# INDIANA CRASH FACTS













# **INDIANA TRAFFIC SAFETY QUICK FACTS - 2009**

- 189,676 traffic collisions resulting in injury or property damage occurred, a 7.7 percent decrease from 2008.
- There were 631 fatal collisions in 2009 (resulting in 692 fatalities), a 12.6 percent decrease from 2008.
- 46,590 people were known to have suffered incapacitating, non-incapacitating or possible injuries in traffic collisions.
- 9.6 percent (18,252) of all collisions were speed-related, a 1.5 percentage point decrease from 2008.
- > 21.6 percent (136 of 631) of fatal collisions were speed-related.
- ► 4.7 percent (8,855) of all collisions were alcohol-related.
- > 24.9 percent (157 of 631) of fatal collisions were alcohol-related.
- 168 people were killed in alcohol-related collisions; 158 people were killed in speed-related collisions.
- ▶ 68.1 percent of all fatalities (471 of 692) occurred in rural areas.
- January had the highest frequency of collisions among all months (20,230, or 10.7 percent of all collisions in 2009).
- The 16 to 17 year old age group had the highest rate of drivers involved in fatal collisions in 2009 (4.0 per 10,000 licensed drivers).
- ► 62 non-motorists were killed in collisions in 2009 (55 pedestrians and 7 pedalcyclists).
- > 48 percent of persons killed in motor vehicle collisions were known to be restrained.\*
- ► In 2009, the economic costs of motor vehicle collisions in Indiana exceeded \$4.3 billion.

\*excludes non-motorists and vehicles reported as *farm vehicles, motorcycles,* and *mopeds*.

# **INTRODUCTION AND ACKNOWLEDGEMENTS**

Designing and implementing effective traffic safety policies requires data-driven analysis of traffic collisions. To help in the policy-making process, the Indiana University Public Policy Institute, Center for Criminal Justice Research (CCJR) has collaborated with the Indiana Criminal Justice Institute (ICJI) to analyze data from the Automated Reporting Information Exchange System (ARIES) database maintained by the Indiana State Police. Research findings have been summarized in a series of Fact Sheets on various aspects of traffic collisions, including alcohol-related crashes, children, motorcycles, light trucks, large trucks, dangerous driving, occupant protection, and young drivers. Portions of the content in those reports and in this Crash Fact Book are based on guidelines provided by the U.S. National Highway Traffic Safety Administration (NHTSA).

The *Indiana Officer's Standard Crash Report*, completed by local and state law enforcement officers, contains over 200 data items for each collision reported. These include the date, time and location of the collision, the types of vehicle(s) involved, a description of the events prior to the collision, conditions at the time of the collision, as well as information on the driver and other passengers, pedestrians, and/or pedalcyclists involved in the collision. These statistics are used to inform the public, as well as state and national policymakers, on matters of road safety and serve as the analytical foundation of traffic safety program planning and design in Indiana.

CCJR would like to thank the Indiana Criminal Justice Institute, NHTSA, the Federal Highway Administration (FHWA), the Indiana State Police, and Open Portal Solutions for their continued support and guidance throughout the process of creating these reports. CCJR would also like to acknowledge the assistance and cooperation of the Indiana Bureau of Motor Vehicles in providing data on Indiana registered vehicles and licensed drivers and to the Indiana Department of Transportation for the vehicle miles travelled data.

Funding for these publications is provided by the Indiana Criminal Justice Institute and the National Highway Traffic Safety Administration. An electronic copy of the Fact Sheets and this document can be accessed via the CCJR website (www.ccjr.iupui.edu), the ICJI traffic safety website (www.in.gov/cji/), or you may contact the Center for Criminal Justice Research at 317-261-3000. This publication may be reproduced free of charge.

#### NOTES:

In order to minimize misinterpretation of the data presented, please take note of the definitions provided in the glossary.

Data discrepancies may exist between this report and previous traffic safety publications. These differences can be attributed to updates to the ARIES database that have occurred since the original date of publication.

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Cover design is a density grid map illustrating concentrations of young driver injuries per 1,000 county licensed young drivers.



Dear Traffic Safety Partners,

TRAFFIC SAFET

Earlier in the year, the Traffic Safety Division (TSD) of the Indiana Criminal Justice Institute (ICJI) reported that Indiana had the fewest number of fatalities in the state since 1925. That said, this historic low is no fluke, it comes after six consecutive years of reductions in fatalities in Indiana. The question remains, how did this happen and how do we continue it?

There has been much speculation about why there has been a reduction in fatalities across much of the country the last two years. Much of it has been attributed to the ailing economy. Regardless, in Indiana, our reductions in overall crashes and fatalities have outpaced many other states in the nation. There is no single program, economic condition or law that can account for the reductions in the last six years in Indiana. All we can point to is what the data in documents such as this tell us. Much has been noted in the past few years by the TSD on our data-driven policy focus. This focus has helped Indiana move towards identifying problem areas quickly allowing us the ability to address them in a timely fashion.

Moving forward, for fiscal year 2011, new grant applications were developed for grantees which encourage them to provide locally specific problem identification, goals and evaluation for traffic safety in their community. A recent change in focus from program management to program development with the TSD is placing the emphasis for the success and failure of traffic safety initiatives more directly into the hands of the local grantees who receive NHTSA funds from the TSD.

Documents like the *Indiana Crash Facts* are a necessary tool for all of our traffic safety partners across the state to help continue the trend of safer roadways in Indiana. With that, we extend our sincere thanks and welcome your continued contributions to making Indiana a safer place to drive, walk and ride.

Sincerely,

T. Neil Moore, Ed.D

T. Neil Moore, Ed.D Executive Director, Criminal Justice Institute

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Governor's Council on Impaired & Dangerous Driving

Dear Fellow Hoosiers,

The Governor's Council on Impaired and Dangerous Driving (Council), which serves as the traffic safety advisory group in Indiana, helps in the development of policies, procedures, strategies and programs to effectively manage and administer Indiana's highway safety programs. The Council, which is comprised of volunteers representing various traffic safety interests, is appointed by Governor Daniels. The Council relies heavily on information contained within this *Indiana Crash Facts* publication for developing effective policy recommendations.

One of the current priorities of the Council is to increase the BAC testing and reporting rates for drivers involved in fatal crashes. By increasing emphases and training the law enforcement officers on the importance of testing drivers involved in fatal crashes, the impaired driving data produced by the Center for Criminal Justice Research will become more comprehensive. This will allow the Council to more effectively direct programmatic and policy changes toward addressing impaired driving to the areas of greatest need. As Chairman of the Council I have recently directed the formation of a Toxicology Advisory Board. Currently, this Advisory Board has been tasked with developing recommendations for the Council on ways of improving the organizational structure and efficiencies of how suspected DUI driver's BAC samples are processed in Indiana.

The foundation for good policy and planning for all traffic safety stakeholders comes from highquality data, like that found in *Indiana Crash Facts*. The collaboration between the Council, the Center for Criminal Justice Research and our partners across the state continues to improve safety for Hoosiers traveling our roadways. I hope that this document serves as a guide for you in continuing to make Indiana a safer and healthier place to live.

Very truly yours,

Curtis T. Hill, Jr. Elkhart County Prosecuting Attorney Chairman, Governor's Council on Impaired and Dangerous Driving

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**INDIANA** TRAFFIC SAFETY FACTS

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The Governor's Council on Impaired and Dangerous Driving, a division of the Indiana Criminal Justice Institute, serves as the public opinion catalyst and the implementing body for statewide action to reduce death and injury on Indiana roadways. The Council provides grant funding, training, coordination and ongoing support to state and local traffic safety advocates.

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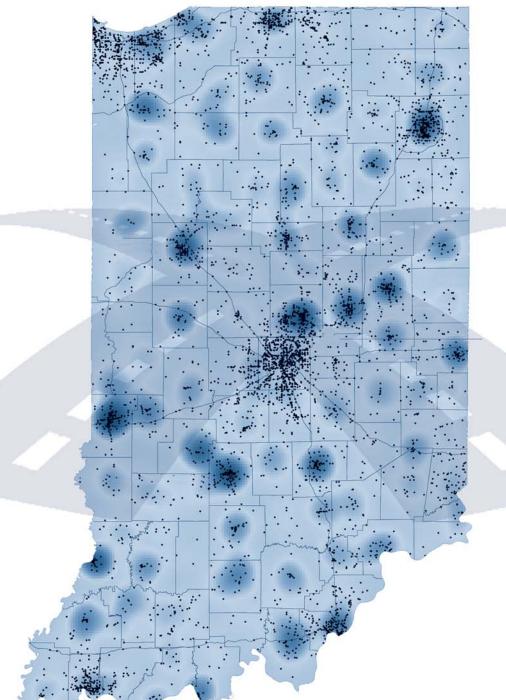
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INDIANA TRAFFIC SAFETY FACTS

# **PROBLEM IDENTIFICATION**





# **PROBLEM IDENTIFICATION, 2009**

The mission of the Governor's Council on Impaired and Dangerous Driving (Governor's Council), a division of the Indiana Criminal Justice Institute (ICJI), is to reduce death, injury, property damage, and economic cost associated with traffic crashes on Indiana's roadways. The Traffic Safety Division (TSD) within ICJI, in conjunction with the Governor's Council, developed a set of benchmarks as part of the Highway Safety Plan for fiscal year 2011 to assess the state of traffic safety in Indiana. These benchmarks correspond to priority program areas established by the National Highway Traffic Safety Administration (NHTSA), targeting the occurrence of fatal and injury collisions as they relate to alcohol involvement, safety belt usage, young drivers, motorcycle safety, dangerous driving, children, pedestrians, and bicycles. Within each area, ICJI has established specific goals and performance measures that relate to the occurrence of collisions and their impact on Indiana. See the Indiana *Highway Safety Plan* for more information.<sup>1</sup>

NOTE: Short-term and long-term goals discussed in subsequent sections are taken from the Indiana Highway Safety Plan 2011. This document uses data from the 2009 Fact Sheets series produced by the Center for Criminal Justice Research. These publications, including this Crash Book, were produced using the collision dataset current as of March 1, 2010. Discrepancies between figures presented in previous year Crash Books are due to updates that have occurred in the collision dataset since the date of these publications. Where applicable, national goals developed by NHTSA are also provided.

#### **Fatalities**

#### Short-term goals

- Reduce the number of traffic fatalities from 692 in 2009 to 643 in 2011
- Reduce the rate of fatalities per 100,000 of the population from 10.8 in 2009 to 9.9 in 2011
- Reduce fatalities per 100m VMT from 0.97 in 2009 to 0.91 in 2011 (not shown in figure)

#### Long-term goals

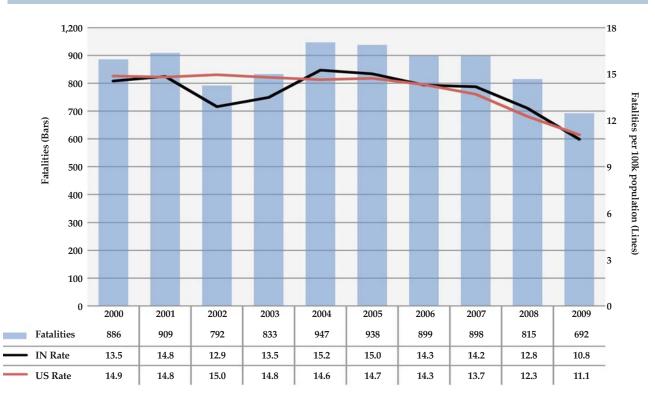
• Reduce the number of traffic fatalities to 600 in 2013

- Reduce the rate of traffic fatalities per 100,000 of the population to 9.2 in 2013
- Reduce fatalities per 100m VMT to 0.85 in 2013

#### Context

Indiana traffic fatalities decreased 15.1 percent from 2008 to 2009 and 2.3 percent on average annually since 2000. Fatalities per 100,000 of the population were at 10-year lows in Indiana and across the United States. Indiana had a lower fatality rate than the nation as a whole in 2009, the first year since 2003.

Figure 1. Indiana traffic fatalities, 2000-2009



#### Sources:

Indiana fatalities, 2000-2002: Indiana fatalities, 2003-2009: Indiana population, 2000-2009:

Fatality Analysis Reporting System (FARS), http://www-fars.nhtsa.dot.gov/Trends/TrendsGeneral.aspx Indiana State Police Automated Reporting Information Exchange System, as of March 1, 2010. Table NST-EST2009-01 - Annual Estimates of the Population for the United States, Regions, States, and Puerto Rico: April 1, 2000 to July 1, 2009; Population Division, U.S. Census Bureau; Release Date: December 2009.

US fatality rate:

Fatality Analysis Reporting System (FARS), http://www-fars.nhtsa.dot.gov/Trends/TrendsGeneral.aspx

# INDIANA TRAFFIC SAFETY FACTS

#### Injuries

#### Short-term goals

- Reduce the number of serious bodily injuries from 3,179 in 2009 to 3,050 in 2011
- Reduce the serious bodily injuries per 100,000 population from 49.5 in 2009 to 47 in 2011
- Reduce the serious bodily injury rate per 100m VMT from 4.47 in 2009 to 4.31 in 2011 (not shown in figure)

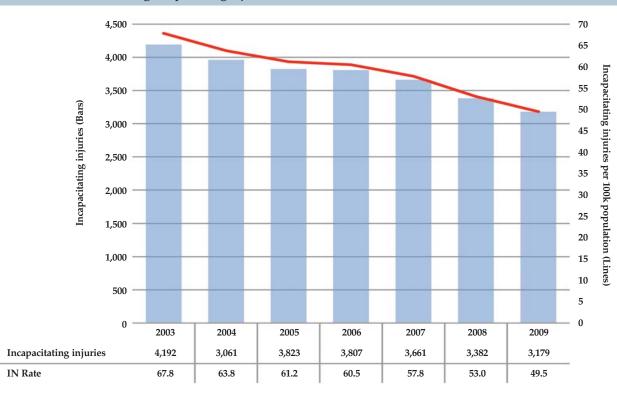
#### Long-term goals

• Reduce the number of serious bodily injuries to 2,924 in 2013

- Reduce the serious bodily injuries per 100,000 population to 45 in 2013
- Reduce the serious bodily injury rate per 100m VMT to 4.13 in 2013

#### Context

The number of incapacitating injuries occurring in Indiana collisions decreased 6 percent from 2008 to 2009. The rate of incapacitating injuries per 100,000 residents decreased from 53 to 50 during this same period and reached a seven-year low in 2009.



#### Figure 2. Individuals suffering incapacitating injuries in Indiana collisions, 2003-2009

#### Sources:

Indiana injuries: Indiana population: Indiana State Police Automated Reporting Information Exchange System, as of March 1, 2010. Table NST-EST2009-01 - Annual Estimates of the Population for the United States, Regions, States, and Puerto Rico: April 1, 2000 to July 1, 2009; Population Division, U.S. Census Bureau; Release Date: December 2009.

#### Alcohol

#### Short-term goals

- Reduce the number of alcohol-related fatalities from 168 in 2009 to 165 in 2011
- Reduce the percent of fatalities in collisions with BAC of 0.08 or higher from 14.7 percent in 2009 to 14.4 percent in 2011
- Reduce the rate of fatalities with BAC of 0.08 or higher per 100m VMT from 0.143 in 2009 to 0.141 in 2011
- Reduce the number of fatalities involving a motorcycle operator with BAC of 0.08 or higher from 15 in 2009 to 13 in 2011

#### Long-term goals

- Reduce the number of alcohol-related fatalities to 158 in 2012
- Reduce the percent of fatalities in collisions with BAC of 0.08 or higher to 13.9 percent in 2013

- Reduce the rate of fatalities with BAC of 0.08 or higher per 100m VMT to 0.135 in 2013
- Reduce the number of fatalities involving a motorcycle operator with BAC of 0.08 or higher to 11 in 2013

#### NHTSA national goal

• Reduce the rate of fatalities in highest BAC (.08+) from 0.49 in 2007 to 0.46 by 2010

#### Context

Alcohol-related fatal collisions decreased by 61 from 2008 to 2009 and by approximately 26 on average annually since 2005. Per 100 million vehicle miles travelled, alcohol-related traffic fatalities decreased by 0.07 from 2008 to 2009 and by 0.03 on average since 2005. In 2009, 77 of 491 (15.7 percent) drivers killed in traffic collisions had a blood alcohol content (BAC) result of 0.08 grams per deciliter or greater, the lowest proportion in the last five years. From 2005 to 2009, the proportion of all individuals in collisions involving an intoxicated driver that were killed decreased on average.

#### Table 1. Indiana fatal collisions and fatalities, by alcohol involvement, 2005-2009

	2005	2006	2007	2008	2009	Change ('08-'09)	Average annual ('05-'09)
Vehicle miles (millions)	74,252	74,173	74,092	72,424	68,787	-3,637	-1,366
Fatal collisions	855	817	804	722	631	-91	-56
Alcohol-related	262	250	233	218	157	-61	-26
% alcohol-related	30.6%	30.6%	29.0%	30.2%	24.9%	-5.31	-1.44
Per 100m VMT	0.35	0.34	0.31	0.30	0.23	-0.07	-0.03
Fatalities	938	899	898	815	692	-123	-61.5
Alcohol-related	293	274	254	246	168	-78	-31
% alcohol-related	31.2%	30.5%	28.3%	30.2%	24.3%	-5.9	-1.7
Per 100m VMT	0.39	0.37	0.34	0.34	0.24	-0.10	-0.04

#### Note:

Vehicle miles travelled for 2009 is a provisional estimate provided by the Indiana Department of Transportation.

Sources:

Collisions and fatalities:Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 1, 2010.Vehicle miles travelled (VMT):Indiana Department of Transportation, as of February 1, 2010.

	Count, by year					Cl	Change	
Injury type/ Person type	2005	2006	2007	2008	2009	Change ('08-'09)	Average annua ('05-'09)	
Fatal	199	198	186	172	102	-70	-24	
Impaired driver	122	140	135	119	77	-42	-11	
Non-impaired driver	23	13	10	12	9	-3	-4	
Vehicle passenger	51	41	38	34	14	-20	-9	
Non-motorist	3	4	3	7	2	-5	< 1	
Non-fatal	7,503	6,769	5,759	4,775	4,699	-76	-701	
Impaired driver	4,913	4,583	3,876	3,284	3,248	-36	-416	
Non-impaired driver	1,927	1,601	1,354	1,099	1,106	7	-205	
Vehicle passenger	629	547	508	370	323	-47	-77	
Non-motorist	34	38	21	22	22	0	-3	
% Fatal	19.2%	20.3%	23.6%	37.1%	15.6%	-21.52	-0.90	
Impaired driver	2.4%	3.0%	3.4%	3.5%	2.3%	-1.18	-0.03	
Non-impaired driver	1.2%	0.8%	0.7%	1.1%	0.8%	-0.27	-0.09	
Vehicle passenger	7.5%	7.0%	7.0%	8.4%	4.2%	-4.26	-0.84	
Non-motorist	8.1%	9.5%	12.5%	24.1%	8.3%	-15.80	0.06	

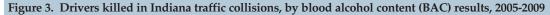
#### Table 2. Individuals involved in traffic collisions with an impaired driver, by person type and injury status, 2005-2009

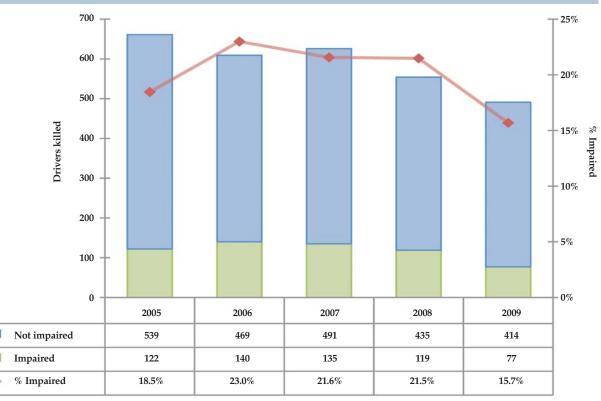
#### Note:

Impaired driver defined as a driver with BAC = 0.08 - 0.59 g/dL.

#### Source:

Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 1, 2010.





#### Notes:

Impaired includes drivers with BAC = 0.08 - 0.59 g/dL.

*Not impaired* includes drivers with no BAC result reported, BAC < 0.08, and invalid BAC results (BAC > 0.59).

#### Source:

#### Safety belt usage

#### Short-term goals

- Decrease the number of unrestrained passenger vehicle fatalities from 204 in 2009 to 178 in 2011
- Increase the observed seat belt usage rate for all vehicles from 92.4 percent during June 2010 to 94.2 percent for the same time period in 2011
- Increase the observed seat belt usage rate for pickup truck occupants from 85 percent in December 2009 to 86 percent in 2011

Note: The pickup truck restraint usage rate of 82 percent illustrated in Figure 4 represents the average rate calculated from the June 2009 and December 2009 observational surveys conducted by ICJI.

#### Long-term goals

- Decrease the number of unrestrained passenger vehicle fatalities to 156 in 2013
- Increase the observed seat belt usage rate for all vehicles

#### to 97.9 percent in 2013

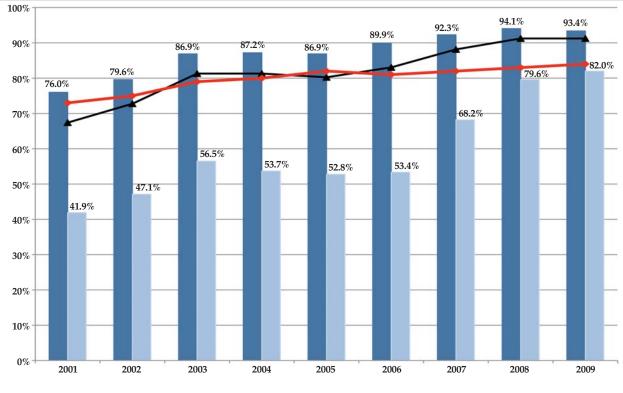
• Increase the observed seat belt usage rate for pickup truck occupants to 89.4 percent in 2013

#### NHTSA national goal

- Increase seat belt use to 84 percent in 2010.
- Increase child passenger restraint to 87 percent for the 0-7 age group in 2010

#### Context

Observed restraint use among Indiana passenger car occupants declined slightly from 94 percent in 2008 to 93.4 percent in 2009. Observed restraint usage rates continue to rise among pickup truck occupants (from 79.6 percent in 2008 to 82 percent in 2009), but remain considerably lower than rates among other passenger vehicle occupants. The number of passenger vehicle occupants killed in collisions that were unrestrained decreased between 2008 (268) and 2009 (204), but the percentage of passenger vehicle occupants killed in collisions that were unrestrained increased from 44 to 48 percent during this same period.



#### Figure 4. Observed seat belt use rates in passenger vehicles, 2001-2009

#### Notes:

🗖 Cars 💴 Pickups 🛨 Indiana 🔶 National

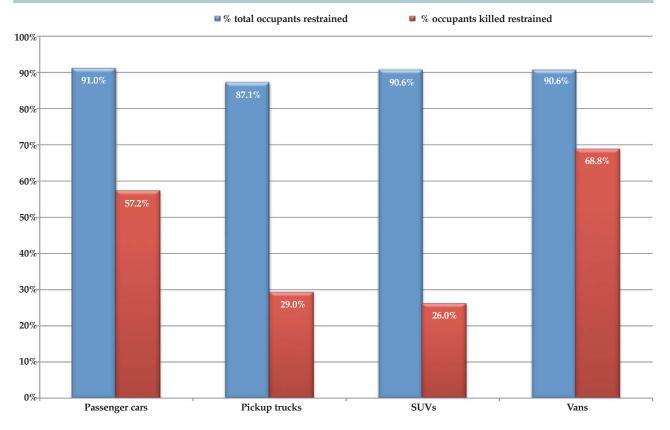
Indiana data represent the average annual rates of observed restraint use among all Indiana passenger vehicle occupants in a study conducted by ICJI twice per year. Car and pickup truck restraint usage rates are specific to Indiana only. National data represent the rates of observed restraint use among all passenger vehicle occupants.

National data represent the rates of observed restraint use among all passenger vehicle occupants. Passenger vehicles are defined as *passenger cars, pickup trucks, SUVs,* and *vans.* 

#### Sources:

Indiana: Indiana Criminal Justice Institute, December 2009.

National: National Center for Statistics and Analysis, National Highway Traffic Safety Administration, Seat Belt Use in 2009–Overall Results, DOT HS 811 100, Sept 2009.



#### Figure 5. Restraint use rates among Indiana passenger vehicle occupants involved in collisions, by vehicle type, 2009

Note:

Restraint use rates are based on injury totals that also include individuals reported to have an *unknown* or invalid safety equipment type.

Source:

	Count, by year						nange
Vehicle type/ restraint use	2005	2006	2007	2008	2009	('08-'09)	Average annual %change
Fatalities							
Passenger car	410	405	374	396	299	-97	-6.9%
Restrained	207	198	201	203	171	-32	-4.4%
Unrestrained	155	158	134	153	97	-56	-8.9%
Unknown	48	49	39	40	31	-9	-9.6%
Pickup truck	165	118	139	91	93	2	-10.8%
Restrained	32	21	39	21	27	6	8.4%
Unrestrained	110	78	79	56	51	-5	-16.5%
Unknown	23	19	21	14	15	1	-8.3%
Van	54	43	57	33	32	-1	-8.2%
Restrained	27	17	33	17	22	5	9.5%
Unrestrained	23	18	19	14	7	-7	-23.1%
Unknown	4	8	5	2	3	1	13.1%
SUV	82	90	100	68	73	5	-0.9%
Restrained	30	25	22	17	19	2	-9.9%
Unrestrained	46	54	60	45	49	4	3.1%
Unknown	6	11	18	6	5	-1	15.9%
All passenger vehicles	711	656	670	588	497	-91	-8.3%
Restrained	296	261	295	258	239	-19	-4.7%
Unrestrained	334	308	292	268	204	-64	-11.3%
Unknown	81	87	83	62	54	-8	-8.8%

#### Table 3. Passenger vehicle occupants killed in Indiana collisions, by restraint use and vehicle type, 2005-2009

#### Note:

Passenger vehicles are defined as passenger cars, pickup trucks, SUVs, and vans.

Source:

Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 1, 2010.

			Count, by year			Ch	ange
Vehicle type/ restraint use	2005	2006	2007	2008	2009	('08-'09)	Average annua %change
Passenger car	100%	100%	100%	100%	100%		
Restrained	50.5%	48.9%	53.7%	51.3%	57.2%	5.9%	3.4%
Unrestrained	37.8%	39.0%	35.8%	38.6%	32.4%	-6.2%	-3.3%
Unknown	11.7%	12.1%	10.4%	10.1%	10.4%	0.3%	-2.7%
Pickup truck	100%	100%	100%	100%	100%		
Restrained	19.4%	17.8%	28.1%	23.1%	29.0%	6.0%	14.4%
Unrestrained	66.7%	66.1%	56.8%	61.5%	54.8%	-6.7%	-4.4%
Unknown	13.9%	16.1%	15.1%	15.4%	16.1%	0.7%	4.0%
Van	100%	100%	100%	100%	100%		
Restrained	50.0%	39.5%	57.9%	51.5%	68.8%	17.2%	12.0%
Unrestrained	42.6%	41.9%	33.3%	42.4%	21.9%	-20.5%	-10.8%
Unknown	7.4%	18.6%	8.8%	6.1%	9.4%	3.3%	30.5%
SUV	100%	100%	100%	100%	100%		
Restrained	36.6%	27.8%	22.0%	25.0%	26.0%	1.0%	-6.8%
Unrestrained	56.1%	60.0%	60.0%	66.2%	67.1%	0.9%	4.7%
Unknown	7.3%	12.2%	18.0%	8.8%	6.8%	-2.0%	10.2%
All passenger vehicles	100%	100%	100%	100%	100%		
Restrained	41.6%	39.8%	44.0%	43.9%	48.1%	4.2%	3.9%
Unrestrained	47.0%	47.0%	43.6%	45.6%	41.0%	-4.5%	-3.1%
Unknown	11.4%	13.3%	12.4%	10.5%	10.9%	0.3%	-0.5%

#### Table 4. Rates of restraint use among passenger vehicle occupants killed in Indiana collisions, by vehicle type, 2005-2009

#### Note:

Passenger vehicles are defined as passenger cars, pickup trucks, SUVs, and vans.

#### Source:

## Young Drivers (15 to 20 years old)

#### Short-term goals

• Decrease the number of drivers age 15 to 20 involved in fatal collisions from 116 in 2009 to 106 in 2011

#### Long-term goals

• Decrease the number of drivers age 15 to 20 involved in fatal collisions to 94 in 2013

#### Context

In 2009, drivers (age 15 to 20) had the highest collision involvement rate of any age cohort (3.6 per 10,000 licensed). Among drivers killed in traffic collisions, drivers age 25 to 44 have historically had the highest likelihood of being unrestrained since 2005. In 2009, individuals involved in collisions with a young driver were 2.4 times more likely to have been killed than the young driver(s). The risk of fatality to other individuals involved has increased on average since 2005 by 0.14.

#### Table 5. Drivers involved in fatal collisions, by age cohort, 2005-2009

			Count			Ch	ange	Ra	te
Driver age cohort	2005	2006	2007	2008	2009	('08-'09)	Average annual ('05-'09)	Licensed drivers 2009 (000)	Per 10,000 licensed
15	1	0	0	1	3	2	< 1		
16	22	33	16	23	13	-10	-2	33.76	3.85 🔴
17	37	32	33	25	24	-1	-3	58.27	4.12 🔴
18	31	39	39	32	34	2	< 1	69.38	4.90 🔴
19	41	38	38	32	24	-8	-4	77.60	3.09 🔴
20	33	37	25	29	18	-11	-4	82.30	2.19 🌑
15-20	165	179	151	142	116	-26	-12	321.30	3.61 🔴
21-24	159	126	105	105	93	-12	-17	287.07	3.24 🔴
25-34	257	232	232	215	176	-39	-20	739.27	2.38 🌑
35-44	222	232	221	197	189	-8	-8	759.57	2.49 🔴
45-54	227	205	228	221	179	-42	-12	866.24	2.07 🌑
55-64	134	134	146	123	119	-4	-4	724.92	1.64 ●
65-74	77	73	82	62	69	7	-2	424.38	1.63 ●
75+	60	56	66	44	48	4	-3	273.90	1.75 🌑
Total	1,301	1,237	1,231	1,109	989	-120	-78	4,396.65	2.25

Low High

#### Notes:

Includes drivers with valid age reported (i.e., 15-109).

Fifteen year-old licensed driver counts are excluded due to data discrepancies with permit/licensed drivers in this age category.

#### Sources:

Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 1, 2010. Indiana Bureau of Motor Vehicles, as of May 1, 2010.

				Count			Cl	nange
	Driver age cohort	2005	2006	2007	2008	2009	Change ('08-'09)	Average annua ('05-'09)
Total killed	15	0	0	0	1	2	1	< 1
	16	14	17	5	11	5	-6	-2
	17	24	14	10	8	7	-1	-4
	18	16	18	22	22	14	-8	< 1
	19	18	22	18	17	11	-6	-2
	20	9	18	13	16	9	-7	< 1
	15-20	81	89	68	75	48	-27	-8
	21-24	80	61	49	56	50	-6	-8
	25-34	118	100	118	114	89	-25	-7
	35-44	110	114	100	75	89	14	-5
	45-54	103	92	110	102	89	-13	-4
	55-64	79	75	77	62	52	-10	-7
	65-74	42	37	47	31	37	6	-1
	75+	46	40	52	35	36	1	-3
	Total	659	608	621	550	490	-60	-42
% Not restrain	<b>ed</b> 15				100%	0%	-100	
	16	35.7%	64.7%	60.0%	18.2%	20.0%	1.82	-3.93
	17	29.2%	57.1%	30.0%	12.5%	42.9%	30.36	3.42
	18	31.3%	55.6%	31.8%	63.6%	50.0%	-13.64	4.69
	19	55.6%	59.1%	66.7%	41.2%	72.7%	31.55	4.29
	20	22.2%	50.0%	61.5%	50.0%	44.4%	-5.56	5.56
	15-20	35.8% ●	57.3% 🛑	48.5%	44.0%	47.9% 🛑	3.92	3.03
	21-24	61.3% 🔴	45.9%	65.3% 🔴	57.1% 🛑	46.0%	-11.14	-3.81
	25-34	57.6% 🔴	57.0% 🔴	58.5% 🔴	64.9% 🔴	55.1% 🔴	-9.86	-0.64
	35-44	67.3% 🔴	66.7% 🔴	57.0% 🛑	56.0% 🛑	55.1% 🔴	-0.94	-3.05
	45-54	58.3% 🔴	50.0% 🛑	50.0% 🛑	50.0% 🛑	52.8% 🛑	2.81	-1.36
	55-64	41.8% ●	38.7%	41.6% ●	41.9%	46.2%	4.22	1.10
	65-74	26.2% ●	29.7%	38.3% ●	35.5%	29.7%	-5.75	0.88
	75+	28.3% ●	32.5% ●	26.9%	40.0%	27.8%	-12.22	-0.12
	Total	51.1%	51.2%	49.9%	51.5%	48.2%	-3.29	-0.74

#### Table 6. Drivers killed in traffic collisions in Indiana, and percent unrestrained, by age, 2005-2009

Low High

#### Note:

Includes drivers reported with valid age (i.e., 15-109).

#### Source:

#### Table 7. Injuries in collisions involving young drivers (ages 15-20), 2005-2009

			Count			Cl	nange
Person type/ Injury status	2005	2006	2007	2008	2009	Change ('08-'09)	Average annual ('05-'09)
Young drivers	56,949	52,100	53,024	50,928	48,017	-2,911	-2,233
Fatal	81	89	68	75	48	-27	-8
Incapacitating	401	381	369	339	311	-28	-23
Non-incapacitating	7,147	6,741	6,137	5,320	5,199	-121	-487
Other injury status	6,061	3,840	1,489	1,016	798	-218	-1,316
Not injured	43,259	41,049	44,961	44,178	41,661	-2,517	-400
Others involved	40,166	36,927	36,664	34,213	33,360	-853	-1,702
Fatal	106	103	106	82	81	-1	-6
Incapacitating	576	589	504	470	452	-18	-31
Non-incapacitating	9,559	9,199	8,605	7,302	7,612	310	-487
Other injury status	4,166	2,652	985	710	520	-190	-912
Not injured	25,759	24,384	26,464	25,649	24,695	-954	-266
% Fatal	0.19%	0.22%	0.19%	0.18%	0.16%	-0.03	-0.01
Young drivers	0.14%	0.17%	0.13%	0.15%	0.10%	-0.05	-0.01
Others involved	0.26%	0.28%	0.29%	0.24%	0.24%	< .01	-0.01
Risk to others	1.86	1.63	2.25	1.63	2.43	0.80	0.14

Notes:

Non-incapacitating injuries include those injuries reported as both non-incapacitating and possible.

Other injury status includes not reported, unknown, refused (treatment), or invalid (+) injury status codes.

Not injured status includes individuals involved in collisions reported as null values in the injury status code field and should only apply to drivers involved in collisions.

Others involved includes drivers (excluding drivers ages 15 to 20), vehicle passengers, pedestrians, and pedalcyclists.

Risk to others defined as the ratio of % Fatal, others involved to % Fatal, young drivers.

Source:

#### **Motorcycle Safety**

#### Short-term goals

- Reduce the number of motorcycle fatalities from 111 in 2009 to 109 in 2011
- Decrease the rate of motorcycle fatalities per 10,000 motorcycle registrations from 4.9 in 2009 to 4.8 in 2011

#### Long-term goals

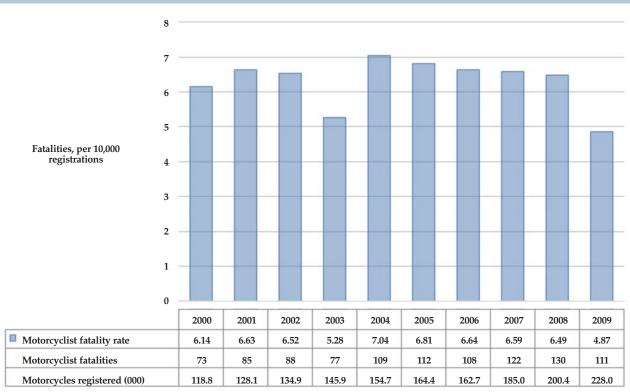
- Reduce the number of motorcycle fatalities to 104 in 2013
- Decrease the percent of motorcycle fatalities per 10,000 motorcycle registrations to 4.6 by 2013

#### Context

Motorcyclist fatality rates were at a 10-year low in 2009 at 4.87 per 10,000 registrations, a 25 percent decrease from 2008. Motorcyclist fatalities have increased by an annual average of 4 since 2000, but decreased by 19 from 2008 to 2009.

Among motorcycle operators involved in traffic collisions, operators ages 15 to 20 were most likely to not have been properly licensed. Over 70 percent of 15 to 20 year-olds involved in collisions in 2009 did not have proper motorcycle endorsements, a 0.8 percentage point increase from 2008. Overall, 48.6 percent of motorcyclists did not have motorcycle endorsements on their license, though this rate had decreased on average by 4.6 percent points per year since 2005. Motorcycle operators involved in fatal crashes were less likely to have endorsements compared to crashes of lower severity. Overall in 2009, 59.8 percent of motorcyclists killed in crashes did not have motorcycle endorsements.

Seventy-seven percent of motorcyclists killed in crashes in 2009 were not wearing a helmet, a 5.9 percentage point increase from 2008. From 2005 to 2009, the incidence of unhelmeted motorcyclists killed in collisions decreased by 4 percent annual-ly, compared to 2.2 percent for all motorcyclist fatalities (regardless of helmet use).



#### Figure 6. Motorcycles and motorcyclist fatalities in Indiana traffic collisions, 2000-2009

Note:

Data include mopeds.

#### Sources:

Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 1, 2010.

Indiana Bureau of Motor Vehicles, as of May 1, 2010.

Table 8. Motorcycle and moped operators involved in Indiana traffic collisions and percent not properly licensed, by age cohort, 2005-2009

						Cl	nange
Age cohort	2005	2006	2007	2008	2009	('08-'09)	Average annua ('05-'09)
Count not properly licensed							
15 - 20	215	242	273	289	245	-44	8
21 - 24	240	209	263	251	225	-26	-4
25 - 34	383	306	365	363	310	-53	-18
35 - 44	424	361	347	363	295	-68	-32
45 - 54	336	336	326	349	278	-71	-15
55 - 64	144	164	133	140	133	-7	-3
65 - 74	22	43	41	35	27	-8	1
75 +	8	7	6	8	8	0	0
All ages	1,780	1,671	1,756	1,800	1,521	-279	-65
Percent not properly licensed							
15 - 20	78.8% 🔴	76.6% 🔴	74.8% 🔴	69.8% 🔴	70.6% 🔴	0.80	-2.04
21 - 24	76.2% 🔴	66.3% 🔴	65.8% 🔴	62.8% 🔴	61.6% 🔴	-1.11	-3.64
25 - 34	70.5% 🔴	61.3% 🔴	54.3% 🔴	52.9% 🔴	53.0% 🛑	0.08	-4.39
35 - 44	67.3% 🔴	56.7% 🔴	49.0% 🛑	47.0%	48.0% 🔵	1.09	-4.81
45 - 54	59.2% ●	54.4%	42.8% ●	41.5% 🔵	39.0% 🌑	-2.56	-5.04
55 - 64	56.0% ●	48.0% ●	36.1% ●	31.8% ●	35.8% ●	4.03	-5.05
65 - 74	47.8% ●	55.1%	39.4% ●	37.2% ●	23.7% ●	-13.55	-6.04
75 +	61.5% ●	50.0%	46.2% ●	47.1% 🛑	42.1%	-4.95	-4.86
All ages	67.0%	59.2%	51.7%	49.1%	48.6%	-0.47	-4.60

#### Notes:

Properly licensed defined as motorcycle operator with any one of the following license types: Chauffeur w/MC endorsement, learner motorcycle, motorcycle, operators w/motorcycle endorsement, PP chauffeur w/MC endorsement.

Counts exclude cases where an unknown, invalid, or no license type was reported.

All ages includes drivers with invalid or no age reported; consequently, sum of age-group counts may not equal All ages.

#### Source:

# Table 9. Motorcycle and moped operators killed in Indiana traffic collisions and percent not properly licensed, by age cohort, 2005-2009

						Cł	nange
Age cohort	2005	2006	2007	2008	2009	('08-'09)	Average annua ('05-'09)
Count not properly licensed							
15 - 20	4	6	4	10	6	-4	1
21 - 24	12	5	3	11	4	-7	-2
25 - 34	13	4	15	10	17	7	1
35 - 44	25	19	14	8	19	11	-2
45 - 54	13	11	10	11	12	1	0
55 - 64	4	6	8	7	5	-2	0
65 - 74	0	1	2	1	1	0	0
75 +	0	0	0	0	0	0	0
All ages	71	52	56	58	64	6	-2
Percent not properly licensed							
15 - 20	66.7% 🔴	100.0% 🔴	57.1% 🔴	76.9% 🔴	100.0% 🔴	23.08	8.33
21 - 24	75.0% 🔴	62.5% 🛑	75.0% 🔴	78.6% 🔴	80.0% 🔴	1.43	1.25
25 - 34	76.5% 🔴	40.0%	68.2% 🔴	45.5% ●	73.9% 🛑	28.46	-0.64
35 - 44	69.4% 🔴	63.3% 🔴	48.3% ●	38.1% ●	67.9% 🔴	29.76	-0.40
45 - 54	65.0% 🔴	52.4% 🛑	38.5% 🔵	47.8% 🌑	44.4% 🌑	-3.38	-5.14
55 - 64	36.4% ●	50.0% 🔴	50.0% 🔴	36.8% 🌑	35.7% 🌑	-1.13	-0.16
65 - 74	0.0% ●	33.3% 🔴	33.3% 🔴	50.0% 🛑	25.0% ●	-25.00	6.25
75 +	0.0% ●	0.0% ●	0.0% ●	0.0% ●	0.0% ●		
All ages	66.4%	57.8%	50.0%	50.0%	59.8%	9.81	-1.64

#### Notes:

Properly licensed defined as motorcycle operator with any one of the following license types: Chauffeur w/MC endorsement, learner motorcycle, motorcycle, operators w/motorcycle endorsement, PP chauffeur w/MC endorsement.

Counts exclude cases where an unknown, invalid, or no license type was reported.

All ages includes drivers with invalid or no age reported; consequently, sum of age-group counts may not equal All ages.

#### Source:

Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 1, 2010.

#### Table 10. Motorcycle and moped rider fatalities, by helmet use, 2005-2009

			Cł	Change			
Vehicle type/ Helmet use	2005	2006	2007	2008	2009	Change ('08-'09)	Average annua ('05-'09)
Motorcycle (MC)	103	96	115	114	92	-22	-3
Helmeted	20	19	30	31	21	-10	0
Not helmeted	81	73	81	76	70	-6	-3
Unknown if helmeted	2	4	4	7	1	-6	0
Moped (MP)	9	12	7	16	19	3	3
Helmeted	0	0	0	0	0	0	0
Not helmeted	9	11	6	15	15	0	2
Unknown if helmeted	0	1	1	1	4	3	1
MC + MP	112	108	122	130	111	-19	0
Helmeted	20	19	30	31	21	-10	0
Not helmeted	90	84	87	91	85	-6	-1
Unknown if helmeted	2	5	5	8	5	-3	1
% Not helmeted							
MC	80.2%	79.3%	73.0%	71.0%	76.9%	5.90	-0.82
MP	100.0%	100.0%	100.0%	100.0%	100.0%	0.00	0.00
MC + MP	81.8%	81.6%	74.4%	74.6%	80.2%	5.60	-0.41

#### Notes:

Unknown if helmeted includes cases where other safety equipment types were marked or no equipment type was marked.

% Not helmeted excludes Unknown if helmeted.

#### Source:

#### **Dangerous Driving**

INDIANA TRAFFIC SAFETY FACTS

#### Short-term goals

- Reduce the number of speed-related fatal collisions from 136 in 2009 to 123 in 2011
- Reduce the percentage of speed-related fatal collisions from 21.6 percent in 2009 to 21.1 percent in 2011
- Reduce the number of collisions caused by a vehicle that disregarded a traffic control device from 3,983 in 2009 to 3,903 in 2011
- Reduce the number of aggressive driving collisions from 2,890 in 2009 to 2,752 in 2011

#### Long-term goals

• Reduce the number of speed-related traffic fatalities to 139 in 2013

- Reduce the percent of speed-related fatal collisions to 20.3 percent in 2013
- Reduce the number of collisions caused by disregarding a traffic control device to 3,744 in 2013
- Reduce the number of aggressive driving collisions to 2,670 in 2013

#### Context

From 2008 to 2009, the proportion of all collisions involving speed decreased by 1.5 percentage points. During that same time period, the incidence of speeding in fatal collisions decreased by 4.5 percentage points, as did speed-related fatalities (4.8 percentage points). The incidence of other forms of dangerous driving (aggressive driving, disregarding a traffic signal) saw only marginal changes from 2008.

#### Table 11. Collisions and fatalities in collisions, by dangerous driving involvement, 2005-2009

			Count			Cl	nange
Outcome/Dangerous driving category	2005	2006	2007	2008	2009	('08-'09)	Average annual ('05-'09)
Total collisions	208,359	192,721	204,999	205,452	189,676	-15,776	-4,671
Aggressive	3,582	3,240	3,045	3,007	2,890	-117	-173
Speeding	20,010	14,570	18,492	22,820	18,252	-4,568	-440
Disregarded signal	4,517	2,855	4,797	4,343	3,983	-360	-134
Fatal collisions	855	817	804	722	631	-91	-56
Aggressive	23	11	21	23	20	-3	-1
Speeding	203	159	165	188	136	-52	-17
Disregarded signal	12	15	23	16	14	-2	1
Fatalities	938	899	898	815	692	-123	-62
Aggressive	26	14	21	29	23	-6	-1
Speeding	229	174	187	225	158	-67	-18
Disregarded signal	13	15	27	16	16	0	1
As % total collisions							
Aggressive	1.7%	1.7%	1.5%	1.5%	1.5%	0.06	-0.05
Speeding	9.6%	7.6%	9.0%	11.1%	9.6%	-1.48	< .01
Disregarded signal	2.2%	1.5%	2.3%	2.1%	2.1%	-0.01	-0.02
As % total fatal collisions							
Aggressive	2.7%	1.3%	2.6%	3.2%	3.2%	-0.02	0.12
Speeding	23.7%	19.5%	20.5%	26.0%	21.6%	-4.49	-0.55
Disregarded signal	1.4%	1.8%	2.9%	2.2%	2.2%	< .01	0.20
As % total fatalities							
Aggressive	2.8%	1.6%	2.3%	3.6%	3.3%	-0.23	0.14
Speeding	24.4%	19.4%	20.8%	27.6%	22.8%	-4.77	-0.40
Disregarded signal	1.4%	1.7%	3.0%	2.0%	2.3%	0.35	0.23

#### Note:

See glossary for definitions of aggressive driving, speeding, and disregard signal.

#### Source:

#### Children

#### Short-term goals

- Reduce the number of fatalities age 15 and younger from 35 in 2009 to 33 in 2011
- Reduce the number of serious bodily injuries for children 15 and younger from 235 in 2009 to 222 in 2010

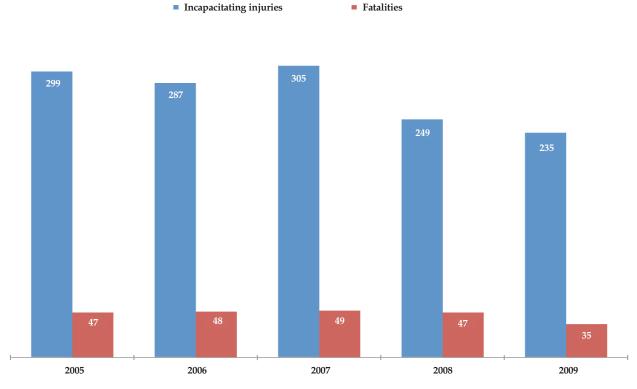
#### Long-term goals

- Reduce the number of fatalities age 15 and younger to 30 in 2013
- Reduce the number of serious bodily injuries for age 15 and younger to 211 in 2013

#### Context

In 2009, approximately 5 percent of the more than 4,300 children (ages 0 to 15) involved in Indiana traffic collisions experienced serious or life threatening injuries, 35 were fatal and 235 were reported as incapacitating. Both the numbers of fatal and incapacitating child traffic injuries in 2009 were at five-year lows.

#### Figure 7. Children (ages 0-15) seriously injured in Indiana traffic collisions, 2005-2009



Note:

Seriously injured applies to individuals suffering fatal or incapacitating injuries.

Source:



#### **Pedestrians**

#### Short-term goal

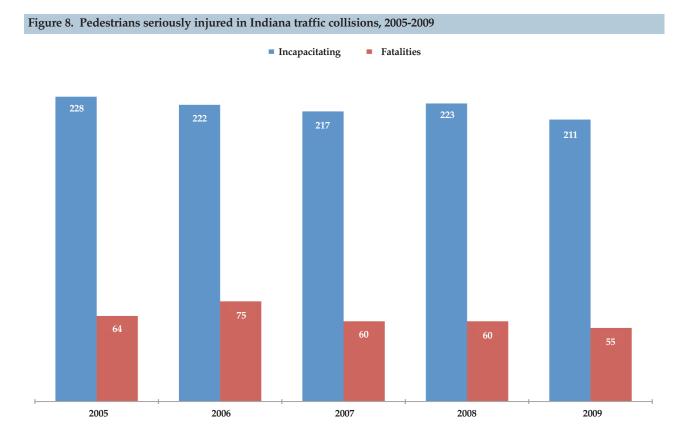
• Reduce the number of fatalities of pedestrians from 55 in 2009 to 54 in 2011

#### Long-term goal

Reduce the number of fatalities of pedestrians to 52 in • 2013

#### Context

In 2009, 55 pedestrians were killed in Indiana traffic collisions, an 8 percent reduction from 2008. The number of pedestrian traffic-related fatalities was at a five-year low in 2009.



