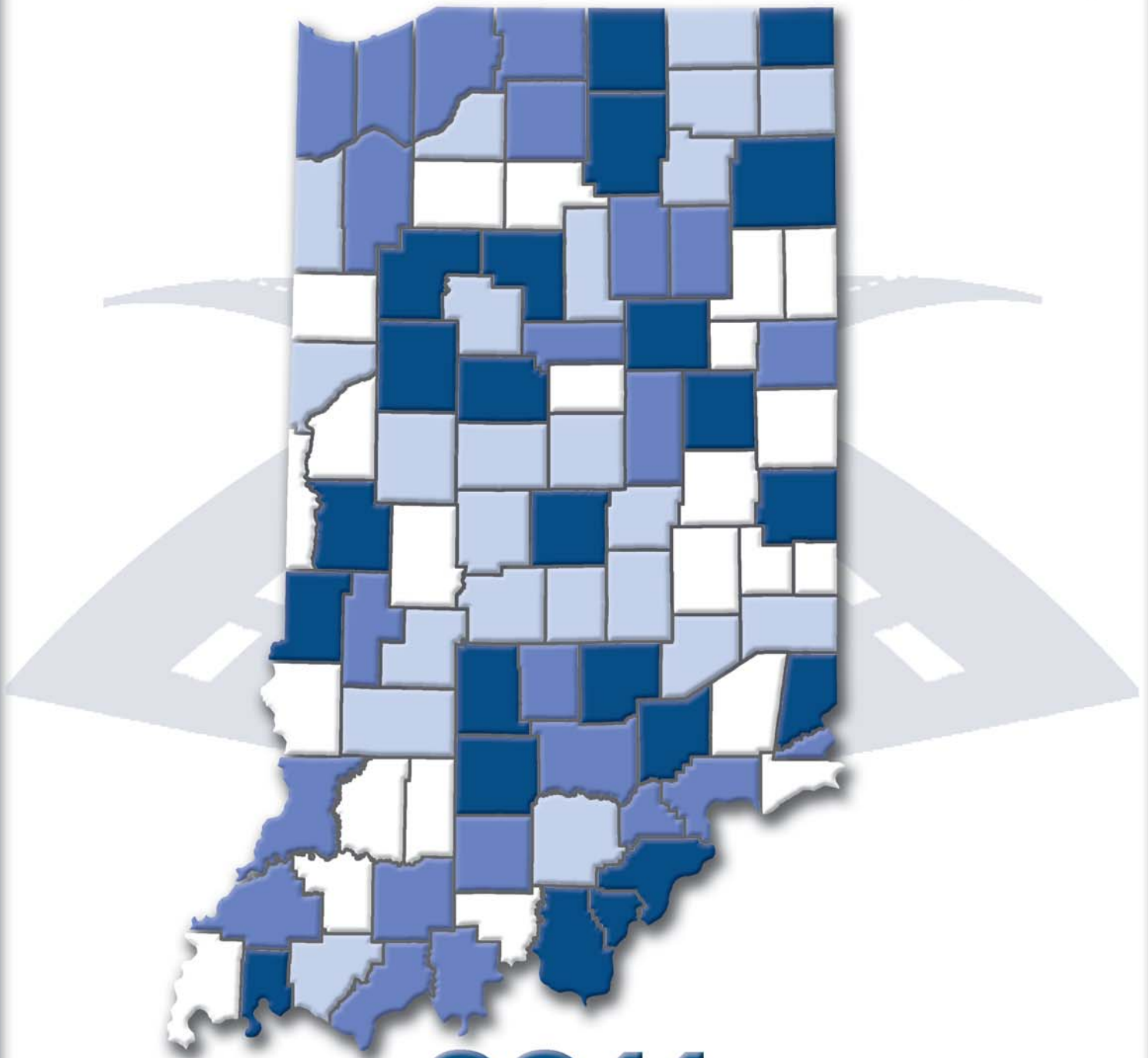


# INDIANA CRASH FACTS



# 2011



## **INDIANA TRAFFIC SAFETY QUICK FACTS - 2011**

- 188,132 traffic collisions resulting in injury or property damage occurred, a 2.5 percent decrease from 2010.
- There were 674 fatal collisions in 2011 (resulting in 749 fatalities), a 3.9 percent decrease from 2010.
- 4,309 collisions (2.3 percent of all collisions) occurred in a work zone in 2011.
- 9.3 percent (17,517) of all collisions were speed-related, representing a 5.6 percent decrease from the 2010 number of collisions that were speed-related.
- 19.4 percent (131 of 674) of fatal collisions were speed-related.
- In 2011, there were 133 fatal crashes and 140 fatalities involving a vehicle driver legally impaired by alcohol (i.e., blood alcohol content at or above 0.08 g/dL). Twenty percent of fatal collisions involved a driver that was legally alcohol-impaired.
- The average economic cost of collisions involving an alcohol-impaired driver was \$58,333.
- Collisions involving motorcycles increased 3.6 percent in 2011, while fatal collisions involving motorcycles increased 6.4 percent, from 110 in 2010 to 117.
- Overall collision counts were higher in Indiana urban (124,699) and suburban (22,826) locales than in surrounding exurban (10,492) and rural (12,594) areas.
- Rates of serious injury collisions per 1,000 total collisions were higher in exurban (34 per 1,000) and rural (37) locales than in areas designated as urban (15) and suburban (30).
- January had the highest frequency of collisions among all months (18,828, or 10 percent of all collisions in 2011).
- The 16 to 17 year old age group had the highest rate of drivers involved in all collisions in 2011 (882 per 10,000 licensed drivers).
- Drivers aged 18 to 20 years old had the highest rate of involvement in fatal collisions per 10,000 licensed drivers (2.5), followed closely by drivers aged 21 to 24 (2.4).
- 80 non-motorists were killed in collisions in 2011 (63 pedestrians, 13 pedalcyclists, and 4 animal drawn vehicle operators).
- 48 percent of persons killed in motor vehicle collisions were known to be restrained.\*
- In 2011, the economic costs of motor vehicle collisions in Indiana approached \$4.4 billion.

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

Source: Indiana State Police

# 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-impaired crashes, children, motorcycles, 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 Appriss 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.policyinstitute.iu.edu/criminal/index.aspx](http://www.policyinstitute.iu.edu/criminal/index.aspx)), the ICJI traffic safety website ([www.in.gov/cji/](http://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.**

## Indiana University Public Policy Institute, Indianapolis

John Krauss, Director  
Samuel Nunn, Director, Center for Criminal Justice Research

## Traffic Records Team:

Dona Sapp, Senior Policy Analyst  
Matt Nagle, Senior Policy Analyst  
Bill Newby, Senior Policy Analyst  
Samuel Nunn, Director  
Kathy Lisby, Senior Policy Analyst

## Assisted by:

Shawndra Miller, Editor  
Susan Hill, Graphic Designer

Cover design is a choropleth map illustrating the county rate of young driver collisions per 1,000 licensed drivers.



**STATE OF INDIANA**



**Mitch Daniels, Governor**  
**Mary L. Allen, Executive Director**


Dear Traffic Safety Partners,

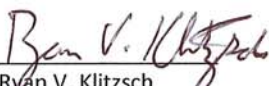
Over the past several years there have been great strides made in improving traffic safety throughout Indiana. Looking closer at the data however reveals that there are areas of the state and segments of the population that are trending in the wrong direction. Motorcycles, distracted driving and rural populations are continuing to over represent crash, injury and fatal numbers. In order to address these problem areas traffic safety partners across the state need accurate, relevant and timely data that continues to be produced in the 2012 *Indiana Traffic Safety Facts* document.

One of the more interesting items the Traffic Safety Division (TSD) and other partners have used is the recently developed breakdown of locational classifications of Indiana motor vehicle collisions. These classifications have been developed by the Center for Criminal Justice Research at Indiana University Public Policy Institute (Center). The Center has broken down locality categories to urban, suburban, exurban and rural. These four categories improve upon the previous two category (urban and rural) locality elements by providing a more informative characterization of the location of collisions. More descriptive information, such as locality data, in conjunction with the comprehensive *Indiana Traffic Safety Facts* book will continue to help traffic safety stakeholders make informed policy and programming decisions.

Lastly, we would like to express our gratitude to the many traffic safety partners and their ongoing dedication to improving traffic safety in Indiana. The collaborative efforts of numerous organizations will continue to ensure that Hoosiers arrive home safely every trip, every time.

Sincerely,

  
Mary L. Allen  
Executive Director,  
Indiana Criminal Justice Institute

  
Ryan V. Klitzsch  
Division Director, Traffic Safety,  
Indiana Criminal Justice Institute



Dear Fellow Hoosiers,

The Governor's Council on Impaired and Dangerous Driving (Council), serving as Indiana's traffic safety advisory group, continues its collaboration with the Indiana Criminal Justice Institute's Traffic Safety Division to develop strategies to address traffic safety concerns throughout the state. Using data provided in this *Indiana Crash Facts* publication allows the Council to coordinate aggressive public information campaigns designed to inform state and local level traffic safety advocates of emerging traffic safety issues and trends. The Council also relies heavily on data provided in this report to develop policy recommendations aimed at reducing traffic collisions that result in injury and death.

For the past several years, the Council has focused its efforts on increasing BAC testing and reporting rates for drivers involved in fatal crashes. In 2011, the Toxicology Advisory Board was formed to develop recommendations for the Council on ways of improving the organizational structure and efficiencies of processing suspected DUI drivers' BAC samples. With the recommendations made by the Toxicology Advisory Board and the appointment of a new Director of Toxicology, in 2012, the Indiana State Department of Toxicology has begun promulgating rules for a new breath testing instrument that will be deployed throughout the state in 2013.

The ability to develop effective countermeasures and policy recommendations is not possible without the thorough analysis of vast amounts of data from various resources. The data published in the Indiana University's Center for Criminal Justice Research's *Indiana Crash Facts* provides traffic safety stakeholders with resources that aid in developing initiatives that reduce crashes, injuries, and fatalities throughout the state. I hope that this document continues to serve as a guide for you in making 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

**INDIANA CRIMINAL JUSTICE INSTITUTE**  
101 West Washington Street  
Suite 1170, East Tower  
Indianapolis, Indiana 46204-2038  
Voice: 317-232-1233  
Facsimile: 317-232-4979  
[www.in.gov/cji](http://www.in.gov/cji)

## **MEMBERS OF THE GOVERNOR'S COUNCIL ON IMPAIRED AND DANGEROUS DRIVING**

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Prosecutor, Elkhart County

**Mary Allen**  
Executive Director, Indiana Criminal Justice Institute

**Tony Bennett, Ed.D.**  
Superintendent, Indiana Department of Education

**Marilyn Bull, M.D.**  
Riley Hospital for Children

**Michael B. Cline**  
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Chief of Police, Marion

**Marie Greger-Smith**  
Executive Director, Advocates Against Impaired Driving, Inc.

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Indiana University School of Medicine

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**Paul Whitesell, Ph.D.**  
Superintendent, Indiana State Police

*A division of the*



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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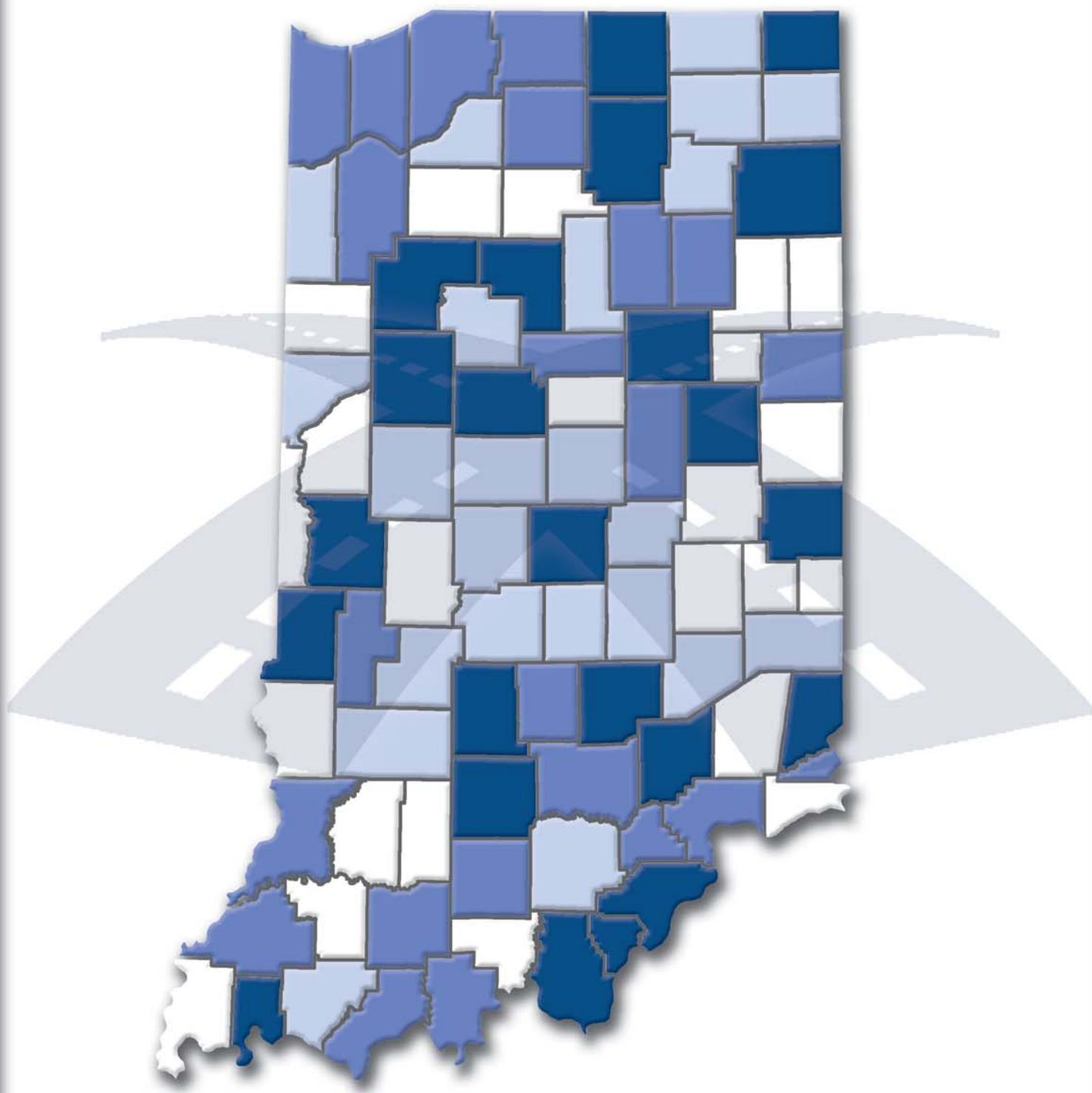
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# **PROBLEM IDENTIFICATION**



## **PROBLEM IDENTIFICATION, 2011**

The Traffic Safety Division (TSD) of the Indiana Criminal Justice Institute, in conjunction with the Indiana Governor's Council on Impaired and Dangerous Driving, developed a set of benchmarks as part of the Highway Safety Plan for fiscal year 2013 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 pedalcyclists. 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 Strategic Highway Safety Plan* for more information.

*NOTE: Short-term and long-term goals discussed in subsequent sections are taken from the Indiana Strategic Highway Safety Plan 2013. This document uses data from the 2011 Fact Sheets series produced by the Indiana University Public Policy Institute's Center for Criminal Justice Research. These publications, including this Crash Book, were produced using the collision dataset current as of March 1, 2012. Discrepancies between figures presented in previous-year Crash Books are due to updates to the collision dataset since the date of these publications. Where applicable, national goals developed by NHTSA are also provided.*

### **Goal Setting by the Indiana Criminal Justice Institute**

For short-term goals (2013), the annualized rate of change for the performance metric back to 2007 was applied to the current rate to establish the new goal. If the annualized rate of change either represented an increase over the time period or the reduction did not equal two percent of the total rate, then a standard two percent reduction in the rate was used.

Long-term goal development (through 2015) was determined by the short-term goal. For goals based on the two percent reduction, a six percent reduction was applied to the 2011 rate. In cases where the annualized reduction was greater than the two percent reduction, the long-term goal was established by calculating the goal for 2013 and applying the same rate annually to determine the 2015 long-term goal. In a few rare cases, if there was an extreme percentage change in a particular area and sustaining that rate of change was deemed unrealistic, a more realistic goal was set.

**Table 1. Performance goals and metrics for Indiana's Highway Safety Plan, 2013**

Goals and performance measures	MOST RECENT (2011)	GOALS		HISTORICAL				Annualized rates of change	
		Short-term (2013)	Long-term (2015)	2010	2009	2008	2007	2010-11	2007-11
<b>Goal: Reduce total fatalities</b>									
Count of fatalities	749	719	662	754	692	815	898	-0.7%	-4.4%
Rate per 100K population	11.55	11.01	10.03	11.63	10.78	12.76	14.15	-0.7%	-5.0%
Rate per 100M vehicle miles travelled (VMT)	0.99	0.94	0.84	0.96	0.90	1.15	1.26	3.4%	-5.8%
<b>BY CRASH LOCALITY (excludes unknown locality)</b>									
Count of fatalities in URBAN areas	279	.	.	262	220	300	281	6.5%	-0.2%
Rate per 100k population	7.46	7.35	7.06	6.91	5.80	7.91	7.41	8.0%	0.2%
Count of fatalities in SUBURBAN areas	189	.	.	173	203	207	262	9.2%	-7.8%
Rate per 100k population	13.54	12.49	10.68	12.56	14.74	15.03	19.03	7.7%	-8.2%
Count of fatalities in EXURBAN areas	108	.	.	121	102	121	148	-10.7%	-7.6%
Rate per 100k population	18.63	17.07	14.39	22.58	19.03	22.58	27.62	-17.5%	-9.4%
Count of fatalities in RURAL areas	135	.	.	126	141	165	204	7.1%	-9.8%
Rate per 100k population	17.89	15.97	12.70	17.70	19.80	23.17	28.65	1.1%	-11.1%
<b>Goal: Reduce serious bodily injuries (SBIs)</b>									
Count of SBIs	3,405	3,337	3,205	3,443	3,179	3,382	3,661	-1.1%	-1.8%
Rate per 100K population	52.52	51.40	49.22	53.10	49.54	52.95	57.70	-1.1%	-2.3%
Rate per 100MVMT	4.51	4.38	4.14	4.38	4.15	4.77	5.12	2.9%	-3.1%
<b>Goal: Reduce alcohol involvement in crashes</b>									
Count of fatalities that involve an impaired driver (any vehicle)	140	132	117	135	150	182	190	3.7%	-7.4%
Percent of all fatalities	18.7%	18.3%	17.4%	17.9%	19.9%	26.3%	23.3%	4.4%	-5.4%
Rate per 100MVMT	0.19	0.17	0.13	0.17	0.20	0.26	0.27	7.9%	-8.6%
Count of fatalities that involve an impaired motorcycle operator	34	33	32	23	21	22	31	47.8%	2.3%
<b>Goal: Increase safety belt usage</b>									
Count of unrestrained occupants of passenger vehicles killed	260	239	203	287	258	330	375	-9.4%	-8.7%
Observed usage rate for occupants of all passenger vehicles	93.6%	93.9%	94.6%	92.4%	92.6%	91.2%	87.9%	1.3%	1.6%
Observed usage rate for occupants of pickup trucks	86.5%	86.9%	87.8%	84.3%	85.2%	78.7%	64.9%	2.6%	7.4%
<b>Goal: Reduce involvement of young drivers in fatal crashes</b>									
Count of drivers aged 15 to 20 in fatal crashes	100	91	75	123	116	142	151	-18.7%	-9.8%
<b>Goal: Reduce motorcyclist fatalities</b>									
Count of motorcycle and moped rider fatalities	118	116	111	110	111	130	122	7.3%	-0.8%
Count of motorcycle and moped operators involved in fatal crashes	121	111	106	112	118	127	121	8.0%	0.0%
Rate per 10K	5.39	5.22	4.92	5.34	5.60	5.83	6.10	1.0%	-3.0%
Count of unhelmeted motorcycle fatalities	79	77	74	85	71	83	85	-7.1%	-1.8%
<b>Goal: Reduce the incidence of dangerous driving in crashes</b>									
Count of speed-related fatalities	150	145	134	145	158	225	187	3.4%	-5.4%
Count of total crashes involving a driver disregarding a signal	3,955	3,773	3,434	4,011	3,983	4,343	4,797	-1.4%	-4.7%
<b>Goal: Reduce fatalities and SBIs for children</b>									
Count of children aged 15 and under killed	38	36	33	33	35	47	49	15.2%	-6.2%
Count of children with SBIs	198	178	145	235	235	249	305	-15.7%	-10.2%
<b>Goal: Reduce non-motorist fatalities and SBIs</b>									
Count of pedestrian fatalities	63	62	59	62	55	60	60	1.6%	1.2%
Count of pedestrian SBIs	238	233	224	251	211	223	217	-5.2%	2.3%
Count of pedalcyclist fatalities	13	12	10	14	7	16	13	-7.1%	0.0%
Count of pedalcyclist SBIs	82	80	77	81	64	66	84	1.2%	-0.6%

Sources: Indiana State Police; Indiana Criminal Justice Institute; US Census Bureau; Federal Highway Administration; Indiana Bureau of Motor Vehicles

Notes:

*Serious bodily injury* is classified as an *incapacitating* injury in the crash database.

Goals for locality-specific fatalities were created for fatality rates per 100K population rather than the raw counts.

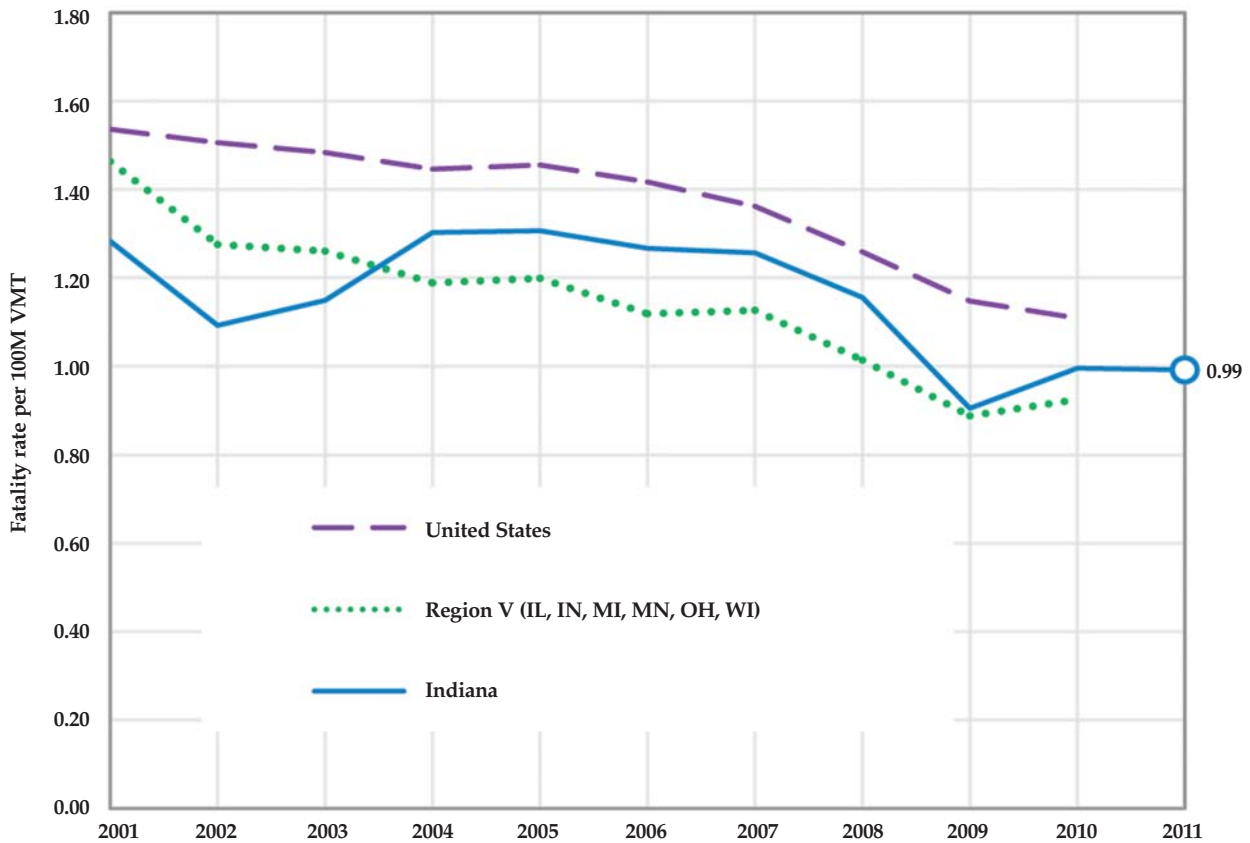
## Context

The likelihood of a person dying in a traffic crash is influenced by many factors, including seat belt usage, pre-collision speed, the point of impact, object collided with, the age and physical condition of the person involved, alcohol involvement, and emergency response times. Crashes in rural areas are more likely to result in fatalities largely because of these circumstances, as crashes usually occur at higher speeds, with fixed objects that increase the force of impact, and because of the greater average distance to emergency care facilities.

## GOALS: Reducing fatalities and serious bodily injuries

In Indiana and across the country, traffic fatality rates have generally decreased over the last 10 years. Indiana's rate of fatalities per 100M vehicle miles travelled (VMT) reached a historical low in 2009, and then increased slightly in 2010 and 2011. Fatality rates in Indiana over the time period have been lower than that of the nation and have recently decreased to the level of the Great Lakes region.

Figure 1. Traffic fatalities per 100M vehicle miles travelled (VMT), 2001-2011



Sources: 2001-10: Fatality Analysis Reporting System, Bureau of Transportation Statistics; 2011: Indiana State Police

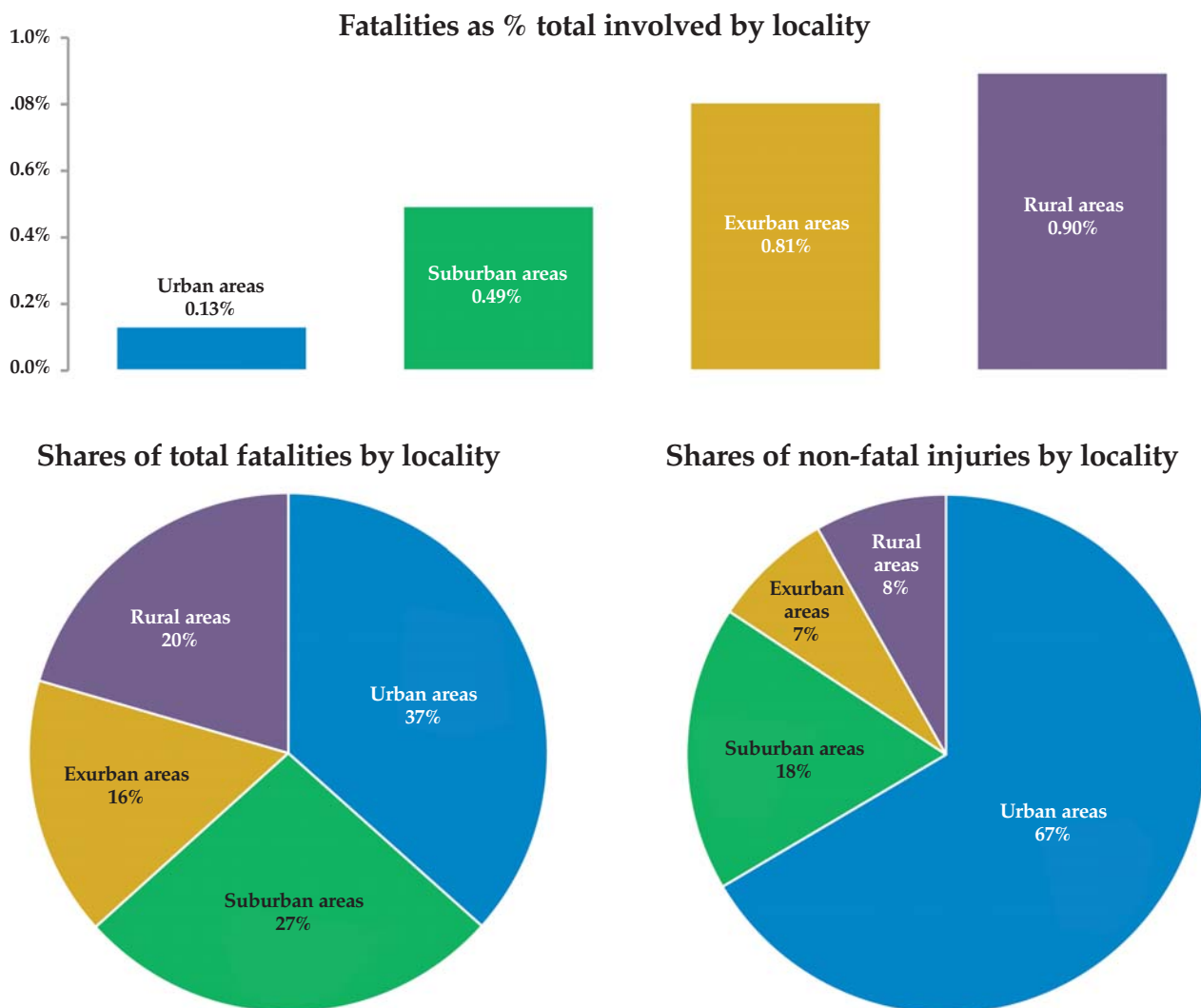
Note: Data for United States and Region V states other than Indiana were not available for 2011 at time of publication.



Fatalities are more likely to occur outside urban areas because of the nature of the crashes occurring there (usually at higher rates of speed, with lower rates of restraint use, and with longer emergency response times on average). Since 2007 about 20 percent of all traffic fatalities occurred in rural areas, compared to 8 percent of non-fatal injuries. However, the rate of fatalities in rural areas has decreased by about 11 percent annually since 2007.

Serious bodily injuries (coded as incapacitating injuries in the Indiana crash database), have decreased 1.8 percent annually since 2007 and have fallen 3.1 percent per 100M VMT. Serious bodily injuries (SBIs) can in some cases be considered potential fatalities that were averted due to circumstantial factors such as faster emergency response. The fact that fatalities have declined faster than SBIs is a rough indication that traffic safety goals and policies toward restraint use and dangerous driving may be having beneficial effects.

**Figure 2. Fatality rates and geographic distribution of fatalities and non-fatal injuries in Indiana crashes, by Census locality, 2007-2011**



Source: Indiana State Police

Notes:

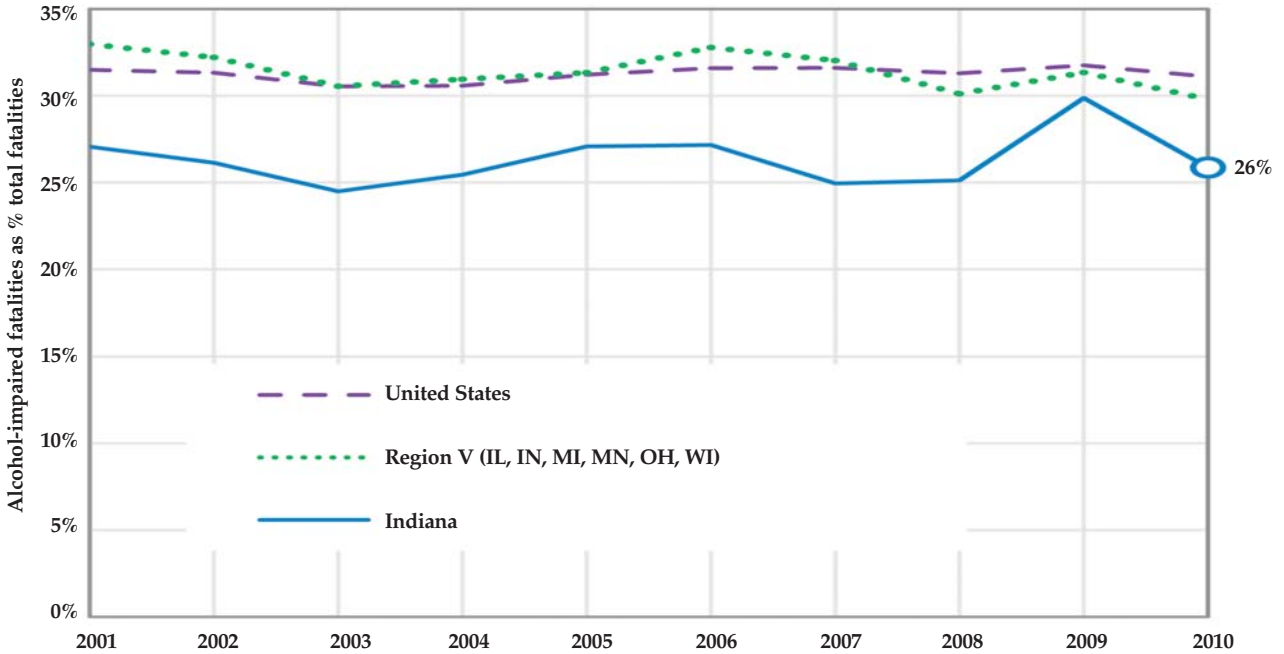
Non-fatal injuries include incapacitating, non-incapacitating, and possible injuries, as coded on the crash report. Excludes cases where locality could not be determined; see glossary for definitions of Census locality classes.

## GOAL: Reducing alcohol involvement

Since 2007, the share of drivers impaired by alcohol (blood alcohol content [BAC] = .08 grams per deciliter or higher) who were involved in fatal crashes in Indiana has been lower than

that of Region V and of the United States. In 2011, 26 percent of all traffic fatalities occurred in crashes involving an alcohol-impaired driver.

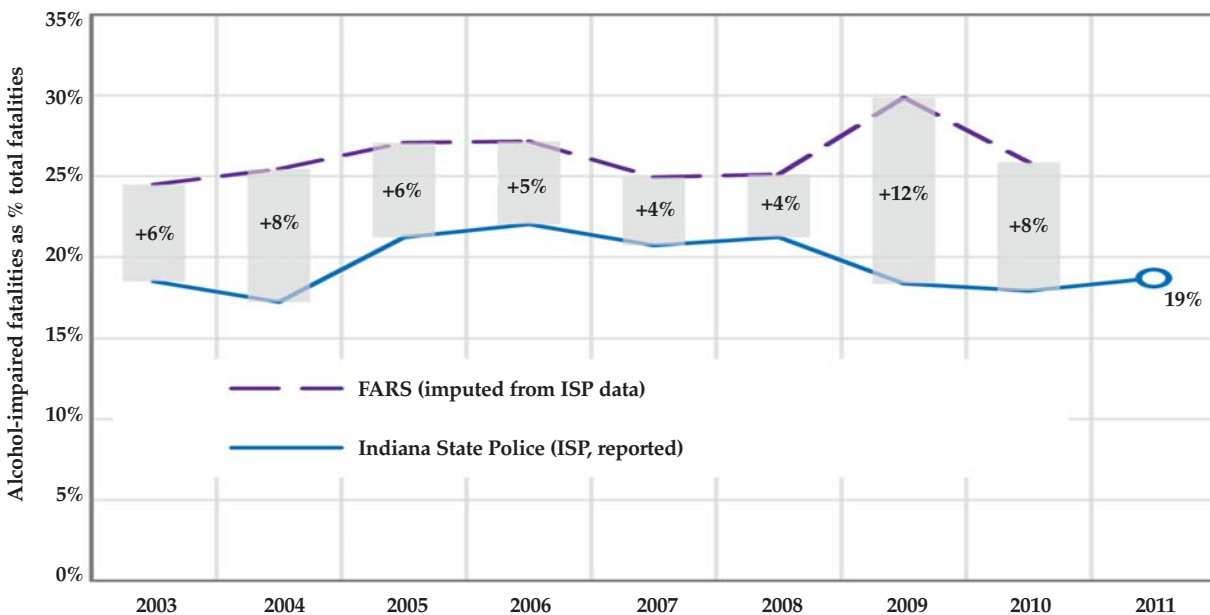
Figure 3. Percent of traffic fatalities that involve an alcohol-impaired driver, 2001-2010



Sources: Fatality Analysis Reporting System, Bureau of Transportation Statistics

Note: NHTSA imputations for alcohol-impaired crashes may vary from data on alcohol-impaired driving as reported by the Indiana State Police.

Figure 4. Alcohol-impaired fatalities as a percent of total fatalities in Indiana, comparison of FARS imputed data to ISP actual reported, 2003-2011



Sources: Fatality Analysis Reporting System, Bureau of Transportation Statistics, Indiana State Police

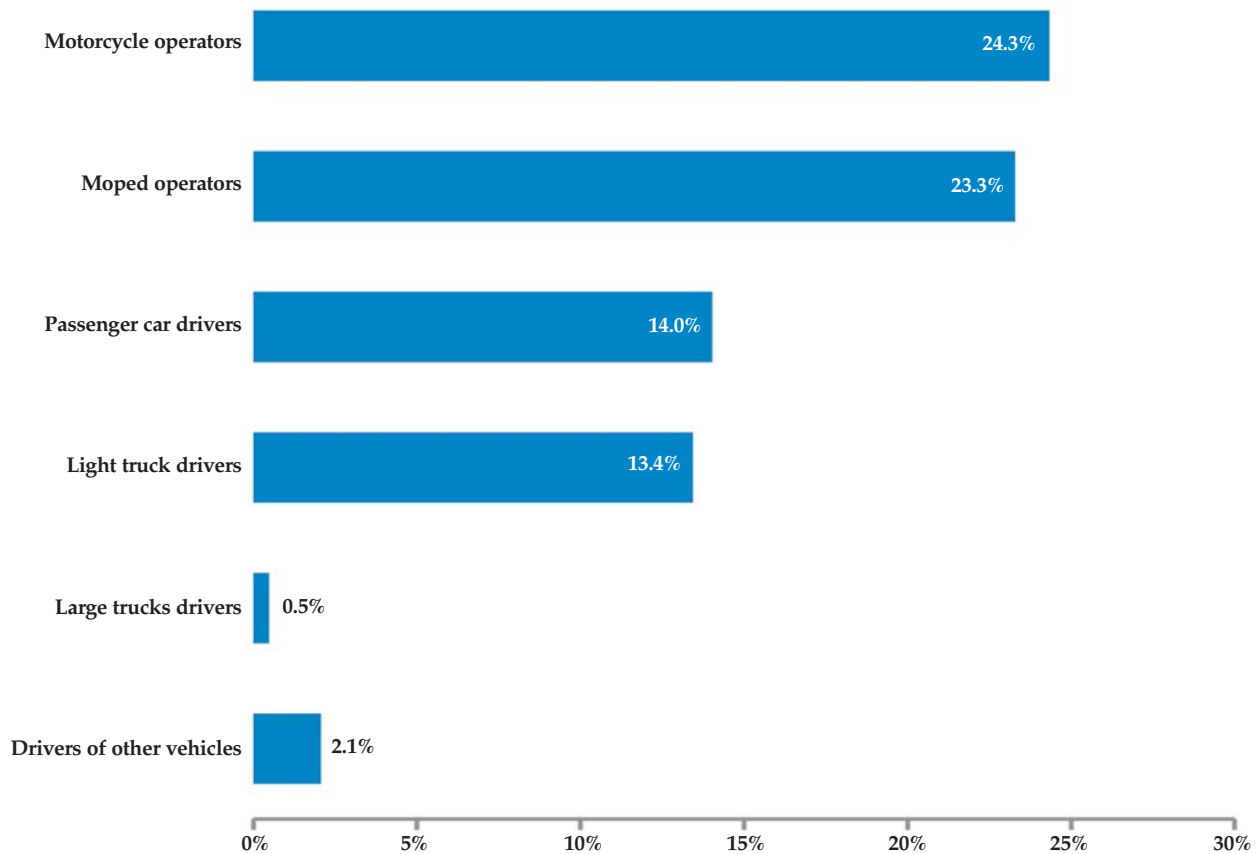
Note: FARS imputed value for 2011 was not available at time of publication.

Rates of alcohol impairment vary by vehicle type. Performance goals included here account for these differences, as motorcyclists and moped operators are more likely to be impaired in fatal crashes than are drivers of other vehicle types. Since 2007, about 24 percent of all motorcyclists involved in fatal crashes were legally impaired. Over that same timeframe, 14 percent of passenger car drivers, 13.4 percent of light truck drivers, and 1 percent of large truck drivers were impaired. Policies and enforcement practices targeted toward reducing alcohol impair-

ment among motorcyclists should lead to measureable drops in fatality rates, especially since motorcyclists encompass one of the more at-risk groups of people in traffic crashes.

The rate of fatalities in crashes involving an alcohol-impaired driver per 100MVMT declined 8.6 percent annually since 2007, though the rate increased from 2010 to 2011. Since 2007, about one in every five fatalities has involved an alcohol-impaired driver.

**Figure 5. Percent of drivers that were legally impaired involved in fatal collisions, by vehicle type, 2007-2011**



Source: Indiana State Police

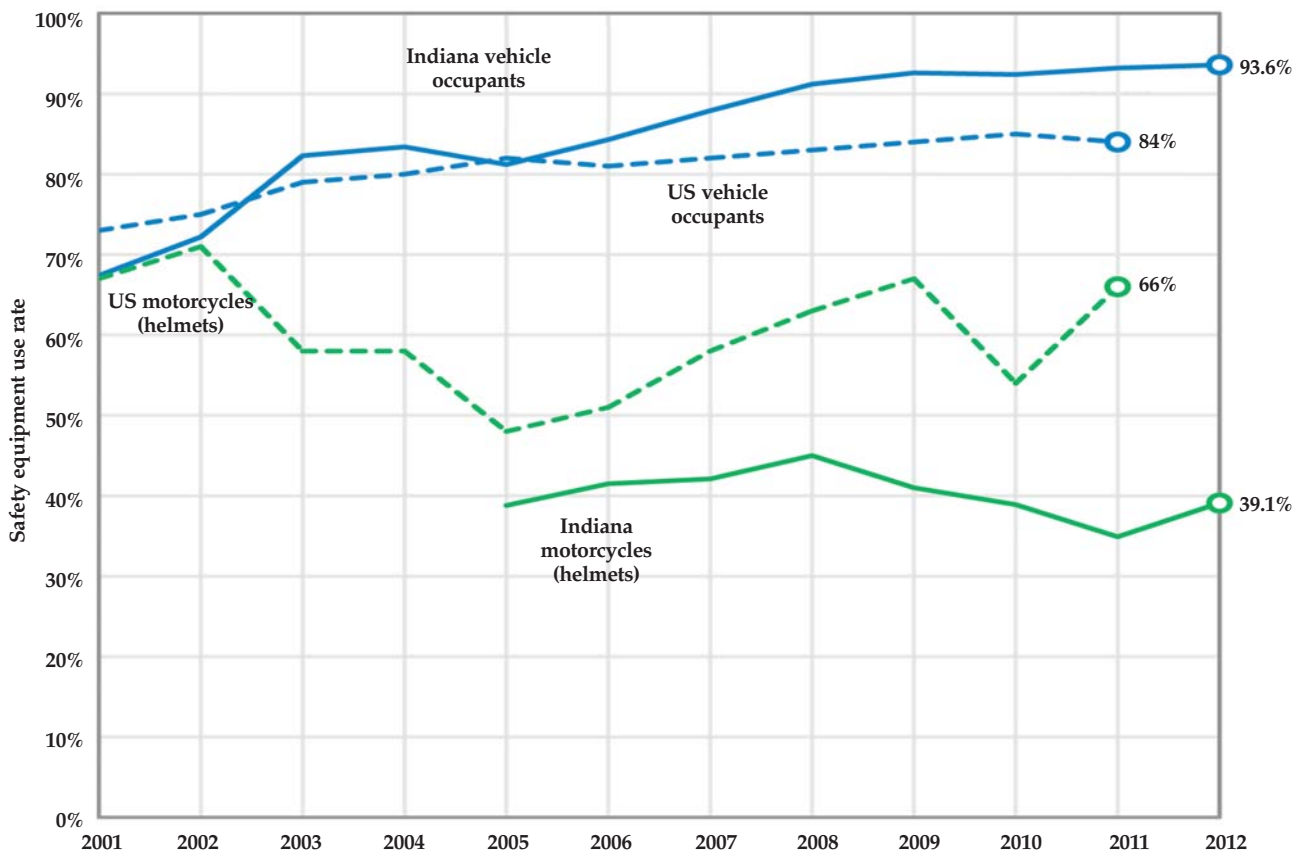
Note: *Other vehicles* includes commercial buses, school buses, and recreational vehicles.

**GOAL: Increasing safety belt usage**

Indiana's rate of restraint use among passenger vehicle occupants has increased from 70 percent in 2001 to over 93 percent in 2012, 7 percentage points higher than the national rate in 2010. However, while not legally mandated, helmet use among

motorcyclists in crashes in Indiana has lagged far behind the national rate. According to observational surveys conducted in Indiana, pickup truck restraint use rates have increased drastically over the last decade, from a rate of 42 percent in 2001 to 86 percent in 2011.

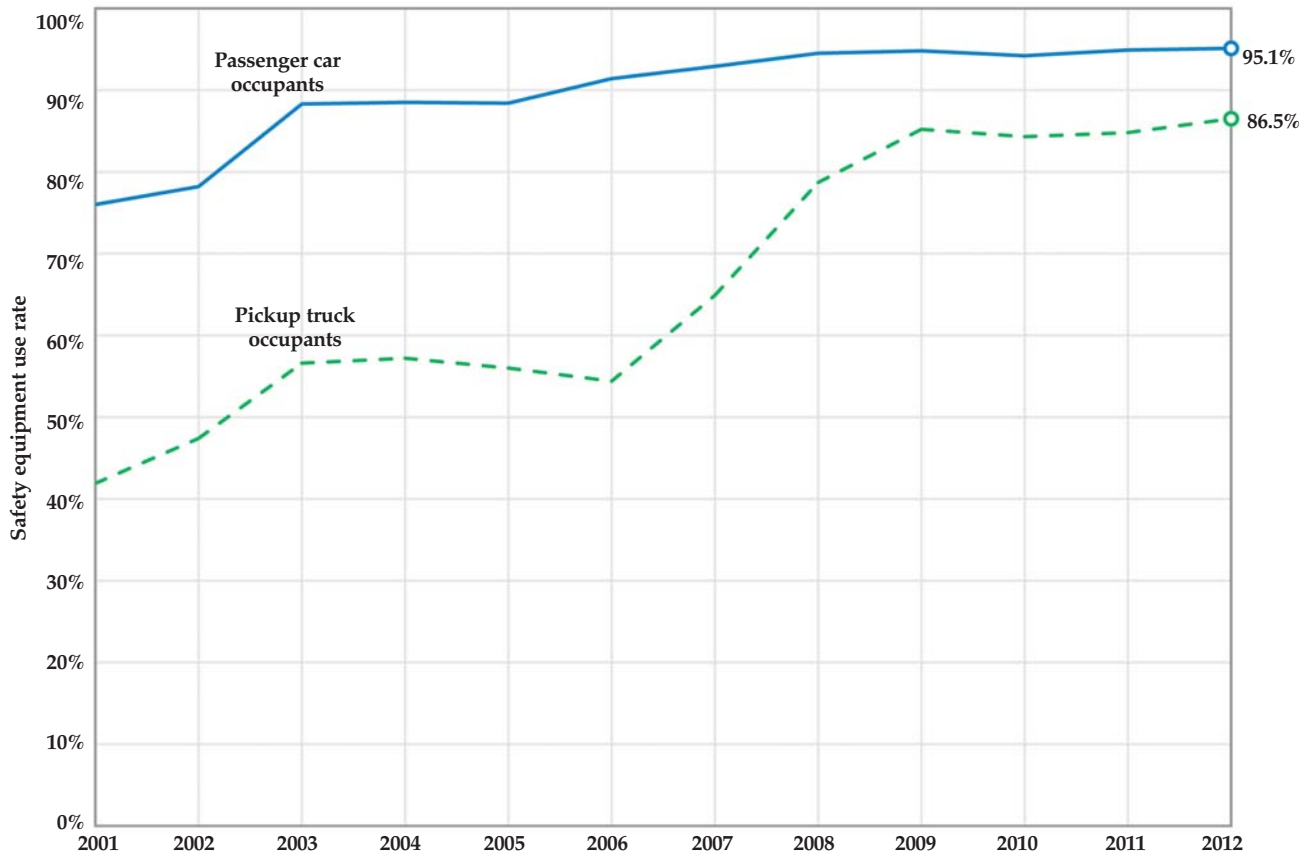
**Figure 6. Geographic comparison of observed safety equipment usage rates by vehicle type, 2001-2012**



Sources: *Seat Belt Use in 2011—Use Rates in the States and Territories*. National Highway Traffic Safety Administration: DOT HS 811 651  
*Motorcycle Helmet Use in 2011—Overall Results*. National Highway Traffic Safety Administration: DOT HS 811 610  
*Indiana Safety Belt Observational Survey, June 2012, Survey Results*. Center for Road Safety, Purdue University

Note: Helmet use data for Indiana are not available prior to 2005; US vehicle occupants' safety equipment use and US motorcyclists' helmet use are not available for 2012.

Figure 7. Observed safety equipment usage rates on Indiana roads, by vehicle type, 2001-2012

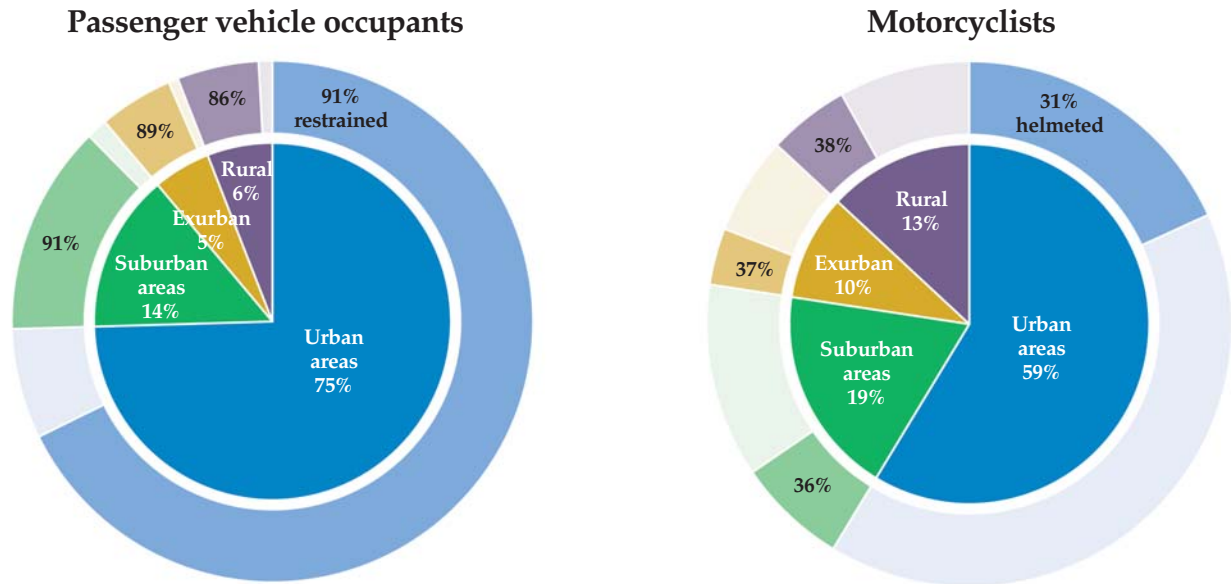


Sources: *Indiana Safety Belt Observational Survey, June, 2012, Survey Results*. Center for Road Safety, Purdue University

Restraint use and helmet use among people involved in crashes vary by crash locality. Restraint use among passenger vehicle occupants tends to increase in more densely populated areas. From 2007 through 2012, 91 percent of passenger vehicle occupants in urban areas were restrained compared to 86 per-

cent for rural crashes. Among motorcyclists in crashes, the trend is reversed; 31 percent of motorcyclists in crashes in urban areas wore a helmet, compared to 38 percent in rural areas.

**Figure 8. Geographic distribution of vehicle occupants and motorcyclists in crashes and rates of safety equipment use, 2007-2011**



Inner pie: Geographic distribution of occupants involved  
 Outer ring: Safety equipment use rates, by locality

Source: Indiana State Police

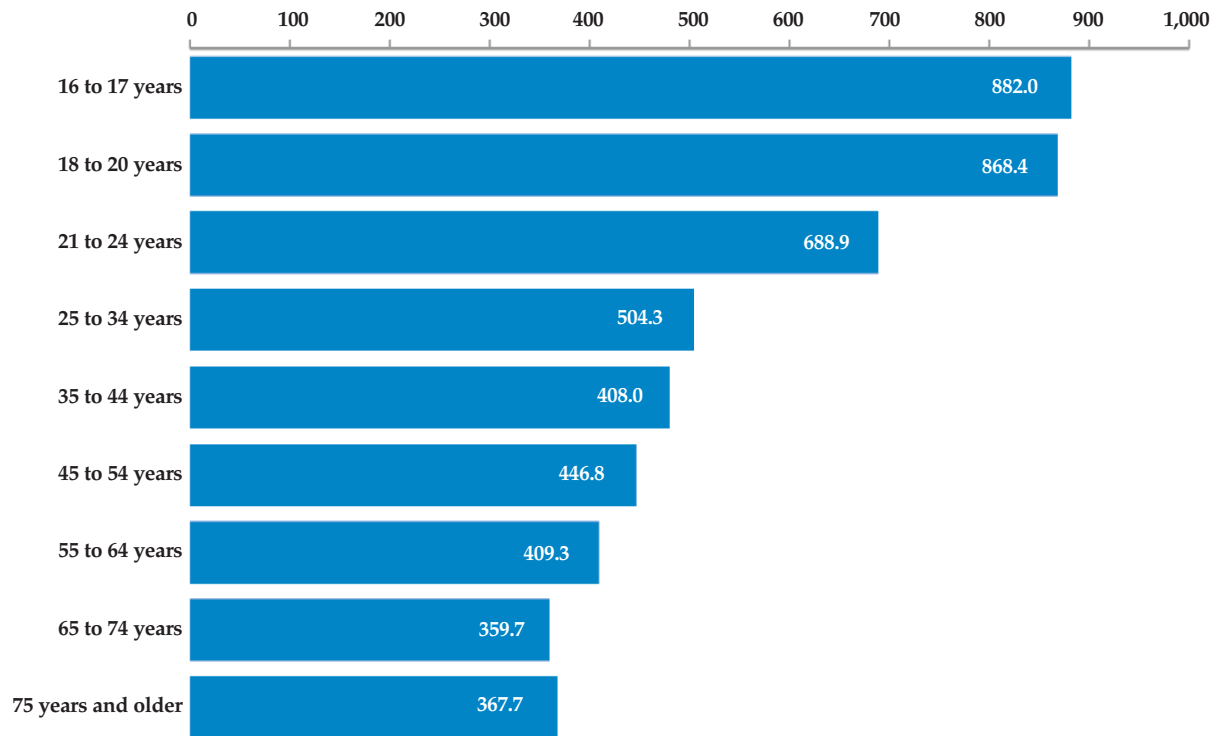
Notes: Passenger vehicles include passenger car; pickup truck, van, sport utility vehicle. See glossary for definition of Census locality classes.

**GOAL: Reducing young driver involvement in fatal crashes**

Crash rates are much higher for young drivers (aged 15 to 20) than for any other age group. Young drivers are more likely than older drivers to be in accidents because of a lack of experience and aggressive behavior. Young drivers (especially those aged 15 to 17) are generally more likely than older drivers to lose con-

trol and more likely to be distracted while in a collision. Among more risky driving behavior, younger drivers were most likely to have been following too closely to other vehicles and/or speeding. Other risk factors for young drivers include nighttime driving, driving with young passengers, and cell phone use (Nagle 2011a, 2011b).

**Figure 9. Drivers in Indiana crashes per 10,000 licenses, by age group, 2011**



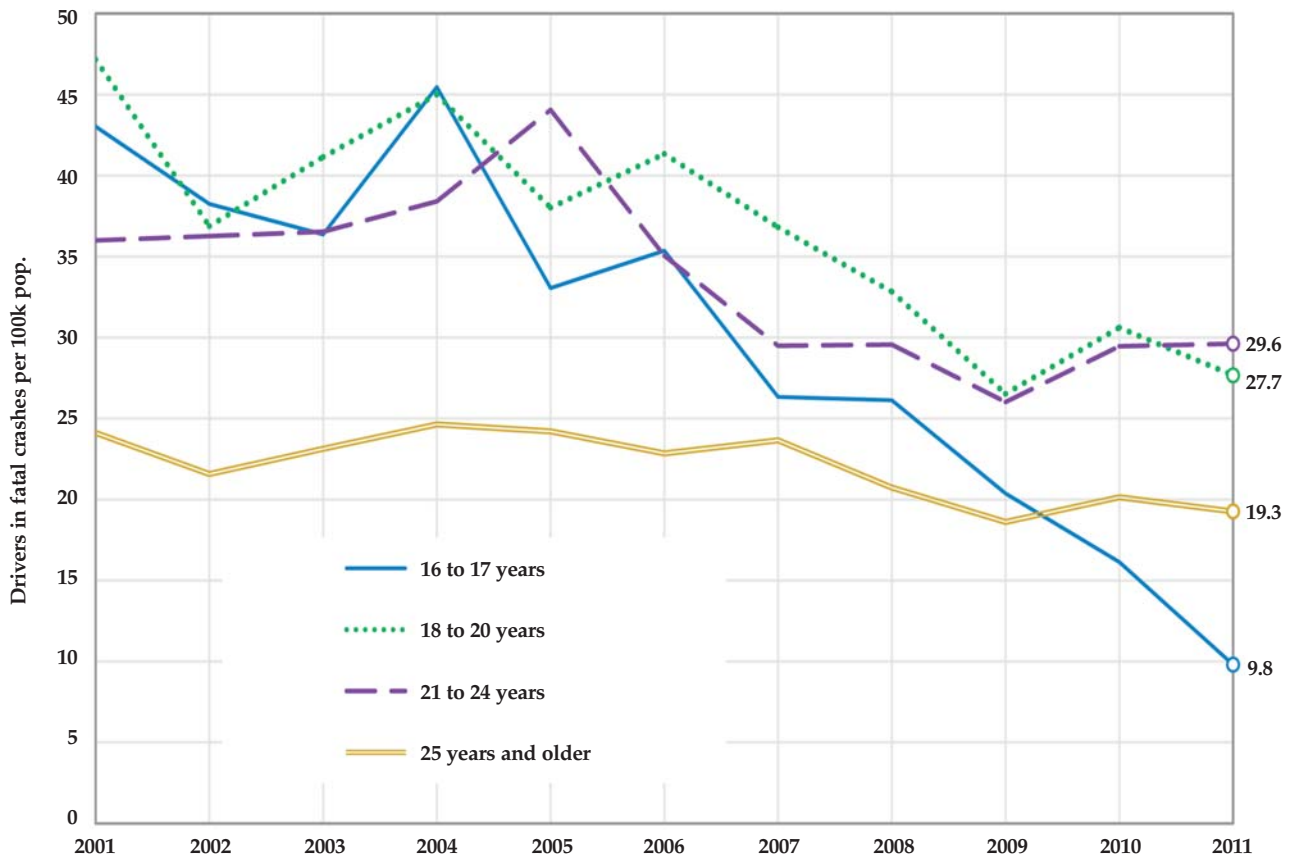
Sources: Indiana Bureau of Motor Vehicles, Indiana State Police

The Indiana Graduated Driver Licensing (GDL) system, first implemented in July 2009, has had a positive effect in reducing the number of teen drivers involved in crashes. The majority of the impact has occurred in the provision that increases the minimum age for receiving a learner permit or probationary license. While there were reductions in crash rates for nearly all age groups over the last decade, rates per 100,000 population

for drivers aged 16 to 17 in fatal crashes have declined most significantly and were the lowest rate of any age group in 2011. Fatal crash rates for drivers aged 18 to 24 have decreased significantly as well.

Since 2007 the number of young drivers in fatal crashes has decreased by 9.8 percent annually and by nearly 19 percent from 2010 to 2011.

**Figure 10. Rate of drivers in Indiana fatal crashes per 100,000 population, by age group, 2001-2011**



Sources: Fatality Analysis Reporting System; Indiana State Police; US Census Bureau



**GOAL: Reducing motorcyclist fatalities**

Due to risks associated with direct exposure to collisions, rates for motorcycle operators in fatal crashes per 10,000 registrations are the highest of any vehicle class. The fatal crash rate of

motorcycle operators decreased just 1.4 percent annually since 2007 but increased by over 8 percent from 2010 to 2011. Fatal crash rates for drivers of passenger cars and light trucks have also generally decreased since 2007.

**Table 2. Rate of vehicle drivers involved in Indiana crashes per 10,000 registrations, by vehicle type and crash severity, 2007-2011**

	Crash rate per 10K registrations					Annual rate of change (%)	
	2007	2008	2009	2010	2011	2007-11	2010-11
<b>In all crashes</b>							
Passenger cars	426.5	434.2	416.6	449.3	446.3	1.1	-0.7
Light trucks	615.7	608.4	576.4	586.6	566.6	-2.1	-3.4
Large trucks	207.0	199.7	153.0	183.8	196.0	-1.4	6.6
Motorcycles	174.8	171.1	151.0	159.0	164.9	-1.5	3.7
Other vehicles	886.5	694.5	609.5	524.8	537.3	-11.8	2.4
<b>In fatal crashes</b>							
Passenger cars	1.2	1.2	1.0	1.2	1.1	-0.5	-5.1
Light trucks	2.5	1.9	1.8	2.1	1.8	-7.6	-15.6
Large trucks	2.2	1.9	1.6	1.7	2.2	-0.1	28.3
Motorcycles	6.1	5.8	5.6	5.3	5.8	-1.4	8.2
Other vehicles	3.9	3.1	3.2	2.3	2.8	-7.8	23.6

Sources: Indiana Bureau of Motor Vehicles; Indiana State Police

Notes: See glossary for definition of *light truck* and *large truck*.

*Other vehicles* includes commercial buses, school buses, and recreational vehicles.

