#### 1999 INDIANA





#### Crash Facts

Prepared for the Indiana Criminal Justice Institute by the Center for the Advancement of Transportation Safety

### **Chapter**

# Problem dentification

#### TOPICS

Summary Overview Findings

Crash Facts is produced as the summary of highway crash statistics for the State of Indiana. The book's content is organized to provide data users with an efficient way to access the necessary results. The format and layout of the book has been an evolutionary process through feedback from Crash Facts recipients and discussions with data users. The current format was adopted in 1997. One of the challenges in publishing this book is the lag time between the end of the year, receipt of the data files from the Indiana State Police, and completing the necessary analysis of the data before writing the interpretations and Problem Identification. Indiana is actively evaluating alternative processes to compress the time between the end of the year and the publication date of Crash Facts to provide more timely data and analysis. These changes could include a new crash form, the ability to transmit crash reports electronically, and the use of GIS for locating the crash.

The 892 fatal crashes in 1999 resulted in 1,021 fatalities. This equates to a fatality each and every 8½ hours during 1999. The number of fatalities and fatal crashes represented one of the worst years in the past decade for Indiana. The 72,883 injuries occurred at a rate of one injury every 7.2 minutes. There were 217,340 crashes in the State, or one crash every 2½ minutes. Another crash will have occurred in the time that you spend reviewing this page.

The strong economy over the past decade and relatively low gasoline prices have persisted to put more motorists on the nation's highways, driving more miles. We continue to experience an increase in the amount of commercial motor vehicle traffic as Americans consume a greater number of goods, and are less dependent upon railroads for freight transportation. During this same time, however, roadway growth has been minimal, resulting in increased traffic congestion and traffic delays. Along with the congestion and delay problems has come an increase in aggressive driving and "road rage."

One of the major challenges in reviewing and evaluating the crash data is the sheer amount of data that is

available. With an excess of 217,000 crashes and the 100 plus data elements that are collected for each reported crash, it can be relatively easy to draw false conclusions and also to overlook certain aspects of the crash. The data published in *Crash Facts* represents what historically has been the most utilized and most requested crash statistics. Requests for information and analysis beyond the book's contents can be obtained through the Indiana Criminal Justice Institute (CJI) web site that also includes a link to the Purdue University–Center for the Advancement of Transportation Safety (CATS) web site. The CJI web site is <a href="http://www.state.in.us/cji">http://www.state.in.us/cji</a> and the CATS web site is <a href="http://cats.ecn.purdue.edu">http://cats.ecn.purdue.edu</a>.

With the design improvements seen in recent years to both the highway system and vehicles, most crashes are attributed to driver errors and their unawareness of the surrounding conditions. We also continue to see the increasing popularity of sport utility vehicles that now represent a much larger and heavier vehicle than historically seen on the highways. This consumer purchasing trend creates an imbalanced combination of vehicles such that the smaller compact vehicles, when involved in a crash with an SUV type of vehicle, are exposed to a greater likelihood of increased damages and higher likelihood of injury. On the positive side, as newer vehicles replace the older vehicles, an increasing number of vehicles are now equipped with airbags and other safety devices.

Through all of these changes, the responsibility still comes back to the driver/operator of the vehicle. Drivers who wear properly adjusted seatbelts (lap/shoulder combination) are less likely to be killed in a crash, and are more likely to have fewer and less severe injuries when involved in a crash. The fact that Indiana legislators continue to exclude pickup trucks from the primary law does not lend creditability to Indiana's commitment to improved highway safety. However, while a law may not require the proper wearing of safety restraints in pickup trucks, each individual driver needs to understand that the likelihood of serious injury and/or death is increased by nearly 50 percent when a restraint system is

not used. Likewise, with more vehicles now equipped with an airbag system, drivers (and protected occupants) cannot depend solely on the airbag system. The severity and likelihood of injury is increased for those who choose to rely solely on the airbag system. Maximum protection is provided only through the proper usage of the safety restraint system and the airbag system. The National Highway Traffic Safety Administration estimates that the combination of an airbag plus a lap/shoulder belt reduces the risk of serious head injury by 81 percent.

This initial chapter reviews Indiana's performance against "Benchmarks" established by the State to address the key areas where change is needed. Included in the discussion are the trends, existing issues, and the identification of emerging issues. Subsequent chapters provide greater concentration and data on specific highway safety areas.

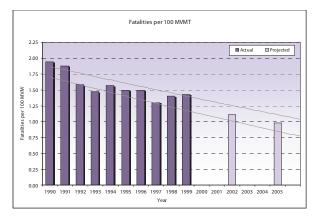
The development of the goal for each area is based upon an analysis of the most recent data. Using the last 10 years of data (1990 – 1999), a projection can then be made for 2000 – 2005 using a technique called exponential decay. The actual results are shown as the solid portion of the bar graph and the projections are shown as the shaded portion. Each of the four graphs also includes the upper and lower control lines. These lines indicate that given the current programs in place, there is a 95 percent confidence level that future years' outcomes will be between these limits. These figures are designed to present a trend analysis rather than viewing the actual results. For each of the four graphs (the exponential decay model cannot be applied to seat belt usage rates), figure numbers and page numbers are shown to reference that particular graph. A link directly to the appropriate figure is also shown for those readers using an electronic format.

#### problem identification

#### Overview—Indiana Highway Safety Plan Benchmarks

As a preface, the goals, for both the United States and Indiana, are extremely aggressive, and without the support of all Indiana motorists, bicyclists, and pedestrians, will not be obtained.

• 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.



For detailed fatality rates, see Table 7, Page 20.

Analysis: The fatality rate for 1999 remained unchanged from 1998 at 1.4 fatalities per 100 MVMT. Since the reduction that was achieved between 1991 and 1992, there has been only limited improvement over the past eight years. The annual rate of improvement has averaged 1.5 percent during these eight years. Indiana continues to experience nearly three-fourths of its fatalities in the rural areas. In 1999, there were 761 fatalities in rural areas, the same number of fatalities as in 1980. The improvements that were achieved occurred in the higher population, urban areas. Indiana's overall low seat belt

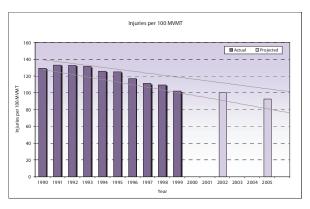
usage rates (especially pickup trucks at 33.5 percent in 1999) further aggravate its ability to reduce fatalities. Unfortunately, one of the best indicators of seat belt usage rates is whether or not fatally injured occupants were belted. The largest fatally injured age grouping, 25-34 years old, showed 98 drivers killed (see Table 2). Of the 86 males that were killed, only 15.1 percent were belted. By contrast, 48.1 percent of the killed females (27) were belted. On a somewhat positive note, the 16 and 17 year old drivers that were killed (37) showed a higher restraint rate (54.1 percent) than their older counterparts (29.5 percent for the 18–20 year old group and 30.2 percent for the 21–24 year old group). Perhaps our newest generation of drivers is learning to accept the valuable role that seat belts play in safe driving. However, this age group of drivers continued to be over-represented in fatal crashes when compared to the number of licensed drivers in that age category. Male drivers represented 70 percent of the killed drivers; 2.3 times as many fatalities as female drivers.

Alcohol was involved in nearly one out of four fatal crashes, in 1999, 23.2 percent of the fatal crashes as defined by the investigating officer.

Overall, significant efforts have to be taken to increase seat belt usage rates, particularly with pickup truck drivers, as well as to remove impaired drivers from Indiana's roads.

• 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: Indiana continued to move toward its goal, reporting a personal injury rate of 101.99 in 1999. This was a 6.5 percent reduction from 1998, and an 8.2 percent improvement over 1997. The 72,883 injuries were the lowest reported number since the 69,280 personal injuries that were reported in 1991. The majority of personal injuries (58.4 percent) occurred in urban areas as contrasted with fatal injuries occurring primarily in

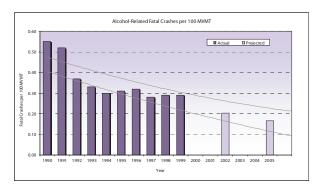


For detailed injury rates, see Table 75, Page 112.

rural areas. This pattern was expected, as rural roads have continued the trend to see greater speeds with a higher incidence of run-off-the-road crashes. Urban areas, on the other hand, have continued to expose the driver and occupants to a greater number of vehicles and fixed objects, but at reduced rates of speed involved. While male drivers represented 70 percent of the killed drivers, their representation as injured drivers was only 50 percent. A subset of total injuries is the serious injuries. The determination for the extent of injuries (serious versus non-serious) is made by the investigating officer. Serious injuries (6,141 in 1999) paralleled total injuries, and showed a 3.5 percent reduction from 1998 results.

• To decrease alcohol-related fatal crashes from a baseline of 0.32 per 100 MVMT in 1996 to 0.20 per 100 MVMT in 2002, to 0.167 per 100 MVMT in 2005, with progress demonstrated on an annual basis.

Analysis: Indiana has experienced very little change since 1991. The incidence rate in 1999 mirrored the 1998 results with 0.29 alcohol-related fatal crashes per 100 MVMT. Without a radical change in performance, it will be difficult for Indiana to achieve its 2005 goal. The issues continue to be the same as in past years. Of the drivers tested for alcohol (and with results), 84.6 percent



For detailed alcohol-related fatal crash rates, see Figure 3, Page 7.

were males. While underage drinking remains an emerging issue as early as age 18, the majority of the drivers killed in 1999 were between the ages of 21 and 44. The problem of the high BAC driver continued with 73.4 percent of the killed tested drivers having a BAC at or greater than 0.10 (the legal limit during 1999 in Indiana). The reported results for this indicator may also be understated, since only 43.9 percent of the killed drivers were tested and had their test results recorded. Increased emphasis needs to be applied to test all drivers involved in fatal crashes, as well as increasing the criminal consequences for drivers with high BACs.

• To increase the observational seat belt usage rate in passenger cars and minivans from 63 percent (based upon previous weighting process) in 1997 to 73 percent (revised weighting process) in 1998, 85 percent by the year 2000, and 90 percent by the year 2005. To increase the overall seat belt usage rate from 53.2 percent (including pickup trucks and sport utility vehicles) in 1997, to 65 percent in 1998, 85 percent by the year 2000, and 90 percent by the year 2005.

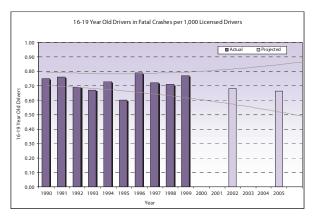
NOTE: Due to revisions in the weighting and data collection process over the past three years, the seat belt observational data is currently insufficient to be displayed graphically as a trend analysis.

Analysis: The overall seat belt usage rate between 1999 and 2000 increased from 57.3 percent to 62.1 percent in 2000. (Observational seat belt usage data is annually collected in September, and, therefore, more current results can be reported for this objective area). There continues to be a distinctive difference in usage rates between pickup trucks and other vehicles as pickup trucks continue to be exempted from the primary law. Overall pickup truck usage rates for the State were only 34.8 percent, while passenger vehicles reported a 69.8 percent usage rate. These results (1999) are confirmed by the Fatality Analysis Reporting System (FARS). Only 36.5 percent of the killed drivers were belted. Lower restraint rates were indicated for the killed male drivers (28.8 percent) versus killed female drivers (54.5 percent). Age was also a significant factor. While the 37 killed drivers that were 16 and 17 years of age had a 54.1 percent restraint rate, the restraint rate was only 26.5 percent for killed drivers between the ages of 18 and 44 years old. For those killed drivers between the ages of 45 and 54, the restraint rate was 39.1 percent, and increased an additional 10 percent for those drivers 55 and older.

For Indiana to achieve its goal, the State must include pickup trucks in the primary law. Based upon vehicle numbers alone, pickup trucks represented 1 out of 5 registered vehicles (20.6%) on Indiana's roadways in 1999. Safety restraint exclusions should not be permitted for any vehicle using the Indiana public roadway system. Increased use of enforcement, through the use of seat belt enforcement zones, has proven to be a very effective way to both enforce the law while educating drivers as they drive through highly visible areas. All enforcement agencies should be encouraged to utilize these zones.

• 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 in 1996 to 0.644 in the year 2000, and 0.592 in the year 2005, with progress demonstrated on an annual basis.



Analysis: The involvement rate for this age group of drivers increased to 0.77 in 1999 from 0.71 in 1998. Over the last ten years, results can be interpreted two ways. One version would be that results over this period have been flat with no substantial improvement. The second interpretation shows substantial improvement in the first six years and poorer performance over the past four years. Regardless of which interpretation is selected, the younger driver has been and continues to be significantly over-represented in fatal crashes. The efforts over the past ten years have been relatively ineffective in reducing this statistic. The Graduated License Law that took effect on January 1, 1999, with only one year of results, is too early to be evaluated for its effectiveness. However, the design of the law is, at best, weak and difficult to enforce. Based upon graduated license law studies conducted in other states, both Indiana's nighttime driving and young passenger restrictions need to be extended to provide the new driver with additional driving experience.

#### problem identification

Table 1 provides an excellent overview of crash statistics for Indiana. Unfortunately, the increase in both the number of fatal crashes and the number of resultant fatalities between 1998 and 1999 greatly out-shadows any gains that were made in other areas. Pedestrian fatalities were the lowest of the decade, and positive results continue to be shown toward reducing both total injuries and severe injuries.

Table 1. Crash Statistics Changes, 1990–1999

Statistic	Average 1990-94	1995	1996	1997	1998	1999	_	% Change 1998-99	% Change 1990-99
All Crashes	203,391	221,027	221,465	220,009	216,510	217,340	219,270	0.4%	3.7%
Fatal Crashes	857	859	870	849	884	892	871	0.9%	-3.5%
Personal Injury Crashes	49,930	53,831	52,058	52,413	51,865	49,518	51,937	-4.5%	-2.3%
<b>Alcohol-Related Crashes</b>	11,251	9,995	9,777	9,544	9,508	9,072	9,579	-4.6%	-38.5%
Fatalities	967	959	982	940	982	1,021	977	4.0%	-2.2%
Alcohol-Related Fatalities	272	226	239	214	234	237	230	1.3%	-30.5%
Total Injuries	74,028	80,632	77,339	78,262	77,138	72,883	77,251	-5.5%	-2.7%
Serious Injuries	6,749	6,889	6,558	6,488	6,361	6,141	6,487	-3.5%	-17.1%
<b>Pedestrian Fatalities</b>	82	76	76	75	72	66	73	-8.3%	-33.3%
Pedalcyclist Fatalities	15	14	6	11	13	14	12	7.7%	-6.7%
<b>Motorcyclist Fatalities</b>	70	65	63	47	68	67	62	-1.5%	-16.3%
Economic Loss (Billions)	2.408	2.549	2.520	2.500	2.540	2.730	2.568	7.5%	9.4%

• There has been an increasing number of fatalities over the past three years, with 1999 experiencing the most since 1991.

Figure 1. Fatalities, 1990–1999

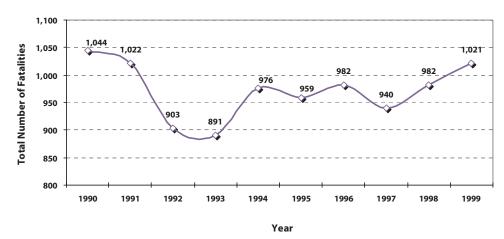


Figure 2. Serious Injuries, 1990–1999

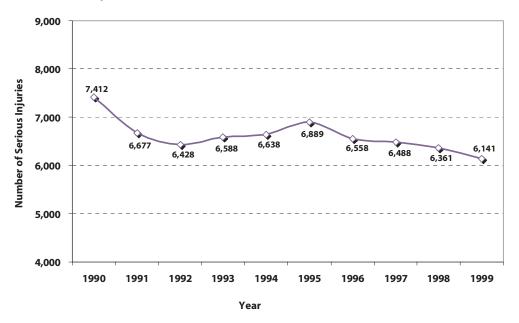


Figure 3. Fatality Rates and Alcohol Fatality Rates per 100 Million Vehicle Miles Traveled: U.S. vs. Indiana, 1990–1999



• 1999 documented the fewest number of serious injuries in the past decade.

- Indiana continued to out-perform the national average with a fatality rate of 1.4 per 100 MVMT, below the national average of 1.6 per 100 MVMT.
- Alcohol-related fatalities remained at the 1998 level of 0.33 per 100 MVMT.
  Alcohol-related fatal crashes accounted for nearly 1 out of 4 fatal crashes.

#### problem identification

- The involvement rate of drivers in fatal crashes continued to decline with driver age, with the exception of the 75+ year old age group.
- The 16-20 year old age group was involved in 2.4 times more fatal crashes than the 45-54 year old age group.
- The state's average fatal crash rate per 1,000 licensed drivers was 0.39 including the 16-20 year old drivers, and 0.34 excluding them. In contrast, the 1999 rate of 0.70 per 1,000 licensed drivers indicates that age group's high rate of involvement in fatal crashes.

- The younger (age 16–17 and 18–20) population continued to be notably over-represented in motor vehicle fatalities.
- The high fatality rate associated with motor vehicle crashes among the 21–24 year old driver continued to also be associated with a higher incidence of alcohol involvement.

Figure 4. Fatal Crash Rates by Driver Age per 1,000 Licensed Drivers, 1999

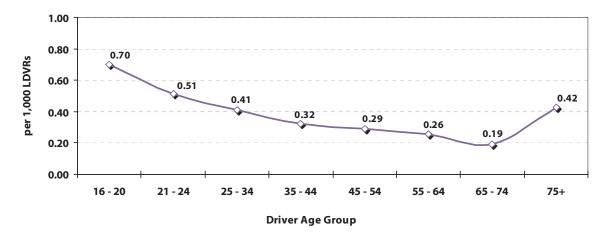
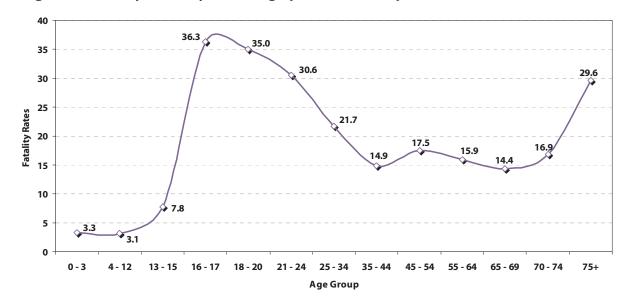


Figure 5. Fatality Rates by Driver Age per 100,000 Population, 1999



• Driver Inattention and Animals on the Roadway were considered to be the primary causes of single vehicle crashes.

Every crash investigated by a law enforcement officer is assigned a primary contributing factor and no more than two vehicular contributing circumstances for each involved driver. Single vehicle crashes are shown in Figure 6, and multiple vehicle crashes are shown in Figure 7. For both types of crash, the contributing circumstances for each age group of driver are shown. A common cause for both was Driver Inattention. This could have truly been driver inattention, or it could have been the best available descriptor for the investigating officer to use. For single vehicle crashes, either animals or other materials on the roadway caused nearly 12 percent of the crashes. However, because of the ability to enter up to two causes, some caution has to be exercised when evaluating these crashes. As an example, for the same crash the officer may have entered both Driver Inattention and Animal in Roadway. The figures do offer value in that they show predominant causes by crash type and driver age.

• Driver Inattention and Failure to Yield were the leading driver contributing causes in multiple vehicle crashes.

Figure 6. Vehicular Contributing Circumstances Rate per Drivers in Crashes by Age Group: Single Vehicle Crashes, 1999

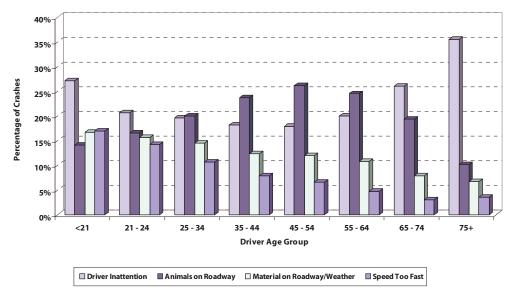
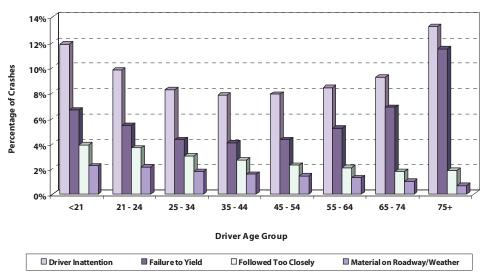


Figure 7. Vehicular Contributing Circumstances Rate per Drivers in Crashes by Age Group: Multiple Vehicle Crashes, 1999



#### problem identification

Percentage of Fatalities Occurring in a Rural Area by Age Group, 1990-1999

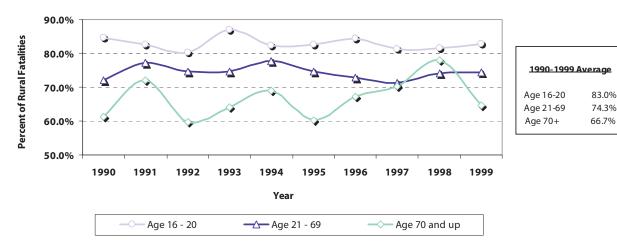


Table 2. Driver Fatalities by Age, Restraint Usage and Gender, 1999

	Num	ber of Dr	<u>ivers</u>	<u>%</u>	Restraine	<u>ed</u>	<u>% N</u>	ot Restrai	<u>ned</u>	9/	<b>Unknow</b>	<u>n</u>
Age	Male	Fem	Tot	Male	Fem	Tot	Male	Fem	Tot	Male	Fem	Tot
0-15	3	1	4	33.3%	0.0%	25.0%	66.7%	100.0%	75.0%	0.0%	0.0%	0.0%
16-17	18	19	37	44.4%	63.2%	54.1%	55.6%	36.8%	45.9%	0.0%	0.0%	0.0%
18-20	46	15	61	21.7%	53.3%	29.5%	63.0%	40.0%	57.4%	15.2%	6.7%	13.1%
21-24	46	17	63	30.4%	29.4%	30.2%	58.7%	70.6%	61.9%	10.9%	0.0%	7.9%
25-34	86	27	113	15.1%	48.1%	23.0%	77.9%	48.1%	70.8%	7.0%	3.7%	6.2%
35-44	74	24	98	20.3%	33.3%	23.5%	68.9%	45.8%	63.3%	10.8%	20.8%	13.3%
45-54	63	29	92	30.2%	58.6%	39.1%	57.1%	34.5%	50.0%	12.7%	6.9%	10.9%
55-64	39	16	55	43.6%	62.5%	49.1%	43.6%	31.3%	40.0%	12.8%	6.3%	10.9%
65-74	24	17	41	33.3%	70.6%	48.8%	54.2%	23.5%	41.5%	12.5%	5.9%	9.8%
75+	39	24	63	53.8%	75.0%	61.9%	38.5%	20.8%	31.7%	7.7%	4.2%	6.3%
Total	438	189	627	28.8%	54.5%	36.5%	61.0%	39.2%	54.4%	10.3%	6.3%	9.1%

Legend: Fem=Female; Tot=Total

Source: Fatality Analysis Reporting System, NHTSA

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

Drivers of parked vehicles, motorcycles and mopeds are excluded.

• For all drivers, 74.5 percent of fatalities occurred on rural roads with 82.9 percent of 16-20 year old fatalities occurring on rural roads.

83.0%

74.3%

Table 2 is based upon data obtained by the investigating officer and recorded on the crash form. The officer makes a determination whether or not a seat belt was being worn at the time of the crash. Due to the circumstances, this method is one of the most accurate ways to determine belt usage rates. This table is based upon the drivers that were fatally injured in 1999. Only 36.5 percent of killed drivers were belted, but there was a considerable disparity in usage rates between male (28.8 percent) and female (54.5 percent) drivers. However, these results did achieve a momentous increase over the two most recent years. The 1998 usage rate was 31.1 percent, while 1997 showed only a 28.0 percent rate. Seat belt usage rates, based upon these fatalities, generally increased with the age of the driver. The one exception in this table was among the 16–17 year old drivers. While the sample size (37) was relatively small, perhaps the younger drivers are receiving and have accepted the message that seat belts save lives. Statistically, a properly used safety belt restraint system is approximately 50 percent effective in reducing occupant death. For example, if there were two people involved in a crash and only one was belted properly, the individual who was restrained would have had a 50% greater likelihood of surviving than the non-belted occupant.

The following two tables provide statistics on alcohol-related crashes and the presence of alcohol in the involved drivers. The determination that alcohol played a role in the crash can be made in different ways. The investigating officer may note the presence of open alcoholic beverage containers, a field sobriety test may be given, and/or breath or blood tests may be administered. In all fatal crashes, alcohol tests are to be administered to all involved drivers, and the test results reported to FARS. In 1999, only 46 percent of killed drivers had a

Table 3. Alcohol Crash Statistics Changes, 1990–1999

	Average						Average	% Change	% Change
Statistic	1990-94	1995	1996	1997	1998	1999	1995-99	1998-99	1990-99
Alcohol-Related (ALC) Crashes	11,251	9,995	9,777	9,544	9,508	9,072	9,579	-4.6%	-38.5%
% ALC Crashes	5.5%	4.5%	4.4%	4.3%	4.4%	4.2%	4.4%	-4.9%	-40.7%
ALC Fatal Crashes	239	199	209	194	206	209	203	1.5%	-29.6%
% ALC Fatal Crashes	27.9%	23.2%	24.0%	22.9%	23.3%	23.4%	23.4%	0.5%	-27.1%
ALC Fatalities	272	226	239	214	234	237	230	1.3%	-30.5%
% ALC Fatalities	28.1%	23.6%	24.3%	22.8%	23.8%	23.2%	23.5%	-2.6%	-28.9%
ALC Injuries	7,777	6,889	6,664	6,524	6,364	5,779	6,444	-9.2%	-42.1%
% ALC Injuries	10.5%	8.5%	8.6%	8.3%	8.3%	7.9%	8.3%	-3.9%	-40.5%

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

Table 4. Alcohol Concentration of Killed Drivers, 1999

	0 to 0.009		09	0.	01 to 0.	049	0.0	050 to (	.099	0.10	0 and G	reater	Unl	known/	Blank		Total	1
Age	Male	Fem	Tot	Male	Fem	Tot	Male	Fem	Tot	Male	Fem	Tot	Male	Fem	Tot	Male	Fem	Tot
10-15	0	0	0	0	0	0	0	0	0	0	0	0	3	1	4	3	1	4
16	2	4	6	0	0	0	1	0	1	0	0	0	5	7	12	8	11	19
17	2	4	6	1	0	1	0	0	0	0	0	0	7	4	11	10	8	18
18	6	2	8	0	0	0	0	0	0	2	1	3	5	6	11	13	9	22
19	2	1	3	3	0	3	3	0	3	3	0	3	13	0	13	24	1	25
20	2	1	3	1	0	1	0	0	0	2	0	2	4	4	8	9	5	14
21	1	1	2	2	1	3	2	0	2	4	0	4	6	3	9	15	5	20
22	1	0	1	0	0	0	1	0	1	3	1	4	8	0	8	13	1	14
23	2	0	2	1	0	1	0	1	1	2	0	2	4	3	7	9	4	13
24	1	3	4	0	0	0	0	0	0	1	0	1	7	4	11	9	7	16
25-34	11	6	17	0	0	0	5	1	6	29	4	33	41	16	57	86	27	02
35-44	12	4	16	2	2	4	1	0	1	16	7	23	43	11	54	74	24	98
45-54	21	11	32	2	0	2	2	0	2	7	1	8	31	17	48	63	29	92
55-64	11	8	19	0	0	0	1	0	1	6	0	6	21	8	29	39	16	55
65-74	4	5	9	0	0	0	0	0	0	0	0	0	20	12	32	24	17	41
75+	16	7	23	0	0	0	0	0	0	2	0	2	21	17	38	39	24	63
Γotal	94	57	151	12	3	15	16	2	18	77	14	91	239	113	352	438	189	627

Legend: Fem=Female; Tot=Total

Source: Fatality Analysis Reporting System, NHTSA

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

- Alcohol was involved in nearly one out of four fatal crashes.
- While the involvement of alcohol in all types of crashes has been decreasing over the past decade, the involvement rate of alcohol in fatal crashes has not changed in the last 5 years.

documented test result in Indiana. Historically, the rate was only 37 percent in 1998, but was much lower than the 59 percent in 1997. The 1999 rate represented an improvement over 1998, but continued to be an unacceptably low rate. The results shown in these tables were based upon the crash report data and did not include an estimate of alcohol crashes that may not have had a test result to validate the presence of alcohol. Unfortunately, testing and reporting does not occur in all fatal crashes. The Unknown or Blank results shown in Table 4 were cases where either no test was administered, or no result was entered. In either case, a positive verification for alcohol could not be made. In an attempt to compensate for this lack of data, NHTSA uses other identifiers to develop an estimate of alcohol crash involvement based upon a percentage of certain characteristics present in a crash. These characteristics include factors attributed to single vehicle run-off-the-road crashes, taking into account the time of day, day of the week, and the age and gender of the driver. If Indiana could successfully obtain BAC results for all drivers, the NHTSA estimate would not be needed. In 1999, alcohol was reportedly involved

- Only 43.9 percent of the killed drivers had a BAC test result recorded.
- Of those drivers that tested positively for alcohol, 73.4 percent had a BAC result at or above the Indiana's 1999 legal limit of 0.10.

#### problem identification

in 23.4 percent of all of Indiana's fatal crashes, according to the crash reports and documentation. For these same fatal crashes, the NHTSA estimate was 36 percent, significantly higher than the reported Indiana rate.

Overall in Indiana, the involvement of alcohol in fatal crashes has decreased 29.6 percent in the past decade. As reported in Table 4, there likewise has been a steady decrease in the number of alcohol-related crashes (38.5 percent) and alcohol-related injuries (42.1 percent) since 1990. All of these indicators are certainly positive signs, but if only 46 percent of killed drivers are tested (above paragraph), there is less likelihood of BAC testing taking place in non-fatal crashes, thereby decreasing the impact of these measures.

- Motorcyclists fatalities remained at a high level similar to the 1998 results.
- Motorcyclist property damage and personal injury crashes increased by 4.2 percent and 3.6 percent, respectively, as compared to 1998.

Table 5. Motorcyclist Crash Statistics Changes, 1990–1999

	Average						Average	% Change	% Change
Statistic	1990-94	1995	1996	1997	1998	1999	1995-99	1998-99	1990-99
Motorcycle (MC) Crashes	2,540	2,251	1,844	1,899	2,063	2,149	2,041	4.2%	-27.1%
MC Fatal Crashes	69	64	58	45	68	67	60	-1.5%	-16.3%
Motorcyclist Fatalities	70	65	63	47	68	67	62	-1.5%	-16.3%
MC Personal Injury Crashes	1,995	1,786	1,442	1,450	1,580	1,637	1,579	3.6%	-27.6%

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

Figure 9. Motorcyclist Fatalities, 1990–1999

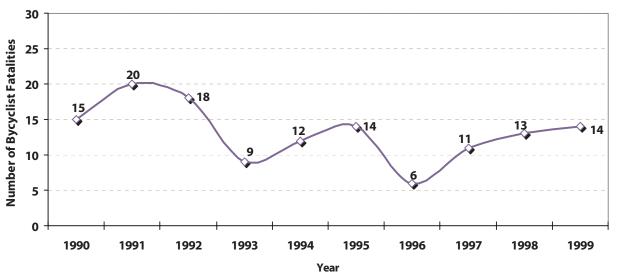


Figure 10. Pedestrian Fatalities, 1990–1999



• Pedestrian fatalities continued to show a steady decline.

Figure 11. Bicyclist Fatalities, 1990–1999



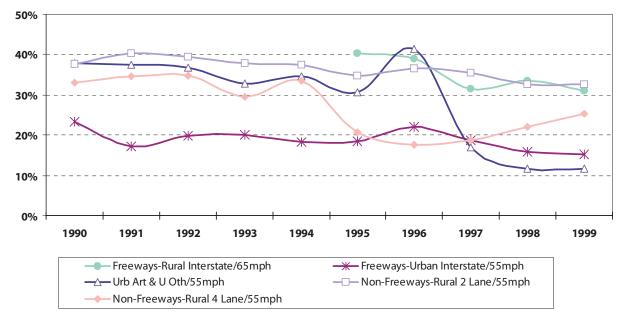
• Bicyclist fatalities increased for the 3<sup>rd</sup> consecutive year.

#### problem identification

Annual surveys are conducted on a cross-section of Indiana roads to analyze driver speed patterns and changes in these patterns.

• Non-compliance with posted speed limits continues in Indiana—the typical rate of compliance varies from less than 15 percent to slightly greater than 30 percent depending upon the highway system.

Figure 12. Motorist Compliance with Posted Speed Limits, 1990–1999



Source: Cochran, David L., Speed Trends for Indiana Highways, Purdue University Joint Transportation Research Project

## State outcome Data summary

TOPICS

Fatalities
Total Economic Loss

Chapter 2 provides those tables and figures that allow for both a State level overview and a comparison with national statistics. The numbers of fatal, personal injury, and property damage crashes, along with an analysis of fatalities, miles driven, licensed drivers, and registered vehicles are the best indicators of highway safety performance. The combination of these data allows for meaningful comparisons to then be conducted.

Mathematically, the change in the number of fatal crashes when compared to 1998 does not appear to be substantial. However, the fact that the 892 fatal crashes that occurred in 1999 was the highest number since the 904 fatal crashes in 1991, combined with the increase in the number of fatalities (1,021–an increase of 39 from 1998) is cause for concern. Indiana has yet to be able to repeat the record low number of fatal crashes that occurred in 1993 (782), despite the fact that the State has already demonstrated that fewer than 800 fatal crashes in a year is a very reasonable goal—in both 1993 and 1994, there were less than 800 fatal crashes each year.

While 39 more people were killed in 1999, there were 2,347 fewer injuries than in 1998, representing a 4.5 percent decrease. At the same time, the number of property damage crashes increased by 2 percent (3,169 crashes).

Indiana's 1999 fatality rate was 1.4 persons killed per million vehicle miles traveled (MVMT), the same as 1998's result. The fatality rate for the United States for the same period was 1.5, a slight improvement from the national rate of 1.6 in 1998. On both a national and state basis, a slow but steady rate of improvement has begun. For 1999, the fatal crash rate was 1.2 fatal crashes per MVMT. The two rates (fatality rate and fatal crash rate) differ in that the fatality rate measures the number of people killed and the fatal crash rate measures the number of crashes that resulted in a death.

Since passenger cars (including station wagons and sport-utility vehicles (SUVs)) and pickup trucks represented 77.7 percent of the registered vehicles in Indiana, it was not surprising that 729 (81.4 percent) of the fatal injuries occurred while riding in one of these two vehicle types. Killed occupants of semi-tractor trailer combinations increased to 27 in 1999, up from 14 in each of the last two years. Although the number of killed motorcycle riders decreased by one from 1998, it remained at 20 fatalities above 1997's total of 47 fatal injuries. Killed occupants of full size vans increased by 9 fatalities to 63 in 1999. Without the ability to separate full size vans, SUVs, and pickup trucks from other vehicles, it is impossible to fully evaluate the effect of these types of vehicles and their performance in fatal crashes.

Indiana continued to see its historical pattern of having a high incidence of fatal crashes occurring in rural areas. In 1999, 74.5 percent of the fatalities occurred in rural areas. This compares to the 75.5 percent in 1998, and 73.4 percent in 1997. In the last 20 years, urban fatalities have been reduced by nearly 40 percent, while the same statistic for rural counties has shown no reduction. Clearly, the efforts to reduce fatal crashes in the rural areas of Indiana have been unsuccessful.

Most fatal crashes occurred during daylight hours. Nearly 30 percent of the fatal crashes occurred between 2 PM and 6:59 PM, up from 26.3 percent and 23.8 percent, respectively in 1998 and 1997. There was also a slight increase (1.3 percent) to 23.5 percent of the fatal crashes occurring between 9 PM and 2:59 AM from 1998, accounting for an additional 22 people that were killed during that six-hour time period.

Sunday and Friday represented the days when most fatal crashes occurred. Deaths on Sunday increased by 47.7 percent versus the 1994-1998 average. More people were killed in the months of July and October since the first printing of *Crash Facts* in 1993.

The chapter closes by placing an economic value on the lives lost, people injured, and total property damaged. While it is a difficult concept, from a humanitarian perspective, to place a dollar value on a person's life, NHTSA provides a formula for this purpose. The formula is based upon estimates and non-Indiana data.

#### state outcome data summary

• The 0.9 percent increase in fatal crashes from 1998 to 1999 also represented the highest number of fatal crashes since 1991.

• There was a 2 percent increase in the number of property damage crashes versus 1998.

• Indiana recorded the fewest number of personal injury crashes since 1992.

Figure 13. Fatal Crashes, 1990–1999

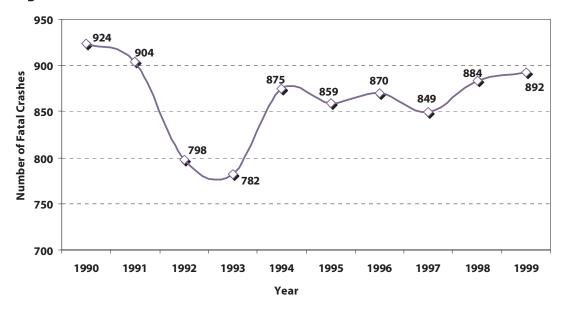
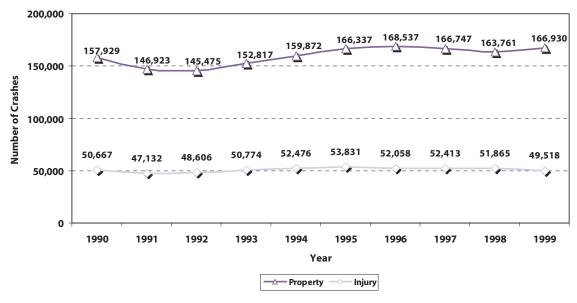


Figure 14. Personal Injury and Property Damage Crashes, 1990–1999



1995 and 1996 corrected for misclassified private property crashes.

Table 6. Crash Severity with Licensed Drivers and Registered Vehicles, 1990–1999

Year	Fatal Crashes	Personal Injury	Property Damage	Total Crashes	Fatalities	Injuries	Serious Injuries	Licensed* Drivers	Registered <sup>*</sup> Vehicles
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	159,872	213,223	976	78,105	6,638	3,860,329	5,131,673
1995	859	53,831	166,337	221,027	959	80,632	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
1998	884	51,865	163,761	216,510	982	77,138	6,361	3,976,075	5,454,680
1999	892	49,518	166,930	217,340	1,021	72,883	6,141	3,876,908	5,372,915

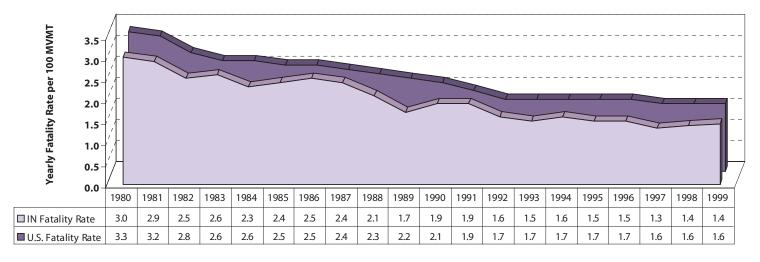
1999's 892 fatal crashes represented the largest number recorded since 1991's total of 904. While fatal crashes increased by 0.9 percent from 1998, the number of licensed drivers and registered vehicles both decreased by 2.5 percent and 1.5 percent, respectively, for that same period.

- Although fatal crashes only increased by 8 in 1999, the number of fatalities that occurred as a result of a crash increased by 39 over 1998.
- The total number of injuries, as well as those classified as serious in nature, achieved sizeable reductions from 1998.

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

1994 and 1995 corrected for misclassified private-property crashes

Figure 15. Fatality Rates per 100 Million Vehicle Miles Traveled: U.S. vs. Indiana, 1980–1999



While Indiana continued to have a lower fatality rate than the national average, the United States has reduced

the fatal crash rate by 23.8 percent in the last 10 years. During the same period, Indiana has reduced its fatal crash rate by 26.3 percent.

• Indiana's fatality rate of 1.4 fatalities per 100 MVMT remained below the national average of 1.6.

<sup>\*</sup>Source: Indiana Bureau of Motor Vehicles

#### state outcome data summary

Indiana's fatality rate remained the same (1.4 fatalities per 100 MVMT) as the 1998 results. The fatal crash rate (1.2 per 100 MVMT) was equal to the lowest reported year (1997). The national fatality rate has remained at the same level of 1.6 fatalities per 100 MVMT for the past three years.

Table 7. Fatality Rates per 100 Million Vehicle Miles Traveled: U.S. vs. Indiana, 1980–1999

	_		I	Indiana				U.S.	
=	Year	Billion VMT	Fatal Crashes	Fatalities	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	3.0	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	2.2	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	1.9	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	42,013	2,562	1.6
	1998	70.7	884	982	1.4	1.3	41,501	2,632	1.6
	1999	71.5	892	1,021	1.4	1.2	41,717	2,691	1.6

Legend: VMT=Vehicle Miles Traveled

VMT Source: Indiana Department of Transportation, Federal Highway Administration

Example: The fatality rate for 1999 was 1.4 traffic fatalities  $[1,021/(71.5 \times 10)]$  per 100 million VMT. Also, the fatal crash rate in 1999 was 1.2 fatal crashes,  $[892/(71.5 \times 10)]$  per 100 million VMT.

Table 8. Driver and Passenger Fatalities by Motor Vehicle Type, 1999

	Dri	ver	Passe	enger	Tot	al
Vehicle Type	Count	Percent	Count	Percent	Count	Percent
Passenger Car/Station Wagon	424	61.18%	172	69.35%	596	63.34%
Pickup	121	17.46%	25	10.08%	146	15.52%
Van	37	5.34%	26	10.48%	63	6.70%
Truck	16	2.31%	2	0.81%	18	1.91%
Semi-Tractor (Only)	0	0.00%	0	0.00%	0	0.00%
Semi-Tractor, Trailer	20	2.89%	7	2.82%	27	2.87%
Semi-Tractor, Multiple Trailers	1	0.14%	0	0.00%	1	0.11%
Combination Vehicle	0	0.00%	0	0.00%	0	0.00%
Recreational Vehicle	3	0.43%	0	0.00%	3	0.32%
Bus	0	0.00%	0	0.00%	0	0.00%
School Bus	0	0.00%	0	0.00%	0	0.00%
Police Car	2	0.29%	1	0.40%	3	0.32%
Fire Truck	0	0.00%	1	0.40%	1	0.11%
Ambulance	0	0.00%	0	0.00%	0	0.00%
Motorcycle*	62	8.95%	5	2.02%	67	7.12%
Snowmobile	2	0.29%	0	0.00%	2	0.21%
Farm Equipment	2	0.29%	0	0.00%	2	0.21%
Special Vehicle	1	0.14%	1	0.40%	2	0.21%
Other	2	0.29%	0	0.00%	2	0.21%
Unknown	0	0.00%	8	3.23%	8	0.85%
Total	693		248		941	

<sup>\*</sup>Motorcycle includes motorcycles, mopeds, motorbikes, motor scooters and minibikes. Note: Tables does not include non-occupants (i.e. pedestrians, bicyclists).

Drivers of parked vehicles are counted as passengers.

• There was an extremely large increase in the number of semi-tractor, trailer combination driver and passenger fatalities—27 in 1999 versus 14 in each of 1997 and 1998.

#### state outcome data summary

In the 60 years represented in the table, many factors have affected the number of highway deaths. Events such as wars, gas shortages, and changes in highway design have all had their impact on the number of fatalities. At the same time, traffic density has increased and vehicle design has radically changed. In Indiana, reductions in traffic deaths continued through 1993, when a recent year low record of 891 fatalities was recorded. In the past six years since 1993, Indiana's overall performance has been static at best.

• Indiana experienced increases in both rural (2.7 percent) and urban fatalities (7.9 percent) versus 1998.

Table 9. Rural and Urban Fatalities, 1941–1999

Year	Rural	Urban	<u>Statewide</u>	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	1998	741	241	982
1969	1,244	434	1,678	1999	761	260	1,021
1970	1,124	442	1,566				

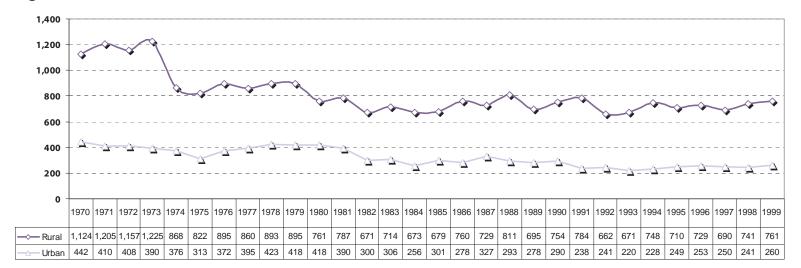
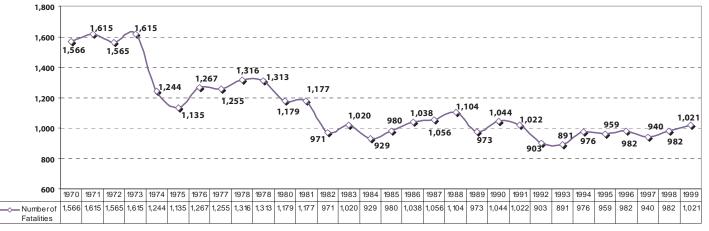


Figure 16. Rural and Urban Fatalities, 1970–1999

- Improvement in Indiana's performance over the last 20 years has been driven by reductions achieved in the number of urban fatalities (38% decrease since 1980).
- While there have been small changes in the number of rural fatalities from year to year, there has not been any measurable improvement toward reducing fatalities in rural areas over the last 20 years.

**Figure 17. Fatalities, 1970–1999** 



• Despite the increases noted in 1999, the overall long-term trend has continued to show improvement in reducing the number of fatalities in both rural and urban locales (35% over the past 30 years).

#### state outcome data summary

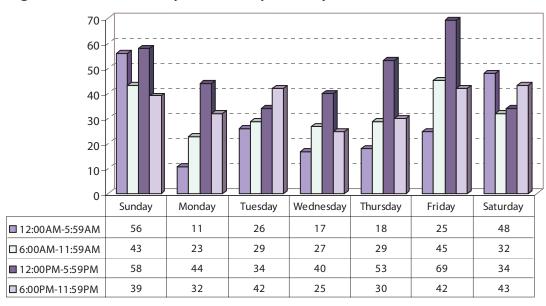
The hour-by-hour display of fatalities varies widely from year to year. The 25 fatalities that occurred between 5 AM and 5:59 PM on Fridays for 1999 were nearly double the totals for both 1997 and 1998 for the same time period. However, when larger blocks of time are grouped together, similar fatality patterns emerge from year to year. The majority of fatalities occurred during daylight hours, presumably due to the higher traffic volumes during those hours. However, the 9 PM-2:59 AM hours, generally expected to be extremely low traffic volume times, continued to exhibit fatality rates nearly one-half that of the daylight hours. Fatalities occurring on Sunday increased by 52 percent between 1998 and 1999, with a recent record high of 198 deaths, with the total number fairly equally distributed across all hours of the day. Further, the total number of fatalities that occurred on a Friday increased by a total of 17.4 percent, compared to 1998. Fridays and Sundays, combined, represented an increase of 95 fatalities versus the same two days of the week for 1998, and 105 more deaths versus the same two days of the week in 1997. Sunday has historically been one of the lower numbers of fatality days, while Friday and Saturday have typically been the higher fatality days.

• The 25 fatalities that occurred between 5 PM and 5:59 PM on Friday afternoons was nearly double that of any other 1-hour period for 1999.

Table 10. Fatalities by Time of Day and Day of Week, 1999

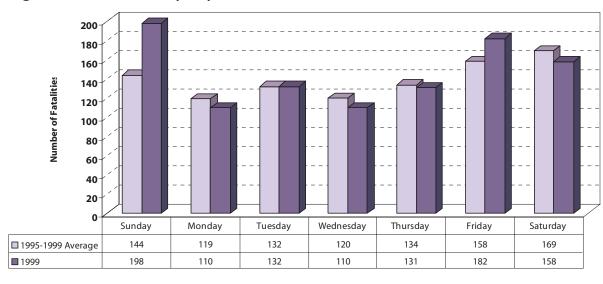
Time	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Total
Midnight - 12:59AM	9	4	4	4	6	4	8	39
1:00AM - 1:59AM	11	2	0	1	3	3	12	32
2:00AM - 2:59AM	11	0	3	6	2	7	9	38
3:00AM - 3:59AM	11	1	6	3	3	3	13	40
4:00AM - 4:59AM	9	1	6	1	4	6	4	31
5:00AM - 5:59AM	5	3	7	2	0	2	2	21
6:00AM - 6:59AM	8	4	9	3	5	11	5	45
7:00AM - 7:59AM	3	9	5	6	3	11	6	43
8:00AM - 8:59AM	2	1	6	4	3	2	8	26
9:00AM - 9:59AM	13	5	3	3	5	4	6	39
10:00AM - 10:59AM	4	3	4	4	5	8	2	30
11:00AM - 11:59AM	13	1	2	7	8	9	5	45
Noon - 12:59PM	6	4	5	10	6	7	6	44
1:00PM - 1:59PM	7	7	5	9	8	3	5	44
2:00PM - 2:59PM	12	8	7	9	13	6	7	62
3:00PM - 3:59PM	12	16	7	4	13	14	4	70
4:00PM - 4:59PM	10	3	4	7	9	14	6	53
5:00PM - 5:59PM	11	6	6	1	4	25	6	59
6:00PM - 6:59PM	5	9	15	5	5	10	4	53
7:00PM - 7:59PM	8	9	2	5	2	9	4	39
8:00PM - 8:59PM	4	3	5	3	2	6	7	30
9:00PM - 9:59PM	8	6	5	6	12	5	17	59
10:00PM - 10:59PM	8	3	7	4	2	6	8	38
11:00PM - 11:59PM	6	2	8	2	7	6	3	34
Unknown	2	0	1	1	1	1	1	7
Total	198	110	132	110	131	182	158	1,021

Figure 18. Fatalities by Time of Day and Day of Week, 1999



 Crashes occurring between noon and 5:59 PM on Fridays and Sundays represented the two highest fatality rates during any 6-hour crash period.

Figure 19. Fatalities by Day of Week, 1999

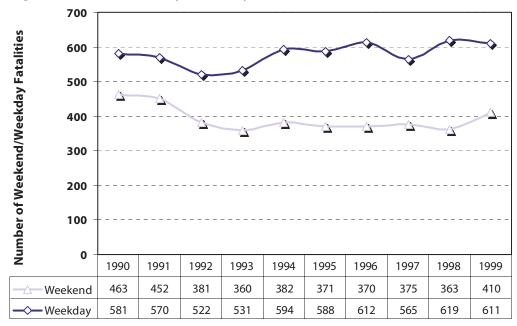


• The number of fatalities occurring on a Friday and Sunday experienced a combined increase of 95 traffic deaths over the 5-year average.

#### state outcome data summary

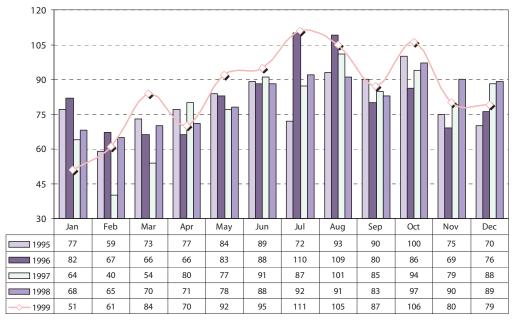
• Indiana posted the highest number of weekend fatalities since 1990.

Figure 20. Fatalities by Weekday/Weekend and Year, 1990–1999



See Glossary for definitions of weekend and weekday.

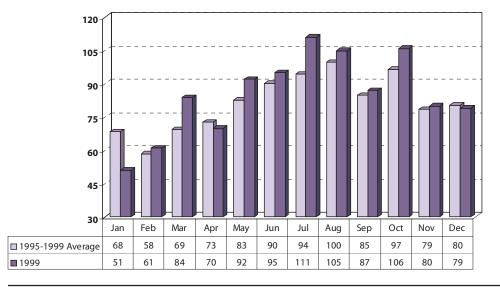




• July and October represented the greatest number of fatalities for those respective months since the initial Crash Facts publication in 1993.

• May through October 1999 experienced more fatalities than the same 6-month time period the past 5 years.

Figure 22. Fatalities by Month, 1999



• January, April and December were the only months in 1999 that recorded fewer fatalities than the 5-year average.

#### state outcome data summary

The economic cost of a crash is calculated utilizing values provided by NHTSA. These values are determined for a property damage crash, a crash involving personal injury, and a fatality. For 1999, the estimated average damage (per vehicle) was \$1,851, each person injured was \$17,673, and each fatality, \$868,639. The model used to determine these values includes medical and funeral costs, lost wages, legal expenses, damage to property, and the loss in market productivity. This latter value includes loss of future earnings potential. Needless to say, the estimate cannot include any cost estimates for those crashes that are not reported. Also, factors such as pain, suffering, and quality of life are not included.

All economic dollar figures displayed in Table 11 have been adjusted to 1999 equivalency dollars, meaning they have been adjusted to reflect inflation and cost of living changes. Therefore, any differences seen from year-to-year are the result of actual differences in crashes and the cost of those crashes.

• Indiana's total economic cost for all crashes in 1999 was nearly \$2½ billion.

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. See Glossary for explanation.

All economic loss is expressed in 1999 dollars so no adjustment for inflation is needed.

Figure 23. Total Economic Loss (in Millions of 1999 Dollars) by Year and Locale, 1990–1999

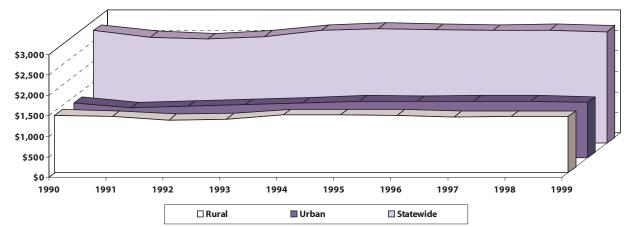


Table 11. Total Economic Loss (In Millions of 1999 Dollars) by Year and Locale, 1990–1999

	Ru	ıral	Url	ban		
Year	Dollars	Percent	Dollars	Percent	Sta	atewide
1990	\$ 1,404	51.0%	\$ 1,349	49.0%	\$	2,754
1991	\$ 1,376	53.0%	\$ 1,220	47.0%	\$	2,595
1992	\$ 1,283	50.5%	\$ 1,258	49.5%	\$	2,540
1993	\$ 1,312	50.2%	\$ 1,300	49.8%	\$	2,612
1994	\$ 1,413	51.3%	\$ 1,341	48.7%	\$	2,754
1995	\$ 1,415	50.5%	\$ 1,390	49.5%	\$	2,805
1996	\$ 1,398	50.4%	\$ 1,375	49.6%	\$	2,773
1997	\$ 1,364	49.6%	\$ 1,387	50.4%	\$	2,750
1998	\$ 1,378	49.9%	\$ 1,383	50.1%	\$	2,761
1999	\$ 1,377	50.5%	\$ 1,352	49.5%	\$	2,730

- The total dollar amount of economic losses continues to be rather evenly split between rural and urban locales.
- Indiana costs were \$31 million less in total economic losses for 1999 than in 1998.

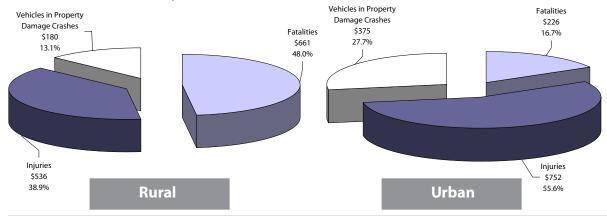
Table 12. Total Economic Loss (in Millions of 1999 Dollars) by Severity and Locale, 1990–1999

Year         Fatalities         Injuries         PD Crashes         Fatalities         Injuries         PD Crashes         Fatalities         Injuries         PD Crashes         PD Crashes         Fatalities         Injuries         PD Crashes					Rural		Urban						Total				
1991       \$ 681.0       \$ 538.9       \$ 155.9       \$ 206.7       \$ 685.4       \$ 327.4       \$ 887.7       \$ 1,224.4       \$ 4         1992       \$ 575.0       \$ 552.6       \$ 155.0       \$ 209.3       \$ 723.8       \$ 324.7       \$ 784.4       \$ 1,276.4       \$ 4         1993       \$ 582.9       \$ 566.4       \$ 162.6       \$ 191.1       \$ 769.9       \$ 338.6       \$ 774.0       \$ 1,336.3       \$ 5         1994       \$ 649.7       \$ 590.1       \$ 173.5       \$ 198.0       \$ 790.2       \$ 352.3       \$ 847.8       \$ 1,380.3       \$ 5         1995       \$ 616.7       \$ 614.3       \$ 184.0       \$ 216.3       \$ 810.7       \$ 362.7       \$ 833.0       \$ 1,425.0       \$ 5         1996       \$ 633.2       \$ 581.0       \$ 183.7       \$ 219.8       \$ 785.8       \$ 369.0       \$ 853.0       \$ 1,366.8       \$ 5         1997       \$ 599.4       \$ 584.5       \$ 180.0       \$ 217.2       \$ 798.6       \$ 370.8       \$ 816.5       \$ 1,383.1       \$ 5         1998       \$ 643.7       \$ 559.5       \$ 174.7       \$ 209.3       \$ 803.8       \$ 370.3       \$ 853.0       \$ 1,363.3       \$ 5	Year	F	atalities	ı	njuries		F	atalities	ı	njuries			F	atalities	Injuries		chicles in Crashes
1992       \$ 575.0       \$ 552.6       \$ 155.0       \$ 209.3       \$ 723.8       \$ 324.7       \$ 784.4       \$ 1,276.4       \$ 4         1993       \$ 582.9       \$ 566.4       \$ 162.6       \$ 191.1       \$ 769.9       \$ 338.6       \$ 774.0       \$ 1,336.3       \$ 5         1994       \$ 649.7       \$ 590.1       \$ 173.5       \$ 198.0       \$ 790.2       \$ 352.3       \$ 847.8       \$ 1,380.3       \$ 5         1995       \$ 616.7       \$ 614.3       \$ 184.0       \$ 216.3       \$ 810.7       \$ 362.7       \$ 833.0       \$ 1,425.0       \$ 5         1996       \$ 633.2       \$ 581.0       \$ 183.7       \$ 219.8       \$ 785.8       \$ 369.0       \$ 853.0       \$ 1,366.8       \$ 5         1997       \$ 599.4       \$ 584.5       \$ 180.0       \$ 217.2       \$ 798.6       \$ 370.8       \$ 816.5       \$ 1,383.1       \$ 5         1998       \$ 643.7       \$ 559.5       \$ 174.7       \$ 209.3       \$ 803.8       \$ 370.3       \$ 853.0       \$ 1,363.3       \$ 5	1990	\$	655.0	\$	584.3	\$ 165.1	\$	251.9	\$	739.7	\$	357.8	\$	906.9	\$ 1,324.0	\$	522.9
1993       \$ 582.9       \$ 566.4       \$ 162.6       \$ 191.1       \$ 769.9       \$ 338.6       \$ 774.0       \$ 1,336.3       \$ 5         1994       \$ 649.7       \$ 590.1       \$ 173.5       \$ 198.0       \$ 790.2       \$ 352.3       \$ 847.8       \$ 1,380.3       \$ 5         1995       \$ 616.7       \$ 614.3       \$ 184.0       \$ 216.3       \$ 810.7       \$ 362.7       \$ 833.0       \$ 1,425.0       \$ 5         1996       \$ 633.2       \$ 581.0       \$ 183.7       \$ 219.8       \$ 785.8       \$ 369.0       \$ 853.0       \$ 1,366.8       \$ 5         1997       \$ 599.4       \$ 584.5       \$ 180.0       \$ 217.2       \$ 798.6       \$ 370.8       \$ 816.5       \$ 1,383.1       \$ 5         1998       \$ 643.7       \$ 559.5       \$ 174.7       \$ 209.3       \$ 803.8       \$ 370.3       \$ 853.0       \$ 1,363.3       \$ 5	1991	\$	681.0	\$	538.9	\$ 155.9	\$	206.7	\$	685.4	\$	327.4	\$	887.7	\$ 1,224.4	\$	483.3
1994       \$ 649.7       \$ 590.1       \$ 173.5       \$ 198.0       \$ 790.2       \$ 352.3       \$ 847.8       \$ 1,380.3       \$ 5         1995       \$ 616.7       \$ 614.3       \$ 184.0       \$ 216.3       \$ 810.7       \$ 362.7       \$ 833.0       \$ 1,425.0       \$ 5         1996       \$ 633.2       \$ 581.0       \$ 183.7       \$ 219.8       \$ 785.8       \$ 369.0       \$ 853.0       \$ 1,366.8       \$ 5         1997       \$ 599.4       \$ 584.5       \$ 180.0       \$ 217.2       \$ 798.6       \$ 370.8       \$ 816.5       \$ 1,383.1       \$ 5         1998       \$ 643.7       \$ 559.5       \$ 174.7       \$ 209.3       \$ 803.8       \$ 370.3       \$ 853.0       \$ 1,363.3       \$ 5	1992	\$	575.0	\$	552.6	\$ 155.0	\$	209.3	\$	723.8	\$	324.7	\$	784.4	\$ 1,276.4	\$	479.7
1995       \$ 616.7       \$ 614.3       \$ 184.0       \$ 216.3       \$ 810.7       \$ 362.7       \$ 833.0       \$ 1,425.0       \$ 5         1996       \$ 633.2       \$ 581.0       \$ 183.7       \$ 219.8       \$ 785.8       \$ 369.0       \$ 853.0       \$ 1,366.8       \$ 5         1997       \$ 599.4       \$ 584.5       \$ 180.0       \$ 217.2       \$ 798.6       \$ 370.8       \$ 816.5       \$ 1,383.1       \$ 5         1998       \$ 643.7       \$ 559.5       \$ 174.7       \$ 209.3       \$ 803.8       \$ 370.3       \$ 853.0       \$ 1,363.3       \$ 5	1993	\$	582.9	\$	566.4	\$ 162.6	\$	191.1	\$	769.9	\$	338.6	\$	774.0	\$ 1,336.3	\$	501.2
1996       \$ 633.2       \$ 581.0       \$ 183.7       \$ 219.8       \$ 785.8       \$ 369.0       \$ 853.0       \$ 1,366.8       \$ 5         1997       \$ 599.4       \$ 584.5       \$ 180.0       \$ 217.2       \$ 798.6       \$ 370.8       \$ 816.5       \$ 1,383.1       \$ 5         1998       \$ 643.7       \$ 559.5       \$ 174.7       \$ 209.3       \$ 803.8       \$ 370.3       \$ 853.0       \$ 1,363.3       \$ 5	1994	\$	649.7	\$	590.1	\$ 173.5	\$	198.0	\$	790.2	\$	352.3	\$	847.8	\$ 1,380.3	\$	525.8
1997       \$ 599.4       \$ 584.5       \$ 180.0       \$ 217.2       \$ 798.6       \$ 370.8       \$ 816.5       \$ 1,383.1       \$ 5         1998       \$ 643.7       \$ 559.5       \$ 174.7       \$ 209.3       \$ 803.8       \$ 370.3       \$ 853.0       \$ 1,363.3       \$ 5	1995	\$	616.7	\$	614.3	\$ 184.0	\$	216.3	\$	810.7	\$	362.7	\$	833.0	\$ 1,425.0	\$	546.7
<b>1998</b> \$ 643.7 \$ 559.5 \$ 174.7 \$ 209.3 \$ 803.8 \$ 370.3 \$ 853.0 \$ 1,363.3 \$ 5	1996	\$	633.2	\$	581.0	\$ 183.7	\$	219.8	\$	785.8	\$	369.0	\$	853.0	\$ 1,366.8	\$	552.7
\$ 0.50 \$	1997	\$	599.4	\$	584.5	\$ 180.0	\$	217.2	\$	798.6	\$	370.8	\$	816.5	\$ 1,383.1	\$	550.8
1000	1998	\$	643.7	\$	559.5	\$ 174.7	\$	209.3	\$	803.8	\$	370.3	\$	853.0	\$ 1,363.3	\$	545.0
\$ 661.0 \$ 536.1 \$ 180.3 \$ 225.8 \$ 752.0 \$ 374.6 \$ 886.9 \$ 1,288.1 \$ 5 وتودا	1999	\$	661.0	\$	536.1	\$ 180.3	\$	225.8	\$	752.0	\$	374.6	\$	886.9	\$ 1,288.1	\$	555.0

- Due to the decrease in the total number of injuries from 1998 (4,255), 1999's total economic losses from injuries decreased 5.5 percent over 1998's losses.
  - Total economic losses due to fatalities increased 4 percent from 1998's total losses, while property damage losses increased 1.8 percent from 1998.

