	9.68	9.11
DEKALB	26,234	184	322	7.01	12.27	26,528	198	289	7.46	10.89	26,754	246	438	9.19	16.37
DELAWARE	75,142	1,088	983	14.48	13.08	75,773	828	1,213	10.93	16.01	75,414	637	860	8.45	11.40
DUBOIS	26,221	237	232	9.04	8.85	26,768	233	226	8.70	8.44	27,076	200	209	7.39	7.72
ELKHART	106,220	1,054	1,128	9.92	10.62	108,145	899	865	8.31	8.00	108,915	823	877	7.56	8.05
FAYETTE	18,047	187	131	10.36	7.26	18,207	161	151	8.84	8.29	18,118	127	217	7.01	11.98
FLOYD	48,113	426	289	8.85	6.01	48,506	329	288	6.78	5.94	48,430	299	251	6.17	5.18
FOUNTAIN	13,657	138	112	10.10	8.20	13,771	116	99	8.42	7.19	13,596	116	92	8.53	6.77
FRANKLIN	12,392	186	173	15.01	13.96	12,889	163	142	12.65	11.02	13,272	165	151	12.43	11.38
FULTON	13,544	137	109	10.12	8.05	13,829	152	108	10.99	7.81	13,975	147	153	10.52	10.95
GIBSON	22,692	229	245	10.09	10.80	22,920	213	235	9.29	10.25	22,892	179	180	7.82	7.86
GRANT	49,858	667	699	13.38	14.02	50,298	594	593	11.81	11.79	49,860	639	614	12.82	12.31
GREENE	21,832	191	192	8.75	8.79	22,336	131	144	5.86	6.45	22,465	160	148	7.12	6.59
HAMILTON	90,233	554	625	6.14	6.93	95,664	554	653	5.79	6.83	101,039	697	556	6.90	5.50
HANCOCK	35,207	511	428	14.51	12.16	36,505	448	450	12.27	12.33	37,348	403	368	10.79	9.85
HARRISON	22,527	256	193	11.36	8.57	23,290	218	171	9.36	7.34	23,793	186	155	7.82	6.51
HENDRICKS	55,618	667	629	11.99	11.31	58,390	550	561	9.42	9.61	60,824	519	602	8.53	9.90
HENRY	35,357	389	333	11.00	9.42	36,029	349	342	9.69	9.49	35,888	347	317	9.67	8.83
HOWARD	58,924	553	530	9.38	8.99	59,629	498	504	8.35	8.45	59,546	402	416	6.75	6.99
HUNTINGTON	25,733	204	195	7.93	7.58	26,033	167	202	6.41	7.76	26,073	208	191	7.98	7.33
JACKSON	27,743	363	370	13.08	13.34	28,370	302	395	10.65	13.92	28,547	235	300	8.23	10.51
JASPER	19,397	203	233	10.47	12.01	19,932	214	217	10.74	10.89	20,245	231	375	11.41	18.52
JAY	15,860	232	218	14.63	13.75	15,992	148	175	9.25	10.94	15,845	137	128	8.65	8.08
JEFFERSON	20,261	205	185	10.12	9.13	20,532	278	236	13.54	11.49	20,667	241	225	11.66	10.89
JENNINGS	16,057	129	124	8.03	7.72	16,551	146	105	8.82	6.34	16,943	206	169	12.16	9.97
JOHNSON	67,479	494	443	7.32	6.57	69,917	540	489	7.72	6.99	71,715	444	578	6.19	8.06
KNOX	26,559	277	265	10.43	9.98	26,931	232	142	8.61	5.27	26,827	295	157	11.00	5.85
KOSCIUSKO	46,124	399	369	8.65	8.00	47,177	444	406	9.41	8.61	47,788	532	461	11.13	9.65
LAGRANGE	15,360	259	216	16.86	14.06	15,796	265	239	16.78	15.13	16,044	226	234	14.09	14.59
LAKE	297,791	2,673	2,414	8.98	8.11	299,700	2,539	2,277	8.47	7.60	297,534	3,342	2,687	11.23	9.03

Table 92 evaluates both Affidavits of Probable Cause (APC) and Driving While Intoxicated convictions (DWI) as reported to the Bureau of Motor Vehicles (BMV) for 1993-1997. This data is then calculated and shown per 1,000 licensed drivers. As a county compares its data either to previous years or to other counties' performance, this is a difficult assessment to make. A county that has taken a very aggressive approach to drinking and driving through a public awareness campaign and targeting programs to the higher risk driver may actually report lower arrests and convictions than another county. An agency can best judge its performance by reviewing its programs, their effectiveness, and then perhaps comparing the results against crash statistics and the percentage and absolute number of alcohol-related crashes.

Table 92. Affidavit of Probable Cause (APC) and DWI Convictions by County with Licensed Drivers by County: 1993-1997 (cont.)

County	1996 ¹					1997 ¹				
	LDVR	APC	DWI Conv	APC per 1,000 LDVR	DWI Conv per 1,000 LDVR	LDVR	APC	DWI Conv	APC per 1,000 LDVR	DWI Conv per 1,000 LDVR
ADAMS	20,444	94	94	4.60	4.60	20,560	108	104	5.25	5.06
ALLEN	210,134	1,453	1,547	6.91	7.36	211,252	1,274	1,398	6.03	6.62
BARTHOLOMEW	49,092	346	327	7.05	6.66	49,308	406	299	8.23	6.06
BENTON	7,086	29	43	4.09	6.07	6,993	33	28	4.72	4.00
BLACKFORD	10,124	145	147	14.32	14.52	10,110	103	136	10.19	13.45
BOONE	30,797	266	239	8.64	7.76	31,058	240	218	7.73	7.02
BROWN	10,912	61	40	5.59	3.67	11,157	86	61	7.71	5.47
CARROLL	14,413	102	90	7.08	6.24	14,516	98	109	6.75	7.51
CASS	26,888	211	188	7.85	6.99	26,778	256	226	9.56	8.44
CLARK	64,417	606	598	9.41	9.28	65,354	761	660	11.64	10.10
CLAY	18,694	201	180	10.75	9.63	18,751	169	196	9.01	10.45
CLINTON	22,181	216	206	9.74	9.29	22,198	233	224	10.50	10.09
CRAWFORD	7,546	46	28	6.10	3.71	7,522	48	42	6.38	5.58
DAVISS	17,761	127	144	7.15	8.11	17,884	100	111	5.59	6.21
DEARBORN	31,145	289	507	9.28	16.28	31,830	378	470	11.88	14.77
DECATUR	17,386	170	174	9.78	10.01	17,420	160	155	9.18	8.90
DEKALB	26,980	313	516	11.60	19.13	27,206	315	596	11.58	21.91
DELAWARE	75,054	605	663	8.06	8.83	74,695	521	739	6.98	9.89
DUBOIS	27,385	211	212	7.71	7.74	27,693	214	201	7.73	7.26
ELKHART	109,684	879	806	8.01	7.35	110,454	1,087	968	9.84	8.76
FAYETTE	18,030	175	167	9.71	9.26	17,941	213	184	11.87	10.26
FLOYD	48,353	355	231	7.34	4.78	48,277	234	203	4.85	4.20
FOUNTAIN	13,421	118	128	8.79	9.54	13,246	137	129	10.34	9.74
FRANKLIN	13,655	152	152	11.13	11.13	14,038	131	108	9.33	7.69
FULTON	14,122	156	119	11.05	8.43	14,268	135	107	9.46	7.50
GIBSON	22,865	209	198	9.14	8.66	22,837	203	206	8.89	9.02
GRANT	49,423	534	602	10.80	12.18	48,985	535	432	10.92	8.82
GREENE	22,594	132	151	5.84	6.68	22,723	92	133	4.05	5.85
HAMILTON	106,413	669	689	6.29	6.47	111,788	719	772	6.43	6.91
HANCOCK	38,190	384	374	10.05	9.79	39,033	349	384	8.94	9.84
HARRISON	24,297	175	131	7.20	5.39	24,800	248	143	10.00	5.77
HENDRICKS	63,258	488	443	7.71	7.00	65,692	583	537	8.87	8.17
HENRY	35,746	328	344	9.18	9.62	35,605	343	332	9.63	9.32
HOWARD	59,462	436	395	7.33	6.64	59,379	507	482	8.54	8.12
HUNTINGTON	26,112	192	196	7.35	7.51	26,152	202	199	7.72	7.61
JACKSON	28,724	312	289	10.86	10.06	28,901	214	252	7.40	8.72
JASPER	20,559	199	261	9.68	12.70	20,872	160	229	7.67	10.97
JAY	15,699	124	155	7.90	9.87	15,552	93	78	5.98	5.02
JEFFERSON	20,801	221	235	10.62	11.30	20,936	239	231	11.42	11.03
JENNINGS	17,336	205	169	11.83	9.75	17,728	165	210	9.31	11.85
JOHNSON	73,514	477	497	6.49	6.76	75,312	409	546	5.43	7.25
KNOX	26,722	220	140	8.23	5.24	26,618	218	93	8.19	3.49
KOSCIUSKO	48,398	455	448	9.40	9.26	49,009	371	450	7.57	9.18
LAGRANGE	16,291	217	220	13.32	13.50	16,539	152	195	9.19	11.79
LAKE	295,368	3,205	3,352	10.85	11.35	293,202	3,108	3,752	10.60	12.80

county data

Table 92. Affidavit of Probable Cause (APC) and DWI Convictions by County with Licensed Drivers by County: 1993-1997 (cont.)