**GOAL: Reducing dangerous driving**

Nationally, 1 in every 3 fatal crashes involved a speeding driver; 1 in 16 involved a driver disregarding a traffic signal (Newby, 2012). Speeding, as with other forms of dangerous driving, is more likely among younger drivers. About 1 in every 4 drivers aged 18 to 24 in fatal crashes was speeding. Across all ages, the risk of a fatal injury increases by at least a factor of two when speeding is involved.

Disregarding signals is also a form of dangerous driving, but is more common among the most inexperienced (aged 15 to 17

years) and most elderly population (aged 65 and older). While speed is nearly always a conscious behavior for the driver, in certain instances disregarding signals represents a lack of awareness rather than a purposeful choice. Regardless, they represent forms of dangerous driving that create injury risks for the perpetrating drivers and for others in the environment.

Speed-related fatalities decreased 5.4 percent annually since 2007 but increased 3.4 percent from 2010 to 2011. The incidence of drivers disregarding signals has decreased by about 5 percent annually since 2007.

**Table 3. Percentage of drivers speeding and disregarding traffic signals, by crash severity and driver age, 2007-2011**

Driver age group	Speeding as % total		Disregarded signal as % total	
	In fatal crashes	In non-fatal crashes	In fatal crashes	In non-fatal crashes
15 to 17 years	21.8%	10.9%	2.1%	1.0%
18 to 20 years	26.4%	10.0%	2.3%	1.6%
21 to 24 years	23.9%	8.7%	1.2%	1.6%
25 to 44 years	15.9%	6.1%	1.1%	1.4%
45 to 64 years	8.5%	3.8%	1.6%	1.3%
65 years and older	4.4%	2.3%	2.1%	1.9%
<b>All ages</b>	<b>14.0%</b>	<b>6.1%</b>	<b>1.5%</b>	<b>1.4%</b>

Source: Indiana State Police

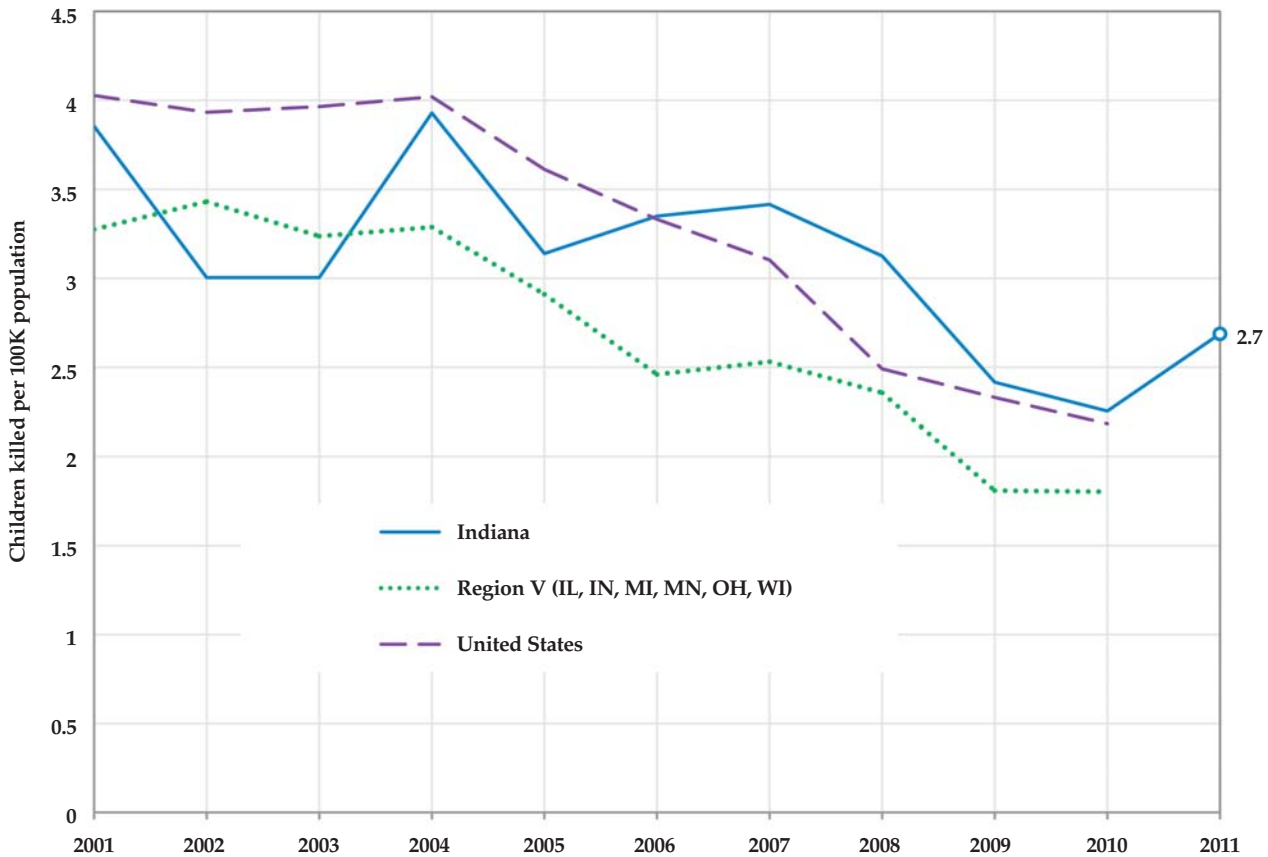
Note: See glossary for definitions of *speeding* and *disregarded signal*.

**GOAL: Reducing fatalities and serious injuries among children**

The rate per 100,000 population of children (under age 16) killed in traffic accidents in Indiana has been higher than the national rate and that of the Great Lakes region since 2006. After reaching a 10-year low in 2010, the Indiana rate of chil-

dren killed per 100,000 population increased to 2.7 in 2011. The total number of children killed in Indiana crashes declined from 49 in 2007 to 38 in 2011, an annualized decrease of 6.2 percent. Serious bodily injuries also decreased over that time.

**Figure 11. Children (under age 16) killed in traffic crashes per 100,000 population, 2001-2011**



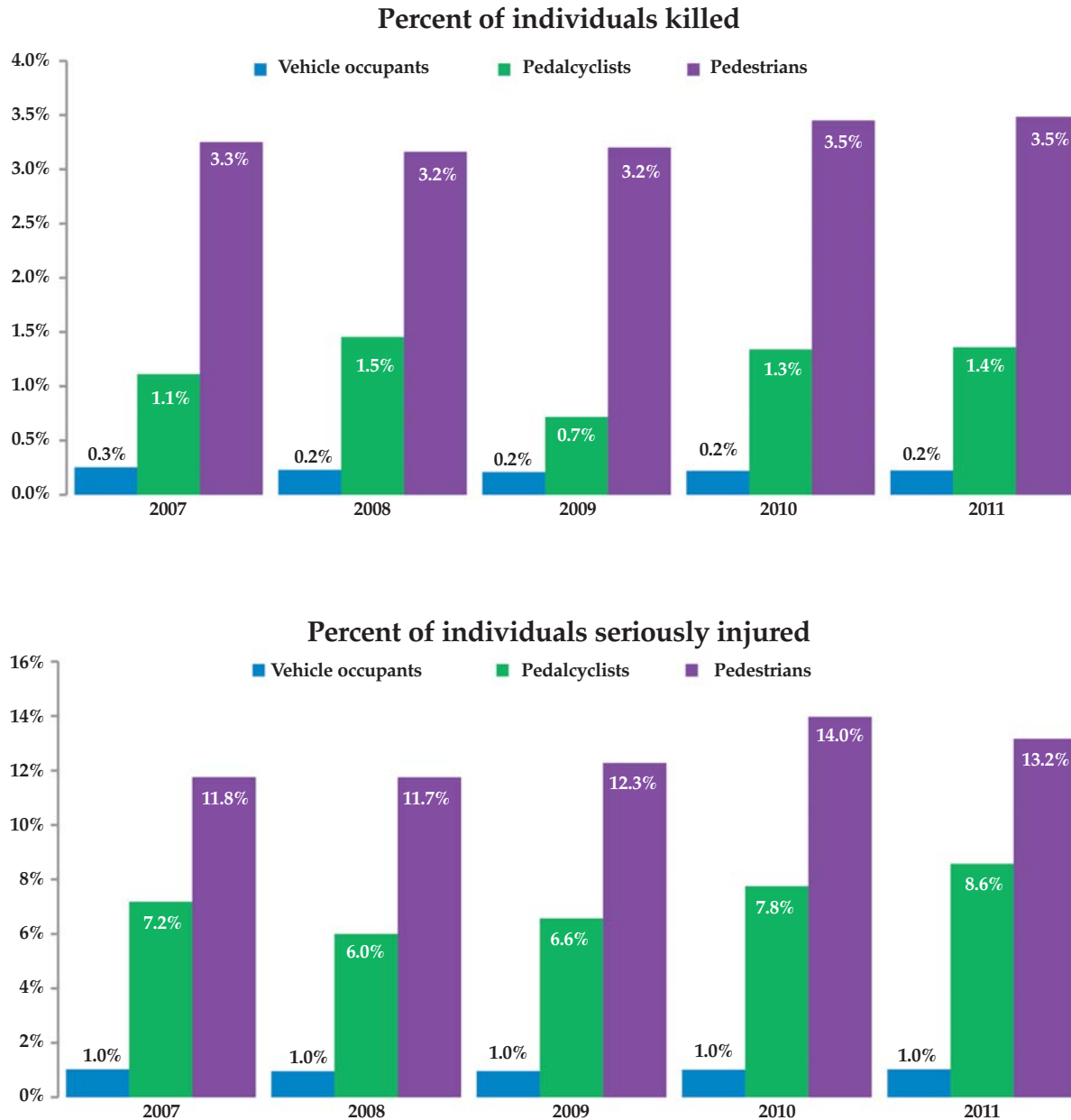
Sources: 2001-10: Fatality Analysis Reporting System; US Census Bureau; 2011: Indiana State Police  
 Note: FARS data for 2011 was not available at time of publication.

**GOAL: Reducing fatalities and serious injuries among non-motorists**

Since 2007, non-motorists (pedestrians and pedalcyclists) have represented only one percent of all individuals in traffic acci-

dents but nine percent of total traffic fatalities. Serious bodily injuries among pedestrians have increased.

Figure 12. Percent of individuals killed and seriously injured in Indiana crashes, by person type, 2007-2011



Source: Indiana State Police

Note: *Seriously injured* denotes an *incapacitating* injury from the crash report.

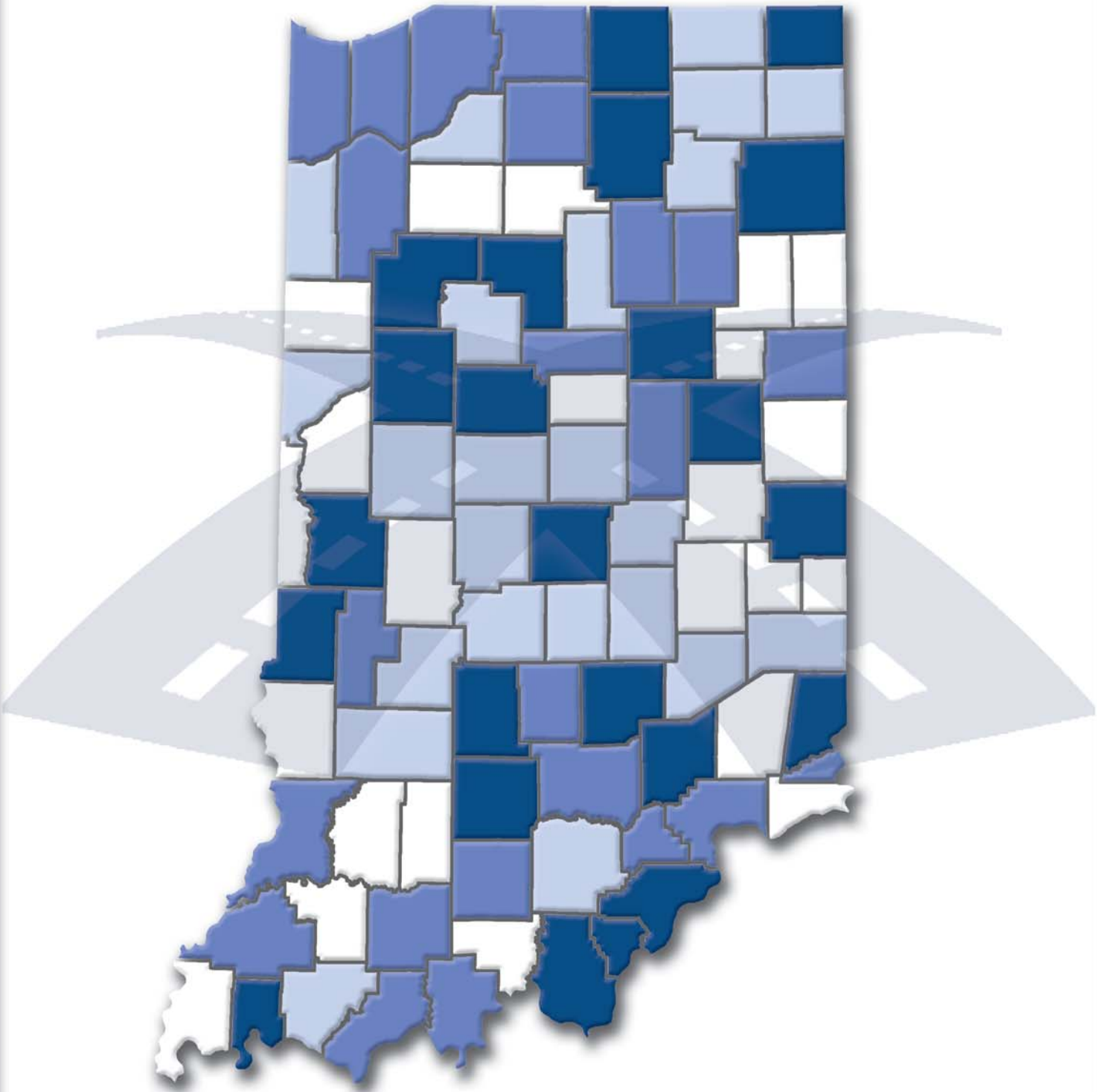
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# GENERAL TRENDS



## GENERAL TRENDS, 2011

After an 8.8 percent increase in traffic fatalities from 2009 to 2010, fatalities declined by less than 1 percent from 2010 to 2011. The rate of traffic fatalities per 100 million vehicle miles in Indiana continued a long running decline since 1997, with an annualized percent decline of 5.3 percent since 2007. The Indiana traffic fatality rate per 100 million vehicle miles continues to be lower than that of the United States, with the Indiana rate of 1.00 compared to 1.11 for the United States in 2010. Total collisions and fatal collisions in Indiana have also generally declined in absolute numbers since 2003 (earliest data available). Drivers killed in Indiana traffic collisions have generally made up about 70 percent of all fatalities since 2007. The number of vehicle occupants (drivers and passengers) and non-motorists injured in traffic collisions has generally declined over the last five years.

The number of collisions in Indiana (188,132) declined by 2.5 percent from 2010 to 2011, with the winter months typically having the lowest incidence of fatal collisions but highest for total collisions. Fatal collisions declined 3.9 percent from 2010 to 2011, with summer months having the highest incidence. March and April of 2011 exhibited the greatest percent decreases in fatal collisions over the same months of 2010. Rates of *alcohol-impaired* collisions have been consistently higher during holidays than during non-holiday periods. From 2007 to 2011, holiday crashes were 1.8 times more likely to have involved an alcohol-impaired driver versus non-holiday periods. The *New Year's*, *Memorial Day*, and *Labor Day* holidays of 2011 had the highest alcohol-impaired crash rates. The percent of holiday fatal collisions that involved an *alcohol-impaired* driver also peaked in 2011 for *New Year's*, *Memorial Day*, and *Christmas*.

In contrast, the number of individuals injured in *alcohol-impaired* collisions in 2011 increased significantly over 2007 levels but declined from injury counts in 2010. There were over 6 *alcohol-impaired* fatal collisions per 100 million vehicle miles in 2011, down from the 2010 rate but still higher than rates going back to 2007. Nearly one in five traffic fatalities in 2011 occurred in an *alcohol-impaired* collision, an increase over the 2009 and 2010 rates. Since 2007, about 37 percent of all *alcohol-impaired* fatalities occurred within the incorporated limits of cities and towns in Indiana, slightly higher than the share for all traffic fatalities in the state.

*Dangerous driving* actions in Indiana collisions (*aggressive driving*, *speeding*, and *disregarding traffic signals*) have been relatively consistent since 2007. However, since 2007 the number of fatalities in aggressive driving collisions increased at an annualized rate of 15.4 percent; from 2010 to 2011, the number increased 86 percent. Fatality levels in *speeding* and *disregarded traffic signal* collisions remained roughly the same over the last five years. As a share of all fatal collisions, those involving *dangerous driving* have remained relatively consistent. In 2011, 4.5 percent of fatal collisions involved *aggressive driving*, 19.4 percent involved *speeding*, and 2.2 percent involved a driver disregarding a traffic signal.

The number (7) and percent (0.9 percent) of fatalities in collisions involving a *cell phone-distracted* driver reached 5-year highs in 2011. Over half of all *cell phone-distracted* fatalities occurred within city/town limits.

Table 4. Indiana traffic fatalities and fatality rates, 1997-2011

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
1997	935	5,872	15.92	3,924	23.83	5,444	17.17	69	1.36
1998	982	5,908	16.62	3,976	24.7	5,475	17.94	69	1.42
1999	1,020	5,943	17.16	3,856	26.45	5,605	18.2	70	1.46
2000	886	6,092	14.54	3,976	22.28	5,689	15.57	71	1.25
2001	909	6,128	14.83	4,117	22.08	5,752	15.8	72	1.27
2002	792	6,156	12.87	4,221	18.76	5,800	13.65	73	1.09
2003	833	6,197	13.44	4,536	18.36	5,884	14.16	73	1.15
2004	947	6,233	15.19	4,521	20.95	5,678	16.68	73	1.30
2005	938	6,279	14.94	4,246	22.09	5,103	18.38	72	1.31
2006	902	6,333	14.24	4,246	21.24	5,103	17.68	71	1.27
2007	898	6,380	14.08	4,309	20.84	5,103	17.6	73	1.23
2008	820	6,425	12.76	5,550	14.77	6,053	13.55	74	1.11
2009	693	6,459	10.73	5,550	12.49	6,053	11.45	77	0.90
2010	754	6,491	11.62	5,550	13.58	5,903	12.77	76	1.00
2011	749	6,517	11.49	5,747	13.03	6,468	11.58	76	0.99
<b>Annual percent change</b>									
			-2.3%		-4.2%		-2.8%		-2.2%
			-4.9%		-11.1%		-9.9%		-5.3%
			-1.1%		-4.0%		-9.3%		-0.9%

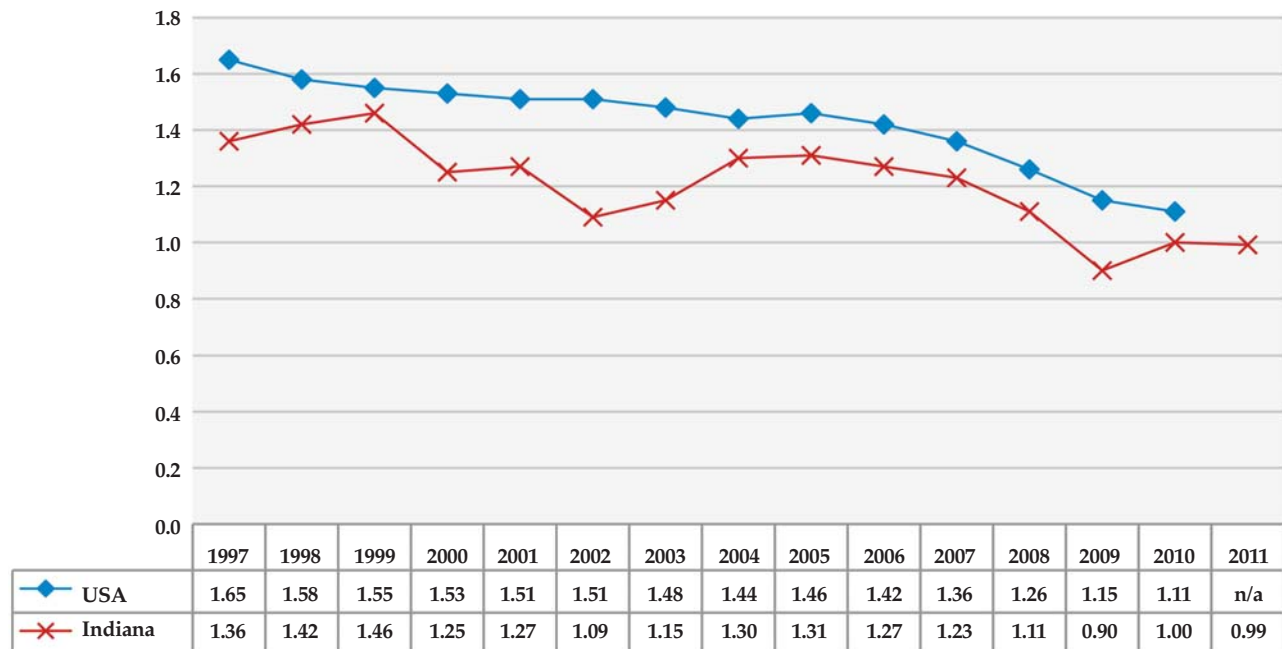
Sources:

1997-2010: Fatality Analysis Reporting System

2011: Indiana State Police, US Census Bureau, Indiana Bureau of Motor Vehicles, Indiana Department of Transportation

Note: Vehicle miles travelled for 2011 is a provisional estimate provided by the Indiana Department of Transportation (subject to change).

Figure 13. Traffic fatalities per 100M vehicle miles travelled (VMT), 1997-2011



Sources:

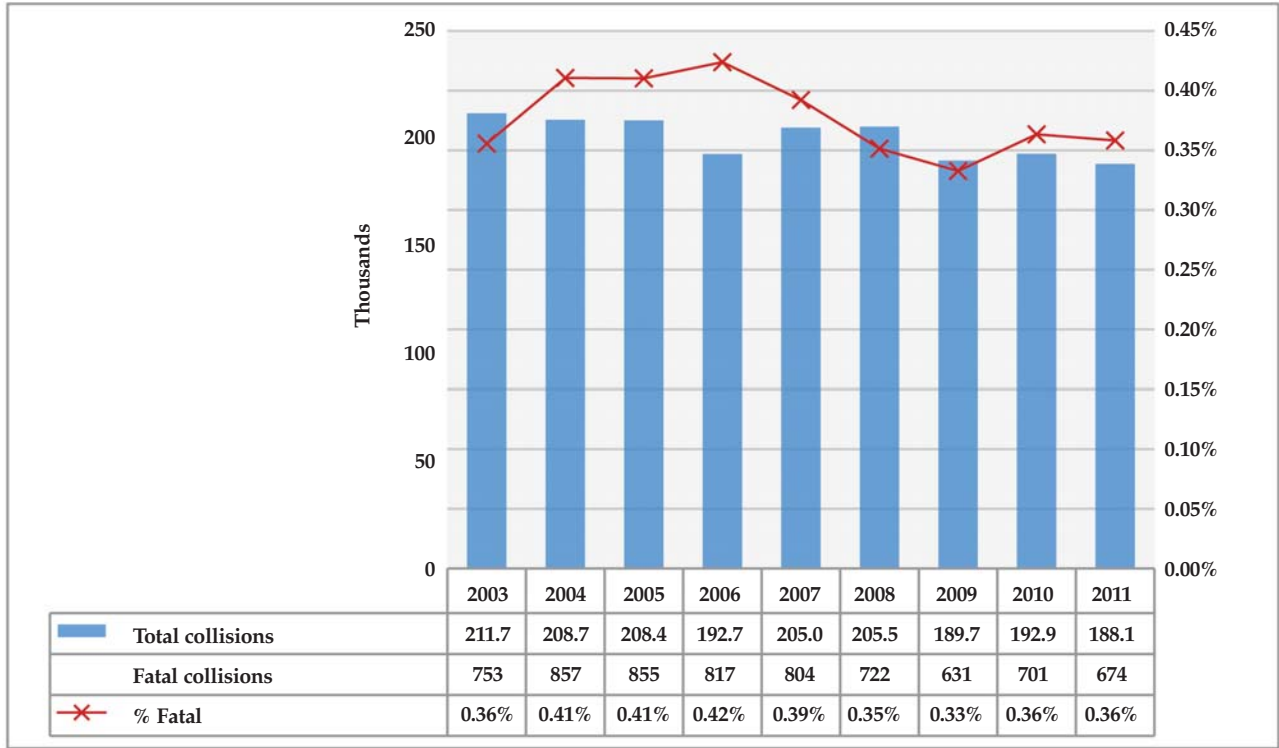
Fatalities (1997-2010): Fatality Analysis Reporting System

Fatalities (2011): Indiana State Police

VMT: Indiana Department of Transportation

Note: VMT for 2011 is a provisional estimate provided by the Indiana Department of Transportation (subject to change).

Figure 14. Indiana collisions and fatal collisions, 2003-2011



Source: Indiana State Police

Table 5. Total and fatal traffic collisions by month, 2007-2011

Month	Total collisions					Fatal collisions				
	2007	2008	2009	2010	2011	2007	2008	2009	2010	2011
Jan	18,023	18,770	20,219	17,060	18,828	59	43	50	45	56
Feb	19,743	20,656	15,255	17,381	16,249	52	66	48	41	42
Mar	15,573	15,641	12,753	13,377	12,743	67	47	39	50	34
Apr	14,778	14,263	14,055	14,166	13,698	62	39	46	62	43
May	15,819	16,044	15,402	15,397	15,126	86	54	50	58	59
Jun	15,104	15,470	14,887	15,432	14,829	70	60	66	63	58
Jul	15,440	14,804	14,118	15,040	14,206	70	75	68	72	76
Aug	16,355	14,877	14,468	14,918	14,992	86	76	63	71	71
Sep	16,068	14,793	14,615	14,905	15,139	77	73	64	56	64
Oct	18,242	17,252	17,576	16,992	17,281	75	56	47	71	65
Nov	19,054	18,662	16,924	17,223	18,401	56	75	43	57	49
Dec	20,800	24,220	19,389	20,995	16,640	44	58	47	55	57
<b>Annual</b>	<b>204,999</b>	<b>205,452</b>	<b>189,661</b>	<b>192,886</b>	<b>188,132</b>	<b>804</b>	<b>722</b>	<b>631</b>	<b>701</b>	<b>674</b>
High	Dec	Dec	Jan	Dec	Jan	May/Aug	Aug	Jul	Jul	Jul
Low	Apr	Apr	Mar	Mar	Mar	Dec	Apr	Mar	Feb	Mar

Source: Indiana State Police





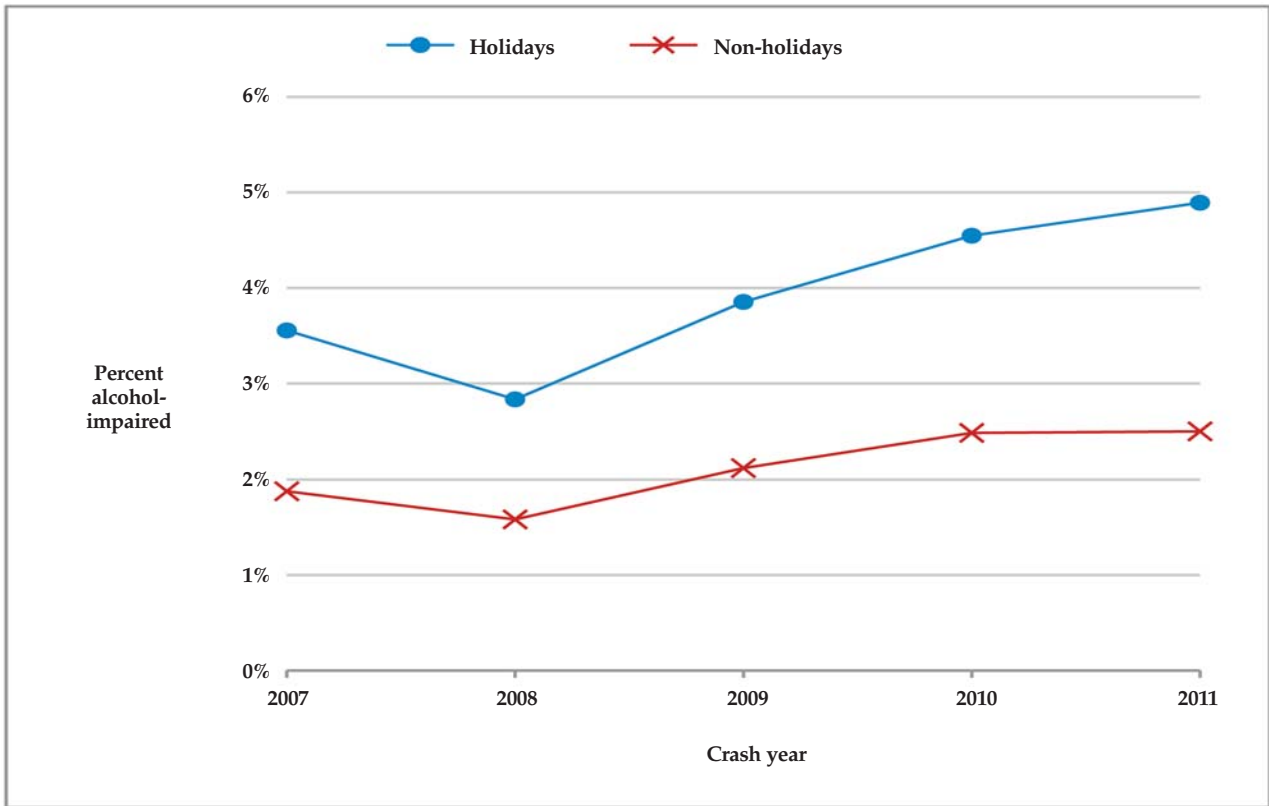
Table 6. Collisions, fatal collisions, and fatalities on legal holidays, by alcohol involvement, 2007-2011

Holiday	Begin	End	Collisions			Fatal collisions			Fatalities		
			Total	Alcohol-impaired	%	Total	Alcohol-impaired	%	Total	Alcohol-impaired	%
New Year's	2006-Dec-29	2007-Jan-02	1,298	66	5.1%	12	2	16.7%	12	2	16.7%
	2007-Dec-28	2008-Jan-02	2,411	45	1.9%	6	0	0.0%	7	0	0.0%
	2008-Dec-31	2009-Jan-05	1,399	49	3.5%	8	2	25.0%	10	3	30.0%
	2009-Dec-31	2010-Jan-04	1,252	64	5.1%	2	0	0.0%	2	0	0.0%
	2010-Dec-31	2011-Jan-03	686	53	7.7%	6	5	83.3%	7	6	85.7%
St. Patrick's Day	2007-Mar-16	2007-Mar-19	912	47	5.2%	4	3	75.0%	5	3	60.0%
	2008-Mar-14	2008-Mar-18	1,310	49	3.7%	1	0	0.0%	1	0	0.0%
	2009-Mar-13	2009-Mar-18	1,761	48	2.7%	6	0	0.0%	6	0	0.0%
	2010-Mar-16	2010-Mar-18	609	20	3.3%	1	1	100.0%	1	1	100.0%
	2011-Mar-16	2011-Mar-21	1,726	60	3.5%	5	1	20.0%	5	1	20.0%
Memorial Day	2007-May-25	2007-May-29	1,367	46	3.4%	8	3	37.5%	9	4	44.4%
	2008-May-23	2008-May-27	1,396	56	4.0%	6	2	33.3%	6	2	33.3%
	2009-May-22	2009-May-26	1,412	46	3.3%	5	0	0.0%	6	0	0.0%
	2010-May-28	2010-Jun-01	1,465	75	5.1%	11	5	45.5%	11	5	45.5%
	2011-May-27	2011-May-31	1,471	92	6.3%	7	4	57.1%	7	4	57.1%
Independence Day	2007-Jul-03	2007-Jul-05	610	32	5.2%	2	1	50.0%	2	1	50.0%
	2008-Jul-03	2008-Jul-07	1,301	54	4.2%	5	1	20.0%	5	1	20.0%
	2009-Jul-03	2009-Jul-06	1,007	60	6.0%	3	1	33.3%	3	1	33.3%
	2010-Jul-02	2010-Jul-05	1,059	58	5.5%	7	1	14.3%	7	1	14.3%
	2011-Jul-01	2011-Jul-05	1,337	71	5.3%	9	1	11.1%	10	1	10.0%
Labor Day	2007-Aug-31	2007-Sep-04	1,448	39	2.7%	9	2	22.2%	11	2	18.2%
	2008-Aug-29	2008-Sep-02	1,229	43	3.5%	9	4	44.4%	9	4	44.4%
	2009-Sep-04	2009-Sep-08	1,205	65	5.4%	4	2	50.0%	4	2	50.0%
	2010-Sep-03	2010-Sep-07	1,261	64	5.1%	9	2	22.2%	9	2	22.2%
	2011-Sep-02	2011-Sep-06	1,163	73	6.3%	10	1	10.0%	12	1	8.3%
Thanksgiving	2007-Nov-21	2007-Nov-26	2,320	56	2.4%	8	1	12.5%	10	1	10.0%
	2008-Nov-26	2008-Dec-01	2,128	54	2.5%	12	7	58.3%	15	10	66.7%
	2009-Nov-25	2009-Nov-30	1,971	73	3.7%	2	1	50.0%	2	1	50.0%
	2010-Nov-24	2010-Nov-29	2,001	80	4.0%	10	1	10.0%	10	1	10.0%
	2011-Nov-23	2011-Nov-28	2,072	78	3.8%	11	1	9.1%	11	1	9.1%
Christmas	2007-Dec-21	2007-Dec-26	1,975	67	3.4%	7	1	14.3%	9	1	11.1%
	2008-Dec-24	2008-Dec-29	2,368	43	1.8%	8	1	12.5%	13	1	7.7%
	2009-Dec-24	2009-Dec-28	1,937	71	3.7%	3	0	0.0%	3	0	0.0%
	2010-Dec-24	2010-Dec-27	974	31	3.2%	6	1	16.7%	6	1	16.7%
	2011-Dec-23	2011-Dec-26	804	26	3.2%	3	1	33.3%	3	1	33.3%
Non-holidays	2007		194,417	3,649	1.9%	760	156	20.5%	846	172	20.3%
	2008		194,732	3,081	1.6%	677	141	20.8%	761	155	20.4%
	2009		178,964	3,794	2.1%	601	114	19.0%	659	120	18.2%
	2010		184,272	4,585	2.5%	653	117	17.9%	705	121	17.2%
	2011		178,508	4,470	2.5%	623	121	19.4%	695	128	18.4%

Source: Indiana State Police

Note: See glossary for definition of alcohol-impaired.

Figure 15. Rates of alcohol-impaired driving collisions, holiday versus non-holiday periods, 2007-2011



Source: Indiana State Police

Table 7. Total traffic collisions and related injuries in Indiana, 2007-2011

Collisions, by severity								
	Severity	2007	2008	2009	2010	2011	Annualized % change 2007-11	% Change 2010-11
	Fatal	804	722	631	701	674	-4.3%	-3.9%
	Non-fatal injury	37,416	35,358	33,410	34,083	32,734	-3.3%	-4.0%
	Property damage	166,779	169,372	155,620	158,102	154,724	-1.9%	-2.1%
	<b>Total</b>	<b>204,999</b>	<b>205,452</b>	<b>189,661</b>	<b>192,886</b>	<b>188,132</b>	<b>-2.1%</b>	<b>-2.5%</b>
	<i>Fatal, per 100m VMT</i>	<i>1.08</i>	<i>0.99</i>	<i>0.81</i>	<i>0.97</i>	<i>0.89</i>	<i>-4.7%</i>	<i>-7.9%</i>
	<i>Total, per 100m VMT</i>	<i>276.11</i>	<i>280.99</i>	<i>244.67</i>	<i>266.58</i>	<i>249.00</i>	<i>-2.6%</i>	<i>-6.6%</i>
Injuries, by person type and injury status								
Person type	Injury status	2007	2008	2009	2010	2011	Annualized % change 2007-11	% Change 2010-11
Driver	Fatal	626	554	491	521	527	-4.2%	1.2%
	Incapacitating	2,490	2,343	2,162	2,272	2,362	-1.3%	4.0%
	Non-incapacitating	33,703	31,554	29,906	30,384	28,833	-3.8%	-5.1%
	<b>Subtotal</b>	<b>36,819</b>	<b>34,451</b>	<b>32,559</b>	<b>33,177</b>	<b>31,722</b>	<b>-3.7%</b>	<b>-4.4%</b>
Injured occupant	Fatal	199	185	139	157	146	-7.5%	-7.0%
	Incapacitating	870	750	742	839	723	-4.5%	-13.8%
	Non-incapacitating	12,853	11,710	11,510	11,733	10,995	-3.8%	-6.3%
	<b>Subtotal</b>	<b>13,922</b>	<b>12,645</b>	<b>12,391</b>	<b>12,729</b>	<b>11,864</b>	<b>-3.9%</b>	<b>-6.8%</b>
Non-motorist	Fatal	73	76	62	76	76	1.0%	0.0%
	Incapacitating	301	289	275	332	320	1.5%	-3.6%
	Non-incapacitating	2,248	2,191	1,994	2,051	2,011	-2.7%	-2.0%
	<b>Subtotal</b>	<b>2,622</b>	<b>2,556</b>	<b>2,331</b>	<b>2,459</b>	<b>2,407</b>	<b>-2.1%</b>	<b>-2.1%</b>
All	Fatal	898	815	692	754	749	-4.4%	-0.7%
	Incapacitating	3,661	3,382	3,179	3,443	3,405	-1.8%	-1.1%
	Non-incapacitating	48,804	45,455	43,410	44,168	41,839	-3.8%	-5.3%
	<b>Total</b>	<b>53,363</b>	<b>49,652</b>	<b>47,281</b>	<b>48,365</b>	<b>45,993</b>	<b>-3.6%</b>	<b>-4.9%</b>

Sources: Indiana State Police, Indiana Department of Transportation

## 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* status codes.

**Table 8. Alcohol-impaired collisions and related injuries in Indiana, 2007-2011**

Alcohol-impaired collisions, by severity								
	Severity	2007	2008	2009	2010	2011	Annualized % change 2007-11	% Change 2010-11
	Fatal	169	156	120	130	133	-5.8%	2.3%
	Non-fatal injury	1,143	881	1,217	1,517	1,434	5.8%	-5.5%
	Property damage	2,688	2,362	2,870	3,331	3,371	5.8%	1.2%
	<b>Total</b>	<b>4,000</b>	<b>3,399</b>	<b>4,207</b>	<b>4,978</b>	<b>4,938</b>	<b>5.4%</b>	<b>-0.8%</b>
	<i>Fatal, per 100m VMT</i>	<i>0.23</i>	<i>0.21</i>	<i>0.15</i>	<i>0.18</i>	<i>0.18</i>	<i>-6.2%</i>	<i>-2.0%</i>
	<i>Total, per 100m VMT</i>	<i>5.39</i>	<i>4.65</i>	<i>5.43</i>	<i>6.88</i>	<i>6.54</i>	<i>4.9%</i>	<i>-5.0%</i>

Injuries in alcohol-impaired collisions, by person type and injury status								
Person type	Injury status	2007	2008	2009	2010	2011	Annualized % change 2007-11	% Change 2010-11
Driver	Fatal	145	132	105	102	120	-4.6%	17.6%
	Incapacitating	83	50	110	181	157	17.3%	-13.3%
	Non-incapacitating	1,082	845	1,124	1,366	1,315	5.0%	-3.7%
	<b>Subtotal</b>	<b>1,310</b>	<b>1,027</b>	<b>1,339</b>	<b>1,649</b>	<b>1,592</b>	<b>5.0%</b>	<b>-3.5%</b>
Injured occupant	Fatal	38	34	20	24	19	-15.9%	-20.8%
	Incapacitating	47	39	39	68	53	3.0%	-22.1%
	Non-incapacitating	436	317	367	449	431	-0.3%	-4.0%
	<b>Subtotal</b>	<b>521</b>	<b>390</b>	<b>426</b>	<b>541</b>	<b>503</b>	<b>-0.9%</b>	<b>-7.0%</b>
Non-motorist	Fatal	3	7	2	9	1	-24.0%	-88.9%
	Incapacitating	4	11	4	15	15	39.2%	0.0%
	Non-incapacitating	16	10	22	25	25	11.8%	0.0%
	<b>Subtotal</b>	<b>23</b>	<b>28</b>	<b>28</b>	<b>49</b>	<b>41</b>	<b>15.5%</b>	<b>-16.3%</b>
All	Fatal	186	173	127	135	140	-6.9%	3.7%
	Incapacitating	134	100	153	264	225	13.8%	-14.8%
	Non-incapacitating	1,534	1,172	1,513	1,840	1,771	3.7%	-3.8%
	<b>Total</b>	<b>1,854</b>	<b>1,445</b>	<b>1,793</b>	<b>2,239</b>	<b>2,136</b>	<b>3.6%</b>	<b>-4.6%</b>

Sources: Indiana State Police, Indiana Department of Transportation

Notes:

See glossary for definition of *alcohol-impaired*.

*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* status codes.

Table 9. Aggressive driving collisions and related injuries in Indiana, 2007-2011

Aggressive driving collisions, by severity								
	Severity	2007	2008	2009	2010	2011	Annualized % change 2007-11	% Change 2010-11
	Fatal	22	24	22	20	30	8.1%	50.0%
	Non-fatal injury	984	983	982	1,125	1,120	3.3%	-0.4%
	Property damage	2,755	3,011	2,943	2,988	3,170	3.6%	6.1%
	<b>Total</b>	<b>3,761</b>	<b>4,018</b>	<b>3,947</b>	<b>4,133</b>	<b>4,320</b>	<b>3.5%</b>	<b>4.5%</b>
	<i>Fatal, per 100m VMT</i>	<i>0.03</i>	<i>0.03</i>	<i>0.03</i>	<i>0.03</i>	<i>0.04</i>	<i>7.6%</i>	<i>43.7%</i>
	<i>Total, per 100m VMT</i>	<i>5.07</i>	<i>5.50</i>	<i>5.09</i>	<i>5.71</i>	<i>5.72</i>	<i>3.1%</i>	<i>0.1%</i>
Injuries in aggressive driving collisions, by person type and injury status								
Person type	Injury status	2007	2008	2009	2010	2011	Annualized % change 2007-11	% Change 2010-11
Driver	Fatal	19	19	19	13	28	10.2%	115.4%
	Incapacitating	69	66	69	97	107	11.6%	10.3%
	Non-incapacitating	1,017	964	951	1,147	1,136	2.8%	-1.0%
	<b>Subtotal</b>	<b>1,105</b>	<b>1,049</b>	<b>1,039</b>	<b>1,257</b>	<b>1,271</b>	<b>3.6%</b>	<b>1.1%</b>
Injured occupant	Fatal	2	6	6	6	11	53.1%	83.3%
	Incapacitating	39	33	28	47	39	0.0%	-17.0%
	Non-incapacitating	460	485	412	540	448	-0.7%	-17.0%
	<b>Subtotal</b>	<b>501</b>	<b>524</b>	<b>446</b>	<b>593</b>	<b>498</b>	<b>-0.2%</b>	<b>-16.0%</b>
Non-motorist	Fatal	1	5	0	2	0	-100.0%	-100.0%
	Incapacitating	2	2	5	1	5	25.7%	400.0%
	Non-incapacitating	16	23	32	21	21	7.0%	0.0%
	<b>Subtotal</b>	<b>19</b>	<b>30</b>	<b>37</b>	<b>24</b>	<b>26</b>	<b>8.2%</b>	<b>8.3%</b>
All	Fatal	22	30	25	21	39	15.4%	85.7%
	Incapacitating	110	101	102	145	151	8.2%	4.1%
	Non-incapacitating	1,493	1,472	1,395	1,708	1,605	1.8%	-6.0%
	<b>Total</b>	<b>1,625</b>	<b>1,603</b>	<b>1,522</b>	<b>1,874</b>	<b>1,795</b>	<b>2.5%</b>	<b>-4.2%</b>

Sources: Indiana State Police, Indiana Department of Transportation

## 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* status codes.

Table 10. Speeding collisions and related injuries in Indiana, 2007-2011

Speeding collisions, by severity								
	Severity	2007	2008	2009	2010	2011	Annualized % change 2007-11	% Change 2010-11
	Fatal	165	188	136	136	131	-5.6%	-3.7%
	Non-fatal injury	4,377	4,711	4,117	4,143	4,104	-1.6%	-0.9%
	Property damage	13,950	17,921	13,998	14,271	13,282	-1.2%	-6.9%
	<b>Total</b>	<b>18,492</b>	<b>22,820</b>	<b>18,251</b>	<b>18,550</b>	<b>17,517</b>	<b>-1.3%</b>	<b>-5.6%</b>
	<i>Fatal, per 100m VMT</i>	<i>0.22</i>	<i>0.26</i>	<i>0.18</i>	<i>0.19</i>	<i>0.17</i>	<i>-6.0%</i>	<i>-7.8%</i>
	<i>Total, per 100m VMT</i>	<i>24.91</i>	<i>31.21</i>	<i>23.54</i>	<i>25.64</i>	<i>23.18</i>	<i>-1.8%</i>	<i>-9.6%</i>
Injuries in speeding collisions, by person type and injury status								
Person type	Injury status	2007	2008	2009	2010	2011	Annualized % change 2007-11	% Change 2010-11
Driver	Fatal	136	153	115	98	105	-6.3%	7.1%
	Incapacitating	375	428	359	380	410	2.3%	7.9%
	Non-incapacitating	3,949	4,271	3,678	3,754	3,735	-1.4%	-0.5%
	<b>Subtotal</b>	<b>4,460</b>	<b>4,852</b>	<b>4,152</b>	<b>4,232</b>	<b>4,250</b>	<b>-1.2%</b>	<b>0.4%</b>
Injured occupant	Fatal	47	67	40	41	38	-5.2%	-7.3%
	Incapacitating	171	144	147	171	150	-3.2%	-12.3%
	Non-incapacitating	1,818	1,835	1,676	1,583	1,459	-5.4%	-7.8%
	<b>Subtotal</b>	<b>2,036</b>	<b>2,046</b>	<b>1,863</b>	<b>1,795</b>	<b>1,647</b>	<b>-5.2%</b>	<b>-8.2%</b>
Non-motorist	Fatal	4	5	3	6	7	15.0%	16.7%
	Incapacitating	13	13	8	15	18	8.5%	20.0%
	Non-incapacitating	73	68	79	78	78	1.7%	0.0%
	<b>Subtotal</b>	<b>90</b>	<b>86</b>	<b>90</b>	<b>99</b>	<b>103</b>	<b>3.4%</b>	<b>4.0%</b>
All	Fatal	187	225	158	145	150	-5.4%	3.4%
	Incapacitating	559	585	514	566	578	0.8%	2.1%
	Non-incapacitating	5,840	6,174	5,433	5,415	5,272	-2.5%	-2.6%
	<b>Total</b>	<b>6,586</b>	<b>6,984</b>	<b>6,105</b>	<b>6,126</b>	<b>6,000</b>	<b>-2.3%</b>	<b>-2.1%</b>

Sources: Indiana State Police, Indiana Department of Transportation

Notes:

See glossary for definition of *speeding*.

*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* status codes.

Table 11. Disregarded traffic signal collisions and related injuries in Indiana, 2007-2011

Disregarded traffic signal collisions, by severity								
	Severity	2007	2008	2009	2010	2011	Annualized % change 2007-11	% Change 2010-11
	Fatal	23	16	14	15	15	-10.1%	0.0%
	Non-fatal injury	1,772	1,590	1,506	1,519	1,451	-4.9%	-4.5%
	Property damage	3,002	2,737	2,463	2,477	2,489	-4.6%	0.5%
	<b>Total</b>	<b>4,797</b>	<b>4,343</b>	<b>3,983</b>	<b>4,011</b>	<b>3,955</b>	<b>-4.7%</b>	<b>-1.4%</b>
	<i>Fatal, per 100m VMT</i>	<i>0.03</i>	<i>0.02</i>	<i>0.02</i>	<i>0.02</i>	<i>0.02</i>	<i>-10.5%</i>	<i>-4.2%</i>
	<i>Total, per 100m VMT</i>	<i>6.46</i>	<i>5.94</i>	<i>5.14</i>	<i>5.54</i>	<i>5.23</i>	<i>-5.1%</i>	<i>-5.6%</i>
Injuries in disregarded traffic signal collisions, by person type and injury status								
Person type	Injury status	2007	2008	2009	2010	2011	Annualized % change 2007-11	% Change 2010-11
Driver	Fatal	18	12	12	12	12	-9.6%	0.0%
	Incapacitating	114	109	95	82	107	-1.6%	30.5%
	Non-incapacitating	1,895	1,683	1,613	1,662	1,533	-5.2%	-7.8%
	<b>Subtotal</b>	<b>2,027</b>	<b>1,804</b>	<b>1,720</b>	<b>1,756</b>	<b>1,652</b>	<b>-5.0%</b>	<b>-5.9%</b>
Injured occupant	Fatal	8	4	3	3	5	-11.1%	66.7%
	Incapacitating	39	53	26	46	35	-2.7%	-23.9%
	Non-incapacitating	809	680	683	669	591	-7.5%	-11.7%
	<b>Subtotal</b>	<b>856</b>	<b>737</b>	<b>712</b>	<b>718</b>	<b>631</b>	<b>-7.3%</b>	<b>-12.1%</b>
Non-motorist	Fatal	1	0	1	0	0	-100.0%	n/a
	Incapacitating	2	0	2	0	0	-100.0%	n/a
	Non-incapacitating	19	18	12	11	14	-7.4%	27.3%
	<b>Subtotal</b>	<b>22</b>	<b>18</b>	<b>15</b>	<b>11</b>	<b>14</b>	<b>-10.7%</b>	<b>27.3%</b>
All	Fatal	27	16	16	15	17	-10.9%	13.3%
	Incapacitating	155	162	123	128	142	-2.2%	10.9%
	Non-incapacitating	2,723	2,381	2,308	2,342	2,138	-5.9%	-8.7%
	<b>Total</b>	<b>2,905</b>	<b>2,559</b>	<b>2,447</b>	<b>2,485</b>	<b>2,297</b>	<b>-5.7%</b>	<b>-7.6%</b>

Sources: Indiana State Police, Indiana Department of Transportation

## Notes:

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* status codes.

Table 12. Hit-and-run collisions and related injuries in Indiana, 2007-2011

Hit-and-run collisions, by severity								
	Severity	2007	2008	2009	2010	2011	Annualized % change 2007-11	% Change 2010-11
	Fatal	19	26	22	28	28	10.2%	0.0%
	Non-fatal injury	2,055	1,982	1,932	1,850	1,825	-2.9%	-1.4%
	Property damage	23,146	23,113	21,395	21,285	20,780	-2.7%	-2.4%
	<b>Total</b>	<b>25,220</b>	<b>25,121</b>	<b>23,349</b>	<b>23,163</b>	<b>22,633</b>	<b>-2.7%</b>	<b>-2.3%</b>
	<i>Fatal, per 100m VMT</i>	<i>0.03</i>	<i>0.04</i>	<i>0.03</i>	<i>0.04</i>	<i>0.04</i>	<i>9.7%</i>	<i>-4.2%</i>
	<i>Total, per 100m VMT</i>	<i>33.97</i>	<i>34.36</i>	<i>30.12</i>	<i>32.01</i>	<i>29.96</i>	<i>-3.1%</i>	<i>-6.4%</i>

Injuries in hit-and-run collisions, by person type and injury status								
Person type	Injury status	2007	2008	2009	2010	2011	Annualized % change 2007-11	% Change 2010-11
Driver	Fatal	5	7	7	10	3	-12.0%	-70.0%
	Incapacitating	59	70	68	56	47	-5.5%	-16.1%
	Non-incapacitating	1,459	1,374	1,311	1,213	1,212	-4.5%	-0.1%
	<b>Subtotal</b>	<b>1,523</b>	<b>1,451</b>	<b>1,386</b>	<b>1,279</b>	<b>1,262</b>	<b>-4.6%</b>	<b>-1.3%</b>
Injured occupant	Fatal	2	9	5	4	3	10.7%	-25.0%
	Incapacitating	36	28	40	35	32	-2.9%	-8.6%
	Non-incapacitating	649	557	559	550	502	-6.2%	-8.7%
	<b>Subtotal</b>	<b>687</b>	<b>594</b>	<b>604</b>	<b>589</b>	<b>537</b>	<b>-6.0%</b>	<b>-8.8%</b>
Non-motorist	Fatal	12	13	11	14	22	16.4%	57.1%
	Incapacitating	43	48	38	44	43	0.0%	-2.3%
	Non-incapacitating	333	336	340	364	367	2.5%	0.8%
	<b>Subtotal</b>	<b>388</b>	<b>397</b>	<b>389</b>	<b>422</b>	<b>432</b>	<b>2.7%</b>	<b>2.4%</b>
All	Fatal	19	29	23	28	28	10.2%	0.0%
	Incapacitating	138	146	146	135	122	-3.0%	-9.6%
	Non-incapacitating	2,441	2,267	2,210	2,127	2,081	-3.9%	-2.2%
	<b>Total</b>	<b>2,598</b>	<b>2,442</b>	<b>2,379</b>	<b>2,290</b>	<b>2,231</b>	<b>-3.7%</b>	<b>-2.6%</b>

Sources: Indiana State Police, Indiana Department of Transportation

Notes:

See glossary for definition of *hit-and-run*.

*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* status codes.



Table 13. Cell phone-distracted collisions and related injuries in Indiana, 2007-2011

Cell phone-distracted collisions, by severity								
	Severity	2007	2008	2009	2010	2011	Annualized % change 2007-11	% Change 2010-11
	Fatal	1	4	2	4	5	49.5%	25.0%
	Non-fatal injury	290	289	313	334	319	2.4%	-4.5%
	Property damage	975	911	904	946	844	-3.5%	-10.8%
	<b>Total</b>	<b>1,266</b>	<b>1,204</b>	<b>1,219</b>	<b>1,284</b>	<b>1,168</b>	<b>-2.0%</b>	<b>-9.0%</b>
	<i>Fatal, per 100m VMT</i>	<i>0.00</i>	<i>0.01</i>	<i>0.00</i>	<i>0.01</i>	<i>0.01</i>	48.9%	19.7%
	<i>Total, per 100m VMT</i>	<i>1.71</i>	<i>1.65</i>	<i>1.57</i>	<i>1.77</i>	<i>1.55</i>	-2.4%	-12.9%
Cell phone-distracted collisions, by person type and injury status								
Person type	Injury status	2007	2008	2009	2010	2011	Annualized % change 2007-11	% Change 2010-11
Driver	Fatal	0	4	2	5	4	n/a	-20.0%
	Incapacitating	12	21	15	19	18	10.7%	-5.3%
	Non-incapacitating	285	275	306	306	290	0.4%	-5.2%
	<b>Subtotal</b>	<b>297</b>	<b>300</b>	<b>323</b>	<b>330</b>	<b>312</b>	<b>1.2%</b>	<b>-5.5%</b>
Injured occupant	Fatal	1	0	0	0	1	0.0%	n/a
	Incapacitating	6	5	7	3	1	-36.1%	-66.7%
	Non-incapacitating	79	77	80	110	106	7.6%	-3.6%
	<b>Subtotal</b>	<b>86</b>	<b>82</b>	<b>87</b>	<b>113</b>	<b>108</b>	<b>5.9%</b>	<b>-4.4%</b>
Non-motorist	Fatal	0	0	0	0	2	n/a	n/a
	Incapacitating	2	1	0	3	3	10.7%	0.0%
	Non-incapacitating	7	13	7	11	11	12.0%	0.0%
	<b>Subtotal</b>	<b>9</b>	<b>14</b>	<b>7</b>	<b>14</b>	<b>16</b>	<b>15.5%</b>	<b>14.3%</b>
All	Fatal	1	4	2	5	7	62.7%	40.0%
	Incapacitating	20	27	22	25	22	2.4%	-12.0%
	Non-incapacitating	371	365	393	427	407	2.3%	-4.7%
	<b>Total</b>	<b>392</b>	<b>396</b>	<b>417</b>	<b>457</b>	<b>436</b>	<b>2.7%</b>	<b>-4.6%</b>

Sources: Indiana State Police, Indiana Department of Transportation

Notes:

See glossary for definition of *cell phone-distracted*.*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* status codes.

**Table 14. Crashes and injuries as a percent of total crashes and injuries, by collision action, 2007-2011**

Action	2007	2008	2009	2010	2011
<b>Fatal collisions</b>					
Alcohol-impaired	21.0%	21.6%	19.0%	18.5%	19.7%
Aggressive driving	2.7%	3.3%	3.5%	2.9%	4.5%
Speeding	20.5%	26.0%	21.6%	19.4%	19.4%
Disregarded traffic signal	2.9%	2.2%	2.2%	2.1%	2.2%
Hit-and-run	2.4%	3.6%	3.5%	4.0%	4.2%
Cell phone-distracted	0.1%	0.6%	0.3%	0.6%	0.7%
<b>Total collisions</b>					
Alcohol-impaired	2.0%	1.7%	2.2%	2.6%	2.6%
Aggressive driving	1.8%	2.0%	2.1%	2.1%	2.3%
Speeding	9.0%	11.1%	9.6%	9.6%	9.3%
Disregarded traffic signal	2.3%	2.1%	2.1%	2.1%	2.1%
Hit-and-run	12.3%	12.2%	12.3%	12.0%	12.0%
Cell phone-distracted	0.6%	0.6%	0.6%	0.7%	0.6%
<b>Fatal injuries</b>					
Alcohol-impaired	20.7%	21.2%	18.4%	17.9%	18.7%
Aggressive driving	2.4%	3.7%	3.6%	2.8%	5.2%
Speeding	20.8%	27.6%	22.8%	19.2%	20.0%
Disregarded traffic signal	3.0%	2.0%	2.3%	2.0%	2.3%
Hit-and-run	2.1%	3.6%	3.3%	3.7%	3.7%
Cell phone-distracted	0.1%	0.5%	0.3%	0.7%	0.9%
<b>Total injuries</b>					
Alcohol-impaired	3.5%	2.9%	3.8%	4.6%	4.6%
Aggressive driving	3.0%	3.2%	3.2%	3.9%	3.9%
Speeding	12.3%	14.1%	12.9%	12.7%	13.0%
Disregarded traffic signal	5.4%	5.2%	5.2%	5.1%	5.0%
Hit-and-run	4.9%	4.9%	5.0%	4.7%	4.9%
Cell phone-distracted	0.7%	0.8%	0.9%	0.9%	0.9%

Source: Indiana State Police

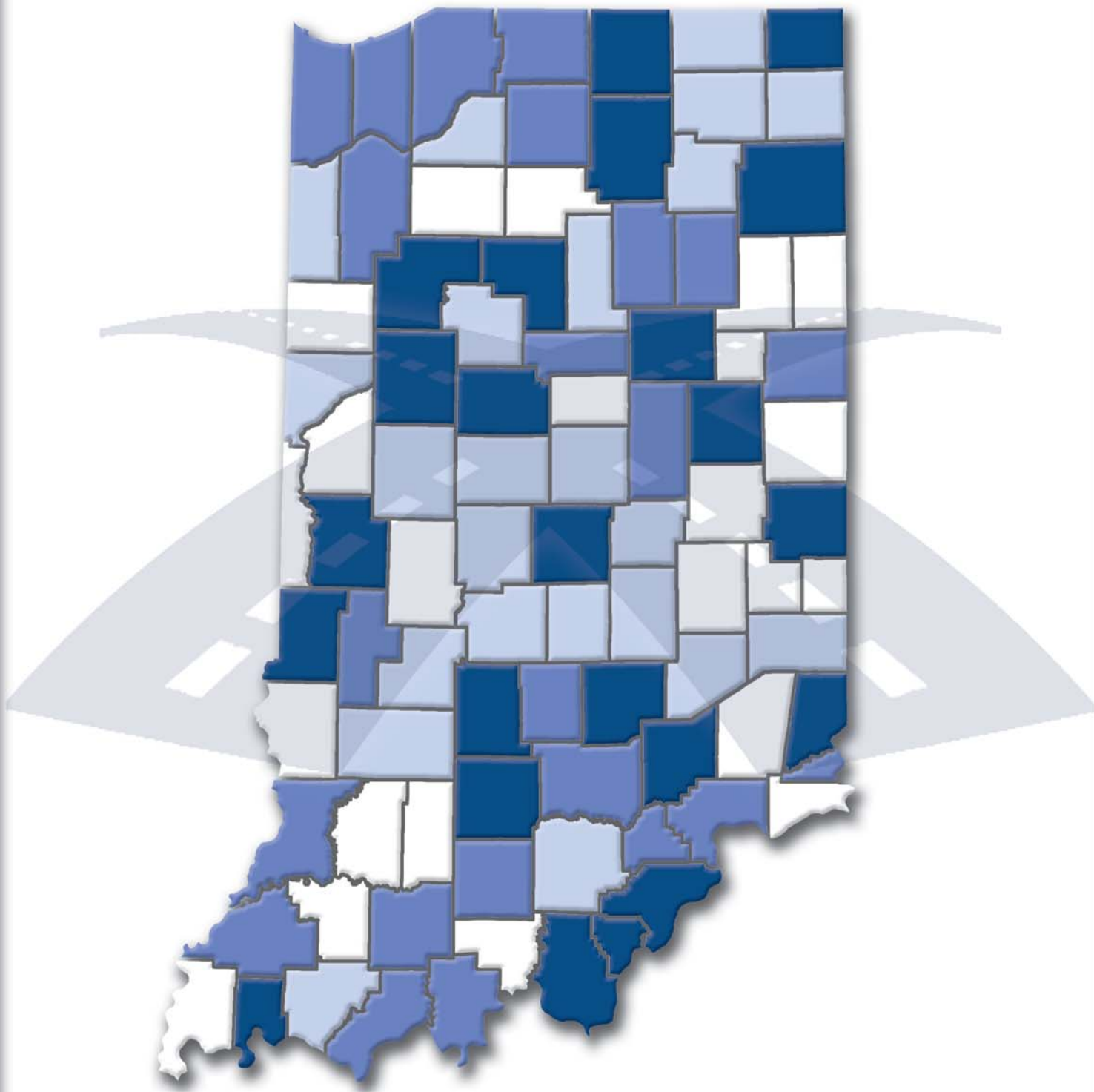
Table 15. Traffic fatalities occurring within incorporated limits of a city/town, by crash type, 2007-2011

Inside city limits?	2007	2008	2009	2010	2011
<b>All fatalities</b>					
No (outside)	636	524	471	491	494
Yes (inside)	262	291	221	263	255
<b>Total</b>	<b>898</b>	<b>815</b>	<b>692</b>	<b>754</b>	<b>749</b>
<i>% Inside</i>	29.2%	35.7%	31.9%	34.9%	34.0%
<b>Alcohol-impaired fatalities</b>					
No	137	91	84	69	99
Yes	49	82	43	66	41
<b>Total</b>	<b>186</b>	<b>173</b>	<b>127</b>	<b>135</b>	<b>140</b>
<i>% Inside</i>	26.3%	47.4%	33.9%	48.9%	29.3%
<b>Aggressive driving fatalities</b>					
No	9	15	17	10	26
Yes	13	15	8	11	13
<b>Total</b>	<b>22</b>	<b>30</b>	<b>25</b>	<b>21</b>	<b>39</b>
<i>% Inside</i>	59.1%	50.0%	32.0%	52.4%	33.3%
<b>Speeding fatalities</b>					
No	131	128	104	90	93
Yes	56	97	54	55	57
<b>Total</b>	<b>187</b>	<b>225</b>	<b>158</b>	<b>145</b>	<b>150</b>
<i>% Inside</i>	29.9%	43.1%	34.2%	37.9%	38.0%
<b>Disregarded traffic signal fatalities</b>					
No	8	3	3	2	3
Yes	19	13	13	13	14
<b>Total</b>	<b>27</b>	<b>16</b>	<b>16</b>	<b>15</b>	<b>17</b>
<i>% Inside</i>	70.4%	81.3%	81.3%	86.7%	82.4%
<b>Hit-and-run fatalities</b>					
No	7	13	12	5	8
Yes	12	16	11	23	20
<b>Total</b>	<b>19</b>	<b>29</b>	<b>23</b>	<b>28</b>	<b>28</b>
<i>% Inside</i>	63.2%	55.2%	47.8%	82.1%	71.4%
<b>Cell phone-distracted fatalities</b>					
No	1	2	1	5	3
Yes	0	2	1	0	4
<b>Total</b>	<b>1</b>	<b>4</b>	<b>2</b>	<b>5</b>	<b>7</b>
<i>% Inside</i>	0.0%	50.0%	50.0%	0.0%	57.1%

Sources: Indiana State Police



# COLLISIONS



## COLLISIONS, 2011

This section provides an analysis of Indiana collisions in 2011, based on various parameters that describe the conditions and circumstances of those collisions as indicated by the reporting officer. Also presented is a time series analysis of collisions, including a discussion of collisions involving non-motorists (pedestrians and pedalcyclists). 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.). Other collision variables examined include month and time of day, locale, road class, environmental conditions, and other external factors. This section concludes with a detailed analysis of collisions that occurred in work zones.