Note: Total Economic Loss is the total socioeconomic cost estimated using the NHTSA crash cost model. Legend: PD=Property Damage

Figure 24. Total Economic Loss (in Millions of 1999 Dollars) by Severity and Locale, 1999



- Fatalities in rural areas continued to be the major contributor (48 percent) to the high rural economic cost of crashes.
- Personal injuries in urban areas were the major contributor (55.6 percent) to the total urban economic cost of crashes.

### Chapter 3

# 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)

#### chapter summary

The underlying theme of this chapter is a focus upon the crash, itself. Where did it happen? When did it happen? What caused it to happen? What were the outcomes of the crash as measured by the severity of the injuries (fatality or seriousness of injuries) and/or property damage? There are several elements that can cause a crash, or at least increase the likelihood of a crash occurring. Adverse weather or road conditions, along with time of day, the level of traffic and light conditions (daytime versus nighttime), and road types are all examples of these crash-influencing factors. Crashes are categorized into three classes: fatal, where at least one person lost his or her life directly as a result of the crash; personal injury, where at least one person was injured directly as a result of the crash; and the most frequent occurrence crashes where there were no injuries, but there was property damage. The damage costs includes the involved vehicles, as well as any other objects that were struck during the crash. Indiana State law requires that any crash with an estimated damage total in excess of \$750 be reported with a crash form completed and forwarded to the Indiana State Police.

Tables 13–16 (a and b) identify the primary contributing cause of the crash and the role of each vehicle (Contributing Circumstance) involved in the crash. These tables are further subdivided into single vehicle and multiple vehicle crashes. In nearly 50 percent of the fatal crashes, factors such as Speeding, Failure to Yield, and Drove Left of Center were cited as the key causes. As severity of the crash decreased from a fatal crash to a personal injury to a property damage crash, Driver Inattention became an increasing factor. While these factors were the causes of most collisions, factors such as Driver Inattention ("Hit-and-Run" crash) and Material on Road ("Overturned" vehicle crash) had a heavy influence in these crashes. Tables 15 and 16 illustrate the differences between single vehicle and multiple vehicle crashes by Vehicular Contributing Circumstance as well as by driver age. As the tables reveal, the inexperience of the younger driver is evident, as indicated by the percentage of crashes caused by their inattention. A similar pattern of overrepresentation of *Driver Inattention* is likewise evident for the driver between 65 and 74 years old. However, the root cause of driver distraction varies between these two age groups. Younger and older drivers react to and process information differently and at dissimilar speeds. Add to the mix additional confounding factors, such as multiple passengers and a lack of driving experience for young drivers, or decreased visual acuity and slowed response time for older drivers, and their ability to timely and adequately process information is decreased. While Animals on Roadway is a substantial factor in single vehicle crashes, animals have a minimal degree of involvement in multiple vehicle crashes. With multiple vehicle crashes, a similar pattern to single vehicle crashes is also noted for both the younger and the older driver. Not surprisingly, Failure to Yield and Following Too Closely are more dominant in multiple vehicle crashes. Tables 16 (a and b) show similar categories, but as a percentage of crashes. Rather than focusing on the actual numbers, the boxed areas better identify over-represented circumstances by age groups, indicating potential causes for concern.

Factors such as Light Condition (daylight versus nighttime), Road Condition (dry versus wet), and Weather Condition (clear versus rain) are evaluated in Tables 17-19 and Figures 25-27. Most of the serious crashes occurred during the daytime, on dry roads, and on clear or cloudy days. Crash severity decreased as weather and road conditions deteriorated—people were more cautious in adverse weather and road conditions than during relatively "normal" conditions. Fifty-five percent of fatal crashes occurred during daylight hours; eighty-two percent of fatal crashes occurred on dry roads; and eighty-seven percent of fatal crashes occurred on clear or cloudy days. Vehicle Mechanical Failure (from Table 13) accounted for only one percent of the fatal crashes. This single indicator determines driver actions (or inactions) to be the primary factor responsible for the vast majority of fatal crashes.

Tables 20 and 21 and Figures 28 and 29 comprise crashes by day of week and time of day. While most crashes occurred on weekdays, between the hours of 3 PM and 5:59 PM (evening rush hour), the most serious crashes were over-represented during the hours of midnight–2:59 AM, as well as on the weekends.

Figures 30–32 and Tables 23–25 provide further particulars on the location of the crash, by crash severity and traffic control type, and a separate table to review interstate/toll road crashes. Most of the fatal crashes occurred on county and state roads, while nearly one-half of all crashes took place on city streets. Traffic density is a logical explanation for the distribution of crashes. Less than one out of four fatal crashes occurred at some type of intersection. The majority of the fatal crashes involved two or more vehicles in a collision on the roadway, or a single vehicle that ran off the roadway.

A figure that has remained relatively constant is the high percentage of fatal crashes that occur in rural areas. In 1999, seventy-three percent of fatal crashes occurred in rural areas. Urban areas continued to represent the primary location of both personal injury (60 percent) and property damage (62 percent) crashes. Most fatal crashes took place in the summer months (Table 27). Tables 26–30 and Figures 33 and 34 further describe the different attributes of rural and urban crashes. Table 26, in particular, shows a ten-year perspective of rural and urban crashes by severity. Both rural and urban fatal crashes for 1999 were above the previous nine-year average (3 percent increase).

#### crashes

The *Primary Contributing Circumstance* of the crash is determined by the investigating officer to describe the single-most likely cause of the crash. The grouping of contributing circumstance codes used for these tables is found in the Glossary (page 164). The same Primary Contributing Circumstance is also assigned to at least one of the vehicles involved in the crash as a Vehicular Contributing Circumstance. Factors that are within the control of the driver such as Drove Left of Center, Speed Too Fast, Failure to Yield, and Driver Inattention were the leading contributing circumstance of serious and fatal crashes. One out of five crashes was attributed to Driver Inattention, but those crashes tended to be less serious (such as property damage). Animals on Roadway was cited as the second leading cause of property damage crashes (Driver Inattention was the leading cause). Crashes attributed to Had Been Drinking approximately doubled as the severity of the crash increased from 1.6 percent of the property damage crashes, to 4.3 percent of the personal injury crashes, and, finally, accounting for 8.3 percent of the fatal crashes. This pattern remains consistent with recent years' results. However, the 8.3 percent represents only about one-third of the alcohol-involved fatal crashes as reported by Indiana annually, and approximately, only one in four, as estimated by the National Highway Transportation Safety Administration (NHTSA).

- Nearly 50 percent of fatal crashes can be attributed to Driving Left of Center, Failure to Yield, and Speed Too Fast.
- Driver Inattention and Failure to Yield were the leading causes of personal injury and property damage crashes.

Table 13. Crashes by Primary Contributing Circumstance and Severity, 1999

Primary	Fatal	% of	PI	% of	PD	% of	All	% of
Contributing Circumstance	Crashes	Fatal	Crashes	PI	Crashes	PD	Crashes	All
Speed Too Fast	121	13.6%	3,186	6.4%	6,684	4.0%	9,991	4.6%
Failure to Yield	126	14.1%	9,612	19.4%	19,733	11.8%	29,471	13.6%
Disregarded Signal/Sign	61	6.8%	3,415	6.9%	4,601	2.8%	8,077	3.7%
Drove Left of Center	126	14.1%	1,161	2.3%	2,230	1.3%	3,517	1.6%
Improper Overtaking	10	1.1%	358	0.7%	1,756	1.1%	2,124	1.0%
Followed Too Closely	11	1.2%	3,651	7.4%	11,545	6.9%	15,207	7.0%
Made Improper Turn	3	0.3%	597	1.2%	3,357	2.0%	3,957	1.8%
Had Been Drinking	74	8.3%	2,147	4.3%	2,704	1.6%	4,925	2.3%
Driver Asleep	27	3.0%	988	2.0%	1,352	0.8%	2,367	1.1%
Driver Inattention	115	12.9%	10,681	21.6%	34,406	20.6%	45,202	20.8%
Other Improper Driving	27	3.0%	1,619	3.3%	8,861	5.3%	10,507	4.8%
Mechanical Failure	9	1.0%	929	1.9%	2,951	1.8%	3,889	1.8%
Animals on Roadway	5	0.6%	968	2.0%	12,876	7.7%	13,849	6.4%
Roadway Factors	2	0.2%	198	0.4%	548	0.3%	748	0.3%
Material on Roadway/Weather	19	2.1%	2,291	4.6%	9,008	5.4%	11,318	5.2%
Other	110	12.3%	4,488	9.1%	11,082	6.6%	15,680	7.2%
Unknown	46	5.2%	3,229	6.5%	33,236	19.9%	36,511	16.8%
Total Crashes	892		49,518		166,930		217,340	

Legend: PI=Personal Injury; PD=Property Damage

Table 14. Crashes by Primary Contributing Circumstance and Crash Type, 1999

Primary	Hit-ar	nd-Run	Coll	ision	Over	turned	Non-C	Collision	Unk	nown	Total Cras	hes by PCC
Contributing Circumstance	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent
Speed Too Fast	839	4.9%	7,829	4.9%	1,121	18.9%	126	8.5%	76	0.2%	9,991	4.6%
Failure to Yield	1,549	9.1%	27,656	17.3%	129	2.2%	21	1.4%	116	0.4%	29,471	13.6%
Disregarded Signal/Sign	712	4.2%	7,255	4.5%	82	1.4%	4	0.3%	24	0.1%	8,077	3.7%
Drove Left of Center	606	3.5%	2,758	1.7%	117	2.0%	16	1.1%	20	0.1%	3,517	1.6%
Improper Overtaking	314	1.8%	1,764	1.1%	32	0.5%	3	0.2%	11	0.0%	2,124	1.0%
Followed Too Closely	1,033	6.0%	14,089	8.8%	38	0.6%	11	0.7%	36	0.1%	15,207	7.0%
Made Improper Turn	465	2.7%	3,429	2.1%	31	0.5%	9	0.6%	23	0.1%	3,957	1.8%
Had Been Drinking	1,013	5.9%	3,394	2.1%	421	7.1%	50	3.4%	47	0.1%	4,925	2.3%
Driver Asleep	56	0.3%	1,971	1.2%	299	5.0%	19	1.3%	22	0.1%	2,367	1.1%
<b>Driver Inattention</b>	3,147	18.4%	40,381	25.2%	1,194	20.1%	173	11.7%	307	0.9%	45,202	20.8%
Other Improper Driving	1,869	10.9%	8,404	5.2%	156	2.6%	22	1.5%	56	0.2%	10,507	4.8%
Mechanical Failure	116	0.7%	3,132	2.0%	227	3.8%	295	19.9%	119	0.4%	3,889	1.8%
Animals on Roadway	52	0.3%	13,225	8.3%	331	5.6%	78	5.3%	163	0.5%	13,849	6.4%
Roadway Factors	9	0.1%	576	0.4%	94	1.6%	48	3.2%	21	0.1%	748	0.3%
Material on Roadway/Weather	281	1.6%	9,685	6.0%	1,004	16.9%	178	12.0%	170	0.5%	11,318	5.2%
Other	1,719	10.0%	12,712	7.9%	556	9.4%	404	27.3%	289	0.9%	15,680	7.2%
Unknown	3,336	19.5%	1,869	1.2%	104	1.8%	22	1.5%	31,180	95.4%	36,511	16.8%
Total Crashes by Type	17,116	7.9%	160,129	73.7%	5,936	2.7%	1,479	0.7%	32,680	15.0%	217,340	100.0%

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 compares the different types of crashes with the Primary Contributing Crash Cause. Crashes were classified as a "Hit-and-Run" when the vehicle(s) left the scene of the crash, even if the vehicles were later identified with the crash. If the crash involved a vehicle hitting another vehicle, an object (such as a tree or sign), or a person, the crash was classified as a "Collision." If the vehicle struck no objects or people, but was involved in a rollover, the crash was classified as "Overturned."

Failing to meet these criteria, and not classified as "Unknown," the crash was considered a "Non-Collision."

- There was a 16 percent increase in the number of "Overturned" vehicle crashes between 1998 and 1999. The central factors for the increase were attributed to Speed Too Fast and Material on Roadway.
- Driver Inattention, which includes cellphone use, continued to be the number one cause of crashes.
- Animals and Materials on Roadway, combined, caused 15 percent of the collision crashes.

#### crashes

Table 15a. Vehicular Contributing Circumstance Rates per Drivers in Crashes by Driver Age: Single Vehicle Crashes, 1999

Vehicular Contributing	Driver Age									
Circumstance	<21	21 - 24	25 - 34	35 - 44	45 - 54	55 - 64	65 - 74	75+	UNK	Drivers
Speed Too Fast	13.7%	11.4%	8.8%	6.6%	5.7%	4.1%	2.6%	3.0%	4.8%	8.5%
Failure to Yield	0.4%	0.4%	0.5%	0.5%	0.5%	0.6%	0.8%	1.5%	0.9%	0.5%
Disregarded Signal/Sign	0.4%	0.5%	0.5%	0.4%	0.4%	0.2%	0.4%	0.7%	0.6%	0.4%
Drove Left of Center	1.9%	1.6%	1.5%	1.2%	0.9%	0.8%	1.1%	1.4%	2.6%	1.5%
Improper Overtaking	0.3%	0.3%	0.3%	0.2%	0.2%	0.2%	0.2%	0.5%	0.4%	0.3%
Followed Too Closely	0.3%	0.3%	0.4%	0.3%	0.3%	0.3%	0.2%	0.4%	0.2%	0.3%
Made Improper Turn	0.8%	0.9%	0.8%	1.0%	0.9%	0.9%	1.2%	1.3%	1.5%	1.0%
Had Been Drinking	3.5%	8.9%	8.0%	7.7%	4.5%	3.1%	1.9%	1.3%	1.5%	5.5%
Driver Asleep	2.9%	3.5%	2.5%	1.9%	2.1%	2.1%	3.2%	2.6%	0.1%	2.3%
Driver Inattention	21.8%	16.7%	16.2%	15.3%	15.5%	17.6%	22.9%	30.4%	19.4%	18.1%
Other Improper Driving	3.7%	4.1%	4.5%	5.0%	4.8%	6.2%	7.9%	11.4%	11.3%	5.3%
Mechanical Failure	2.7%	2.8%	2.5%	2.4%	2.3%	2.6%	2.4%	2.6%	0.3%	2.4%
Animals on Roadway	11.3%	13.3%	16.4%	19.9%	22.7%	21.5%	16.9%	8.6%	0.7%	15.1%
Roadway Factors	1.6%	0.9%	0.9%	1.0%	0.9%	0.8%	0.6%	0.6%	0.1%	1.0%
Material on Roadway/Weather	13.5%	12.6%	12.0%	10.5%	10.3%	9.5%	6.9%	5.7%	2.0%	10.6%
Other	8.6%	8.2%	8.6%	9.1%	8.9%	8.8%	9.8%	11.6%	9.7%	8.9%
Total Factors Cited in Crashes	18,115	9,282	16,482	14,397	9,208	4,898	2,474	1,787	7,176	83,819

Note: Highlighting identifies areas where there is an over-representation

Drivers of parked vehicles are excluded.

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

Legend: UNK = Unknown

Table 15 distributes the *Vehicle Contributing Circumstance* by the age of the driver and converts it into a percentage based upon the number of drivers within each age category involved in a crash. Table 15a addresses single vehicle crashes while Table 15b addresses multiple vehicle crashes. Some caution has to be exercised when reviewing the results of both Table 15 and Table 16. Crash reports that are entered in the database include both those that are investigated by an officer, and those that are not. For those crashes that are not investigated by a law enforcement officer, the only data that is obtained is from the driver's report, which is significantly limited. The driver's report does not contain any infor-

mation on the contributing causes, and as a result, the contributing cause is categorized as "Blank/Unknown" within these tables (15 and 16). The total numbers of Blanks/Unknowns are excluded from these tables and, therefore, illustrated percentages will not total 100 percent. The Standard Officers' Reports also includes up to two *Vehicular Contributing Circumstances* per involved vehicle. The suggested way to interpret this table is to look for over-represented areas (over-represented areas are boxed in the tables). For example, for the younger driver (under the age of 21), *Speed Too Fast* was determined to be a contributing circumstance for 13.7 percent of the crashes that these drivers were involved in.

When looking at all drivers, *Speed Too Fast* was listed as a contributing factor in only 8.5 percent of the crashes. The 5.2-percentage-point difference between the 13.7 percent and the 8.5 percent is considered to be an overrepresentation of the younger drivers' involvement in crashes. *Driver Inattention* was over-represented for both the younger and the older drivers, but the underlying causes of their distractions are notably different. Inexperience is a major contributing factor for the younger driver's involvement in a crash, while slower reaction time and perhaps, limited vision, can be categorized as *Inattention* on the part of the older driver.

Table 15b. Vehicular Contributing Circumstance Rates per Drivers in Crashes by Driver Age: Multiple Vehicle Crashes, 1999

Vehicular Contributing				Dr	iver Age					All
Circumstance	<21	21 - 24	25 - 34	35 - 44	45 - 54	55 - 64	65 - 74	75+	UNK	Drivers
Speed Too Fast	2.6%	2.4%	2.0%	1.5%	1.2%	1.0%	0.8%	0.6%	1.3%	1.7%
Failure to Yield	12.1%	9.9%	8.3%	7.8%	8.0%	9.6%	13.3%	19.6%	4.4%	9.5%
Disregarded Signal/Sign	2.9%	3.0%	2.4%	2.0%	2.1%	2.5%	3.1%	3.9%	2.3%	2.5%
Drove Left of Center	1.4%	1.1%	1.1%	1.0%	0.9%	0.8%	0.7%	0.7%	1.4%	1.1%
Improper Overtaking	0.8%	0.8%	0.7%	0.7%	0.6%	0.6%	0.5%	0.4%	1.1%	0.7%
Followed Too Closely	7.2%	6.7%	5.9%	5.2%	4.3%	3.9%	3.5%	3.2%	2.9%	5.3%
Made Improper Turn	1.5%	1.3%	1.2%	1.2%	1.2%	1.4%	1.6%	2.1%	1.2%	1.3%
Had Been Drinking	0.4%	1.1%	1.3%	1.4%	1.0%	0.8%	0.5%	0.4%	0.3%	0.9%
Driver Asleep	0.3%	0.3%	0.2%	0.2%	0.2%	0.2%	0.1%	0.2%	0.0%	0.2%
Driver Inattention	21.7%	18.0%	16.1%	15.1%	14.8%	15.6%	17.9%	22.6%	6.7%	16.6%
Other Improper Driving	2.3%	2.5%	2.5%	2.5%	2.7%	2.6%	2.9%	2.9%	3.0%	2.6%
Mechanical Failure	1.1%	0.9%	0.8%	0.7%	0.6%	0.6%	0.4%	0.4%	0.4%	0.8%
Animals on Roadway	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.0%	0.0%	0.1%
Roadway Factors	0.1%	0.2%	0.2%	0.1%	0.2%	0.1%	0.2%	0.1%	0.1%	0.1%
Material on Roadway/Weather	4.2%	4.0%	3.6%	3.1%	2.8%	2.4%	1.9%	1.2%	0.8%	3.1%
Other	4.5%	4.3%	4.3%	4.2%	4.2%	4.3%	4.3%	4.4%	1.8%	4.2%
Total Drivers in Crashes	62,895	34,073	67,432	62,483	43,981	25,811	16,585	12,676	22,427	348,363

Note: Boxed numbers identify areas where there is an over-representation.

Drivers of parked vehicles are excluded.

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

- More than 1 out of 5 single-vehicle crashes involving younger drivers (under the age of 21) were caused by Driver Inattention.
- Speed Too Fast played an essential role in single-vehicle crashes for drivers under the age of 25.
- Had Been Drinking was cited as a substantial contributing circumstance in single-vehicle crashes for drivers age 21–44 years.

- Animals and Materials on Roadway played a large role in single-vehicle crashes.
- 1999 experienced nearly a 23 percent increase over 1998 in the number of single-vehicle contributing factors involving the 55-64-year-old driver.
- Driver Inattention was a major cause of multiple-vehicle crashes for the younger (under age 24) and the older driver (age 65+).
- Three aggressive driving attributes (Speed Too Fast, Following Too Closely, and Failure to Yield) were significant contributing factors in the multiple-vehicle crashes of drivers age 34 and younger.
- Failure to Yield increased as a contributing factor in conjunction with the aging of drivers, and was highest in multiple-vehicle crashes involving the 65-year-old and older driver.

#### crashes

Table 16a. Vehicular Contributing Circumstance Rates per Licensed Drivers by Age: Single Vehicle Crashes, 1999

Vehicular Contributing		Driver Age									
Circumstance	<21	21 - 24	25 - 34	35 - 44	45 - 54	55 - 64	65 - 74	75+	Drivers		
Speed Too Fast	0.82%	0.40%	0.21%	0.11%	0.07%	0.04%	0.02%	0.03%	2.25%		
Failure to Yield	0.02%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.12%		
Disregarded Signal/Sign	0.02%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.01%	0.10%		
Drove Left of Center	0.12%	0.06%	0.04%	0.02%	0.01%	0.01%	0.01%	0.01%	0.36%		
Improper Overtaking	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.07%		
Followed Too Closely	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.08%		
Made Improper Turn	0.05%	0.03%	0.02%	0.02%	0.01%	0.01%	0.01%	0.01%	0.23%		
Had Been Drinking	0.21%	0.31%	0.19%	0.13%	0.06%	0.03%	0.01%	0.01%	1.50%		
Driver Asleep	0.18%	0.12%	0.06%	0.03%	0.03%	0.02%	0.02%	0.02%	0.65%		
Driver Inattention	1.31%	0.58%	0.38%	0.26%	0.19%	0.18%	0.17%	0.26%	4.56%		
Other Improper Driving	0.22%	0.14%	0.11%	0.09%	0.06%	0.06%	0.06%	0.10%	1.21%		
Mechanical Failure	0.16%	0.10%	0.06%	0.04%	0.03%	0.03%	0.02%	0.02%	0.65%		
<b>Animals on Roadway</b>	0.68%	0.47%	0.39%	0.34%	0.28%	0.22%	0.12%	0.07%	4.17%		
Roadway Factors	0.10%	0.03%	0.02%	0.02%	0.01%	0.01%	0.00%	0.01%	0.27%		
Material on Roadway/Weather	0.81%	0.44%	0.28%	0.18%	0.13%	0.10%	0.05%	0.05%	2.91%		
Other	0.52%	0.29%	0.20%	0.16%	0.11%	0.09%	0.07%	0.10%	2.23%		
Total Licensed Drivers	301,864	265,052	694,011	844,534	740,431	479,803	339,197	212,016	3,876,908		

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

Drivers of parked vehicles are excluded.

Legend: UNK = Unknown

Table 16 differs from Table 15 by calculating the percentages based upon the number of licensed drivers in each age grouping. The Indiana Bureau of Motor Vehicles provides the number of licensed drivers in each age category. Both of the younger two age categories were notably over-represented in a number of contributing circumstance categories. Moreover, what is also noticeable (with the exception of *Had Been Drinking*) is that there was a notable decrease in the involvement rate as the driver moved from the 20 and under category to the 21–24-year-old age category. This applied to both single vehicle and multiple vehicle crashes.

• The younger driver was greatly overrepresented in all major crash causes.

Table 16b. Vehicular Contributing Circumstance Rates per Licensed Drivers by Age: Multiple Vehicle Crashes, 1999

Vehicular Contributing		Driver Age									
Circumstance	<21	21 - 24	25 - 34	35 - 44	45 - 54	55 - 64	65 - 74	75+	Drivers		
Speed Too Fast	0.54%	0.31%	0.19%	0.11%	0.07%	0.05%	0.04%	0.04%	1.90%		
Failure to Yield	2.51%	1.27%	0.81%	0.57%	0.48%	0.52%	0.65%	1.17%	10.64%		
Disregarded Signal/Sign	0.60%	0.39%	0.24%	0.15%	0.12%	0.13%	0.15%	0.23%	2.74%		
Drove Left of Center	0.29%	0.15%	0.11%	0.07%	0.05%	0.04%	0.04%	0.04%	1.13%		
Improper Overtaking	0.16%	0.10%	0.07%	0.05%	0.04%	0.03%	0.03%	0.03%	0.73%		
Followed Too Closely	1.50%	0.86%	0.57%	0.39%	0.25%	0.21%	0.17%	0.19%	5.94%		
Made Improper Turn	0.30%	0.17%	0.11%	0.09%	0.07%	0.08%	0.08%	0.13%	1.44%		
Had Been Drinking	0.09%	0.14%	0.12%	0.11%	0.06%	0.04%	0.03%	0.02%	1.05%		
Driver Asleep	0.05%	0.04%	0.02%	0.02%	0.01%	0.01%	0.01%	0.01%	0.24%		
Driver Inattention	4.52%	2.31%	1.56%	1.12%	0.88%	0.84%	0.88%	1.35%	18.71%		
Other Improper Driving	0.48%	0.32%	0.24%	0.18%	0.16%	0.14%	0.14%	0.17%	2.73%		
Mechanical Failure	0.24%	0.11%	0.08%	0.06%	0.04%	0.03%	0.02%	0.02%	0.86%		
Animals on Roadway	0.02%	0.01%	0.01%	0.01%	0.01%	0.00%	0.00%	0.00%	0.11%		
Roadway Factors	0.03%	0.02%	0.02%	0.01%	0.01%	0.01%	0.01%	0.01%	0.16%		
Material on Roadway/Weather	0.88%	0.51%	0.35%	0.23%	0.17%	0.13%	0.10%	0.07%	3.55%		
Other	0.95%	0.55%	0.42%	0.31%	0.25%	0.23%	0.21%	0.26%	4.66%		
Total Licensed Drivers	301,864	265,052	694,011	844,534	740,431	479,803	339,197	212,016	3,876,908		

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

Drivers of parked vehicles are excluded.

Legend: UNK = Unknown

• The younger driver was greatly overrepresented in all major crash causes.

Table 17. Crashes by Light Conditions and Severity with Fatalities and Injuries, 1999

										Tot	tal	
	Fatal	Crashes	Person	al Injury	Propert	y Damage	Total (	Crashes	Inju	uries	Fata	lities
Light Condition	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent
Daylight	487	54.6%	32,393	65.4%	91,416	54.8%	124,296	57.2%	48,251	66.2%	561	54.9%
Dawn/Dusk	33	3.7%	2,157	4.4%	6,691	4.0%	8,881	4.1%	3,058	4.2%	39	3.8%
Dark/Lights On	105	11.8%	6,648	13.4%	19,502	11.7%	26,255	12.1%	9,831	13.5%	113	11.1%
Dark/Lights Off	9	1.0%	362	0.7%	1,245	0.7%	1,616	0.7%	501	0.7%	10	1.0%
Dark/No Lights	255	28.6%	5,334	10.8%	18,636	11.2%	24,225	11.1%	7,685	10.5%	295	28.9%
Unknown	3	0.3%	2,624	5.3%	29,440	17.6%	32,067	14.8%	3,557	4.9%	3	0.3%
Total	892		49,518		166,930	:	217,340		72,883		1,021	

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

The number of fatal daytime crashes increased by 55 between 1998 and 1999, and the 54.6 percent of total fatal crashes occurring during daylight hours was one of the highest percentages in recent years. As in recent years, the severity of the crash increased with reduced daylight.

The high number of *Unknown* light conditions is attributed to the drivers' crash reports (when submitted without the standard officer's form) not containing data such as light condition.

- The majority of fatal crashes occurred during daylight hours.
- Darkness increased the severity of injury by a factor of 2.5.

Figure 25. Crashes by Light Conditions and Severity, 1999

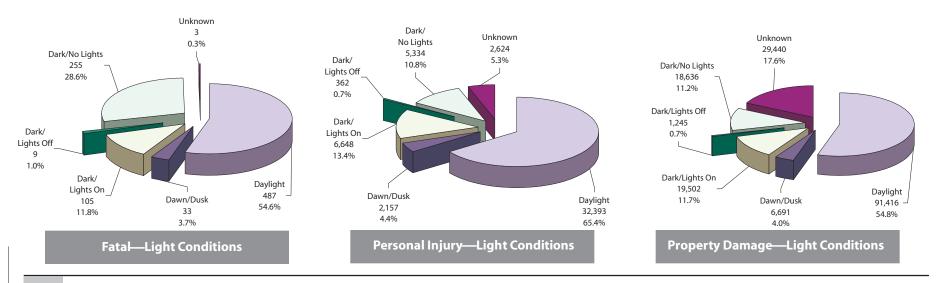


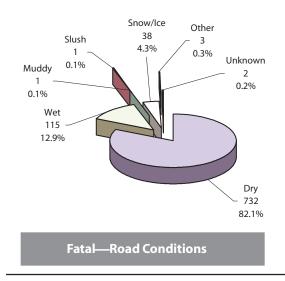
Table 18. Crashes by Road Conditions and Severity with Fatalities and Injuries, 1999

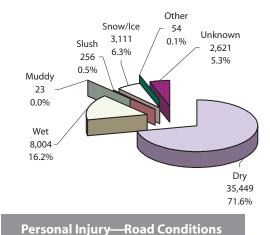
										To	tal	
	Fatal C	rashes	Person	al Injury	Property	Damage	Total	Crashes	Inju	ıries	Fata	alities
Road Condition	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent
Dry	732	82.1%	35,449	71.6%	99,278	59.5%	135,459	62.3%	52,796	72.4%	838	82.1%
Wet	115	12.9%	8,004	16.2%	23,043	13.8%	31,162	14.3%	11,827	16.2%	134	13.1%
Muddy	1	0.1%	23	0.0%	82	0.0%	106	0.0%	36	0.0%	1	0.1%
Slush	1	0.1%	256	0.5%	950	0.6%	1,207	0.6%	348	0.5%	1	0.1%
Snow/Ice	38	4.3%	3,111	6.3%	14,247	8.5%	17,396	8.0%	4,254	5.8%	41	4.0%
Other	3	0.3%	54	0.1%	119	0.1%	176	0.1%	79	0.1%	4	0.4%
Unknown	2	0.2%	2,621	5.3%	29,211	17.5%	31,834	14.6%	3,543	4.9%	2	0.2%
Total	892		49,518		166,930		217,340		72,883		1,021	

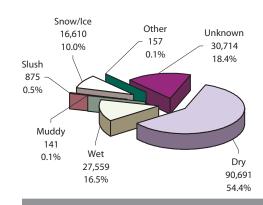
Historically, eight out of ten fatal crashes occurred on dry roads. While a larger percentage of less severe crashes occurred on *Wet* or *Snow*-covered roads, drivers tend to exercise more caution as road conditions become poorer. The high number of *Unknown* road conditions is attributed to the drivers' crash reports (when submitted without the standard officer's form) not containing data such as road condition.

- 8 out of 10 fatal crashes occurred on dry roads.
- Injury severity decreased as road conditions deteriorated.

Figure 26. Crashes by Road Conditions and Severity, 1999







**Property Damage—Road Conditions** 

Table 19. Crashes by Weather Conditions and Severity with Fatalities and Injuries, 1999

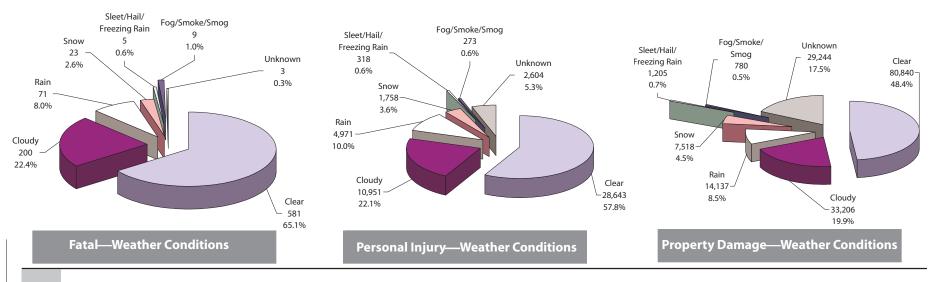
										Te	otal	
-	Fatal (	Crashes	Person	al Injury	Property	Damage	Total	Crashes	Inju	ıries	Fata	alities
Weather Condition	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percen	Count	Percent
Clear	581	65.1%	28,643	57.8%	80,840	48.4%	110,064	50.6%	42,404	58.2%	652	63.9%
Cloudy	200	22.4%	10,951	22.1%	33,206	19.9%	44,357	20.4%	16,234	22.3%	242	23.7%
Rain	71	8.0%	4,971	10.0%	14,137	8.5%	19,179	8.8%	7,398	10.2%	84	8.2%
Snow	23	2.6%	1,758	3.6%	7,518	4.5%	9,299	4.3%	2,478	3.4%	25	2.4%
Sleet/Hail/Freezing Rain	5	0.6%	318	0.6%	1,205	0.7%	1,528	0.7%	453	0.6%	5	0.5%
Fog/Smoke/Smog	9	1.0%	273	0.6%	780	0.5%	1,062	0.5%	392	0.5%	10	1.0%
Unknown	3	0.3%	2,604	5.3%	29,244	17.5%	31,851	14.7%	3,524	4.8%	3	0.3%
Total	892		49,518		166,930		217,340		72,883		1,021	

*Daylight* conditions, *Dry* roads, and *Clear* weather were the central conditions in most of the fatal crashes in 1999.

- Nearly 2 out of 3 fatal crashes occurred on clear days.
- Injury severity decreased as weather conditions deteriorated.

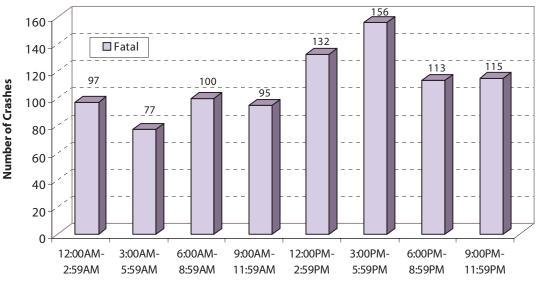
- . .

Figure 27. Crashes by Weather Conditions and Severity, 1999



### **Crashes by Time of Incident**

Figure 28. Crashes by Time of Day and Severity, 1999



**Time of Day** 

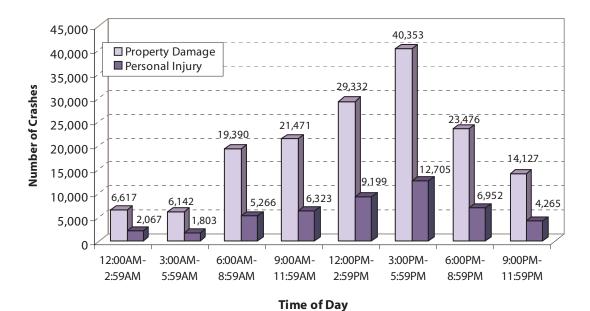


Figure 28 presents the distribution of crashes using three-hour increments of time.

- The 3 PM-5:59 PM block represented the peak time period for both the total number of fatal crashes and all crashes (fatal, personal injury, and property damage combined).
- Fatal crashes, as a percentage of total crashes for each time block, was the greatest (1.1 percent) during the midnight through 2:59 AM time period [97/(97 + 6,617 + 2,067)]. The lowest percentage of fatal crashes (0.3 percent), compared to the total number of crashes for each time block, occurred during the 3 PM-5:59 PM time period.

Table 20. Fatal and Personal Injury Crashes by Time of Day and Day of Week, 1999

	S	unda	ay	ı	Mond	lay	Т	uesd	ay	We	dnes	day	Tł	ursd	ay		Frida	y	:	Saturd	ay		Total	
Time	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 - 12:59AM	7	173	761	3	106	383	4	70	357	3	86	392	5	99	411	4	109	548	8	182	828	34	825	3,680
1:00AM - 1:59AM	11	181	636	2	55	237	0	49	245	1	64	253	2	67	300	3	107	398	10	160	683	29	683	2,752
2:00AM - 2:59AM	8	135	547	0	42	177	3	44	222	6	57	222	2	52	256	7	82	353	8	147	572	34	559	2,349
3:00AM - 3:59AM	7	163	583	1	25	147	4	44	231	3	53	262	3	61	256	3	106	395	11	171	571	32	623	2,445
4:00AM - 4:59AM	7	110	418	1	27	210	5	49	285	1	51	262	3	62	291	5	70	349	4	113	413	26	482	2,228
5:00AM - 5:59AM	4	81	333	3	85	448	6	103	573	2	104	502	0	108	546	2	101	542	2	116	405	19	698	3,349
6:00AM - 6:59AM	4	76	343	3	171	796	8	191	1,052	3	195	947	5	208	1,016	7	196	917	5	98	477	35	1,135	5,548
7:00AM - 7:59AM	3	81	377	8	372	1,749	5	472	2,057	5	427	2,049	3	461	2,017	9	390	1,771	6	125	585	39	2,328	10,605
8:00AM - 8:59AM	2	110	456	1	280	1,320	6	296	1,501	4	334	1,526	3	315	1,545	2	294	1,454	8	174	801	26	1,803	8,603
9:00AM - 9:59AM	8	150	651	5	230	1,039	3	238	1,171	3	245	1,139	5	277	1,222	3	302	1,335	5	249	1,081	32	1,691	7,638
10:00AM - 10:59AM	3	226	873	2	282	1,241	3	265	1,251	3	262	1,192	5	294	1,313	8	302	1,544	2	356	1,534	26	1,987	8,948
11:00AM - 11:59AM	9	283	1,066	1	348	1,606	2	334	1,532	5	342	1,508	7	359	1,658	8	509	2,083	5	470	1,850	37	2,645	11,303
Noon - 12:59PM	5	334	1,354	4	421	1,803	5	403	1,786	8	388	1,768	6	423	1,865	5	512	2,307	6	486	1,946	39	2,967	12,829
1:00PM - 1:59PM	7	358	1,342	7	354	1,556	4	351	1,619	9	363	1,604	6	385	1,697	3	503	2,123	5	490	1,897	41	2,804	11,838
2:00PM - 2:59PM	10	400	1,423	7	512	2,096	5	450	1,978	8	475	1,987	10	493	2,036	6	623	2,621	6	475	1,855	52	3,428	13,996
3:00PM - 3:59PM	9	402	1,506	12	651	2,971	6	675	2,924	4	702	2,919	12	658	2,902	12	907	3,789	3	487	1,802	58	4,482	18,813
4:00PM - 4:59PM	9	378	1,321	3	647	2,748	4	642	2,710	7	623	2,737	8	646	2,793	13	823	3,541	4	428	1,707	48	4,187	17,557
5:00PM - 5:59PM	9	359	1,357	6	566	2,504	6	661	2,741	1	621	2,559	4	661	2,744	19	785	3,344	5	383	1,595	50	4,036	16,844
6:00PM - 6:59PM	5	309	1,324	7	428	1,815	15	437	1,943	5	433	1,819	4	418	1,875	10	595	2,496	4	395	1,648	50	3,015	12,920
7:00PM - 7:59PM	6	241	1,076	8	269	1,251	2	315	1,377	5	295	1,268	2	293	1,350	8	421	1,853	4	309	1,401	35	2,143	9,576
8:00PM - 8:59PM	4	222	983	3	226	1,066	5	242	1,080	3	259	1,120	2	253	1,142	6	304	1,465	5	288	1,189	28	1,794	8,045
9:00PM - 9:59PM	7	172	833	3	189	925	5	212	953	6	225	1,015	12	251	1,046	5	362	1,448	12	284	1,167	50	1,695	7,387
10:00PM - 10:59PM	8	160	671	3	164	750	7	168	712	4	184	737	2	181	740	6	302	1,310	6	272	1,087	36	1,431	6,007
11:00PM - 11:59PM	4	116	508	2	119	582	6	116	551	2	128	587	7	143	666	5	277	1,189	3	240	1,030	29	1,139	5,113
Unknown	2	98	715	0	124	979	1	132	992	1	122	989	1	152	1,055	1	166	1,211	1	144	1,026	7	938	6,967
Total	158	5,318	21,457	95	6,693	30,399	120 (	6,959	31,843	102	7,038	31,363	119	7,320	32,742	160	9,148	40,386	138	7,042	29,150	892	49,518	217,340

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

Tables 20 and 21 provide further details as to when crashes occurred by looking at both one-hour and three-hour increments across the days of the week. Saturday and Sunday morning, between the hours of 3 AM to 5:59 AM had the highest percentage of those crashes where a fatality occurred. While there were instances of higher fatal and personal injury crashes occurring early on Tuesday and Wednesday mornings, these same times also

experienced some of the lowest number of crashes. In order to effectively use the data presented herein, both tables (percentages and absolute numbers) should be used in conjunction with each other.

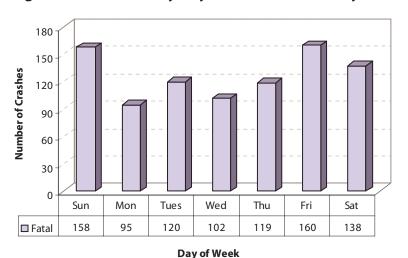
• Tuesday morning between 3 AM-5:59 AM represented the highest percent of fatal crashes as a percent of total crashes, followed by Saturday (1.2 percent) and Sunday (1.3 percent) mornings between midnight and 2:59 AM.

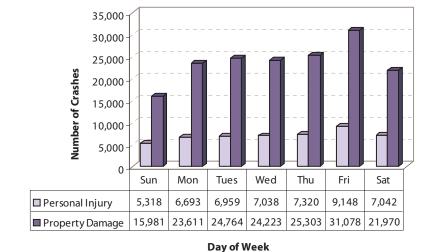
Table 21. Percentage of Fatal and Personal Injury Crashes by Time of Day and Day of Week, 1999

_	Sun	day	Mor	nday	Tue	esday	Wedn	esday	Thu	rsday	Fri	day	Satu	ırday	To	tal
Time Period	% Ftl	% PI														
Midnight - 2:59 AM	1.3%	25.2%	0.6%	25.5%	0.8%	19.8%	1.2%	23.9%	0.9%	22.5%	1.1%	22.9%	1.2%	23.5%	1.1%	23.5%
3:00AM - 5:59AM	1.3%	26.5%	0.6%	17.0%	1.4%	18.0%	0.6%	20.3%	0.5%	21.1%	0.8%	21.5%	1.2%	28.8%	1.0%	22.5%
6:00AM - 8:59AM	0.8%	22.7%	0.3%	21.3%	0.4%	20.8%	0.3%	21.1%	0.2%	21.5%	0.4%	21.2%	1.0%	21.3%	0.4%	21.3%
9:00AM - 11:59AM	0.8%	25.4%	0.2%	22.1%	0.2%	21.2%	0.3%	22.1%	0.4%	22.2%	0.4%	22.4%	0.3%	24.1%	0.3%	22.7%
Noon - 2:59PM	0.5%	26.5%	0.3%	23.6%	0.3%	22.4%	0.5%	22.9%	0.4%	23.2%	0.2%	23.2%	0.3%	25.5%	0.3%	23.8%
3:00PM - 5:59PM	0.6%	27.2%	0.3%	22.7%	0.2%	23.6%	0.1%	23.7%	0.3%	23.3%	0.4%	23.6%	0.2%	25.4%	0.3%	23.9%
6:00PM - 8:59PM	0.4%	22.8%	0.4%	22.3%	0.5%	22.6%	0.3%	23.5%	0.2%	22.1%	0.4%	22.7%	0.3%	23.4%	0.4%	22.8%
9:00PM - 11:59PM	0.9%	22.3%	0.4%	20.9%	0.8%	22.4%	0.5%	23.0%	0.9%	23.5%	0.4%	23.8%	0.6%	24.2%	0.6%	23.0%
Unknown	0.3%	13.7%	0.0%	12.7%	0.1%	13.3%	0.1%	12.3%	0.1%	14.4%	0.1%	13.7%	0.1%	14.0%	0.1%	13.5%
Total	0.7%	24.8%	0.3%	22.0%	0.4%	21.9%	0.3%	22.4%	0.4%	22.4%	0.4%	22.7%	0.5%	24.2%	0.4%	25.6%

Note: Boxes identify areas where there is an over-representation. Legend: Ftl=Fatal, Pl=Personal Injury, Tot=Total

Figure 29. Crashes by Day of Week and Severity, 1999





Most fatal crashes occurred during weekend days, while the vast majority of crashes occurred during the weekdays.

• The greatest number of fatal crashes occurred on Sunday and Friday.

• The greatest number of crashes occurred on Friday.

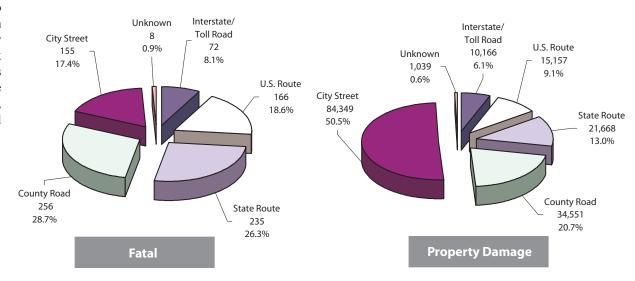
Table 22. Fatal Crashes and Fatalities on Legal Holidays, 1990–1999

					All Cra	shes	Alco Related							All Cr	ashes	Alco Related	ohol Crashes
Year	Begin	End	Hours	Actual Holiday		Fatal	Fatalities	Fatal	Year	Begin	End	Hours	Actual Holiday	-	Fatal	Fatalities	Fatal
New Y	ear's Day								Labor	Dav							
	6:00 PM 12/29	5:59 AM 1/02	84	Mon, 1/1	3	3	2	2		6:00 PM 8/31	5:59 AM 9/04	84	Mon, 9/3	19	18	6	6
1991	6:00 PM 12/28			Tue, 1/1	1	1	1	1	1991	6:00 PM 8/30	5:59 AM 9/03		Mon, 9/2	13	13	6	6
1992	6:00 PM 12/31	5:59 AM 1/02	36	Wed, 1/1	4	4	3	3	1992	6:00 PM 9/04	5:59 AM 9/08	84	Mon, 9/7	15	10	5	5
1993	6:00 PM 12/31	5:59 AM 1/04	84	Fri, 1/1	6	6	1	1	1993	6:00 PM 9/03	5:59 AM 9/07	84	Mon, 9/6	8	8	1	1
1994	6:00 PM 12/30	5:59 AM 1/03	84	Sat, 1/1	10	9	1	1	1994	6:00 PM 9/02	5:59 AM 9/06	84	Mon, 9/5	8	8	4	4
1995	6:00 PM 12/30	5:59 AM 1/03	84	Sun, 1/1	14	10	7	5	1995	6:00 PM 9/01	5:59 AM 9/05	84	Mon, 9/4	7	7	2	2
1996	6:00 PM 12/31	5:59 AM 1/02	36	Mon, 1/1	2	2	2	2	1996	6:00 PM 8/30	5:59 AM 9/03	84	Mon, 9/2	11	10	7	6
1997	6:00 PM 12/31	5:59 AM 1/02	36	Wed, 1/1	5	3	4	2	1997	6:00 PM 8/29	5:59 AM 9/02	84	Mon, 9/1	11	11	0	0
1998	6:00 PM 12/31	5:59 AM 1/05	108	Thu, 1/1	11	10	4	3	1998	6:00 PM 9/04	5:59 AM 9/08	84	Mon, 9/7	10	9	3	3
1999	6:00 PM 12/31	5:59 AM 1/04	84	Fri, 1/1	13	10	0	0	1999	6:00 PM 9/03	5:59 AM 9/07	84	Mon, 9/6	10	9	4	4
Ten Year	r Totals		744		69	58	25	20	Ten Yea	r Totals		840		112	103	38	37
Memo	orial Day								Thank	csgiving							
1990	6:00 PM 5/25	5:59 AM 5/29	84	Mon, 5/28	15	14	8	7	1990	6:00 PM 11/21	5:59 AM 11/26	108	Thu, 11/22	13	12	4	4
1991	6:00 PM 5/24	5:59 AM 5/28	84	Mon, 5/27	13	12	6	5	1991	6:00 PM 11/27	5:59 AM 12/02	108	Thu, 11/28	9	8	0	0
1992	6:00 PM 5/22	5:59 AM 5/26	84	Mon, 5/25	10	9	3	2	1992	6:00 PM 11/25	5:59 AM 11/30	108	Thu, 11/26	6	6	3	3
1993	6:00 PM 5/28	5:59 AM 6/01	84	Mon, 5/31	7	7	4	4	1993	6:00 PM 11/24	5:59 AM 11/29	108	Thu, 11/25	6	5	1	1
1994	6:00 PM 5/27	5:59 AM 5/31	84	Mon, 5/30	15	13	3	3	1994	6:00 PM 11/23	5:59 AM 11/28	108	Thu, 11/24	12	12	4	4
1995	6:00 PM 5/26	5:59 AM 5/30	84	Mon, 5/29	12	10	3	3	1995	6:00 PM 11/22	5:59 AM 11/27	108	Thu, 11/23	4	4	1	1
1996	6:00 PM 5/24	5:59 AM 5/28	84	Mon, 5/27	15	15	6	6	1996	6:00 PM 11/27	5:59 AM 12/02	108	Thu, 11/28	7	5	3	1
1997	6:00 PM 5/23	5:59 AM 5/27	84	Mon, 5/26	7	7	1	1	1997	6:00 PM 11/26	5:59 AM 12/01	108	Thu, 11/27	5	5	1	1
1998	6:00 PM 5/22	5:59 AM 5/26	84	Mon, 5/25	9	8	5	4	1998	6:00 PM 11/25	5:59 AM 11/30	108	Thu, 11/26	11	10	7	6
1999	6:00 PM 5/28	5:59 AM 6/01	84	Mon, 5/31	18	10	6	3	1999	6:00 PM 11/24	5:59 AM 11/29	108	Thu, 11/25	8	7	4	3
Ten Yea	r Totals		840		121	105	45	38	<b>Ten Yea</b>	r Totals		1,080		81	74	28	24
July 4	th								Christ	tmas							
1990	6:00 PM 7/03	5:59 AM 7/05	36	Wed, 7/4	4	4	1	1	1990	6:00 PM 12/21	5:59 AM 12/26	108	Tue, 12/25	21	11	1	11
1991	6:00 PM 7/03	5:59 AM 7/08	108	Thu, 7/4	22	20	5	4	1991	6:00 PM 12/24	5:59 AM 12/26	36	Wed, 12/25	5 2	2	1	2
1992	6:00 PM 7/02	5:59 AM 7/06	84	Sat, 7/4	8	6	2	2	1992	6:00 PM 12/24	5:59 AM 12/28	84	Fri, 12/25	10	9	4	9
1993	6:00 PM 7/02	5:59 AM 7/06	84	Sun, 7/4	13	10	5	3	1993	6:00 PM 12/23	5:59 AM 12/27	84	Sat, 12/25	5	4	0	0
1994	6:00 PM 7/01	5:59 AM 7/05	84	Mon, 7/4	16	13	3	3	1994	6:00 PM 12/23	5:59 AM 12/27	84	Sun, 12/25	4	4	2	2
1995	6:00 PM 6/30	5:59 AM 7/05	108	Tue, 7/4	9	9	3	3	1995	6:00 PM 12/22	5:59 AM 12/26	84	Mon, 12/25	5 11	10	4	4
1996	6:00 PM 7/03	5:59 AM 7/08	108	Thu, 7/4	12	9	1	1	1996	6:00 PM 12/24	5:59 AM 12/26	36	Wed, 12/25	5 2	2	1	1
1997	6:00 PM 7/03	5:59 AM 7/07	84	Fri, 7/4	11	10	1	1	1997	6:00 PM 12/24	5:59 AM 12/29	108	Thu, 12/25	13	12	4	4
1998	6:00 PM 7/02	5:59 AM 7/06	84	Sat, 7/4	6	6	3	3	1998	6:00 PM 12/24	5:59 AM 12/28	84	Fri, 12/25	11	11	3	3
1999	6:00 PM 5/28	5:59 AM 6/01	84	Sun, 7/4	18	10	6	3	1999	6:00 PM 12/23	5:59 AM 12/27	84	Sat, 12/25	6	6	1	1
Ten Year	r Totals		864		119	97	30	24	Ten Yea	r Totals		792		85	71	21	37

Indiana roads are classified by road type, including distinctions between local roads within rural or urban areas. County and state roads historically have had the greatest percentage of fatal crashes, and 1999 was no exception. Likely contributors to their higher fatal crash rates are: county roads are generally narrower, county roads often lack visible lane markers, and they may lack shoulders and/or have the potential for higher drop-offs (from the road surface to the non-road surface). These roads also, while not carrying an interstate speed limit, have the potential for higher speeds versus city or local streets.

- 55 percent of fatal crashes occurred on County Roads and State Routes.
- City Streets ranked as the number one location for personal injury crashes.

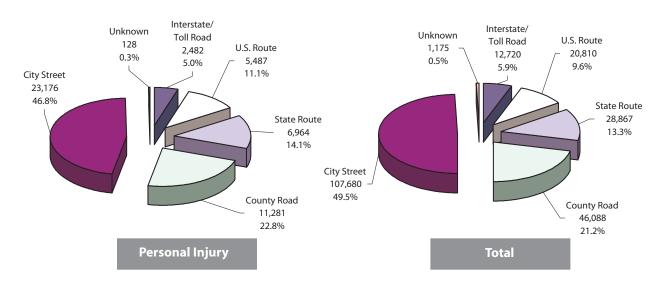
Figure 30. Crashes by Roadway Type and Severity, 1999



#### Table 22

The number of hours in the holiday period is shown in the hours column. The length of the holiday period depends on the day on which the legal holiday falls, as follows:

If a holiday falls on *Monday*, the holiday period is from 6:00 p.m. Friday to 5:59 a.m. Tuesday. If a holiday falls on *Tuesday*, the holiday period is from 6:00 p.m. Friday to 5:59 a.m. Wednesday. If a holiday falls on *Wednesday*, the holiday period is from 6:00 p.m. Tuesday to 5:59 a.m. Thursday. If a holiday falls on *Thursday*, the holiday period is from 6:00 p.m. Wednesday to 5:59 a.m. Monday. If a holiday falls on *Friday*, the holiday period is from 6:00 p.m. Thursday to 5:59 a.m. Monday.



While the majority of crashes occurred on the roadway (85 percent in 1999), where they occurred in relation to the roadway was equally vital, as crash location was linked to the resultant severity of the crash. *Off Road*way crashes had a three times higher fatality incidence rate as compared to other crash locations.

- Off Roadway fatal crashes represented 30 percent of the fatal crashes, and only 13 percent of total crashes.
- Nearly 2 out of 3 crashes occurred on a roadway (including at an intersection).

Table 23. Crashes by Location Type and Severity, 1999

	Fatal (	Crashes	Person	al Injury	Propert	y Damage	Total (	Crashes
Location	Count	Percent	Count	Percent	Count	Percent	Count	Percent
Intersection	202	22.6%	17,994	36.3%	39,801	23.8%	57,997	26.7%
<b>Driveway Access</b>	7	0.8%	1,024	2.1%	3,980	2.4%	5,011	2.3%
Interchange Area	5	0.6%	404	0.8%	1,429	0.9%	1,838	0.8%
Off Roadway	270	30.3%	8,210	16.6%	19,763	11.8%	28,243	13.0%
Shoulder	41	4.6%	1,175	2.4%	3,697	2.2%	4,913	2.3%
Median	14	1.6%	376	0.8%	976	0.6%	1,366	0.6%
Roadway	350	39.2%	17,642	35.6%	68,109	40.8%	86,101	39.6%
Unknown	3	0.3%	2,693	5.4%	29,175	17.5%	31,871	14.7%
Total	892		49,518		166,930		217,340	

Note: The percentage of fatal crashes occurring at an intersection was 202/892, or 22.6%.

The total number of Hit-and-Run crashes has remained relatively flat over the past three years. However, the injury severity of these crashes, as represented by the decrease in fatal crashes from 25 in 1997, to 22 in 1998, and down even more to 15 in 1999, is rather noteworthy. Personal injury Hit-and-Run crashes have decreased by 7.2 percent over the last two years.

• The 15 fatal Hit-and-Run crashes were the fewest recorded since Crash Facts was first published in 1993, representing a decrease from 22 in 1998 and 25 in 1997.

Table 24. Hit-and-Run Crashes by Location Type and Severity, 1999

	Fatal (	Crashes	Person	al Injury	Property	/ Damage	Total (	Crashes
Location	Count	Percent	Count	Percent	Count	Percent	Count	Percent
Intersection	1	6.7%	999	43.0%	3,512	23.8%	4,512	26.4%
<b>Driveway Access</b>	0	0.0%	48	2.1%	442	3.0%	490	2.9%
Interchange Area	0	0.0%	16	0.7%	107	0.7%	123	0.7%
Off Roadway	0	0.0%	220	9.5%	2,597	17.6%	2,817	16.5%
Shoulder	3	20.0%	52	2.2%	804	5.4%	859	5.0%
Median	0	0.0%	5	0.2%	37	0.3%	42	0.2%
Roadway	11	73.3%	980	42.2%	7,192	48.7%	8,183	47.8%
Unknown	0	0.0%	4	0.2%	86	0.6%	90	0.5%
Total	15		2,324		14,777		17,116	

Note: The percentage of fatal hit and run crashes occurring at an intersection was 1/15, or 6.7%.