# PROBLEM IDENTIFICATION

#### **Pedalcyclists**

#### Short-term goal

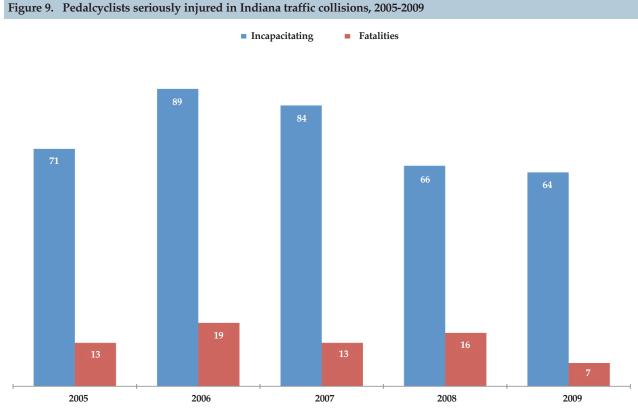
- Reduce the number of pedalcyclist fatalities from 7 in 2009 to 6 in 2011
- Reduce the number of serious bodily injuries for pedalcyclists from 64 in 2009 to 63 in 2010

#### Long-term goal

- Reduce the number of pedalcyclist fatalities to 4 in 2013
- Reduce the number of serious bodily injuries for pedalcyclists to 58 in 2013

#### Context

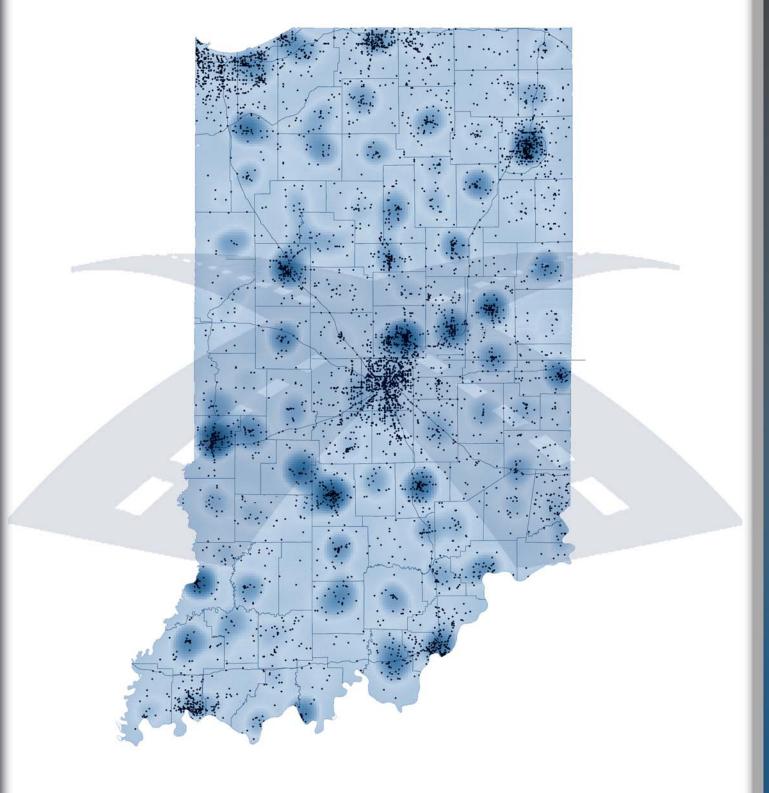
In 2009, 7 pedalcyclists were killed in Indiana traffic collisions, a 56 percent reduction from 2008. The number of pedalcyclist traffic-related fatalities was at a five-year low in 2009.



#### Source:

INDIANA TRAFFIC SAFETY FACTS

# **GENERAL TRENDS**



## **GENERAL TRENDS**, 2009

The General Trends section provides a time series analysis of Indiana collisions based on various parameters that describe the conditions and circumstances of those collisions. Collision data are categorized by the most severe injury involved (*fatal* collisions involve at least one fatality; *incapacitating* collisions involve no fatalities but at least one incapacitating injury; etc.).

#### HIGHLIGHTS

INDIANA TRAFFIC SAFETY FACTS

In 2009, 0.33 percent of all collisions resulted in a fatality, a 10-year low.

Fatal collisions decreased 2.5 percent on average from 2003 to 2009, 50 percent faster than the average percent decline in total collisions (1.7 percent).

Since 1995, the Indiana fatality rate has been lower than the national rate by about 0.21 per 100m vehicle miles traveled.

Drivers killed in traffic collisions represented 70.1 percent of all fatalities (491 of 692) in 2009, up from 68 percent in 2008.

As a proportion of total fatalities, alcohol-related fatalities were at a five-year low in 2009 (24.3 percent).

Speed-related fatalities and non-fatal injuries were at five-year lows in 2009.

Hit-and-run collisions were at a five-year low in 2009.

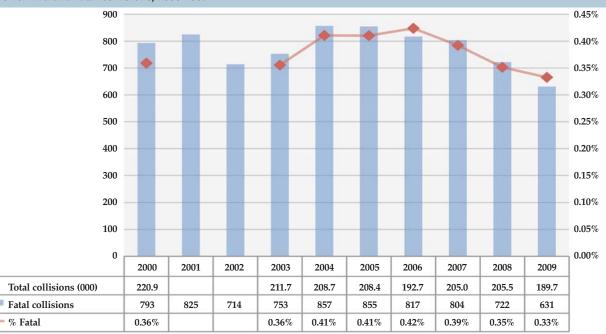
In 2009, 0.3 percent of all fatalities were related to distracted driving from cell phone use, down from 0.5 percent in 2008.

In 2009, 68.1 percent of all traffic fatalities occurred in rural areas, up from 64.3 percent in 2008.

Alcohol-related collision rates on holidays have generally decreased each year since 2005.

- > In 2009, 0.33 percent of all collisions resulted in a fatality, a 10-year low.
- > Fatal collisions have decreased by an average of 18 per year from 2000 to 2009.
- Fatal collisions decreased 2.5 percent on average from 2003 to 2009, 50 percent faster than the average percent decline in total collisions (1.7 percent).

Figure 10. Indiana fatal collisions, 2000-2009



# Note:

Collision data for 2001 and 2002 omitted due to incomplete records within state records database.

#### Sources:

Collisions 2000:Indiana Crash Facts, 2000.Collisions 2003-2009:Indiana State Police Automated Reporting Information Exchange System, as of March 1, 2010.Fatal collisions 2000-2002:Fatality Analysis Reporting System.Fatal collisions 2003-2009:Indiana State Police Automated Reporting Information Exchange System, as of March 1, 2010.

- ► Traffic fatalities decreased by 15 percent from 2008 to 2009 and 2.3 percent on average since 2000.
- > Fatality rates in Indiana have generally decreased since 2000 and in some cases were at 10-year lows in 2009.
- ► From 2008 to 2009, traffic fatalities per 100m VMT decreased by 10.6 percent from 1.13 to 1.01.

#### Table 12. Indiana traffic fatalities and fatality rates, 2000-2009

Year	Traffic fatalities	Population (thousands)	Fatalities, per 100,000 population	Licensed drivers (thousands)	Fatalities, per 100,000 licensed	Registered vehicles (thousands)	Fatalities per 100,000 registered	Vehicle miles travelled (billions)	Fatalities, per 100m VMT
2000	886	6,092	14.54	3,976	22.28	5,689	15.57	71.0	1.25
2001	909	6,125	14.84	4,117	22.08	5,752	15.80	72.0	1.26
2002	792	6,149	12.88	4,221	18.76	5,800	13.66	73.0	1.08
2003	833	6,182	13.48	4,536	18.36	5,884	14.16	74.4	1.12
2004	947	6,214	15.24	4,521	20.95	5,678	16.68	74.5	1.27
2005	938	6,253	15.00	4,246	22.09	5,103	18.38	74.3	1.26
2006	899	6,302	14.27	4,246	21.17	5,103	17.62	74.2	1.21
2007	898	6,346	14.15	4,309	20.84	5,103	17.60	74.1	1.21
2008	815	6,388	12.76	5,550	14.68	6,053	13.46	72.4	1.13
2009	692	6,423	10.77	4,402	15.72	na	na	68.8	1.01

#### Note:

**INDIANA** TRAFFIC SAFETY FACTS

Vehicle miles travelled for 2009 is a provisional estimate provided by the Indiana Department of Transportation..

Sources:

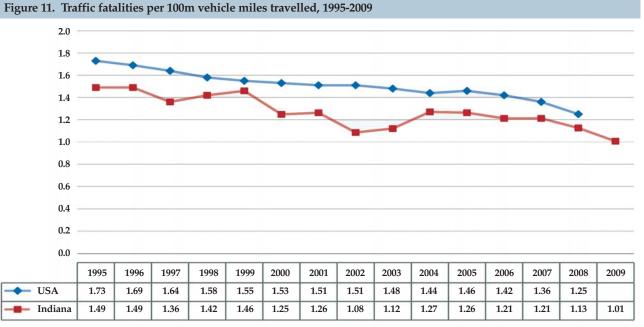
 Traffic Fatalities:
 Fatality Analysis Reporting System, Indiana State Police Automated Reporting Information Exchange System, as of March 1, 2010.

 Population:
 U.S. Census Bureau, Table 1. Annual Estimates of the Resident Population of the United States: April 1, 2000 to July 1, 2009 (NST-EST2009-01).

Registered Vehicles: Federal Highway Administration, Federal Highway Statistics.

Licensed Drivers: Federal Highway Administration, Federal Highway Statistics (2000-2008); 2009 data from Indiana Bureau of Motor Vehicles, as of June 1, 2010.

- > The Indiana fatality rate was at a 10-year low in 2009 (1.01 per 100m VMT).
- > Since 1995, the Indiana fatality rate has been lower than the national rate by about 0.21 per 100m VMT.
- ➤ Since 1995, the Indiana fatality rate has decreased by 2.7 percent on average each year.



#### Notes:

United States fatality rate for 2009 not available at time of publication.

Vehicle miles travelled for Indiana in 2009 is a provisional estimate provided by the Indiana Department of Transportation.

# Sources:

1995-2008: Fatality Analysis Reporting System.

- 2009: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 1, 2010.
- 2009: Indiana Department of Transportation, as of February 1, 2010.

> From 2008 to 2009, the Indiana collision rate decreased by nearly 8 per 100m VMT.

The Indiana traffic fatality rate decreased the most of any injury type from 2008 to 2009 (-0.12 per 100m VMT) >

# Table 13. Total traffic collisions and injuries in Indiana, 2005-2009

			Count				Per 100m VN	1T
	2005	2006	2007	2008	2009	2008	2009	Change
Collisions, by severity	208,359	192,721	204,999	205,452	189,676	283.68	275.74	-7.93
Fatal	855	817	804	722	631	1.00	0.92	-0.08
Non-fatal injury	41,761	38,849	37,416	35,358	33,411	48.82	48.57	-0.25
Property damage	165,743	153,055	166,779	169,372	155,634	233.86	226.25	-7.61
Injuries, by severity and								
person type	60,188	56,095	53,363	49,652	47,282	68.56	68.74	0.18
Fatal	938	899	898	815	692	1.13	1.01	-0.12
Drivers	661	609	626	554	491	0.76	0.71	-0.05
Vehicle passengers	200	196	199	185	139	0.26	0.20	-0.05
Non-motorists	77	94	73	76	62	0.10	0.09	-0.01
Incapacitating	3,823	3,807	3,661	3,382	3,179	4.67	4.62	-0.05
Drivers	2,562	2,583	2,490	2,343	2,162	3.24	3.14	-0.09
Vehicle passengers	962	913	870	750	742	1.04	1.08	0.04
Non-motorists	299	311	301	289	275	0.40	0.40	< 0.01
Non-incapacitating	55,427	51,389	48,804	45,455	43,411	62.76	63.11	0.35
Drivers	39,077	36,016	33,703	31,554	29,905	43.57	43.47	-0.09
Vehicle passengers	14,520	13,427	12,853	11,710	11,512	16.17	16.74	0.57
Non-motorists	1,830	1,946	2,248	2,191	1,994	3.03	2.90	-0.13

# Notes:

Non-fatal injury collisions are those with no fatalities and at least one incapacitating, non-incapacitating, or possible injury. *Non-incapacitating* includes *non-incapacitating* and *possible* injury categories. *Non-motorist* includes *pedestrians* and *pedalcyclists*.

## Sources:

From 2008 to 2009, alcohol-related injury rates decreased at all severity levels (fatal, incapacitating, and non-incapacitating).

> As a proportion of total fatalities, alcohol-related fatalities were at a five-year low in 2009 (24.3 percent).

Table 14. Alcohol-related traffic collisions and injuries in Indiana, 2005-2009

			Count				Per 100m VM	IT
	2005	2006	2007	2008	2009	2008	2009	Change
Alcohol-related collisions,								
by severity	13,684	11,855	9,943	9,411	8,855	12.99	12.87	-0.12
Fatal	262	250	233	218	157	0.30	0.23	-0.07
Non-fatal injury	4,696	4,200	3,557	3,225	2,969	4.45	4.32	-0.14
Property damage	8,726	7,405	6,153	5,968	5,729	8.24	8.33	0.09
Injuries, by severity and								
person type	6,920	6,152	5,241	4,735	4,207	6.54	6.12	-0.42
Fatal	293	274	254	246	168	0.34	0.24	-0.10
Drivers	200	192	184	167	131	0.23	0.19	-0.04
Vehicle passengers	77	57	54	57	29	0.08	0.04	-0.04
Non-motorists	16	25	16	22	8	0.03	0.01	-0.02
Incapacitating	704	720	646	582	473	0.80	0.69	-0.12
Drivers	471	479	467	396	320	0.55	0.47	-0.08
Vehicle passengers	202	199	138	134	107	0.19	0.16	-0.03
Non-motorists	31	42	41	52	46	0.07	0.07	< 0.01
Non-incapacitating	5,923	5,158	4,341	3,907	3,566	5.39	5.18	-0.21
Drivers	4,317	3,792	3,060	2,809	2,575	3.88	3.74	-0.14
Vehicle passengers	1,473	1,211	1,142	950	837	1.31	1.22	-0.09
Non-motorists	133	155	139	148	154	0.20	0.22	0.02
Alcohol-related injuries,								
as % total injuries								
Fatal	31.2%	30.5%	28.3%	30.2%	24.3%			
Incapacitating	18.4%	18.9%	17.6%	17.2%	14.9%			
Non-incapacitating	10.7%	10.0%	8.9%	8.6%	8.2%			

# Notes:

See glossary for definition of *alcohol-related*.

Non-fatal injury collisions are those with no fatalities and at least one *incapacitating*, *non-incapacitating*, or *possible* injury. Non-incapacitating includes *non-incapacitating* and *possible* injury categories.

Non-motorist includes pedestrians and pedalcyclists.

## Sources:

> The aggressive driving collision rate (per 100m VMT) increased by .05 from 2008 to 2009.

As a proportion of total fatalities, aggressive driving fatalities decreased from 3.6 percent in 2008 to 3.3 percent in 2009.

# Table 15. Aggressive driving collisions and injuries in Indiana, 2005-2009

			Count				Per 100m VM	IT
	2005	2006	2007	2008	2009	2008	2009	Change
Aggressive driving collisions,								
by severity	3,582	3,240	3,045	3,007	2,890	4.15	4.20	0.05
Fatal	23	11	21	23	20	0.03	0.03	< 0.01
Non-fatal injury	967	947	832	801	774	1.11	1.13	0.02
Property damage	2,592	2,282	2,192	2,183	2,096	3.01	3.05	0.03
Injuries, by severity and								
person type	1,603	1,547	1,385	1,256	1,222	1.73	1.78	0.04
Fatal	26	14	21	29	23	0.04	0.03	-0.01
Drivers	17	9	18	18	18	0.02	0.03	< 0.01
Vehicle passengers	9	4	2	6	5	0.01	0.01	< 0.01
Non-motorists	0	1	1	5	0	0.01	0.00	-0.01
Incapacitating	92	130	105	87	81	0.12	0.12	< 0.01
Drivers	63	81	66	53	54	0.07	0.08	0.01
Vehicle passengers	28	48	37	32	22	0.04	0.03	-0.01
Non-motorists	1	1	2	2	5	0.00	0.01	< 0.01
Non-incapacitating	1,485	1,403	1,259	1,140	1,118	1.57	1.63	0.05
Drivers	1,031	993	862	782	758	1.08	1.10	0.02
Vehicle passengers	445	404	382	336	329	0.46	0.48	0.01
Non-motorists	9	6	15	22	31	0.03	0.05	0.01
Aggressive driving injuries,								
as % total injuries								
Fatal	2.8%	1.6%	2.3%	3.6%	3.3%			
Incapacitating	2.4%	3.4%	2.9%	2.6%	2.5%			
Non-incapacitating	2.7%	2.7%	2.6%	2.5%	2.6%			

# Notes:

See glossary for definition of *aggressive driving*.

Non-fatal injury collisions are those with no fatalities and at least one *incapacitating*, *non-incapacitating*, or *possible* injury. Non-incapacitating includes *non-incapacitating* and *possible* injury categories.

Non-motorist includes pedestrians and pedalcyclists.

#### Sources:

- > Speed-related fatalities and non-fatal injuries were at five-year lows in 2009.
- > The speed-related collision rate declined by about five per 100m VMT from 2008 to 2009.
- > As a proportion of total fatalities, speed-related fatalities in 2009 (22.8 percent) were at the lowest level since 2007.

# Table 16. Speed-related collisions and injuries in Indiana, 2005-2009

			Count				Per 100m VM	ſT
	2005	2006	2007	2008	2009	2008	2009	Change
Speed-related collisions,								
by severity	20,010	14,570	18,492	22,820	18,252	31.51	26.53	-4.97
Fatal	203	159	165	188	136	0.26	0.20	-0.06
Non-fatal injury	5,107	4,317	4,377	4,711	4,117	6.50	5.99	-0.52
Property damage	14,700	10,094	13,950	17,921	13,999	24.74	20.35	-4.39
Injuries, by severity and								
person type	7,717	6,514	6,586	6,984	6,105	9.64	8.88	-0.77
Fatal	229	174	187	225	158	0.31	0.23	-0.08
Drivers	161	128	136	153	115	0.21	0.17	-0.04
Vehicle passengers	64	40	47	67	40	0.09	0.06	-0.03
Non-motorists	4	6	4	5	3	0.01	0.00	< 0.01
Incapacitating	617	607	559	585	514	0.81	0.75	-0.06
Drivers	406	415	375	428	359	0.59	0.52	-0.07
Vehicle passengers	195	163	171	144	147	0.20	0.21	0.01
Non-motorists	16	29	13	13	8	0.02	0.01	-0.01
Non-incapacitating	6,871	5,733	5,840	6,174	5,433	8.52	7.90	-0.63
Drivers	4,777	3,975	3,949	4,271	3,678	5.90	5.35	-0.55
Vehicle passengers	2,040	1,712	1,818	1,835	1,676	2.53	2.44	-0.10
Non-motorists	54	46	73	68	79	0.09	0.11	0.02
Speed-related injuries,								
as % total injuries								
Fatal	24.4%	19.4%	20.8%	27.6%	22.8%			
Incapacitating	16.1%	15.9%	15.3%	17.3%	16.2%			
Non-incapacitating	12.4%	11.2%	12.0%	13.6%	12.5%			

# Notes:

See glossary for definition of *speed-related*.

Non-fatal injury collisions are those with no fatalities and at least one incapacitating, non-incapacitating, or possible injury.

Non-incapacitating includes non-incapacitating and possible injury categories.

Non-motorist includes pedestrians and pedalcyclists.

# Sources:

- > From 2008 to 2009, the rate of collisions involving a vehicle disregarding a signal per 100m VMT decreased by 0.21.
- > As a proportion of total fatalities, disregarding-signal fatalities increased from 2 percent in 2008 to 2.3 percent in 2009.
- The proportion of incapacitating injuries related to disregarding a traffic signal decreased by nearly one percent from 2008 to 2009 (4.8 percent to 3.9 percent).

 Table 17. Disregarding-signal collisions and injuries in Indiana, 2005-2009

			Count				Per 100m VM	1T
	2005	2006	2007	2008	2009	2008	2009	Change
Disregarding-signal								
collisions, by severity	4,517	2,855	4,797	4,343	3,983	6.00	5.79	-0.21
Fatal	12	15	23	16	14	0.02	0.02	< 0.01
Non-fatal injury	1,859	1,149	1,772	1,590	1,506	2.20	2.19	-0.01
Property damage	2,646	1,691	3,002	2,737	2,463	3.78	3.58	-0.20
Injuries, by severity and								
person type	3,044	1,903	2,905	2,559	2,447	3.53	3.56	0.02
Fatal	13	15	27	16	16	0.02	0.02	< 0.01
Drivers	9	13	18	12	12	0.02	0.02	< 0.01
Vehicle passengers	4	2	8	4	3	0.01	0.00	< 0.01
Non-motorists	0	0	1	0	1	0.00	0.00	< 0.01
Incapacitating	142	100	155	162	123	0.22	0.18	-0.04
Drivers	95	64	114	109	95	0.15	0.14	-0.01
Vehicle passengers	46	36	39	53	26	0.07	0.04	-0.04
Non-motorists	1	0	2	0	2	0.00	0.00	< 0.01
Non-incapacitating	2,889	1,788	2,723	2,381	2,308	3.29	3.36	0.07
Drivers	2,021	1,250	1,895	1,683	1,613	2.32	2.34	0.02
Vehicle passengers	863	532	809	680	683	0.94	0.99	0.05
Non-motorists	5	6	19	18	12	0.02	0.02	-0.01
Disregarding-signal njuries, as % total injuries								
Fatal	1.4%	1.7%	3.0%	2.0%	2.3%			
Incapacitating	3.7%	2.6%	4.2%	4.8%	3.9%			
Non-incapacitating	5.2%	3.5%	5.6%	5.2%	5.3%			

#### Notes:

**INDIANA** TRAFFIC SAFETY FACTS

See glossary for definition of *disregarding a signal*.

Non-fatal injury collisions are those with no fatalities and at least one incapacitating, non-incapacitating, or possible injury.

Non-incapacitating includes non-incapacitating and possible injury categories.

Non-motorist includes pedestrians and pedalcyclists.

## Sources:

- ► Hit-and-run collisions were at a five-year low in 2009 (23,349).
- > Per 100m VMT, hit-and-run collisions decreased by 0.74 but hit-and-run injuries increased by .09 from 2008 to 2009.
- In 2009, 3.3 percent of all fatalities were in hit-and-run collisions, down from 3.6 percent in 2008. >

# Table 18. Hit-and-run collisions and injuries in Indiana, 2005-2009

			Count				Per 100m VM	ſT
	2005	2006	2007	2008	2009	2008	2009	Change
Hit-and-run collisions,								
by severity	27,450	23,924	25,220	25,121	23,349	34.69	33.94	-0.74
Fatal	34	27	19	26	22	0.04	0.03	< 0.01
Non-fatal injury	2,559	2,131	2,055	1,982	1,932	2.74	2.81	0.07
Property damage	24,857	21,766	23,146	23,113	21,395	31.91	31.10	-0.81
Injuries, by severity and								
person type	3,222	2,665	2,598	2,442	2,379	3.37	3.46	0.09
Fatal	36	27	19	29	23	0.04	0.03	-0.01
Drivers	13	11	5	7	7	0.01	0.01	< 0.01
Vehicle passengers	7	5	2	9	5	0.01	0.01	-0.01
Non-motorists	16	11	12	13	11	0.02	0.02	< 0.01
Incapacitating	207	173	138	146	146	0.20	0.21	0.01
Drivers	95	77	59	70	68	0.10	0.10	< 0.01
Vehicle passengers	63	49	36	28	40	0.04	0.06	0.02
Non-motorists	49	47	43	48	38	0.07	0.06	-0.01
Non-incapacitating	2,979	2,465	2,441	2,267	2,210	3.13	3.21	0.08
Drivers	1,963	1,529	1,459	1,374	1,311	1.90	1.91	0.01
Vehicle passengers	734	606	649	557	559	0.77	0.81	0.04
Non-motorists	282	330	333	336	340	0.46	0.49	0.03
Hit-and-run injuries,								
as % total injuries								
Fatal	3.8%	3.0%	2.1%	3.6%	3.3%			
Incapacitating	5.4%	4.5%	3.8%	4.3%	4.6%			
Non-incapacitating	5.4%	4.8%	5.0%	5.0%	5.1%			

# Notes:

Non-fatal injury collisions are those with no fatalities and at least one incapacitating, non-incapacitating, or possible injury. *Non-incapacitating* includes *non-incapacitating* and *possible* injury categories. *Non-motorist* includes *pedestrians* and *pedalcyclists*.

# Sources:

- Collisions involving distracted driving from cell phone use increased by 0.11 per 100m VMT from 2008 to 2009 (1.66 to 1.77).
- > In 2009, 0.3 percent of all fatalities were related to distracted driving from cell phone use, down from 0.5 percent in 2008.

Table 19.	Distracted	driving	collisions and	d injuries	s in Indiana	a, 2005-2009
-----------	------------	---------	----------------	------------	--------------	--------------

			Count				Per 100m VM	ſT
	2005	2006	2007	2008	2009	2008	2009	Change
Distracted driving								
collisions, by severity	1,100	1,185	1,253	1,199	1,215	1.66	1.77	0.11
Fatal	2	1	1	4	2	0.01	0.00	< 0.01
Non-fatal injury	276	298	290	289	313	0.40	0.46	0.06
Property damage	822	886	962	906	900	1.25	1.31	0.06
Injuries, by severity and								
person type	377	416	392	396	417	0.55	0.61	0.06
Fatal	2	1	1	4	2	0.01	0.00	< 0.01
Drivers	2	1	0	4	2	0.01	0.00	< 0.01
Vehicle passengers	0	0	1	0	0	0.00	0.00	0.00
Non-motorists	0	0	0	0	0	0.00	0.00	0.00
Incapacitating	15	14	20	27	22	0.04	0.03	-0.01
Drivers	7	10	12	21	15	0.03	0.02	-0.01
Vehicle passengers	6	3	6	5	7	0.01	0.01	< 0.01
Non-motorists	2	1	2	1	0	0.00	0.00	< 0.01
Non-incapacitating	360	401	371	365	393	0.50	0.57	0.07
Drivers	279	311	285	275	306	0.38	0.44	0.07
Vehicle passengers	76	86	79	77	80	0.11	0.12	0.01
Non-motorists	5	4	7	13	7	0.02	0.01	-0.01
Distracted driving injuries, as % total injuries								
Fatal	0.2%	0.1%	0.1%	0.5%	0.3%			
Incapacitating	0.4%	0.4%	0.5%	0.8%	0.7%			
Non-incapacitating	0.6%	0.8%	0.8%	0.8%	0.9%			

# Notes:

Distracted driving collisions are those where at least one driver was using a cell phone or other telematic device during the crash. Non-fatal injury collisions are those with no fatalities and at least one *incapacitating*, *non-incapacitating*, or *possible* injury. Non-incapacitating includes *non-incapacitating* and *possible* injury categories.

Non-motorist includes pedestrians and pedalcyclists.

## Sources:

# ▶ In 2009, 68.1 percent of all traffic fatalities occurred in rural areas, up from 64.3 percent in 2008.

# Table 20. Traffic fatalities in Indiana, by collision type and locality, 2005-2009

			Count of fatalities		
Circumstances/locality	2005	2006	2007	2008	2009
All fatal collisions	938	899	898	815	692
Urban	250	251	262	291	221
Rural	688	648	636	524	471
% Rural	73.3%	72.1%	70.8%	64.3%	68.1%
Alcohol-related	293	274	254	246	168
Urban	88	77	78	108	59
Rural	205	197	176	138	109
% Rural	70.0%	71.9%	69.3%	56.1%	64.9%
Aggressive driving	26	14	21	29	23
Urban	6	4	12	14	7
Rural	20	10	9	15	16
% Rural	76.9%	71.4%	42.9%	51.7%	69.6%
Speed-related	229	174	187	225	158
Urban	53	55	56	97	54
Rural	176	119	131	128	104
% Rural	76.9%	68.4%	70.1%	56.9%	65.8%
Disregard traffic signal	13	15	27	16	16
Urban	8	11	19	13	13
Rural	5	4	8	3	3
% Rural	38.5%	26.7%	29.6%	18.8%	18.8%
Hit and run	36	27	19	29	23
Urban	15	15	12	16	11
Rural	21	12	7	13	12
% Rural	58.3%	44.4%	36.8%	44.8%	52.2%
Construction zone	19	15	7	12	9
Urban	5	2	1	6	2
Rural	14	13	6	6	7
% Rural	73.7%	86.7%	85.7%	50.0%	77.8%
Distracted driving	2	1	1	4	2
Urban	1	0	0	2	1
Rural	1	1	1	2	1
% Rural	50%	100%	100%	50%	50%

# Note:

Distracted driving collisions are those where at least one driver was using a cell phone or other telematic device during the crash.

# Source:

# Summer months have generally had the highest incidence of fatal collisions, whereas winter months have the highest incidence of collisions overall.

		Т	otal collision	ons			F	atal collisio	ns	
Month	2005	2006	2007	2008	2009	2005	2006	2007	2008	2009
Jan	• 20,056	• 15,529	• 18,023	<b>1</b> 8,770	• 20,230	• 60	• 55	• 59	• 43	• 50
Feb	• 15,364	• 14,310	• 19,743	●20,656	• 15,258	62	64	• 52	66	• 48
Mar	• 16,240	• 14,994	• 15,573	●15,641	• 12,753	• 59	●51	67	• 47	• 39
Apr	• 15,497	• 15,151	• 14,778	●14,263	• 14,055	• 85	•48	62	• 39	• 46
May	• 16,767	• 16,778	• 15,819	●16,044	● 15,402	66	<b>8</b> 7	86	• 54	• 50
Jun	• 16,993	• 16,266	• 15,104	● 15,470	• 14,887	• 71	• 75	• 70	• 60	66
Jul	• 16,416	• 15,193	• 15,440	●14,804	• 14,118	96	66	• 70	• 75	68
Aug	• 16,781	• 15,763	• 16,355	●14,877	• 14,469	<b>7</b> 3	• 79	86	• 76	63
Sep	• 15,507	● 15,672	• 16,068	•14,793	• 14,615	90	<b>e</b> 80	• 77	• 73	64
Oct	• 17,528	• 18,486	• 18,242	17,252	• 17,576	• 88	• 78	• 75	• 56	• 47
Nov	• 19,481	● 18,084	• 19,054	• 18,662	6,924	• 54	72	• 56	• 75	• 43
Dec	• 21,729	• 16,495	• 20,800	• 24,220	• 19,389	• 51	62	• 44	• 58	• 47
Annual	208,359	192,721	204,999	205,452	189,676	855	817	804	722	631
Monthly average	17,363	16,060	17,083	17,121	15,806	71	68	67	60	53
High month	Dec	Oct	Dec	Dec	Jan	Jul	May	May	Aug	Ju
Low month	Feb	Feb	Apr	Apr	Mar	Dec	Apr	Dec	Apr	Mai

• Low High

# Table 21. Indiana traffic collisions, by severity and month, 2005-2009

#### Source:

# > July 4th and Memorial Day have generally had the most alcohol-related collisions among holiday periods since 2005.

# Table 22. Fatal collisions and fatalities on legal holidays, by alcohol involvement, 2005-2009

	D	ate	A	ll collisions	5	Fa	atal collis	ions		Fatalitie	s
				Alcohol-			Alcohol	-		Alcohol	
Holiday/Year	Begin	End	Total	related	%	Total	related		Total	related	
New Years	2004-Dec-31	2005-Jan-3	874	118	<b>1</b> 3.5%	1	1	<b>0</b> 100.0%	1	1	<b>1</b> 00.0%
	2005-Dec-30	2006-Jan-2	915	137	● 15.0%	5	2	<b>40.0%</b>	5	2	• 40.0%
	2006-Dec-29	2007-Jan-2	1,298	154	<b>•</b> 11.9%	12	4	33.3%	12	4	33.3%
	2007-Dec-28	2008-Jan-2	2,411	143	5.9%	6	1	• 16.7%	7	1	• 14.3%
	2008-Dec-31	2009-Jan-5	1,399	144	010.3%	8	2	• 25.0%	10	3	<b>30.0%</b>
St. Patrick's Day	2005-Mar-16	2005-Mar-21	1,861	160	● 8.6%	16	8	<b>50.0%</b>	16	8	50.0%
	2006-Mar-16	2006-Mar-20	1,453	155	10.7%	5	4	● 80.0%	5	4	● 80.0%
	2007-Mar-16	2007-Mar-19	912	87	9.5%	4	3	• 75.0%	5	3	60.0%
	2008-Mar-14	2008-Mar-18	1,310	124	9.5%	1	0	• 0.0%	1	0	• 0.0%
	2009-Mar-13	2009-Mar-18	1,761	144	● 8.2%	6	0	• 0.0%	6	0	• 0.0%
Memorial Day	2005-May-27	2005-May-31	1,567	178	11.4%	10	6	60.0%	10	6	60.0%
	2006-May-26	2006-May-30	1,491	165	●11.1%	11	4	36.4%	12	4	33.3%
	2007-May-25	2007-May-29	1,367	119	8.7%	8	4	6 50.0%	9	5	55.6%
	2008-May-23	2008-May-27	1,396	150	010.7%	6	2	33.3%	6	2	33.3%
	2009-May-22	2009-May-26	1,412	123	8.7%	5	0	• 0.0%	6	0	• 0.0%
July 4th	2005-Jul-1	2005-Jul-5	1,446	199	<b>1</b> 3.8%	17	5	● 29.4%	19	6	• 31.6%
	2006-Jun-30	2006-Jul-5	2,009	217	●10.8%	13	5	38.5%	15	5	• 33.3%
	2007-Jul-3	2007-Jul-5	610	64	10.5%	2	1	<b>50.0%</b>	2	1	50.0%
	2008-Jul-3	2008-Jul-7	1,301	131	10.1%	5	3	60.0%	5	3	60.0%
	2009-Jul-3	2009-Jul-6	1,007	106	10.5%	3	1	33.3%	3	1	• 33.3%
Labor Day	2005-Sep-2	2005-Sep-6	1,301	161	12.4%	15	9	60.0%	16	9	6.3%
	2006-Sep-1	2006-Sep-5	1,224	123	010.0%	12	5	6 41.7%	13	5	938.5%
	2007-Aug-31	2007-Sep-4	1,448	118	● 8.1%	9	2	• 22.2%	11	2	• 18.2%
	2008-Aug-29	2008-Sep-2	1,229	105	8.5%	9	7	• 77.8%	9	7	6 77.8%
	2009-Sep-4	2009-Sep-8	1,205	101	8.4%	4	2	<b>50.0%</b>	4	2	6 50.0%
Thanksgiving	2005-Nov-23	2005-Nov-28	2,114	143	6.8%	9	5	55.6%	10	5	6 50.0%
0 0	2006-Nov-22	2006-Nov-27	1,998	147	• 7.4%	11	5	45.5%	11	5	45.5%
	2007-Nov-21	2007-Nov-26	2,320	157	6.8%	8	2	• 25.0%	10	2	• 20.0%
	2008-Nov-26	2008-Dec-1	2,128	144	6.8%	12	8	66.7%	15	11	6 73.3%
	2009-Nov-25	2009-Nov-30	1,971	127	● 6.4%	2	1	50.0%	2	1	50.0%
Christmas	2005-Dec-23	2005-Dec-26	1,101	129	11.7%	4	0	• 0.0%	5	0	• 0.0%
	2006-Dec-22	2006-Dec-26	1,165	100	8.6%	6	5	83.3%	8	5	62.5%
	2007-Dec-21	2007-Dec-26	1,975	164	8.3%	7	2	28.6%	9	2	• 22.2%
	2008-Dec-24	2008-Dec-29	2,368	126	• 5.3%	8	3	37.5%	13	4	30.8%
	2009-Dec-24	2009-Dec-28	1,937	95	• 4.9%	3	0	• 0.0%	3	0	• 0.0%



Notes:

See glossary for definition of *alcohol-related*.

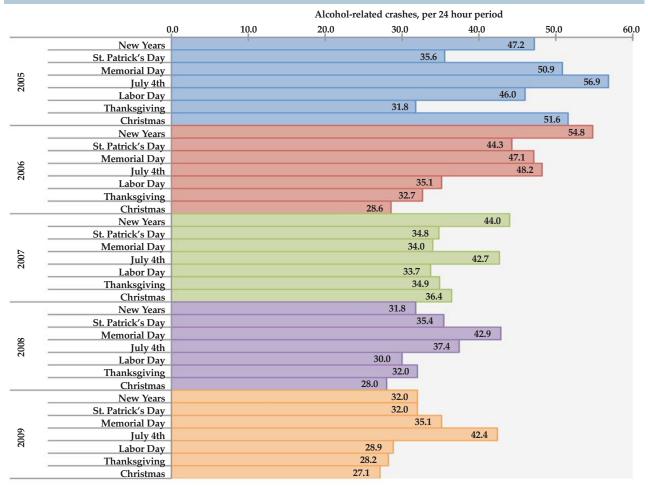
Holiday ranges begin at 6pm of the first day and end at 5:59am of the last day. Data limited to collisions with valid date and time, as marked on the crash report.

## Source:

> Since 2005, July 4th and Memorial Day have had the highest alcohol-related collision rates of any holiday.

> Alcohol-related collision rates on holidays have generally decreased each year since 2005.

Figure 12. Alcohol-related collisions per 24-hour holiday period, 2005-2009



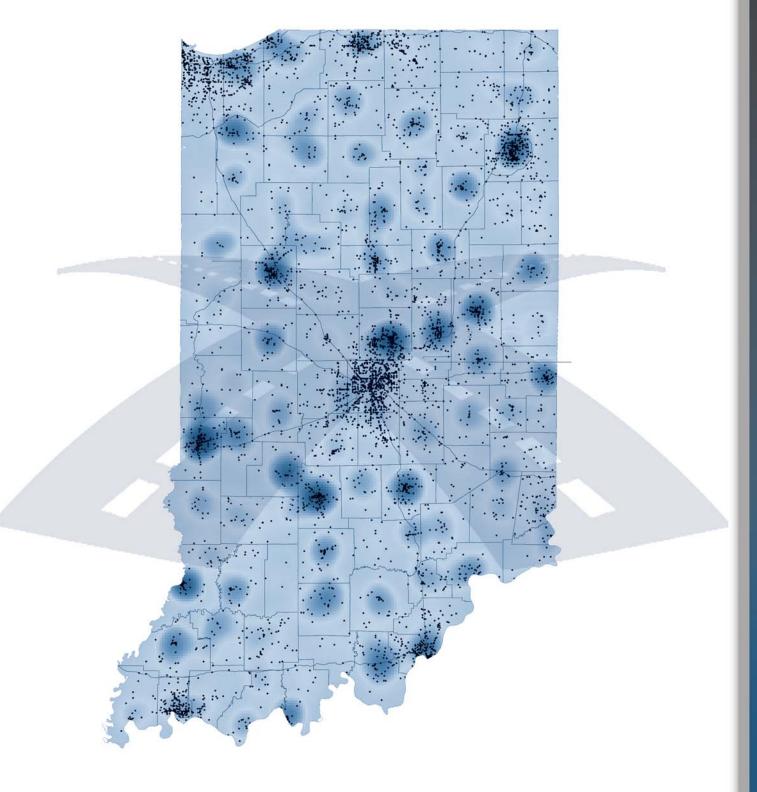
# Notes:

See glossary for definition of alcohol-related.

Holiday ranges begin at 6pm of the first day and end at 5:59am of the last day. Data limited to collisions with valid date and time, as marked on the crash report.

## Source:

# COLLISIONS



# **COLLISIONS**, 2009

INDIANA TRAFFIC SAFETY FACTS

This section provides an analysis of Indiana collisions in 2009, based on various parameters that describe the conditions and circumstances of those collisions as marked by the reporting officer. Collision data are categorized by the most severe injury involved (i.e., *fatal* collisions involve at least one fatality; *incapacitating* collisions involve no fatalities but at least one incapacitating injury; etc.). Included are analyses by contributing circumstances, environmental conditions, road characteristics, time, date, location, road type, and manner of collision. Estimated economic costs associated with traffic collisions are also estimated. See Appendix A for details on cost methodologies.

# HIGHLIGHTS

There were 631 fatal collisions in 2009, a 12.6 decrease from 2008. Total collisions decreased 7.7 percent from 2008 to 2009. There were approximately 33 fatal collisions for every 10,000 non-fatal collisions in 2009. Twenty-five percent (94) of all days in the year had three or more fatal collisions.

Driver-related factors accounted for 82 percent of all collisions and 93 percent of fatal collisions (calculated from Table 2). Proportional to all fatal collisions, *ran off road* was listed as the most common primary factor. Collisions attributable to driver *loss of control* accounted for 26 percent of all fatal collisions and seven percent of non-fatal collisions (calculated from Table 2).

Collisions involving distracted driving from cell phone use were most likely from 12am to 2:59am. At any given time of day, approximately 0.6 percent of collisions (1,215 of 189,665) involved a driver distracted by a cell phone (Note: Cell phone use is likely undercounted in collision data, due to driver selfreporting and witness descriptions).

Among all road classes, collisions on county roads and US routes were most likely to have involved fatalities in 2009. Fatal collisions per 100m VMT were highest on state roads and US routes.

Alcohol-related and hit-and-run collisions were most likely to have occurred from 12am - 5:59am on Saturdays and Sundays. Aggressive driving collisions were most likely to have occurred from 12pm - 5:59pm.

Traffic collisions in Indiana had an estimated economic cost of \$4.3 billion in 2009. On average, each collision cost the State of Indiana \$22,675 (calculated from Table 11). Alcohol-related collisions had the greatest average economic cost of any collision type at \$48,385 per collision.

- > Fatal collisions decreased by 91 (12.6 percent) from 2008 to 2009.
- > The proportion of all collisions that involved fatalities decreased from 0.35 percent in 2008 to 0.33 percent in 2009.

		Fatal collisions			Total collisions		% Fatal		
Month	2008	2009	Change	2008	2009	Change	2008	CR 2009	
Jan	43	50	7	18,770	20,230	1,460	0.23%	0.25%	
Feb	66	48	-18	20,656	15,258	-5,398	0.32%	0.31%	
Mar	47	39	-8	15,641	12,753	-2,888	0.30%	0.31%	
Apr	39	46	7	14,263	14,055	-208	0.27%	0.33%	
May	54	50	-4	16,044	15,402	-642	0.34%	0.32%	
Jun	60	66	6	15,470	14,887	-583	0.39%	0.44%	
Jul	75	68	-7	14,804	14,118	-686	0.51%	0.48%	
Aug	76	63	-13	14,877	14,469	-408	0.51%	0.44%	
Sep	73	64	-9	14,793	14,615	-178	0.49%	0.44%	
Oct	56	47	-9	17,252	17,576	324	0.32%	0.27%	
Nov	75	43	-32	18,662	16,924	-1,738	0.40%	0.25%	
Dec	58	47	-11	24,220	19,389	-4,831	0.24%	0.24%	
Total	722	631	-91	205,452	189,676	-15,776	0.35%	0.33%	

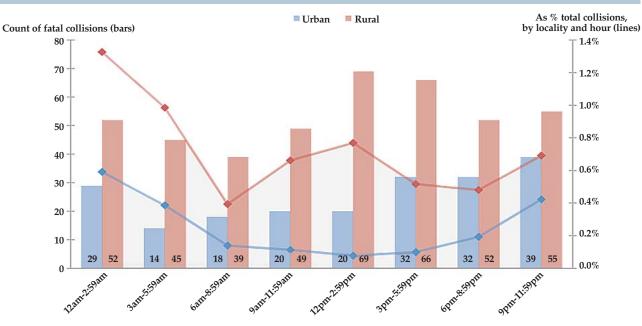
# Table 23. Indiana traffic collisions, by severity and month, 2008-2009

Source:

Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 1, 2010.

- Fatal collisions in rural locations were most frequent between 12pm and 3pm, but were most likely between 12am and 3am.
- In 2009, fatal collisions between 12pm and 3pm were nearly 10 times more likely to have occurred in a rural location than an urban location.

# Figure 13. Fatal collisions, by locality and time of day, 2009



# Note:

Data limited to collisions with valid time reported.

# Source:

- > Ran off road was the most common primary factor in fatal collisions in 2009 (21 percent or 135 of 631).
- Unsafe speed was the primary factor in 11 percent of fatal collisions (67 of 631) and two percent of non-fatal collisions ≻ (3,891 of 189,045) in 2009.
- > Distracted driving was the primary factor in less than one percent of fatal collisions (4 of 631) in 2009.

Table 24. Indiana collisions, by primary factor and collision severity, 2009

			Collisions, by seve	erity		Injuries	, by status
Primary factor	Total	Fatal	Non-fatal injury	Property damage	Fatal, as % total	Fatal	Non-fatal
Driver: Unsafe actions	106,232	297	19,332	86,603	0.3%	334	28,512
Failure to yield right of way	28,567	83	7,044	21,440	0.3%	88	10,758
Following too closely	25,757	11	4,705	21,041	< 0.1%	12	6,444
Unsafe backing	15,430	1	301	15,128	< 0.1%	1	328
Speed too fast for weather conditions	9,565	18	1,585	7,962	0.2%	21	2,136
Disregard signal/reg sign	6,609	45	2,377	4,187	0.7%	51	3,825
Improper lane usage	6,315	6	585	5,724	0.1%	7	775
Improper turning	5,205	7	431	4,767	0.1%	8	592
Unsafe speed	3,958	67	1,264	2,627	1.7%	78	1,857
Left of center	2,759	49	785	1,925	1.8%	54	1,419
Improper passing	1,862	8	208	1,646	0.4%	12	296
Wrong way on one way	205	2	47	156	1.0%	2	82
Driver: Loss of control	14,073	164	3,634	10,275	1.2%	176	4,596
Ran off road	10,846	135	2,893	7,818	1.2%	145	3,549
Overcorrecting/oversteering	3,178	29	735	2,414	0.9%	31	1,039
Jackknifing	49	0	6	43	0.0%	0	8
Driver: Distractions	7,874	4	1,686	6,184	0.1%	4	2,359
Unspecified distraction	7,101	3	1,497	5,601	< 0.1%	3	2,111
Cell phone / other electronic device	675	1	154	520	0.1%	1	194
Passenger distraction	98	0	35	63	0.0%	0	54
Driver: Cognitive/Physical impairment	6,020	34	2,097	3,889	0.6%	35	2,648
Alcoholic beverages	3,101	19	944	2,138	0.6%	19	1,197
Driver asleep or fatigued	1,658	6	552	1,100	0.4%	6	730
Driver illness	957	7	509	441	0.7%	8	603
Prescription drugs	162	0	48	114	0.0%	0	57
Illegal drugs	142	2	44	96	1.4%	2	61
Driver: Miscellaneous factors	20,607	89	3,661	16,857	0.4%	96	4,650
Influenced by pedestrian action	932	35	726	171	3.8%	35	757
Violation of license restriction	27	0	10	17	0.0%	0	12
Other (unspecified)	19,289	54	2,918	16,317	0.3%	61	3,873
(Driver not a factor)	359	0	7	352	0.0%	0	8
Driver factors (all)	154,806	588	30,410	123,808	0.4%	645	42,765
Vehicle factors	4,663	10	703	3,950	0.2%	14	976
Environmental factors	28,843	29	2,233	26,581	0.1%	29	2,775
All collisions	189,676	631	33,411	155,634	0.3%	692	46,590

#### Notes:

INDIANA TRAFFIC SAFETY FACTS

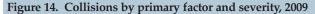
All collisions includes cases where primary factor was not reported.

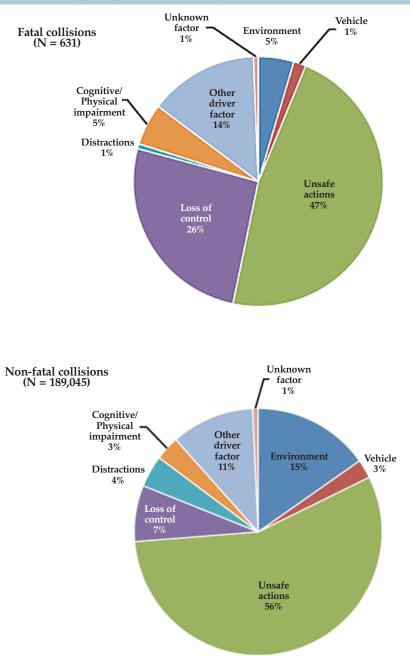
*Non-fatal injury* collisions are those with no fatalities and at least one *incapacitating*, *non-incapacitating*, or *possible* injury. *Non-fatal* injury status includes *incapacitating*, *non-incapacitating*, and *possible* injury categories.

## Source:

# **COLLISIONS**

- Fatal collisions were more likely than non-fatal collisions to have been attributable to a driver losing control of the vehicle in 2009.
- > Unsafe actions were less likely to have been the primary factor in fatal collisions than in non-fatal collisions.
- Environmental and vehicular circumstances were less likely to have been the primary factor in fatal collisions than in nonfatal collisions.



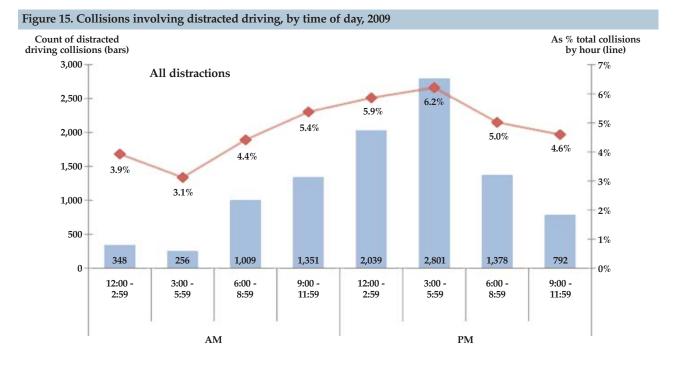


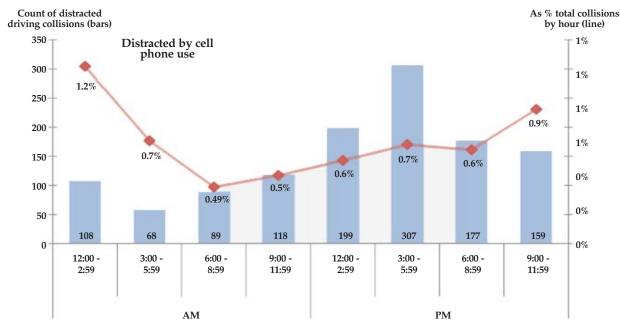
#### **Note:** See Table 2 for definitions of factor categories related to driver actions.

Source:

# > Collisions involving distracted driving from cell phone use were most likely from 12am to 2:59am.

- Collisions involving all forms of distracted driving were most likely during the evening rush hour (3pm to 5:59pm).
- At any given time of day, approximately 0.6 percent of collisions (1,215 of 189,665) involved a driver distracted by a cell phone.





# Notes:

**INDIANA** TRAFFIC SAFETY FACTS

Data limited to collisions where a valid collision time was reported.

All distractions includes cell phone use, use of other electronic devices, passenger distractions, and other (unspecified) distractions. Distracted by cell phone use also includes collisions where a driver was using some other electronic device.