### ALL COLLISIONS

In 2011, 188,132 traffic collisions occurred in Indiana, representing a 2.5 percent decrease from 2010. The number of fatal collisions decreased 3.9 percent, from 701 in 2010 to 674 in 2011. The rate of fatal collisions per 1,000 total collisions remained steady at 3.6 in 2011.

### Collisions involving non-motorists

In 2011, the number of Indiana collisions involving pedalcyclists decreased 8.5 percent, from 1,031 in 2010 to 943 in 2011. The rate of pedalcyclist collisions per 1,000 total collisions decreased from 5.3 in 2010 to 5.0 in 2011. The number of Indiana collisions involving pedestrians decreased slightly from 1,725 in 2010 to 1,717 in 2011, while the rate of collisions involving pedestrians increased from 8.9 to 9.1 per 1,000 total collisions between 2010 and 2011.

### Collisions by month and time of day

The largest number of collisions in 2011 occurred in late fall months of October and November and winter months (December, January, and February). January accounted for the largest monthly total collisions (18,828). Monthly counts for fatal collisions were highest in the summer, with the largest numbers occurring in the months of July (76) and August (71). The number of collisions occurring in the month of December decreased 21 percent between 2010 and 2011, while the number of fatal collisions occurring in the month of January increased 24 percent during this same time period. In 2011, when looking at time of day and day of week, the highest proportion of fatal collisions occurred on Fridays between the hours of midnight and 3am (1.1 percent) and Mondays and Thursdays between the hours of 3am and 6am (1 percent).

On average, monthly counts of daytime collisions are higher than counts of collisions occurring at night. *Day* is defined as 6am - 5:59pm, and *night* is defined as 6pm - 5:59am. The average monthly count of collisions occurring during day hours in 2011 was 10,669 compared to an average count of 5,009 for collisions occurring during night hours. Both daytime and nighttime total collision counts exceeded monthly averages during January, October, November, and December.

Monthly average fatal collision counts are also higher during the day (30 fatal collisions) than at night (27 fatal collisions). Daytime fatal collisions during January, July, August, October, and December exceeded the monthly daytime average, while fatal collisions that occurred at night were above average during the months of May through September. The lowest number of nighttime fatal collisions occurred in the month of February (14), and the lowest number of daytime fatal collisions occurred in the month of March (14).

### Collision circumstances

Alcohol-impaired collisions represented 2.6 percent (4,938) of all collisions and 20 percent (133/674) of fatal collisions. Collisions that involved speeding accounted for 9.3 percent of total collisions, and hit-and-run collisions accounted for 12 percent of total collisions in 2011. The highest proportions of speed-related collisions occurred during the months of January and February, likely due in part to individuals driving at speeds unsafe for weather conditions. The highest proportions of alcohol-impaired collisions occurred during the spring and summer.

When looking at time of day, proportions of alcohol-impaired collisions were consistently greater between the hours of midnight and 6am across all days of the week. Similarly, proportions of speed-related collisions were greater during overnight and early morning hours.

### Collisions by primary factor

*Driver unsafe actions* accounted for the largest number (111,298 of 188,132) of collisions in 2011. Within the *driver unsafe actions* category, primary factors classified as *following too closely* (28,882) and *failure to yield right of way* (28,814) accounted for the greatest number of collisions. Rates of serious injury collisions were higher among collisions with primary factors attributed to driver actions (21 per 1,000 collisions) than those with primary factors attributed to vehicles or the environment. In 2011, 51 in every 1,000 collisions where the driver was identified with a *cognitive/physical impairment* were serious injury collisions.

Fatal collisions were less likely than non-fatal collisions to have been attributable to *driver unsafe actions* (50 percent of fatal collisions compared to 59 percent in non-fatal collisions). *Driver loss of control* accounted for 28 percent of all fatal collisions, but only 8 percent of non-fatal collisions. Environmental and vehicular circumstances were less likely to have been the primary factor in fatal collisions (2 percent) than in non-fatal collisions (13 percent).

### Geography of collisions (locale and road class)

Collision counts in 2011 were higher in Indiana *urban* (124,699) and *suburban* (22,826) locales than in surrounding *exurban* (10,492) and *rural* (12,594) areas. Conversely, 2011 rates of serious injury collisions per 1,000 collisions were higher in *exurban* (34) and *rural* (37) locales than in areas designated as urban (15) and *suburban* (30). While rates of serious injury collisions leveled off in *urban* locales since 2007, serious injury collision rates decreased in other locales between 2010 and 2011.

Collision counts were highest on *local/city roads* (84,666 in 2011) and lowest on *interstates* (14,348 in 2011). Rates of serious injury collisions were higher on *county roads*, *state roads*, and *US routes* than on other road types. Serious injury collision rates leveled off on *local/city roads* over the past few years, but increased on *county roads* and *state roads* since 2008.

### Environmental conditions and other external factors

Environmental conditions including traffic control types, road surface, light conditions, and weather often contribute to the

likelihood of a collision. Collisions that involved traffic control types identified as *no passing zone* (38.3), *person directing traffic* (35.7), and *flashing signal* (35.7) had the highest rate of serious injury collisions. Collisions that involved road surface conditions reported as *muddy* and *loose material on road* had the highest rate of serious injury collisions per 1,000 collisions (29.0 and 23.4, respectively).

When looking at light conditions identified by the reporting officer, collisions that occurred on roads that were *dark (not lighted)* had the highest rates of serious injury collisions (24.8 per 1,000 collisions). Nearly 30 percent of all fatal collisions (201/674) occurred on *dark (not lighted)* roads. Among weather-related conditions, *severe cross wind* (36.1) and *fog/smoke/smog* (28.0) had the highest rates of serious injury collisions per 1,000 collisions.

### Economic cost of collisions

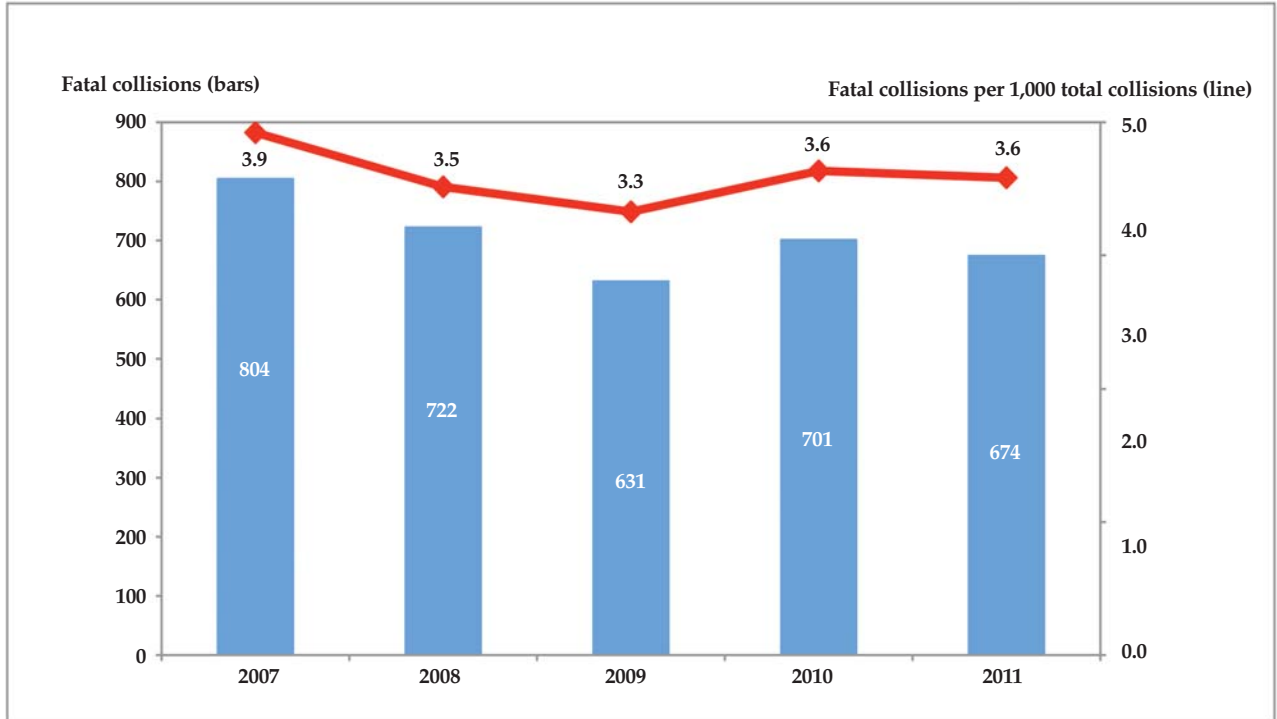
In 2011, the total estimated economic cost of Indiana traffic collisions was just under \$4.4 billion. On average, the cost of each collision is estimated to be \$23,288. The economic cost of speeding collisions totaled more than \$561 million, with an average collision cost of \$32,015. Alcohol-impaired collisions had an economic cost of \$466 million, with an average collision cost of \$58,333. The average cost of aggressive driving collisions was \$37,892. The total cost of work zone collisions exceeded \$116 million, with an average collision cost of \$24,034.

Table 16. Indiana traffic collisions, by collision severity, 2007-2011

	2007	2008	2009	2010	2011	% Change ('10-'11)
<b>All collisions</b>	<b>204,999</b>	<b>205,452</b>	<b>189,661</b>	<b>192,886</b>	<b>188,132</b>	<b>-2.5%</b>
Fatal	804	722	631	701	674	-3.9%
Incapacitating	3,075	2,898	2,732	2,912	2,858	-1.9%
Non-incapacitating	34,341	32,460	30,678	31,171	29,876	-4.2%
Property damage only	166,779	169,372	155,620	158,102	154,724	-2.1%

Source: Indiana State Police

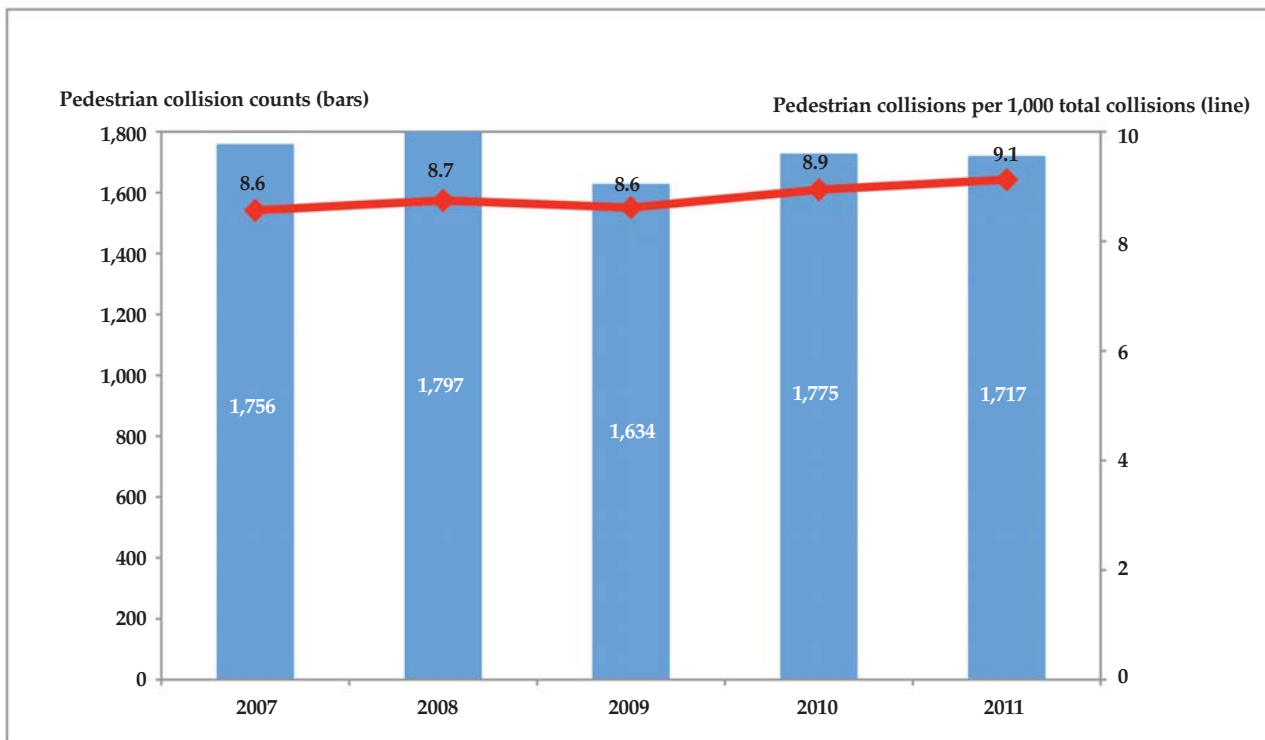
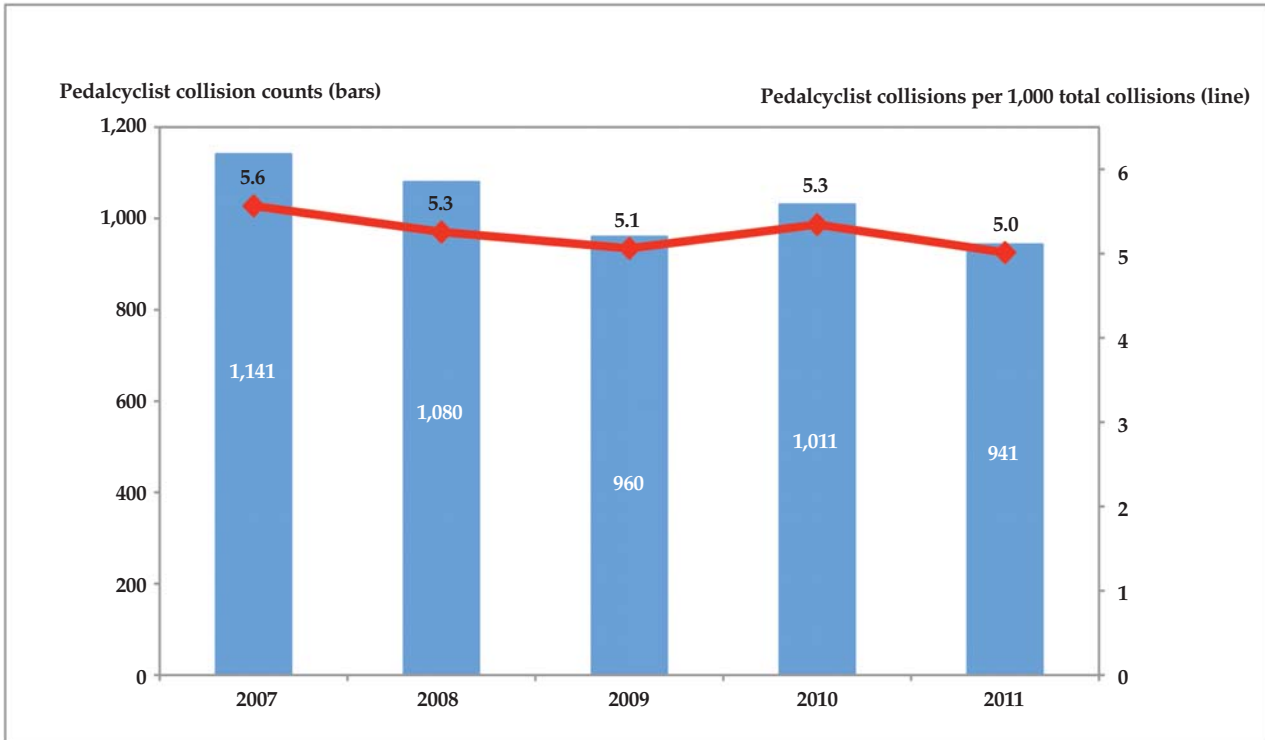
Figure 16. Indiana fatal traffic collisions, 2007-2011



Source: Indiana State Police



**Figure 17. Indiana collisions involving pedalcyclists and pedestrians, 2007-2011**



Source: Indiana State Police

Notes:

*Pedalcyclist* collisions are defined as collisions that involve one or more *pedalcyclists*.

*Pedestrian* collisions are defined as collisions that involve one or more *pedestrians*.

**Table 17. Indiana traffic collisions, by month, 2010-2011**

Month	Fatal collisions			Total collisions			% Change ('10-'11)	
	2010	2011	Change	2010	2011	Change	Fatal	Total
Jan	45	56	11	17,060	18,828	1,768	24.4%	10.4%
Feb	41	42	1	17,381	16,249	-1,132	2.4%	-6.5%
Mar	50	34	-16	13,377	12,743	-634	-32.0%	-4.7%
Apr	62	43	-19	14,166	13,698	-468	-30.6%	-3.3%
May	58	59	1	15,397	15,126	-271	1.7%	-1.8%
Jun	63	58	-5	15,432	14,829	-603	-7.9%	-3.9%
Jul	72	76	4	15,040	14,206	-834	5.6%	-5.5%
Aug	71	71	0	14,918	14,992	74	0.0%	0.5%
Sep	56	64	8	14,905	15,139	234	14.3%	1.6%
Oct	71	65	-6	16,992	17,281	289	-8.5%	1.7%
Nov	57	49	-8	17,223	18,401	1,178	-14.0%	6.8%
Dec	55	57	2	20,995	16,640	-4,355	3.6%	-20.7%
<b>Total</b>	<b>701</b>	<b>674</b>	<b>-27</b>	<b>192,886</b>	<b>188,132</b>	<b>-4,754</b>	<b>-3.9%</b>	<b>-2.5%</b>

Source: Indiana State Police

**Table 18. Indiana traffic collisions, by day of the week, and time of day, 2011**

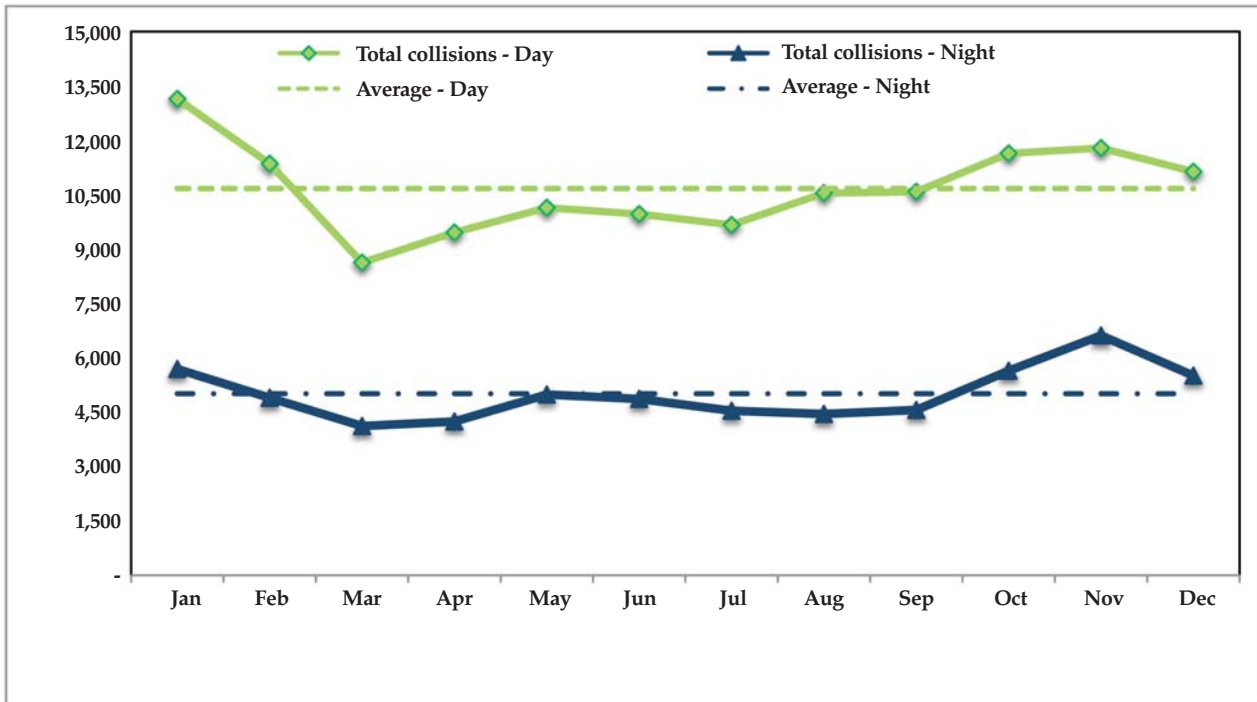
Day of week	Time of day								All hours
	12am-2:59am	3am-5:59am	6am-8:59am	9am-11:59am	12pm-2:59pm	3pm-5:59pm	6pm-8:59pm	9pm-11:59pm	
<b>Total collisions</b>	<b>8,360</b>	<b>8,718</b>	<b>23,353</b>	<b>24,552</b>	<b>34,600</b>	<b>45,520</b>	<b>26,937</b>	<b>16,090</b>	<b>188,130</b>
Sunday	1,947	1,501	1,241	2,133	3,663	3,473	3,087	1,868	18,913
Monday	787	1,034	3,843	3,496	5,023	7,159	3,779	1,967	27,088
Tuesday	855	988	4,292	3,900	5,044	7,560	3,793	2,027	28,459
Wednesday	886	1,123	3,996	3,410	4,744	6,906	3,856	2,014	26,935
Thursday	895	1,146	3,935	3,821	5,478	7,770	3,941	2,218	29,204
Friday	1,071	1,298	4,093	4,014	5,944	8,160	4,576	3,056	32,212
Saturday	1,919	1,628	1,953	3,778	4,704	4,492	3,905	2,940	25,319
<b>Fatal collisions</b>	<b>61</b>	<b>65</b>	<b>69</b>	<b>67</b>	<b>98</b>	<b>121</b>	<b>106</b>	<b>87</b>	<b>674</b>
Sunday	16	12	8	6	7	17	19	12	97
Monday	6	10	14	11	13	14	11	13	92
Tuesday	6	7	9	7	18	22	19	17	105
Wednesday	5	8	11	13	8	20	11	11	87
Thursday	6	11	5	16	23	16	9	7	93
Friday	12	7	10	5	19	17	18	13	101
Saturday	10	10	12	9	10	15	19	14	99
<b>% Fatal</b>	<b>0.7%</b>	<b>0.7%</b>	<b>0.3%</b>	<b>0.3%</b>	<b>0.3%</b>	<b>0.3%</b>	<b>0.4%</b>	<b>0.5%</b>	<b>0.4%</b>
Sunday	0.8%	0.8%	0.6%	0.3%	0.2%	0.5%	0.6%	0.6%	0.5%
Monday	0.8%	1.0%	0.4%	0.3%	0.3%	0.2%	0.3%	0.7%	0.3%
Tuesday	0.7%	0.7%	0.2%	0.2%	0.4%	0.3%	0.5%	0.8%	0.4%
Wednesday	0.6%	0.7%	0.3%	0.4%	0.2%	0.3%	0.3%	0.5%	0.3%
Thursday	0.7%	1.0%	0.1%	0.4%	0.4%	0.2%	0.2%	0.3%	0.3%
Friday	1.1%	0.5%	0.2%	0.1%	0.3%	0.2%	0.4%	0.4%	0.3%
Saturday	0.5%	0.6%	0.6%	0.2%	0.2%	0.3%	0.5%	0.5%	0.4%

Source: Indiana State Police

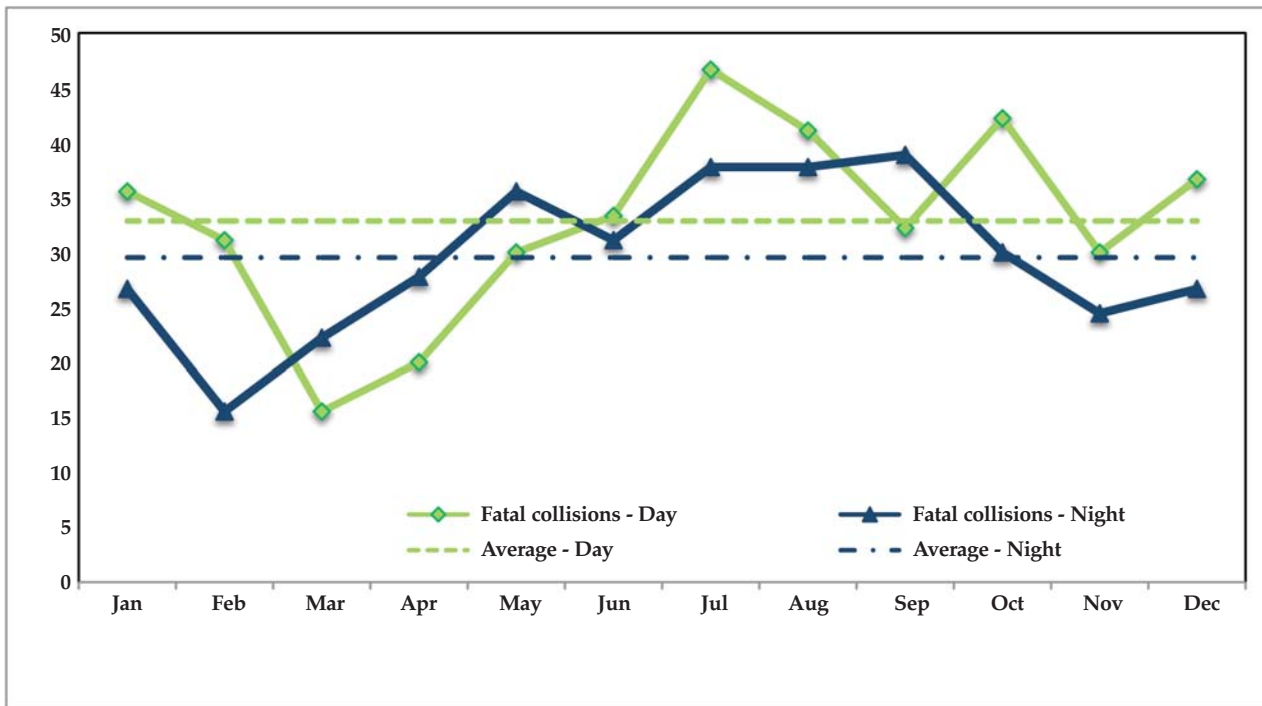
Note: Limited to collisions where day and time were reported.



**Figure 18. Indiana traffic collisions, by month and day/night, 2011**



**Figure 19. Indiana fatal collisions by month and day/night, 2011**



Source: Indiana State Police

Note: Day is defined as 6am - 5:59pm. Night is defined as 6pm - 5:59am.

**Table 19. Collisions, by month and collision circumstances, 2011**

Month	Total	Alcohol-impaired		Aggressive driving		Speed-related		Disregard signal		Hit-and-run		Distracted, any type		Distracted, cell phone	
		Count	As % month total	Count	As % month total	Count	As % month total	Count	As % month total	Count	As % month total	Count	As % month total	Count	As % month total
Jan	18,828	422	2.2	457	2.4	4,434	23.6	326	1.7	2,114	11.2	618	3.3	86	0.5
Feb	16,249	340	2.1	454	2.8	3,079	18.9	320	2.0	2,076	12.8	579	3.6	69	0.4
Mar	12,743	392	3.1	278	2.2	817	6.4	279	2.2	1,746	13.7	727	5.7	117	0.9
Apr	13,698	380	2.8	309	2.3	841	6.1	287	2.1	1,689	12.3	740	5.4	101	0.7
May	15,126	457	3.0	364	2.4	921	6.1	333	2.2	1,848	12.2	862	5.7	122	0.8
Jun	14,829	380	2.6	333	2.2	833	5.6	324	2.2	1,807	12.2	882	5.9	121	0.8
Jul	14,206	427	3.0	302	2.1	726	5.1	319	2.2	1,860	13.1	796	5.6	104	0.7
Aug	14,992	438	2.9	321	2.1	785	5.2	337	2.2	1,855	12.4	893	6.0	82	0.5
Sep	15,139	425	2.8	358	2.4	1,038	6.9	356	2.4	1,851	12.2	839	5.5	86	0.6
Oct	17,281	458	2.7	366	2.1	959	5.5	382	2.2	1,987	11.5	860	5.0	86	0.5
Nov	18,401	398	2.2	399	2.2	1,508	8.2	362	2.0	1,921	10.4	737	4.0	94	0.5
Dec	16,640	421	2.5	379	2.3	1,576	9.5	330	2.0	1,879	11.3	853	5.1	10	0.1
<b>Total</b>	<b>188,132</b>	<b>4,938</b>	<b>2.6</b>	<b>4,320</b>	<b>2.3</b>	<b>17,517</b>	<b>9.3</b>	<b>3,955</b>	<b>2.1</b>	<b>22,633</b>	<b>12.0</b>	<b>9,386</b>	<b>5.0</b>	<b>1,078</b>	<b>0.6</b>

Source: Indiana State Police

Note: Color comparisons are applied within collision circumstance categories.



**Table 20. Indiana traffic collisions by day, hour, and collision circumstances, 2011**

Day	Time	Total	Alcohol-impaired		Aggressive driving		Speed-related		Disregard signal		Hit-and-run		Distracted, any type		Distracted, cell phone	
			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	1,821	128	7.0	39	2.1	243	13.3	25	1.4	340	18.7	71	3.9	17	0.9
	6am - 11:59am	7,339	8	0.1	164	2.2	697	9.5	209	2.8	646	8.8	325	4.4	29	0.4
	12pm - 5:59pm	12,182	98	0.8	282	2.3	825	6.8	246	2.0	1,177	9.7	699	5.7	59	0.5
	6pm - 11:59pm	5,746	229	4.0	130	2.3	531	9.2	124	2.2	822	14.3	273	4.8	40	0.7
Tue	12am - 5:59am	1,843	144	7.8	36	2.0	279	15.1	18	1.0	341	18.5	66	3.6	6	0.3
	6am - 11:59am	8,192	28	0.3	209	2.6	1,071	13.1	195	2.4	686	8.4	366	4.5	38	0.5
	12pm - 5:59pm	12,604	82	0.7	341	2.7	1,181	9.4	261	2.1	1,214	9.6	701	5.6	82	0.7
	6pm - 11:59pm	5,820	209	3.6	139	2.4	541	9.3	109	1.9	841	14.5	268	4.6	44	0.8
Wed	12am - 5:59am	2,009	151	7.5	33	1.6	327	16.3	21	1.0	376	18.7	66	3.3	7	0.3
	6am - 11:59am	7,406	34	0.5	164	2.2	671	9.1	186	2.5	655	8.8	351	4.7	28	0.4
	12pm - 5:59pm	11,650	95	0.8	261	2.2	725	6.2	226	1.9	1,089	9.3	637	5.5	62	0.5
	6pm - 11:59pm	5,870	233	4.0	117	2.0	413	7.0	120	2.0	812	13.8	311	5.3	51	0.9
Thu	12am - 5:59am	2,041	169	8.3	36	1.8	234	11.5	31	1.5	389	19.1	91	4.5	21	1.0
	6am - 11:59am	7,756	34	0.4	158	2.0	807	10.4	188	2.4	657	8.5	355	4.6	35	0.5
	12pm - 5:59pm	13,248	86	0.6	331	2.5	1,384	10.4	252	1.9	1,229	9.3	635	4.8	76	0.6
	6pm - 11:59pm	6,159	238	3.9	141	2.3	598	9.7	125	2.0	877	14.2	315	5.1	51	0.8
Fri	12am - 5:59am	2,369	261	11.0	66	2.8	377	15.9	36	1.5	512	21.6	71	3.0	18	0.8
	6am - 11:59am	8,107	40	0.5	201	2.5	936	11.5	205	2.5	679	8.4	363	4.5	39	0.5
	12pm - 5:59pm	14,104	123	0.9	314	2.2	812	5.8	252	1.8	1,304	9.2	807	5.7	72	0.5
	6pm - 11:59pm	7,632	333	4.4	165	2.2	548	7.2	138	1.8	1,143	15.0	383	5.0	69	0.9
Sat	12am - 5:59am	3,547	578	16.3	70	2.0	483	13.6	53	1.5	1,009	28.4	157	4.4	50	1.4
	6am - 11:59am	5,731	78	1.4	118	2.1	724	12.6	129	2.3	626	10.9	259	4.5	16	0.3
	12pm - 5:59pm	9,196	123	1.3	218	2.4	677	7.4	216	2.3	1,070	11.6	526	5.7	45	0.5
	6pm - 11:59pm	6,845	405	5.9	152	2.2	563	8.2	150	2.2	1,096	16.0	311	4.5	56	0.8
Sun	12am - 5:59am	3,448	597	17.3	92	2.7	504	14.6	47	1.4	1,044	30.3	131	3.8	32	0.9
	6am - 11:59am	3,374	81	2.4	66	2.0	399	11.8	109	3.2	482	14.3	177	5.2	21	0.6
	12pm - 5:59pm	7,136	100	1.4	192	2.7	568	8.0	201	2.8	846	11.9	443	6.2	59	0.8
	6pm - 11:59pm	4,955	253	5.1	85	1.7	399	8.1	83	1.7	669	13.5	228	4.6	45	0.9
Mon	(Total)	27,088	463	1.7	615	2.3	2,296	8.5	604	2.2	2,985	11.0	1,368	5.1	169	0.6
Tue	(Total)	28,459	463	1.6	725	2.5	3,072	10.8	583	2.0	3,082	10.8	1,401	4.9	188	0.7
Wed	(Total)	26,935	513	1.9	575	2.1	2,136	7.9	553	2.1	2,932	10.9	1,365	5.1	185	0.6
Thu	(Total)	29,204	527	1.8	666	2.3	3,023	10.4	596	2.0	3,152	10.8	1,396	4.8	207	0.7
Fri	(Total)	32,212	757	2.4	746	2.3	2,673	8.3	631	2.0	3,638	11.3	1,624	5.0	215	0.6
Sat	(Total)	25,319	1,184	4.7	558	2.2	2,447	9.7	548	2.2	3,801	15.0	1,253	4.9	171	0.7
Sun	(Total)	18,913	1,031	5.5	435	2.3	1,870	9.9	440	2.3	3,041	16.1	979	5.2	149	0.7
<b>TOTAL</b>		<b>188,130</b>	<b>4,938</b>	<b>2.6</b>	<b>4,320</b>	<b>2.3</b>	<b>17,517</b>	<b>9.3</b>	<b>3,955</b>	<b>2.1</b>	<b>22,631</b>	<b>12.0</b>	<b>9,386</b>	<b>5.0</b>	<b>1,284</b>	<b>0.7</b>

Source: Indiana State Police

Notes:

Daily totals exclude collisions with invalid time reported.

Color comparisons are applied within collision circumstance categories.



**Table 21. Indiana collisions, by primary factor and collision severity, 2011**

Primary factor	Collisions, by severity					Serious injury per 1,000 collisions
	Total	Fatal	Incapacitating	Non-incapacitating	Property damage	
<b>Driver: Unsafe actions</b>	<b>111,298</b>	<b>335</b>	<b>1,518</b>	<b>18,630</b>	<b>90,815</b>	<b>16.6</b>
Failure to yield right of way	28,814	92	556	6,668	21,498	22.5
Following too closely	28,882	23	208	5,070	23,581	8.0
Unsafe backing	17,383	2	26	341	17,014	1.6
Speed too fast for weather conditions	9,123	16	112	1,369	7,626	14.0
Disregard signal/reg sign	6,617	33	194	2,152	4,238	34.3
Improper lane usage	5,173	10	30	425	4,708	7.7
Improper turning	5,919	3	24	405	5,487	4.6
Unsafe speed	4,033	60	188	1,154	2,631	61.5
Left of center	3,225	86	145	796	2,198	71.6
Improper passing	1,890	5	32	191	1,662	19.6
Wrong way on one way	239	5	3	59	172	33.5
<b>Driver: Loss of control</b>	<b>16,231</b>	<b>206</b>	<b>542</b>	<b>3,709</b>	<b>11,774</b>	<b>46.1</b>
Off road	13,175	178	471	3,086	9,440	49.3
Overcorrecting/oversteering	3,051	28	71	622	2,330	32.4
Jackknifing	5	0	0	1	4	0.0
<b>Driver: Distractions</b>	<b>6,373</b>	<b>10</b>	<b>82</b>	<b>1,248</b>	<b>5,033</b>	<b>14.4</b>
Unspecified distraction	5,856	10	71	1,129	4,646	13.8
Cell phone/other electronic device	500	0	9	116	375	18.0
Passenger distraction	17	0	2	3	12	117.6
<b>Driver: Cognitive/physical impairment</b>	<b>2,838</b>	<b>16</b>	<b>128</b>	<b>888</b>	<b>1,806</b>	<b>50.7</b>
Alcoholic beverages	552	0	14	132	406	25.4
Driver asleep or fatigued	1,397	6	35	384	972	29.3
Driver illness	802	10	77	346	369	108.5
Prescription drugs	39	0	0	12	27	0.0
Illegal drugs	48	0	2	14	32	41.7
<b>Driver: Miscellaneous factors</b>	<b>16,186</b>	<b>71</b>	<b>327</b>	<b>2,677</b>	<b>13,111</b>	<b>24.6</b>
Influenced by pedestrian action	873	32	113	586	142	166.1
Violation of license restriction	8	0	0	3	5	0.0
Other (unspecified)	15,205	39	214	2,086	12,866	16.6
(Driver not a factor)	100	0	0	2	98	0.0
Driver factors (all)	152,926	638	2,597	27,152	122,539	21.2
Vehicle factors	5,184	11	65	697	4,411	14.7
Environmental factors	24,127	15	144	1,472	22,496	6.6
Unknown	5,895	10	52	555	5,278	10.5
<b>All collisions</b>	<b>188,132</b>	<b>674</b>	<b>2,858</b>	<b>29,876</b>	<b>154,724</b>	<b>18.8</b>

Source: Indiana State Police

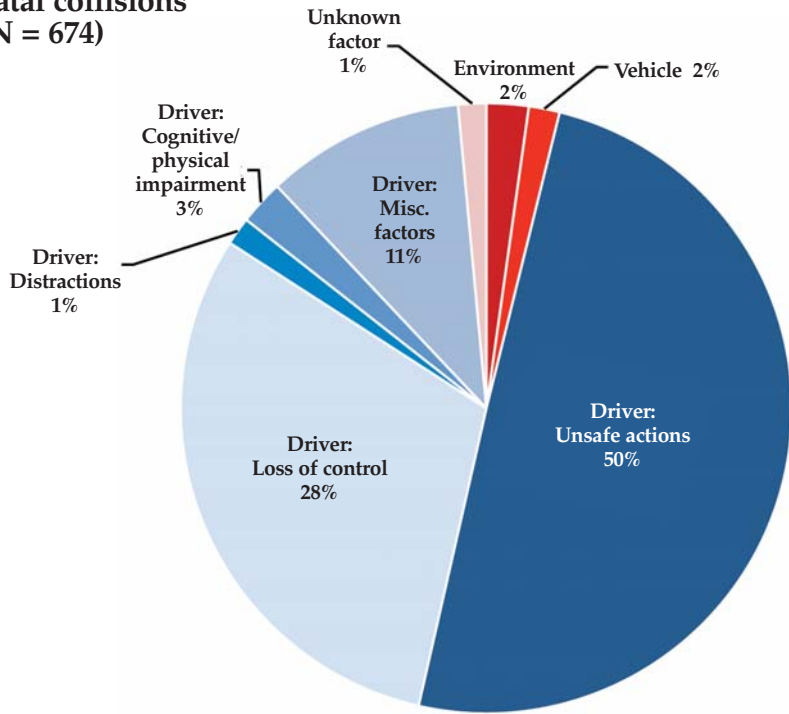
**Notes:**

*Serious injury* collisions are those with at least one *fatal* or *incapacitating* injury.

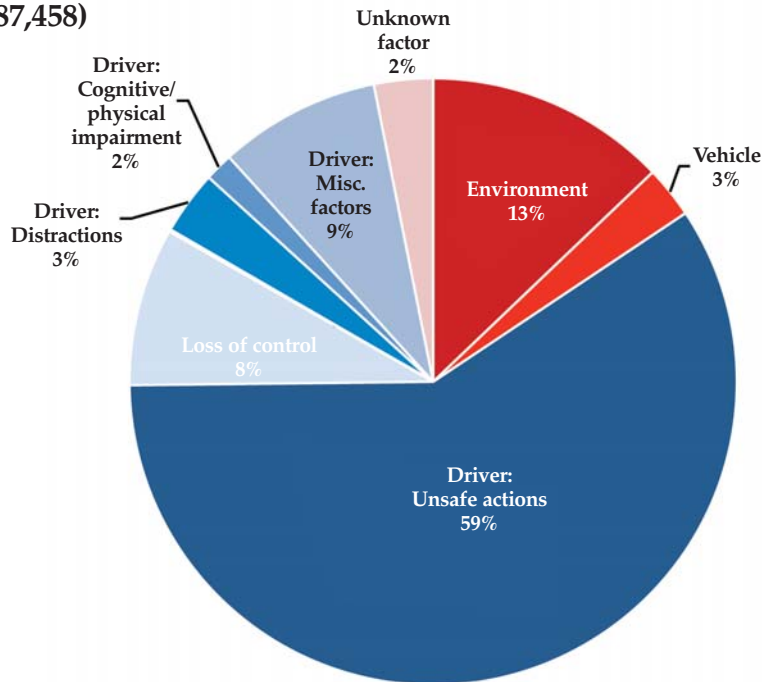
*Non-incapacitating* collisions are those with at least one *non-incapacitating* or *possible* injury.

Figure 20. Indiana traffic collisions, by primary factor and severity, 2011

**Fatal collisions  
(N = 674)**



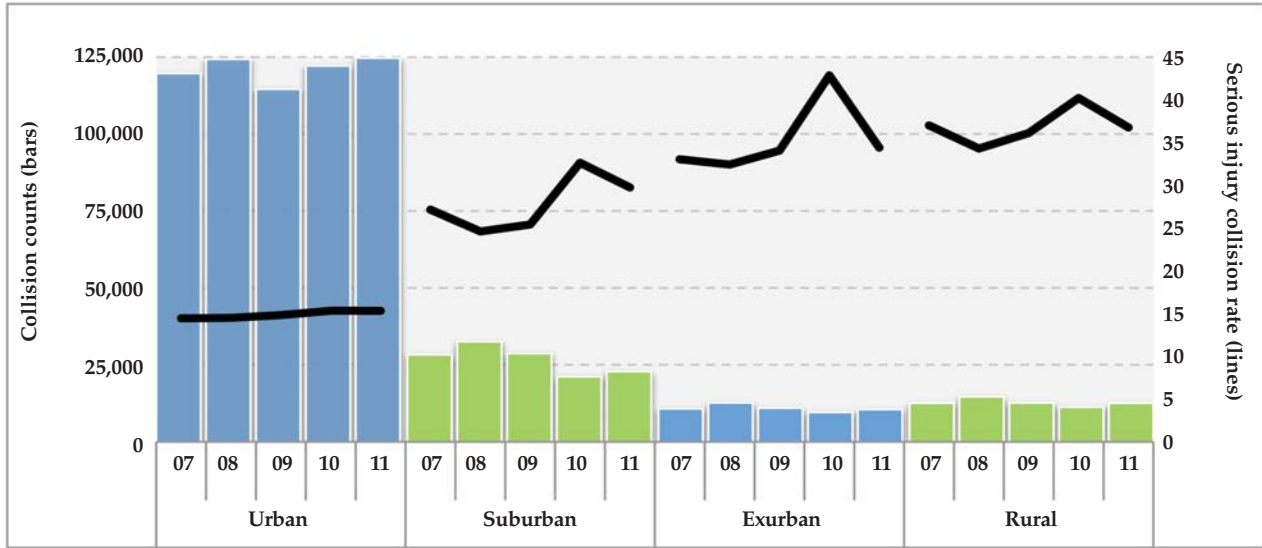
**Non-fatal collisions  
(N = 187,458)**



Source: Indiana State Police

Note: See Table 21 for definitions of factor categories related to driver actions.

Figure 21. Indiana traffic collisions and serious injury collision rates, by locale, 2007-2011



Source: Indiana State Police

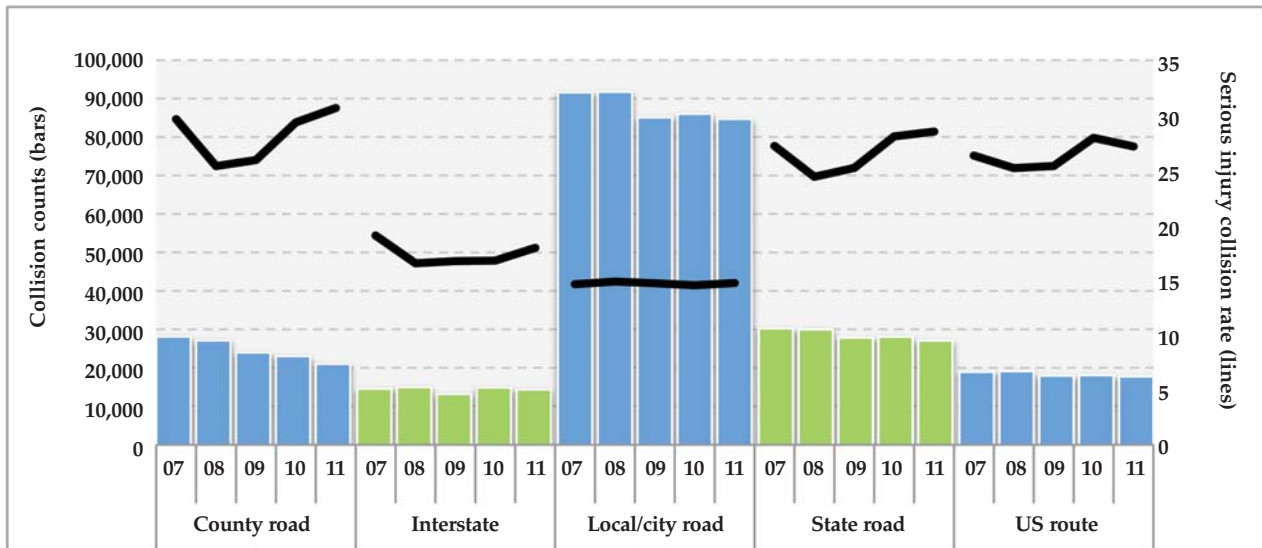
Notes:

Includes only collisions where valid locale was identified.

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

Serious injury collision rate is calculated per 1,000 total collisions in each locale.

Figure 22. Indiana traffic collisions and serious injury collision rates, by road class, 2007-2011



Source: Indiana State Police

Notes:

Includes only collisions where valid road class was identified.

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

Serious injury collision rate is calculated per 1,000 total collisions in each road class.



**Table 22. Indiana traffic collisions by severity and road parameters, 2011**

	Collisions, by severity					Serious injury per 1,000 collisions
	Total	Fatal	Incapacitating	Non-incapacitating	Property damage	
<b>By road class</b>						
County road	20,988	133	510	3,559	16,786	● 30.6
Interstate	14,348	72	185	1,915	12,176	● 17.9
Local/city road	84,666	161	1,085	14,612	68,808	● 14.7
State road	27,058	201	570	5,014	21,273	● 28.5
US route	17,724	96	385	3,537	13,706	● 27.1
Unknown	23,348	11	123	1,239	21,975	● 5.7
<b>By junction type</b>						
Five point or more	500	1	9	108	382	● 20.0
Four-way	37,358	101	649	8,295	28,313	● 20.1
Interchange	715	2	9	136	568	● 15.4
No junction	126,208	510	1,843	17,465	106,390	● 18.6
Ramp	3,038	4	40	469	2,525	● 14.5
T-intersection	18,874	49	285	3,221	15,319	● 17.7
Traffic circle/roundabout	643	2	5	49	587	● 10.9
Y-intersection	719	5	18	130	566	● 32.0
Unknown	77	0	0	3	74	● 0.0
<b>By road character</b>						
<b>Straight</b>	<b>163,571</b>	<b>529</b>	<b>2,359</b>	<b>26,135</b>	<b>134,548</b>	● 17.7
Level	136,450	438	1,871	21,777	112,364	● 16.9
Graded	21,567	65	384	3,383	17,735	● 20.8
Hillcrest	5,554	26	104	975	4,449	● 23.4
<b>Curve</b>	<b>18,559</b>	<b>141</b>	<b>464</b>	<b>3,448</b>	<b>14,506</b>	● 32.6
Level	11,081	85	257	2,039	8,700	● 30.9
Graded	6,211	46	175	1,168	4,822	● 35.6
Hillcrest	1,267	10	32	241	984	● 33.1
Non-roadway crash	5,822	4	35	286	5,497	● 6.7
Unknown	180	0	0	7	173	● 0.0
<b>Roadway surface type</b>						
Asphalt	166,260	597	2,564	26,716	136,383	● 19.0
Concrete	18,318	64	245	2,798	15,211	● 16.9
Gravel	2,529	6	30	234	2,259	● 14.2
Other	886	7	18	125	736	● 28.2
Unknown	139	0	1	3	135	● 7.2
<b>All collisions</b>	<b>188,132</b>	<b>674</b>	<b>2,858</b>	<b>29,876</b>	<b>154,724</b>	<b>18.8</b>

Source: Indiana State Police

**Notes:**

Serious injury collisions are defined as collisions with one or more fatal or incapacitating injuries. Serious injury collision rate is calculated per 1,000 total collisions in each road parameter category.



**Table 23. Indiana traffic collisions, by severity and manner of collision, 2011**

Manner of collision	Collisions, by severity					Serious injury per 1,000 collisions
	Total	Fatal	Incapacitating	Non-incapacitating	Property damage	
Backing	19,634	2	38	439	19,155	● 2.0
Head on	20,845	170	469	3,233	16,973	● 30.7
Left turn	8,974	12	142	1,782	7,038	● 17.2
Left/right turn	2,180	3	23	286	1,868	● 11.9
Non-collision	2,518	15	97	565	1,841	● 44.5
Opposite direction sideswipe	4,993	12	52	555	4,374	● 12.8
Ran off road	22,416	199	678	5,012	16,527	● 39.1
Rear end	44,231	67	447	8,284	35,433	● 11.6
Rear to rear	376	0	4	37	335	● 10.6
Right angle	31,322	133	622	6,891	23,676	● 24.1
Right turn	2,616	3	19	237	2,357	● 8.4
Same direction sideswipe	18,712	15	69	1,280	17,348	● 4.5
Other collision manner	8,558	42	196	1,245	7,075	● 27.8
Unknown	757	1	2	30	724	● 4.0
<b>All collisions</b>	<b>188,132</b>	<b>674</b>	<b>2,858</b>	<b>29,876</b>	<b>154,724</b>	<b>0.4</b>

Source: Indiana State Police

Notes:

Serious injury collisions are defined as collisions with one or more fatal or incapacitating injuries. Serious injury collision rate is calculated per 1,000 total collisions by each manner of collision.



**Table 24. Indiana collisions, by severity and traffic control type, 2011**

Traffic control type	Collisions, by severity					Serious injury per 1,000 collisions
	Total	Fatal	Incapacitating	Non-incapacitating	Property damage	
Lane control	44,291	235	741	7,325	35,990	● 22.0
Traffic control signal	33,131	56	463	6,945	25,667	● 15.7
Stop sign	17,928	55	349	3,738	13,786	● 22.5
No passing zone	4,932	53	136	931	3,812	● 38.3
Other regulatory sign	1,355	4	15	204	1,132	● 14.0
Yield sign	1,485	3	20	270	1,192	● 15.5
Flashing signal	1,232	9	35	288	900	● 35.7
Railroad crossing	400	9	5	67	319	● 35.0
Person directing traffic	224	3	5	47	169	● 35.7
None	82,875	246	1,088	10,052	71,489	● 16.1
Unknown	279	1	1	9	268	● 7.2
<b>All collisions</b>	<b>188,132</b>	<b>674</b>	<b>2,858</b>	<b>29,876</b>	<b>154,724</b>	<b>18.8</b>

Source: Indiana State Police

Notes:

Serious injury collisions are defined as collisions with one or more fatal or incapacitating injuries. Serious injury collision rate is calculated per 1,000 total collisions by each traffic control type.



**Table 25. Indiana traffic collisions, by severity and environmental conditions, 2011**

	Collisions, by severity					Serious injury per 1,000 collisions
	Total	Fatal	Incapacitating	Non-incapacitating	Property damage	
<b>All collisions</b>	<b>188,132</b>	<b>674</b>	<b>2,858</b>	<b>29,876</b>	<b>154,724</b>	<b>18.8</b>
<b>By light conditions</b>						
Daylight	123,002	353	1,809	20,654	100,186	● 17.6
Dark (not lighted)	28,680	201	510	3,793	24,176	● 24.8
Dark (lighted)	26,363	82	419	4,081	21,781	● 19.0
Dawn/dusk	8,775	36	117	1,336	7,286	● 17.4
Unknown	1,312	2	3	12	1,295	● 3.8
<b>By weather conditions</b>						
Clear	110,076	438	1,850	17,867	89,921	● 20.8
Cloudy	41,629	140	579	6,605	34,305	● 17.3
Rain	22,431	68	284	3,727	18,352	● 15.7
Snow	8,905	12	80	1,018	7,795	● 10.3
Blowing sand/soil/snow	2,215	7	14	292	1,902	● 9.5
Sleet/hail/freezing rain	1,599	3	30	232	1,334	● 20.6
Fog/smoke/smog	644	2	16	89	537	● 28.0
Severe cross wind	249	4	5	44	196	● 36.1
Unknown	384	0	0	2	382	● 0.0
<b>By road surface conditions</b>						
Dry	133,144	535	2,207	21,766	108,636	● 20.6
Wet	33,969	99	453	5,578	27,839	● 16.3
Snow/slush	11,717	21	91	1,269	10,336	● 9.6
Ice	7,294	11	80	950	6,253	● 12.5
Loose material on road	726	5	12	141	568	● 23.4
Water (standing or moving)	795	1	13	146	635	● 17.6
Muddy	138	2	2	21	113	● 29.0
Unknown	349	0	0	5	344	● 0.0

Source: Indiana State Police

**Notes:**

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

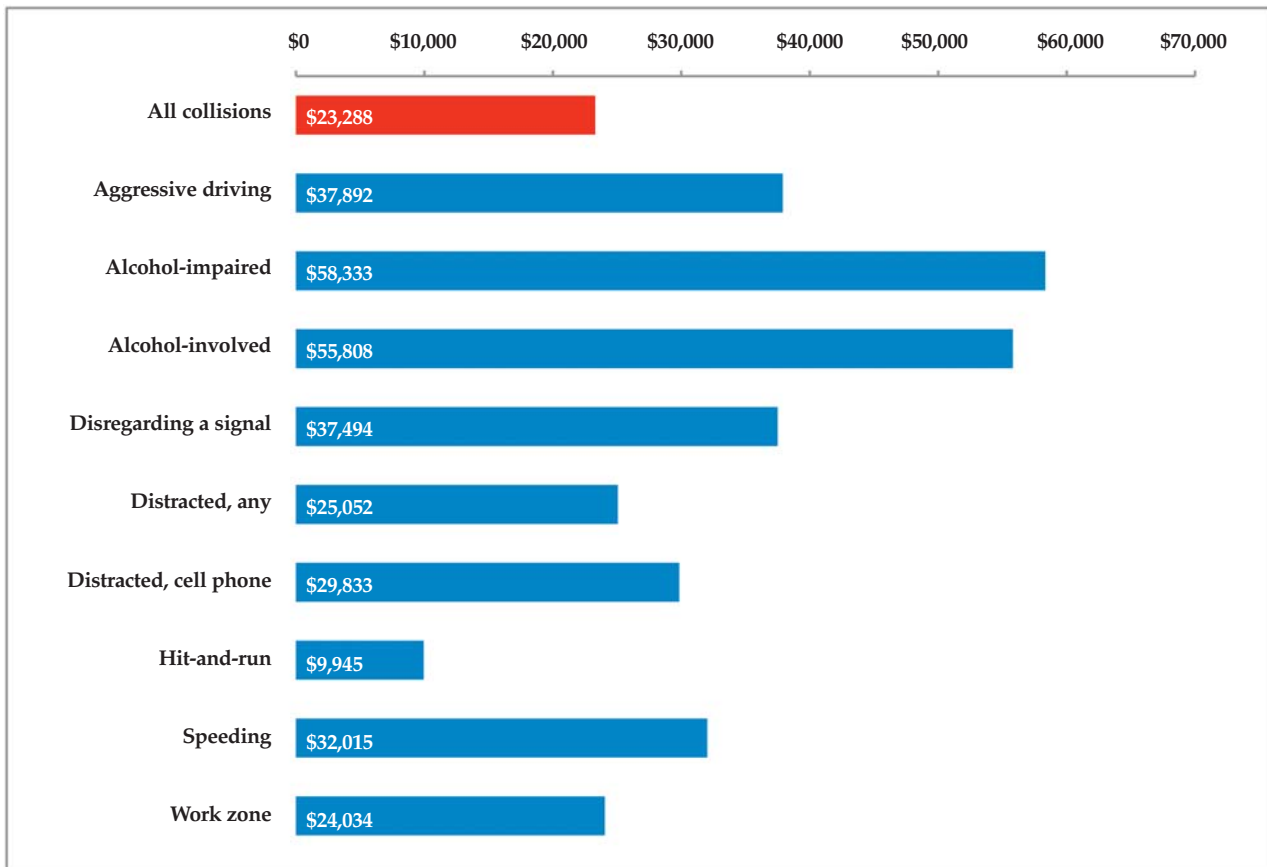
Serious injury collision rate is calculated per 1,000 total collisions in each environmental condition category.



**Table 26. Economic cost of traffic collisions in Indiana, by collision type, 2011**

Collision Type	Count of collisions	Total cost (millions)
All crashes	188,132	\$4,381.27
Speeding	17,517	\$560.82
Alcohol-impaired	4,938	\$466.27
Alcohol-involved	8,355	\$288.05
Distracted, any type	9,386	\$235.14
Hit-and-run	22,633	\$225.09
Disregarding a signal	3,955	\$148.29
Aggressive driving	4,320	\$163.69
In a work zone	4,836	\$116.23
Distracted, cell phone	1,168	\$34.85

**Figure 23. Average economic cost of Indiana traffic collisions, 2011**



Source: Indiana State Police

Note: See Appendix A for details on cost computations.