### **Crashes by Location Type**

Table 25. Traffic Controls by Crash Severity, 1999

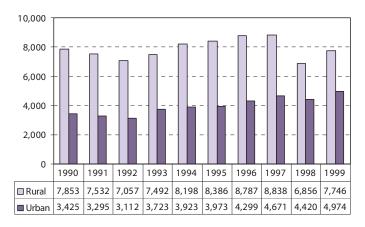
	Fatal	Crashes	Person	al Injury	Property	/ Damage	Te	otal
Traffic Control	Count	Percent	Count	Percent	Count	Percent	Count	Percent
Officer, Crossing Guard or Flagman	6	0.7%	230	0.5%	647	0.4%	883	0.4%
RR Crossing Gate/Flagman	4	0.4%	65	0.1%	250	0.1%	319	0.1%
RR Crossing Signal	5	0.6%	71	0.1%	245	0.1%	321	0.1%
RR Crossing Sign	17	1.9%	150	0.3%	365	0.2%	532	0.2%
<b>Traffic Control Signal</b>	73	8.2%	10,505	21.2%	24,839	14.9%	35,417	16.3%
Flashing Signal	18	2.0%	561	1.1%	1,139	0.7%	1,718	0.8%
Stop Sign	115	12.9%	7,355	14.9%	17,747	10.6%	25,217	11.6%
Yield Sign	16	1.8%	543	1.1%	1,434	0.9%	1,993	0.9%
Lane Control	483	54.1%	24,042	48.6%	65,183	39.0%	89,708	41.3%
No Passing Zone	158	17.7%	3,418	6.9%	7,128	4.3%	10,704	4.9%
Other Regulatory Signs	51	5.7%	1,413	2.9%	3,595	2.2%	5,059	2.3%
None	226	25.3%	12,955	26.2%	46,530	27.9%	59,711	27.5%
Total Crashes	892		49,518		166,930		217,340	

Note: Of the fatal crashes in 1999, 12.9% (115/892) 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 type of traffic control at the crash location.

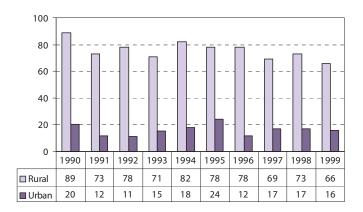
While Table 23 provides data relative to the location of a crash (*Intersection, Off Road, Roadway*, etc.), Table 25 provides further focus and details on those crashes to identify other factors in the crash. For example, Table 23 identified that nearly 58,000 crashes in 1999 occurred at some type of *Intersection*, with 202 of those crashes resulting in a fatality. *Traffic Control Signals, Flashing Signals, Stop Signs, and Yield Signs* are the predominant intersection controls, but not all intersections necessarily have a traffic control. The investigating officer can also indicate the presence of multiple traffic controls at an intersection, such as *Stop Signs* in addition to *Flashing Signals*. Therefore, while the numbers are not precise, they are a good indicator of the level of Traffic Controls present at the crash scene.

- Lane Controls (most often, painted lane markings) and No Passing Zones, all typically Non-Intersection locations, represented the setting of nearly 3 out of 4 fatal crashes.
- Injury severity played an important role for crashes occurring in a No Passing Zone, as a higher percentage of people were killed in a No Passing Zone (17.7 percent), as compared to those involved in a personal injury (6.9 percent) or property damage (4.3 percent) crash in a No Passing Zone.

Figure 31. Rural and Urban Interstate/Toll Road Crashes, 1990–1999



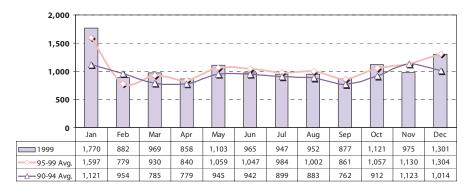
### **Rural/Urban Crashes**



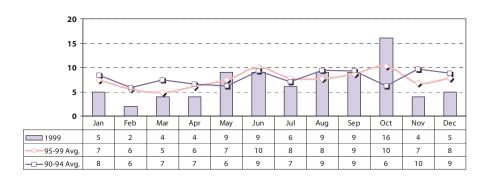
### **Rural/Urban Fatalities**

- The 1999 results for total fatalities (82) on Interstates/Toll Roads represented the lowest number of fatalities since 1989, when there were 76 fatalities.
- After showing a substantial reduction for total Interstate/Toll Road crashes in 1998, 1999 crashes increased by 12.8 percent.

Figure 32. Interstate/Toll Road Crashes by Monthly Average, 1990–1999



Crashes



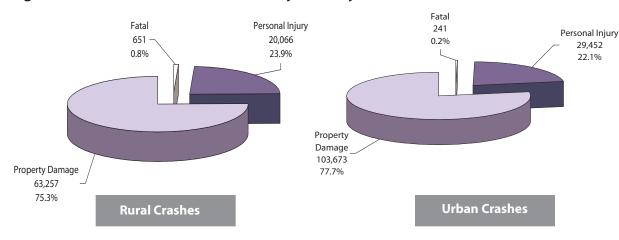
**Fatalities** 

Figures 31 and 32 are used to evaluate the crash rates on Interstates and Toll Roads in Indiana. These roads are further classified as to whether they pass through rural or urban areas of Indiana. While there is no difference in the road design itself, the users and traffic density may differ, depending upon where the road is located.

- January and December represented the highest total crash months for Interstate/Toll Road crashes.
- With the exception of October, Interstate/Toll Road fatalities were near or below historical monthly rates.

### Crashes by Locale (Rural/Urban)

Figure 33. Rural and Urban Crashes by Severity, 1999



Rural crashes have historically represented a significantly higher percentage of the more serious and fatal crashes, while urban areas have represented a high percentage of property damage crashes.

- In 1999, 0.8 percent of rural crashes were fatal, as compared with 0.2 percent for urban crashes.
- The 892 total fatal crashes represent the greatest number of fatal crashes since 1991.
- The 241 fatal crashes in urban areas were the highest number since 1990.

Table 26. Rural and Urban Crashes by Severity, 1990–1999

		Crashes         Injury         Damage         Total           650         21,341         59,090         81,081           679         19,967         56,231         76,877           575         20,236         55,770         76,581           579         20,900         58,685         80,164           655         21,899         62,259         84,813           625         22,596         65,767         88,988           635         21,605         66,011         88,251           614         21,538         63,788         85,940				Urb	an			Total C	rashes	
Year				Rural Total	Fatal Crashes	Personal Injury	Property Damage	Urban Total	Fatal Crashes	Personal Injury	Property Damage	
1990	650	21,341	59,090	81,081	274	29,326	98,839	128,439	924	50,667	157,929	209,520
1991	679	19,967	56,231	76,877	225	27,165	90,692	118,082	904	47,132	146,923	194,959
1992	575	20,236	55,770	76,581	223	28,370	89,705	118,298	798	48,606	145,475	194,879
1993	579	20,900	58,685	80,164	203	29,874	94,132	124,209	782	50,774	152,817	204,373
1994	655	21,899	62,259	84,813	220	30,577	97,612	128,409	875	52,476	159,871	213,222
1995	625	22,596	65,767	88,988	234	31,235	100,569	132,038	859	53,831	166,336	221,026
1996	635	21,605	66,011	88,251	235	30,453	102,526	133,214	870	52,058	168,537	221,465
1997	614	21,538	63,788	85,940	235	30,875	102,959	134,069	849	52,413	166,747	220,009
1998	660	20,688	61,514	82,862	224	31,177	102,247	133,648	884	51,865	163,761	216,510
1999	651	20,066	63,257	83,974	241	29,452	103,673	133,366	892	49,518	166,930	217,340

Table 27. Rural and Urban Crashes by Month and Severity, 1999

	F	atal Crashe	S	P	ersonal Inj	ury	Pre	operty Dan	nage		Total Crash	es
Month	Rur	Urb	Tot	Rur	Urb	Tot	Rur	Urb	Tot	Rur	Urb	Tot
January	32	13	45	1,610	1,899	3,509	7,198	10,215	17,413	8,840	12,127	20,967
February	37	17	54	1,376	1,851	3,227	4,279	6,804	11,083	5,692	8,672	14,364
March	51	20	71	1,462	2,206	3,668	4,635	7,902	12,537	6,148	10,128	16,276
April	43	17	60	1,483	2,557	4,040	4,335	8,485	12,820	5,861	11,059	16,920
May	59	20	79	1,778	2,754	4,532	5,027	8,875	13,902	6,864	11,649	18,513
June	68	20	88	1,714	2,777	4,491	4,725	8,402	13,127	6,507	11,199	17,706
July	77	21	98	1,868	2,660	4,528	4,427	8,123	12,550	6,372	10,804	17,176
August	60	29	89	1,793	2,703	4,496	4,411	8,714	13,125	6,264	11,446	17,710
September	58	23	81	1,745	2,554	4,299	4,629	8,285	12,914	6,432	10,862	17,294
October	66	28	94	1,751	2,669	4,420	5,957	9,295	15,252	7,774	11,992	19,766
November	49	18	67	1,589	2,309	3,898	6,696	8,512	15,208	8,334	10,839	19,173
December	51	15	66	1,897	2,513	4,410	6,938	10,061	16,999	8,886	12,589	21,475
Total	651	241	892	20,066	29,452	49,518	63,257	103,673	166,930	83,974	133,366	217,340

Note: Boxes identify areas where there is an over-representation. Legend: Rur=Rural, Urb=Urban, Tot=Total

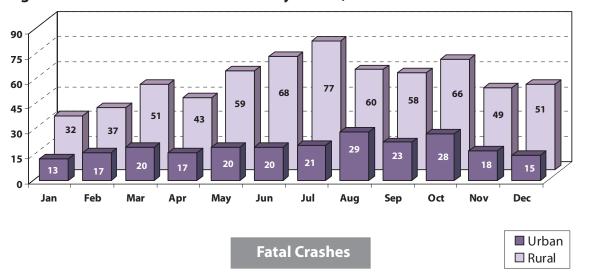
Tables 27 and Figure 34 show the distribution of rural and urban crashes by severity and month of year. Most serious crashes occurred during the summer months (higher levels of travel), while most property damage crashes occurred during the winter months (principally due to weather).

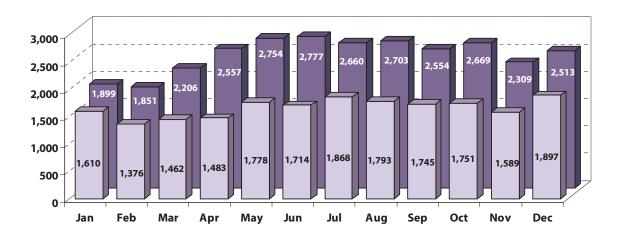
- 73 percent of fatal crashes occurred in rural areas.
- Most fatal and personal injury crashes occurred in the warmer months.
- Most property damage crashes occurred in the winter months.
- Urban property damage crashes were fairly evenly spread across all months, while rural property damage crashes peaked in the four colder months (October-January).

### Crashes by Locale (Rural/Urban)

• July and October represented the months with the greatest number of fatal rural crashes, with August and October having the greatest number of urban fatal crashes.







**Personal Injury Crashes** 

Table 28. Rural and Urban Fatal Crashes by Number of Fatalities, 1990–1999

Year	Rur	Urb	Tot	Year	Rur	Urb	Tot	Year	Rur	Urb	Tot	Year	Rur	Urb	Tot
One Po	erson F	atality (	Crashes	Two P	erson l	Fatality	Crashes	Three F	Person	Fatality (	Crashes	Four P	erson F	atality	Crashes
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
1998	594	211	805	1998	53	9	62	1998	11	4	15	1998	2	0	2
1999	564	225	789	1999	68	13	81	1999	16	3	19	1999	2	0	2
Five Pe	erson F	atality (	Crashes	Six Pe	erson F	atality (	Crashes	Seven F	erson	Fatality	Crashes	Т	otal Fat	al Cras	hes
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
1998	0	0	0	1998	0	0	0	1998	0	0	0	1998	660	224	884
1999	1	0	1	1999	0	0	0	1999	0	0	0	1999	651	241	892

This table presents a ten-year review of rural and urban fatal crashes, based upon the number of fatalities that occurred as a result of the crash.

• Fortunately, most fatal crashes involved the death of only one individual.

Table 29. Rural and Urban Crashes by Object Collided With and Severity, 1999

	Fa	tal Crash	es	P	ersonal In	jury	P	roperty Da	amage		<b>Total Crasl</b>	nes
COLLISION WITH	Rur	Urb	Tot	Rur	Urb	Tot	Rur	Urb	Tot	Rur	Urb	Tot
Other Motor Vehicle	324	129	453	10,449	22,673	33,122	27,082	74,806	101,888	37,855	97,608	135,463
Pedestrian	28	39	67	259	1,250	1,509	38	92	130	325	1,381	1,706
Bicyclist	10	5	15	199	986	1,185	35	148	183	244	1,139	1,383
RR Train	9	10	19	41	50	91	57	115	172	107	175	282
<b>Animal Drawn Vehicle</b>	2	0	2	28	12	40	44	32	76	74	44	118
Deer	1	0	1	310	35	345	9,673	880	10,553	9,984	915	10,899
Other Animal	2	0	2	93	22	115	1,085	256	1,341	1,180	278	1,458
Fixed Object	531	138	669	11,749	6,201	17,950	19,532	11,248	30,780	31,812	17,587	49,399
Other	14	2	16	247	178	425	1,142	701	1,843	1,403	881	2,284
Total	921	323	1,244	23,375	31,407	54,782	58,688	88,278	146,966	82,984	120,008	202,992

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.

Table 29 further describes the other object struck in a *Collision* crash. Since a vehicle can hit more than one object in a crash, multiple entries can be made on the crash report.

- The number of collisions with RR Trains decreased 13.5 percent from 1998's figure of 326.
- 67 percent of Collisions involved vehicles colliding with other vehicles.
- 54 percent of the fatal crashes involved vehicles colliding with a Fixed Object, such as a tree, bridge support or embankment.

Table 30. Rural and Urban Crashes by Fixed Object Struck and Severity, 1999

	F	atal Crash	es	P	ersonal Inj	ury	Pro	perty Dan	nage	·	Total Crash	ıes
Type of Fixed Object	Rur	Urb	Tot	Rur	Urb	Tot	Rur	Urb	Tot	Rur	Urb	Tot
Light Support/Utility Pole	71	23	94	1,496	1,203	2,699	2,177	1,848	4,025	3,744	3,074	6,818
Guard Rail/Median	35	14	49	970	596	1,566	2,040	1,185	3,225	3,045	1,795	4,840
Impact Attenuator	1	0	1	16	20	36	57	46	103	74	66	140
Sign Post	32	16	48	605	479	1,084	1,348	1,074	2,422	1,985	1,569	3,554
Tree	114	30	144	2,009	701	2,710	2,527	920	3,447	4,650	1,651	6,301
Building/Wall	4	6	10	98	353	451	186	666	852	288	1,025	1,313
Curbing	9	20	29	184	1,235	1,419	277	1,720	1,997	470	2,975	3,445
Fence	35	9	44	794	284	1,078	1,733	764	2,497	2,562	1,057	3,619
Bridge Support	11	2	13	132	81	213	259	159	418	402	242	644
Culvert/Drainage Structure	28	1	29	582	110	692	791	201	992	1,401	312	1,713
Snow Embankment	7	0	7	240	128	368	869	341	1,210	1,116	469	1,585
Earth Embankment/Ditch	166	12	178	3,891	600	4,491	5,352	897	6,249	9,409	1,509	10,918
Fire Hydrant	0	0	0	26	101	127	58	250	308	84	351	435
Traffic Signal	0	2	2	8	60	68	20	111	131	28	173	201
Mailbox	13	1	14	399	110	509	1,016	346	1,362	1,428	457	1,885
Other Fixed Object	23	5	28	554	395	949	1,050	949	1,999	1,627	1,349	2,976
Total	549	141	690	12,004	6,456	18,460	19,760	11,477	31,237	32,313	18,074	50,387

Note: This report counts objects struck, not crashes. There may have been more than one fixed object in some crashes. Legend: Rur=Rural, Urb=Urban, Tot=Total

This table provides details on collisions with fixed objects, such as *Trees*, *Guardrails*, etc. Historically, there have not been significant changes in the types of objects struck.

• 64 percent of fixed-object collisions occurred in rural locales.

# Chapter 4

# People

# TOPICS

Fatalities and Injuries by Role
Drivers
Non-Occupants
Safety Restraint Data

In 1999, there were 1,021 people killed as a result of a highway crash in Indiana. This is the equivalent of one person being killed every 8½ hours, every day of every week in 1999. Indiana experienced 982 fatalities in 1998. While statistically the difference may not be significant, an additional 39 people were killed in 1999 than in 1998. There were nearly three times as many highway deaths as there were murders during 1999 in Indiana. Three out of four fatalities, and nearly three out of five serious injuries occurred in rural areas, but for all injuries, only two out of five occurred in rural areas. Males were involved in 56 percent of property damage and personal injury crashes, as well as 73 percent of fatal crashes. One out of three fatalities was male between the ages of 25-54. Nearly three out of four alcohol-related crashes involved a male driver, while four out of five fatal alcohol crashes involved a male driver. Male drivers in the 21–34 age bracket were involved in 35 percent of the fatal alcohol-related crashes. The two common denominators of fatal crashes were male drivers and rural areas.

The most common time of day for crashes to occur was from noon to 5:59 PM (only one-fourth of the day) when nearly one-half (46 percent) of the crashes occurred. While fatal crashes were under-represented during the hours of noon to 5:59 PM, fatal crashes were considerably over-represented between the hours of 9 PM and 5:59 AM. For the younger driver (age 16 and 17), they were three times more likely to be involved in an after-school crash than a before-school crash. The 21–34-year-old-male driver was three times as likely to be involved in a crash between the hours of midnight and 5:59 AM than a female driver of the same age.

Nearly one out of nine drivers, who acknowledged that they were drinking, was under the age of 21. This statistic represents a three percent increase over 1998, and an eight percent increase over 1997 for the number of crashes involving both a younger driver and alcohol. Younger drivers continued to be over-represented in crashes. Even with the introduction of the Graduated License Law that took effect on January 1, 1999, it has only had a minimum impact on reducing the younger

driver crash involvement, at least through the initial year of the law. While there was a reduction in the number of crashes involving 16- and 17-year-old drivers, there was a similar percentage reduction in the number of licensed drivers in those age brackets. The crash rate for the 16- and 17-year-old driver continued to be 50 percent higher than the 18–20 age bracket, and nearly three times as high as the overall state average. Three out of ten 16-year-old drivers will be involved in a crash before they reach their 17<sup>th</sup> birthday. More than one out of four 17-year-old drivers will be involved in a crash before they reach their 18<sup>th</sup> birthday. The young and inexperienced driver continues to be a major source of concern due to their high degree of involvement in highway crashes.

Overall, there were 55 youth under the age of 16 that were killed in 1999, a reduction of 13 from 1998, and 24 from 1997. This represented the fewest number of fatalities in this age category since *Crash Facts* was first published in 1993. Consistent with this result is the fact that 1999 recorded the fewest number of pedestrian fatalities since 1993, with the under 16-year-old age group showing the most improvement. While two out of three pedestrian injuries occurred between noon and 5:59 PM, more than one out of three fatalities occurred between midnight and 5:59 AM. Not surprisingly, 77 percent of pedestrians involved in crashes were injured or killed. Nearly 60 percent of pedestrian crashes occurred while pedestrians were crossing the road, and 60 percent of those crashes occurred at intersections.

The number of bicyclist fatal crashes has remained relatively flat over the past seven years. This is an encouraging trend following three years of an increasing number of crashes. Nearly two-thirds of the crashes occurred between 2 and 7:59 PM, with Tuesday through Friday posting the greatest number of crashes. Males are over-represented in both the number of bicycle crashes and the number of fatal bicycle crashes. While there were 11 male fatalities over the age of 15, there were no female fatalities in the same age categories.

Unfortunately, a valid but deadly statistic is the nonuse of seat and shoulder belts in fatal crashes. Seat and shoulder belts have been demonstrated to be about 45 percent effective in crashes. Although a seat belt cannot guarantee that it will save a life, it could have saved the lives of approximately one out of two individuals fatally injured in a crash where the seat belt was either not used, or not used properly. In 1999, there were 427 vehicle occupants killed who were not wearing a seat belt. Provided that those crashes were survivable, the total number of fatalities could have been reduced by over 200 deaths, had these individuals been properly buckled up. The 1999 statistics did show an increase in safety restraint use of 5.1 percent for drivers, and seven percent for passengers who were fatally injured, versus similar results for 1998. This is the first major increase observed in this area in the past five years, and is perhaps an outcome of Indiana's Primary Seat Belt Law (effective date-July 1, 1998). However, nearly two out of three fatally injured occupants were not properly buckled. A second conclusion can be drawn from the 1999 results. As the use of seat belts by vehicle occupants increased, the degree of injury severity (fatal, serious, or moderate level of injury) decreased, again showing the value of seat belts.

The closing tables and figures in this section display the results of Indiana's September 2000 observational seat belt survey. This survey is conducted annually throughout the state and utilizes a methodology that provides a statistically sound cross section of restraint use. Subsequent to the passage of the primary law, an immediate increase was seen in restraint use. However, the usage rate in September 1999 showed a 5 percent decrease from the 1998 results, perhaps because of the legal controversy that followed passage of the law. The September 2000 results showed restraint usage return to the 1998 usage rate, with female drivers on certain road types showing usage rates as high as 75 percent. Unfortunately, pickup trucks continue to be excluded from the Indiana law; as a consequence, usage rates for pickup truck occupants as low as 19 percent were observed. A change in the law to include pickup truck occupants is projected to lead to an increase in seat belt usage rates of 8-10 percent, but more importantly, save additional lives.

Table 31. Rural and Urban Fatalities by Age, Role and Gender, 1999

			V	ehicle <sup>1</sup>				ı	Motorc	ycle <sup>2</sup>			В	icyclist		Pe	destria	n	Total	<sup>3</sup> Fatalit	ies
		Driver		Pa	assenger			Driver		Pa	ssenge	r									
Age	Male	Fem	Tot	Male	Fem	Tot	Male	Fem	Tot	Male	Fem	Tot	Male	Fem	Tot	Male	Fem	Tot	Male	Fem	Tot
									R	URAL											
0-4	0	0	0	2	4	6	0	0	0	0	0	0	0	0	0	1	0	1	3	4	7
5-9	0	0	0	4	5	9	0	0	0	0	0	0	0	0	0	1	0	1	5	5	10
10-15	2	1	3	11	8	19	1	0	1	0	0	0	1	1	2	0	0	0	15	10	25
16-17	17	17	35	10	11	21	0	0	0	0	0	0	2	0	2	1	0	1	30	28	59
18-20	38	13	51	15	5	20	1	0	1	0	0	0	0	0	0	0	0	0	54	18	72
21-24	38	15	55	8	7	15	2	0	2	0	1	1	0	0	0	2	0	2	50	23	75
25-34	65	25	90	15	11	26	5	1	6	0	0	0	2	0	2	2	2	4	89	39	128
35-44	60	21	81	3	4	7	13	3	16	0	2	2	3	0	3	2	1	3	81	31	112
45-54	50	21	71	5	10	15	10	0	10	0	0	0	0	0	0	5	3	8	70	34	104
55-64	28	10	38	5	6	11	4	1	5	0	1	1	0	0	0	3	0	3	40	18	58
65-74	15	9	24	8	6	14	0	0	0	0	0	0	1	0	1	1	0	1	25	15	40
75+	28	14	42	6	16	22	0	0	0	0	0	0	0	0	0	1	2	3	35	32	67
Unknown	0	0	0	3	1	4	0	0	0	0	0	0	0	0	0	0	0	0	3	1	4
TOTAL	341	146	490	95	94	189	36	5	41	0	4	4	9	1	10	19	8	27	500	258	761
									U	RBAN											
0-4	0	0	0	4	1	5	0	0	0	0	0	0	0	0	0	2	1	3	6	2	8
5-9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1	1
10-15	0	0	0	1	1	2	0	0	0	0	0	0	0	1	1	0	1	1	1	3	4
16-17	1	1	2	3	1	4	0	0	0	0	0	0	0	0	0	0	0	0	4	2	6
18-20	9	2	11	3	5	8	0	0	0	0	1	1	0	0	0	1	0	1	13	8	21
21-24	7	3	10	2	5	7	2	0	2	0	0	0	0	0	0	1	0	1	12	8	20
25-34	20	3	23	3	1	4	11	0	11	0	0	0	2	0	2	7	3	11	43	7	51
35-44	14	6	20	2	0	2	2	0	2	0	0	0	0	0	0	6	1	7	24	7	31
45-54	13	6	19	4	2	6	2	0	2	0	0	0	1	0	1	4	1	5	24	9	33
55-64	12	5	17	0	1	1	3	0	3	0	0	0	0	0	0	2	2	4	17	8	25
65-74	10	7	17	0	3	3	0	0	0	0	0	0	0	0	0	0	1	1	10	11	21
75+	13	9	22	3	7	10	1	0	1	0	0	0	0	0	0	2	2	4	19	18	37
Unknown	0	0	0	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2
TOTAL	99	42	141	26	28	54	21	0	21	0	1	_1_	3	11	4	25	13	39	174	85	260

<sup>• 3</sup> out of 4 fatalities occurred on rural roads, remaining consistent with recent years' results.

- 2 out of 3 fatalities were males.
- 1 out of 3 fatalities was male between the ages of 25–54.
- 55 children (under the age of 16) were killed in 1999, a reduction of 13 from 1998, and 24 from 1997.

3 = Totals include persons of unknown gender.

Note: Tables count fatalities, not crashes Legend: Fem=Female; Tot=Total

 $<sup>1 = \</sup>textit{Vehicle includes any motor vehicle except motorcycles, mopeds, motorized bicycles, motor scooters, and minibikes.}$ 

<sup>2 =</sup> Motorcycle includes motorcycles, mopeds, motorized bicycles, motor scooters and minibikes.

Table 32. Rural and Urban Injuries by Age, Role and Gender, 1999

			,	/ehicle <sup>1</sup>					Motor	cycle <sup>2</sup>			1	Bicyclist		Ped	destriar	1	Tot	al <sup>3</sup> Injurie	5
		Drive	er		Passenger			Driver		F	asseng	er									
Age	Male	e Fem	Tot	Male	Fem	Tot	Male	Fem	Tot	Male	Fem	Tot	Male	Fem	Tot	Male	Fem	Tot	Male	Fem	Tot
										RUR	۸L										
0-4	9	6	15	299	284	587	0	0	0	1	0	1	1	1	2	8	4	12	318	295	617
5-9	2	4	6	372	428	804	0	0	0	1	1	2	12	10	22	19	4	23	406	447	857
10-15	42	31	73	606	782	1,401	26	8	34	4	5	9	40	13	54	20	19	39	738	858	1,610
16-17	1,072	1,031	2,109	457	590	1,091	18	1	19	1	4	5	5	2	7	9	5	14	1,562	1,633	3,245
18-20	1,415	1,036	2,451	511	465	993	77	2	79	0	6	6	7	2	9	7	9	16	2,017	1,520	3,554
21-24	1,169	924	2,095	339	317	661	64	2	66	1	10	11	7	1	8	12	6	18	1,592	1,260	2,859
25-34	2,082	1,663	3,755	409	501	914	134	13	147	3	7	11	13	2	15	37	17	54	2,678	2,203	4,896
35-44	1,829	1,497	3,327	242	389	635	155	12	167	0	26	26	6	1	7	25	13	38	2,257	1,938	4,200
45-54	1,243	1,004	2,247	153	320	478	110	13	123	0	15	15	7	2	9	10	11	21	1,523	1,365	2,893
55-64	697	536	1,234	81	232	314	33	1	34	0	4	4	2	2	4	12	4	16	825	779	1,606
65-74	406	304	712	54	208	262	11	0	11	0	1	1	3	0	3	9	1	11	483	514	1,000
75+	306	274	580	44	149	194	3	0	3	0	1	1	0	0	0	5	1	6	358	425	784
Unknown	31	18	60	201	301	2,071	4	0	4	1	7	11	17	6	38	7	3	23	261	335	2,207
TOTAL	10,303	8,328	18,664	3,768	4,966	10,405	635	52	687	12	87	103	120	42	178	180	97	291	15,018	13,572	30,328
										URBA	N										
0-4	7	13	20	352	367	731	2	0	2	0	0	0	8	6	14	69	25	94	438	411	861
5-9	4	3	7	538	539	1,090	1	1	2	1	2	3	136	58	195	135	74	210	815	677	1,507
10-15	33	20	53	626	977	1,610	59	8	67	6	6	12	234	63	301	124	91	216	1,082	1,165	2,259
16-17	731	903	1,639	386	666	1,064	28	3	31	1	3	4	39	11	51	52	25	77	1,237	1,611	2,866
18-20	1,310	1,568	2,879	490	722	1,226	91	6	97	2	6	8	43	12	55	52	36	89	1,988	2,350	4,354
21-24	1,275	1,545	2,823	403	546	955	125	3	128	2	4	6	30	6	36	56	26	83	1,891	2,130	4,031
25-34	2,458	2,782	5,248	490	796	1,302	200	10	210	0	12	13	37	18	57	78	60	138	3,263	3,678	6,968
35-44	2,140	2,541	4,685	359	729	1,095	170	12	184	1	10	11	41	11	52	88	68	159	2,799	3,371	6,186
45-54	1,476	1,811	3,290	189	524	719	110	4	114	1	5	6	20	5	25	61	57	119	1,857	2,406	4,273
55-64	855	998	1,855	86	362	451	29	5	34	0	0	0	7	3	11	29	41	70	1,006	1,409	2,421
65-74	608	658	1,266	64	326	391	16	0	16	0	1	1	7	2	9	29	18	47	724	1,005	1,730
75+	459	536	997	57	308	366	2	1	4	0	0	0	2	0	2	13	18	32	533	863	1,401
Unknown	39	28	76	228	482	3,401	3	1	4	0	2	5	56	13	111	20	11	95	346	537	3,692
TOTAL	11,395	13,406	24,838	4,268	7,344	14,401	836	54	893	14	51	69	660	208	919	806	550	1,429	17,979	21,613	42,549

<sup>1 =</sup> Vehicle includes any motor vehicle except motorcycles, mopeds, motorized bicycles, motor scooters, and minibikes.

Note: Tables count injuries, not crashes.

Legend: Fem=Female; Tot=Total.

• 35 children (under the age of 5), listed as the driver, were injured.

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 1999 data, there were six discrepancies.

 $<sup>2 =</sup> Motorcycle\ includes\ motorcycles, mopeds, motorized\ bicycles, motor\ scooters\ and\ minibikes.$ 

<sup>3 =</sup> Totals include persons of unknown gender.

<sup>• 58</sup> percent of injuries occurred in urban areas.

Table 33. Rural and Urban Serious Injuries by Age, Role and Gender, 1999

			v	ehicle 1					Moto	rcycle <sup>2</sup>				Bicyclist		Ped	lestrian		Tota	al <sup>3</sup> Injuries	i
		Driv	ver		Passenge	er		Driver			Passenge	er									
Age	Male	Fem	Tot	Male	Fem	Tot	Male	Fem	Tot	Male	Fem	Tot	Male	Fem	Tot	Male	Fem	Tot	Male	Fem	Tot
			_							RUR	AL										
0-4	0	0	0	34	20	54	0	0	0	0	0	0	0	0	0	2	3	5	36	23	59
5-9	0	0	0	28	33	61	0	0	0	1	0	1	3	2	5	8	0	8	40	35	75
10-15	10	2	12	56	61	120	6	2	8	0	1	1	7	2	9	5	2	7	84	70	157
16-17	133	78	212	62	67	130	3	0	3	0	2	2	0	0	0	3	0	3	201	147	350
18-20	183	82	265	90	61	151	20	1	21	0	2	2	0	1	1	4	1	5	297	148	445
21-24	164	81	245	58	44	103	19	0	19	1	3	4	1	1	2	3	2	5	246	131	378
25-34	304	175	481	62	50	112	42	3	45	0	1	1	2	0	2	10	5	15	420	234	656
35-44	256	152	408	32	50	82	57	3	60	0	8	8	3	0	3	13	7	20	361	220	581
45-54	157	98	255	25	34	59	38	3	41	0	5	5	2	1	3	3	1	4	225	142	367
55-64	82	55	137	9	24	33	13	0	13	0	3	3	0	0	0	5	2	7	109	84	193
65-74	45	46	91	2	20	22	2	0	2	0	0	0	0	0	0	5	0	6	54	66	121
75+	46	34	80	3	23	26	1	0	1	0	0	0	0	0	0	1	1	2	51	58	109
Unknown	3	0	3	17	22	62	2	0	2	1	0	2	2	2	10	3	1	5	28	25	84
TOTAL	1,383	803	2,189	478	509	1,015	203	12	215	3	25	29	20	9	35	65	25	92	2,152	1,383	3,575
										URB/	AΝ										
0-4	0	0	0	11	11	22	0	0	0	0	0	0	1	2	3	11	5	16	23	18	41
5-9	0	0	0	22	13	35	0	0	0	1	0	1	18	8	26	28	13	41	69	34	103
10-15	3	3	6	39	32	72	13	1	14	1	3	4	23	5	28	22	15	37	101	59	161
16-17	44	35	79	30	31	63	6	1	7	0	0	0	4	0	4	11	1	12	95	68	165
18-20	76	54	130	34	31	65	15	1	16	1	2	3	5	1	6	11	3	14	142	92	234
21-24	106	69	175	28	32	60	35	1	36	1	1	2	4	0	4	14	5	19	188	108	296
25-34	186	100	286	40	30	70	53	3	56	0	2	3	5	1	6	25	9	34	309	145	455
35-44	141	103	244	21	36	57	46	2	49	1	1	2	4	1	5	19	6	25	232	149	382
45-54	108	80	188	13	29	42	32	1	33	0	0	0	3	0	3	15	9	24	171	119	290
55-64	57	52	109	3	19	22	4	2	6	0	0	0	0	0	0	6	11	17	70	84	154
65-74	39	39	78	2	15	17	4	0	4	0	0	0	1	0	1	8	5	13	54	59	113
75+	39	40	79	5	22	27	1	0	1	0	0	0	1	0	1	3	4	7	49	66	115
Unknown	2	0	3	11	18	35	1	0	1	0	0	0	6	1	11	4	1	7	24	20	57
TOTAL	801	575	1,377	259	319	587	210	12	223	5	9	15	75	19	98	177	87	266	1,527	1,021	2,566

 $<sup>1 = \</sup>textit{Vehicle includes any motor vehicle except motorcycles, mopeds, motorized bicycles, motor scooters, and minibikes.}$ 

Note: Tables count injuries, not crashes.

Legend: Fem=Female; Tot=Total.

• Approximately 3 out of 5 serious injuries occurred in rural areas, remaining consistent with recent years' results.

 $<sup>2 =</sup> Motorcycle\ includes\ motorcycles,\ mopeds,\ motorized\ bicycles,\ motor\ scooters\ and\ minibikes.$ 

<sup>3 =</sup> Totals include persons of unknown gender.

Table 34. Rural and Urban Minor Injuries by Age, Role and Gender, 1999

				. 1						. 2	,									tal Mino	r <sup>3</sup>
-		Duinne	Vehi							rcycle <sup>2</sup>			Bi	cyclis	t	Pe	destri	an		Injuries	
Age _	Male	Driver Fem	Tot	Male	Passeng Fem			Orive Fem		Male I	seng Fem		Male	Fem	Tot	Male	Fem	Tot	Male	Fem	Tot
7190										RAL											
0-3	9	6	15	192	184	379	0	0	0	0	0	0	0	1	1	2	0	2	203	191	397
4 - 12	11	7	18	633	694	1,332	2	0	2	4	2	6	28	14	43	22	13	35	698	730	1,434
13 - 15	23	26	49	334	502	846	18	6	24	1	3	4	15	5	20	8	9	17	398	551	959
16 - 17	939	953	1,897	395	523	961	15	1	16	1	2	3	5	2	7	6	5	11	1,361	1,486	2,895
18 - 20	1,232	954	2,186	421	404	842	57	1	58	0	4	4	7	1	8	3	8	11	1,720	1,371	3,108
21 - 24	1,005	843	1,850	281	273	558	45	2	47	0	7	7	6	0	6	9	4	13	1,346	1,130	2,482
25 - 34	1,778	1,488	3,274	347	451	802	92	10	102	3	6	10	11	2	13	27	12	39	2,258	1,965	4,236
35 - 44	1,573	1,345	2,919	210	339	553	98	9	107	0	18	18	3	1	4	12	6	18	1,896	1,718	3,619
45 - 54	1,086	906	1,992	128	286	419	72	10	82	0	10	10	5	1	6	7	10	17	1,298	1,220	2,523
55 - 64	615	481	1,097	72	208	281	20	1	21	0	1	1	2	2	4	7	2	9	716	695	1,413
65 - 74	361	258	621	52	188	240	9	0	9	0	1	1	3	0	3	4	1	5	429	449	880
75+	260	240	500	41	126	168	2	0	2	0	1	1	0	0	0	4	0	4	307	367	675
Unknown	28	18	57	184	279	2,009	2	0	2	0	7	9	15	4	28	4	2	18	233	310	2,123
TOTAL	8,920	7,525	16,475	3,290	4,457	9,390	432	40	472	9	62	74	100	33	143	115	72	199	12,863	12,183	26,744
									URE	BAN											
0 - 3	7	13	20	256	259	521	2	0	2	0	0	0	2	2	4	43	15	58	310	289	605
4 - 12	11	3	14	860	958	1,838	5	2	7	3	4	7	231	84	318	162	107	271	1,266	1,158	2,449
13 - 15	23	17	40	328	610	943	42	6	48	2	1	3	103	26	131	62	35	97	557	694	1,258
16 - 17	687	868	1,560	356	635	1,001	22	2	24	1	3	4	35	11	47	41	24	65	1,142	1,540	2,698
18 - 20	1,234	1,514	2,749	456	691	1,161	76	5	81	1	4	5	38	11	49	41	33	75	1,844	2,256	4,116
21 - 24	1,169	1,476	2,648	375	514	895	90	2	92	1	3	4	26	6	32	42	21	64	1,703	2,022	3,735
25 - 34	2,272	2,682	4,962	450	766	1,232	147	7	154	0	10	10	32	17	51	53	51	104	2,953	3,526	6,505
35 - 44	1,999	2,438	4,441	338	693	1,038	124	10	135	0	9	9	37	10	47	69	62	134	2,566	3,214	5,795
45 - 54	1,368	1,731	3,102	176	495	677	78	3	81	1	5	6	17	5	22	46	48	95	1,686	2,286	3,982
55 - 64	798	946	1,746	83	343	429	25	3	28	0	0	0	7	3	11	23	30	53	936	1,324	2,266
65 - 74	569	619	1,188	62	311	374	12	0	12	0	1	1	6	2	8	21	13	34	670	947	1,618
75+	420	496	918	52	286	339	1	1	3	0	0	0	1	0	1	10	14	25	484	797	1,286
Unknown	37	28	73	217	464	3,366	2	1	3	0	2	5	50	12	100	16	10	88	321	514	3,631
TOTAL	10,594	12,831	23,461	4,009	7,025	13,814	626	42	670	9	42	54	585	189	821	629	463	1,163	16,438	20,567	39,944

<sup>1=</sup> Vehicle includes any motor vehicle except motorcycles, mopeds, motorized bicycles, motor scooters and minibiles. Note: Tables count minor injuries, not crashes.

Legend: Fem=Female; Tot=Total

 $<sup>2= \</sup>textit{M}\ otorcycle\ includes\ motorcycles,\ mopeds,\ motorized\ bicycles,\ motor\ scooters\ and\ minibikes.$ 

<sup>3 =</sup> Totals include persons of unknown gender.

<sup>• 60</sup> percent of Minor Injuries occurred in urban locales.

<sup>•</sup> Females sustained 51.5 percent of minor injuries that occurred in urban locales.

Table 35. Drivers in Crashes by Age, Gender and Severity, 1999

		Orivers i tal Cras			rs in Per ury Crasl			rivers in Pro Damage Cra			tal Numbe ers in Cra	
Age	Male	Fem	Tot	Male	Fem	Tot	Male	Fem	Tot	Male	Fem	Tot
<15	2	0	2	175	87	262	345	179	526	522	266	790
15	1	2	3	123	69	192	222	173	395	346	244	590
16	23	16	40	1,633	1,529	3,167	4,913	3,770	8,694	6,569	5,315	11,901
17	23	13	36	2,115	1,720	3,847	6,178	4,322	10,521	8,316	6,055	14,404
18	29	16	45	2,230	1,596	3,829	6,625	4,182	10,821	8,884	5,794	14,695
19	47	10	57	1,969	1,420	3,390	5,834	3,744	9,596	7,850	5,174	13,043
20	25	8	33	1,652	1,215	2,873	5,078	3,293	8,390	6,755	4,516	11,296
21	37	11	49	1,526	1,178	2,706	4,724	2,971	7,701	6,287	4,160	10,456
22	21	3	24	1,428	1,081	2,512	4,169	2,863	7,045	5,618	3,947	9,581
23	18	9	28	1,194	845	2,042	3,810	2,375	6,198	5,022	3,229	8,268
24	22	12	34	1,210	883	2,099	3,584	2,294	5,891	4,816	3,189	8,024
25-34	222	62	284	10,358	7,681	18,069	32,451	21,171	53,704	43,031	28,914	72,057
35-44	195	78	273	9,339	7,103	16,467	29,930	20,160	50,173	39,464	27,341	66,913
45-54	157	55	212	6,517	4,829	11,357	21,477	13,841	35,384	28,151	18,725	46,953
55-64	98	26	124	3,756	2,604	6,368	12,944	7,589	20,571	16,798	10,219	27,063
65-74	41	23	64	2,429	1,634	4,066	7,717	4,671	12,412	10,187	6,328	16,542
<b>75</b> +	61	29	90	1,682	1,397	3,085	5,015	3,883	8,920	6,758	5,309	12,095
Unknown	1	0	10	556	334	2,817	4,684	2,848	24,728	5,241	3,182	27,555
Total	1,023	373	1,408	49,892	37,205	89,148	159,700	104,329	281,670	210,615	141,907	372,226

<sup>\*</sup>Total includes drivers whose gender is unknown Note: Drivers of parked vehicles are excluded.

Legend: Fem=Female; Tot=Total

• While the number of 16-, 17- and 18year-old drivers involved in crashes decreased, there was a corresponding decrease in the number of licenses in these age categories.

<sup>•</sup> Male drivers were involved in 73 percent of the fatal crashes, while they were only involved in 56 percent of all other crashes.

Table 36. Drivers in Crashes by Age and Gender, 1999

			All (	Crashes			Alcohol-Re	elated Cras	hes
		Fatal	Personal	Property	Total	Fatal	Personal	Property	Total
_	_	Crashes	Damage	Damage	Crashes	Crashes	Damage	Damage	Crashes
Age and (	Gender	%	%	%	%	%	%	%	%
<21	Male	150	9,897	29,195	39,242	26	515	662	1,203
	% Total	10.7%	11.1%	10.4%	10.5%	9.2%	9.0%	9.5%	9.3%
	Female	65	7,636	19,663	27,364	7	221	238	466
	% Total	4.6%	8.6%	7.0%	7.4%	2.5%	3.9%	3.4%	3.6%
	Total	216	17,560	48,943	66,719	33	736	901	1,670
	% Total	15.3%	19.7%	17.4%	17.9%	11.7%	12.9%	12.9%	12.9%
21-34	Male	320	15,716	48,738	64,774	100	1,780	2,094	3,974
	% Total	22.7%	17.6%	17.3%	17.4%	35.3%	31.2%	30.0%	30.7%
	Female	97	11,668	31,674	43,439	16	537	630	1,183
	% Total	6.9%	13.1%	11.2%	11.7%	5.7%	9.4%	9.0%	9.1%
	Total	419	27,428	80,539	108,386	117	2,318	2,729	5,164
	% Total	29.8%	30.8%	28.6%	29.1%	41.3%	40.6%	39.1%	39.8%
35-54	Male	352	15,856	51,407	67,615	74	1,569	1,800	3,443
	% Total	25.0%	17.8%	18.3%	18.2%	26.1%	27.5%	25.8%	26.6%
	Female	133	11,932	34,001	46,066	28	524	707	1,259
	% Total	9.4%	13.4%	12.1%	12.4%	9.9%	9.2%	10.1%	9.7%
	Total	485	27,824	85,557	113,866	102	2,094	2,509	4,705
	% Total	34.4%	31.2%	30.4%	30.6%	36.0%	36.7%	36.0%	36.3%
55+	Male	200	7,867	25,676	33,743	29	367	478	874
	% Total	14.2%	8.8%	9.1%	9.1%	10.2%	6.4%	6.9%	6.7%
	Female	78	5,635	16,143	21,856	2	113	144	259
	% Total	5.5%	6.3%	5.7%	5.9%	0.7%	2.0%	2.1%	2.0%
	Total	278	13,519	41,903	55,700	31	481	622	1,134
	% Total	19.7%	15.2%	14.9%	15.0%	11.0%	8.4%	8.9%	8.7%
TOTAL	Male	1,023	49,892	159,700	210,615	229	4,254	5,079	9,562
	% Total	72.7%	56.0%	56.7%	56.6%	80.9%	74.6%	72.8%	73.8%
	Female	373	37,205	104,329	141,907	53	1,401	1,733	3,187
	% Total	26.5%	41.7%	37.0%	38.1%	18.7%	24.6%	24.8%	24.6%
	Total	1,408	89,148	281,670	372,226	283	5,704	6,975	12,962
	% Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

- Nearly 3 out of 4 alcoholinvolved crashes involved a male driver; 4 out of 5 fatal alcohol crashes involved a male driver.
- Male drivers in the 21-34 age bracket were involved in 35 percent of the fatal crashes in 1999.

This table provides a detailed break-down by type of crash, gender and age. It is important to point out that being involved in the crash does not imply that the driver from that age group was the cause of the crash. For example, although an under 21-year-old driver was involved in an alcohol-related crash, it does not mean that the young driver was the impaired driver.

Note: This report counts drivers, not crashes.

Drivers of parked vehicles are excluded.

Totals include drivers whose age and/or gender is unknown.

Example: Of all drivers involved in alcohol-related crashes in the State, 9.3% (1,203/12,962) were male drivers under the age of 21.

Also, of all drivers involved in fatal alcohol-related crashes, 9.2% (26/283) were male drivers under the age of 21.

- Nearly one-half (46 percent) of all crashes occurred between noon and 5:59 PM.
- While males were involved in 58 percent of the crashes between noon and 5:59 PM, they were involved in 74 percent of the crashes between midnight and 5:59 AM.
- The 21-34 year old male driver was nearly three times as likely to be involved in a crash between midnight and 5:59 AM, as compared to female drivers of the same age.

Table 37. Drivers in Crashes by Age, Gender and Time of Day, 1999

			Time	e Period		
Age and	d Gender	12:00 AM 5:59 AM	6:00 AM 11:59 AM	12:00 PM 5:59 PM	6:00 PM 11:59 PM	Total Crashes
<21	Male % Total	2,420 <i>6.2%</i>	7,196 <i>18.3%</i>	18,026 <i>45.9%</i>	10,695 <i>27</i> .3%	39,242
	Female <i>% Total</i>	1,071 3.9%	5,436 19.9%	13,396 <i>49.0%</i>	6,852 <i>25.0%</i>	27,364
	Total <i>% Total</i>	3,498 <i>5.2%</i>	12,648 <i>19.0%</i>	31,485 <i>47.2%</i>	17,569 <i>26</i> .3%	66,719
21-34	Male % Total	5,773 8.9%	15,365 <i>23.7%</i>	27,718 <i>42</i> .8%	14,503 <i>22.4%</i>	64,774
	Female % Total	1,993 <i>4.6%</i>	11,307 <i>26.0%</i>	20,659 <i>47.6%</i>	8,473 19.5%	43,439
	Total % Total	7,779 <i>7.2%</i>	26,716 <i>24</i> .6%	48,449 <i>44.7%</i>	23,011 <i>21.2%</i>	108,386
35-54	% Total	4,242 6.3%	17,985 <i>26.6%</i>	30,397 <i>45.0%</i>	13,477 <i>19.9%</i>	67,615
	Female % Total	1,708 3.7%	12,416 <i>27.0%</i>	22,605 49.1%	8,225 17.9%	46,066
	Total % Total	5,961 <i>5.2%</i>	30,441 <i>26.7%</i>	53,082 <i>46.6%</i>	21,741 19.1%	113,866
55+	Male <i>% Total</i>	1,111 3.3%	10,107 <i>30.0%</i>	16,467 <i>48</i> .8%	5,250 15.6%	33,743
	Female <i>% Total</i>	371 1.7%	6,319 <i>28.9%</i>	11,689 <i>53.5%</i>	2,880 13.2%	21,856
	Total <i>% Total</i>	1,486 <i>2.7%</i>	16,447 29.5%	28,211 <i>50.6%</i>	8,141 <i>14</i> .6%	55,700
TOTAL	Male % Total	13,773 <i>6.5%</i>	51,797 <i>24</i> .6%	94,890 <i>45</i> .1%	44,910 <i>21</i> .3%	210,615
	Female % Total	5,210 3.7%	36,210 <i>25.5%</i>	69,817 <i>49.2%</i>	26,949 19.0%	141,907
	Total <i>% Total</i>	20,935 <i>5.6%</i>	91,877 <i>24.7%</i>	171,755 <i>46.1%</i>	76,593 <i>20.6%</i>	372,226

Note: This report counts drivers, not crashes. Drivers of parked vehicles are excluded.

Totals include drivers whose age and/or gender is unknown.

Of all male drivers under age 21 involved in crashes in the state, 45.9% (18,026/39,242) were involved in crashes between 12:00 PM and 5:59 PM.

Table 38. Percentage of Crashes by Driver Age and Time of Day, 1999

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	3.1%	2.5%	8.3%	10.2%	19.6%	28.9%	17.8%	7.2%	2.4%
16-17	2.4%	0.7%	10.9%	7.8%	15.6%	33.0%	16.2%	11.2%	2.2%
18-20	4.4%	2.3%	8.8%	10.4%	18.3%	27.9%	15.5%	10.1%	2.3%
21-24	4.5%	3.8%	10.5%	11.9%	18.6%	26.0%	14.0%	8.4%	2.3%
25-34	3.3%	3.3%	12.9%	12.9%	18.4%	26.4%	13.5%	7.1%	2.2%
35-44	2.6%	3.0%	12.9%	13.6%	19.3%	26.8%	13.0%	6.6%	2.3%
45-54	2.0%	2.7%	12.7%	14.5%	19.7%	27.7%	12.8%	5.7%	2.3%
55-64	1.6%	2.2%	11.7%	17.0%	21.5%	26.8%	11.6%	5.1%	2.4%
65-74	0.9%	1.1%	9.2%	20.9%	25.4%	26.1%	10.3%	3.7%	2.4%
75+	0.7%	0.4%	6.8%	23.6%	28.3%	26.3%	8.4%	2.5%	2.9%
Unknown	4.7%	3.3%	9.4%	11.0%	16.1%	22.1%	13.3%	9.0%	11.1%
TOTAL	3.0%	2.7%	11.3%	13.4%	19.2%	26.9%	13.3%	7.3%	3.0%

Note: Boxed numbers identify areas where there is an over-representation.

Table 39. Percentage of Fatal Crashes by Driver Age and Time of Day, 1999

	12:00 AM	3:00 AM	6:00 AM	9:00 AM	12:00 PM	3:00 PM	6:00 PM	9:00 PM	
Age	2:59 AM	5:59 AM	8:59 AM	11:59 AM	2:59 PM	5:59 PM	8:59 PM	11:59 PM	UNK
<16	0.0%	0.0%	0.0%	20.0%	20.0%	40.0%	20.0%	0.0%	0.0%
16-17	6.6%	1.3%	15.8%	9.2%	7.9%	23.7%	11.8%	23.7%	0.0%
18-20	14.8%	8.1%	10.4%	8.1%	12.6%	20.7%	12.6%	11.9%	0.7%
21-24	13.3%	11.1%	14.8%	6.7%	12.6%	11.1%	11.9%	17.8%	0.7%
25-34	9.2%	10.9%	12.3%	11.6%	14.8%	17.6%	10.6%	12.3%	0.7%
35-44	8.8%	8.1%	7.3%	13.6%	15.4%	19.0%	17.9%	9.5%	0.4%
45-54	5.7%	7.1%	12.7%	12.7%	16.5%	18.9%	14.6%	11.8%	0.0%
55-64	5.6%	4.0%	8.9%	10.5%	25.8%	26.6%	12.1%	5.6%	0.8%
65-74	0.0%	3.1%	14.1%	15.6%	26.6%	17.2%	17.2%	6.2%	0.0%
75+	2.2%	0.0%	12.2%	27.8%	24.4%	21.1%	7.8%	4.4%	0.0%
Unknown	30.0%	20.0%	10.0%	0.0%	10.0%	0.0%	0.0%	20.0%	10.0%
TOTAL	8.3%	7.4%	11.4%	12.3%	16.5%	19.0%	13.2%	11.4%	0.5%

Note: Boxed numbers identify areas where there is an over-representation.

- The peak time period for a crash to occur was between 3 PM and 5:59 PM. Nearly 27 percent of the crashes occurred during these typical, evening commuting hours that represent only one-eighth of the day.
- 1 out of 3 crashes involving a 16–17-yearold driver occurred in the after-school hours, representing more than 3 times their exposure on their drive to school.
- The incidence of fatal crashes was less than all crashes occurring during the noon-5:59 PM period, similar to all crashes during the 6 AM-11:59 AM and 6 PM-8:59 PM brackets, but much higher from 9 PM-5:59 AM.

Boxed areas are over-represented percentages for that age group. For example, Table 38 indicates that 26.9 percent of the crashes (Total) occurred between 3:00 PM and 5:59 PM. For the 16-year-old driver, they experienced 33.0 percent of their crashes during this same time period—an over-representation. However, a degree of caution has to be exercised where analyzing percentages, because the actual number of incidents is not viewed. Thus, it is important to use these tables in conjunction with the actual data shown in other tables.

- Nearly 1 out of 9 drivers who had acknowledged they had been drinking prior to the crash were under 21 years old.
- The reported incidence of underage drinking prior to the crash increased by 3 percent over 1998, and 7.8 percent over 1997.

Table 40. Drivers in Crashes by Age and Physical Status, 1999

Age		Normal	Had Been Drinking	Physical Handicaps	Illness	Fatigued	Asleep	Medication or Drugs	Unknown	Total
<1	5	637	21	1	2	1	1	1	126	790
15		519	6	0	0	0	0	1	64	590
16		10,261	56	4	8	14	18	10	1,530	11,901
17		12,390	134	2	10	26	22	8	1,812	14,404
18		12,544	212	4	18	35	30	22	1,830	14,695
19		11,102	287	3	8	38	42	17	1,546	13,043
20		9,505	276	5	16	29	48	13	1,404	11,296
21		8,670	451	3	10	21	30	6	1,265	10,456
22		8,013	360	2	12	21	32	13	1,128	9,581
23		6,911	285	5	10	18	19	7	1,013	8,268
24		6,753	284	2	10	15	20	17	923	8,024
25	-34	60,248	2,410	63	112	123	128	91	8,882	72,057
35	-44	55,364	2,220	75	118	122	89	125	8,800	66,913
45	-54	39,209	933	58	131	70	74	52	6,426	46,953
55	-64	22,555	354	44	102	25	35	20	3,928	27,063
65	-74	13,677	144	58	94	25	28	14	2,502	16,542
75	+	9,968	65	68	59	20	15	12	1,888	12,095
Un	known	884	60	1	4	1	2	2	26,601	27,555
Total		289,210	8,558	398	724	604	633	431	71,668	372,226

Note: Drivers of parked vehicles are excluded.

Table 41. Drivers in Crashes by Age and Severity, 1999

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 Personal Injury Crashes	Drivers in Property Damage Crashes
<15	0	0.00%	0.21%	N/A	790	2	262	526
15	0	0.00%	0.16%	N/A	590	3	192	395
16	39,039	1.01%	3.20%	30.5%	11,901	40	3,167	8,694
17	56,226	1.45%	3.87%	25.6%	14,404	36	3,847	10,521
18	64,916	1.67%	3.95%	22.6%	14,695	45	3,829	10,821
19	70,786	1.83%	3.50%	18.4%	13,043	57	3,390	9,596
20	70,897	1.83%	3.03%	15.9%	11,296	33	2,873	8,390
21	63,424	1.64%	2.81%	16.5%	10,456	49 24 28	2,706	7,701
22	67,843	1.75%	2.57%	14.1%	9,581		2,512	7,045
23	66,152	1.71%	2.22%	12.5%	8,268		2,042	6,198
24	67,633	1.74%	2.16%	11.9%	8,024	34	2,099	5,891
25-34	694,011	17.90%	19.36%	10.4%	72,057	284	18,069	53,704
35-44	844,534	21.78%	17.98%	7.9%	66,913	273	16,467	50,173
45-54	740,431	19.10%	12.61%	6.3%	46,953	212	11,357	35,384
55-64	479,803	12.38%	7.27%	5.6%	27,063	124	6,368	20,571
65-74	339,197	8.75%	4.44%	4.9%	16,542	64	4,066	12,412
75+	212,016	5.47%	3.25%	5.7%	12,095	90	3,085	8,920
Unknown	0	0.00%	7.40%	N/A	27,555	27,555 10		24,728
Total	3,876,908				372,226	1,408	89,148	281,670

Legend: N/A=Not Applicable

Note: Drivers of parked vehicles excluded.

Boxed numbers identify areas where there is an over-representation.

Note: Boxed numbers identify areas where there is an over-representation.

- Young drivers continued to be overrepresented in crashes compared to older drivers.
- By the time they reach the age of 19, three out of four young drivers will have been involved in a crash as a driver.
- Young drivers, age 16–24, continued to be noticeably over-represented in both fatal and non-fatal crashes.
- With increased experience, practice, and maturity, driver crash involvement continued to decrease with the exception of the 75+ year old driver.

Boxed areas are over-represented percentages for that age group. For example, 30.5 percent of the licensed 16-year-old drivers were involved in a crash in 1999. There were 11,901 16-year-old drivers in a crash, and 39,039 licensed 16-year old drivers. This equates to a 16-year-old driver being involved in nearly five times as many crashes during one year versus the same results for 45–54-year-old driver.

Table 42. Total Crashes and Fatal Crashes by Driver Age per 1,000 Licensed Drivers, 1999

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	
<16	5	0.4%	1,380	0.4%	0	N/A	N/A	N/A	
16-17	76	5.4%	26,305	7.1%	95,265	95,265 <b>2.5</b> % 0.80		276.1	
18-20	135	9.6%	39,034	10.5%	206,599	<b>5.3%</b> 0.65		188.9	
21-24	135	9.6%	36,329	9.8%	265,052	6.8%	0.51	137.1	
25-34	284	20.2%	72,057	19.4%	694,011	17.9%	0.41	103.8	
35-44	273	19.4%	66,913	18.0%	844,534	21.8%	0.32	79.2	
45-54	212	15.1%	46,953	12.6%	740,431	19.1%	0.29	63.4	
55-64	124	8.8%	27,063	7.3%	479,803	12.4%	0.26	56.4	
65-74	64	4.5%	16,542	4.4%	339,197	8.7%	0.19	48.8	
75+	90	6.4%	12,095	3.2%	212,016	5.5%	0.42	57.0	
Unknown	10	0.7%	27,555	7.4%	0	N/A	N/A	N/A	
TOTAL	1,408	100.0%	372,226	100.0%	3,876,908	100.0%	0.36	96.0	

Note: Drivers of parked vehicles are excluded. Legend: N/A=Not Applicable

### Figures 35 and 36

- The crash rate for the 18-20-year-old drivers was 32 percent less than the 16-17-year-old drivers, but still nearly twice as high as the overall rate for all drivers combined.
- 21-24-year-old drivers had the highest incidence of alcohol involvement—
  twice the involvement rate of all licensed drivers.
- Underage drinkers as drivers (the 16–20year-old group) were also substantially over-represented in alcohol-related crashes. Note—not all 16–20-year-old drivers that were involved in alcoholrelated crashes were the impaired driver.
- The 16- and 17-year-old driver was more than twice as likely to be involved in a fatal crash.
- Driving experience helps reduce the incidence of drivers being involved in fatal crashes.