#### Source:

> The highest likelihood for fatal collisions in 2009 was Monday and Friday, 12am - 2:59am, and Sunday, 3am - 5:59am.

					e of day				-
Day of week	12am- 2:59am	3am- 5:59am	6am- 8:59am	9am- 11:59am	12pm- 2:59pm	3pm- 5:59pm	6pm- 8:59pm	9pm- 11:59pm	All hours
Total collisions	8,861	8,206	22,855	25,132	34,811	45,099	27,470	17,231	189,665
Sunday	2,172	1,455	1,172	2,335	3,742	3,797	3,321	1,961	19,955
Monday	762	977	4,197	3,448	4,858	6,552	3,519	1,922	26,235
Tuesday	850	1,001	4,004	3,828	5,061	7,414	4,027	2,255	28,440
Wednesday	882	981	4,203	3,892	5,252	7,182	4,008	2,301	28,701
Thursday	1,089	1,224	4,022	3,856	4,893	7,197	3,909	2,293	28,483
Friday	1,135	1,119	3,521	3,948	5,875	8,287	4,608	3,081	31,574
Saturday	1,971	1,449	1,736	3,825	5,130	4,670	4,078	3,418	26,277
Fatal collisions	81	59	57	69	89	98	84	94	633
Sunday	20	16	5	9	15	9	11	10	95
Monday	10	8	4	7	16	14	5	3	62
Tuesday	7	3	10	15	14	14	10	14	87
Wednesday	8	6	12	12	11	15	15	10	89
Thursday	7	5	9	6	7	17	16	15	82
Friday	16	8	10	9	12	12	14	15	96
Saturday	13	13	7	11	14	17	13	27	115
% Fatal	0.9%	• 0.7%	• 0.2%	• 0.3%	• 0.3%	• 0.2%	• 0.3%	• 0.5%	0.3%
Sunday	0.9%	• 1.1%	• 0.4%	• 0.4%	• 0.4%	• 0.2%	• 0.3%	• 0.5%	0.5%
Monday	• 1.3%	0.8%	• 0.1%	• 0.2%	• 0.3%	• 0.2%	• 0.1%	• 0.2%	0.3%
Tuesday	0.8%	• 0.3%	• 0.2%	• 0.4%	• 0.3%	• 0.2%	• 0.2%	• 0.6%	0.3%
Wednesday	0.9%	• 0.6%	• 0.3%	• 0.3%	• 0.2%	• 0.2%	• 0.4%	• 0.4%	0.3%
Thursday	• 0.6%	• 0.4%	• 0.2%	• 0.2%	• 0.1%	• 0.2%	• 0.4%	• 0.7%	0.3%
Friday	• 1.4%	• 0.7%	• 0.3%	• 0.2%	• 0.2%	• 0.1%	• 0.3%	• 0.5%	0.3%
Saturday	• 0.7%	0.9%	• 0.4%	• 0.3%	• 0.3%	• 0.4%	• 0.3%	0.8%	0.4%

# Table 25. Collisions by severity, day of the week, and time of day, 2009

Low High

# Notes:

Limited to collisions where date and time were reported.

Non-fatal injury status includes incapacitating, non-incapacitating, and possible injury categories.

# Source:

- In 2009, a collision was 2.7 times more likely to have involved fatalities when the road was *curved* (0.8 percent), relative to *straight* roads (0.3 percent).
- > Among all road classes, collisions on *county* roads and US routes were most likely to have involved fatalities in 2009.

# Table 26. Collisions by severity and road parameters, 2009

		Co	llisions, by sever	rity		Injuries	, by status
	Total	Fatal	Non-fatal injury	Property damage	Fatal as % total	Fatal	Non-fat
By road class							
Local/city	85,066	152	15,972	68,942	0.2% ●	164	21,784
State road	27,835	152	5,756	21,927	0.5% 🔴	167	8,541
County road	23,973	157	4,669	19,147	0.7%	169	6,330
US route	17,942	106	3,809	14,027	0.6% 🔴	108	5,767
Interstate	13,167	57	1,932	11,178	0.4%	77	2,724
Unknown road class	21,693	7	1,273	20,413	0.0%	7	1,444
By junction type							
No junction	127,531	454	19,691	107,386	0.4%	504	26,770
Four-way	37,531	113	9,060	28,358	0.3%	123	13,482
T-intersection	19,447	49	3,771	15,627	0.3%	50	5,201
Ramp	2,805	6	449	2,350	0.2%	6	564
Interchange	671	3	133	535	0.4%	3	176
Y-intersection	646	2	135	509	0.3%	2	170
Five point or more	486	4	124	358	0.8%	4	176
Traffic circle/roundabout	454	0	41	413	0.0%	0	44
Unknown junction type	105	0	7	98	0.0%	0	7
By road character					,		
Straight	164,638	476	28,958	135,204	0.3%	522	40,695
Level	136,708	351	23,871	112,486	0.3%	381	33,435
Graded	22,065	88	3,948	18,029	0.4%	93	5,636
Hillcrest	5,865	37	1,139	4,689	0.6%	48	1,624
Curve	19,248	151	4,140	14,957	0.8%	166	5,525
Level	11,435	101	2,378	8,956	0.9%	109	3,153
Graded	6,415	44	1,478	4,893	0.7%	49	2,007
Hillcrest	1,398	6	284	1,108	0.4%	8	365
Non-roadway crash	5,569	4	302	5,263	0.1%	4	356
Unknown character	221	0	11	210	0.0%	0	14
All collisions	189,676	631	33,411	155,634	0.3%	692	46,590

Low High

#### Notes:

*Non-fatal injury* collisions are those with no fatalities and at least one *incapacitating*, *non-incapacitating*, or *possible* injury. *Non-fatal* injury status includes *incapacitating*, *non-incapacitating*, and *possible* injury categories.

# Source:

- Collisions where the vehicle ran off [the] road represented 11 percent (23,883 or 189,676) of total collisions and 32 percent (203 of 631) of fatal collisions in 2009.
- > *Ran off of road* and *head-on* collisions were most likely to have involved fatalities in 2009.

# Table 27. Collisions by severity and manner of collision, 2009

		Co	llisions, by sever	ity		Injuries	, by status
Manner of collision	Total	Fatal	Non-fatal injury	Property damage	Fatal as % total	Fatal	Non-fatal
Rear end	43,467	52	8,480	34,935	0.1% ●	58	12,012
Right angle	32,494	141	7,686	24,667	0.4% 🔴	156	11,825
Ran off road	23,883	203	6,167	17,513	0.8% 🔴	221	7,650
Head on	21,233	144	3,762	17,327	0.7% 🔴	157	5,349
Backing	18,395	1	443	17,951	0.0% ●	1	490
Same direction sideswipe	17,263	10	1,146	16,107	0.1% ●	10	1,409
Left turn	8,915	15	1,975	6,925	0.2% ●	17	2,956
Opposite direction sideswipe	4,921	9	638	4,274	0.2% ●	12	905
Right turn	2,509	2	282	2,225	0.1%	2	351
Left/right turn	2,299	1	333	1,965	0.0% ●	1	464
Rear to rear	410	0	43	367	0.0% ●	0	66
Other collision manner	10,476	38	1,725	8,713	0.4% ●	41	2,260
Non-collision	2,648	14	688	1,946	0.5% 🔴	15	803
Unknown	763	1	43	719	0.1% ●	1	50
All collisions	189,676	631	33,411	155,634	0.3%	692	46,590
		•	•				
	L	ow	Hi	igh			

Notes:

*Non-fatal injury* collisions are those with no fatalities and at least one *incapacitating*, *non-incapacitating*, or *possible* injury. *Non-fatal* injury status includes *incapacitating*, *non-incapacitating*, and *possible* injury categories.

# Source:

- Collisions occurring in *fog/smoke/smog* conditions or in *severe cross winds* had the highest likelihood of involving fatalities among weather conditions.
- Collisions occurring on roads with *loose material* or with *mud* had the highest likelihood of involving fatalities among road surface conditions.

# Table 28. Collisions by severity and environmental conditions, 2009

		Co	llisions, by sever	ity		Injuries	, by status
	Total	Fatal	Non-fatal injury	Property damage	Fatal as % total	Fatal	Non-fata
By light conditions							
Daylight	122,655	317	22,925	99,413	0.3% ●	349	32,422
Dark (not lighted)	30,587	202	4,540	25,845	0.7% 🔴	222	6,084
Dark (lighted)	26,068	82	4,436	21,550	0.3% ●	89	6,018
Dawn/dusk	9,075	28	1,484	7,563	0.3%	30	2,031
Unknown	1,291	2	26	1,261	0.2% ●	2	35
By weather conditions							
Clear	108,194	388	19,675	88,131	0.4%	428	27,427
Cloudy	43,485	141	7,528	35,816	0.3%	154	10,641
Rain	21,122	53	3,937	17,132	0.3%	56	5,472
Snow	10,054	19	1,272	8,763	0.2% ●	20	1,676
Blowing sand/soil/snow	3,035	8	446	2,581	0.3%	10	620
Sleet/hail/freezing rain	2,237	9	350	1,878	0.4%	10	461
Fog/smoke/smog	804	10	139	655	1.2% 🔴	11	209
Severe cross wind	307	3	51	253	1.0% 🔴	3	68
Unknown	438	0	13	425	0.0% ●	0	16
By road surface conditions							
Dry	131,604	492	24,083	107,029	0.4% 🔴	537	33,786
Wet	32,486	85	5,890	26,511	0.3%	93	8,277
Snow/Slush	12,733	22	1,517	11,194	0.2%	26	2,036
Ice	10,668	25	1,514	9,129	0.2%	28	1,959
Loose material on road	832	4	218	610	0.5% 🔴	5	275
Water (standing or moving)	781	2	160	619	0.3%	2	222
Muddy	166	1	20	145	0.6% 🔴	1	24
Unknown	406	0	9	397	0.0% ●	0	11
All collisions	189,676	631	33,411	155,634	0.3%	692	46,590

High

#### Notes:

*Non-fatal injury* collisions are those with no fatalities and at least one *incapacitating*, *non-incapacitating*, or *possible* injury. *Non-fatal* injury status includes *incapacitating*, *non-incapacitating*, and *possible* injury categories.

Low

#### Source:

# > In 2009, railroad crossings were the most dangerous traffic control type for collisions, with 2.7 percent involving fatalities.

# Table 29. Collisions by severity and traffic control type, 2009

		Co	llisions, by sever	ity		Injuries	, by status
Traffic control type	Total	Fatal	Non-fatal injury	Property damage	Fatal as % total	Fatal	Non-fatal
Lane control	45,447	189	8,201	37,057	0.4%	213	11,480
Traffic light	32,196	54	7,249	24,893	0.2% ●	58	10,595
Stop sign	18,944	75	4,407	14,462	0.4%	83	6,528
No passing zone	5,144	68	1,120	3,956	1.3%	75	1,600
Other regulatory sign	1,498	7	289	1,202	0.5% •	8	408
Yield sign	1,345	6	252	1,087	0.4%	6	379
Flashing signal	1,251	8	352	891	0.6% ●	8	572
Railroad crossing	373	10	70	293	2.7% 🔴	12	99
Person directing traffic	232	0	53	179	0.0%	0	75
Unknown/not reported	390	1	24	365	0.3% ●	1	29
None	82,856	213	11,394	71,249	0.3% ●	228	14,825
All collisions	189,676	631	33,411	155,634	0.3%	692	46,590
	L	ow		igh			

#### Notes:

Non-fatal injury collisions are those with no fatalities and at least one *incapacitating*, *non-incapacitating*, or *possible* injury. Non-fatal injury status includes *incapacitating*, *non-incapacitating*, and *possible* injury categories.

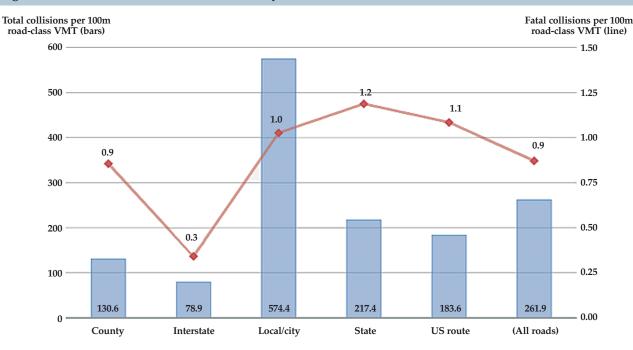
#### Source:

Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 1, 2010.

> Fatal collision rates per 100m VMT were highest on *state roads* and US routes in 2009.

> Total collision rates per 100m VMT were highest on *local/city roads* and lowest on *interstates*.

# Figure 16. Total collision and fatal collision rates, by road class, 2009



# Note:

Vehicle miles travelled data not available by road class for 2009 at time of publication; 2008 data used as a proxy.

# Sources:

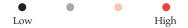
Collisions: I Vehicle miles travelled: I

**INDIANA** TRAFFIC SAFETY FACTS

- Collisions occurring in road segments with *cross-overs* or *lane shifts* had the highest likelihood of involving fatalities in 2009.
- In 2009, 1.4 percent of fatal collisions (9 of 631) occurred in construction zones, compared to 2.3 percent of non-fatal collisions (4,534 of 189,045).

# Table 30. Collisions in construction zones, by severity and construction type, 2009

		Co	llisions, by sever	ity		Injuries	, by status
Construction zone type	Total	Fatal	Non-fatal injury	Property damage	Fatal as % total	Fatal	Non-fata
Lane closure	1,998	2	328	1,668	0.1%	2	475
Cross-over/lane shift	442	3	49	390	0.7% 🔴	3	70
Intermittent/moving work	513	2	92	419	0.4%	2	129
Work on shoulder	1,075	2	206	867	0.2%	2	283
Other/not reported	515	0	83	432	0.0% ●	0	107
All construction types	4,543	9	758	3,776	0.2%	9	1,064
Not in construction zone	185,133	622	32,653	151,858	0.3%	683	45,526
All collisions	189,676	631	33,411	155,634	0.3%	692	46,590



## Notes:

Non-fatal injury collisions are those with no fatalities and at least one *incapacitating*, *non-incapacitating*, or *possible* injury. Non-fatal injury status includes *incapacitating*, *non-incapacitating*, and *possible* injury categories.

#### Source:

- > Alcohol-related and hit-and-run collisions were most likely to have occurred from 12am 5:59am on Saturdays and Sundays.
- > Aggressive driving collisions were most likely to have occurred from 12pm 5:59pm.
- > Collisions involving vehicles *disregarding a signal* were least likely to have occurred on Fridays and Saturdays.

Table 31. Collisions by day, hour, and collision circumstances, 2009

			Low	<	<	<			>	>	I	High				
				ohol- ated		essive ving		oeed- lated	Disr siş	regard gnal		it- -run		racted, type		tracted, phone
Day	Time	Total	Count	As % day/time total	Count	As % day/time total	Count	As % day/time total	Count	As % day/time total	Count	As % day/time total	Count	As % day/time total	Count	As % day/time total
Mon	12am - 5:59am	1,739	168	9.7	12	0.7	262	15.1	14	0.8	258	14.8	51	2.9	13	0.7
	6am - 11:59am	7,645	38	0.5	82	1.1	1,013	13.3	182	2.4	572	7.5	382	5.0	29	0.4
	12pm - 5:59pm	11,410	175	1.5	208	1.8	568	5.0	254	2.2	1,177	10.3	734	6.4	65	0.6
	6pm - 11:59pm	5,441	391	7.2	85	1.6	373	6.9	103	1.9	827	15.2	275	5.1	48	0.9
Tue	12am - 5:59am	1,851	260	14.0	7	0.4	215	11.6	17	0.9	393	21.2	60	3.2	11	0.6
	6am - 11:59am	7,832	61	0.8	115	1.5	881	11.2	194	2.5	663	8.5	397	5.1	36	0.5
	12pm - 5:59pm	12,475	161	1.3	190	1.5	1,151	9.2	260	2.1	1,160	9.3	757	6.1	76	0.6
	6pm - 11:59pm	6,282	403	6.4	79	1.3	701	11.2	134	2.1	881	14.0	307	4.9	44	0.7
Wed	12am - 5:59am	1,863	293	15.7	18	1.0	248	13.3	26	1.4	373	20.0	55	3.0	15	0.8
	6am - 11:59am	8,095	75	0.9	110	1.4	972	12.0	189	2.3	734	9.1	364	4.5	31	0.4
	12pm - 5:59pm	12,434	199	1.6	218	1.8	1,106	8.9	272	2.2	1,226	9.9	704	5.7	79	0.6
	6pm - 11:59pm	6,309	420	6.7	97	1.5	661	10.5	128	2.0	883	14.0	313	5.0	44	0.7
Thu	12am - 5:59am	2,313	372	16.1	15	0.6	386	16.7	26	1.1	505	21.8	65	2.8	19	0.8
	6am - 11:59am	7,878	54	0.7	112	1.4	1,012	12.8	180	2.3	612	7.8	360	4.6	32	0.4
	12pm - 5:59pm	12,090	184	1.5	250	2.1	838	6.9	293	2.4	1,171	9.7	744	6.2	80	0.7
	6pm - 11:59pm	6,202	474	7.6	99	1.6	497	8.0	146	2.4	909	14.7	301	4.9	53	0.9
Fri	12am - 5:59am	2,254	442	19.6	18	0.8	245	10.9	22	1.0	556	24.7	73	3.2	21	0.9
	6am - 11:59am	7,469	89	1.2	93	1.2	610	8.2	193	2.6	653	8.7	400	5.4	38	0.5
	12pm - 5:59pm	14,162	204	1.4	268	1.9	901	6.4	269	1.9	1,325	9.4	885	6.2	96	0.7
	6pm - 11:59pm	7,689	611	7.9	117	1.5	578	7.5	124	1.6	1,163	15.1	418	5.4	60	0.8
Sat	12am - 5:59am	3,420	932	27.3	47	1.4	404	11.8	56	1.6	1,022	29.9	155	4.5	46	1.3
	6am - 11:59am	5,561	147	2.6	74	1.3	677	12.2	131	2.4	603	10.8	285	5.1	19	0.3
	12pm - 5:59pm	9,800	260	2.7	168	1.7	903	9.2	192	2.0	1,175	12.0	563	5.7	60	0.6
	6pm - 11:59pm	7,496	725	9.7	132	1.8	800	10.7	122	1.6	1,236	16.5	314	4.2	60	0.8
Sun	12am - 5:59am	3,627	981	27.0	38	1.0	460	12.7	50	1.4	1,133	31.2	145	4.0	41	1.1
	6am - 11:59am	3,507	121	3.5	41	1.2	505	14.4	88	2.5	468	13.3	172	4.9	22	0.6
	12pm - 5:59pm	7,539	197	2.6	135	1.8	721	9.6	213	2.8	908	12.0	453	6.0	50	0.7
	6pm - 11:59pm	5,282	418	7.9	62	1.2	561	10.6_	105	2.0	761	14.4	242	4.6	27	0.5
Mon		26,235	772	2.9	387	1.5	2,216	8.4	553	2.1	2,834	10.8	1,442	5.5	155	0.6
Tue		28,440	885	3.1	391	1.5	2,210	10.4	605	2.1	3,097	10.8	1,442	5.3	155	0.6
Wed		28,704	987	3.4	443	1.4	2,940	10.4	615	2.1	3,217	11.2	1,436	5.0	169	0.6
Thu		28,486	1,084	3.8	476	1.7	2,900	9.6	645	2.1	3,197	11.2	1,430	5.2	184	0.6
Fri		31,576	1,346	4.3	496	1.6	2,335	7.4	608	1.9	3,697	11.2	1,470	5.6	215	0.0
Sat		26,279	2,064	7.9	421	1.6	2,335	10.6	501	1.9	4,036	11.7	1,770	5.0	185	0.7
Sun		19,956	1,717	8.6	276	1.4	2,785	11.3	456	2.3	4,030 3,271	16.4	1,012	5.1	140	0.7
TOTA	L	189,676	8,855	4.7	2,890	1.5	18,252	9.6	3,983	2.1	23,349	12.3	9,974	5.3	1,215	0.6

#### Notes:

Daily totals include collisions with invalid time reported. Color comparisons are only valid within crash-type categories.

Source:

Proportional to total collisions by month, alcohol-related collisions were least likely in winter months (December - February).

Ligh

- Aggressive driving collisions were proportionally most likely during summer months. >
- Speed-related collisions were proportionally most likely during winter months. >

# Table 32. Collisions by month and collision circumstances, 2009

Low

		Low	<	<	<			>	>	ŀ	ligh				
			ohol- ated	Aggr driv	essive ving		eed- ated		egard gnal	H and			racted, type		racted, phone
Month	Total	Count	As % day/time total	Count	As % day/time total	Count	As % day/time total	Count	As % day/time total	Count	As % day/time total	Count	As % day/time total	Count	As % day/time total
Jan	20,230	756	3.7	209	1.0	4,765	23.6	359	1.8	2,284	11.3	621	3.1	86	0.4
Feb	15,258	664	4.4	208	1.4	2,253	14.8	303	2.0	2,031	13.3	677	4.4	79	0.5
Mar	12,753	739	5.8	211	1.7	703	5.5	314	2.5	1,778	13.9	745	5.8	102	0.8
Apr	14,055	707	5.0	212	1.5	880	6.3	334	2.4	1,814	12.9	880	6.3	106	0.8
May	15,402	818	5.3	265	1.7	820	5.3	303	2.0	1,993	12.9	969	6.3	119	0.8
Jun	14,887	698	4.7	233	1.6	832	5.6	329	2.2	1,854	12.5	917	6.2	96	0.6
Jul	14,118	775	5.5	218	1.5	762	5.4	361	2.6	1,831	13.0	886	6.3	93	0.7
Aug	14,469	778	5.4	259	1.8	832	5.8	303	2.1	2,010	13.9	902	6.2	106	0.7
Sep	14,615	728	5.0	254	1.7	831	5.7	312	2.1	1,831	12.5	944	6.5	106	0.7
Oct	17,576	759	4.3	299	1.7	1,179	6.7	389	2.2	2,013	11.5	910	5.2	130	0.7
Nov	16,924	731	4.3	253	1.5	805	4.8	337	2.0	1,850	10.9	779	4.6	84	0.5
Dec	19,389	702	3.6	269	1.4	3,590	18.5	339	1.7	2,060	10.6	744	3.8	108	0.6
Total	189,676	8,855	4.7	2,890	1.5	18,252	9.6	3,983	2.1	23,349	12.3	9,974	5.3	1,215	0.6

# Note:

Color comparisons are only valid within crash-type categories.

## Source:

Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 1, 2010.

# Alcohol-related collisions produced \$428 million in economic costs to Indiana in 2009.

- Speed-related collisions produced \$569 million in economic costs to Indiana in 2009.  $\succ$
- Forty-eight percent of costs associated with *alcohol-related* collisions were attributable to fatalities in those collisions. >

Table 33. Collisions, injuries, and estimated economic costs, by collision type, 2009

				Collision	n type			
	All	Alcohol- related	Aggressive driving	Speed- related	Disregard signal	Hit- and-run	Distracted, any type	Distracted, cell phone
Collisions	189,676	8,855	2,890	18,252	3,983	23,349	9,974	1,215
Injuries	41,867	3,815	1,074	5,508	2,101	2,108	2,865	362
Fatalities	692	168	23	158	16	23	10	2
Incapacitating	3,179	473	81	514	123	146	160	22
Non-incapacitating	37,996	3,174	970	4,836	1,962	1,939	2,695	338
Estimated costs (millions)	\$4,300.9	\$428.4	\$103.7	\$568.6	\$147.0	\$224.9	\$229.0	\$28.5
From fatalities	\$849.1	\$206.1	\$28.2	\$193.9	\$19.6	\$28.2	\$12.3	\$2.5
From incapacitating injuries	\$350.1	\$52.1	\$8.9	\$56.6	\$13.5	\$16.1	\$17.6	\$2.4
From non-incap. injuries	\$1,294.3	\$106.9	\$33.2	\$162.9	\$68.2	\$65.9	\$91.1	\$11.7
Other costs	\$1,807.3	\$63.3	\$33.3	\$155.2	\$45.6	\$114.7	\$108.0	\$12.0

# Notes:

See Appendix A for details on cost computations.

All dollar values in 2009 dollars.

*Other costs* includes costs associated with individuals with unknown injuries and costs to damaged vehicles.

## Source:

- ▶ In general, each traffic collision cost the State of Indiana \$22,675 in 2009.
- > Alcohol-related collisions had the greatest economic cost of any collision type in 2009 (\$48,385 per collision).

# Figure 17. Average economic impact of traffic collisions, by collision type, 2009

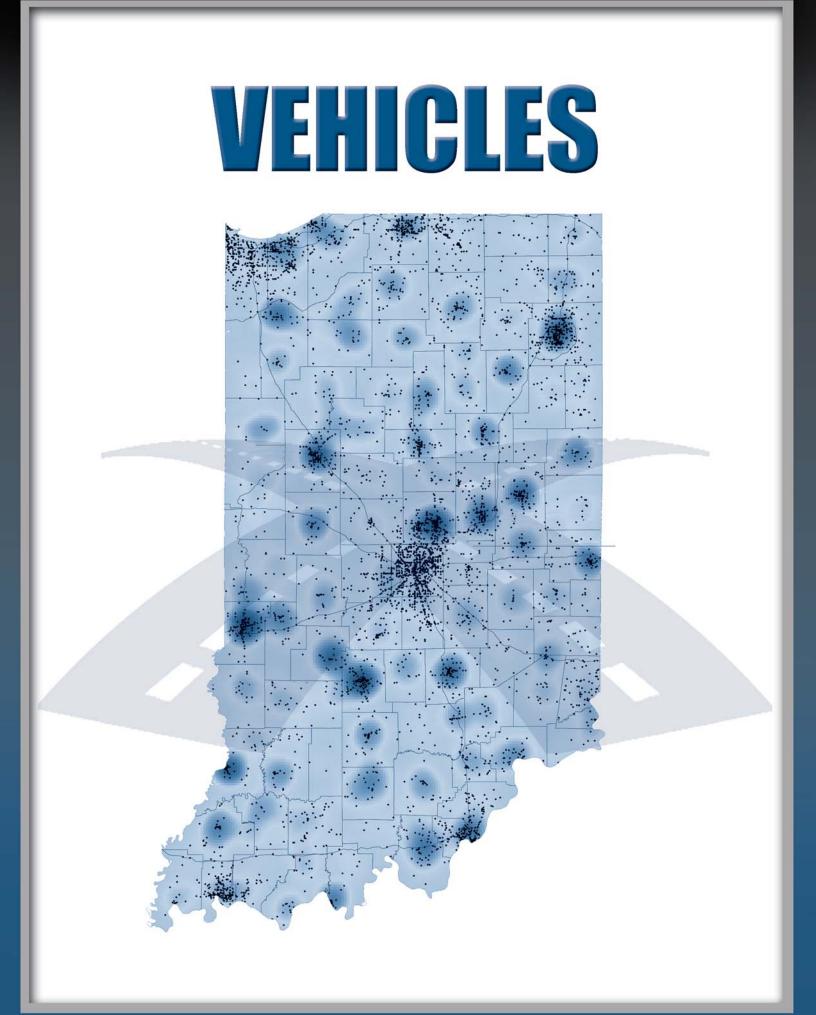


# Notes:

See Appendix A for details on cost computations. All dollar values in 2009 dollars.

Source:

INDIANA TRAFFIC SAFETY FACTS



# VEHICLES, 2009

INDIANA TRAFFIC SAFETY FACTS

The vehicles section summarizes data on motor vehicles involved in Indiana collisions in 2009. Special emphasis is given to passenger vehicles (passenger cars, pickup trucks, sport utility vehicles, and vans), large trucks, and school buses. Except as noted, motorcycles and mopeds are described in the Motorcycles section of this report. Vehicle data are categorized by collision severity, vehicle use, locality (rural/urban), road class, and primary factors.

# HIGHLIGHTS

Vehicles involved in Indiana collisions per 100,000 registered vehicles decreased on average between 2005 and 2009.

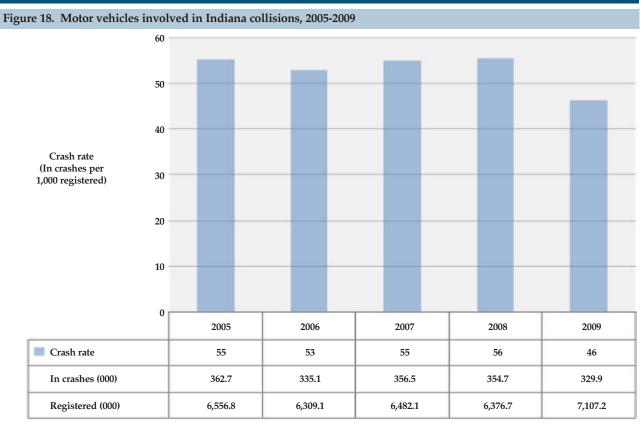
In 2009, large trucks accounted for 3.5 percent of the vehicles involved in all collisions, and nearly 11 percent of the vehicles involved in fatal collisions.

For every 1,000 passenger cars involved in collisions, 5.9 were involved in fatal collisions on *interstates*.

*Failure to yield right of way* was the most common collision primary factor in serious injury collisions involving passenger vehicle types.

Nearly 90 percent of the collisions involving school buses in 2009 were property damage only collisions.

- While the number of registered vehicles increased (11 percent) from 2008 to 2009, the number of motor vehicles involved in collisions decreased (7 percent) during the same time period.
- > Per 1,000 registered vehicles, the crash rate decreased from 56 in 2008 to 46 in 2009.



#### Notes:

Vehicle counts exclude unit types reported as *bicycles* and *pedestrians*. Registered vehicles excludes all non-motor vehicle types.

Sources:

Motor vehicles involved Registered vehicles Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 1, 2010. Indiana Bureau of Motor Vehicles, as of June 8, 2010.

# **VEHICLES**

- In 2009, other vehicles were four times as likely to have been involved in a fatal collision as passenger vehicles (10 versus 2.5 per 1,000 total involved, respectively). Excluding motorcycles, the fatal collision rate for other vehicles was 6.1, about 2.5 times more likely than passenger vehicles.
- Among all vehicle types, *motorcycles/mopeds* were most likely to have been involved in a fatal collision in 2009 (35.2 per 1,000 total involved). This is up from 32.7 per 1,000 involved in 2008.
- In 2009, large trucks accounted for 3.5 percent of the vehicles involved in all collisions, but nearly 11 percent of the vehicles involved in fatal collisions.
- While motorcycles/mopeds represented only 1 percent of all vehicles involved in all collisions, they accounted for over 11 percent of vehicles involved in fatal collisions.

					Vehicl	es involved	l in				
	All collisions		Fatal collisions		Incapacitating collisions		Non- incapacitating collisions		Property damage only collisions		Vehicles in fatal collisions per 1,000 in all collisions
Vehicle type	Count	% Total	Count	% Total	Count	% Total	Count	% Total	Count	% Total	
Passenger vehicles	304,393	92.3%	767	75.1%	3,799	84.4%	50,888	93.1%	248,939	92.3%	2.5
Passenger car	187,981	57.0%	417	40.8%	2,308	51.3%	31,800	58.2%	153,456	56.9%	2.2
Pickup truck	47,058	14.3%	166	16.3%	640	14.2%	7,289	13.3%	38,963	14.4%	3.5
Sport utility vehicle (SUV)	46,232	14.0%	130	12.7%	556	12.4%	7,819	14.3%	37,727	14.0%	2.8
Van	23,122	7.0%	54	5.3%	295	6.6%	3,980	7.3%	18,793	7.0%	2.3
Other vehicles	25,513	7.7%	254	24.9%	703	15.6%	3,744	6.9%	20,812	7.7%	10.0
Buses	1,821	0.6%	6	0.6%	18	0.4%	206	0.4%	1,591	0.6%	3.3
Large trucks	11,591	3.5%	110	10.8%	173	3.8%	1,205	2.2%	10,103	3.7%	9.5
Motorcycle/moped	3,354	1.0%	118	11.6%	445	9.9%	1,831	3.4%	960	0.4%	35.2
Other vehicle types	870	0.3%	4	0.4%	15	0.3%	130	0.2%	721	0.3%	4.6
Unknown vehicle type	7,877	2.4%	16	1.6%	52	1.2%	372	0.7%	7,437	2.8%	2.0
Total vehicles	329,906	100%	1,021	100%	4,502	100%	54,632	100%	269,751	100%	

# Table 34. Motor vehicles involved in Indiana collisions, by collision severity, 2009

#### Notes:

Vehicle counts exclude unit types reported as bicycles and pedestrians.

Other vehicle types include combination vehicle, farm vehicle, and motor home/recreational vehicle.

Unknown vehicle type includes vehicles reported as unknown, blank or invalid codes.

Non-incapacitating includes collisions with injuries reported as non-incapacitating and possible injuries.

#### Source:

- The fatal collision rate per 1,000 vehicles involved in all collisions was highest for commercial use vehicles (10), ambulances (7.6), and fire vehicles (4).
- > Among public emergency vehicles (police, ambulance, and fire), *police* have the highest count of fatal collisions.

Table 35. Motor vehicles involved in Indiana collisions by vehicle use and collision severity, 2009

				Ve	hicles in	volved in					
	All co	llisions	Fatal	collisions		acitating lisions	incapa	lon- acitating isions		y damage ollisions	Vehicles in fatal collisions per 1,000 in all collisions
Vehicle use	Count	% Total	Count	% Total	Count	% Total	Count	% Total	Count	% Total	
Personal	302,914	91.8%	888	87.0%	4,202	93.3%	52,134	95.4%	245,690	91.1%	2.9
Commercial	10,790	3.3%	108	10.6%	168	3.7%	1,132	2.1%	9,382	3.5%	10.0
Police	2,561	0.8%	6	0.6%	35	0.8%	332	0.6%	2,188	0.8%	2.3
Other	2,437	0.7%	5	0.5%	29	0.6%	242	0.4%	2,161	0.8%	2.1
Rental, not leased	1,393	0.4%	2	0.2%	13	0.3%	175	0.3%	1,203	0.4%	1.4
School	1,160	0.4%	3	0.3%	17	0.4%	120	0.2%	1,020	0.4%	2.6
Highway department	457	0.1%	1	0.1%	3	0.1%	39	0.1%	414	0.2%	2.2
Ambulance	395	0.1%	3	0.3%	4	0.1%	51	0.1%	337	0.1%	7.6
Public utilities	316	0.1%	0	0.0%	1	0.0%	35	0.1%	280	0.1%	0.0
Fire	250	0.1%	1	0.1%	4	0.1%	20	0.0%	225	0.1%	4.0
Military	82	0.0%	0	0.0%	1	0.0%	8	0.0%	73	0.0%	0.0
Unknown	7,151	2.2%	4	0.4%	25	0.6%	344	0.6%	6,778	2.5%	0.6
Total vehicles	329,906	100%	1,021	100%	4,502	100%	54,632	100%	269,751	100%	

#### Notes:

**INDIANA** TRAFFIC SAFETY FACTS

Vehicle counts exclude unit types reported as *bicycles* and *pedestrians*.

Unknown vehicle use includes vehicles reported as unknown, blank or invalid codes.

Commercial use includes buses, taxis, etc.

Other use includes government, postal, etc.

Public utilities use includes gas, electric, etc.

Non-incapacitating includes collisions with injuries reported as non-incapacitating and possible injuries.

#### Source:

- In 2009, nearly 21 percent of the vehicles involved in serious injury collisions in *rural* locales were *pickup trucks*, compared to 13 percent in *urban* locales.
- > Twice as many *large trucks* were involved in serious injury collisions in *rural* as *urban* locales.
- Passenger cars were involved in serious injury collisions in urban (59.2 percent) more than rural (40.8 percent) locales overall, and in all months.
- > August (459) and July (455) were the months with the highest number of vehicles involved in serious injury collisions.

Table 36. Passenger vehicles and large trucks involved in serious injury collisions, by locality, vehicle type, and month,2009

	Passen	ger cars	Pickuj	o trucks	SU	JVs	V	ans	Large	trucks
Month	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban
January	89	114	46	26	35	18	6	9	23	7
February	93	117	40	17	24	28	18	19	17	19
March	62	125	34	30	20	29	6	15	15	6
April	81	127	29	29	25	30	7	10	9	8
May	95	151	40	25	18	32	16	17	13	6
June	96	134	27	28	29	32	12	20	18	6
July	118	130	45	36	32	30	16	18	20	10
August	101	158	41	43	28	40	18	15	12	3
September	87	127	53	23	29	31	16	21	15	6
October	102	154	31	28	25	19	18	17	18	14
November	97	124	36	21	29	28	9	13	14	4
December	92	151	44	34	32	43	15	18	15	5
TOTAL	1,113	1,612	466	340	326	360	157	192	189	94
Total rural	2,251									
Total urban		2,598								
Total vehicle type	2,725		806		686		349		283	
% rural/urban of total vehicle type	40.8%	59.2%	57.8%	42.2%	47.5%	52.5%	45.0%	55.0%	66.8%	33.2%
% of total rural or urban	49.4%	62.0%	20.7%	13.1%	14.5%	13.9%	7.0%	7.4%	8.4%	3.6%

### Notes:

Includes only those where locality was known (urban/rural).

Serious injury collisions are defined as those collisions where one or more occupants obtained injuries reported as fatal or incapacitating.

# Source:

> Generally *pickup* and *large trucks* had the highest percentages per month of *rural* serious injury collisions.

# Table 37. Percentage of passenger vehicles and large trucks involved in rural serious injury collisions, by month, 2009

high

	% Rural						
Month	Passenger cars	Pickup trucks	SUVs	Vans	Large trucks		
January	43.8%	63.9%	66.0%	40.0%	76.7%		
February	44.3%	70.2%	46.2%	48.6%	47.2%		
March	33.2%	53.1%	40.8%	28.6%	71.4%		
April	38.9%	50.0%	45.5%	41.2%	52.9%		
May	38.6%	61.5%	36.0%	48.5%	68.4%		
June	41.7%	49.1%	47.5%	37.5%	75.0%		
July	47.6%	55.6%	51.6%	47.1%	66.7%		
August	39.0%	48.8%	41.2%	54.5%	80.0%		
September	40.7%	69.7%	48.3%	43.2%	71.4%		
October	39.8%	52.5%	56.8%	51.4%	56.3%		
November	43.9%	63.2%	50.9%	40.9%	77.8%		
December	37.9%	56.4%	42.7%	45.5%	75.0%		

# Notes:

**INDIANA** TRAFFIC SAFETY FACTS

Includes only those where locality was known (urban/rural).

Scale represents rural involvement within vehicle type by month.

low

#### Source:

> For every 1,000 large trucks involved in collisions, 21.9 were involved in fatal collisions on U.S. routes and 15.1 on state roads.

► For every 1,000 passenger cars involved in collisions, 5.9 were involved in fatal collisions on *interstates*.

# Table 38. Vehicles involved in fatal collisions by vehicle type and road class, per 1,000 in all collisions, 2009

Vehicle	Road class						
	Local/city	County	State	U.S. route	Interstate		
Passenger cars	0.8	5.2	4.2	4.3	5.9		
Pickup trucks	1.7	8.0	5.2	5.2	6.4		
SUVs	1.6	6.6	4.8	3.7	4.2		
Vans	0.9	1.9	5.5	8.7	1.9		
Large trucks	2.9	1.4	15.1	21.9	14.1		

Note:

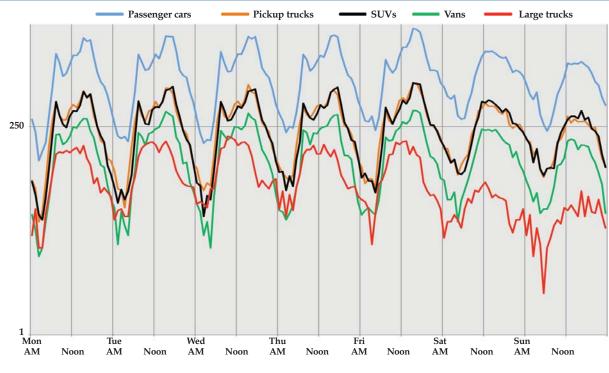
Excludes unknown road class.

# Source:

Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 1, 2010.

- The distribution of passenger vehicles (excluding large trucks) involved in Indiana collisions in 2009 generally followed similar patterns across all passenger vehicle types.
- For all vehicles except large trucks, the highest number of vehicles involved in collisions occurred on Friday afternoons between the 3:00 to 5:00pm hours.
- Wednesday mornings during the 9:00 to 11:00am time period held the highest number of vehicles involved in collisions for large trucks.
- > For all vehicle types, the lowest per day total number of vehicles involved in collisions occurred on Sundays.

# Figure 19. Passenger vehicles and large trucks involved in collisions by time of day and day of week, 2009



# Notes:

Excludes vehicles where time of day and/or day of week were unknown. Y-axis is measured in a log scale.

#### Source:

- Failure to yield right of way was the collision primary factor with the largest number of vehicles involved in serious injury ≻ collisions across all passenger vehicle types.
- > About 60 percent of passenger cars, pickup trucks, SUVs, and vans involved in serious injury collisions were identified as the vehicle attributed to the primary factor of the collision.
- ≻ About 90 percent of passenger cars, pickup trucks, SUVs, and vans involved in serious injury collisions with ran off the road right as the primary factor were identified as the vehicle attributable to the primary factor of the collisions.
- ≻ Over 86 percent of SUVs involved in serious injury collisions with overcorrecting/oversteering as the primary factor were identified as the vehicle attributable to the primary factor of the collisions.

# Table 39. Passenger vehicles in Indiana collisions, by the top ten primary serious injury collision factors, and vehicle type, 2009

	Passenger vehicles involved in						
Top 10 primary factors	All collisions	Serious injury collisions	Serious injury collisions where contributing circumstance of vehicle matched collision primary factor	Vehicle attributed to primary factor as % of serious injury			
Passenger cars	187,981	2,725	1,743	64.0%			
Failure to yield right of way	36,052	612	355	58.0%			
Following too closely	33,383	241	111	46.1%			
		239	111	49.8%			
Disregard signal/reg sign	8,266						
Ran off road right	6,258	227	214	94.3%			
Other - driver (explained in narrative)	18,663	204	136	66.7%			
Left of center	2,854	176	97	55.1%			
Unsafe speed	3,884	162	115	71.0%			
Speed too fast for weather conditions	8,088	126	85	67.5%			
Alcoholic beverages	2,860	104	65	62.5%			
Driver distracted (explained in narrative)	7,836	85	41	48.2%			
Top 10 subtotal	128,144	2,176	1,338	61.5%			
Top 10 as % of passenger car total	68.2%	79.9%	76.8%				
Pickup trucks	47,058	806	503	62.4%			
Failure to yield right of way	7,466	163	82	50.3%			
Ran off road right	1,986	85	80	94.1%			
Disregard signal/reg sign	1,718	66	25	37.9%			
Other - driver (explained in narrative)	4,980	61	42	68.9%			
Left of center	1.040	60	33	55.0%			
Following too closely	7,020	50	19	38.0%			
Unsafe speed	883	48	31	64.6%			
Alcoholic beverages	850	35	26	74.3%			
Speed too fast for weather conditions	2,240	32	18	56.3%			
Driver distracted (explained in narrative)	1,948	32	19	59.4%			
	30,131						
Top 10 subtotal	64.0%	632 78.4%	375 74.6%	59.3%			
Top 10 as % of pickup truck total	46,232	686	409	59.6%			
Sport utility vehicles (SUVs)	7,444	129	63	48.8%			
Failure to yield right of way	1.886	72	33	45.8%			
Disregard signal/reg sign							
Other - driver (explained in narrative)	4,533	60	38	63.3%			
Following too closely	9,064	53	18	34.0%			
Left of center	728	53	22	41.5%			
Ran off road right	1,601	46	45	97.8%			
Unsafe speed	816	31	16	51.6%			
Speed too fast for weather conditions	2,361	31	19	61.3%			
Overcorrecting/oversteering	615	29	25	86.2%			
Driver illness	191	26	14	53.8%			
Top 10 subtotal	29,239	530	293	55.3%			
<i>Top 10 as % of SUV total</i>	63.2%	77.3%	71.6%				
Vans	23,122	349	207	59.3%			
Failure to yield right of way	4,185	85	45	52.9%			
Disregard signal/reg sign	1,062	35	19	54.3%			
Other - driver (explained in narrative)	2,456	35	24	68.6%			
Following too closely	3,897	28	14	50.0%			
Left of center	332	22	9	40.9%			
Ran off road right	615	18	16	88.9%			
Driver distracted (explained in narrative)	943	16	9	56.3%			
Pedestrian action	86	14	14	100.0%			
Speed too fast for weather conditions	922	13	7	53.8%			
Driver illness	116	12	10	83.3%			
Top 10 subtotal	14,614	278	167	60.1%			
Top 10 as % of van total	63.2%	79.7%	80.7%	00.170			
10p 10 us 70 0j 0un 101ui	0.5.270	15.170	00.770				

Notes:

*Top 10 primary factors* are counts of vehicles, by each vehicle type, involved in collisions. For example, there were 36,052 passenger cars involved in collisions where the primary factor for each collision was *failure to yield right of way*. Note that if the collision was a multi-vehicle collision, more than one vehicle may have contributing circumstances that match the primary factor.

Serious injury collisions are defined as those collisions where one or more occupants obtained injuries reported as fatal or incapacitating.

Source

- For passenger cars, pickup trucks and SUVs, collisions that involved the vehicle colliding with a pedestrian were most ≻ likely to result in a serious injury.
- > For all passenger vehicle types involved in serious injury collisions, the top three objects collided with by count were another motor vehicle, a tree, and a pedestrian.

Table 40. Passenger vehicles involved in serious injury collisions by the top ten object collided with, vehicle type, and collision severity, 2009

	Passenger vel	nicles involved in	
Object collided with	All collisions	Serious injury collisions	Serious injury as % of total
assenger cars	187,981	2,725	1.4%
Another motor vehicle	152,299	1,947	1.3%
Tree	2,408	140	5.8%
Pedestrian	859	119	13.9%
Utility pole	2,549	90	3.5%
Off roadway	2,270	73	3.2%
Ditch	2,293	50	2.2%
Bicycle	605	44	7.3%
Other	2,707	33	1.2%
Embankment	822	29	3.5%
	1,117	22	2.0%
Other post/pole or support			
Top 10 subtotal	167,929	2,547	1.5%
Top 10 as % of passenger car total	89.3%	93.5%	
ckup trucks	47,058	806	1.7%
Another motor vehicle	36,230	532	1.5%
Tree	896	57	6.4%
Pedestrian	230	43	18.7%
Utility pole	926	26	2.8%
Off roadway	706	22	3.1%
Ditch	702	22	3.1%
Other	771	18	2.3%
Overturn/rollover	210	11	5.2%
Bicycle	128	10	7.8%
Embankment	241	9	3.7%
Top 10 subtotal	41,040	750	1.8%
Top 10 as % of pickup truck total	87.2%	93.1%	1.070
			1 50/
port utility vehicles (SUVs)	46,232	686	1.5%
Another motor vehicle	36,703	478	1.3%
Tree	975	35	3.6%
Pedestrian	190	26	13.7%
Overturn/rollover	303	20	6.6%
Utility pole	679	17	2.5%
Ditch	639	16	2.5%
Off roadway	649	12	1.8%
Bicycle	138	12	8.7%
Other	585	11	1.9%
Embankment	228	8	3.5%
Top 10 subtotal	41,089	635	1.5%
Top 10 as % of SUV total	88.9%	92.6%	
ans	23,122	349	1.5%
Another motor vehicle	18,849	257	1.4%
Pedestrian	122	237	18.0%
Tree	209	15	7.2%
Utility pole	271	10	3.7%
Ditch	228	7	3.1%
Wall/building/tunnel	132	6	4.5%
Off roadway	205	4	2.0%
Culvert	29	4	13.8%
Other	353	3	0.8%
Overturn/rollover	50	3	6.0%
Railway vehicle/train/engine	7	3	42.9%
Top 10 subtotal	20,455	334	1.6%

**Note:** Serious injury collisions are defined as those collisions where one or more occupants obtained injuries reported as *fatal* or *incapacitating*.

- Nearly 8 percent of large trucks were turning right prior to the collision, compared to approximately 3 percent for each passenger vehicle type.
- > Over 9 percent of pickup trucks were *backing* prior to the collision, compared to under 5 percent of passenger cars.

Table 41. Passenger vehicles and large trucks in collisions by the pre-collision action and vehicle type, 2009

					Vehic	e type						
	Passen	iger cars	Picku	p trucks	1 1	: utility s (SUVs)	Va	ans	Large	trucks	Tot	tals
Pre-collision action	Count	% Total	Count	% Total	Count	% Total	Count	% Total	Count	% Total	Count	% Total
Going straight	93,365	49.7%	23,525	50.0%	22,149	47.9%	11,001	47.6%	5,462	47.1%	155,502	49.2%
Slowing or stopped in traffic	31,352	16.7%	6,687	14.2%	9,058	19.6%	4,123	17.8%	1,157	10.0%	52,377	16.6%
Parked	16,121	8.6%	3,470	7.4%	3,027	6.5%	1,756	7.6%	815	7.0%	25,189	8.0%
Turning left	14,579	7.8%	3,189	6.8%	3,102	6.7%	1,701	7.4%	861	7.4%	23,432	7.4%
Backing	9,111	4.8%	4,367	9.3%	3,359	7.3%	1,740	7.5%	1,029	8.9%	19,606	6.2%
Turning right	5,911	3.1%	1,696	3.6%	1,374	3.0%	760	3.3%	896	7.7%	10,637	3.4%
Changing lanes	3,361	1.8%	625	1.3%	782	1.7%	443	1.9%	534	4.6%	5,745	1.8%
Starting in traffic	2,903	1.5%	682	1.4%	840	1.8%	358	1.5%	148	1.3%	4,931	1.6%
Entering traffic lane	3,174	1.7%	651	1.4%	624	1.3%	365	1.6%	115	1.0%	4,929	1.6%
Avoiding object in roadway	1,689	0.9%	414	0.9%	435	0.9%	160	0.7%	85	0.7%	2,783	0.9%
Driving left of center	1,375	0.7%	443	0.9%	318	0.7%	126	0.5%	37	0.3%	2,299	0.7%
Overtaking/passing	1,248	0.7%	363	0.8%	331	0.7%	155	0.7%	100	0.9%	2,197	0.7%
Leaving traffic lane	1,229	0.7%	336	0.7%	268	0.6%	151	0.7%	101	0.9%	2,085	0.7%
Merging	801	0.4%	175	0.4%	194	0.4%	86	0.4%	86	0.7%	1,342	0.4%
Making U turn	395	0.2%	58	0.1%	97	0.2%	46	0.2%	57	0.5%	653	0.2%
Crossing the median	321	0.2%	82	0.2%	54	0.1%	31	0.1%	13	0.1%	501	0.2%
Unattended moving vehicle	164	0.1%	79	0.2%	50	0.1%	38	0.2%	35	0.3%	366	0.1%
Unknown	882	0.5%	216	0.5%	170	0.4%	82	0.4%	60	0.5%	1,410	0.4%
Total	187,981	100.0%	47,058	100.0%	46,232	100.0%	23,122	100.0%	11,591	100.0%	315,984	100.0%

Source:

INDIANA TRAFFIC SAFETY FACTS

- Failure to yield right of way and other-driver were the primary factors with the highest number of large trucks in serious injury collisions.
- Only 5.6 percent of large trucks involved in serious injury collisions with the primary factor of *left of center* were identified as the vehicle attributed to the primary contributing factor of the collisions.
- Of the 283 large trucks involved in serious injury collisions, 121 (42.8 percent) were identified as the vehicle attributed to the primary contributing factor of the collision.