**WORK ZONE COLLISIONS**

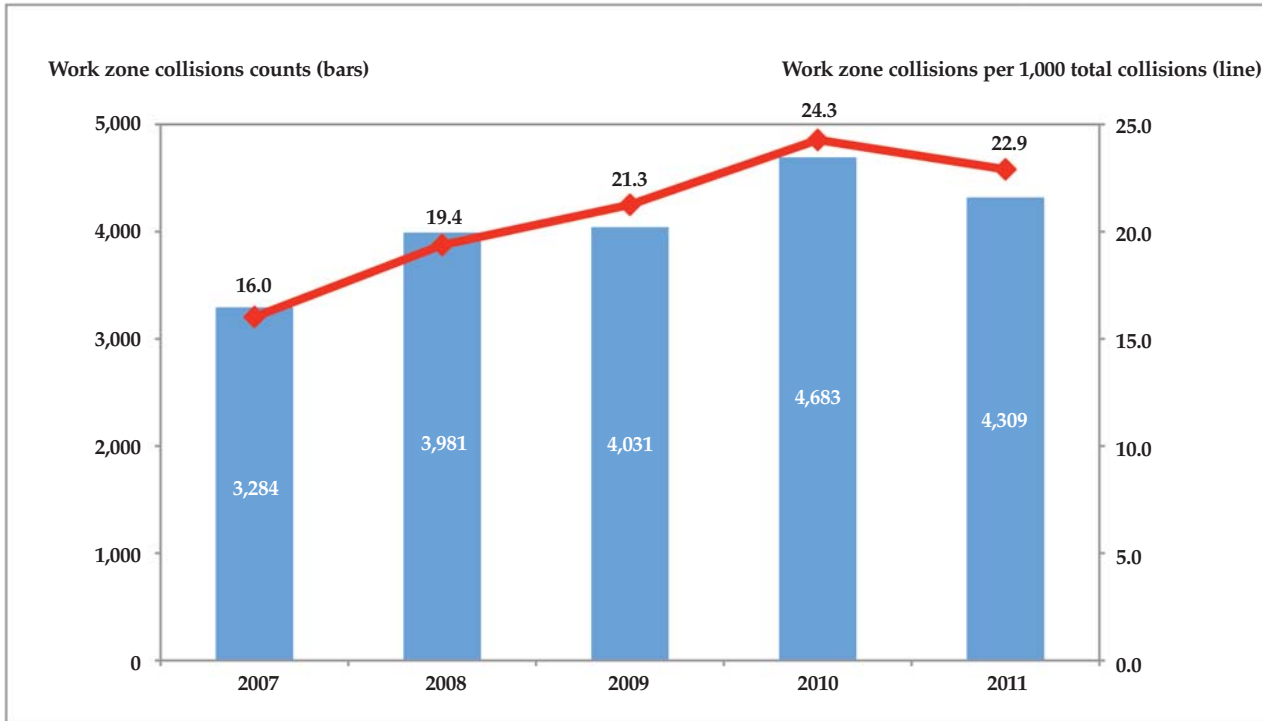
The number of collisions occurring in work zones increased from 3,284 in 2007 to 4,309 in 2011, but decreased from a 5-year high in 2010 of 4,683. The work zone collision rate was 22.9 in 1,000 collisions in 2011. The serious injury rate for work zone collisions (13.2) was less than the serious injury rate for non-work zone collisions (18.9). Among work zone collisions, those occurring in the construction zone type of *intermittent/moving work* had the highest rate of serious injury collisions (18.8 per 1,000 collisions). In terms of hourly incidence, overall collision counts were higher during afternoon/evening rush hour periods, while work zone collision rates peaked during mid-day hours.

Work zone collision rates per 1,000 total collisions were higher in *urban* (26.6) and *suburban* (17.9) locales than in *exurban* (11.8) and *rural* (9.5) locales. Serious injury collision rates among work zone collisions were highest in *exurban* (64.5 per 1,000 work zone collisions) and *rural* (50.0) areas than in other areas.

The rates of collisions occurring in work zones were highest on *interstates* (91.9 per 1,000 collisions) and lowest on *county roads* (6.3 per 1,000 collisions). Rates of serious injury collisions in work zones were highest on *state roads* in 2011.

Environmental conditions such as light, weather, and road surface conditions also played a factor in work zone collisions. While 73 percent of all work zone collisions (3,160/4,309) occurred during *daylight*, serious injury work zone collision rates were highest in light conditions reported as *dark (not lighted)* (17.1 per 1,000 work zone collisions) and *dawn/dusk* (17.1 per 1,000 work zone collisions). *Severe cross wind* was the weather condition with the highest rate of serious injury in work zone collisions (125), and *loose material on road* was the road surface condition with the highest rate of serious injury (40). The highest serious injury rates in work zone collisions occurred under the traffic control types of *person directing traffic* (61.9 per 1,000) and *no passing zone* (35.7).

**Figure 24. Indiana work zone collisions, 2007-2011**



Source: Indiana State Police

**Table 27. Indiana work zone collisions, by severity and construction type, 2011**

	Collisions, by severity					Serious injury per 1,000 collisions
	Total	Fatal	Incapacitating	Non-incapacitating	Property damage	
<b>All collisions</b>	<b>188,132</b>	<b>674</b>	<b>2,858</b>	<b>29,876</b>	<b>154,724</b>	<b>18.8</b>
All construction types	4,309	17	40	646	3,606	13.2
Not in construction zone	183,823	657	2,818	29,230	151,118	18.9
<b>Construction zone type</b>						
Lane closure	2,296	8	19	340	1,929	11.8
Cross-over/lane shift	456	3	5	64	384	17.5
Intermittent/moving work	533	3	7	84	439	18.8
Work on shoulder	1,017	3	9	157	848	11.8
Other/not reported	7	0	0	0	7	0.0

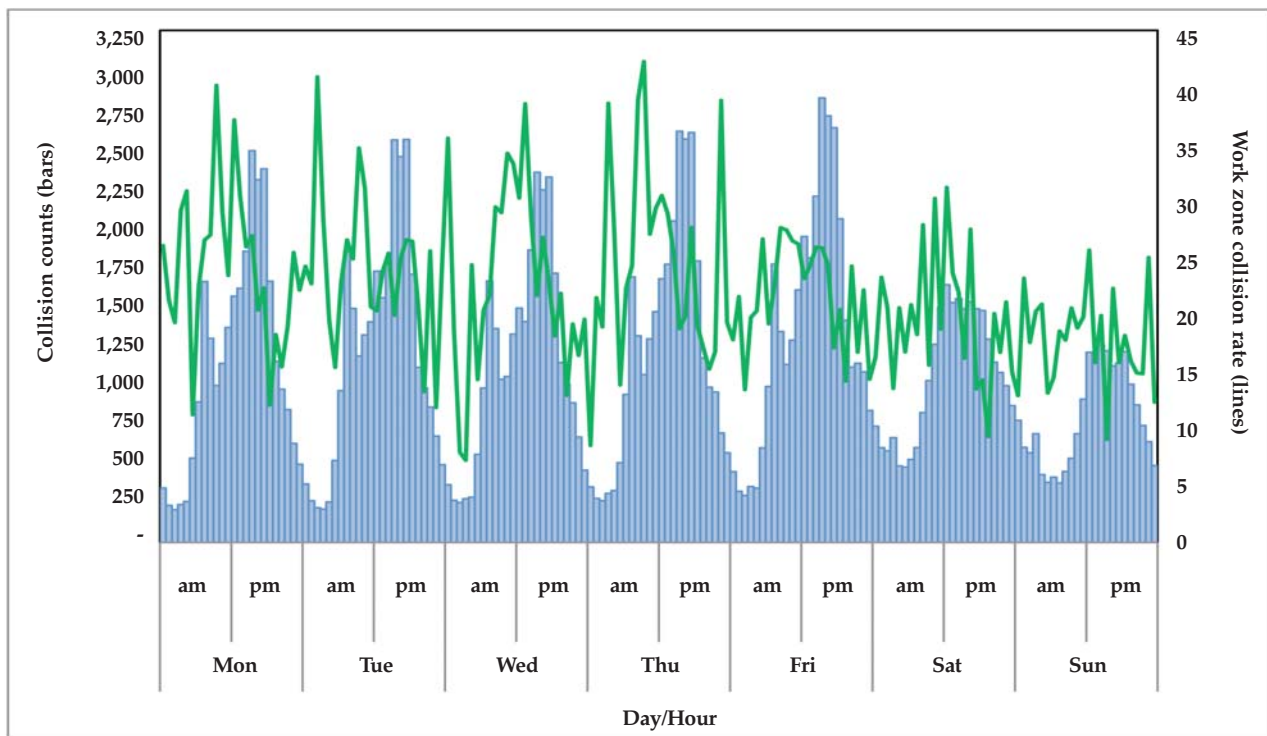
Source: Indiana State Police

Notes:

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

Serious injury collision rate is calculated per 1,000 total collisions in each construction zone type category.

**Figure 25. Indiana work zone collisions, by hour, and day of week, 2011**



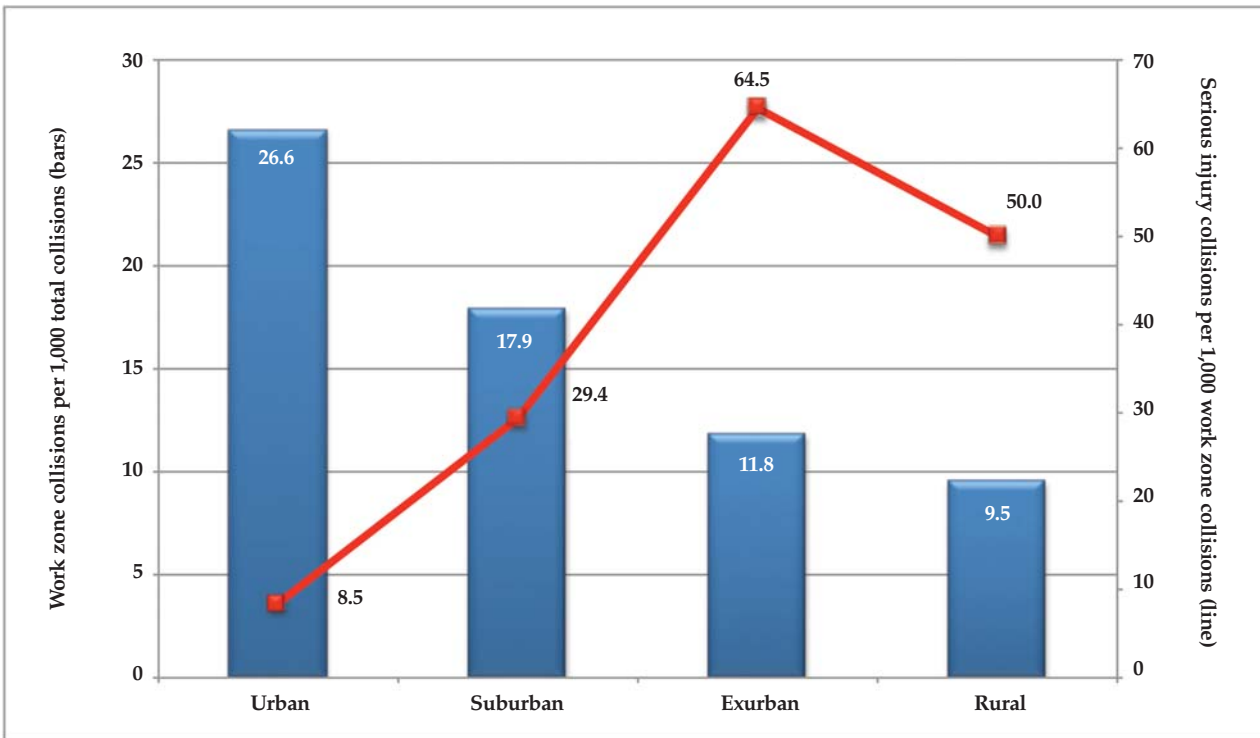
Source: Indiana State Police

Notes:

Data exclude collisions with invalid time reported.

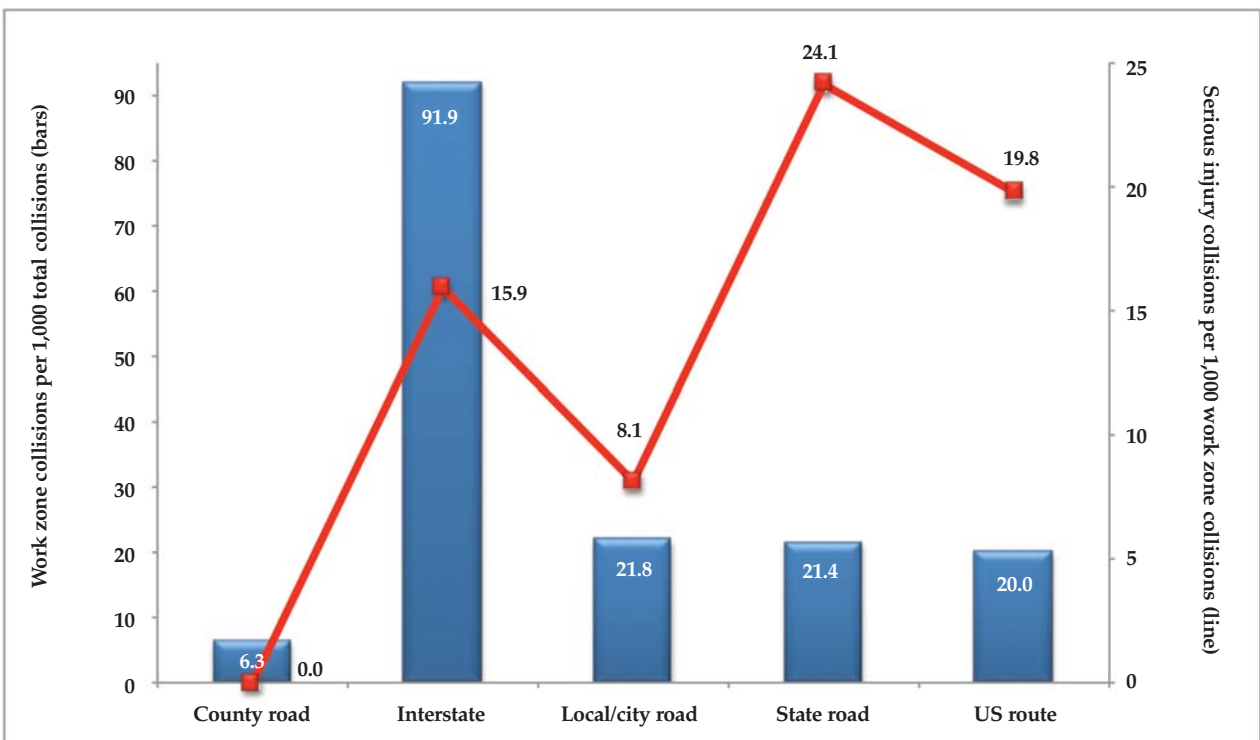
Work zone collision rate is calculated per 1,000 collisions by hour and day.

**Figure 26. Indiana work zone collisions, by locale, 2011**



Notes:  
*Serious injury* collisions are defined as collisions with one or more *fatal* or *incapacitating* injuries.  
 Includes only collisions with valid locale reported.

**Figure 27. Indiana work zone collisions, by road class, 2011**



Notes:  
*Serious injury* collisions are defined as collisions with one or more *fatal* or *incapacitating* injuries.  
 Includes only collisions with valid road class reported.

**Table 28. Indiana work zone collisions, by severity and environmental conditions, 2011**

	Work zone collisions, by severity					Serious injury per 1,000 collisions
	Total	Fatal	Incapacitating	Non-incapacitating	Property damage	
<b>All work zone collisions</b>	<b>4,309</b>	<b>17</b>	<b>40</b>	<b>646</b>	<b>3,606</b>	<b>13.2</b>
<b>By light conditions</b>						
Daylight	3,160	12	30	461	2,657	13.3
Dark (not lighted)	410	2	5	60	343	17.1
Dark (lighted)	557	1	4	94	458	9.0
Dawn/dusk	175	2	1	31	141	17.1
Unknown	7	0	0	0	7	0.0
<b>By weather conditions</b>						
Clear	2,784	14	23	443	2,304	13.3
Cloudy	922	1	12	131	778	14.1
Rain	455	1	3	57	394	8.8
Snow	79	0	1	7	71	12.7
Blowing sand/soil/snow	21	0	0	1	20	0.0
Sleet/hail/freezing rain	20	0	0	3	17	0.0
Fog/smoke/smog	19	1	0	2	16	52.6
Severe cross wind	8	0	1	2	5	125.0
Unknown	1	0	0	0	1	0.0
<b>By road surface conditions</b>						
Dry	3,430	15	32	530	2,853	13.7
Wet	665	1	5	94	565	9.0
Snow/slush	87	0	2	12	73	23.0
Ice	49	0	0	5	44	0.0
Loose material on road	50	1	1	3	45	40.0
Water (standing or moving)	19	0	0	2	17	0.0
Muddy	8	0	0	0	8	0.0
Unknown	1	0	0	0	1	0.0

Source: Indiana State Police

**Notes:**

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

*Serious injury* collision rate is calculated per 1,000 total collisions in each environmental condition category.



Table 29. Indiana work zone collisions, by severity and traffic control type, 2011

	Work zone collisions, by severity					Serious injury per 1,000 collisions
	Total	Fatal	Incapacitating	Non- incapacitating	Property damage	
<b>All work zone collisions</b>	<b>4,309</b>	<b>17</b>	<b>40</b>	<b>646</b>	<b>3,606</b>	<b>13.2</b>
<b>Traffic control type</b>						
Lane control	1,896	7	17	243	1,629	12.7
Traffic control signal	1,030	1	3	186	840	3.9
Stop sign	179	0	2	21	156	11.2
No passing zone	56	0	2	13	41	35.7
Other regulatory sign	135	1	0	16	118	7.4
Yield sign	30	0	0	2	28	0.0
Flashing signal	41	0	1	4	36	24.4
Railroad crossing	8	0	0	1	7	0.0
Person directing traffic	97	3	3	22	69	61.9
None	835	5	12	138	680	20.4
Unknown	2	0	0	0	2	0.0

Source: Indiana State Police

## Notes:

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

Serious injury collision rate is calculated per 1,000 total collisions in each traffic control type category.

Table 30. Indiana work zone collisions, by severity and roadway surface, 2011

	Work zone collisions, by severity					Serious injury per 1,000 collisions
	Total	Fatal	Incapacitating	Non- incapacitating	Property damage	
<b>All work zone collisions</b>	<b>4,309</b>	<b>17</b>	<b>40</b>	<b>646</b>	<b>3,606</b>	<b>13.2</b>
<b>Roadway surface type</b>						
Asphalt	3,273	14	31	515	2,713	13.7
Concrete	963	3	8	124	828	11.4
Gravel	40	0	0	3	37	0.0
Other	31	0	1	4	26	32.3
Unknown	2	0	0	0	2	0.0

Source: Indiana State Police

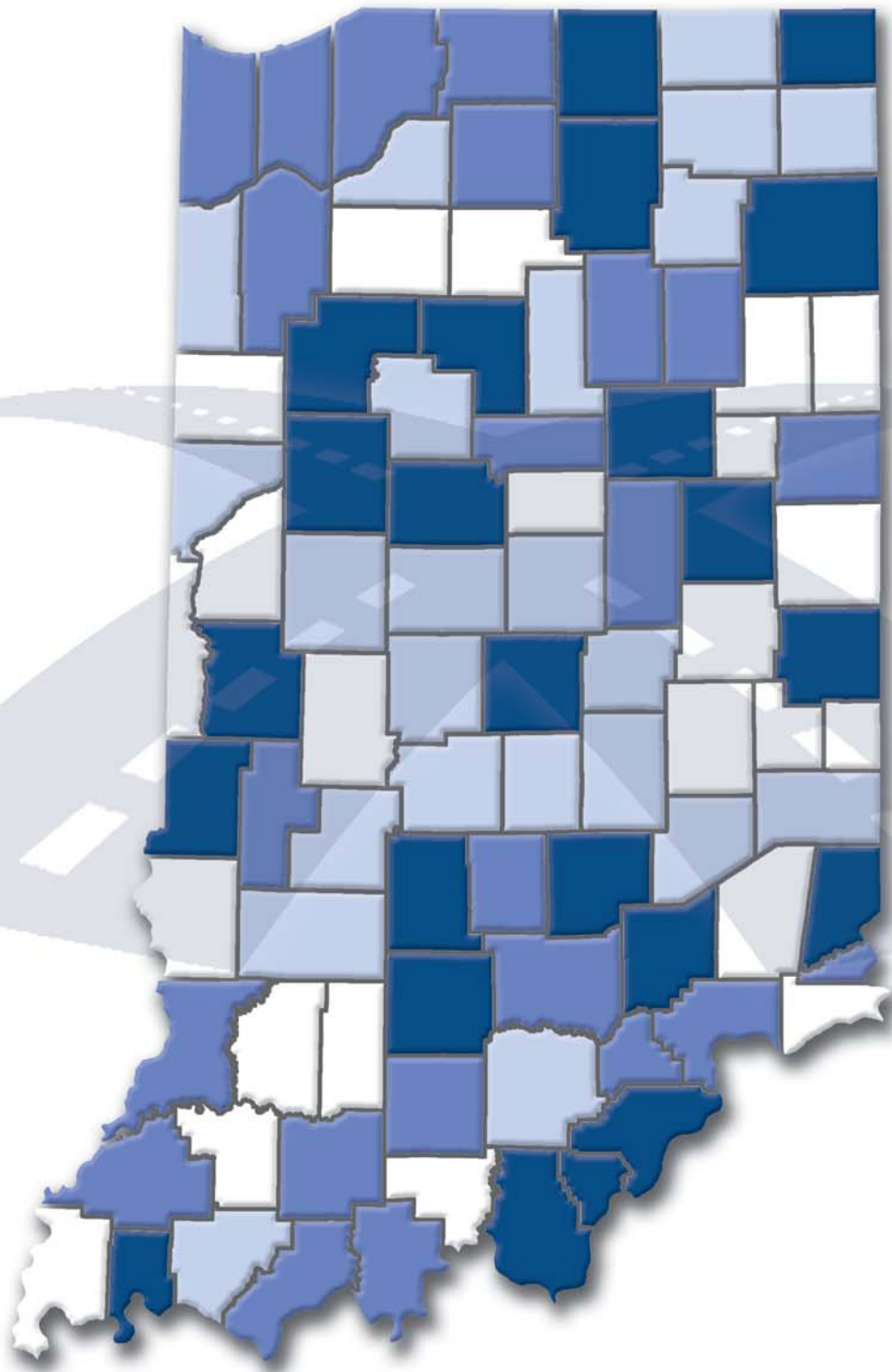
## Notes:

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

Serious injury collision rate is calculated per 1,000 total collisions in each roadway surface type category.



# VEHICLES



## VEHICLES, 2011

The vehicle section summarizes data on motor vehicles involved in Indiana collisions in 2011. Special emphasis is given to passenger cars, pickup trucks, sport utility vehicles, 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, location, road class, and collision primary factors. Note that the majority of vehicles had a driver; however, some involve a driver hitting a parked, unoccupied vehicle.

### HIGHLIGHTS

There were 329,389 vehicles involved in collisions in Indiana in 2011, a crash rate of 50.9 vehicles per 1,000 registered vehicles. This rate is down slightly from 51.5 in 2010, but consistent with previous years of 2007 and 2008. Passenger cars composed 58 percent of the vehicles involved in collisions, while pickup trucks and sport utility vehicles (SUVs) each comprised 13 percent of vehicles involved. Large trucks accounted for 4 percent of total vehicles in all collisions, but 13 percent of vehicles involved in fatal collisions, representing an increase of 3 percentage points from 2010. Motorcycles comprised 1 percent of total vehicles involved in all collisions, but 11 percent of vehicles involved in fatal collisions.

The majority (91 percent) of vehicles involved in collisions were for personal use. Commercial use vehicles comprised 12 percent of the vehicles involved in fatal collisions, but only 4 percent of vehicles involved in all collisions. Overall, vehicles were involved in 3.2 fatal collisions per 1,000 collisions, although the fatality rate varied by vehicle use. Ambulances, though public safety vehicles, had a slightly higher rate (5.3). Commercial vehicles had the highest fatality rate (10.4).

Prior to all collisions as well as fatal collisions, the majority of vehicles were *going straight*. Proportionately, the next highest pre-collision maneuver was *slowing or stopped in traffic* for all collisions. The next highest percentage for passenger cars involved in fatal collisions was *driving left of center* (9.8 percent). Nearly 5 percent of large trucks were changing lanes prior to a collision, compared to 2 percent for other vehicle types.

Only 13 percent of large trucks were involved in single-vehicle fatal collisions, compared to 30 (or more) percent for other vehicle types. For injury collisions, 80 percent or more of all vehicle types were involved in multiple-vehicle collisions.

Based on U.S. Census locality definitions (urban, suburban,

exurban, and rural), most vehicles involved in fatal collisions occurred within urban and suburban locales. The exception was SUVs. Large trucks involved in fatal collisions were distributed among suburban (22.4 percent), rural (21 percent), exurban (18.9 percent), and urban (31.5 percent) locales. For all vehicle types involved in injury collisions, the majority again were in urban locations, with suburban being proportionately second.

For all vehicle types except passenger cars, January was proportionately the highest month that vehicles were involved in all collisions. The highest proportional month for passenger cars was November. For vehicles involved in fatal collisions, however, the proportionately highest month varied by vehicle type (passenger cars—July; pickup trucks—October; SUVs—December; vans—February; large trucks—August). While the distribution per month for all collisions was fairly similar across vehicle types, for fatal collisions, the distribution was more scattered.

For every 1,000 passenger cars involved in collisions, 6 were involved in fatal collisions on *state roads* and 4.4 on *county roads*. For every 1,000 large trucks involved, 26 were involved in fatal collisions on *U.S. routes* and 22.8 on *state roads*. The highest fatal rates for pickup trucks occurred on *U.S. routes* and for vans occurred on *county roads*. *Local/city roads* had the lowest fatal rates for all vehicle types.

*Failure to yield right of way* was the most common collision primary factor in serious injury collisions. Only seven percent of large trucks involved in serious injury collisions *ran off the road right* as a primary factor in the collision, compared to nearly 15 percent for pickup trucks.

Considering serious injury collisions, the majority of all vehicle types collided with another motor vehicle. Less than one percent of large trucks involved in serious injury collisions collided with a tree; this compared to three percent for pickup trucks (calculated from table).

Overall, of the 13,941 large trucks involved in collisions, 1.5 percent (203) had a hazard release in the collision. Of the 143 large trucks involved in fatal collisions, 10 were indicated as displaying a hazard placard and 5 had a hazard release.

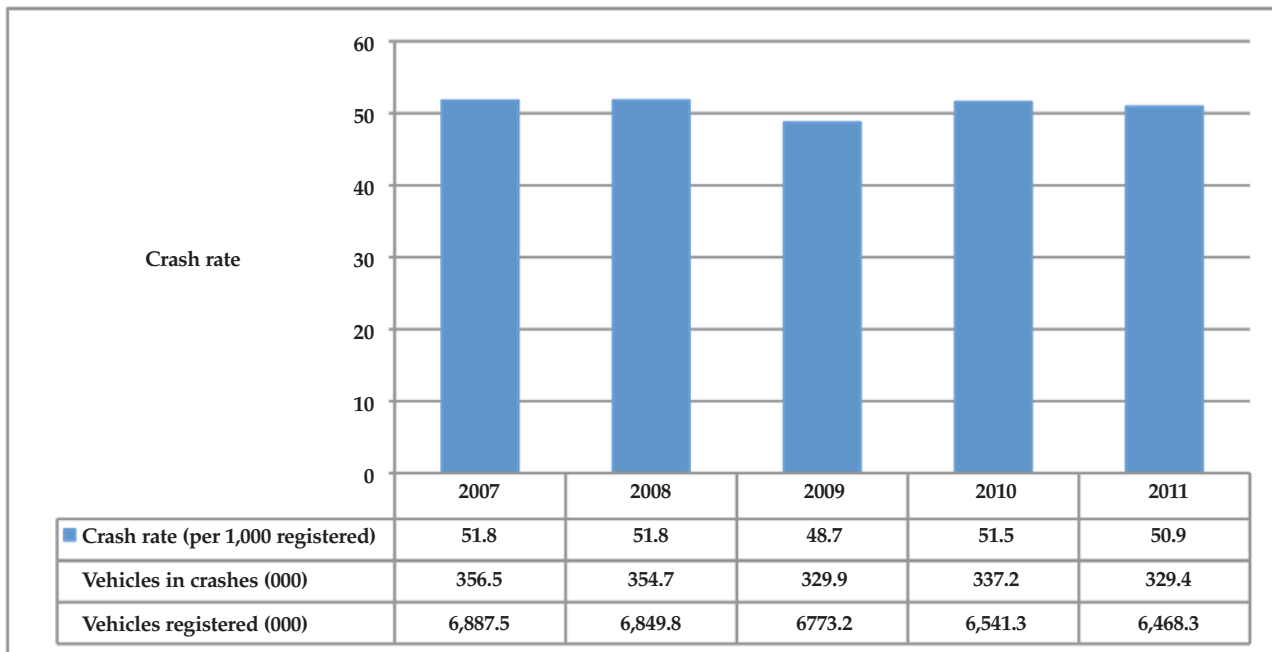
Collisions involving school buses increased in 2011, from 808 in 2010 to 874. In 2011, the majority (89 percent) of collisions involving school buses were property damage only. There were five fatalities involved in school bus collisions: one was a non-

motorist and four were occupants of the other vehicle. Four school bus occupants sustained incapacitating injuries. Of the 919 school buses involved in collisions, 819 collided with another vehicle; 9 involved a deer. The most common primary factor for school bus collisions was reported as *failure to yield right of way* (15 percent of collision-involved school buses).

There were 100 vehicles involved in collisions with a railway

vehicle/train/engine. Eight of those vehicles were involved in fatal collisions; this is twice the count of vehicles involved in railway-related crashes in 2010. Five of the eight vehicles involved in the fatal collisions were at a railroad crossing where a flashing signal or gate was in place. The remaining three were at a crossing where there was a railroad crossing sign.

**Figure 28. Indiana motor vehicle crash rate per 1,000 registrations, 2007-2011**



Sources:  
*Motor vehicles involved:* Indiana State Police  
*Registered vehicles:* Indiana Bureau of Motor Vehicles

Note: Excludes *bicycles and pedestrians*.

**Table 31. Motor vehicles involved in Indiana collisions, by vehicle type and collision severity, 2011**

Vehicle type	Vehicles involved in:										
	All collisions		Fatal collisions		Incapacitating collisions		Non-incapacitating collisions		Property damage only collisions		Vehicles in fatal collisions per 1,000 in all collisions
	Count	% of total	Count	% of total	Count	% of total	Count	% of total	Count	% of total	
<b>Passenger vehicles</b>	<b>301,854</b>	<b>91.6%</b>	<b>779</b>	<b>72.7%</b>	<b>3,888</b>	<b>82.5%</b>	<b>49,302</b>	<b>91.9%</b>	<b>247,885</b>	<b>91.8%</b>	<b>2.6</b>
Passenger car	192,354	58.4%	450	42.0%	2,398	50.9%	31,753	59.2%	157,753	58.4%	2.3
Pickup truck	43,914	13.3%	142	13.2%	661	14.0%	6,599	12.3%	36,512	13.5%	3.2
Sport utility vehicle (SUV)	44,641	13.6%	125	11.7%	567	12.0%	7,422	13.8%	36,527	13.5%	2.8
Van	20,945	6.4%	62	5.8%	262	5.6%	3,528	6.6%	17,093	6.3%	3.0
<b>Other vehicles</b>	<b>27,535</b>	<b>8.4%</b>	<b>293</b>	<b>27.3%</b>	<b>823</b>	<b>17.5%</b>	<b>4,342</b>	<b>8.1%</b>	<b>22,077</b>	<b>8.2%</b>	<b>10.6</b>
Bus	1,908	0.6%	7	0.7%	19	0.4%	191	0.4%	1,691	0.6%	3.7
Large truck	13,941	4.2%	143	13.3%	211	4.5%	1,720	3.2%	11,867	4.4%	10.3
Motorcycle/moped	3,624	1.1%	121	11.3%	522	11.1%	1,946	3.6%	1,035	0.4%	33.4
Other vehicle type	812	0.2%	9	0.8%	26	0.6%	109	0.2%	668	0.2%	11.1
Unknown vehicle type	7,250	2.2%	13	1.2%	45	1.0%	376	0.7%	6,816	2.5%	1.8
<b>Total vehicles</b>	<b>329,389</b>	<b>100.0%</b>	<b>1,072</b>	<b>100.0%</b>	<b>4,711</b>	<b>100.0%</b>	<b>53,644</b>	<b>100.0%</b>	<b>269,962</b>	<b>100.0%</b>	<b>3.3</b>

Source: Indiana State Police

**Notes:**

*Other vehicle types include combination vehicle, farm vehicle, motor home/recreational vehicle, and animal drawn vehicle (non-motor vehicle). Unknown vehicle type includes vehicles reported as unknown, blank, or invalid codes.*

**Table 32. Motor vehicles involved in Indiana collisions, by vehicle use and collision severity, 2011**

Vehicle use	Vehicles involved in:										
	All collisions		Fatal collisions		Incapacitating collisions		Non-incapacitating collisions		Property damage only collisions		Vehicles in fatal collisions per 1,000 in all collisions
	Count	% of total	Count	% of total	Count	% of total	Count	% of total	Count	% of total	
Personal	301,068	91.4%	905	84.7%	4,400	93.6%	50,710	94.6%	245,053	90.8%	3.0
Commercial	12,703	3.9%	132	12.4%	192	4.1%	1,599	3.0%	10,780	4.0%	10.4
Police	2,429	0.7%	2	0.2%	27	0.6%	300	0.6%	2,100	0.8%	0.8
Other	2,109	0.6%	7	0.7%	22	0.5%	208	0.4%	1,872	0.7%	3.3
Rental, not leased	1,379	0.4%	7	0.7%	16	0.3%	169	0.3%	1,187	0.4%	5.1
School	1,096	0.3%	5	0.5%	13	0.3%	102	0.2%	976	0.4%	4.6
Highway department	482	0.1%	2	0.2%	5	0.1%	59	0.1%	416	0.2%	4.1
Ambulance	379	0.1%	2	0.2%	5	0.1%	54	0.1%	318	0.1%	5.3
Public utilities	318	0.1%	0	0.0%	3	0.1%	32	0.1%	283	0.1%	0.0
Fire	263	0.1%	0	0.0%	1	0.0%	19	0.0%	243	0.1%	0.0
Military	72	0.0%	0	0.0%	3	0.1%	17	0.0%	52	0.0%	0.0
Unknown	6,989	2.1%	6	0.6%	16	0.3%	356	0.7%	6,611	2.4%	0.9
<b>Total vehicles</b>	<b>329,287</b>	<b>100.0%</b>	<b>1,068</b>	<b>100.0%</b>	<b>4,703</b>	<b>100.0%</b>	<b>53,625</b>	<b>100.0%</b>	<b>269,891</b>	<b>100.0%</b>	<b>3.2</b>

Source: Indiana State Police

**Notes:**

*Unknown vehicle use includes vehicles reported as unknown, blank, or invalid codes. Commercial use includes buses, taxis, carriers, etc. Other use includes government, postal, etc. Public utilities use includes gas, electric, etc. Excludes bicycles, pedestrians, and animal-drawn vehicles.*

**Table 33. Percentage of vehicles involved in collisions, by pre-collision vehicle maneuver, vehicle type, and collision severity, 2011**

Maneuver	All collisions					Fatal collisions				
	Passenger car	Pickup truck	SUV	Van	Large truck	Passenger car	Pickup truck	SUV	Van	Large truck
<b>Total count</b>	<b>192,354</b>	<b>43,914</b>	<b>44,641</b>	<b>20,942</b>	<b>13,941</b>	<b>450</b>	<b>142</b>	<b>125</b>	<b>62</b>	<b>143</b>
Going straight	49.4%	49.3%	46.1%	46.6%	46.6%	64.7%	69.7%	76.8%	71.0%	72.0%
Slowing or stopped in traffic	16.7%	14.2%	20.7%	17.4%	9.7%	6.2%	5.6%	0.8%	8.1%	15.4%
Parked	8.5%	7.6%	6.8%	8.2%	7.5%	1.3%	5.6%	3.2%	1.6%	2.8%
Turning left	7.7%	6.8%	7.0%	7.0%	7.2%	5.8%	4.9%	5.6%	3.2%	4.2%
Backing	5.3%	9.4%	7.7%	8.7%	9.2%	0.0%	0.0%	0.8%	0.0%	1.4%
Turning right	3.1%	3.4%	3.0%	3.4%	8.0%	0.4%	0.7%	0.0%	0.0%	1.4%
Changing lanes	1.9%	1.5%	1.9%	2.1%	4.9%	2.0%	1.4%	0.0%	1.6%	0.0%
Entering traffic lane	1.7%	1.5%	1.4%	1.6%	1.0%	2.4%	0.7%	0.0%	0.0%	1.4%
Starting in traffic	1.4%	1.4%	1.7%	1.5%	0.9%	0.7%	0.7%	0.8%	3.2%	0.0%
Avoiding object in roadway	0.8%	0.9%	0.8%	0.6%	0.7%	0.4%	1.4%	0.0%	0.0%	0.0%
Driving left of center	0.8%	1.0%	0.7%	0.6%	0.4%	9.8%	4.9%	5.6%	6.5%	1.4%
Leaving traffic lane	0.8%	0.8%	0.7%	0.6%	1.0%	2.7%	1.4%	2.4%	0.0%	0.0%
Overtaking/passing	0.7%	0.8%	0.6%	0.7%	0.8%	1.6%	2.1%	2.4%	1.6%	0.0%
Merging	0.4%	0.4%	0.4%	0.3%	0.7%	0.4%	0.0%	0.0%	0.0%	0.0%
Unknown	0.4%	0.4%	0.3%	0.3%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%
Making U-turn	0.2%	0.2%	0.2%	0.2%	0.5%	0.4%	0.0%	0.8%	1.6%	0.0%
Crossing median	0.2%	0.1%	0.1%	0.2%	0.1%	1.1%	0.7%	0.8%	1.6%	0.0%
Unattended moving vehicle	0.1%	0.2%	0.1%	0.1%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Total</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>

Source: Indiana State Police

**Table 34. Passenger vehicles and large trucks involved in fatal and injury collisions, by vehicle type, collision type, and locality, 2011**

Collision type	Passenger cars		Pickup trucks		SUVs		Vans		Large trucks	
	Count	%	Count	%	Count	%	Count	%	Count	%
<b>Fatal</b>	<b>450</b>	<b>100.0%</b>	<b>142</b>	<b>100.0%</b>	<b>125</b>	<b>100.0%</b>	<b>62</b>	<b>100.0%</b>	<b>143</b>	<b>100.0%</b>
Single-vehicle	148	32.9%	47	33.1%	43	34.4%	18	29.0%	19	13.3%
Multiple-vehicle	302	67.1%	95	66.9%	82	65.6%	44	71.0%	124	86.7%
<b>Injury</b>	<b>34,151</b>	<b>100.0%</b>	<b>7,260</b>	<b>100.0%</b>	<b>7,989</b>	<b>100.0%</b>	<b>3,790</b>	<b>100.0%</b>	<b>1,931</b>	<b>100.0%</b>
Single-vehicle	5,995	17.6%	1,486	20.5%	1,442	18.0%	521	13.7%	292	15.1%
Multiple-vehicle	28,156	82.4%	5,774	79.5%	6,547	82.0%	3,269	86.3%	1,639	84.9%
<b>Census locality</b>										
<b>Fatal</b>	<b>450</b>	<b>100.0%</b>	<b>142</b>	<b>100.0%</b>	<b>125</b>	<b>100.0%</b>	<b>62</b>	<b>100.0%</b>	<b>143</b>	<b>100.0%</b>
Urban	180	40.0%	42	29.6%	57	45.6%	30	48.4%	45	31.5%
Suburban	129	28.7%	43	30.3%	24	19.2%	14	22.6%	32	22.4%
Exurban	57	12.7%	24	16.9%	17	13.6%	8	12.9%	27	18.9%
Rural	59	13.1%	24	16.9%	25	20.0%	9	14.5%	30	21.0%
Unknown	25	5.6%	9	6.3%	2	1.6%	1	1.6%	9	6.3%
<b>Injury</b>	<b>34,151</b>	<b>100.0%</b>	<b>7,260</b>	<b>100.0%</b>	<b>7,989</b>	<b>100.0%</b>	<b>3,790</b>	<b>100.0%</b>	<b>1,931</b>	<b>100.0%</b>
Urban	25,920	75.9%	4,669	64.3%	5,973	74.8%	2,887	76.2%	1,016	52.6%
Suburban	4,192	12.3%	1,196	16.5%	1,085	13.6%	459	12.1%	402	20.8%
Exurban	1,637	4.8%	559	7.7%	357	4.5%	166	4.4%	220	11.4%
Rural	1,639	4.8%	640	8.8%	393	4.9%	194	5.1%	232	12.0%
Unknown	763	2.2%	196	2.7%	181	2.3%	84	2.2%	61	3.2%

Source: Indiana State Police

Notes:

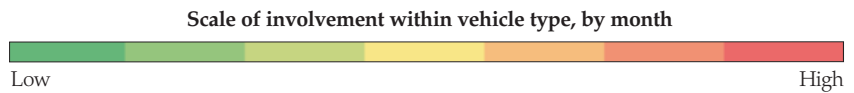
See glossary for definition of U.S. Census localities (urban, suburban, exurban, rural).

Injury collisions are those with no fatal injuries, but contain at least one incapacitating, non-incapacitating, possible, or other known injury.

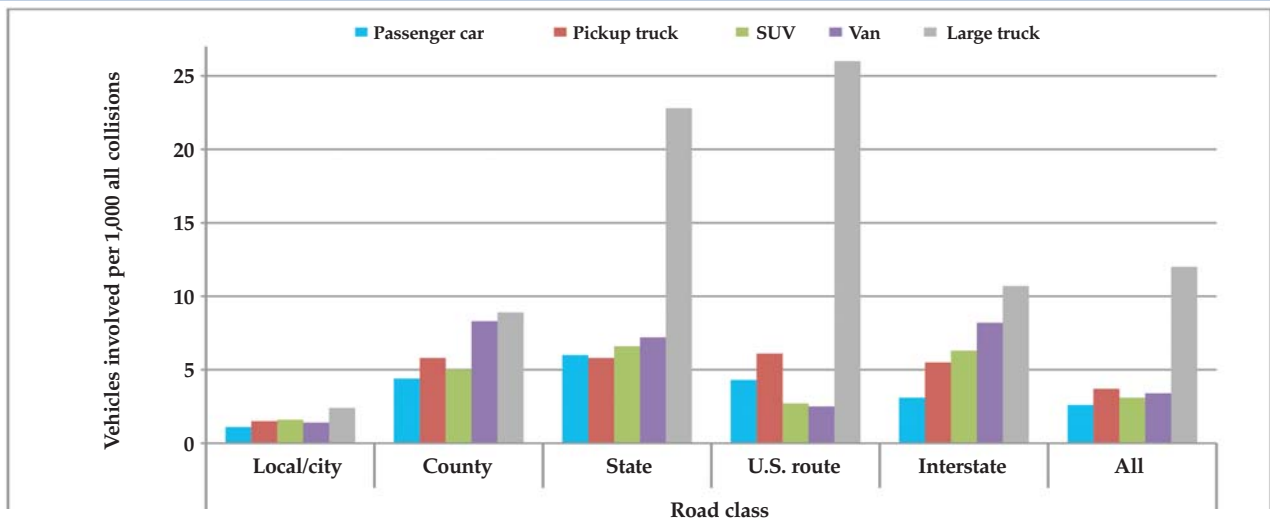
**Table 35. Percentage of each vehicle type involved in fatal and all collisions, by vehicle type and month, 2011**

	Passenger car	Pickup truck	SUV	Van	Large truck	Total
<b>Vehicles in all collisions</b>	<b>192,354</b>	<b>43,914</b>	<b>44,641</b>	<b>20,945</b>	<b>13,841</b>	<b>315,695</b>
January	9.3%	10.1%	9.9%	9.8%	10.9%	9.6%
February	8.2%	9.1%	8.9%	8.5%	10.0%	8.5%
March	6.9%	6.8%	6.8%	7.2%	7.2%	6.9%
April	7.6%	7.5%	7.3%	7.3%	6.0%	7.4%
May	8.2%	7.9%	8.0%	8.0%	8.0%	8.1%
June	7.9%	7.7%	7.9%	8.1%	8.8%	7.9%
July	7.6%	7.8%	7.5%	7.9%	7.4%	7.6%
August	8.3%	8.0%	8.1%	8.5%	8.3%	8.2%
September	8.3%	8.0%	8.3%	8.2%	8.1%	8.3%
October	9.4%	9.0%	9.0%	8.7%	8.9%	9.2%
November	9.6%	9.4%	9.3%	9.0%	8.8%	9.5%
December	8.9%	8.7%	9.2%	8.6%	7.7%	8.8%
<b>Vehicle in fatal collisions</b>	<b>450</b>	<b>142</b>	<b>125</b>	<b>62</b>	<b>143</b>	<b>922</b>
January	8.4%	7.7%	9.6%	3.2%	12.6%	8.8%
February	7.6%	8.5%	6.4%	17.7%	5.6%	7.9%
March	4.4%	5.6%	9.6%	6.5%	2.1%	5.1%
April	6.2%	6.3%	4.8%	14.5%	5.6%	6.5%
May	8.7%	11.3%	5.6%	4.8%	5.6%	7.9%
June	9.8%	4.2%	5.6%	3.2%	10.5%	8.0%
July	10.7%	6.3%	10.4%	11.3%	9.8%	9.9%
August	9.1%	12.7%	9.6%	4.8%	16.1%	10.5%
September	9.3%	9.2%	7.2%	11.3%	6.3%	8.7%
October	9.1%	15.5%	10.4%	11.3%	9.1%	10.4%
November	7.8%	4.9%	6.4%	4.8%	9.1%	7.2%
December	8.9%	7.7%	14.4%	6.5%	7.7%	9.1%

Source: Indiana State Police



**Figure 29. Vehicles involved in fatal collisions per 1,000 involved in all Indiana collisions, by vehicle type and road class, 2011**



Source: Indiana State Police

Note: Excludes unknown road class.



Table 36. Vehicles involved in serious injury collisions, by the top primary collision factors and vehicle type, 2011

Primary factor	Passenger cars	Pickup trucks	Sport utility vehicles	Vans	Large trucks	Total
<b>Total vehicles - serious injury collisions</b>	<b>2,848</b>	<b>803</b>	<b>692</b>	<b>324</b>	<b>354</b>	<b>5,021</b>
Failure to yield right of way	656	160	150	76	72	1,114
Ran off road right	301	119	86	37	26	569
Following too closely	276	70	67	29	43	485
Disregard signal/reg sign	238	80	58	40	25	441
Left of center	246	74	50	26	39	435
Other - driver (explained in narrative)	185	53	40	18	20	316
Unsafe speed	169	41	39	16	24	289
Speed too fast for weather conditions	127	22	34	6	17	206
Pedestrian action	93	17	16	12	8	146
Driver illness	78	22	19	20	7	146
Driver distracted (explained in narrative)	73	22	22	7	8	132
Overcorrecting/oversteering	54	17	25	2	4	102
Driver asleep or fatigued	29	14	7	3	9	62
<i>Top subtotal</i>	<i>2,525</i>	<i>711</i>	<i>613</i>	<i>292</i>	<i>302</i>	<i>4,443</i>
<i>Top as % of each vehicle's serious injury collision total</i>	<i>88.7%</i>	<i>88.5%</i>	<i>88.6%</i>	<i>90.1%</i>	<i>85.3%</i>	<i>88.5%</i>

Source: Indiana State Police

## Notes:

The above represents the top ten primary factors in collisions for each of the vehicles listed. More than ten primary factors are included due to variation across the top ten for each vehicle type.

Top primary factors are based on counts of vehicles, by each vehicle type, involved in serious injury collisions. For example, there were 656 passenger cars involved in serious injury 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 those with at least one *fatal* or *incapacitating* injury.

Table 37. Vehicles involved in serious injury collisions, by the top object collided with and vehicle type, 2011

Object collided with	Passenger cars	Pickup trucks	Sport utility vehicles	Vans	Large trucks	Total
<b>Total vehicles - serious injury collisions</b>	<b>2,848</b>	<b>803</b>	<b>692</b>	<b>324</b>	<b>354</b>	<b>5,021</b>
Another motor vehicle	2,001	551	474	228	281	3,535
Off roadway	212	71	54	20	11	368
Pedestrian	151	31	28	22	18	250
Tree	74	25	14	9	3	125
Ditch	49	18	17	3	7	94
Bicycle	50	10	15	6	7	88
Other	43	17	12	6	7	85
Utility pole	39	9	11	2	1	62
Embankment	16	13	7	3	1	40
Guardrail face	26	6	4	2	2	40
Curb	17	6	11	1	2	37
Overturn/rollover	10	7	7	0	4	28
Median barrier	20	3	1	1	2	27
Mailbox	14	3	4	3	0	24
<i>Top objects subtotal</i>	<i>2,722</i>	<i>770</i>	<i>659</i>	<i>306</i>	<i>346</i>	<i>4,803</i>
<i>Top as % of each vehicle's serious injury collision total</i>	<i>95.6%</i>	<i>95.9%</i>	<i>95.2%</i>	<i>94.4%</i>	<i>97.7%</i>	<i>95.7%</i>

Source: Indiana State Police

## Notes:

The above represents the top ten objects collided with in collisions for each of the vehicles listed. More than ten objects collided with are included due to variation across the top ten for each vehicle type.

Serious injury collisions are those with at least one *fatal* or *incapacitating* injury.

**Table 38. Large trucks involved in collisions, by hazard placard, hazard release, and collision severity, 2011**

	All	% of total collisions	Fatal	% of total fatal collisions	Incapacitating	% incapacitating collisions	Non-incapacitating	% non-incapacitating collisions	Property damage only	% Property damage collisions
<b>Large truck w/trailer</b>	<b>8,920</b>		<b>103</b>		<b>122</b>		<b>1,100</b>		<b>7,595</b>	
w/hazard placard	271	3.0%	7	6.8%	4	3.3%	38	3.5%	222	2.9%
hazard release	153	1.7%	4	3.9%	2	1.6%	15	1.4%	132	1.7%
placard+release	42	0.5%	3	2.9%	0	0.0%	8	0.7%	31	0.4%
<b>Large truck single unit</b>	<b>5,021</b>		<b>40</b>		<b>89</b>		<b>620</b>		<b>4,272</b>	
w/hazard placard	61	1.2%	3	7.5%	1	1.1%	4	0.6%	53	1.2%
hazard release	50	1.0%	1	2.5%	0	0.0%	1	0.2%	48	1.1%
placard+release	8	0.2%	1	2.5%	0	0.0%	0	0.0%	7	0.2%
<b>Total large trucks</b>	<b>13,941</b>		<b>143</b>		<b>211</b>		<b>1,720</b>		<b>11,867</b>	
w/hazard placard	332	2.4%	10	7.0%	5	2.4%	42	2.4%	275	2.3%
hazard release	203	1.5%	5	3.5%	2	0.9%	16	0.9%	180	1.5%
placard+release	50	0.4%	4	2.8%	0	0.0%	8	0.5%	38	0.3%

Source: Indiana State Police

**Notes:**

Placard and release information is included where known.

*w/hazard placard:* Federal Motor Carriers Safety Regulations (FMCSR) requires the use of hazardous materials placards (signs) when shipping hazardous materials cargo and dangerous goods in the United States. These are square colored placards/signs posted on the cargo hold of the trailer. These data represent the counts of vehicles involved in collisions that had a proper placard posted on the trailer.

*hazard release:* This is the count of trucks that as a result of the collision released some or all of the hazardous materials they were carrying at the accident site.

**Table 39. Indiana collisions involving school buses and known injuries, by collision severity, 2007-2011**

	2007		2008		2009		2010		2011	
	Count	%	Count	%	Count	%	Count	%	Count	%
<b>Total collisions involving school buses</b>	<b>826</b>	<b>100.0%</b>	<b>957</b>	<b>100.0%</b>	<b>837</b>	<b>100.0%</b>	<b>808</b>	<b>100.0%</b>	<b>874</b>	<b>100.0%</b>
Fatal	4	0.5%	1	0.1%	2	0.2%	3	0.4%	5	0.6%
Incapacitating	5	0.6%	9	0.9%	10	1.2%	5	0.6%	7	0.8%
Non-incapacitating	74	9.0%	59	6.2%	77	9.2%	79	9.8%	86	9.8%
Property damage only	743	90.0%	888	92.8%	748	89.4%	721	89.2%	776	88.8%
<b>Known injuries</b>										
<b>Fatal</b>	<b>4</b>	<b>100.0%</b>	<b>4</b>	<b>100.0%</b>	<b>2</b>	<b>100.0%</b>	<b>3</b>	<b>100.0%</b>	<b>5</b>	<b>100.0%</b>
School bus occupant	1	25.0%	4	100.0%	0	0.0%	0	0.0%	0	0.0%
Non-motorist	2	50.0%	0	0.0%	2	100.0%	0	0.0%	1	20.0%
Other vehicle occupant	1	25.0%	0	0.0%	0	0.0%	3	100.0%	4	80.0%
<b>Incapacitating</b>	<b>5</b>	<b>100.0%</b>	<b>10</b>	<b>100.0%</b>	<b>10</b>	<b>100.0%</b>	<b>6</b>	<b>100.0%</b>	<b>8</b>	<b>100.0%</b>
School bus occupant	0	0.0%	4	40.0%	0	0.0%	2	33.3%	4	50.0%
Non-motorist	0	0.0%	1	10.0%	1	10.0%	0	0.0%	1	12.5%
Other vehicle occupant	5	100.0%	5	50.0%	9	90.0%	4	66.7%	3	37.5%
<b>Non-incapacitating</b>	<b>171</b>	<b>100.0%</b>	<b>188</b>	<b>100.0%</b>	<b>227</b>	<b>100.0%</b>	<b>198</b>	<b>100.0%</b>	<b>253</b>	<b>100.0%</b>
School bus occupant	98	57.3%	137	72.9%	167	73.6%	135	68.2%	166	65.6%
Non-motorist	7	4.1%	8	4.3%	5	2.2%	1	0.5%	3	1.2%
Other vehicle occupant	66	38.6%	43	22.9%	55	24.2%	62	31.3%	84	33.2%

Source: Indiana State Police

**Table 40. School buses involved in Indiana collisions, by the top ten primary collision factors and collision severity, 2011**

Primary collision factors	All collisions	Serious injury collisions
<b>School buses</b>	<b>919</b>	<b>13</b>
Failure to yield right of way	137	3
Other - driver	126	0
Following too closely	107	3
Improper turning	103	0
Unsafe backing	90	0
Speed too fast for weather conditions	47	0
Improper lane usage	37	0
Driver distracted	34	3
Left of center	33	0
Improper passing	30	0
<i>Top 10 subtotal</i>	<i>744</i>	<i>9</i>
<i>Top 10 as % of school bus total</i>	<i>81.0%</i>	<i>69.2%</i>

Source: Indiana State Police

**Notes:**

Top primary factors are counts of vehicles involved in collisions. For example, there were 107 school buses involved in collisions where the primary factor for each collision was *Following too closely*. 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 those with at least one fatal or incapacitating injury.

**Table 41. School buses involved in collisions, by the top ten objects collided with and collision severity, 2011**

Object collided with	All collisions	Fatal	Incapacitating	Non-incapacitating	Property damage only
<b>School buses</b>	<b>919</b>	<b>5</b>	<b>8</b>	<b>88</b>	<b>818</b>
Another motor vehicle	819	4	7	77	731
Other	16	0	0	1	15
Other post/pole or support	9	0	0	0	9
Pedestrian	9	1	1	6	1
Deer	9	0	0	1	8
Highway traffic sign post	8	0	0	0	8
Off roadway	7	0	0	1	6
Wall/building/tunnel	6	0	0	0	6
Utility pole	6	0	0	2	4
Tree	5	0	0	0	5
<i>Top 10 subtotal</i>	<i>894</i>	<i>5</i>	<i>8</i>	<i>88</i>	<i>793</i>
<i>Top 10 as % of school bus total</i>	<i>97.3%</i>	<i>100.0%</i>	<i>100.0%</i>	<i>100.0%</i>	<i>96.9%</i>

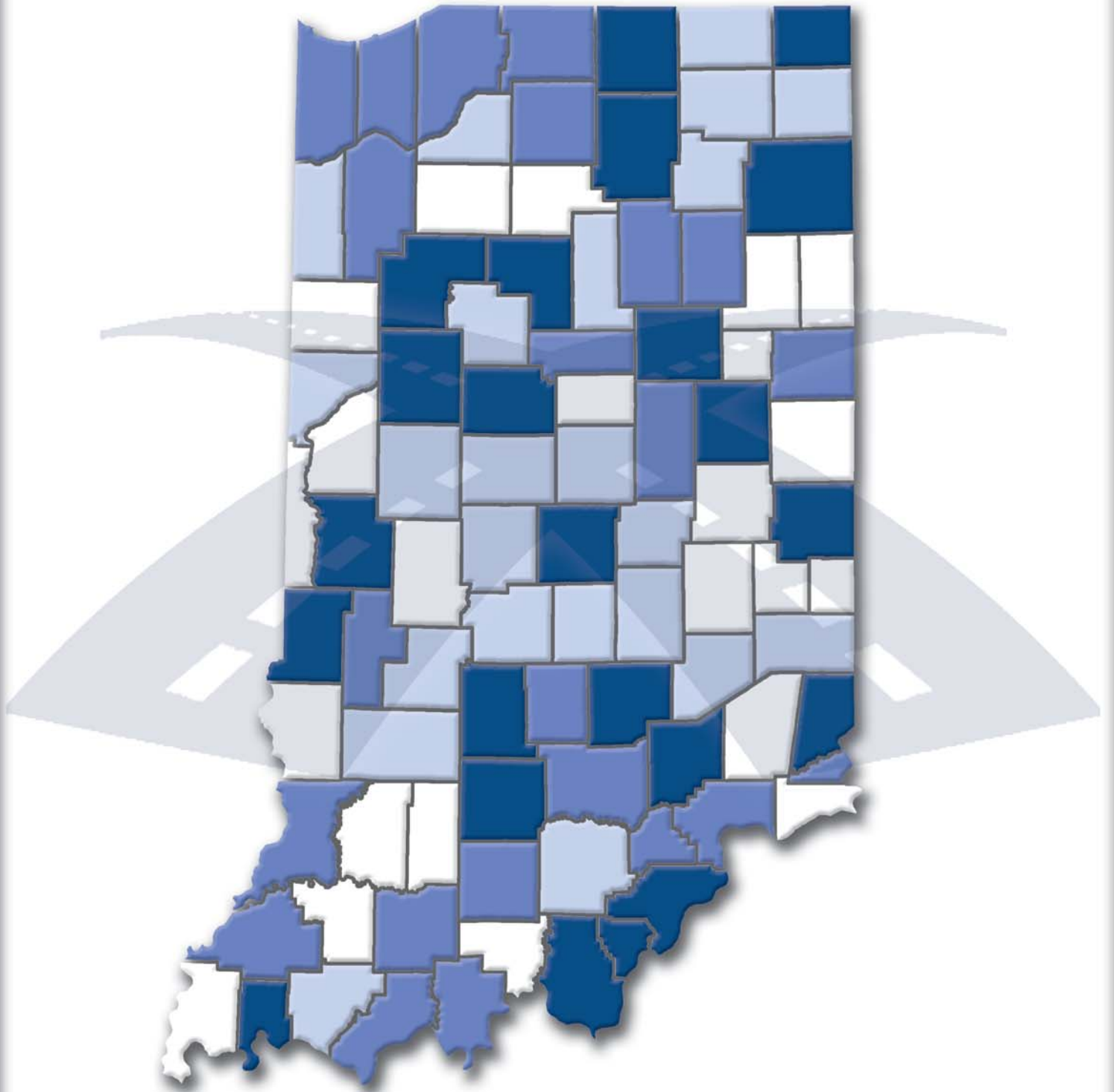
Source: Indiana State Police

**Table 42. Vehicles that collided with a railway vehicle/train/engine, by vehicle type, traffic control type, and collision severity, 2011**

Vehicle type/traffic control type	Fatal	Incapacitating	Non-incapacitating	Property damage only
<b>Farm vehicle</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>
RR crossing flashing signal/gate	0	0	0	1
<b>Large truck</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>14</b>
RR crossing flashing signal/gate	0	0	1	8
RR crossing sign	0	0	1	1
Stop/yield sign	0	0	1	3
Lane control	0	0	0	1
None	0	0	0	1
<b>Motor home/recreational vehicle</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>
RR crossing flashing signal/gate	0	0	1	0
<b>Motorcycle</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>0</b>
RR crossing sign	1	0	0	0
None	0	0	1	0
<b>Passenger car</b>	<b>5</b>	<b>2</b>	<b>12</b>	<b>36</b>
RR crossing flashing signal/gate	3	2	10	22
RR crossing sign	2	0	0	7
Traffic or flashing signal	0	0	0	1
Stop/yield sign	0	0	1	3
Lane control	0	0	0	1
None	0	0	1	2
<b>Pickup truck</b>	<b>0</b>	<b>1</b>	<b>5</b>	<b>9</b>
RR crossing flashing signal/gate	0	0	2	5
RR crossing sign	0	0	1	3
Stop/yield sign	0	0	1	0
None	0	1	1	1
<b>Sport utility vehicle</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>6</b>
RR crossing flashing signal/gate	0	0	0	3
RR crossing sign	0	0	0	1
Traffic or flashing signal	0	0	0	2
<b>Van</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>0</b>
RR crossing flashing signal/gate	2	1	0	0
<b>Total</b>	<b>8</b>	<b>4</b>	<b>22</b>	<b>66</b>

Source: Indiana State Police

# MOTORCYCLES



## MOTORCYCLES, 2011

### Collisions

Collisions involving motorcycles increased 3.6 percent in 2011, while *fatal collisions* increased 6.4 percent, from 110 in 2010 to 117. More than seven of ten motorcycle collisions involve injuries and, from 2007 to 2011, the proportion of motorcycle collisions resulting in at least one *serious injury* averaged about 17 percent. After a drop from 2007 to 2008, the rate of *serious injury* motorcycle collisions increased about 5 percent annually (2009-10 and 2010-11). Each year from 2007 to 2011, there was an average of 19 percent more *multi-vehicle* than *single-vehicle* motorcycle collisions. Although *multi-vehicle* and *single-vehicle* fatality rates are similar, *single-vehicle serious injury* rates are higher.

The proportion of motorcycle involvement in collisions varies by time of day and by whether another vehicle was involved. In 2011, peak motorcycle involvement in *multi-vehicle* collisions was from 6pm to 10pm. Among all *single-vehicle* collisions, motorcycle involvement was highest from 1pm to 5pm. *Single-vehicle* motorcycle collisions as a percent of all collisions increases steeply from 7am to 4pm—from one percent to five percent of all *single-vehicle* collisions. At virtually all times of the day, motorcycles have a larger impact on (i.e., comprise larger shares of) all *single-vehicle* collisions than they do on all *multi-vehicle* collisions.