County	1993					1994					1995 ¹				
	LDVR	APC	DWI Conv	APC per 1,000 LDVR	DWI Conv per 1,000 LDVR	LDVR	APC	DWI Conv	APC per 1,000 LDVR	DWI Conv per 1,000 LDVR	LDVR	APC	DWI Conv	APC per 1,000 LDVR	DWI Conv per 1,000 LDVR
LAPORTE	71,067	947	860	13.33	12.10	72,075	785	804	10.89	11.16	71,980	768	687	10.67	9.54
LAWRENCE	30,973	274	249	8.85	8.04	31,569	273	255	8.65	8.08	31,737	271	254	8.54	8.00
MADISON	90,382	1,025	954	11.34	10.56	91,324	951	1,023	10.41	11.20	90,789	1,030	727	11.35	8.01
MARION	514,993	4,718	6,179	9.16	12.00	521,914	5,357	5,544	10.26	10.62	521,006	4,217	4,729	8.09	9.08
MARSHALL	28,388	356	335	12.54	11.80	29,104	325	299	11.17	10.27	29,356	276	285	9.40	9.71
MARTIN	7,683	111	194	14.45	25.25	7,819	89	136	11.38	17.39	7,756	66	123	8.51	15.86
MIAMI	25,094	270	244	10.76	9.72	25,207	265	262	10.51	10.39	24,933	251	254	10.07	10.19
MONROE	65,459	706	1,151	10.79	17.58	66,665	574	1,002	8.61	15.03	67,302	535	1,097	7.95	16.30
MONTGOMERY	25,117	224	372	8.92	14.81	25,576	204	242	7.98	9.46	25,618	162	257	6.32	10.03
MORGAN	40,409	401	711	9.92	17.60	41,798	322	668	7.70	15.98	42,636	411	697	9.64	16.35
NEWTON	9,065	69	59	7.61	6.51	9,512	71	65	7.46	6.83	9,725	133	125	13.68	12.85
NOBLE	27,511	345	278	12.54	10.11	28,102	364	381	12.95	13.56	28,474	315	346	11.06	12.15
OHIO	3,864	50	52	12.94	13.46	3,902	48	38	12.30	9.74	3,957	37	48	9.35	12.13
ORANGE	12,642	114	96	9.02	7.59	12,966	100	90	7.71	6.94	13,064	104	83	7.96	6.35
OWEN	12,483	101	85	8.09	6.81	13,058	68	102	5.21	7.81	13,388	95	84	7.10	6.27
PARKE	10,760	153	124	14.22	11.52	10,895	43	28	3.95	2.57	10,922	85	54	7.78	4.94
PERRY	12,598	65	95	5.16	7.54	12,879	64	86	4.97	6.68	13,034	48	68	3.68	5.22
PIKE	8,856	99	112	11.18	12.65	8,924	100	103	11.21	11.54	8,973	126	153	14.04	17.05
PORTER	92,470	951	989	10.28	10.70	95,274	858	797	9.01	8.37	96,762	819	801	8.46	8.28
POSEY	18,064	230	216	12.73	11.96	18,469	166	182	8.99	9.85	18,588	139	158	7.48	8.50
PULASKI	9,204	94	87	10.21	9.45	9,445	92	98	9.74	10.38	9,502	64	58	6.74	6.10
PUTNAM	20,541	156	155	7.59	7.55	21,214	135	112	6.36	5.28	21,617	220	160	10.18	7.40
RANDOLPH	20,036	276	225	13.78	11.23	20,185	254	270	12.58	13.38	20,086	225	225	11.20	11.20
RIPLEY	19,646	180	139	9.16	7.08	19,994	157	149	7.85	7.45	19,978	194	150	9.71	7.51
RUSH	12,425	96	176	7.73	14.16	12,678	115	181	9.07	14.28	12,702	98	270	7.72	21.26
ST. JOSEPH	161,205	1,333	1,376	8.27	8.54	163,107	1,214	1,260	7.44	7.72	163,655	1,373	1,494	8.39	9.13
SCOTT	15,114	170	164	11.25	10.85	15,457	215	213	13.91	13.78	15,513	133	167	8.57	10.76
SHELBY	27,879	305	377	10.94	13.52	28,756	294	360	10.22	12.52	28,963	286	304	9.87	10.50
SPENCER	14,107	185	164	13.11	11.63	14,464	133	124	9.20	8.57	14,437	96	99	6.65	6.86
STARKE	14,750	187	244	12.68	16.54	15,231	179	224	11.75	14.71	15,401	188	154	12.21	10.00
STEUBEN	21,055	329	283	15.63	13.44	21,757	227	264	10.43	12.13	22,068	266	308	12.05	13.96
SULLIVAN	14,092	183	189	12.99	13.41	14,319	109	137	7.61	9.57	14,308	118	85	8.25	5.94
SWITZERLAND	4,995	72	86	14.41	17.22	5,222	35	59	6.70	11.30	5,369	54	64	10.06	11.92
TIPPECANOE	81,324	849	679	10.44	8.35	82,770	707	811	8.54	9.80	83,714	564	537	6.74	6.41
TIPTON	11,463	60	52	5.23	4.54	11,706	69	34	5.89	2.90	11,847	52	40	4.39	3.38
UNION	5,255	63	52	11.99	9.90	5,347	58	47	10.85	8.79	5,354	55	74	10.27	13.82
VANDERBURGH	112,614	954	892	8.47	7.92	113,608	967	864	8.51	7.61	113,230	1,381	1,185	12.20	10.47
VERMILLION	12,082	100	138	8.28	11.42	12,263	100	82	8.15	6.69	12,277	73	61	5.95	4.97
VIGO	68,209	884	1,096	12.96	16.07	68,600	695	689	10.13	10.04	68,048	654	623	9.61	9.16
WABASH	24,414	173	172	7.09	7.05	24,886	147	127	5.91	5.10	24,792	196	149	7.91	6.01
WARREN	5,011	55	52	10.98	10.38	5,126	64	56	12.49	10.92	5,336	55	54	10.31	10.12
WARRICK	34,543	222	203	6.43	5.88	35,455	194	154	5.47	4.34	36,040	319	237	8.85	6.58
WASHINGTON	15,863	195	198	12.29	12.48	16,415	115	142	7.01	8.65	16,833	163	163	9.68	9.68
WAYNE	48,886	636	563	13.01	11.52	49,204	556	579	11.30	11.77	48,996	382	381	7.80	7.78
WELLS	18,303	124	133	6.77	7.27	18,641	109	129	5.85	6.92	18,862	103	108	5.46	5.73
WHITE	17,774	208	212	11.70	11.93	17,994	196	183	10.89	10.17	18,138	275	260	15.16	14.33
WHITLEY	20,999	188	185	8.95	8.81	21,367	214	195	10.02	9.13	21,513	184	202	8.55	9.39
INDIANA	3,790,783	37,123	39,010	9.79	10.29	3,860,329	34,562	35,691	8.95	9.25	3,881,424	34,282	35,099	8.83	9.04

Table 92. Affidavit of Probable Cause (APC) and DWI Convictions by County with Licensed Drivers by County: 1993-1997 (cont.)

County	1996 ¹					1997 ¹				
	LDVR	APC	DWI Conv	APC per 1,000 LDVR	DWI Conv per 1,000 LDVR	LDVR	APC	DWI Conv	APC per 1,000 LDVR	DWI Conv per 1,000 LDVR
LAPORTE	71,884	713	688	9.92	9.57	71,789	633	590	8.82	8.22
LAWRENCE	31,905	255	255	7.99	7.99	32,073	217	199	6.77	6.20
MADISON	90,253	1,016	958	11.26	10.61	89,718	1,120	1,061	12.48	11.83
MARION	520,097	4,270	4,538	8.21	8.73	519,189	3,871	3,888	7.46	7.49
MARSHALL	29,607	331	414	11.18	13.98	29,859	357	554	11.96	18.55
MARTIN	7,692	64	107	8.32	13.91	7,629	61	101	8.00	13.24
MIAMI	24,659	203	227	8.23	9.21	24,385	201	232	8.24	9.51
MONROE	67,940	584	965	8.60	14.20	68,577	443	847	6.46	12.35
MONTGOMERY	25,661	230	324	8.96	12.63	25,703	193	354	7.51	13.77
MORGAN	43,475	359	674	8.26	15.50	44,313	326	739	7.36	16.68
NEWTON	9,938	169	142	17.01	14.29	10,151	151	174	14.88	17.14
NOBLE	28,847	331	300	11.47	10.40	29,219	360	300	12.32	10.27
OHIO	4,011	42	29	10.47	7.23	4,066	95	68	23.36	16.72
ORANGE	13,163	125	99	9.50	7.52	13,261	137	117	10.33	8.82
OWEN	13,718	109	95	7.95	6.93	14,048	77	91	5.48	6.48
PARKE	10,950	61	60	5.57	5.48	10,977	59	44	5.37	4.01
PERRY	13,188	18	55	1.36	4.17	13,343	17	56	1.27	4.20
PIKE	9,023	104	132	11.53	14.63	9,072	93	140	10.25	15.43
PORTER	98,249	963	933	9.80	9.50	99,737	666	665	6.68	6.67
POSEY	18,707	175	181	9.35	9.68	18,826	170	182	9.03	9.67
PULASKI	9,559	92	75	9.62	7.85	9,616	67	66	6.97	6.86
PUTNAM	22,021	287	256	13.03	11.63	22,424	273	249	12.17	11.10
RANDOLPH	19,987	200	204	10.01	10.21	19,888	202	214	10.16	10.76
RIPLEY	19,962	189	156	9.47	7.81	19,946	175	148	8.77	7.42
RUSH	12,727	113	189	8.88	14.85	12,751	93	234	7.29	18.35
ST. JOSEPH	164,202	1,339	1,467	8.15	8.93	164,750	859	1,178	5.21	7.15
SCOTT	15,570	158	152	10.15	9.76	15,626	173	148	11.07	9.47
SHELBY	29,171	331	243	11.35	8.33	29,378	343	333	11.68	11.34
SPENCER	14,410	125	119	8.67	8.26	14,383	110	89	7.65	6.19
STARKE	15,570	227	181	14.58	11.62	15,740	211	194	13.41	12.33
STEBEN	22,378	183	285	8.18	12.74	22,689	184	313	8.11	13.80
SULLIVAN	14,296	140	148	9.79	10.35	14,285	129	128	9.03	8.96
SWITZERLAND	5,515	38	57	6.89	10.33	5,662	55	91	9.71	16.07
TIPPECANOE	84,658	739	639	8.73	7.55	85,602	787	1,030	9.19	12.03
TIPTON	11,989	61	28	5.09	2.34	12,130	64	20	5.28	1.65
UNION	5,360	69	66	12.87	12.31	5,367	53	64	9.88	11.92
VANDERBURGH	112,851	1,187	1,144	10.52	10.14	112,473	830	725	7.38	6.45
VERMILLION	12,292	83	78	6.75	6.35	12,306	75	81	6.09	6.58
VIGO	67,497	704	591	10.43	8.76	66,945	672	731	10.04	10.92
WABASH	24,697	238	212	9.64	8.58	24,603	219	192	8.90	7.80
WARREN	5,545	75	58	13.52	10.46	5,755	61	68	10.60	11.82
WARRICK	36,625	299	289	8.16	7.89	37,210	233	228	6.26	6.13
WASHINGTON	17,250	172	203	9.97	11.77	17,668	189	169	10.70	9.57
WAYNE	48,788	423	430	8.67	8.81	48,580	382	406	7.86	8.36
WELLS	19,083	110	113	5.76	5.92	19,304	70	87	3.63	4.51
WHITE	18,282	182	198	9.96	10.83	18,426	229	241	12.43	13.08
WHITLEY	21,660	219	196	10.11	9.05	21,806	210	215	9.63	9.86
INDIANA	3,902,519	34,613	35,788	8.87	9.17	3,923,420	32,546	36,890	8.30	9.40