Table 42. Number of large trucks by the top ten primary serious injury collision factors, and collision severity, 2009

		Large trucks involv	red in	Large truck
Top 10 primary collision factors	All collisions	Serious injury collisions	Serious injury collisions where large truck contributing circumstance matched collision primary factor	attributed to primary factor as % of serious injury
Large trucks	11,591	283	121	42.8%
Failure to yield right of way	1,192	39	19	48.7%
Other - driver	1,566	39	20	51.3%
Speed too fast for weather conditions	608	35	17	48.6%
Following too closely	1,094	27	10	37.0%
Disregard signal/reg sign	269	23	11	47.8%
Left of center	204	18	1	5.6%
Improper lane usage	1,088	11	2	18.2%
Unsafe speed	210	11	4	36.4%
Pedestrian action	21	9	8	88.9%
Ran off road right	383	8	6	75.0%
Driver illness	35	8	6	75.0%
Top 10 subtotal	6,670	228	104	45.6%
Top 10 as % of large truck total	57.5%	80.6%	86.0%	

Notes:

Top 10 primary factors are counts of vehicles, by each vehicle type, involved in collisions. For example, there were 1,192 large trucks involved in collisions where the primary factor for each collision was *Failure to yield right of way*. Note that if the collision was a multi-vehicle collision, more than one vehicle may have contributing circumstances that match the primary factor.

Serious injury collisions are defined as those collisions where one or more occupants obtained injuries reported as fatal or incapacitating.

#### Source:

- > Of the large trucks involved in collisions, 2.4 percent were involved in serious injury collisions.
- Of the large trucks involved in collisions that collided with another motor vehicle, 2.7 percent were serious injury collisions.

Table 43. Large trucks involved in serious injury collisions by the top ten objects collided with, and collision severity, 2009

	Large truc	ks involved in	
Object collided with	All collisions	Serious injury collisions	Serious injury as % of total
Large trucks	11,591	283	2.4%
Another motor vehicle	8,723	234	2.7%
Pedestrian	19	11	57.9%
Other	571	8	1.4%
Off roadway	161	5	3.1%
Utility pole	191	2	1.0%
Overturn/rollover	137	2	1.5%
Ditch	136	2	1.5%
Tree	66	2	3.0%
Railway vehicle/train/engine	11	2	18.2%
Bridge pier or abutment	9	2	22.2%
Top 10 subtotal	10,024	270	2.7%
Top 10 as % of large truck total	86.5%	95.4%	

# Note:

**INDIANA** TRAFFIC SAFETY FACTS

Serious injury collisions are defined as those collisions where one or more occupants incurred injuries reported as *fatal* or *incapacitating*. Source:

Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 1, 2010.

- Nearly 5 percent of large trucks with trailers involved in fatal collisions revealed a *hazard placard*, with one large truck reporting a *hazard release*.
- Four percent of single unit large trucks involved in fatal collisions revealed a *hazard placard*, with none reporting a *hazard release*.
- Slightly over 2 percent of all large trucks involved in collisions revealed a *hazard placard*, with 1.5 percent reporting a *hazard release*.

Table 44. Large trucks involved in collisions, by hazard placard and release, and collision severity, 2009

				Large truck	s involved in		
	All collisions	% of total collisions	Fatal collisions	% of total fatal collisions	Incapacitating injury collisions	Non-incapacitating injury collisions	Property damage only collisions
Large truck w/trailer	7,312		85		111	754	6,362
w/hazard placard	198	2.7%	4	4.7%	3	21	170
hazard release	137	1.9%	1	1.2%	1	15	120
Large truck single unit	4,279		25		62	451	3,741
w/hazard placard	65	1.5%	1	4.0%	1	5	58
hazard release	41	1.0%	0	0.0%	0	4	37
Total large trucks	11,591		110		173	1,205	10,103
w/hazard placard	263	2.3%	5	4.5%	4	26	228
hazard release	178	1.5%	1	0.9%	1	19	157

#### Notes:

Large truck w/trailer is defined as those vehicles reported as tractor/one semi-trailer, tractor/double trailer, or tractor/triple trailer.

Large truck single unit is defined as those vehicles reported as truck (single 2 axle, 6 tires), truck (single 3 or more axles) truck/trailer (not semi), or tractor (cab only, no trailer).

Non-incapacitating includes collisions with injuries reported as non-incapacitating and possible injuries.

#### Source:

- Total collisions involving school buses decreased from 2008 to 2009; however, each category of injury collisions (fatal, incapacitating, and non-incapacitating) increased for the same time frame.
- > From 2008 to 2009, total fatal injuries for individuals involved in school bus collisions decreased from 4 to 2.
- > Nearly 90 percent (748/837) of the collisions involving school buses in 2009 were property damage only collisions.

Table 45. Indiana collisions involving school buses and known injuries, by collision severity, 2005-2009

		2005		2006		2007		2008		2009
	Count	%								
Total collisions										
involving school buses	1,021	100.0%	853	100.0%	826	100.0%	957	100.0%	837	100.0%
Fatal	5	0.5%	3	0.4%	4	0.5%	1	0.1%	2	0.2%
Incapacitating	14	1.4%	5	0.6%	5	0.6%	9	0.9%	10	1.2%
Non-incapacitating	123	12.0%	124	14.5%	74	9.0%	59	6.2%	77	9.2%
Property damage only	879	86.1%	721	84.5%	743	90.0%	888	92.8%	748	89.4%
Known injuries										
Fatal	5	100.0%	4	100.0%	4	100.0%	4	100.0%	2	100.0%
School bus occupant	1	20.0%	0	0.0%	1	25.0%	4	100.0%	0	0.0%
Non-motorist	1	20.0%	0	0.0%	2	50.0%	0	0.0%	2	100.0%
Other vehicle occupant	3	60.0%	4	100.0%	1	25.0%	0	0.0%	0	0.0%
Incapacitating	14	100.0%	6	100.0%	5	100.0%	10	100.0%	10	100.0%
School bus occupant	0	0.0%	1	16.7%	0	0.0%	4	40.0%	0	0.0%
Non-motorist	3	21.4%	0	0.0%	0	0.0%	1	10.0%	1	10.0%
Other vehicle occupant	11	78.6%	5	83.3%	5	100.0%	5	50.0%	9	90.0%
Non-incapacitating	277	100.0%	318	100.0%	171	100.0%	188	100.0%	227	100.0%
School bus occupant	166	59.9%	176	55.3%	98	57.3%	137	72.9%	167	73.6%
Non-motorist	5	1.8%	4	1.3%	7	4.1%	8	4.3%	5	2.2%
Other vehicle occupant	106	38.3%	138	43.4%	66	38.6%	43	22.9%	55	24.2%

#### Note:

Non-incapacitating includes non-incapacitating and possible injuries.

#### Source:

- Twelve school buses were involved in serious injury collisions in 2009; five (41.7 percent) of those buses were identified as the vehicle attributable to the primary factor of the collision.
- Of the 694 school bus collisions involving the top ten primary factors, there were only three in which the school bus was the vehicle attributable to the primary factor.

		School buses involv	red in	School buses
Top ten primary collision factors	All collisions	Serious injury collisions	Serious injury collisions where contributing circumstance matched collision primary factor	attributed to primary factor as % of serious injury
School buses	850	12	5	41.7%
Other-driver	166	3	0	0.0%
Failure to yield right of way	108	2	2	100.0%
Following too closely	101	0	0	na
Improper turning	75	0	0	na
Unsafe backing	73	0	0	na
Speed too fast for weather conditions	46	0	0	na
Roadway surface condition	42	0	0	na
Driver distracted	33	2	1	50.0%
Disregard signal/reg sign	26	2	0	0.0%
Improper lane usage	24	0	0	na
Top 10 subtotal	694	9	3	33.3%
Top 10 as % of school bus total	81.6%	75.0%	60.0%	

# Table 46. Number of school buses by the top ten primary collision factors, and collision severity, 2009

#### Notes:

Top 10 primary factors are counts of vehicles, by each vehicle type, involved in collisions. For example, there were 108 school buses involved in collisions where the primary factor for each collision was *Failure to yield right of way*. Note that if the collision was a multi-vehicle collision, more than one vehicle may have contributing circumstances that match the primary factor.

Serious injury collisions are defined as those collisions where one or more occupants obtained injuries reported as fatal or incapacitating.

#### Source:

Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 1, 2010.

# Eighty-eight percent (749/850) of school buses involved in collisions collided with another motor vehicle in 2009.

# The two school buses involved in fatal collisions in 2009 collided with a pedestrian.

# Table 47. School buses involved in collisions by the top ten objects collided with, and collision severity, 2009

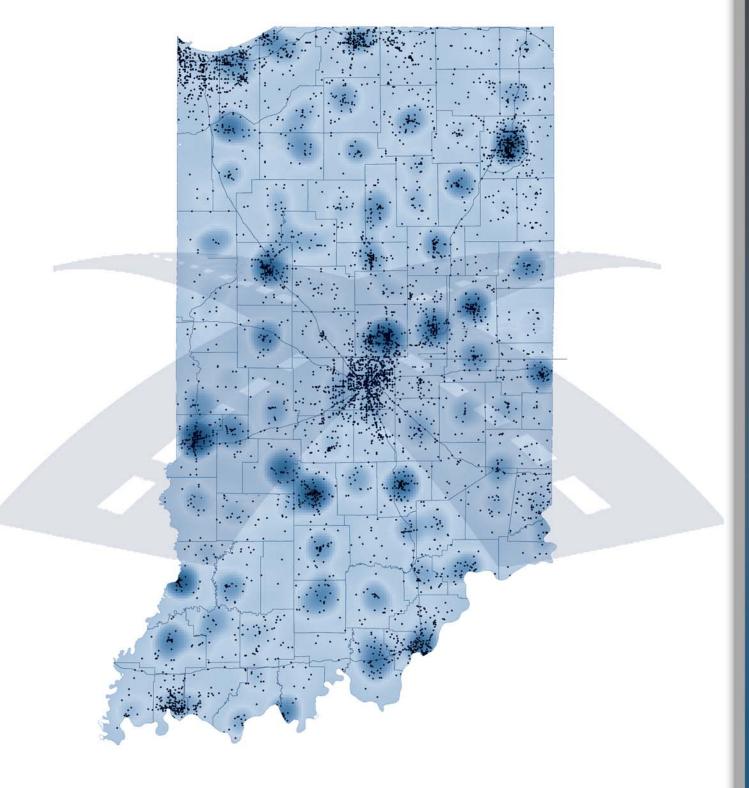
		Scho	ol buses involved in.		
Object collided with	All collisions	Fatal collisions	Incapacitating injury collisions	Non-incapacitating injury collisions	Property damage only collisions
School buses	850	2	10	79	759
Another motor vehicle	749	0	9	65	675
Other	13	0	0	3	10
Other post/pole/support	13	0	0	0	13
Utility pole	9	0	0	0	9
Wall/building/tunnel	8	0	0	0	8
Pedestrian	6	2	1	3	0
Deer	6	0	0	1	5
Light/luminaire support	6	0	0	1	5
Tree	4	0	0	1	3
Ditch	4	0	0	1	3
Animal other than deer	4	0	0	0	4
Top 10 subtotal	822	2	10	75	735
Top 10 as % of school bus total	96.7%	100.0%	100.0%	94.9%	96.8%

# Note:

Non-incapacitating includes collisions with injuries reported as non-incapacitating and possible injuries.

#### Source:

# MOTORCYCLES



# **MOTORCYCLES**, 2009

Rates of motorcycle collisions and injuries declined in 2009. The number of collisions dropped from 3,822 in 2008 to 3,276 in 2009. Serious injuries declined from 628 to 579 during the same period. Nonetheless, the five-year trend in motorcyclist injuries is still positive, with serious injuries reflecting the largest average annual growth rate (4.1 percent) from 2005 to 2009. Overall in 2009, slightly more than half of the motorcyclists in collisions were properly licensed. Other highlights are noted below.

# HIGHLIGHTS

INDIANA TRAFFIC SAFETY FACTS

There was a 14.3 percent decline in overall collisions with injuries in 2009, though on average since 2005 these collisions have increased by 3.6 percent.

There is a declining five-year trend in serious injury rates for both single- and multi-vehicle motorcycle crashes, although single-vehicle collisions are declining more slowly.

The highest serious injury rate in 2009 was experienced by unhelmeted riders from 45 to 54 years of age.

In 2009, non-helmeted riders comprised 77 percent of motorcyclists killed.

Overall, other vehicles are more likely to be the unit attributable in motorcycle-involved collisions, but there are differences within primary factor categories. For example, when unsafe speed is a primary factor, motorcyclists are 19 times more likely to be the unit attributable than the vehicles with which they crash.

During the 2005-2009 period, the odds of motorcycle alcohol involvement was always greater than that of other vehicles, by factors ranging from 2.2 to 5.9.

There were decreases across all categories of motorcycle operator blood alcohol content (BAC) from 2008 to 2009.

Across all but the 65 and older age range, helmeted riders reported lower serious injury rates in 2009.

Compared to helmeted riders, non-helmeted motorcyclists have a much larger percentage of injuries located to the neck and above (28 percent versus 9 percent).

The highest fatality rates among objects of impact are when motorcyclists collide with fixed objects such as trees, road and bridge infrastructure, posts, signs, and mailboxes.

In multi-vehicle collisions with serious injuries, motorcyclists are much more likely than the other units to be alcoholinvolved.

- > There were significant declines in all injury categories from 2008 to 2009.
- > However, motorcyclist injuries continue to grow on an average annual basis.

## Table 48. Motorcycle rider injuries, 2005-2009

Injury status	2005	2006	2007	2008	2009	% change 2008-2009	Average annual change
Serious injury	508	578	690	628	579	-7.8%	4.1%
Fatal	112	108	122	130	111	-14.6%	0.3%
Incapacitating	396	470	568	498	468	-6.0%	5.3%
Other injury	1,957	2,020	2,231	2,497	2,018	-19.2%	1.6%
Non-incapacitating	1,794	1,935	2,176	2,459	1,986	-19.2%	3.5%
Other injury	163	85	55	38	32	-15.8%	-32.5%
Not injured	631	729	882	979	889	-9.2%	9.6%
Total	3,096	3,327	3,803	4,104	3,486	-15.1%	3.7%

Source:

Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 1, 2010.

- > In 2009, the percent of motorcycle collisions with injuries was at a five-year low (71.3 percent).
- > From 2008 to 2009, there were significant declines in every collision severity category.
- There was a 14.3 percent decline in overall collisions with injuries in 2009, though on average since 2005 these collisions have increased by 3.6 percent.

# Table 49. Number of collisions involving motorcycles by severity, 2005-2009

Motorcycle collision severity	2005	2006	2007	2008	2009	Average annual change	Change, 2008 to 2009
Fatal	113	104	117	125	111	0.0%	-11.2%
Incapacitating	379	440	525	462	438	4.6%	-5.2%
Non-incapacitating	1,604	1,713	1,969	2,184	1,786	3.6%	-18.2%
Property damage only	810	841	945	1,051	941	4.2%	-10.5%
Total	2,906	3,098	3,556	3,822	3,276	3.6%	-14.3%
Percent injury collisions	72.1%	72.9%	73.4%	72.5%	71.3%		

#### Note:

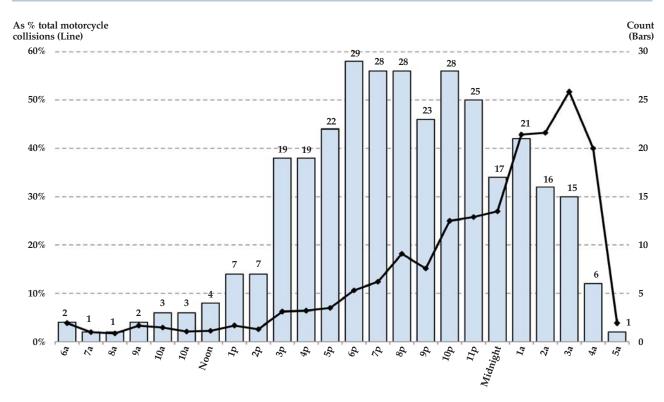
For all tables and exhibits in this section, unless otherwise noted, motorcycles includes mopeds.

#### Source:

Based on crashes in 2009, alcohol-related motorcycle collisions exhibit several sharp changes over a 24-hour cycle from 6am to 5am:

- > The number of alcohol-related motorcycle collisions more than doubles after 2pm, and peaks around 6pm and after.
- > Between 9pm and 3am, the percentage of collisions that are alcohol-related grows from 15 percent to 52 percent.
- > Alcohol collisions and percent of all collisions that are alcohol-related decline quickly after 3am.

Figure 20. Count and percent of total motorcycle collisions that are alcohol-involved by hour, 2009



## Note:

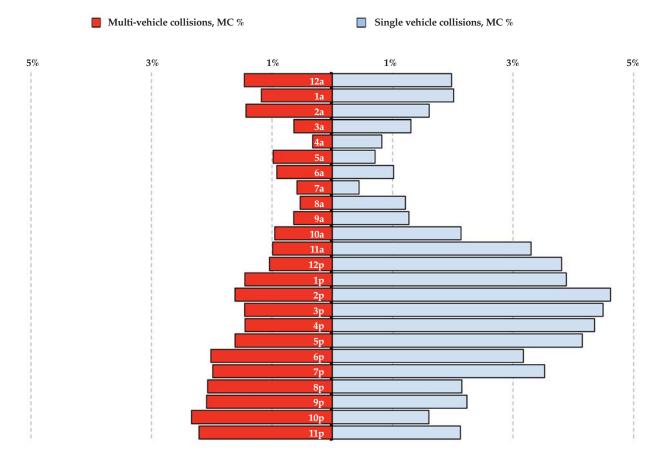
TRAFFIC SAFE

Total motorcycle collisions = 3,276. Total alcohol-related collisions = 327.

Source:

- Considering all multi-vehicle collisions occurring in the hour starting 3pm, 1.5 percent involved motorcycles. During that same hour, 4.5 percent of all single vehicle collisions involved motorcycles.
- > At nearly all hours, motorcycles tend to be involved proportionally more often in single than in multi-vehicle collisions.

Figure 21. Proportion of total motor vehicle collisions with motorcycles (MC) involved, by time of day, 2009



#### Notes:

N = 3,276 motorcycle collisions (single vehicle = 1,493 and multi-vehicle = 1,783).

N = 186,384 other non-motorcycle collisions (single vehicle = 59,167 and multi-vehicle = 127,217).

Bars present the differential involvement of motorcycles among all single and multi-vehicle collisions hourly across a daily cycle. **Source:** 

- > The comparison of collision severity by type of collision suggests several consistent trends:
  - > Each year, motorcycles are involved in more multi- than single vehicle collisions.
  - > Each year, fatal collision rates are higher for multi-vehicle motorcycle collisions.
  - > Each year, serious injury rates are higher for single vehicle collisions.

# Table 50. Probability of motorcycle collision severity by vehicles involved, 2005-2009

				Collisi	on severity		
Type of motorcycle collision	Year	Total motorcycle collisions	Fatal	Incapacitating	Non- incapacitating	Property damage only	Serious injury percent
	2005	1,341	3.6%	14.4%	62.6%	19.5%	18.0%
	2006	1,463	2.9%	16.6%	63.7%	16.8%	19.5%
Single vehicle	2007	1,644	3.1%	17.4%	63.3%	16.2%	20.5%
-	2008	1,794	3.0%	13.4%	65.9%	17.7%	16.3%
	2009	1,493	3.2%	15.3%	62.6%	19.0%	18.5%
	2005	1,565	4.2%	11.9%	48.9%	35.1%	16.0%
	2006	1,635	3.8%	12.0%	47.8%	36.4%	15.8%
Multi-vehicle	2007	1,912	3.5%	12.5%	48.6%	35.5%	16.0%
	2008	2,028	3.6%	10.9%	49.4%	36.1%	14.5%
	2009	1,783	3.5%	11.8%	47.8%	36.9%	15.3%
Mean annual rates							
Single vehicle		1,547	3.1%	15.4%	63.6%	17.8%	18.6%
Multi-vehicle		1,785	3.7%	11.8%	48.5%	36.0%	15.5%

Note:

Serious injury includes fatal and incapacitating collision severity.

Source:

> In 2009, higher rates of fatal and incapacitating motorcycle collisions occurred under several different circumstances:

- > Under *cloudy* or *poor visibility* conditions
- > At *interchange / ramp* road junctions
- On curves  $\mathbf{>}$
- ► On highways
- ➤ In *dark (unlighted)* conditions

# Table 51. Characteristics of motorcycle collisions by collision severity, 2009

	(	Collision severity	(number of	collisions)		Prob	ability of coll	ision sever	ity
Characteristics	Fatal	Incapacitating	Non-inca- pacitating	Property damage only	Total	Fatal	Incapa- citating	Serious injury	Serious injury change 2008-2009
Weather conditions									
Clear	80	355	1,430	762	2,627	3.0%	13.5%	16.6%	0.9
Cloudy or poor visibility	27	77	276	137	517	5.2%	14.9%	20.1%	6.0
Extreme weather	4	6	78	40	128	3.1%	4.7%	7.8%	-6.1
Road junctions									
No junction involved	67	277	1,172	596	2,112	3.2%	13.1%	16.3%	0.1
Intersections	42	148	571	325	1,086	3.9%	13.6%	17.5%	3.9
Interchange/ramp	2	13	42	20	77	2.6%	16.9%	19.5%	1.8
Road character									
Straight/level	58	260	1,160	666	2,144	2.7%	12.1%	14.8%	1.2
Curves	35	107	383	139	664	5.3%	16.1%	21.4%	2.4
Straight/grade/hillcrest	18	67	230	113	428	4.2%	15.7%	19.9%	1.0
Non-roadway crash		4	11	21	36	0.0%	11.1%	11.1%	1.9
Road class									
Local/city road	30	198	868	478	1,574	1.9%	12.6%	14.5%	0.9
Highway	47	136	471	199	853	5.5%	15.9%	21.5%	2.5
County road	25	76	308	127	536	4.7%	14.2%	18.8%	2.7
Other (unknown)	1	16	68	109	194	0.5%	8.2%	8.8%	1.6
Interstate	8	12	69	26	115	7.0%	10.4%	17.4%	-3.2
Light conditions									
Daylight	60	301	1,328	707	2,396	2.5%	12.6%	15.1%	0.3
Dark (lighted)	18	64	184	109	375	4.8%	17.1%	21.9%	8.5
Dark (not lghted)	27	54	174	78	333	8.1%	16.2%	24.3%	2.1
Dawn/dusk	6	19	95	41	161	3.7%	11.8%	15.5%	2.1

## Notes:

Characteristics (weather, road junctions/character/class) are re-grouped from collision characteristics reported in ARIES, as shown below. Weather conditions are defined as follows:

Cloudy or poor visibility includes cloudy, fog/smoke/smog, and blowing sand/soil/snow. Extreme weather includes rain, severe cross wind, sleet/hail/freezing rain, and snow.

Road junctions are defined as follows:

Intersections includes five point or more, four-way intersection, T-intersection, traffic circle/roundabout, and Y-intersection.

Interchange/ramp includes interchange and ramp.

Road character is defined as follows:

Curves includes curve/grade, curve/hillcrest, and curve/level.

Straight/grade/hillcrest includes straight/grade and straight/hillcrest.

Road class is defined as follows:

Highway includes state road and US route.

Serious injury includes fatal and incapacitating collision severity.

# Source:



- When unsafe speed is a primary factor, motorcyclists are 19 times more likely to be the unit attributable than the vehicles with which they crash.
- When *alcoholic beverages* (which should not be considered a primary factor) is a primary factor, motorcyclists are nearly 4 times more likely to be unit attributable than other involved vehicles.
- When *improper passing* is a primary factor, motorcyclists are 3 times more likely to be the unit attributable than the vehicles with which they crash.
- > Motorcyclists are least likely to be unit attributable when the primary factor is *failure to yield right away* or *improper turning*.

Table 52. Vehicles involved in motorcycle (MC) collisions, by vehicle type, primary factor, and risk of vehicle attributability to collision occurrence, 2009

		of vehicles outable		f vehicles ributable	% Att	ributable	Risk of
Primary factor	MC	Other vehicles	MC	Other vehicles	MC	Other vehicles	attributability
Unsafe actions	526	836	883	536	37.3%	60.9%	0.61
Failure to yield right of way	115	484	490	108	19.0%	81.8%	0.23
Following too closely	160	103	118	157	57.6%	39.6%	1.45
Unsafe backing	0	107	114	3	0.0%	97.3%	
Disregard signal/reg sign	57	39	42	74	57.6%	34.5%	1.67
Improper lane usage	33	37	37	32	47.1%	53.6%	0.88
Unsafe speed	60	3	7	59	89.6%	4.8%	18.51
Improper passing	41	12	16	43	71.9%	21.8%	3.30
Improper turning	20	34	39	17	33.9%	66.7%	0.51
Left of center	34	14	16	36	68.0%	28.0%	2.43
Speed too fast for weather conditions	5	0	1	6	83.3%	0.0%	
Wrong way on one way	1	3	3	1	25.0%	75.0%	0.33
Distractions	31	35	39	33	44.3%	51.5%	0.86
Cell phone usage	1	3	3	1	25.0%	75.0%	0.33
Other distraction	30	32	36	32	45.5%	50.0%	0.91
Cognitive impairment	29	11	11	33	72.5%	25.0%	2.90
Alcoholic beverages	26	8	8	30	76.5%	21.1%	3.63
Driver illness	2	1	1	2	66.7%	33.3%	2.00
Driver asleep or fatigued	0	2	2	0	0.0%	100.0%	
Illegal drugs	1	0	0	1	100.0%	0.0%	
Loss of control	23	10	12	24	65.7%	29.4%	2.23
Ran off road	10	8	9	10	52.6%	44.4%	1.18
Overcorrecting/oversteering	13	2	3	14	81.3%	12.5%	6.50
Other factors	140	114	88	93	61.4%	55.1%	1.11
Reaction to pedestrian action	2	0	0	3	100.0%	0.0%	
Unspecified factor	136	114	88	88	60.7%	56.4%	1.08
Violation of license restriction	1	0	0	1	100.0%	0.0%	
(Driver not a factor)	1	0	0	1	100.0%	0.0%	
Total	749	1,006	1,033	719	42.0%	58.3%	0.72

#### Notes:

**INDIANA** TRAFFIC SAFETY FACTS

A vehicle is *attributable* to the occurrence of a collision when the officer marks a contributing circumstance for that vehicle that also matches the collision primary factor.

Data exclude collisions where the primary factor was a vehicle or environmental circumstance.

*Risk of attributability* defined as ratio of % *Attributable (motorcycles)* to % *Attributable (other vehicles)*. A value greater than 1 indicates that motorcycles are more likely to have been attributable to the collision occurring for that particular factor.

#### Source:

- > Considering all collisions, motorcycles in collisions are much more likely than other vehicles to be classified as speeding.
- > In 2009, motorcycles were nearly 11 times more likely to be speeding than the other vehicles involved.
- > During the 2005-2009 period, the number of motorcycles in collisions classified as not speeding grew 4.2 percent annually.

# Table 53. Vehicles involved in motorcycle collisions, by speeding involvement, 2005-2009

Speeding/ vehicle type	2005	2006	2007	2008	2009	Average annual change
Not speeding						
Motorcycles	2,660	2,833	3,293	3,552	3,055	4.2%
Other vehicles	1,603	1,658	1,922	2,035	1,783	3.2%
Speeding						
Motorcycles	305	330	363	363	299	0.1%
Other vehicles	31	27	14	22	16	-7.8%
Odds of speeding (within vehicle type)						
Motorcycles	0.115	0.116	0.110	0.102	0.098	
Other vehicles	0.019	0.016	0.007	0.011	0.009	
Odds ratio (motorcycles/others)	5.9	7.2	15.1	9.5	10.9	

#### Notes:

Other vehicles includes unknown unit type.

Odds of speeding calculated as type of vehicle speeding / type of vehicle not speeding.

#### Source:

Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 1, 2010.

- Among vehicles involved in motorcycle collisions, motorcycle alcohol involvement is growing at a faster annual rate than other vehicles.
- During the 2005-2009 period, the odds of motorcycle alcohol involvement was always greater than that of other vehicles, by factors ranging from 2.2 to 5.9.

# Table 54. Vehicles involved in motorcycle collisions, by operator alcohol status, 2005-2009

Alcohol-related/ type of vehicle	2005	2006	2007	2008	2009	Average annual change
No alcohol						
Motorcycles	2,678	2,847	3,288	3,540	3,061	4.0%
Other vehicles	1,558	1,606	1,889	2,021	1,760	3.7%
Alcohol-related						
Motorcycles	287	316	368	375	293	1.6%
Other vehicles	76	79	47	36	39	-12.9%
Odds of alcohol-related						
(within vehicle type)						
Motorcycles	0.107	0.111	0.112	0.106	0.096	
Other vehicles	0.049	0.049	0.025	0.018	0.022	
Odds ratio (motorcycles/other vehicles)	2.2	2.3	4.5	5.9	4.3	

#### Notes:

Other vehicles includes unknown unit type.

Odds of alcohol-related calculated as units alcohol-related / not alcohol-related.

#### Source:

> Male and female riders had similar serious injury rates.

**INDIANA** TRAFFIC SAFETY FACTS

- Injured occupants on motorcycles have slightly higher serious injury rates than operators (21 versus 16 percent, respectively).
- Individuals with motorcycle/endorsement had lower serious injury rates than other license groups.

Table 55. Motorcyclists involved in collisions, by rider characteristics and injury status, 2009

		Individual in	njury status			Proba	bility of injury	status
Characteristics			Non-				Incap-	Serious
	Fatal	Incapacitating	incapacitating	All other	Total	Fatal	acitating	injury
Helmet use/age								
Helmet	21	96	569	301	987	2.1%	9.7%	11.9%
Under 16	-	4	28	2	34	0.0%	11.8%	11.8%
16-20	1	8	55	31	95	1.1%	8.4%	9.5%
21-24	1	8	55	32	96	1.0%	8.3%	9.4%
25-34	3	15	102	59	179	1.7%	8.4%	10.1%
35-44	6	18	92	54	170	3.5%	10.6%	14.1%
45-54	3	23	115	57	198	1.5%	11.6%	13.1%
55-64	4	12	88	44	148	2.7%	8.1%	10.8%
65 and older	3	8	34	22	67	4.5%	11.9%	16.4%
No helmet indicated	85	349	1,292	531	2,257	3.8%	15.5%	19.2%
Under 16	-	14	59	23	96	0.0%	14.6%	14.6%
16-20	4	24	160	50	238	1.7%	10.1%	11.8%
21-24	3	40	130	50	223	1.3%	17.9%	19.3%
25-34	20	58	232	102	412	4.9%	14.1%	18.9%
35-44	24	76	256	108	464	5.2%	16.4%	21.6%
45-54	24	96	298	117	535	4.5%	17.9%	22.4%
55-64	9	33	120	61	223	4.0%	14.8%	18.8%
65 and older	1	8	37	20	66	1.5%	12.1%	13.6%
Gender								
Male	100	389	1,625	853	2,967	3.4%	13.1%	16.5%
Operator	100	377	1,587	846	2,910	3.4%	13.0%	16.4%
Injured occupant	-	12	38	7	57	0.0%	21.1%	21.1%
Female	11	79	361	64	515	2.1%	15.3%	17.5%
Operator	7	31	170	58	266	2.6%	11.7%	14.3%
Injured occupant	4	48	191	6	249	1.6%	19.3%	20.9%
Type of individual								
Operators	107	408	1,757	904	3,176	3.4%	12.8%	16.2%
Injured occupants	4	60	229	13	306	1.3%	19.6%	20.9%
Operators' license status								
Motorcycle / endorsement	43	194	852	518	1,607	2.7%	12.1%	14.7%
Other operator license	53	159	665	303	1,180	4.5%	13.5%	18.0%
No License	11	51	208	71	341	3.2%	15.0%	18.2%
Percent with MC license	40.2%	48.0%	49.4%	58.1%	51.4%			

Notes:

n = 3,804 individuals where helmet use is known.

n = 4,100 individuals where gender is known.

n = 3,666 motorcycle operators where license status is known.

Non-incapacitating includes non-incapacitating and possible injuries.

All other injury status includes not reported, null, refused, and unknown.

Motorcycle/endorsement license status includes motorcycle, chauffeur w/mc endorsement, learner motorcycle, operators w/mc endorsement, and PP chauffeur w/mc endorsement.

No helmet indicated excludes null and unknown safety equipment types.

Serious injury includes fatal and incapacitating injuries.

#### Source:

- > Riders with no reported helmet use have higher *serious injury* rates for all ages except 65 and older.
- > The highest serious injury rate in 2009 was experienced by unhelmeted riders from 45 to 54 years of age.

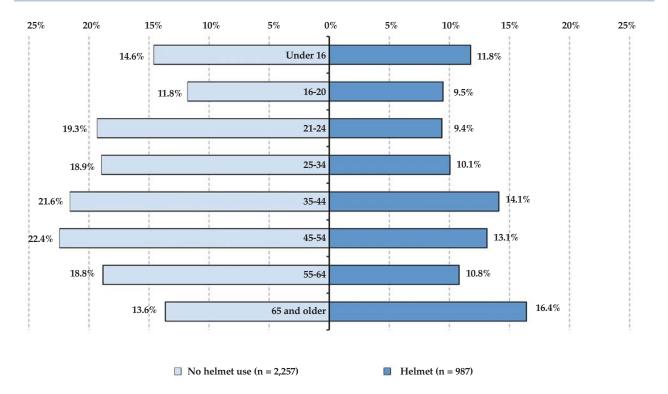


Figure 22. Serious injuries as percent of total motorcyclist injuries, by helmet use and age, 2009

# Notes:

Includes cases where *helmet use* and *age* are known (n=3,244).

Serious injury includes fatal and incapacitating injuries.

#### Source:

# ► In comparison to helmeted motorcycle riders:

- Non-helmeted motorcyclists have a much larger percentage of injuries located to the neck and above (28 percent versus 9 percent).
- Non-helmeted motorcyclists have a higher percentage of injuries classified as minor or severe bleeding (18 percent versus 8 percent).

Table 56. Nature and location of injuries to motorcycle operators and passengers, by reported helmet use, 2009

			Location of	of injury				Percent of
Nature of injury	Neck and above	Entire body	Torso	Arms	Legs	Not indicated	Total	injuries by nature
No helmet indicated	634	170	179	321	434	520	2,258	100%
Burns	-	2	1	-	-	-	3	0.1%
Fracture/dislocation	50	18	27	58	140	-	293	13.0%
Internal	79	21	17	1	3	-	121	5.4%
Minor bleeding	167	16	7	51	42	1	284	12.6%
No injury or unknown	-	-	-	-	-	513	513	22.7%
None visible	2	1	6	-	1	6	16	0.7%
Other	24	3	-	3	11	-	41	1.8%
Other minor injury	211	103	120	204	228	-	866	38.4%
Severe bleeding	100	5	1	4	7	-	117	5.2%
Severed	1	1	-	-	2	-	4	0.2%
Percent injuries by location	28.1%	7.5%	7.9%	14.2%	19.2%	23.0%	100%	
Helmet	84	75	103	194	230	301	987	100%
Burns	-	1	-	-	-	-	1	0.1%
Fracture/dislocation	6	8	14	41	62	1	132	13.4%
Internal	11	5	15	1	1	-	33	3.3%
Minor bleeding	13	4	6	21	21	-	65	6.6%
No injury or unknown	-	1	-	1	-	297	299	30.3%
None visible	1	1	-	-	2	3	7	0.7%
Other	4	3	1	2	1	-	11	1.1%
Other minor injury	40	50	66	124	139	-	419	42.5%
Severe bleeding	9	2	1	3	3	-	18	1.8%
Severed	-	-	-	1	1	-	2	0.2%
Percent injuries by location	8.5%	7.6%	10.4%	19.7%	23.3%	30.5%	100%	

## Notes:

n = 3,804 individuals where helmet use is known.

Other minor injuries includes abrasion, complaint of pain, and contusion/bruise.

Location of injury is defined as follows based on ARIES categories:

Torso includes abdomen/pelvis, back, and chest.

Arms includes elbow/lower arm and shoulder/upper arm.

Neck and above includes eye, face, head, and neck.

Legs includes hip/upper leg and knee/lower leg/foot.

Not indicated includes null and invalid.

No helmet indicated excludes null and unknown safety equipment types.

#### Source:

- > Non-helmeted riders comprised 77 percent of motorcyclists killed.
- Nearly 58 percent of fatalities were the result of injuries to the neck and above of unhelmeted riders. This increases to 66 percent if you consider all motorcycle fatalities.
- > Regardless of helmet status, *internal* is the largest single proportion of fatal injury *location* (50 percent of all fatalities).

# Table 57. Percentage of total motorcyclist fatalities by helmet use and nature and location of injuries, 2009

		Loca	ntion			
Helmet use/nature of injury	Neck and above	Entire body	Torso	Legs	Percent by nature	Total fatalities
No helmet use	57.7%	12.6%	6.3%		76.6%	85
Contusion/bruise	2.7%	0.9%			3.6%	4
Fracture/dislocation	9.0%		0.9%		9.9%	11
Internal	22.5%	9.0%	5.4%		36.9%	41
Minor bleeding	1.8%				1.8%	2
Other	6.3%	0.9%			7.2%	8
Severe bleeding	15.3%	0.9%			16.2%	18
Severe burn		0.9%			0.9%	1
Helmet	4.5%	5.4%	7.2%	1.8%	18.9%	21
Abrasion		0.9%			0.9%	1
Contusion/bruise		0.9%			0.9%	1
Fracture/dislocation	0.9%			0.9%	1.8%	2
Internal	2.7%	0.9%	6.3%		9.9%	11
No injury or unknown		0.9%			0.9%	1
Severe bleeding	0.9%	0.9%	0.9%	0.9%	3.6%	4
Severe burn		0.9%			0.9%	1
Unknown	3.6%		0.9%		4.5%	5
Internal	2.7%		0.9%		3.6%	4
Severe bleeding	0.9%				0.9%	1
Percent by location	65.8%	18.0%	14.4%	1.8%	100%	
Total fatalities	73	20	16	2		111

# Note:

No helmet indicated excludes null and unknown safety equipment types.

#### Source:

The highest fatality rates among objects of impact are when motorcyclists collide with fixed objects such as trees, road and bridge infrastructure, posts, signs, and mailboxes.

# Table 58. Probability of injury status of motorcycle operators and passengers by object of impact, 2009

		Prob	ability of injury	status (sum = 10	0%)	
Objects of impact	Total	Fatal	Incap- acitating	Non-incap- acitating	Other	Serious injury rate
Animals	182	2.2%	15.4%	61.0%	21.4%	17.6%
Deer	125	3.2%	15.2%	62.4%	19.2%	18.4%
Animal other than deer	57	0.0%	15.8%	57.9%	26.3%	15.8%
Another motor vehicle	1,765	3.3%	12.5%	51.3%	32.9%	15.8%
Fell from vehicle (non-collision)	292	0.7%	16.4%	64.7%	18.2%	17.1%
Off the roadway	440	2.5%	15.2%	63.2%	19.1%	17.7%
Off roadway	238	2.1%	13.9%	62.2%	21.8%	16.0%
Ditch	152	1.3%	15.1%	66.4%	17.1%	16.4%
Embankment	40	5.0%	25.0%	60.0%	10.0%	30.0%
Culvert	10	20.0%	10.0%	50.0%	20.0%	30.0%
Other actions	481	2.1%	10.8%	65.9%	21.2%	12.9%
Other	369	1.1%	10.3%	65.0%	23.6%	11.4%
Overturn/rollover	112	5.4%	12.5%	68.8%	13.4%	17.9%
Other traffic units	25	4.0%	4.0%	52.0%	40.0%	8.0%
Pedestrian	10	0.0%	0.0%	50.0%	50.0%	0.0%
Bicycle	7	0.0%	0.0%	42.9%	57.1%	0.0%
Animal drawn vehicle	5	0.0%	20.0%	60.0%	20.0%	20.0%
Work zone maintenance equipment	2	0.0%	0.0%	100.0%	0.0%	0.0%
Railway vehicle/train/engine	1	100.0%	0.0%	0.0%	0.0%	100.0%
Post, sign, mailbox	61	9.8%	18.0%	62.3%	9.8%	27.9%
Mailbox	20	5.0%	15.0%	65.0%	15.0%	20.0%
Utility pole	18	27.8%	11.1%	61.1%	0.0%	38.9%
Other post/pole or support	17	0.0%	17.6%	70.6%	11.8%	17.6%
Highway traffic sign post	5	0.0%	40.0%	40.0%	20.0%	40.0%
Light/luminaire Support	1	0.0%	100.0%	0.0%	0.0%	100.0%
Road and bridge infrastructure	173	7.5%	20.8%	58.4%	13.3%	28.3%
Curb	109	5.5%	18.3%	61.5%	14.7%	23.9%
Guardrail face	39	10.3%	30.8%	46.2%	12.8%	41.0%
Median barrier	12	8.3%	16.7%	66.7%	8.3%	25.0%
Bridge rail	9	22.2%	22.2%	55.6%	0.0%	44.4%
Guardrail end	3	0.0%	0.0%	66.7%	33.3%	0.0%
Impact attenuator/crash cushion	1	0.0%	0.0%	100.0%	0.0%	0.0%
Tree	25	16.0%	12.0%	52.0%	20.0%	28.0%
Wall, fence, building	29	3.4%	3.4%	51.7%	41.4%	6.9%
Fence	19	5.3%	0.0%	52.6%	42.1%	5.3%
Wall/building/tunnel	10	0.0%	10.0%	50.0%	40.0%	10.0%
Unknown	13	0.0%	7.7%	46.2%	46.2%	7.7%
Total	3,486	3.2%	13.4%	57.0%	26.4%	16.6%

Note:

Serious injury includes fatal and incapacitating injuries.

Source:

- Considering motorcycles involved, single vehicle collisions involved alcohol proportionately more often than in multi-≻ vehicle collisions.
- > In multi-vehicle collisions with serious injuries, motorcyclists are much more likely than the other units to be alcoholinvolved.

Table 59. Individuals involved in motorcycle collisions by vehicle type, driver alcohol status, and individual injury status, 2009

		Individual	injury status		
Type of vehicle/alcohol status	Fatal	Incapacitating	Non-incapacitating	All other	Total
Single vehicle collision					
Motorcycle and moped	49	243	1,026	318	1,636
Alcohol-related unit	17	40	129	29	215
Percent alcohol-related	34.7%	16.5%	12.6%	9.1%	13.1%
Multi-vehicle collision					
Motorcycle and moped	62	225	960	603	1,850
Alcohol-related unit	9	19	46	24	98
Percent alcohol-related	14.5%	8.4%	4.8%	4.0%	5.3%
All other units/vehicles	2	1	84	1,500	1,587
Alcohol-related unit	-	-	4	35	39
Percent alcohol-related	0.0%	0.0%	4.8%	2.3%	2.5%

#### Notes:

Non-incapacitating includes non-incapacitating and possible injuries. All other injury status includes not reported, null, refused, and unknown. Excludes pedestrians and pedalcyclists.

#### Source:

Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 1, 2010.

#### > There were decreases across all categories of BAC from 2008 to 2009.

The smallest proportional decrease was in seriously impaired (0.15 and greater) motorcycle operators. >

# Table 60. Motorcycle operators involved in collisions by blood alcohol content (BAC) (g/dL), 2005-2009

						Average annual	Change	Percent change,
BAC range, g/dL	2005	2006	2007	2008	2009	change	2008-2009	2008-2009
Total motorcycle operators	2,813	3,008	3,468	3,726	3,180	3.8%	-546	-14.7%
No BAC reported	2,621	2,805	3,269	3,487	3,007	4.1%	-480	-13.8%
Percent total operators	93.2%	93.3%	94.3%	93.6%	94.6%			
< 0.01	67	62	66	96	54	0.2%	-42	-43.8%
Percent total operators	2.4%	2.1%	1.9%	2.6%	1.7%			
0.01 < 0.08	27	33	23	40	28	9.0%	-12	-30.0%
Percent total operators	1.0%	1.1%	0.7%	1.1%	0.9%			
0.08 < 0.15	35	38	40	51	43	6.4%	-8	-15.7%
Percent total operators	1.2%	1.3%	1.2%	1.4%	1.4%			
0.15 and greater	63	70	70	52	48	-5.6%	-4	-7.7%
Percent total operators	2.2%	2.3%	2.0%	1.4%	1.5%			

#### Notes:

Includes all individual injury status categories.

g/dL = grams per deciliter.

No BAC reported for 2008 includes one invalid record.

#### Source:

INDIANA TRAFFIC SAFETY FACTS



# **PEOPLE**, 2008

INDIANA TRAFFIC SAFETY FACTS

This section on people looks at individuals involved in Indiana fatal and non-fatal collisions in 2009. Tables and figures summarize individuals involved by age, gender, locality (rural/ urban), type of injury (fatal, incapacitating, non-incapacitating), physical condition (normal, drinking, asleep/fatigued), as well as restraint usage. Data include descriptions of drivers, occupants, pedestrians, and pedalcyclists.

# HIGHLIGHTS

In 2009, there were a total of 304,412 individuals involved in motor vehicle collisions, of which 692 individuals were killed.

In 2009, there were 657 drivers involved in collisions for every 10,000 licensed drivers.

After a high of 1,898 in 2008, pedestrian involvement in collisions fell in 2009 to 1,719.

On average from 2005 to 2009, restraint use increased 1.7 percent annually.

- > There were a total of 304,412 individuals involved in motor vehicle collisions in 2009, of which 692 were killed.
- > Of all age groups, males ages 18 to 20 involved in collisions had the highest fatality rate (27.3 per 100,000 population).
- Among females involved in collisions, those ages 16 to 17 were killed at the highest rate (17.0 per 100,000 population), and had the highest injury rate (2,209.3 per 100,000 population).
- > Males were killed in traffic collisions at a rate more than twice that of females (15.3 vs 6.4 per 100,000 population).
- > There were 5,866 children (age 15 and under) involved in collisions, including 35 deaths.

	]	Populatior	ı	Fatalities			atalities p K popula			Non-fatal/ unknown injuries			Non-fatal/unknown injuries per 100k population		
Age group	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
< 4	183,004	175,184	358,188	3	2	5	1.6	1.1	1.4	427	378	808	233.3	215.8	225.6
4 - 7	179,066	171,020	350,086	1	4	5	0.6	2.3	1.4	415	399	816	231.8	233.3	233.1
8 - 15	357,234	342,222	699,456	13	12	25	3.6	3.5	3.6	1,243	1,419	2,670	348.0	414.6	381.7
16 - 17	93,462	88,173	181,635	9	15	24	9.6	17.0	13.2	1,557	1,948	3,507	1,665.9	2,209.3	1,930.8
18 - 20	146,760	139,751	286,511	40	14	54	27.3	10.0	18.8	2,575	2,829	5,407	1,754.6	2,024.3	1,887.2
21 - 24	182,264	175,145	357,409	49	18	67	26.9	10.3	18.7	2,377	2,626	5,005	1,304.2	1,499.3	1,400.4
25 - 34	424,914	413,974	838,888	90	31	121	21.2	7.5	14.4	4,133	4,646	8,780	972.7	1,122.3	1,046.6
35 - 44	428,615	421,547	850,162	85	21	106	19.8	5.0	12.5	3,488	3,818	7,315	813.8	905.7	860.4
45 - 54	465,936	473,235	939,171	79	27	106	17.0	5.7	11.3	3,499	3,681	7,182	751.0	777.8	764.7
55 - 64	356,841	376,175	733,016	40	21	61	11.2	5.6	8.3	2,308	2,615	4,924	646.8	695.2	671.7
65 - 74	201,454	235,218	436,672	37	18	55	18.4	7.7	12.6	1,060	1,330	2,390	526.2	565.4	547.3
75 and over	145,138	246,781	391,919	39	24	63	26.9	9.7	16.1	828	1,068	1,899	570.5	432.8	484.5
Unknown age	0	0	0	0	0	0	na	na	na	3	2	40	na	na	na
TOTAL	3,164,688	3,258,425	6,423,113	485	207	692	15.3	6.4	10.8	23,913	26,759	50,743	755.6	821.2	790.0

#### Table 61. Individuals involved in collisions, by age, gender, and injury status, 2009

#### Notes:

Gender totals include cases of individuals with unknown or unreported gender types, thus may not equal the sum of male and female. Non-fatal/unknown injuries includes injury status of incapacitating, non-incapacitating, possible, unknown, not reported, refused (treatment), and invalid injury categories.

#### Sources:

*Individuals in collisions: Population:* 

Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 1, 2010. US Census Bureau, Population Estimates, State Characteristics; SC-EST2009-agesex-res: Annual Estimates of the Resident

Population by Single-Year of Age and Sex for States:

tes: April 1, 2000 to July 1, 2009. Release date: June 2010. File: July 1, 2009.

- > Individuals are more likely to be killed or suffer an incapacitating injury in rural collisions than in urban collisions, regardless of age.
- > Of the 25 child (age 15 and under) fatalities where locality was known, 17 (68 percent) occurred in rural areas.
- > Individuals age 75 and over in rural collisions were most likely of any age group/locality to have been killed in a collision.
- > Individuals aged 64 to 74 are over 8 times more likely to be killed in a rural collision than an urban collision, while children age 4 to 7 are over twice as likely to be seriously injured in a rural than an urban collision.