*Serious injury* rates in motorcycle collisions are associated with different collision characteristics. In terms of frequency, motorcycle collisions occurred in 2011 predominantly during *clear weather conditions*, on *straight/level* roads not involving *road junctions*, on local *city roads*, or during *daylight*. The probability of *fatal* motorcycle collisions was highest under *dark (unlighted)* conditions (7.7 percent), *curves* (5.5), *highways* (5.4), and *county roads* (4.4). The largest growth in serious injury rates from 2010 to 2011 was for motorcycle collisions on *highways* and under *dark (not lighted)* conditions, which increased 3.2 and 4.3 percent, respectively, from 2010 to 2011.

While it is expected that rates of alcohol impairment vary by time of day, hourly rates of alcohol-impairment also vary, sometimes substantially, between motorcycles and other vehicles. The hourly percentage of all motorcycle collisions classified as *alcohol-impaired* increased steadily from 5pm, peaking at 3am and dropping thereafter (in 2010, the motorcycle collision alcohol impairment rate peaked at 1am, suggesting later drinking hours in 2011). Comparing motorcycle collisions to other collisions not involving motorcycles, the odds ratio (OR) of alcohol impairment is highest (3x or more) at 9am and 10am ( $p<0.05$ ) and is significantly higher ( $p<0.05$ ) than non-motorcycle collisions from 1pm through 1am.

In all *multi-vehicle* motorcycle collisions, the likelihood of alcohol impairment is higher for motorcyclists than the other

involved vehicle drivers. From 2009 to 2011, collisions involving motorcycles were approximately twice as likely ( $p<0.05$ ) to involve an *alcohol-impaired* driver or operator than collisions not involving motorcycles. From 2007 to 2011, the number of *alcohol impaired* motorcyclists involved in *multi-vehicle* collisions increased 5.7 percent annually.

Considering another aspect of *multi-vehicle* motorcycle collisions, there is little difference between motorcyclists and other involved vehicles in terms of which *primary factors* were most common, but there is a big difference between the likelihood the motorcycle or the other vehicle was *attributable* (i.e., *at fault*—situations where a vehicle's *contributing circumstance* matched the collision *primary factor*). In 2011, *multi-vehicle* collisions involving motorcycles most frequently involved some type of *unsafe action* by either or both the motorcyclist (78.1 percent) and the other vehicle (78.7). However, considering all *multi-vehicle* collisions, motorcyclists were about 16 percent less likely ( $p<0.05$ ) to be at fault than the other vehicles involved (i.e., motorcyclists' likelihood of being *at fault* was .84). In comparison, motorcyclists were 27 percent less likely to be *at fault* in 2010; so, from 2010 to 2011, relative to other involved vehicles, motorcycles increased their likelihood of being considered *at fault*. In addition, *multi-vehicle* motorcycle collisions in 2011 involving *following too closely*, *unsafe speed*, and *improper passing* were much more likely to be the fault of motorcyclists. In addition, motorcycles were more likely to be at fault when *primary factors* involved *cognitive impairment* or, especially, *loss of control*.

When collisions occur, motorcycles are more likely to be *speeding*. Examining only *multi-vehicle* motorcycle collisions, motorcycles are substantially more likely than other involved vehicles to be categorized as *speeding*. The OR for *speeding* (i.e., motorcycles relative to other involved vehicles) in 2007 was 8.8, although the OR dropped to 3.9 by 2011 (all  $p<0.05$ ), largely because from 2007 to 2011 motorcycle *speeding* rates dropped slightly while other vehicle rates increased slightly. The *speeding* difference between motorcycles and other vehicles holds when comparing motorcycle to non-motorcycle collisions, although differences are less. In 2011, compared to vehicles in other (non-motorcycle) *single-vehicle* collisions, motorcycles were slightly more likely to be *speeding* (OR = 1.2,  $p<0.05$ ), while they were 1.7 times ( $p<0.05$ ) more likely to be *speeding* in *multi-vehicle* collisions than vehicles in non-motorcycle *multi-vehicle* collisions.

### Individuals

From 2010 to 2011, the number of *motorcyclists* killed increased 7.3 percent, from 110 to 118, and the count of riders with *incapacitating injuries* increased 4.5 percent, from 529 to 553. From 2007 to 2011, serious injuries to motorcyclists decreased on

average less than 1 percent annually. In 2011, the *serious injury* rate for motorcyclists was 17.6 percent. Overall in 2011, more than 2,800 motorcycle riders experienced some type of injury (2,719) or death (118).

Considering the objects with which motorcyclists collided in 2011, among the most deadly were *utility poles, guardrails, and wall/building/tunnel*. Considering objects of impact in broad groupings, the highest serious injury rates were linked in 2011 to *walls/fences/buildings* (36.4 percent of injuries were serious), *post/signs/mailbox* (27.5), and *off-roadway* (22.8).

Among *multi-vehicle* collisions, motorcycle riders are more likely to be alcohol-impaired than the motorists with whom they collide. However, motorcyclists are more likely to be impaired in *single-vehicle* collisions. Among the 118 motorcycle fatalities in 2011, 54 occurred in *single-vehicle* collisions (42.6 percent impairment rate) and 64 in multi-vehicle collisions (25 percent impairment rate).

In terms of *blood alcohol content* (BAC) results from 2007 to 2011 across all collisions, the numbers of motorcycle operators with a BAC of 0.08 g/dL or more grew annually: 7.8 percent per year for operators with 0.08 to 0.14 g/dL, and 15.4 percent per year for operators with 0.15 g/dL or more. From 2010 to 2011, the number of motorcycle operators with 0.01 or more g/dL increased 32.5 percent. The proportion of operators shown as *no BAC reported* has declined from 94.3 to 90.8 percent, suggesting BAC reporting has improved somewhat over the 2007-2011 period.

One hundred (84.7 percent) of the 118 motorcyclist fatalities in 2011 were not wearing helmets. Controlling for age, *serious injury* rates were higher for all unhelmeted riders in all age categories, with the largest difference in the 65 years and older category (where unhelmeted riders had serious injuries 22.4 percent of the time, and helmeted riders had a 9.8 percent serious injury rate). Male motorcyclists in 2011 had a fatality rate (3.4 percent) more than twice that of female motorcyclists (1.5

percent). Approximately 47 percent of injured motorcyclists in 2011 had proper *motorcycle licenses* or *endorsements*. *Serious injury* rates do not appear to be associated with the operator's license status, although compared to all other license statuses, operators with *motorcycle endorsements* had a slightly lower fatality rate (2.8 percent) than the others (3.8).

In 2011, *unhelmeted* riders experienced injuries to the *neck and above* 26.2 percent of the time, compared to 10.7 percent of the time for riders with helmets. However, helmeted riders sustained proportionately more injuries to the *torso, arms, and legs* than unhelmeted riders. More than two-thirds (70.3 percent) of all motorcyclists killed in 2011 had injuries to the *neck or above*. About six out of ten motorcyclists killed were unhelmeted, with injuries to the *neck or above*.

Motorcycle operators, and especially moped operators, compared unfavorably to other motor vehicle operators along several dimensions related to previous driving history. In terms of *drivers' license status*, motorcycle operators involved in collisions in 2011 had a lower percentage of *valid drivers' licenses* (76.7 percent) than the operators of other motorized vehicles (85 percent and above)—with the exception of *moped* operators, who had a valid license only 32.5 percent of the time. Nearly one-half of moped operators involved in collisions in 2011 had *suspended licenses* and slightly more than half had a history of *traffic convictions*. Ten out of every 100 moped operators in collisions were classified as *habitual traffic violators*, which is a rate more than 145 times greater than other four-wheeled (or more) vehicles. Further, moped operators involved in crashes in 2011 were much more likely to have *prior alcohol offenses* and *prior licensing offenses* than operators of other vehicles, including motorcycles. Interestingly, moped operators are somewhat less likely to have *prior speeding offenses* than all other vehicles. Motorcycle operators and large truck operators involved in collisions were equally likely to have *prior speeding offenses*, and had the highest rates of *prior speeding offenses* in comparison to other vehicle types.

**Table 43. Number of collisions involving motorcycles, by collision severity, 2007-2011**

Motorcycle collision severity	2007	2008	2009	2010	2011	Annual rate of change	
						2007-11	2010-11
Fatal	117	125	111	110	117	0.0%	6.4%
Incapacitating	525	462	438	493	511	-0.7%	3.7%
Non-incapacitating	1,969	2,184	1,786	1,917	1,910	-0.8%	-0.4%
Property damage only	945	1,051	941	909	1,013	1.8%	11.4%
<b>Total</b>	<b>3,556</b>	<b>3,822</b>	<b>3,276</b>	<b>3,429</b>	<b>3,551</b>	<b>-0.04%</b>	<b>3.6%</b>
% injury collisions	73.4%	72.5%	71.3%	73.5%	71.5%	-0.7%	-2.7%
% serious injury collisions	18.1%	15.4%	16.8%	17.6%	17.7%	-0.5%	0.6%

Source: Indiana State Police

Note: *Serious injury collisions* include those with one or more *fatal* and *incapacitating* injuries.

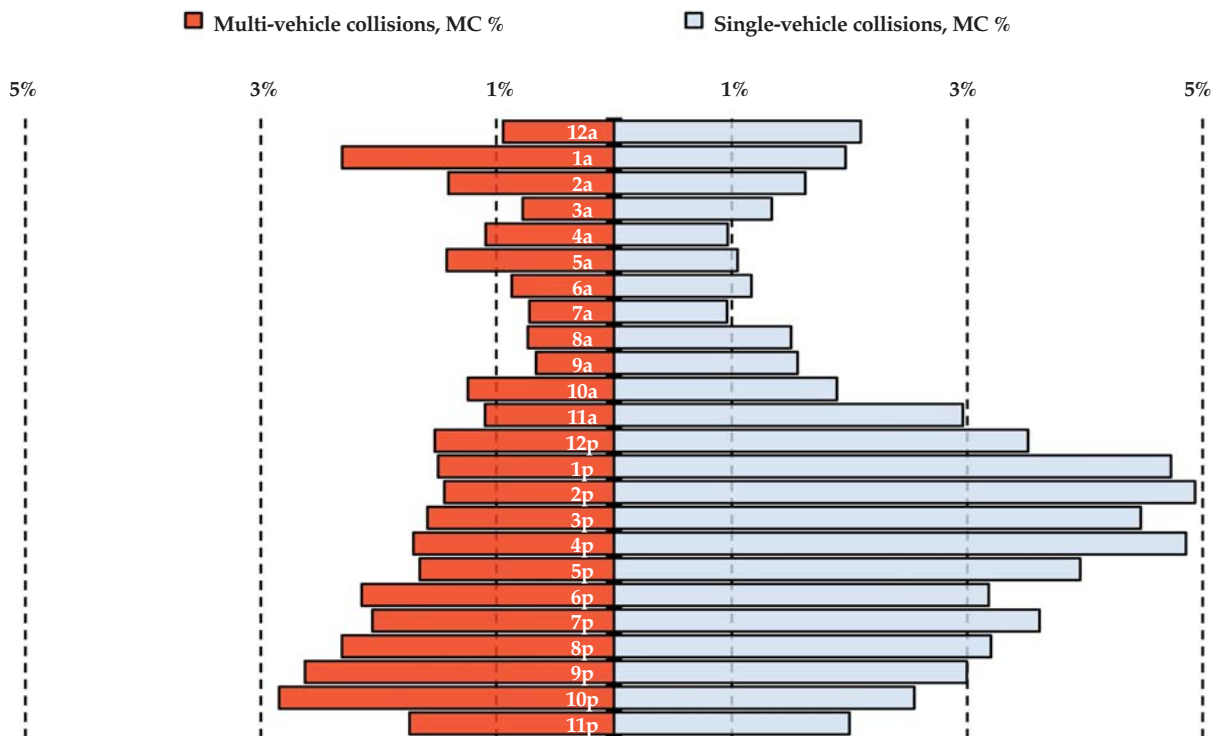
Table 44. Probability of motorcycle collision severity, by vehicles involved, 2007-2011

Type of motorcycle collision	Year	Total motorcycle collisions	Collision severity				
			Fatal	Incapacitating	Non-incapacitating	Property damage only	Serious injury percent
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%
	2010	1,557	3.1%	16.6%	62.8%	17.5%	19.7%
	2011	1,566	3.4%	16.1%	62.5%	17.9%	19.5%
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%
	2010	1,872	3.3%	12.6%	50.2%	34.0%	15.8%
	2011	1,985	3.2%	13.0%	46.9%	36.9%	16.2%
<b>Mean annual rates</b>							
Single-vehicle		1,611	3.2%	15.7%	63.4%	17.7%	18.9%
Multi-vehicle		1,916	3.4%	12.2%	48.6%	35.9%	15.6%

Source: Indiana State Police

Note: Serious injury collisions include those with one or more fatal and incapacitating injuries.

Figure 30. Proportion of total motor vehicle collisions with motorcycles (MC) involved, by time of day and number of vehicles involved, 2011



Source: Indiana State Police

Notes:

N = 3,551 motorcycle collisions (single-vehicle = 1,566 and multi-vehicle = 1,985)

N = 184,581 other non-motorcycle collisions (single-vehicle = 56,372 and multi-vehicle = 128,209)

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



Table 45. Characteristics of motorcycle collisions, by severity of collision, 2011

Characteristics	Number of collisions					Probability of collision severity			
	Fatal	Incapacitating	Non-incapacitating	Property damage	Total	Fatal	Incapacitating	Serious injury	Serious injury change, 2010-11
<b>Weather conditions</b>									
Clear	93	404	1,509	774	2,780	3.3%	14.5%	17.9%	-0.1
Cloudy or poor visibility	19	85	305	187	596	3.2%	14.3%	17.4%	2.0
Extreme weather	5	22	96	51	174	2.9%	12.6%	15.5%	0.8
<b>Road junctions</b>									
No junction involved	80	327	1,209	633	2,249	3.6%	14.5%	18.1%	0.1
Intersections	36	175	662	362	1,235	2.9%	14.2%	17.1%	0.4
Interchange/ramp	1	9	39	18	67	1.5%	13.4%	14.9%	-6.8
<b>Road character</b>									
Straight/level	62	315	1,279	703	2,271	2.7%	13.9%	16.6%	1.6
Curves	36	117	361	139	654	5.5%	17.9%	23.4%	-0.9
Straight/grade/hillcrest	17	77	248	131	457	3.7%	16.8%	20.6%	-0.4
Non-roadway crash	2	2	22	40	46	4.3%	4.3%	8.7%	-6.5
<b>Road class</b>									
Local/city road	38	207	994	532	1,771	2.1%	11.7%	13.8%	-1.4
Highway	50	176	496	209	931	5.4%	18.9%	24.3%	3.2
County road	23	101	276	124	524	4.4%	19.3%	23.7%	1.0
Interstate	4	13	67	31	115	3.5%	11.3%	14.8%	-4.4
<b>Light conditions</b>									
Daylight	75	365	1,400	764	2,604	2.9%	14.0%	16.9%	-0.1
Dark (lighted)	11	61	228	126	426	2.6%	14.3%	16.9%	-1.2
Dark (not lighted)	29	63	203	81	376	7.7%	16.8%	24.5%	4.3
Dawn/dusk	2	20	79	40	141	1.4%	14.2%	15.6%	-4.7

Source: Indiana State Police

Notes:

Excludes collisions where characteristic was unknown or not reported.

Characteristics 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.

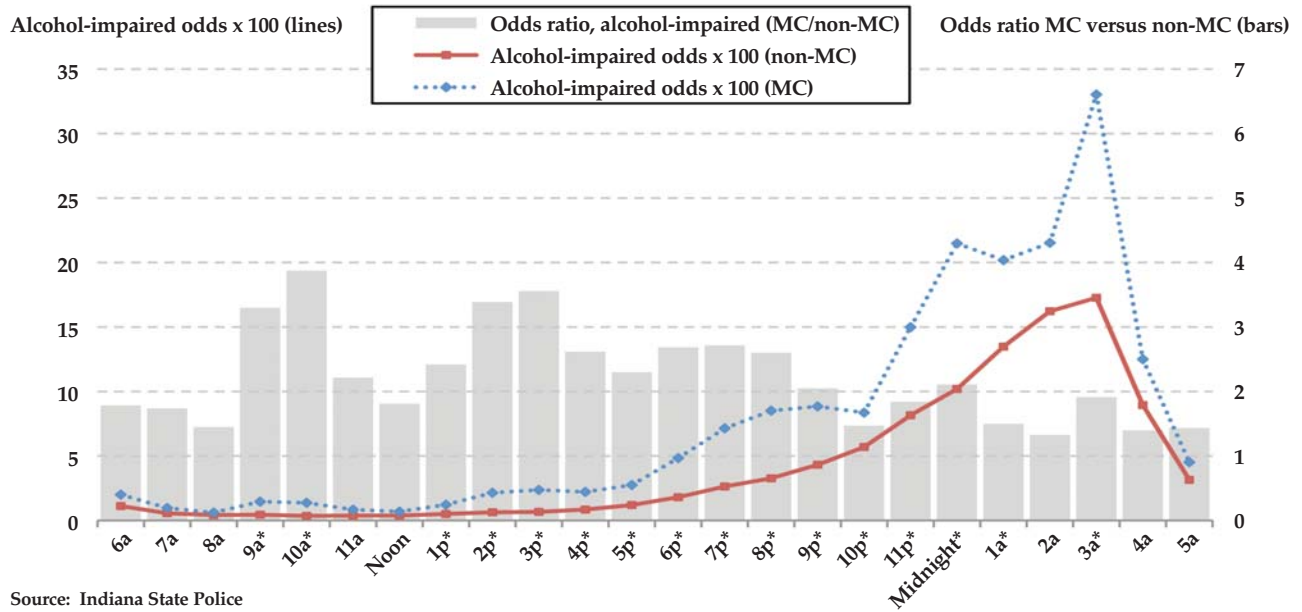
*Straight/grade/hillcrest* includes straight/grade and straight/hillcrest.

*Road class* is defined as follows:

*Highway* includes state road and US route.

*Serious injury collisions* include those with one or more fatal and incapacitating injuries.

Figure 31. Odds of motorcycle (MC) and non-motorcycle collisions involving alcohol-impairment, by hour of day, 2007-2011



Source: Indiana State Police

Notes:

Total motorcycle collisions = 17,633. Total motorcycle alcohol-impaired collisions = 790.

Total non-motorcycle collisions = 963,180. Total non-motorcycle alcohol-impaired collisions = 20,723.

\*Odds ratio significant at  $p < 0.05$  or better.

Table 46. Vehicles involved in multi-vehicle motorcycle collisions, by operator alcohol impairment, 2007-2011

Alcohol status/Type of vehicle	2007	2008	2009	2010	2011	Annual rate of change	
						2007-11	2010-11
<b>Not alcohol-impaired</b>							
Motorcycles	1,976	2,095	1,821	1,893	2,013	0.5%	6.3%
Other vehicles	1,913	2,042	1,779	1,875	2,015	1.3%	7.5%
<b>Alcohol-impaired</b>							
Motorcycles	36	26	40	45	45	5.7%	0.0%
Other vehicles	23	15	20	23	27	4.1%	17.4%
<b>Odds of alcohol-impaired (within vehicle type)</b>							
Motorcycles	0.018	0.012	0.022	0.024	0.022		
Other vehicles	0.012	0.007	0.011	0.012	0.013		
<b>Odds ratio (MC/other vehicles)</b>	<b>1.5</b>	<b>1.7</b>	<b>2.0*</b>	<b>1.9*</b>	<b>1.7*</b>		

Source: Indiana State Police

Notes:

Other vehicles includes unknown unit type; excludes pedestrians, bicycles, and non-motorized vehicles.

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

\*Odds ratio significant  $p < 0.05$ .

**Table 47. Vehicles involved in multi-vehicle motorcycle (MC) collisions, by vehicle type, primary factor, and risk of vehicle attributability to collision occurrence, 2011**

Primary factor	Vehicles involved		Count of vehicles attributable		Count of vehicles not attributable		% Attributable		Relative risk of attributability (MC/other)
	MC	Other vehicles	MC	Other vehicles	MC	Other vehicles	MC	Other vehicles	
<b>Unsafe actions</b>	<b>1,608</b>	<b>1,609</b>	<b>677</b>	<b>899</b>	<b>931</b>	<b>710</b>	<b>42.1%</b>	<b>55.9%</b>	<b>0.75*</b>
Failure to yield right of way	709	715	164	545	545	170	23.1%	76.2%	0.30*
Following too closely	376	366	235	124	141	242	62.5%	33.9%	1.84*
Disregard signal/reg sign	93	104	54	38	39	66	58.1%	36.5%	1.59*
Unsafe backing	87	86	1	83	86	3	1.1%	96.5%	0.01*
Unsafe speed	79	75	63	14	16	61	79.7%	18.7%	4.27*
Improper passing	73	66	50	17	23	49	68.5%	25.8%	2.66*
Improper turning	66	65	25	38	41	27	37.9%	58.5%	0.65*
Improper lane usage	63	65	42	18	21	47	66.7%	27.7%	2.41*
Left of center	54	55	37	18	17	37	68.5%	32.7%	2.09*
Speed too fast for weather conditions	5	9	4	3	1	6	80.0%	33.3%	2.40
Wrong way on one way	3	3	2	1	1	2	66.7%	33.3%	2.00
<b>Distractions</b>	<b>81</b>	<b>82</b>	<b>45</b>	<b>33</b>	<b>36</b>	<b>49</b>	<b>55.6%</b>	<b>40.2%</b>	<b>1.38</b>
Driver distracted	79	80	45	31	34	49	57.0%	38.8%	1.47*
Cell phone distracted	2	2	0	2	2	0	0.0%	100.0%	--
<b>Cognitive impairment</b>	<b>11</b>	<b>15</b>	<b>8</b>	<b>4</b>	<b>3</b>	<b>11</b>	<b>72.7%</b>	<b>26.7%</b>	<b>2.73*</b>
Alcoholic beverages	7	7	6	2	1	5	85.7%	28.6%	3.00
Driver illness	3	7	1	2	2	5	33.3%	28.6%	1.17
Driver asleep or fatigued	1	1	1		1	1	100.0%	0.0%	--
<b>Loss of control</b>	<b>28</b>	<b>22</b>	<b>22</b>	<b>3</b>	<b>6</b>	<b>19</b>	<b>78.6%</b>	<b>13.6%</b>	<b>5.76*</b>
Overcorrecting/oversteering	17	13	14	1	3	12	82.4%	7.7%	10.71*
Ran off road right	11	9	8	2	3	7	72.7%	22.2%	3.27
<b>Environmental</b>	<b>55</b>	<b>45</b>	<b>35</b>	<b>26</b>	<b>20</b>	<b>19</b>	<b>63.6%</b>	<b>57.8%</b>	<b>1.10</b>
<b>Vehicle-related</b>	<b>34</b>	<b>37</b>	<b>26</b>	<b>6</b>	<b>8</b>	<b>31</b>	<b>76.5%</b>	<b>16.2%</b>	<b>4.72*</b>
<b>All other factors</b>	<b>241</b>	<b>234</b>	<b>127</b>	<b>137</b>	<b>114</b>	<b>97</b>	<b>52.7%</b>	<b>58.5%</b>	<b>0.90</b>
<b>Total</b>	<b>2,058</b>	<b>2,044</b>	<b>940</b>	<b>1108</b>	<b>1118</b>	<b>936</b>	<b>45.7%</b>	<b>54.2%</b>	<b>0.84*</b>
By primary factor category:									
Unsafe actions	78.1%	78.7%							
Distractions	3.9%	4.0%							
Cognitive impairment	0.5%	0.7%							
Loss of control	1.4%	1.1%							
Environmental	2.7%	2.2%							
Vehicle-related	1.7%	1.8%							
Other	11.7%	11.4%							

Source: Indiana State Police

Notes:

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 single-vehicle collisions involving motorcycles.

Relative risk of attributability is 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.

\*Relative risk of attributability significant at p < 0.05.

Other vehicles includes unknown unit type; excludes pedestrians, bicycles, and non-motorized vehicles.

**Table 48. Speeding status of motorcycles and other vehicles involved in multi-vehicle motorcycle collisions, 2007-2011**

Speeding/type of vehicle	2007	2008	2009	2010	2011	Annual rate of change	
						2007-11	2010-11
<b>Not speeding</b>							
Motorcycles	1,891	2,007	1,756	1,845	1,951	0.8%	5.7%
Other vehicles	1,922	2,035	1,783	1,880	2,014	1.2%	7.1%
<b>Speeding</b>							
Motorcycles	121	114	105	93	107	-3.0%	15.1%
Other vehicles	14	22	16	21	28	18.9%	33.3%
<b>Odds of speeding (within vehicle type)</b>							
Motorcycles	0.064	0.057	0.060	0.050	0.055		
Other vehicles	0.007	0.011	0.009	0.011	0.014		
<b>Odds ratio (motorcycle/others)</b>	<b>8.78*</b>	<b>5.25*</b>	<b>6.66*</b>	<b>4.51*</b>	<b>3.94*</b>		

Source: Indiana State Police

Notes:

\* Odds ratio significant at  $p < 0.001$  or better.

Other vehicles include *unknown* unit type; excludes *pedestrians, bicycles, and animal-drawn vehicles*.

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

**Table 49. Speeding status of motorcycles and other vehicles involved in collisions, by collision type, 2007-2011**

Collision type/speeding/type of vehicle	2007	2008	2009	2010	2011	Annual rate of change	
						2007-11	2010-11
<b>Single-vehicle collisions</b>							
<b>Not speeding</b>							
Motorcycles	1,402	1,545	1,299	1,319	1,289	-2.1%	-2.3%
Other vehicles	54,789	54,744	50,168	48,992	47,781	-3.4%	-2.5%
<b>Speeding</b>							
Motorcycles	242	249	194	238	277	3.4%	16.4%
Other vehicles	9,219	11,571	8,999	9,485	8,591	-1.7%	-9.4%
<b>Odds of speeding (within vehicle type)</b>							
Motorcycles	0.173	0.161	0.149	0.180	0.215		
Other vehicles	0.168	0.211	0.179	0.194	0.180		
<b>Odds ratio (motorcycle/others)</b>	<b>1.03</b>	<b>0.76*</b>	<b>0.83*</b>	<b>0.93</b>	<b>1.20*</b>		
<b>Multi-vehicle collisions</b>							
<b>Not speeding</b>							
Motorcycles	1,891	2,007	1,756	1,845	1,951	0.8%	5.7%
Other vehicles	279,881	273,357	258,291	266,426	260,665	-1.8%	-2.2%
<b>Speeding</b>							
Motorcycles	121	114	105	93	107	-3.0%	15.1%
Other vehicles	8,984	11,070	9,059	8,771	8,626	-1.0%	-1.7%
<b>Odds of speeding (within vehicle type)</b>							
Motorcycles	0.064	0.057	0.060	0.050	0.055		
Other vehicles	0.032	0.040	0.035	0.033	0.033		
<b>Odds ratio (motorcycle/others)</b>	<b>1.99*</b>	<b>1.40*</b>	<b>1.70*</b>	<b>1.53*</b>	<b>1.66*</b>		

Source: Indiana State Police

Notes:

\* Odds ratio significant at  $p < 0.001$  or better.

Other vehicles include *unknown* unit type; excludes *pedestrians, bicycles, and animal-drawn vehicles*.

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

**Table 50. Motorcycle rider injuries, 2007-2011**

Injury status	2007	2008	2009	2010	2011	Annual rate of change	
						2007-11	2010-11
<b>Serious injury</b>	<b>690</b>	<b>628</b>	<b>579</b>	<b>639</b>	<b>671</b>	<b>-0.7%</b>	<b>5.0%</b>
Fatal	122	130	111	110	118	-0.8%	7.3%
Incapacitating	568	498	468	529	553	-0.7%	4.5%
<b>Other injury</b>	<b>2,231</b>	<b>2,497</b>	<b>2,017</b>	<b>2,183</b>	<b>2,166</b>	<b>-0.7%</b>	<b>-0.8%</b>
Non-incapacitating	1,897	2,211	1,793	1,956	1,944	0.6%	-0.6%
Other injury	334	286	224	227	222	-9.7%	-2.2%
<b>Not injured</b>	<b>882</b>	<b>979</b>	<b>890</b>	<b>900</b>	<b>972</b>	<b>2.5%</b>	<b>8.0%</b>
<b>Total</b>	<b>3,803</b>	<b>4,104</b>	<b>3,486</b>	<b>3,722</b>	<b>3,809</b>	<b>0.0%</b>	<b>2.3%</b>
% injured	76.8%	76.1%	74.5%	75.8%	74.5%		
% serious injury	18.1%	15.3%	16.6%	17.2%	17.6%		

Source: Indiana State Police

**Table 51. Probability of injury status of motorcycle operators and passengers, by (first) object of impact, 2011**

Object of impact	Total	Probability of injury status (sum = 100%)				Serious injury rate
		Fatal	Incapacitating	Non-incapacitating	Other	
<b>Animals</b>	<b>193</b>	<b>2.1%</b>	<b>14.0%</b>	<b>53.9%</b>	<b>30.1%</b>	<b>16.1%</b>
Deer	138	2.2%	13.0%	55.8%	29.0%	15.2%
Animal other than deer	55	1.8%	16.4%	49.1%	32.7%	18.2%
<b>Another motor vehicle</b>	<b>1,972</b>	<b>2.9%</b>	<b>14.2%</b>	<b>50.4%</b>	<b>32.4%</b>	<b>17.2%</b>
<b>Fell from vehicle (non-collision)</b>	<b>285</b>	<b>2.1%</b>	<b>14.7%</b>	<b>64.9%</b>	<b>18.2%</b>	<b>16.8%</b>
<b>Off the roadway</b>	<b>549</b>	<b>5.6%</b>	<b>17.1%</b>	<b>60.5%</b>	<b>16.8%</b>	<b>22.8%</b>
Off roadway	381	5.5%	18.4%	61.2%	15.0%	23.9%
Ditch	125	7.2%	13.6%	54.4%	24.8%	20.8%
Embankment	37	2.7%	16.2%	73.0%	8.1%	18.9%
Culvert	6	0.0%	16.7%	66.7%	16.7%	16.7%
<b>Other actions</b>	<b>505</b>	<b>1.4%</b>	<b>11.5%</b>	<b>68.5%</b>	<b>18.6%</b>	<b>12.9%</b>
Other	368	1.4%	8.7%	71.2%	18.8%	10.1%
Overturn/rollover	134	1.5%	19.4%	61.9%	17.2%	20.9%
Cargo/equipment shift or loss	1	0.0%	0.0%	100%	0.0%	0.0%
Immersion	1	0.0%	0.0%	0.0%	100%	0.0%
Jackknife	1	0.0%	0.0%	0.0%	100%	0.0%
<b>Other traffic units</b>	<b>38</b>	<b>2.6%</b>	<b>7.9%</b>	<b>65.8%</b>	<b>23.7%</b>	<b>10.5%</b>
Pedestrian	14	0.0%	0.0%	64.3%	35.7%	0.0%
Animal drawn vehicle	10	0.0%	30.0%	40.0%	30.0%	30.0%
Bicycle	9	0.0%	0.0%	88.9%	11.1%	0.0%
Work zone maintenance equipment	3	0.0%	0.0%	100%	0.0%	0.0%
Railway vehicle/train/engine	2	50.0%	0.0%	50.0%	0.0%	50.0%
<b>Post, signs, mailbox</b>	<b>40</b>	<b>7.5%</b>	<b>20.0%</b>	<b>52.5%</b>	<b>20.0%</b>	<b>27.5%</b>
Utility pole	14	21.4%	14.3%	42.9%	21.4%	35.7%
Mailbox	10	0.0%	10.0%	60.0%	30.0%	10.0%
Other post/pole or support	9	0.0%	33.3%	66.7%	0.0%	33.3%
Light/luminaire support	4	0.0%	50.0%	25.0%	25.0%	50.0%
Highway traffic sign post	3	0.0%	0.0%	66.7%	33.3%	0.0%
<b>Road/bridge infrastructure</b>	<b>184</b>	<b>3.3%</b>	<b>17.4%</b>	<b>63.0%</b>	<b>16.3%</b>	<b>20.7%</b>
Curb	126	0.8%	18.3%	63.5%	17.5%	19.0%
Guardrail face	36	13.9%	19.4%	58.3%	8.3%	33.3%
Median barrier	12	0.0%	16.7%	58.3%	25.0%	16.7%
Impact attenuator/crash cushion	4	0.0%	0.0%	75.0%	25.0%	0.0%
Bridge rail	3	0.0%	0.0%	66.7%	33.3%	0.0%
Bridge overhead structure	1	0.0%	0.0%	100%	0.0%	0.0%
Bridge pier or abutment	1	0.0%	0.0%	100%	0.0%	0.0%
Guardrail end	1	0.0%	0.0%	100%	0.0%	0.0%
<b>Tree</b>	<b>18</b>	<b>0.0%</b>	<b>5.6%</b>	<b>88.9%</b>	<b>5.6%</b>	<b>5.6%</b>
<b>Wall, fence, building</b>	<b>22</b>	<b>9.1%</b>	<b>27.3%</b>	<b>36.4%</b>	<b>27.3%</b>	<b>36.4%</b>
Wall/building/tunnel	16	12.5%	25.0%	31.3%	31.3%	37.5%
Fence	6	0.0%	33.3%	50.0%	16.7%	33.3%
<b>Unknown</b>	<b>3</b>	<b>0.0%</b>	<b>33.3%</b>	<b>33.3%</b>	<b>33.3%</b>	<b>33.3%</b>
<b>Total</b>	<b>3,809</b>	<b>3.1%</b>	<b>14.5%</b>	<b>56.4%</b>	<b>26.0%</b>	<b>17.6%</b>

Source: Indiana State Police

Note: Serious injury collisions include those with one or more fatal and incapacitating injuries.

**Table 52. Individuals involved in motorcycle collisions by vehicle type, driver alcohol impairment, and injury status, 2011**

Type of vehicle/alcohol status	Individual injury status			Total
	Fatal	Incapacitating	All other	
<b>Single-vehicle collisions</b>				
<b>Motorcycles</b>	<b>54</b>	<b>264</b>	<b>1,412</b>	<b>1,730</b>
Alcohol-impaired unit	23	32	94	149
% alcohol-impaired	42.6%	12.1%	6.7%	8.6%
<b>Multi-vehicle collisions</b>				
<b>Motorcycles</b>	<b>64</b>	<b>289</b>	<b>1,726</b>	<b>2,079</b>
Alcohol-impaired unit	16	11	22	49
% alcohol-impaired	25.0%	3.8%	1.3%	2.4%
<b>All other units/vehicles</b>	<b>0</b>	<b>6</b>	<b>1,863</b>	<b>1,869</b>
Alcohol-impaired unit	0	0	28	23
% alcohol-impaired	--	0%	1.5%	1.2%

Source: Indiana State Police

Notes:

Excludes *unknown unit type, pedestrians, and pedalcyclists*.

*All other injury status includes all other injuries and non-injuries.*

**Table 53. Motorcycle operators involved in Indiana collisions, by blood alcohol content (BAC) (g/dL), 2007-2011**

BAC range, g/dL	2007	2008	2009	2010	2011	Annual rate of change	
						2007-11	2010-11
<b>Total motorcycle operators</b>	<b>3,468</b>	<b>3,726</b>	<b>3,180</b>	<b>3,338</b>	<b>3,456</b>	<b>-0.1%</b>	<b>3.5%</b>
No BAC reported	3,269	3,485	2,938	3,060	3,137	-1.0%	2.5%
% total operators	94.3%	93.5%	92.4%	91.7%	90.8%		
< 0.01	66	96	76	80	106	12.6%	32.5%
% total operators	1.9%	2.6%	2.4%	2.4%	3.1%		
0.01 < 0.08	23	40	32	38	35	11.1%	-7.9%
% total operators	0.7%	1.1%	1.0%	1.1%	1.0%		
0.08 < 0.15	40	51	47	66	54	7.8%	-18.2%
% total operators	1.2%	1.4%	1.5%	2.0%	1.6%		
0.15 and greater	70	54	87	94	124	15.4%	31.9%
% total operators	2.0%	1.4%	2.7%	2.8%	3.6%		

Source: Indiana State Police

Note: g/dL = grams per deciliter.

**Table 54. Motorcyclists involved in collisions, by rider characteristics and injury status, 2011**

Characteristics	Individual injury status				Total	Probability of injury status		
	Fatal	Incapacitating	Non-incapacitating	All other		Fatal	Incapacitating	Serious injury
<b>Helmet use/age group</b>								
<b>Helmet</b>	<b>18</b>	<b>126</b>	<b>555</b>	<b>282</b>	<b>981</b>	<b>1.8%</b>	<b>12.8%</b>	<b>14.7%</b>
Under 16	0	3	27	3	33	0.0%	9.1%	9.1%
16-20	1	6	48	27	82	1.2%	7.3%	8.5%
21-24	0	8	58	24	90	0.0%	8.9%	8.9%
25-34	6	24	91	56	177	3.4%	13.6%	16.9%
35-44	4	21	86	54	165	2.4%	12.7%	15.2%
45-54	3	29	101	53	186	1.6%	15.6%	17.2%
55-64	2	31	103	51	187	1.1%	16.6%	17.6%
65 and older	2	4	41	14	61	3.3%	6.6%	9.8%
<b>No helmet indicated</b>	<b>100</b>	<b>427</b>	<b>1,611</b>	<b>690</b>	<b>2,828</b>	<b>3.5%</b>	<b>15.1%</b>	<b>18.6%</b>
Under 16	0	14	74	21	109	0.0%	12.8%	12.8%
16-20	4	26	180	70	280	1.4%	9.3%	10.7%
21-24	7	35	164	78	284	2.5%	12.3%	14.8%
25-34	21	72	296	146	535	3.9%	13.5%	17.4%
35-44	21	77	322	116	536	3.9%	14.4%	18.3%
45-54	25	140	356	159	680	3.7%	20.6%	24.3%
55-64	16	47	161	82	306	5.2%	15.4%	20.6%
65 and older	6	16	58	18	98	6.1%	16.3%	22.4%
<b>Gender</b>								
<b>Male</b>	<b>109</b>	<b>445</b>	<b>1,751</b>	<b>916</b>	<b>3,221</b>	<b>3.4%</b>	<b>13.8%</b>	<b>17.2%</b>
Operator	109	435	1,689	913	3,146	3.5%	13.8%	17.3%
Injured passenger	0	10	62	3	75	0.0%	13.3%	13.3%
<b>Female</b>	<b>9</b>	<b>108</b>	<b>414</b>	<b>56</b>	<b>587</b>	<b>1.5%</b>	<b>18.4%</b>	<b>19.9%</b>
Operator	4	50	205	51	310	1.3%	16.1%	17.4%
Injured passenger	5	58	209	5	277	1.8%	20.9%	22.7%
<b>Type of individual</b>								
Operator	113	485	1,894	964	3,456	3.3%	14.0%	17.3%
Injured passenger	5	68	272	8	353	1.4%	19.3%	20.7%
<b>Operators' license status</b>								
Motorcycle/endorsement	44	225	830	499	1,598	2.8%	14.1%	16.8%
Other operator license	56	205	758	358	1,377	4.1%	14.9%	19.0%
No license	13	51	286	89	439	3.0%	11.6%	14.6%
Percent with MC license	38.9%	46.8%	44.3%	52.7%	46.8%			

Source: Indiana State Police

**Notes:**

*All other injury status includes injuries identified as not reported, null, refused, and unknown.*

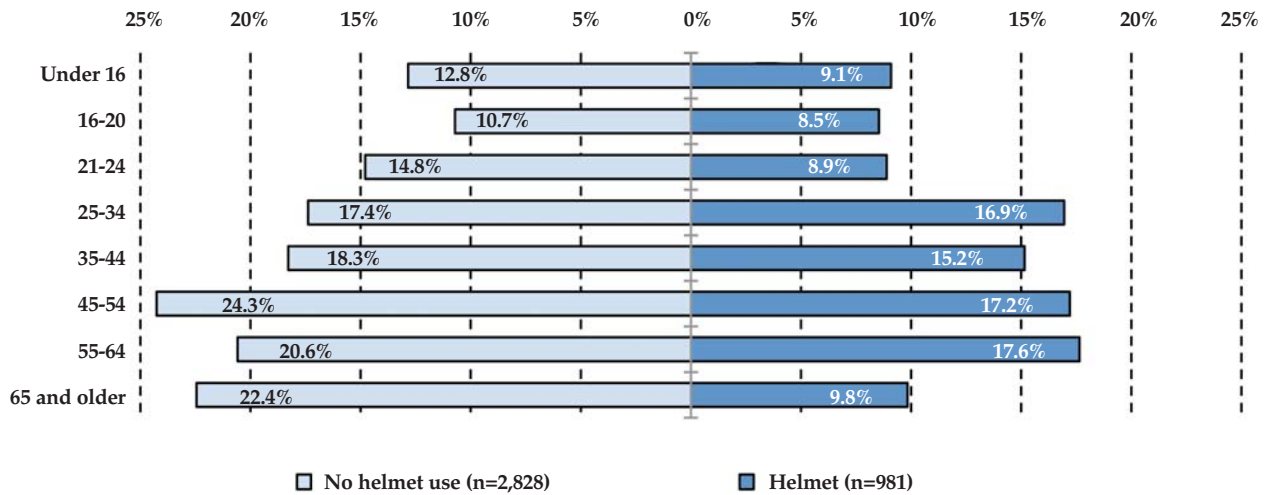
*Motorcycle/endorsement license status includes motorcycle, chauffeur w/MC endorsement, learner motorcycle, operators w/MC endorsement, and PP chauffeur w/MC endorsement.*

*No helmet indicated includes null and unknown safety equipment types.*

*Serious injuries include injuries reported as fatal or incapacitating.*

*Excludes cases in which operators' license status was unknown.*

**Figure 32. Serious injuries as percent of total motorcyclist injuries, by helmet use and age group, 2011**



Source: Indiana State Police

Notes:

Includes cases where *helmet use* and *age* are known.

*Serious injuries* include injuries reported as *fatal* or *incapacitating*.

**Table 55. Nature and location of injuries to motorcycle operators and passengers, by reported helmet use, 2011**

Nature of injury	Location of injury						Total	Percent injuries by nature
	Neck and above	Entire body	Torso	Arms	Legs	No injury/unknown		
<b>No helmet use</b>	<b>741</b>	<b>247</b>	<b>218</b>	<b>388</b>	<b>535</b>	<b>699</b>	<b>2,828</b>	<b>100%</b>
Burns	0	0	0	0	1	0	1	0.0%
Fracture/dislocation	50	31	27	74	151	1	334	11.8%
Internal	97	30	30	5	4	0	166	5.9%
Minor bleeding	158	21	11	65	63	0	318	11.2%
No injury/unknown	2	0	0	0	0	692	694	24.5%
None visible	11	3	1	3	5	4	27	1.0%
Other injuries	324	154	148	237	301	2	1,166	41.2%
Severe bleeding	97	5	1	4	8	0	115	4.1%
Severed	2	3	0	0	2	0	7	0.2%
<i>Percent injuries by location</i>	<i>26.2%</i>	<i>8.7%</i>	<i>7.7%</i>	<i>13.7%</i>	<i>18.9%</i>	<i>24.7%</i>	<i>100%</i>	
<b>Helmet</b>	<b>105</b>	<b>77</b>	<b>117</b>	<b>190</b>	<b>206</b>	<b>286</b>	<b>981</b>	<b>100%</b>
Burns	0	0	0	0	0	0	0	0.0%
Fracture/dislocation	6	5	18	46	58	0	133	13.6%
Internal	18	10	13	1	1	0	43	4.4%
Minor bleeding	14	5	1	27	11	0	58	5.9%
No injury/unknown	1	0	0	0	0	282	283	28.8%
None visible	2	0	0	1	0	3	6	0.6%
Other injuries	55	55	85	113	129	1	438	44.6%
Severe bleeding	8	2	0	2	5	0	17	1.7%
Severed	1	0	0	0	2	0	3	0.3%
<i>Percent injuries by location</i>	<i>10.7%</i>	<i>7.8%</i>	<i>11.9%</i>	<i>19.4%</i>	<i>21.0%</i>	<i>29.2%</i>	<i>100%</i>	

Source: Indiana State Police

Notes:

*Other injuries* include abrasion, complaint of pain, contusion/bruise, and other.

*Burns* include minor burn and severe burn.

*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.

*No injury/unknown* includes null and invalid.

*No helmet indicated* includes null and unknown safety equipment types.



**Table 56. Percentage of total motorcyclist fatalities, by helmet use and nature and location of injuries, 2011**

Helmet use/nature of injury	Location			% by nature	Total fatalities
	Neck and above	Entire body	Torso		
<b>No helmet use</b>	<b>59.3%</b>	<b>16.9%</b>	<b>8.5%</b>	<b>84.7%</b>	<b>100</b>
Fracture/dislocation	6.8%			6.8%	8
Internal	30.5%	12.7%	6.8%	50.0%	59
No injury/unknown	1.7%			1.7%	2
None visible			0.8%	0.8%	1
Other injuries	8.5%	2.5%		11.0%	13
Severe bleeding	10.2%		0.8%	11.0%	13
Severed	1.7%	1.7%		3.4%	4
<b>Helmet</b>	<b>11.0%</b>	<b>3.4%</b>	<b>0.8%</b>	<b>15.3%</b>	<b>18</b>
Fracture/dislocation	0.8%			0.8%	1
Internal	6.8%	1.7%	0.8%	9.3%	11
None visible	0.8%			0.8%	1
Other injuries	0.8%	0.8%		1.7%	2
Severe bleeding	0.8%	0.8%		1.7%	2
Severed	0.8%			0.8%	1
<b>% by location</b>	<b>70.3%</b>	<b>20.3%</b>	<b>9.3%</b>	<b>100%</b>	
<b>Total fatalities</b>	<b>83</b>	<b>24</b>	<b>11</b>		<b>118</b>

Source: Indiana State Police

Note: No helmet indicated includes null and unknown safety equipment types.

**Table 57. Count of drivers involved in Indiana crashes, by vehicle type and license status, 2011**

License status	Vehicle type							Total drivers by license status
	Motorcycle	Moped	Passenger car	Light truck	Vans	Large truck	Other vehicle types	
<b>Valid</b>	<b>1,752</b>	<b>211</b>	<b>128,963</b>	<b>60,614</b>	<b>14,159</b>	<b>5,357</b>	<b>2,705</b>	<b>213,761</b>
<b>Suspended</b>	<b>495</b>	<b>315</b>	<b>20,933</b>	<b>9,968</b>	<b>2,152</b>	<b>892</b>	<b>304</b>	<b>35,059</b>
Suspended - infraction	382	170	17,998	8,476	1,831	814	267	29,938
Suspended - misdemeanor	14	14	389	165	28	5	1	616
Suspended - prior	85	62	2,435	1,253	279	70	32	4,216
Habitual traffic violator	6	25	79	47	7	3	2	169
Habitual traffic violator - life	8	44	32	27	7		2	120
<b>No license</b>	<b>35</b>	<b>123</b>	<b>2,180</b>	<b>829</b>	<b>222</b>	<b>47</b>	<b>31</b>	<b>3,467</b>
Invalid - revoked	8	11	953	400	112	15	7	1,506
Unlicensed	22	108	962	332	86	18	20	1,548
Cancelled	5	4	265	97	24	14	4	413
<b>Other status</b>	<b>2</b>	<b>1</b>	<b>76</b>	<b>55</b>	<b>9</b>	<b>1</b>	<b>0</b>	<b>144</b>
<b>Total drivers by vehicle type (100%)</b>	<b>2,284</b>	<b>650</b>	<b>152,152</b>	<b>71,466</b>	<b>16,542</b>	<b>6,297</b>	<b>3,040</b>	<b>252,431</b>
Valid	76.7%	32.5%	84.8%	84.8%	85.6%	85.1%	89.0%	84.7%
Suspended	21.7%	48.5%	13.8%	13.9%	13.0%	14.2%	10.0%	13.9%
Habitual violater	0.6%	10.6%	0.1%	0.1%	0.1%	0.0%	0.1%	0.1%
No license	1.5%	18.9%	1.4%	1.2%	1.3%	0.7%	1.0%	1.4%

Sources: Indiana State Police, Indiana Bureau of Motor Vehicles

Notes:

Data limited to drivers where license status was identified by the Bureau of Motor Vehicles.

Light truck includes pickup trucks and SUVs.

Other vehicle type excludes non-motorists.

Other status includes conditional and fraudulent.

**Table 58. Drivers in Indiana crashes, by vehicle type and history of traffic convictions, 2011**

Vehicle type	Total drivers in crashes	Any prior convictions		Prior alcohol offenses		Prior licensing offenses		Prior speeding offenses		Other prior offenses	
		Count of drivers	Percent	Count of drivers	Percent	Count of drivers	Percent	Count of drivers	Percent	Count of drivers	Percent
Motorcycle	2,284	1,333	58.4%	146	6.4%	263	11.5%	752	32.9%	273	12.0%
Moped	650	335	51.5%	121	18.6%	141	21.7%	98	15.1%	76	11.7%
Passenger car	152,152	67,503	44.4%	5,195	3.4%	8,637	5.7%	38,935	25.6%	14,799	9.7%
Light truck	88,003	39,186	44.5%	3,234	3.7%	4,541	5.2%	21,240	24.1%	7,824	8.9%
Large truck	6,302	3,463	55.0%	75	1.2%	173	2.7%	2,081	33.0%	1,020	16.2%
Other	3,040	1,059	34.8%	46	1.5%	65	2.1%	606	19.9%	201	6.6%
<b>All vehicle types</b>	<b>252,431</b>	<b>112,879</b>	<b>44.7%</b>	<b>8,817</b>	<b>3.5%</b>	<b>13,820</b>	<b>5.5%</b>	<b>63,712</b>	<b>25.2%</b>	<b>24,193</b>	<b>9.6%</b>

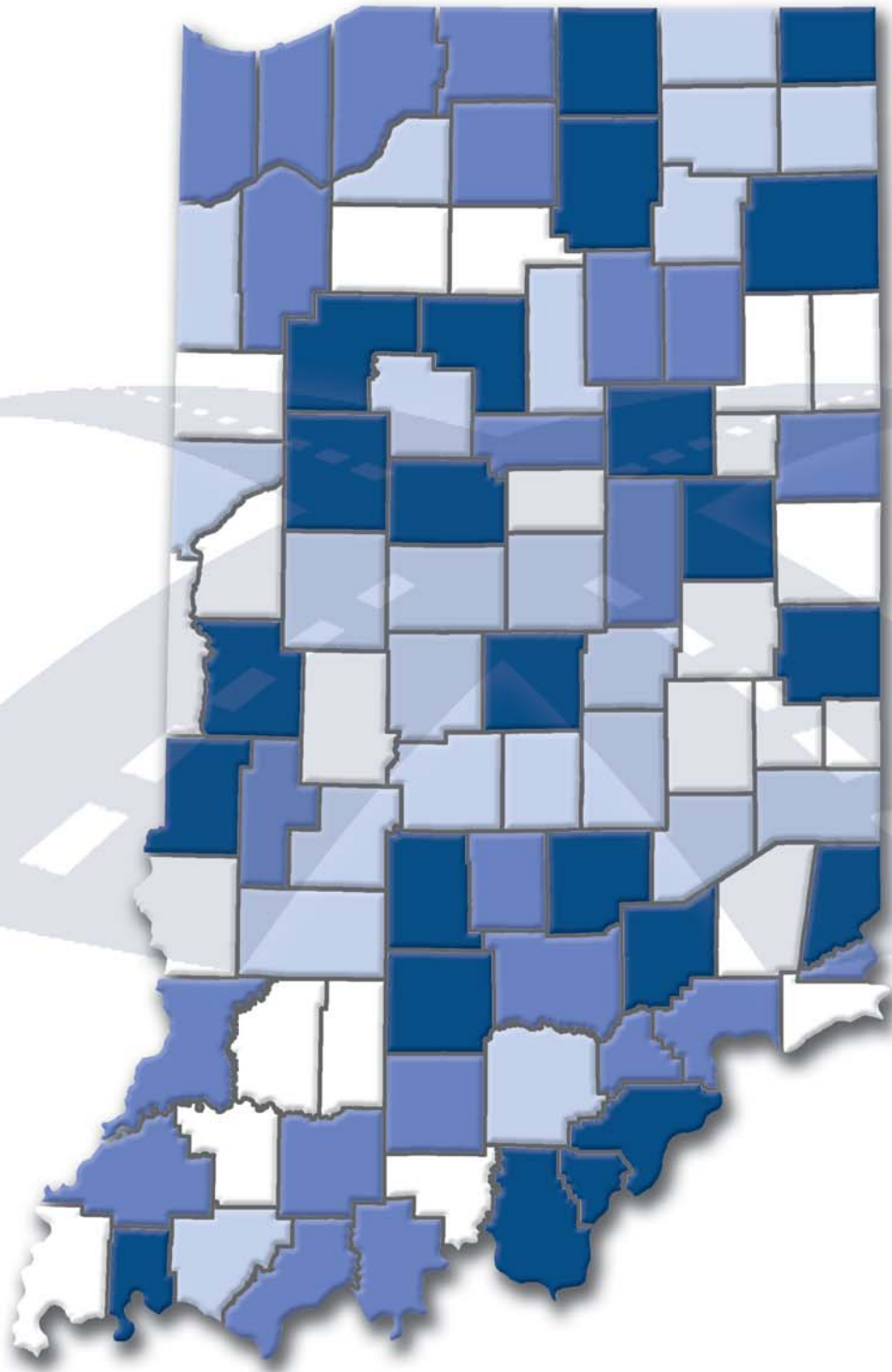
Sources: Indiana State Police; Indiana Bureau of Motor Vehicles

Notes:

Limited to drivers identified within the Bureau Motor Vehicles database.

Prior convictions include those drivers who were convicted of a traffic offense within five years of the crash date.

# PEOPLE



## PEOPLE, 2011

This section documents individuals involved in Indiana's fatal and non-fatal collisions in 2011, as well as trends from 2007 to 2011. Tables and figures detail the individuals involved (i.e., drivers, occupants, pedestrians, and pedalcyclists) by age, gender, location, type of injury, physical condition, and restraint use. More detailed information regarding drivers involved in collisions can be found in the previous CCJR publication, *Young Drivers, 2011*. In addition, motorcycle operators and occupants are covered in detail in a separate section of this publication.

In 2011, 303,530 individuals were involved in collisions; 95 percent of those were drivers of vehicles. (Note that the data include only drivers and injured occupants.) In addition, 1,808 pedestrians and 956 pedalcyclists were involved in collisions. On average, the number of individuals (all types) involved in collisions has decreased since 2007. However, the number of pedestrians involved has decreased at a rate nearly six times slower than all individuals. Excluding animal drawn vehicle operators, pedestrians are the only person type with greater collision involvement in 2011 than 2010, a result of greater male pedestrian involvement (increase of 4.3 percent). On average annually from 2007 to 2011, all males involved in collisions decreased 2.6 percent, while involvement of all females decreased 1.3 percent.

In 2011, 749 individuals were killed in collisions, encompassing:

- 410 drivers,
- 141 injured occupants,
- 118 motorcycle/moped riders (including operators and occupants),
- 63 pedestrians,
- 13 pedalcyclists, and
- 4 animal drawn vehicle operators.

Fatality risk is largely a function of the level of protection afforded the individuals involved. Enclosed vehicles provide greater protection and result in lower fatality rates. Pedestrians, the most vulnerable of person types, were killed at a rate of 34.8 per 1,000 involved. Similarly, motorcyclists were killed at a rate of 31.1 per 1,000 involved. Vehicle drivers, by contrast, were killed at a rate of 1.4 per 1,000. Nearly 90 percent of the drivers involved in collisions were not injured.

In 2011, while the largest population age group for both males and females was 45 to 54, males aged 18 to 20 and females aged 75 and over had the highest fatality rate per 100,000 population. Additionally, males and females aged 25 to 34 had the highest numbers of non-fatal or unknown injuries, while males and females aged 18 to 20 had the highest non-fatal/unknown injury rate per 100,000 population.

Drivers aged 18 to 20 years old had the highest rate of involvement in fatal collisions per 10,000 licensed drivers (2.5), followed closely by drivers aged 21 to 24 (2.4). Drivers aged 75 and over had the highest rate of drivers killed per 10,000 licensed (1.7). Younger drivers (aged 16 to 20) generally had the highest rates of collision involvement.

The majority of drivers in fatal and in all collisions in 2011 were identified as having an apparent physical condition of *normal*. Of the drivers in fatal collisions with an apparent physical condition of *had been drinking*, 68 percent were killed.

Of the drivers killed in collisions, 4.4 percent had no license. Of the drivers with a commercial driver license, 94 percent involved in collisions were not injured. (Rates for motorcycle licenses are somewhat overstated because motorcycle collisions involve a substantial number of improperly licensed motorcycle operators.) Nearly three-quarters of the drivers involved in collisions had valid licenses. Of drivers killed, 15.5 percent had some form of a suspended license.

The number of pedestrians involved in collisions increased slightly from 2010 to 2011 (1,796 to 1,808), while the number of pedalcyclists decreased (1,042 to 956). The percentage of pedalcyclists killed increased slightly from 2010 to 2011 (1.3 to 1.4 percent), while the percentage of pedestrians killed remained constant (3.5 percent). For non-motorists (pedestrians and pedalcyclists), males aged 8 to 15 had the highest involvement in collisions, and outnumbered females in all age groups.

Of the 63 pedestrians killed in collisions, 18 were crossing the road, but not at an intersection. Pedestrian activity while working on the road had the highest risk of fatality. Of the 13 pedalcyclists killed in collisions, 11 were either on the roadway, on the shoulder, or riding with traffic at the time of the collision. Non-motorists generally were involved in collisions between the hours of 3pm and 7pm and on weekdays.

Overall, restraint use increased slightly on average annually 0.4 percent from 2007 to 2011. While the number of people fatally injured decreased from 2010 to 2011, the proportion of those killed who were restrained increased by 3 percent. In 2011, of the 546 vehicle occupants killed, only 48 percent were restrained. The extremes of restraint use fell into two age categories: 25 percent of the vehicle occupants aged 18 to 20 who were killed were restrained, while 76 percent of those aged 75 and older who were killed were restrained. For passenger cars, SUVs, and vans involved in collisions, nearly 90 percent of the occupants killed or injured were restrained. Generally, female vehicle occupants had a higher percentage of restraint use for all vehicle types than did male occupants.

Unrestrained passenger vehicle occupants were more likely to be *ejected*, *partially ejected*, or *pinned under* a vehicle than occupants who were restrained. Of passenger vehicle occupants *ejected*, 77 percent were not restrained, while 9 percent were restrained. Of those occupants *not ejected* or *trapped*, 57 percent were restrained, while 28 percent were not restrained.

In *passenger vehicles* (passenger car, SUV, pickup truck, or van) involved in collisions in 2011, 67 percent of individuals killed who were seated in the middle rear seat were not restrained. Similarly, 63 percent of individuals killed who were seated in the rear right seat were not restrained.

Table 59. Individuals involved in Indiana collisions, by person type and gender, 2007-2011

	2007	2008	2009	2010	2011	Average annual % change	% change 2010-2011
<b>Driver</b>	<b>312,797</b>	<b>309,746</b>	<b>288,974</b>	<b>295,225</b>	<b>288,449</b>	<b>-2.0%</b>	<b>-2.3%</b>
Male	177,674	174,238	160,335	164,381	159,752	-2.6%	-2.8%
Female	134,284	134,886	128,024	130,253	128,090	-1.1%	-1.7%
Unknown gender	839	622	615	591	607	-7.0%	2.7%
<b>Injured occupant</b>	<b>14,316</b>	<b>13,031</b>	<b>12,715</b>	<b>13,085</b>	<b>12,216</b>	<b>-3.8%</b>	<b>-6.6%</b>
Male	5,553	4,994	4,811	4,984	4,701	-4.0%	-5.7%
Female	8,651	8,009	7,855	8,094	7,507	-3.4%	-7.3%
Unknown gender	112	28	49	7	8	-17.9%	14.3%
<b>Pedalcyclist</b>	<b>1,170</b>	<b>1,100</b>	<b>975</b>	<b>1,045</b>	<b>956</b>	<b>-4.7%</b>	<b>-8.5%</b>
Male	906	852	785	837	776	-3.6%	-7.3%
Female	241	245	186	205	180	-6.1%	-12.2%
Unknown gender	23	3	4	3	0	na	-100.0%
<b>Pedestrian</b>	<b>1,846</b>	<b>1,898</b>	<b>1,719</b>	<b>1,797</b>	<b>1,808</b>	<b>-0.4%</b>	<b>0.6%</b>
Male	1,029	1,088	972	1,017	1,061	1.0%	4.3%
Female	790	805	740	778	746	-1.3%	-4.1%
Unknown gender	27	5	7	2	1	-40.7%	-50.0%
<b>Animal drawn vehicle operator</b>	<b>na</b>	<b>na</b>	<b>6</b>	<b>79</b>	<b>100</b>	<b>na</b>	<b>26.6%</b>
Male	na	na	5	55	72	na	30.9%
Female	na	na	1	22	28	na	27.3%
Unknown gender	na	na	0	2	0	na	-100.0%
<b>All individuals</b>	<b>330,129</b>	<b>325,775</b>	<b>304,389</b>	<b>311,231</b>	<b>303,529</b>	<b>-2.0%</b>	<b>-2.5%</b>
Male	185,162	181,172	166,908	171,274	166,362	-2.6%	-2.9%
Female	143,966	143,945	136,806	139,352	136,551	-1.3%	-2.0%
Unknown gender	1,001	658	675	605	616	-10.1%	1.8%

Source: Indiana State Police

Notes:

*Animal Drawn Vehicle Operator* was added as a person type in late 2009.