county data

Table 93. Total Alcohol-Related Crashes by County: 1993-1997

County	1993			1994			1995			1996			1997			Percentage of ALC Crashes 1993-1997		
	Alcohol Crashes	Total Crashes	% of Crashes	Alcohol Crashes	Total Crashes	% of Crashes	Alcohol Crashes	Total Crashes	% of Crashes	Alcohol Crashes	Total Crashes	% of Crashes	Alcohol Crashes	Total Crashes	% of Crashes	5-Yr Wtd. Avg.	% Yearly Change	% of State Avg.
ADAMS	33	907	3.6%	20	991	2.0%	22	1,187	1.9%	30	928	3.2%	29	886	3.3%	3.1%	-127.4%	64.8%
ALLEN	608	13,037	4.7%	556	13,611	4.1%	673	14,566	4.6%	562	13,339	4.2%	606	13,598	4.5%	4.4%	-45.9%	90.0%
BARTHOLOMEW	108	2,285	4.7%	100	2,537	3.9%	129	2,829	4.6%	99	2,461	4.0%	107	2,258	4.7%	4.4%	0.0%	90.2%
BENTON	10	188	5.3%	6	203	3.0%	17	227	7.5%	3	189	1.6%	8	191	4.2%	3.4%	-321.6%	70.6%
BLACKFORD	20	471	4.2%	19	455	4.2%	28	553	5.1%	14	450	3.1%	8	382	2.1%	3.3%	-543.8%	68.3%
BOONE	43	1,219	3.5%	51	1,336	3.8%	55	1,502	3.7%	57	1,419	4.0%	49	1,385	3.5%	3.9%	-129.9%	79.5%
BROWN	25	485	5.2%	18	564	3.2%	18	593	3.0%	28	481	5.8%	37	544	6.8%	5.5%	146.8%	112.5%
CARROLL	36	619	5.8%	32	618	5.2%	30	638	4.7%	24	649	3.7%	42	590	7.1%	5.7%	-87.6%	117.9%
CASS	82	1,627	5.0%	92	1,795	5.1%	67	2,212	3.0%	60	1,807	3.3%	66	1,798	3.7%	4.2%	-216.3%	85.9%
CLARK	155	3,295	4.7%	189	3,586	5.3%	185	3,921	4.7%	191	3,616	5.3%	138	3,498	3.9%	4.8%	-124.0%	99.9%
CLAY	31	916	3.4%	50	1,072	4.7%	46	1,103	4.2%	36	979	3.7%	26	876	3.0%	3.8%	-291.8%	77.8%
CLINTON	63	1,105	5.7%	62	1,170	5.3%	52	1,184	4.4%	52	1,061	4.9%	59	1,129	5.2%	5.3%	-57.1%	108.4%
CRAWFORD	14	266	5.3%	9	289	3.1%	7	302	2.3%	8	270	3.0%	5	297	1.7%	3.0%	-697.7%	62.1%
DAVIESS	44	754	5.8%	47	894	5.3%	52	881	5.9%	64	858	7.5%	39	872	4.5%	5.7%	-52.3%	118.5%
DEARBORN	91	1,445	6.3%	92	1,648	5.6%	87	1,800	4.8%	91	1,590	5.7%	124	1,715	7.2%	6.5%	-46.5%	133.1%
DECATUR	55	770	7.1%	49	845	5.8%	46	1,003	4.6%	35	820	4.3%	38	811	4.7%	5.2%	-135.1%	106.9%
DEKALB	67	1,326	5.1%	61	1,478	4.1%	51	1,608	3.2%	56	1,480	3.8%	43	1,394	3.1%	3.9%	-282.1%	80.5%
DELAWARE	202	4,488	4.5%	188	4,700	4.0%	259	5,439	4.8%	189	4,661	4.1%	193	4,301	4.5%	4.4%	-113.9%	90.6%
DUBOIS	96	1,287	7.5%	77	1,534	5.0%	74	1,574	4.7%	75	1,382	5.4%	79	1,452	5.4%	5.7%	-104.5%	118.5%
ELKHART	286	6,253	4.6%	332	7,209	4.6%	353	8,510	4.1%	321	7,521	4.3%	310	7,832	4.0%	4.3%	-92.4%	89.4%
FAYETTE	62	956	6.5%	68	1,064	6.4%	61	1,253	4.9%	60	998	6.0%	46	985	4.7%	5.8%	-121.1%	119.3%
FLOYD	147	2,312	6.4%	140	2,423	5.8%	143	2,744	5.2%	145	2,572	5.6%	117	2,510	4.7%	5.5%	-91.4%	112.9%
FOUNTAIN	32	504	6.3%	27	636	4.2%	41	663	6.2%	29	648	4.5%	43	563	7.6%	5.8%	51.7%	119.7%
FRANKLIN	43	571	7.5%	38	635	6.0%	43	756	5.7%	41	646	6.3%	41	676	6.1%	6.5%	-77.5%	133.1%
FULTON	46	630	7.3%	45	657	6.8%	37	694	5.3%	38	681	5.6%	33	588	5.6%	6.2%	-81.3%	126.9%
GIBSON	56	943	5.9%	59	1,044	5.7%	51	1,104	4.6%	48	1,072	4.5%	41	1,068	3.8%	4.7%	-127.1%	97.4%
GRANT	118	2,523	4.7%	113	2,819	4.0%	114	3,169	3.6%	113	2,864	3.9%	107	2,621	4.1%	4.2%	-119.6%	86.3%
GREENE	66	979	6.7%	46	1,126	4.1%	52	1,162	4.5%	44	965	4.6%	37	898	4.1%	4.8%	-209.6%	98.5%
HAMILTON	141	3,639	3.9%	130	4,428	2.9%	130	4,796	2.7%	119	4,700	2.5%	110	4,523	2.4%	2.8%	-352.1%	58.6%
HANCOCK	61	1,322	4.6%	55	1,490	3.7%	67	1,655	4.0%	60	1,536	3.9%	48	1,639	2.9%	3.8%	-318.3%	77.8%
HARRISON	62	1,112	5.6%	52	1,262	4.1%	58	1,283	4.5%	47	1,217	3.9%	48	1,255	3.8%	4.2%	-143.2%	86.5%
HENDRICKS	114	2,075	5.5%	92	2,479	3.7%	75	2,645	2.8%	92	2,695	3.4%	91	2,647	3.4%	3.9%	-257.1%	80.3%
HENRY	70	1,360	5.1%	63	1,618	3.9%	105	1,893	5.5%	68	1,554	4.4%	54	1,398	3.9%	4.4%	-206.9%	89.8%
HOWARD	108	2,625	4.1%	133	2,947	4.5%	149	3,135	4.8%	126	2,824	4.5%	129	2,737	4.7%	4.6%	-43.7%	94.5%
HUNTINGTON	57	1,179	4.8%	44	1,308	3.4%	54	1,433	3.8%	45	1,323	3.4%	47	1,377	3.4%	3.7%	-241.9%	76.8%
JACKSON	90	1,562	5.8%	81	1,818	4.5%	89	2,057	4.3%	62	1,755	3.5%	75	1,610	4.7%	4.6%	-196.1%	94.7%
JASPER	28	1,036	2.7%	45	1,120	4.0%	47	1,232	3.8%	45	1,020	4.4%	44	1,073	4.1%	3.9%	204.1%	80.9%
JAY	35	687	5.1%	36	833	4.3%	31	878	3.5%	19	753	2.5%	30	750	4.0%	3.8%	-157.5%	78.6%
JEFFERSON	65	988	6.6%	54	1,166	4.6%	64	1,119	5.7%	61	1,024	6.0%	53	1,096	4.8%	5.6%	-143.6%	115.0%
JENNINGS	48	723	6.6%	59	930	6.3%	44	1,012	4.3%	48	886	5.4%	31	850	3.6%	5.1%	-136.2%	106.1%
JOHNSON	108	2,548	4.2%	119	2,910	4.1%	134	3,362	4.0%	139	3,186	4.4%	123	2,853	4.3%	4.4%	-113.9%	90.6%
KNOX	82	1,543	5.3%	96	1,505	6.4%	95	1,658	5.7%	72	1,423	5.1%	55	1,437	3.8%	5.1%	-196.5%	105.1%
KOSCIUSKO	134	2,470	5.4%	141	2,690	5.2%	127	3,121	4.1%	153	2,757	5.5%	124	2,507	4.9%	5.3%	-56.4%	109.8%
LAGRANGE	56	940	6.0%	50	1,024	4.9%	47	1,117	4.2%	45	1,086	4.1%	44	1,115	3.9%	4.6%	-216.9%	95.2%
LAKE	891	17,874	5.0%	922	19,496	4.7%	922	21,501	4.3%	935	19,612	4.8%	982	20,748	4.7%	4.8%	-41.6%	99.3%
LAPORTE	257	3,865	6.6%	249	4,191	5.9%	271	4,635	5.8%	253	4,106	6.2%	281	4,549	6.2%	6.2%	-16.1%	128.2%
LAWRENCE	71	1,504	4.7%	77	1,656	4.6%	71	1,724	4.1%	79	1,499	5.3%	88	1,497	5.9%	5.2%	115.4%	107.3%
MADISON	268	4,841	5.5%	147	4,880	3.0%	297	5,963	5.0%	239	5,096	4.7%	192	4,641	4.1%	4.4%	-137.0%	90.4%
MARION	1,399	32,678	4.3%	1,455	35,903	4.1%	1,409	38,535	3.7%	1,279	33,523	3.8%	1,262	34,609	3.6%	3.9%	-102.0%	80.9%
MARSHALL	87	1,635	5.3%	94	1,735	5.4%	83	1,860	4.5%	75	1,745	4.3%	79	1,631	4.8%	4.9%	-41.2%	100.3%

This table presents the actual data for the past five years (1993-1997) for total crashes, alcohol-related crashes and the percentage of alcohol-related crashes. The three right-hand columns use a time-weighting factor to indicate the percent of alcohol-related crashes, the percentage of change over the past five years and a per-

cent of state average. A negative sign with the percent of change indicates that the percentage of alcohol-related crashes has been decreasing over the past five years. A positive percentage indicates that there is an increasing percentage of alcohol-related crashes in that county. The final column indicates how that county

compares with the state average for percentage of alcohol-related crashes. This information is solely based upon the data entered by the investigating officer at the time of the crash.

Table 93. Total Alcohol-Related Crashes by County: 1993-1997 (cont.)