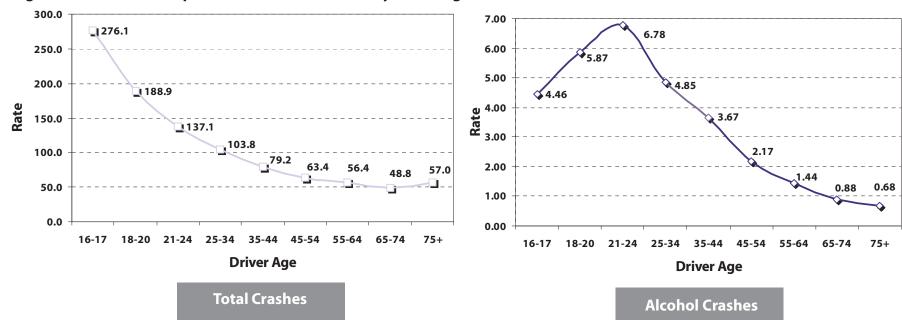
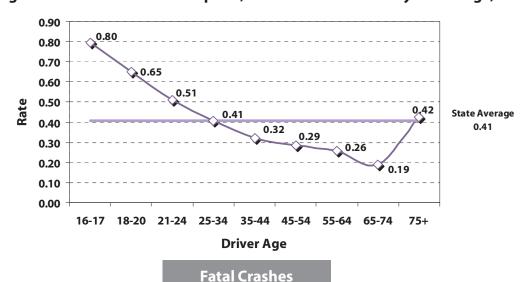


Figure 35. Crash Rates per 1,000 Licensed Drivers by Driver Age, 1999

Figure 36. Fatal Crash Rates per 1,000 Licensed Drivers by Driver Age, 1999



The 1999 Crash Facts further divides the under-21year-old driver into two categories versus previous Crash Facts that grouped all under-21-year-old drivers into one category. The separation identified nearly a 50 percent higher crash involvement rate for the 16- and 17year-old drivers, as compared to the 18-20-year-old drivers for all crashes. However, the 18-20-year-old group was involved in 30 percent more alcohol-related crashes than the 16-17-year-old group. Again, it is important to note that this graph cannot be interpreted to say that all of the drivers involved in an alcohol-related crash were the impaired driver. With the overall involvement rate of 3.34 drivers per 1,000 licensed drivers involved in alcohol crashes, it can be safely concluded that both the 16–17-year-old driver and the 18–20-yearold driver are over-represented in their alcohol-related crash involvement.

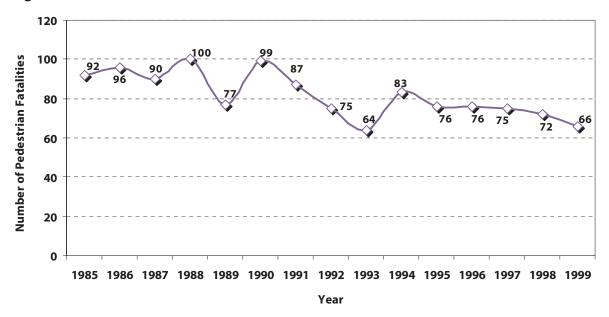
Table 43. In-State and Out-of-State Drivers in Indiana Crashes by Month, 1999

	-	Indiana		O	ut-of-Stat	e		Jnknown		Total				
Month	Fatality	Other	Total	Fatality	Other	Total	Fatality	Other	Total	Fatality	Other	Total		
January	30	28,075	28,105	4	2,981	2,985	1	3,671	3,672	35	34,727	34,762		
February	36	19,916	19,952	6	1,826	1,832	1	2,362	2,363	43	24,104	24,147		
March	51	22,941	22,992	3	2,068	2,071	2	2,775	2,777	56	27,784	27,840		
April	40	24,535	24,575	3	2,284	2,287	1	2,978	2,979	44	29,797	29,841		
May	54	26,378	26,432	9	2,622	2,631	3	3,198	3,201	66	32,198	32,264		
June	60	25,230	25,290	7	2,513	2,520	3	3,114	3,117	70	30,857	30,927		
July	64	24,085	24,149	4	2,615	2,619	4	3,249	3,253	72	29,949	30,021		
August	56	25,107	25,163	12	2,713	2,725	2	3,294	3,296	70	31,114	31,184		
September	50	24,747	24,797	8	2,348	2,356	4	3,146	3,150	62	30,241	30,303		
October	64	27,641	27,705	4	2,789	2,793	4	3,217	3,221	72	33,647	33,719		
November	47	26,044	26,091	3	2,494	2,497	1	2,965	2,966	51	31,503	31,554		
December	43	29,404	29,447	4	2,791	2,795	5	3,417	3,422	52	35,612	35,664		
Total	595	304,103	304,698	67	30,044	30,111	31	37,386	37,417	693	371,533	372,226		

Note: Drivers of parked vehicles are excluded.

- For the past 3 years, the greatest number of fatalities occurred in July and October.
- 89 percent of the fatalities involved a known Indiana licensed/permitted driver.

Figure 37. Pedestrian Fatalities, 1985–1999



• The 5-year trend continues to be favorable, marking the fewest number of pedestrian fatalities since 1993.

- Nearly 2 out of 3 pedestrian crashes occurred between 12 PM and 8:59 PM.
- More than 1 out of 3 pedestrian fatal crashes occurred between 6 PM and 11:59 PM.

Table 44. Pedestrian Crashes by Time of Day and Day of Week, 1999

	Sunday		Monday		Tuesday		Wednesday		Thursday		Friday		Saturday		Total	
Time	Fatal	Total	Fatal	Total	Fatal	Total	Fatal	Total	Fatal	Total	Fatal	Total	Fatal	Total	Fatal	Total
12:00AM - 2:59AM	3	18	1	6	0	5	0	8	1	5	1	10	5	17	11	69
3:00AM - 5:59AM	0	8	0	1	1	4	0	6	0	2	3	10	1	10	5	41
6:00AM - 8:59AM	1	7	2	32	1	31	2	45	1	39	1	31	2	11	10	196
9:00AM -11:59AM	2	25	0	31	0	31	0	31	1	44	2	37	0	50	5	249
12:00PM - 2:59PM	1	35	1	60	0	48	3	45	3	53	1	53	0	55	9	349
3:00PM - 5:59PM	0	49	0	100	0	122	0	134	3	113	3	125	0	52	6	695
6:00PM - 8:59PM	0	43	3	63	3	84	2	67	0	64	4	87	2	63	14	471
9:00PM -11:59PM	3	20	0	20	1	17	1	25	2	32	3	47	3	51	13	212
Unknown	0	4	0	10	0	6	1	4	0	5	0	4	0	4	1	37
Total	10	209	7	323	6	348	9	365	11	357	18	404	13	313	74	2,319

 ${\it See~Gloss ary~for~definition~of~a~pedestrian~crash.}$ 

Table counts the number of fatal crashes, not fatalities.

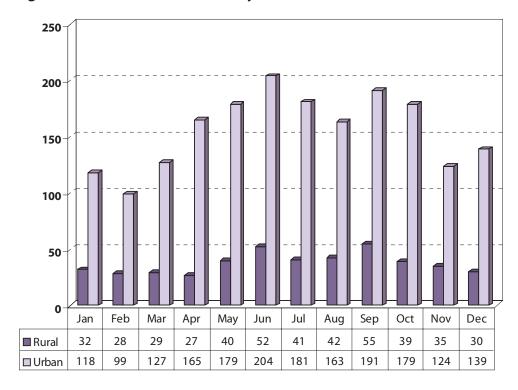
Table 45. Pedestrian Crashes by Month, Severity and Locale with Fatalities and Injuries, 1999

															Pede	strians	3			No	n-Pede	strian	s	
	Fatal Crashes		Pe	Personal Injury			erty Da	mage	To	tal Cra	shes	Fa	atalities	5		Injurie	s	F	atalitie	es		Injurie	s	
Month	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	5	6	28	102	130	3	11	14	32	118	150	1	4	5	30	105	135	0	0	0	3	2	5
February	2	3	5	23	85	108	3	11	14	28	99	127	2	3	5	16	73	89	0	0	0	2	3	5
March	2	5	7	24	111	135	3	11	14	29	127	156	2	5	7	24	104	128	0	0	0	2	3	5
April	1	6	7	20	139	159	6	20	26	27	165	192	1	6	7	16	136	152	0	0	0	0	4	4
May	5	1	6	29	159	188	6	19	25	40	179	219	4	1	5	24	147	171	0	0	0	3	4	7
June	2	2	4	44	182	226	6	20	26	52	204	256	2	1	3	34	147	181	1	0	1	5	7	12
July	6	3	9	30	158	188	5	20	25	41	181	222	4	3	7	26	136	162	1	0	1	2	8	10
August	2	4	6	32	132	164	8	27	35	42	163	205	1	4	5	25	93	118	0	0	0	4	2	6
September	5	4	9	43	163	206	7	24	31	55	191	246	4	4	8	36	141	177	0	0	0	3	5	8
October	1	4	5	31	155	186	7	20	27	39	179	218	1	3	4	27	142	169	0	0	0	2	4	6
November	2	2	4	24	104	128	9	18	27	35	124	159	2	2	4	15	92	107	0	0	0	1	4	5
December	3	3	6	21	118	139	6	18	24	30	139	169	3	3	6	18	113	131	0	0	0	1	2	3
Total	32	42	74	349	1,608	1,957	69	219	288	450	1,869	2,319	27	39	66	291	1,429	1,720	2	0	2	28	48	76

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 is a considerably higher likelihood that a pedestrian will suffer a serious injury or fatality in an urban locale.
- 59 percent of pedestrian fatalities occurred in urban areas, while only 17 percent of the pedestrian injuries occurred in rural areas.
- 88 percent of pedestrian-involved crashes resulted in an injury or fatality.

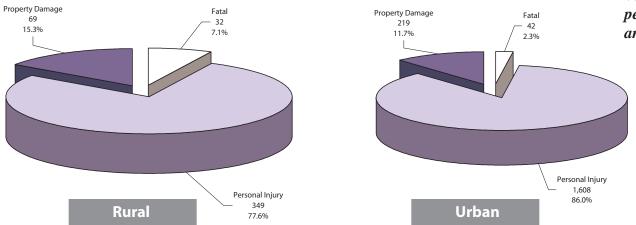
Figure 38. Pedestrian Crashes by Month and Locale, 1999



• Not surprisingly, the greatest number of crashes involving a pedestrian occurred in the warmer months of the year.

• 80 percent of crashes involving a pedestrian occurred in urban areas.

Figure 39. Pedestrian Crashes by Severity and Locale, 1999



• Very few crashes that involved pedestrians, both in rural and urban areas, resulted in only property damage.

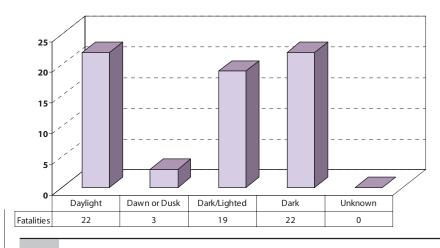
- 62 percent of pedestrian fatalities occurred at night, while only 30 percent of the injuries occurred at night.
- Most fatal crashes involving a younger pedestrian (age 0-9) occurred during Daylight hours, while 70 percent of the fatalities involving 21-54-year-old pedestrians occurred during Dark/Lighted or Dark light conditions.
- The under-16 age group has experienced the greatest decrease in pedestrian fatalities over the past 3 years (15 in 1997, 10 in 1998 and 7 in 1999).

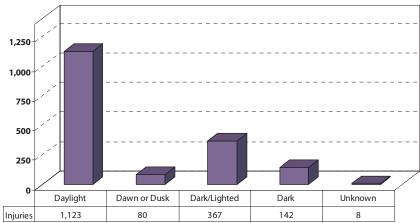
Table 46. Pedestrian Fatalities and Injuries by Age and Light Condition, 1999

_	Daylight			wn/ usk		Dark/ Lighted		Dark		nown	Totals			
Age	Ftly	lnj	Ftly	lnj	Ftly	lnj	Ftly	lnj	Ftly	lnj	Ftly	lnj	Total	
0-4	3	82	0	11	1	11	0	2	0	0	4	106	110	
5-9	2	190	0	17	0	19	0	6	0	1	2	233	235	
10-15	0	210	0	4	1	30	0	11	0	0	1	255	256	
16-20	1	93	0	6	0	68	1	28	0	1	2	196	198	
21-24	0	50	1	5	0	29	2	17	0	0	3	101	104	
25-34	3	98	0	11	7	56	5	25	0	2	15	192	207	
35-44	1	125	0	4	5	51	4	17	0	0	10	197	207	
45-54	5	79	1	9	1	42	6	8	0	2	13	140	153	
55-64	3	55	0	4	2	22	2	5	0	0	7	86	93	
65-69	0	13	0	2	0	7	0	5	0	0	0	27	27	
75+	2	27	1	1	2	7	2	2	0	1	7	38	45	
Unknown	2	101	0	6	0	25	0	16	0	1	2	149	151	
Total	22	1,123	3	80	19	367	22	142	0	8	66	1,720	1,786	

See Glossary for definition of a pedestrian crash. Legend: Ftly=Fatalities; Inj=Injuries

Figure 40. Pedestrian Fatalities and Injuries by Light Condition, 1999





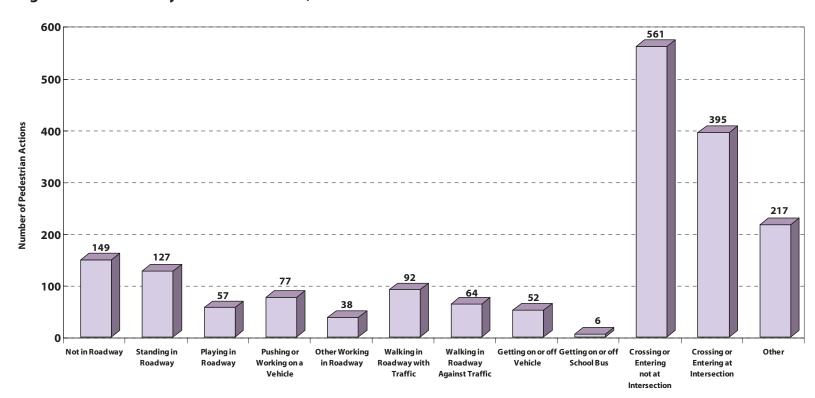


Figure 41. Crashes by Pedestrian Action, 1999

- Only 17 percent of pedestrian crashes occurred while the pedestrian was Walking in Roadway with Traffic, while 59 percent of the crashes occurred while the person was Crossing or Entering not at Intersection.
- Only 22 percent of the pedestrians were Crossing or Entering at Intersection when they were hit.

• The number of bicyclist fatalities has been gradually increasing after reaching an all-time low of 6 in 1996.

Figure 42. Bicyclist Fatalities, 1985–1999



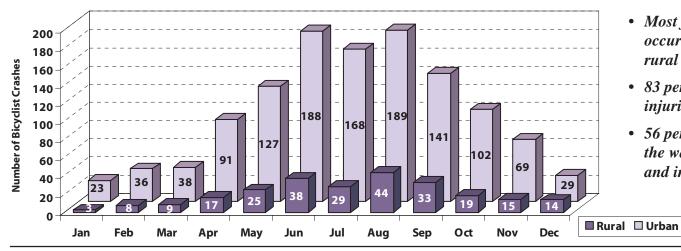
Table 47. Bicyclist Crashes by Month, Severity and Locale, 1999

							1	Proper	tv						Bicy	/clists					Non-Bio	yclists	į	
	Fat	al Cras	hes	P	ersonal I	njury		Damag	-	T	otal Cras	shes		Fataliti	es		Injurie	s	F	atalitie	es		Injurie	es
Month	Rur	Urb	Tot	Rur	Urb	Tot	Rur	Urb	Tot	Rur	Urb	Tot	Rur	Urb	Tot	Rur	Urb	Tot	Urb	Rur	Tot	Rur	Urb	Tot
January	0	0	0	3	17	20	0	6	6	3	23	26	0	0	0	1	15	16	0	0	0	2	2	4
February	0	0	0	7	29	36	1	7	8	8	36	44	0	0	0	6	24	30	0	0	0	1	5	6
March	0	0	0	8	33	41	1	5	6	9	38	47	0	0	0	6	31	37	0	0	0	2	2	4
April	0	0	0	13	74	87	4	17	21	17	91	108	0	0	0	14	57	71	0	0	0	1	18	19
May	0	0	0	22	111	133	3	16	19	25	127	152	0	0	0	17	87	104	0	0	0	5	27	32
June	2	1	3	33	170	203	3	17	20	38	188	226	2	1	3	28	147	175	0	0	0	6	34	40
July	2	1	3	25	146	171	2	21	23	29	168	197	2	1	3	23	134	157	0	0	0	3	17	20
August	1	0	1	37	177	214	6	12	18	44	189	233	1	0	1	37	170	207	0	0	0	0	17	17
September	4	0	4	25	122	147	4	19	23	33	141	174	4	0	4	20	108	128	0	0	0	6	16	22
October	1	3	4	17	83	100	1	16	17	19	102	121	1	2	3	12	71	83	0	1	1	5	15	20
November	0	0	0	11	64	75	4	5	9	15	69	84	0	0	0	9	56	65	0	0	0	2	9	11
December	0	0	0	8	22	30	6	7	13	14	29	43	0	0	0	5	19	24	0	0	0	3	3	6
Total	10	5	15	209	1,048	1,257	35	148	183	254	1,201	1,455	10	4	14	178	919	1,097	0	1	1	36	165	201

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

See glossary for the definition of a bicyclist crash.

Figure 43. Bicyclist Crashes by Month and Locale, 1999



- Most fatal crashes involving bicyclists occurred in the warmer months and in rural areas.
- 83 percent of crashes that resulted in injuries occurred in urban areas.
- 56 percent of all crashes occurred during the warmer months (May-September) and in urban areas.

- After 3 years of an increasing number of bicyclist crashes, 1999 experienced 60 fewer crashes than 1998.
- 62 percent of all bicyclist crashes occurred between 2 PM and 7:59 PM.
- Tuesday-Friday continued to represent the greatest number of bicyclist crashes.

Table 48. Bicyclist Crashes by Time of Day and Day of Week, 1999

Time	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Total
Midnight - 12:59AM	1	1	1	2	1	2	1	9
1:00AM - 1:59AM	1	0	0	0	0	2	1	4
2:00AM - 2:59AM	1	0	0	0	0	1	0	2
3:00AM - 3:59AM	0	0	0	1	0	1	1	3
4:00AM - 4:59AM	1	0	1	0	0	0	1	3
5:00AM - 5:59AM	0	3	3	3	1	1	0	11
6:00AM - 6:59AM	2	5	3	1	2	1	2	16
7:00AM - 7:59AM	3	7	12	9	5	6	2	44
8:00AM - 8:59AM	3	5	4	7	3	1	4	27
9:00AM - 9:59AM	2	2	6	7	5	4	4	30
10:00AM - 10:59AM	1	7	5	7	4	7	12	43
11:00AM - 11:59AM	5	8	7	7	4	10	13	54
Noon - 12:59PM	4	13	14	4	10	9	13	67
1:00PM - 1:59PM	12	12	10	9	6	9	12	70
2:00PM - 2:59PM	17	15	10	15	19	19	14	109
3:00PM - 3:59PM	14	23	24	23	27	31	9	151
4:00PM - 4:59PM	15	34	25	39	24	36	13	186
5:00PM - 5:59PM	12	28	45	33	34	32	12	196
6:00PM - 6:59PM	13	21	25	18	23	28	23	151
7:00PM - 7:59PM	12	9	24	17	22	16	8	108
8:00PM - 8:59PM	7	8	14	10	16	5	10	70
9:00PM - 9:59PM	5	1	3	6	6	5	5	31
10:00PM - 10:59PM	2	4	2	5	3	8	6	30
11:00PM - 11:59PM	2	2	5	1	2	1	3	16
Unknown	2	2	5	3	4	4	4	24
Total	137	210	248	227	221	239	173	1,455

See Glossary for the definition of a bicyclist crash.

Table 49. Bicyclist Fatalities and Injuries by Age, Severity and Gender, 1999

	F	atalitie	es	Serio	us Inju	ıries	Mode	rate Ir	ijuries	Othe	r Inju	ries	Possil	ble Inj	uries		Tota	<u> </u>
Age	Male	Fem	Tot	Male	Fem	Tot	Male	Fem	Tot	Male	Fem	Tot	Male	Fem	Tot	Male	Fem	Tot
0-4	0	0	0	1	2	3	4	5	9	4	0	4	0	0	0	9	7	16
5-9	0	0	0	21	11	32	85	36	122	39	19	58	3	2	5	148	68	217
10-15	1	2	3	30	7	37	154	39	195	87	30	119	3	0	4	275	78	358
16-20	2	0	2	10	2	12	40	14	55	41	11	52	3	0	3	96	27	124
21-24	0	0	0	5	1	6	19	1	20	12	5	17	1	0	1	37	7	44
25-34	4	0	4	7	1	8	20	7	27	22	11	35	1	1	2	54	20	76
35-44	3	0	3	8	1	9	18	6	24	21	5	26	0	0	0	50	12	62
45-54	1	0	1	5	1	6	10	3	13	12	3	15	0	0	0	28	7	35
55-64	0	0	0	0	0	0	6	3	9	3	2	6	0	0	0	9	5	15
65-69	1	0	1	0	0	0	4	2	6	1	0	1	1	0	1	7	2	9
75+	0	0	0	1	0	1	0	0	0	1	0	1	0	0	0	2	0	2
Unknown	0	0	0	9	3	23	37	13	71	23	2	38	8	1	21	77	19	153
Total	12	2	14	97	29	137	397	129	551	266	88	372	20	4	37	792	252	1,111

Note: Totals include persons whose gender is unknown.

Legend: Fem=Female; Tot=Total.

See Glossary for the definition of a bicyclist crash.

- Male bicyclists continued to be substantially over-represented in all categories of injuries and fatalities.
- The 5-15-year-old male represented the largest age group to sustain either a serious or a moderate injury.
- There were no adult female bicyclist fatalities, while there were 11 male bicyclist fatalities (over the age of 15).

- Lap and shoulder belt usage rates showed a 5.1 percent and 7 percent increase from 1998 for drivers and passengers, respectively, who were fatally injured. This indicates that nearly 2 out of 3 fatalities from 1999 still were not wearing a seat belt, or were not wearing it properly. However the 1999 data does indicate a positive trend toward increased safety belt usage.
- 427 drivers and passengers who were not restrained were fatally injured. Provided that all of those crashes were survivable, if all of those individuals had been properly restrained, more than 200 lives could have been saved in 1999.

Tables 50 and 51, and Figures 44 and 45 are based upon data extracted from the 1999 crash reports. The investigating officer at the scene of the crash determines both the use of seat belts, and also estimates the extent of injuries. Tables 54 through 57, and Figure 46 are based upon observational data gathered during September 2000.

Table 50. Fatalities by Restraint Usage and Role, 1999

	Dri	ver	Pass	enger	Unk	nown	T	otal
Type of Restraint	Count	Percent	Count	Percent	Count	Percent	Count	Percent
Child Safety Seat	N/A	N/A	4	1.7%	0	0.0%	4	0.5%
Child Safety Seat Improperly Used	N/A	N/A	0	0.0%	0	0.0%	0	0.0%
Shoulder Belt	2	0.3%	1	0.4%	0	0.0%	3	0.3%
Lap and Shoulder Belt	204	32.5%	68	29.6%	0	0.0%	272	31.7%
Lap Belt	22	3.5%	16	7.0%	0	0.0%	38	4.4%
Restraint Used - Type Unknown	1	0.2%	0	0.0%	0	0.0%	1	0.1%
None Used or Not Applicable	341	54.4%	126	54.8%	2	100.0%	469	54.6%
Unknown	57	9.1%	15	6.5%	0	0.0%	72	8.4%
Subtotal	627		230		2		859	
Motorcyclist, mopeds, minibikes, buggies, motorscooters, and all terrain vehicles Pedestrians and Bicyclists							66 81	
Total							1,006	

Source: Fatality Analysis Reporting System, NHTSA

Example: During 1999, 204 of 627, or 32.5% of the driver fatalities were restrained by both lap and shoulder belts.

Figure 44. Fatalities by Restraint Usage and Role, 1999

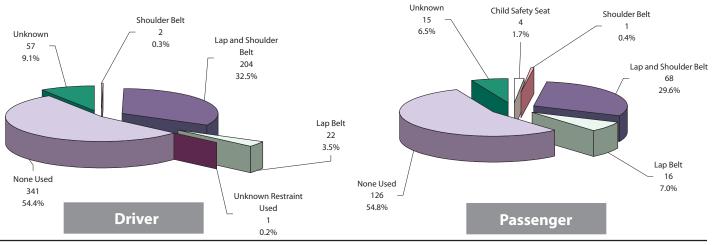


Table 51. Driver Injuries by Age and Restraint Usage, 1999

		Fatal Inj	uries			Serious I	njuries			Moderate	Injuries	
Age	No Restraint Used	Restraint Used	Unknown	Total	No Restraint Used	Restraint Used	Unknown	Total	No Restraint Used	Restraint Used	Unknown	Total
<21	114	72	10	196	751	638	54	1,443	2,154	3,633	182	5,969
%	58.2%	36.7%	5.1%		52.0%	44.2%	3.7%		36.1%	60.9%	3.0%	
21-34	155	58	15	228	786	646	89	1,521	1,689	2,424	185	4,298
%	68.0%	25.4%	6.6%		51.7%	42.5%	5.9%		39.3%	56.4%	4.3%	
35-54	139	70	11	220	555	691	72	1,318	1,055	2,074	127	3,256
%	63.2%	31.8%	5.0%		42.1%	52.4%	5.5%		32.4%	63.7%	3.9%	
55+	91	116	13	220	207	470	40	717	523	1,423	85	2,031
%	41.4%	52.7%	5.9%		28.9%	65.6%	5.6%		25.8%	70.1%	4.2%	
Unknown	2	3	1	6	36	41	7	84	152	185	19	356
%	33.3%	50.0%	16.7%		42.9%	48.8%	8.3%		42.7%	52.0%	5.3%	
Total	501	319	50	870	2,335	2,486	262	5,083	5,573	9,739	598	15,910
%	<i>57.6%</i>	36.7%	<i>5.7</i> %		45.9%	48.9%	5.2%		35.0%	61.2%	3.8%	

Source: Fatality Analysis Reporting System, NHTSA

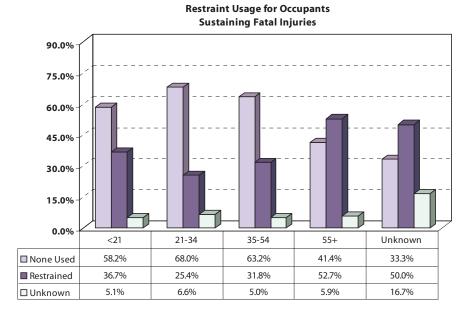
Note: Motorcycles, mopeds, motorbikes, minibikes, and motorscooters are excluded. Drivers of parked vehicles excluded.

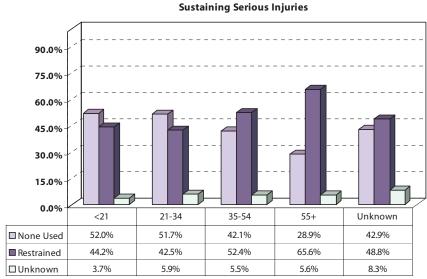
Example: For occupants under age 21 who were fatally injured, 72 of 196, or 36.7% were restrained.

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.

- Increased belt usage rates are directly associated with a decrease in the severity of injuries.
- The 21-34-year-old occupant, as measured by fatalities, continued to be the lowest user of seat/shoulder belts.
- The under-21-year-old occupant, while still showing a high rate of not using a seat/shoulder belt (58.2 percent), has shown considerable improvement over the past two years (1997–66.2 percent and 1998–65.4 percent).

Figure 45. Driver Fatalities and Injuries by Age and Restraint Usage, 1999





**Restraint Usage for Occupants** 

# • As restraint usage increased, injury severity decreased.

Figure 45 shows graphically the data presented in Table 51.

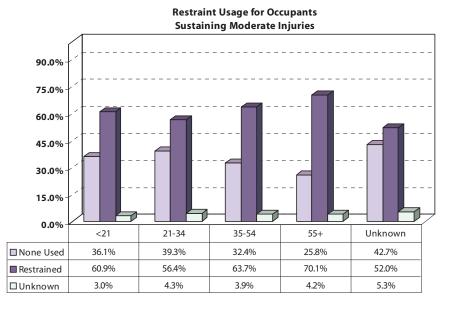


Table 52. Driver Restraint Usage by Age and Gender, 1995–1999

#### **State Summary**

			1995			1996			1997			1998			1999	
Age and	l Gender	Yes	No	Unk	Yes	No	Unk	Yes	No	Unk	Yes	No	Unk	Yes	No	Unk
<21	Male	22,260	6,117	13,947	21,514	5,168	11,541	22,068	5,083	11,021	24,100	4,344	11,073	24,194	3,931	10,727
	%	52.6%	14.5%	33.0%	56.3%	13.5%	30.2%	57.8%	13.3%	28.9%	61.0%	11.0%	28.0%	62.3%	10.1%	27.6%
	Female	17,159	2,730	9,332	16,675	2,269	7,864	17,612	2,575	7,808	18,443	2,063	7,420	18,325	1,707	7,296
	%	58.7%	9.3%	31.9%	62.2%	8.5%	29.3%	62.9%	9.2%	27.9%	66.0%	7.4%	26.6%	67.1%	6.2%	26.7%
	Sub-total	39,439	8,851	23,343	38,211	7,446	19,465	39,712	7,668	18,871	42,577	6,413	18,562	42,561	5,642	18,090
	%	55.1%	12.4%	32.6%	58.7%	11.4%	29.9%	59.9%	11.6%	28.5%	63.0%	9.5%	27.5%	64.2%	8.5%	27.3%
21-34	Male	42,296	9,083	23,556	40,443	8,041	19,920	39,941	7,403	18,352	40,483	6,531	16,762	41,465	6,065	16,522
	%	56.4%	12.1%	31.4%	59.1%	11.8%	29.1%	60.8%	11.3%	27.9%	63.5%	10.2%	26.3%	64.7%	9.5%	25.8%
	Female	31,834	3,852	16,683	30,434	3,121	13,809	31,006	3,361	12,928	30,686	2,655	11,662	29,922	2,340	11,140
	%	60.8%	7.4%	31.9%	64.3%	6.6%	29.2%	65.6%	7.1%	27.3%	68.2%	5.9%	25.9%	68.9%	5.4%	25.7%
	Sub-total	74,187	12,949	40,334	70,924	11,170	33,838	71,010	10,778	31,384	71,244	9,203	28,509	71,449	8,416	27,762
	%	58.2%	10.2%	31.6%	61.2%	9.6%	29.2%	62.7%	9.5%	27.7%	65.4%	8.4%	26.2%	66.4%	7.8%	25.8%
35-54	Male	39,620	6,492	22,393	39,444	5,620	19,500	40,619	5,708	18,627	42,387	5,252	17,767	43,758	4,983	18,134
	%	57.8%	9.5%	32.7%	61.1%	8.7%	30.2%	62.5%	8.8%	28.7%	64.8%	8.0%	27.2%	65.4%	7.5%	27.1%
	Female	30,017	2,631	15,913	29,768	2,242	13,682	31,129	2,540	13,636	31,430	2,189	12,706	31,677	1,908	12,430
	%	61.8%	5.4%	32.8%	65.1%	4.9%	29.9%	65.8%	5.4%	28.8%	67.8%	4.7%	27.4%	68.8%	4.1%	27.0%
	Sub-total	69,686	9,127	38,396	69,257	7,870	33,274	71,810	8,250	32,363	73,860	7,448	30,561	75,499	6,892	30,681
	%	59.5%	7.8%	32.8%	62.7%	7.1%	30.1%	63.9%	7.3%	28.8%	66.0%	6.7%	27.3%	66.8%	6.1%	27.1%
55+	Male	19,840	2,988	12,530	19,554	2,588	10,499	19,798	2,452	9,988	21,046	2,297	9,679	21,771	2,092	9,743
	%	56.1%	8.5%	35.4%	59.9%	7.9%	32.2%	61.4%	7.6%	31.0%	63.7%	7.0%	29.3%	64.8%	6.2%	29.0%
	Female	13,357	1,095	8,347	12,912	876	6,763	13,770	1,033	6,680	14,552	825	6,504	14,467	817	6,564
	%	58.6%	4.8%	36.6%	62.8%	4.3%	32.9%	64.1%	4.8%	31.1%	66.5%	3.8%	29.7%	66.2%	3.7%	30.0%
	Sub-total	33,211	4,086	20,939	32,486	3,466	17,327	33,600	3,491	16,718	35,619	3,125	16,241	36,269	2,912	16,373
	%	57.0%	7.0%	36.0%	61.0%	6.5%	32.5%	62.4%	6.5%	31.1%	64.8%	5.7%	29.5%	65.3%	5.2%	29.5%

<sup>\*</sup> 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

A different data source is used for Table 52 (ISP Crash Data) versus Table 51 (FARS data). Table 52 is based upon information entered on the crash report by the investigating officer which, especially in the case of property damage and personal injury crashes, may be self-reported by the involved parties.

Table 53. Occupant Restraint Usage in Crashes by Injury Severity, 1995–1999

		1995			1996			1997			1998			1999	
Severity of Injury	Yes	No	Unk												
Fatal	227	504	68	244	523	64	217	508	77	262	558	67	319	553	65
%	28.4%	63.1%	8.5%	29.4%	62.9%	7.7%	27.1%	63.3%	9.6%	29.5%	62.9%	7.6%	34.0%	59.0%	6.9%
Serious	2,474	3,018	361	2,463	2,806	296	2,434	2,803	317	2,525	2,912	356	2,490	2,770	327
%	42.3%	51.6%	6.2%	44.3%	50.4%	5.3%	43.8%	50.5%	5.7%	43.6%	50.3%	6.1%	44.6%	49.6%	5.9%
Moderate	9,843	8,599	844	9,557	7,682	728	9,911	7,376	705	10,384	7,139	783	9,755	6,264	750
%	51.0%	44.6%	4.4%	53.2%	42.8%	4.1%	55.1%	41.0%	3.9%	56.7%	39.0%	4.3%	58.2%	37.4%	4.5%
Other	31,926	10,734	1,989	31,630	9,526	1,772	33,071	9,373	1,671	35,425	8,765	1,782	34,071	7,688	1,607
%	71.5%	24.0%	4.5%	73.7%	22.2%	4.1%	75.0%	21.2%	3.8%	77.1%	19.1%	3.9%	78.6%	17.7%	3.7%
<b>Total Restraint Use</b>	44,470	22,855	3,262	43,894	20,537	2,860	45,633	20,060	2,770	48,596	19,374	2,988	46,635	17,275	2,749
%	63.0%	32.4%	4.6%	65.2%	30.5%	4.3%	66.7%	29.3%	4.0%	68.5%	27.3%	4.2%	70.0%	25.9%	4.1%

Example: In 1999 in the State, 59.0% [553/(553+319+65)] of occupants in fatal crashes were not restrained.

Overall in 1999, 70.0% of occupants involved in crashes used restraints.

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

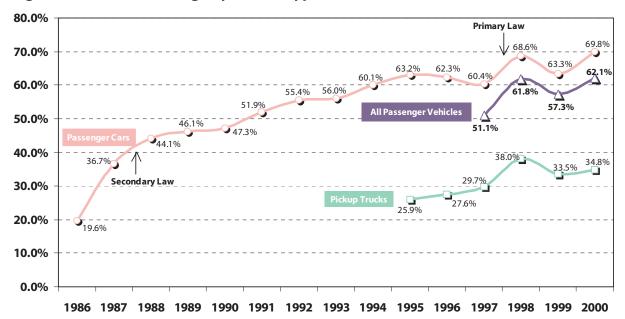
A small number of injured people cannot be accounted for due to the fact that they cannot be linked to a vehicle type in the original dataset.

Legend: Unk-Unknown Restraint Use

Source: ISP Crash Data

- There was a considerable increase in the use of seat belts as measured by crash occupants, versus the previous 4 years.
- Seat belt usage rates decreased with the increased severity of a crash.

Figure 46. Restraint Usage by Vehicle Type, 1986–2000



- Overall, seat belt usage rates for all passenger vehicles as measured by observational surveys achieved a record high usage rate of 62.1 percent in 2000.
- Overall use is substantially reduced by the extremely low usage rate of pickup trucks (34.8 percent).

Data presented for the balance of this chapter was collected via observational surveys by Purdue University-Center for the Advancement of Transportation Safety. Each year the Center conducts observational surveys using a statistically sound mix of road classifications and population areas. Nearly 16,000 observations are taken and analyzed. Results since passage of the primary law in July 1998 have been relatively unchanged. The primary law applies only to passenger cars (and vehicles registered as cars), but pickup trucks are specifically excluded. The result is that there is a considerable difference in seat belt use, as shown by the graph, for both cars and pickup trucks. Reported to NHTSA is the "all passenger vehicle" rate that is a weighted average of the cars and non-commercial passenger cars, vans, and pickup trucks observed.

Table 54. Restraint Usage by Vehicle Type, 1999–2000

	Septen	nber 1999	Septen	nber 2000		95 Percent	1999-2000 Change
	Percent	Restrained	Percent	Restrained	Relative	Confidence	in Weighted
Vehicle Type	Weighted	Unweighted	Weighted	Unweighted	Precision	Interval	% Restrained
Cars	63.3%	62.7%	69.8%	69.2%	1.5%	67.8% - 71.9%	6.5%
Pickups	33.5%	30.4%	34.8%	33.2%	5.0%	31.4% - 38.2%	1.3%
All Pass. Veh. (non-commercial)	57.3%	55.9%	62.1%	61.6%	2.0%	59.7% - 64.5%	4.8%

All Pass. Veh.=All non-commercial Passenger vehicles

Data obtained from roadside observation surveys conducted in September 1999 and September 2000.

# • Pickup truck occupants were consistently low users of seat belts.

"Unweighted" percents are the actual usage rates as calculated from the observational surveys. The unweighted data is then "weighted" to accurately reflect restraint use by Indiana drivers based upon the type of roads and the number of vehicle miles traveled.

- Female occupants, both drivers and passengers, had higher seat belt usage rates than males.
- Usage rates of male drivers were 5–8 percent lower than female drivers for cars, SUVs, and minivans, and 15 percent less than female pickup drivers.
- Male pickup truck drivers and passengers had the lowest usage rate of all vehicles at 29.4 percent and 19.7 percent, respectively.
- Based on vehicle type, occupants of minivans displayed the highest seat belt usage rates.

Table 55. Unweighted Restraint Usage by Vehicle Type, Gender and Role, 2000

									Eligible
		All	Drive	rs	Fr	ont-Sea	t Pass	sengers	Occupants
				Percent				Percent	Percent
Vehicle Type	R	NR	U	Restrained	R	NR	U	Restrained	Restrained
Cars	6,527	3,056	45	68.1%	1,679	945	56	64.0%	67.2%
Pickup Trucks	1,156	2,553	44	31.2%	263	623	26	29.7%	30.9%
Minivans	1,204	473	23	71.8%	401	182	20	68.8%	71.0%
Large Vans	174	256	13	40.5%	57	81	12	41.3%	40.7%
SUV	1,181	633	15	65.1%	324	177	18	64.7%	65.0%
All Pass.	10,242	6,971	140	59.5%	2,724	2,008	132	57.6%	59.1%
		Fema	le Dri	vers	Femal	le Front	-Seat	Passengers	Both
Cars	3,288	1,365	15	70.7%	1,197	534	26	69.2%	70.3%
Pickup Trucks	202	255	5	44.2%	183	294	10	38.4%	41.2%
Minivans	675	231	3	74.5%	312	115	8	73.1%	74.0%
Large Vans	79	57	5	58.1%	38	40	3	48.7%	54.7%
SUV	583	258	1	69.3%	264	88	9	75.0%	71.0%
All Pass.	4,827	2,166	29	69.0%	1,994	1,071	56	65.1%	67.8%
		Male	Driv	ers	Male	Front-S	Seat P	assengers	Both
Cars	3,229	1,690	8	65.6%	476	407	15	53.9%	63.9%
Pickup Trucks	954	2,293	18	29.4%	79	322	5	19.7%	28.3%
Minivans	525	241	5	68.5%	85	66	5	56.3%	66.5%
Large Vans	95	199	4	32.3%	18	39	3	31.6%	32.2%
SUV	596	375	6	61.4%	59	85	2	41.0%	58.7%
All Pass.	5,399	4,798	41	52.9%	717	919	30	43.8%	51.7%

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

Table 56. Unweighted Restraint Usage by Vehicle Type, Age and Role, 2000

Drivers

	Your	ıg (16-21)	Older Ad	ult (22+)
Vehicle		Percent		Percent
Туре	Count	Restrained	Count I	Restrained
Cars	922	45.3%	8,706	70.5%
Pickups	192	16.8%	3,561	31.9%
Minivans	33	65.6%	1,667	71.9%
Large Vans	5	20.0%	438	40.7%
SUV	98	40.8%	1,731	66.5%
All Pass.	1,250	41.0%	16,103	60.9%

#### Passengers

	Child	(10-15)	Youn	ıg (16-21)	Older Ad	lult (22+)
Vehicle		Percent		Percent		Percent
Туре	Count	Restrained	Count	Restrained	Count	Restrained
Cars	170	56.2%	417	40.8%	2,097	69.3%
Pickups	81	27.5%	94	18.3%	744	31.4%
Minivans	78	52.1%	43	69.8%	484	71.2%
Large Vans	9	62.5%	8	62.5%	133	38.5%
SUV	36	48.3%	47	44.7%	438	68.0%
All Pass.	374	49.0%	609	40.0%	3,896	61.1%

Note: Restraint Usage unknown not included.

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

Source: Roadside Observation Survey of Safety Belt and Motorcycle Helmet Use in Indiana, 2000.

- Rural local roads and collectors continue to post the lowest rates of selt belt use.
- Restraint use among pickup truck occupants is considerably lower than cars or othr passenger vehicles for every type of roadway class.

Table 57. Weighted Restraint Usage by Vehicle Type, Locale, Strata and Roadway Class, 2000

		Rural Ro	oads			Urban R	Roads	
Vehicle	Co	unty VMT Str	ata	Entire	Co	ounty VMT St	rata	Entire
Туре	High	Medium	Low	State	High	Medium	Low	State
		Rural Fre	eways			Urban Fre	eeways	
Cars	74.5%	80.9%	84.0%	81.0%	75.8%	73.8%	76.2%	74.9%
Pickups	37.9%	45.1%	52.0%	46.3%	47.7%	39.0%	45.1%	42.9%
Other Pass.	79.4%	71.7%	80.0%	75.3%	77.6%	72.5%	74.4%	74.7%
All Pass.	64.6%	72.8%	75.3%	72.5%	72.1%	67.7%	70.0%	69.7%
		Rural Art	erials			Urban Ar	terials	
Cars	80.7%	76.9%	68.6%	74.7%	66.9%	71.6%	60.1%	68.1%
Pickups	47.8%	38.2%	29.8%	36.1%	34.8%	35.9%	25.6%	34.2%
Other Pass.	78.4%	76.8%	68.9%	74.6%	62.8%	68.3%	60.3%	64.9%
All Pass.	74.1%	68.5%	59.8%	66.2%	61.6%	64.9%	53.0%	62.1%
		Rural Coll	ectors			Urban Col	llectors	
Cars	67.8%	68.9%	58.9%	66.0%	67.5%	69.7%	40.0%	66.3%
Pickups	30.5%	26.5%	20.1%	25.5%	32.4%	33.0%	12.7%	28.4%
Other Pass.	71.2%	62.2%	63.3%	64.5%	61.4%	69.6%	31.4%	62.0%
All Pass.	59.1%	55.1%	48.9%	54.2%	62.0%	65.4%	29.7%	60.2%
	I	Rural Loca	l Roads		U	rban Loca	l Streets	
Cars	0.0%	64.2%	66.7%	65.5%	54.4%	63.0%	65.0%	60.7%
Pickups	0.0%	31.6%	18.6%	24.1%	43.4%	27.6%	29.9%	31.6%
Other Pass.	0.0%	52.5%	57.7%	55.2%	55.1%	61.5%	72.0%	62.7%
All Pass.	0.0%	54.5%	52.9%	53.6%	53.5%	58.2%	60.9%	57.5%

Other Pass. = Large Vans, Minivans and Sport-Utility Vehicles

All Pass. = All non-commercial Passenger vehicles

Source: Roadside Observation Survey of Safety Belt and Motorcycle Helmet Use in Indiana, 2000

See Glossary for definitions of Rural/Urban Roads, Roadway Class (freeways,

arterials, collectors, etc.). and County VMT Strata.

# Chapter 5

# Vehicles

# TOPICS

Motorcyclist Crashes
Truck Crashes
School Bus Crashes
Railroad Crashes

While the vast majority of crashes involved passenger vehicles, there were a number of vehicle types that while they did not represent a large number of crashes, the number of injuries and fatalities that resulted was substantial. Further, when compared to crashes involving other vehicles, motorcycles, pickup trucks, and large trucks (both straight and semi-tractor/trailers) were notably over-represented in the resultant serious injuries or deaths. In 1999, there were nearly 5.4 million vehicles registered in Indiana. Of this number, there were nearly 400,000 (7 percent) of those vehicles involved in a crash. As you read this page, another three vehicles will have been involved in a crash. Fortunately, the vast majority of these crashes (about 75 percent) only involve property damage, but the other 25 percent results in injury or death.

Motorcycle riders are afforded the least protection in a crash. For every 1,000 motorcycles involved in a crash, 30 of those crashes resulted in a fatality, representing a fatality rate that was ten times greater than the fatality rate for passenger vehicles. Alcohol continues to play a primary role in motorcycle crashes, with 10 percent of the crashes indicating the presence of alcohol (as compared to four percent of all types of vehicle crashes). Forty percent of the fatal motorcycle crashes in 1999 had alcohol involved. Overall, there has been only minimal improvement during the past five years to reduce the number of motorcycle crashes and the occurrence of alcohol involvement. The potential for injury is further compounded by the fact that Indiana does not require motorcycle riders (unless they are under 16 years old) to wear helmets. Included as part of the annual Indiana observational seat belt study is the use of helmets. Results throughout the State show less than a 40 percent observed usage rate. Acknowledging that not all fatal injuries are caused by the lack of helmets, 85 percent of the fatally injured motorcycle riders in 1999 were not wearing a helmet, representing only minimal improvement in the past 10 years.

Pickup trucks represent approximately one out of five vehicles on Indiana's highways. Yet, when comparing the severity of their crashes to passenger cars, pickup trucks were involved in one out of four fatal crashes. A primary cause for this over-representation of killed pickup truck occupants continues to be the lack of either a primary or secondary seat belt law that applies to pickup trucks in Indiana. Seventy-seven percent of all pickup truck occupants fatally injured were either not belted, or not belted properly. This compares with 49.4 percent for passenger vehicles. 1 A second over-representation is the greater number of pickup truck drivers that acknowledged they had been drinking prior to the crash—a rate that was nearly three times higher than the other vehicle drivers involved in those same fatal crashes. This factor remains twice as high even for personal injury crashes, as compared to the other drivers in those crashes.

Large trucks, either a straight (non tractor-trailer combination) or a semi-tractor/trailer, offered substantial protection for the occupants of those vehicles. However, their size, when involved in a crash, resulted in a disproportionately high percentage of injuries and fatalities in the other involved vehicles. Seventy-four percent of the fatalities, when involved with a straight truck, were not the occupants of the truck. This figure increased to 87 percent when the fatal crash involved a semi-tractor/trailer. These two types of vehicles were involved in 21.2 percent of the fatal crashes (as measured by the number of fatalities) in 1999. Similar to all other fatal crash statistics, 70 percent of the straight truck fatalities occurred in rural areas. For semi-tractor/trailers, this percentage increased to 83 percent.

There were two fatal school bus crashes in Indiana during 1999. Both occurred in an urban area, but did not result in a fatality to any of the school bus occupants. The total number of crashes involving a school bus has remained nearly flat over the past four years, with ap-

proximately four crashes each week resulting in injuries to the involved parties.

Indiana had the third highest number of highway–rail-grade-crossing fatalities in the nation for 1999, with 19 fatal crashes resulting in 26 fatalities. Furthermore, Indiana documented an average of more than five railroad/motor vehicle crashes weekly, for a total of 282 in 1999. On a positive note, this number represents the fewest number recorded since *Crash Facts* was first published in 1994, and is a 19-percent improvement.

<sup>&</sup>lt;sup>1</sup>Besel, Ronald R., Carolyn S. Dennis and Maria L. Drake, "Pickup Truck Occupant Safety Belt Usage," Center for the Advancement of Transportation Safety, January 26, 2001.

Table 58. Vehicles in Crashes by Type and Severity, 1999

	Fatal C	Crashes	Person	al Injury	Property	/ Damage	Total Ve Involved i	
Vehicle Type	Count	Percent	Count	Percent	Count	Percent	Count	Percent
Passenger Car, Station Wagon, SUV	764	54.11%	57,553	64.27%	149,333	52.27%	207,650	55.13%
Pickup	244	17.28%	12,067	13.47%	36,121	12.64%	48,432	12.86%
Van	93	6.59%	6,564	7.33%	18,798	6.58%	25,455	6.76%
Truck	60	4.25%	2,513	2.81%	8,749	3.06%	11,322	3.01%
Semi -Tractor (Only)	6	0.42%	115	0.13%	417	0.15%	538	0.14%
Semi -Tractor, Trailer	134	9.49%	1,706	1.90%	6,610	2.31%	8,450	2.24%
Combination Vehicle	4	0.28%	62	0.07%	207	0.07%	273	0.07%
Recreational Vehicle	4	0.28%	110	0.12%	362	0.13%	476	0.13%
Bus	4	0.28%	128	0.14%	582	0.20%	714	0.19%
School Bus	2	0.14%	175	0.20%	653	0.23%	830	0.22%
Police Car	4	0.28%	380	0.42%	1,148	0.40%	1,532	0.41%
Fire Truck	1	0.07%	27	0.03%	128	0.04%	156	0.04%
Ambulance	0	0.00%	36	0.04%	112	0.04%	148	0.04%
Motorcycle*	67	4.75%	1,663	1.86%	427	0.15%	2,157	0.57%
Snowmobile	2	0.14%	3	0.00%	5	0.00%	10	0.00%
Farm Equipment	2	0.14%	65	0.07%	165	0.06%	232	0.06%
Special Vehicle	2	0.14%	122	0.14%	503	0.18%	627	0.17%
Other	4	0.28%	161	0.18%	389	0.14%	554	0.15%
Unknown	15	1.06%	6,105	6.82%	60,990	21.35%	67,110	17.82%
Total	1,412	100.00%	89,555	100.00%	285,699	100.00%	376,666	100.00%

<sup>\*</sup>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).

- Motorcycles were substantially overrepresented in both fatal crashes (4.75 percent) and personal injury crashes (1.86 percent), as compared to property damage crashes (0.15 percent).
- Semi-tractor/trailers were notably overrepresented in fatal crashes, with an involvement rate of 9.49 percent for fatal crashes, versus 2.24 percent for all crashes.
- Pickup trucks were likewise overrepresented in fatal crashes with an involvement rate of 17.28 percent, versus only 12.86 percent for all crashes.

Table 59. Motorcyclist Crash Data, 1995–1999

Severity	1995	Rate	1996	Rate	1997	Rate	1998	Rate	1999	Rate
Fatal	64	0.28	58	0.26	45	0.20	68	0.31	67	0.30
Personal Injury	1,786	7.83	1,443	6.51	1,450	6.57	1,580	7.16	1,637	7.22
Property Damage	401	1.76	343	1.55	404	1.83	415	1.88	445	1.96
Total Crashes	2,251	9.86	1,844	8.32	1,899	8.60	2,063	9.35	2,149	9.48
% Fatal % Personal Injury	2.8% 79.3%		3.1% 78.3%		2.4% 79.3%		3.3% 76.6%		2.8% 76.2%	
% Property Damage	17.8%		18.6%		21.3%		20.1%		20.7%	
Alcohol-Related Crashes Severity	1995	Rate	1996	Rate	1997	Rate	1998	Rate	1999	Rate
Fatal	20	0.09	17	0.08	15	0.07	18	0.08	27	0.12
Personal Injury	187	0.82	178	0.80	173	0.78	178	0.81	173	0.76
Property Damage	18	0.08	23	0.10	19	0.09	23	0.10	15	0.07
Total Alcohol-Related	225	0.99	218	0.98	207	0.94	219	0.99	215	0.95
% Fatal	31.3%		29.3%		33.3%		26.5%		40.3%	
% Personal Injury	10.5%		12.3%		11.9%		11.3%		10.6%	
% Property Damage	4.5%		6.7%		4.7%		5.5%		3.4%	
% of Total Crashes	10.0%		11.8%		10.9%		10.6%		10.0%	

been relatively level over the past 5 years.40 percent of the fatal motorcyclist

• The number of motorcyclist crashes has

- 40 percent of the fatal motorcyclist crashes involved alcohol.
- 80 percent of crashes that involved a motorcycle resulted in either a personal injury or fatality.

All Crashes

Note: Rates are expressed per 1,000 licensed motorcycle drivers.

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

Licensed Driver Source: Indiana Bureau of Motor Vehicles, 1999.

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

A comparison of the number of licensed drivers involved in crashes, and the number of licensed drivers (LDVRs) with a motorcycle endorsement to the number of crashes involving those vehicles appeared to show a markedly lower involvement rate for motorcycles (0.0095 per 1,000 endorsements), versus passenger cars (0.0726 per 1,000 LDVRs). This is more than likely due to a large percentage of endorsement holders who were not active riders. A comparison of fatal crashes indicated comparable levels between both groups. However, using an estimate that nearly three out of four endorsement holders were actually inactive would indicate that motorcycle drivers were actually over-represented by an eight to one ratio in fatal crashes.

• The total number of motorcycle-involved crashes has increased over the past 3 years, after achieving a record low number of 1,844 in 1996.

The motorcycle involvement rate in crashes was 21.2 crashes per 1,000 registered motorcycles as compared to 52.4 crashes per 1,000 registered passenger vehicles (cars, minivans, and pickup trucks). While a better representative figure than motorcycle endorsements (Table 59), the lower rate for motorcycles is still skewed by their seasonal use. A comparison of fatal crashes showed nearly the opposite ratio—0.2 fatal crashes per 1,000 registered passenger vehicles, versus 0.66 fatal crashes per 1,000 registered motorcycles—again, indicating a considerable over-representation of motorcycles in fatal crashes. Thirty-one out of every 1,000 crashes involving a motorcycle resulted in a fatality, versus less than four out of 1,000 crashes involving passenger vehicles that resulted in a fatality, representing nearly an eight times greater chance of being involved in a fatal crash while riding a motorcycle.

Table 60. Motorcyclist Crashes by Severity, 1990–1999

	Registered	Licensed	Fatal C	rashes	Person	al Injury	Property	y Damage	Total
Year	Cycles	Cyclists	Count	Percent	Count	Percent	Count	Percent	Crashes
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	80.4%	408	16.9%	2,410
1995	96,394	228,236	64	2.8%	1,786	79.3%	401	17.8%	2,251
1996	96,518	221,758	58	3.1%	1,443	78.3%	343	18.6%	1,844
1997	98,476	215,279	45	2.4%	1,450	76.4%	404	21.3%	1,899
1998	100,027	220,746	68	3.3%	1,580	76.6%	415	20.1%	2,063
1999	101,140	226,646	67	3.1%	1,637	76.2%	445	20.7%	2,149

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

Example: In 1999, 67 of 2,149 or 3.1% of motorcyclist crashes were fatal crashes.

1994 and 1995 corrected for misclassified private property crashes. See Private Property in Glossary for explanation.

Table 61. Motorcyclist Crashes by Time of Day and Day of Week, 1999

	Sun	day	Mor	nday	Tues	sday	Wedn	esday	Thur	sday	Frie	day	Satu	rday		Total	
Time	Fatal	Total	% Fatal														
Midnight - 2:59AM	4	26	1	7	0	7	0	9	0	8	1	10	1	31	7	98	7.1%
3:00AM - 5:59AM	1	9	0	4	0	7	1	6	0	9	0	4	0	10	2	49	4.1%
6:00AM - 8:59AM	2	8	0	15	0	22	0	14	1	14	0	22	3	17	6	112	5.4%
9:00AM -11:59AM	2	38	1	20	0	13	0	23	1	23	2	32	3	46	9	195	4.6%
Noon - 2:59PM	2	88	0	41	1	40	0	34	0	35	2	53	5	88	10	379	2.6%
3:00PM - 5:59PM	3	101	1	72	3	85	2	75	0	86	2	119	1	100	12	638	1.9%
6:00PM - 8:59PM	3	52	3	68	1	63	1	56	2	55	3	55	1	63	14	412	3.4%
9:00PM -11:59PM	0	32	0	24	2	21	3	33	0	27	2	51	0	42	7	230	3.0%
Unknown	0	5	0	2	0	5	0	1	0	11	0	5	0	7	0	36	0.0%
Total	17	359	6	253	7	263	7	251	4	268	12	351	14	404	67	2,149	3.1%

 $Example: Of the 112\ motorcyclist\ crashes\ that\ occurred\ between\ 6:00 AM-8:59 AM\ in\ 1999,\ 5.4\%\ (6/112)\ were\ fatal.$ 

Table 61

- The incidence of both fatal crashes and all motorcycle-involved crashes increased appreciably on weekend days.
- The greatest percentage of motorcyclist crashes that were fatal occurred during the midnight-2:59 AM hours, but based upon frequency, more fatal crashes occurred during daylight hours (specifically between 12 PM and 8:59 PM).

Table 62. Motorcyclist Crashes by Light Condition and Severity, 1999

	Fatal	Crashes	Person	al Injury	Property	/ Damage	Total (	Crashes
<b>Light Condition</b>	Count	Percent	Count	Percent	Count	Percent	Count	Percent
Daylight	41	61.2%	1,119	68.4%	330	74.2%	1,490	69.3%
Dawn or Dusk	3	4.5%	91	5.6%	28	6.3%	122	5.7%
Darkness	23	34.3%	422	25.8%	86	19.3%	531	24.7%
Not Stated	0	0.0%	5	0.3%	1	0.2%	6	0.3%
Total	67	100.0%	1,637	100.0%	445	100.0%	2,149	100.0%

#### Table 62

 More than one-third of the fatal motorcyclist crashes occurred at night (Darkness), compared to the nearly 70 percent of all motorcyclist crashes that occurred during daylight conditions.

#### Table 63

- Not surprisingly, motorcycle drivers' actions or inactions, versus roadway conditions or mechanical problems, were involved in nearly 90 percent of the crashes.
- Alcohol was nearly three times more likely to be involved in fatal crashes than in personal injury crashes, and seven times more likely than in property damage crashes.