The total number of people for 2011 is 303,530 - this table excludes one individual with an unknown person type and gender.

na=not applicable

Table 60. Individuals involved in Indiana collisions, by person type and injury status, 2011

Unit type/person type	Injury status						Total individuals	% not injured
	Fatal	Fatalities per 1,000 total involved	Incapacitating	Non-incapacitating	Unknown/other injury	Not injured		
<b>Vehicle occupants</b>	<b>551</b>	<b>1.9</b>	<b>2,528</b>	<b>37,667</b>	<b>1,829</b>	<b>254,291</b>	<b>296,866</b>	<b>85.7%</b>
Drivers	410	1.4	1,873	26,932	1,722	254,056	284,993	89.1%
Passengers	141	11.9	655	10,735	107	235	11,873	2.0%
<b>Non-motorists</b>	<b>76</b>	<b>27.5</b>	<b>320</b>	<b>2,011</b>	<b>50</b>	<b>307</b>	<b>2,764</b>	<b>11.1%</b>
Pedestrians	63	34.8	238	1,328	34	145	1,808	8.0%
Pedalcyclists	13	13.6	82	683	16	162	956	16.9%
<b>Motorcycle/moped riders</b>	<b>118</b>	<b>31.1</b>	<b>553</b>	<b>2,138</b>	<b>18</b>	<b>972</b>	<b>3,799</b>	<b>25.6%</b>
<b>Animal drawn vehicle operators</b>	<b>4</b>	<b>40.0</b>	<b>4</b>	<b>23</b>	<b>0</b>	<b>69</b>	<b>100</b>	<b>69.0%</b>
<b>TOTAL</b>	<b>749</b>	<b>2.5</b>	<b>3,405</b>	<b>41,839</b>	<b>1,897</b>	<b>255,639</b>	<b>303,529</b>	<b>84.2%</b>

Source: Indiana State Police

Notes:

*Total individuals* includes one person with unknown person type and unknown injury.*Unknown/other injury* includes injury status of *not reported*, *unknown*, *refused* (treatment), and invalid injury codes.*Non-incapacitating* includes *non-incapacitating* and *possible* injuries.

Passengers are only entered into ARIES if some injury occurs, which explains the low number and percent of reported non-injury for passengers.

**Table 61. Fatal and injured individuals involved in Indiana collisions, by age, gender, and injury status, 2011**

Age group	Population			Fatalities			Fatalities per 100K population			Non-fatal injuries			Non-fatal injuries per 100K population		
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
< 4	174,429	166,744	341,173	6	3	9	3.4	1.8	2.6	351	341	700	201.2	204.5	205.2
4 - 7	180,992	172,596	353,588	3	4	7	1.7	2.3	2.0	436	385	821	240.9	223.1	232.2
8 - 15	367,213	352,038	719,251	11	11	22	3.0	3.1	3.1	1,158	1,267	2,430	315.3	359.9	337.9
16 - 17	94,454	89,137	183,591	13	5	18	13.8	5.6	9.8	1,075	1,383	2,459	1,138.1	1,551.5	1,339.4
18 - 20	151,509	144,878	296,387	47	19	66	31.0	13.1	22.3	2,168	2,450	4,620	1,430.9	1,691.1	1,558.8
21 - 24	182,201	179,053	361,254	56	15	71	30.7	8.4	19.7	2,377	2,478	4,855	1,304.6	1,383.9	1,343.9
25 - 34	419,031	415,935	834,966	85	32	117	20.3	7.7	14.0	4,006	4,384	8,392	956.0	1,054.0	1,005.1
35 - 44	415,861	414,401	830,262	78	22	100	18.8	5.3	12.0	3,281	3,513	6,795	789.0	847.7	818.4
45 - 54	463,124	472,062	935,186	86	36	122	18.6	7.6	13.0	3,405	3,552	6,958	735.2	752.4	744.0
55 - 64	390,758	412,419	803,177	67	28	95	17.1	6.8	11.8	2,337	2,539	4,878	598.1	615.6	607.3
65 - 74	216,555	248,234	464,789	37	17	54	17.1	6.8	11.6	1,140	1,310	2,450	526.4	527.7	527.1
75 and over	150,858	242,440	393,298	33	35	68	21.9	14.4	17.3	784	989	1,773	519.7	407.9	450.8
Unknown age	0	0	0	0	0	0	na	na	na	4	4	11	na	na	na
<b>Total</b>	<b>3,206,985</b>	<b>3,309,937</b>	<b>6,516,922</b>	<b>522</b>	<b>227</b>	<b>749</b>	<b>16.3</b>	<b>6.9</b>	<b>11.5</b>	<b>22,522</b>	<b>24,595</b>	<b>47,142</b>	<b>702.3</b>	<b>743.1</b>	<b>723.4</b>

Sources:

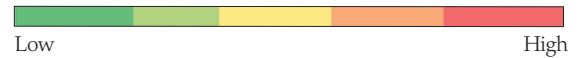
Individuals in collisions: Indiana State Police

Population: US Census Bureau

Notes:

Gender totals include cases of individuals with unknown or unreported gender types, thus may not equal 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.



**Table 62. Drivers in Indiana collisions, by age, 2011**

Age	Licensed drivers		Drivers in fatal collisions			Drivers killed			Drivers in all collisions		
	Count	% Total	Count	% Total	Per 10,000 licensed	Count	% Total	Per 10,000 licensed	Count	% Total	Per 10,000 licensed
< 16	12,829	0.2%	0	0.0%	0.0	1	0.0%	0.0	272	0.1%	212.0
16 - 17	138,310	2.4%	18	1.8%	1.3	11	2.1%	0.8	12,199	4.2%	882.0
18 - 20	323,191	5.6%	82	8.0%	2.5	44	8.4%	1.4	28,066	9.8%	868.4
21 - 24	450,646	7.8%	107	10.4%	2.4	53	10.2%	1.2	31,043	10.8%	688.9
25 - 34	1,130,942	19.7%	171	16.6%	1.5	80	15.3%	0.7	57,035	19.9%	504.3
35 - 44	1,010,061	17.6%	164	16.0%	1.6	79	15.1%	0.8	48,480	16.9%	480.0
45 - 54	1,067,498	18.6%	194	18.9%	1.8	96	18.4%	0.9	47,696	16.6%	446.8
55 - 64	853,444	14.9%	150	14.6%	1.8	70	13.4%	0.8	34,935	12.2%	409.3
65 - 74	466,984	8.1%	74	7.2%	1.6	40	7.7%	0.9	16,798	5.8%	359.7
75 and over	292,698	5.1%	68	6.6%	2.3	49	9.4%	1.7	10,763	3.7%	367.7
<b>Total</b>	<b>5,746,603</b>	<b>100.0%</b>	<b>1,028</b>	<b>100.0%</b>	<b>1.8</b>	<b>523</b>	<b>100.0%</b>	<b>0.9</b>	<b>287,287</b>	<b>100.0%</b>	<b>499.9</b>

Sources:

Drivers in collisions: Indiana State Police

Licensed drivers: Indiana Bureau of Motor Vehicles



**Table 63. Drivers involved in Indiana collisions, by apparent physical condition and injury status, 2011**

Apparent physical condition	In fatal collisions				In all collisions	In fatal collisions as % all collisions
	Killed	Survived	Total involved	Killed as % total involved		
Normal	159	418	577	27.6%	271,601	0.2%
Had been drinking	77	36	113	68.1%	7,218	1.6%
Handicapped	2	0	2	100.0%	303	0.7%
Illness	14	3	17	82.4%	1,532	1.1%
Asleep/fatigued	7	10	17	41.2%	2,852	0.6%
On drugs/medication	20	16	36	55.6%	1,322	2.7%
Other/unknown	267	30	297	89.9%	3,288	9.0%
<b>Total</b>	<b>546</b>	<b>513</b>	<b>1,059</b>	<b>51.6%</b>	<b>288,116</b>	<b>0.4%</b>

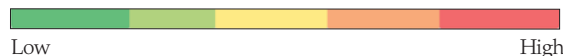
Source: Indiana State Police

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

**Table 64. Drivers involved in Indiana collisions, by license type and injury status, 2011**

License type	Driver injury status							Fatal, as % overall total	
	Fatal	% of total fatal	Incapacitating	Non-incapacitating	Unknown/other	No injury	% not injured		Total
Operator	399	76.4%	1,843	25,136	1,489	223,710	88.6%	252,577	0.2%
Commercial driver	30	5.7%	69	788	108	14,830	93.7%	15,825	0.2%
Motorcycle	56	10.7%	260	1,224	31	5,422	77.5%	6,993	0.8%
Chauffeur	7	1.3%	35	382	25	3,976	89.9%	4,425	0.2%
No license	23	4.4%	93	756	26	3,190	78.0%	4,088	0.6%
Learner permit	6	1.1%	42	302	14	1,717	82.5%	2,081	0.3%
Probationary operator	1	0.2%	0	58	7	443	87.0%	509	0.2%
Unknown license type	0	0.0%	5	70	19	695	88.1%	789	0.0%
<b>Total</b>	<b>522</b>	<b>100.0%</b>	<b>2,347</b>	<b>28,716</b>	<b>1,719</b>	<b>253,983</b>	<b>88.4%</b>	<b>287,287</b>	<b>0.2%</b>

Source: Indiana State Police



Notes:

Includes drivers reported with ages ranging from 15 to 109. Excludes unknown and invalid ages.

Chauffeur license type includes chauffeur and public passenger chauffeur license.

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

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

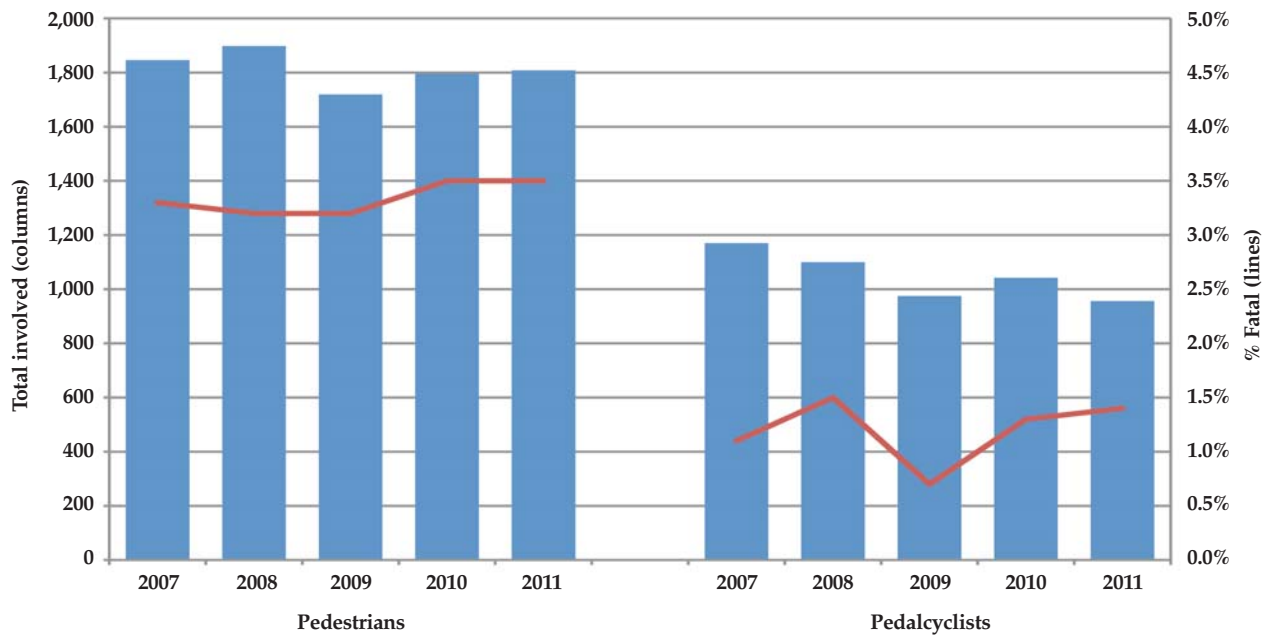
Non-incapacitating injuries include those reported as non-incapacitating and possible injuries.

**Table 65. Drivers involved in Indiana collisions, by license status and driver injury status, 2011**

License status	Driver injury status						Total	% Total
	Fatal	% Fatal	Non-					
			Incapacitating	incapacitating	Not injured			
Valid	339	64.8%	1,590	20,839	189,740	212,508	74.1%	
Unknown	89	17.0%	272	3,143	32,302	35,806	12.5%	
Suspended - infraction	65	12.4%	333	3,537	25,793	29,728	10.4%	
Suspended - prior	13	2.5%	83	584	3,503	4,183	1.5%	
Unlicensed	4	0.8%	27	261	1,247	1,539	0.5%	
Invalid/revoked	1	0.2%	18	205	1,277	1,501	0.5%	
Suspended - misdemeanor	3	0.6%	12	84	510	609	0.2%	
Cancelled	1	0.2%	4	47	355	407	0.1%	
Habitual traffic violator	3	0.6%	8	45	113	169	0.1%	
Conditional	1	0.2%	1	24	97	123	0.0%	
Habitual traffic violator - life	4	0.8%	9	40	65	118	0.0%	
Fraudulent	0	0.0%	1	1	18	20	0.0%	
<b>Total</b>	<b>523</b>	<b>100.0%</b>	<b>2,358</b>	<b>28,810</b>	<b>255,020</b>	<b>286,711</b>	<b>100.0%</b>	

Sources: Bureau of Motor Vehicles, Indiana State Police  
 Note: Excludes drivers with unknown or other injuries.

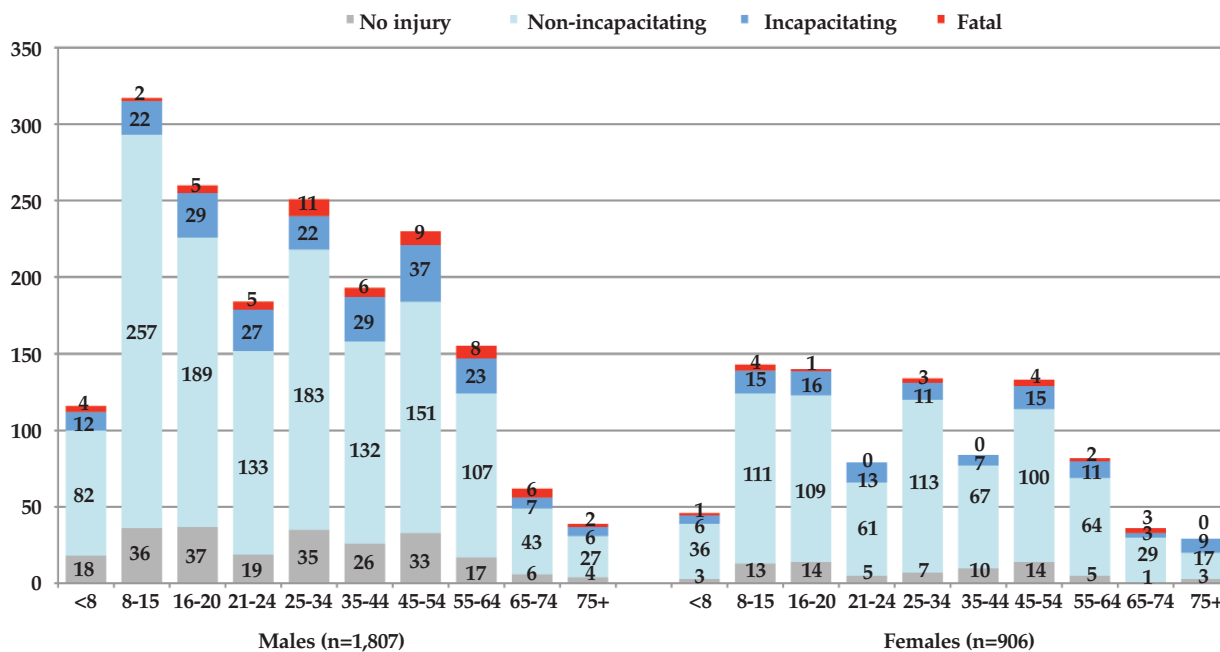
**Figure 33. Pedestrians and pedalcyclists involved in collisions, 2007 - 2011**



Source: Indiana State Police



Figure 34. Non-motorists involved in Indiana collisions, by age, gender, and injury status, 2011



Source: Indiana State Police

Notes:

Excludes non-motorists with missing or invalid ages or gender and unknown injuries.

Non-incapacitating includes non-incapacitating and possible injuries.

**Table 66. Pedestrians involved in Indiana collisions, by pedestrian action, 2011**

Pedestrian action	Fatalities	Survivors	Total involved	% Fatal
Working	4	28	32	12.5%
On roadway	15	241	256	5.9%
Crossing not at intersection	18	309	327	5.5%
With traffic	2	39	41	4.9%
Against traffic	1	29	30	3.3%
Crossing at intersection	10	336	346	2.9%
Moving	3	108	111	2.7%
Other	6	239	245	2.4%
On shoulder	1	49	50	2.0%
Not in roadway	2	137	139	1.4%
Standing	1	124	125	0.8%
Unknown	0	50	50	0.0%
Getting in/out of vehicle	0	28	28	0.0%
Getting off/on school bus	0	7	7	0.0%
On designated non-motorist lane	0	21	21	0.0%
<b>Total</b>	<b>63</b>	<b>1,745</b>	<b>1,808</b>	<b>3.5%</b>

Source: Indiana State Police

**Table 67. Pedalcyclists involved in Indiana collisions, by pedalcyclist action, 2011**

Pedalcyclist action	Fatalities	Survivors	Total involved	% Fatal
On roadway	9	135	144	6.3%
On shoulder	1	17	18	5.6%
With traffic	1	55	56	1.8%
Crossing not at intersection	1	92	93	1.1%
Crossing at intersection	1	320	321	0.3%
Unknown	0	37	37	0.0%
Against traffic	0	67	67	0.0%
Other	0	75	75	0.0%
Moving	0	99	99	0.0%
Not in roadway	0	30	30	0.0%
On designated non-motorist lane	0	16	16	0.0%
<b>Total</b>	<b>13</b>	<b>943</b>	<b>956</b>	<b>1.4%</b>

Source: Indiana State Police

**Table 68. Non-motorists involved in Indiana collisions, by time of day and day of week, 2011**

	Sun	Mon	Tues	Wed	Thur	Fri	Sat	Total by hour	% by hour
12am-	7	2	4	6	3	4	14	40	1.4%
1am-	8	3	4	0	3	5	11	34	1.2%
2am-	16	6	3	0	2	7	4	38	1.4%
3am-	7	3	4	3	3	2	9	31	1.1%
4am-	1	1	3	1	1	3	4	14	0.5%
5am-	3	4	6	7	2	2	2	26	0.9%
6am-	7	11	9	9	5	9	7	57	2.1%
7am-	7	24	21	14	24	24	6	120	4.3%
8am-	4	13	16	14	15	11	4	77	2.8%
9am-	7	10	13	9	10	15	8	72	2.6%
10am-	9	9	22	14	14	11	14	93	3.4%
11am-	8	20	16	20	30	20	22	136	4.9%
12pm-	13	23	16	19	22	24	20	137	5.0%
1pm-	12	24	21	16	17	22	20	132	4.8%
2pm-	14	25	23	31	22	28	23	166	6.0%
3pm-	16	41	42	34	44	45	21	243	8.8%
4pm-	22	41	39	41	37	41	25	246	8.9%
5pm-	20	50	39	44	34	39	22	248	9.0%
6pm-	34	36	29	35	30	41	28	233	8.4%
7pm-	23	31	27	28	24	35	19	187	6.8%
8pm-	17	23	20	18	18	21	18	135	4.9%
9pm-	6	16	22	26	20	18	14	122	4.4%
10pm-	13	6	14	8	13	20	25	99	3.6%
11pm-	6	10	13	5	7	19	18	78	2.8%
<b>Total</b>	<b>280</b>	<b>432</b>	<b>426</b>	<b>402</b>	<b>400</b>	<b>466</b>	<b>358</b>	<b>2,764</b>	<b>100%</b>
<b>% by day</b>	<b>10.1%</b>	<b>15.6%</b>	<b>15.4%</b>	<b>14.5%</b>	<b>14.5%</b>	<b>16.9%</b>	<b>13.0%</b>	<b>100%</b>	

Source: Indiana State Police

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

**Table 69. Vehicle occupants involved in Indiana collisions, by restraint use, and injury status, 2007-2011**

Individuals	2007	2008	2009	2010	2011	Average annual % change	% change 2010-2011
<b>All occupants</b>	<b>322,929</b>	<b>318,311</b>	<b>297,800</b>	<b>304,237</b>	<b>296,540</b>	<b>-2.1%</b>	<b>-2.5%</b>
% restrained	89.0%	90.2%	90.0%	90.6%	90.4%	0.4%	-0.2%
<b>Fatal injuries</b>	<b>698</b>	<b>607</b>	<b>519</b>	<b>565</b>	<b>546</b>	<b>-5.5%</b>	<b>-3.4%</b>
% restrained	43.4%	44.0%	48.0%	46.5%	48.0%	2.6%	3.1%
<b>Incapacitating injuries</b>	<b>2,786</b>	<b>2,588</b>	<b>2,433</b>	<b>2,576</b>	<b>2,522</b>	<b>-2.3%</b>	<b>-2.1%</b>
% restrained	64.8%	71.4%	71.5%	73.6%	73.0%	3.1%	-0.9%
<b>Non-incapacitating injuries</b>	<b>44,343</b>	<b>40,769</b>	<b>39,385</b>	<b>39,899</b>	<b>37,636</b>	<b>-4.0%</b>	<b>-5.7%</b>
% restrained	85.6%	87.3%	87.2%	88.4%	88.3%	0.8%	-0.1%
<b>Unknown/other injuries</b>	<b>8,411</b>	<b>5,818</b>	<b>4,075</b>	<b>2,425</b>	<b>1,827</b>	<b>-31.5%</b>	<b>-24.7%</b>
% restrained	85.0%	88.5%	93.3%	88.3%	87.9%	0.9%	-0.5%
<b>Not injured</b>	<b>266,691</b>	<b>268,529</b>	<b>251,388</b>	<b>258,772</b>	<b>254,009</b>	<b>-1.1%</b>	<b>-1.8%</b>
% restrained	90.1%	91.0%	90.7%	91.2%	91.0%	0.3%	-0.2%

Source: Indiana State Police

Notes:

Excludes unit types of farm vehicles, motorcycles, mopeds, animal drawn vehicles, bicycles, and pedestrians.

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 and 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 (mainly drivers in property damage only collisions).

**Table 70. Vehicle occupants involved in Indiana collisions, by age, restraint use, and injury severity, 2011**

Age group	Injury status					Total
	Fatal	Incapacitating	Non-incapacitating	Unknown/other injury	Not injured	
<b>&lt;16</b>	<b>24</b>	<b>122</b>	<b>3,094</b>	<b>59</b>	<b>1,090</b>	<b>4,389</b>
% restrained	58.3%	74.6%	83.7%	84.7%	42.5%	73.1%
<b>16 - 17</b>	<b>12</b>	<b>118</b>	<b>2,029</b>	<b>96</b>	<b>10,708</b>	<b>12,963</b>
% restrained	33.3%	61.9%	86.1%	90.6%	90.9%	89.8%
<b>18 - 20</b>	<b>61</b>	<b>231</b>	<b>3,800</b>	<b>188</b>	<b>24,777</b>	<b>29,057</b>
% restrained	24.6%	62.8%	86.2%	87.2%	90.8%	89.8%
<b>21 - 24</b>	<b>59</b>	<b>252</b>	<b>3,917</b>	<b>175</b>	<b>27,311</b>	<b>31,714</b>
% restrained	45.8%	64.7%	85.1%	85.1%	90.7%	89.7%
<b>25 - 34</b>	<b>75</b>	<b>465</b>	<b>6,717</b>	<b>381</b>	<b>50,254</b>	<b>57,892</b>
% restrained	41.3%	70.5%	87.1%	85.8%	90.9%	90.2%
<b>35 - 44</b>	<b>69</b>	<b>375</b>	<b>5,396</b>	<b>269</b>	<b>42,793</b>	<b>48,902</b>
% restrained	42.0%	72.8%	88.9%	87.7%	91.3%	90.8%
<b>45 - 54</b>	<b>80</b>	<b>374</b>	<b>5,375</b>	<b>268</b>	<b>41,812</b>	<b>47,909</b>
% restrained	46.3%	77.3%	91.0%	90.3%	91.7%	91.4%
<b>55 - 64</b>	<b>64</b>	<b>275</b>	<b>3,846</b>	<b>199</b>	<b>30,849</b>	<b>35,233</b>
% restrained	46.9%	80.4%	92.4%	89.4%	91.7%	91.6%
<b>65 - 74</b>	<b>39</b>	<b>184</b>	<b>1,965</b>	<b>115</b>	<b>14,860</b>	<b>17,163</b>
% restrained	69.2%	81.5%	92.1%	92.2%	91.7%	91.6%
<b>75 and over</b>	<b>63</b>	<b>126</b>	<b>1,492</b>	<b>72</b>	<b>9,390</b>	<b>11,143</b>
% restrained	76.2%	84.9%	93.3%	90.3%	91.6%	91.7%

Source: Indiana State Police

Notes:

Includes only individuals with valid age.

Excludes unit types of farm vehicles, motorcycles, mopeds, animal drawn vehicles, bicycles, and pedestrians.

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 (mainly drivers in property damage only collisions).

Table 71. Vehicle occupants killed and injured in Indiana collisions, by restraint use, vehicle type, and gender, 2011

Vehicle type	Fatal		Non-fatal injury		Total
	Male	Female	Male	Female	
<b>Buses</b>	<b>0</b>	<b>0</b>	<b>144</b>	<b>179</b>	<b>323</b>
% restrained	na	na	19.4%	22.3%	21.1%
<b>Passenger cars</b>	<b>190</b>	<b>145</b>	<b>10,241</b>	<b>15,562</b>	<b>26,138</b>
% restrained	49.5%	60.0%	85.8%	91.2%	88.6%
<b>Pickup trucks</b>	<b>66</b>	<b>9</b>	<b>3,153</b>	<b>1,244</b>	<b>4,472</b>
% restrained	43.9%	66.7%	79.9%	84.1%	80.5%
<b>SUVs</b>	<b>43</b>	<b>24</b>	<b>2,222</b>	<b>3,691</b>	<b>5,980</b>
% restrained	37.2%	37.5%	85.1%	92.3%	89.0%
<b>Vans</b>	<b>20</b>	<b>17</b>	<b>1,166</b>	<b>1,709</b>	<b>2,912</b>
% restrained	40.0%	29.4%	85.3%	92.5%	88.9%
<b>Large trucks</b>	<b>24</b>	<b>3</b>	<b>597</b>	<b>29</b>	<b>653</b>
% restrained	29.2%	33.3%	84.8%	82.8%	82.4%
<b>Other vehicle types</b>	<b>8</b>	<b>2</b>	<b>167</b>	<b>68</b>	<b>245</b>
% restrained	12.5%	0.0%	25.7%	23.5%	24.5%

Source: Indiana State Police

Notes:

Excludes unit types of farm vehicles, motorcycles, mopeds, animal drawn vehicles, bicycles and pedestrians.

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

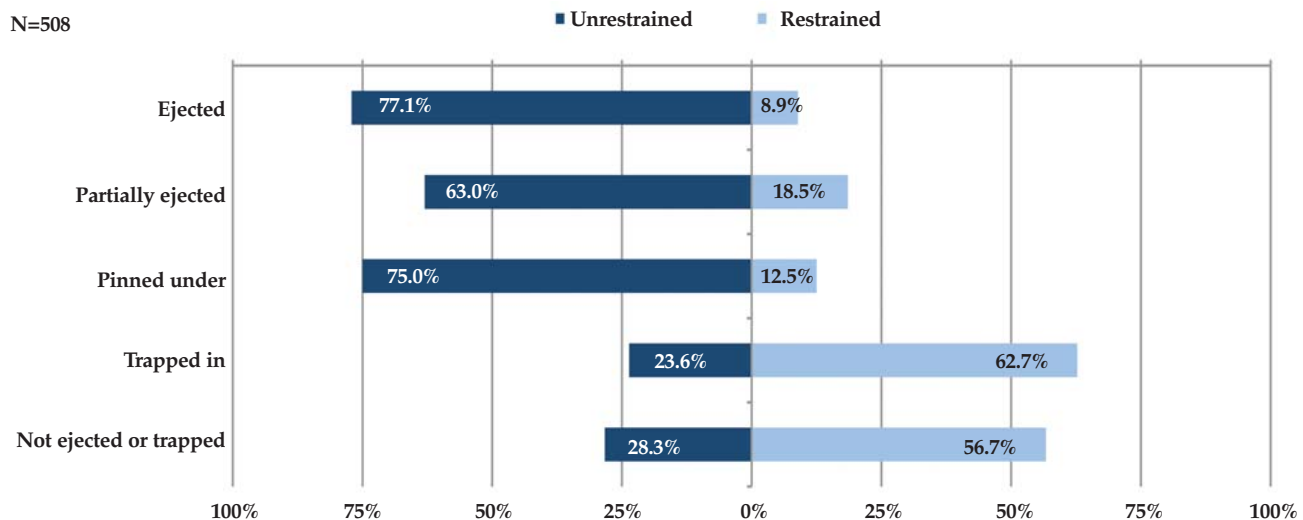
Restraint use includes the use of one of the following: Lap belt only, harness, airbag deployed and harness, child restraint, or lap and harness.

Non-fatal injury includes injury statuses of incapacitating, non-incapacitating, and possible injuries.

na = not applicable

Figure 35. Passenger vehicle fatalities in Indiana collisions, by ejection status and restraint use, 2011

N=508



Source: Indiana State Police

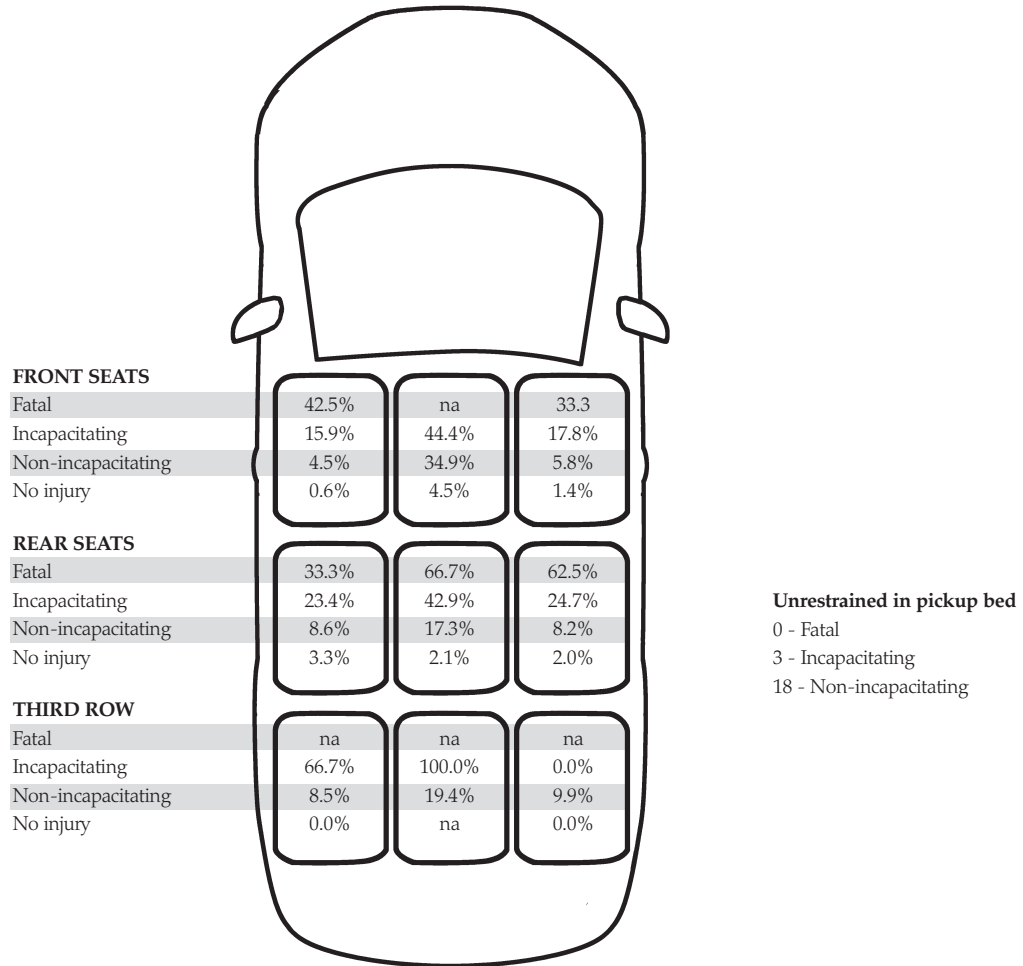
Notes:

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, 77.1 percent represents 64 individuals killed, ejected, and known not restrained out of the total of 83 individuals known to be ejected.

Figure 36. Percentage of unrestrained individuals in passenger vehicles involved in Indiana collisions, by seating position and injury status, 2011



Source: Indiana State Police

**Notes:**

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

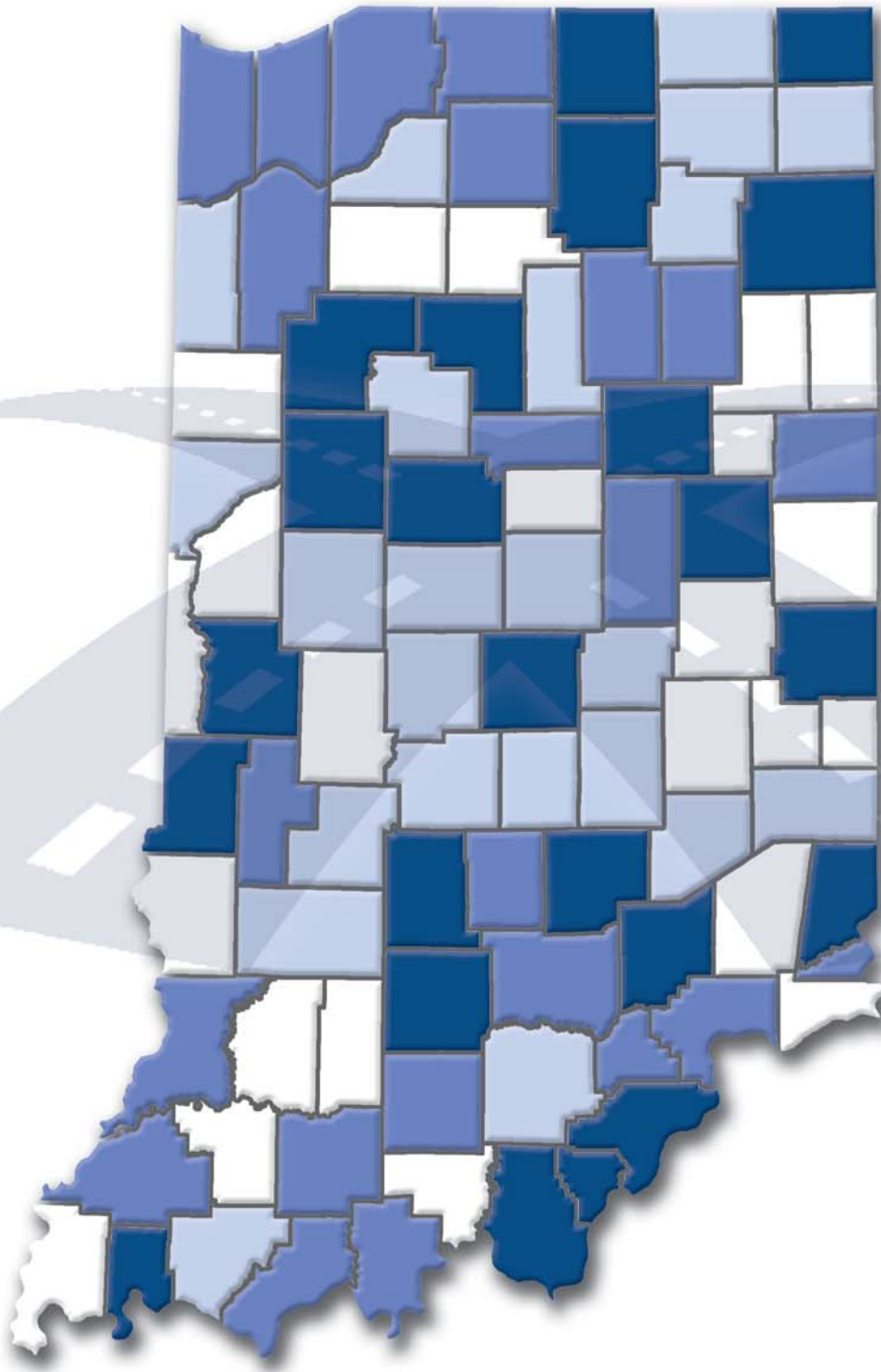
Excludes positions of *outside left*, *outside center*, *outside right*, and *outside rear*.

Percentages represent the number of known unrestrained persons for each seat position for that injury status. For example, of all the fatalities in the front left seat position, 42.5% were not restrained.

Includes individuals in where restraint use was known.

na = not applicable; there were no persons in that seat position for that injury status.

# ALCOHOL



## ALCOHOL, 2011

In 2011, there were 133 fatal crashes and 140 fatalities involving a vehicle driver legally impaired by alcohol (i.e., blood alcohol content at or above 0.08 g/dL). Impaired drivers comprised 107 (76.4 percent) of the 140 fatalities. As a proportion of all fatal crashes in ARIES, those involving an impaired driver increased 1.2 percent annually since 2003, but declined 1.6 percent since 2007. The number of persons killed in alcohol-impaired crashes declined 1.2 percent annually since 2003. The number of alcohol-impaired drivers in fatal crashes decreased 0.5 percent annually since 2003 and 5.5 percent annually since 2007. In addition, please note there are regularly substantial annual differences between the counts of Indiana crashes and fatalities involving impaired drivers reported by federal versus state data sources. Because the National Highway Traffic Safety Administration fatality analysis reporting system (FARS) uses an imputation model on state data submissions (e.g., Indiana ARIES) in order to correct possible undercounts of alcohol-impairment, FARS counts are always greater than ARIES counts. On average from 2003 to 2010, FARS reports about 34 percent *more* crashes and fatalities linked to impaired drivers than does ARIES.

Generally, the largest numbers of impaired drivers across the 2003-11 period were among age cohorts between 21 and 44 years. The incidence of alcohol-impaired drivers 25 to 34 years old in fatal crashes increased 2.5 percent annually since 2003. In the more recent five-year period (2007-11), although the numbers of persons killed in crashes involving alcohol-impaired drivers decreased 6.9 percent annually, persons with incapacitating injuries increased 13.8 percent annually.

Males, in comparison to females, have traditionally been and continue to be the most frequent and likely to have been impaired in crashes. In 2011 fatal crashes, male drivers were more than twice as likely than female drivers to be impaired. For both male and female drivers, the age groups with the highest frequency of impairment were between 21 and 44 years of age. Per 10,000 licensed drivers in 2011, males age 25 to 34 and 35 to 44 had the highest rates of alcohol impairment in traffic crashes. Nearly 30 percent of males aged 35 to 44 in fatal crashes were impaired. This rate is twice that of females in the same age group. In general, about one of every 44 males and one of every 100 females involved in crashes were legally impaired. Overall, male driver impairment rate in 2011 was twice the rate of female drivers.

Continuing a five-year trend, about seven of every 10 drivers involved in fatal crashes in Indiana were tested for alcohol consumption. Among surviving drivers with positive results in 2011, 73.7 percent of drivers were legally impaired; among driv-

ers killed with positive BAC results, nine of ten were legally impaired. Testing rates are generally higher for younger drivers and for drivers in more severe crashes. About 76 percent of fatally injured drivers between the ages of 21 and 44 were tested for alcohol, compared to about 58 percent for drivers over age 45. Among drivers killed and tested for alcohol consumption in Indiana crashes in 2011, the likelihood of those drivers being impaired by alcohol was highest for the 35-44 year old age group (note, however, the only driver under 16 years of age killed was tested and BAC was reported to be greater than 0.15). Approximately one of every five drivers killed in crashes (and tested) in 2011 had a BAC result of 0.15 g/dL or above.

Fatalities in crashes involving an impaired driver were most common on local/city roads and county roads. In 2011, roughly 29 percent of all fatalities on county roads involved an impaired driver. Serious non-fatal (incapacitating) injuries linked to alcohol-impaired drivers were proportionally largest on interstates (10.5 percent). Among all persons injured in collisions involving alcohol-impairment, more than one-half (56 percent) were impaired drivers, 19 percent were the unimpaired drivers involved, and 14 percent were the passengers of impaired drivers. In addition, alcohol-impaired fatalities were most common in urban areas (46 of 133 alcohol-impaired fatalities), and represented the highest proportion (33 percent) of total fatalities in any geographic locality.

Alcohol-impaired fatalities and injuries in Indiana vary by month. In 2011 the months of May through August had the highest counts and rates of fatalities in crashes involving alcohol impaired drivers. The highest proportion of non-fatal injuries from collisions involving alcohol-impaired drivers was in March 2011. In July 2011, 20 people were killed in alcohol-impaired crashes.

Impaired drivers are considerably more likely to be involved in single-vehicle collisions than are unimpaired drivers. In 2011, about 55 percent of all alcohol-impaired drivers were in single-vehicle collisions, compared to 18.5 percent of non-impaired drivers. Drivers under age 24 had even higher rates of single-vehicle crashes when impaired (ranging from 63 to 74 percent of the age groups). Overall, however, as driver age increases the proportion of crashes that are single-vehicle declines, even though impaired drivers are always more likely than unimpaired drivers to be involved in single-vehicle collisions.

Motorcycle and moped operators had the highest rates of alcohol-impaired driving in crashes of any vehicle class. In 2011, about one in every three motorcycle operators and one in every four moped operators killed in Indiana crashes were legally



impaired. More generally, one in every 21 motorcyclists and one in 16 moped operators in crashes were legally impaired by alcohol. Sport utility vehicles and pickup trucks typically had the next highest rates of impairment in 2011.

When comparing impaired and non-impaired drivers in 2011, impaired drivers were much more likely to collide with something other than another vehicle. For example, the most frequent object of impact for non-impaired drivers was another vehicle (80 percent), whereas only 42.7 percent of impaired

drivers collided with another vehicle. Nearly 7 of 10 impaired drivers in fatal crashes collided with either a fixed object (28 percent) or generally lost control resulting in an off-road crash (40 percent). Additionally, while objects of impact reflect different fatality rates for drivers overall, impaired drivers in 2011 were significantly more likely to be killed than non-impaired drivers (e.g., in colliding with fixed objects, impaired drivers were five times more likely to die than unimpaired drivers).

**Table 72. FARS and ARIES Indiana fatal crashes and fatalities involving an alcohol-impaired driver since 2003**

**FARS data, 2003-2010**

Year	Count of fatal crashes			Count of fatalities		
	Alcohol-impaired	Total	Impaired as % of total	Alcohol-impaired	Total	Impaired as % of total
2003	181	753	24.0%	204	833	24.5%
2004	213	857	24.9%	241	947	25.4%
2005	230	855	26.9%	254	938	27.1%
2006	226	820	27.6%	245	902	27.2%
2007	204	804	25.4%	224	898	24.9%
2008	185	727	25.4%	206	820	25.1%
2009	192	632	30.4%	207	693	29.9%
2010	186	701	26.5%	195	754	25.9%
<b>Annualized rate of change</b>						
2003-10	0.4%	-1.0%	1.4%	-0.6%	-1.4%	0.8%
2006-10	-4.8%	-3.8%	-0.9%	-5.5%	-4.4%	-1.2%
2009-10	-3.1%	10.9%	-12.7%	-5.8%	8.8%	-13.4%

Source: Fatality Analysis Reporting System

**ARIES data, 2003-2011**

Year	Count of fatal crashes			Count of fatalities		
	Alcohol-impaired	Total	Impaired as % of total	Alcohol-impaired	Total	Impaired as % of total
2003	135	753	17.9%	154	833	18.5%
2004	146	857	17.0%	163	947	17.2%
2005	179	855	20.9%	199	938	21.2%
2006	183	817	22.4%	198	899	22.0%
2007	169	804	21.0%	186	898	20.7%
2008	156	722	21.6%	173	815	21.2%
2009	120	631	19.0%	127	692	18.4%
2010	130	701	18.5%	135	754	17.9%
2011	133	674	19.7%	140	749	18.7%
<b>Annualized rate of change</b>						
2003-11	-0.2%	-1.4%	1.2%	-1.2%	-1.3%	0.1%
2007-11	-5.8%	-4.3%	-1.6%	-6.9%	-4.4%	-2.5%
2010-11	2.3%	-3.9%	6.4%	3.7%	-0.7%	4.4%

Source: Indiana State Police

**Table 73. Alcohol-impaired drivers in Indiana fatal crashes, by driver age, 2003-2011**

Year	Under 16	16 to 20	21 to 24	25 to 34	35 to 44	45 to 54	55 to 64	65 to 74	75 and older	Total
2003	0	14	29	27	39	20	6	5	1	141
2004	1	18	25	46	28	22	5	1	1	147
2005	0	18	30	50	42	32	8	0	1	181
2006	0	13	37	53	55	18	12	1	0	189
2007	0	18	30	44	31	34	8	4	0	169
2008	2	18	27	47	24	28	10	1	1	158
2009	0	10	14	39	33	17	10	0	0	123
2010	1	9	24	30	33	27	7	2	0	133
2011	1	9	20	33	34	24	13	1	0	135
<b>Annualized rate of change</b>										
2003-11	--	-5.4%	-4.5%	2.5%	-1.7%	2.3%	10.1%	-18.2%	--	-0.5%
2007-11	--	-15.9%	-9.6%	-6.9%	2.3%	-8.3%	12.9%	-29.3%	--	-5.5%
2010-11	--	0.0%	-16.7%	10.0%	3.0%	-11.1%	85.7%	-50.0%	--	1.5%

Source: Indiana State Police

**Table 74. Indiana crashes and injuries in crashes involving alcohol-impaired drivers, 2007-2011**

**Crashes involving an alcohol-impaired driver**

Crash severity	Count of crashes					Annual rate of change (%)	
	2007	2008	2009	2010	2011	2007-11	2010-11
Fatal	169	156	120	130	133	-5.8%	2.3%
Incapacitating	95	77	126	213	184	18.0%	-13.6%
Non-incapacitating	1,048	804	1,091	1,289	1,250	4.5%	-3.0%
Property damage	2,688	2,362	2,870	3,275	3,371	5.8%	2.9%
<b>Total</b>	<b>4,000</b>	<b>3,399</b>	<b>4,207</b>	<b>4,907</b>	<b>4,938</b>	<b>5.4%</b>	<b>0.6%</b>

**Individuals injured in crashes involving an alcohol-impaired driver**

Injury status	Count of injuries					Annual rate of change (%)	
	2006	2007	2008	2009	2010	2006-10	2009-10
Fatal	186	173	127	135	140	-6.9%	3.7%
Incapacitating	134	100	153	264	225	13.8%	-14.8%
Non-incapacitating	1,534	1,172	1,513	1,840	1,771	3.7%	-3.8%
<b>Total</b>	<b>1,854</b>	<b>1,445</b>	<b>1,793</b>	<b>2,239</b>	<b>2,136</b>	<b>3.6%</b>	<b>-4.6%</b>

Source: Indiana State Police

Note: For individuals injured, *non-incapacitating* includes *possible* injuries.

Table 75. Drivers in Indiana crashes, by age, gender, and alcohol-impairment, 2011

## Drivers involved in fatal crashes

Driver age	Females			Males			All drivers		
	Alcohol-impaired	Total involved	% impaired	Alcohol-impaired	Total involved	% impaired	Alcohol-impaired	Total involved	% impaired
Under 16	1	1	100.0%	0	1	0.0%	1	4	25.0%
16 to 20	1	28	3.6%	8	63	12.7%	9	100	9.0%
21 to 24	3	22	13.6%	17	65	26.2%	20	107	18.7%
25 to 34	6	37	16.2%	27	101	26.7%	33	171	19.3%
35 to 44	4	28	14.3%	30	102	29.4%	34	164	20.7%
45 to 54	0	47	0.0%	24	123	19.5%	24	194	12.4%
55 to 64	1	40	2.5%	12	97	12.4%	13	150	8.7%
65 to 74	0	19	0.0%	1	54	1.9%	1	74	1.4%
75 and older	0	29	0.0%	0	39	0.0%	0	68	0.0%
Unknown age	0	0	--	0	0	--	0	1	0.0%
<b>Total</b>	<b>16</b>	<b>251</b>	<b>6.4%</b>	<b>119</b>	<b>645</b>	<b>18.4%</b>	<b>135</b>	<b>1,033</b>	<b>13.1%</b>

## Drivers involved in all crashes

Driver age	Females			Males			All drivers		
	Alcohol-impaired	Total involved	% impaired	Alcohol-impaired	Total involved	% impaired	Alcohol-impaired	Total involved	% impaired
Under 16	4	334	1.2%	10	582	1.7%	15	1,262	1.2%
16 to 20	83	18,887	0.4%	345	21,370	1.6%	428	40,265	1.1%
21 to 24	252	14,420	1.7%	703	16,590	4.2%	956	31,043	3.1%
25 to 34	357	25,959	1.4%	975	31,048	3.1%	1,332	57,035	2.3%
35 to 44	255	21,329	1.2%	649	27,137	2.4%	904	48,480	1.9%
45 to 54	236	20,422	1.2%	597	27,254	2.2%	833	47,696	1.7%
55 to 64	79	14,698	0.5%	298	20,216	1.5%	377	34,935	1.1%
65 to 74	12	7,111	0.2%	84	9,685	0.9%	96	16,798	0.6%
75 and older	0	4,913	0.0%	12	5,833	0.2%	12	10,763	0.1%
Unknown age	0	17	0.0%	0	37	0.0%	0	172	0.0%
<b>Total</b>	<b>1,278</b>	<b>128,090</b>	<b>1.0%</b>	<b>3,673</b>	<b>159,752</b>	<b>2.3%</b>	<b>4,953</b>	<b>288,449</b>	<b>1.7%</b>

Source: Indiana State Police

Note: All drivers includes cases where gender information was not reported.

Table 76. Rate of alcohol-impaired drivers involved in Indiana crashes per 10,000 licenses, by age and gender, 2011

Driver age	Females			Males			All drivers		
	Alcohol-impaired	Total licensed	Rate per 10K licensed	Alcohol-impaired	Total licensed	Rate per 10K licensed	Alcohol-impaired	Total licensed	Rate per 10K licensed
Under 16	4	6,253	6.4	10	6,581	15.2	15	12,834	11.7
16 to 20	83	221,088	3.8	345	240,413	14.4	428	461,501	9.3
21 to 24	252	226,459	11.1	703	224,187	31.4	956	450,646	21.2
25 to 34	357	575,155	6.2	975	555,787	17.5	1,332	1,130,942	11.8
35 to 44	255	507,133	5.0	649	502,928	12.9	904	1,010,061	8.9
45 to 54	236	539,420	4.4	597	528,078	11.3	833	1,067,498	7.8
55 to 64	79	433,544	1.8	298	419,900	7.1	377	853,444	4.4
65 to 74	12	244,095	0.5	84	222,889	3.8	96	466,984	2.1
75 and older	0	163,400	0.0	12	129,298	0.9	12	292,698	0.4
<b>All ages</b>	<b>1,278</b>	<b>2,916,547</b>	<b>4.4</b>	<b>3,673</b>	<b>2,830,061</b>	<b>13.0</b>	<b>4,953</b>	<b>5,746,608</b>	<b>8.6</b>

Sources: Indiana State Police; Indiana Bureau of Motor Vehicles

Note: All drivers includes cases where gender information was not reported.

**Table 77. Drivers involved in Indiana fatal crashes, by substance test results and fatality status, 2007-2011**

Count of drivers	Surviving drivers					Killed drivers				
	2007	2008	2009	2010	2011	2007	2008	2009	2010	2011
<b>Total in fatal crashes</b>	<b>610</b>	<b>561</b>	<b>500</b>	<b>563</b>	<b>510</b>	<b>626</b>	<b>554</b>	<b>491</b>	<b>520</b>	<b>523</b>
<b>By test type given</b>										
Alcohol/drug	422	417	316	410	378	435	390	315	341	371
Refused				1						
None	99	101	94	47	51	92	112	124	62	48
Not reported	89	43	90	105	81	99	52	52	117	104
Tested, as % all	69.2%	74.3%	63.2%	72.8%	74.1%	69.5%	70.4%	64.2%	65.6%	70.9%
<b>By BAC result (g/dL)</b>										
Not reported	258	172	250	224	197	245	189	239	238	218
Reported	352	389	250	339	313	381	365	252	282	305
0.00	305	337	215	292	275	229	229	136	176	186
0.01 < 0.08	13	14	9	6	10	17	16	20	14	12
0.08 < 0.15	12	14	9	10	9	29	37	29	28	29
0.15+	22	24	17	31	19	106	83	67	64	78
<b>Reported, as % all</b>	<b>57.7%</b>	<b>69.3%</b>	<b>50.0%</b>	<b>60.2%</b>	<b>61.4%</b>	<b>60.9%</b>	<b>65.9%</b>	<b>51.3%</b>	<b>54.2%</b>	<b>58.3%</b>
0.01+ as % reported	13.4%	13.4%	14.0%	13.9%	12.1%	39.9%	37.3%	46.0%	37.6%	39.0%
0.08+ as % positive	72.3%	73.1%	74.3%	87.2%	73.7%	88.8%	88.2%	82.8%	86.8%	89.9%
0.15+ as % positive	46.8%	46.2%	48.6%	66.0%	50.0%	69.7%	61.0%	57.8%	60.4%	65.5%

Source: Indiana State Police

**Table 78. Drivers in Indiana crashes that were tested for alcohol or other substances, by age and injury severity, 2011**

Driver Age	Fatal injuries			Incapacitating injuries			Non-incapacitating injuries			Other injury status		
	Tested / refused	Total	Tested as % total	Tested / refused	Total	Tested as % total	Tested / refused	Total	Tested as % total	Tested / refused	Total	Tested as % total
Under 16	1	1	100.0%	4	19	21.1%	9	149	6.0%	26	1,093	2.4%
16 to 20	39	55	70.9%	50	255	19.6%	337	4,104	8.2%	721	35,851	2.0%
21 to 24	38	53	71.7%	54	227	23.8%	451	3,192	14.1%	1,242	27,571	4.5%
25 to 34	61	80	76.3%	148	454	32.6%	695	5,669	12.3%	2,046	50,832	4.0%
35 to 44	65	79	82.3%	104	398	26.1%	468	4,762	9.8%	1,486	43,241	3.4%
45 to 54	76	96	79.2%	108	461	23.4%	448	4,819	9.3%	1,287	42,320	3.0%
55 to 64	41	70	58.6%	63	294	21.4%	217	3,374	6.4%	680	31,197	2.2%
65 to 74	26	40	65.0%	21	155	13.5%	62	1,588	3.9%	180	15,015	1.2%
75 and older	24	49	49.0%	9	95	9.5%	20	1,151	1.7%	43	9,468	0.5%
Unknown	0	0	--	0	0	--	0	2	0.0%	0	170	0.0%
<b>All ages</b>	<b>371</b>	<b>523</b>	<b>70.9%</b>	<b>561</b>	<b>2,358</b>	<b>23.8%</b>	<b>2,707</b>	<b>28,810</b>	<b>9.4%</b>	<b>7,711</b>	<b>256,758</b>	<b>3.0%</b>

Notes:

*Tested/refused* includes drivers that (1) were given an alcohol/drug test, (2) refused a test, or (3) had a positive BAC result listed on the crash report.

*Non-incapacitating* includes possible injuries.

*Other injury status* includes unknown, refused, and unreported categories.

Table 79. Drivers killed in Indiana crashes, by blood alcohol content (BAC) test results, 2011

Driver Age	Total driver fatalities	Drivers tested	BAC results (g/dL)					Impaired (.08+) as % tested	Felony impaired (.15+) as % tested
			.00	.01 to .07	.08 to .14	.15 and above	Not reported		
Under 16	1	1	0	0	0	1	0	100.0%	100.0%
16 to 20	55	39	22	3	2	6	6	20.5%	15.4%
21 to 24	53	38	16	1	3	11	7	36.8%	28.9%
25 to 34	80	61	22	2	11	14	12	41.0%	23.0%
35 to 44	79	65	23	1	5	24	12	44.6%	36.9%
45 to 54	96	76	41	3	8	12	12	26.3%	15.8%
55 to 64	70	41	20	1	0	9	11	22.0%	22.0%
65 to 74	40	26	22	1	0	1	2	3.8%	3.8%
75 and older	49	24	17	0	0	0	7	0.0%	0.0%
<b>All ages</b>	<b>523</b>	<b>371</b>	<b>183</b>	<b>12</b>	<b>29</b>	<b>78</b>	<b>69</b>	<b>28.8%</b>	<b>21.0%</b>

Source: Indiana State Police

## Notes:

*Impaired* is 0.08 g/dL BAC and above.*Felony impaired* is 0.15 g/dL BAC and above.*Drivers tested* include drivers (1) given an alcohol/drug test, (2) that refused a test, or (3) had a BAC result on the crash report.

BAC counts are for drivers tested/refused only.

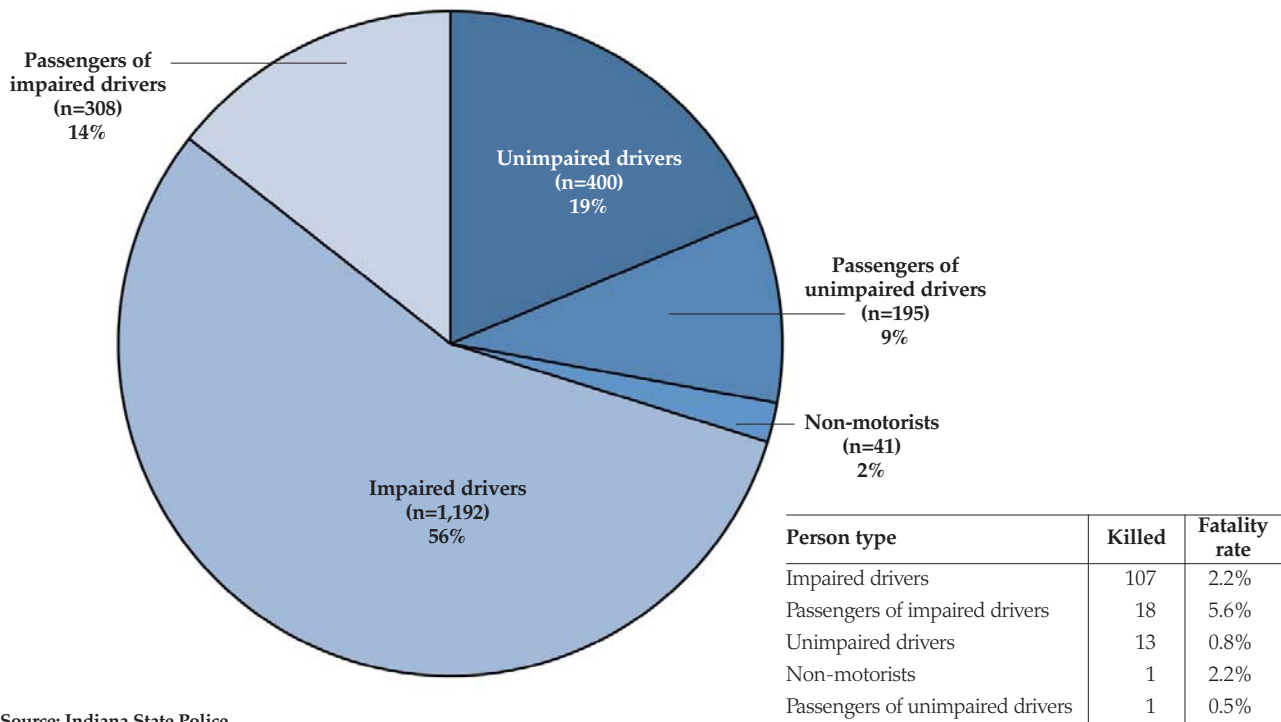
Table 80. Indiana crashes and injuries involving an alcohol-impaired driver, by road class, 2011

Road class	Count of crashes involving an alcohol-impaired driver		Count of injuries in crashes involving an alcohol-impaired driver by injury status					
	Count	As % all crashes	Fatalities		Incapacitating		Non-incapacitating	
			Count	As % all	Count	As % all	Count	As % all
Local/city roads	2,333	2.8%	33	19.4%	94	7.6%	802	4.0%
County roads	876	4.2%	42	29.4%	48	7.9%	313	6.3%
State roads	590	2.2%	36	15.8%	27	3.7%	266	3.6%
US Routes	389	2.2%	15	14.0%	20	4.2%	222	4.1%
Interstates	315	2.2%	11	12.2%	24	10.5%	110	4.1%
Not reported	435	1.9%	3	27.3%	12	9.0%	58	3.9%
<b>All roads</b>	<b>4,938</b>	<b>2.6%</b>	<b>140</b>	<b>18.7%</b>	<b>225</b>	<b>6.6%</b>	<b>1,771</b>	<b>4.2%</b>

Source: Indiana State Police

Note: For individuals injured, *non-incapacitating* includes *possible injuries*.