County	1993			1994			1995			1996			1997			Percentage of ALC Crashes 1993-1997		
	Alcohol Crashes	Total Crashes	% of Crashes	Alcohol Crashes	Total Crashes	% of Crashes	Alcohol Crashes	Total Crashes	% of Crashes	Alcohol Crashes	Total Crashes	% of Crashes	Alcohol Crashes	Total Crashes	% of Crashes	5-Yr Wtd. Avg.	% Yearly Change	% of State Avg.
MARTIN	27	322	8.4%	20	335	6.0%	18	367	4.9%	25	337	7.4%	14	336	4.2%	6.2%	-176.6%	128.6%
MIAMI	62	1,116	5.6%	64	1,205	5.3%	63	1,239	5.1%	51	1,128	4.5%	52	1,117	4.7%	5.0%	-139.7%	103.4%
MONROE	147	3,943	3.7%	147	4,405	3.3%	145	4,739	3.1%	125	4,566	2.7%	140	4,481	3.1%	3.2%	-188.1%	65.8%
MONTGOMERY	46	1,318	3.5%	57	1,276	4.5%	52	1,525	3.4%	48	1,321	3.6%	58	1,265	4.6%	4.2%	-23.9%	86.3%
MORGAN	64	1,574	4.1%	69	1,695	4.1%	99	1,909	5.2%	82	1,675	4.9%	81	1,665	4.9%	4.7%	-42.5%	97.2%
NEWTON	29	413	7.0%	29	454	6.4%	22	435	5.1%	30	376	8.0%	23	415	5.5%	6.6%	-15.1%	136.9%
NOBLE	89	1,517	5.9%	73	1,709	4.3%	92	2,074	4.4%	90	1,713	5.3%	68	1,780	3.8%	4.8%	-168.4%	98.0%
OHIO	9	196	4.6%	14	176	8.0%	7	214	3.3%	15	217	6.9%	19	229	8.3%	7.3%	96.6%	149.7%
ORANGE	15	548	2.7%	11	640	1.7%	19	692	2.7%	18	622	2.9%	17	622	2.7%	2.6%	-76.3%	54.1%
OWEN	28	629	4.5%	23	686	3.4%	32	724	4.4%	31	640	4.8%	27	643	4.2%	4.3%	-69.1%	89.6%
PARKE	35	521	6.7%	25	552	4.5%	34	613	5.5%	32	573	5.6%	28	470	6.0%	5.7%	-52.4%	118.1%
PERRY	32	595	5.4%	18	639	2.8%	30	744	4.0%	35	684	5.1%	20	603	3.3%	4.1%	-122.9%	84.0%
PIKE	17	308	5.5%	18	358	5.0%	27	413	6.5%	24	408	5.9%	19	397	4.8%	5.4%	-128.7%	112.3%
PORTER	226	4,210	5.4%	235	4,673	5.0%	234	5,306	4.4%	221	4,624	4.8%	192	4,848	4.0%	4.7%	-148.9%	97.0%
POSEY	35	609	5.7%	32	599	5.3%	36	660	5.5%	26	578	4.5%	32	523	6.1%	5.5%	-36.6%	112.9%
PULASKI	28	535	5.2%	32	524	6.1%	20	605	3.3%	22	603	3.6%	22	538	4.1%	4.6%	-173.5%	95.2%
PUTNAM	64	1,189	5.4%	64	1,204	5.3%	56	1,347	4.2%	41	1,183	3.5%	47	1,230	3.8%	4.3%	-163.2%	88.6%
RANDOLPH	43	696	6.2%	33	792	4.2%	45	880	5.1%	32	740	4.3%	30	647	4.6%	4.7%	-105.9%	97.4%
RIPLEY	51	732	7.0%	39	915	4.3%	49	931	5.3%	44	872	5.0%	44	878	5.0%	5.2%	-95.8%	107.7%
RUSH	35	543	6.4%	36	597	6.0%	28	652	4.3%	19	529	3.6%	28	554	5.1%	5.2%	-211.9%	107.1%
SAINT JOSEPH	516	9,348	5.5%	567	10,279	5.5%	587	11,174	5.3%	593	10,330	5.7%	538	10,075	5.3%	5.5%	0.0%	113.9%
SCOTT	36	765	4.7%	34	776	4.4%	44	854	5.2%	43	829	5.2%	34	741	4.6%	4.7%	64.1%	96.6%
SHELBY	91	1,282	7.1%	98	1,480	6.6%	65	1,612	4.0%	79	1,381	5.7%	81	1,409	5.7%	6.2%	-65.0%	126.9%
SPENCER	46	642	7.2%	36	678	5.3%	33	741	4.5%	52	641	8.1%	41	678	6.0%	6.7%	-29.8%	138.7%
STARKE	43	670	6.4%	52	786	6.6%	53	794	6.7%	55	824	6.7%	41	748	5.5%	6.2%	-48.2%	128.6%
STEBEN	61	1,397	4.4%	75	1,710	4.4%	89	2,072	4.3%	54	1,761	3.1%	61	1,665	3.7%	3.9%	-257.7%	80.1%
SULLIVAN	3	475	0.6%	4	497	0.8%	8	571	1.4%	10	527	1.9%	5	495	1.0%	1.1%	1964.3%	23.1%
SWITZERLAND	15	305	4.9%	17	371	4.6%	11	336	3.3%	14	367	3.8%	24	337	7.1%	5.3%	37.5%	110.2%
TIPPECANOE	231	5,945	3.9%	272	7,074	3.8%	276	7,770	3.6%	279	6,492	4.3%	255	6,319	4.0%	4.1%	-24.5%	84.2%
TIPTON	16	371	4.3%	15	457	3.3%	15	462	3.2%	12	423	2.8%	8	392	2.0%	3.0%	-505.1%	61.3%
UNION	10	207	4.8%	11	260	4.2%	13	269	4.8%	4	248	1.6%	13	240	5.4%	3.9%	-76.1%	81.3%
VANDERBURGH	381	6,899	5.5%	346	7,344	4.7%	341	7,840	4.3%	305	6,832	4.5%	347	6,812	5.1%	5.0%	-80.5%	102.6%
VERMILLION	26	508	5.1%	48	590	8.1%	39	637	6.1%	32	601	5.3%	35	535	6.5%	6.4%	-15.7%	131.7%
VIGO	264	4,940	5.3%	253	5,238	4.8%	257	5,639	4.6%	232	5,260	4.4%	206	4,777	4.3%	4.7%	-128.5%	96.4%
WABASH	59	1,102	5.4%	57	1,335	4.3%	58	1,480	3.9%	52	1,287	4.0%	56	1,142	4.9%	4.7%	-127.1%	97.4%
WARREN	14	250	5.6%	9	281	3.2%	8	287	2.8%	10	282	3.5%	11	230	4.8%	4.3%	-138.9%	89.2%
WARRICK	58	1,338	4.3%	90	1,379	6.5%	53	1,491	3.6%	65	1,481	4.4%	67	1,406	4.8%	5.0%	-59.8%	103.6%
WASHINGTON	47	748	6.3%	46	773	6.0%	60	903	6.6%	55	878	6.3%	53	905	5.9%	6.2%	-48.8%	126.9%
WAYNE	132	2,482	5.3%	121	2,842	4.3%	128	3,111	4.1%	130	2,932	4.4%	134	2,735	4.9%	4.9%	-144.3%	100.1%
WELLS	20	744	2.7%	34	836	4.1%	37	977	3.8%	32	826	3.9%	23	799	2.9%	3.5%	-143.3%	72.0%
WHITE	68	1,069	6.4%	58	1,210	4.8%	47	1,199	3.9%	38	1,078	3.5%	39	1,029	3.8%	4.4%	-250.6%	90.6%
WHITLEY	47	1,005	4.7%	66	1,072	6.2%	53	1,226	4.3%	46	1,069	4.3%	50	1,039	4.8%	5.0%	-60.4%	102.6%
INDIANA	10,137	204,373	5.0%	10,128	225,030	4.5%	10,545	247,305	4.3%	9,777	221,465	4.4%	9,544	220,009	4.3%			
				(9,794)¹	(213,027)¹	(4.6%)¹	(9,995)¹	(221,027)¹	(4.5%)¹									

¹ Corrected for misclassified private property crashes. See Glossary for explanation.

county data

Table 94. Alcohol-Related Crashes by County with Rates per 1,000 Licensed Drivers–1997

County	Fatal Rate		Injury Rate		Damage Rate		Total Rate	
	Fatal	per 1000 LDVR	Personal Injury	per 1000 LDVR	Property Damage	per 1000 LDVR	Total	per 1000 LDVR
ADAMS	0	0.000	10	0.49	19	0.92	29	1.41
ALLEN	7	0.033	267	1.26	332	1.57	606	2.87
BARTHOLOMEW	5	0.101	54	1.10	48	0.97	107	2.17
BENTON	1	0.143	3	0.43	4	0.57	8	1.14
BLACKFORD	0	0.000	3	0.30	5	0.49	8	0.79
BOONE	1	0.032	24	0.77	24	0.77	49	1.58
BROWN	0	0.000	19	1.70	18	1.61	37	3.32
CARROLL	0	0.000	22	1.52	20	1.38	42	2.89
CASS	2	0.075	31	1.16	33	1.23	66	2.46
CLARK	2	0.031	73	1.12	63	0.96	138	2.11
CLAY	1	0.053	16	0.85	9	0.48	26	1.39
CLINTON	1	0.045	31	1.40	27	1.22	59	2.66
CRAWFORD	0	0.000	2	0.27	3	0.40	5	0.66
DAVIESS	0	0.000	22	1.23	17	0.95	39	2.18
DEARBORN	2	0.063	68	2.14	54	1.70	124	3.90
DECATUR	0	0.000	20	1.15	18	1.03	38	2.18
DEKALB	0	0.000	22	0.81	21	0.77	43	1.58
DELAWARE	2	0.027	77	1.03	114	1.53	193	2.58
DUBOIS	1	0.036	38	1.37	40	1.44	79	2.85
ELKHART	13	0.118	148	1.34	149	1.35	310	2.81
FAYETTE	2	0.111	15	0.84	29	1.62	46	2.56
FLOYD	0	0.000	60	1.24	57	1.18	117	2.42
FOUNTAIN	2	0.151	21	1.59	20	1.51	43	3.25
FRANKLIN	2	0.142	23	1.64	16	1.14	41	2.92
FULTON	3	0.210	15	1.05	15	1.05	33	2.31
GIBSON	0	0.000	15	0.66	26	1.14	41	1.80
GRANT	0	0.000	45	0.92	62	1.27	107	2.18
GREENE	0	0.000	26	1.14	11	0.48	37	1.63
HAMILTON	1	0.009	49	0.44	60	0.54	110	0.98
HANCOCK	3	0.077	28	0.72	17	0.44	48	1.23
HARRISON	3	0.121	30	1.21	15	0.60	48	1.94
HENDRICKS	3	0.046	31	0.47	57	0.87	91	1.39
HENRY	1	0.028	16	0.45	37	1.04	54	1.52
HOWARD	2	0.034	60	1.01	67	1.13	129	2.17
HUNTINGTON	2	0.076	20	0.76	25	0.96	47	1.80
JACKSON	2	0.069	34	1.18	39	1.35	75	2.60
JASPER	2	0.096	19	0.91	23	1.10	44	2.11
JAY	0	0.000	18	1.16	12	0.77	30	1.93
JEFFERSON	1	0.048	25	1.19	27	1.29	53	2.53
JENNINGS	2	0.113	10	0.56	19	1.07	31	1.75
JOHNSON	2	0.027	52	0.69	69	0.92	123	1.63
KNOX	0	0.000	23	0.86	32	1.20	55	2.07
KOSCIUSKO	3	0.061	62	1.27	59	1.20	124	2.53
LAGRANGE	0	0.000	24	1.45	20	1.21	44	2.66
LAKE	11	0.038	471	1.61	500	1.71	982	3.35
LAPORTE	11	0.153	129	1.80	141	1.96	281	3.91
LAWRENCE	4	0.125	40	1.25	44	1.37	88	2.74
MADISON	3	0.033	91	1.01	98	1.09	192	2.14
MARION	14	0.027	539	1.04	709	1.37	1,262	2.43
MARSHALL	3	0.100	44	1.47	32	1.07	79	2.65