Table 63. Motorcyclist Crashes by Vehicular Contributing Circumstance, 1999

	Fatal C	rashes	Person	al Injury	Property	/ Damage	Total (	Crashes
Contributing Circumstance	Count	Percent	Count	Percent	Count	Percent	Count	Percent
Speed Too Fast	21	20.4%	240	10.4%	31	5.3%	292	9.8%
Failure to Yield	13	12.6%	365	15.9%	71	12.1%	449	15.0%
Disregarded Signal or Sign	1	1.0%	59	2.6%	13	2.2%	73	2.4%
Drove Left of Center	7	6.8%	47	2.0%	7	1.2%	61	2.0%
Improper Overtaking	2	1.9%	39	1.7%	19	3.2%	60	2.0%
Followed to Closely	3	2.9%	87	3.8%	46	7.8%	136	4.6%
Made Improper Turn	1	1.0%	60	2.6%	23	3.9%	84	2.8%
Had Been Drinking	19	18.4%	153	6.7%	15	2.6%	187	6.3%
Other Improper Driving	5	4.9%	78	3.4%	37	6.3%	120	4.0%
Mechanical Failure	1	1.0%	71	3.1%	11	1.9%	83	2.8%
Driver Asleep	0	0.0%	5	0.2%	4	0.7%	9	0.3%
Driver Inattention	19	18.4%	580	25.2%	181	30.9%	780	26.1%
Animals on Roadway	1	1.0%	76	3.3%	19	3.2%	96	3.2%
Roadway Factors	0	0.0%	83	3.6%	11	1.9%	94	3.1%
Material on Roadway/Weather	0	0.0%	78	3.4%	14	2.4%	92	3.1%
Other	10	9.7%	277	12.1%	84	14.3%	371	12.4%

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

Table 64. Motorcyclist Fatalities by Helmet Use, 1990–1999

	Cyclist	Fataliti	es Without	Helmet			Cyclist F	atalities	Wearing	Helmet		Total C	yclist Fa	talities
Dr	iver	Pass	senger	To	otal	Dr	iver	Pass	enger	Т	otal			
Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Driver	Pass.	Total
63	90.0%	10	100.0%	73	91.3%	7	10.0%	0	0.0%	7	8.8%	70	10	80
58	81.7%	10	100.0%	68	84.0%	13	18.3%	0	0.0%	13	16.0%	71	10	81
54	85.7%	7	100.0%	61	87.1%	9	14.3%	0	0.0%	9	12.9%	63	7	70
38	82.6%	7	100.0%	45	84.9%	8	17.4%	0	0.0%	8	15.1%	46	7	53
50	83.3%	5	100.0%	55	84.6%	10	16.7%	0	0.0%	10	15.4%	60	5	65
49	83.1%	6	100.0%	55	84.6%	10	16.9%	0	0.0%	10	15.4%	59	6	65
46	85.2%	8	88.9%	54	85.7%	8	14.8%	1	11.1%	9	14.3%	54	9	63
33	84.6%	6	75.0%	39	83.0%	6	15.4%	2	25.0%	8	17.0%	39	8	47
48	78.7%	6	85.7%	54	79.4%	13	21.3%	1	14.3%	14	20.6%	61	7	68
53	85.5%	4	80.0%	57	85.1%	9	14.5%	1	20.0%	10	14.9%	62	5	67
	63 58 54 38 50 49 46 33 48	Driver           Count         Percent           63         90.0%           58         81.7%           54         85.7%           38         82.6%           50         83.3%           49         83.1%           46         85.2%           33         84.6%           48         78.7%	Driver         Pass           Count         Percent         Count           63         90.0%         10           58         81.7%         10           54         85.7%         7           38         82.6%         7           50         83.3%         5           49         83.1%         6           46         85.2%         8           33         84.6%         6           48         78.7%         6	Driver         Passenger           Count         Percent         Count         Percent           63         90.0%         10         100.0%           58         81.7%         10         100.0%           54         85.7%         7         100.0%           38         82.6%         7         100.0%           50         83.3%         5         100.0%           49         83.1%         6         100.0%           46         85.2%         8         88.9%           33         84.6%         6         75.0%           48         78.7%         6         85.7%	Count         Percent         Count         Percent         Count           63         90.0%         10         100.0%         73           58         81.7%         10         100.0%         68           54         85.7%         7         100.0%         61           38         82.6%         7         100.0%         45           50         83.3%         5         100.0%         55           49         83.1%         6         100.0%         55           46         85.2%         8         88.9%         54           33         84.6%         6         75.0%         39           48         78.7%         6         85.7%         54	Driver         Passenger         Total           Count Percent         Count Percent         Count Percent           63         90.0%         10         100.0%         73         91.3%           58         81.7%         10         100.0%         68         84.0%           54         85.7%         7         100.0%         61         87.1%           38         82.6%         7         100.0%         45         84.9%           50         83.3%         5         100.0%         55         84.6%           49         83.1%         6         100.0%         55         84.6%           46         85.2%         8         88.9%         54         85.7%           33         84.6%         6         75.0%         39         83.0%           48         78.7%         6         85.7%         54         79.4%	Driver         Passenger         Total         Dr           Count Percent         Count Percent         Count Percent         Count Percent           63         90.0%         10         100.0%         73         91.3%         7           58         81.7%         10         100.0%         68         84.0%         13           54         85.7%         7         100.0%         61         87.1%         9           38         82.6%         7         100.0%         45         84.9%         8           50         83.3%         5         100.0%         55         84.6%         10           49         83.1%         6         100.0%         55         84.6%         10           46         85.2%         8         88.9%         54         85.7%         8           33         84.6%         6         75.0%         39         83.0%         6           48         78.7%         6         85.7%         54         79.4%         13	Driver         Passenger         Total         Driver           63         90.0%         10         100.0%         73         91.3%         7         10.0%           58         81.7%         10         100.0%         68         84.0%         13         18.3%           54         85.7%         7         100.0%         61         87.1%         9         14.3%           38         82.6%         7         100.0%         45         84.9%         8         17.4%           50         83.3%         5         100.0%         55         84.6%         10         16.7%           49         83.1%         6         100.0%         55         84.6%         10         16.9%           46         85.2%         8         88.9%         54         85.7%         8         14.8%           33         84.6%         6         75.0%         39         83.0%         6         15.4%           48         78.7%         6         85.7%         54         79.4%         13         21.3%	Driver         Passenger         Total         Driver         Pass           63         90.0%         10         100.0%         73         91.3%         7         10.0%         0           58         81.7%         10         100.0%         68         84.0%         13         18.3%         0           54         85.7%         7         100.0%         61         87.1%         9         14.3%         0           38         82.6%         7         100.0%         45         84.9%         8         17.4%         0           50         83.3%         5         100.0%         55         84.6%         10         16.7%         0           49         83.1%         6         100.0%         55         84.6%         10         16.9%         0           46         85.2%         8         88.9%         54         85.7%         8         14.8%         1           33         84.6%         6         75.0%         39         83.0%         6         15.4%         2           48         78.7%         6         85.7%         54         79.4%         13         21.3%         1	Driver         Passenger         Total         Driver         Passenger         Count Percent         Count	Driver         Passenger         Total         Driver         Passenger         Total           63         90.0%         10         100.0%         73         91.3%         7         10.0%         0         0.0%         7           58         81.7%         10         100.0%         68         84.0%         13         18.3%         0         0.0%         13           54         85.7%         7         100.0%         61         87.1%         9         14.3%         0         0.0%         9           38         82.6%         7         100.0%         45         84.9%         8         17.4%         0         0.0%         8           50         83.3%         5         100.0%         55         84.6%         10         16.7%         0         0.0%         10           49         83.1%         6         100.0%         55         84.6%         10         16.9%         0         0.0%         10           46         85.2%         8         88.9%         54         85.7%         8         14.8%         1         11.1%         9           33         84.6%         6         75.0%         39	Driver         Passenger         Total         Driver         Percent         Count Percent         Asset           58         81.7%         10         100.0%         68         84.0%         13         18.3%         0         0.0%         13         16.0%           54         85.7%         7         100.0%         45         84.9%         8         17.4%         0         0.0%         8         15.1%           49         83.1%         6         100.0%         55         84.6%         10         16.9%         0         0.0%         10         15.4%           46	Driver         Passenger         Total         Driver         Passenger         Total         Count Percent         Count Percent<	Driver         Passenger         Total         Driver         Passenger         Count Percent         Driver         Passenger         Total         Driver         Passenger         T

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

Legend: Pass.=Passenger

Example: In 1999, 53 of 62 or 85.5% of fatally injured motorcycle drivers were not wearing a helmet.

• Helmet usage for both drivers and passengers continued to be markedly low in 1999, with only 14.9 percent of riders wearing a helmet at the time of their fatal crash.

#### Table 65

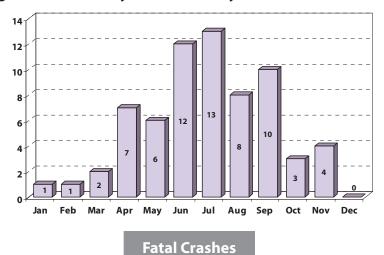
- Two-thirds of the fatal crashes occurred in rural areas, yet only 41 percent of the non-fatal crashes occurred in rural areas.
- Nearly two-thirds of the fatal crashes occurred during the 4-month period June through September.

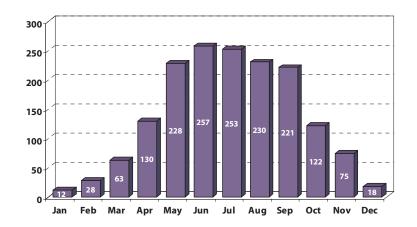
Table 65. Motorcyclist Crashes by Month and Severity with Fatalities and Injuries by Rural/Urban Locale, 1999

															Motorcy	clists Or	nly			Ne	n-Moto	orcyclis	sts	
	Fa	tal Cras	shes	Pei	rsonal Ir	njury	Prop	erty Da	mage	To	tal Cras	shes	I	Fataliti	es		Injuries	<u>:                                    </u>	I	Fatalitie	s		Injurie	es
Month	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	5	7	12	1	4	5	7	11	18	1	0	1	6	6	12	0	0	0	0	1	1
February	1	0	1	12	16	28	4	2	6	17	18	35	1	0	1	11	16	27	0	0	0	1	0	1
March	1	1	2	24	39	63	8	8	16	33	48	81	1	1	2	27	41	68	0	0	0	4	3	7
April	5	2	7	53	77	130	16	17	33	74	96	170	5	2	7	54	79	133	0	0	0	5	7	12
May	2	4	6	96	132	228	30	38	68	128	174	302	2	4	6	116	146	262	0	0	0	8	20	28
June	9	3	12	100	157	257	14	51	65	123	211	334	9	3	12	117	165	282	1	0	1	7	14	21
July	9	4	13	106	147	253	25	37	62	140	188	328	8	4	12	126	173	299	1	0	1	9	14	23
August	4	4	8	102	128	230	20	35	55	126	167	293	4	4	8	117	137	254	0	0	0	8	13	21
September	8	2	10	108	113	221	21	41	62	137	156	293	9	2	11	130	129	259	0	0	0	8	0	8
October	2	1	3	57	65	122	15	23	38	74	89	163	2	1	3	60	70	130	0	0	0	8	5	13
November	3	1	4	30	45	75	7	17	24	40	63	103	3	1	4	32	46	78	0	0	0	6	7	13
December	0	0	0	6	12	18	1	10	11	7	22	29	0	0	0	6	12	18	0	0	0	0	2	2
Total	45	22	67	699	938	1,637	162	283	445	906	1,243	2,149	45	22	67	802	1,020	1,822	2	0	2	64	86	150

Note: Crashes include motorcycles, motor bikes, minibikes, motor scooters and mopeds. Legend: Rur=Rural; Urb=Urban; Tot=Total

Figure 47. Motorcyclist Crashes by Month, 1999





**Personal Injury** 

Table 66. Pickup Truck Crashes by Vehicular Contributing Circumstance and Severity, 1999

			ı	Pickup Tru	ıck Crashe	s				Other	Vehicle	s Involve	d in Picku	ıp Truck Cr	ashes	
	Fatal	Crashes	Person	al Injury	Property	Damage	Total C	rashes	Fatal	Crashes	Person	al Injury	Propert	y Damage	Total	Crashes
Contributing Circumstance	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent
Speed Too Fast	38	12.3%	939	6.5%	2,008	4.7%	2,985	5.2%	17	7.9%	548	5.0%	1,167	3.7%	1,732	4.0%
Failure to Yield	47	15.3%	2,550	17.8%	5,499	13.0%	8,096	14.2%	45	20.9%	2,357	21.3%	5,047	16.0%	7,449	17.4%
Disregarded Signal or Sign	24	7.8%	933	6.5%	1,167	2.7%	2,124	3.7%	21	9.8%	896	8.1%	1,037	3.3%	1,954	4.6%
Drove Left of Center	55	17.9%	478	3.3%	852	2.0%	1,385	2.4%	43	20.0%	378	3.4%	630	2.0%	1,051	2.5%
Improper Overtaking	3	1.0%	118	0.8%	563	1.3%	684	1.2%	2	0.9%	101	0.9%	495	1.6%	598	1.4%
Followed Too Closely	4	1.3%	1,143	8.0%	3,845	9.1%	4,992	8.7%	7	3.3%	1,168	10.6%	3,685	11.7%	4,860	11.4%
Made Improper Turn	0	0.0%	178	1.2%	900	2.1%	1,078	1.9%	0	0.0%	169	1.5%	791	2.5%	960	2.2%
Had Been Drinking	40	13.0%	903	6.3%	1,164	2.7%	2,107	3.7%	10	4.7%	373	3.4%	571	1.8%	954	2.2%
Other Improper Driving	12	3.9%	440	3.1%	2,486	5.9%	2,938	5.1%	8	3.7%	324	2.9%	2,118	6.7%	2,450	5.7%
Mechanical Failure	1	0.3%	279	1.9%	928	2.2%	1,208	2.1%	2	0.9%	210	1.9%	600	1.9%	812	1.9%
Driver Asleep	6	1.9%	274	1.9%	395	0.9%	675	1.2%	1	0.5%	95	0.9%	160	0.5%	256	0.6%
Driver Inattention	47	15.3%	3,797	26.4%	12,595	29.7%	16,439	28.8%	39	18.1%	3,195	28.9%	0,576	33.6%	13,810	32.3%
Animals on Roadway	0	0.0%	178	1.2%	2,829	6.7%	3,007	5.3%	0	0.0%	23	0.2%	67	0.2%	90	0.2%
Roadway Factors	2	0.6%	54	0.4%	209	0.5%	265	0.5%	2	0.9%	17	0.2%	79	0.3%	98	0.2%
Material on Roadway/Weather	11	3.6%	907	6.3%	3,655	8.6%	4,573	8.0%	6	2.8%	474	4.3%	2,053	6.5%	2,533	5.9%
Other	18	5.8%	1,193	8.3%	3,347	7.9%	4,558	8.0%	12	5.6%	735	6.6%	2,422	7.7%	3,169	7.4%

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

 $Example: Of the \ total \ number \ of \ fatal \ crashes \ involving \ pickup \ trucks, 38 \ or 12.3\% \ were \ attributed \ to \ the \ circumstance \ of \ Speed \ Too \ Fast.$ 

- Drivers' actions/inactions were considered to be the primary cause of 85 percent of the pickup-involved crashes, versus road conditions and/or mechanical problems. The single circumstance of Driver Inattention, which includes the use of cellular phones, attributed to nearly 30 percent of the total number of crashes involving a pickup truck.
- Thirteen percent of pickup truck drivers involved in a fatal crash acknowledged that they had been drinking prior to the crash. That percentage dropped to half that rate (6.3 percent) for personal injury crashes and dropped to a fourth (2.7 percent) of the fatal crash rate for property damage crashes.

#### Table 67

- Typical of all fatal crashes, 70.3 percent of fatal crashes involving a straight truck occurred in rural areas, while only 36.8 percent of all crashes involving straight trucks occurred in rural areas.
- Not surprisingly, because of the size of the involved vehicles, 3 out of 4 fatalities occurred in the other vehicles (and/or pedestrians, cyclists, etc.).

Table 67. Large Single-Unit Truck Crashes by Month, Severity and Locale with Fatalities and Injuries, 1999

														lı	n Single	-Unit Tru	ıck			Not	in Sing	le-Unit	Truck	
	Fat	al Cras	hes	Pe	rsonal l	njury	Prop	erty D	amage	То	tal Cras	hes	Fa	talitie	s		Injurie	s	F	atalitie	es		Injurie	es
Month	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	3	5	79	100	179	422	640	1,062	503	743	1,246	2	0	2	56	48	104	2	3	5	53	108	161
February	3	0	3	67	94	161	183	369	552	253	463	716	1	0	1	54	54	108	3	0	3	43	84	127
March	3	1	4	74	116	190	232	462	694	309	579	888	1	0	1	48	37	85	2	1	3	50	113	163
April	1	2	3	76	125	201	192	444	636	269	571	840	1	0	1	58	66	124	0	2	2	64	114	178
May	5	3	8	85	124	209	246	477	723	336	604	940	2	1	3	69	73	142	4	2	6	69	122	191
June	4	1	5	81	127	208	243	501	744	328	629	957	1	0	1	62	59	121	3	1	4	72	139	211
July	5	0	5	117	135	252	268	480	748	390	615	1,005	3	0	3	88	60	148	2	0	2	99	125	224
August	4	2	6	100	143	243	250	486	736	354	631	985	1	0	1	64	75	139	3	2	5	80	134	214
September	7	2	9	98	134	232	262	495	757	367	631	998	2	0	2	53	67	120	5	2	7	89	132	221
October	3	5	8	92	148	240	312	487	799	407	640	1,047	1	0	1	66	77	143	2	6	8	65	155	220
November	1	0	1	76	128	204	268	479	747	345	607	952	0	0	0	56	53	109	1	0	1	55	127	182
December	7	0	7	88	117	205	334	545	879	429	662	1,091	2	0	2	59	49	108	5	0	5	83	109	192
Total	45	19	64	1,033	1,491	2,524	3,212	5,865	9,077	4,290	7,375	11,665	17	1	18	733	718	1,451	32	19	51	822	1,462	2,284

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

Table 68. Large Single-Unit Truck Crashes by Vehicular Contributing Circumstance and Severity, 1999

			Lar	ge, Singl	e-Unit Tru	ucks			Othe	er Vehicle:	s Involve	d in Cras	hes with I	arge, Sing	le-Unit 1	rucks
	Fatal	Crashes	Person	al Injury	Property	y Damage	Total	Crashes	Fatal C	rashes	Person	al Injury	Propert	y Damage	Total	Crashes
Contributing Circumstance	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent
Speed Too Fast	7	8.9%	183	5.7%	414	3.8%	604	4.2%	4	5.2%	162	5.9%	282	3.2%	448	3.8%
Failure to Yield	11	13.9%	534	16.7%	1,171	10.7%	1,716	12.1%	12	15.6%	516	18.7%	1,094	12.4%	1,622	13.9%
Disregarded Signal or Sign	8	10.1%	211	6.6%	300	2.7%	519	3.7%	7	9.1%	229	8.3%	303	3.4%	539	4.6%
Drove Left of Center	12	15.2%	85	2.7%	207	1.9%	304	2.1%	13	16.9%	82	3.0%	181	2.1%	276	2.4%
Improper Overtaking	1	1.3%	29	0.9%	185	1.7%	215	1.5%	1	1.3%	24	0.9%	192	2.2%	217	1.9%
Followed Too Closely	1	1.3%	310	9.7%	870	7.9%	1,181	8.3%	3	3.9%	314	11.4%	855	9.7%	1,172	10.0%
Made Improper Turn	1	1.3%	42	1.3%	319	2.9%	362	2.5%	2	2.6%	35	1.3%	274	3.1%	311	2.7%
Had Been Drinking	6	7.6%	132	4.1%	189	1.7%	327	2.3%	4	5.2%	96	3.5%	133	1.5%	233	2.0%
Other Improper Driving	4	5.1%	121	3.8%	1,043	9.5%	1,168	8.2%	3	3.9%	108	3.9%	909	10.3%	1,020	8.7%
Mechanical Failure	2	2.5%	96	3.0%	397	3.6%	495	3.5%	2	2.6%	72	2.6%	254	2.9%	328	2.8%
Driver Asleep	1	1.3%	59	1.9%	79	0.7%	139	1.0%	1	1.3%	21	0.8%	35	0.4%	57	0.5%
Driver Inattention	16	20.3%	906	28.4%	3,408	31.1%	4,330	30.5%	20	26.0%	800	29.0%	2,908	32.9%	3,728	32.0%
Animals on Roadway	0	0.0%	24	0.8%	358	3.3%	382	2.7%	0	0.0%	7	0.3%	8	0.1%	15	0.1%
Roadway Factors	0	0.0%	20	0.6%	79	0.7%	99	0.7%	0	0.0%	9	0.3%	48	0.5%	57	0.5%
Material on Roadway/Weather	3	3.8%	164	5.1%	825	7.5%	992	7.0%	3	3.9%	100	3.6%	575	6.5%	678	5.8%
Other	6	7.6%	273	8.6%	1,102	10.1%	1,381	9.7%	2	2.6%	188	6.8%	777	8.8%	967	8.3%

While speed was not a chief factor in straight truck crashes, driver actions/inactions continued to be the major cause of these crashes. Specifically, Driver Inattention represented 30.5 percent of all large-unit truck crashes for 1999. Driver Asleep was attributed to only 1.0 percent of largeunit truck crashes. However, researchers at the AAA Foundation for Traffic Safety have suggested that very few crashes happen because a driver actually falls asleep at the wheel, compared to those that happen because a drowsy driver fails to detect an upcoming hazard, or fails to take proper collision avoidance action. This consequently results in a higher reported incidence of Driver Inattention, rather than Driver Asleep.

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

Table 69. Large Truck with Trailer Crashes by Month, Severity and Locale with Fatalities and Injuries, 1999

														In	Truck w	rith Trai	ler			Not	in Truc	k with T	railer	
	Fat	al Cra	shes	Per	sonal lı	njury	Prop	erty D	amage	To	otal Cra	shes	Fa	talitie	s		Injuries	:	F	atalitie	es		Injurie	es es
Month	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	6	1	7	109	81	190	529	375	904	644	457	1,101	0	1	1	50	16	66	7	0	7	105	100	205
February	7	0	7	57	41	98	205	209	414	269	250	519	2	0	2	22	11	33	6	0	6	67	40	107
March	9	3	12	64	40	104	277	262	539	350	305	655	1	1	2	22	7	29	14	2	16	71	42	113
April	5	1	6	70	62	132	214	270	484	289	333	622	0	0	0	28	15	43	7	1	8	64	65	129
May	15	3	18	67	57	124	266	299	565	348	359	707	3	0	3	36	17	53	13	3	16	70	66	136
June	12	2	14	91	69	160	241	277	518	344	348	692	5	0	5	38	14	52	8	3	11	100	80	180
July	16	4	20	78	58	136	255	248	503	349	310	659	4	0	4	44	7	51	16	4	20	81	72	153
August	10	2	12	80	73	153	228	289	517	318	364	682	4	0	4	43	24	67	15	3	18	79	70	149
September	3	0	3	81	60	141	240	262	502	324	322	646	2	0	2	29	14	43	1	0	1	79	64	143
October	12	4	16	78	68	146	311	280	591	401	352	753	2	0	2	34	22	56	10	4	14	138	75	213
November	8	2	10	72	71	143	249	231	480	329	304	633	0	0	0	35	15	50	11	3	14	70	85	155
December	6	0	6	78	59	137	263	267	530	347	326	673	3	0	3	35	19	54	6	0	6	82	56	138
Total	109	22	131	925	739	1,664	3,278	3,269	6,547	4,312	4,030	8,342	26	2	28	416	181	597	114	23	137	1,006	815	1,821

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

Table 70. Large Truck with Trailer Crashes by Vehicular Contributing Circumstance and Severity, 1999

			La	rge Truck	s with Tra	ilers			Other Vehicles Involved in Crashes with Large Trucks with Trailers								
	Fatal C	rashes	Person	al Injury	Property	/ Damage	Total	Crashes	Fatal	Crashes	Person	al Injury	Property	Damage	Total	Crashes	
Contributing Circumstance	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent	
Speed Too Fast	11	7.0%	255	12.0%	493	6.1%	759	7.3%	12	7.2%	193	10.2%	302	5.5%	507	6.7%	
Failure to Yield	17	10.8%	187	8.8%	505	6.2%	709	6.8%	21	12.7%	192	10.2%	511	9.2%	724	9.5%	
Disregarded Signal or Sign	12	7.6%	110	5.2%	115	1.4%	237	2.3%	13	7.8%	119	6.3%	115	2.1%	247	3.3%	
Drove Left of Center	25	15.9%	52	2.4%	111	1.4%	188	1.8%	29	17.5%	66	3.5%	96	1.7%	191	2.5%	
Improper Overtaking	3	1.9%	32	1.5%	143	1.8%	178	1.7%	3	1.8%	41	2.2%	149	2.7%	193	2.5%	
Followed Too Closely	8	5.1%	213	10.0%	514	6.3%	735	7.1%	7	4.2%	185	9.8%	368	6.6%	560	7.4%	
Made Improper Turn	1	0.6%	40	1.9%	409	5.0%	450	4.3%	1	0.6%	32	1.7%	248	4.5%	281	3.7%	
Had Been Drinking	4	2.5%	43	2.0%	33	0.4%	80	0.8%	12	7.2%	64	3.4%	60	1.1%	136	1.8%	
Other Improper Driving	8	5.1%	189	8.9%	1,087	13.4%	1,284	12.3%	9	5.4%	181	9.6%	922	16.7%	1,112	14.6%	
Mechanical Failure	5	3.2%	69	3.2%	412	5.1%	486	4.7%	6	3.6%	34	1.8%	197	3.6%	237	3.1%	
Driver Asleep	7	4.5%	62	2.9%	110	1.4%	179	1.7%	7	4.2%	49	2.6%	62	1.1%	118	1.6%	
<b>Driver Inattention</b>	34	21.7%	538	25.3%	2,239	27.6%	2,811	27.0%	31	18.7%	475	25.2%	1,572	28.4%	2,078	27.4%	
Animals on Roadway	0	0.0%	13	0.6%	295	3.6%	308	3.0%	0	0.0%	2	0.1%	7	0.1%	9	0.1%	
Roadway Factors	0	0.0%	7	0.3%	42	0.5%	49	0.5%	0	0.0%	7	0.4%	18	0.3%	25	0.3%	
Material on Roadway/Weather	3	1.9%	124	5.8%	584	7.2%	711	6.8%	5	3.0%	121	6.4%	384	6.9%	510	6.7%	
Other	19	12.1%	196	9.2%	1,033	12.7%	1,248	12.0%	10	6.0%	127	6.7%	526	9.5%	663	8.7%	

 ${\it Note: See \ Glossary \ for \ an \ explanation \ of \ groupings \ of \ Contributing \ Circumstance.}}$ 

Table 71. School Bus Crashes by Month, Severity and Locale with Fatalities and Injuries, 1999

															Out	of Bus			In Bus					
	Fata	al Cras	hes	Pers	onal I	njury	Prope	rty Da	mage	То	tal Cra	shes	Fa	talitie	es		Injurie	s	F	ataliti	es	I	njurie	s
Month	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	6	4	10	36	67	103	42	71	113	0	0	0	6	7	13	0	0	0	2	0	2
February	0	1	1	7	13	20	18	31	49	25	45	70	0	1	1	7	9	16	0	0	0	23	30	53
March	0	0	0	5	6	11	25	37	62	30	43	73	0	0	0	5	4	9	0	0	0	2	4	6
April	0	0	0	10	11	21	25	32	57	35	43	78	0	0	0	13	9	22	0	0	0	7	8	15
May	0	0	0	7	15	22	22	38	60	29	53	82	0	0	0	8	12	20	0	0	0	15	29	44
June	0	0	0	1	0	1	6	14	20	7	14	21	0	0	0	1	0	1	0	0	0	2	0	2
July	0	0	0	0	2	2	4	7	11	4	9	13	0	0	0	0	2	2	0	0	0	0	0	0
August	0	0	0	4	6	10	15	22	37	19	28	47	0	0	0	4	6	10	0	0	0	3	4	7
September	0	0	0	9	14	23	26	38	64	35	52	87	0	0	0	7	13	20	0	0	0	7	10	17
October	0	0	0	8	11	19	21	52	73	29	63	92	0	0	0	7	9	16	0	0	0	68	6	74
November	0	1	1	8	9	17	31	43	74	39	53	92	0	1	1	12	12	24	0	0	0	8	10	18
December	0	0	0	9	4	13	25	27	52	34	31	65	0	0	0	4	3	7	0	0	0	18	9	27
Total	0	2	2	74	95	169	254	408	662	328	505	833	0	2	2	74	86	160	0	0	0	155	110	265

Leaend: Rur=Rural: Urb=Urban: Tot=Total

#### Table 69

- When a large truck fatality occurs, 5 out of 6 fatalities are not occupants of the large truck.
- 83 percent of the fatal crashes involving semi-tractor/trailers occurred in rural areas (overall State average equaled 73 percent).
- Only 17 percent of the fatalities were occupants of the semi-tractor/trailer.
- 1.6 percent of crashes involving a semitractor/trailer resulted in a fatality. This is three times the fatal involvement rate for all vehicles.

#### Table 70

• Driver Inattention and Drove Left of Center were the leading contributing factors in semi-tractor/trailer crashes. Again, both of these have been cited by research as indicators of driver fatigue.

#### Table 71

- Neither of the 2 fatalities in 1999 were occupants of the school bus.
- The 2 fatal crashes represented the fewest number of fatal crashes involving school buses since 1996 (0 fatal crashes).
- The total number of school bus crashes has remained relatively unchanged over the past three years, but still represents a 19percent reduction in crashes since 1995.

in an urban locale.

• 61 percent of school bus crashes occurred Figure 48. School Bus Crashes by Month and Locale, 1999

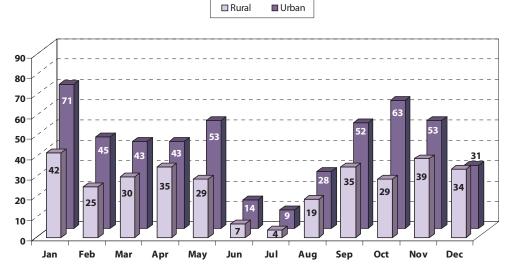


Table 72. School Bus Crashes by Vehicular Contributing Circumstance and Severity, 1999

				Scho	ol Bus				Other Vehicles Involved in Crashes with School Buses								
	Fatal Crashes		Personal Injury		Propert	y Damage	Total	Crashes	Fatal	Crashes	Person	al Injury	<b>Property Damage</b>		Total	Crashes	
Contributing Circumstance	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent	
Speed Too Fast	0	0.0%	9	4.3%	23	3.1%	32	3.4%	0	0.0%	6	2.9%	21	2.8%	27	2.8%	
Failure to Yield	0	0.0%	44	21.3%	69	9.4%	113	12.0%	0	0.0%	46	22.1%	72	9.6%	118	12.3%	
Disregarded Signal or Sign	0	0.0%	17	8.2%	15	2.0%	32	3.4%	0	0.0%	20	9.6%	19	2.5%	39	4.1%	
Drove Left of Center	0	0.0%	1	0.5%	28	3.8%	29	3.1%	0	0.0%	3	1.4%	27	3.6%	30	3.1%	
Improper Overtaking	0	0.0%	1	0.5%	15	2.0%	16	1.7%	0	0.0%	2	1.0%	18	2.4%	20	2.1%	
Followed Too Closely	0	0.0%	21	10.1%	47	6.4%	68	7.2%	0	0.0%	26	12.5%	54	7.2%	80	8.4%	
Made Improper Turn	0	0.0%	5	2.4%	36	4.9%	41	4.4%	0	0.0%	3	1.4%	32	4.3%	35	3.7%	
Had Been Drinking	0	0.0%	1	0.5%	5	0.7%	6	0.6%	0	0.0%	1	0.5%	8	1.1%	9	0.9%	
Other Improper Driving	0	0.0%	11	5.3%	59	8.0%	70	7.4%	0	0.0%	11	5.3%	57	7.6%	68	7.1%	
Mechanical Failure	0	0.0%	6	2.9%	17	2.3%	23	2.4%	0	0.0%	9	4.3%	17	2.3%	26	2.7%	
Driver Asleep	0	0.0%	0	0.0%	6	0.8%	6	0.6%	0	0.0%	0	0.0%	4	0.5%	4	0.4%	
Driver Inattention	1	50.0%	52	25.1%	246	33.6%	299	31.7%	1	100.0%	49	23.6%	258	34.5%	308	32.2%	
Animals on Roadway	0	0.0%	0	0.0%	8	1.1%	8	0.8%	0	0.0%	0	0.0%	3	0.4%	3	0.3%	
Roadway Factors	0	0.0%	1	0.5%	6	0.8%	7	0.7%	0	0.0%	1	0.5%	8	1.1%	9	0.9%	
Material on Roadway/Weather	0	0.0%	14	6.8%	57	7.8%	71	7.5%	0	0.0%	11	5.3%	64	8.6%	75	7.8%	
Other	1	50.0%	24	11.6%	96	13.1%	121	12.8%	0	0.0%	20	9.6%	86	11.5%	106	11.1%	

• Driver Inattention and Failure to Yield on the part of the school bus driver were the leading cause of crashes.

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

Table 73. Railroad/Motor Vehicle Crashes by Vehicular Contributing Circumstance and Severity, 1999

	Fatal (	Crashes	Persor	al Injury	Property	Damage	Total Crashes		
Contributing Circumstance	Count	Percent	Count	Percent	Count	Percent	Count	Percent	
Speed Too Fast	1	4.0%	4	3.0%	16	6.7%	21	5.3%	
Failure to Yield	7	28.0%	25	18.7%	29	12.1%	61	15.3%	
Disregarded Signal or Sign	5	20.0%	29	21.6%	37	15.4%	71	17.8%	
Drove Left of Center	0	0.0%	2	1.5%	3	1.3%	5	1.3%	
Improper Overtaking	0	0.0%	0	0.0%	4	1.7%	4	1.0%	
Made Improper Turn	0	0.0%	2	1.5%	5	2.1%	7	1.8%	
Had Been Drinking	2	8.0%	12	9.0%	16	6.7%	30	7.5%	
Other Improper Driving	0	0.0%	1	0.7%	5	2.1%	6	1.5%	
Mechanical Failure	0	0.0%	1	0.7%	5	2.1%	6	1.5%	
Driver Asleep	0	0.0%	1	0.7%	2	0.8%	3	0.8%	
Driver Inattention	7	28.0%	34	25.4%	60	25.0%	101	25.3%	
Animals on Roadway	0	0.0%	0	0.0%	1	0.4%	1	0.3%	
Roadway Factors	1	4.0%	0	0.0%	6	2.5%	7	1.8%	
Material on Roadway/Weather	0	0.0%	2	1.5%	17	7.1%	19	4.8%	
Other	2	8.0%	21	15.7%	34	14.2%	57	14.3%	

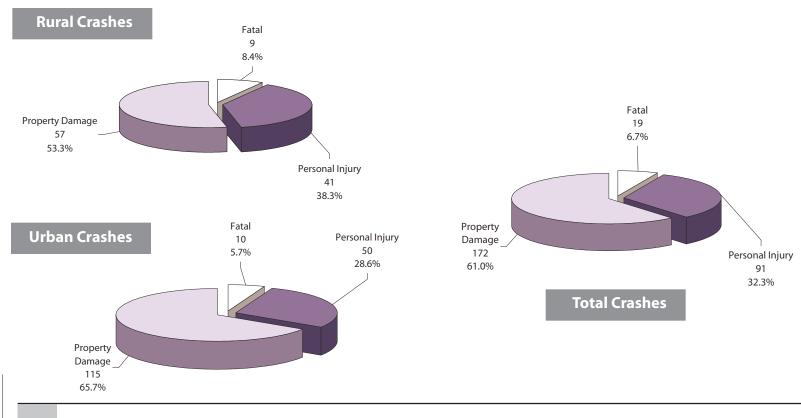
Note: See Glossary for an explanation of groupings of Contributing Circumstance. More than one contributing circumstance can be cited per crash.

- Driver Inattention and Failure to Yield at rail crossings were the major causes of fatal railroad crashes. Disregarded Signal or Sign followed closely behind at 20 percent.
- 1 out of every 16 crashes that involved a train resulted in a fatality.

Table 74. Railroad/Motor Vehicle Crashes by Light Condition and Severity, 1999

	<u>Fatal</u>	<u>Crashes</u>	Person	al Injury	<u>Propert</u>	y Damage	Total	<u>Crashes</u>
Light Condition	Count	Percent	Count	Percent	Count	Percent	Count	Percent
Daylight	12	63.2%	52	57.1%	93	54.1%	157	55.7%
Dawn or dusk	0	0.0%	0	0.0%	6	3.5%	6	2.1%
Dark, Street Lights On	4	21.1%	17	18.7%	38	22.1%	59	20.9%
Dark, Street Lights Off	0	0.0%	3	3.3%	1	0.6%	4	1.4%
Dark, No Street Lights	3	15.8%	19	20.9%	33	19.2%	55	19.5%
Unknown	0	0.0%	0	0.0%	1	0.6%	1	0.4%
Total	19		91		172		282	100.0%

Figure 49. Railroad/Motor Vehicle Crashes by Severity and Locale, 1999



# Chapter 6

# Alcohol

# TOPICS

Alcohol-Related Crashes
Alcohol-Related BAC Test Results

An initial review of this chapter, focused upon the drivers of alcohol-related crashes, suggests that Indiana is making limited but positive progress towards reducing the presence of the impaired driver on Indiana roads. As illustrated in Figure 50, Total Crashes (total count of all types of crashes), as measured per 1,000 licensed drivers, have remained relatively level over the past 7-8 years, with 56.1 drivers of every 1,000 Indiana licensed drivers (LDVR) being involved in a crash. As a comparison, the number of Alcohol-Related Crashes (as measured by the same index) has shown steady improvement (a decrease). The 1999 rate of 2.3 alcohol-related crashes per 1,000 LDVR is the lowest that Indiana has ever recorded. Over the past eight years, the alcoholrelated crash rate (per 1,000 LDVR) has been reduced by 2.9 percent. However, the number of fatalities as a result of an alcohol-related crash has remained relatively steady over the same time period. Nonetheless, Indiana did experience a dramatic reduction in the number of injuries sustained by individuals in alcohol-related crashes, representing a 9.2 percent drop. Alcohol continued to be the number one cause of fatal highway crashes for Indiana—nearly one out of four fatalities (23.2 percent) were attributed to the presence of alcohol, and 4 percent of all crashes indicated the involvement of alcohol. Again, however, the 1999 numbers represent substantial improvement from ten years ago-in 1990, alcohol was involved in nearly one out of three fatalities (32.7 percent) in Indiana.

Drivers in the 21–24-year-old age group continued to have the highest alcohol-related crash involvement rate for all licensed drivers. In 1999, 6.78 out of every 1,000 licensed drivers in that age category were involved in an alcohol-related crash. That figure is slightly higher than what was reported for both 1998 (6.39) and 1997 (6.55). A subtle change in this year's *Crash Facts* was the subdivision of the younger driver age category (ages 16–20) into two age groups, separating the 16- and 17-year-old drivers from the 18–20-year-old drivers. As a result, a significant difference is seen both in their overall crash

rates and respective involvement in alcohol-related crashes. While the 16- and 17-year-old drivers were involved in nearly 50 percent more crashes than the 18–20-year-old drivers (as measured by 1,000 licensed drivers in that age category), only 1.6 percent of the 16- and 17-year-old driver crashes were alcohol-related. For the 18–20-year-old driver—also an underage drinker—this statistic rose to 3.1 percent, twice that of the younger driver, and alarmingly, much closer to the state average, 3.5 percent. From this it can be concluded that the 16- and 17-year-old driver, if drinking, is not driving (as much). The much higher incidence rate for the 18–20-

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 (BAC) of greater than 0.05 percent for one or more of the drivers involved in the crash.

year-old driver suggests a greater level of alcohol use that was much closer to that of the legal drinker. With 5.0 percent of their crashes being alcohol-related, traditional thinking has been that the 21–25-year-old driver should be the primary targeted age group for countermeasure efforts. However, in 1999, 4.6 percent of crashes involving a driver from the 25–34 age category were also alcohol-related.

While 76 percent of the alcohol-related crashes involved drivers between 21 and 54 years old, the numbers of drivers involved in these crashes continued to decrease. The number of 21–25-year-old drivers involved

in alcohol crashes has decreased by 21 percent over the past four years. The same statistic for the 34–54 age group has also shown an 8.1 percent reduction.

Historically, there has not been a discernable pattern to alcohol-involved crashes as they relate to the time of year, or more specifically, the month. However, there has been a somewhat higher incidence of injuries during the summer months. There does exist, however, a relationship between time of day and a higher incidence of alcohol-related crashes. Fifty-six percent of the alcohol crashes occurred during the eight-hour period from 8:00 PM through 3:59 AM. In the 36-hour time span from 5:00 PM on Friday evening through 4:59 AM on Sunday morning that represents only 21.4 percent of the week, 41 percent of the alcohol crashes occurred.

There appears to be a direct relationship between vehicle speed and injury severity. Crash locations, classified as *City Streets* (lower speed limits) when compared to *County Roads* (higher speed limits) had a higher frequency of alcohol-related crashes, but the severity was lower than county roads. As a percentage, twice as many alcohol crashes occurred on city streets (versus county roads). However, fatal crashes had the opposite relationship. Nearly 40 percent of the fatal alcohol crashes occurred on county roads, while only 20 percent of the fatal alcohol crashes occurred on city streets.

One problem that continues to make the analysis of alcohol crashes more difficult is the lack of sufficient data. Of the 627 drivers killed as a result of a crash, only 275 (44 percent) had their blood alcohol content test results (BAC) recorded on their crash form. Of those available test results, 151 killed drivers had a BAC result of 0.00-0.009 (unimpaired), whereas 91 of the killed drivers had a BAC result greater than 0.100 (Indiana legal limit for alcohol impairment). Eighty-five percent of those 91 killed drivers were males, compared to 62 percent of the unimpaired, killed drivers that were males. A similarly low percentage of drivers were tested (44 percent) for those drivers involved in any

#### alcohol

type of property damage, personal injury, or fatal alcohol crash.

While there is increasing concern over the limited test results, the level of testing (percent of drivers) has not changed in recent years. Nonetheless, there has been a noteworthy reduction in the number of drivers involved in a crash that have a BAC at or greater than 0.05. As shown in Table 83 and Figure 61, there has been a significant reduction in all age categories. With regard to underage drinking and driving, there has been some evidence that impaired driving is on the decline among 16and 17-year-old drivers. As the driver approaches the age of 21, however, the incidence of impaired driving (greater than 0.05 BAC) significantly increases. Motorcycle-driver fatality rates, a much smaller set of numbers, display similar levels of driver testing. For this reason, while 62 percent of the tested drivers had a BAC at or greater than 0.05, only 32 (of 61) of the killed motorcycle drivers were actually tested with a result recorded.

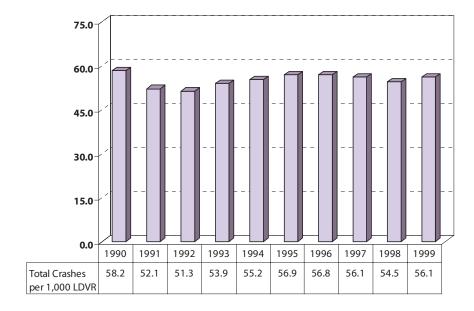
Testing of pedestrians for alcohol content is an even lower 21 percent. Three of the killed pedestrians were under the age of 16.

Overall, there continues to be significant opportunity to increase the testing of all individuals involved in fatal crashes, but progress continues to be made toward reducing the involvement of alcohol in highway crashes.

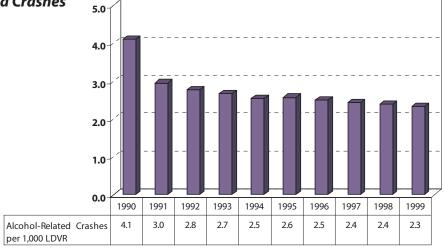
- Statistically, the involvement rate of drivers in all crashes has remained relatively flat over the past 4 years.
- Driver involvement rates (per 1,000 licensed drivers) in alcohol-related crashes continues to show a slow but gradual decline. The 1999 rate of 2.3 per 1,000 licensed drivers is the lowest reported rate that Indiana has achieved.

Figure 50. Crash Rates per 1,000 Licensed Drivers, 1990–1999

#### **Total Crashes**



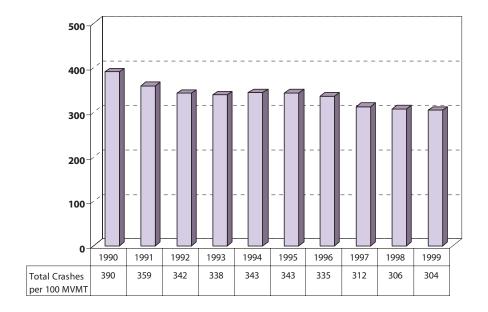
#### **Alcohol-Related Crashes**



#### **Alcohol-Related Crashes**

Figure 51. Crash Rates per 100 Million Vehicle Miles Traveled, 1990-1999

#### **Total Crashes**



#### Alcohol-Related Crashes 30.0 25.0 20.0 15.0 10.0 5.0 1990 1991 1992 1994 1995 1996 1997 Alcohol-Related Crashes 20.4 18.4 16.8 15.8 15.5 14.8 13.5 13.4 12.7 per 100 MVMT

Over the past five years, the involvement rate of drivers in crashes has been stable. The decrease between 1990 and 1991 is primarily attributed to the change in reporting requirements for property damage crashes. The involvement rate for alcohol-related crashes per 1,000 licensed drivers has decreased at an average annual rate of 2.9 percent over the past nine years (since 1991).

- Overall crash rates per million vehicle miles traveled (MVMT) continues to gradually decrease.
- Alcohol-related crashes per 100 million vehicle miles traveled have been reduced at an average annual rate of 4.7 percent over the past 9 years (since 1991).
- The 1999 level is the lowest level of alcoholrelated crashes that Indiana has achieved.

While comparing crashes per 1,000 licensed drivers is a useful tool in measuring driver behaviors between age groups, (Figure 50), it does not factor in the number of miles actually driven by Indiana drivers. The ability to compare crash rates per million vehicle miles traveled (MVMT) is a better indicator of driver performance on Indiana roads. Figures 50 and 51 allows a good historical perspective on the progress that Indiana has achieved over the past ten years.

# alcohol

Table 75. Total Crash and Alcohol-Related Crash Data, 1995–1999

CRASH TYPE		1995			1996			1997		1998	3			1999	
		LDVR	VMT												
All Crashes	Number	Rate	Rate												
TOTAL	221,027	56.945	342.46	221,465	56.749	335.40	220,009	56.076	312.21	216,510	54.453	306.26	217,340	56.060	304.15
Fatal Crashes	859	0.221	1.33	870	0.223	1.32	849	0.216	1.20	884	0.222	1.25	892	0.230	1.25
Personal Injury Crashes	53,831	13.869	83.41	52,058	13.340	78.84	52,413	13.359	74.38	51,865	13.044	73.36	49,518	12.773	69.30
Property Damage Crashes	166,337	42.855	257.72	168,537	43.187	255.24	166,747	42.500	236.62	163,761	41.187	231.64	166,930	43.057	233.60
Fatalities	959	0.247	1.49	982	0.252	1.49	940	0.240	1.33	982	0.247	1.39	1,021	0.263	1.43
Injuries	80,632	20.774	124.93	77,339	19.818	117.13	78,262	19.947	111.06	77,138	19.401	109.11	72,883	18.799	101.99
% Fatal	0.39			0.39			0.39			0.41			0.41		
% Personal Injury	24.35			23.51			23.82			23.96			22.78		
% Property Damage	75.26			76.10			75.79			75.64			76.81		
Alcohol-Related Crashes															
TOTAL	9,995	2.575	15.49	9,777	2.505	14.81	9,544	2.433	13.54	9,508	2.391	13.45	9,072	2.340	12.70
Fatal Alcohol Crashes	199	0.051	0.31	209	0.054	0.32	194	0.049	0.28	206	0.052	0.29	209	0.054	0.29
Personal Injury Alcohol Crashes	4,637	1.195	7.18	4,526	1.160	6.85	4,408	1.124	6.26	4,293	1.080	6.07	3,933	1.014	5.50
Property Damage Alcohol Crashes	5,159	1.329	7.99	5,042	1.292	7.64	4,942	1.260	7.01	5,009	1.260	7.09	4,930	1.272	6.90
Alcohol Fatalities	226	0.058	0.35	239	0.061	0.36	214	0.055	0.30	234	0.059	0.33	237	0.061	0.33
Alcohol Injuries	6,889	1.775	10.67	6,664	1.708	10.09	6,524	1.663	9.26	6,364	1.601	9.00	5,779	1.491	8.09
% Fatal Alcohol Crashes	1.99			2.14			2.03			2.17			2.30		
% Personal Injury Alcohol Crashes	46.39			46.29			46.19			45.15			43.35		
% Property Damage Alcohol Crashes	51.62			51.57			51.78			52.68			54.34		
% of all Crashes	4.5			4.4			4.3			4.4			4.2		
% of all Fatal Crashes	23.2			24.0			22.8			23.3			23.4		
% of all Personal Injury Crashes	8.6			8.7			8.4			8.3			7.9		
% of all Property Damage Crashes	3.1			3.0			3.0			3.1			3.0		
VEHICLE MILES TRAVELED (in hundred millions)	645.41			660.30			704.69			706.95			714.59		
LICENSED DRIVERS (LDVR) (in thousands)	3,881.42			3,902.52			3,923.42			3,976.08			3,876.91		

LDVR Rates are expressed per 1,000 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.

Actual 1995 and 1996 licensed driver numbers unavailable.

<sup>1995</sup> corrected for misclassified private property crashes.

<sup>1995</sup> and 1996 licensed driver numbers estimated from 1994 and 1997 counts.

Table 75

- Improvements gained in reducing the frequency of alcohol-related crashes has been offset by the increase in both the number of licensed drivers and miles that are driven, such that the total number of alcohol-related crashes has remained relatively flat over the past 5 years.
- The risk of injury and/or fatality is considerably higher when a person is involved in an alcohol-related crash (5.6 times greater for a fatal and nearly twice as high for an injury-related crash).

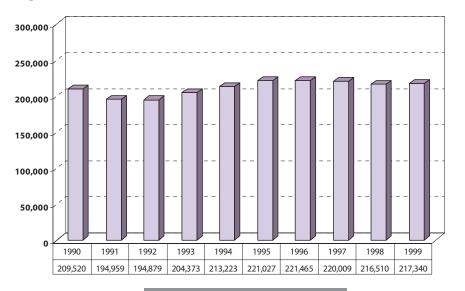
#### Table 76

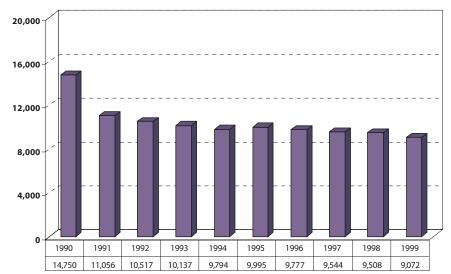
- The major gains in reducing the role of alcohol in crashes were made in the late 1980s. Recent years' results, given the significant efforts put into reducing drinking and driving, have resulted only in minimal improvements.
- A bright spot in 1999 was that the total number of alcohol crashes decreased by 4.6 percent from 1998. However, the personal injury and fatal alcohol crashes continued at their recent historical rates.

Table 76. Alcohol-Related Crashes by Severity, 1990–1999

Year	Alcohol Crashes	% of All Crashes	Fatal Alcohol Crashes	% of Fatal Crashes	Personal Injury Alcohol Crashes	% of Personal Injury Crashes	Property Damage Alcohol Crashes	% of Property Damage Crashes
1990	14,750	7.0%	296	32.0%	5,803	11.5%	6,556	4.2%
1991	11,056	5.7%	283	31.3%	5,018	10.6%	5,755	3.9%
1992	10,517	5.4%	211	26.4%	4,881	10.0%	5,425	3.7%
1993	10,137	5.0%	199	25.4%	4,807	9.5%	5,131	3.4%
1994	9,794	4.6%	204	23.3%	4,680	8.9%	4,910	3.1%
1995	9,995	4.5%	199	23.2%	4,637	8.6%	5,159	3.1%
1996	9,777	4.4%	209	24.0%	4,526	8.7%	5,042	3.0%
1997	9,544	4.3%	194	22.9%	4,408	8.4%	4,942	3.0%
1998	9,508	4.4%	206	23.3%	4,293	8.3%	5,009	3.1%
1999	9,072	4.2%	209	23.4%	3,933	7.9%	4,930	3.0%

Figure 52. Total Crashes and Alcohol-Related Crashes, 1990–1999





**Total Crashes** 

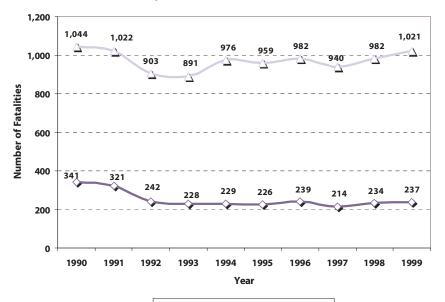
**Alcohol-Related Crashes** 

- Alcohol-related crashes have decreased 38.5 percent since 1990.
- The number of people killed in an alcohol-related crash remained relatively flat over the past 5 years, while there was a 16.1 percent decrease in the number of alcohol-related injuries.
- Nearly 1 out of 4 traffic deaths continues to be alcohol related.

Table 77. Alcohol-Related Fatalities and Injuries, 1990–1999

Year	Alcohol Fatalities	Total Fatalities	% Alcohol Fatalities	Alcohol Injuries	Total Injuries	% Alcohol Injuries
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%
1998	234	982	23.8%	6,364	77,138	8.3%
1999	237	1,021	23.2%	5,779	72,883	7.9%

Figure 53. Total Fatalities and Alcohol-Related Fatalities, 1990–1999



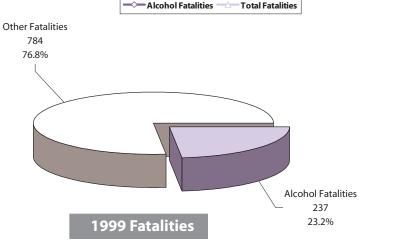
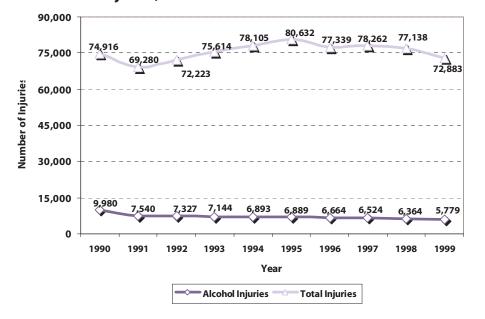
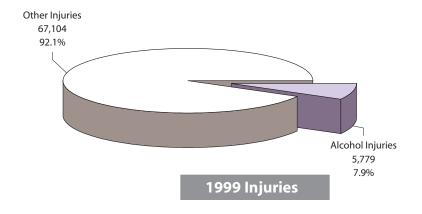


Figure 54. Total Injuries and Alcohol-Related Injuries, 1990–1999





- In 1990, 32.7 percent of fatalities were the result of an alcohol-related crash. In 1999, this had decreased to 23.2 percent.
- In 1990, 13.3 percent of injuries were the result of an alcohol-related crash. In 1999, this has decreased to 7.9 percent.

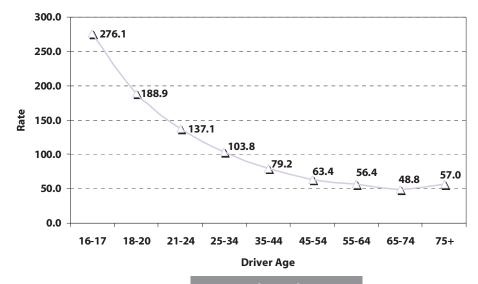
#### alcohol

- Younger and inexperienced drivers, especially the 16–17-year-old group and the 18–20-year-old group, are over-represented in all crashes.
- The 21–24-year-old driver is significantly over–represented in alcohol-related crashes. Nearly 5 percent of the crashes involving this age group are reported as alcohol related.
- While the 25-34 age group and the 35-44
  age group have a lower overall
  involvement rate in crashes, 4.7 and 4.6
  percent, respectively, of their crashes are
  alcohol related.

Younger and inexperienced drivers have a substantially higher incidence of crashes. Three out of four young drivers by the time they reach their 19<sup>th</sup> birthday will have been involved in a crash. The 16- and 17-year-old driver will have nearly three times as many crashes as the "average" driver, and nearly five times as many crashes as the 45–54-year-old driver. With the average involvement rate in 1999 being 96.0 crashes (all types) per 1,000 licensed drivers (or nearly one out of 10 drivers), even drivers in the 25–34-year-old age group are slightly over-represented in crashes.

When reviewing the alcohol-related crash involvement rate by driver's age, caution has to be used to not jump to the conclusion that the younger drivers (16–17) are over-represented in this category. Their higher overall incidence rate of crashes leads to the younger driver having a higher likelihood of being involved in an alcohol-related crash (although the other involved drivers are most often the impaired drivers). In fact, their low percent incidence (1.6 percent of their crashes are alcohol-related) compared to the overall average (3.48 percent) would indicate that their crashes typically occur during

Figure 55. Total Crash Rates and Alcohol-Related Crash Rates by Age per 1,000 Licensed Drivers, 1999



#### **Total Crashes**



**Alcohol Crashes** 

Table 78. Alcohol-Related Crashes by Driver Age, 1995–1999

	1	995	1	1996		1997	1	1998	1	1999
Driver Age	Drivers	LDVR	Drivers	LDVR	Drivers	LDVR	Drivers	LDVR	Drivers	LDVR
<21	1,623	304,304	1,616	309,538	1,679	314,765	1,642	318,628	1,685	301,864
% Alcohol	10.85%	6	11.65%	6	12.229	%	12.08	%	12.92%	
% of LDVR		0.53%		0.52%		0.53%		0.52%		0.56%
21-34	6,571	1,070,287	5,971	1,047,984	5,578	1,025,567	5,570	1,021,304	5,189	959,063
% Alcohol	43.94%	6	43.04%	6	40.609	%	40.97	%	39.79%	
% of LDVR	<b>% of LDVR</b> 0.61%			0.57%		0.54%		0.55%		0.54%
35-54	5,146	1,520,611	4,817	1,546,283	5,015	1,571,893	4,913	1,603,286	4,725	1,584,965
% Alcohol	34.41%	6	34.72%	6	<b>36.50</b> 9	%	36.14	%	36.23%	
% of LDVR		0.34%		0.31%		0.32%		0.31%		0.30%
55+	1,205	986,222	1,470	998,713	1,151	1,011,195	1,149	1,032,857	1,141	1,031,016
% Alcohol	8.06%	6	10.60%	6	8.389	%	8.45	%	8.75%	
% of LDVR		0.12%		0.15%		0.11%		0.11%		0.11%
Total Drivers*	14,955	3,881,424	13,874	3,902,519	13,739	3,923,420	13,595	3,976,075	13,040	3,876,908

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 involved in alcohol-related crashes for 1999, 12.92% (1,685/13,040) were drivers under age 21.

The percentage of all drivers under age 21 that were involved in alcohol-related crashes was 0.56% (1,685/301,864) of all licensed drivers under age 21.

those times and days where there is a lower exposure to the impaired driver, but they are simply involved in more crashes. The 18–20-year-old is involved in alcohol-related crashes at nearly twice the rate of the 16-17-year-old driver (3.1 percent versus 1.6 percent) and would indicate that this age group is part of the problem—the impaired driver. The major concern, though, has to be with the 21–44-year-old age groups. Each of these age categories has nearly five percent of their crashes involving alcohol. There is not a considerable difference between results of the 21–24-year-old age group (4.9 percent alcohol-related crashes) and the 35–44 age group (4.6 percent).

- The primary targeted age group (21–34 years old) is seeing small but consistent improvement in the number of these drivers involved in alcohol crashes. Similar results have also been seen with the 45–54-year-old age bracket.
- The number of under-21-year-old drivers involved in alcohol crashes has continued at the same level for the past several years.

<sup>\*</sup>Totals include unknowns. Legend: LDVR=Licensed Drivers

#### alcohol

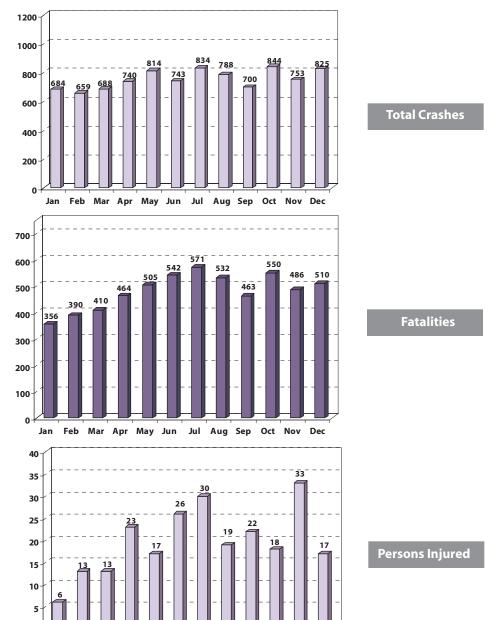
# • Not surprisingly, the primary cause of alcohol crashes is "Alcoholic Beverages"—in 54.3 percent of the crashes.

The presence of any alcohol (open containers, breath test, etc.) can lead the investigating officer to make the determination that alcohol was involved in the crash. However, in determining the primary cause of the crash, the officer has to evaluate all of the possible contributing factors such as driver inattention, unsafe speed, etc. This can present unique challenges to the officer to determine whether, for example, a person crossed the center line as the result of inattention or whether the center line was crossed because of impairment. Or as another example, a vehicle (driver not consuming alcohol) may have crossed the centerline, but the oncoming car (where alcohol was present) may not have been able to avoid the crash. Again, the officer has to determine whether alcohol impaired the driver's ability to adapt to the situation or not.