Table 62. Individuals with fatal or incapacitating injuries in traffic collisions, by age and locale, 2009

		Lo	w <		<		>	>	High				
			Rural					Urban			Relative risk (rural to urban)		
Age group	Fatalities	Incapac- itating	Total involved	% Fatal	% Inca- pacitating injury	Fatalities	Incapac- itating	Total involved	% Fatal	% Inca- pacitating injury	Fatal	Incapac- itating	
< 4	3	15	266	1.1%	5.6%	1	18	467	0.2%	3.9%	5.27	1.46	
4 - 7	4	16	254	1.6%	6.3%	0	12	459	0.0%	2.6%	na	2.41	
8 - 15	10	63	904	1.1%	7.0%	7	48	1,287	0.5%	3.7%	2.03	1.87	
16 - 17	16	91	1,603	1.0%	5.7%	6	63	1,475	0.4%	4.3%	2.45	1.33	
18 - 20	36	171	2,133	1.7%	8.0%	16	118	2,679	0.6%	4.4%	2.83	1.82	
21 - 24	42	134	1,642	2.6%	8.2%	17	162	2,862	0.6%	5.7%	4.31	1.44	
25 - 34	78	249	2,911	2.7%	8.6%	34	270	4,953	0.7%	5.5%	3.90	1.57	
35 - 44	78	219	2,355	3.3%	9.3%	25	219	4,008	0.6%	5.5%	5.31	1.70	
45 - 54	68	223	2,334	2.9%	9.6%	32	246	4,054	0.8%	6.1%	3.69	1.57	
55 - 64	40	153	1,598	2.5%	9.6%	15	145	2,759	0.5%	5.3%	4.60	1.82	
65 - 74	41	76	838	4.9%	9.1%	8	73	1,331	0.6%	5.5%	8.14	1.65	
75 and over	35	54	550	6.4%	9.8%	18	65	1,174	1.5%	5.5%	4.15	1.77	
Unknown age	0	0	36	0.0%	0.0%	0	1	2	0.0%	50.0%	na	na	
Total	451	1,464	17,424	2.6%	8.4%	179	1,440	27,510	0.7%	5.2%	3.98	1.61	

Notes:

Excludes *pedestrians*, *pedalcyclists*, and individuals with an unknown locality.

Total involved includes individuals with a reported injury status of fatal, incapacitating, non-incapacitating and possible injuries.

Relative risk (rural to urban) is the likelihood of a selected injury status in rural areas divided by the likelihood of the same injury status in urban areas.

# Source:

- In 2009, pedestrians and motorcycle riders had the highest rate of fatalities per 1,000 involved (32 and 31.8, respectively).
- Compared to drivers of motor vehicles, non-motorists have much lower rates of non-injury.

# Table 63. Individuals involved in collisions, by person type and injury status, 2009

			In	ijury status				
Unit type/person type	Fatal	Fatalities per 1,000 total involved	Incapacitating	Non- incapacitating	Unknown/ other injury	Not injured	Total individuals	% not injured
Vehicle occupants								
Driver	384	1.3	1,754	28,148	3,985	251,550	285,821	88.0%
Passenger	135	10.9	682	11,283	93	218	12,411	1.8%
Motorcycle/moped riders	111	31.8	468	1,986	32	889	3,486	25.5%
Non-occupants								
Pedestrians	55	32.0	211	1,255	34	164	1,719	9.5%
Pedalcyclists	7	7.2	64	739	9	156	975	16.0%
TOTAL	692	2.3	3,179	43,411	4,153	252,977	304,412	83.1%

#### Notes:

Unknown/other injury includes injury status of not reported, unknown, refused (treatment), and invalid injury codes. Non-incapacitating includes non-incapacitating and possible injuries.

#### Source:

Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 1, 2010.

- In 2009, there were 657 drivers involved in collisions for every 10,000 licensed drivers, up from 627 in 2008. (This is due in large part to an 11 percent decline in licensed drivers from 2008 to 2009 as reported by the Indiana BMV.)
- The 16 and 17 age group represents the lowest percentage of licensed drivers (2.1 percent), but the highest rates per 10,000 licensed drivers involved in fatal collisions (4.0) and all collisions (1,856.2).
- Drivers age 21 to 24 had the highest rate (1.7) of drivers killed per 10,000 licensed drivers.

# Table 64. Drivers in collisions by age and rate, 2009

		Low	<	<		>	>	High			
	Licensed	l drivers	Driver	s in fatal co	ollisions	D	rivers kille	d	Drive	ers in all co	ollisions
					Per 10,000			Per 10,000			Per 10,000
Age	Count	% total	Count	% total	licensed	Count	% total	licensed	Count	% total	licensed
< 16	0	0.0%	5	0.5%	na	3	0.6%	na	1,636	0.6%	na
16 - 17	92,021	2.1%	37	3.7%	4.0	12	2.4%	1.3	17,081	5.9%	1,856.2
18 - 20	229,275	5.2%	76	7.7%	3.3	34	6.9%	1.5	30,485	10.5%	1,329.6
21 - 24	287,073	6.5%	93	9.4%	3.2	50	10.2%	1.7	30,206	10.5%	1,052.2
25 - 34	739,269	16.8%	176	17.8%	2.4	89	18.1%	1.2	55,858	19.3%	755.6
35 - 44	759,567	17.3%	189	19.1%	2.5	89	18.1%	1.2	48,464	16.8%	638.0
45 - 54	866,241	19.7%	179	18.1%	2.1	89	18.1%	1.0	46,283	16.0%	534.3
55 - 64	724,918	16.5%	119	12.0%	1.6	52	10.6%	0.7	32,451	11.2%	447.7
65 - 74	424,380	9.7%	69	7.0%	1.6	37	7.5%	0.9	15,744	5.4%	371.0
75 and over	273,901	6.2%	48	4.8%	1.8	36	7.3%	1.3	10,741	3.7%	392.1
Unknown age	0	0.0%	0	0.0%	na	0	0.0%	na	52	0.0%	na
Total	4,396,645	100.0%	991	100.0%	2.3	491	100.0%	1.1	289,001	100.0%	657.3

#### Note:

Licensed and/or permit driver counts were not available or incomplete for 15 year-olds.

# Sources:

Drivers in collisions: Licensed drivers:

sions: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 1, 2010.s: Indiana Bureau of Motor Vehicles, as of June 8, 2010.

- > Nearly 55 percent of the drivers in fatal collisions were classified with an apparent physical condition of normal.
- Drivers identified at the time of a collision as having a physical condition of had been drinking had the highest fatal collision and drivers killed rates.

# Table 65. Drivers involved in collisions, by apparent physical condition, 2009

		Drivers						
Apparent physical condition	Killed	In fatal collisions	In all collisions	Killed rate	Fatal collision rate			
Normal	134	553	272,415	0.5	2.0			
Had been drinking	78	114	7,809	10.0	14.6			
Asleep/fatigued	11	14	2,694	4.1	5.2			
Illness	13	14	1,438	9.0	9.7			
Drugs/medication	8	13	1,176	6.8	11.1			
Handicapped	2	2	258	7.8	7.8			
Unknown	256	296	3,900	65.6	75.9			
Total	502	1,006	289,690	1.7	3.5			

#### Notes:

*Killed rate* is defined as drivers killed per 1,000 in all collisions for each condition.

Fatal collision rate is defined as drivers in fatal collisions per 1,000 in all collisions for each condition.

A driver can be assigned more than one condition type; totals will not match actual unique individual totals.

#### Source:

Indiana State Police Automated Reporting Information Exchange System, as of March 1, 2010

- > Of drivers killed in collisions, nearly 5 percent had no license and one had a probationary license.
- Drivers with a motorcycle license had the highest risk of fatality (nearly 1 percent), followed by those with no license (0.6 percent).
- > When involved in a collision, drivers with a commercial license had the highest percentage (92.7 percent) of non-injury.

# Table 66. Drivers involved in collisions, by license type and injury status, 2009

	Driver injury status								
License type	Fatal	% of fatal total	Incapa- citating	Non- incapacitating	Unknown/ other	No injury	% Not injured	Total	Fatal, as % overall total
Operator	365	74.8%	1,669	26,115	3,516	219,604	87.4%	251,269	0.1%
Commercial driver	22	4.5%	74	737	152	12,539	92.7%	13,524	0.2%
Motorcycle	62	12.7%	214	1,246	89	5,108	76.0%	6,719	0.9%
No license	24	4.9%	92	653	49	3,491	81.0%	4,309	0.6%
Chauffeur	10	2.0%	34	311	50	3,364	89.3%	3,769	0.3%
Probationary operator	1	0.2%	7	190	30	1,899	89.3%	2,127	0.0%
Learner permit	4	0.8%	43	318	29	1,540	79.6%	1,934	0.2%
Unknown license type	0	0.0%	10	129	39	1,360	88.4%	1,538	0.0%
Total	488	100.0%	2,143	29,699	3,954	248,905	87.3%	285,189	0.2%

#### Notes:

Includes only drivers of motorcycles/mopeds, passenger cars, SUVs, vans, pickups, and large trucks.

Chauffeur includes chauffeur and public passenger chauffeur license.

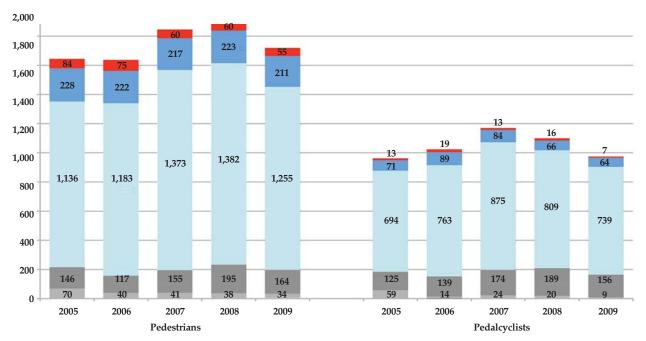
Motorcycle includes motorcycle, chauffeur with MC endorsement, operators with MC endorsement, and public passenger chauffer with MC endorsement.

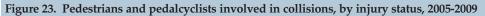
Learner permit includes learner permit, drivers education learners permit, and learner motorcycle.

Non-incapacitating includes non-incapacitating and possible injuries.

#### Source:

- > After a high of 1,898 in 2008, pedestrian involvement in collisions fell in 2009 to 1,719.
- All categories of pedestrian and pedalcyclist injuries fell in number from 2008 to 2009.
- After a high in 2007, pedalcyclist involvement in collisions continued to decrease in 2009.
- > Pedalcyclist fatalities reached a five-year low in 2009 in number as well as in proportion (7 and 0.7 percent, respectively).





#### Notes:

**INDIANA** TRAFFIC SAFETY FACTS

Non-incapacitating includes injury statuses reported as non-incapacitating and possible.

No injury includes the injury status of blank.

Unknown includes the injury statuses of unknown, not reported, and refused (treatment).

## Source:

Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 1, 2010.

Fatal

- Incapacitating
   Non-incapacitating
- No injury
- Unknown

# **PEOPLE**

- > There were a total of 953 male and 724 female pedestrians involved in collisions in 2009.
- Ten (7 females, 3 males) of the pedestrians killed were children (ages 15 and under), and 358 other pedestrian children were involved in collisions.
- > Of all the age/gender groups, males ages 8 to 15 had the largest number of pedestrians involved in collisions.

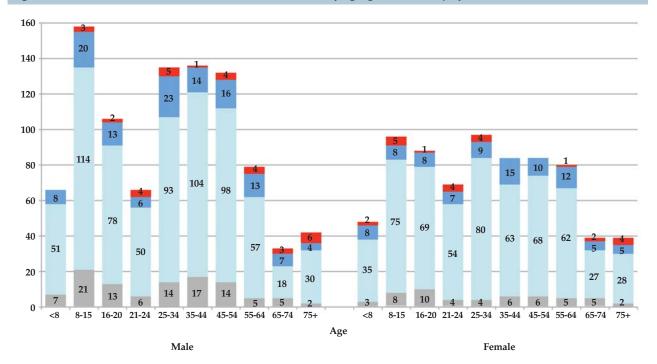


Figure 24. Pedestrians involved in motor vehicle collisions, by age, gender, and injury status, 2009

#### Notes:

Source:

Excludes pedestrians with missing or invalid age or gender and unknown injuries. Non-incapacitating includes injury statuses reported as non-incapacitating and possible.

Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 1, 2010.

# Fatal

- Incapacitating
- Non-incapacitating
- No injury

89

- ► In 2009, *on roadway* was the pedestrian action with the highest number of fatalities, while *crossing at an intersection* was the action with the highest number for pedestrians surviving collisions.
- > Of the known pedestrian actions, *working* and being on the roadway posed the highest risk of fatality.

 Table 67. Pedestrians involved in motor vehicle collisions, by pedestrian action, 2009

Pedestrian action	Fatalities	Survivors	Total involved	% Fatal
Working	2	19	21	9.5%
On roadway	22	228	250	8.8%
Unknown	1	18	19	5.3%
Crossing not at intersection	15	287	302	5.0%
Getting in/out of vehicle	1	37	38	2.6%
With traffic	1	38	39	2.6%
Other	6	255	261	2.3%
Crossing at intersection	6	328	334	1.8%
Not in roadway	1	111	112	0.9%
Standing	0	123	123	0.0%
Moving	0	115	115	0.0%
On shoulder	0	49	49	0.0%
Against traffic	0	36	36	0.0%
On designated non-motorist lane	0	20	20	0.0%
Total	55	1,664	1,719	3.2%

Source:

> Wednesdays and Fridays were the days with the highest numbers of non-motorists involved in collisions.

<

Non-motorists were involved in collisions mainly between the hours of 3pm and 7pm, with the highest proportion hour being between 5pm and 6pm.

>

High

>

> Sundays had the fewest number of non-motorists involved in collisions.

Low

Table 68. Non-motorists involved in collisions, by time of day and day of week, 2009

<

							1 iigit		
Time	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Total by hour	% by hour
12am-	11	4	1	1	6	3	15	41	1.5%
1am-	8	1	2	2	3	6	9	31	1.2%
2am-	11	0	1	0	0	5	8	25	0.9%
3am-	4	3	0	1	4	4	8	24	0.9%
4am-	3	0	2	4	2	2	2	15	0.6%
5am-	4	2	4	1	6	4	3	24	0.9%
6am-	4	7	1	11	6	11	2	42	1.6%
7am-	2	14	28	26	20	20	2	112	4.2%
8am-	4	15	12	13	11	12	3	70	2.6%
9am-	6	14	10	7	16	13	11	77	2.9%
10am-	4	6	10	14	16	16	12	78	2.9%
11am-	9	18	11	27	14	16	27	122	4.5%
12pm-	10	23	21	30	19	23	22	148	5.5%
1pm-	13	21	14	25	17	22	26	138	5.1%
2pm-	16	22	18	25	30	41	24	176	6.5%
3pm-	16	38	40	35	35	37	28	229	8.5%
4pm-	19	31	48	40	36	45	26	245	9.1%
5pm-	32	34	34	49	40	53	35	277	10.3%
6pm-	25	34	43	36	30	29	28	225	8.4%
7pm-	14	32	25	39	35	34	33	212	7.9%
8pm-	17	11	21	20	22	25	18	134	5.0%
9pm-	15	15	16	21	13	14	24	118	4.4%
10pm-	9	6	16	7	14	15	16	83	3.1%
11pm-	5	2	4	4	8	11	14	48	1.8%
Total by day	261	353	382	438	403	461	396	2,694	100%
% by day	9.7%	13.1%	14.2%	16.3%	15.0%	17.1%	14.7%	100%	

#### Note:

Excludes non-motorists (pedestrians, pedalcyclists) with unknown time of day or day of week.

Source:

- > In 2009, overall restraint use was 90 percent, down .02 percentage points from 2008.
- > On average from 2005 to 2009, restraint use in traffic collisions increased 1.7 percent annually.
- From 2008 to 2009, fatal injuries decreased by 88, as the percentage of restraint use in fatal injury collisions increased 4 percent.
- > While restraint use continued to increase each year, fatal injury restraint use remained less than 50 percent.

Table 69. Vehicle occupants involved in traffic collisions, by restraint use and injury status, 2005-2009

Individuals	2005	2006	2007	2008	2009	Average annual change	2008 to 2009 change
All occupants	338,630	309,580	322,929	318,311	297,829	-3.0%	-20,482
% Restraint use	84.1%	85.6%	89.0%	90.2%	90.0%	1.7%	-0.2%
Fatal injuries	748	695	698	607	519	-8.5%	-88
% Restraint use	40.8%	39.4%	43.4%	44.0%	48.0%	4.3%	4.0%
Incapacitating injuries	3,127	3,021	2,786	2,588	2,433	-6.1%	-155
% Restraint use	61.1%	63.6%	64.8%	71.4%	71.5%	4.1%	0.1%
Non-incapacitating injuries	51,777	47,475	44,343	40,769	39,388	-6.6%	-1,381
% Restraint use	80.9%	82.0%	85.6%	87.3%	87.2%	1.9%	-0.1%
Unknown/other injuries	34,280	21,665	8,411	5,818	4,075	-39.7%	-1,743
% Restraint use	84.5%	84.2%	85.0%	88.5%	93.3%	2.5%	4.8%
Not injured	248,698	236,724	266,691	268,529	251,414	0.5%	-17,115
% Restraint use	85.1%	86.8%	90.1%	91.0%	90.7%	1.6%	-0.3%

## Notes:

**INDIANA** TRAFFIC SAFETY FACTS

Excludes unit types of farm vehicles, motorcycles, and mopeds.

Restraint use includes the use of one of the following: lap belt only, harness, airbag deployed and harness, child restraint, or lap and harness.

Non-incapacitating injuries include those injuries reported as non-incapacitating or possible.

Unknown/other injuries include not reported, unknown, refused (treatment), and invalid injury codes.

Not injured includes individuals reported with blank values in the injury status code field.

#### Source:

- ► For the most part, as restraint use increased, the injury level decreased (fatal to no injury).
- > Except for those under age 16, restraint use was lowest for those individuals who were killed.
- Individuals aged 35 to 44 who were killed had the lowest restraint use percentage of all age groups and injury statuses (35.6 percent).

Table 70. Vehicle occupants involved in collisions, by age, restraint use, and injury severity, 2009

		Injury severity							
Age group	Fatal	Incapacitating	Non- incapacitating	Unknown/ other injury	Not injured	Total			
<16	23	149	3,328	68	1,407	4,975			
% Restraint use	52.2%	71.1%	84.8%	80.9%	46.4%	73.3%			
16 - 17	21	146	2,843	334	14,765	18,109			
% Restraint use	42.9%	62.3%	86.4%	94.9%	91.6%	90.6%			
18 - 20	48	265	4,304	462	26,481	31,560			
% Restraint use	37.5%	55.5%	84.5%	91.3%	90.6%	89.4%			
21 - 24	55	247	3,951	367	26,266	30,886			
% Restraint use	45.5%	63.6%	84.0%	91.6%	90.5%	89.4%			
25 - 34	88	439	6,879	720	48,612	56,738			
% Restraint use	43.2%	68.1%	85.4%	92.5%	90.3%	89.5%			
35 - 44	73	340	5,452	760	42,282	48,907			
% Restraint use	35.6%	76.8%	88.5%	94.2%	91.0%	90.6%			
45 - 54	72	345	5,378	594	40,182	46,571			
% Restraint use	48.6%	77.7%	89.6%	93.8%	91.2%	90.9%			
55 - 64	41	252	3,776	423	28,269	32,761			
% Restraint use	51.2%	80.6%	91.2%	95.7%	91.7%	91.6%			
65 - 74	45	133	1,901	195	13,778	16,052			
% Restraint use	64.4%	82.7%	92.0%	94.9%	91.4%	91.4%			
75 and over	53	117	1,539	151	9,323	11,183			
% Restraint use	67.9%	82.9%	91.5%	92.7%	90.7%	90.6%			

#### Notes:

Includes only individuals with valid age.

Excludes unit types of farm vehicles, motorcycles, and mopeds.

Restraint use includes the use of one of the following: lap belt only, harness, airbag deployed and harness, child restraint, or lap and harness.

Non-incapacitating injuries include those injuries reported as non-incapacitating or possible.

Unknown/other injuries include not reported, unknown, refused (treatment), and invalid injury codes.

Not injured includes individuals reported with blank values in the injury status code field.

# Source:

- The restraint use rate for male occupants of pickup trucks and SUVs was under 25 percent; however, it was higher than the 2008 percentages of under 20 percent.
- > Occupants of passenger cars had the highest restraint use percentage of all vehicle types (88.3 percent).
- Of the 4,935 people in pickup trucks killed or with non-fatal injuries, 78.2 percent were properly restrained, an increase from 2008 (77.1 percent).

Table 71. Vehicle occupants killed and injured in collisions, by restraint use, vehicle type, and gender, 2009

	]	Fatal	Non-fa			
Vehicle type	Male	Female	Male	Female	Total	
Buses	1	0	141	200	342	
% Restraint use	0.0%	na	18.4%	15.5%	16.7%	
Passenger cars	178	121	10,181	16,214	26,694	
% Restraint use	50.6%	66.9%	84.6%	91.2%	88.3%	
Pickup trucks	81	12	3,467	1,375	4,935	
% Restraint use	24.7%	58.3%	76.7%	85.5%	78.2%	
SUVs	49	24	2,430	3,828	6,331	
% Restraint use	22.4%	33.3%	83.3%	90.7%	87.1%	
Vans	21	11	1,326	1,957	3,315	
% Restraint use	76.2%	54.5%	85.7%	90.1%	88.1%	
Large trucks	15	1	397	23	436	
% Restraint use	53.3%	100.0%	80.9%	78.3%	79.8%	
Other vehicle types	0	0	72	12	84	
% Restraint use	na	na	22.2%	33.3%	23.8%	

#### Notes:

Excludes unit types of *farm vehicles, motorcycles,* and *mopeds*.

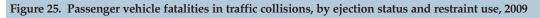
Other vehicle types consists of unknown, combination vehicles, and motor homes/RVs.

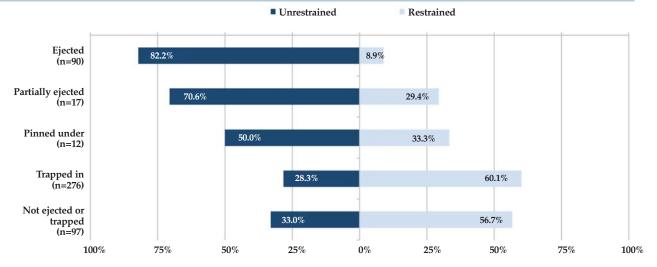
Restraint use includes the use of one of the following: lap belt only, harness, airbag deployed and harness, child restraint, or lap and harness. Non-fatal injury includes injury statuses of incapacitating, non-incapacitating, and possible.

#### Source:

# PEOPLE

- > Persons unrestrained were more likely to be ejected.
- Slightly over 77 percent of those killed and ejected (ejected, partially ejected, pinned under) were known to be unrestrained (92 of 119).
- > Over 45 percent (92 of 202) of those killed and known unrestrained were ejected (ejected, partially ejected, pinned under).





#### Notes:

Includes vehicle types of *passenger cars*, *pickup trucks*, SUVs, and *vans*.

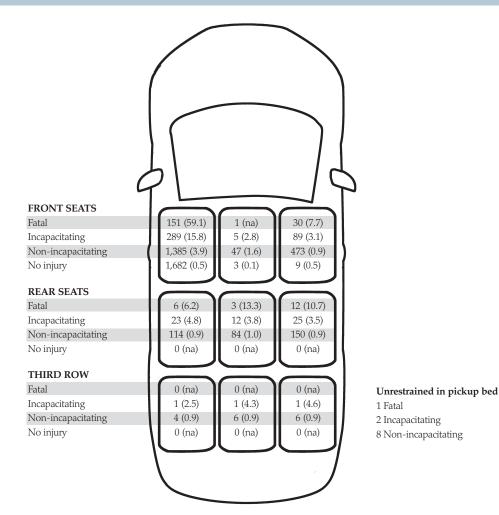
Excludes unknown ejection status.

Percents are individuals killed known to be restrained or not restrained as a percent of the total of individuals for each ejection status. For example, 82.2 percent represents 74 individuals killed, ejected, and known not restrained of 90 individuals known to be ejected.

Source:

- In passenger vehicles, there were 440 drivers and 125 front seat passengers who were not restrained and were killed or suffered incapacitating injuries.
- If involved in a collision, a driver of a passenger vehicle was 59 times more likely to have been killed if unrestrained than a driver who was restrained.
- In 2009, a person sitting in the right rear seat of a passenger vehicle who was unrestrained was more likely to be killed than a front right seat passenger who was unrestrained.

Figure 26. Individuals known to be unrestrained in passenger vehicles involved in collisions, by seat positions, and injury status, 2009



#### Notes:

INDIANA TRAFFIC SAFETY FACTS

Calculations include only individuals where injury status, restraint use, and seat position were known.

Excludes positions of outside left, outside center, outside right, and outside rear.

Numbers shown represent the number of known unrestrained persons in each seat position and the relative risk of injury (in parentheses) for that injury and seat position if unrestrained.

Relative risk of injury is defined as the ratio of persons who incurred the injury given they were unrestrained, to those who incurred the injury given they were restrained.

Includes persons in passenger vehicles only (*passenger cars, SUVs, vans, pickup trucks*) where restraint use is known. na = not applicable; there were no persons in that seat position or no persons in that seat position restrained.

#### Source:



## ALCOHOL, 2009

INDIANA TRAFFIC SAFETY FACTS

As with other indicators of Indiana traffic safety performance, there were further improvements in alcohol metrics from 2008 to 2009. Alcohol-related collisions of all severities decreased from 2008 to 2009 and on average since 2005. Alcohol-related fatalities declined by 78 from 2008 to 2009, and by an average of 12.2 percent from 2005 to 2009. Considering 2008 to 2009 decreases, major declines in the fall season accounted for 82 percent of the reduction in alcohol-related fatalities: August (-10), September (-9), November (-29), December (-16). As in previous years, the preponderance of alcohol-related fatalities and personal injuries occurred within alcohol-related units. Other alcohol-related highlights are noted below.

#### Highlights

#### Testing

From 2008 to 2009, the percent of seriously injured drivers with a reported toxicological test declined.

The proportion of *drivers killed* that had toxicological tests varies with age (highest = ages 16-20; lowest = ages <16 and 75+).

*Killed* drivers are much more likely to have been impaired (0.08+) than the *surviving* drivers.

There is a large increase in % *positive drug test results* for *drivers killed* from 2005 (6.5) to 2009 (18.7).

#### Time and Location

*County* roads had the largest proportions of alcohol-involved injuries and fatalities.

*Local/city* roads hosted the highest volume of non-fatal personal injuries in alcohol-related collisions in 2009.

Peak periods for alcohol-related crashes occur later than nonalcohol collisions, shifting to the early morning periods past midnight.

#### Factors in alcohol-related collisions

Age: Based on their shares of total Indiana population, the 16 to 24 age group had disproportionately larger shares of alcohol-related serious injury.

Gender: Among all age groups, males were reported with BACs of 0.15 g/dL or greater more than three times the rate of females in 2009.

Units involved: Alcohol-involvement is typically two or more times more likely for single than multi-vehicle collisions.

Type of units: Mopeds and motorcycles consistently have the highest rates of alcohol-involvement each year among all traffic units.

*Alcoholic beverages* continues to be assigned as the primary factor in more than one-third of alcohol-related collisions.

- > Alcohol-related collisions of all severities decreased from 2008 to 2009 and on average since 2005.
- > The proportion of fatal collisions that were alcohol-related fell sharply from 30.2 percent in 2008 to 24.9 percent in 2009.
- > Alcohol-related collisions decreased 5.9 percent from 2008 to 2009, less than the 7.7 percent decrease in total collisions.

#### Table 72. Indiana collisions involving alcohol, 2005-2009

	2005	2006	2007	2008	2009	% change '08-'09	Average annual change
All collisions	208,359	192,721	204,999	205,452	189,676	-7.7%	-2.1%
Fatal	855	817	804	722	631	-12.6%	-7.2%
Incapacitating	3,141	3,190	3,075	2,898	2,732	-5.7%	-3.4%
Non-incapacitating	38,620	35,659	34,341	32,460	30,679	-5.5%	-5.6%
Property damage	165,743	153,055	166,779	169,372	155,634	-8.1%	-1.3%
Alcohol-related collisions	13,684	11,855	9,943	9,411	8,855	-5.9%	-10.2%
Fatal	262	250	233	218	157	-28.0%	-11.4%
Incapacitating	560	583	532	506	406	-19.8%	-7.3%
Non-incapacitating	4,136	3,617	3,025	2,719	2,563	-5.7%	-11.2%
Property damage	8,726	7,405	6,153	5,968	5,729	-4.0%	-9.8%
% Alcohol-related	6.6%	6.2%	4.9%	4.6%	4.7%		
Fatal	30.6%	30.6%	29.0%	30.2%	24.9%		
Incapacitating	17.8%	18.3%	17.3%	17.5%	14.9%		
Non-incapacitating	10.7%	10.1%	8.8%	8.4%	8.4%		
Property damage	5.3%	4.8%	3.7%	3.5%	3.7%		

#### Note:

See glossary for definition of *alcohol-related* collisions.

#### Source:

Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 1, 2010.

- > On average from 2005 to 2009, about 29 percent of fatalities have been classified as alcohol-related.
- > Alcohol-related injuries averaged about 10 percent annually during the same period.
- > Alcohol-related fatalities declined by 78 from 2008 to 2009, and by an average of 12.2 percent from 2005 to 2009.
- > Alcohol-related injuries have declined annually on average 6.1 percent from 2005 to 2009.

Table 73. Individuals killed or injured in alcohol-related collisions, 2005-2009

						2005-2009	Average annual %		ange, -2009
	2005	2006	2007	2008	2009	average	change	Count	Percent
Total fatalities	938	899	898	815	692	848	-7.2%	-123	-15.1%
Alcohol-related	293	274	254	246	168	247	-12.2%	-78	-31.7%
% alcohol-related	31.2%	30.5%	28.3%	30.2%	24.3%	28.9%	-5.6%	-0.06	-19.6%
Total injuries	59,250	55,196	52,465	48,837	46,590	52,468	-5.8%	-2,247	-4.6%
Alcohol-related	6,627	5,878	4,987	4,489	4,039	5,204	-11.6%	-450	-10.0%
% alcohol-related	11.2%	10.6%	9.5%	9.2%	8.7%	9.8%	-6.1%	-0.01	-5.7%

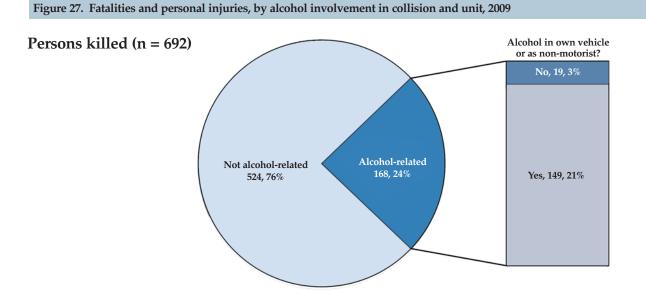
#### Notes:

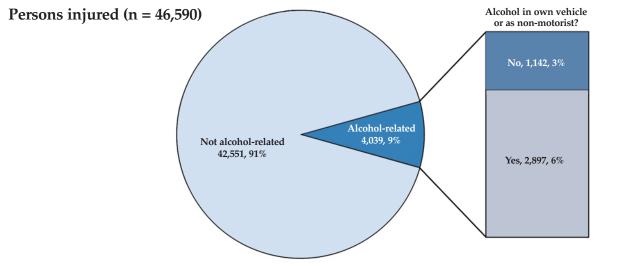
See glossary for definition of *alcohol-related* collisions.

Injuries includes incapacitating, non-incapacitating, and possible.

#### Source:

- > The preponderance of alcohol-related fatalities and personal injuries occurred within alcohol-related units.
- Eighty-nine percent of all fatalities in alcohol-related collisions were to occupants of vehicles involving alcohol or to alcohol-related non-motorists (149 of 168).
- Seventy-two percent of all non-fatal injuries in alcohol-related collisions were to occupants of vehicles involving alcohol or to alcohol-related non-motorists (2,897 of 4,039).





#### Notes:

**INDIANA** TRAFFIC SAFETY FACTS

See glossary for definition of *alcohol-related*. *Injuries* includes *incapacitating*, *non-incapacitating*, and *possible*.

#### Source:

- Males across all age groups (except <16) exhibited higher rates of involvement in alcohol-related collisions than females in 2009.</p>
- > For both males and females, the age group at highest risk of alcohol-involved fatalities or injuries was 21-24 year-olds.
- > After the 21-24 year-old peak in injuries per 100,000, the rate of involvement drops with age.
- Based on their shares of total Indiana population, the 16 to 24 year old age categories had disproportionately larger shares of alcohol-related serious injury.

Table 74. Alcohol-related injury and fatality rates per 100,000 population for individuals in Indiana motor vehicle collisions by age and gender, 2009

		Males			Females			Total	
Age group	Fatalities and injuries	Est. 2009 population	Per 100,000 population	Fatalities and injuries	Est. 2009 population	Per 100,000 population	Fatalities and injuries	Est. 2009 population	Per 100,000 population
<16	92	719,304	12.8	107	688,426	15.5	199	1,407,730	14.1
16-20	383	240,222	159.4	227	227,924	99.6	610	468,146	130.3
21-24	461	182,264	252.9	200	175,145	114.2	661	357,409	184.9
25-34	668	424,914	157.2	315	413,974	76.1	983	838,888	117.2
35-44	483	428,615	112.7	259	421,547	61.4	742	850,162	87.3
45-54	449	465,936	96.4	177	473,235	37.4	626	939,171	66.7
55-64	178	356,841	49.9	94	376,175	25.0	272	733,016	37.1
65-74	48	201,454	23.8	34	235,218	14.5	82	436,672	18.8
75 +	23	145,138	15.8	9	246,781	3.6	32	391,919	8.2
Total	2,785	3,164,688	88.0	1,422	3,258,425	43.6	4,207	6,423,113	65.5

#### Notes:

Injuries includes incapacitating, non-incapacitating, and possible.

Includes individuals in alcohol-related collisions when age and gender are known.

#### Sources:

Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 1, 2010.

Population: US Census Bureau, Population Division, Annual Estimates of the Resident Population by Single-Year of Age and Sex for the United States and States: April 1, 2000 to July 1, 2009, accessed August 18, 2010 at http://www.census.gov/popest/states/asrh/

- Drivers in the three age groups from 16 to 34 years had the highest alcohol-related rates of injury/fatality per 10,000 licenses.
- Based on their proportions among Indiana operator licenses, the same age groups (16-34) are over-represented in alcohol-related injuries.
- > Rates of alcohol-related injuries and fatalities declined with age after the 21-24 year old category.

Table 75. Driver injury and fatality rates in Indiana motor vehicle collisions per 10,000 operator licenses by age and alcohol involvement, 2009

	Operator li	icenses, 2009	Alcoho	ol-related colli	sions	Non-a	lcohol collisi	ons
Age group	Number	Percent total	Drivers injured and killed	Percent total	Rate per 10K licenses	Drivers injured and killed	Percent total	Rate per 10K licenses
<16	5,342	0.1%	4	0.1%	7.5	205	0.7%	383.8
16-20	321,296	7.3%	383	12.7%	11.9	5,083	17.2%	158.2
21-24	287,073	6.5%	500	16.5%	17.4	2,996	10.1%	104.4
25-34	739,269	16.8%	772	25.5%	10.4	5,561	18.8%	75.2
35-44	759,567	17.3%	566	18.7%	7.5	4,650	15.7%	61.2
45-54	866,241	19.7%	500	16.5%	5.8	4,775	16.2%	55.1
55-64	724,918	16.5%	211	7.0%	2.9	3,384	11.5%	46.7
65-74	424,380	9.6%	70	2.3%	1.6	1,646	5.6%	38.8
75 and older	273,901	6.2%	20	0.7%	0.7	1,231	4.2%	44.9
TOTAL	4,401,987	100.0%	3,026	100.0%	6.9	29,531	100.0%	67.1

#### Notes:

INDIANA TRAFFIC SAFETY FACTS

Injuries include incapacitating, non-incapacitating, and possible.

Includes driver injury and fatalities in alcohol- and non-alcohol related collisions where age is known.

#### Sources:

Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 1, 2010. Indiana Bureau of Motor Vehicles, as of June 1, 2010.

- > From 2008 to 2009, the percent of seriously injured drivers tested declined.
- > Roughly two-thirds of drivers killed in collisions are typically tested for alcohol and/or drugs.
- > Toxicological testing rates for drivers decline with less serious injury outcomes.

### Table 76. Drivers involved in traffic collisions by individual injury status and alcohol and/or drug tests given, 2005-2009

						Change	, 2008-09
Injury status/test given	2005	2006	2007	2008	2009	Count	Percent
Fatal							
No test reported	209	215	191	164	176	12	7.3%
Alcohol and/or drug	452	394	435	390	315	-75	-19.2%
% tested	68.4%	64.7%	69.5%	70.4%	64.2%	-0.06	-8.9%
Incapacitating							
No test reported	1,948	1,962	1,861	1,830	1,716	-114	-6.2%
Alcohol and/or drug	604	617	624	504	441	-63	-12.5%
Refused	10	4	5	9	5	-4	-44.4%
% tested	23.6%	23.9%	25.1%	21.5%	20.4%	-0.01	-5.2%
Non-incapacitating							
No test reported	35,559	32,596	30,558	28,590	27,236	-1,354	-4.7%
Alcohol and/or drug	3,352	3,293	3,013	2,841	2,578	-263	-9.3%
Refused	166	127	132	123	91	-32	-26.0%
% tested	8.6%	9.1%	8.9%	9.0%	8.6%	-0.004	-4.3%
All other							
No test reported	274,620	250,791	267,811	267,469	248,945	-18,524	-6.9%
Alcohol and/or drug	7,640	7,557	7,588	7,272	7,002	-270	-3.7%
Refused	721	574	579	554	496	-58	-10.5%
% tested	2.7%	2.9%	2.7%	2.6%	2.7%	0.00	3.4%
Total	325,281	298,130	312,797	309,746	289,001	-20,745	-6.7%
% tested	3.7%	4.0%	3.7%	3.6%	3.6%	0.00	0.6%

#### Notes:

*Non-incapacitating* includes *possible* injuries.

All other includes not reported, null, refused, unknown, and +.

No test reported includes none, null, and +.

Source:

- Considering all age groups, males were reported with BACs of 0.15 g/dL or greater more than three times the rate of females in 2009.
- > About one-third of alcohol and/or drug test results for drivers killed were not reported in ARIES as of March 1, 2010.

							BAC (	g/dL) tes	t result	s				driv		cent of ities test	ed:
	-	Driver ities tes	sted	0 < 0	.01	0.01 <	0.08	0.08 <	: 0.15	0.1	5 +	Missir not rep		0.0	8 +	0.1	5+
Drivers	Female	Male	Total	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male
<16	0	1	1	0	0	0	0	0		0	0	0	1	-	0%	-	0%
16	2	1	3	0	0	1	0	0		0	0	1	1	0%	0%	0%	0%
17	2	2	4	0	1	0	0	0		0	1	2	0	0%	50.0%	0%	50.0%
18	3	9	12	2	5	0	0	0		0	1	1	3	0%	11.1%	0%	11.1%
19	1	9	10	1	5	0	1	0		0	1	0	2	0%	11.1%	0%	11.1%
20	2	5	7	2	3	0	1	0		0	1	0	0	0%	20.0%	0%	20.0%
21	0	8	8	0	1	0	1	0	1	0	4	0	1	-	62.5%	-	50.0%
22	2	6	8	1	2	0	1	0	1	0	1	1	1	0%	33.3%	0%	16.7%
23	2	7	9	1	1	0	0	0	1	1	2	0	3	50.0%	42.9%	50.0%	28.6%
24	2	5	7	1	4	1	0	0		0	0	0	1	0%	0%	0%	0%
25-34	12	49	61	8	10	0	1	0	6	0	16	4	16	0%	44.9%	0%	32.7%
35-44	9	56	65	3	12	0	4	1	8	0	14	5	18	11.1%	39.3%	0%	25.0%
45-54	10	39	49	2	12	2	4	1	2	3	6	2	15	40.0%	20.5%	30.0%	15.4%
55-64	9	23	32	6	3	0	1	0		0	4	3	15	0%	17.4%	0%	17.4%
65-74	6	15	21	5	8	0	0	0		0	0	1	7	0%	0%	0%	0%
75 and older	3	15	18	1	10	0	1	0		0	0	2	4	0%	0%	0%	0%
Total	65	250	315	33	77	4	15	2	19	4	51	22	88	9.2%	28.0%	6.2%	20.4%

#### Table 77. Drivers killed and alcohol and/or drug tested, by gender and blood alcohol content (g/dL), 2009

#### Notes:

Includes only drivers killed in collisions and administered alcohol and / or drug tests.

g/dL = grams per deciliter.

#### Source:

- > From 2008 to 2009, there were reduced numbers of *drivers tested* in fatal collisions.
- ► *Killed* drivers are much more likely to have been impaired (0.08+) than the *surviving* drivers.
- ➤ There is a large increase in % *positive drug test results* from 2005 (6.5) to 2009 (18.7).

### Table 78. Drivers involved in fatal collisions by test type and results, 2005-2009

	20	005	20	006	20	007	20	008	20	09	Char 2008-2	
	Survivin	g Killed	Survivin	g Killed	Surviving	g Killed	Survivir	ng Killed	Surviving	g Killed	Surviving	Killed
All drivers in fatal collisions	644	661	631	609	610	626	561	554	500	491	-61	-63
Total drivers tested	419	452	424	394	422	435	417	390	316	315	-101	-75
% tested, all drivers	65.1%	68.4%	67.2%	64.7%	69.2%	69.5%	74.3%	70.4%	63.2%	64.2%	-11.1	-6.2
BAC results	644	661	631	609	610	626	561	554	500	491	-61	-63
0 < 0.01	279	253	315	185	305	229	335	229	180	111	-155	-118
0.01 < 0/08	18	23	10	21	13	17	14	16	6	19	-8	3
0.08 < 0.15	26	36	24	39	12	29	14	37	6	22	-8	-15
0.15 +	33	86	25	101	22	106	24	82	15	55	-9	-27
No result	288	263	257	263	258	245	174	190	293	284	119	94
% = 0.01+	12.0%	21.9%	9.4%	26.4%	7.7%	24.3%	9.3%	24.4%	5.4%	19.6%	-3.9	-4.8
% = 0.08+	9.2%	18.5%	7.8%	23.0%	5.6%	21.6%	6.8%	21.5%	4.2%	15.7%	-2.6	-5.8
% = 0.15+	5.1%	13.0%	4.0%	16.6%	3.6%	16.9%	4.3%	14.8%	3.0%	11.2%	-1.3	-3.6
Drug test results	644	661	631	609	610	626	561	554	500	491	-61	-63
Positive	27	43	54	103	52	110	56	103	22	92	-34	-11
Negative	183	264	200	221	200	253	197	222	134	132	-63	-90
Null or pending	434	354	377	285	358	263	308	229	344	267	36	38
% Positive (all results)	4.2%	6.5%	8.6%	16.9%	8.5%	17.6%	10.0%	18.6%	4.4%	18.7%	-5.6	0.1
When results are known												
(neg + pos)	210	307	254	324	252	363	253	325	156	224	-97	-101
% Positive	12.9%	14.0%	21.3%	31.8%	20.6%	30.3%	22.1%	31.7%	14.1%	41.1%	-8.0	9.4

#### Note:

g/dL = grams per deciliter.

#### Source:

- > The proportion of *drivers killed* that had toxicological tests varies with age (highest = ages 16-20; lowest = ages <16 and 75+).
- > Considering only cases with *drug test results reported*, 21-24 year old drivers had the highest rate of *positive* results.

			tests given st types)	BAC	results		Drug t	Drug test results reported			
Drivers	Drivers killed	Total	% drivers killed	Reported	% reported (drivers killed)	Total	% drivers killed	Total positive	% positive (drivers killed)	% positive (reported results)	
< 16	3	1	33.3%	0	0.0%	0	0.0%		0.0%	-	
16-20	46	36	78.3%	26	56.5%	27	58.7%	13	28.3%	48.1%	
21-24	50	32	64.0%	25	50.0%	24	48.0%	15	30.0%	62.5%	
25-34	89	61	68.5%	42	47.2%	45	50.6%	18	20.2%	40.0%	
35-44	89	65	73.0%	42	47.2%	46	51.7%	17	19.1%	37.0%	
45-54	89	49	55.1%	32	36.0%	36	40.4%	18	20.2%	50.0%	
55-64	52	32	61.5%	15	28.8%	21	40.4%	6	11.5%	28.6%	
65-74	37	21	56.8%	13	35.1%	14	37.8%	2	5.4%	14.3%	
75 +	36	18	50.0%	12	33.3%	11	30.6%	3	8.3%	27.3%	
Total	491	315	64.2%	207	42.2%	224	45.6%	92	18.7%	41.1%	

#### Table 79. Drivers killed in traffic collisions, by age group and substance test results, 2009

#### Notes:

Driver tests given includes alcohol, alcohol and drug, and drug test categories from ARIES.

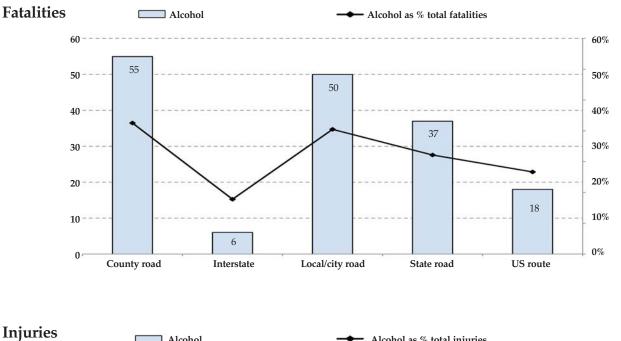
Total drug tests reported excludes 16 drug test results reported as pending. Pending cases are grouped with the null or not tested cases.

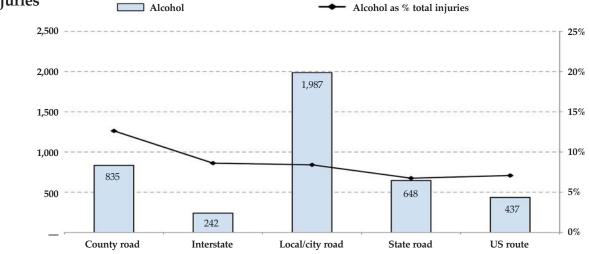
#### Source:

### <u>ALCOHOL</u>

- > Local/city roads hosted the highest volume of non-fatal personal injuries in alcohol-related collisions in 2009.
- County roads reflected the highest volume of fatal injuries (55) in alcohol-related collisions in 2009, followed by local/city roads (50) and state roads (37).
- > County roads had the largest proportions of alcohol-involved injuries and fatalities.

Figure 28. Fatalities and injuries by roadway class and alcohol involvement, 2009





#### Notes:

*Personal injuries* excludes *null* (non-injury) records. Excludes *unknown* road class (*fatal* = 7 and *injuries* = 1,893).

#### Source:

# INDIANA TRAFFIC SAFETY FACTS

- > Alcoholic beverages continues to be assigned as the primary factor in more than one-third of alcohol-related collisions.
- > The next most common primary factor is *ran off road right,* which accounted for 31 percent of alcohol-related fatalities.
- > Unsafe speed accounted for one-fifth of alcohol-related fatalities.

Table 80. Alcohol-related collisions, fatalities, and injuries, by top 25 primary factors to collision occurrence, 2009

	Coll	isions	Fat	alities	Injı	ıries
Primary factor	Total	% total	Total	% total	Total	% total
Alcoholic beverages	3,101	35.0%	19	11.3%	1,299	30.4%
Ran off road right	1,506	17.0%	52	31.0%	672	15.7%
Unsafe speed	519	5.9%	34	20.2%	322	7.5%
Other driver factor	489	5.5%	11	6.5%	244	5.7%
Failure to yield right of way	437	4.9%	9	5.4%	368	8.6%
Following too closely	388	4.4%	-	0.0%	157	3.7%
Left of center	313	3.5%	14	8.3%	246	5.7%
Disregard signal/reg sign	262	3.0%	10	6.0%	231	5.4%
Improper lane usage	245	2.8%	1	0.6%	70	1.6%
Unsafe backing	230	2.6%	-	0.0%	13	0.3%
Speed too fast for weather conditions	208	2.3%	1	0.6%	87	2.0%
Overcorrecting/oversteering	179	2.0%	5	3.0%	112	2.6%
Improper turning	145	1.6%	-	0.0%	30	0.7%
Illegal drugs	96	1.1%	1	0.6%	43	1.0%
Driver distracted (explained in narrative)	95	1.1%	-	0.0%	47	1.1%
Pedestrian action	88	1.0%	4	2.4%	86	2.0%
Driver asleep or fatigued	87	1.0%	-	0.0%	36	0.8%
Prescription drugs	82	0.9%	-	0.0%	34	0.8%
Animal on roadway	67	0.8%	3	1.8%	39	0.9%
Cell phone usage	58	0.7%	-	0.0%	18	0.4%
Improper passing	54	0.6%	1	0.6%	19	0.4%
Roadway surface condition	39	0.4%	1	0.6%	17	0.4%
Unknown	37	0.4%	-	0.0%	17	0.4%
Wrong way on one way	30	0.3%	-	0.0%	25	0.6%
Driver illness	14	0.2%	-	0.0%	7	0.2%
Subtotal, top 25	8,769	99.0%	166	98.8%	4,239	99.0%
Remaining 21 primary factors	86	1.0%	2	1.2%	41	1.0%
otal, all alcohol-related collisions	8,855	100%	168	100%	4,280	100%

Notes:

See glossary for definition of *alcohol-related* collisions.

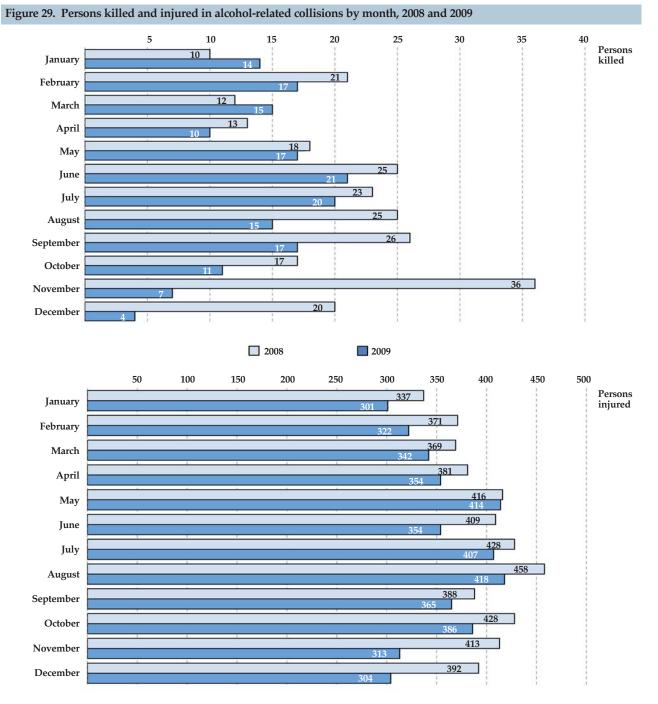
Unknown includes collisions where no primary factor was included on the collision report.