County	Fatal Rate		Injury Rate		Damage Rate		Total Rate	
	Fatal	per 1000 LDVR	Personal Injury	per 1000 LDVR	Property Damage	per 1000 LDVR	Total	per 1000 LDVR
MARTIN	0	0.000	7	0.92	7	0.92	14	1.84
MIAMI	3	0.123	20	0.82	29	1.19	52	2.13
MONROE	6	0.087	67	0.98	67	0.98	140	2.04
MONTGOMERY	2	0.078	34	1.32	22	0.86	58	2.26
MORGAN	4	0.090	38	0.86	39	0.88	81	1.83
NEWTON	1	0.099	9	0.89	13	1.28	23	2.27
NOBLE	3	0.103	29	0.99	36	1.23	68	2.33
OHIO	0	0.000	10	2.46	9	2.21	19	4.67
ORANGE	3	0.226	5	0.38	9	0.68	17	1.28
OWEN	1	0.071	12	0.85	14	1.00	27	1.92
PARKE	1	0.091	15	1.37	12	1.09	28	2.55
PERRY	1	0.075	9	0.67	10	0.75	20	1.50
PIKE	0	0.000	14	1.54	5	0.55	19	2.09
PORTER	4	0.040	101	1.01	87	0.87	192	1.93
POSEY	0	0.000	13	0.69	19	1.01	32	1.70
PULASKI	0	0.000	16	1.66	6	0.62	22	2.29
PUTNAM	1	0.045	16	0.71	30	1.34	47	2.10
RANDOLPH	1	0.050	12	0.60	17	0.85	30	1.51
RIPLEY	1	0.050	25	1.25	18	0.90	44	2.21
RUSH	1	0.078	12	0.94	15	1.18	28	2.20
SAINT JOSEPH	7	0.042	267	1.62	264	1.60	538	3.27
SCOTT	0	0.000	17	1.09	17	1.09	34	2.18
SHELBY	0	0.000	20	0.68	61	2.08	81	2.76
SPENCER	0	0.000	17	1.18	24	1.67	41	2.85
STARKE	2	0.127	22	1.40	17	1.08	41	2.60
STEBUEN	2	0.088	33	1.45	26	1.15	61	2.69
SULLIVAN	0	0.000	2	0.14	3	0.21	5	0.35
SWITZERLAND	1	0.177	13	2.30	10	1.77	24	4.24
TIPPECANOE	3	0.035	98	1.14	154	1.80	255	2.98
TIPTON	1	0.082	3	0.25	4	0.33	8	0.66
UNION	1	0.186	9	1.68	3	0.56	13	2.42
VANDERBURGH	7	0.062	165	1.47	175	1.56	347	3.09
VERMILLION	1	0.081	18	1.46	16	1.30	35	2.84
VIGO	3	0.045	83	1.24	120	1.79	206	3.08
WABASH	3	0.122	25	1.02	28	1.14	56	2.28
WARREN	0	0.000	4	0.70	7	1.22	11	1.91
WARRICK	2	0.054	23	0.62	42	1.13	67	1.80
WASHINGTON	2	0.113	26	1.47	25	1.41	53	3.00
WAYNE	3	0.062	65	1.34	66	1.36	134	2.76
WELLS	2	0.104	9	0.47	12	0.62	23	1.19
WHITE	0	0.000	17	0.92	22	1.19	39	2.12
WHITLEY	1	0.046	23	1.05	26	1.19	50	2.29
INDIANA	194	0.049	4,408	1.12	4,942	1.26	9,544	2.43

Legend: LDVR=Licensed Drivers

Source: Indiana Bureau of Motor Vehicles.

Licensed Drivers, Registered Vehicles and Population by County

Table 95. County Data—Registered Vehicles, Licensed Drivers, Population and Vehicle Miles Traveled—1997

County	Registered Vehicles	Licensed Drivers	1997 Population Estimates	VMT	County	Registered Vehicles	Licensed Drivers	1997 Population Estimates	VMT
ADAMS	29,054	20,560	32,837	835,556	LAWRENCE	44,920	32,073	45,539	1,322,583
ALLEN	282,254	211,252	312,091	9,393,985	MADISON	122,943	89,718	131,840	3,995,936
BARTHOLOMEW	68,902	49,308	68,734	2,385,336	MARION	684,665	519,189	813,670	27,025,655
BENTON	10,390	6,993	9,557	502,173	MARSHALL	44,340	29,859	45,337	1,956,025
BLACKFORD	14,264	10,110	14,020	429,027	MARTIN	10,753	7,629	10,510	345,469
BOONE	43,821	31,058	42,985	2,452,118	MIAMI	34,951	24,385	33,199	1,035,925
BROWN	16,729	11,157	15,591	433,601	MONROE	87,428	68,577	116,653	2,672,998
CARROLL	22,382	14,516	19,989	711,480	MONTGOMERY	35,477	25,703	36,285	1,569,670
CASS	37,876	26,778	38,573	1,162,240	MORGAN	66,027	44,313	64,787	2,075,278
CLARK	86,394	65,354	93,212	3,594,964	NEWTON	15,520	10,151	14,683	643,698
CLAY	26,395	18,751	26,531	1,131,760	NOBLE	41,690	29,219	41,918	1,428,686
CLINTON	31,615	22,198	33,232	1,388,676	OHIO	5,755	4,066	5,458	158,900
CRAWFORD	11,522	7,522	10,499	596,313	ORANGE	19,201	13,261	19,378	552,164
DAVIESS	26,947	17,884	28,851	875,814	OWEN	21,065	14,048	20,257	558,152
DEARBORN	43,922	31,830	46,576	1,554,768	PARKE	15,990	10,977	16,446	683,775
DECATUR	25,331	17,420	25,362	1,244,732	PERRY	19,088	13,343	19,306	664,828
DEKALB	40,535	27,206	38,722	1,459,019	PIKE	13,826	9,072	12,758	542,492
DELAWARE	101,888	74,695	117,625	4,277,112	PORTER	125,226	99,737	144,084	4,482,365
DUBOIS	40,770	27,693	39,139	1,311,857	POSEY	28,249	18,826	26,640	1,107,980
ELKHART	157,869	110,454	170,725	5,125,729	PULASKI	15,031	9,616	13,212	549,259
FAYETTE	25,143	17,941	26,133	643,350	PUTNAM	32,236	22,424	33,706	1,574,988
FLOYD	61,477	48,277	71,465	2,200,780	RANDOLPH	27,900	19,888	27,480	950,510
FOUNTAIN	17,624	13,246	18,235	697,213	RIPLEY	28,191	19,946	27,177	937,663
FRANKLIN	21,747	14,038	21,582	760,734	RUSH	18,546	12,751	18,236	681,743
FULTON	21,228	14,268	20,351	743,348	ST. JOSEPH	223,875	164,750	258,056	6,315,190
GIBSON	32,405	22,837	31,948	1,404,141	SCOTT	22,056	15,626	22,818	813,716
GRANT	67,779	48,985	72,818	2,411,222	SHELBY	43,311	29,378	43,151	1,701,199
GREENE	32,970	22,723	33,074	1,111,085	SPENCER	21,670	14,383	20,690	883,596
HAMILTON	139,994	111,788	154,785	4,806,901	STARKE	23,095	15,740	23,759	663,587
HANCOCK	55,828	39,033	53,071	2,636,546	STEBEN	33,445	22,689	31,102	1,818,751
HARRISON	37,369	24,800	33,999	1,293,134	SULLIVAN	20,582	14,285	20,280	832,875
HENDRICKS	93,284	65,692	92,291	2,837,495	SWITZERLAND	8,189	5,662	8,636	232,120
HENRY	50,595	35,605	48,867	2,006,283	TIPPECANOE	106,818	85,602	138,307	3,807,070
HOWARD	78,321	59,379	83,586	2,376,189	TIPTON	18,598	12,130	16,395	829,128
HUNTINGTON	36,113	26,152	37,144	1,594,726	UNION	7,870	5,367	7,272	239,126
JACKSON	41,129	28,901	40,884	1,673,517	VANDERBURGH	149,888	112,473	166,837	4,226,962
JASPER	31,481	20,872	28,697	1,704,778	VERMILLION	17,540	12,306	16,997	826,410
JAY	21,092	15,552	21,692	765,000	VIGO	89,430	66,945	104,940	3,206,584
JEFFERSON	28,129	20,936	31,292	836,771	WABASH	35,740	24,603	34,525	1,155,592
JENNINGS	26,596	17,728	27,217	745,126	WARREN	9,685	5,755	8,170	492,051
JOHNSON	97,730	75,312	106,888	2,533,046	WARRICK	50,089	37,210	50,831	1,581,125
KNOX	36,582	26,618	39,686	1,411,692	WASHINGTON	26,702	17,668	27,143	838,436
KOSCIUSKO	71,679	49,009	70,363	2,120,980	WAYNE	64,483	48,580	71,800	3,155,447
LAGRANGE	26,559	16,539	32,719	1,574,319	WELLS	28,407	19,304	26,773	834,675
LAKE	351,008	293,202	479,339	12,689,220	WHITE	27,438	18,426	25,041	1,234,126
LAPORTE	101,496	71,789	109,080	3,887,156	WHITLEY	31,491	21,806	29,969	1,233,201
					INDIANA	5,343,638	3,923,420	5,864,108	192,768,721

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Appendix

TOPICS

Indiana Officer's Standard Crash Report
Indiana Officer's Vehicle Crash Report
Safety Equipment

A-1. Indiana Officer's Standard Crash Report



INDIANA OFFICER'S STANDARD CRASH REPORT

State Form: 23558(R3/7-91) Stock 302
 Mail to: Indiana State Police, Crash Records Section
 100 North Senate Avenue, Indianapolis, IN 46204

Crash I.D. No. 7.