Table 79. Alcohol-Related Crashes by Primary Contributing Circumstance with Fatalities and Injuries, 1999

Primary Contributing Circumstance	Total	Percent	Fatalities	Injuries
Alcoholic Beverage	4,925	54.29%	83	2,954
Illegal Drugs	9	0.10%	0	11
Presciption Drugs	10	0.11%	0	6
Driver Apparently Asleep	174	1.92%	7	106
Driver Inattention	880	9.70%	19	488
Driver Illness	10	0.11%	0	12
Unsafe Speed	671	7.40%	41	529
Failure to Yield Right-of-Way	415	4.57%	13	340
Disregarded Signal/Sign	218	2.40%	13	242
Left of Center	334	3.68%	34	322
Improper Overtaking	58	0.64%	2	32
Improper Turning	90	0.99%	0	46
Improper Lane Usage	245	2.70%	4	121
Following Too Closely	223	2.46%	1	152
Unsafe Backing	70	0.77%	0	7
Wrong Way on One Way	25	0.28%	2	27
Pedestrian Actions	14	0.15%	4	9
Passenger Distractions	8	0.09%	0	8
<b>Violation of License Restrictions</b>	4	0.04%	0	0
Engine Failure of Defective	4	0.04%	0	1
Accelerator Failure or Defective	3	0.03%	0	1
Brake Failure of Defective	14	0.15%	0	7
Tire Failure or Defective	18	0.20%	0	13
Headlight Defective or Not On	5	0.06%	0	10
Other Lights Defective	3	0.03%	0	5
Steering Failure	6	0.07%	0	4
Insecure/Leaky Load	5	0.06%	0	3
Animal(s) Present on Roadway	123	1.36%	1	57
Glare	4	0.04%	0	5
Loose Surface Material	6	0.07%	0	3
Material on Surface (Includes Weather)	130	1.43%	1	61
Holes/Ruts in Surface	2	0.02%	0	2
Shoulder Defective	1	0.01%	0	0
View Obstructed by a Vehicle	8	0.09%	0	2
View Obstructed by Other	19	0.21%	0	12
Jack Knifing	1	0.01%	0	0
Other	214	2.36%	5	129
Unknown	123	1.36%	7	52
TOTAL	9,072	100.00%	237	5,779

Figure 56. Alcohol-Related Crashes, Fatalities and Injuries by Month, 1999



Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec

Table 80. Alcohol-Related Crashes, Fatalities and Injuries by Month, 1999

Month	Alcohol Crashes	Fatalities	Persons Injured
January	684	6	356
February	659	13	390
March	688	13	410
April	740	23	464
May	814	17	505
June	743	26	542
July	834	30	571
August	788	19	532
September	700	22	463
October	844	18	550
November	753	33	486
December	825	17	510
Total	9,072	237	5,779

Other than the months of January through March being under-represented in alcohol crashes, there was not a strong pattern to when (by month) and the severity of the crash. Only July was over-represented in all three columns—possibly the combined impact of the 4<sup>th</sup> of July holiday and the summer months.

#### alcohol

- 55 percent of alcohol crashes occurred between 8 PM and 3:59 AM (33 percent of the day).
- 56 percent of fatalities occurred in the 7 hours between 9 PM and 3:59 AM (29 percent of the day).
- In the 36 hours (21.4 percent) of the week between Friday night at 5 PM through Sunday morning at 4:59 AM, 41 percent of the alcohol crashes occurred.

While alcohol-related crashes are strongly correlated to evening and early morning hours and weekends, 18.2 percent of alcohol-related crashes occurred on Monday through Thursday between the hours of 5 PM–10:59 PM. This time period represents only 14.3 percent of the time, showing some over-representation for certain hours of even weekdays.

Table 81. Alcohol-Related Crashes by Time of Day and Day of Week with Fatalities and Injuries, 1999

Time	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Total	Injuries	Fatalities
Midnight - 12:59AM	176	63	38	45	71	99	154	646	396	14
1:00AM - 1:59AM	165	34	37	52	63	78	166	595	363	19
2:00AM - 2:59AM	147	17	37	46	63	92	188	590	343	22
3:00AM - 3:59AM	200	18	46	58	58	93	197	670	416	25
4:00AM - 4:59AM	107	9	21	20	30	45	108	340	206	13
5:00AM - 5:59AM	60	7	18	11	22	28	56	202	129	5
6:00AM - 6:59AM	35	5	11	10	11	14	32	118	69	6
7:00AM - 7:59AM	19	4	19	14	16	12	19	103	50	0
8:00AM - 8:59AM	12	2	6	16	4	13	15	68	41	1
9:00AM - 9:59AM	8	6	7	8	6	13	25	73	50	2
10:00AM - 10:59AM	27	8	9	11	11	21	20	107	76	2
11:00AM - 11:59AM	17	14	16	14	16	28	30	135	86	3
Noon - 12:59PM	17	15	20	13	12	27	20	124	67	3
1:00PM - 1:59PM	22	16	20	12	29	26	31	156	101	3
2:00PM - 2:59PM	37	31	20	20	31	54	52	245	179	8
3:00PM - 3:59PM	42	36	36	42	55	47	59	317	195	12
4:00PM - 4:59PM	50	44	43	42	54	62	74	369	214	8
5:00PM - 5:59PM	66	54	40	52	65	96	95	468	324	9
6:00PM - 6:59PM	70	56	63	58	65	96	99	507	324	9
7:00PM - 7:59PM	53	62	46	51	60	110	102	484	334	9
8:00PM - 8:59PM	88	69	93	91	57	107	112	617	453	8
9:00PM - 9:59PM	68	79	71	94	108	143	123	686	493	29
10:00PM - 10:59PM	56	79	78	68	89	138	150	658	399	14
11:00PM - 11:59PM	70	56	78	69	75	162	118	628	386	10
Unknown	24	14	20	18	26	31	33	166	85	3
Total	1,636	798	893	935	1,097	1,635	2,078	9,072	5,779	237

### Figure 58

Although speed is not always a factor, 80 percent of the fatal crashes occurred on generally higher-speed roads (non-city streets). City streets, generally a lowerspeed-limit road, accounted for more than 40 percent of the personal injury alcohol-related crashes. While the interstate system represents one of the highest road uses (as measured by "Vehicle Miles Traveled"), it represented less than 5 percent of all alcohol crashes, and only 4.3 percent of the fatal crashes (down from 7.2 percent and 10.0 percent, respectively, for 1997 and 1998).

Figure 57. Alcohol-Related Crashes by Time of Day and Day of Week, 1999

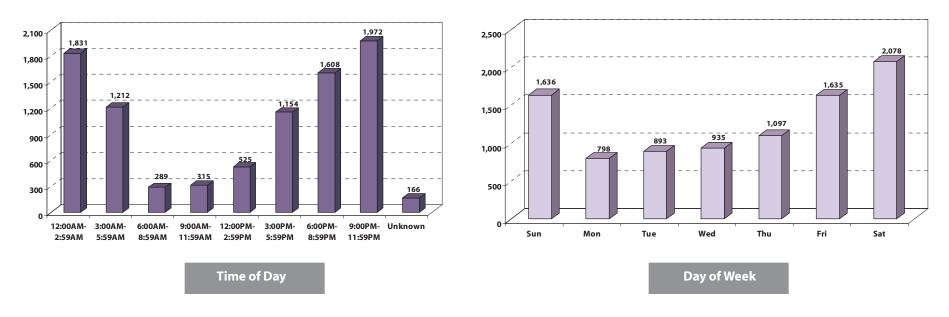
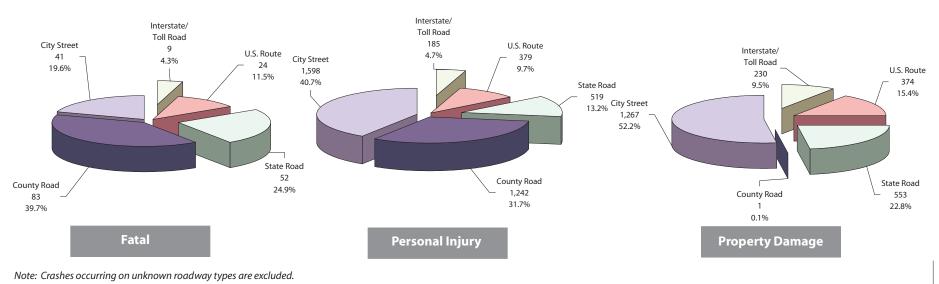


Figure 58. Alcohol-Related Crashes by Roadway Type and Severity, 1999



#### alcohol

- Of the 627 drivers killed, only 44 percent of those drivers had been tested and documented on the crash report.
- 85 percent of the tested killed drivers (with a BAC greater than 0.01) were males.
- There were 17 killed drivers under the age of 21 that showed a positive alcohol test. 8 of those killed drivers had alcohol results at or above the legal limit in Indiana (0.100).

Results for this table are drawn from FARS—Fatality Analysis Reporting System—generally a more complete data set than the crash report because the crash resulted in a fatality. Without actual results from an alcohol test documented on the crash form or captured by FARS, analyzing the seriousness of Indiana's impaired driver is extremely difficult. For those fatalities where BAC results were not obtained on the involved drivers, NHTSA uses a probability analysis based upon certain criteria to estimate the number of deaths caused by the impaired driver. For this same reason, a comparison of NHTSA's FARS data will show an approximately 50 percent higher incidence of alcohol involvement than Indiana's statistics. The key to narrowing the difference in the two results is simply testing all drivers involved in fatal crashes for drugs and alcohol.

Table 82. Driver Fatalities by BAC Test Result, Age and Gender, 1999

	0.	0 to 0.	009	0.0	10 to 0.	049	0.0	50 to 0	.099	0.10	0 or Gre	ater	Unkno	wn or l	Blank	Total		
Age	Male	Fem	Tot	Male	Fem	Tot	Male	Fem	Tot	Male	Fem	Tot	Male	Fem	Tot	Male	Fem	Tot
<15	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2	0	2
15	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	1	1	2
16	2	4	6	0	0	0	1	0	1	0	0	0	5	7	12	8	11	19
17	2	4	6	1	0	1	0	0	0	0	0	0	7	4	11	10	8	18
18	6	2	8	0	0	0	0	0	0	2	1	3	5	6	11	13	9	22
19	2	1	3	3	0	3	3	0	3	3	0	3	13	0	13	24	1	25
20	2	1	3	1	0	1	0	0	0	2	0	2	4	4	8	9	5	14
21	1	1	2	2	1	3	2	0	2	4	0	4	6	3	9	15	5	20
22	1	0	1	0	0	0	1	0	1	3	1	4	8	0	8	13	1	14
23	2	0	2	1	0	1	0	1	1	2	0	2	4	3	7	9	4	13
24	1	3	4	0	0	0	0	0	0	1	0	1	7	4	11	9	7	16
25-34	11	6	17	0	0	0	5	1	6	29	4	33	41	16	57	86	27	113
35-44	12	4	16	2	2	4	1	0	1	16	7	23	43	11	54	74	24	98
45-54	21	11	32	2	0	2	2	0	2	7	1	8	31	17	48	63	29	92
55-64	11	8	19	0	0	0	1	0	1	6	0	6	21	8	29	39	16	55
65-74	4	5	9	0	0	0	0	0	0	0	0	0	20	12	32	24	17	41
75+	16	7	23	0	0	0	0	0	0	2	0	2	21	17	38	39	24	63
Total	94	57	151	12	3	15	16	2	18	77	14	91	239	113	352	438	189	627

Legend: Fem=Female; Tot=Total

Source: Fatality Analysis Reporting System, NHTSA

 $Note: Drivers\ of\ motorcycles,\ mopeds,\ minibikes,\ motors cooters,\ and\ motorbikes\ are\ excluded.$ 

#### **Alcohol-Related BAC Test Results**

- Based on the known sample results, 45 percent of the killed drivers showed some evidence of alcohol (greater than 0.01) and 33 percent of the killed drivers had BAC levels at or above Indiana's legal limit (0.100).
- Killed male drivers represented 85 percent of the killed drivers with BAC results at or above Indiana's legal limit.

Figure 59. BAC Test Results for Killed Drivers, 1999

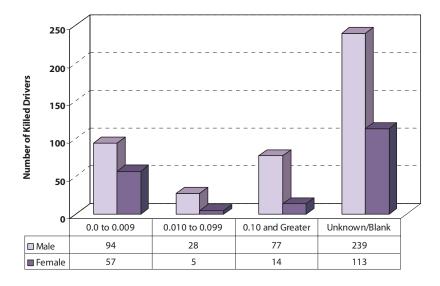
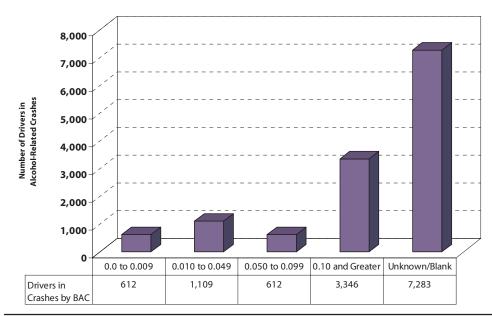


Figure 60. Driver BAC in Alcohol-Related Crashes, 1999



• In non-fatal alcohol crashes, alcohol test results are obtained on only 43.8 percent of the drivers, leaving a majority of the alcohol-related crashes to be determined by the judgement of the investigating officer.

Table 83. Drivers with BAC Greater Than 0.05 by Age Group, 1990–1999

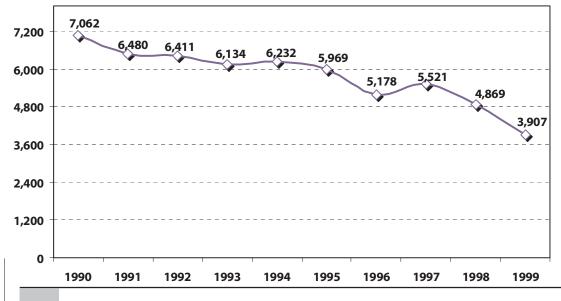
Age	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
<16	13	6	5	11	6	6	4	4	9	7
16-17	<b>7</b> 173	130	98	93	102	95	105	114	103	79
18-20	739	641	544	479	445	441	399	462	413	351
21-24	<b>1</b> ,306	1,171	1,144	1,098	1,119	998	800	821	770	676
25-34	<b>1</b> 2,683	2,419	2,337	2,139	2,153	2,006	1,677	1,691	1,441	1,099
35-44	<b>1</b> ,227	1,265	1,352	1,379	1,398	1,400	1,309	1,418	1,248	984
45-54	458	442	538	526	576	614	531	640	571	438
55-64	<b>1</b> 249	209	237	235	242	236	208	210	198	172
65-74	<b>4</b> 93	110	112	105	123	119	92	103	76	58
75+	38	45	27	29	37	32	38	38	22	28
Unkn	own 83	42	17	40	31	22	15	20	18	15
Total	7,062	6,480	6,411	6,134	6,232	5,969	5,178	5,521	4,869	3,907

 Over the past ten years, the data shows a clear decline in the numbers of alcoholrelated crashes for drivers in all age categories, providing the percentage of drivers tested has not changed significantly.

While these results indicate the number of drivers who had a BAC level of 0.05 or greater has decreased, due to the large percentage of drivers that are not tested (56 percent in 1999), it is difficult to confidently say that progress has been made.

Note: Drivers of parked vehicles excluded.

Figure 61. Drivers with BAC Greater than 0.05, 1990–1999



• The 3,907 drivers represent the lowest result demonstrated by Indiana. However, a cautious approach has to be taken to this reduction. If fewer drivers are tested, then the number of positive BAC results will naturally decrease as well.

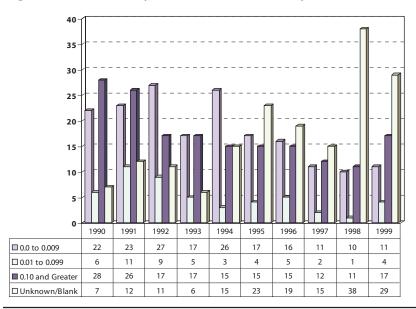
Table 84. Motorcycle Driver Fatalities by BAC Test Result, 1990–1999

Year	0.0 to 0.009	0.01 to 0.049	0.05 to 0.099	0.10 and Greater	Unknown/ Blank	Total
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
1998	10	0	1	11	38	60
1999	11	0	4	17	29	61

Note: Drivers of mopeds, motorized bicycles, motor scooters and minibikes are excluded.

Source: Fatality Analysis Reporting System, NHTSA.

Figure 62. Motorcycle Driver Fatalities by BAC Test Result, 1990–1999



- There was a large increase in the number of killed motorcycle drivers with reported BAC results greater than 0.05.
- 53 percent of the tested killed drivers were at or above the legal limit in Indiana.
- Nearly 50 percent of killed drivers (29 out of 61) had no reported BAC results.

• The number of "unknown or blank" BAC results has greatly increased in the past two years. There were 4 times as many "unknowns or blanks" entered in 1999 as there were in 1990.

#### alcohol

- 1999 had the fewest number of documented impaired pedestrian fatalities, but of the 14 tested, 9 or 64.3 percent were legally intoxicated.
- Only 21.2 percent of the fatally killed pedestrians were tested for alcohol. 59 of the 66 killed pedestrians were 16 years or older.

This table contains similar characteristics of the last few tables—the reduced level of BAC testing of the fatally injured or those individuals involved in a fatal crash.

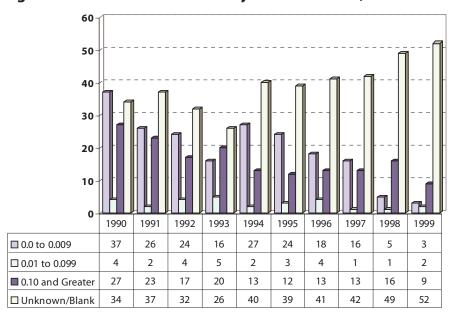
• The lack of testing is the most visible component of this table. Without BAC results, no conclusions can be drawn as to whether the impaired pedestrian represents a real problem in Indiana or not.

Table 85. Pedestrian Fatalities by BAC Test Result, 1990–1999

	0.0 to	0.01 to	0.10 and	Unknown/	
Year	0.009	0.099	Greater	Blank	Total
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
1998	5	1	16	49	71
1999	3	2	9	52	66

Source: Fatality Analysis Reporting System, NHTSA.

Figure 63. Pedestrian Fatalities by BAC Test Result, 1990-1999



# Chapter 7

# County data

### TOPICS

Crash Severity by County
Crashes and Fatalities by County and Month
Economic Loss
Crashes Rates per 1,000 Licensed Drivers
Drivers in Crashes by County and Age Group
Affidavits of Probable Cause and DWI Convictions by County
Alcohol-Related Crashes by County
Licensed Drivers, Registered Vehicles, and Population by County
Deer Collisions by County

This chapter allows the user of Crash Facts to obtain county data for each of the 92 counties in Indiana. The largest four counties in Indiana (Allen, Lake, Marion, and St. Joseph) combine for more than onethird of the State's population. In contrast, the 69 smallest counties likewise constitute about one-third of the State's population. When reviewing the smaller county data consisting of a much lower population base, they record, for the most part, far fewer crashes than the larger counties, and even fewer alcohol and more serious crashes. Therefore, when viewing and evaluating data from these smaller counties, caution must be exercised when comparing results from year to year. For this reason, not only is the current year's data shown, but five-year weighted averages are also shown. The weighted averages place a heavier degree of importance on the most recent years, and less on performance from three or four years ago. For the smaller counties, the weighted average data will provide a much better way to view trends. For the larger counties, the database for most categories is sufficiently large that annual comparisons can be made in conjunction with the use of the weighted-average data. The data presented in the following tables is a compilation of facts that primarily have been collected by the investigating officers of the crashes. As a reminder, as the tables are reviewed, care needs to be taken to fully understand the ramifications of the results.

Using the five-year weighted average data from Table 86, Indiana showed a 12.1 percent reduction in total crashes. For every county where there had been an increase in the number of crashes, there were 14 counties that showed a reduction in the number of crashes. The 1:14 ratio compares with a 1:3 ratio reported in the 1998 *Crash Facts*, showing continuous improvement for the State. Crawford and Ohio counties, both smaller counties, showed a double-digit rate of increase in crashes. Of the 24 counties that showed double-digit percent reductions in their reported 1998 crashes, 17 of those counties again showed double-digit reductions in 1999. They

are (in alphabetical order): Adams, Blackford, Brown, Delaware, Fayette, Grant, Greene, Huntington, Jay, Lawrence, Posey, Randolph, Tipton, Union, Vermillion, Wabash, and Wells.

Overall, the State also showed a 14.0 percent weighted average reduction in alcohol-related crashes (Table 86). While there are fewer alcohol-related crashes (approximately 4 percent of the total number of crashes), the percent changes can be much larger, and can, at times, be somewhat misleading. There is also the potential to under-report alcohol crashes. This can occur due to a lack of driver testing (for alcohol or drugs), a lack of the results being entered on the crash form, or other similar reasons. Although all four of the largest counties in the State (Allen, Lake, Marion, and St. Joseph) reported reductions in alcohol-related crashes (as measured by the 1995-1999 percent change), only two of these four counties were able to report the same favorable results from 1998 to 1999.

Table 87 provides month-by-month data on the number of fatal crashes and fatalities by county for 1999. The two columns that are furthest on the right hand side of the table provide a comparison of the 1999 data with the five-year weighted averages. A positive number in a county's "Rate of Change" column indicates that the number of people being killed in traffic crashes has increased by the given rate each year. A negative number indicates that fewer people are being killed by the given rate each year. Here again, caution has to be used when analyzing counties that have fewer than five fatalities annually, because the lower results can potentially cause wide swings in the "Rate of Change" column.

The total economic loss that a county suffers as a result of a crash is based upon several factors. It includes an estimate of the damage caused by the crash to any vehicles and other property (such as signs, buildings, etc.). The loss also includes the medical costs associated with any injured person. For fatal crashes, the cost of a lost life is not only based upon the above items,

but also includes an estimate for the wages and economic contribution that is lost as a result of the fatality. In Indiana, actual costs are not determined for any of these elements; thus, the NHTSA estimate is used for each type of crash. These costs are updated annually by NHTSA, and the 1999 results for Indiana's 92 counties are displayed in Table 88. One tool that is used to normalize the results is the number of miles driven in a county. The miles are expressed as MVMT-million vehicle miles traveled. The far right hand column in Table 88 compares each county's economic loss to the state average (per MVMT). A percentage greater than 100 percent indicates that the county is experiencing above average economic losses due to crashes as compared to the state average.

Table 89 uses two different tools to normalize the data for each county: the number of licensed drivers, and the county population. Table 90 provides a distribution of drivers that were involved in crashes with the results grouped into categories according to driver age. Particular focus is placed on the younger drivers (16–20 yeas old). This group of drivers represents a large pool of relatively inexperienced motorists who have the highest incidence of crash involvement. Particularly noticeable from this table is that one out of five drivers, age 16–20 years old, from Dubois, Floyd, Ohio, Pulaski, and Wells counties, were involved in a crash.

Tables 91–94 address the impact of alcohol on highway crashes. As a preface to Table 91, the composition and flow of data is important to fully understand the table. The data is supplied by the Bureau of Motor Vehicles (BMV) and reflects the number of alcohol-related arrests and convictions received at the Bureau. This information is then placed into the licensed driver's BMV record. An APC, or Affidavit of Probable Cause, occurs when an officer has sufficient information and, in his or her judgment, identifies the involvement of alcohol as a contributing factor to the crash. The column labeled APC provides the number of Court Affidavits of driving while intoxicated/driving under the influence filed in each

county and submitted to the BMV in 1999. Of those written in 1999, the percent shown (second column) indicates the percentage of court-filed alcohol-related offenses received by the Bureau of Motor Vehicles prior to receiving the arresting officer's Affidavit (the record of the arrest/charge) on that particular case. The third column (DWI Conv.) is the number of convictions recorded in that county and received by the BMV in 1999. In comparing the number of convictions to APC data (column four), there may be a time lapse (in some cases up to two years) between the date that the record of arrest and the date of conviction is received by the Bureau. Other definitions for Table 91 are given on page 131. For comparison purposes, five-year performance data and state data are shown for T2 (the average number of days from arrest to court APC disposition, which indicates the number of days from the date of arrest to the date actual court charges are filed) and T5 (the average number of days from DWI disposition to BMV receipt, which indicates the number of days from the DWI conviction to the date the Bureau receives the report). In the columns that compare the county results with the same statistic for the State, a percentage greater than 100 percent indicates that the county, for that particular statistic, takes a greater number of days than the State average. Caution has to be used before making an inaccurate assumption based upon the numbers themselves. A single case extending out for a two-year period can drastically alter the average results for a given county, particularly, if there were only a small number of cases handled during that time period.

Table 92 shows the actual number of APCs and convictions for the last five years, and also normalizes the results per 1,000 licensed drivers in the county. A good analysis for a county to perform is a review of the results and changes from year-to-year on a normalized basis. As a follow up to this table, Table 93 also provides the total number of crashes and alcohol crashes by county, for the past five years. Since the State average (percent alcohol crashes) is shown at the end of the table (5.5 percent for 1999 crashes), county averages

can be compared against the State averages for the same years to further evaluate the exposure to alcohol crashes as well as the overall trends in alcohol crashes.

Historically, Indiana has only tested and reported BAC levels on approximately one-half of the drivers involved in fatal crashes. Until Indiana achieves an 85+ percent test rate of drivers involved in fatal crashes, notable changes in the absolute number of alcohol-related crashes may be limited from an evaluation perspective.

Table 94 shows only alcohol-related crashes (fatal, personal injury, and property damage) experienced by a county, and normalizes the results based upon the number of licensed drivers in each county.

Table 95 provides county-wide statistics on the number of registered vehicles, licensed drivers, population, and an annual estimate of miles driven in that county. Table 96 provides county specific data on the number of deer-vehicle collisions for 1999.

County data is also available in an electronic format on a CD-ROM–County Visualization Tool that allows the user to conduct more direct comparisons with other similar sized counties, contiguous counties, or county attributes. The tool is available at no charge through either the Indiana Criminal Justice Institute (<a href="http://www.state.in.us/cji">http://www.state.in.us/cji</a>) or the Purdue University–CATS web sites (<a href="http://www.ecn.purdue.edu/cats">http://www.ecn.purdue.edu/cats</a>).

#### chapter summary

# **Total Crashes per County**

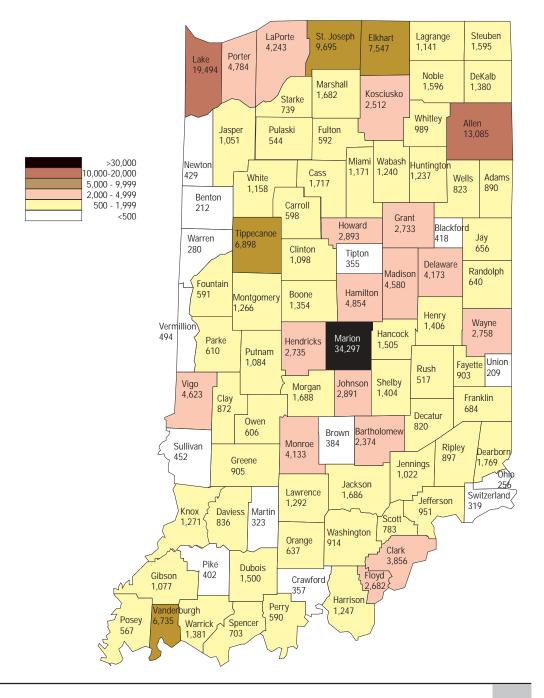


 Table 86.
 Crash Severity by County, 1999

			Total C	rashes			Alcohol-Related Crashes								
County	Total Crashes	1995-1999 Weighted Average	1995-1999 Percent Change	Fatal Crashes	Personal Injury	Property Damage	Total Crashes	1995-1999 Weighted Average	1995-1999 Percent Change	Fatal Crashes	Personal Injury	Property Damage			
ADAMS	890	905	-25.0%	2	207	681	41	32	86.4%	0	20	21			
ALLEN	13,085	13,274	-10.2%	48	2,834	10,203	590	586	-12.3%	11	265	314			
BARTHOLOMEW	2,374	2,378	-16.1%	11	644	1,719	88	95	-31.8%	2	40	46			
BENTON	212	203	-6.6%	3	41	168	13	10	-23.5%	0	6	7			
BLACKFORD	418	418	-24.4%	2	92	324	22	18	-21.4%	0	9	13			
BOONE	1,354	1,384	-9.9%	5	237	1,112	53	51	-3.6%	2	21	30			
BROWN	384	475	-35.2%	3	62	319	2	22	-88.9%	0	0	2			
CARROLL	598	616	-6.3%	3	131	464	34	35	13.3%	2	11	21			
CASS	1,717	1,762	-22.4%	7	357	1,353	78	75	16.4%	2	28	48			
CLARK	3,856	3,601	-1.7%	12	955	2,889	155	154	-16.2%	3	72	80			
CLAY	872	935	-20.9%	3	157	712	39	36	-15.2%	0	17	22			
CLINTON	1,098	1,089	-7.3%	8	214	876	43	51	-17.3%	1	20	22			
CRAWFORD	357	292	18.2%	2	78	277	22	11	214.3%	0	8	14			
DAVIESS	836	850	-5.1%	5	218	613	48	50	-7.7%	1	23	24			
DEARBORN	1,769	1,695	-1.7%	8	397	1,364	88	101	1.1%	3	34	51			
DECATUR	820	812	-18.2%	10	173	637	34	42	-26.1%	0	12	22			
DEKALB	1,380	1,407	-14.2%	5	229	1,146	42	48	-17.6%	2	12	28			
DELAWARE	4,173	4,342	-23.3%	13	1,038	3,122	174	184	-32.8%	2	77	95			
DUBOIS	1,500	1,439	-4.7%	6	323	1,171	72	75	-2.7%	2	30	40			
ELKHART	7,547	7,431	-11.3%	20	1,742	5,785	258	290	-26.9%	3	114	141			
FAYETTE	903	952	-27.9%	5	161	737	43	47	-29.5%	3	15	25			
FLOYD	2,682	2,540	-2.3%	3	666	2,013	132	131	-7.7%	0	51	81			
FOUNTAIN	591	597	-10.9%	6	104	481	24	34	-41.5%	0	11	13			
FRANKLIN	684	671	-9.5%	5	159	520	56	48	30.2%	2	26	28			
FULTON	592	625	-14.7%	7	143	442	27	35	-27.0%	1	16	10			
GIBSON	1,077	1,059	-2.4%	8	236	833	42	50	-17.6%	3	20	19			
GRANT	2,733	2,677	-13.8%	13	541	2,179	102	105	-10.5%	2	34	66			
GREENE	905	933	-22.1%	12	190	703	42	41	-19.2%	2	14	26			
HAMILTON	4,854	4,619	1.2%	14	1,048	3,792	139	123	6.9%	1	64	74			
HANCOCK	1,505	1,498	-9.1%	10	423	1,072	51	55	-23.9%	2	24	25			
HARRISON	1,247	1,239	-2.8%	4	279	964	57	55	-1.7%	0	32	25			
HENDRICKS	2,735	2,648	3.4%	19	598	2,118	126	104	68.0%	4	54	68			
HENRY	1,406	1,458	-25.7%	8	303	1,095	59	65	-43.8%	0	25	34			
HOWARD	2,893	2,764	-7.7%	11	771	2,111	125	123	-16.1%	4	56	65			
HUNTINGTON	1,237	1,262	-13.7%	8	243	986	27	37	-50.0%	1	13	13			
JACKSON	1,686	1,686	-18.0%	7	371	1,308	67	72	-24.7%	2	24	41			
JASPER	1,051	1,057	-14.7%	6	241	804	37	44	-21.3%	1	19	17			
JAY	656	714	-25.3%	3	134	519	23	28	-25.8%	1	14	8			
JEFFERSON	951	1,040	-15.0%	6	205	740	24	50	-62.5%	2	7	15			
JENNINGS	1022	896	1.0%	11	232	779	47	38	6.8%	2	22	23			
JOHNSON	2,891	2,932	-14.0%	12	680	2,199	121	122	-9.7%	2	40	79			
KNOX	1,271	1,380	-23.3%	3	358	910	67	72	-29.5%	2	34	31			
KOSCIUSKO	2,512	2,563	-19.5%	15	521	1,976	108	130	-15.0%	3	42	63			
LAGRANGE	1,141	1,079	2.1%	13	180	948	47	45	0.0%	4	17	26			
LAKE	19,494	19,739	-9.3%	51	4,636	14,807	835	906	-9.4%	13	356	466			
	,	,	- 10 / 0		.,	,	300		2	.5	-50	,00			

 Table 86.
 Crash Severity by County, 1999 (cont.)

			Total Cr	ashes				Alc	ohol-Relate	d Crashe	s	
		1995-1999	1995-1999					1995-1999	1995-1999			
	Total	Weighted	Percent	Fatal	Personal	Property	Total	Weighted	Percent	Fatal	Personal	Property
County	Crashes	Average	Change	Crashes	Injury	Damage	Crashes	Average	Change	Crashes	Injury	Damage
LAPORTE	4,243	4,257	-8.5%	16	1,034	3,193	211	243	-22.1%	6	101	104
LAWRENCE	1,292	1,400	-25.1%	4	340	948	68	77	-4.2%	1	36	31
MADISON	4,580	4,731	-23.2%	26	1,058	3,496	185	205	-37.7%	5	71	109
MARION	34,297	34,383	-11.0%	85	8,248	25,964	1,249	1280	-11.4%	21	541	687
MARSHALL	1,682	1,678	-9.6%	18	349	1,315	86	77	3.6%	6	30	50
MARTIN	323	335	-12.0%	5	71	247	13	18	-27.8%	1	6	6
MIAMI	1,171	1,140	-5.5%	5	239	927	48	50	-23.8%	1	15	32
MONROE	4,133	4,323	-12.8%	9	911	3,213	141	143	-2.8%	1	63	77
MONTGOMERY	1,266	1,265	-17.0%	9	283	974	52	54	0.0%	1	24	27
MORGAN	1,688	1,693	-11.6%	13	394	1,281	83	78	-16.2%	2	30	51
NEWTON	429	408	-1.4%	5	91	333	22	24	0.0%	1	9	12
NOBLE	1,596	1,666	-23.0%	11	293	1,292	65	74	-29.3%	0	31	34
ОНЮ	256	230	19.6%	1	52	203	16	16	128.6%	0	9	7
ORANGE	637	624	-7.9%	5	115	517	34	21	78.9%	2	17	15
OWEN	606	637	-16.3%	3	134	469	28	27	-12.5%	0	12	16
PARKE	610	558	-0.5%	3	136	471	30	31	-11.8%	2	15	13
PERRY	590	636	-20.7%	2	106	482	20	26	-33.3%	0	8	12
PIKE	402	392	-2.7%	3	87	312	15	19	-44.4%	1	10	4
PORTER	4,784	4,713	-9.8%	23	1,239	3,522	229	215	-2.1%	4	117	108
POSEY	567	549	-14.1%	6	118	443	30	33	-16.7%	1	16	13
PULASKI	544	565	-10.1%	3	91	450	23	23	15.0%	0	12	11
PUTNAM	1,084	1,154	-19.5%	9	245	830	56	49	0.0%	4	31	21
RANDOLPH	640	677	-19.3%	2	112	526	23	31	-48.9%	0	9	14
RIPLEY	897	871	-27.5%	8	195	694	46	41	-46.9% -6.1%	0	28	18
RUSH										0	28 9	18 7
SAINT JOSEPH	517	548	-20.7%	4	142	371	16	23	-42.9%	8	_	
	9,695	9,922	-13.2%	30	2,308	7,357	427	508	-27.3%		163	256
SCOTT	783	756	-8.3%	4	216	563	26	31	-40.9%	0	15	11
SHELBY	1,404	1,408	-12.9%	8	389	1,007	69	73	6.2%	2	32	35
SPENCER	703	669	-5.1%	7	148	548	45	45	36.4%	1	18	26
STARKE	739	743	-6.9%	10	164	565	56	51	5.7%	4	25	27
STEUBEN	1,595	1,629	-23.0%	4	245	1,346	70	65	-21.3%	0	40	30
SULLIVAN	452	482	-20.8%	1	99	352	5	5	-37.5%	0	1	4
SWITZERLAND	319	332	-5.1%	2	45	272	7	13	-36.4%	0	6	1
TIPPECANOE	6,898	6,668	-11.2%	16	1,216	5,666	252	268	-8.7%	6	103	143
TIPTON	355	390	-23.2%	3	78	274	10	12	-33.3%	0	5	5
UNION	209	230	-22.3%	1	43	165	13	11	0.0%	0	9	4
VANDERBURGH	6,735	6,896	-14.1%	10	1,632	5,093	305	328	-10.6%	5	120	180
VERMILLION	494	514	-22.4%	5	115	374	22	31	-43.6%	0	12	10
VIGO	4,623	4,877	-18.0%	19	1,113	3,491	204	223	-20.6%	6	91	107
WABASH	1,240	1,209	-16.2%	7	236	997	57	55	-1.7%	4	23	30
WARREN	280	272	-2.4%	4	47	229	14	12	75.0%	1	5	8
WARRICK	1,381	1,415	-7.4%	8	259	1,114	88	76	66.0%	3	35	50
WASHINGTON	914	883	1.2%	3	203	708	54	53	-10.0%	2	31	21
WAYNE	2,758	2,755	-11.3%	9	749	2,000	109	124	-14.8%	2	51	56
WELLS	823	798	-15.8%	7	158	658	23	25	-37.8%	2	9	12
WHITE	1,158	1,112	-3.4%	12	222	924	70	56	48.9%	8	25	37
WHITLEY	989	1,026	-19.3%	8	198	783	33	48	-37.7%	2	15	16
NDIANA	217,340	2,373	-12.1%	892	49,518	166,930	9,072	103	-14.0%	209	3,933	4,930

 Table 87.
 Fatal Crashes and Fatalities by County and Month, 1999

ADAMS  O O O O O O O O O O O O O O O O O O O	9
ADAMS  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Change
ALLEN 2 2 2 0 0 3 3 3 5 5 4 5 5 6 3 3 3 9 12 5 6 3 3 3 3 3 6 8 48 56 41.57  BARTHOLOMEW 0 0 1 1 1 3 3 3 1 1 1 2 2 2 0 0 0 0 0 0 0 0 1 1 1 2 3 0 0 1 1 1 11 12 15.33  BENTON 1 2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.08
BARTHOLOMEW         0         0         1         1         3         3         1         1         2         2         0         0         0         0         0         1         0 <th< th=""><th>0.52</th></th<>	0.52
BENTON         1         2         0 <th>0.69</th>	0.69
BLACKFORD         0	0.20
BOONE         0         0         1         1         1         3         0         0         1         1         1         1         1         1         0 <th>0.71</th>	0.71
CARROLL  O O O O O O O O O O O O O O O O O O	0.06
CASS	0.26
CLARK         1         1         0         0         1 <th>0.49</th>	0.49
CLAY         0         0         0         0         1         1         0         0         1         2         0         0         0         0         0         1         1         0         0         1         1         0	0.02
CLINTON         0         0         1         1         0         0         0         1         1         2         2         2         3         1         4         0         0         0         0         0         8         12         7.62         -           CRAWFORD         0	0.21
CRAWFORD         0<	3.58
DAVIESS         1         1         0 </th <th>0.18</th>	0.18
DEARBORN         0<	0.05
DECATUR         1         1         1         1         1         1         1         2         2         0         3         3         1         1         1         0 </th <th>0.28</th>	0.28
DEKALB 0 0 0 0 0 0 0 0 1 1 0 0 1 1 0 0 1 2 0 0 2 3 0 0 5 7 8.43 ·	0.87
	0.52
	0.55
	0.80
	0.33
	1.52
	1.59
	0.80
	0.23
	0.19
	0.45 0.11
	0.11
	0.20
<del></del>	0.68
	0.15
	0.06
	2.31
	0.82
	0.93
	0.72
	0.17
	0.32
	0.15
	0.26
JENNINGS 1 1 1 1 1 1 1 2 0 0 0 0 1 1 0 0 1 1 1 1	0.12
	0.88
KNOX 0 0 0 0 0 0 0 0 0 0 0 1 1 0 0 1 1 0 0 3 3 6.24	0.42
KOSCIUSKO 1 1 1 2 2 3 0 0 2 3 1 1 1 3 2 4 1 1 4 4 0 0 0 0 15 22 21.48	0.18
LAGRANGE 1 1 0 0 2 4 0 0 1 2 1 2 1 2 0 0 2 2 1 1 4 5 0 0 13 19 13.29	1.13
LAKE 2 2 3 4 6 6 4 4 2 2 4 4 4 4 8 8 6 6 5 5 5 6 2 4 51 55 61.76 ·	0.84

 Table 87.
 Fatal Crashes and Fatalities by County and Month, 1999 (cont.)

	Janu	ary	Febr	uary	Mar	ch	Ар	ril	Ma	ay	Ju	ne	<u>J</u> ı	ıly	Aug	ust	Septe	mber	Octo	ber	Nove	mber	Decer	mber	To	tal	1995-1	1999
County	Crashes	Fatalities	Crashes	Fatalities	Crashes	Fatalities	Crashes	Fatalities	Crashes	Fatalities	Crashes	Fatalities	Crashes	Fatalities	Crashes	Fatalities	Fatalities Wtd. Avg.	Rate of Change										
LAPORTE	0	0	2	2	0	0	2	2	1	1	2	2	1	1	1	1	0	0	5	5	1	2	1	1	16	17	23.48	-1.51
LAWRENCE	1	1	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1	1	1	1	0	0	4	4	8.05	-0.79
MADISON	0	0	2	2	4	5	3	3	2	3	1	1	4	6	1	1	2	3	6	7	0	0	1	1	26	32	23.19	1.62
MARION	2	2	4	5	10	11	5	5	13	13	9	10	6	6	8	12	11	11	5	6	7	8	5	5	85	94	88.48	1.90
MARSHALL	2	3	1	1	2	2	2	3	2	4	3	3	1	1	1	1	0	0	2	3	2	2	0	0	18	23	13.14	0.73
MARTIN	0	0	1	1	0	0	0	0	0	0	1	1	0	0	0	0	1	1	1	1	0	0	1	1	5	5	4.71	0.65
MIAMI	1	1	1	1	0	0	0	0	0	0	1	1	0	0	1	1	1	1	0	0	0	0	0	0	5	5	7.62	-0.28
MONROE	0	0	2	4	1	1	1	1	0	0	0	0	1	1	0	0	0	0	2	2	0	0	2	2	9	11	11.76	-0.36
MONTGOMERY	0	0	1	1	1	2	1	1	0	0	2	2	0	0	0	0	2	2	0	0	2	2	0	0	9	10	8.71	0.23
MORGAN	1	1	1	1	1	1	2	2	1	1	1	1	0	0	2	2	2	2	1	3	0	0	1	3	13	17	13.48	1.40
NEWTON	1	1	0	0	0	0	1	2	1	1	1	1	0	0	0	0	1	1	0	0	0	0	0	0	5	6	5.57	-0.19
NOBLE	1	1	1	1	1	1	1	1	0	0	1	1	2	3	1	1	1	1	1	1	1	1	0	0	11	12	11.95	0.45
ОНЮ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0.52	0.01
ORANGE	0	0	1	1	0	0	0	0	1	1	1	1	0	0	1	1	1	1	0	0	0	0	0	0	5	5	6.05	0.89
OWEN	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	3	3	5.48	0.23
PARKE	0	0	1	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	1	0	0	0	0	3	3	3.76	0.16
PERRY	0	0	0	0	0	0	0	0	0	0	0	0	2	3	0	0	0	0	0	0	0	0	0	0	2	3	2.57	-0.33
PIKE	0	0	0	0	0	0	0	0	1	- 1	0	0	1	1	0	0	0	0	0	0	0	0	1	2	3	4	3.81	0.67
PORTER	1	1	1	1	0	0	2	2	3	5	3	3	6	7	2	2	1	1	0	0	2	2	2	2	23	26 7	24.76	0.03
POSEY PULASKI	1	2	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	1	1	0	0	0	2	6		5.19	-0.01
PUTNAM	0	0	2	2	1	1	1	2	0	0	0	0	0	0	2	2	0	0	1	1	1	1	1	1	3 9	3 10	3.62	2.18
RANDOLPH	0	0	0	0	0	0	0	0	0	0	0	0	1	3	1	1	0	0	0	0	0	0	0	0	2	4	7.95 5.71	0.49 -0.98
RIPLEY	0	0	1	1	1	1	1	2	0	0	0	0	2		0	0	3	3	0	0	0	0	0	0	8	9	7.00	1.21
RUSH	0	0	0	0	0	0	0	0	1	2	0	0	0	0	0	0	0	0	1	1	2	4	0	0	4	7	4.48	0.36
SAINT JOSEPH	1	1	5	5	3	5	1	1	0	0	3	3	5	5	2	2	4	4	3	3	1	1	2	2	30	32	26.90	0.30
SCOTT	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	3	4	0	0	0	0	4	5	3.67	-0.47
SHELBY	1	1	0	0	1	1	0	0	0	0	1	1	1	1	0	0	0	0	1	1	1	1	2	2	8	8	6.95	-0.29
SPENCER	0	0	1	1	0	0	2	3	0	0	1	1	1	1	0	0	0	0	2	2	0	0	0	0	7	8	6.14	0.47
STARKE	1	1	1	1	1	1	3	3	2	2	1	1	0	0	0	0	1	1	0	0	0	0	0	0	10	10	10.52	0.72
STEUBEN	1	1	1	1	0	0	0	0	0	0	1	1	0	0	1	1	0	0	0	0	0	0	0	0	4	4	6.14	-0.35
SULLIVAN	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2.86	-0.25
SWITZERLAND	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	3.19	0.51
TIPPECANOE	2	2	0	0	1	3	2	2	1	1	2	3	2	2	1	1	3	3	0	0	0	0	2	2	16	19	18.14	-0.05
TIPTON	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	1	1	0	0	0	0	0	0	3	3	3.52	0.20
UNION	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	1.19	0.97
VANDERBURGH	0	0	0	0	1	1	0	0	1	1	1	1	1	1	2	2	0	0	2	2	1	1	1	1	10	10	13.24	-0.12
VERMILLION	0	0	1	1	0	0	0	0	0	0	1	1	1	1	1	1	0	0	0	0	1	1	0	0	5	5	5.19	-0.01
VIGO	1	2	1	1	2	2	0	0	1	2	4	5	1	1	2	3	1	1	4	5	1	1	1	2	19	25	19.33	0.83
WABASH	0	0	0	0	0	0	1	1	1	1	0	0	2	2	0	0	1	1	0	0	1	2	1	1	7	8	9.38	-0.35
WARREN	0	0	0	0	0	0	1	1	1	1	0	0	0	0	2	2	0	0	0	0	0	0	0	0	4	4	2.29	-0.14
WARRICK	1	1	0	0	0	0	0	0	1	1	1	1	0	0	2	2	1	1	1	1	1	1	0	0	8	8	8.67	0.20
WASHINGTON	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	1	3	3	5.90	-0.02
WAYNE	1	1	0	0	1	1	0	0	1	1	2	2	2	2	0	0	1	1	0	0	1	1	0	0	9	9	12.19	0.73
WELLS	1	1	0	0	2	2	1	2	0	0	1	1	0	0	1	1	0	0	0	0	0	0	1	1	7	8	5.81	-0.36
WHITE	0	0	0	0	1	1	0	0	2	2	0	0	2	2	1	1	1	1	0	0	0	0	5	6	12	13	7.29	0.46
WHITLEY	2	2	0	0	0	0	0	0	1	1	1	1	0	0	0	0	2	3	0	0	1	2	1	2	8	11	6.71	-0.07
INDIANA	45	51	54	61	71	84	60	70	79	92	88	95	98	111	89	105	81	87	94	106	67	80	66	79	892	1,021		

Legend: Wtd. Avg. = Weighted Average

 Table 88.
 Total Economic Loss for all Reportable Crashes by County, 1999

		1999 Total Economic	1995-1999 Wtd. Avg. Total Economic	1995-1999 Wtd. Avg. Total Economic	1999 Economic Loss	Wtd. Avg. Economic Loss	1995-1999 Wtd. Avg. Economic Loss	1995-1999 Wtd. Avg. Economic Loss per	1999 Economic Loss per	1995-1999 Wtd. Avg. Economic Loss per	1995-1999 Wtd. Avg. Economic Loss per	1995-1999 Wtd. Avg. Economic Loss per
	County	Loss (Millions)	Loss of Dollars)	Loss Rate of Change	per Capita (Dollars)	per Capita (Dollars)	per Capita \$ Change	Capita % of State Avg.	(Dollars)	Million VMT (Dollars)	Million VMT \$ Change	Million VMT % of State Avg.
Ī	ADAMS	\$10.6	\$12.4	-\$0.42	\$321	\$377	-\$14.63	80%	\$37,510	\$41,877	-\$1,744	112.7%
	ALLEN	\$156.9	\$148.4	\$0.56	\$499	\$474	-\$0.33	101%	\$46,584	\$45,248	-\$1,715	121.8%
	BARTHOLOMEW	\$34.0	\$38.1	-\$2.00	\$489	\$551	-\$32.36	117%	\$37,217	\$44,786	-\$5,075	120.5%
	BENTON	\$5.9	\$4.5	\$0.78	\$610	\$462	\$80.53	98%	\$32,069	\$24,430	\$3,712	65.7%
	BLACKFORD	\$5.8	\$5.7	\$0.00	\$416	\$406	\$1.77	86%	\$36,113	\$36,374	-\$1,091	97.9%
	BOONE	\$15.4	\$17.1	-\$0.78	\$352	\$396	-\$22.83	84%	\$16,870	\$19,307	-\$1,424	52.0%
	BROWN	\$5.9	\$6.5	-\$0.14	\$368	\$414	-\$13.88	88%	\$39,159	\$42,346	-\$1,921	114.0%
	CARROLL	\$7.0	\$8.1	-\$0.15	\$352	\$406	-\$9.84	86%	\$26,388	\$30,743	-\$921	82.7%
	CASS	\$19.9	\$22.6	-\$0.21	\$513	\$584	-\$5.76	124%	\$44,276	\$52,730	-\$2,134	141.9%
	CLARK	\$45.4	\$43.8	-\$0.55	\$484	\$469	-\$8.62	100%	\$32,616	\$33,236	-\$1,842	89.4%
	CLAY	\$9.7	\$12.2	-\$1.11	\$363	\$460	-\$43.21	98%	\$20,984	\$29,125	-\$3,897	78.4%
	CLINTON	\$18.7	\$15.2	-\$0.02	\$562	\$458	-\$3.00	97%	\$36,852	\$30,304	-\$778	81.6%
	CRAWFORD	\$4.5	\$4.2	\$0.20	\$423	\$395	\$17.84	84%	\$20,377	\$19,323	\$462	52.0%
	DAVIESS	\$12.5	\$13.8	-\$0.16	\$432	\$476	-\$7.14	101%	\$37,476	\$45,430	-\$5,136	122.3%
	DEARBORN	\$21.6	\$22.4	-\$0.46	\$457	\$481	-\$17.43	102%	\$35,493	\$39,266	-\$2,458	105.7%
	DECATUR	\$15.0	\$14.0	\$0.69	\$587	\$549	\$23.69	117%	\$31,695	\$30,549	\$589	82.2%
	DEKALB	\$15.4	\$17.0	-\$0.54	\$393	\$435	-\$18.11	92%	\$27,690	\$31,822	-\$2,059	85.6%
	DELAWARE DUBOIS	\$49.3 \$17.7	\$53.2 \$16.3	-\$2.33 \$0.08	\$422 \$446	\$453 \$414	-\$17.62 -\$0.35	96% 88%	\$32,080 \$34,378	\$35,177 \$33,868	-\$3,724 -\$994	94.7% 91.1%
	ELKHART	\$17.7 \$82.4	\$16.5	-\$5.69	\$446 \$478	\$414 \$546	-\$0.55 -\$37.76	116%	\$34,376 \$42,394	\$50,344	-\$994 -\$5,332	135.5%
	FAYETTE	\$10.8	\$10.3	-\$0.37	\$414	\$396	-\$37.76	84%	\$45,861	\$44,523	-\$3,532	119.8%
	FLOYD	\$10.8	\$10.5	-\$0.93	\$364	\$384	-\$15.05 -\$15.71	82%	\$31,661	\$34,802	-\$2,032	93.7%
	FOUNTAIN	\$9.5	\$8.6	-\$0.12	\$519	\$470	-\$8.33	100%	\$35,424	\$33,475	-\$1,511	90.1%
	FRANKLIN	\$10.3	\$11.5	\$0.55	\$470	\$531	\$21.30	113%	\$36,170	\$42,067	\$217	113.2%
	FULTON	\$13.9	\$12.0	\$1.08	\$672	\$587	\$48.19	125%	\$53,818	\$45,520	\$3,597	122.5%
	GIBSON	\$16.8	\$14.9	-\$0.73	\$522	\$464	-\$23.41	98%	\$31,469	\$28,966	-\$2,471	78.0%
	GRANT	\$33.1	\$31.4	-\$0.56	\$456	\$431	-\$5.92	92%	\$38,317	\$36,511	-\$1,506	98.3%
	GREENE	\$18.6	\$13.6	\$0.84	\$556	\$407	\$22.90	87%	\$44,235	\$33,170	\$1,211	89.3%
	HAMILTON	\$52.1	\$52.7	-\$0.18	\$320	\$335	-\$13.26	71%	\$28,583	\$29,971	-\$1,341	80.7%
	HANCOCK	\$24.8	\$23.2	\$0.54	\$454	\$433	\$2.77	92%	\$26,634	\$24,576	\$431	66.1%
	HARRISON	\$13.7	\$17.0	-\$1.19	\$396	\$498	-\$42.78	106%	\$29,186	\$36,441	-\$3,114	98.1%
	HENDRICKS	\$43.5	\$37.2	\$2.56	\$457	\$398	\$18.56	85%	\$41,828	\$36,256	\$1,442	97.6%
	HENRY	\$18.6	\$17.1	-\$1.61	\$381	\$351	-\$32.22	74%	\$23,930	\$23,212	-\$2,758	62.5%
	HOWARD	\$39.2	\$37.0	\$0.85	\$470	\$442	\$10.43	94%	\$44,293	\$42,947	-\$530	115.6%
	HUNTINGTON	\$17.4	\$18.9	-\$1.27	\$466	\$509	-\$35.82	108%	\$27,806	\$31,866	-\$2,956	85.8%
	JACKSON	\$22.1	\$21.8	-\$0.33	\$539	\$534	-\$10.59	113%	\$32,968	\$34,512	-\$1,184	92.9%
	JASPER	\$15.4	\$15.8	\$0.33	\$525	\$546	\$5.04	116%	\$23,521	\$25,306	-\$425	68.1%
	JAY	\$9.8	\$9.6	-\$0.40	\$453	\$444	-\$18.17	94%	\$34,082	\$34,583	-\$2,521	93.1%
	JEFFERSON	\$13.6 \$19.1	\$13.8 \$14.1	-\$0.45 \$0.61	\$432 \$687	\$440 \$513	-\$16.45 \$14.80	93% 109%	\$45,097 \$62,407	\$46,318	-\$2,169 -\$237	124.7% 131.5%
	JENNINGS JOHNSON	\$19.1	\$14.1	\$0.61 -\$0.37	\$320	\$341	-\$9.70	72%	\$82,407	\$48,873 \$39,666	-\$2,766	106.8%
	KNOX	\$35.0 \$14.6	\$36.7 \$17.6	-\$0.57 -\$0.59	\$320 \$371	\$341 \$446	-\$9.70 -\$13.91	95%	\$30,314	\$35,924	-\$2,766 -\$1,288	96.7%
	KOSCIUSKO	\$14.6	\$17.6	\$0.83	\$571 \$540	\$ <del>44</del> 6 \$549	-\$15.91 \$7.78	117%	\$49,761	\$50,603	-\$1,200 \$21	136.2%
	LAGRANGE	\$36.5	\$19.8	\$1.03	\$709	\$600	\$23.26	127%	\$41,316	\$30,003	\$977	93.9%
	LAKE	\$23.7	\$237.7	-\$4.32	\$467	\$496	-\$8.43	105%	\$48,911	\$51,876	-\$1,851	139.6%
	LITTLE	422J.Z	7237.7	y-1.52	¥107	Q-100	Q0.13	10370	7-10,511	451,070	71,051	133.070

Table 88. Total Economic Loss for all Reportable Crashes by County, 1999 (cont.)