*Injuries* includes *incapacitating*, *non-incapacitating*, *possible*, and *other*.

Source:

## **ALCOHOL**

- From 2008 to 2009, major declines in the fall season accounted for 82 percent of the decrease in alcohol-related fatalities: August (-10), September (-9), November (-29), December (-16).
- > Personal injuries in alcohol-related collisions declined in every month between 2008 and 2009.
- > In 2009, June was the peak month for persons killed and August was the peak month for persons injured.

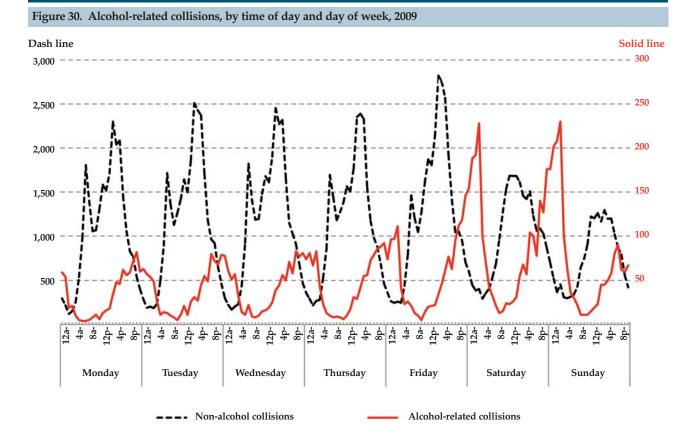


#### Note:

Injuries includes incapacitating, non-incapacitating, possible and other.

#### Source:

- NU A TRA
  - Like non-alcohol collisions, the count of alcohol-related crashes climbs gradually from Monday to Saturday. >
  - > Peak periods for alcohol-related crashes occur later than non-alcohol collisions, shifting to the early morning periods past midnight.



Note: Excludes collisions with unknown *hour*.

Source:

- > Alcohol-involvement is typically two or more times more likely for *single* than *multi-vehicle* collisions.
- > Average annual declines in *percent alcohol-related* have been smallest for *single vehicle* collisions.
- The numbers of alcohol-related *multi-vehicle* collisions from 2005 to 2009 have declined annually on average nearly 15 percent.

#### Table 81. Alcohol-related single and multiple vehicle collisions, 2005-2009

Collisions	2005	2006	2007	2008	2009	Average annual change, 2005-2009
Single vehicle (SV)	66,500	61,825	65,652	68,109	60,662	-2.0%
Alcohol-related	5,624	5,716	5,256	5,049	4,703	-4.3%
% alcohol-related	8.5%	9.2%	8.0%	7.4%	7.8%	-1.7%
Multiple vehicle (MV)	141,462	130,619	139,235	137,337	129,009	-2.1%
Alcohol-related	8,059	6,139	4,687	4,362	4,152	-14.8%
% alcohol-related	5.7%	4.7%	3.4%	3.2%	3.2%	-12.5%
Unknown	397	277	112	6	5	
Total	208,359	192,721	204,999	205,452	189,676	-2.1%
Alcohol-related	13,683	11,855	9,943	9,411	8,855	-10.2%
% alcohol-related	6.6%	6.2%	4.9%	4.6%	4.7%	-7.8%
SV alcohol incidence factor	1.5	2.0	2.4	2.3	2.4	

#### Notes:

Unknown includes collisions where number of vehicles involved was marked as '0' on the collision report.

*SV alcohol incidence factor* defined as ratio of *single vehicle*, % *alcohol-related* to *multiple vehicle*, % *alcohol-related*. Values greater than one indicate that single vehicle collisions were more likely to have involved alcohol.

#### Source:

Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 1, 2010.

- > Mopeds and motorcycles have had the highest rates of alcohol-involvement each year among all traffic units.
- > Large commercial vehicles (buses and large trucks) have the lowest alcohol-involvement rates.
- > Overall, the percentage of total units that were alcohol-related has declined from 2005 to 2009.

#### Table 82. Percent of vehicle or unit type classified as alcohol-related unit in collisions, 2005-2009

	Low <	. <	>	> 1	High	
					0	
Unit type	2005	2006	2007	2008	2009	Average 2005-2009
Moped	15.3%	14.8%	13.9%	15.3%	13.4%	14.5%
Motorcycle	9.0%	9.0%	9.3%	8.2%	7.5%	8.6%
Pedestrian	4.4%	7.8%	6.7%	6.9%	8.1%	6.8%
Pickup truck	4.9%	4.8%	3.9%	3.7%	3.8%	4.2%
Passenger car	4.5%	3.8%	2.8%	2.6%	2.7%	3.3%
Sport utility vehicle	3.9%	3.8%	2.7%	2.6%	2.6%	3.1%
Bicycle	2.4%	3.7%	3.4%	3.0%	3.0%	3.1%
Van	3.4%	2.6%	1.8%	2.0%	1.8%	2.3%
Unknown	2.2%	1.0%	1.1%	0.6%	1.3%	1.2%
Other vehicle	2.6%	1.9%	0.9%	0.2%	0.3%	1.2%
Bus	2.2%	1.4%	0.2%	0.1%	0.1%	0.8%
Large truck	1.1%	0.8%	0.3%	0.2%	0.3%	0.6%
Total units	363,538	336,585	359,389	357,635	332,638	
% alcohol-related units	4.2%	3.8%	2.8%	2.7%	2.7%	

Notes:

Unknown includes collisions where no vehicle records were included on the collision report.

See glossary for definition of alcohol-related units.

Other vehicle type includes combination vehicle, farm vehicle, and motorhome/recreational vehicle. Bus includes bus/seats 15+ persons with driver, bus/seats 9-15 persons with driver, and school bus.

#### Source:

INDIANA TRAFFIC SAFETY FACTS





## **SPEED**, 2009

A collision is defined as speed-related if any one of the following conditions is met: (1) *Unsafe speed or speed too fast for weather conditions* is listed as the primary or a contributing factor of the collision; or (2) a vehicle driver is issued a speeding citation.

There were 18,252 speed-related collisions in Indiana in 2009, representing 9.6 percent of all collisions and a 20 percent decrease over 2008 speed-related collisions. These collisions involved 18,358 speeding motor vehicles (5.6 percent of all motor vehicles in collisions) 10,414 motor vehicles that were not speeding, and 28,129 drivers, injured occupants, pedestrians, and pedalcyclists (9.2 percent of all individuals in collisions).

#### Highlights

The number of individuals fatally injured in speed-related collisions decreased 30 percent from 2008 to 2009.

Approximately one in five fatal collisions (136/631), one in seven (425/2,732) incapacitating collisions, and one in eight (3,692/30,679) non-incapacitating collisions were speed-related.

The risk of fatality is 4.1 times greater for occupants of vehicles where the driver is speeding compared to vehicles where the driver is not speeding.

In 2009, motorcycles were the most likely vehicle type to be speeding (9.3 percent).

Young males continue to be the most likely group of drivers to speed, and nearly one-and-a-half times more likely than females to speed.

On average in 2009, 10.6 percent of collisions at any given hour and day were speed-related.

As a percentage of all collisions occurring on a given road class, interstates had the greatest proportion of speed-related collisions.

- > From 2008 to 2009, total speed-related and fatal speed-related collisions decreased by 20 and 27.7 percent, respectively.
- > Speed-related collisions represented 9.6 percent of collisions in 2009 compared to 11.1 percent in 2008.
- > In 2009, nearly one in five fatal collisions was speed-related compared to one in four in 2008.
- > In 2009, speed-related collisions were 2.6 times more likely to be fatal than non-speed-related collisions.

Table 83. Indiana collisions, by speed involvement and collision severity, 2005-2009

Speed involvement/ collision severity	2005	2006	2007	2008	2009	% 2009 total	% change '08 - '09	Average annual change
								0
All collisions	208,359	192,721	204,999	205,452	189,676	100.0%	-7.7%	-2.1%
Speed-related	20,010	14,570	18,492	22,820	18,252	100.0%	-20.0%	0.8%
Fatal	203	159	165	188	136	0.7%	-27.7%	-7.9%
Incapacitating	486	473	459	484	425	2.3%	-12.2%	-3.1%
Non-incapacitating	4,621	3,844	3,918	4,227	3,692	20.2%	-12.7%	-4.9%
Property damage only	14,700	10,094	13,950	17,921	13,999	76.7%	-21.9%	3.4%
Non speed-related	188,349	178,151	186,507	182,632	171,424	100.0%	-6.1%	-2.2%
Fatal	652	658	639	534	495	0.3%	-7.3%	-6.4%
Incapacitating	2,655	2,717	2,616	2,414	2,307	1.3%	-4.4%	-3.4%
Non-incapacitating	33,999	31,815	30,423	28,233	26,987	15.7%	-4.4%	-5.6%
Property damage only	151,043	142,961	152,829	151,451	141,635	82.6%	-6.5%	-1.5%
% Speed-related	9.6%	7.6%	9.0%	11.1%	9.6%	-	-	-
Fatal	23.7%	19.5%	20.5%	26.0%	21.6%	-	-	-
Incapacitating	15.5%	14.8%	14.9%	16.7%	15.6%	-	-	-
Non-incapacitating	12.0%	10.8%	11.4%	13.0%	12.0%	-	-	-
Property damage only	8.9%	6.6%	8.4%	10.6%	9.0%	-	-	-
Relative risk								
Fatal	2.9	3.0	2.6	2.8	2.6	-	-	-
Incapacitating	1.7	2.1	1.8	1.6	1.7	-	-	-
Non-incapacitating	1.3	1.5	1.3	1.2	1.3	-	-	-

#### Notes:

*Relative risk* defined as ratio of *speed-related* rate (fatal, as % total speed-related) to *non-speed-related* rate (fatal, as % of total non-speed-related). *Non-incapacitating* includes *non-incapacitating* and *possible* collision severities.

#### Source:

- The number of individuals involved in speed-related collisions decreased 18.2 percent from 2008 to 2009 and 0.4 percent on average each year from 2005 to 2009.
- While total fatalities decreased 15 percent from 2008 to 2009, the number of fatalities in speed-related collisions decreased nearly 30 percent.
- In 2009, individuals involved in speed-related collisions were 2.9 times more likely than individuals in non-speed-related collisions to suffer a fatal injury.

Table 84. Individuals involved in Indiana collisions, by speed involvement and injury status, 2005-2009

Speed involvement/						% 2009	% change	Average
injury status	2005	2006	2007	2008	2009	total	<b>'08 - '09</b>	annual change
All individuals	344,609	315,894	330,129	325,775	304,412	100.0%	-6.6%	-2.9%
Speed-related collisions	31,605	23,444	28,417	34,398	28,129	100.0%	-18.2%	-0.4%
Fatal	229	174	187	225	158	0.6%	-29.8%	-6.5%
Incapacitating	617	607	559	585	514	1.8%	-12.1%	-4.3%
Non-incapacitating	6,871	5,733	5,840	6,174	5,433	19.3%	-12.0%	-5.2%
Other injury	2,904	1,558	706	532	385	1.4%	-27.6%	-38.3%
Not injured	20,984	15,372	21,125	26,882	21,639	76.9%	-19.5%	4.6%
Non speed-related collisions	313,004	292,450	301,712	291,377	276,283	100.0%	-5.2%	-3.0%
Fatal	709	725	711	590	534	0.2%	-9.5%	-6.5%
Incapacitating	3,206	3,200	3,102	2,797	2,665	1.0%	-4.7%	-4.5%
Non-incapacitating	48,556	45,656	42,964	39,281	37,978	13.7%	-3.3%	-5.9%
Other injury	31,690	20,258	7,835	5,387	3,768	1.4%	-30.1%	-39.7%
Not injured	228,843	222,611	247,100	243,322	231,338	83.7%	-4.9%	0.5%
% Speed-related	9.2%	7.4%	8.6%	10.6%	9.2%	-	-	-
Fatal	24.4%	19.4%	20.8%	27.6%	22.8%	-	-	-
Incapacitating	16.1%	15.9%	15.3%	17.3%	16.2%	-	-	-
Non-incapacitating	12.4%	11.2%	12.0%	13.6%	12.5%	-	-	-
Other injury	8.4%	7.1%	8.3%	9.0%	9.3%	-	-	-
Not injured	8.4%	6.5%	7.9%	9.9%	8.6%	-	-	-
Relative risk								
Fatal	3.2	3.0	2.8	3.2	2.9	-	-	-
Incapacitating	1.9	2.4	1.9	1.8	1.9	-	-	-
Non-incapacitating	1.4	1.6	1.4	1.3	1.4	-	-	-

#### Notes:

INDIANA TRAFFIC SAFETY FACTS

Relative risk defined as ratio of speed-related rate (fatal, as % total speed-related) to non-speed-related rate (fatal, as % of total non-speed-related).

Non-incapacitating includes non-incapacitating and possible injuries.

Other injury includes injuries reported as refused, unknown, and not reported.

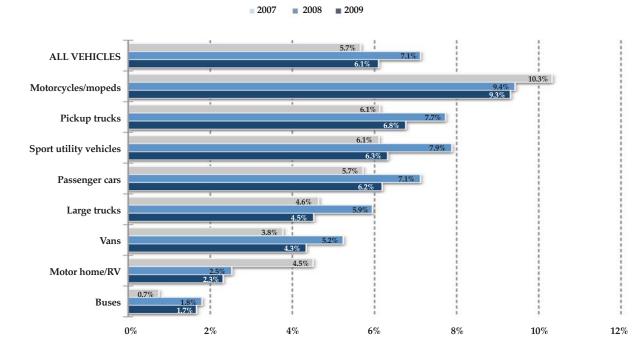
Not injured is defined as individuals with no injury status reported.

#### Source:

### SPEED

- Approximately 6 percent of vehicles involved in Indiana collisions in 2009 were speeding, compared to 6 and 7 percent in 2007 and 2008, respectively.
- > From 2008 to 2009, all vehicle types experienced reductions in the rate of vehicles speeding in collisions.
- > In 2009, motorcycles involved in collisions were more likely than other vehicle types to have been speeding.
- Sport utility vehicles and large trucks experienced the greatest reductions in proportion of vehicles speeding from 2008 to 2009 (1.6 and 1.5 percentage points, respectively).

Figure 31. Percent of vehicles speeding in Indiana collisions, by vehicle type, 2007-2009



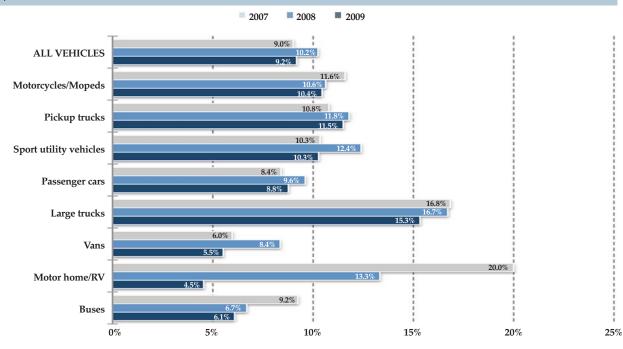
#### Note:

Excludes vehicle types of farm vehicle, combination vehicle, pedestrian, bicycle, and unknown type.

#### Source:

- > The percent of known injuries occurring in speeding vehicles dropped from 10.2 percent in 2008 to 9.2 percent in 2009.
- > In 2009, approximately 15 percent of injuries occurring in large trucks were in speeding large trucks, nearly double the rate of passenger cars.

Figure 32. Injuries in Indiana collisions that occurred in speeding vehicles, as a proportion of total injuries, by vehicle type, 2007-2009



**Notes:** Percent of injuries is defined as percent of total injuries (*fatal, incapacitating, non-incapacitating, possible*) in a given vehicle type. Excludes vehicle types of *farm vehicle, combination vehicle, pedestrian, bicycle,* and *unknown* type.

#### Source:

- In 2009, 6.8 percent of serious injuries in speed-related collisions occurred in areas with a posted speed limit of 65 or higher, compared to 4 percent of serious injuries in non speed-related collisions.
- In 2009, 28.3 percent of serious injuries in areas with a posted speed limit of 65 or higher were in speed-related collisions, compared to 36.2 percent in 2008.
- Persons in speed-related collisions in areas with a posted speed limit of 65 or higher are 1.7 times more likely to suffer a serious injury than persons in non speed-related collisions.
- > Speed only becomes a risk factor for serious injury on roads with posted speed limits of 65 or greater.

### Table 85. Serious injuries, by speed involvement and posted speed limit, 2005-2009

Speed involvement/						% 2009	% change	Average
posted speed limit	2005	2006	2007	2008	2009	total	<b>'</b> 08 - <b>'</b> 09	annual change
All injuries	4,486	4,330	4,166	3,820	3,513	100.0%	-8.0%	-5.9%
Speed-related injuries	821	746	725	788	659	100.0%	-16.4%	-4.9%
< 35	180	171	139	138	143	21.7%	3.6%	-5.2%
35 < 50	292	285	264	312	250	37.9%	-19.9%	-2.9%
50 < 65	302	236	263	267	221	33.5%	-17.2%	-6.5%
65 +	47	54	59	71	45	6.8%	-36.6%	2.0%
Non speed-related injuries	3,665	3,584	3,441	3,032	2,854	100.0%	-5.9%	-6.0%
< 35	819	728	696	618	603	21.1%	-2.4%	-7.3%
35 < 50	1,302	1,368	1,278	1,215	1,075	37.7%	-11.5%	-4.5%
50 < 65	1,384	1,336	1,287	1,074	1,062	37.2%	-1.1%	-6.2%
65 +	160	152	180	125	114	4.0%	-8.8%	-6.5%
% Speed-related	18.3%	17.2%	17.4%	20.6%	18.8%	-	-	-
< 35	18.0%	19.0%	16.6%	18.3%	19.2%	-	-	-
35 < 50	18.3%	17.2%	17.1%	20.4%	18.9%	-	-	-
50 < 65	17.9%	15.0%	17.0%	19.9%	17.2%	-	-	-
65 +	22.7%	26.2%	24.7%	36.2%	28.3%	-	-	-
Relative risk								
< 35	1.0	1.1	0.9	0.9	1.0	-	-	-
35 < 50	1.0	1.0	1.0	1.0	1.0	-	-	-
50 < 65	1.0	0.8	1.0	1.0	0.9	-	-	-
65 +	1.3	1.7	1.6	2.2	1.7	-	-	-

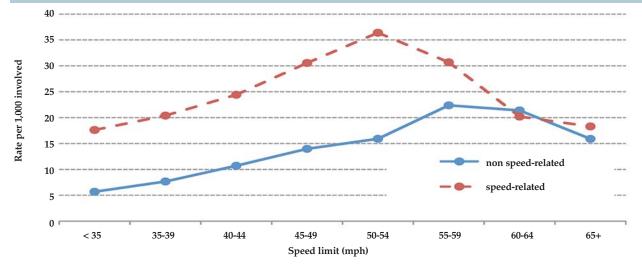
#### Note:

Serious injuries defined as fatal and incapacitating injuries.

#### Source:

> The risk of serious injury in speed-related collisions in areas with a posted speed limit up to 54mph is more than twice as likely as non speed-related collisions.

Figure 33. Seriously injured individuals per 1,000 individuals involved in collisions, by speed limit group and collision speed status, 2009



#### Notes:

Serious injuries defined as fatal or incapacitating injuries. Speed limit categories (other than < 35 and 65+) include speeds up to the next category (e.g., 35 includes 35 - 39 mph).

#### Source:

> Younger drivers involved in collisions are consistently more likely to be speeding than older drivers.

▶ In 2009, 12.2 percent (3,094/25,326) of male drivers ages 16-20 involved in collisions were speeding, compared to 7.9 percent (1,757/22,207) of female drivers ages 16-20.

> Males who are speeding have consistently been nearly two times as likely as females to suffer a serious injury.

Table 86. Proportion of drivers who were speeding in Indiana collisions, by age group and gender, 2005-2009

		Low	<	<		>	>	High		
	2	005	20	006	20	007	2	008	20	009
Age group	Male	Female								
16-20	11.8%	7.9%	10.9%	6.3%	12.0%	7.3%	12.9%	9.2%	12.2%	7.9%
21-24	9.5%	6.5%	8.3%	4.9%	9.4%	6.0%	11.6%	8.3%	10.1%	7.4%
25-29	8.5%	5.8%	6.4%	4.0%	7.8%	5.2%	9.5%	7.5%	8.5%	6.2%
30-34	6.3%	4.8%	5.1%	3.4%	6.7%	4.5%	8.4%	6.4%	6.9%	5.1%
35-39	5.6%	4.6%	4.3%	3.1%	5.6%	4.0%	7.0%	6.1%	5.9%	4.7%
40-44	4.8%	4.0%	3.7%	2.8%	4.8%	3.9%	6.4%	5.0%	5.6%	4.1%
45-49	4.4%	3.3%	3.6%	2.4%	4.1%	3.6%	5.7%	4.6%	4.8%	3.8%
50-54	4.1%	3.0%	3.1%	2.2%	3.8%	2.9%	4.8%	4.0%	4.2%	3.6%
55-59	3.6%	3.1%	2.4%	1.6%	3.2%	2.6%	4.8%	4.0%	3.8%	3.3%
60-64	3.2%	2.6%	2.1%	1.9%	2.9%	2.3%	3.9%	3.6%	3.3%	2.7%
65-69	2.5%	2.3%	2.3%	1.3%	2.6%	1.8%	3.4%	2.4%	2.9%	2.1%
70-74	2.1%	2.1%	1.7%	1.5%	2.4%	1.6%	3.0%	2.3%	2.2%	1.6%
75+	2.7%	1.7%	1.9%	1.2%	2.2%	1.1%	3.0%	1.9%	2.3%	1.7%
All ages	6.6%	4.9%	5.5%	3.6%	6.5%	4.5%	7.8%	6.1%	6.8%	5.1%

Table 87 Prov	nortion of s	naadina	drivers serious	ly in	iurod in	Indiana	collisions	hv	200 070111	h and	gandar	2005-2009
Table 07. 110	portion of s	peeung	unvers serious	ту ш	juleu m	IIIuIaIIa	comstoms,	Dy	age grou	p anu	genuer,	2003-2009

	2	.005	20	006	20	007	20	008	2	009
Age group	Male	Female								
16-20	1.9%	1.5%	2.2%	1.5%	2.1%	1.5%	2.1%	1.3%	1.8%	1.1%
21-24	3.0%	1.5%	5.0%	2.0%	2.4%	0.8%	2.8%	1.3%	3.3%	1.6%
25-29	2.8%	1.7%	4.8%	1.9%	3.7%	1.2%	2.8%	1.0%	2.7%	1.3%
30-34	3.0%	2.1%	5.5%	0.5%	4.6%	2.1%	2.7%	1.8%	3.0%	0.7%
35-39	4.0%	2.4%	5.7%	2.0%	4.0%	0.8%	2.9%	1.1%	3.0%	1.9%
40-44	4.2%	1.7%	4.2%	2.5%	3.6%	1.8%	2.7%	1.1%	3.2%	0.7%
45-49	2.5%	2.4%	3.1%	2.7%	3.8%	1.0%	2.5%	2.1%	2.7%	1.5%
50-54	3.6%	1.4%	3.9%	3.0%	3.8%	1.4%	3.0%	3.2%	3.7%	1.2%
55-59	3.7%	3.0%	4.4%	3.2%	1.7%	1.0%	2.0%	1.2%	2.4%	1.2%
60-64	1.2%	1.6%	5.9%	1.1%	1.3%	3.1%	1.5%	1.0%	2.2%	4.5%
65-69	2.4%	0.0%	1.8%	0.0%	2.2%	1.6%	1.6%	3.2%	3.8%	3.6%
70-74	1.3%	5.4%	1.6%	2.5%	1.1%	2.5%	5.5%	0.0%	1.2%	0.0%
75+	2.5%	2.3%	1.8%	0.0%	1.5%	0.0%	1.1%	4.3%	4.4%	0.0%
All ages	2.8%	1.8%	3.8%	1.8%	3.0%	1.3%	2.5%	1.5%	2.7%	1.3%

#### Notes:

Data limited to drivers with valid gender and age reported. Serious injuries defined as *fatal* and *incapacitating* injuries.

#### Source:

- In 2009, occupants of vehicles with drivers who were speeding were 4.1 times (0.7 percent / 0.2 percent) more likely to be killed than occupants of vehicles where the driver was not speeding.
- Occupants of vehicles with drivers who were speeding and impaired were 12.8 times (7.0 percent / 0.5 percent) more likely to be killed than occupants of vehicles where the driver was speeding only.

Vehicle driver speeding?	Vehicle driver impaired?	Vehicle occupants killed	Vehicle occupants surviving	Total occupants involved	Killed, as % total	Risk of fatality
Yes	Yes	34	454	488	7.0%	12.8
	No	100	18,240	18,340	0.5%	
	Total	134	18,694	18,828		
No	Yes	57	2,950	3,007	1.9%	12.1
	No	439	279,444	279,883	0.2%	
	Total	496	282,394	282,890		
All	Yes	91	3,404	3,495	2.6%	14.4
	No	539	297,684	298,223	0.2%	
	Total	630	301,088	301,718		
Yes	All	134	18,694	18,828	0.7%	4.1
No		496	282,394	282,890	0.2%	
	Total	630	301,088	301,718		

#### Notes:

Driver impaired: BAC = 0.08+

*Risk of fatality* defined as ratio of the rate of *vehicle occupants killed where driver was impaired* (fatal, as % total driver impaired) to *rate of vehicle occupants killed where driver was not impaired* (fatal, as % of total driver not impaired).

#### Source:

- > In 2009, 20.8 percent (59/284) of collisions occurring during the 2am hour on Thursdays were speed-related.
- > Speed-related collisions were most likely during the 3am hour (13.9 percent) and on Sundays (11.3 percent).
- Compared to morning rush hour (7am-9am), a smaller percent of collisions during evening rush hour (5pm-7pm) were speed-related.

		Low	<	<	>	>	High	
Time	Sun	Mon	Tue	Wed	Thu	Fri	Sat	% Speed-related by hour
12am-	11.3%	15.8%	13.8%	14.2%	15.2%	11.5%	9.8%	12.5%
1am-	12.2%	11.1%	11.7%	14.5%	18.3%	15.3%	13.2%	13.7%
2am-	11.8%	6.5%	10.9%	16.9%	20.8%	10.5%	13.0%	13.0%
3am-	15.6%	19.2%	11.9%	14.6%	15.7%	10.8%	11.9%	13.9%
4am-	13.7%	13.0%	10.5%	11.4%	16.4%	10.1%	14.0%	12.9%
5am-	11.6%	18.4%	10.8%	10.5%	15.5%	7.6%	9.6%	12.3%
6am-	12.9%	19.9%	10.3%	10.0%	9.8%	7.3%	14.4%	12.0%
7am-	13.7%	15.6%	10.0%	9.9%	13.5%	8.6%	15.0%	11.9%
8am-	19.3%	14.4%	10.8%	15.3%	15.6%	9.2%	14.6%	13.7%
9am-	16.5%	13.6%	12.2%	14.8%	16.8%	7.2%	12.5%	13.3%
10am-	13.6%	10.1%	13.8%	12.5%	12.4%	8.5%	10.8%	11.6%
11am-	12.0%	6.0%	10.8%	10.0%	8.1%	7.8%	10.2%	9.2%
12pm-	8.2%	5.3%	10.2%	10.6%	6.4%	5.7%	9.9%	8.0%
1pm-	8.4%	5.5%	8.8%	9.8%	7.3%	5.6%	8.9%	7.7%
2pm-	8.9%	4.9%	9.0%	8.8%	6.7%	6.2%	9.5%	7.6%
3pm-	11.6%	5.4%	9.6%	8.6%	7.3%	5.9%	7.3%	7.7%
4pm-	10.6%	4.8%	8.7%	8.8%	7.3%	6.4%	8.7%	7.7%
5pm-	9.7%	4.1%	9.3%	7.7%	6.5%	7.9%	11.1%	7.8%
6pm-	10.3%	4.9%	9.7%	9.0%	6.8%	6.5%	10.3%	8.1%
7pm-	10.4%	5.5%	10.3%	9.7%	6.6%	7.5%	8.8%	8.4%
8pm-	10.2%	7.1%	9.9%	10.2%	7.2%	8.0%	11.3%	9.2%
9pm-	9.0%	7.4%	13.5%	10.9%	8.9%	8.2%	10.9%	9.9%
10pm-	13.1%	9.0%	12.6%	11.1%	10.4%	7.6%	11.7%	10.7%
11pm-	12.7%	12.2%	14.0%	15.7%	11.4%	8.4%	11.5%	11.9%
% Speed-related by day	11.3%	8.4%	10.4%	10.4%	9.6%	7.4%	10.6%	

### Table 89. Percent of Indiana collisions that were speed-related, by time of day and day of week, 2009

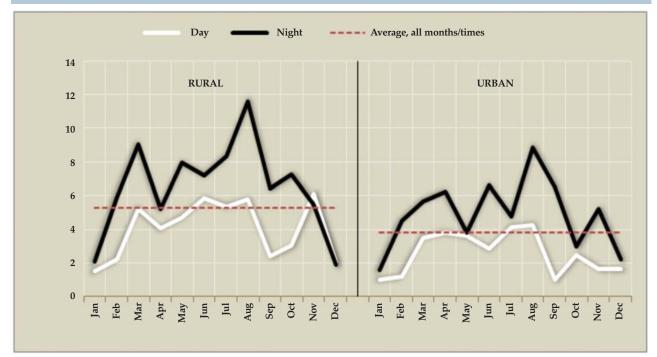
#### Note:

Includes collisions where valid time was reported.

Source:

- On average, rates of speed-related collisions with serious injury are higher in rural areas than urban areas (5.3 per 100 speed-related collisions versus 3.8).
- > In both rural and urban areas, rates of speed-related collisions with serious injury are higher at night than during the day.
- For both locales and times of day, August is a particularly problematic month; speed-related collision rates are 4 to 5.6 times greater than in January and 2.6 to 6.1 times greater than in December.

Figure 34. Speed-related collisions with serious injuries per 100 speed-related collisions, by locale, time of day, and month, 2009



#### Notes:

**INDIANA** TRAFFIC SAFETY FACTS

Serious injuries defined as fatal and incapacitating injuries.

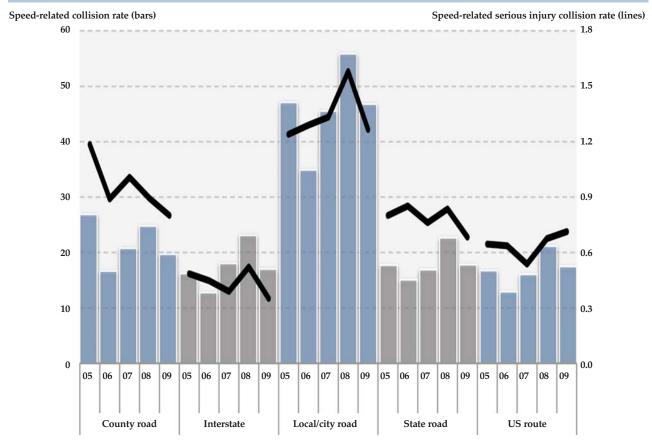
Includes collisions where a valid locale was reported. Day defined as 6am - 5:59pm. Night defined as 6pm - 5:59am.

#### Source:

## **SPEED**

- > After increasing each year from 2006 to 2008, speed-related collision rates decreased in 2009 for all road classes.
- Road classes with higher speed limits (Interstates, State roads, US routes) tend to have lower rates of speed-related collisions with serious injury.
- > Since 2005, speed-related collision rates on local/city roads have been nearly two times greater than on other road types.
- While the rate of speed-related collisions on US routes decreased from 2008 to 2009, the rate of speed-related collisions with serious injury increased slightly.

Figure 35. Speed-related and serious injury speed-related collision rates per 100m vehicle miles travelled (VMT), by road class, 2005-2009



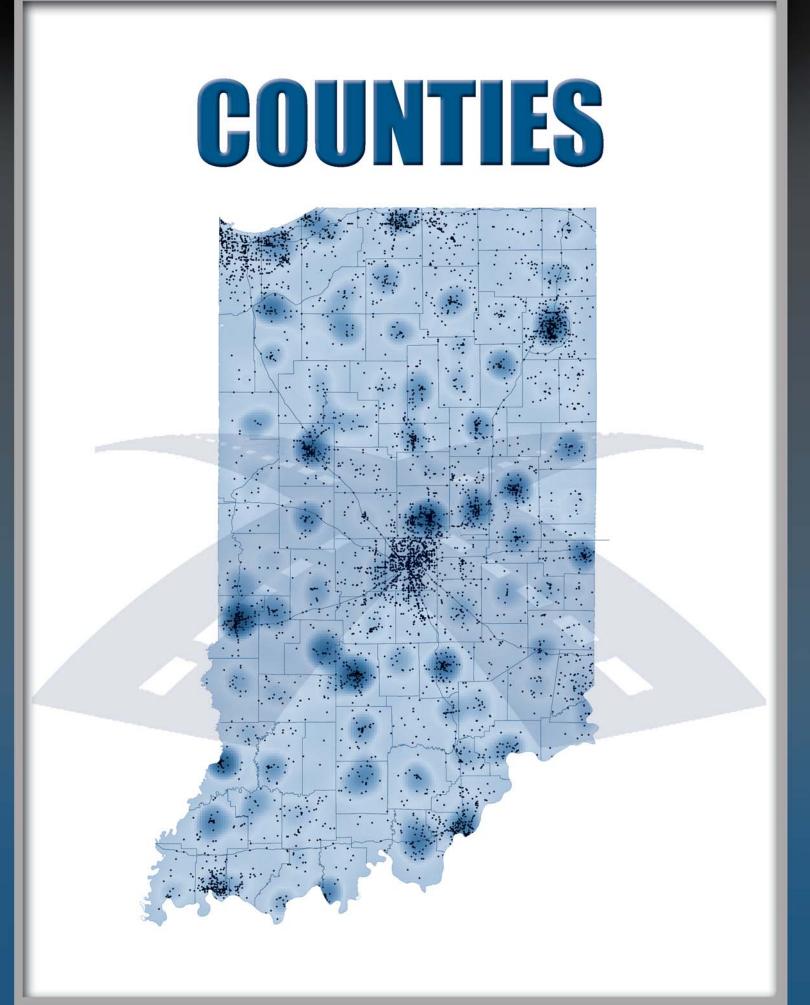
#### Notes:

Includes collisions where valid road class was reported.

Serious injury defined as collisions with one or more fatal or incapacitating injuries.

#### Sources:

Collisions: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 1, 2010. Vehicle miles travelled (VMT): Indiana Department of Transportation, as of March 1, 2010. INDIANA TRAFFIC SAFETY FACTS





## COUNTIES, 2009

Understanding the spatial distribution of traffic collisions and injuries can assist officials in developing policies and targeting resources to address the varying issues related to those crashes. A variety of factors may influence when and where traffic collisions occur, including the size and makeup of the population and the number of registered vehicles, licensed drivers, and vehicle miles travelled (VMT). The following *choropleth* and *density grid* maps show which counties had the highest rates as well as where various types of traffic collisions and injuries were concentrated in Indiana in 2009. Some maps are normalized in an attempt to account for the disparate volumes of the aforementioned factors.

#### Notes:

All density grid maps were created using a ten mile-search radius.

Choropleth maps use themes, such as color or shading, to depict spatial feature values for a given attribute of the features. Themes are typically based on different categories of the mapped attribute.

#### Table 90. Indiana collisions by severity and county, 2009

	Total co	llisions		Fatal		Persor	nal injury	Property da	mage only
	Count	County rank	Count	% total county collisions	County rank (on %)	Count	% total county collisions	Count	% total county collisions
Indiana	189,676	na	631	0.3	na	33,411	17.6	155,634	82.1
Mean	2,062	na	7	na	na	363	na	1,692	na
Minimum	127	na	0	na	na	28	na	105	na
Maximum	26,436	na	56	na	na	5,102	na	21,278	na
Adams	726	58	1	0.1	89	98	13.5	627	86.4
Allen	11,267	3	23	0.2	78	2,033	18.0	9,211	81.8
Bartholomew	2,156	22	5	0.2	72	542	25.1	1,609	74.6
Benton	173	91	3	1.7	2	35	20.2	135	78.0
Blackford	293	85	1	0.3	56	43	14.7	249	85.0
Boone	1,653	25	7	0.4	48	237	14.3	1,409	85.2
Brown	543	72	4	0.7	20	106	19.5	433	79.7
Carroll	645	62	5	0.8	17	91	14.1	549	85.1
Cass	1,264	35	6	0.5	44	190	15.0	1,068	84.5
Clark	3,978	13	11	0.3	67	660	16.6	3,307	83.1
Clay	824	51	5	0.6	27	130	15.8	689	83.6
Clinton	850	50	9	1.1	8	159	18.7	682	80.2
Crawford	350	83	5	1.4	4	43	12.3	302	86.3
Daviess	370	81	2	0.5	32	116	31.4	252	68.1
Dearborn	1,894	24	6	0.3	60	255	13.5	1,633	86.2
Decatur	695	59	1	0.1	87	93	13.4	601	86.5
DeKalb	1,299	32	7	0.5	33	187	14.4	1,105	85.1
Delaware	4,212	11	9	0.2	74	700	16.6	3,503	83.2
Dubois	891	47	3	0.3	57	192	21.5	696	78.1
Elkhart	5,956	8	21	0.4	52	785	13.2	5,150	86.5
Fayette	571	69	0	0.0	91	105	18.4	466	81.6
Floyd	2,689	18	4	0.1	85	526	19.6	2,159	80.3
Fountain	407	78	2	0.5	42	52	12.8	353	86.7
Franklin	506	75	1	0.2	79	104	20.6	401	79.2
Fulton	602	65	5	0.8	15	94	15.6	503	83.6
Gibson	996	43	6	0.6	28	170	17.1	820	82.3
Grant	2,244	21	6	0.3	69	333	14.8	1,905	84.9
Greene	867	49	6	0.7	23	129	14.9	732	84.4
Hamilton	6,338		17	0.3	68	974	15.4	5,347	84.4
Hancock	1,426	29	8	0.6	31	283	19.4	1,135	79.6
Harrison	1,164	36	4	0.3	54	200	18.8	941	80.8
Hendricks	3,598	14	12	0.3	58	606	16.8	2,980	82.8
Henry	1,121	41	2	0.2	81	215	19.2	904	80.6
Howard	2,304	20	7	0.2	65	477	20.7	1.820	79.0
Huntington	1,150	38	6	0.5	39	188	16.3	956	83.1
Jackson	1,322	31	1	0.1	90	225	17.0	1,096	82.9
Jasper	1,274	34	8	0.6	24	225	17.0	1,041	81.7
Jay	687	60	2	0.3	66	101	14.7	584	85.0
Jefferson	977	44	3	0.3	64	170	17.4	804	82.3
Jennings	798	54	4	0.5	41	133	16.7	661	82.8

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### Table 90. (continued)

	Total co	llisions		Fatal		Persor	al injury	Property da	mage only
	Count	County rank	Count	% total county collisions	County rank (on %)	Count	% total county collisions	Count	% total county collisions
Johnson	2,887	17	9	0.3	61	613	21.2	2,265	78.5
Knox	975	45	3	0.3	63	219	22.5	753	77.2
Kosciusko	2,453	19	13	0.5	37	313	12.8	2,127	86.7
LaGrange	823	52	5	0.6	26	88	10.7	730	88.7
Lake	16,889	2	39	0.2	73	2,776	16.4	14,074	83.3
LaPorte	3,258	16	25	0.8	18	608	18.7	2,625	80.6
Lawrence	1,152	37	4	0.3	53	268	23.3	880	76.4
Madison	4,217	10	9	0.2	75	800	19.0	3,408	80.8
Marion	26,436	1	56	0.2	76	5,102	19.3	21,278	80.5
Marshall	1,493	27	8	0.5	34	225	15.1	1,260	84.4
Martin	228	89	4	1.8	1	40	17.5	184	80.7
Miami	1,145	39	10	0.9	12	174	15.2	961	83.9
Monroe	4,013	12	7	0.2	82	873	21.8	3,133	78.1
Montgomery	974	46	6	0.6	25	156	16.0	812	83.4
Morgan	1,606	26	7	0.4	47	344	21.4	1,255	78.1
Newton	399	79	3	0.8	19	61	15.3	335	84.0
Noble	1,284	33	4	0.3	62	153	11.9	1,127	87.8
Ohio	238	87	1	0.4	49	31	13.0	206	86.6
Orange	600	66	1	0.2	84	106	17.7	493	82.2
Owen	543	72	5	0.9	11	112	20.6	426	78.5
Parke	608	64	5	0.8	16	85	14.0	518	85.2
Perry	433	76	3	0.7	22	100	23.1	330	76.2
Pike	179	90	2	1.1	6	50	27.9	127	70.9
Porter	4,767	9	22	0.5	45	1,037	21.8	3,708	77.8
Posey	526	74	1	0.2	80	88	16.7	437	83.1
Pulaski	565	71	4	0.7	21	78	13.8	483	85.5
Putnam	765	56	4	0.5	38	124	16.2	637	83.3
Randolph	566	70	3	0.5	36	91	16.1	472	83.4
Ripley	749	57	4	0.5	35	145	19.4	600	80.1
Rush	323	84	3	0.9	10	84	26.0	236	73.1
St. Joseph	6,761	5	14	0.2	77	1,311	19.4	5,436	80.4
Scott	612	63	2	0.2	59	172	28.1	438	71.6
Shelby	1,132	40	5	0.4	46	260	23.0	867	76.6
Spencer	593	40 68	5	0.4	40 14	82	13.8	506	85.3
Starke	768	55	4	0.5	40	99	12.9	665	86.6
Steuben	1,379	30	4 5	0.3	40 51	144	12.9	1,230	89.2
Sullivan	386	80	5	1.3	5	75	10.4	306	79.3
	231	80 88	0	0.0	91	42	19.4	306 189	79.3 81.8
Switzerland									
Tippecanoe	7,009	4	10	0.1	88	946	13.5	6,053	86.4
Tipton	365	82	4	1.1	7	82	22.5	279	76.4
Union	127	92	2	1.6	3	20	15.7	105	82.7
Vanderburgh	6,374	6	16	0.3	71	1,110	17.4	5,248	82.3
Vermillion	425	77	4	0.9	9	75	17.6	346	81.4
Vigo	3,543	15	9	0.3	70	785	22.2	2,749	77.6
Wabash	1,040	42	6	0.6	29	144	13.8	890	85.6
Warren	264	86	1	0.4	50	28	10.6	235	89.0
Warrick	1,429	28	7	0.5	43	197	13.8	1,225	85.7
Washington	681	61	1	0.1	86	104	15.3	576	84.6
Wayne	2,083	23	12	0.6	30	425	20.4	1,646	79.0
Wells	595	67	1	0.2	83	84	14.1	510	85.7
White	873	48	3	0.3	54	120	13.7	750	85.9
Whitley	823	52	7	0.9	13	138	16.8	678	82.4
Unknown	9	na	0	0.0	na	0	0.0	9	100.0

**Notes:** *Non-incapacitating* collisions include collisions with *non-incapacitating* and *possible* injuries. *Personal injury* collisions include collisions with *incapacitating, non-incapacitating,* and *possible* injuries.

	Total in	dividuals		Fatal		Incapa	citating	Non-inca	pacitating	Other/n	o injury
	Count	County rank	Count	As % county total	County rank (on %)	Count	As % county total	Count	As % county total	Count	As % county total
Indiana	304,412	na	692	0.2	na	3,179	1.0	43,411	14.3	257,130	84.5
Mean	3,309	na	8	na	na	35	na	472	na	2,795	na
Minimum	162	na	0	na	na	1	na	27	na	128	na
Maximum	46,355	na	56	na	na	437	na	6,608	na	39,254	na
Adams	1,038	57	1	0.1	90	12	1.2	119	11.5	906	87.3
Allen	18,304	3	26	0.1	75	185	1.0	2,612	14.3	15,481	84.6
Bartholomew	3,701	20	5	0.1	77	33	0.9	738	19.9	2,925	79.0
Benton	228	91	3	1.3	1	1	0.4	45	19.7	179	78.5
Blackford	415	85	1	0.2	57	4	1.0	57	13.7	353	85.1
Boone	2,448	27	7	0.3	52	18	0.7	328	13.4	2,095	85.6
Brown	718	74	4	0.6	26	33	4.6	125	17.4	556	77.4
Carroll	855	65	5	0.6	22	17	2.0	102	11.9	731	85.5
Cass	1,836	32	6	0.3	45	16	0.9	255	13.9	1,559	84.9
Clark	6,544	13	12	0.2	66	42	0.6	865	13.2	5,625	86.0
Clay	1,211	52	5	0.4	34	12	1.0	164	13.5	1,030	85.1
Clinton	1,219	50	11	0.9	7	22	1.8	203	16.7	983	80.6
Crawford	429	84	5	1.2	4	14	3.3	48	11.2	362	84.4
Daviess	613	77	2	0.3	46	11	1.8	163	26.6	437	71.3
Dearborn	2,840	24	6	0.2	64	41	1.4	341	12.0	2,452	86.3
Decatur	1,017	59	1	0.1	89	10	1.0	118	11.6	888	87.3
DeKalb	1,882	31	8	0.4	33	26	1.4	240	12.8	1,608	85.4
Delaware	6,745	11	9	0.1	78	43	0.6	929	13.8	5,764	85.5
Dubois	1,399	46	3	0.2	62	14	1.0	241	17.2	1,141	81.6
Elkhart	9,213	8	24	0.3	56	87	0.9	991	10.8	8,111	88.0
Fayette	923	62	0	0.0	91	5	0.5	140	15.2	778	84.3
Floyd	4,469	18	5	0.1	84	39	0.9	681	15.2	3,744	83.8
Fountain	565	79	4	0.7	11	9	1.6	60	10.6	492	87.1
Franklin	722	72	1	0.1	76	17	2.4	118	16.3	586	81.2
Fulton	791	70	5	0.6	17	19	2.4	107	13.5	660	83.4
Gibson	1,479	44	6	0.4	35	11	0.7	235	15.9	1,227	83.0
Grant	3,378	22	6	0.2	68	26	0.8	418	12.4	2,928	86.7
Greene	1,143	53	8	0.7	12	18	1.6	153	13.4	964	84.3
Hamilton	11,342	6	18	0.2	72	102	0.9	1,281	11.3	9,941	87.6
Hancock	2,458	26	11	0.4	30	46	1.9	392	15.9	2,009	81.7
Harrison	1,713	36	4	0.2	58	30	1.8	274	16.0	1,405	82.0
Hendricks	6,140	14	13	0.2	63	61	1.0	775	12.6	5,291	86.2
Henry	1,659	39	3	0.2	67	34	2.0	268	16.2	1,354	81.6
Howard	3,995	19	7	0.2	70	57	1.4	617	15.4	3,314	83.0
Huntington	1,620	40	7	0.4	32	22	1.4	229	14.1	1,362	84.1
Jackson	1,916	30	2	0.1	87	23	1.2	274	14.3	1,617	84.4
Jasper	1,825	35	11	0.6	19	22	1.2	324	17.8	1,468	80.4
Jay	916	63	2	0.2	60	20	2.2	120	13.1	774	84.5
Jefferson	1,487	43 49	3	0.2 0.3	65 47	37	2.5 2.2	200	13.4	1,247 1,059	83.9 84.0
Jennings Johnson	1,260		9	0.3	47 69	28 55		169	13.4 15.1		
Johnson Knox	5,112	16 42	4	0.2			1.1 1.2	771 290	15.1 19.2	4,277	83.7 79.4
Knox Kosciusko	1,513 3,531	42 21	13	0.3	55 41	18 21	1.2 0.6	437	19.2 12.4	1,201 3,060	79.4 86.7
LaGrange	1,065	56	6	0.4	25	17	1.6	111	10.4	931	87.4
Lake	28,022	2	47	0.2	71	198	0.7	3,678	13.1	24,099	86.0
LaPorte	4,866	17	28	0.2	23	58	1.2	756	15.5	4,024	82.7
Lawrence	1,834	33	4	0.0	23 61	39	2.1	356	19.4	1,435	78.2
Madison	6,769	10	9	0.2	79	67	1.0	1,081	19.4	5,612	82.9
Marion	46,355	10	56	0.1	82	437	0.9	6,608	14.3	39,254	84.7
Marshall	2,088	29	8	0.1	32 39	29	1.4	314	14.5	1,737	83.2
Martin	317	87	4	1.3	2	5	1.4	44	13.9	264	83.3
Martin Miami	1,602	87 41	11	0.7	13	20	1.6	224	13.9	1,347	83.5 84.1

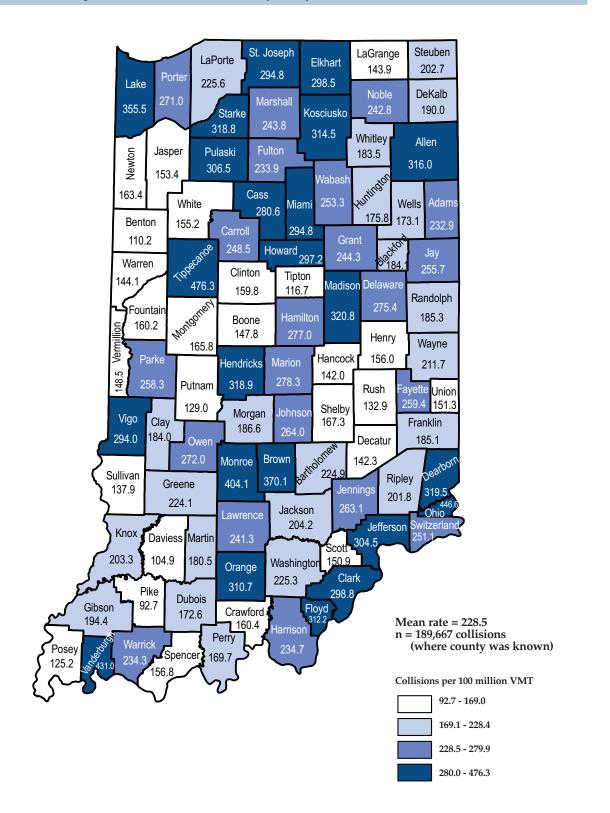
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### Table 91. (continued)

	Total ir	ndividuals	Fatal			Incapacitating		Non-incapacitating		Other/No injury	
	Count	County rank	Count	As % county total	County rank (on %)	Count	As % county total	Count	As % county total	Count	As % county total
Monroe	6,624	12	7	0.1	86	62	0.9	1,115	16.8	5,440	82.1
Montgomery	1,385	47	7	0.5	27	14	1.0	199	14.4	1,165	84.1
Morgan	2,638	25	8	0.3	50	35	1.3	472	17.9	2,123	80.5
Newton	525	81	3	0.6	24	11	2.1	74	14.1	437	83.2
Noble	1,713	36	4	0.2	58	21	1.2	170	9.9	1,518	88.6
Ohio	299	88	1	0.3	43	4	1.3	38	12.7	256	85.6
Orange	825	67	1	0.1	81	16	1.9	128	15.5	680	82.4
Owen	788	71	5	0.6	16	9	1.1	150	19.0	624	79.2
Parke	808	68	5	0.6	18	18	2.2	146	18.1	639	79.1
Perry	676	76	4	0.6	21	11	1.6	133	19.7	528	78.1
Pike	268	90	2	0.7	9	2	0.7	74	27.6	190	70.9
Porter	7,542	9	22	0.3	51	90	1.2	1,324	17.6	6,106	81.0
Posey	721	73	2	0.3	54	11	1.5	105	14.6	603	83.6
Pulaski	706	75	5	0.7	10	18	2.5	101	14.3	582	82.4
Putnam	1,121	54	5	0.4	31	15	1.3	150	13.4	951	84.8
Randolph	793	69	3	0.4	40	9	1.1	120	15.1	661	83.4
Ripley	1,033	58	4	0.4	38	19	1.1	190	18.4	820	79.4
Rush	470	83	3	0.4	15	11	2.3	115	24.5	341	72.6
St. Joseph	11,476	5	14	0.0	80	91	0.8	1,709	14.9	9,662	84.2
Scott	1,075	55	3	0.1	53	28	2.6	241	22.4	803	74.7
Shelby	1,703	38	6	0.3	42	20	1.2	324	19.0	1,352	74.7
•	830	66	5	0.4	42 20	11	1.2	122	19.0	692	83.4
Spencer			_					122			
Starke	1,014	60 24	5	0.5 0.3	28 44	14 17	1.4 0.9	-	12.3	870	85.8
Steuben	1,830	34	6					194	10.6	1,613	88.1
Sullivan	535	80	5	0.9	5	10	1.9	98	18.3	422	78.9
Switzerland	292	89	0	0.0	91	5	1.7	54	18.5	233	79.8
Tippecanoe	10,946	7	12	0.1	85	62	0.6	1,203	11.0	9,669	88.3
Tipton	512	82	4	0.8	8	8	1.6	94	18.4	406	79.3
Union	162	92	2	1.2	3	5	3.1	27	16.7	128	79.0
Vanderburgh	11,715	4	17	0.1	74	71	0.6	1,504	12.8	10,123	86.4
Vermillion	586	78	4	0.7	14	8	1.4	97	16.6	477	81.4
Vigo	5,879	15	9	0.2	73	90	1.5	1,016	17.3	4,764	81.0
Wabash	1,472	45	7	0.5	29	16	1.1	176	12.0	1,273	86.5
Warren	324	86	1	0.3	49	10	3.1	35	10.8	278	85.8
Warrick	2,220	28	9	0.4	36	25	1.1	254	11.4	1,932	87.0
Washington	974	61	1	0.1	88	9	0.9	140	14.4	824	84.6
Wayne	3,040	23	12	0.4	37	30	1.0	563	18.5	2,435	80.1
Wells	863	64	1	0.1	83	12	1.4	111	12.9	739	85.6
White	1,284	48	4	0.3	48	14	1.1	163	12.7	1,103	85.9
Whitley	1,213	51	11	0.9	6	15	1.2	168	13.8	1,019	84.0
Unknown	2	na	0	na	na	0	na	0	na	2	na

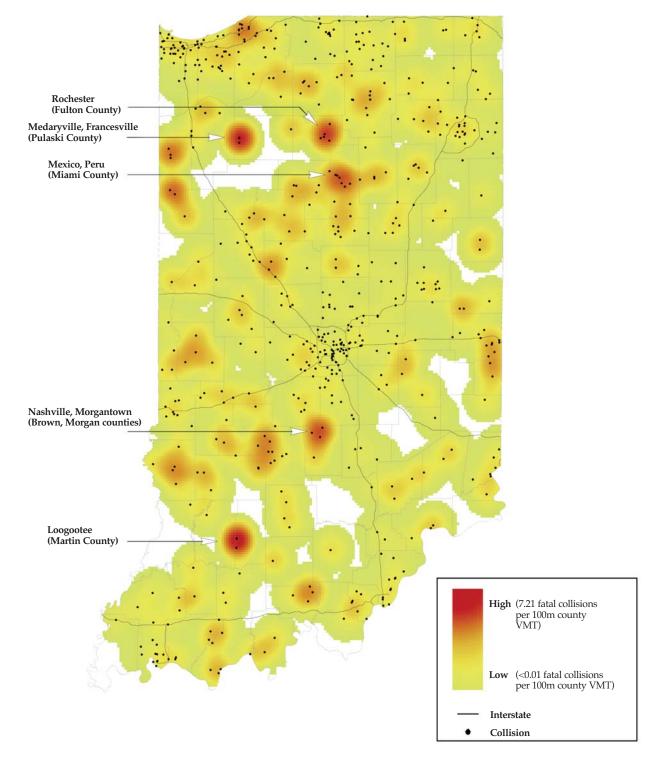
Notes: Non-incapacitating injuries include those reported as *non-incapacitating* and *possible* injuries. Other/no injury counts include injury type values identified as *not reported*, *refused*, *unknown*, invalid and missing codes.