Date of Crash MONTH DAY YEAR		Actual Local Time AM PM		No Motor Vehicles	No Injured	No Dead	No Trailers
County		Township		City/Town or Nearest City/Town			
Inside Corporate Limits? Property? <input type="checkbox"/> DNR <input type="checkbox"/> Other <input type="checkbox"/>		Distance and Direction From Corporate Limits Miles North _____ Miles South _____		Miles East _____ Miles West _____			
Road Crash Occurred On		Intersecting Road/Mile Marker/Interchange					
If not at Intersection, number of feet from		Nearest Intersecting Road/Mile Marker/Interchange					

Driver's Name (Last, First, MI)		Address (Street, City, State, Zip)					
Apparent Phys Stat (enter no.)	Sex	Date of Birth MONTH DAY YEAR	Arrested? Yes <input type="checkbox"/> No <input type="checkbox"/>	Date of Birth MONTH DAY YEAR			
Driver's License No	Lic. Type	Lic. St	Restr.	Apparent Phys Stat (enter no.)	Sex	Date of Birth MONTH DAY YEAR	Arrested? Yes <input type="checkbox"/> No <input type="checkbox"/>
Color	Veh. Yr	Make	Model Name	Driver's License No	Lic. Type	Lic. St	Restr.

Veh. Type (enter no.)	Lic. Yr	License No	Lic. State	Color	Veh. Yr	Make	Model Name
Veh. Use (enter no.)	Speed Limit	Fuel Tax No		Veh. Type (enter no.)	Lic. Yr	License No	Lic. State
Direction of Travel	No. Occupants	Fire? Yes <input type="checkbox"/> No <input type="checkbox"/>	No. Axles	Veh. Use (enter no.)	Speed Limit	Fuel Tax No	
Towed To	Towed By		Transporting Hazardous Mat. Yes <input type="checkbox"/> No <input type="checkbox"/>	Direction of Travel	No. Occupants	Fire? Yes <input type="checkbox"/> No <input type="checkbox"/>	No. Axles
Registered Owner's Name (Last, First, MI)	Address (Street, City, State, Zip)	Registered Owner's Name (Last, First, MI)	Address (Street, City, State, Zip)	Towed To	Towed By		Transporting Hazardous Mat. Yes <input type="checkbox"/> No <input type="checkbox"/>

Registered Owner's Name (Last, First, MI)	Address (Street, City, State, Zip)	Registered Owner's Name (Last, First, MI)	Address (Street, City, State, Zip)
License No.	Year	Make	Year
License No.	Year	Make	Year

INITIAL IMPACT V1 V2	Areas Damaged (Multiples) FRONT 3 4 5 2 9 6 1 8 7	Undercarriage <input type="checkbox"/> 10 Trailer <input type="checkbox"/> 11 None <input type="checkbox"/> 12	Direction Street/Highway	Arrested? Yes <input type="checkbox"/> No <input type="checkbox"/>	Apparent Phys. Stat. (enter no.)
DAMAGE EST V1 V2	VEHICLE 1	VEHICLE 2	What was pedestrian doing before crash? 1 Not in roadway 2 Standing in roadway 3 Pushing or working on vehicle 4 Other working in roadway 5 Walking in roadway with traffic 6 Getting on or off school bus 7 Getting on or off school bus 8 Crossing or entering not at intersection 9 Crossing or entering at intersection 10 Crossing or entering at intersection 11 Crossing or entering at intersection 12 Other	Enter No.	
Name of Object	OWNER'S NAME AND ADDRESS		Pedestrian Traffic Control? Yes <input type="checkbox"/> No <input type="checkbox"/>		

16	17	18	19	20	21	22	23	24	25	26	27	28	29
DRIVER OF VEHICLE 1 (as listed above)													
DRIVER OF VEHICLE 2 (as listed above)													

- 1. Prim.
 - V1
 - V1
 - V2
 - V2
- 2. V1
 - V2
- 3. V1
 - V1
 - V1
 - V2
 - V2
 - V2
- 4. V1
 - V1
 - V2
 - V2
- 5. V1
 - V2
- 6.



INDIANA OFFICER'S VEHICLE CRASH REPORT

CODING INSTRUCTION SHEET

THE FOLLOWING ARE THE CODES USED THROUGHOUT THE REPORT

1.	Prim.	<p>2. PRE-CRASH VEHICLE ACTION</p> <ol style="list-style-type: none"> 1 Going Straight Ahead 2 Turning on Red 3 Making Right Turn 4 Making Left Turn 5 Exiting to Ramp 6 Merging 7 Changing Lanes 8 Driving Left of Center 9 Crossed Median 10 Overtaking 11 Other 	7.																																																								
2.	V1 V2	<p>1. CONTRIBUTING CIRCUMSTANCES</p> <ol style="list-style-type: none"> 1 Alcoholic Beverages 2 Illegal Drugs 3 Prescription Drugs 4 Driver Apparently Asleep 5 Driver Inattention 6 Driver Illness 7 Unsafe Speed* 8 Failure to Yield Right of Way 9 Deregulated Signal/Regulatory Sign 10 Left of Center 11 Improper Passing 12 Improper Turning 13 Improper Lane Usage 14 Following Too Closely 15 Unsafe Backing 16 Wrong Way on One Way 17 Pedestrian(s) Actions* 18 Passenger Distraction 19 Violation Driver License Restrictions 20 Engine Failure or Defective 21 Accelerator Failure or Defective 22 Brake Failure or Defective 23 Tire Failure or Defective 24 Headlight Defective or Not On 25 Other Lights Defective* 26 Steering Failure 27 Window/Windshield Defective 28 Oversize/Overweight Load 29 Insecure/Leaky Load 30 Tow Hitch Failure 31 Animal(s) Present on Roadway 32 Glare 33 Surface Material Loose 34 Material on Surface (Include Weather) 35 Holes/Ruts in Surface 36 Shoulder Defective 37 Road Under Construction* 38 Obstruction Not Marked 39 Lane Marking Obscured 40 View Obstructed by A Veh. 41 View Obstructed By* 42 Other* 43 Jack Knifing 	8.																																																								
3.	V1 V2	<p>3. COLLISION INVOLVED</p> <ol style="list-style-type: none"> 1 Other Motor Veh. 2 Pedestrian(s) 3 Bicyclist 4 RR/Train 5 Animal Drawn Veh. 6 Animal 7 Deer-List Number Also 8 Light Support/Utility Pole 9 Guide Rail/Median Barrier 10 Impact Attenuator 11 Sign Post 12 Tree 13 Building Wall 14 Curbing 15 Fence 16 Bridge Support 17 Culvert Head Wall/Drainage Structure 18 Snow Embankment 19 Earth Embankment/Rock Cut/Ditch 20 Fire Hydrant 21 Traffic Signal 22 Mail Box 23 Other Non-Fixed Obj.* 24 Other Fixed Obj.* 	9.																																																								
4.	V1 V2	<p>4. TRAFFIC CONTROLS</p> <ol style="list-style-type: none"> 1 Officer/Crossing Guard/Flagman 2 RR Crossing Gate/Flagman 3 RR Crossing Flashing Signal 4 RR Crossing Sign/Pavement Markings 5 Traffic Control Signal 6 Flashing Signal 7 Stop Sign 8 Yield Sign 9 Lane Control 10 No Passing Zone 11 Other Regulatory Sign Markings* 12 None 	10.																																																								
5.	V1 V2	<p>5. WERE AUTOMATED CONTROLS OPERATING PROPERLY?</p> <p>1 Yes 2 No*</p>	11.																																																								
6.		<p>6. COLLISION DIAGRAM</p> <p>1 Rear End 6 Right Angle</p> <p>2 Head On 7 Left & Right</p> <p>3 Same Direction Sideswipe 8</p> <p>4 Opp. Direction Sideswipe</p> <p>5 Off Road Collision</p> <p style="text-align: center;"> </p>	12.																																																								
7.		<p>16. INJURED</p> <p>1 Vehicle 1 2 Vehicle 2</p> <p style="text-align: center;"> </p> <p>18. SAFETY EQUIPMENT USED (Drivers and Injured)</p> <ol style="list-style-type: none"> 1 No Restraint 2 Lap Belt 3 Harness 4 Child Restraint 5 Helmet 6 Airbag 7 Other* <p>18A WAS SAFETY EQUIPMENT EFFECTIVE?</p> <p>1 Yes 2 No</p> <p>19. EJECTION/TRAPPED (Drivers and Injured)</p> <ol style="list-style-type: none"> 1 Not Ejected 2 Partially Ejected 3 Ejected 4 Trapped In 5 Pinned Under 	13.																																																								
8.		<p>17. POSITION IN OR ON VEHICLE</p> <ol style="list-style-type: none"> 2-7 Passengers 8 Include Passengers on Motorcycle 9 Include Person in Truck Bed 10 Riding/Handing on Outside 	14.																																																								
9.		<p>18. LIST NAMES AND ADDRESSES OF INJURED</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 5%;">16</td> <td style="width: 5%;">17</td> <td style="width: 5%;">18</td> <td style="width: 5%;">19</td> <td style="width: 5%;">20</td> <td style="width: 5%;">21</td> <td style="width: 5%;">22</td> <td style="width: 5%;">23</td> <td style="width: 5%;">24</td> <td style="width: 5%;">25</td> <td style="width: 5%;">26</td> <td style="width: 5%;">27</td> <td style="width: 5%;">28</td> <td style="width: 5%;">29</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td colspan="8" style="text-align: center;">DRIVER OF VEHICLE 1 (as listed above)</td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td colspan="8" style="text-align: center;">DRIVER OF VEHICLE 2 (as listed above)</td> <td></td> </tr> </table>	16	17	18	19	20	21	22	23	24	25	26	27	28	29																				DRIVER OF VEHICLE 1 (as listed above)														DRIVER OF VEHICLE 2 (as listed above)									15.
16	17	18	19	20	21	22	23	24	25	26	27	28	29																																														
					DRIVER OF VEHICLE 1 (as listed above)																																																						
					DRIVER OF VEHICLE 2 (as listed above)																																																						

S# 302-A

7.	<p>7. CRASH TYPE</p> <ol style="list-style-type: none"> 1 Hit and Run 2 Collision 3 Overtaken 4 Non-Collision 	7.
8.	<p>8. LOCATION OF FIRST DAMAGE OR INJURY</p> <ol style="list-style-type: none"> 1 Intersection 2 Driveway Access 3 Interchange Area 4 Off Roadway 5 Shoulder 6 Median 7 Roadway 	8.
9.	<p>9. KIND OF LOCALITY</p> <ol style="list-style-type: none"> 1 School/Playground 2 Residential 3 Commercial/Industrial 4 Rural 5 Public Park 6 Urban Interstate 	9.
10.	<p>10. ROAD CONSTRUCTION/MAINTENANCE/UTILITY WORK PRESENT?</p> <ol style="list-style-type: none"> 1 Yes 2 No 	10.
11.	<p>11. LIGHT CONDITION</p> <ol style="list-style-type: none"> 1 Daylight 2 Dawn/Dusk 3 Dark (Street Lights On) 4 Dark (Street Lights Off) 5 Dark (No Street Lights) 	11.
12.	<p>12. WEATHER</p> <ol style="list-style-type: none"> 1 Clear 2 Cloudy 3 Rain 4 Snow 5 Sleet/Hail/Freezing Rain 6 Fog/Smoke/Smog 	12.
13.	<p>13. ROAD SURFACE</p> <ol style="list-style-type: none"> 1 Concrete 2 Blacktop 3 Brick 4 Dirt/Gravel 5 Other* 	13.
14.	<p>14. ROAD CHARACTER</p> <ol style="list-style-type: none"> 1 Straight/Level 2 Straight/Grade 3 Straight/Hillcrest 4 Curve/Level 5 Curve/Grade 6 Curve/Hillcrest 	14.
15.	<p>15. SURFACE CONDITION</p> <p>Must use 1-6</p> <ol style="list-style-type: none"> 1 Dry 2 Wet 3 Muddy 4 Slush 5 Snow/Ice 6 Other* 	15.
15A.	<p>15A. WERE HAZARDOUS MATERIALS INVOLVED?</p> <ol style="list-style-type: none"> 1 Yes 2 No 	15A.