	1999 Total	Wtd. Avg. Total	1995-1999 Wtd. Avg. Total	1999 Economic	Wtd. Avg. Economic	1995-1999 Wtd. Avg. Economic	1995-1999 Wtd. Avg. Economic	1999 Economic	1995-1999 Wtd. Avg. Economic	1995-1999 Wtd. Avg. Economic	1995-1999 Wtd. Avg. Economic
	Economic Loss	Economic Loss	Economic Loss	Loss per Capita	Loss per Capita	Loss per Capita	Loss per Capita % of	Loss per	Loss per Million VMT	Loss per Million VMT	Loss per Million VMT
County		of Dollars)	% Change	(Dollars)	(Dollars)	\$ Change	State Avg.	(Dollars)	(Dollars)	\$ Change	% of State Avg.
LAPORTE	\$51.5	\$58.9	-\$1.26	\$471	\$538	-\$11.28	114%	\$33,337	\$40,507	-\$2,535	109.0%
LAWRENCE	\$15.3	\$20.2	-\$1.20	\$335	\$443	-\$11.20	94%	\$30,534	\$42,712	-\$2,553	114.9%
MADISON	\$67.6	\$63.8	\$0.10	\$515	\$484	\$2.10	103%	\$47,656	\$44,816	-\$440	120.6%
MARION	\$387.9	\$397.5	-\$5.92	\$477	\$488	-\$6.69	104%	\$40,491	\$42,792	-\$2,852	115.2%
MARSHALL	\$33.4	\$26.0	\$0.50	\$735	\$574	\$9.02	122%	\$53,774	\$39,007	\$881	105.0%
MARTIN	\$6.7	\$7.0	\$0.50	\$634	\$669	\$47.85	142%	\$50,730	\$54,703	\$3,026	147.2%
MIAMI	\$13.5	\$15.5	-\$0.62	\$403	\$467	-\$22.71	99%	\$33,998	\$40,511	-\$2,367	109.0%
MONROE	\$43.4	\$46.3	-\$0.55	\$377	\$400	-\$4.26	85%	\$46,203	\$48,433	-\$1,549	130.3%
MONTGOMERY	\$19.0	\$18.1	-\$0.35	\$522	\$498	-\$10.11	106%	\$33,728	\$32,108	-\$1,090	86.4%
MORGAN	\$28.7	\$27.7	\$0.95	\$439	\$427	\$9.10	91%	\$35,726	\$35,830	-\$81	96.4%
NEWTON	\$8.6	\$8.1	\$0.60	\$587	\$554	\$37.87	118%	\$34,292	\$33,765	\$1,269	90.9%
NOBLE	\$22.1	\$23.1	-\$1.44	\$518	\$548	-\$40.11	116%	\$40,845	\$44,023	-\$3,773	118.5%
OHIO	\$2.5	\$2.4	-\$0.09	\$467	\$444	-\$15.33	94%	\$41,963	\$42,518	-\$4,383	114.4%
ORANGE	\$8.7	\$9.9	\$0.18	\$445	\$507	\$5.54	108%	\$40,425	\$48,387	-\$1,126	130.2%
OWEN	\$7.3	\$9.9	\$0.37	\$358	\$488	\$14.27	104%	\$36,564	\$49,877	\$1,343	134.2%
PARKE	\$7.3	\$7.5	\$0.24	\$438	\$454	\$10.46	96%	\$30,938	\$30,815	\$663	82.9%
PERRY	\$6.8	\$6.9	-\$0.55	\$350	\$357	-\$29.28	76%	\$26,651	\$28,173	-\$3,309	75.8%
PIKE	\$6.6	\$6.6	\$0.19	\$510	\$516	\$11.60	110%	\$32,255	\$31,658	-\$372	85.2%
PORTER	\$66.4	\$67.1	-\$0.88	\$456	\$464	-\$10.47	99%	\$40,194	\$41,096	-\$1,104	110.6%
POSEY	\$10.2	\$9.0	\$0.32	\$387	\$339	\$11.78	72%	\$25,611	\$22,442	\$521	60.4%
PULASKI	\$6.0	\$7.0	-\$0.35	\$451	\$527	-\$28.14	112%	\$30,803	\$35,260	-\$2,268	94.9%
PUTNAM	\$17.3	\$15.9	\$0.86	\$501	\$466	\$20.05	99%	\$27,297	\$26,848	\$735	72.3%
RANDOLPH	\$7.5	\$9.2	-\$1.38	\$272	\$333	-\$50.80	71%	\$22,147	\$26,944	-\$4,553	72.5%
RIPLEY	\$14.8	\$13.4	\$0.17	\$545	\$493	\$4.17	105%	\$39,583	\$37,500	-\$1,279	100.9%
RUSH	\$10.9	\$9.4	-\$0.93	\$595	\$511	-\$50.63	109%	\$43,786	\$38,183	-\$4,539	102.8%
SAINT JOSEPH	\$113.2	\$114.8	-\$5.42	\$439	\$445	-\$21.50	94%	\$48,458	\$49,948	-\$3,925	134.4%
SCOTT	\$11.8	\$10.5	-\$0.69	\$516	\$460	-\$32.69	98%	\$35,220	\$34,113	-\$3,523	91.8%
SHELBY	\$19.9	\$18.2	-\$0.04	\$458	\$421	-\$2.60	89%	\$30,324	\$29,142	-\$1,016	78.4%
SPENCER	\$12.3	\$10.7	\$0.72	\$590	\$514	\$31.07	109%	\$33,352	\$30,392	\$1,260	81.8%
STARKE	\$14.7	\$16.3	\$0.04	\$615	\$685	-\$7.24	146%	\$58,522	\$66,492	-\$1,258	178.9%
STEUBEN	\$13.5	\$16.2	-\$0.89	\$428	\$519	-\$33.52	110%	\$19,091	\$24,315	-\$2,151	65.4%
SULLIVAN	\$5.6	\$6.3	-\$0.17	\$289	\$319	-\$4.13	68%	\$17,706	\$20,568	-\$1,150	55.4%
SWITZERLAND	\$3.6	\$5.2	-\$0.12	\$410	\$598	-\$24.54	127%	\$41,829	\$61,310	-\$2,826	165.0%
TIPPECANOE	\$66.9	\$66.4	-\$0.61	\$481	\$479	-\$5.62	102%	\$45,122	\$46,993	-\$2,189	126.5%
TIPTON	\$5.6	\$6.8	-\$0.40	\$334	\$410	-\$25.72	87%	\$17,111	\$22,353	-\$2,030	60.2%
UNION	\$2.4	\$2.9	-\$0.19	\$332	\$393	-\$25.25	83%	\$27,861	\$33,468	-\$2,766	90.1%
VANDERBURGH	\$69.2	\$73.7	-\$1.45	\$412	\$439	-\$9.09	93%	\$43,857	\$48,297	-\$2,924	130.0%
VERMILLION	\$8.6	\$8.7	-\$0.80	\$510	\$517	-\$47.95	110%	\$29,795	\$29,974	-\$2,966	80.7%
VIGO	\$63.0	\$60.9	\$0.22	\$600	\$578	\$4.21	123%	\$50,450	\$51,184	-\$1,876	137.7%
WABASH	\$16.4	\$18.1	-\$1.93	\$476	\$525	-\$54.93	111%	\$38,046	\$43,365	-\$5,934	116.7%
WARREN	\$5.2	\$3.9	\$0.27	\$633	\$479	\$32.84	102%	\$28,902	\$22,116	\$1,124	59.5%
WARRICK	\$16.9	\$18.1	\$1.13	\$328	\$353	\$18.30	75%	\$27,389	\$30,600	\$649	82.4%
WASHINGTON	\$9.9	\$12.6	-\$0.06	\$356	\$461	-\$10.02	98%	\$30,847	\$41,784	-\$2,551	112.5%
WAYNE	\$34.4	\$37.2	-\$0.14	\$482	\$519	-\$0.12	110%	\$28,676	\$32,184	-\$864	86.6%
WELLS	\$12.5	\$11.0	-\$0.28	\$468	\$410	-\$11.84	87%	\$39,594	\$36,125	-\$2,302	97.2%
WHITE	\$20.0	\$14.8	\$1.61	\$791	\$586	\$60.66	124%	\$40,034	\$29,812	\$2,807	80.2%
WHITLEY	\$16.9	\$14.4	\$0.02	\$555	\$476	-\$3.00	101%	\$36,772	\$31,924	-\$734	85.9%
INDIANA	\$4,729			\$486	\$471	-\$5.93			\$37,158	-\$1,492	

Note: Total Economic Loss is the total socioeconomic cost estimated using the NHTSA crash model. 1999 population estimates obtained from the U.S. Census Bureau. Legend: Wtd. Avg. = Weighted Average

 Table 89.
 Crashes by County with Rates per 1,000 Licensed Drivers, 1999

						Total Crashes														
<del>-</del>					1999	1995-1999		1999	1995-1999			_		Fata	Crashes			Injury C	rashes	
County	1999 Total		Yearly Rate of Change	1999 Capita	per 1,000 Capita	Wtd. Avg. per 1,000 Capita	1999 LDVR	per 1,000 LDVR	Wtd. Avg. per 1,000 LDVR	1999 MVMT	1999 per MVMT	1995-1999 Wtd. Avg. per MVMT	Fatal	per 1,000 LDVR	per 1,000 Capita	per Hundred MVMT	Personal Injury	per 1,000 LDVR	per 1,000 Capita	per Hundred MVMT
ADAMS	890	905	-9.00	33,168	26.8	27.3	20,331	43.8	44.5	283	3.14	3.19	2	0.10	0.06	0.71	207	10.18	6.24	73.06
ALLEN	13,085	13,274	-17.78	316,471	41.3	41.9	209,201	62.5	63.4	3,367	3.89	3.94	48	0.23	0.15	1.43	2,834	13.55	8.96	84.16
BARTHOLOMEW	2,374	2,378	-4.96	69,714	34.1	34.1	48,938	48.5	48.6	913	2.60	2.60	11	0.22	0.16	1.20	644	13.16	9.24	70.50
BENTON	212	203	2.70	9,776	21.7	20.7	6,775	31.3	29.9	185	1.15	1.10	3	0.44	0.31	1.62	41	6.05	4.19	22.16
BLACKFORD	418	418	-9.85	13,927	30.0	30.0	9,755	42.8	42.8	160	2.61	2.61	2	0.21	0.14	1.25	92	9.43	6.61	57.35
BOONE	1,354	1,384	22.77	44,835	30.2	30.9	31,462	43.0	44.0	915	1.48	1.51	5	0.16	0.11	0.55	237	7.53	5.29	25.90
BROWN	384	475	-13.65	15,992	24.0	29.7	11,262	34.1	42.2	150	2.56	3.16	3	0.27	0.19	2.00	62	5.51	3.88	41.30
CARROLL	598	616	-1.87	20,004	29.9	30.8	14,227	42.0	43.3	267	2.24	2.31	3	0.21	0.15	1.12	131	9.21	6.55	49.12
CASS	1,717	1,762	9.42	38,964	44.1	45.2	26,093	65.8	67.5	448	3.83	3.93	7	0.27	0.18	1.56	357	13.68	9.16	79.60
CLARK	3,856	3,601	43.89	95,121	40.5	37.9	66,205	58.2	54.4	1,392	2.77	2.59	12	0.18	0.13	0.86	955	14.42	10.04	68.63
CLAY	872	935	-12.31	26,903	32.4	34.8	18,314	47.6	51.1	461	1.89	2.03	3	0.16	0.11	0.65	157	8.57	5.84	34.03
CLINTON	1,098	1,089	-8.90	32,964	33.3	33.0	21,740	50.5	50.1	507	2.17	2.15	8	0.37	0.24	1.58	214	9.84	6.49	42.21
CRAWFORD	357	292	4.50	10,739	33.2	27.2	7,490	47.7	39.0	220	1.63	1.33	2	0.27	0.19	0.91	78	10.41	7.26	35.53
DAVIESS	836	850	6.40	29,084	28.7	29.2	17,774	47.0	47.8	334	2.50	2.54	5	0.28	0.17	1.50	218	12.27	7.50	65.25
DEARBORN	1,769	1,695	40.86	48,011	36.8	35.3	32,273	54.8	52.5	607	2.91	2.79	8	0.25	0.17	1.32	397	12.30	8.27	65.38
DECATUR	820	812	1.82	25,704	31.9	31.6	17,296	47.4	47.0	473	1.73	1.72	10	0.58	0.39	2.11	173	10.00	6.73	36.56
DEKALB	1,380	1,407	-0.44	39,683	34.8	35.4	27,157	50.8	51.8	558	2.47	2.52	5	0.18	0.13	0.90	229	8.43	5.77	41.05
DELAWARE	4,173	4,342	-65.88	115,472	36.1	37.6	72,735	57.4	59.7	1,538	2.71	2.82	13	0.18	0.11	0.85	1,038	14.27	8.99	67.50
DUBOIS	1,500	1,439	12.97	40,093	37.4	35.9	27,709	54.1	51.9	515	2.91	2.80	6	0.22	0.15	1.17	323	11.66	8.06	62.75
ELKHART	7,547	7,431	158.86	174,680	43.2	42.5	108,355	69.7	68.6	1,944	3.88	3.82	20	0.18	0.11	1.03	1,742	16.08	9.97	89.62
FAYETTE	903 2,682	952 2,540	-14.41	25,860	34.9 37.1	36.8	17,158	52.6 56.4	55.5 53.4	234 827	3.85 3.24	4.06	5 3	0.29	0.19	2.13 0.36	161	9.38 14.00	6.23 9.22	68.66
FLOYD FOUNTAIN	2,062 591	2,340 597	40.65 6.51	72,243 18,374	32.2	35.2 32.5	47,564 12,921	45.7	46.2	269	2.20	3.07 2.22	6	0.06 0.46	0.04 0.33	2.23	666 104	8.05	5.66	80.54 38.66
FRANKLIN	684	671	17.18	22,120	30.9	30.3	14,872	46.0	45.1	283	2.20	2.22	5	0.40	0.33	1.76	159	10.69	7.19	56.09
FULTON	592	625	-5.97	20,893	28.3	29.9	14,281	41.5	43.8	257	2.41	2.37	7	0.49	0.23	2.72	143	10.03	6.84	55.55
GIBSON	1,077	1,059	15.19	32,230	33.4	32.9	22,672	47.5	46.7	533	2.02	1.99	8	0.35	0.25	1.50	236	10.41	7.32	44.30
GRANT	2,733	2,677	-0.73	72,082	37.9	37.1	47,533	57.5	56.3	864	3.16	3.10	13	0.27	0.18	1.50	541	11.38	7.51	62.63
GREENE	905	933	-23.63	33,158	27.3	28.1	22,391	40.4	41.6	420	2.15	2.22	12	0.54	0.36	2.85	190	8.49	5.73	45.20
HAMILTON	4,854	4,619	147.74	172,094	28.2	26.8	121,292	40.0	38.1	1,822	2.66	2.54	14	0.12	0.08	0.77	1,048	8.64	6.09	57.52
HANCOCK	1,505	1,498	17.60	55.617	27.1	26.9	40,254	37.4	37.2	930	1.62	1.61	10	0.25	0.18	1.08	423	10.51	7.61	45.47
HARRISON	1,247	1,239	14.07	35,376	35.2	35.0	25,347	49.2	48.9	471	2.65	2.63	4	0.16	0.11	0.85	279	11.01	7.89	59.27
HENDRICKS	2,735	2,648	90.27	98,826	27.7	26.8	69,901	39.1	37.9	1,039	2.63	2.55	19	0.27	0.19	1.83	598	8.55	6.05	57.55
HENRY	1,406	1,458	-6.86	48,377	29.1	30.1	34,551	40.7	42.2	776	1.81	1.88	8	0.23	0.17	1.03	303	8.77	6.26	39.05
HOWARD	2,893	2,764	-0.65	83,736	34.5	33.0	57,738	50.1	47.9	885	3.27	3.12	11	0.19	0.13	1.24	771	13.35	9.21	87.13
HUNTINGTON	1,237	1,262	-0.29	37,377	33.1	33.8	25,523	48.5	49.4	625	1.98	2.02	8	0.31	0.21	1.28	243	9.52	6.50	38.90
JACKSON	1,686	1,686	1.43	41,319	40.8	40.8	28,778	58.6	58.6	670	2.52	2.52	7	0.24	0.17	1.04	371	12.89	8.98	55.35
JASPER	1,051	1,057	-2.24	29,462	35.7	35.9	20,967	50.1	50.4	654	1.61	1.62	6	0.29	0.20	0.92	241	11.49	8.18	36.87
JAY	656	714	-11.27	21,686	30.2	32.9	15,092	43.5	47.3	289	2.27	2.47	3	0.20	0.14	1.04	134	8.88	6.18	46.37
JEFFERSON	951	1,040	-8.01	31,813	29.9	32.7	20,653	46.0	50.4	301	3.16	3.45	6	0.29	0.19	1.99	205	9.93	6.44	68.05
JENNINGS	1022	896	21.62	28,106	36.4	31.9	17,982	56.8	49.8	306	3.34	2.93	11	0.61	0.39	3.60	232	12.90	8.25	75.87
JOHNSON	2,891	2,932	39.82	112,724	25.6	26.0	77,935	37.1	37.6	1,019	2.84	2.88	12	0.15	0.11	1.18	680	8.73	6.03	66.74
KNOX	1,271	1,380	-35.15	39,051	32.5	35.3	25,690	49.5	53.7	482	2.64	2.86	3	0.12	0.08	0.62	358	13.94	9.17	74.26
KOSCIUSKO	2,512	2,563	-8.99	71,336	35.2	35.9	48,780	51.5	52.5	773	3.25	3.32	15	0.31	0.21	1.94	521	10.68	7.30	67.41
LAGRANGE	1,141	1,079	22.49	33,997	33.6	31.7	16,535	69.0	65.3	574	1.99	1.88	13	0.79	0.38	2.26	180	10.89	5.29	31.33
LAKE	19,494	19,739	227.68	480,619	40.6	41.1	282,893	68.9	69.8	4,564	4.27	4.32	51	0.18	0.11	1.12	4,636	16.39	9.65	101.58

Table 89. Crashes by County with Rates per 1,000 Licensed Drivers, 1999 (cont.)

						Total Crashe	es													
					1999	1995-1999		1999	1995-1999				•	Fatal	Crashes			Injury (	Crashes	
					per	Wtd. Avg.		per	Wtd. Avg.		1999	1995-1999		per	per	per		per	per	per
	1999		Yearly Rate	1999	1,000	per 1,000	1999	1,000	per 1,000	1999	per	Wtd. Avg.		1,000	1,000	Hundred	Personal	1,000	1,000	Hundred
County	Total		of Change	Capita	Capita	Capita	LDVR	LDVR	LDVR	MVMT	MVMT	per MVMT	Fatal	LDVR	Capita	MVMT	Injury	LDVR	Capita	MVMT
LAPORTE	4,243	4,257	53.31	109,939	38.6	38.7	70,158	60.5	60.7	1,545	2.75	2.75	16	0.23	0.15	1.04	1,034	14.74	9.41	66.92
LAWRENCE	1,292	1,400	-43.50	45,752	28.2	30.6	31,601	40.9	44.3	500	2.58	2.80	4	0.13	0.09	0.80	340	10.76	7.43	68.02
MADISON	4,580	4,731	-43.29	130,990	35.0	36.1	87,074	52.6	54.3	1,419	3.23	3.33	26	0.30	0.20	1.83	1,058	12.15	8.08	74.57
MARION	34,297	34,383	89.14	810,946	42.3	42.4	500,093	68.6	68.8	9,579	3.58	3.59	85	0.17	0.10	0.89	8,248	16.49	10.17	86.10
MARSHALL	1,682	1,678	-2.14	46,129	36.5	36.4	29,505	57.0	56.9	621	2.71	2.70	18	0.61	0.39	2.90	349	11.83	7.57	56.21
MARTIN	323	335	1.26	10,379	31.1	32.3	7,431	43.5	45.1	132	2.46	2.55	5	0.67	0.48	3.80	71	9.55	6.84	53.98
MIAMI MONROE	1,171	1,140	-1.77 20.39	33,605	34.8 35.3	33.9 37.0	23,948	48.9	47.6	398 940	2.94 4.40	2.86	5 9	0.21	0.15	1.26	239 911	9.98	7.11 7.79	60.04
	4,133	4,323		116,923			67,690	61.1	63.9		2.25	4.60	9	0.13	0.08	0.96		13.46		96.91
MONTGOMERY	1,266	1,265	-9.50 15.25	36,583	34.6 25.2	34.6 25.3	25,201 45,223	50.2 37.3	50.2	562 800		2.25 2.12	13	0.36 0.29	0.25 0.19	1.60	283 394	11.23 8.71	7.74 5.88	50.33
MORGAN	1,688 429	1,693	-3.32	67,003	28.9	25.3		42.1	37.4 40.0		2.11 1.70		5	0.29	0.19	1.63 1.98	39 <del>4</del> 91	8.71	6.13	49.26 36.10
NEWTON NOBLE	1,596	408 1,666	-3.32 7.86	14,844 43,241	28.9 36.9	38.5	10,198 28,946	55.1	40.0 57.5	252 541	2.95	1.62 3.08	5 11	0.49	0.34	2.03	293	10.12	6.78	54.17
OHIO	256	230	10.81	43,241 5,457	36.9 46.9	38.3 42.1	28,946 4,167	55.1 61.4	57.5 55.1	60	2.95 4.25	3.08	1	0.38	0.25	2.03 1.66	293 52	12.48	9.53	34.17 86.24
ORANGE	637	624	8.33	5, <del>4</del> 57 19,835	46.9 32.1	42.1 31.5	13,149	48.4	55.1 47.5	216	4.25 2.95	2.89	5	0.24	0.18	2.32	115	8.75	9.53 5.80	53.25
OWEN	606	637	-4.66	20,619	29.4	30.9	14,069	43.1	45.2	200	3.03	3.18	3	0.36	0.25	1.50	134	9.52	6.50	67.04
PARKE	610	558	6.77	16,908	36.1	33.0	10,974	55.6	50.8	237	2.57	2.35	3	0.27	0.13	1.27	136	12.39	8.04	57.40
PERRY	590	636	1.96	19.091	30.9	33.3	13,167	44.8	48.3	254	2.32	2.50	2	0.15	0.10	0.79	106	8.05	5.55	41.75
PIKE	402	392	13.58	13,021	30.9	30.1	9,133	44.0	42.9	204	1.97	1.92	3	0.13	0.10	1.47	87	9.53	6.68	42.74
PORTER	4,784	4,713	67.41	147,758	32.4	31.9	100,076	47.8	47.1	1,652	2.90	2.85	23	0.23	0.16	1.39	1239	12.38	8.39	74.98
POSEY	567	549	-11.66	26,292	21.6	20.9	18,573	30.5	29.6	400	1.42	1.37	6	0.32	0.13	1.50	118	6.35	4.49	29.49
PULASKI	544	565	5.94	13,527	40.2	41.8	9,458	57.5	59.7	194	2.80	2.91	3	0.32	0.22	1.55	91	9.62	6.73	46.92
PUTNAM	1,084	1,154	-13.18	34,788	31.2	33.2	22,525	48.1	51.2	633	1.71	1.82	9	0.40	0.26	1.42	245	10.88	7.04	38.71
RANDOLPH	640	677	-15.25	27,417	23.3	24.7	19,188	33.4	35.3	340	1.88	1.99	2	0.10	0.07	0.59	112	5.84	4.09	32.98
RIPLEY	897	871	13.52	27,660	32.4	31.5	19,320	46.4	45.1	375	2.39	2.32	8	0.41	0.29	2.14	195	10.09	7.05	52.05
RUSH	517	548	-3.97	18,208	28.4	30.1	12,507	41.3	43.8	249	2.08	2.20	4	0.32	0.22	1.61	142	11.35	7.80	57.05
SAINT JOSEPH	9,695	9,922	9.79	258,537	37.5	38.4	159,845	60.7	62.1	2,337	4.15	4.25	30	0.19	0.12	1.28	2308	14.44	8.93	98.76
SCOTT	783	756	-5.47	23,433	33.4	32.2	15,616	50.1	48.4	336	2.33	2.25	4	0.26	0.17	1.19	216	13.83	9.22	64.33
SHELBY	1,404	1,408	9.47	43,630	32.2	32.3	29,247	48.0	48.1	657	2.14	2.14	8	0.27	0.18	1.22	389	13.30	8.92	59.23
SPENCER	703	669	3.92	21,178	33.2	31.6	14,454	48.6	46.3	370	1.90	1.81	7	0.48	0.33	1.89	148	10.24	6.99	39.99
STARKE	739	743	1.18	23,597	31.3	31.5	15,900	46.5	46.7	252	2.94	2.95	10	0.63	0.42	3.97	164	10.31	6.95	65.16
STEUBEN	1,595	1,629	14.23	31,742	50.2	51.3	22,367	71.3	72.8	705	2.26	2.31	4	0.18	0.13	0.57	245	10.95	7.72	34.74
SULLIVAN	452	482	-3.33	21,535	21.0	22.4	14,052	32.2	34.3	315	1.44	1.53	1	0.07	0.05	0.32	99	7.05	4.60	31.46
SWITZERLAND	319	332	-2.09	8,961	35.6	37.1	5,870	54.3	56.6	87	3.66	3.81	2	0.34	0.22	2.29	45	7.67	5.02	51.58
TIPPECANOE	6,898	6,668	68.94	142,475	48.4	46.8	84,485	81.6	78.9	1,483	4.65	4.50	16	0.19	0.11	1.08	1216	14.39	8.53	82.00
TIPTON	355	390	-6.12	16,641	21.3	23.4	12,075	29.4	32.3	326	1.09	1.19	3	0.25	0.18	0.92	78	6.46	4.69	23.91
UNION	209	230	-1.42	7,297	28.6	31.5	5,284	39.6	43.5	87	2.42	2.66	1	0.19	0.14	1.16	43	8.14	5.89	49.70
VANDERBURGH	6,735	6,896	-41.10	167,922	40.1	41.1	111,262	60.5	62.0	1,579	4.27	4.37	10	0.09	0.06	0.63	1632	14.67	9.72	103.38
VERMILLION	494	514	-11.07	16,954	29.1	30.3	11,979	41.2	42.9	289	1.71	1.78	5	0.42	0.29	1.73	115	9.60	6.78	39.76
VIGO	4,623	4,877	-60.29	104,349	44.3	46.7	64,358	71.8	75.8	1,249	3.70	3.90	19	0.30	0.18	1.52	1113	17.29	10.67	89.09
WABASH	1,240	1,209	0.09	34,538	35.9	35.0	24,137	51.4	50.1	432	2.87	2.80	7	0.29	0.20	1.62	236	9.78	6.83	54.59
WARREN	280	272	2.22	8,349	33.5	32.6	5,995	46.7	45.3	181	1.55	1.50	4	0.67	0.48	2.21	47	7.84	5.63	26.00
WARRICK	1,381	1,415	9.28	52,557	26.3	26.9	37,744	36.6	37.5	617	2.24	2.29	8	0.21	0.15	1.30	259	6.86	4.93	41.94
WASHINGTON	914	883	28.20	28,233	32.4	31.3	18,070	50.6	48.9	322	2.84	2.74	3	0.17	0.11	0.93	203	11.23	7.19	63.11
WAYNE	2,758	2,755	18.19	71,134	38.8	38.7	46,951	58.7	58.7	1,199	2.30	2.30	9	0.19	0.13	0.75	749	15.95	10.53	62.46
WELLS	823	798	2.16	26,810	30.7	29.8	19,396	42.4	41.2	317	2.60	2.52	7	0.36	0.26	2.21	158	8.15	5.89	49.85
WHITE	1,158	1,112	-0.04	25,522	45.4	43.6	18,173	63.7	61.2	501	2.31	2.22	12	0.66	0.47	2.40	222	12.22	8.70	44.33
WHITLEY	989	1,026	-4.68	30,811	32.1	33.3	21,879	45.2	46.9	459	2.15	2.23	8	0.37	0.26	1.74	198	9.05	6.43	43.09
INDIANA	217,340	2,373		5,942,901	36.6		3,876,908	56.1		71,507	3.04	2.63	892	0.23	0.15	1.25	49,518	12.77	8.33	69.25

Source: Indiana Bureau of Motor Vehicles, Department of Transportation, US Census Bureau Legend: Wtd. Avg. = Weighted Average

Table 90. Drivers in Crashes by County and Age Group, 1999

	1995-1999 Wtd. Avg.	1995-1999	1999 Drivers Age										
	Drivers Age 16-20 in	Wtd. Avg. Yearly	16-20 in Crashes					Drive	r Age				
County	Crashes per Capita	Percent Change	per Capita	<21	21-24	25-34	35-44	45-54	55-64	65-74	75+	Unknown	Total
ADAMS	13.51	-13%	0.13	316	119	260	239	152	114	72	66	86	1,424
ALLEN	18.68	12%	0.18	4,069	2,323	4,660	4,213	2,976	1,587	907	665	2,036	23,436
BARTHOLOMEW	16.96	-29%	0.17	798	378	760	763	556	393	188	122	144	4,102
BENTON	10.54	4%	0.10	62	19	46	51	46	20	11	20	12	287
BLACKFORD	14.82	-39%	0.16	150	45	122	97	72	43	28	23	36	616
BOONE	15.85	22%	0.15	423	200	435	421	245	151	95	74	152	2,196
BROWN	14.99	-46%	0.12	123	48	78	92	80	42	23	18	51	555
CARROLL	13.90	7%	0.14	185	93	178	161	85	62	44	35	32	875
CASS	19.99	-22%	0.18	481	234	501	434	339	219	144	132	144	2,628
CLARK	16.43	-1%	0.17	1,143	617	1,326	1,291	920	523	346	197	379	6,742
CLAY	18.68	-18%	0.17	300	105	257	225	152	80	66	46	65	1,296
CLINTON	16.43	-45%	0.15	311	180	317	269	216	105	64	56	140	1,658
CRAWFORD	10.52	16%	0.12	94	45	83	94	71	25	23	11	19	465
DAVIESS	15.70	8%	0.15	307	115	240	219	157	78	58	53	34	1,261
DEARBORN	17.28	21%	0.17	549	239	532	495	388	233	127	77	112	2,752
DECATUR	15.82	-67%	0.13	253	129	233	201	142	82	74	48	91	1,253
DEKALB	14.35	-50%	0.12	350	175	361	391	257	134	91	85	255	2,099
DELAWARE	9.99	-5%	0.10	1,389	883	1,328	1,151	832	567	327	267	476	7,220
DUBOIS	21.51	30%	0.23	575	235	439	456	288	167	113	64	72	2,409
ELKHART	18.07	17%	0.18	2,207	1,232	2,788	2,428	1,711	1000	606	416	864	13,252
FAYETTE	18.22	-59%	0.15	298	123	277	266	172	100	93	59	73	1,461
FLOYD	18.50	45%	0.20	977	394	881	819	603	320	188	155	257	4,594
FOUNTAIN	14.11	-11%	0.14	170	73	134	139	100	74	48	28	45	811
FRANKLIN	14.58	2%	0.14	233	90	161	146	115	80	33	22	42	922
FULTON	16.01	26%	0.15	199	92	130	148	120	73	54	41	30	887
GIBSON	18.66	23%	0.19	382	139	285	306	239	134	97	87	60	1,729
GRANT	12.26	-12%	0.12	821	422	839	766	535	403	215	191	311	4,503
GREENE	14.66	-56%	0.14	295	111	220	226	181	116	55	51	82	1,337
HAMILTON	15.43	10%	0.15	1,594	730	1,930	1,781	1,150	565	333	202	629	8,914
HANCOCK	14.51	14%	0.14	549	211	455	469	344	208	118	81	134	2,569
HARRISON	18.99	-1%	0.19	471	175	339	351	255	122	83	52	48	1,896
HENDRICKS	13.94	22%	0.13	902	380	906	948	622	334	199	143	285	4,719
HENRY	14.30	10%	0.14	449	196	438	393	224	147	107	102	159	2,215
HOWARD	16.47	-13%	0.17	985	538	957	873	687	463	278	170	263	5,214
HUNTINGTON	15.68	22%	0.14	387	166	340	339	240	163	73	66	130	1,904
JACKSON	19.46	-45%	0.18	521	247	569	497	317	202	133	134	106	2,726
JASPER	14.33	-28%	0.14	352	151	286	279	197	98	52	47	59 35	1,521
JAY	14.38	-39%	0.13	200	85	184	137	107	87	43	42	35	920
JEFFERSON	14.52	8%	0.13	352	114	283	241	194	123	90	80	109	1,586
JENNINGS	15.26	-22%	0.16	338	143	337	274	196	114	73	57	53	1,585
JOHNSON	13.11	-9%	0.12	1,032	465	940	941	661	328	232	161	368	5,128
KNOX	12.92	-9%	0.13	553	195	326	311	217	180	112	97	96	2,087
KOSCIUSKO	18.19	7%	0.18	865	377	744	735	499	304	176	130	119	3,949
LAGRANGE	10.07	-7%	0.10	300	139	304	296	191	145	72	40	73	1,560
LAKE	14.91	39%	0.15	5,204	3,322	6,508	6,584	4,831	2,857	1,713	1,158	2,849	35,026

Table 90. Drivers in Crashes by County and Age Group, 1999 (cont.)

	1995-1999 Wtd. Avg.	1995-1999	1999 Drivers Age										
	Drivers Age 16-20 in	Wtd. Avg. Yearly	16-20 in Crashes						er Age				
County	Crashes per Capita	Percent Change	per Capita	<21	21-24	25-34	35-44	45-54	55-64	65-74	75+	Unknown	Total
LAPORTE	16.78	29%	0.17	1,235	585	1,258	1,214	963	499	310	256	529	6,849
LAWRENCE	16.21	-56%	0.15	460	169	393	328	268	158	141	99	97	2,113
MADISON	15.33	-11%	0.15	1,447	693	1,495	1,296	992	607	464	389	485	7,868
MARION	15.52	34%	0.16	8,299	6,330	14,064	12,302	7,853	4,289	2,468	1,536	7,829	64,970
MARSHALL	17.08	9%	0.17	522	268	493	449	322	175	115	84	99	2,527
MARTIN	14.78	-38%	0.14	100	41	84	88	51	41	33	16	19	473
MIAMI	16.74	8%	0.16	360	172	319	313	242	152	92	65	80	1,795
MONROE	9.06	20%	0.09	1,695	1,253	1,364	1,137	884	446	275	196	339	7,589
MONTGOMERY	14.78	-33%	0.14	397	179	363	377	261	155	90	53	93	1,968
MORGAN	12.80	17%	0.12	592	221	518	494	368	204	111	92	165	2,765
NEWTON	12.28	26%	0.13	131	54	103	131	83	42	22	12	28	606
NOBLE	17.08	-11%	0.16	508	228	461	440	313	172	95	72	105	2,394
ОНЮ	17.84	159%	0.20	69	26	60	53	40	36	14	9	12	319
ORANGE	14.03	15%	0.15	209	84	183	159	100	75	48	25	34	917
OWEN	14.70	14%	0.13	185	71	152	164	111	75	35	29	53	875
PARKE	12.80	13%	0.14	158	72	144	154	103	64	38	30	57	820
PERRY	17.25	-12%	0.16	222	74	145	146	105	79	47	52	43	913
PIKE	14.99	68%	0.16	139	47	94	98	87	40	31	16	21	573
PORTER	14.23	13%	0.14	1,580	781	1,482	1,419	1,112	585	295	225	446	7,925
POSEY	10.60	-8%	0.11	177	54	132	147	118	73	36	20	92	849
PULASKI	19.70	49%	0.20	180	58	112	129	86	51	32	26	35	709
PUTNAM	10.59	-37%	0.09	317	137	297	305	204	140	85	49	66	1,600
RANDOLPH	11.07	-18%	0.10	200	69	160	162	104	78	66	41	30	910
RIPLEY	14.70	-4%	0.14	275	137	239	253	145	103	57	53	79	1,341
RUSH	13.41	2%	0.13	172	77	144	115	96	49	28	33	48	762
SAINT JOSEPH	13.20	13%	0.13	2,923	1,587	3,326	2,975	2,181	1,180	796	617	1,520	17,105
SCOTT	16.28	-33%	0.17	287	114	262	201	161	95	71	52	102	1,345
SHELBY	17.11	3%	0.17	520	225	434	385	260	134	104	78	108	2,248
SPENCER	14.98	-19%	0.17	208	92	187	194	142	69	34	33	31	990
STARKE	12.46	-32%	0.12	208	109	209	197	120	76	41	24	43	1,027
STEUBEN	19.79	15%	0.12	454	231	421	470	292	184	112	60	87	2,311
SULLIVAN	9.94	-3%	0.09	133	45	120	96	91	56	35	42	93	711
SWITZERLAND	14.42	-97%	0.09	63	39	74	70	44	32	26	12	49	409
TIPPECANOE	11.42	15%	0.11	2,365	1,855	2,330	1,972	1,374	719	445	320	649	12,029
TIPTON	12.03	-15%	0.10	120	52	2,530	103	74	43	21	26	60	587
UNION	13.41	-24%	0.10	59	26	56	49	31	18	14	15	23	291
VANDERBURGH				2,360	26 1.192				938	14 626	572	23 920	
	19.41	8%	0.19	,		2,251	2,285	1,610					12,754
VERMILLION	12.58	-48%	0.13	148	56	100	127	101	60	44	16	53	705
VIGO	15.70	-5%	0.15	1,573	921	1,436	1,265	914	524	348	309	680	7,970
WABASH	14.31	-6%	0.15	423	209	330	333	246	150	88	73	81	1,933
WARREN	12.70	-20%	0.11	60	32	60	79	37	42	21	12	14	357
WARRICK	15.10	-12%	0.14	510	192	429	454	297	165	91	83	53	2,274
WASHINGTON	15.05	-22%	0.15	314	137	268	214	166	75	59	44	19	1,296
WAYNE	15.75	13%	0.16	837	394	902	822	592	394	245	192	234	4,612
WELLS	19.69	40%	0.20	340	108	195	212	131	91	62	53	56	1,248
WHITE	19.56	-34%	0.19	313	193	355	309	216	141	83	64	90	1,764
WHITLEY	17.43	-1%	0.17	358	148	248	272	180	124	71	49	91	1,541
NDIANA				66,719	36,329	72,057	66,913	46,953	27,063	16,542	12,095	27,555	372,226

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

 Table 91.
 Affidavits of Probable Cause and DWI Convictions by County, 1999

		% APC		% Conv.			1995-1999							
		with Prior	DWI	with Prior			Days Arrest	% of				1995-1999	% of	
	APC	Officer APC	Conv.	Court APC	T1	T2	to Disp.	State Avg.	T3	T4	T5	State Avg.	State Avg.	T6
ADAMS	114	40.4%	72	69.4%	21	14	14.24	74.7%	126	20	136	112.29	64.1%	86
ALLEN	1,644	0.1%	1,105	91.3%	52	14	11.48	60.2%	129	39	99	148.14	84.6%	22
BARTHOLOMEW	385	75.3%	155	83.2%	40	63	46.38	243.3%	186	17	411	386.67	220.8%	17
BENTON	49	26.5%	27 68	74.1% 69.1%	41	9 29	18.05	94.7%	109 159	25 15	55	84.71 179.48	48.4%	26 18
BLACKFORD BOONE	110 290	30.9% 39.0%	151	84.8%	56 34	6	35.19 12.95	184.6% 67.9%	171	17	123 129	179.46	102.5% 114.1%	16
BROWN	90	7.8%	42	73.8%	32	27	30.67	160.9%	200	26	217	278.24	158.9%	23
CARROLL	92	39.1%	72	76.4%	57	28	14.95	78.4%	116	33	149	106.19	60.6%	32
CASS	316	44.6%	166	89.8%	27	9	7.33	38.5%	131	24	79	114.95	65.6%	27
CLARK	435	40.5%	258	59.3%	44	45	38.33	201.1%	185	34	178	215.48	123.0%	38
CLAY	212	35.8%	144	67.4%	31	17	14.81	77.7%	125	14	48	159.62	91.1%	12
CLINTON	174	1.1%	129	70.5%	38	9	7.67	40.2%	109	18	70	145.76	83.2%	30
CRAWFORD	79	0.0%	45	75.6%	59	18	20.62	108.2%	133	15	109	114.14	65.2%	16
DAVIESS	125	52.8%	84	71.4%	38	32	28.00	146.9%	146	24	150	319.43	182.4%	19
DEARBORN	459	19.0%	293	75.8%	36	5	5.19	27.2%	134	23	95	154.81	88.4%	25
DECATUR	171	64.3%	87	78.2%	37	51	43.76	229.6%	170	20	178	187.86	107.3%	18
DEKALB	287	44.9%	174	56.3%	37	28	22.43	117.7%	173	18	149	214.52	122.5%	27
DELAWARE	654	58.3%	266	76.7%	53	67 4	67.57	354.5% 36.5%	171 102	17 18	250	394.57	225.3%	24 24
DUBOIS ELKHART	201 1,254	24.9% 31.5%	159 832	86.8% 83.3%	38 37	9	6.95 8.95	47.0%	130	22	111 108	135.71 160.90	77.5% 91.9%	24 27
FAYETTE	239	51.5%	130	70.8%	29	32	21.38	112.2%	171	17	122	245.33	140.1%	19
FLOYD	252	10.3%	137	60.6%	41	34	32.14	168.6%	164	16	280	218.57	124.8%	21
FOUNTAIN	125	43.2%	67	80.6%	34	17	12.90	67.7%	135	26	94	90.33	51.6%	69
FRANKLIN	158	50.6%	89	87.6%	34	18	20.90	109.7%	116	20	135	158.81	90.7%	29
FULTON	124	48.4%	60	91.7%	35	34	32.62	171.1%	164	16	139	195.19	111.5%	22
GIBSON	246	30.5%	208	76.4%	37	9	8.62	45.2%	88	23	66	68.33	39.0%	24
GRANT	550	27.6%	213	87.8%	32	10	4.76	25.0%	168	18	188	167.95	95.9%	19
GREENE	106	18.9%	70	81.4%	43	21	16.81	88.2%	127	26	105	177.71	101.5%	27
HAMILTON	822	53.3%	491	87.0%	34	26	22.05	115.7%	147	19	195	237.57	135.7%	14
HANCOCK	465	18.7%	266	80.5%	36	3	5.29	27.7%	146	17	95	171.19	97.7%	34
HARRISON HENDRICKS	169 592	28.4% 12.3%	78 392	67.9% 95.9%	32 31	35 5	31.52 5.62	165.4% 29.5%	180 109	19 15	147 82	185.19 207.95	105.7% 118.7%	23 20
HENRY	393	17.6%	185	95.9% 87.0%	36	6	7.43	39.0%	152	16	106	153.05	87.4%	20
HOWARD	537	12.1%	235	82.6%	37	8	9.48	49.7%	186	25	127	117.48	67.1%	25
HUNTINGTON	192	29.7%	161	75.2%	26	10	13.57	71.2%	64	23	39	65.29	37.3%	23
JACKSON	256	0.8%	235	51.1%	31	13	9.43	49.5%	99	19	40	101.52	58.0%	31
JASPER	223	21.1%	170	84.1%	33	6	4.76	25.0%	112	15	72	149.19	85.2%	35
JAY	104	44.2%	75	88.0%	51	24	21.67	113.7%	120	15	107	144.71	82.6%	13
JEFFERSON	192	28.6%	97	76.3%	36	5	5.95	31.2%	153	22	90	139.48	79.6%	30
JENNINGS	193	41.5%	106	86.8%	39	23	28.38	148.9%	135	14	91	180.14	102.9%	20
JOHNSON	663	38.2%	354	74.0%	39	36	20.57	107.9%	151	27	154	341.62	195.1%	39
KNOX	315	47.3%	95	83.2%	36	43	29.24	153.4%	186	22	147	194.76	111.2%	64
KOSCIUSKO LAGRANGE	440 172	29.5% 43.6%	275 89	82.2% 78.7%	38 34	7 11	7.29 7.81	38.2% 41.0%	156 155	24 23	116 77	169.57 252.71	96.8% 144.3%	21 24
LAGRANGE	3,132	3.8%	1,876	78.7% 72.3%	35	28	29.33	153.9%	160	30	205	317.00	181.0%	44
LAPORTE	709	14.7%	489	84.0%	50	16	8.86	46.5%	120	18	91	179.62	102.6%	16
LAWRENCE	354	52.5%	230	74.3%	31	19	20.24	106.2%	123	29	65	142.24	81.2%	24
MADISON	1,401	21.6%	590	83.1%	39	10	10.43	54.7%	165	16	146	228.43	130.4%	37
MARION	4,013	28.0%	2,882	73.4%	42	24	17.10	89.7%	142	24	118	137.05	78.3%	24
MARSHALL	399	36.8%	259	83.4%	33	12	12.71	66.7%	137	18	111	217.00	123.9%	18

#### Affidavits of Probable Cause and DWI Convictions by County

Table 91. Affidavits of Probable Cause and DWI Convictions by County, 1999 (cont.)

		% APC		% Conv.			1995-1999							
		with Prior	DWI	with Prior			Days Arrest	% of				1995-1999	% of	
	APC	Officer APC	Conv.	Court APC	T1	T2	to Disp.	State Avg.	T3	T4	T5	State Avg.	State Avg.	T6
MARTIN	81	18.5%	56	85.7%	47	7	10.81	56.7%	123	19	85	144.57	82.5%	15
MIAMI	254	48.8%	162	89.5%	33	14	23.81	124.9%	111	18	95	165.19	94.3%	23
MONROE	659	27.9%	468	72.0%	34	10	10.24	53.7%	120	17	99	154.95	88.5%	39
MONTGOMERY	215	34.0%	159	73.6%	38	33	38.19	200.3%	98	18	117	152.81	87.3%	13
MORGAN	407	39.6%	234	73.9%	39	9	9.00	47.2%	165	28	146	183.67	104.9%	24
NEWTON	123 389	35.0% 22.1%	79 225	88.6% 81.3%	34 31	4 8	5.90 4.48	31.0% 23.5%	105 145	23 15	81 102	120.76 131.71	69.0% 75.2%	17 20
NOBLE OHIO	189	56.1%	129	79.1%	34	3	4.46 5.86	30.7%	130	34	71	144.19	82.3%	35
ORANGE	126	27.0%	90	81.1%	34	4	9.81	51.5%	97	19	41	85.33	48.7%	13
OWEN	114	25.4%	72	86.1%	33	5	7.48	39.2%	144	52	77	150.95	86.2%	22
PARKE	107	21.5%	92	56.5%	76	23	20.86	109.4%	132	21	117	158.14	90.3%	21
PERRY	30	70.0%	64	10.9%	113	268	169.90	891.2%	17	13	198	198.14	113.1%	196
PIKE	82	32.9%	60	75.0%	33	15	8.33	43.7%	101	15	68	91.29	52.1%	19
PORTER	805	61.6%	438	77.2%	46	49	34.81	182.6%	143	21	121	189.33	108.1%	26
POSEY	141	34.0%	126	57.1%	85	62	28.86	151.4%	111	34	83	97.14	55.5%	25
PULASKI	78	42.3%	29	79.3%	98	77	30.00	157.4%	173	15	179	197.29	112.6%	22
PUTNAM	234	5.1%	140	78.6%	45	8	8.81	46.2%	124	21	65	83.95	47.9%	23
RANDOLPH	210	29.5%	133	74.4%	45	13	24.33	127.6%	154	15	98	338.38	193.2%	15
RIPLEY	217	34.1%	106	69.8%	36	12	12.71	66.7%	176	20	139	141.67	80.9%	14
RUSH	95	49.5%	43	76.7%	31	13	12.48	65.4%	184	27	144	384.05	219.3%	16
ST. JOSEPH	1,051	30.8%	752	59.3%	43	31	23.43	122.9%	123	22	83	126.71	72.4%	32
SCOTT	205	15.6%	104	85.6%	28	4	5.67	29.7%	147	14	94	153.48	87.6%	18
SHELBY	272	1.8%	161	85.7%	42	11	10.38	54.5%	133	18	152	197.52	112.8%	16
SPENCER STARKE	164 202	55.5% 39.6%	108 114	82.4% 69.3%	38 37	19 18	9.05 16.24	47.5% 85.2%	102 137	30 27	62 73	106.52 126.05	60.8% 72.0%	76 28
STEUBEN	328	55.8%	203	61.6%	42	56	35.52	186.3%	154	28	168	329.95	188.4%	46
SULLIVAN	200	46.5%	127	85.8%	38	14	7.52	39.5%	140	21	102	106.81	61.0%	25
SWITZERLAND	57	33.3%	30	56.7%	28	4	6.38	33.5%	161	38	101	154.24	88.1%	23
TIPPECANOE	788	51.3%	540	86.1%	54	37	39.24	205.8%	114	23	121	331.14	189.1%	26
TIPTON	80	27.5%	34	97.1%	33	8	21.57	113.2%	147	12	92	175.19	100.0%	31
UNION	73	46.6%	50	66.0%	48	19	18.95	99.4%	136	24	97	276.05	157.6%	24
VANDERBURGH	850	19.2%	512	70.9%	45	6	6.81	35.7%	120	31	63	92.71	52.9%	29
VERMILLION	111	16.2%	82	86.6%	42	12	14.05	73.7%	105	22	90	129.14	73.7%	28
VIGO	570	17.7%	370	80.0%	30	3	5.24	27.5%	131	17	102	136.10	77.7%	34
WABASH	207	28.5%	121	74.4%	30	9	9.14	48.0%	147	13	90	192.48	109.9%	16
WARREN	44	2.3%	28	78.6%	37	9	6.86	36.0%	118	14	76	94.14	53.8%	16
WARRICK	181	65.2%	111	75.7%	33	34	40.05	210.1%	142	37	179	224.62	128.3%	19
WASHINGTON WAYNE	193 499	20.2% 57.7%	118 315	88.1% 61.6%	37 57	10 53	9.14 19.81	48.0% 103.9%	134 136	15 40	173 120	229.48 145.52	131.0% 83.1%	23 39
WELLS	499 75	37.7%	515 59	71.2%	28	15	18.86	98.9%	108	17	120	156.05	89.1%	22
WELLS	168	5.4%	127	80.3%	52	19	12.38	64.9%	99	23	61	71.33	40.7%	23
WHITLEY	258	20.5%	187	89.3%	31	8	6.52	34.2%	95	14	64	75.29	43.0%	21
INDIANA	35,811	28.7%	23,310	72.9%	40	21	19.06	2270	142	23	124	175.14	.2.270	31
	-,-		,											
OTHER <sup>1</sup>	2	N/A	1,219	N/A	N/A	N/A			N/A	N/A	N/A			N/A

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

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

<sup>&</sup>lt;sup>1</sup> 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.

Table 92. Affidavits of Probable Cause and DWI Convictions by County with Rates per 1,000 Licensed Drivers, 1995–1999

			1995					1996					1997		
County	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	20,327	100	116	4.92	5.71	20,444	94	94	4.60	4.60	20,560	108	104	5.25	5.06
ALLEN	209,016	1,418	1,518	6.78	7.26	210,134	1,453	1,547	6.91	7.36	211,252	1,274	1,398	6.03	6.62
BARTHOLOMEW	48,876	315	296	6.44	6.06	49,092	346	327	7.05	6.66	49,308	406	299	8.23	6.06
BENTON	7,180	45	27	6.27	3.76	7,086	29	43	4.09	6.07	6,993	33	28	4.72	4.00
BLACKFORD	10,139	122	169	12.03	16.67	10,124	145	147	14.32	14.52	10,110	103	136	10.19	13.45
BOONE	30,536	222	199	7.27	6.52	30,797	266	239	8.64	7.76	31,058	240	218	7.73	7.02
BROWN	10,667	35	38	3.28	3.56	10,912	61	40	5.59	3.67	11,157	86	61	7.71	5.47
CARROLL	14,310	94	104	6.57	7.27	14,413	102	90	7.08	6.24	14,516	98	109	6.75	7.51
CASS	26,998	192	212	7.11	7.85	26,888	211	188	7.85	6.99	26,778	256	226	9.56	8.44
CLARK	63,481	675	676	10.63	10.65	64,417	606	598	9.41	9.28	65,354	761	660	11.64	10.10
CLAY	18,636	198	170	10.62	9.12	18,694	201	180	10.75	9.63	18,751	169	196	9.01	10.45
CLAY	22,163	235	232	10.62	9.12 10.47	22,181	216	206	9.74	9.03	22,198	233	224	10.50	10.45
CRAWFORD	7,570	235 46	32	6.08	4.23	7,546	46	206	6.10	9.29 3.71	7,522	233 48	42	6.38	5.58
DAVIESS					4.23 4.99	7,5 <del>4</del> 6 17,761				3.7 i 8.11	7,522 17,884				6.21
DEARBORN	17,639 30,459	91 278	88 313	5.16 9.13	10.28	31,145	127 289	144 507	7.15 9.28	16.28	31,830	100 378	111 470	5.59 11.88	14.77
DECATUR	17,353	168	158	9.13	9.11	17,386	170	174	9.28	10.28	17,420	160	155	9.18	8.90
DEKALB	26,754		438	9.08	16.37	26,980	313	516	11.60	19.13	27,206	315	596	11.58	21.91
DELAWARE	•	246	438 860	9.19 8.45		75,054	605			8.83	27,206 74,695	521	739	6.98	9.89
DUBOIS	75,414 27,076	637 200	209	8.45 7.39	11.40 7.72	75,054 27,385	211	663 212	8.06	6.63 7.74	74,693 27,693	214	739 201	7.73	9.89 7.26
ELKHART	108.915	823	209 877	7.59 7.56	7.72 8.05		211 879	806	7.71 8.01	7.74		1.087	968	7.73 9.84	7.26 8.76
FAYETTE	18,118	127	217	7.01	11.98	109,684 18,030	175	167	9.71	9.26	110,454 17,941	213	184	11.87	10.26
FLOYD	48,430	299	251	6.17	5.18	48,353	355	231	7.34	9.20 4.78	48,277	213	203	4.85	4.20
FOUNTAIN	13,596	116	92	8.53	6.77	13,421	118	128	8.79	9.54	13,246	137	129	10.34	9.74
FRANKLIN	13,272	165	151	12.43	11.38	13,421	152	152	11.13	11.13	14,038	137	108	9.33	7.69
FULTON	13,272	147	153	10.52	10.95	14,122	156	119	11.05	8.43	14,268	135	107	9.46	7.50
GIBSON	22,892	179	180	7.82	7.86	22,865	209	198	9.14	8.66	22,837	203	206	8.89	9.02
GRANT	49,860	639	614	12.82	12.31	49,423	534	602	10.80	12.18	48,985	535	432	10.92	9.02 8.82
GREENE	22,465	160	148	7.12	6.59	22,594	132	151	5.84	6.68	22,723	92	133	4.05	5.85
HAMILTON	101,039	697	556	6.90	5.50	106,413	669	689	6.29	6.47	111,788	719	772	6.43	6.91
HANCOCK	37,348	403	368	10.79	9.85	38,190	384	374	10.05	9.79	39,033	349	384	8.94	9.84
HARRISON	23,793	186	155	7.82	6.51	24,297	175	131	7.20	5.39	24,800	248	143	10.00	5.77
HENDRICKS	60,824	519	602	8.53	9.90	63,258	488	443	7.20	7.00	65,692	583	537	8.87	8.17
HENRY	35,888	347	317	9.67	8.83	35,746	328	344	9.18	9.62	35,605	343	332	9.63	9.32
HOWARD	59,546	402	416	6.75	6.99	59,462	436	395	7.33	6.64	59,379	507	482	8.54	8.12
HUNTINGTON	26,073	208	191	7.98	7.33	26,112	192	196	7.35	7.51	26,152	202	199	7.72	7.61
JACKSON	28,547	235	300	8.23	10.51	28,724	312	289	10.86	10.06	28,901	214	252	7.72	8.72
JASPER	20,245	231	375	11.41	18.52	20,559	199	261	9.68	12.70	20,872	160	229	7.67	10.97
JAY	15,845	137	128	8.65	8.08	15,699	124	155	7.90	9.87	15,552	93	78	5.98	5.02
JEFFERSON	20,667	241	225	11.66	10.89	20,801	221	235	10.62	11.30	20,936	239	231	11.42	11.03
JENNINGS	16,943	206	169	12.16	9.97	17,336	205	169	11.83	9.75	17,728	165	210	9.31	11.85
JOHNSON	71,715	444	578	6.19	8.06	73,514	477	497	6.49	6.76	75,312	409	546	5.43	7.25
KNOX	26,827	295	157	11.00	5.85	26,722	220	140	8.23	5.24	26,618	218	93	8.19	3.49
KOSCIUSKO	47,788	532	461	11.13	9.65	48,398	455	448	9.40	9.26	49,009	371	450	7.57	9.18
LAGRANGE	16,044	226	234	14.09	14.59	16,291	217	220	13.32	13.50	16,539	152	195	9.19	11.79
LAKE	297,534	3,342	2,687	11.23	9.03	295,368	3,205	3,352	10.85	11.35	293,202	3,108	3,752	10.60	12.80
LARE	451,334	3,342	2,007	11.23	5.03	273,300	3,203	3,332	10.03	11.33	273,202	3,100	3,732	10.00	12.00

Table 92. Affidavits of Probable Cause and DWI Convictions by County with Rates per 1,000 Licensed Drivers, 1995–1999 (cont.)

				1998			_			1999		
					APC	DWI Conv					APC	DWI Conv
C		I DVD	400	DWI	per 1,000	per 1,000		LDVD	400	DWI	per 1,000	per 1,000
County		LDVR	APC	Conv	LDVR	LDVR		LDVR	APC	Conv	LDVR	LDVR
ADAMS		20,769	117	125	5.63	6.02		20,331	114	72	5.61	3.54
ALLEN		214,474	1,570	1,408	7.32	6.56		209,201	1,644	1,105	7.86	5.28
BARTHO		49,849	393	378	7.88	7.58		48,938	385	155	7.87	3.17
BENTON		7,001	35	28	5.00	4.00 11.45		6,775	49 110	27 68	7.23 11.28	3.99 6.97
BLACKFO BOONE	JKD	10,043 31,581	140 282	115 262	13.94 8.93	8.30		9,755 31,462	290	151	9.22	4.80
BROWN		11,484	99	75	8.62	6.53		11,262	90	42	7.99	3.73
CARROL		14,582	103	109	7.06	7.47		14,227	90	72	6.47	5.06
CARROL	L	26,991	271	198	10.04	7.47		26,093	316	166	12.11	6.36
CLARK		67,015	633	642	9.45	9.58		66,205	435	258	6.57	3.90
CLAY		18,824	199	189	10.57	10.04		18,314	212	144	11.58	7.86
CLINTON		22,441	241	221	10.74	9.85		21,740	174	129	8.00	5.93
CRAWFO		7,607	38 138	29 105	5.00	3.81 5.79		7,490	79	45 84	10.55	6.01
DAVIESS		18,143 32,731	385	392	7.61 11.76	5.79 11.98		17,774 32,273	125 459	84 293	7.03 14.22	4.73 9.08
DEARBO DECATU		•	170	147	9.62	8.32		17,296	459 171	293 87	9.89	5.03
DEKALB	ĸ	17,664 27,581	267	303	9.62	10.99		27,157	287	87 174	9.89 10.57	5.03 6.41
DELAWA	DE	75,101	599	519	7.98	6.91		72,735	654	266	8.99	3.66
DUBOIS	INL	28,179	228	221	8.09	7.84		27,709	201	159	7.25	5.74
ELKHAR'	г	111,695	1,080	1,070	9.67	9.58		108,355	1,254	832	11.57	7.68
FAYETTI		17,821	176	191	9.88	10.72		17,158	239	130	13.93	7.58
FLOYD	=	49,026	216	143	4.41	2.92		47,564	252	137	5.30	2.88
FOUNTA	IN	13,306	152	131	11.42	9.85		12,921	125	67	9.67	5.19
FRANKLI		14,756	168	164	11.39	11.11		14,872	158	89	10.62	5.98
FULTON		14,522	150	144	10.33	9.92		14,281	124	60	8.68	4.20
GIBSON		23,101	273	246	11.82	10.65		22,672	246	208	10.85	9.17
GRANT		49,116	541	547	11.01	11.14		47,533	550	213	11.57	4.48
GREENE		22,920	124	111	5.41	4.84		22,391	106	70	4.73	3.13
HAMILT	ON	119,034	692	717	5.81	6.02		121,292	822	491	6.78	4.05
HANCO	K	40,226	424	370	10.54	9.20		40,254	465	266	11.55	6.61
HARRISO	ON	25,514	155	142	6.08	5.57		25,347	169	78	6.67	3.08
HENDRIC	CKS	68,599	510	606	7.43	8.83		69,901	592	392	8.47	5.61
HENRY		35,591	410	356	11.52	10.00		34,551	393	185	11.37	5.35
HOWAR		59,340	633	540	10.67	9.10		57,738	537	235	9.30	4.07
HUNTIN		26,051	163	176	6.26	6.76		25,523	192	161	7.52	6.31
JACKSO	N	29,293	238	256	8.12	8.74		28,778	256	235	8.90	8.17
JASPER		21,371	199	205	9.31	9.59		20,967	223	170	10.64	8.11
JAY	•••	15,488	123	108	7.94	6.97		15,092	104	75	6.89	4.97
JEFFERS		21,123	173	165	8.19	7.81		20,653	192	97	9.30	4.70
JENNING		18,226	216 429	179	11.85	9.82 5.84		17,982	193	106	10.73	5.89
JOHNSO KNOX	114	78,121 26,535	429 222	456 96	5.49 8.37	5.84 3.62		77,935 25,690	663 315	354 95	8.51 12.26	4.54 3.70
KOSCIUS	· VO	49,805	416	96 423	8.35	3.62 8.49		48,780	440	95 275	9.02	5.64
LAGRAN		49,805 16,944	139	137	8.20	8.09		16,535	172	2/5 89	10.40	5.38
LAGRAN	GL	293,999	2,646	2,956	9.00	10.05		282,893	3,132	1,876	11.07	6.63
LAKE		273,779	2,040	2,950	5.00	10.05		202,093	3,132	1,070	11.07	0.03

Note: The totals for APCs and DWIs include Indiana licensed drivers who were charged and/or convicted in a state other than Indiana. For 1999, there were 2 out-of-state APCs and 1,219 out-of-state DWI charges against Indiana licensed drivers.

Table 92. Affidavits of Probable Cause and DWI Convictions by County with Rates per 1,000 Licensed Drivers, 1995–1999 (cont.)

			1995					1996					1997		
County	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	71,980	768	687	10.67	9.54	71,884	713	688	9.92	9.57	71,789	633	590	8.82	8.22
LAWRENCE	31,737	271	254	8.54	8.00	31,905	255	255	7.99	7.99	32,073	217	199	6.77	6.20
MADISON	90,789	1,030	727	11.35	8.01	90,253	1,016	958	11.26	10.61	89,718	1,120	1,061	12.48	11.83
MARION	521,006	4,217	4,729	8.09	9.08	520,097	4,270	4,538	8.21	8.73	519,189	3,871	3,888	7.46	7.49
MARSHALL	29,356	276	285	9.40	9.71	29,607	331	414	11.18	13.98	29,859	357	554	11.96	18.55
MARTIN	7,756	66	123	8.51	15.86	7,692	64	107	8.32	13.91	7,629	61	101	8.00	13.24
MIAMI	24,933	251	254	10.07	10.19	24,659	203	227	8.23	9.21	24,385	201	232	8.24	9.51
MONROE	67,302	535	1,097	7.95	16.30	67,940	584	965	8.60	14.20	68,577	443	847	6.46	12.35
MONTGOMERY	25,618	162	257	6.32	10.03	25,661	230	324	8.96	12.63	25,703	193	354	7.51	13.77
MORGAN	42,636	411	697	9.64	16.35	43,475	359	674	8.26	15.50	44,313	326	739	7.36	16.68
NEWTON	9,725	133	125	13.68	12.85	9,938	169	142	17.01	14.29	10,151	151	174	14.88	17.14
NOBLE	28,474	315	346	11.06	12.05	28,847	331	300	11.47	10.40	29,219	360	300	12.32	10.27
OHIO	3,957	37	48	9.35	12.13	4,011	42	29	10.47	7.23	4,066	95	68	23.36	16.72
ORANGE	13,064	104	83	7.96	6.35	13,163	125	99	9.50	7.52	13,261	137	117	10.33	8.82
OWEN	13,388	95	84	7.96	6.27	13,718	109	99	7.95	6.93	14,048	77	91	5.48	6.48
PARKE	10,922	95 85	54	7.10	4.94		61	60	7.95 5.57	5.48		59	44	5.37	4.01
PERRY						10,950					10,977				
PIKE	13,034	48	68	3.68	5.22	13,188	18	55	1.36	4.17	13,343	17	56	1.27 10.25	4.20
	8,973	126	153	14.04	17.05	9,023	104	132	11.53	14.63	9,072	93	140		15.43
PORTER	96,762	819	801	8.46	8.28	98,249	963	933	9.80	9.50	99,737	666	665	6.68	6.67
POSEY	18,588	139	158	7.48	8.50	18,707	175	181	9.35	9.68	18,826	170	182	9.03	9.67
PULASKI	9,502	64	58	6.74	6.10	9,559	92	75	9.62	7.85	9,616	67	66	6.97	6.86
PUTNAM	21,617	220	160	10.18	7.40	22,021	287	256	13.03	11.63	22,424	273	249	12.17	11.10
RANDOLPH	20,086	225	225	11.20	11.20	19,987	200	204	10.01	10.21	19,888	202	214	10.16	10.76
RIPLEY	19,978	194	150	9.71	7.51	19,962	189	156	9.47	7.81	19,946	175	148	8.77	7.42
RUSH	12,702	98	270	7.72	21.26	12,727	113	189	8.88	14.85	12,751	93	234	7.29	18.35
ST. JOSEPH	163,655	1,373	1,494	8.39	9.13	164,202	1,339	1,467	8.15	8.93	164,750	859	1,178	5.21	7.15
SCOTT	15,513	133	167	8.57	10.76	15,570	158	152	10.15	9.76	15,626	173	148	11.07	9.47
SHELBY	28,963	286	304	9.87	10.50	29,171	331	243	11.35	8.33	29,378	343	333	11.68	11.34
SPENCER	14,437	96	99	6.65	6.86	14,410	125	119	8.67	8.26	14,383	110	89	7.65	6.19
STARKE	15,401	188	154	12.21	10.00	15,570	227	181	14.58	11.62	15,740	211	194	13.41	12.33
STEUBEN	22,068	266	308	12.05	13.96	22,378	183	285	8.18	12.74	22,689	184	313	8.11	13.80
SULLIVAN	14,308	118	85	8.25	5.94	14,296	140	148	9.79	10.35	14,285	129	128	9.03	8.96
SWITZERLAND	5,369	54	64	10.06	11.92	5,515	38	57	6.89	10.33	5,662	55	91	9.71	16.07
TIPPECANOE	83,714	564	537	6.74	6.41	84,658	739	639	8.73	7.55	85,602	787	1,030	9.19	12.03
TIPTON	11,847	52	40	4.39	3.38	11,989	61	28	5.09	2.34	12,130	64	20	5.28	1.65
UNION	5,354	55	74	10.27	13.82	5,360	69	66	12.87	12.31	5,367	53	64	9.88	11.92
VANDERBURGH	113,230	1,381	1,185	12.20	10.47	112,851	1,187	1,144	10.52	10.14	112,473	830	725	7.38	6.45
VERMILLION	12,277	73	61	5.95	4.97	12,292	83	78	6.75	6.35	12,306	75	81	6.09	6.58
VIGO	68,048	654	623	9.61	9.16	67,497	704	591	10.43	8.76	66,945	672	731	10.04	10.92
WABASH	24,792	196	149	7.91	6.01	24,697	238	212	9.64	8.58	24,603	219	192	8.90	7.80
WARREN	5,336	55	54	10.31	10.12	5,545	75	58	13.52	10.46	5,755	61	68	10.60	11.82
WARRICK	36,040	319	237	8.85	6.58	36,625	299	289	8.16	7.89	37,210	233	228	6.26	6.13
WASHINGTON	16,833	163	163	9.68	9.68	17,250	172	203	9.97	11.77	17,668	189	169	10.70	9.57
WAYNE	48,996	382	381	7.80	7.78	48,788	423	430	8.67	8.81	48,580	382	406	7.86	8.36
WELLS	18,862	103	108	5.46	5.73	19,083	110	113	5.76	5.92	19,304	70	87	3.63	4.51
WHITE	18,138	275	260	15.16	14.33	18,282	182	198	9.96	10.83	18,426	229	241	12.43	13.08
WHITLEY	21,513	184	202	8.55	9.39	21,660	219	196	10.11	9.05	21,806	210	215	9.63	9.86
NDIANA	3,881,424	34,282	35,099	8.83	9.04	3,902,519	34,613	35,788	8.87	9.17	3,923,420	32,546	36,890	8.30	9.40

Legend: APC=Affidavit of Probable Cause; LDVR=Number of Licensed Drivers; DWI Conv=Number of Driving While Intoxicated Convictions Reported to BMV Source: Indiana Bureau of Motor Vehicles

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

Table 92. Affidavits of Probable Cause and DWI Convictions by County with Rates per 1,000 Licensed Drivers, 1995–1999 (cont.)