### Map 1. Traffic collisions per 100m vehicle miles travelled, by county, 2009



#### Sources:

Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 1, 2010. Indiana Department of Transportation, 2008 Vehicle Miles Travelled (VMT).



## Map 2. Indiana fatal collision concentrations per 100m county vehicle miles travelled (VMT), 2009

## Note:

Density grid is based on points with valid coordinates (607/631).

## Sources:

Indiana State Police Automated Reporting Information Exchange System, as of March 1, 2010. Indiana Department of Transportation, 2008 Vehicle Miles Travelled (VMT).

		All collisions			Fatal		Perso	nal injury	Property	damage only
	Speed- related collisions	Speed- related as % of total collisions	County rank (on %)	Count	Speed- related as % of total fatal collisions	County rank (on %)	Count	Speed- related as % of total personal injury collisions	Count	Speed- related as % of total property damage collisions
Indiana	18,252	9.6	na	136	21.6	na	4,117	12.3	13,999	9.0
Mean	198	na	na	1	na	na	45	na	152	na
Minimum	8	na	na	0	na	na	2	na	4	na
Maximum	2,199	na	na	16	na	na	545	na	1,870	na
Adams	55	7.6	55	0	0.0	59	11	11.2	44	7.0
Allen Bartholomew	1,115 107	9.9 5.0	40 81	10 1	43.5 20.0	10	223	11.0 5.0	882 79	9.6 4.9
Benton	107	5.8	81 74	0	20.0	36 59	27	5.0 8.6	79	4.9 5.2
Blackford	8	2.7	92	0	0.0	59	2	4.7	6	2.4
Boone	193	11.7	23	0	0.0	59	39	16.5	154	10.9
Brown	79	14.5	10	1	25.0	25	25	23.6	53	12.2
Carroll	106	16.4	4	1	20.0	36	23	25.3	82	14.9
Cass	94	7.4	56	1	16.7	45	21	11.1	72	6.7
Clark	221	5.6	78	3	27.3	23	61	9.2	157	4.7
Clay	46	5.6	77	1	20.0	36	15	11.5	30	4.4
Clinton	134	15.8	6	3	33.3	14	28	17.6	103	15.1
Crawford	42	12.0	20	3	60.0	7	9	20.9	30	9.9
Daviess	30	8.1	51	0	0.0	59	9	7.8	21	8.3
Dearborn	137	7.2	59	1	16.7	45	43	16.9	93	5.7
Decatur	77	11.1	27	0	0.0	59	13	14.0	64	10.6
DeKalb	145	11.2	26	0	0.0	59	33	17.6	112	10.1
Delaware	445	10.6	33	3	33.3	14	76	10.9	366	10.4
Dubois	92	10.3	36	2	66.7	6	32	16.7	58	8.3
Elkhart	912 20	15.3 3.5	7 90	4	19.0	43	132 7	16.8	776	15.1 2.8
Fayette	129	5.5 4.8	90 85	1	0.0 25.0	59 25	38	6.7 7.2	13 90	2.8 4.2
Floyd Fountain	30	4.8 7.4	83 57	2	100.0	23 1	9	17.3	19	4.2 5.4
Franklin	91	18.0	2	0	0.0	59	25	24.0	66	16.5
Fulton	89	14.8	9	0	0.0	59	23	24.5	66	13.1
Gibson	92	9.2	44	2	33.3	14	25	14.7	65	7.9
Grant	325	14.5	11	0	0.0	59	52	15.6	273	14.3
Greene	44	5.1	80	1	16.7	45	13	10.1	30	4.1
Hamilton	414	6.5	67	4	23.5	34	65	6.7	345	6.5
Hancock	87	6.1	72	2	25.0	25	23	8.1	62	5.5
Harrison	72	6.2	71	1	25.0	25	20	9.1	51	5.4
Hendricks	348	9.7	42	2	16.7	45	88	14.5	258	8.7
Henry	98	8.7	46	2	100.0	1	25	11.6	71	7.9
Howard	148	6.4	69	0	0.0	59	37	7.8	111	6.1
Huntington	96	8.3	47	0	0.0	59	18	9.6	78	8.2
Jackson	74	5.6	76	0	0.0	59	20	8.9	54	4.9
Jasper	146	11.5	24	1	12.5	52	40	17.8	105	10.1
Jay	33 65	4.8 6.7	84 63	0	0.0 33.3	59 14	11 20	10.9 11.8	22 44	3.8 5.5
Jefferson Jennings	33	6.7 4.1	63 89	1	33.3 25.0	14 25	20	6.8	23	5.5 3.5
Johnson	189	6.5	65	2	22.2	35	62	10.1	125	5.5
Knox	104	10.7	32	0	0.0	59	32	14.6	72	9.6
Kosciusko	173	7.1	62	1	7.7	57	37	11.8	135	6.3
LaGrange	161	19.6	1	1	20.0	36	31	35.2	129	17.7
Lake	2,382	14.1	13	10	25.6	24	502	18.1	1,870	13.3
LaPorte	367	11.3	25	4	16.0	50	53	8.7	310	11.8
Lawrence	76	6.6	64	0	0.0	59	26	9.7	50	5.7
Madison	303	7.2	60	1	11.1	54	69	8.6	233	6.8

## Table 92. Indiana speed-related collisions, by severity and county, 2009

continued on next page

## Table 92. (continued)

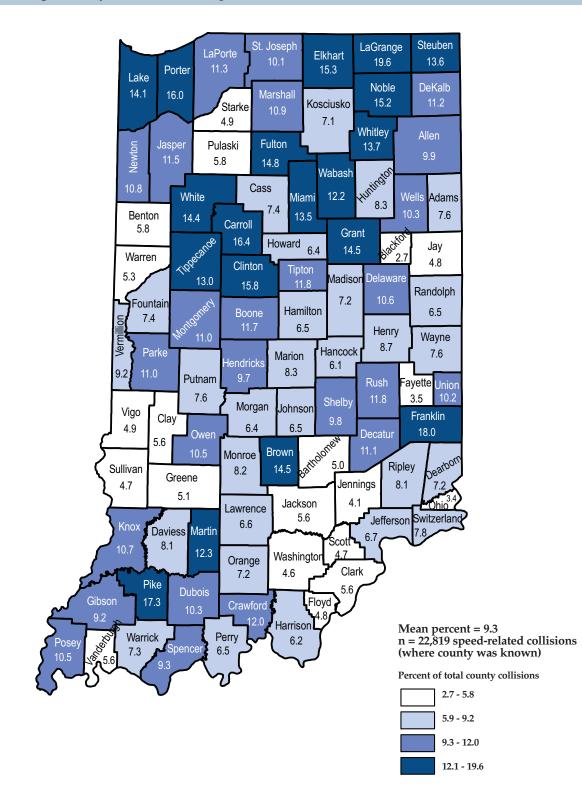
		All collisions			Fatal		Perso	nal injury	Property	damage only
	Speed- related collisions	Speed- related as % of total collisions	County rank (on %)	Count	Speed- related as % of total fatal collisions	County rank (on %)	Count	Speed- related as % of total personal injury collisions	Count	Speed- related as % of total property damage collisions
Marion	2,199	8.3	48	16	28.6	20	545	10.7	1,638	7.7
Marshall	162	10.9	30	1	12.5	52	37	16.4	124	9.8
Martin	28	12.3	18	0	0.0	59	10	25.0	18	9.8
Miami	155	13.5	16	1	10.0	56	43	24.7	111	11.6
Monroe	328	8.2	49	1	14.3	51	95	10.9	232	7.4
Montgomery	107	11.0	29	0	0.0	59	19	12.2	88	10.8
Morgan	103	6.4	70	2	28.6	20	35	10.2	66	5.3
Newton	43	10.8	31	0	0.0	59	8	13.1	35	10.4
Noble	195	15.2	8	1	25.0	25	37	24.2	157	13.9
Ohio	8	3.4	91	0	0.0	59	4	12.9	4	1.9
Orange	43	7.2	61	0	0.0	59	20	18.9	23	4.7
Owen	57	10.5	34	2	40.0	12	15	13.4	40	9.4
Parke	67	11.0	28	1	20.0	36	19	22.4	47	9.1
Perry Pike	28 31	6.5	68	0	0.0 0.0	59 59	10	10.0	18 23	5.5
Porter	761	17.3 16.0	3 5	9	0.0 40.9	59 11	8 167	16.0	585	18.1 15.8
Posey	55	10.5	35	9	40.9	59	167	16.1 19.3	38	8.7
Pulaski	33	5.8	73	0	0.0	59 59	17	19.5	21	4.3
Putnam	58	7.6	54	1	25.0	25	14	11.3	43	4.3 6.8
Randolph	37	6.5	66	0	0.0	29 59	8	8.8	29	6.1
Ripley	61	8.1	50	0	0.0	59	21	14.5	40	6.7
Rush	38	11.8	22	1	33.3	14	14	16.7	23	9.7
St. Joseph	686	10.1	39	1	7.1	58	149	11.4	536	9.9
Scott	29	4.7	86	1	50.0	9	5	2.9	23	5.3
Shelby	111	9.8	41	2	40.0	12	31	11.9	78	9.0
Spencer	55	9.3	43	1	20.0	36	16	19.5	38	7.5
Starke	38	4.9	82	1	25.0	25	9	9.1	28	4.2
Steuben	187	13.6	15	1	20.0	36	41	28.5	145	11.8
Sullivan	18	4.7	87	0	0.0	59	6	8.0	12	3.9
Switzerland	18	7.8	52	0	0.0	59	9	21.4	9	4.8
Tippecanoe	913	13.0	17	6	60.0	7	149	15.8	758	12.5
Tipton	43	11.8	21	1	25.0	25	12	14.6	30	10.8
Union	13	10.2	38	2	100.0	1	2	10.0	9	8.6
Vanderburgh	358	5.6	75	3	18.8	44	100	9.0	255	4.9
Vermillion	39	9.2	45	0	0.0	59	7	9.3	32	9.2
Vigo	174	4.9	83	1	11.1	54	47	6.0	126	4.6
Wabash	127	12.2	19	0	0.0	59	31	21.5	96	10.8
Warren	14	5.3	79	1	100.0	1	2	7.1	11	4.7
Warrick	105	7.3	58	2	28.6	20	26	13.2	77	6.3
Washington	31	4.6	88	1	100.0	1	10	9.6	20	3.5
Wayne	159	7.6	53	2	16.7	45	46	10.8	111	6.7
Wells	61	10.3	37	0	0.0	59	9	10.7	52	10.2
White	126	14.4	12	1	33.3	14	22	18.3	103	13.7
Whitley	113	13.7	14	0	0.0	59	25	18.1	88	13.0

Notes:
 Percent calculations represent the percent of total county collisions (presented in Table 1) in each injury category that are speed-related.
 *Personal injury* collisions include collisions with *incapacitating, non-incapacitating,* and *possible* injuries.
 Fatal speed-related county rank values may result in a tie due to the fact that a number of counties have the same value for speed-related fatal collisions as a percentage of total county fatal collisions.

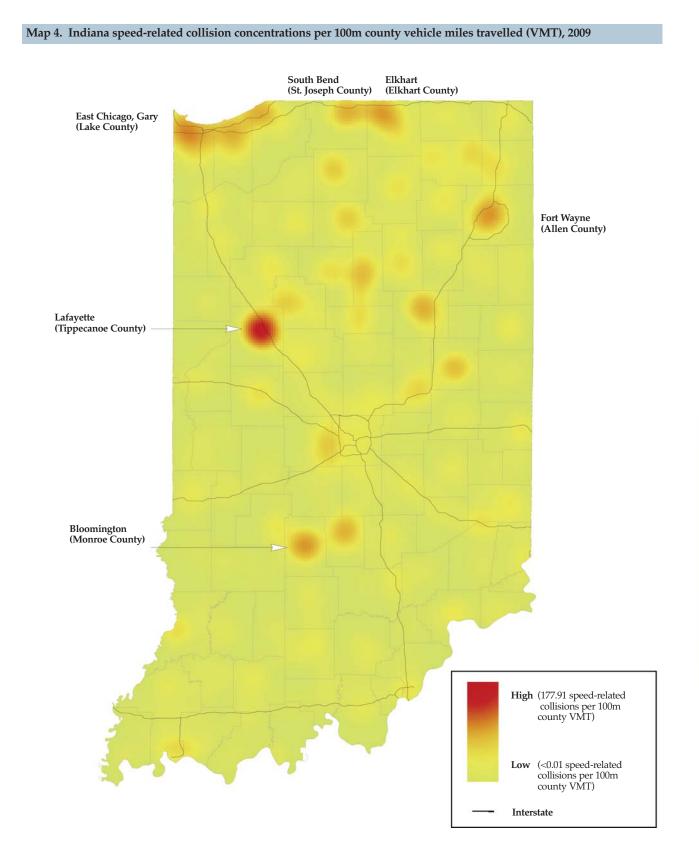
## Source:

Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 1, 2010.

## Map 3. Percentage of county collisions that were speed-related, 2009



**Source:** Indiana State Police Automated Reporting Information Exchange System, as of March 1, 2010.



## Note:

Density grid is based on points with valid coordinates (15,957/18,252).

## Sources:

Indiana State Police Automated Reporting Information Exchange System, as of March 1, 2010. Indiana Department of Transportation, 2008 Vehicle Miles Travelled (VMT).

## Table 93. Indiana alcohol-related collisions, by severity and county, 2009

		All collisions			Fatal		Perso	nal injury	Property	damage only
	Alcohol- related collisions	Alcohol- related as % of total collisions	County rank (on %)	Count	Alcohol- related as % of total fatal collisions	County rank (on %)	Count	Alcohol- related as % of total personal injury collisions	Count	Alcohol- related as % of total property damage collisions
Indiana	8,855	4.7	na	157	24.9	na	2,969	8.9	5,729	3.7
Mean	96	na	na	2	na	na	32	na	62	na
Minimum	7	na	na	0	na	na	1	na	4	na
Maximum Adams	1,126 27	na 3.7	na 75	14 0	na 0.0	na 63	388 10	na 10.2	731	na 2.7
Allen	597	5.3	29	0 14	60.9	7	10	10.2 8.9	402	2.7 4.4
Bartholomew	89	4.1	66	14	20.0	44	43	7.9	45	2.8
Benton	11	6.4	10	0	0.0	63	7	20.0	4	3.0
Blackford	8	2.7	90	0	0.0	63	1	2.3	7	2.8
Boone	67	4.1	68	1	14.3	54	18	7.6	48	3.4
Brown	22	4.1	69	1	25.0	30	7	6.6	14	3.2
Carroll	30	4.7	52	1	20.0	44	8	8.8	21	3.8
Cass	67	5.3	28	2	33.3	19	16	8.4	49	4.6
Clark	177	4.4	57	3	27.3	29	54	8.2	120	3.6
Clay	41	5.0	37	0	0.0	63	12	9.2	29	4.2
Clinton Crawford	59 26	6.9 7.4	74	3	33.3 20.0	19 44	21 10	13.2 23.3	35 15	5.1 5.0
Daviess	36	9.7	4	1	20.0 50.0	44 9	10	23.5 15.5	13	6.7
Dearborn	98	5.2	32	4	66.7	5	27	10.6	67	4.1
Decatur	30	4.3	61	1	100.0	1	12	12.9	17	2.8
DeKalb	61	4.7	50	1	14.3	54	24	12.8	36	3.3
Delaware	199	4.7	48	2	22.2	41	69	9.9	128	3.7
Dubois	40	4.5	55	2	66.7	5	18	9.4	20	2.9
Elkhart	204	3.4	83	7	33.3	19	62	7.9	135	2.6
Fayette	36	6.3	12	0	0.0	63	11	10.5	25	5.4
Floyd	136	5.1	35	0	0.0	63	44	8.4	92	4.3
Fountain	22	5.4	25	1	50.0	9	8	15.4	13	3.7
Franklin Fulton	24 26	4.7 4.3	47 60	0	0.0 20.0	63 44	11 11	10.6 11.7	13 14	3.2 2.8
Gibson	46	4.5	54	0	0.0	44 63	22	11.7	24	2.8
Grant	72	3.2	85	1	16.7	51	19	5.7	52	2.7
Greene	38	4.4	59	2	33.3	19	10	7.8	26	3.6
Hamilton	225	3.6	80	4	23.5	38	62	6.4	159	3.0
Hancock	82	5.8	20	1	12.5	59	21	7.4	60	5.3
Harrison	40	3.4	82	1	25.0	30	14	6.4	25	2.7
Hendricks	144	4.0	71	2	16.7	51	42	6.9	100	3.4
Henry	40	3.6	78	0	0.0	63	19	8.8	21	2.3
Howard	110	4.8	43	2	28.6	27	36	7.5	72	4.0
Huntington Jackson	31 59	2.7 4.5	91 56	0 0	0.0 0.0	63 63	14 16	7.4 7.1	17 43	1.8 3.9
Jasper	61	4.5	42	1	12.5	59	33	14.7	43	2.6
Jay	25	3.6	77	1	50.0	9	11	10.9	13	2.2
Jefferson	65	6.7	9	0	0.0	63	23	13.5	42	5.2
Jennings	31	3.9	73	1	25.0	30	12	9.0	18	2.7
Johnson	155	5.4	27	3	33.3	19	57	9.3	95	4.2
Knox	50	5.1	34	1	33.3	19	16	7.3	33	4.4
Kosciusko	90	3.7	76	3	23.1	39	34	10.9	53	2.5
LaGrange	47	5.7	21	3	60.0	8	13	14.8	31	4.2
Lake	831	4.9	38	14	35.9	18	278	10.0	539	3.8
LaPorte	200	6.1	13	9	36.0	17	62	10.2	129	4.9
Lawrence Madison	51 219	4.4 5.2	58 31	1 2	25.0 22.2	30 41	13 78	4.9 9.8	37 139	4.2 4.1
Marion	1,126	4.3	64	10	17.9	50	385	7.5	731	3.4
Marshall	45	3.0	87	1	12.5	59	18	8.0	26	2.1
Martin	13	5.7	22	0	0.0	63	4	10.0	9	4.9
Miami	44	3.8	74	1	10.0	62	15	8.6	28	2.9 ed on next page

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## Table 93. (continued)

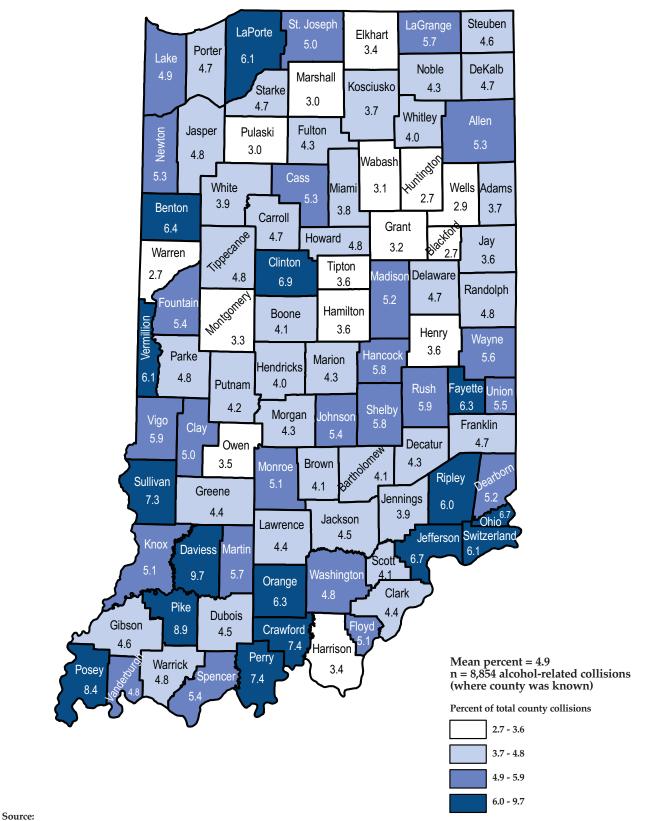
		All collisions			Fatal		Perso	nal injury	Property	damage only
	Alcohol- related collisions	Alcohol- related as % of total collisions	County rank (on %)	Count	Alcohol- related as % of total fatal collisions	County rank (on %)	Count	Alcohol- related as % of total personal injury collisions	Count	Alcohol- related as % of total property damage collisions
Monroe	206	5.1	33	0	0.0	63	75	8.6	131	4.2
Montgomery	32	3.3	84	1	16.7	51	11	7.1	20	2.5
Morgan	69	4.3	62	2	28.6	27	24	7.0	43	3.4
Newton	21	5.3	30	0	0.0	63	11	18.0	10	3.0
Noble	55	4.3	63	0	0.0	63	23	15.0	32	2.8
Ohio	16	6.7	8	0	0.0	63	5	16.1	11	5.3
Orange	38	6.3	11	0	0.0	63	18	17.0	20	4.1
Owen	19	3.5	81	0	0.0	63	5	4.5	14	3.3
Parke	29	4.8	45	2	40.0	15	7	8.2	20	3.9
Perry	32	7.4	5	0	0.0	63	13	13.0	19	5.8
Pike	16	8.9	2	2	100.0	1	6	12.0	8	6.3
Porter	224	4.7	49	5	22.7	40	80	7.7	139	3.7
Posey	44	8.4	3	0	0.0	63	18	20.5	26	5.9
Pulaski	17	3.0	88	0	0.0	63	6	7.7	11	2.3
Putnam	32	4.2	65	1	25.0	30	8	6.5	23	3.6
Randolph	27	4.8	44	0	0.0	63	13	14.3	14	3.0
Ripley	45	6.0	16	1	25.0	30	16	11.0	28	4.7
Rush	19	5.9	18	0	0.0	63	5	6.0	14	5.9
St. Joseph	338	5.0	36	2	14.3	54	117	8.9	219	4.0
Scott	25	4.1	67	0	0.0	63	14	8.1	11	2.5
Shelby	66	5.8	19	0	0.0	63	24	9.2	42	4.8
Spencer	32	5.4	26	1	20.0	44	11	13.4	20	4.0
Starke	36	4.7	51	2	50.0	9	18	18.2	16	2.4
Steuben	64	4.6	53	1	20.0	44	18	12.5	45	3.7
Sullivan	28	7.3	6	2	40.0	15	10	13.3	16	5.2
Switzerland	14	6.1	15	0	0.0	63	7	16.7	7	3.7
Tippecanoe	336	4.8	41	3	30.0	26	71	7.5	262	4.3
Tipton	13	3.6	79	0	0.0	63	8	9.8	5	1.8
Union	7	5.5	24	2	100.0	1	1	5.0	4	3.8
Vanderburgh	306	4.8	40	4	25.0	30	86	7.7	216	4.1
Vermillion	26	6.1	14	1	25.0	30	10	13.3	15	4.3
Vigo	209	5.9	17	2	22.2	41	63	8.0	144	5.2
Wabash	32	3.1	86	3	50.0	9	9	6.3	20	2.2
Warren	7	2.7	92	0	0.0	63	2	7.1	5	2.1
Warrick	68	4.8	46	1	14.3	54	32	16.2	35	2.9
Washington	33	4.8	39	1	100.0	1	15	14.4	17	3.0
Wayne	116	5.6	23	5	41.7	14	50	11.8	61	3.7
Wells	17	2.9	89	0	0.0	63	7	8.3	10	2.0
White	34	3.9	72	1	33.3	19	12	10.0	21	2.8
Whitley	33	4.0	70	1	14.3	54	10	7.2	22	3.2
Unknown	1	11.1	na	0	0.0	na	0	0.0	1	11.1

## Notes:

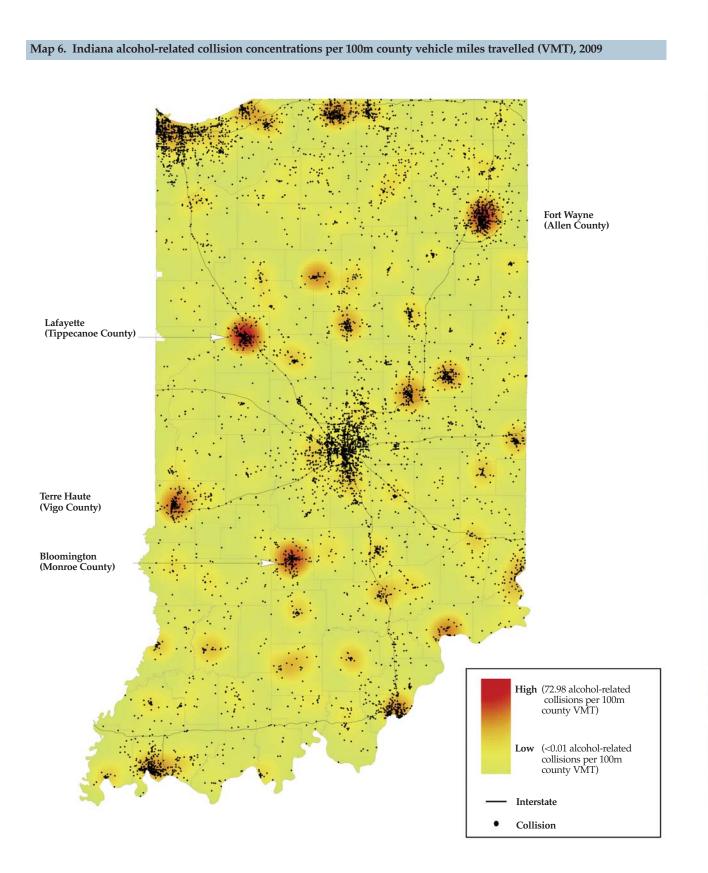
Notes:
 Percent calculations represent the percent of total county collisions (presented in Table 1) in each injury category that are alcohol-related.
 Personal injury collisions include collisions with incapacitating, non-incapacitating, and possible injuries.
 Fatal alcohol-related county rank values may result in a tie due to the fact that a number of counties have the same value for alcohol-related fatal collisions as a percentage of total county fatal collisions.
 See glossary for definition of alcohol-related.

**Source:** Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 1, 2010.

Map 5. Percentage of county collisions that were alcohol-related, 2009



Indiana State Police Automated Reporting Information Exchange System, as of March 1, 2010.

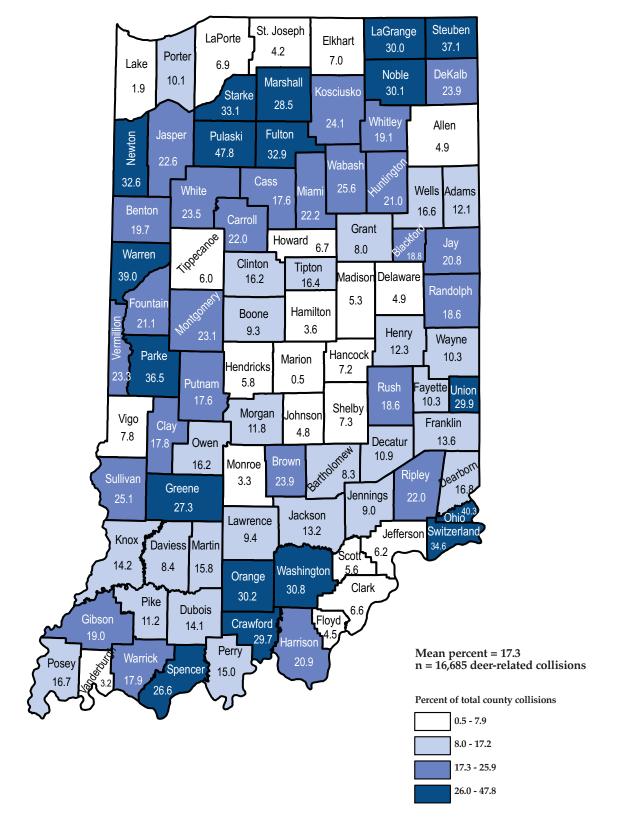


## Note:

Density grid is based on points with valid coordinates (7,926/8,855).

**Sources:** Indiana State Police Automated Reporting Information Exchange System, as of March 1, 2010. Indiana Department of Transportation, 2008 Vehicle Miles Travelled (VMT).

## Map 7. Percentage of county collisions that involved a deer, 2009



Source: Indiana State Police Automated Reporting Information Exchange System, as of March 1, 2010.

							Non-incapacitating			
		Fatal			Incapacita	0		•		
	Total	Unrestrained	% unrestrained	Total	Unrestrained	% unrestrained	Total	Unrestrained	% unrestrained	
Indiana	630	296	47.0	2,904	831	28.6	41,417	4,027	9.7	
Mean	7	3 0	na	32	9	na	450	44	na	
Minimum Maximum	0 44	0 25	na na	1 396	0 83	na	26 6,229	3 489	na	
Adams	1	<u> </u>	100.0	10	4	40.0	113	17		
Allen	25	17	68.0	161	51	31.7	2,475	178	7.2	
Bartholomew	4	3	75.0	29	11	37.9	707	67	9.5	
Benton	3	1	33.3	1	0	0.0	45	3	6.7	
Blackford	1	1	100.0	4	1	25.0	56	9	16.1	
Boone	7	2	28.6	17	3	17.6	321	30	9.3	
Brown	2	1	50.0	33	13	39.4	123	26	21.1	
Carroll	4	1	25.0	16	4	25.0	101	13	12.9	
Cass	6	2	33.3	16	4	25.0	244	22	9.0	
Clark	12	4	33.3	40	13	32.5	827	61	7.4	
Clay	4	3	75.0	12	2	16.7	162	16	9.9	
Clinton	10	5	50.0	21	11	52.4	199	29	14.6	
Crawford	5	2	40.0	14	7	50.0	48	10	20.8	
Daviess	2	1	50.0	11	2	18.2	158	33	20.9	
Dearborn	6	3	50.0	41	6	14.6	338	29	8.6	
Decatur	1	0	0.0	8	4	50.0	117	23	19.7	
DeKalb	7	2	28.6	25	5	20.0	227	33	14.5	
Delaware	9	6	66.7	39	13	33.3	868	101	11.6	
Dubois	3	1	33.3	14	5	35.7	235	32	13.6	
Elkhart	24	9	37.5	76	9	11.8	917	84	9.2	
Fayette	0	0	0.0	5	2	40.0	130	10	7.7	
Floyd	5	3	60.0	37	13	35.1	654	44	6.7	
Fountain	4	2	50.0	9	1	11.1	58	7	12.1	
Franklin	1	1	100.0	16	4	25.0	116	14	12.1	
Fulton	4	2	50.0	19	9	47.4	102	20	19.6	
Gibson	5	1	20.0	10	4	40.0	230	37	16.1	
Grant	6	5 5	83.3	26	6	23.1	399	52	13.0	
Greene Hamilton	8 15	6	62.5 40.0	16 92	8 24	50.0 26.1	147 1,233	20 69	13.6 5.6	
Hancock	15	6	40.0 54.5	92 44	24 9	20.5	382	38	5.6 9.9	
Harrison	4	2	50.0	44 29	5	17.2	266	22	8.3	
Hendricks	13	4	30.8	58	8	17.2	748	58	7.8	
Henry	3	4 0	0.0	32	5	15.6	260	36	13.8	
Howard	6	4	66.7	50	15	30.0	591	70	11.8	
Huntington	7	3	42.9	20	5	25.0	221	25	11.3	
Jackson	2	0	0.0	20	5	23.8	253	33	13.0	
Jasper	9	3	33.3	21	8	38.1	313	55	17.6	
Jay	2	1	50.0	20	9	45.0	110	17	15.5	
Jefferson	3	2	66.7	36	8	22.2	193	20	10.4	
Jennings	4	3	75.0	28	4	14.3	167	21	12.6	
Johnson	9	3	33.3	49	15	30.6	741	51	6.9	
Knox	4	2	50.0	15	6	40.0	277	35	12.6	
Kosciusko	13	8	61.5	18	3	16.7	423	52	12.3	
LaGrange	6	3	50.0	13	7	53.8	94	12	12.8	
Lake	41	19	46.3	172	64	37.2	3,471	240	6.9	
LaPorte	26	13	50.0	53	12	22.6	703	71	10.1	
Lawrence	4	1	25.0	37	14	37.8	347	50	14.4	
Madison	8	5	62.5	59	14	23.7	1,033	108	10.5	
Marion	44	25	56.8	396	83	21.0	6,229	489	7.9	
Marshall	7	4	57.1	28	11	39.3	304	42	13.8	
Martin	4	1	25.0	5	2	40.0	41	4	9.8	
Miami Monroe	10 6	4	40.0 66.7	19 55	4 15	21.1 27.3	215 1,045	31 74	14.4 7.1	
Montgomery	6	4 1	16.7	13	3	23.1	1,045	22	11.2	
Morgan	8	1	12.5	35	8	22.9	464	50	11.2	
Newton	3	2	66.7	11	4	36.4	72	11	15.3	
1.0000000		4	00.7	11	т	00.1	14		tinued on next nage	

## Table 94. Vehicle occupants injured in Indiana collisions by injury status, restraint use, and county, 2009

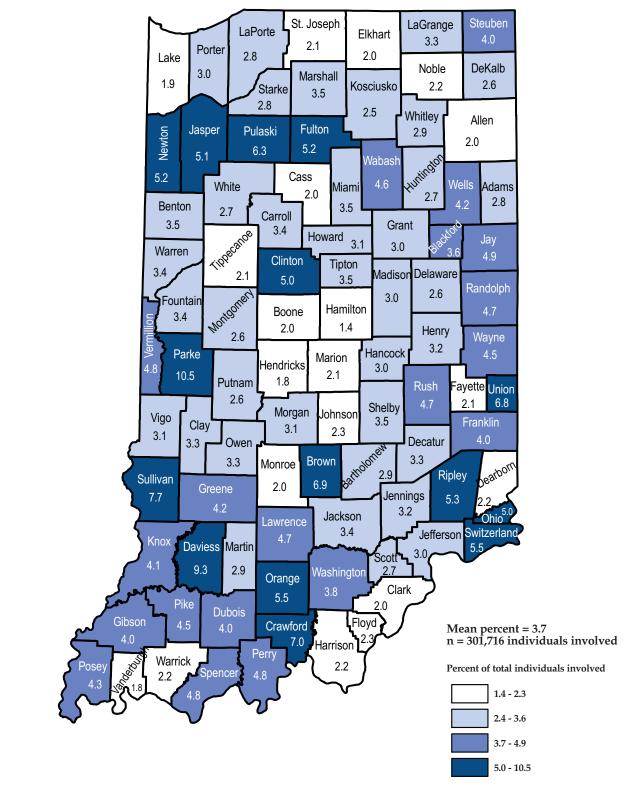
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## Table 94. (continued)

		Fatal			Incapacita	ating		Non-incapac	itating
					1	0			
	Total	Unrestrained	% unrestrained	Total	Unrestrained	% unrestrained	Total	Unrestrained	% unrestrained
Noble	3	1	33.3	19	9	47.4	165	12	7.3
Ohio	1	0	0.0	4	2	50.0	38	9	23.7
Orange	1	0	0.0	16	6	37.5	127	24	18.9
Owen	5	2	40.0	8	3	37.5	150	12	8.0
Parke	5	2	40.0	18	8	44.4	145	58	40.0
Perry	4	1	25.0	11	3	27.3	129	22	17.1
Pike	2	0	0.0	2	0	0.0	73	10	13.7
Porter	20	14	70.0	81	21	25.9	1,263	128	10.1
Posey	2	1	50.0	9	3	33.3	102	17	16.7
Pulaski	5	1	20.0	17	6	35.3	100	24	24.0
Putnam	5	2	40.0	15	4	26.7	149	13	8.7
Randolph	3	2	66.7	9	3	33.3	115	16	13.9
Ripley	4	1	25.0	17	5	29.4	188	32	17.0
Rush	3	2	66.7	11	3	27.3	112	11	9.8
St. Joseph	7	3	42.9	74	24	32.4	1,616	113	7.0
Scott	3	1	33.3	28	10	35.7	237	11	4.6
Shelby	5	3	60.0	20	7	35.0	308	34	11.0
Spencer	5	3	60.0	10	1	10.0	122	21	17.2
Starke	5	2	40.0	13	5	38.5	121	15	12.4
Steuben	6	1	16.7	16	4	25.0	193	40	20.7
Sullivan	5	4	80.0	10	3	30.0	97	23	23.7
Switzerland	0	0	0.0	5	1	20.0	54	12	22.2
Tippecanoe	11	2	18.2	51	18	35.3	1,115	117	10.5
Tipton	4	2	50.0	8	3	37.5	92	7	7.6
Union	2	2	100.0	5	0	0.0	26	5	19.2
Vanderburgh	14	5	35.7	64	16	25.0	1,434	93	6.5
Vermillion	4	2	50.0	8	3	37.5	95	16	16.8
Vigo	7	4	57.1	80	30	37.5	980	95	9.7
Wabash	5	2	40.0	16	6	37.5	170	31	18.2
Warren	1	1	100.0	10	2	20.0	35	8	22.9
Warrick	8	3	37.5	21	7	33.3	244	26	10.7
Washington	1	1	100.0	8	5	62.5	139	19	13.7
Wayne	11	5	45.5	27	13	48.1	544	83	15.3
Wells	1	0	0.0	10	2	20.0	109	18	16.5
White	4	2	50.0	14	4	28.6	157	14	8.9
Whitley	11	5	45.5	14	6	42.9	164	12	7.3

**Notes:** *Non-incapacitating* collision severity includes collisions with *non-incapacitating* and *possible* injuries. Total counts include vehicle occupants identified as *restrained*, *unrestrained*, and *unknown* restraint usage. Excludes individuals with injury status of *not reported*, *unknown*, *refused* (*treatment*), and invalid or missing status codes.

**Source:** Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 1, 2010.



Map 8. Percentage of individual injuries, by county where victim was not properly restrained, 2009

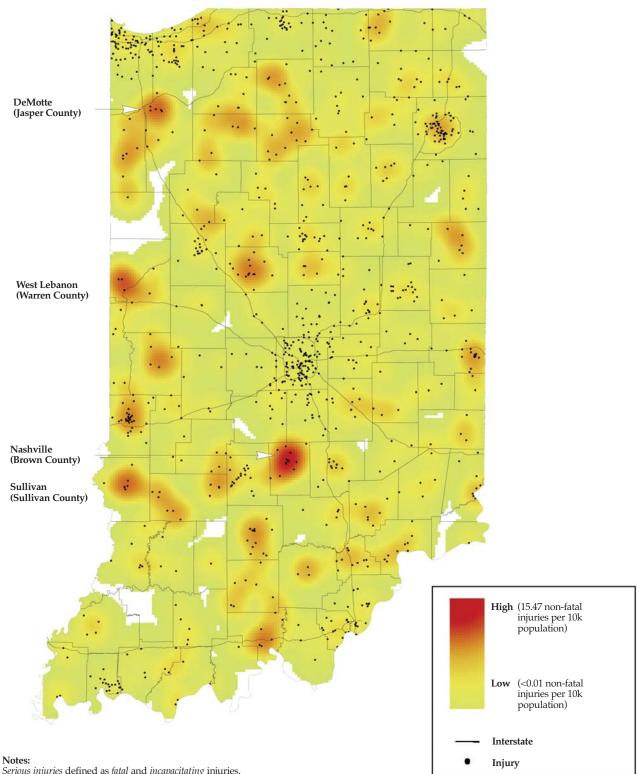
## Notes:

Injuries depicted include those reported as fatal, incapacitating, non-incapacitating, possible, not reported, unknown, refused (treatment), and invalid and missing injury status codes. Percentages are based on individuals with valid restraint type reported.

## Source:

Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 1, 2010.

Map 9. Concentrations of serious injuries in Indiana collisions where victim was unrestrained per 10,000 county population, 2009



Serious injuries defined as *fatal* and *incapacitating* injuries. Density grid is based on points with valid coordinates (1,090/1,127).

**Sources:** Indiana State Police Automated Reporting Information Exchange System, as of March 1, 2010. Stats Indiana, Population Estimates for Indiana Counties, 2009.

	Г	otal		Fatal	Perso	nal injury	Other	injury status
	Count	% of all county injuries	Count	% of county fatal injuries	Count	% of county personal injuries	Count	% of county other injuries
All counties	48,016	15.8	48	6.9	5,510	11.8	42,458	16.5
Mean	522	17.2	1	6.2	60	14.4	462	17.8
Minimum	32	12.2	0	0.0	6	7.5	24	12.5
Maximum	5,779	23.1	4	50.0	635	25.0	5,141	24.4
Adams	203	19.6	0	0.0	27	20.6	176	19.4
Allen	3,054	16.7	4	15.4	313	11.2	2,737	17.7
Bartholomew	649	17.5	0	0.0	98	12.7	551	18.8
Benton	36	15.8	0	0.0	9	19.6	27	15.1
Blackford	69	16.6	0	0.0	7	11.5	62	17.6
Boone	395	16.1	1	14.3	51	14.7	343	16.4
Brown	132	18.4	0	0.0	20	12.7	112	20.1
Carroll	163	19.1	0	0.0	25	21.0	138	18.9
Cass	261	14.2	0	0.0	23	10.3	233	14.9
lark	917	14.2	1	8.3	110	10.3	806	14.9
lay	204	16.9	1	20.0	32	18.3	171	14.5
linton	204 232	19.0	0	0.0	28	18.5	204	20.8
Liinton Crawford	76	19.0	0	0.0	28	12.4	68	20.8 18.8
Daviess	119	19.4	0	0.0	32	18.4	87	19.9
Dearborn	509	17.9	0	0.0	62	16.2	447	18.2
Decatur	143	14.1	0	0.0	18	14.1	125	14.1
DeKalb	302	16.0	1	12.5	41	15.4	260	16.2
Delaware	1,219	18.1	0	0.0	118	12.1	1,101	19.1
Jubois	292	20.9	0	0.0	42	16.5	250	21.9
Elkhart	1,376	14.9	2	8.3	103	9.6	1,271	15.7
ayette	154	16.7	0	0.0	17	11.7	137	17.6
loyd	791	17.7	0	0.0	87	12.1	704	18.8
ountain	111	19.6	1	25.0	12	17.4	98	19.9
Franklin	165	22.9	0	0.0	22	16.3	143	24.4
Fulton	133	16.8	1	20.0	19	15.1	113	17.1
Gibson	245	16.6	1	16.7	40	16.3	204	16.6
Grant	548	16.2	0	0.0	56	12.6	492	16.8
Greene	232	20.3	0	0.0	33	19.3	199	20.6
Iamilton	1,884	16.6	2	11.1	163	11.8	1,719	17.3
Iancock	401	16.3	0	0.0	46	10.5	355	17.7
Harrison	306	17.9	0	0.0	50	16.4	256	18.2
Iendricks	1,064	17.3	2	15.4	117	14.0	945	17.9
Henry	292	17.7	0	0.0	40	13.3	252	18.7
loward	682	17.1	0	0.0	74	11.0	608	18.3
Iuntington	297	18.3	0	0.0	33	13.1	264	19.4
ackson	305	15.9	0	0.0	37	12.5	268	16.6
	274	15.0	1	9.1	46	13.3	200	15.5
asper	160	17.5	0	0.0	28	20.0	132	15.5
ay	215		1	33.3	35	20.0 14.8	132	
efferson		14.5						14.4
ennings	245	19.4	0	0.0	33	16.8	212	20.0
ohnson	976	19.1	0	0.0	108	13.1	868	20.3
(nox	289	19.1	1	25.0	45	14.6	243	20.2
Kosciusko	552	15.8	0	0.0	65	15.3	487	15.9
aGrange	171	16.1	0	0.0	16	12.5	155	16.7
ake	3,588	12.8	3	6.4	289	7.5	3,296	13.7
aPorte	761	15.6	1	3.6	102	12.5	658	16.4
awrence	366	20.0	0	0.0	51	12.9	315	22.0
Adison	972	14.4	1	11.1	143	12.5	828	14.8
Marion	5,779	12.5	3	5.4	635	9.0	5,141	13.1
Marshall	299	14.3	1	12.5	46	13.4	252	14.5
Martin	56	17.7	1	25.0	8	16.3	47	17.8
Miami	252	15.7	0	0.0	38	15.6	214	15.9

## Table 95. Young drivers (ages 15-20) involved in Indiana collisions, by young driver injury severity and county, 2009

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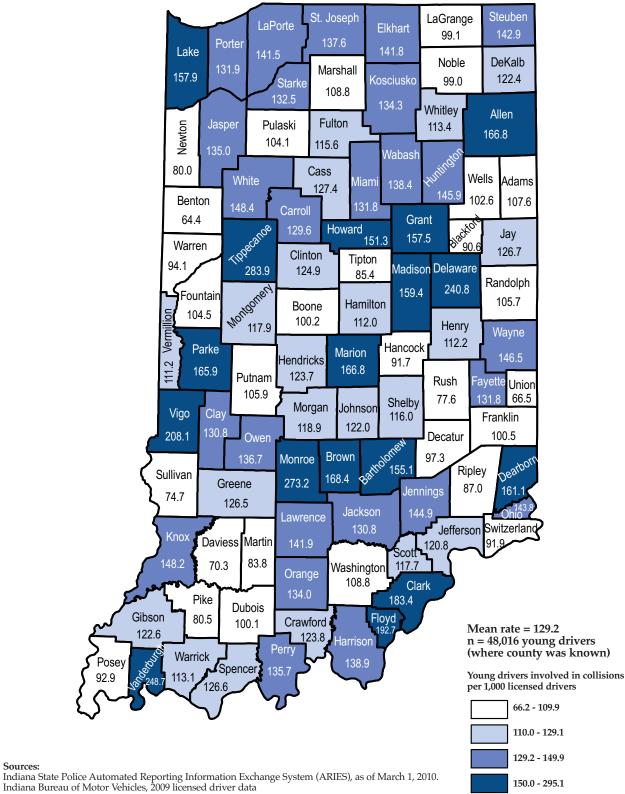
## Table 95. (continued)

	т	otal		Fatal	Perso	nal injury	Other	injury status
	-	% of all		1 4441	1 0150	, ,	Outer	, ,
	Count	% of all county injuries	Count	% of county fatal injuries	Count	% of county personal injuries	Count	% of county other injuries
Monroe	1,318	19.9	1	14.3	136	11.6	1,181	21.7
Montgomery	253	18.3	0	0.0	32	15.1	221	19.0
Morgan	505	19.1	1	12.5	79	15.6	425	20.0
Newton	64	12.2	0	0.0	8	9.4	56	12.8
Noble	260	15.2	0	0.0	24	12.6	236	15.5
Ohio	44	14.7	0	0.0	8	19.0	36	14.1
Orange	154	18.7	0	0.0	25	17.4	129	19.0
Owen	158	20.1	0	0.0	37	23.3	121	19.4
Parke	146	18.1	0	0.0	24	14.6	122	19.1
Perry	143	21.2	1	25.0	24	16.7	118	22.3
Pike	62	23.1	0	0.0	18	23.7	44	23.2
Porter	1,172	15.5	1	4.5	187	13.2	984	16.1
Posey	162	22.5	0	0.0	22	19.0	140	23.2
Pulaski	91	12.9	0	0.0	18	15.1	73	12.5
Putnam	213	19.0	2	40.0	30	18.2	181	19.0
Randolph	155	19.5	0	0.0	20	15.5	135	20.4
Ripley	156	15.1	2	50.0	25	12.0	129	15.7
Rush	74	15.7	0	0.0	15	11.9	59	17.3
Saint Joseph	1,690	14.7	1	7.1	188	10.4	1,501	15.5
Scott	152	14.1	0	0.0	32	11.9	120	14.9
Shelby	294	17.3	0	0.0	54	15.7	240	17.8
Spencer	173	20.8	0	0.0	25	18.8	148	21.4
Starke	169	16.7	0	0.0	19	13.7	150	17.2
Steuben	261	14.3	1	16.7	26	12.3	234	14.5
Sullivan	81	15.1	1	20.0	14	13.0	66	15.6
Switzerland	44	15.1	0	0.0	9	15.3	35	15.0
Fippecanoe	2,031	18.6	0	0.0	148	11.7	1,883	19.5
Fipton	86	16.8	0	0.0	14	13.7	72	17.7
Union	32	19.8	0	0.0	8	25.0	24	18.8
Vanderburgh	1,914	16.3	2	11.8	157	10.0	1,755	17.3
Vermillion	101	17.2	0	0.0	13	12.4	88	18.4
Vigo	976	16.6	1	11.1	139	12.4	836	17.5
Nabash	251	17.1	0	0.0	35	18.2	216	17.0
Varren	53	16.4	0	0.0	6	13.3	47	16.9
Narrick	431	19.4	2	22.2	35	12.5	394	20.4
Washington	176	19.4	0	0.0	21	14.1	155	18.8
Nayne	437	14.4	0	0.0	72	14.1	365	15.0
Wells	437	20.9	0	0.0	20	16.3	160	21.7
White	210	20.9 16.4	1	25.0	16	9.0	193	21.7 17.5
	210	16.4	1	25.0 9.1	21	9.0 11.5	206	17.5 20.2
Whitley	220	10.0	1	9.1	<u></u>	11.3	200	20.2

**Notes:** Excludes records where county is unknown. *Personal injury* includes *incapacitating*, *non-incapacitating*, and *possible* injury collisions.