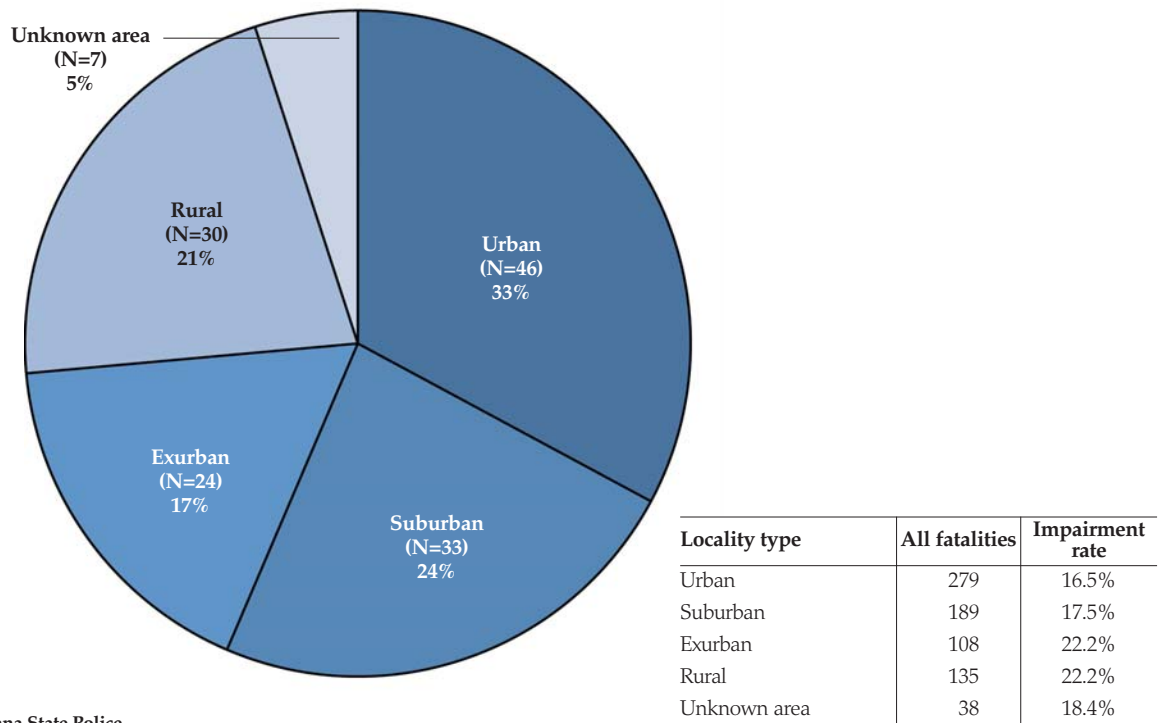
Figure 37. Individuals injured in Indiana crashes involving an alcohol-impaired driver, by person type, 2011



Source: Indiana State Police

Note: Limited to individuals with fatal, incapacitating, non-incapacitating, or possible injuries.

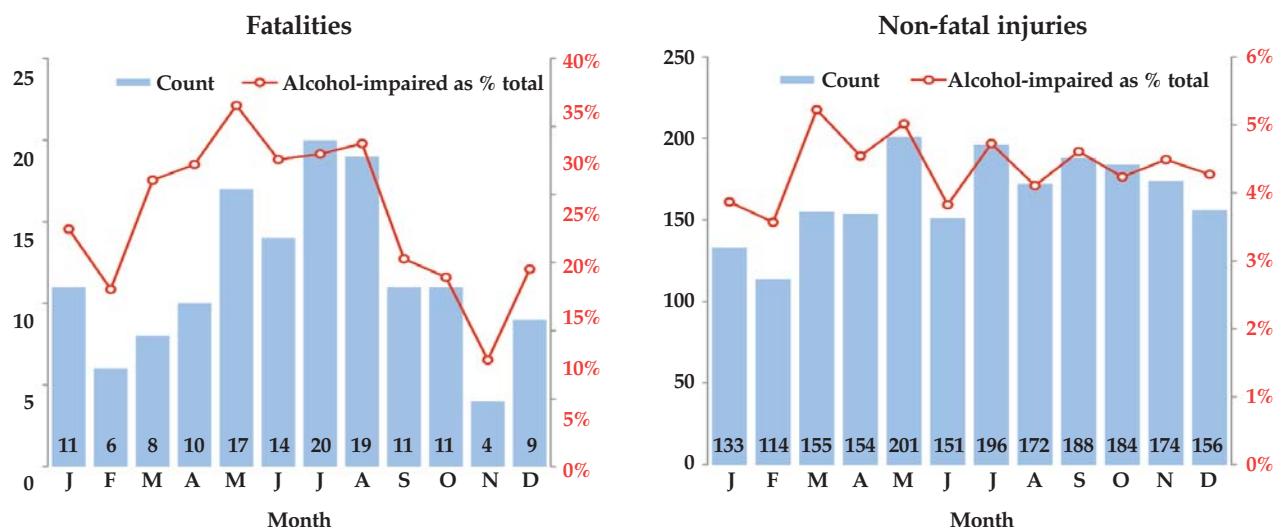
Figure 38. Fatalities in Indiana crashes involving an alcohol-impaired driver, by crash locality, 2011



Source: Indiana State Police

Note: See glossary for definition of Census locale.

Figure 39. Fatalities and injuries in crashes involving an alcohol-impaired driver, by month, 2011



Source: Indiana State Police

Note: Non-fatal injuries includes incapacitating, non-incapacitating, and possible injuries only.

Table 81. Drivers in Indiana crashes, by driver age, alcohol-impairment, and number of vehicles involved, 2011

Driver age	Not alcohol-impaired			Alcohol-impaired		
	Single-vehicle	Multiple-vehicle	% Single-vehicle	Single-vehicle	Multiple-vehicle	% Single-vehicle
Under 16	301	964	23.8%	11	4	73.3%
16 to 20	8,258	31,594	20.7%	295	133	68.9%
21 to 24	5,863	24,236	19.5%	597	360	62.4%
25 to 34	10,677	45,040	19.2%	714	618	53.6%
35 to 44	8,928	38,666	18.8%	470	434	52.0%
45 to 54	8,579	38,296	18.3%	400	433	48.0%
55 to 64	5,910	28,655	17.1%	173	204	45.9%
65 to 74	2,550	14,153	15.3%	38	58	39.6%
75 and older	1,328	9,424	12.4%	3	9	25.0%
Unknown	16	157	9.2%	--	--	--
<b>Total</b>	<b>52,410</b>	<b>231,185</b>	<b>18.5%</b>	<b>2,701</b>	<b>2,253</b>	<b>54.5%</b>

Source: Indiana State Police

Table 82. Drivers involved in Indiana crashes, by vehicle type, injury severity, and alcohol-impairment, 2011

Vehicle type	Fatal			Incapacitating			Non-incapacitating			Property damage only			All crashes		
	Alcohol-impaired	Total involved	% impaired	Alcohol-impaired	Total involved	% impaired	Alcohol-impaired	Total involved	% impaired	Alcohol-impaired	Total involved	% impaired	Alcohol-impaired	Total involved	% impaired
Passenger car	42	251	16.7%	52	1,167	4.5%	545	17,675	3.1%	2,067	151,733	1.4%	2,706	170,826	1.6%
Sport utility vehicle	10	44	22.7%	13	259	5.0%	116	3,849	3.0%	424	36,358	1.2%	563	40,510	1.4%
Pickup truck	15	65	23.1%	24	263	9.1%	171	3,046	5.6%	633	35,693	1.8%	843	39,067	2.2%
Van	2	22	9.1%	5	103	4.9%	29	1,670	1.7%	144	16,852	0.9%	180	18,647	1.0%
Large trucks	0	21	0.0%	0	43	0.0%	5	517	1.0%	17	11,759	0.1%	22	12,340	0.2%
Motorcycle	32	92	34.8%	28	362	7.7%	49	1,343	3.6%	14	777	1.8%	123	2,574	4.8%
Buses	0	0	--	0	4	0.0%	0	55	0.0%	1	1,770	0.1%	1	1,829	0.1%
Moped	6	21	28.6%	10	123	8.1%	31	535	5.8%	6	203	3.0%	53	882	6.0%
Other vehicles	0	8	0.0%	0	11	0.0%	3	59	5.1%	1	653	0.2%	4	731	0.5%
Unknown	0	3	0.0%	2	27	7.4%	2	84	2.4%	7	1,029	0.7%	11	1,143	1.0%
<b>Total</b>	<b>107</b>	<b>527</b>	<b>20.3%</b>	<b>134</b>	<b>2,362</b>	<b>5.7%</b>	<b>951</b>	<b>28,833</b>	<b>3.3%</b>	<b>3,314</b>	<b>256,827</b>	<b>1.3%</b>	<b>4,506</b>	<b>288,549</b>	<b>1.6%</b>

Source: Indiana State Police

**Table 83. Drivers involved in Indiana crashes, by alcohol-impairment, crash severity, and object collided with, 2011**

Object collided with	NON-IMPAIRED drivers					IMPAIRED drivers				
	Fatal	Incapacitating	Non-incap.	Property damage	Total	Fatal	Incapacitating	Non-incap.	Property damage	Total
<b>Other vehicle</b>	<b>627</b>	<b>3,073</b>	<b>40,977</b>	<b>182,828</b>	<b>227,505</b>	<b>38</b>	<b>58</b>	<b>527</b>	<b>1,455</b>	<b>2,078</b>
Another motor vehicle	616	3,060	40,876	182,283	226,835	37	58	525	1,448	2,068
Animal drawn vehicle	3	9	80	496	588	1	0	1	4	6
Railway vehicle/train/engine	8	4	21	49	82	0	0	1	3	4
<b>Fixed object</b>	<b>100</b>	<b>466</b>	<b>4,010</b>	<b>16,783</b>	<b>21,359</b>	<b>38</b>	<b>64</b>	<b>387</b>	<b>1,165</b>	<b>1,654</b>
Ditch	19	86	776	2,247	3,128	7	10	55	146	218
Utility pole	7	54	536	1,966	2,563	4	2	58	199	263
Tree	23	77	619	1,558	2,277	11	15	71	111	208
Other post/pole or support	3	20	173	1,458	1,654	0	1	15	67	83
Guardrail face	8	37	266	1,307	1,618	4	1	27	58	90
Curb	7	42	269	1,058	1,376	3	10	42	121	176
Median barrier	4	20	204	1,006	1,234	0	5	14	56	75
Wall/building/tunnel	1	14	124	953	1,092	2	4	14	59	79
Embankment	2	39	303	729	1,073	1	7	18	44	70
Fence	2	10	105	945	1,062	1	1	11	67	80
Mailbox	2	19	118	805	944	0	4	18	83	105
Highway traffic sign post	2	7	65	683	757	0	0	5	50	55
Light/luminaire support	2	4	77	511	594	1	2	9	26	38
Guardrail end	5	10	92	390	497	0	0	13	33	46
Culvert	4	12	112	243	371	3	1	5	14	23
Bridge rail	1	3	67	304	375	0	0	3	13	16
Bridge overhead structure	1	4	14	149	168	0	0	0	0	0
Bridge pier or abutment	6	5	34	110	155	0	0	1	5	6
Impact attenuator/crash cushion	0	2	21	113	136	1	0	4	4	9
Work zone maintenance equipment	1	0	12	90	103	0	0	3	4	7
Overhead sign post	0	0	10	70	80	0	1	1	3	5
Concrete traffic barrier	0	0	5	38	43	0	0	0	1	1
Bridge parapet end	0	1	6	22	29	0	0	0	0	0
Parked motor vehicle	0	0	2	14	16	0	0	0	0	0
Cable barrier	0	0	0	8	8	0	0	0	1	1
Other traffic barrier	0	0	0	6	6	0	0	0	0	0
<b>Non-motorist/other object</b>	<b>65</b>	<b>293</b>	<b>2,010</b>	<b>16,201</b>	<b>18,569</b>	<b>3</b>	<b>10</b>	<b>20</b>	<b>16</b>	<b>49</b>
Deer	2	31	309	14,844	15,186	3	2	4	10	19
Pedestrian	51	174	999	106	1,330	0	6	9	3	18
Animal other than deer	3	14	133	1,053	1,203	0	0	3	2	5
Bicycle	9	74	569	198	850	0	2	4	1	7
<b>Off road/non-collision</b>	<b>84</b>	<b>420</b>	<b>2,706</b>	<b>7,568</b>	<b>10,778</b>	<b>54</b>	<b>45</b>	<b>266</b>	<b>547</b>	<b>912</b>
Off roadway	64	315	2,137	6,065	8,581	46	36	227	505	814
Overturn/rollover	5	45	256	345	651	2	3	22	16	43
Fell from vehicle (non-collision)	4	46	201	332	583	3	3	8	2	16
Ran off roadway	8	12	67	248	335	3	2	9	19	33
Cargo/equipment shift or loss	0	0	24	286	310	0	0	0	0	0
Jackknife	0	1	10	119	130	0	0	0	1	1
Fire/explosion	0	0	2	108	110	0	0	0	0	0
Immersion	3	1	3	38	45	0	0	0	4	4
Crossing center line/median	0	0	3	20	23	0	1	0	0	1
Equipment/mechanical failure	0	0	1	5	6	0	0	0	0	0
Thrown or falling object	0	0	2	1	3	0	0	0	0	0
Separation of units	0	0	0	1	1	0	0	0	0	0
<b>Other/not reported</b>	<b>26</b>	<b>101</b>	<b>740</b>	<b>4,599</b>	<b>5,466</b>	<b>2</b>	<b>7</b>	<b>39</b>	<b>131</b>	<b>179</b>
<b>TOTAL</b>	<b>902</b>	<b>4,353</b>	<b>50,443</b>	<b>227,979</b>	<b>283,677</b>	<b>135</b>	<b>184</b>	<b>1,239</b>	<b>3,314</b>	<b>4,872</b>
% other vehicles	69.5%	70.6%	81.2%	80.2%	80.2%	28.1%	31.5%	42.5%	43.9%	42.7%
% fixed objects	11.1%	10.7%	7.9%	7.4%	7.5%	28.1%	34.8%	31.2%	35.2%	33.9%
% non-motorists/other object	7.2%	6.7%	4.0%	7.1%	6.5%	2.2%	5.4%	1.6%	0.5%	1.0%
% offroad/non-collisions	9.3%	9.6%	5.4%	3.3%	3.8%	40.0%	24.5%	21.5%	16.5%	18.7%
% other	2.9%	2.3%	1.5%	2.0%	1.9%	1.5%	3.8%	3.1%	4.0%	3.7%

Source: Indiana State Police



**Table 84. Odds of fatal injury to drivers involved in Indiana crashes, by alcohol-impairment and object collided with, 2011**

Object collided with	NON-IMPAIRED drivers			IMPAIRED drivers			Odds ratio (imp/ non-imp)
	Fatal	Total	Fatal odds	Fatal	Total	Fatal odds	
Other vehicle	627	227,505	0.003	38	2,078	0.019	6.74
Fixed object	100	21,359	0.005	38	1,654	0.024	5.00
Non-motorist/other moving object	65	18,569	0.004	3	49	0.065	18.57
Off road/non-collision	84	10,778	0.008	54	912	0.063	8.01
<b>Total</b>	<b>902</b>	<b>283,677</b>	<b>0.003</b>	<b>135</b>	<b>4,872</b>	<b>0.028</b>	<b>8.93</b>

Source: Indiana State Police

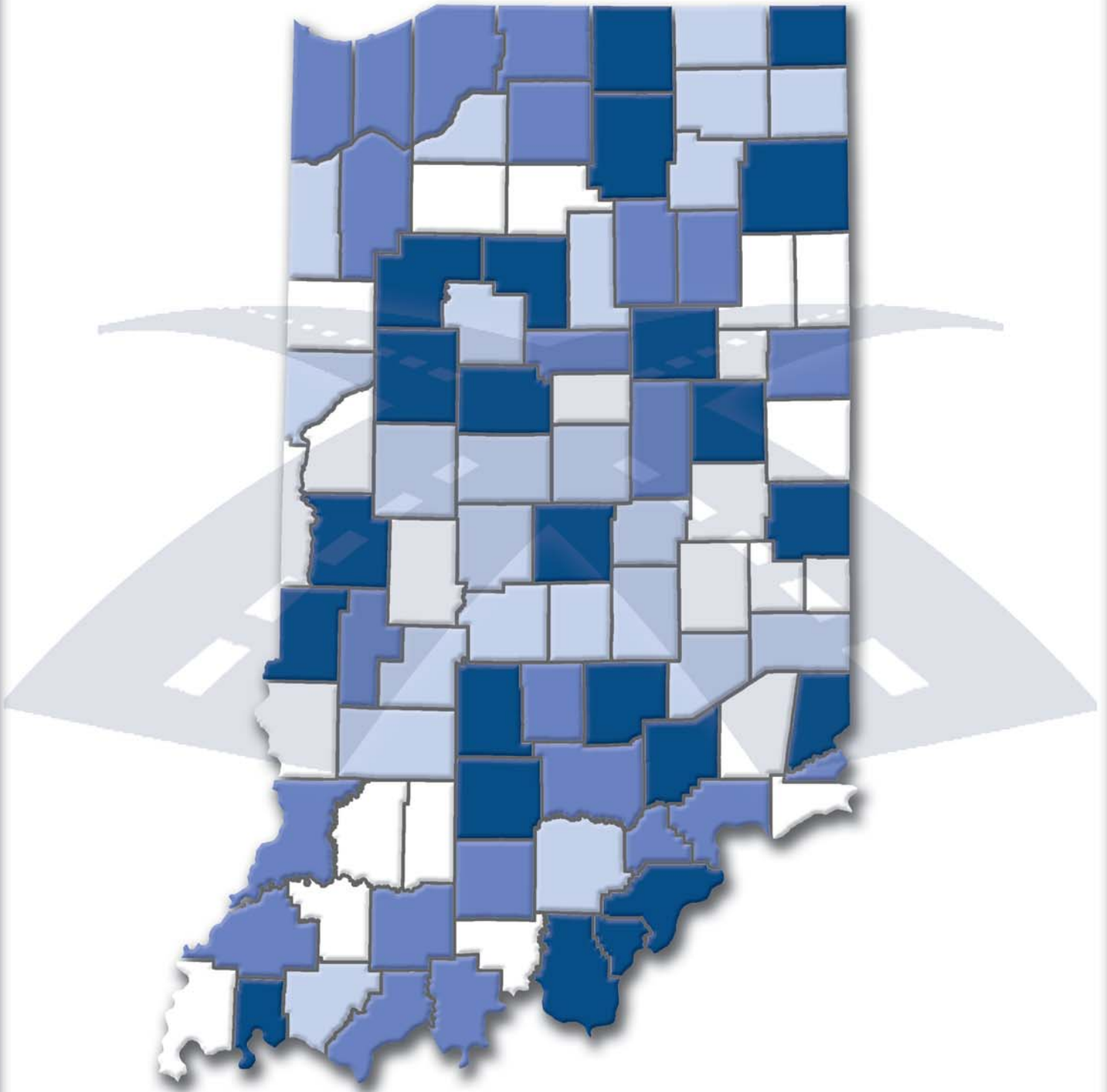
Notes:

Total includes *Other/not reported*.

Odds ratios significant at  $p < 0.001$ .



# SPEED



## SPEED, 2011

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.

In Indiana in 2011, nine percent of all collisions were speed-related and the number of speed-related collisions (17,517) decreased six percent from 2010. These collisions involved 16,763 speeding motor vehicles (six percent of all motor vehicles in collisions), 9,915 motor vehicles that were not speeding, and 26,968 drivers, injured occupants, pedestrians, pedalcyclists, and animal drawn vehicle operators (nine percent of all individuals in collisions).

### Trends in speed-related collisions

From 2001 to 2010 (latest data available from the Fatality Analysis Reporting System), Indiana reported fewer fatal speed-related collisions per one billion vehicle miles travelled than the Great Lakes region, each of the other nine US regions, and the US as a whole, for all years except 2005 and 2008. During this ten-year period, the Indiana rate increased a marginal 0.5 percent on average each year, while the rate decreased on average in the Great Lakes region (1.4 percent), US (2.5 percent), and all other regions except Lower New England (0.4 percent increase). More recently, during the five-year period from 2006 to 2010, Indiana's fatal speed-related collision rate increased 2.2 percent on average, compared to declines for all other regions except Lower New England. Despite these rate increases, Indiana's average fatal speed-related collision rate (2.7) during the 2001 to 2010 period was the lowest of all regions.

From 2007 to 2011, the number of speed-related collisions in Indiana decreased slightly (0.1 percent) on average, while fatal speed-related collisions decreased almost 4 percent on average. After increasing slightly from 2009 to 2010, the number of speed-related collisions decreased nearly 6 percent in 2011; fatal speed-related collisions declined about 4 percent. In 2011, speed-related collisions were 2.3 times more likely to result in a fatality than collisions not involving speeding, a rate virtually unchanged from the prior year when the risk was at a five-year low.

### Individuals and vehicles involved in speed-related collisions

There were fewer fatal speed-related collisions in 2011 than 2010 but more persons killed in these collisions. In 2010, 136 fatal speed-related collisions resulted in 145 deaths. In 2011, 131 fatal speed-related collisions (four percent fewer) resulted in 150 deaths (four percent more).

Continuing a downward trend, vehicles involved in collisions in 2011 were slightly less likely to have been speeding than in the previous two years (5.8 percent versus 6 percent in 2010 and 6.1 percent in 2009). Among vehicle types, motorcycles were the most likely to have been speeding at the time of collision (10.9 percent) and one of only two vehicle types more likely to have been speeding in 2011 than 2010 (the other was motorhomes/RVs).

### Injury rates and drivers involved in speed-related collisions

Given involvement in a collision in 2011, occupants of speeding vehicles were more likely to suffer an injury than occupants of vehicles that were not speeding. Approximately 231 of every 1,000 individuals riding in speeding vehicles suffered an injury, compared to 146 of every 1,000 in vehicles not speeding. In 2011, occupants of speeding motorhomes/RVs and large trucks were 4.9 and 3 times more likely, respectively, to suffer an injury than occupants of the same vehicle types not speeding.

Generally, serious injury (i.e., fatal and incapacitating injuries) rates were greater for individuals involved in collisions where posted speed limits were higher. And regardless of posted speed limit, speed-related collisions were more likely to result in serious injury than collisions not involving speeding. However, collisions in lower speed limit zones that involved speeding carried a higher risk of serious injury relative to those that did not involve speeding.

The likelihood that a driver involved in a collision was speeding depends largely on the driver's age and gender. In 2011, male drivers involved in collisions were more likely to have been speeding than female drivers and young drivers more likely than older drivers. Nearly 12 percent of young male drivers ages 16 to 20 involved in collisions in 2011 were speeding, a rate higher than any other driver demographic.

Drivers who were speeding when involved in collisions were more likely to suffer serious injuries than drivers who were not speeding. For male drivers, this *relative risk* generally decreased with age; for female drivers, the relative risk increased with age up to ages 55 to 64 before declining.

Given involvement in a collision in 2011, occupants riding in vehicles where the driver was speeding were 3.3 times more likely to suffer a fatality than occupants of vehicles where the driver was not speeding. If the driver was speeding and alcohol-impaired, occupants were 12.3 times more likely to suffer a fatality than if the driver was only speeding.

### Time, season, and location of speed-related collisions

Generally, collisions occurring during morning (12am-10:59am) and late evening (9pm-11:59pm) hours were more likely to be speed-related than those in the afternoon. Rates declined from 12am through 11am, held relatively steady between seven and eight percent from 11am through 9pm, and then increased steadily thereafter.

The number and rate of speed-related collisions is generally three to six times greater in winter months (December, January, February) than other months. This contrasts with collisions that do not involve speeding, which tend to occur with similar frequency across months. The larger counts in winter months are likely due to the designation of *speeding too fast for weather conditions* when the weather is bad, as described below. In 2011, however, the number of speed-related collisions in December (1,576) was 63 percent below the 2007 to 2010 December average (4,305), while January (4,434) was 31 percent above average (3,386) and February (3,079) was 15 percent below average (3,615).

These winter month deviations ultimately contributed to a reduction in the total number of speed-related collisions in 2011. Much of this decrease is attributable to fewer collisions involving drivers *speeding too fast for weather conditions*: in December 2011, there were 888 such collisions compared to an average of nearly 3,000 from 2007 to 2010. Typically, more than half of collisions that involve *speeding too fast for weather conditions* are linked to collisions occurring in winter weather conditions (e.g., *snow*,

*sleet/hail/freezing rain, blowing sand/soil/snow*). Because snowfall in December 2011 was 61 percent below normal (2.5 inches versus 6.4 inches), the number of collisions that occurred in winter weather conditions was dramatically lower, resulting in fewer collisions involving drivers *speeding too fast for weather conditions*, and, in turn, fewer total speed-related collisions.

As might be expected, northern Indiana counties subject to lake effect snow from Lake Michigan tend to have higher numbers and rates of winter weather collisions than southern counties. More winter weather collisions creates the opportunity for and results in more collisions involving *speeding too fast for weather conditions*. This, in turn, generally contributes to higher numbers and rates of speed-related collisions in northern counties.

In Indiana in 2011, collisions occurring outside of *urban* areas were generally more likely to be speed-related; serious injury collisions were more likely than those not involving serious injury. Speed-related collisions in rural areas were more likely than speed-related collisions in more densely populated areas to involve alcohol, with serious injury collisions more likely than those not involving serious injury.

Historically, rates of speed-related collisions have been highest on *interstates* and lowest on *local/city* roads. Rates of speed-related collisions involving serious injury have also been highest on *interstates* but lowest on *state roads*. On average, collision rates (speed and speed with serious injury) increased on all road classes from 2007 to 2011.

**Table 85. Rate of fatal speed-related collisions per 1 billion vehicle miles travelled (VMT), by region, 2001-2010**

Geography	Fatal speed-related collisions per 1 billion VMT										Average annual % change	
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2001-10	2006-10
INDIANA	2.8	2.2	2.7	3.1	3.2	2.5	2.5	3.0	2.2	2.5	0.5%	2.2%
UNITED STATES	4.1	4.2	4.1	3.9	4.0	4.0	3.9	3.6	3.2	3.2	-2.5%	-5.2%
Upper New England (CT, ME, MS, NH, RI, VT)	3.5	3.7	3.2	3.3	3.1	2.9	2.8	2.3	2.4	2.8	-2.0%	-0.2%
Lower New England (NJ, NY, PA)	3.4	3.7	3.4	3.3	3.7	3.3	3.6	3.5	3.2	3.4	0.4%	1.0%
Mid-Atlantic (DE, DC, KY, MD, NC, VA, WV)	4.0	4.2	4.0	4.1	4.0	3.7	4.0	3.4	3.4	3.6	-1.1%	-0.8%
Southern Atlantic (AL, FL, GA, SC, TN)	4.2	4.0	3.9	3.9	3.9	4.3	3.9	3.6	3.2	2.9	-3.6%	-9.3%
Great Lakes (IL, IN, MI, MN, OH, WI)	3.1	3.1	3.3	3.2	3.0	2.9	2.9	2.6	2.3	2.7	-1.4%	-1.4%
Southern Central (LA, MS, NM, OK, TX)	5.2	5.6	5.6	5.3	5.2	5.7	5.2	5.2	4.4	4.3	-1.7%	-6.3%
Central (AR, IA, KS, MO, NE)	4.2	5.1	4.4	3.9	4.2	3.8	3.4	3.2	3.3	3.3	-2.4%	-3.3%
West (CO, NV, ND, SD, UT, WY)	6.0	5.8	5.2	4.9	4.2	3.9	4.2	3.9	3.7	3.4	-5.8%	-3.0%
Pacific (AZ, CA, HI)	4.5	4.5	4.4	4.0	4.5	4.5	4.4	3.6	3.2	2.8	-4.7%	-11.3%
Upper Northwest (AK, ID, MT, OR, WA)	4.4	4.6	4.5	4.1	4.6	4.3	4.0	4.1	4.0	3.3	-2.8%	-6.4%

Sources: Fatality Analysis Reporting System (FARS); Bureau of Transportation Statistics

#### Notes:

Geographic regions are defined by the National Highway Traffic Safety Administration. 2011 FARS data are not yet available.

**Table 86. Indiana collisions, by speed involvement and collision severity, 2007-2011**

Speed involvement/collision severity	2007	2008	2009	2010	2011	% 2011 total	% change '10-'11	Average annual change
<b>All collisions</b>	<b>204,999</b>	<b>205,452</b>	<b>189,661</b>	<b>192,886</b>	<b>188,132</b>	<b>100.0%</b>	<b>-2.5%</b>	<b>-2.1%</b>
<b>Speed-related</b>	<b>18,492</b>	<b>22,820</b>	<b>18,251</b>	<b>18,550</b>	<b>17,517</b>	<b>100.0%</b>	<b>-5.6%</b>	<b>-0.1%</b>
Fatal	165	188	136	136	131	0.7%	-3.7%	-4.3%
Incapacitating	459	484	425	461	475	2.7%	3.0%	1.2%
Non-incapacitating	3,918	4,227	3,692	3,682	3,629	20.7%	-1.4%	-1.6%
Property damage	13,950	17,921	13,998	14,271	13,282	75.8%	-6.9%	0.4%
<b>Not speed-related</b>	<b>186,507</b>	<b>182,632</b>	<b>171,410</b>	<b>174,336</b>	<b>170,615</b>	<b>100.0%</b>	<b>-2.1%</b>	<b>-2.2%</b>
Fatal	639	534	495	565	543	0.3%	-3.9%	-3.4%
Incapacitating	2,616	2,414	2,307	2,451	2,383	1.4%	-2.8%	-2.2%
Non-incapacitating	30,423	28,233	26,986	27,489	26,247	15.4%	-4.5%	-3.6%
Property damage	152,829	151,451	141,622	143,831	141,442	82.9%	-1.7%	-1.9%
<b>% Speed-related</b>	<b>9.0%</b>	<b>11.1%</b>	<b>9.6%</b>	<b>9.6%</b>	<b>9.3%</b>	-	<b>-3.2%</b>	<b>1.6%</b>
Fatal	20.5%	26.0%	21.6%	19.4%	19.4%	-	0.2%	0.0%
Incapacitating	14.9%	16.7%	15.6%	15.8%	16.6%	-	5.0%	2.9%
Non-incapacitating	11.4%	13.0%	12.0%	11.8%	12.1%	-	2.8%	1.9%
Property damage	8.4%	10.6%	9.0%	9.0%	8.6%	-	-4.9%	1.7%
<b>Relative risk of fatal collision</b>	<b>2.6</b>	<b>2.8</b>	<b>2.6</b>	<b>2.3</b>	<b>2.3</b>	-	<b>3.9%</b>	<b>-2.2%</b>

Source: Indiana State Police

**Notes:**

*Non-incapacitating* includes *non-incapacitating* and *possible* collision severities.

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

All *relative risk* estimates are significantly different from 1.0 (where a relative risk of 1.0 signifies no difference in risk).

**Table 87. Individuals involved in Indiana collisions, by speed involvement and injury status, 2007-2011**

Speed involvement/injury severity	2007	2008	2009	2010	2011	% 2011 total	% change '10-'11	Average annual change
<b>All individuals</b>	<b>330,129</b>	<b>325,775</b>	<b>304,389</b>	<b>311,231</b>	<b>303,529</b>	<b>100.0%</b>	<b>-2.5%</b>	<b>-2.0%</b>
<b>Speed-related</b>	<b>28,417</b>	<b>34,398</b>	<b>28,127</b>	<b>28,009</b>	<b>26,968</b>	<b>100.0%</b>	<b>-3.7%</b>	<b>-0.3%</b>
Fatal	187	225	158	145	150	0.6%	3.4%	-3.6%
Incapacitating	559	585	514	566	578	2.1%	2.1%	1.2%
Non-incapacitating	5,840	6,174	5,433	5,415	5,272	19.5%	-2.6%	-2.3%
Other injury	706	532	385	226	209	0.8%	-7.5%	-25.3%
Not injured	21,125	26,882	21,637	21,657	20,759	77.0%	-4.1%	0.9%
<b>Not speed-related</b>	<b>301,712</b>	<b>291,377</b>	<b>276,262</b>	<b>283,222</b>	<b>276,561</b>	<b>100.0%</b>	<b>-2.4%</b>	<b>-2.1%</b>
Fatal	711	590	534	609	599	0.2%	-1.6%	-3.5%
Incapacitating	3,102	2,797	2,665	2,877	2,827	1.0%	-1.7%	-2.1%
Non-incapacitating	42,964	39,281	37,977	38,753	36,567	13.2%	-5.6%	-3.9%
Other injury	7,835	5,387	3,768	2,279	1,688	0.6%	-25.9%	-31.7%
Not injured	247,100	243,322	231,318	238,704	234,880	84.9%	-1.6%	-1.2%
<b>% Speed-related</b>	<b>8.6%</b>	<b>10.6%</b>	<b>9.2%</b>	<b>9.0%</b>	<b>8.9%</b>	--	<b>-1.3%</b>	<b>1.6%</b>
Fatal	20.8%	27.6%	22.8%	19.2%	20.0%	--	4.1%	0.9%
Incapacitating	15.3%	17.3%	16.2%	16.4%	17.0%	--	3.3%	2.9%
Non-incapacitating	12.0%	13.6%	12.5%	12.3%	12.6%	--	2.8%	1.6%
Other injury	8.3%	9.0%	9.3%	9.0%	11.0%	--	22.1%	7.8%
Not injured	7.9%	9.9%	8.6%	8.3%	8.1%	--	-2.4%	1.8%
<b>Relative risk of fatality</b>	<b>2.8</b>	<b>3.2</b>	<b>2.9</b>	<b>2.4</b>	<b>2.6</b>	--	<b>6.7%</b>	<b>-1.2%</b>

Source: Indiana State Police

**Notes:**

*Non-incapacitating* includes *non-incapacitating* and *possible* injuries.

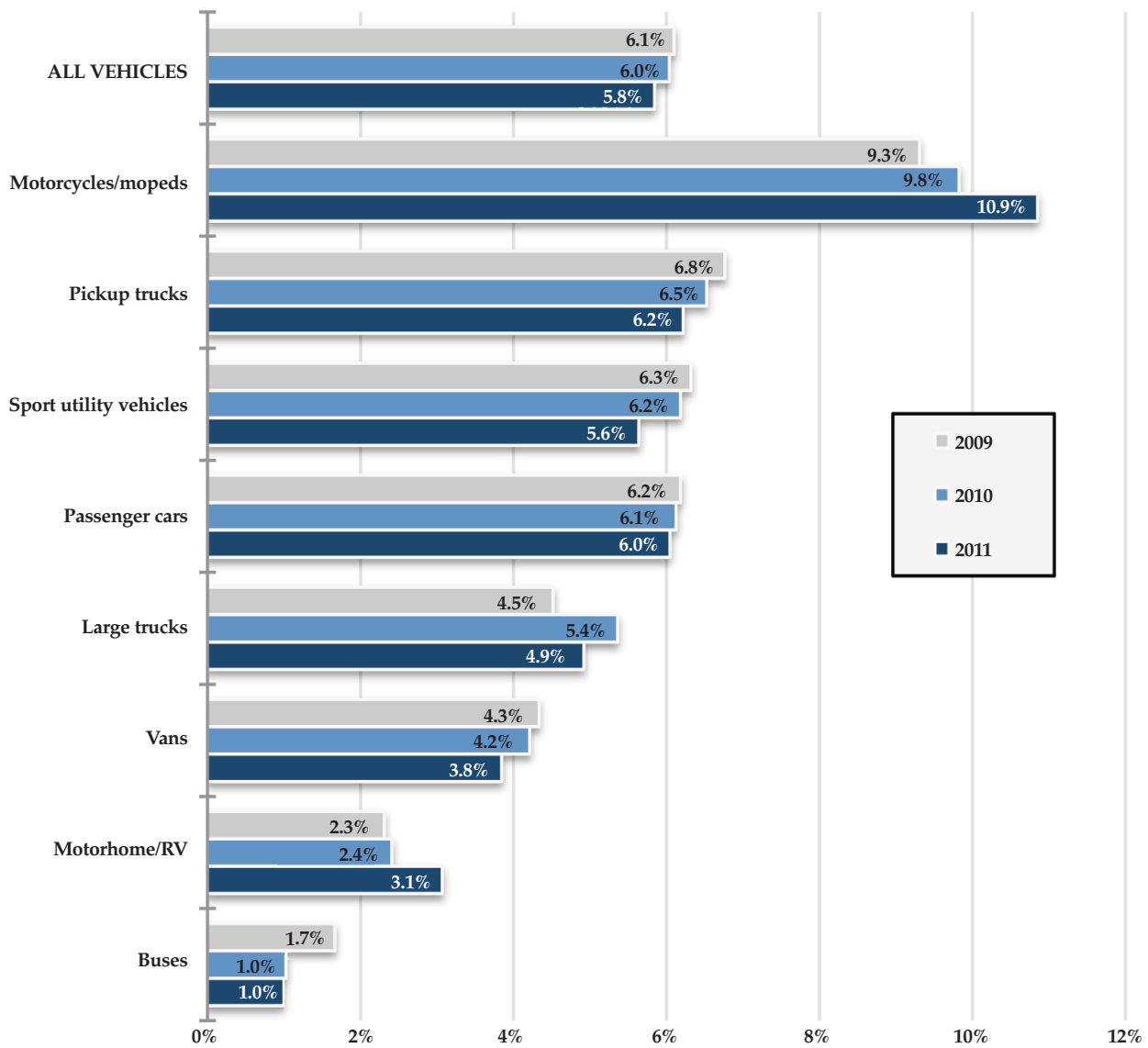
*Other injury* includes injuries reported as *refused*, *unknown*, and *not reported*.

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

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

All *relative risk* estimates are significantly different from 1.0 (where a relative risk of 1.0 signifies no difference in risk).

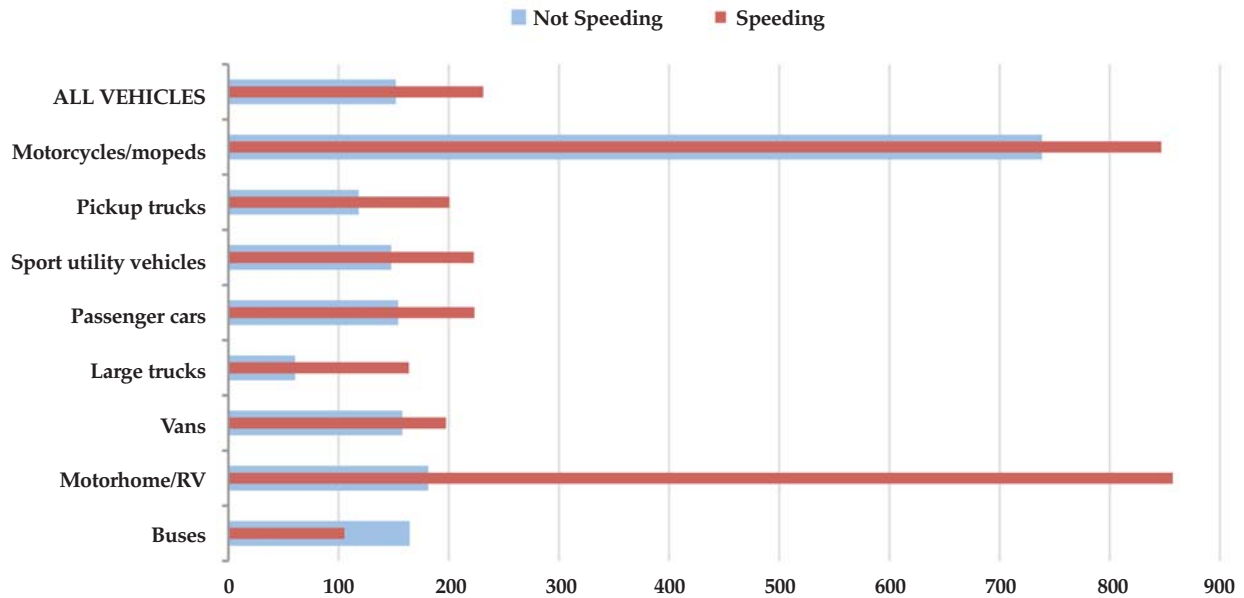
Figure 40. Vehicles speeding as a percent of all vehicles involved in Indiana collisions, by vehicle type, 2009-2011



Source: Indiana State Police

Note: Excludes vehicle types of animal drawn vehicle (non-motor vehicle), farm vehicle, combination vehicle, pedestrian, bicycle, and unknown type.

Figure 41. Injury rates per 1,000 occupants involved in Indiana collisions, by unit type and speed status, 2011

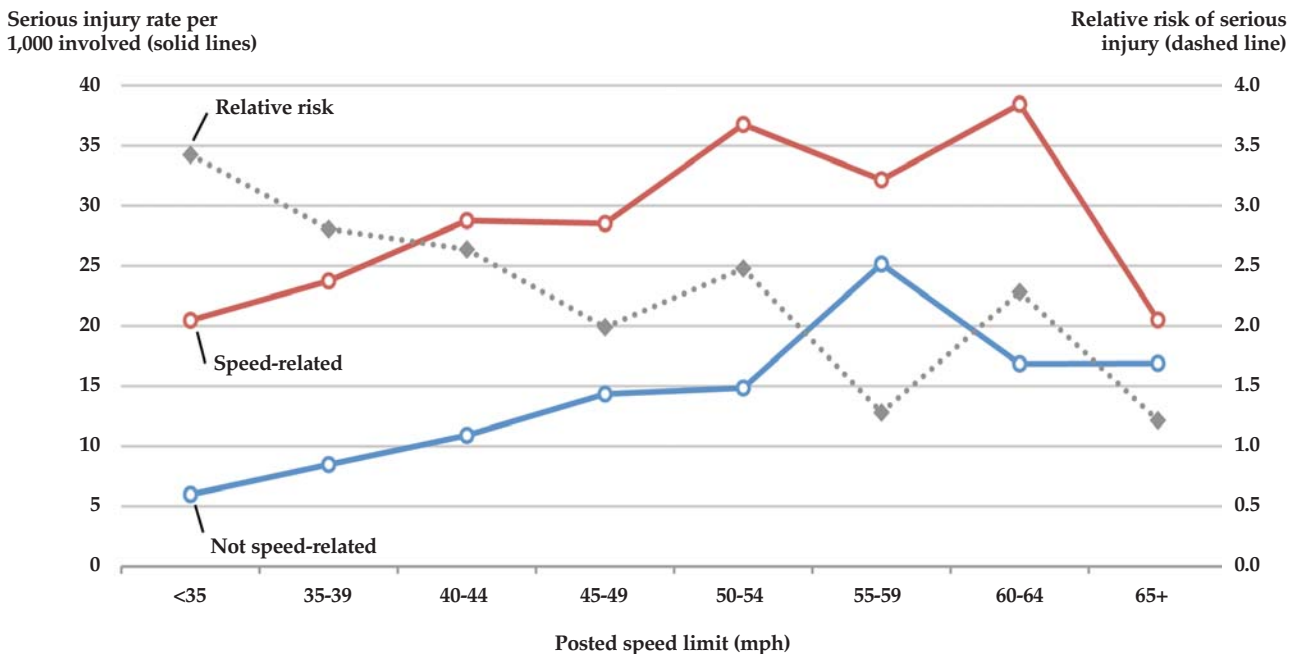


Source: Indiana State Police

Notes:

Excludes vehicle types of *animal drawn vehicle (non-motor vehicle), farm vehicle, combination vehicle, pedestrian, bicycle, and unknown type.* Injury includes *fatal, incapacitating, non-incapacitating, possible, and other injury types.*

Figure 42. Seriously injured individuals per 1,000 involved in collisions, by speed limit group and collision speed status, 2011



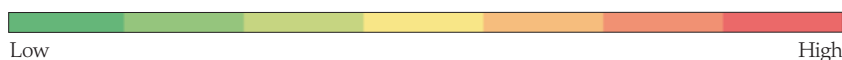
Source: Indiana State Police

Notes:

Serious injury includes *fatal and incapacitating injuries.*

All *relative risk* estimates are significantly different from 1.0 (where a relative risk of 1.0 signifies no difference in risk) except those in areas with posted speed limits of 65+.





**Table 88. Drivers speeding as a percent of all drivers involved in Indiana collisions, by age group and gender, 2007-2011**

Age group	Average, 2007-10		2011	
	Male	Female	Male	Female
16-20	12.3%	8.2%	11.9%	8.1%
21-24	10.3%	7.1%	10.2%	6.9%
25-34	8.0%	5.8%	7.5%	5.6%
35-44	5.8%	4.6%	5.6%	4.5%
45-54	4.6%	3.7%	4.7%	3.5%
55-64	3.7%	3.0%	3.5%	2.5%
65-74	2.8%	2.0%	2.7%	1.9%
75 +	2.6%	1.6%	2.2%	1.7%
<b>all ages</b>	<b>7.0%</b>	<b>5.2%</b>	<b>6.6%</b>	<b>4.9%</b>

Source: Indiana State Police

**Notes:**

Data are limited to drivers with valid gender and age reported.

Serious injury includes fatal and incapacitating injuries.

**Table 89. Relative risk of serious injury, speeding drivers versus non-speeding drivers, by age group and gender, 2007-2011**

Age group	Average, 2007-10		2011	
	Male	Female	Male	Female
16-20	2.8	2.0	2.9	<b>1.6</b>
21-24	3.1	1.9	3.4	1.9
25-34	3.3	2.3	3.5	3.0
35-44	3.2	2.1	3.8	2.5
45-54	2.9	2.2	3.3	1.5
55-64	2.2	2.5	2.9	3.6
65-74	2.2	2.2	<b>0.9</b>	<b>2.4</b>
75 +	2.1	1.6	3.2	1.1
<b>all ages</b>	<b>2.8</b>	<b>2.0</b>	<b>3.0</b>	<b>2.1</b>

Source: Indiana State Police

**Notes:**

Data are limited to drivers with valid gender and age reported.

Serious injury includes fatal and incapacitating injuries.

Relative risk is defined as the ratio of speed-related rate (serious injury, as % of total speed-related) to non-speed-related rate (serious injury, as % of total non-speed-related). A value greater than 1 indicates that speeding drivers are more likely to suffer a serious injury than drivers who were not speeding (e.g., in 2011, 16- to 20-year-old male drivers involved in collisions while speeding were three times more likely to suffer a serious injury than 16- to 20-year-old male drivers who were not speeding).

All relative risk estimates in Table 5 are significantly different from 1.0 (where a relative risk of 1.0 signifies no difference in risk) except those shown in bold.

Color scales are year-specific.

**Table 90. Vehicle occupants involved in traffic collisions, by driver speed involvement and alcohol-impairment, 2011**

Vehicle driver speeding?	Vehicle driver impaired?	Vehicle occupants killed	Vehicle occupants surviving	Total occupants involved	Killed, as % total	Risk of fatality
Yes	Yes	48	889	937	5.1%	12.3
	No	75	16,930	18,078	0.4%	
	Total	123	17,819	19,015		
No	Yes	77	4,262	4,174	1.8%	10.9
	No	469	284,521	278,002	0.2%	
	Total	546	288,783	282,176		
All	Yes	125	5,151	5,111	2.4%	13.3
	No	544	301,451	296,080	0.2%	
	Total	669	306,602	301,191		
Yes	All	123	17,819	19,015	0.6%	3.3
No		546	288,783	282,176	0.2%	
	Total	669	306,602	301,191		

Source: Indiana State Police

**Notes:**

*Impaired drivers* is defined as drivers with a BAC of 0.08 g/dL or greater.

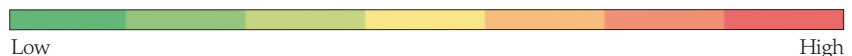
*Risk of fatality* is defined as the ratio of the rate of *vehicle occupants killed where driver was impaired* (fatal, as % total driver impaired) to the rate of *vehicle occupants killed where driver was NOT impaired* (fatal, as % of total driver not impaired).

All risk of fatality estimates are significantly different from 1.0 (where a relative risk of 1.0 signifies no difference in risk).

**Table 91. Speed-related collisions as a percent of all Indiana collisions, by time of day and day of week, 2011**

Time	Sun	Mon	Tue	Wed	Thu	Fri	Sat	% Speed-related by hour
12am-	16.1%	12.5%	16.4%	12.3%	11.4%	16.0%	12.5%	14.1%
1am-	14.4%	16.2%	14.4%	16.1%	15.8%	12.3%	13.6%	14.5%
2am-	15.5%	14.5%	16.8%	19.4%	13.3%	13.8%	16.0%	15.6%
3am-	15.8%	14.2%	19.0%	21.3%	13.2%	13.6%	14.4%	15.5%
4am-	11.9%	13.5%	16.0%	18.1%	10.0%	16.0%	13.4%	13.9%
5am-	11.5%	11.8%	11.9%	14.1%	8.1%	20.2%	11.5%	13.0%
6am-	11.8%	12.7%	13.1%	9.6%	8.3%	15.2%	13.3%	11.9%
7am-	15.4%	10.3%	11.4%	9.3%	9.3%	14.6%	18.4%	11.7%
8am-	15.6%	10.7%	12.9%	10.5%	11.0%	13.5%	18.6%	12.7%
9am-	11.8%	9.9%	17.1%	11.2%	9.0%	12.0%	15.2%	12.4%
10am-	12.2%	8.0%	13.4%	7.8%	14.4%	8.1%	8.9%	10.4%
11am-	8.3%	6.2%	11.7%	6.2%	10.0%	6.8%	8.2%	8.2%
12pm-	8.2%	5.0%	8.1%	5.3%	10.2%	6.3%	7.2%	7.2%
1pm-	7.4%	8.4%	8.6%	6.0%	11.7%	5.6%	6.0%	7.8%
2pm-	7.6%	6.3%	10.2%	6.6%	10.3%	6.2%	7.2%	7.8%
3pm-	8.7%	7.8%	10.6%	6.3%	11.2%	5.3%	6.3%	8.1%
4pm-	8.1%	6.6%	9.7%	6.2%	10.7%	5.9%	8.2%	7.9%
5pm-	7.7%	6.3%	8.6%	6.6%	8.8%	5.4%	9.2%	7.4%
6pm-	6.3%	8.9%	8.2%	5.5%	9.7%	5.9%	7.4%	7.4%
7pm-	6.6%	7.8%	9.5%	6.8%	7.5%	5.7%	7.8%	7.4%
8pm-	6.9%	10.3%	8.0%	6.4%	8.1%	5.1%	7.3%	7.4%
9pm-	9.6%	10.1%	10.1%	6.9%	9.5%	7.8%	9.6%	9.0%
10pm-	10.8%	10.2%	11.1%	9.3%	12.2%	9.2%	8.1%	10.0%
11pm-	11.7%	9.1%	11.6%	11.8%	14.2%	11.9%	9.8%	11.4%
<b>% Speed-related by day</b>	<b>9.9%</b>	<b>8.5%</b>	<b>10.8%</b>	<b>7.9%</b>	<b>10.4%</b>	<b>8.3%</b>	<b>9.7%</b>	<b>9.3%</b>

Source: Indiana State Police

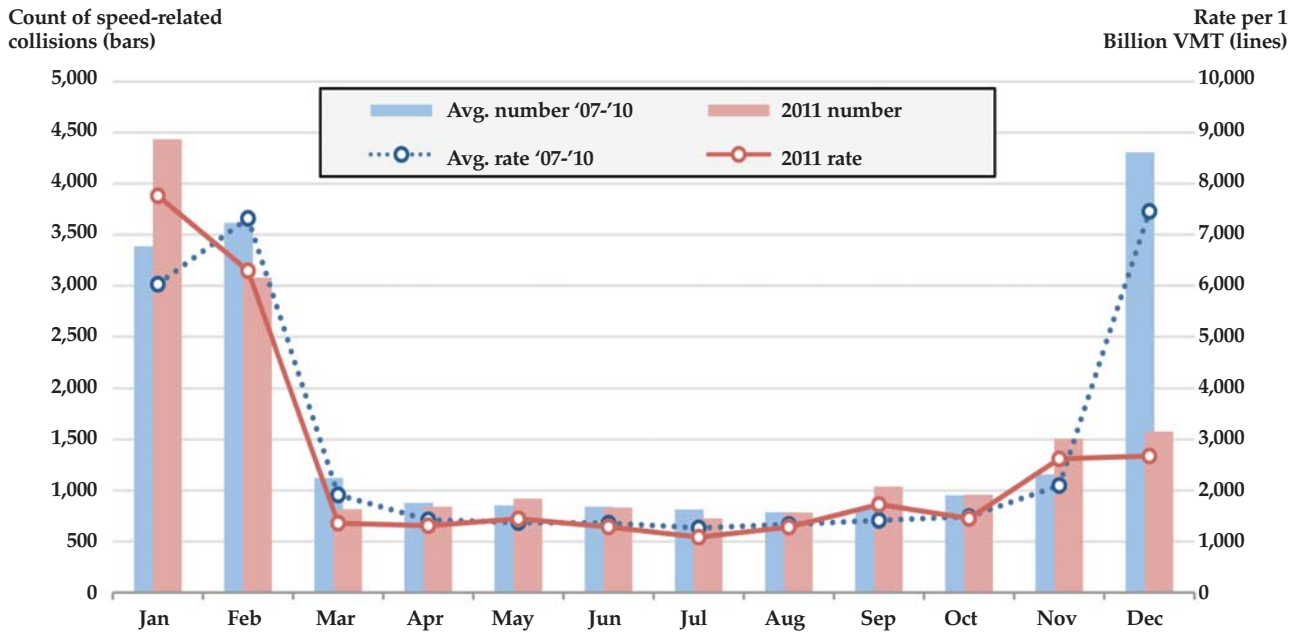


**Notes:**

Includes only collisions where valid time was reported.

Color scales apply to all days/times.

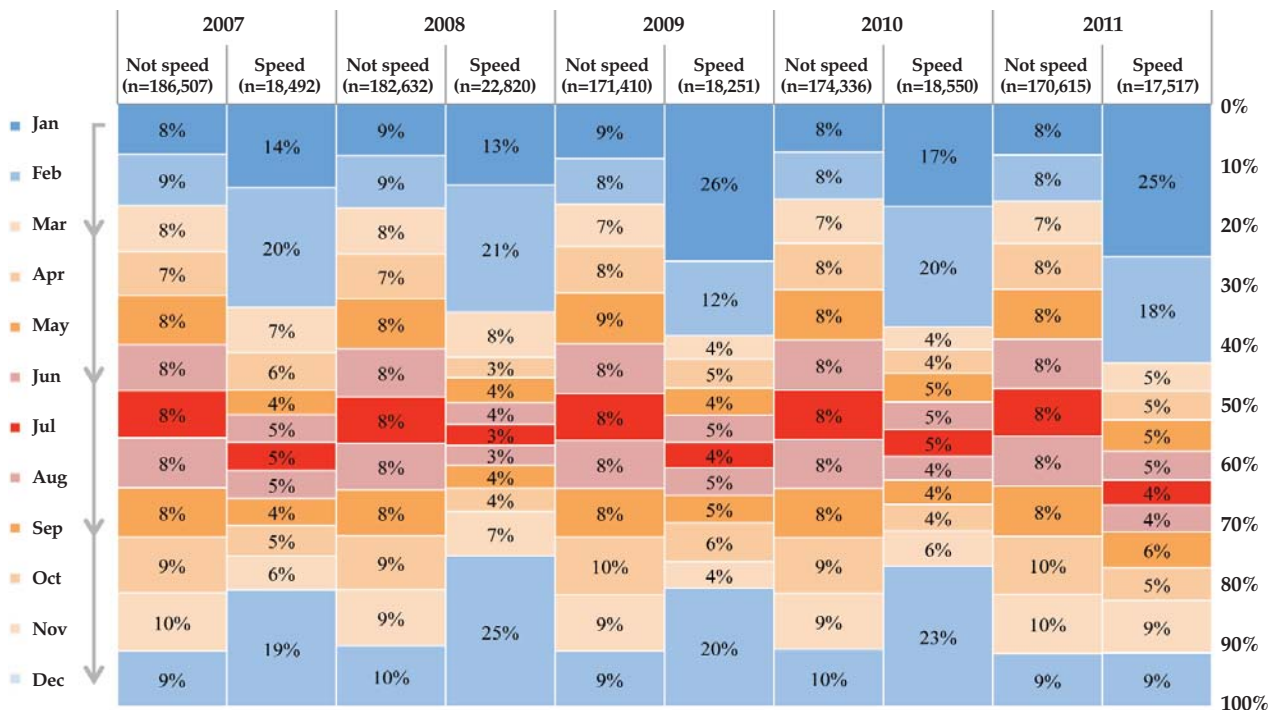
**Figure 43. Number of speed-related collisions and rate per billion vehicle miles travelled (VMT), by month, 2007-2011**



Source: Indiana State Police; Bureau of Transportation Statistics

Note: 2011 rate is based on 2010 vehicle miles travelled (2011 VMT not available).

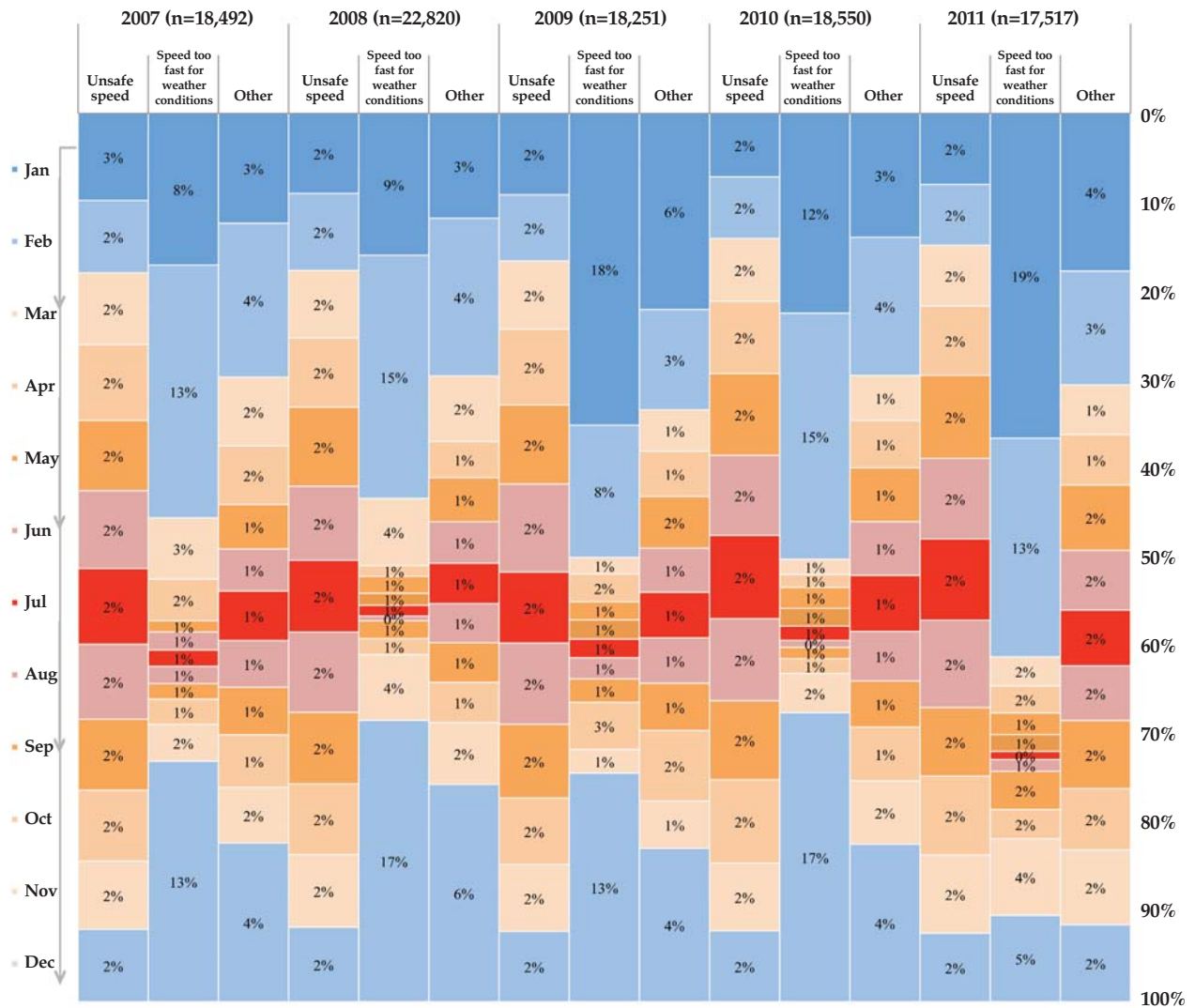
**Figure 44. Distribution of collisions, by month and speed involvement, 2007-2011**



Source: Indiana State Police

Note: Percentage values represent the percent of total collisions in a given year that are speed-related and not speed-related. For example, 25 percent of all speed-related collisions (4,434 of 17,517) in 2011 occurred in January.

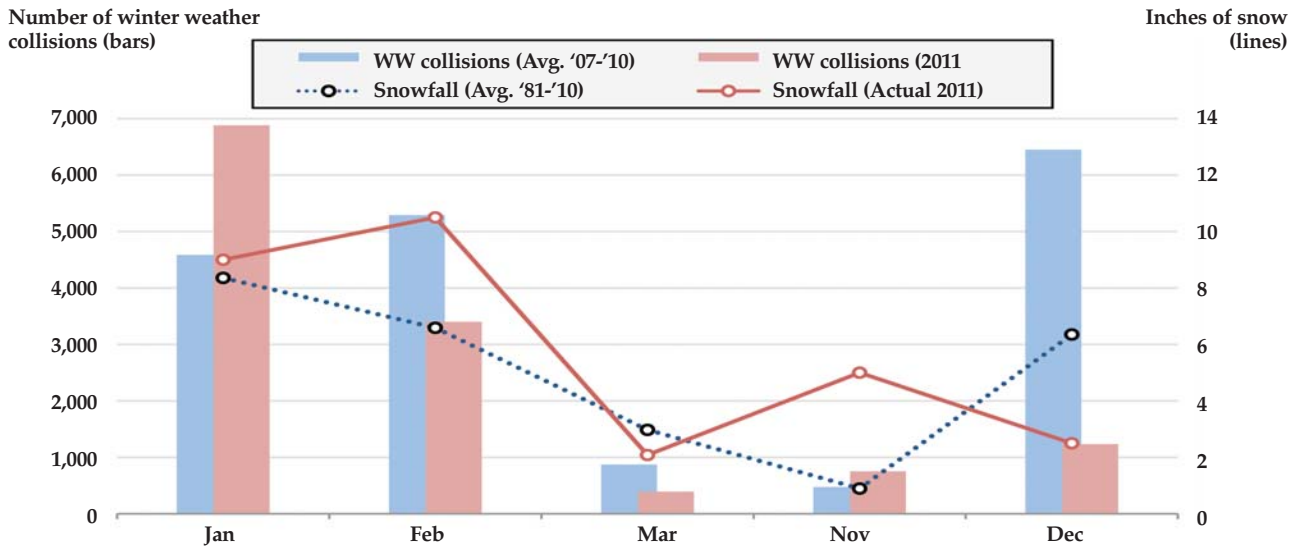
Figure 45. Distribution of speed-related collisions, by month and primary cause, 2007-2011



Source: Indiana State Police

Note: Percentage values represent the percent of the total speed-related collisions for a given year. For example, two percent of all speed-related collisions (323 of 17,517) in 2011 occurred in January as a result of *unsafe speed*.