			1000					1000		
_			1998	APC	DWI Conv			1999	APC	DWI Conv
			DWI	per 1,000	per 1,000			DWI	per 1,000	per 1,000
County	LDVR	APC	Conv	LDVR	LDVR	LDVR	APC	Conv	LDVR	LDVR
LAPORTE	72,375	606	563	8.37	7.78	70,158	709	489	10.11	6.97
LAWRENCE	32,304	294	277	9.10	8.57	31,601	354	230	11.20	7.28
MADISON	89,939	1,298	1,043	14.43	11.60	87,074	1,401	590	16.09	6.78
MARION	523,261	3,672	3,361	7.02	6.42	500,093	4,013	2,882	8.02	5.76
MARSHALL	30,125	333	330	11.05	10.95	29,505	399	259	13.52	8.78
MARTIN	7,587	98	111	12.92	14.63	7,431	81	56	10.90	7.54
MIAMI	24,459	250	286	10.22	11.69	23,948	254	162	10.61	6.76
MONROE	69,822	444	507	6.36	7.26	67,690	659	468	9.74	6.91
MONTGOMERY	25,902	191	210	7.37	8.11	25,201	215	159	8.53	6.31
MORGAN	45,562	284	286	6.23	6.28	45,223	407	234	9.00	5.17
NEWTON	10,383	120	124	11.56	11.94	10,198	123	79	12.06	7.75
NOBLE	29,703	391	322	13.16	10.84	28,946	389	225	13.44	7.77
OHIO	4,145	134	114	32.33	27.50	4,167	189	129	45.36	30.96
ORANGE	13,398	155 98	169 87	11.57	12.61	13,149	126	90	9.58	6.84
OWEN	14,346			6.83	6.06	14,069	114	72	8.10	5.12
PARKE	11,148	52 29	45	4.66	4.04	10,974	107	92	9.75	8.38
PERRY	13,473	29 111	53 109	2.15	3.93	13,167	30	64	2.28	4.86
PIKE	9,272	746	682	11.97	11.76	9,133	82	60	8.98	6.57
PORTER	101,627	110	130	7.34	6.71	100,076	805	438	8.04	4.38
POSEY	19,011			5.79	6.84	18,573	141	126	7.59	6.78
PULASKI	9,651 22,801	69 219	59 212	7.15 9.60	6.11 9.30	9,458 22,525	78 234	29 140	8.25 10.39	3.07 6.22
PUTNAM RANDOLPH	19,910	219	201	11.05	10.10	19,188	210	133	10.39	6.22
RIPLEY	19,910	212	155	10.70	7.83	19,188	210	106	11.23	5.49
RUSH	12,845	87	99	6.77	7.63 7.71	19,520	95	43	7.60	3.44
SAINT JOSEPH	165,952	784	1,082	4.72	6.52	159,845	1,051	752	6.58	4.70
SCOTT	15,935	210	205	13.18	12.86	15,616	205	104	13.13	6.66
SHELBY	29,793	263	263	8.83	8.83	29,247	272	161	9.30	5.50
SPENCER	14,608	143	117	9.79	8.01	14,454	164	108	11.35	7.47
STARKE	16,088	146	135	9.08	8.39	15,900	202	114	12.70	7.17
STEUBEN	22,945	229	217	9.98	9.46	22,367	328	203	14.66	9.08
SULLIVAN	14,397	167	158	11.60	10.97	14,052	200	127	14.23	9.04
SWITZERLAND	5,872	64	76	10.90	12.94	5,870	57	30	9.71	5.11
TIPPECANOE	87,292	794	795	9.10	9.11	84,485	788	540	9.33	6.39
TIPTON	12,252	60	55	4.90	4.49	12,075	80	34	6.63	2.82
UNION	5,401	73	53	13.52	9.81	5,284	73	50	13.82	9.46
VANDERBURGH	113,843	718	703	6.31	6.18	111,262	850	512	7.64	4.60
VERMILLION	12,324	85	58	6.90	4.71	11,979	111	82	9.27	6.85
VIGO	66,888	580	564	8.67	8.43	64,358	570	370	8.86	5.75
WABASH	24,769	166	173	6.70	6.98	24,137	207	121	8.58	5.01
WARREN	5,976	55	48	9.20	8.03	5,995	44	28	7.34	4.67
WARRICK	38,006	219	226	5.76	5.95	37,744	181	111	4.80	2.94
WASHINGTON	18,145	210	184	11.57	10.14	18,070	193	118	10.68	6.53
WAYNE	48,684	461	421	9.47	8.65	46,951	499	315	10.63	6.71
MELL 6										
WELLS	19,652	96	95	4.88	4.83	19,396	75	59	3.87	3.04
WHITE		188	176	4.88 10.12	4.83 9.48	19,396 18,173	75 168	127	3.87 9.24	3.04 6.99
	19,652									

Note: The totals for APCs and DWIs include Indiana licensed drivers who were charged and/or convicted in a state other than Indiana. For 1999, there were 2 out-of-state APCs and 1,219 out-of-state DWI charges against Indiana licensed drivers.

Table 93. Total and Alcohol-Related Crashes by County, 1995–1999

	1995			1996			1997				1998		1999			
County	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	
ADAMS	22	1,187	1.9%	30	928	3.2%	29	886	3.3%	28	890	3.1%	41	890	4.6%	
ALLEN	673	14,566	4.6%	562	13,339	4.2%	606	13,598	4.5%	589	13,114	4.5%	590	13,085	4.5%	
BARTHOLOMEW	129	2,829	4.6%	99	2,461	4.0%	107	2,258	4.7%	87	2,383	3.7%	88	2,374	3.7%	
BENTON	17	227	7.5%	3	189	1.6%	8	191	4.2%	12	212	5.7%	13	212	6.1%	
BLACKFORD	28	553	5.1%	14	450	3.1%	8	382	2.1%	21	402	5.2%	22	418	5.3%	
BOONE	55	1,502	3.7%	57	1,419	4.0%	49	1,385	3.5%	49	1,452	3.4%	53	1,354	3.9%	
BROWN	18	593	3.0%	28	481	5.8%	37	544	6.8%	32	487	6.6%	2	384	0.5%	
CARROLL	30	638	4.7%	24	649	3.7%	42	590	7.1%	40	636	6.3%	34	598	5.7%	
CASS	67	2,212	3.0%	60	1,807	3.3%	66	1,798	3.7%	80	1,773	4.5%	78	1,717	4.5%	
CLARK	185	3,921	4.7%	191	3,616	5.3%	138	3,498	3.9%	128	3,434	3.7%	155	3,856	4.0%	
CLAY	46	1,103	4.2%	36	979	3.7%	26	876	3.0%	37	981	3.8%	39	872	4.5%	
CLINTON	52	1,184	4.4%	52	1,061	4.9%	59	1,129	5.2%	46	1,028	4.5%	43	1,098	3.9%	
CRAWFORD	7	302	2.3%	8	270	3.0%	5	297	1.7%	6	230	2.6%	22	357	6.2%	
DAVIESS	52	881	5.9%	64	858	7.5%	39	872	4.5%	54	844	6.4%	48	836	5.7%	
DEARBORN	87	1,800	4.8%	91	1,590	5.7%	124	1,715	7.2%	110	1,721	6.4%	88 34	1,769	5.0%	
DECATUR	46 51	1,003	4.6%	35 56	820	4.3%	38 43	811	4.7% 3.1%	53	795	6.7% 3.2%		820	4.1%	
DEKALB DELAWARE	259	1,608 5,439	3.2% 4.8%	189	1,480 4,661	3.8% 4.1%	193	1,394 4,301	4.5%	44 181	1,392 4,215	4.3%	42 174	1,380 4,173	3.0% 4.2%	
DUBOIS	239 74	5, <del>4</del> 59 1,574	4.8% 4.7%	75	1,382	4.1% 5.4%	193 79	1,452	4.5% 5.4%	71	1,384	4.3% 5.1%	72	4,173 1,500	4.2%	
ELKHART	353	8,510	4.7%	321	7,521	4.3%	310	7,832	4.0%	278	7,243	3.8%	258	7,547	3.4%	
FAYETTE	61	1,253	4.1%	60	998	6.0%	46	985	4.0%	35	912	3.8%	43	903	4.8%	
FLOYD	143	2,744	5.2%	145	2,572	5.6%	117	2,510	4.7%	127	2,466	5.2%	132	2,682	4.9%	
FOUNTAIN	41	663	6.2%	29	648	4.5%	43	563	7.6%	43	605	7.1%	24	591	4.1%	
FRANKLIN	43	756	5.7%	41	646	6.3%	41	676	6.1%	54	702	7.7%	56	684	8.2%	
FULTON	37	694	5.3%	38	681	5.6%	33	588	5.6%	38	646	5.9%	27	592	4.6%	
GIBSON	51	1,104	4.6%	48	1,072	4.5%	41	1,068	3.8%	63	1,051	6.0%	42	1,077	3.9%	
GRANT	114	3.169	3.6%	113	2,864	3.9%	107	2,621	4.1%	97	2,516	3.9%	102	2,733	3.7%	
GREENE	52	1,162	4.5%	44	965	4.6%	37	898	4.1%	34	887	3.8%	42	905	4.6%	
HAMILTON	130	4,796	2.7%	119	4,700	2.5%	110	4,523	2.4%	110	4,638	2.4%	139	4,854	2.9%	
HANCOCK	67	1,655	4.0%	60	1,536	3.9%	48	1,639	2.9%	61	1,393	4.4%	51	1,505	3.4%	
HARRISON	58	1,283	4.5%	47	1,217	3.9%	48	1,255	3.8%	61	1,247	4.9%	57	1,247	4.6%	
HENDRICKS	75	2,645	2.8%	92	2,695	3.4%	91	2,647	3.4%	100	2,698	3.7%	126	2,735	4.6%	
HENRY	105	1,893	5.5%	68	1,554	4.4%	54	1,398	3.9%	80	1,466	5.5%	59	1,406	4.2%	
HOWARD	149	3,135	4.8%	126	2,824	4.5%	129	2,737	4.7%	113	2,548	4.4%	125	2,893	4.3%	
HUNTINGTON	54	1,433	3.8%	45	1,323	3.4%	47	1,377	3.4%	30	1,161	2.6%	27	1,237	2.2%	
JACKSON	89	2,057	4.3%	62	1,755	3.5%	75	1,610	4.7%	75	1,679	4.5%	67	1,686	4.0%	
JASPER	47	1,232	3.8%	45	1,020	4.4%	44	1,073	4.1%	55	1,054	5.2%	37	1,051	3.5%	
JAY	31	878	3.5%	19	753	2.5%	30	750	4.0%	34	690	4.9%	23	656	3.5%	
JEFFERSON	64	1,119	5.7%	61	1,024	6.0%	53	1,096	4.8%	68	1,073	6.3%	24	951	2.5%	
JENNINGS	44	1,012	4.3%	48	886	5.4%	31	850	3.6%	16	808	2.0%	47	1022	4.6%	
JOHNSON	134	3,362	4.0%	139	3,186	4.4%	123	2,853	4.3%	116	2,979	3.9%	121	2,891	4.2%	
KNOX	95	1,658	5.7%	72	1,423	5.1%	55	1,437	3.8%	80	1,356	5.9%	67	1,271	5.3%	
KOSCIUSKO	127	3,121	4.1%	153	2,757	5.5%	124	2,507	4.9%	142	2,519	5.6%	108	2,512	4.3%	
LAGRANGE	47	1,117	4.2%	45	1,086	4.1%	44	1,115	3.9%	41	1,022	4.0%	47	1,141	4.1%	
LAKE	922	21,501	4.3%	935	19,612	4.8%	982	20,748	4.7%	909	19,772	4.6%	835	19,494	4.3%	

Table 93. Total and Alcohol-Related Crashes by County, 1995–1999 (cont.)

	1995			1996			1997				1998		1999			
County	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	
LAPORTE	271	4,635	5.8%	253	4,106	6.2%	281	4,549	6.2%	239	4,234	5.6%	211	4,243	5.0%	
LAWRENCE	71	1,724	4.1%	79	1,499	5.3%	88	1,497	5.9%	77	1,271	6.1%	68	1,292	5.3%	
MADISON	297	5,963	5.0%	239	5,096	4.7%	192	4,641	4.1%	231	4,683	4.9%	185	4,580	4.0%	
MARION	1,409	38,535	3.7%	1,279	33,523	3.8%	1,262	34,609	3.6%	1,238	34,556	3.6%	1,249	34,297	3.6%	
MARSHALL	83	1,860	4.5%	75	1,745	4.3%	79	1,631	4.8%	57	1,655	3.4%	86	1,682	5.1%	
MARTIN	18	367	4.9%	25	337	7.4%	14	336	4.2%	22	352	6.3%	13	323	4.0%	
MIAMI	63	1,239	5.1%	51	1,128	4.5%	52	1,117	4.7%	41	1,106	3.7%	48	1,171	4.1%	
MONROE	145	4,739	3.1%	125	4,566	2.7%	140	4,481	3.1%	155	4,322	3.6%	141	4,133	3.4%	
MONTGOMERY	52	1,525	3.4%	48	1,321	3.6%	58	1,265	4.6%	58	1,214	4.8%	52	1,266	4.1%	
MORGAN	99	1,909	5.2%	82	1,675	4.9%	81	1,665	4.9%	73	1,756	4.2%	83	1,688	4.9%	
NEWTON	22	435	5.1%	30	376	8.0%	23	415	5.5%	19	376	5.1%	22	429	5.1%	
NOBLE	92	2,074	4.4%	90	1,713	5.3%	68	1,780	3.8%	77	1,642	4.7%	65	1,596	4.1%	
OHIO	7	214	3.3%	15	217	6.9%	19	229	8.3%	18	235	7.7%	16	256	6.3%	
ORANGE	19	692	2.7%	18	622	2.9%	17	622	2.7%	16	622	2.6%	34	637	5.3%	
OWEN	32	724	4.4%	31	640	4.8%	27	643	4.2%	25	648	3.9%	28	606	4.6%	
PARKE	34	613	5.5%	32	573	5.6%	28	470	6.0%	35	566	6.2%	30	610	4.9%	
PERRY	30	744	4.0%	35	684	5.1%	20	603	3.3%	33	695	4.7%	20	590	3.4%	
PIKE	27	413	6.5%	24	408	5.9%	19	397	4.8%	20	396	5.1%	15	402	3.7%	
PORTER	234	5,306	4.4%	221	4,624	4.8%	192	4,848	4.0%	202	4,690	4.3%	229	4,784	4.8%	
POSEY	36	660	5.5%	26	578	4.5%	32	523	6.1%	40	499	8.0%	30	567	5.3%	
PULASKI	20	605	3.3%	22	603	3.6%	22	538	4.1%	21	611	3.4%	23	544	4.2%	
PUTNAM	56	1,347	4.2%	41	1,183	3.5%	47	1,230	3.8%	39	1,133	3.4%	56	1,084	5.2%	
RANDOLPH	45	880	5.1%	32	740	4.3%	30	647	4.6%	36	659	5.5%	23	640	3.6%	
RIPLEY	49	931	5.3%	44	872	5.0%	44	878	5.0%	29	843	3.4%	46	897	5.1%	
RUSH	28	652	4.3%	19	529	3.6%	28	554	5.1%	24	574	4.2%	16	517	3.1%	
SAINT JOSEPH	587	11,174	5.3%	593	10,330	5.7%	538	10,075	5.3%	507	9,801	5.2%	427	9,695	4.4%	
SCOTT	44	854	5.2%	43	829	5.2%	34	741	4.6%	25	680	3.7%	26	783	3.3%	
SHELBY	65	1,612	4.0%	79	1,381	5.7%	81	1,409	5.7%	53	1,424	3.7%	69	1,404	4.9%	
SPENCER	33	741	4.5%	52	641	8.1%	41	678	6.0%	48	640	7.5%	45	703	6.4%	
STARKE	53	794	6.7%	55	824	6.7%	41	748	5.5%	53	692	7.7%	56	739	7.6%	
STEUBEN	89	2.072	4.3%	54	1,761	3.1%	61	1,665	3.7%	67	1,576	4.3%	70	1,595	4.4%	
SULLIVAN	8	2,072 571	1.4%	10	527	1.9%	5	495	1.0%	2	478	0.4%	5	452	1.1%	
SWITZERLAND				10	367					9	478 314	2.9%	5 7	452 319		
	11	336	3.3%			3.8%	24	337	7.1%						2.2%	
TIPPECANOE	276	7,770	3.6%	279	6,492	4.3%	255	6,319	4.0%	297	6,759	4.4%	252	6,898	3.7%	
TIPTON	15	462	3.2%	12	423	2.8%	8	392	2.0%	16	386	4.1%	10	355	2.8%	
UNION	13	269	4.8%	4	248	1.6%	13	240	5.4%	13	229	5.7%	13	209	6.2%	
VANDERBURGH	341	7,840	4.3%	305	6,832	4.5%	347	6,812	5.1%	336	7,015	4.8%	305	6,735	4.5%	
VERMILLION	39	637	6.1%	32	601	5.3%	35	535	6.5%	33	438	7.5%	22	494	4.5%	
VIGO	257	5,639	4.6%	232	5,260	4.4%	206	4,777	4.3%	232	4,876	4.8%	204	4,623	4.4%	
WABASH	58	1,480	3.9%	52	1,287	4.0%	56	1,142	4.9%	52	1,151	4.5%	57	1,240	4.6%	
WARREN	8	287	2.8%	10	282	3.5%	11	230	4.8%	14	290	4.8%	14	280	5.0%	
WARRICK	53	1,491	3.6%	65	1,481	4.4%	67	1,406	4.8%	75	1,453	5.2%	88	1,381	6.4%	
WASHINGTON	60	903	6.6%	55	878	6.3%	53	905	5.9%	54	902	6.0%	54	914	5.9%	
WAYNE	128	3,111	4.1%	130	2,932	4.4%	134	2,735	4.9%	130	2,683	4.8%	109	2,758	4.0%	
WELLS	37	977	3.8%	32	826	3.9%	23	799	2.9%	21	747	2.8%	23	823	2.8%	
WHITE	47	1,199	3.9%	38	1,078	3.5%	39	1,029	3.8%	60	1,113	5.4%	70	1,158	6.0%	
WHITLEY	53	1,226	4.3%	46	1,069	4.3%	50	1,039	4.8%	58	1,021	5.7%	33	989	3.3%	
NDIANA	10,545 (9,995) <sup>1</sup> (2	247,305 221,027) <sup>1</sup>	4.3% (4.5%) <sup>1</sup>	9,777	221,465	4.4%	9,544	220,009	4.3%	9,508	216,510	4.4%	9,072	217,340	4.2%	

<sup>&</sup>lt;sup>1</sup> Corrected for misclassified private property crashes. See Glossary for explanation.

Table 94. Alcohol-Related Crashes by County with Rates per 1,000 Licensed Drivers, 1999

County	Fatal Crashes	Fatal Crash Rate per 1,000 LDVR	Personal Injury Crashes	Injury Crash Rate per 1,000 LDVR	Property Damage Crashes	Property Damage Crash Rate per 1,000 LDVR	Total Crashes	Total Crash Rate per 1,000 LDVR	County	Fatal Crashes	Fatal Crash Rate per 1,000 LDVR	Personal Injury Crashes	Injury Crash Rate per 1,000 LDVR	Property Damage Crashes	Property Damage Crash Rate per 1,000 LDVR	Total Crashes	Total Cras Rate per 1,000 LDV
ADAMS	0	0.000	20	0.98	21	1.03	41	2.02	LAWRENCE	1	0.032	36	1.14	31	0.98	68	2.15
ALLEN	11	0.053	265	1.27	314	1.50	590	2.82	MADISON	5	0.057	71	0.82	109	1.25	185	2.12
BARTHOLOMEW	2	0.041	40	0.82	46	0.94	88	1.80	MARION	21	0.042	541	1.08	687	1.37	1,249	2.50
BENTON	0	0.000	6	0.89	7	1.03	13	1.92	MARSHALL	6	0.203	30	1.02	50	1.69	86	2.91
BLACKFORD	0	0.000	9	0.92	13	1.33	22	2.26	MARTIN	1	0.135	6	0.81	6	0.81	13	1.75
BOONE	2	0.064	21	0.67	30	0.95	53	1.68	MIAMI	1	0.042	15	0.63	32	1.34	48	2.00
BROWN	0	0.000	0	0.00	2	0.18	2	0.18	MONROE	1	0.015	63	0.93	77	1.14	141	2.08
CARROLL	2	0.141	11	0.77	21	1.48	34	2.39	MONTGOMERY	1	0.040	24	0.95	27	1.07	52	2.06
CASS	2	0.077	28	1.07	48	1.84	78	2.99	MORGAN	2	0.044	30	0.66	51	1.13	83	1.84
CLARK	3	0.045	72	1.09	80	1.21	155	2.34	NEWTON	1	0.098	9	0.88	12	1.18	22	2.16
CLAY	0	0.000	17	0.93	22	1.20	39	2.13	NOBLE	0	0.000	31	1.07	34	1.17	65	2.25
CLINTON	1	0.046	20	0.92	22	1.01	43	1.98	оню	0	0.000	9	2.16	7	1.68	16	3.84
CRAWFORD	0	0.000	8	1.07	14	1.87	22	2.94	ORANGE	2	0.152	17	1.29	15	1.14	34	2.59
DAVIESS	1	0.056	23	1.29	24	1.35	48	2.70	OWEN	0	0.000	12	0.85	16	1.14	28	1.99
DEARBORN	3	0.093	34	1.05	51	1.58	88	2.73	PARKE	2	0.182	15	1.37	13	1.18	30	2.7
DECATUR	0	0.000	12	0.69	22	1.27	34	1.97	PERRY	0	0.000	8	0.61	12	0.91	20	1.5
DEKALB	2	0.074	12	0.44	28	1.03	42	1.55	PIKE	1	0.109	10	1.09	4	0.44	15	1.6
DELAWARE	2	0.027	77	1.06	95	1.31	174	2.39	PORTER	4	0.040	117	1.17	108	1.08	229	2.2
DUBOIS	2	0.072	30	1.08	40	1.44	72	2.60	POSEY	1	0.054	16	0.86	13	0.70	30	1.6
ELKHART	3	0.028	114	1.05	141	1.30	258	2.38	PULASKI	0	0.000	12	1.27	11	1.16	23	2.4
FAYETTE	3	0.175	15	0.87	25	1.46	43	2.51	PUTNAM	4	0.178	31	1.38	21	0.93	56	2.4
FLOYD	0	0.000	51	1.07	81	1.70	132	2.78	RANDOLPH	0	0.000	9	0.47	14	0.73	23	1.2
FOUNTAIN	0	0.000	11	0.85	13	1.01	24	1.86	RIPLEY	0	0.000	28	1.45	18	0.93	46	2.3
FRANKLIN	2	0.134	26	1.75	28	1.88	56	3.77	RUSH	0	0.000	9	0.72	7	0.56	16	1.2
FULTON	1	0.070	16	1.12	10	0.70	27	1.89	SAINT JOSEPH	8	0.050	163	1.02	256	1.60	427	2.6
GIBSON	3	0.132	20	0.88	19	0.84	42	1.85	SCOTT	0	0.000	15	0.96	11	0.70	26	1.6
GRANT	2	0.042	34	0.72	66	1.39	102	2.15	SHELBY	2	0.068	32	1.09	35	1.20	69	2.3
GREENE	2	0.089	14	0.63	26	1.16	42	1.88	SPENCER	1	0.069	18	1.25	26	1.80	45	3.1
HAMILTON	1	0.008	64	0.53	74	0.61	139	1.15	STARKE	4	0.252	25	1.57	27	1.70	56	3.5
HANCOCK	2	0.050	24	0.60	25	0.62	51	1.27	STEUBEN	0	0.000	40	1.79	30	1.34	70	3.1
HARRISON	0	0.000	32	1.26	25	0.99	57	2.25	SULLIVAN	0	0.000	1	0.07	4	0.28	5	0.3
HENDRICKS	4	0.057	54	0.77	68	0.97	126	1.80	SWITZERLAND	0	0.000	6	1.02	1	0.17	7	1.1
HENRY	0	0.000	25	0.77	34	0.98	59	1.71	TIPPECANOE	6	0.000	103	1.02	143	1.69	252	2.9
HOWARD	4	0.069	56	0.72	65	1.13	125	2.16	TIPPECANGE	0	0.000	5	0.41	5	0.41	10	0.8
HUNTINGTON	1	0.069	13	0.97	13	0.51	27	1.06	UNION	0	0.000	9	1.70	4	0.41	13	2.4
JACKSON	2	0.039	24	0.83	41	1.42	67	2.33	VANDERBURGH	5	0.000	120	1.70	180	1.62	305	2.4
	1	0.069		0.83		0.81			VANDERBURGH	0	0.045	120	1.08	10	0.83	303 22	1.8
JASPER	1		19 14		17 8		37 23	1.76		6	0.000	91		107			3.1
JAY	-	0.066	14 7	0.93		0.53		1.52	VIGO	4			1.41		1.66	204	
JEFFERSON	2	0.097		0.34	15	0.73	24	1.16	WABASH		0.166	23 5	0.95	30	1.24	57 14	2.3
JENNINGS	2	0.111	22	1.22	23	1.28	47	2.61	WARREN	1	0.167		0.83	8	1.33	14	2.3
JOHNSON	2	0.026	40	0.51	79 21	1.01	121	1.55	WARRICK	3	0.079	35	0.93	50	1.32	88	2.33
KNOX	2	0.078	34	1.32	31	1.21	67	2.61	WASHINGTON	2	0.111	31	1.72	21	1.16	54	2.9
KOSCIUSKO	3	0.062	42	0.86	63	1.29	108	2.21	WAYNE	2	0.043	51	1.09	56	1.19	109	2.3
LAGRANGE	4	0.242	17	1.03	26	1.57	47	2.84	WELLS	2	0.103	9	0.46	12	0.62	23	1.1
LAKE	13	0.046	356	1.26	466	1.65	835	2.95	WHITE	8	0.440	25	1.38	37	2.04	70	3.8
LAPORTE	6	0.086	101	1.44	104	1.48	211	3.01	WHITLEY	2	0.091	15	0.69	16	0.73	33	1.5

Legend: LDVR=Licensed Drivers

Source: Indiana Bureau of Motor Vehicles.

## Licensed Drivers, Registered Vehicles and Population by County

Table 95. Registered Vehicles, Licensed Drivers, Population and Vehicle Miles Traveled by County, 1999

County	Registered Vehicles	Licensed Drivers	1999 Population Estimates	1999 Yearly VMT	County	Registered Vehicles	Licensed Drivers	1999 Population Estimates	1999 Yearly VMT
ADAMS	28,996	20,331	33,168	283,140,548	LAWRENCE	44,217	31,601	45,752	499,494,353
ALLEN	286,979	209,201	316,471	3,364,927,897	MADISON	120,911	87,074	130,990	1,417,790,466
BARTHOLOMEW	67,590	48,938	69,714	912,874,457	MARION	687,995	500,093	810,946	9,572,620,247
BENTON	10,316	6,775	9,776	184,917,296	MARSHALL	43,905	29,505	46,129	620,475,417
BLACKFORD	14,126	9,755	13,927	160,312,825	MARTIN	10,755	7,431	10,379	131,439,686
BOONE	44,908	31,462	44,835	914,499,733	MIAMI	34,796	23,948	33,605	397,782,698
BROWN	16,574	11,262	15,992	150,034,465	MONROE	85,966	67,690	116,923	939,389,466
CARROLL	22,801	14,227	20,004	266,501,918	MONTGOMERY	35,176	25,201	36,583	561,895,428
CARROLL					MORGAN				
	37,664	26,093	38,964	448,187,913		65,880	45,223	67,003	799,314,825
CLARK	88,255	66,205	95,121	1,390,589,739	NEWTON	15,635	10,198	14,844	251,935,505
CLAY	26,563	18,314	26,903	460,986,419	NOBLE	42,573	28,946	43,241	540,488,376
CLINTON	31,383	21,740	32,964	506,618,602	OHIO	5,937	4,167	5,457	60,257,449
CRAWFORD	11,349	7,490	10,739	219,374,957	ORANGE	19,852	13,149	19,835	215,829,201
DAVIESS	26,331	17,774	29,084	333,889,623	OWEN	20,572	14,069	20,619	199,752,860
DEARBORN	45,285	32,273	48,011	606,801,568	PARKE	16,106	10,974	16,908	236,751,253
DECATUR	25,735	17,296	25,704	472,917,112	PERRY	18,978	13,167	19,091	253,714,829
DEKALB	42,235	27,157	39,683	557,440,541	PIKE	13,882	9,133	13,021	203,424,432
DELAWARE	97,545	72,735	115,472	1,536,684,471	PORTER	130,596	100,076	147,758	1,651,232,041
DUBOIS	40,522	27,709	40,093	514,384,430	POSEY	28,576	18,573	26,292	399,887,134
ELKHART	157,652	108,355	174,680	1,942,540,384	PULASKI	15,018	9,458	13,527	193,806,715
FAYETTE	23,813	17,158	25,860	234,331,580	PUTNAM	32,100	22,525	34,788	632,456,425
FLOYD	60,712	47,564	72,243	826,356,825	RANDOLPH	27,618	19,188	27,417	339,387,205
FOUNTAIN	17,381	12,921	18,374	268,860,215	RIPLEY	28,311	19,320	27,660	374,368,951
FRANKLIN	22,127	14,872	22,120	283,298,407	RUSH	18,594	12,507	18,208	248,725,553
FULTON	21,387	14,281	20,893	257,235,579	ST. JOSEPH	231,987	159,845	258,537	2,335,336,138
GIBSON	31,724	22,672	32,230	532,409,206	SCOTT	22,341	15,616	23,433	335,531,911
GRANT	67,444	47,533	72,082	863,246,119	SHELBY	42,366	29,247	43,630	656,328,754
GREENE	32,035	22,391	33,158	420,040,248	SPENCER	21,633	14,454	21,178	369,839,772
HAMILTON	148,992	121,292	172,094	1,820,587,884	STARKE	23,436	15,900	23,597	251,508,597
HANCOCK	58,295	40,254	55,617	929,564,710	STEUBEN	33,546	22,367	31,742	704,786,946
HARRISON	38,311	25,347	35,376	470,396,071	SULLIVAN	19,959	14,052	21,535	314,469,185
HENDRICKS	96,894	69,901	98,826	1,038,303,528	SWITZERLAND	8,564	5,870	8,961	87,179,878
HENRY	49,207	34,551	48,377	775,392,068	TIPPECANOE	106,667	84,485	142,475	1,481,874,563
HOWARD	76,353	57,738	83,736	884,266,739	TIPTON	18,520	12,075	16,641	326,037,911
HUNTINGTON	35,463	25,523	37,377	624,200,436	UNION	7,861	5,284	7,297	86,457,495
JACKSON	41,771	28,778	41,319	669,853,066	VANDERBURGH	149,652	111,262	167,922	1,577,542,082
JASPER	33,625	20,967	29,462	653,201,127	VERMILLION	17,055	11,979	16,954	289,032,773
JAY	20,638	15,092	21,686	288,760,786	VIGO	86,689	64,358	104,349	1,248,436,912
JEFFERSON	28,028	20,653	31,813	301,039,794	WABASH	35,362	24,137	34,538	432,029,991
JENNINGS	26,859	17,982	28,106	305,563,042	WARREN	9,384	5,995	8,349	180,664,714
JOHNSON	100,924	77,935	112,724	1,018,244,625	WARRICK	49,435	37,744	52,557	617,062,408
KNOX	36,691	25,690	39,051	481,782,641	WASHINGTON	26,839	18,070	28,233	321,442,407
KOSCIUSKO	71,471	48,780	71,336	772,369,156	WAYNE	62,640	46,951	71,134	1,198,370,989
LAGRANGE	26,703	16,535	33,997	574,102,518	WELLS	28,350	19,396	26,810	316,752,632
LAKE	355,651	282,893	480,619	4,560,867,286	WHITE	27,545	18,173	25,522	500,424,081
LAPORTE	99,639	70,158	109,939	1,544,094,898	WHITLEY	31,952	21,879	30,811	459,178,990
Little Chile	22,032	. 3,130	. 00,000	.,5,55 ,,550	INDIANA	5,372,915	3,876,908	5.942.901	71,458,503,096

Source: Indiana Bureau of Motor Vehicles, Indiana Department of Transportation, US Census Bureau

Note: The total number of registered vehicles includes an additional 2,236 vehicles that were not registered to a specific county in 1999.

## county data

Table 96. Crashes Involving Deer by County, Severity and Locale with Fatalities and Injuries, 1999

<u>-</u>	Rural Crashes						Urban Crashes					Totals						
County	Fatal Crashes	Personal Injury	Property Damage	Total Crashes	Total Fatalities	Total Injuries	Fatal Crashes		Property Damage	Total Crashes	Total Fatalities	Total Injuries	Fatal Crashes	Personal Injury	Property Damage	Total Crashes	Total Fatalities	Total Injuries
ADAMS	0	0	84	84	0	0	0	0	1	1	0	0	0	0	85	85	0	0
ALLEN	0	14	240	254	0	17	0	2	27	29	0	2	0	16	267	283	0	19
BARTHOLOMEW	0	5	95	100	0	5	0	0	17	17	0	0	0	5	112	117	0	5
BENTON	0	0	14	14	0	0	0	0	0	0	0	0	0	0	14	14	0	0
BLACKFORD	0	0	53	53	0	0	0	0	5	5	0	0	0	0	58	58	0	0
BOONE	0	4	50	54	0	4	0	0	4	4	0	0	0	4	54	58	0	4
BROWN	0	0	2	2	0	0	0	0	2	2	0	0	0	0	4	4	0	0
CARROLL	0	1	66	67	0	1	0	0	2	2	0	0	0	1	68	69	0	1
CASS	0	2	195	197	0	2	0	0	9	9	0	0	0	2	204	206	0	2
CLARK	0	5	160	165	0	6	0	0	24	24	0	0	0	5	184	189	0	6
CLAY	0	1	130	131	0	1	0	0	3	3	0	0	0	1	133	134	0	1
CLINTON	0	1	51	52	0	1	0	0	3	3	0	0	0	1	54	55	0	1
CRAWFORD	0	2	49	51	0	3	0	0	6	6	0	0	0	2	55	57	0	3
DAVIESS	0	2	81	83	0	2	0	0	0	0	0	0	0	2	81	83	0	2
DEARBORN	0	6	150	156	0	6	0	0	27	27	0	0	0	6	177	183	0	6
DECATUR	0	3	54	57	0	3	0	0	2	2	0	0	0	3	56	59	0	3
DEKALB	0	1	147	148	0	1	0	0	1	1	0	0	0	1	148	149	0	1
DELAWARE	0	3	148	151	0	5	0	3	22	25	0	3	0	6	170	176	0	8
DUBOIS	0	3	162	165	0	5	0	1	7	8	0	1	0	4	169	173	0	6
ELKHART	0	5	329	334	0	5	0	1	22	23	0	1	0	6	351	357	0	6
FAYETTE	0	1	55	56	0	1	0	0	5	5	0	0	0	1	60	61	0	1
FLOYD	0	6	116	122	0	7	0	0	26	26	0	0	0	6	142	148	0	7
FOUNTAIN	0	4	41	45	0	4	0	0	1	1	0	0	0	4	42	46	0	4
FRANKLIN	0	2	42	44	0	5	0	0	0	0	0	0	0	2	42	44	0	5
FULTON	0	1	52	53	0	1	0	0	2	2	0	0	0	1	54	55	0	1
GIBSON	0	2	90	92	0	2	0	0	4	4	0	0	0	2	94	96	0	2
GRANT	0	9	121	130	0	9	0	0	9	9	0	0	0	9	130	139	0	9
GREENE	0	4	90	94	0	4	0	0	1	1	0	0	0	4	91	95	0	4
HAMILTON	0	3	75	78	0	3	0	1	53	54	0	1	0	4	128	132	0	4
HANCOCK	1	4	61	66	1	4	0	1	8	9	0	1	1	5	69	75	1	5
HARRISON	0	6	186	192	0	6	0	0	3	3	0	0	0	6	189	195	0	6
HENDRICKS	0	2	127	129	0	2	0	0	13	13	0	0	0	2	140	142	0	2
HENRY	0	6	103	109	0	6	0	0	2	2	0	0	0	6	105	111	0	6
HOWARD	0	4	69	73	0	5	0	0	4	4	0	0	0	4	73	77	0	5
HUNTINGTON	0	6	129	135	0	7	0	0	10	10	0	0	0	6	139	145	0	7
JACKSON	0	3	106	109	0	3	0	0	3	3	0	0	0	3	109	112	0	3
JASPER	0	9	190	199	0	9	0	0	4	4	0	0	0	9	194	203	0	9
JAY	0	3	137	140	0	4	0	0	2	2	0	0	0	3	139	142	0	4
JEFFERSON	0	0	18	18	0	0	0	1	14	15	0	1	0	1	32	33	0	1
JENNINGS	0	3	101	104	0	3	0	0	2	2	0	0	0	3	103	106	0	3
JOHNSON	0	3	62	65	0	3	0	0	5	5	0	0	0	3	67	70	0	3
KNOX	0	2	43	45	0	2	0	0	1	1	0	0	0	2	44	46	0	2
KOSCIUSKO	0	8	165	173	0	8	0	0	15	15	0	0	0	8	180	188	0	8
LAGRANGE	0	4	184	188	0	4	0	0	2	2	0	0	0	4	186	190	0	4
LAKE	0	3	100	103	0	3	0	6	133	139	0	8	0	9	233	242	0	11
LAPORTE	0	8	179	187	0	8	0	4	59	63	0	4	0	12	238	250	0	12

Table 96. Crashes Involving Deer by County, Severity and Locale with Fatalities and Injuries, 1999 (cont.)

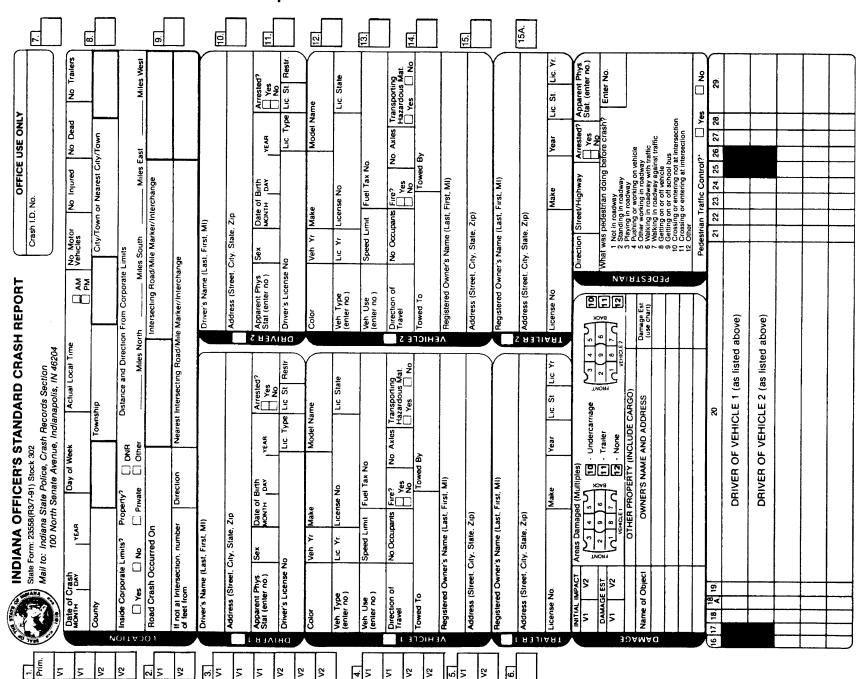
	Rural Crashes					Urban Crashes					Totals							
	Fatal	Personal	Property	Total	Total	Total	Fatal	Personal	Property	Total	Total	Total	Fatal	Personal	Property	Total	Total	Total
County	Crashes	Injury	Damage	Crashes	Fatalities	Injuries	Crashes	Injury	Damage	Crashes	Fatalities	Injuries	Crashes	Injury	Damage	Crashes	Fatalities	Injuries
LAWRENCE	0	1	49	50	0	2	0	0	4	4	0	0	0	1	53	54	0	2
MADISON	0	1	79	80	0	2	0	1	14	15	0	2	0	2	93	95	0	4
MARION	0	4	76	80	0	4	0	0	10	10	0	0	0	4	86	90	0	4
MARSHALL	0	8	322	330	0	15	0	0	16	16	0	0	0	8	338	346	0	15
MARTIN	0	3	31	34	0	3	0	0	2	2	0	0	0	3	33	36	0	3
MIAMI	0	3	79	82	0	3	0	0	2	2	0	0	0	3	81	84	0	3
MONROE	0	2	25	27	0	2	0	0	5	5	0	0	0	2	30	32	0	2
MONTGOMERY	0	5	153	158	0	5	0	0	1	1	0	0	0	5	154	159	0	5
MORGAN	0	1	95	96	0	1	0	0	5	5	0	0	0	1	100	101	0	1
NEWTON	0	2	87	89	0	2	0	0	1	1	0	0	0	2	88	90	0	2
NOBLE	0	6	216	222	0	7	0	0	19	19	0	0	0	6	235	241	0	7
OHIO	0	2	51	53	0	2	0	0	2	2	0	0	0	2	53	55	0	2
ORANGE	0	4	28	32	0	5	0	0	2	2	0	0	0	4	30	34	0	5
OWEN	0	6	43	49	0	6	0	0	2	2	0	0	0	6	45	51	0	6
PARKE	0	6	88	94	0	6	0	0	1	1	0	0	0	6	89	95	0	6
PERRY	0	0	21	21	0	0	0	0	8	8	0	0	0	0	29	29	0	0
PIKE	0	2	48	50	0	3	0	0	0	0	0	0	0	2	48	50	0	3
PORTER	0	5	227	232	0	5	0	7	64	71	0	8	0	12	291	303	0	13
POSEY	0	0	31	31	0	0	0	0	1	1	0	0	0	0	32	32	0	0
PULASKI	0	7	166	173	0	10	0	0	2	2	0	0	0	7	168	175	0	10
PUTNAM	0	3	118	121	0	3	0	1	7	8	0	2	0	4	125	129	0	5
RANDOLPH	0	4	96	100	0	4	0	0	6	6	0	0	0	4	102	106	0	4
RIPLEY	0	2	84	86	0	3	0	0	4	4	0	0	0	2	88	90	0	3
RUSH	0	1	46	47	0	1	0	0	0	0	0	0	0	1	46	47	0	1
ST. JOSEPH	0	7	207	214	0	8	0	1	17	18	0	1	0	8	224	232	0	9
SCOTT	0	2	32	34	0	2	0	1	3	4	0	2	0	3	35	38	0	4
SHELBY	0	1	48	49	0	1	0	0	5	5	0	0	0	1	53	54	0	1
SPENCER	0	1	87	88	0	1	0	0	3	3	0	0	0	1	90	91	0	1
STARKE	0	2	131	133	0	2	0	0	7	7	0	0	0	2	138	140	0	2
STEUBEN	0	5	314	319	0	5	0	0	11	11	0	0	0	5	325	330	0	5
SULLIVAN	0	2	14	16	0	3	0	0	0	0	0	0	0	2	14	16	0	3
SWITZERLAND	0	1	8	9	0	1	0	0	1	1	0	0	0	1	9	10	0	1
TIPPECANOE	0	5	289	294	0	5	0	2	20	22	0	2	0	7	309	316	0	7
TIPTON	0	0	5	5	0	0	0	0	0	0	0	0	0	0	5	5	0	0
UNION	0	2	40	42	0	2	0	0	0	0	0	0	0	2	40	42	0	2
VANDERBURGH	0	2	54	56	0	2	0	0	7	7	0	0	0	2	61	63	0	2
VERMILLION	0	3	36	39	0	3	0	0	0	0	0	0	0	3	36	39	0	3
VIGO	0	5	194	199	0	5	0	1	25	26	0	1	0	6	219	225	0	6
WABASH	0	4	128	132	0	4	0	0	10	10	0	0	0	4	138	142	0	4
WARREN	0	4	56	60	0	4	0	0	1	1	0	0	0	4	57	61	0	4
WARRICK	0	1	132	133	0	1	0	0	4	4	0	0	0	1	136	137	0	1
WASHINGTON	0	7	179	186	0	8	0	1	2	3	0	1	0	8	181	189	0	9
WAYNE	0	6	199	205	0	6	0	0	6	6	0	0	0	6	205	211	0	6
WELLS	0	3	110	113	0	3	0	0	2	2	0	0	0	3	112	115	0	3
WHITE	0	4	160	164	0	4	0	0	7	7	0	0	0	4	167	171	0	4
WHITLEY	0	1	89	90	0	1	0	0	6	6	0	0	0	1	95	96	0	1
INDIANA	1	310	9,673	9,984	1	345	0	35	880	915	0	41	1	345	10,553	10,899	1	386

# Appendix

## TOPICS

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

#### A-1. Indiana Officer's Standard Crash Report



## A-2. Indiana Officer's Standard Crash Report (Page 2)

Diagram				C
				Indicate NORTH by an arrow
	· : · · · · · · · · · · · · · · · · · ·			
NAR	RATIVE (Refer to	NARRATIVE (Refer to Vehicle by Number)		
				Here is the second of the seco
O insured by		D2 Insured By		
Other Participant(s) Name, Address (etc.)				
Name of Witness No. 1	Address		Location at Time of Crash	of Crash
Name of Witness No. 2	Address	And the state of t	Location at Time of Crash	of Crash
	I.C. Code(s)	Name of Person Arrested	l	I.C. Code(s)
AM Time Arrived AM PM	Other Location of Investigation		Investigation Complete	Photos Taken
	1.D. No.	Agency		Date of Report
-	I.D. No.	Agency		Driver Report Form Furnished D2
Investigating Officer's Signature	I.D. No.	Agency	C. T. C.	

#### A-3. Indiana Officer's Vehicle Crash Report

#### 15A. 14. 21. NATURE OF MOST SEVERE INJURY 1 Severed 5 Abrassion 8 Frequent/Oslocation 2 Internat 6 Minor Bleading 9 Controllorise 3 Minor Blum 7 Severe Bleeding 10 Completor of Pain 4 Severe Blum 7 Abretian 11 Notice of Visible 7 LOCATION OF MOST SEVERE INJURY 2 LOCATION OF MOST SEVERE INJURY 2 Neck 7 Shoulder/ 10 Hp/Upper Lgg 5 Neck 7 Shoulder/ 11 Kneet/Lower 4 Face 8 Elbowt/Lower 12 Entire Body 5 Hadd ArmYland 12 Entire Body 4 Dark (Street Lights Off) 5 Dark (No Street Lights) S# 302-A 4 Curve/Level 5 Curve/Grade 6 Curve/Hillcrest 5 Sleet/Hail/ Freezing Rain 6 Fog/Smoke/ Smog 10. ROAD CONSTRUCTION/MAINTE-NANCE/UTILITY WORK PRESENT? 15A WERE HAZARDOUS MATERIALS INVOLVED? 4 Dirt/Gravel 5 Other\* 5 Shoulder 6 Median 7 Roadway 8. LOCATION OF FIRST DAMAGE OR INJURY 15 SURFACE CONDITION Must use 1-6 27 11. LIGHT CONDITION 1 Daylight 4 2 Dawn/Dusk 3 Dark (Street 5 Lights On) 14. ROAD CHARACTER 26 Se. SEX 13. ROAD SURFACE 1 Concrete 2 Blacktop 3 Brick 33 SP. AGE 1 School/ Playground 2 Residential 3 Commercial/ Industrial 12. WEATHER 1 Clear 2 Cloudy 3 Rain 4 Snow 24 St' EW2 NO: ಣ 52 Driver liness Unsafe Speed Failure to Yield Right of Way Disregarded Signal/Regulatory Programment of Engine Failure or Defective 1 Accelerator Failure or Defective 2 Barke Failure or Defective 3 Tre Failure or Defective 3 Tre Failure or Defective or Not On 5 Other Lights Defective or Not On 5 Other Lights CONTRIBUTING CIRCUMSTANCES Tow Hitch Failure Animal(s) Present on Roadway Window/Windshield Defective Oversize/Overweight Load Insecure/Leaky Load THE FOLLOWING ARE THE CODES USED THROUGHOUT THE REPORT Unsate Backing Wrong Way on One Way Pedestrian(s) Actions' Passenger Distraction Violation Driver License DRIVER OF VEHICLE 1 (as listed above) DRIVER OF VEHICLE 2 (as listed above) 4 Other. 5 Pinned Under 7 01 2-7 Passengers 6 Include Passengers on Motorcycle 7 Include Passengers on Motorcycle 8 'Riding/Hanging on Outside 10 No Restraint 3 Harness 5 Helmet 1 No Restraint 3 Harness 5 Helmet 2 Lap Belt 4 Child Restraint 6 Airbag 1 No Restraint 3 Harness 5 Helmet 2 Lap Belt 6 Airbag 2 Day Belt 7 Outlier Restraint 6 Airbag 3 No 14 Curbing 15 Fence 16 Bridge Support 17 Curvert Head Wall/ Drainage Structure 18 Snow Embankment 19 Earth Embankment 19 Earth Embankment 22 Traffic Signal 22 Mail Box 23 Other Non-Fixed Obj. 24 Other Fixed Obj. Stowning or Stopping Stopping or Start From Parked Pos. Sentering Parked Pos. Parked Or Avoiding Obj. in Road Driverless Moving or Other. Other Stopping of Road on the Right EJECTION/TRAPPED (Drivers and Injured) 5. WERE AUTOMATED CONTROLS OPERATING PROPERLY? 7 Left & Right 1 Officer/Crossing Guard/Flagman 2 RP Crossing Gater/Flagman 3 RR Crossing Starbing Signal 4 RR Crossing Sign/Pavement Markings 5 Traffic Control Signal 6 Flashing Signal 554567865222 PRE-CRASH VEHICLE ACTION O - Other\* POSITION IN OR ON VEHICLE 1 Rear End 2 Head On 3 Same Direction Sideswipe 4 Opp. Direction Sideswipe 5 Off Road Collision COLLISION INVOLVED COLLISION DIAGRAM TRAFFIC CONTROLS 5 16. INJURED 1 Vehicle 1 2 Vehicle 2 18 12646078807126 က 16 17

4 >

8 8 8

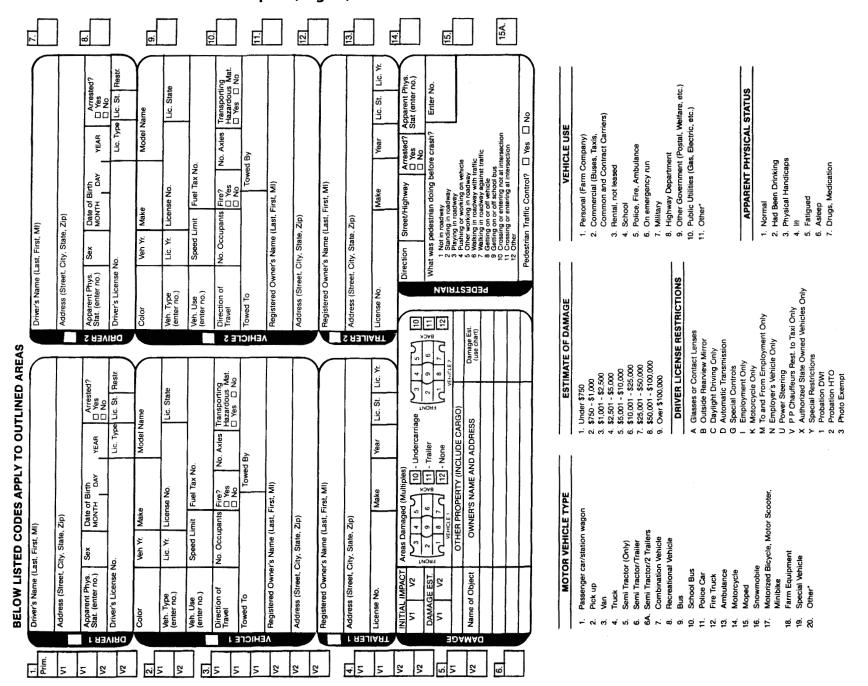
ø

8

CODING INSTRUCTION SHEET

INDIANA OFFICER'S VEHICLE CRASH REPORT

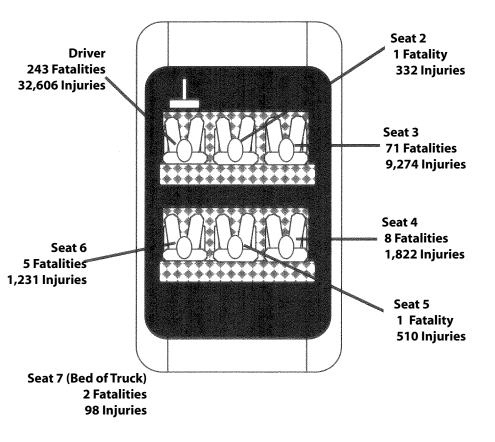
#### A-4. Indiana Officer's Vehicle Crash Report (Page 2)



#### A-5. Safety Equipment: Automobiles and Light Trucks

#### **With Safety Equipment**

#### **Without Safety Equipment**



Seat 2 6 Fatalities 272 Injuries Driver 309 Fatalities 7,047 Injuries Seat 3 **78 Fatalities** 3,028 Injuries Seat 4 14 Fatalities Seat 6 747 Injuries 12 Fatalities 515 Injuries Seat 5 **5 Fatalities** 364 Injuries Seat 7 (Bed of Truck) **0 Fatalities** 163 Injuries

**Seating Position Unknown: 6 Fatalities** 

137 Injuries

Seating Position Unknown: 5 Fatalities

75 Injuries

Safety Equipment Unknown: 37 Fatalities

1,868 Injuries

Safety Equipment and

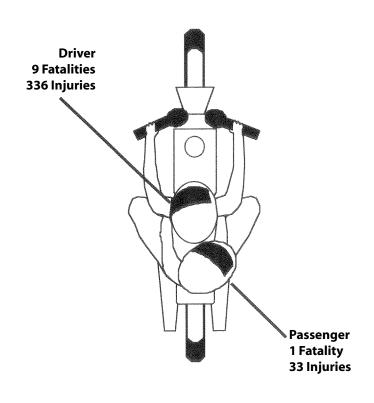
**Seating Position Unknown: 0 Fatalities** 

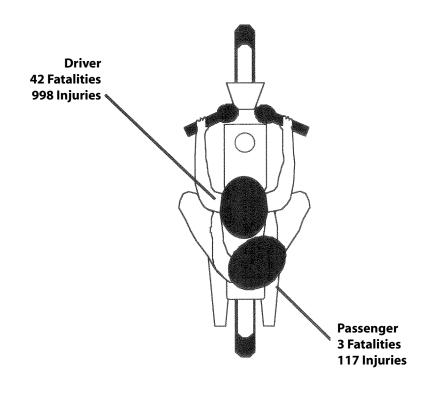
101 Injuries

#### A-6. Safety Equipment: Motorcycles

#### **With Helmet**

#### **Without Helmet**





Driver Usage Unknown: 11 Fatalities

244 Injuries

Passenger Usage Unknown: 1 Fatality

23 Injuries

# Glossary

**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.

**Bicyclist 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 the data presented here, the following 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

**County VMT Strata:** Indiana's 92 counties are divided into 3 strata based upon a rank-ordering of annual VMT data. The high VMT strata represents the top 7 counties with the highest VMT, the medium VMT strata represents the next 24 counties, and the low strata group represents the bottom 61 counties in annual vehicle miles traveled.

**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.

**Fatal Crash LD Rate:** The number of fatal crashes per 1,000 licensed drivers ([Fatal Crashes/Licensed Drivers] x 1,000).

**Fatal Crash VMT Rate:** The number of fatal crashes per 100 million vehicle miles traveled ([Fatal Crashes/Vehicle Miles Traveled] x 100,000,000).

**Fatality LD Rate:** The numbers of fatalities (persons killed) per 1,000 licensed drivers for a county/state ([Fatalities/Licensed Drivers] x 1000).

**Fatality VMT Rate:** The numbers of fatalities (persons killed) per 100 million vehicle miles traveled for a county/state ([Fatalities/Vehicle Miles Traveled] x 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 main-

tained 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.

**Motorcyclist 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.

## glossary

**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 non-highway 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.

## glossary

**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.

## Indiana Safety Time Clock-1999

## **Crime Clock**

## **Traffic Safety Clock**

1 Murder Every 22.4 hours

**Every 8.6 hours 1 Fatality** 

**Every 57.9 minutes 1 Alcohol-Related Crash** 

1 Violent Crime Every 23.6 minutes

1 Burglary Every 12.4 minutes

**Every 7.2 minutes 1 Person Injured** 

**Every 3.1 minutes 1 Property Damage Crash** 

1 Property Crime Every 2.6 minutes

**Every 2.4 minutes 1 Crash** 

## traffic safety quick facts

# IN INDIANA IN 1999... . 1,021 people were killed in motor vehicle traffic crashes.

- 72,883 people were injured in the state's 217,340 crashes in 1999.
- An average of 2.8 people were killed every 24 hours on Indiana highways.
- The fatality rate per 100 million miles of travel was 1.4, the same as 1998.
- 23.4 percent of the fatal crashes involved alcohol (209 crashes).
- 66 pedestrians were killed, down from 72 in 1998.
- 14 bicyclists were killed, compared with 13 in 1998.
- 67 motorcyclists were killed, compared with 68 in 1998.
- 81.8 percent of all motorcyclists (drivers and passengers) killed in crashes were not wearing helmets.
- 49.5 percent of all crashes occurred on city streets and 21.2 percent occurred on county roads.
- 73 percent of fatal crashes occurred in rural areas.
- The total number of registered vehicles was 5,372,915, compared to 5,454,680 in 1998 (1.5 percent decrease).
- The total number of licensed drivers was 3,876,908 at the end of 1999.