**Source:** Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 1, 2010.

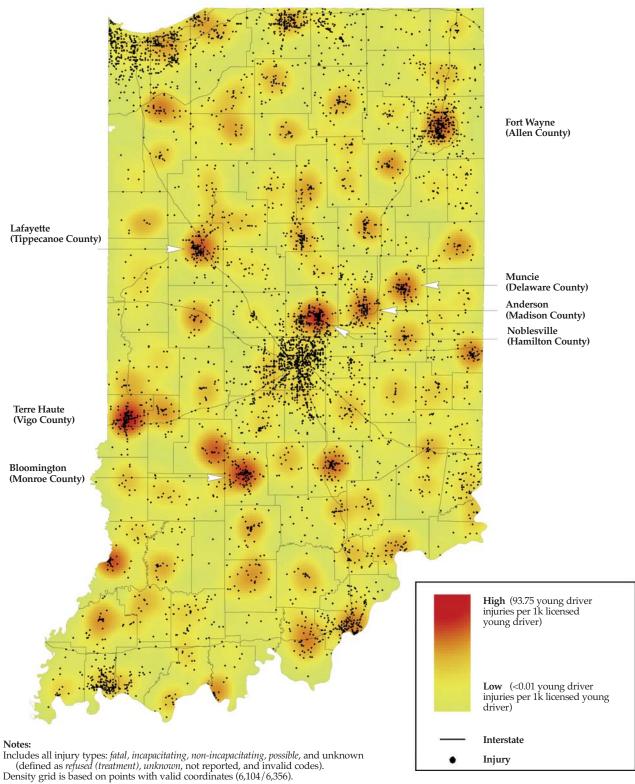
## 



Map 10. Young drivers (ages 15 to 20) involved in collisions per 1,000 licensed young drivers, 2009

Sources:

Map 11. Concentrations of young driver (ages 15-20) injuries in Indiana collisions per 1,000 county licensed young drivers, 2009



## Sources:

Indiana State Police Automated Reporting Information Exchange System, as of March 1, 2010. Indiana Bureau of Motor Vehicles, 2009 licensed driver data.

## Table 96. Indiana collisions involving motorcycles, by severity and county, 2009

	7	Fotal		Fatal	Pers	sonal injury	Other	injury status
	Count	% of all county collisions	Count	% of county fatal injuries	Count	% of county personal injury collisions	Count	% of county other injury collisions
All counties	3,276	1.7	111	17.6	2,224	6.7	941	0.6
Mean	36	2.0	1	16.7	24	8.1	10	0.6
Minimum	2	0.7	0	0.0	1	2.4	0	0.0
Maximum	351	6.6	10	100.0	228	26.4	113	1.8
Adams	8	1.1	0	0.0	7	7.1	1	0.2
Allen	189	1.7	7	30.4	123	6.1	59	0.6
Bartholomew	47	2.2 1.7	3	60.0	35	6.5	9	0.6
Benton Blackford	3	1.7	1 0	33.3 0.0	4	5.7 9.3	0	0.0 0.4
Boone	25	1.5	3	42.9	15	6.3	7	0.4
Brown	36	6.6	0	0.0	28	26.4	8	1.8
Carroll	9	1.4	0	0.0	6	6.6	3	0.5
Cass	14	1.1	0	0.0	11	5.8	3	0.3
Clark	64	1.6	0	0.0	36	5.5	28	0.8
Clay	15	1.8	0	0.0	9	6.9	6	0.9
Clinton	12	1.4	1	11.1	11	6.9	0	0.0
Crawford	8	2.3	2	40.0	4	9.3	2	0.7
Daviess	7	1.9	0	0.0	6	5.2	1	0.4
Dearborn	21	1.1	2	33.3	13	5.1	6	0.4
Decatur	8	1.2	0	0.0	6	6.5	2	0.3
DeKalb	24	1.8	0	0.0	16	8.6	8	0.7
Delaware	79	1.9	2	22.2	53	7.6	24	0.7
Dubois	18	2.0	0	0.0	13	6.8	5	0.7
Elkhart	94	1.6	2	9.5	56	7.1	36	0.7
Fayette	13	2.3	0	0.0	8	7.6	5	1.1
Floyd	44	1.6	3	75.0	29	5.5	12	0.6
Fountain	3	0.7 2.6	1	50.0 0.0	2	3.8	02	0.0 0.5
Franklin Fulton	13 15	2.5	2	40.0	11 10	10.6 10.6	3	0.5
Gibson	13	1.8	1	40.0	10	6.5	6	0.7
Grant	54	2.4	2	33.3	34	10.2	18	0.9
Greene	14	1.6	2	33.3	7	5.4	5	0.7
Hamilton	90	1.4	2	11.8	60	6.2	28	0.5
Hancock	26	1.8	1	12.5	18	6.4	7	0.6
Harrison	18	1.5	2	50.0	13	5.9	3	0.3
Hendricks	51	1.4	5	41.7	30	5.0	16	0.5
Henry	20	1.8	0	0.0	15	7.0	5	0.6
Howard	76	3.3	2	28.6	50	10.5	24	1.3
Huntington	24	2.1	1	16.7	16	8.5	7	0.7
Jackson	34	2.6	0	0.0	26	11.6	8	0.7
Jasper	20	1.6	0	0.0	15	6.7	5	0.5
Jay	12	1.7	1	50.0	7	6.9	4	0.7
Jefferson	23	2.4	0	0.0	15	8.8	8	1.0
Jennings	12	1.5	0	0.0	8	6.0	4	0.6
Johnson	59	2.0	2	22.2	40	6.5	17	0.8
Knox	16	1.6	0	0.0	12	5.5	4	0.5
Kosciusko LaGrange	40 18	1.6 2.2	2 2	15.4 40.0	21 9	6.7 10.2	17 7	0.8 1.0
LaGrange Lake	173	1.0	5	12.8	108	3.9	60	0.4
LaRe	59	1.0	4	12.8	39	6.4	16	0.4
Lawrence	39	3.4	0	0.0	39	12.7	5	0.6
Madison	93	2.2	1	11.1	67	8.4	25	0.7
Marion	351	1.3	10	17.9	228	4.5	113	0.5
Marshall	28	1.9	1	12.5	18	8.0	9	0.7
Martin	8	3.5	2	50.0	4	10.0	2	1.1
Miami	28	2.4	2	20.0	20	11.5	6	0.6

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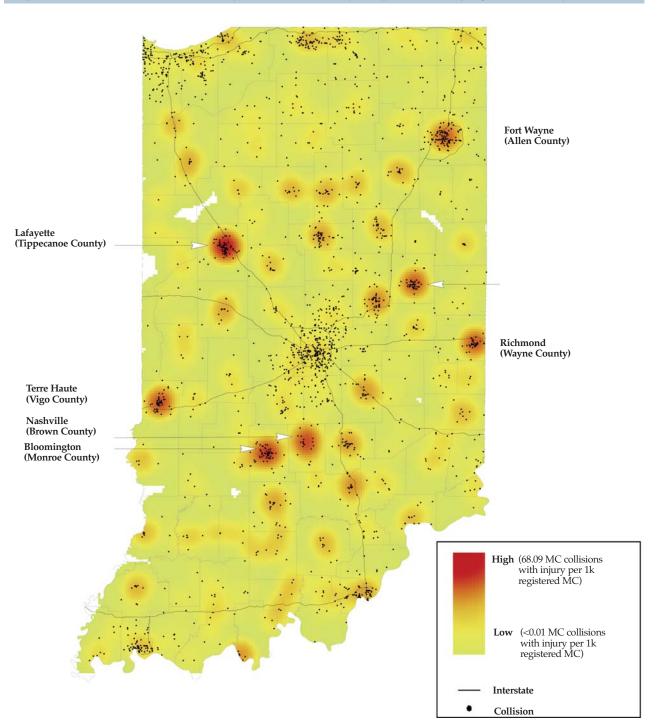
## Table 96. (continued)

	1	Total		Fatal	Pers	onal injury	Other	injury status
	Count	% of all county collisions	Count	% of county fatal injuries	Count	% of county personal injury collisions	Count	% of county other injury collisions
Monroe	85	2.1	2	28.6	64	7.3	19	0.6
Montgomery	18	1.8	1	16.7	15	9.6	2	0.2
Morgan	59	3.7	2	28.6	43	12.5	14	1.1
Newton	9	2.3	0	0.0	7	11.5	2	0.6
Noble	19	1.5	0	0.0	11	7.2	8	0.7
Dhio	8	3.4	1	100.0	5	16.1	2	1.0
Drange	12	2.0	1	100.0	9	8.5	2	0.4
Owen	11	2.0	0	0.0	8	7.1	3	0.7
Parke	15	2.5	1	20.0	11	12.9	3	0.6
Perry	13	3.0	0	0.0	10	10.0	3	0.9
Pike	3	1.7	0	0.0	3	6.0	0	0.0
Porter	95	2.0	7	31.8	67	6.5	21	0.6
Posey	12	2.3	0	0.0	9	10.2	3	0.7
Pulaski	9	1.6	0	0.0	7	9.0	2	0.4
Putnam	11	1.4	0	0.0	10	8.1	1	0.2
Randolph	12	2.1	0	0.0	10	11.0	2	0.4
Ripley	16	2.1	0	0.0	12	8.3	4	0.7
Rush	5	1.5	1	33.3	4	4.8	0	0.0
aint Joseph	97	1.4	1	7.1	65	5.0	31	0.6
cott	13	2.1	0	0.0	11	6.4	2	0.5
helby	30	2.7	2	40.0	23	8.8	5	0.6
pencer	13	2.2	0	0.0	9	11.0	4	0.8
starke	9	1.2	0	0.0	7	7.1	2	0.3
teuben	31	2.2	1	20.0	20	13.9	10	0.8
ullivan	9	2.3	2	40.0	5	6.7	2	0.7
witzerland	3	1.3	0	0.0	1	2.4	2	1.1
Tippecanoe	131	1.9	2	20.0	85	9.0	44	0.7
ïpton	6	1.6	1	25.0	5	6.1	0	0.0
Jnion	3	2.4	0	0.0	3	15.0	0	0.0
anderburgh	101	1.6	3	18.8	68	6.1	30	0.6
/ermillion	4	0.9	0	0.0	3	4.0	1	0.3
/igo	78	2.2	1	11.1	59	7.5	18	0.7
Vabash	23	2.2	0	0.0	18	12.5	5	0.6
Varren	2	0.8	0	0.0	2	7.1	0	0.0
Varrick	20	1.4	1	14.3	11	5.6	8	0.7
Vashington	17	2.5	0	0.0	13	12.5	4	0.7
Vayne	62	3.0	2	16.7	46	10.8	14	0.9
Vells	8	1.3	0	0.0	6	7.1	2	0.4
White	8	0.9	0	0.0	6	5.0	2	0.4
Whitley	18	2.2	0	0.0	14	10.1	4	0.5
rindey .	10	2.2	0	0.0	14	10.1	т	0.0

**Notes:** Includes collisions where at least one *motorcycle* or *moped* was involved. *Personal injury* includes *incapacitating*, *non-incapacitating*, and *possible* injury collisions.

**Source:** Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 1, 2010.

## **COUNTIES**



## Map 12. Concentrations of Indiana motorcycle collisions with injuries per 1,000 county registered motorcycles, 2009

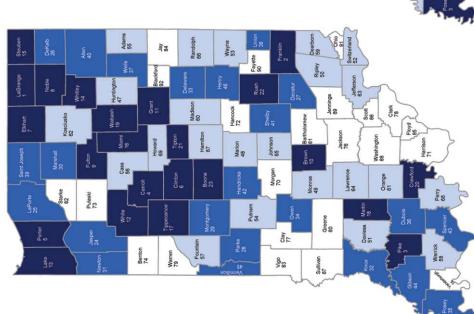
## Notes:

Includes *fatal, incapacitating,* and *non-incapacitating* (including *possible*) collision severities. Includes collisions where at least one *motorcycle* or *moped* was involved. Density grid is based on points with valid coordinates (2,246/2,335).

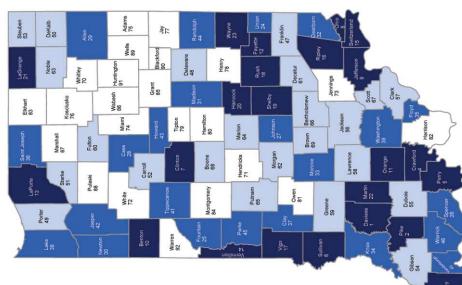
## Sources:

Indiana State Police Automated Reporting Information Exchange System, as of March 1, 2010. Indiana Bureau of Motor Vehicles, 2009 registered vehicles.

Map 13. Total collisions, per 100m vehicle miles travelled (VMT)



Map 14. Alcohol-involved collisions, as % of total collisions



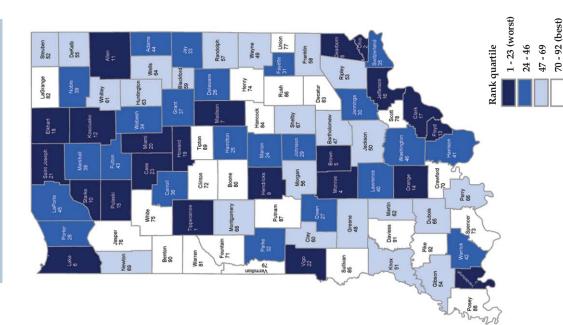
Map 15. Speed-related collisions, as % of total collisions

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FACTS

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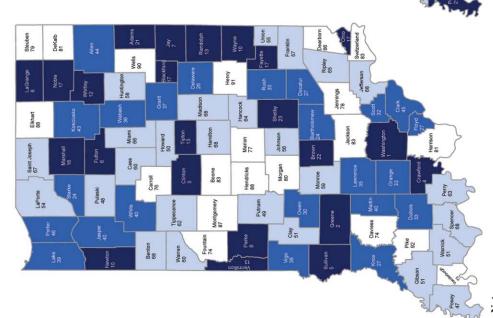
A TRAFFIC



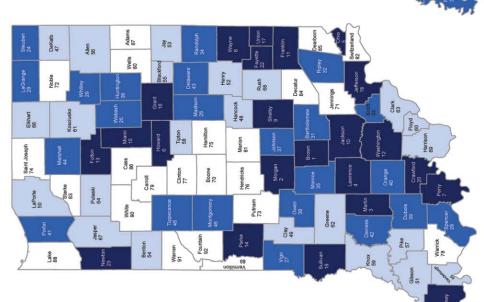
Source: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 1, 2010.

# **County ranks (descending order), by collisions metric, 2009**

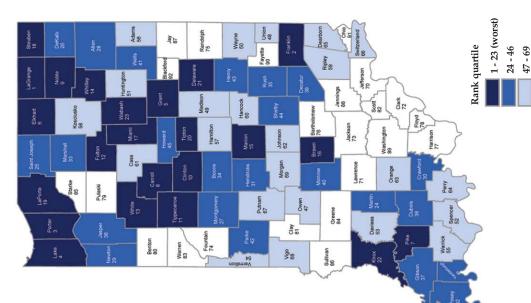
Map 16. Dangerous driving collisions, as % of total collisions



Map 17. Motorcycle-involved collisions, as %of total collisions



Map 18. Unrestrained serious injuries, as % of total serious injuries



## Notes:

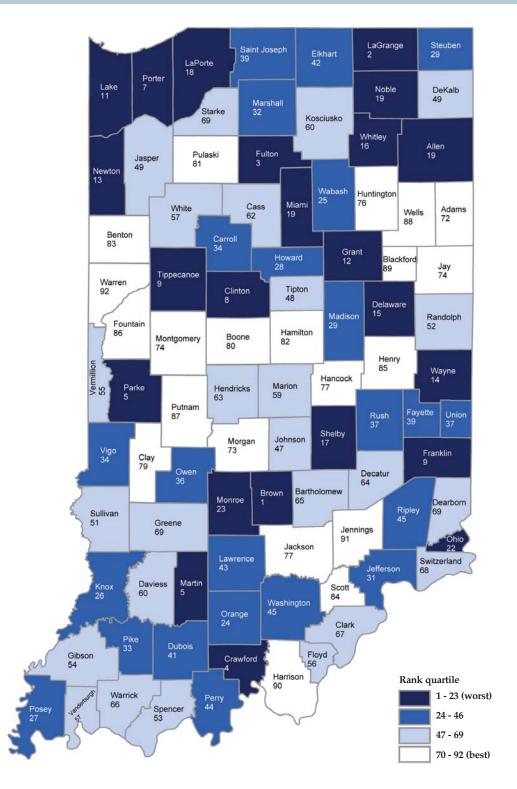
*Dangerous driving* includes collisions involving *aggressive driving, disregarding traffic signals,* or *speeding.* Motorcycle collisions defined as collisions with at least one *motorcycle* or *moped* involved. *Serious injuries* defined as *fatal* and *incapacitating* injuries. Ties received the same rank (applies to unrestrained serious injuries only).

Source: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 1, 2010.

## **COUNTIES**

70 - 92 (best)

## Map 19. County rank composite (average, six metrics)



## Notes:

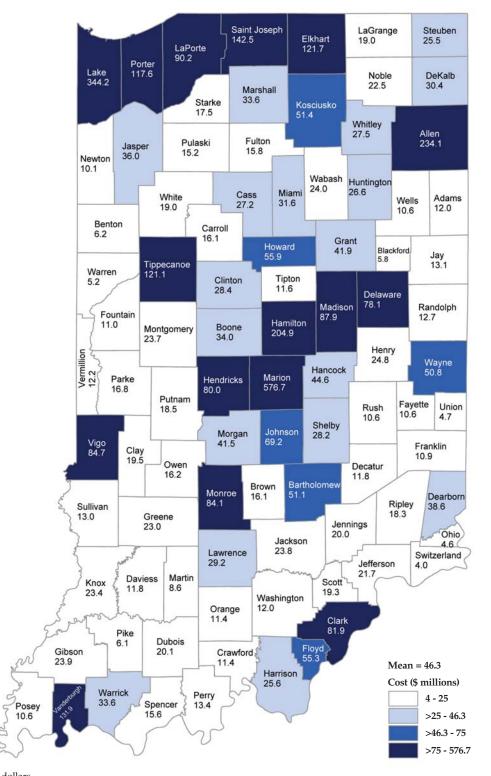
Composite rank is the ascending order rank of the average county ranks from Maps 13 to 18. For example, the average rank of the six metrics for Adams County is 56.3. This results in a composite rank of 72 when compared to the average ranks of the remaining 91 counties. Ties received the same rank.

## Source:

Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 1, 2010.

## COUNTIES

## Map 20. Estimated costs of Indiana collisions (\$ millions), by county, 2009



## Notes:

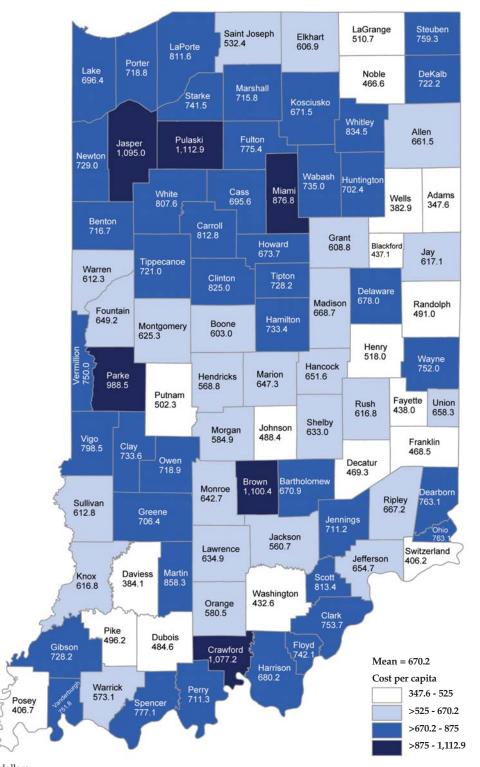
All costs in 2009 dollars. See Appendix A for discussion of cost calculations.

## Sources:

Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 1, 2010. Blincoe, L., Seay, A., Zaloshnja, E., Miller, T., Romano, E., Luchter, S., Spicer, R. (2000). *The economic impact of motor vehicle crashes, 2000*. National Highway Traffic Safety Administration, DOT HS 809 446.

Bureau of Labor Statistics, http://www.bls.gov

## Map 21. Estimated costs per capita of Indiana collisions, by county, 2009



## Notes:

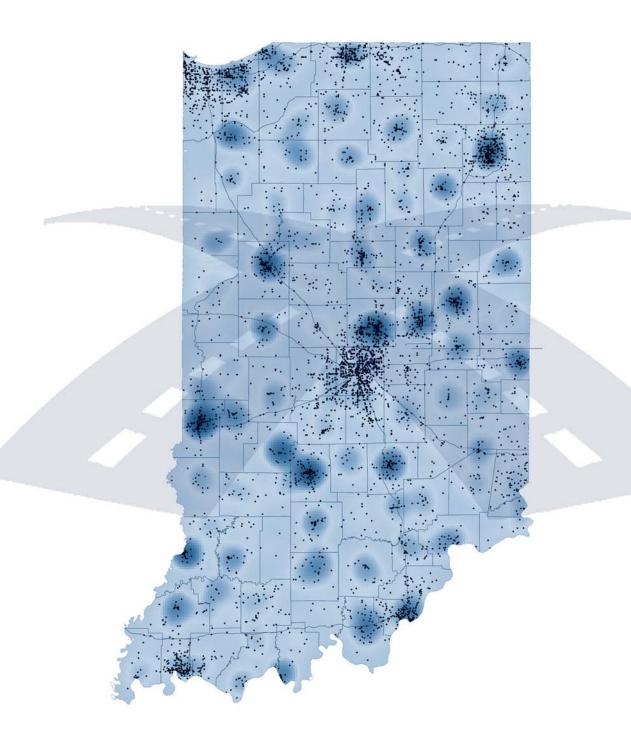
All costs in 2009 dollars. See Appendix A for discussion of cost calculations.

## Sources:

Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 1, 2010. Blincoe, L., Seay, A., Zaloshnja, E., Miller, T., Romano, E., Luchter, S., Spicer, R. (2000). *The economic impact of motor vehicle crashes, 2000*. National Highway Traffic Safety Administration, DOT HS 809 446.

Bureau of Labor Statistics, http://www.bls.gov

## INDIANA STANDARD CRASH REPORT, GLOSSARY, APPENDIX



## **INDIANA OFFICER'S STANDARD CRASH REPORT**

	ER'S STANDARD CRA Electronic Version	ASH REPOF	रा	Local ID		Page	1.	of	
Date of Crash Day of Week Actual Local Time	County	Townsh		# Motor Vehicles	# Injured	# Dead	Veh		# Deer
Road Crash Occurred On	Nearest/Intersecting Road/MileM	arker/Interchange	If not an int number of		Direction		load Clas	sific ation	1
Inside Corporate Limits? Ci	ty/Town or Nearest City/Town		Property	n	Crash Lat	itude	Cra	sh Longi	tude
Driver #1	Driver #2		Driver #3			C	)river #4		
Primary Cause Vehicle 1 Vehicle 2 Vehicle 4 Vehicle 4	e 2				Area Info	rmation			
	ehicle Contributing Circumstan		Hit and Run						
Alcoholic Beverages	] 🗌 🔲 🔲 🔲 Engine Failure (		School Zone						
Prescription Drugs	Brake Failure of D		Rumble Strips	i.					
Driver Illness	Cher Lights De		Locality						
Failure to Yield       Disregard Signal       Laft of Center	Steering Failure Steering Failure Window/Windsl Oversize/Overw	hield Defective	Light Conditio						
I I I I I I I I I I I I I I I I I I I	Contraction of the second seco	Load	Weather Cond	litions					
Improper Lane Usage       Improper Lane Usage       Improper Lane Usage       Improper Lane Usage	0 Cher	e Surface Condition							
	nvironment Contributing Circur		Type of Median						
Ran off Road	Roadway Surfa	urface	Type of Roadway Junction						
Pedestrian's Action Passenger Distraction Restriction Violation	Shoulder Defec	nstruction	Road Charact	er					
Jackknifing	Obstruction No	t Marked	Roadway Surf	ace					
Other Telematics       Difference       Difference	Viewr Obstructe               Animal/Object i		Construction	lf Yes,	Construction	Туре			
SpeedWeather Conditions	] 🗌 🔲 🔲 🛛 Utility Work	Missing/Obscure	Traffic Contro	l Devices					
L L L None L	Cher		Traffic Contro	l Device Ope	rational?				
Total Estimate of all damage in the Crash:			Was this crasl	h the result c	faggressive	driving?			
Other Property Damage (1) State Property	Owner's Name and Address								
Other Property Damage (2) State Property	Owner's Name and Address								-
Witness/Other Partic	•			Non-	Motorist				
Witness # Name Other Participant Address etc.		(Last Name, First Na		lon-Motorist	Action				
Phone # Location at Time of Crash		Apparent Physical (		on-motorist	Acuon				
Witness # Name			Direction						
Other Participant Address etc.		Street/Highway							
Phone # Location at Time of Crash		Traffic Control? If yes, was traffic control operational?				al?			

Local ID					Page	of
Type of Crash						
Time Notified	Time Arrived	Other Location o	f Investigati	on		
Assisting Officer		ID No	0	Agency	Investigation Complete?	Photos Taken?
Assisting Officer		ID No	es -	Agency	Date of Report	
Investigating Officer		ID No	•	Agency	Reviewing Officer	

Narrative

UNIT INFORM	ATION				:							Page	of
Local ID												, uge	
Driver's Name (Last, First, MI)								Safety Equipment Used					
Address (Street, City, State, Zip)								Safety Equipment Effective?					
ŭ								Ejection/Trapped					
Date of I	Birth		Ag	e	-	Gender		EMS No.	Immed At	ttn	Driver In	jury Status	
			13				1					90.9% 	
							Nature of Most Severe I	0.00					
App arent Physical Status Res Normal Glasses/Contact Lense				strictions es 🔲 Employer's Vehicle Only			Location of Most Sever	e Injury					
				arview Mirro Mina		tate-Owned Vehicles P Chauffeurs Taxi Only		If Cited?	IC Codes				
III Automatic Tr.			Fransmissio	nission 🔲 Power Steering			Infraction						
Asleep/Fatigued Special Controls				Special Restrictions Probation DWI			Misdemeanor Felony						
Unknown		M	otorcycle	Only	ЦP	robation HTO							
Test Give		ype Give		nployment		one							
NONE Alcohol Results		Blood	յ 🗌 տ	ine 🗌 E	Breath [	SFST Drug Re	PBT						
PBT	Certifi Test			Pend	1.5								
Veh# Color	Vehic	le Y ear N	lake		Model		Style	Initial Impact Area		(			
# Occupants	i Lic Ye	ear L	icense #			License State		Trailer		Front	ŏ		
#Axles Speed	Limit Insure	ed By				Phone Numb	er	None Unknown		-(			
Vehicle Identifica	tion#							Areas Damaged (Mult	tiples)		_		
Registered Owner's Name (Last, First, MI) Same as Driver								Undercarriage		ŧ			
Address (Street, City, State, Zip)								Trailer		Front	H		
Address (ou ser,	ony, orace, a	- 497						Unknown					
								Vehicle Use					
Towed? To By	research and a second sec			Reason	on			Emergency Run?			Fire?		
	te Lic Year	Registe	red Owne	r's Name (La	s <b>t, F</b> irst,	MI) Same	e as Driver	Emergency Run?			FILEF	N	0
License#		Address	s (Street, C	City, State, Z	ip)	A-1		Vehicle Type			1		
Veh Year Make			5. BV	sent Di									
		Desta	- 10			M0 -		Pre-Crash Vehicle Actio	DN				
Lie Stat	te Lic Year			r's Name (La		mi) 🗌 Same	e as Driver	Direction of Travel					
License#		Address	s (Street, C	City, State, Z	ip)								
Veh Year Make								Type of Primary/Seco	0.0011100555		<i>m</i>		
	Ca	mmerci	al Vehicle:	Carrier's Na	ame and	Address		One Way Traffic	r	Two Way Tr Two La			Private Driv
								Two Lanes	[	=		d (3 or more)	
								. 🔲 Multi-Lanes (3 or	more) [	Multi-La	ane Undivi	ded 2 way left (	turn
UA 7MAT D	China in a M				0	DOTA		Front Colligion Mitt	[	Multi-La	ane Undivi	ded (3 or more	)
HAZMAT Proper	onipping Na	me:			State	DOT#		Event Collision With					
US DOT#		ICC#			CM	V Inspection	lf Y es	·					
Gross Vehicle	e Weight Ra	ting	-	Ca	rgo Bod	у Туре							
HAZMAT Placard	HAZMAT	Release	of Cargo	HAZMAT 4-	Digit ID#	Hazzard	Class #	-					

INDIANA TRAFFIC SAFETY FACTS

## GLOSSARY

## **Aggressive Driving**

A collision is defined as involving aggressive driving when the driver of a motor vehicle was engaged in at least two of the following actions: (1) driving at an unsafe speed; (2) failing to yield right of way; (3) disregarding a regulatory signal/sign; (4) improper passing; (5) improper turning; (6) improper lane usage; or (7) following too closely.

## **Alcohol Involvement/Alcohol-related**

National Highway Traffic Safety Administration (NHTSA) defines a fatal crash as alcohol-related or alcohol-involved if at least one driver or nonoccupant (such as a pedestrian or pedalcyclist) involved in the crash is determined to have had a Blood Alcohol Concentration (BAC) of .01 gram per deciliter (g/dL) or higher. NHTSA defines a nonfatal crash as alcohol-related or alcoholinvolved if police indicate on the police accident report that there is evidence of alcohol present. The code does not necessarily mean that a driver or nonoccupant was tested for alcohol.

The term "alcohol-related" or "alcohol-involved" does not indicate that a crash or fatality was caused by the presence of alcohol.

Indiana defines a crash as alcohol-related or alcohol-involved if any of the following are true: (1) *alcoholic beverages* is listed as the primary factor of the collision; (2) *alcoholic beverages* is listed as a contributing circumstance in the collision; (3) any vehicle driver or non-motorist (pedestrian, pedalcyclist) involved in the collision had a BAC test result greater than zero; (4) the collision report lists the apparent physical condition of any vehicle driver or non-motorist involved as had been drinking; or (5) a vehicle driver is issued an Operating While Intoxicated (OWI) citation.

## **Alcohol-impaired**

A collision in which any vehicle driver involved has a BAC test result at or above 0.08 g/dL. Note that this definition is limited to vehicle drivers, whereas the BAC levels of any driver or non-motorist are included in the definition alcohol-related.

## **Automated Reporting Information Exchange System (ARIES)**

Formerly the Vehicle Crash Reporting System (VCRS). The computer data information system in which all local and state law enforcement officers enter the information from the *Indiana Officer's Standard Crash Report*. This data system provides the data found in this report as well as the *Indiana Traffic Fact Sheets*.

## **Blood Alcohol Concentration**

The BAC is measured as a percentage by weight of alcohol in the blood (grams/deciliter). A positive BAC level (.01 g/dL and higher) indicates that alcohol was consumed by the person tested; a BAC level of .01 to .07 g/dL indicates that the person was impaired; a BAC level of .08 g/dL or more indicates that the person was intoxicated.

## Bus

Large motor vehicles used to carry nine or more passengers, including school buses, inter-city buses, and transit buses.

## **Cited/Citation**

When a person involved in a collision is cited (traffic or criminal) for a violation relating to the motor vehicle crash. The document produced is a citation.

## **Combination Vehicle**

A truck consisting primarily of a transport device which is a single-unit truck or truck tractor together with one or more attached trailers.

## **Commercial Vehicle**

- 1) A Truck: A vehicle equipped for carrying property and having a Gross Vehicle Weight Rating (GVWR) or Gross Combination Weight Rating (GCWR) over 10,000 pounds.
- 2) A Bus: A motor vehicle designed to transport 9 or more occupants.
- 3) Any Vehicle: Displaying a hazardous materials placard.

## **Contributing Circumstance**

Actions of the driver, apparent environmental conditions, or apparent vehicle conditions that contributed to the collision. See also *General Contributing Factors*.

## **Collision/Crash**

An event that produces injury and/or property damage, involves a motor vehicle in transport, and occurs on a trafficway or while the vehicle is still in motion after running off the trafficway.

## **Crash Severity**

- 1. *Fatal Crash.* A police-reported crash involving a motor vehicle in transport on a trafficway in which at least one person dies within 30 days of the crash.
- 2. *Injury Crash.* A police-reported crash involving a motor vehicle in transport on a trafficway in which no one died but a least one person was reported to have: (1) an incapacitating injury; (2) a visible but not incapacitating injury; (3) a possible, not visible injury; or (4) an injury of unknown severity.
- 3. *Property Damage Only Crash.* A police-reported crash involving a motor vehicle in transport on a trafficway in which no one involved in the crash suffered any injuries. Indiana statute states the estimated property damage must be \$1000 or more. Note: All collisions reported as property damage collisions, regardless of estimated damage costs, are reported in the 2008 *Indiana Crash Fact Book.*

## **Dark-Lighted**

The time between dusk and dawn, and where there are lights designed and installed to illuminate the roadway. This does not include lighting from storefronts, houses, etc.

## Glossary, continued

## **Dark-Not lighted**

INDIANA TRAFFIC SAFETY FACTS

The time between dusk and dawn, and where there are no lights designed or installed to illuminate the roadway.

## Day

From 6:00a to 5:59p.

## **Disregarding traffic signal**

A collision where one or more drivers disregarded a traffic signal or flashing signal at a road intersection (excludes interstates).

## Driver

An occupant of a vehicle who is in physical control of a motor vehicle in transport, or for an out-of-control vehicle, an occupant who was in control until control was lost.

## **Ejection**

Refers to occupants being totally or partially thrown from the vehicle as a result of an impact or rollover.

## **Fatal Injury**

Any injury that results in death within a 30-day period after the crash occurred.

## **Fixed /Immoveable Object**

Stationary structures or substantial vegetation attached to the terrain. Examples include guardrail, bridge railing or abutments, trees, utility poles, ditches, culverts, and buildings.

## **General Contributing Factor(s)**

The factors which the investigating officer believes to have contributed to the collision's occurrence – one of these may or may not have been the primary factor. Each collision may have two driver contributing factors, one environmental, and one vehicle factor. See also *Contributing Circumstance*.

## **Gross Combination Weight Rating (GCWR)**

The value specified by the manufacturer as the loaded weight of a combination (articulated) motor vehicle. In absence of a value specified by the manufacturer, GCWR will be determined by adding the GVWR of the power unit and the total weight of the towed unit and any load thereon.

## **Gross Vehicle Weight Rating (GVWR)**

The maximum rated capacity of a vehicle, including the weight of the base vehicle, all added equipment, driver and passengers, and all cargo loaded into or on the vehicle. Actual weight may be less than or greater than GVWR.

## **Harmful Event**

The event during a crash for a particular vehicle that is judged to have produced the greatest personal injury or property damage.

## **Hazardous Materials**

Any substance or material which has been determined by the U.S. Department of Transportation, or other authorizing entity, to be capable of posing an unreasonable risk to health, safety, and property when transported in commerce. Any motor vehicle transporting quantities of hazardous materials in quantities above the thresholds established by the USDOT, or other authorized entity, is required to display a hazardous materials placard.

## **Hazardous Materials Placard**

A sign that must be affixed to any motor vehicle transporting hazardous materials in quantities above the thresholds established by the USDOT, or other authorized entity. This placard identifies the hazard class division number, four-digit hazardous material identification number or name of the hazardous material being transported.

## ICJI

Indiana Criminal Justice Institute.

## **Incapacitating Injury**

A non-fatal injury that prevents the injured person from walking, driving, or normally continuing the activities the person was capable of performing before the injury occurred. Hospitalization is usually required. Examples are severe lacerations, broken limbs, skull fracture, crushed chest, internal injuries, etc.

## Intersection

An area of roadway which is: (1) at a crossing or connection of two or more roadways not classified as a driveway; and (2) the area of the roadway measured less than 33 feet from the apex of two roadways at the curb or boundary line. Types of intersections noted on the Indiana Crash Report are: 1) T-intersections; 2) Y-intersections; 3) Four-way intersection; 4) Interchange; 5) Five points or more; 6) Ramp; and 7) Traffic circle/roundabout.

## ISP

Indiana State Police.

## **Jackknife**

Jackknife can occur at any time during the crash sequence. Jackknifing is generally restricted to truck tractors pulling a trailing unit in which the trailing unit and the pulling vehicle rotate with respect to each other.

## Junction

Area formed by the connection of two roadways, including intersections, interchange areas, and entrance/exit ramps.

## **Lane Control**

Visible lane markings such as hash marks or lines that separate lanes of travel.

## Glossary, continued

## Large Trucks

Trucks over 10,000 pounds gross vehicle weight rating, including single unit trucks and truck tractors.

## **Licensed Drivers**

The annual count of licensed drivers in a given location (e.g., county, state, nation).

## **Light Trucks**

Trucks of 10,000 pounds gross vehicle weight rating or less, including pickups, vans, truck-based station wagons, and sport utility vehicles.

## Motorcycle

A two- or three-wheeled motor vehicle designed to transport one or two people. This category can include motor scooters, minibikes, and mopeds, etc.; however, the Indiana reporting system separates the two categories.

## **Motor Vehicle in Transport**

A motor vehicle in motion on the trafficway or any other motor vehicle on the roadway, including stalled, disabled, or abandoned vehicles.

## Night

From 6:00p to 5:59a.

## **Non-incapacitating Injury**

An injury, other than a fatal or incapacitating injury, which is evident to the officer at the scene of the crash and may require medical treatment, although hospitalization is usually not required. Examples are abrasions, minor bleeding, and lacerations.

## Nonoccupant/Nonmotorist

Any person who is not an occupant of a motor vehicle in transport and includes the following: (1) pedestrians; (2) pedal-cyclists; (3) occupants of parked motor vehicles; (4) others such as joggers, skateboard riders, people riding on animals, and persons riding in animal-drawn conveyances.

## Not Injured

Any blank value in the injury status code field of the Indiana Crash Report. These are generally drivers of vehicles involved in property damage only collisions.

## Occupant

Any person who is in or upon a motor vehicle in transport. Includes the driver, passengers, and persons riding on the exterior of a motor vehicle.

## Passenger

Any occupant of a motor vehicle who is not a driver.

## **Passenger Car**

Motor vehicles used primarily for carrying passengers, including convertibles, sedans, and station wagons.

## **Passenger Vehicles**

Passenger vehicles are defined as *passenger cars, pickup trucks, SUVs,* and *vans.* 

## **Pedalcyclist**

A person on a vehicle that is powered solely by pedals.

## **Pedestrian**

Any person not in or upon a motor vehicle or other vehicle.

## **Pedestrian Collision**

A collision in which a pedestrian was involved or *pedestrian action* was listed as a contributing factor to the collision. NOTE: Sometimes a collision had a contributing factor of *pedestrian action* where there was not information regarding a pedestrian individual – these collisions were counted as pedestrian collisions.

## **Pickup Truck**

A motor vehicle designed to carry ten persons or less, with an exposed bed.

## **Possible Injury**

Any injury reported or claimed which is not visible. Example: the complaint of back or neck pain.

## **Primary Factor**

The single factor which the investigating officer believes to be the main or primary factor which contributed to the collision's occurrence. Each collision may have only one primary factor.

## **Property Damage Only Collision**

A police-reported crash involving a motor vehicle in transport on a trafficway in which no one involved in the crash suffered any injuries but at least one vehicle or property was damaged.

## **Registered Vehicles**

The annual count of registered vehicles in a given location (e.g., county, state, nation).

## **Restraint Use**

The occupant's use of available vehicle restraints including lap belt, shoulder belt, or automatic belt.

## Roadway

That part of a trafficway designed, improved, and ordinarily used for motor vehicle travel.

## Rollover

Rollover is defined as any vehicle rotation of 90 degrees or more about any true longitudinal or lateral axis. Includes rollovers occurring as a first harmful event or subsequent event.

## Rural

Any area outside the incorporated limits of a city.

## Glossary, continued

## **Seating Position**

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The location of the occupants in the vehicle. More than one can be assigned the same seat position; however, this is allowed only when a person is sitting on someone's lap.

## **Semi-trailer**

A trailer, other than a pole trailer, designed for carrying property and so constructed that part of its weight rest upon or is carried by the power unit.

## **Single-unit Truck**

A medium or heavy truck in which the engine, cab, drive train, and cargo area are all on one chassis. (Can have two axles and six tires on the ground, or three or more axles).

## **Speed-related**

A collision is identified as speed-related if any one of the following conditions is met: (1) *unsafe speed* or *speed too fast for weather conditions* is listed as the primary or contributing factor of the collision; (2) a vehicle driver is issued a speeding citation.

## **Sport Utility Vehicle (SUV)**

A multi-purpose motor vehicle designed for carrying less than ten persons, which is constructed on a truck chassis or with special features for occasional off-road operation, other than a pickup truck. These vehicles are generally four-wheel-drive (4x4) and have increased ground clearance, and a gross vehicle weight rating (GVWR) of 10,000 pounds or less.

## **Tractor (Semi)**

A motor vehicle consisting of a single power unit device designed primarily for pulling semi-trailers.

## **Traffic Circle/Roundabout**

An intersection of roads where vehicles must travel around a circle to continue on the same road or to connect to an intersecting road.

## **Traffic Control Signal**

Includes the red/green/yellow signal and/or a flashing signal.

## **Trapped**

Persons who are restrained in the vehicle by damaged vehicle components as a result of a crash, and who have to be freed from the vehicle.

## Unit

Denotes a motor vehicle, pedestrian, pedalcyclist, or other entity involved in the collision.

## **Unknown Injury**

Injuries reported on the *Indiana Crash Report* as: 1) *refused* (treatment); 2) *unknown*; 3) *not reported*; and 4) invalid codes.

## Urban

Any area inside the incorporated limits of a city.

## Van

A motor vehicle consisting primarily of a transport device that has a gross vehicle weight rating of 10,000 pounds or less and is basically a "box on wheels" that is identifiable by its enclosed passenger and/or cargo area, step-up floor, and relatively short (or nonexistent) hood. Examples are passenger vans, cargo or delivery vans, and van-based mini-motor homes.

## **Vehicle Miles Travelled**

The annual vehicle distance travelled in miles (VMT).

## Weekday

From 6:00a Monday to 5:59p Friday.

## Weekend

From 6:00p Friday to 5:59a Monday.

## Work Zone

An area of a trafficway where construction, maintenance, or utility work activities are identified by warning signs/signals/indicators, including those on transport devices (e.g., signs, flashing lights, channelizing devices, barriers, pavement markings, flagmen, warning signs, and arrow boards mounted on the vehicles in a mobile maintenance activity) that mark the beginning and end of a construction, maintenance, or utility work activity.

It extends from the first warning sign, signal, or flashing lights to the END ROAD WORK sign or the last traffic control device pertinent for that work activity.

Work zones also include roadway sections where there is ongoing, moving (mobile) work activity such as lane line painting or roadside mowing only if the beginning of the ongoing, moving (mobile) work activity is designated by warning signs or signals.

## **Young Driver**

A driver of a motor vehicle whose age is between the ages of 15 and 20 years old.

## **APPENDIX A:** Methods for producing economic costs of traffic collisions in Indiana

For the purposes of *Indiana Crash Facts, economic costs* represent the monetary and non-monetary impacts produced by injuries and property damage in traffic collisions. These costs are calculated by taking existing estimates of costs, broken down into various impact categories, by the incidence of traffic injuries and property damage to vehicles in collisions. The general methodology used here follows that in economic cost reports produced by the National Highway Traffic Safety Administration (NHTSA).<sup>1</sup> Several intermediate procedures were performed on the data to arrive at final cost estimates.

## 1. Injury classifications

Cost estimates are based on the *Maximum Abbreviated Injury Scale* (MAIS), a medical assessment of the most severe injury incurred.<sup>2</sup> The MAIS scale ranges from MAIS 0 (no injury), to MAIS 6 (fatality), with incremental levels representing increasing levels of bodily damage (i.e., decreasing probabilities of survival). Indiana crash reports, however, use the KABCO (K=fatal; A=incapacitating; B=non-incapacitating; C=possible; O=not injured) system of injury classification, in which an officer with no medical training can make a general assessment of the injury severity to individuals involved in the collision. As such, Indiana injury data classifications must be converted to the MAIS system to obtain the cost estimates.

Data taken from the National Automotive Sampling System (NASS) from 1982 to 1986 were used to create this injury "translator." <sup>3,4</sup> These data encompass a representative sample of crashes in the United States and provide individual-level information on individuals involved; from it, KABCO injuries can be proportionally distributed into MAIS categories. Data were taken from this time period because it represents the most recent data that contains both KABCO and MAIS designations of injury at the individual level. Note that the injury translator can apportion fatalities (K) to MAIS designations, but the data in Indiana Crash Facts does not do this for ease of interpretation.

## 2. Cost estimates and price deflation

Economic cost estimates were obtained from NHTSA economic cost reports.<sup>5</sup> The data are in year 2000 US dollars and accordingly must be adjusted for the effects of the time value of money. Price deflators were obtained from the Bureau of Labor statistics and were applied as follows:

## a. Medical care and emergency services

Consumer Price Index (CPI) - Medical care (Midwest region). Bureau of Labor Statistics. http://www.bls.gov/cpi/cpi\_dr.htm

## b. Market productivity, household productivity, travel delay

Productivity Index - Output per hour of all persons, business sector (annual). Bureau of Labor Statistics. http://www.bls.gov/schedule/archives/prod\_nr.htm

c. Insurance administration, legal costs, property damage

Consumer Price Index - Services less medical care services (Midwest region). Bureau of Labor Statistics. http://www.bls.gov/cpi/cpi\_dr.htm

d. Workplace costs

Employment Cost Index - Total compensation, all civilian workers, (Q4, not seasonally adjusted). Bureau of Labor Statistics. http://www.bls.gov/ect/. Note that 2000 data were not available for this series; 2001 data used as a proxy.

Once costs were adjusted to current economic conditions, the values were multiplied by the incidence of injuries and vehicles that sustained property damage only (i.e., no injured occupants) to arrive at total cost estimates.

<sup>1</sup>Blincoe, L., Seay. A., Zaloshnja, E., Miller, T., Romano, E., Luchter, S., & R. Spicer. (May 2002). *The economic impact of motor vehicle crashes*, 2000. (DOT HS809 446) National Highway Traffic Safety Administration, Washington D.C.

<sup>2</sup>Association for the Advancement of Automotive Medicine. http://www.carcrash.org

<sup>3</sup>http://www.nhtsa-tsis.net/projects/NHTSA/NHTSA\_NASS.htm

<sup>4</sup>National Automotive Sampling System, 1982-1986; *Ejection Mitigation Using Advanced Glazing: A Status Report, November 1995,* NHTSA <sup>5</sup>Blincoe et al. 2002.

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An electronic copy of this document can be accessed via the Center website (www.ccjr.iupui.edu), the ICJI traffic safety website (www.in.gov/cji/), or you may contact the Center for Criminal Justice Research at 317-261-3000.