21	22	23	24	25	26	27	28	29

21. NATURE OF MOST SEVERE INJURY

- 1 Severed
- 2 Internal
- 3 Minor Burn
- 4 Severe Burn
- 5 Abrasion
- 6 Minor Bleeding
- 7 Severe Bleeding
- 8 Fracture/Dislocation
- 9 Contusion/Bruse
- 10 Complaint of Pain
- 11 None Visible

22. LOCATION OF MOST SEVERE INJURY

- 1 Chest
- 2 Neck
- 3 Eye
- 4 Head
- 5 Arm/Hand
- 6 Back
- 7 Shoulder/Upper Arm
- 8 Elbow/Forearm
- 9 Abdomen/Pelvis
- 10 Hip/Upper Leg
- 11 Knee/Lower Leg
- 12 Entire Body

23. VICTIMS INJURY STATUS

- 1 Conscious
- 2 Somewhat conscious
- 3 Incoherent
- 4 Unconscious
- 5 Shock
- 6 Dead
- 7 Refused Med.

27. TEST GIVEN

1	2	3	4
N	Y	N	Y

28. TYPE GIVEN

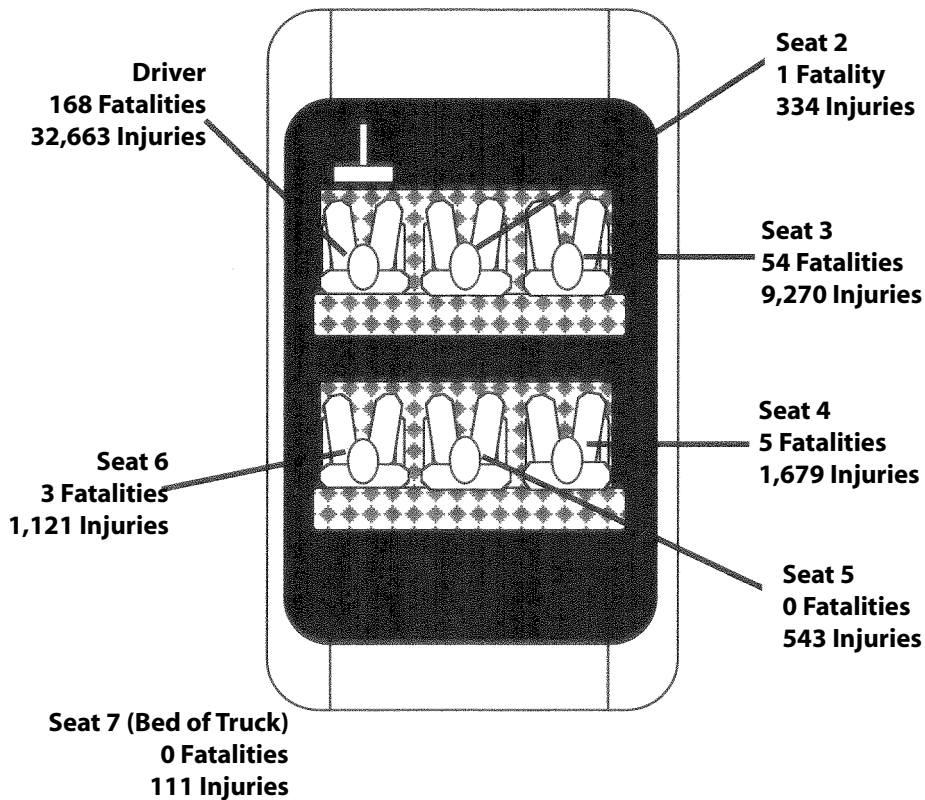
- 1 Blood
- 2 Urine
- 3 Breath
- 4 Other*

29. RESULTS

1	2	3	4
N	Y	N	Y

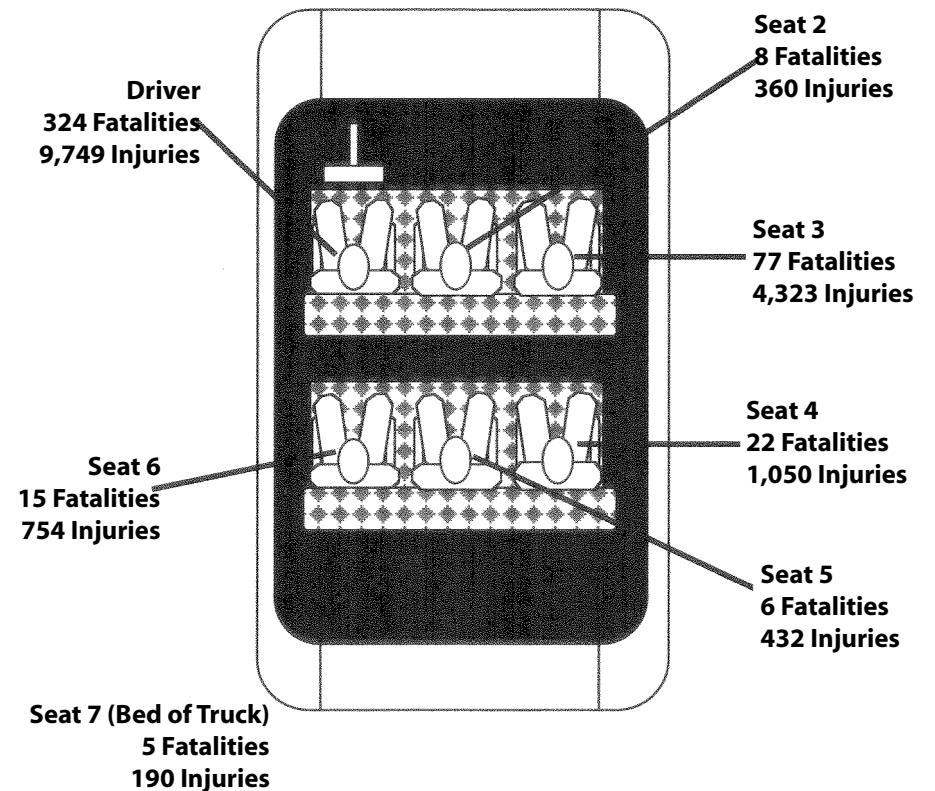
A-5. Safety Equipment: Automobiles and Light Trucks

With Safety Equipment



Seating Position Unknown: 0 Fatalities
149 Injuries

Without Safety Equipment



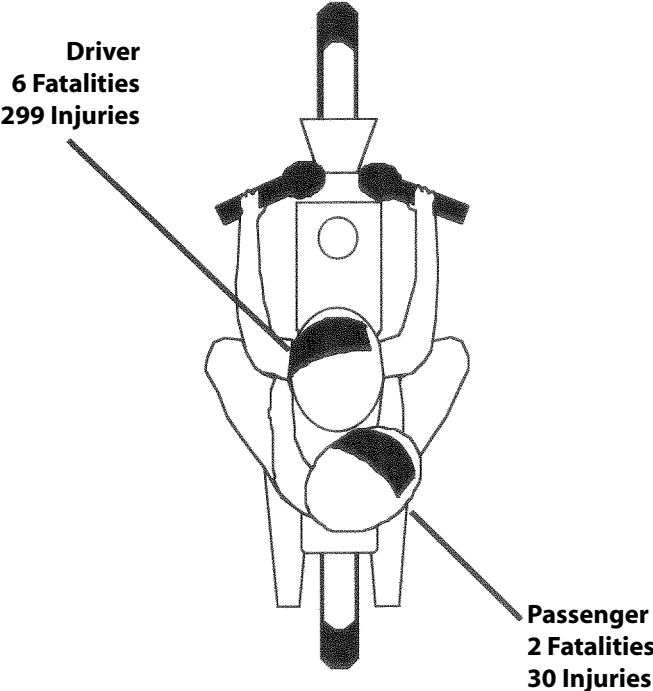
Seating Position Unknown: 5 Fatalities
82 Injuries

Safety Equipment Unknown: 62 Fatalities
2,351 Injuries

Safety Equipment and
Seating Position Unknown: 4 Fatalities
164 Injuries

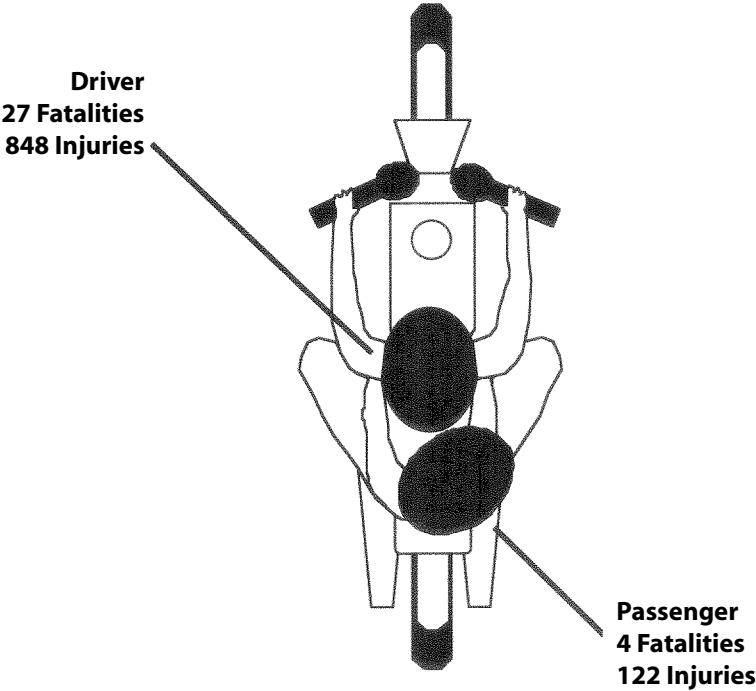
A-6. Safety Equipment: Motorcycles

With Helmet



**Driver Usage Unknown: 6 Fatalities
244 Injuries**

Without Helmet



**Passenger Usage Unknown: 1 Fatality
20 Injuries**

Alcohol-Related Crash: A crash in which the investigating officer reported one or more of the following: Primary Contributing Circumstance for the crash as Alcoholic Beverages; Vehicle Contributing Circumstance for one or more of the involved vehicles as Alcoholic Beverages, or; a Blood Alcohol Concentration of greater than 0.05 percent for one or more of the drivers involved in the crash.

BAC (Blood Alcohol Concentration): Grams of ethanol per 100 ml of blood, or 210 liters of breath. It is reported as a percentage. For example, 0.10, Indiana's current legal level for *per se* intoxication, would denote 0.1% alcohol within a person's blood.

Bicycle Crash: A crash involving one or more bicycles and a motor vehicle. In *Crash Facts* for 1993-94, only crashes in which a bicyclist was reported injured or killed were included.

Collision Crash: A motor vehicle crash other than an overturning incident in which the first harmful event is a collision of a motor vehicle in transport with another motor vehicle, other property or pedestrians.

Construction Zone: An area around a construction zone as identified by highway safety signs.

Contributing Circumstance: A single Primary Contributing Circumstance may be indicated on the crash report for a crash. For each vehicle involved up to two Vehicular Contributing Circumstances can be cited. For Tables 13, 14, 15, 16 and 80, groupings of contributing circumstance were used as follows:

- Unsafe Speed (Speed Too Fast)
- Failure to Yield Right-of-Way
- Disregard Signal/Sign
- Left of Center
- Improper Passing
- Following Too Closely
- Improper Turning (Made Improper Turn)
- Alcoholic Beverages (Had Been Drinking)
- Other Improper Driving
 - Illegal Drugs
 - Prescription Drugs
 - Driver Illness

- Improper Lane Usage
- Unsafe Backing
- Wrong Way on One Way
- Violation of License Restrictions
- Mechanical Failure
 - Engine Failure or Defective
 - Accelerator Failure or Defective
 - Brake Failure or Defective
 - Tire Failure or Defective
 - Headlight Defective or Not On
 - Other Lights Defective
 - Steering Failure
 - Window/Windshield Defective
 - Insecure/Leaky Load
 - Tow Hitch Failure
- Driver Asleep
- Driver Inattention
- Animal(s) Present on Roadway
- Roadway Factors
 - Loose Surface Material
 - Holes/Ruts in Surface
 - Shoulder Defective
 - Road Under Construction
 - Obstruction Not Marked
 - Lane Marking Obscured
- Materials on Surface (Weather)
- Other
 - Pedestrian Actions
 - Passenger Distractions
 - Glare
 - Oversize/Overweight
 - View Obstructed By a Vehicle
 - View Obstructed By Other
 - Jackknifing
- Unknown

glossary

Crash Severity: The type of Crash: **Fatal**—a crash in which a person or persons died; **Personal Injury**—a crash in which a person or persons were injured, not including any crash in which a person or persons died; **Property Damage**—a crash in which property sustained damage of \$750 or more (\$200 prior to 1990), but there were no fatalities or reported injuries.

Driver/Operator: The person who is in actual physical control of a vehicle in transit.

Economic Loss: An approximation of the costs associated with crashes, based upon current National Highway Traffic Safety Administration (NHTSA) estimates of the loss to society for each fatality, injury and property damage crash.

FARS: Fatality Analysis Reporting System (previously Fatal Accident Reporting System).

Fatal Crash: A fatality is counted when a person dies due to the injuries from a traffic crash, within 30 days after the crash. Prior to 1983 fatalities were counted if they occurred up to 90 days after the crash.

Fatality LD Rate: The numbers of fatalities (persons killed) per 1,000 licensed drivers for a county/state ($[\text{Fatalities/Licensed Drivers}] \times 1000$).

Fatality VMT Rate: The numbers of fatalities (persons killed) per 100 million vehicle miles traveled for a county/state ($[\text{Fatalities/Vehicle Miles Traveled}] \times 100,000,000$).

FHWA: Federal Highway Administration, a division of the United States Department of Transportation.

Highway Class (Road Type): Indiana roads are classified as: (1) Interstate or Toll Road; (2) United States Route; (3) State Road; (4) County Road—a locally maintained road outside the limits of incorporated cities or towns; and (5) City Street—a locally maintained road within the limits of an incorporated city or town.

Injury Severity: The type of injury: **Severe Injury**—An injury (other than fatal) that prevents the injured person from walking, driving or normally continuing the activities he or she was capable of performing before the injury occurred. Includes severe lacerations, broken or distorted limbs, skull fracture, crushed chest, internal injuries, severe burns, unconsciousness, shock, etc. Hospitalization is usually required. **Moderate Injury**—An injury (other than fatal or severe) that is evident to the officer at the scene of the crash. Includes abrasions, minor lacerations, bleeding, etc. May require medical treatment, but hospitalization is usually not required.

Possible Injury—An injury (other than fatal, severe or moderate) that is reported by a person involved in the crash. Includes complaint of physical pain when no cause is evident, momentary unconsciousness, limping, nausea, hysteria, etc.

In-Transport: Denotes a motor vehicle in motion or on a roadway.

Licensed Driver (LDVR): Person listed by the Indiana Bureau of Motor Vehicles as holding a valid driver's license.

Manner of Collision: Indicates what the driver/vehicle was doing (turning left, right, going straight, etc.) at the time of the crash, as referred to in the Officer's Standard Crash Report Code Sheet (see Appendix).

Motor Vehicle Crash: A crash that involves a motor vehicle in transport on a public trafficway (in Indiana) and results in injury, death or at least \$750 property damage.

Motorcycle Crash: A crash involving one or more motorcycles, mopeds, motor scooters or minibikes.

Non-Collision Crash: A crash that does not involve a collision with another motor vehicle, bicycle, pedestrian or other property. Types of non-collision crashes include explosion or fire in vehicle, rollover, immersion, vehicle struck by flying object, etc.

Occupant: Any person who is in or upon a vehicle, including the driver, passenger and persons riding on the outside of the vehicle.

Passenger: Any occupant of a vehicle who is not the driver.

Pedestrian Crash: A crash involving a collision of a motor vehicle with a pedestrian or a crash in which a contributing circumstance was "pedestrian distraction." In *Crash Facts* 1993-94, only crashes in which a pedestrian was reported as killed or injured were included.

Personal Injury Crash: A crash in which a person or persons were injured, not including any crash in which a person or persons died.

Private Property Crash: A crash which occurs on private property, driveways, parking lots or garages. A crash in which a motor vehicle leaves a public roadway and strikes a person, vehicle, tree or mailbox on private property is not classified as *Private Property* since the crash started on the roadway.

Private Property Data: The Indiana State Police (ISP) have discovered that most

private property crashes, in previous years excluded from crash statistics, were included in the 1995 and approximately half of the 1994 data. This problem does not affect the 1996 crash data. When the 1996 ISP crash data became available, ATC used statistical curve-fitting procedures to estimate the most likely private property crash statistics for 1994 and 1995. The estimated numbers of total crashes, personal injury crashes and injuries were then computed by subtracting the appropriate statistical estimates for private property crashes. The annual number of private property fatalities have varied between zero and four for the 1988-1996 time period. Estimates of the total numbers of crashes, personal injury crashes and injuries for 1994 and 1995 are provided and footnoted in the appropriate tables. The misclassification of private property crashes affected such counts as the number of hit-and-run crashes, school zone crashes, motorcycle, bicycle and pedestrian crashes.

Property Damage Crash: Any crash in which only property damage (damage to the vehicle or other property) occurred. As of 1990, a crash is only required to be reported if the amount of the damage was \$750 or more. Prior to 1990, the amount was \$200 or more.

Registered Vehicle: Vehicle of any type in a county or state registered with the Indiana Bureau of Motor Vehicles.

Reportable Crash: Any crash in which a person dies, one or more persons were injured, or property damage of \$750 or more occurred (\$200 prior to 1990).

Roadway Class: A roadway classification system that is based upon the type of service the street or highway is intended to provide. The roadway classes and their derivative FHWA functional class codes are:

Freeways: Interstates: Limited access, divided facilities of at least four lanes and designated by the Federal Highway Administration as part of the Interstate System. Rural: FC=1; Urban: FC=11

Other Freeways and Expressways: All urban principal arterial with limited control of access not on the Interstate system. FC=12

Arterials: Other Principal Arterials: Major streets or highways, many with multilane or freeway design, serving high-volume traffic corridor movements that connect major generators of travel. Rural: FC=2; Urban: FC=14

Minor Arterials: Streets and highways linking cities and larger towns in rural areas. Rural: FC=6; Distributing trips to small

geographic areas in urban areas (not penetrating identifiable neighborhoods.) Urban: FC=16

Collectors: In rural areas, routes serving intra-county, rather than state wide travel. Major Rural: FC=7, Minor Rural: FC=8. In urban areas, streets providing direct access to neighborhoods as well as direct access to arterials. Urban: FC=17

Local: Local Streets and Roads. Streets whose primary purpose is feeding higher order systems, providing direct access with little or no through traffic. Rural: FC=9; Urban: FC=19

Roadway Type: Indiana roads are classified as: (1) Interstate or Toll Road; (2) United States Route; (3) State Road; (4) County Road—a locally maintained road outside the limits of incorporated cities or towns; and (5) City Street—a locally maintained road within the limits of an incorporated city or town.

Role: The function of the person at the time of the crash, such as driver, passenger, motorcyclist, bicyclist or pedestrian.

Rural Area: An area outside the limits of an incorporated city or town.

Safety Restraint: A safety device classified as a lap belt, shoulder belt, harness, child restraint, airbag or other similar equipment.

School Bus Crash: A crash involving one or more school buses.

School Zone: An area around a school as identified by designated highway signs.

Truck Crash: A motor vehicle crash involving one or more vehicles of the following types: (1) 2-axle, 6-tire single-unit truck or stepvan; (2) 3-or-more-axle single-unit truck; (3) single-unit truck with trailer; (4) truck tractor with trailer; (5) truck tractor with no trailer; (6) truck tractor with double trailers; (7) heavy truck of other or unknown type. Pickup trucks and vans are not counted as trucks.

Urban Area: An area inside the limits of an incorporated city or town.

Vehicle Type: The type of vehicle according to the vehicle codes section of the Officer's Standard Crash Report Code Sheet (see Appendix).

VMT: Vehicle Miles Traveled. The estimated total number of miles traveled annually by motor vehicles on Indiana trafficways.

Weekday: From 6 AM Monday to 5:59 PM Friday.

Weekend: From 6 PM Friday to 5:59 AM Monday.

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Indiana Safety Time Clock-1997

Crime Clock

1 Murder

Every 20.4 hours

Every 9.3 hours

1 Violent Crime

Every 55 minutes

Every 17 minutes

1 Burglary

Every 10 minutes

Every 7 minutes

1 Property Crime

Every 3 minutes

Every 2.3 minutes

Every 2 minutes

Traffic Safety Clock

1 Fatality

1 Alcohol-Related Crash

1 Person Injured

1 Property Damage Crash

1 Crash