Figure 46. Number of winter weather (WW) collisions and average snowfall, by select months, average and 2011

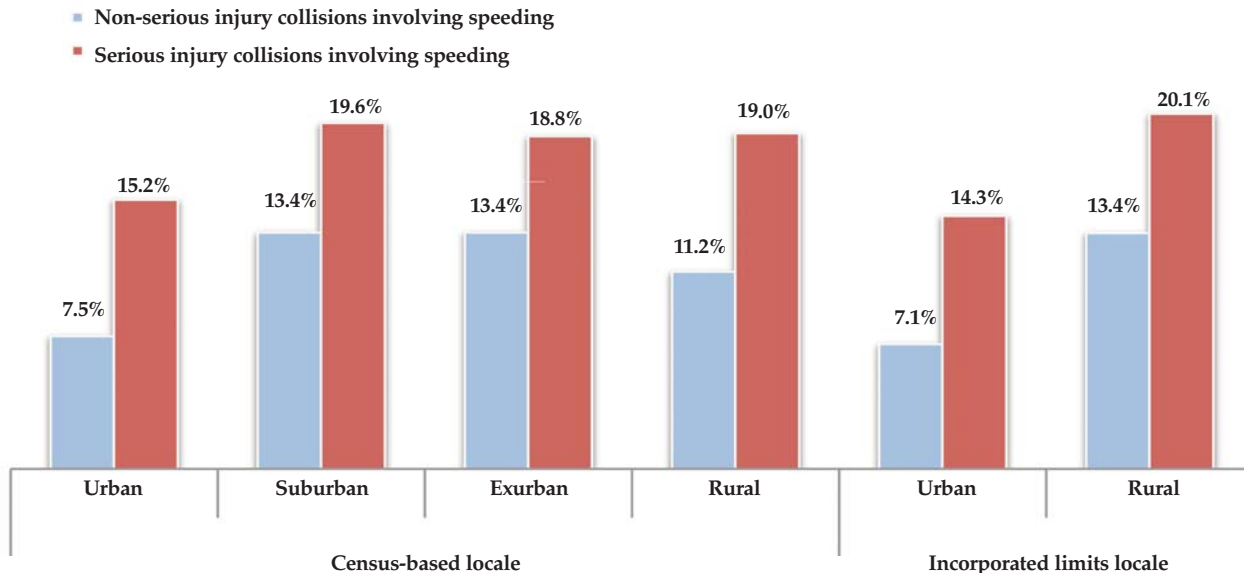


Source: Indiana State Police; NOAA National Climatic Data Center; Indiana State Climate Office

Notes:

Winter weather collisions are defined as collisions occurring in snow, sleet/hail/freezing rain, or blowing sand/soil/snow. From April to October, there were either no winter weather collisions and snowfall, or the numbers were very small relative to the other months, so the data are not shown in the exhibit. Snowfall average time period ('81-'10) varies from winter weather collisions average ('07-'10) due to limitations in how snowfall data are reported.

Figure 47. Speed-related collisions as a percent of all Indiana collisions, by collision severity and locale, 2011

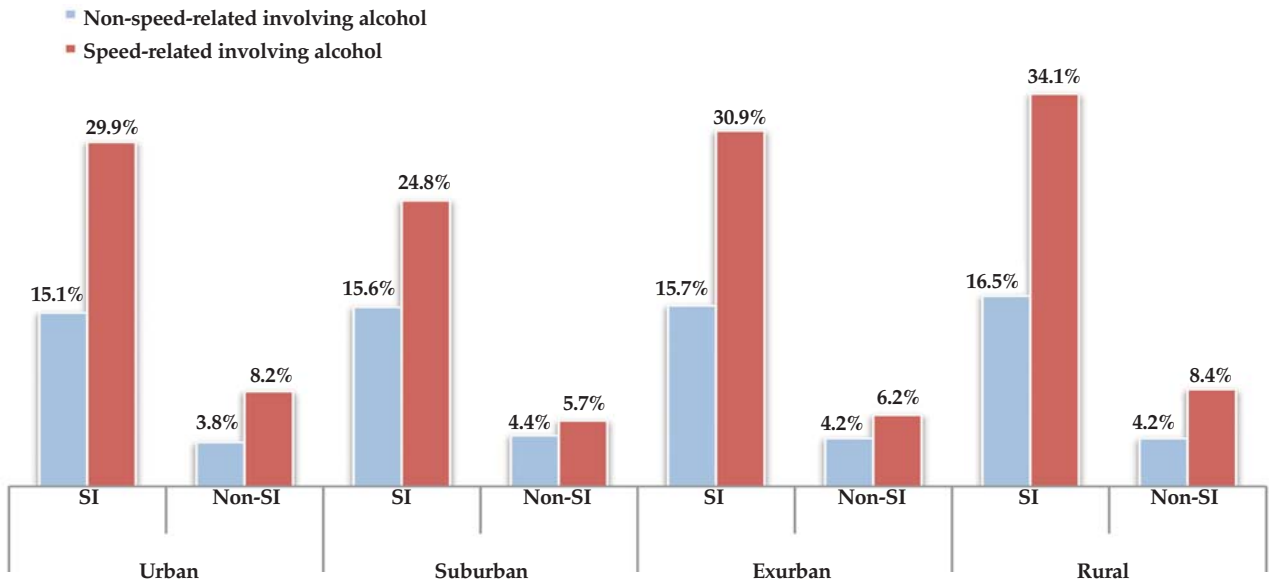


Source: Indiana State Police

Notes:

Serious injury collision is defined as collision with at least one fatal or incapacitating injury. See glossary for definition of Census-based locale and incorporated limits locale. Includes only collisions where valid locale was reported.

Figure 48. Speed-related and non-speed-related collisions involving alcohol as a percent of all collisions, by collision severity and locale, 2011

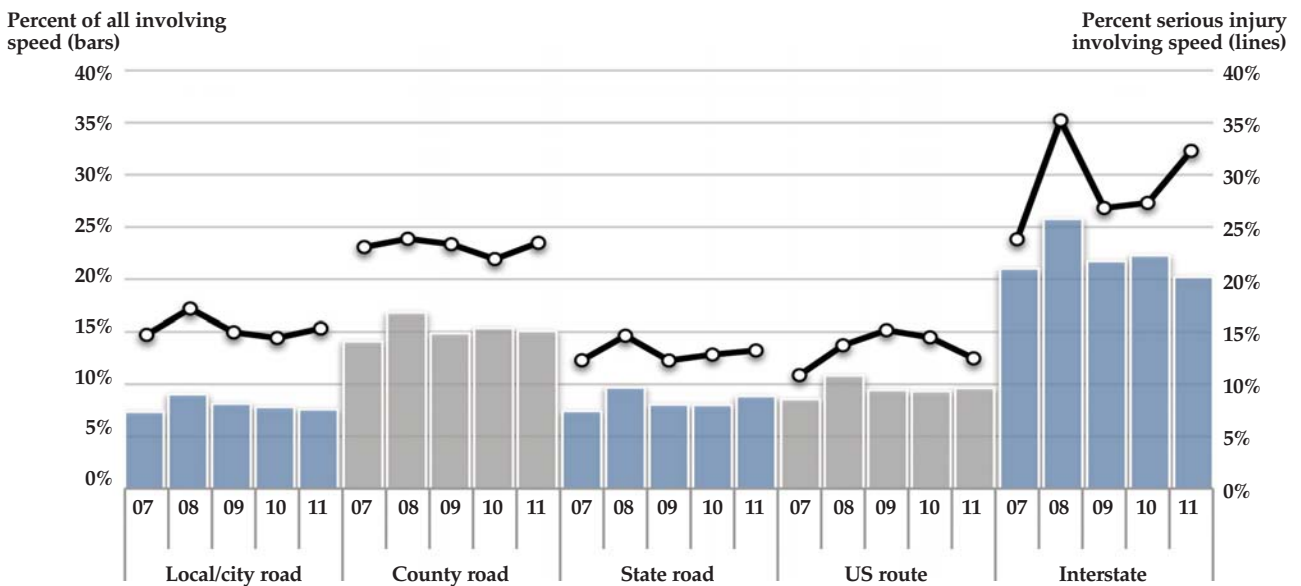


Source: Indiana State Police

Notes:

SI = Serious injury collision; Non-SI = Non-serious injury collision.  
 Serious injury collision is defined as collision with at least one fatal or incapacitating injury.  
 See glossary for definition of Census-based locale and incorporated limits locale.  
 Includes only collisions where valid locale was reported.

Figure 49. Speed-related and serious injury speed-related collisions as a percent of all collisions and serious injury collisions, by road class, 2007-2011

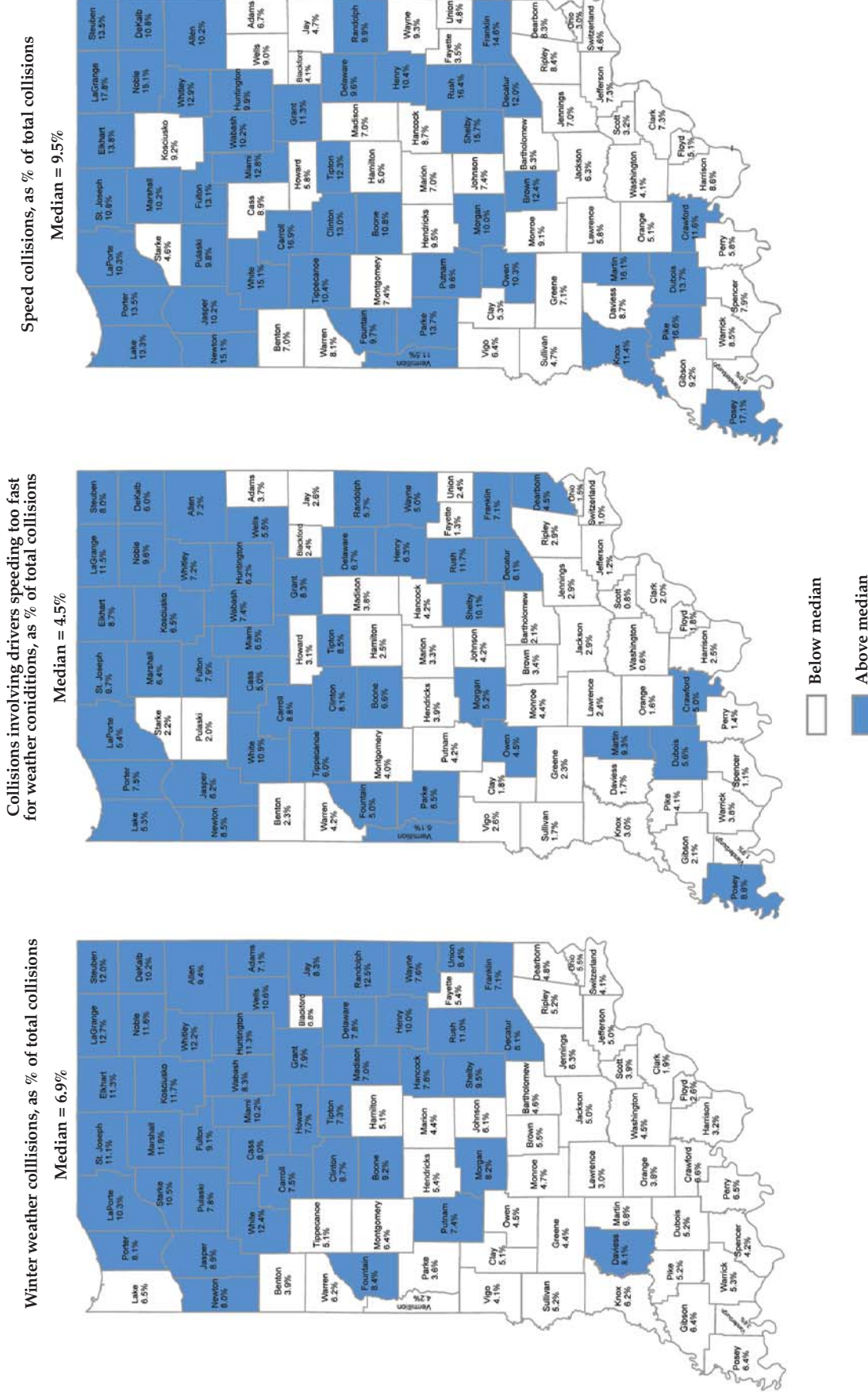


Source: Indiana State Police

Notes:

Includes collisions where valid road class was reported.  
 Serious injury collision is defined as collision with at least one fatal or incapacitating injury.

Map 1. Winter weather effect on speed-related collisions (2011)



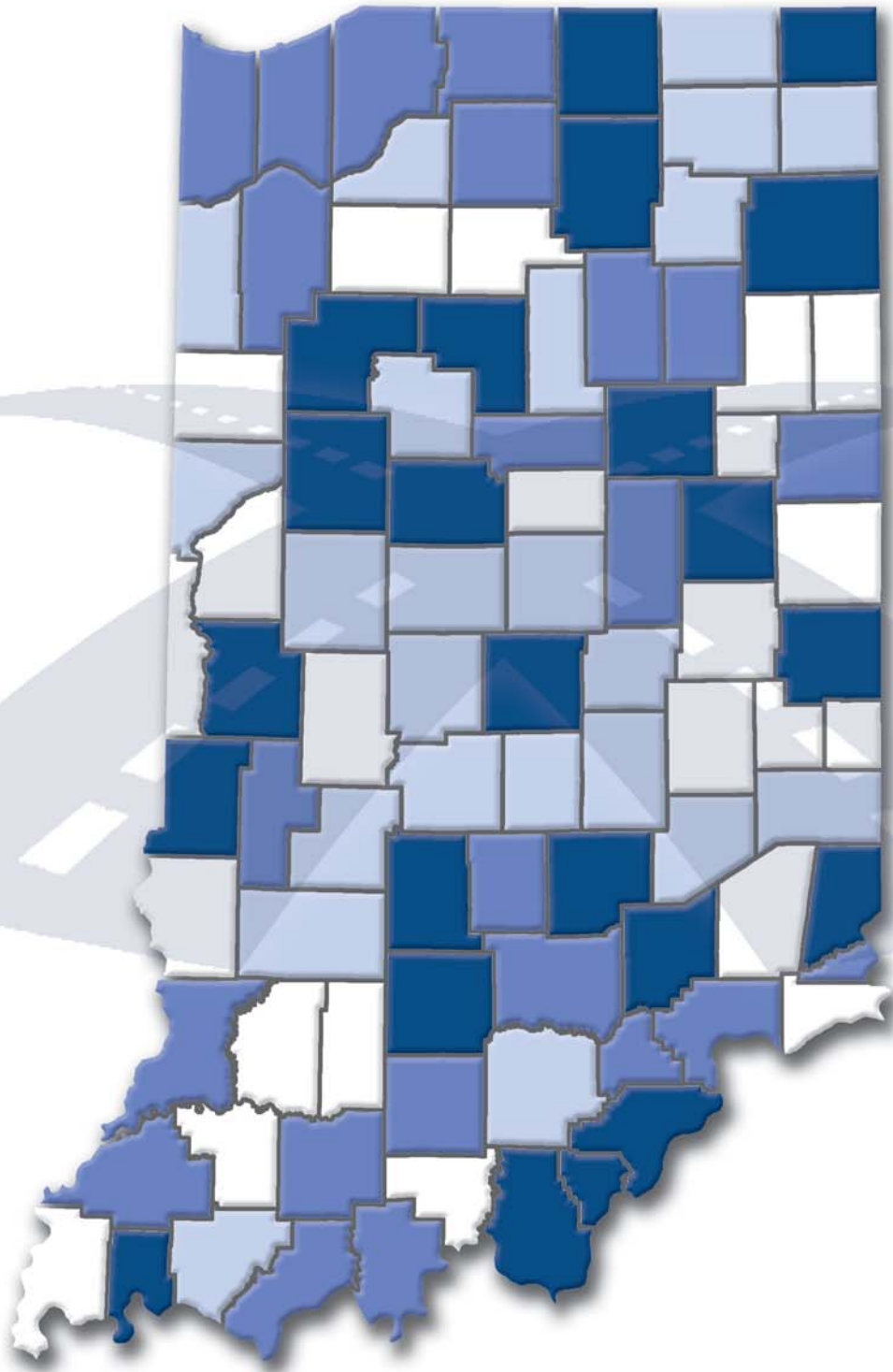
Source: Indiana State Police

Note: Winter weather collisions include as collisions occurring in snow, sleet/hail/freezing rain, or blowing sand/soil/snow.





# COUNTIES



## COUNTIES, 2011

Understanding the spatial distribution of traffic collisions and injuries can assist law enforcement and elected officials in developing policies and programs, while targeting resources to address the many issues that contribute to the frequency and severity of crashes. A variety of factors may influence the number and nature of traffic collisions that occur in a given area, including the size and makeup of the population, the number of registered vehicles and licensed drivers, and the number of vehicle miles travelled (VMT). The following *choropleth* and *density grid* maps show counties with the highest collision and injury rates in Indiana in 2011 by a select group of crash characteristics. Additionally, Indiana counties are ranked on a variety of collision metrics to determine which counties experienced the highest collision and injury rates in 2011. The economic costs associated with 2011 collisions are also reported for each county.

### Notes:

All density grid maps were created using a ten-mile search radius. Choropleth maps show counties grouped by quartiles.

### Collision severity and injuries

In 2011, 188,132 collisions occurred in Indiana, 674 of which were fatal. The mean number of collisions per county was 2,045, and the mean number of fatal collisions per county was 7. Marion County ranked highest in the total number of collisions (27,426), and Warren County ranked highest in the percentage of all collisions that were fatal (1.9), followed by Rush County (1.6). The median county rate of collisions per 100m VMT was 225.1, and the mean county rate per 100m VMT was 229.7. Tippecanoe County had the highest rate of collisions per 100m VMT (488.8), and Benton County had the lowest (80.4).

The total number of individuals involved in 2011 Indiana collisions was 303,528, and the mean number of individuals involved in collisions per county was 3,299. Marion County had the largest number of individuals involved (48,200) and the largest number of traffic fatalities (85), but ranked 74th out of 92 counties in the percentage of all injuries that were fatal. Counties with the highest traffic fatality rates included Warren, Daviess, Benton, and Rush.

### Speed-related collisions

Speed-related collisions accounted for 9.3 percent of all Indiana collisions in 2011, and 19.4 percent of all fatal collisions. The mean number of speed-related collisions per county was 190. LaGrange County ranked first in the percentage of all collisions that were speed-related (17.8 percent). The median percent of speed-related collisions by county was 9.5, and the mean percent was 9.6. Many counties with the highest percentages of speed-related collisions were clustered in northern portions of the state.

### Collisions involving alcohol-impaired drivers

Collisions that involved an alcohol-impaired driver accounted for 2.6 percent of all Indiana collisions in 2011, and 18.5 percent of all fatal collisions. The mean number of alcohol-impaired

collisions per county was 54, and the mean number of fatal alcohol-impaired collisions per county was 1. The median percent of alcohol-impaired collisions by county was 2.6. Vermillion County had the highest percentage of collisions that involved an alcohol-impaired driver (4.6 percent), and Ohio County had the lowest (0.5 percent). The southwestern region of Indiana had more counties with high percentages of alcohol-impaired collisions than other areas in the state.

### Collisions involving deer

A large percentage of collisions in rural counties throughout the state involved a deer. Counties with the highest percentage of deer-involved collisions were clustered in the northern and southern regions of the state. Counties located in the east central portions of Indiana have lower percentages of deer-involved collisions than other areas of the state. Pulaski County had the highest percentage of deer-involved collisions (55.6 percent).

### Work zone collisions

There were 4,309 work zone collisions in Indiana in 2011. The median county rate of work zone collisions per 1,000 total collisions was 10.6, and the mean rate of work zone collisions was 13.2. Hancock County, located in central Indiana, had the highest rate of work zone collisions (83.9 per 1,000 collisions). A number of other counties along the I-70 corridor across the state also were among the highest work zone collision rates in 2011. It is worth noting that work zone locations are constantly changing throughout the state, a fact that will likely impact which counties have the highest work zone collision rates in any given year. Counties with higher levels of road construction are likely to experience higher rates of work zone collisions.

### Restraint use

Forty-four percent of vehicle occupants killed in Indiana collisions were unrestrained in 2011, while 9.2 percent of individuals suffering non-incapacitating injuries were unrestrained. The median county percent of unrestrained individuals involved in collisions was 3.2 percent, and the mean county percent was 3.3. Daviess and Switzerland counties had the highest rates of unrestrained vehicle occupants at 8.9 percent and 6.9 percent, respectively. Urban counties throughout the state had some of the lowest rates of unrestrained injuries.

### Young drivers

In 2011, 40,537 young drivers (aged 15 to 20) were involved in collisions (14 percent of all persons involved), of whom 55 suffered fatal injuries, 4,424 incurred personal injuries, and 36,058 were reported as other injury types or no injuries. On average, 15 percent of persons involved in collisions in Indiana counties were young drivers; the smallest proportion was reported in Pulaski County (9.9 percent) and the largest in Franklin County (21.2 percent). The median county rate of young driver involvement in collisions was 72.4 per 1,000 licensed young drivers, and the mean county rate was 75.2. Tippecanoe County had the highest rate of young driver involvement in collisions (161.1).

Other counties with high rates of young driver involvement in collisions included those that are the locations of large universities (Monroe, Delaware, Vanderburgh, and Vigo).

### Motorcycle collisions

Of the 188,132 collisions occurring in Indiana in 2011, 3,551 (1.9 percent) involved motorcycles, 117 of which were fatal. On average, 2 percent of collisions in Indiana counties involved motorcycles; the smallest proportion was reported in Benton County (no motorcycle collisions) and the largest in Brown County (8.5 percent). While motorcycle collisions comprised only 1.9 percent of all collisions, they accounted for 17.4 percent of fatal collisions and 7.4 percent of personal injury collisions. In Brown County, 32 percent of personal injury collisions involved a motorcycle.

### County ranks

Indiana counties were ranked on six collision-related rates: total collisions, alcohol-involved collisions, speed-related collisions, dangerous driving collisions, motorcycle-involved collisions, and unrestrained serious injuries. A composite index consisting of the average of the six ranks was calculated to provide an indication of a county's overall traffic safety environment. A number of factors not accounted for here—such as different population compositions, road types, driving conditions, reporting practices, etc.—may have influenced collision rankings. Readers should be mindful of these differences when viewing county ranks.

Based on the composite index, many counties with relatively dangerous traffic safety environments in 2010 remained relatively dangerous in 2011. As in 2010, counties on the northern border of the state around the Gary/Chicago area (e.g., Lake, Porter, Newton) and along Interstate 80/90 (e.g., LaPorte, St. Joseph, Elkhart, LaGrange, Steuben) reported more dangerous traffic safety environments in 2011 than many other areas of the state. Several counties intersecting State Highway 25 from

Tippecanoe County to Fulton County and intersecting US route 52 in Shelby, Rush, and Franklin counties also experienced more dangerous traffic safety environments in 2011. Finally, a number of counties immediately south of the Bloomington Metropolitan Statistical Area (e.g., Knox, Daviess, Martin, Pike, Dubois) in southeastern Indiana reported more dangerous traffic safety environments in 2011 than many other areas of the state. By this index, Brown County was the most dangerous county in 2011 while Starke County was the safest.

### Economic Costs

Two maps were produced to show economic costs associated with collisions: total costs and costs per capita. Because costs are based on the number of collisions and injuries that occur and because more heavily populated areas tend to record higher numbers of collisions and injuries, counties with larger populations had the highest total economic costs of collisions in 2011. Marion County recorded the highest estimated economic costs with \$633 million, followed by Lake County (\$347 million), Allen County (\$241 million), Hamilton County (\$151 million), and St. Joseph County (\$151 million). (These are the five most populated counties in Indiana). By comparison, the total economic cost for the 46 counties below the median (\$23.7 million) was \$608 million.

When normalizing by county population, the economic cost burden associated with collisions changes: Many counties with smaller populations bear greater cost burdens. The average population size of the 23 counties with the largest per capita costs was 52,000, compared to 77,000 for remaining counties. Further, only 5 of the counties with the largest total costs were among the 23 counties with the largest per capita costs. Warren County recorded the largest per capita cost at \$1,226 while ranking 90th in population size.

**Table 92. Indiana collisions, by severity and county, 2011**

	Total collisions		Fatal			Non-fatal injury		Property damage only	
	Count	County rank	Count	As % county total	County rank (on %)	Count	As % county total	Count	As % county total
<b>Indiana</b>	<b>188,132</b>	<b>na</b>	<b>674</b>	<b>0.4</b>	<b>na</b>	<b>32,734</b>	<b>17.4</b>	<b>154,724</b>	<b>82.2</b>
Mean	2,045	na	7	0.5	na	356	17.1	1,682	82.4
Minimum	128	na	0	0.0	na	26	9.2	101	66.0
Maximum	27,426	na	79	1.9	na	4,919	32.8	22,428	90.6
Adams	652	60	5	0.8	19	88	13.5	559	85.7
Allen	11,382	3	21	0.2	88	2,157	19.0	9,204	80.9
Bartholomew	2,083	23	6	0.3	69	549	26.4	1,528	73.4
Benton	128	92	1	0.8	17	26	20.3	101	78.9
Blackford	292	83	3	1.0	7	44	15.1	245	83.9
Boone	1,732	25	9	0.5	37	232	13.4	1,491	86.1
Brown	437	73	3	0.7	27	97	22.2	337	77.1
Carroll	510	70	3	0.6	33	78	15.3	429	84.1
Cass	1,187	35	7	0.6	32	185	15.6	995	83.8
Clark	4,519	10	13	0.3	70	762	16.9	3,744	82.9
Clay	829	52	1	0.1	90	136	16.4	692	83.5
Clinton	1,143	37	5	0.4	47	152	13.3	986	86.3
Crawford	258	86	2	0.8	18	46	17.8	210	81.4
Daviess	344	80	4	1.2	3	113	32.8	227	66.0
Dearborn	1,899	24	7	0.4	55	262	13.8	1,630	85.8
Decatur	765	56	2	0.3	76	110	14.4	653	85.4
DeKalb	1,210	34	7	0.6	35	144	11.9	1,059	87.5
Delaware	4,058	11	15	0.4	54	713	17.6	3,330	82.1
Dubois	1,004	46	3	0.3	65	229	22.8	772	76.9
Elkhart	5,962	8	23	0.4	51	864	14.5	5,075	85.1
Fayette	461	72	3	0.7	28	71	15.4	387	83.9
Floyd	2,516	18	7	0.3	72	465	18.5	2,044	81.2
Fountain	382	78	1	0.3	75	54	14.1	327	85.6
Franklin	522	69	5	1.0	11	83	15.9	434	83.1
Fulton	559	67	2	0.4	57	90	16.1	467	83.5
Gibson	1,073	41	4	0.4	53	184	17.1	885	82.5
Grant	2,236	22	9	0.4	49	340	15.2	1,887	84.4
Greene	871	49	6	0.7	26	117	13.4	748	85.9
Hamilton	6,594	6	14	0.2	84	1,040	15.8	5,540	84.0
Hancock	1,442	28	4	0.3	73	274	19.0	1,164	80.7
Harrison	1,141	38	11	1.0	10	197	17.3	933	81.8
Hendricks	3,629	14	10	0.3	74	580	16.0	3,039	83.7
Henry	1,029	43	11	1.1	5	184	17.9	834	81.0
Howard	2,380	20	7	0.3	66	497	20.9	1,876	78.8
Huntington	1,121	39	4	0.4	58	176	15.7	941	83.9
Jackson	1,402	31	13	0.9	14	239	17.0	1,150	82.0
Jasper	1,162	36	6	0.5	38	179	15.4	977	84.1
Jay	688	59	4	0.6	34	132	19.2	552	80.2
Jefferson	896	48	5	0.6	36	150	16.7	741	82.7
Jennings	832	51	4	0.5	44	153	18.4	675	81.1
Johnson	2,860	17	5	0.2	89	540	18.9	2,315	80.9
Knox	1,033	42	5	0.5	43	230	22.3	798	77.3
Kosciusko	2,462	19	10	0.4	48	368	14.9	2,084	84.6
LaGrange	809	53	4	0.5	40	100	12.4	705	87.1
Lake	16,113	2	39	0.2	80	2,801	17.4	13,273	82.4
LaPorte	3,166	15	20	0.6	29	623	19.7	2,523	79.7
Lawrence	1,373	32	14	1.0	8	300	21.8	1,059	77.1
Madison	3,662	13	9	0.2	79	617	16.8	3,036	82.9

continued on next page

Table 92. (continued)

	Total collisions		Fatal			Non-fatal injury		Property damage only	
	Count	County rank	Count	As % county total	County rank (on %)	Count	As % county total	Count	As % county total
Marion	27,426	1	79	0.3	68	4,919	17.9	22,428	81.8
Marshall	1,404	30	3	0.2	83	236	16.8	1,165	83.0
Martin	236	87	0	0.0	91	44	18.6	192	81.4
Miami	1,011	44	7	0.7	25	126	12.5	878	86.8
Monroe	3,915	12	10	0.3	77	824	21.0	3,081	78.7
Montgomery	1,006	45	5	0.5	39	151	15.0	850	84.5
Morgan	1,487	26	7	0.5	45	285	19.2	1,195	80.4
Newton	352	79	4	1.1	4	66	18.8	282	80.1
Noble	1,238	33	9	0.7	21	161	13.0	1,068	86.3
Ohio	200	88	0	0.0	91	26	13.0	174	87.0
Orange	607	64	3	0.5	41	101	16.6	503	82.9
Owen	561	66	4	0.7	23	100	17.8	457	81.5
Parke	554	68	2	0.4	56	58	10.5	494	89.2
Perry	433	74	1	0.2	81	77	17.8	355	82.0
Pike	193	90	2	1.0	6	45	23.3	146	75.6
Porter	4,584	9	15	0.3	62	957	20.9	3,612	78.8
Posey	502	71	3	0.6	31	79	15.7	420	83.7
Pulaski	408	76	2	0.5	42	51	12.5	355	87.0
Putnam	767	55	3	0.4	50	135	17.6	629	82.0
Randolph	424	75	4	0.9	12	48	11.3	372	87.7
Ripley	689	58	5	0.7	22	116	16.8	568	82.4
Rush	317	82	5	1.6	2	73	23.0	239	75.4
St. Joseph	6,683	5	19	0.3	71	1,341	20.1	5,323	79.6
Scott	590	65	2	0.3	61	160	27.1	428	72.5
Shelby	1,108	40	9	0.8	15	269	24.3	830	74.9
Spencer	622	63	5	0.8	16	95	15.3	522	83.9
Starke	647	61	6	0.9	13	79	12.2	562	86.9
Steuben	1,471	27	3	0.2	86	136	9.2	1,332	90.6
Sullivan	404	77	3	0.7	20	77	19.1	324	80.2
Switzerland	197	89	2	1.0	9	32	16.2	163	82.7
Tiptecanoe	7,109	4	14	0.2	87	996	14.0	6,099	85.8
Tipton	341	81	1	0.3	67	90	26.4	250	73.3
Union	166	91	1	0.6	30	26	15.7	139	83.7
Vanderburgh	6,306	7	14	0.2	82	1,191	18.9	5,101	80.9
Vermillion	262	84	1	0.4	52	55	21.0	206	78.6
Vigo	3,081	16	14	0.5	46	579	18.8	2,488	80.8
Wabash	997	47	3	0.3	64	129	12.9	865	86.8
Warren	260	85	5	1.9	1	32	12.3	223	85.8
Warrick	1,439	29	3	0.2	85	190	13.2	1,246	86.6
Washington	704	57	5	0.7	24	130	18.5	569	80.8
Wayne	2,337	21	8	0.3	60	370	15.8	1,959	83.8
Wells	632	62	2	0.3	63	88	13.9	542	85.8
White	856	50	3	0.4	59	100	11.7	753	88.0
Whitley	796	54	2	0.3	78	120	15.1	674	84.7
Unknown	2	na	0	0.0	na	0	0.0	2	100.0

Source: Indiana State Police

Note: Non-fatal injury collisions include collisions with incapacitating, non-incapacitating and possible injuries.

**Table 93. Individuals involved in Indiana collisions, by injury status and county, 2011**

	Total individuals involved		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
<b>Indiana</b>	<b>303,528</b>	<b>na</b>	<b>749</b>	<b>0.2</b>	<b>na</b>	<b>3,405</b>	<b>1.1</b>	<b>41,839</b>	<b>13.8</b>	<b>257,535</b>	<b>84.8</b>
Mean	3,299	na	8	0.4	na	37	1.6	455	14.5	2,799	83.4
Minimum	168	na	0	0.0	na	0	0.0	25	8.1	136	71.6
Maximum	48,200	na	85	1.5	na	416	5.2	6,273	25.4	41,426	89.8
Adams	936	61	5	0.5	26	12	1.3	115	12.3	804	85.9
Allen	18,684	3	22	0.1	88	159	0.9	2,815	15.1	15,693	84.0
Bartholomew	3,588	21	6	0.2	76	34	0.9	699	19.5	2,849	79.4
Benton	168	92	2	1.2	3	5	3.0	25	14.9	136	81.0
Blackford	374	84	4	1.1	5	9	2.4	59	15.8	302	80.7
Boone	2,613	25	9	0.3	45	32	1.2	285	10.9	2,287	87.5
Brown	571	77	3	0.5	27	28	4.9	92	16.1	448	78.5
Carroll	683	71	4	0.6	24	10	1.5	92	13.5	577	84.5
Cass	1,736	33	11	0.6	19	18	1.0	254	14.6	1,453	83.7
Clark	7,607	9	13	0.2	75	75	1.0	985	12.9	6,534	85.9
Clay	1,211	52	1	0.1	90	13	1.1	180	14.9	1,017	84.0
Clinton	1,600	40	5	0.3	48	17	1.1	196	12.3	1,382	86.4
Crawford	321	87	3	0.9	7	7	2.2	56	17.4	255	79.4
Daviess	584	76	7	1.2	2	11	1.9	148	25.3	418	71.6
Dearborn	2,853	24	7	0.2	60	34	1.2	339	11.9	2,473	86.7
Decatur	1,118	54	2	0.2	73	16	1.4	133	11.9	967	86.5
DeKalb	1,693	35	10	0.6	23	24	1.4	149	8.8	1,510	89.2
Delaware	6,525	11	16	0.2	61	64	1.0	921	14.1	5,524	84.7
Dubois	1,580	41	3	0.2	70	21	1.3	288	18.2	1,268	80.3
Elkhart	9,411	8	34	0.4	43	96	1.0	1,089	11.6	8,192	87.0
Fayette	733	68	4	0.5	25	11	1.5	92	12.6	626	85.4
Floyd	4,232	18	7	0.2	78	43	1.0	604	14.3	3,578	84.5
Fountain	503	79	1	0.2	68	8	1.6	64	12.7	430	85.5
Franklin	711	69	5	0.7	11	15	2.1	103	14.5	588	82.7
Fulton	759	67	2	0.3	55	11	1.4	111	14.6	635	83.7
Gibson	1,568	42	5	0.3	47	30	1.9	238	15.2	1,295	82.6
Grant	3,392	23	10	0.3	51	20	0.6	462	13.6	2,900	85.5
Greene	1,208	53	6	0.5	30	18	1.5	159	13.2	1,025	84.9
Hamilton	11,841	4	16	0.1	86	99	0.8	1,308	11.0	10,418	88.0
Hancock	2,421	26	4	0.2	79	40	1.7	376	15.5	2,001	82.7
Harrison	1,687	36	11	0.7	17	46	2.7	264	15.6	1,366	81.0
Hendricks	6,084	13	11	0.2	72	90	1.5	720	11.8	5,263	86.5
Henry	1,513	44	14	0.9	8	19	1.3	247	16.3	1,233	81.5
Howard	4,136	19	9	0.2	65	66	1.6	623	15.1	3,438	83.1
Huntington	1,622	38	4	0.2	59	17	1.0	235	14.5	1,366	84.2
Jackson	2,034	31	14	0.7	14	27	1.3	306	15.0	1,687	82.9
Jasper	1,611	39	7	0.4	37	22	1.4	252	15.6	1,330	82.6
Jay	949	59	4	0.4	40	30	3.2	151	15.9	764	80.5
Jefferson	1,360	47	5	0.4	42	17	1.3	191	14.0	1,147	84.3
Jennings	1,304	49	4	0.3	49	58	4.4	170	13.0	1,072	82.2
Johnson	5,055	16	5	0.1	89	52	1.0	709	14.0	4,289	84.8
Knox	1,545	43	5	0.3	46	11	0.7	288	18.6	1,241	80.3
Kosciusko	3,653	20	10	0.3	53	41	1.1	454	12.4	3,148	86.2
LaGrange	1,092	56	5	0.5	35	12	1.1	130	11.9	945	86.5
Lake	27,149	2	40	0.1	83	242	0.9	3,640	13.4	23,227	85.6
LaPorte	4,856	17	21	0.4	38	70	1.4	817	16.8	3,948	81.3
Lawrence	2,073	29	14	0.7	16	58	2.8	365	17.6	1,636	78.9
Madison	5,811	14	11	0.2	71	57	1.0	803	13.8	4,940	85.0

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Table 93. (continued)

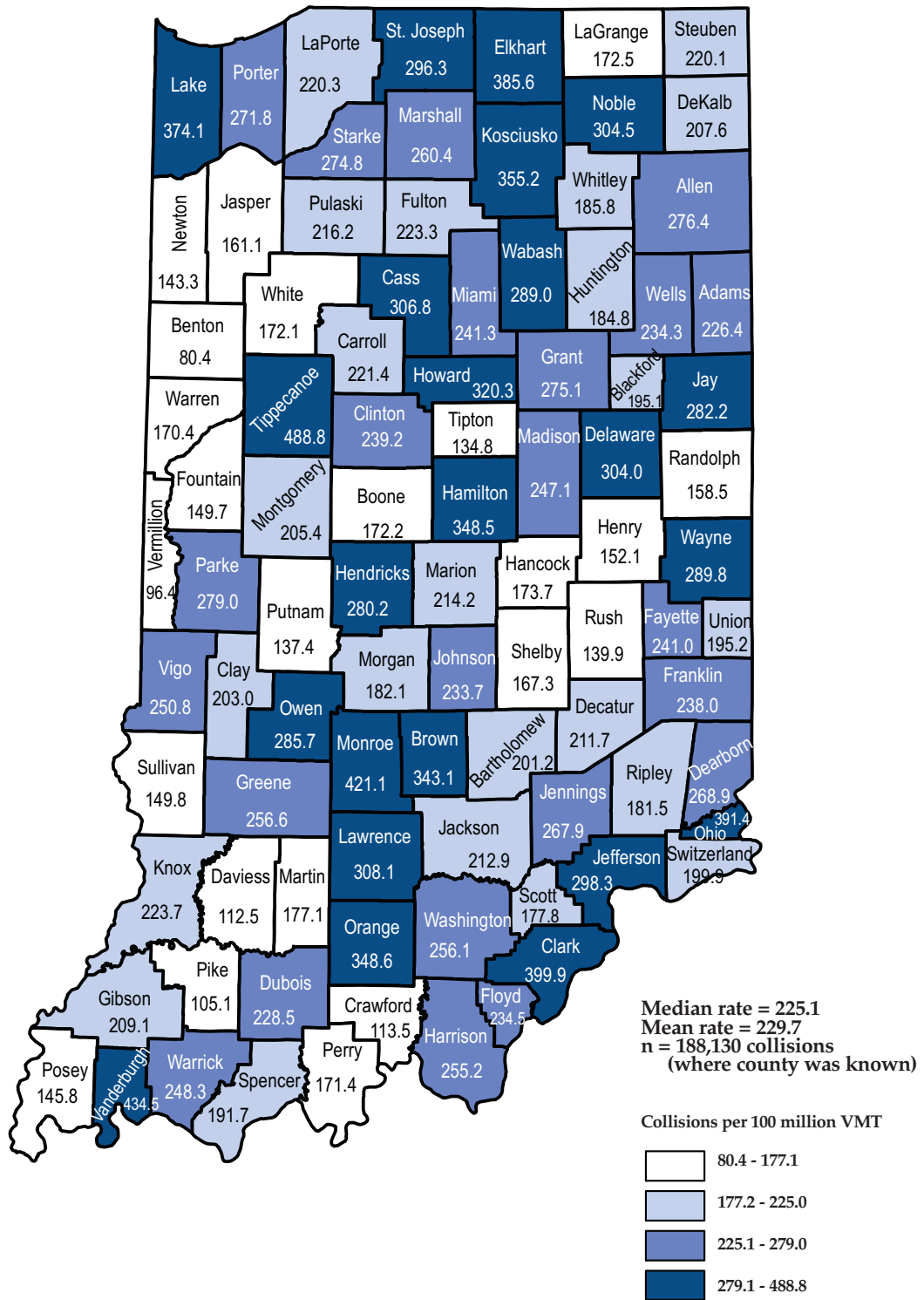
	Total individuals involved		Fatal			Incapacitating		Non-incapacitating		Other/no injury	
	Count	County rank	Count	As % county total	County rank (on %)	Count	As % county total	Count	As % county total	Count	As % county total
Marion	48,200	1	85	0.2	74	416	0.9	6,273	13.0	41,426	85.9
Marshall	2,049	30	5	0.2	62	13	0.6	335	16.3	1,696	82.8
Martin	334	85	0	0.0	91	5	1.5	58	17.4	271	81.1
Miami	1,344	48	8	0.6	21	26	1.9	144	10.7	1,166	86.8
Monroe	6,249	12	10	0.2	81	79	1.3	1,008	16.1	5,152	82.4
Montgomery	1,464	45	7	0.5	33	21	1.4	194	13.3	1,242	84.8
Morgan	2,403	27	7	0.3	52	37	1.5	345	14.4	2,014	83.8
Newton	478	81	5	1.0	6	8	1.7	76	15.9	389	81.4
Noble	1,734	34	9	0.5	28	44	2.5	201	11.6	1,480	85.4
Ohio	238	90	0	0.0	91	1	0.4	29	12.2	208	87.4
Orange	838	65	3	0.4	44	13	1.6	133	15.9	684	81.6
Owen	778	66	4	0.5	29	12	1.5	123	15.8	639	82.1
Parke	670	72	3	0.4	36	19	2.8	54	8.1	594	88.7
Perry	624	73	1	0.2	80	10	1.6	95	15.2	518	83.0
Pike	286	88	2	0.7	12	15	5.2	44	15.4	225	78.7
Porter	7,402	10	16	0.2	66	92	1.2	1,222	16.5	6,072	82.0
Posey	709	70	3	0.4	39	7	1.0	107	15.1	592	83.5
Pulaski	483	80	2	0.4	41	8	1.7	74	15.3	399	82.6
Putnam	1,104	55	3	0.3	54	11	1.0	166	15.0	924	83.7
Randolph	591	75	4	0.7	15	11	1.9	51	8.6	525	88.8
Ripley	945	60	6	0.6	18	13	1.4	148	15.7	778	82.3
Rush	433	82	5	1.2	4	20	4.6	87	20.1	321	74.1
St. Joseph	11,441	6	19	0.2	77	80	0.7	1,712	15.0	9,630	84.2
Scott	993	57	2	0.2	67	28	2.8	198	19.9	765	77.0
Shelby	1,684	37	10	0.6	22	33	2.0	355	21.1	1,286	76.4
Spencer	854	64	7	0.8	9	14	1.6	134	15.7	699	81.9
Starke	862	63	6	0.7	13	18	2.1	98	11.4	740	85.8
Steuben	1,968	32	3	0.2	82	19	1.0	179	9.1	1,767	89.8
Sullivan	614	74	3	0.5	31	16	2.6	117	19.1	478	77.9
Switzerland	265	89	2	0.8	10	3	1.1	40	15.1	220	83.0
Tippecanoe	11,237	7	15	0.1	87	54	0.5	1,282	11.4	9,886	88.0
Tipton	511	78	1	0.2	69	9	1.8	130	25.4	371	72.6
Union	217	91	1	0.5	34	0	0.0	39	18.0	177	81.6
Vanderburgh	11,578	5	17	0.1	84	96	0.8	1,584	13.7	9,881	85.3
Vermillion	386	83	1	0.3	57	9	2.3	75	19.4	301	78.0
Vigo	5,067	15	15	0.3	50	81	1.6	735	14.5	4,236	83.6
Wabash	1,441	46	7	0.5	32	21	1.5	140	9.7	1,273	88.3
Warren	331	86	5	1.5	1	6	1.8	44	13.3	276	83.4
Warrick	2,185	28	3	0.1	85	31	1.4	206	9.4	1,945	89.0
Washington	979	58	6	0.6	20	13	1.3	165	16.9	795	81.2
Wayne	3,431	22	9	0.3	56	39	1.1	448	13.1	2,935	85.5
Wells	908	62	2	0.2	64	11	1.2	101	11.1	794	87.4
White	1,248	50	3	0.2	63	6	0.5	142	11.4	1,097	87.9
Whitley	1,214	51	3	0.2	58	22	1.8	146	12.0	1,043	85.9

Source: Indiana State Police

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.  
 Excludes one individual where person type was unknown.

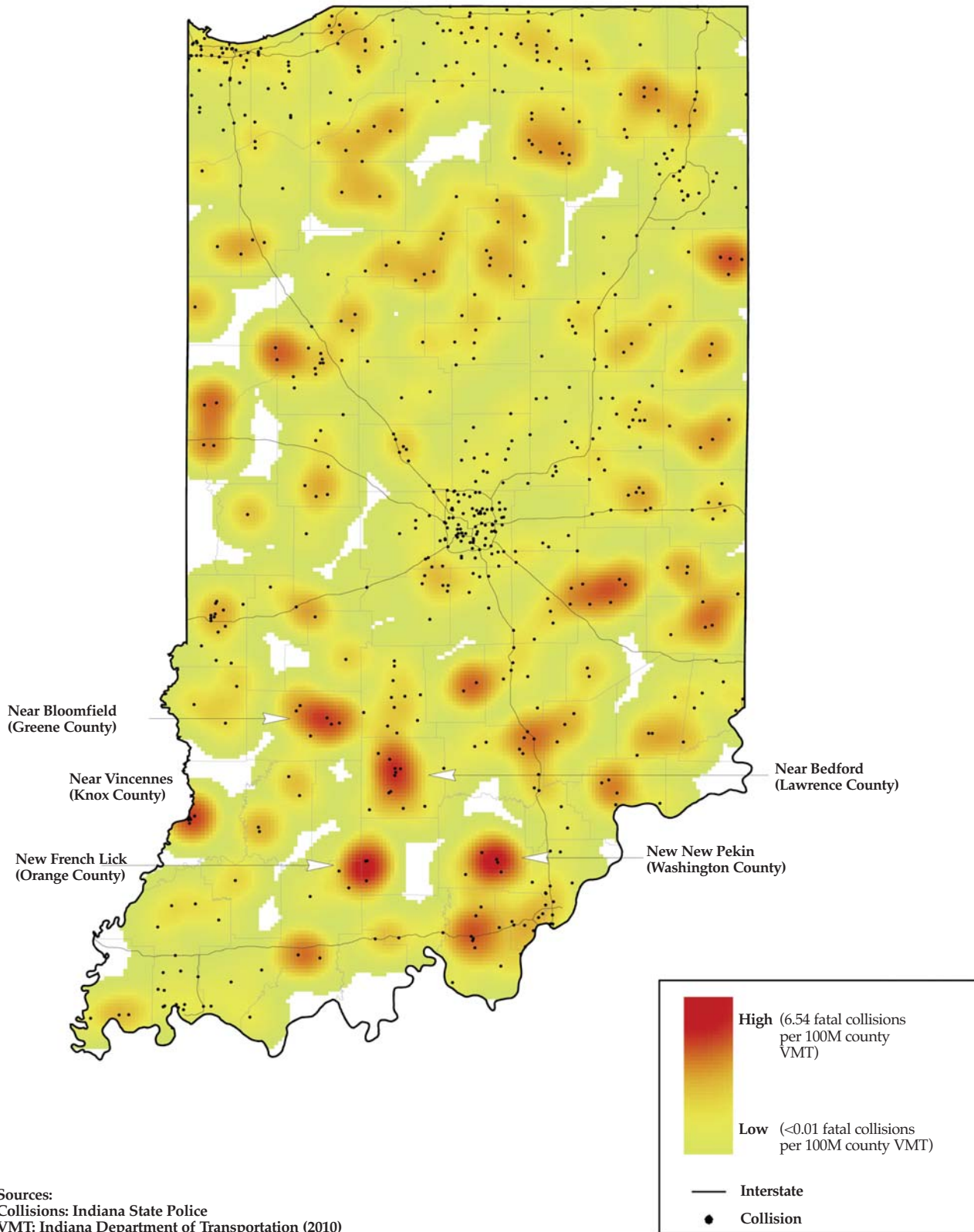
Map 2. Traffic collisions per 100M vehicle miles travelled by county, 2011



Sources:  
 Collisions: Indiana State Police  
 VMT: Indiana Department of Transportation



Map 3. Indiana fatal collision concentrations per 100M county vehicle miles travelled (VMT), 2011



Sources:  
 Collisions: Indiana State Police  
 VMT: Indiana Department of Transportation (2010)

Notes:  
 Density grid is based on points with valid coordinates (640/674).  
 Labeled places have or are near areas with 5 or more fatal collisions per 100M VMT.

**Table 94. Indiana speed-related collisions, by severity and county, 2011**

	All collisions			Fatal			Non-fatal 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 non-fatal injury collisions	Count	Speed-related as % of total property damage collisions
<b>Indiana</b>	<b>17,517</b>	<b>9.3</b>	<b>na</b>	<b>131</b>	<b>19.4</b>	<b>na</b>	<b>4,104</b>	<b>12.5</b>	<b>13,282</b>	<b>8.6</b>
Mean	190	9.6	na	1	17.3	na	45	14.1	144	8.6
Minimum	6	3.0	na	0	0.0	na	1	3.8	5	2.1
Maximum	2,148	17.8	na	14	100.0	na	518	28.7	1,617	17.4
Adams	44	6.7	71	0	0.0	53	14	15.9	30	5.4
Allen	1,163	10.2	38	4	19.0	38	244	11.3	915	9.9
Bartholomew	111	5.3	77	0	0.0	53	37	6.7	74	4.8
Benton	9	7.0	67	0	0.0	53	1	3.8	8	7.9
Blackford	12	4.1	89	0	0.0	53	4	9.1	8	3.3
Boone	187	10.8	30	1	11.1	50	37	15.9	149	10.0
Brown	54	12.4	22	2	66.7	4	18	18.6	34	10.1
Carroll	86	16.9	3	1	33.3	11	22	28.2	63	14.7
Cass	106	8.9	53	1	14.3	43	29	15.7	76	7.6
Clark	331	7.3	64	3	23.1	28	104	13.6	224	6.0
Clay	44	5.3	78	0	0.0	53	12	8.8	32	4.6
Clinton	149	13.0	19	0	0.0	53	31	20.4	118	12.0
Crawford	30	11.6	25	0	0.0	53	6	13.0	24	11.4
Daviess	30	8.7	55	3	75.0	3	15	13.3	12	5.3
Dearborn	158	8.3	59	2	28.6	21	42	16.0	114	7.0
Decatur	92	12.0	24	0	0.0	53	24	21.8	68	10.4
DeKalb	131	10.8	29	2	28.6	21	23	16.0	106	10.0
Delaware	389	9.6	46	3	20.0	32	74	10.4	312	9.4
Dubois	138	13.7	13	1	33.3	11	47	20.5	90	11.7
Elkhart	825	13.8	12	7	30.4	19	139	16.1	679	13.4
Fayette	16	3.5	90	0	0.0	53	6	8.5	10	2.6
Floyd	128	5.1	80	1	14.3	43	40	8.6	87	4.3
Fountain	37	9.7	44	1	100.0	1	12	22.2	24	7.3
Franklin	76	14.6	11	1	20.0	32	18	21.7	57	13.1
Fulton	73	13.1	18	1	50.0	7	18	20.0	54	11.6
Gibson	99	9.2	49	1	25.0	25	29	15.8	69	7.8
Grant	253	11.3	28	3	33.3	11	48	14.1	202	10.7
Greene	62	7.1	66	0	0.0	53	19	16.2	43	5.7
Hamilton	329	5.0	81	1	7.1	52	67	6.4	261	4.7
Hancock	126	8.7	54	0	0.0	53	27	9.9	99	8.5
Harrison	98	8.6	56	2	18.2	39	29	14.7	67	7.2
Hendricks	343	9.5	47	0	0.0	53	76	13.1	267	8.8
Henry	107	10.4	32	2	18.2	39	28	15.2	77	9.2
Howard	138	5.8	75	1	14.3	43	35	7.0	102	5.4
Huntington	111	9.9	42	0	0.0	53	27	15.3	84	8.9
Jackson	88	6.3	73	2	15.4	42	24	10.0	62	5.4
Jasper	119	10.2	36	2	33.3	11	25	14.0	92	9.4
Jay	32	4.7	85	0	0.0	53	12	9.1	20	3.6
Jefferson	65	7.3	65	3	60.0	5	23	15.3	39	5.3
Jennings	58	7.0	69	2	50.0	7	17	11.1	39	5.8
Johnson	213	7.4	62	0	0.0	53	38	7.0	175	7.6
Knox	118	11.4	27	1	20.0	32	39	17.0	78	9.8
Kosciusko	226	9.2	50	1	10.0	51	42	11.4	183	8.8
LaGrange	144	17.8	1	0	0.0	53	21	21.0	123	17.4
Lake	2,148	13.3	17	13	33.3	11	518	18.5	1,617	12.2
LaPorte	325	10.3	35	5	25.0	25	78	12.5	242	9.6
Lawrence	80	5.8	74	3	21.4	30	25	8.3	52	4.9
Madison	257	7.0	68	2	22.2	29	66	10.7	189	6.2

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Table 94. (continued)

	All collisions			Fatal			Non-fatal 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 non-fatal injury collisions	Count	Speed-related as % of total property damage collisions
Marion	1,908	7.0	70	14	17.7	41	433	8.8	1,461	6.5
Marshall	143	10.2	39	0	0.0	53	43	18.2	100	8.6
Martin	38	16.1	6	0	0.0	53	7	15.9	31	16.1
Miami	129	12.8	21	2	28.6	21	27	21.4	100	11.4
Monroe	355	9.1	51	3	30.0	20	114	13.8	238	7.7
Montgomery	74	7.4	63	1	20.0	32	12	7.9	61	7.2
Morgan	149	10.0	40	1	14.3	43	35	12.3	113	9.5
Newton	53	15.1	10	0	0.0	53	12	18.2	41	14.5
Noble	187	15.1	8	0	0.0	53	36	22.4	151	14.1
Ohio	6	3.0	92	0	0.0	53	1	3.8	5	2.9
Orange	31	5.1	79	0	0.0	53	10	9.9	21	4.2
Owen	58	10.3	34	1	25.0	25	14	14.0	43	9.4
Parke	76	13.7	14	0	0.0	53	14	24.1	62	12.6
Perry	25	5.8	76	0	0.0	53	5	6.5	20	5.6
Pike	32	16.6	4	1	50.0	7	8	17.8	23	15.8
Porter	617	13.5	16	4	26.7	24	143	14.9	470	13.0
Posey	86	17.1	2	0	0.0	53	13	16.5	73	17.4
Pulaski	40	9.8	43	1	50.0	7	14	27.5	25	7.0
Putnam	74	9.6	45	0	0.0	53	22	16.3	52	8.3
Randolph	42	9.9	41	0	0.0	53	6	12.5	36	9.7
Ripley	58	8.4	58	1	20.0	32	19	16.4	38	6.7
Rush	52	16.4	5	0	0.0	53	14	19.2	38	15.9
St. Joseph	721	10.8	31	10	52.6	6	159	11.9	552	10.4
Scott	19	3.2	91	0	0.0	53	10	6.3	9	2.1
Shelby	174	15.7	7	0	0.0	53	46	17.1	128	15.4
Spencer	49	7.9	61	0	0.0	53	13	13.7	36	6.9
Starke	30	4.6	86	0	0.0	53	9	11.4	21	3.7
Steuben	199	13.5	15	1	33.3	11	39	28.7	159	11.9
Sullivan	19	4.7	84	0	0.0	53	6	7.8	13	4.0
Switzerland	9	4.6	87	0	0.0	53	4	12.5	5	3.1
Tippecanoe	736	10.4	33	3	21.4	30	163	16.4	570	9.3
Tipton	42	12.3	23	0	0.0	53	13	14.4	29	11.6
Union	8	4.8	83	0	0.0	53	2	7.7	6	4.3
Vanderburgh	313	5.0	82	2	14.3	43	89	7.5	222	4.4
Vermillion	30	11.5	26	0	0.0	53	9	16.4	21	10.2
Vigo	196	6.4	72	2	14.3	43	51	8.8	143	5.7
Wabash	102	10.2	37	1	33.3	11	21	16.3	80	9.2
Warren	21	8.1	60	0	0.0	53	2	6.3	19	8.5
Warrick	123	8.5	57	1	33.3	11	23	12.1	99	7.9
Washington	29	4.1	88	1	20.0	32	7	5.4	21	3.7
Wayne	217	9.3	48	1	12.5	49	47	12.7	169	8.6
Wells	57	9.0	52	2	100.0	1	13	14.8	42	7.7
White	129	15.1	9	0	0.0	53	17	17.0	112	14.9
Whitley	103	12.9	20	0	0.0	53	29	24.2	74	11.0

Source: Indiana State Police

Notes:

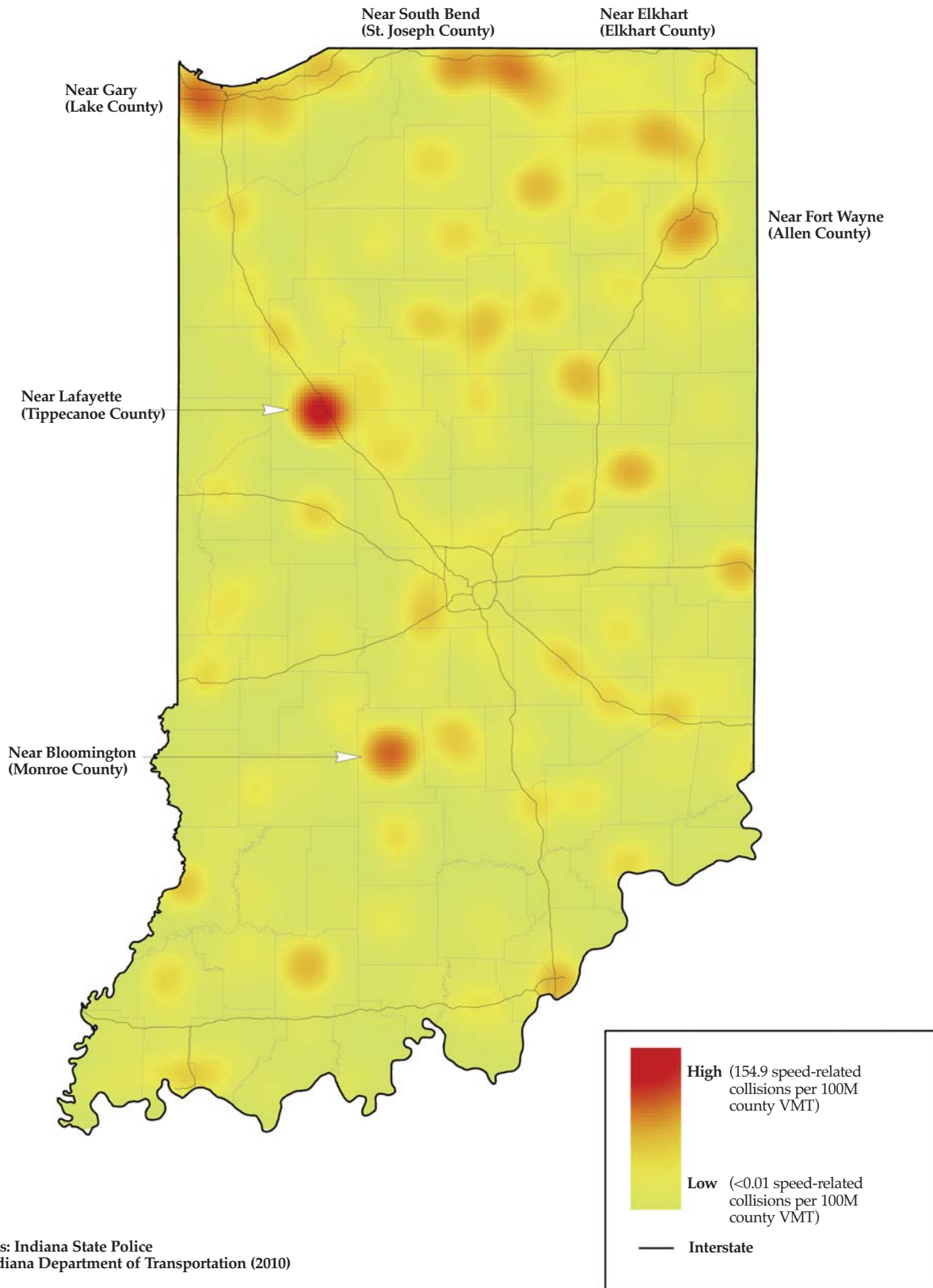
Percent calculations represent the percent of total county collisions (presented in Table 92) in each injury category that are speed-related.

Non-fatal 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.



Map 5. Indiana speed-related collision concentrations per 100M county vehicle miles travelled (VMT), 2011



Sources:  
 Collisions: Indiana State Police  
 VMT: Indiana Department of Transportation (2010)

Notes:  
 Density grid is based on points with valid coordinates (15,480/17,517).  
 Labeled places have or are near areas with 75 or more speed-related collisions per 100M VMT.

**Table 95. Indiana collisions involving an alcohol-impaired driver, by severity and county, 2011**

County	Total		Fatal		Non-fatal injury		Property damage	
	Count	Alcohol-impaired as % of total collisions	Count	Alcohol-impaired as % of total fatal collisions	Count	Alcohol-impaired as % of total non-fatal injury collisions	Count	Alcohol-impaired as % of total property damage collisions
<b>All counties</b>	<b>4,938</b>	<b>2.6</b>	<b>133</b>	<b>18.5</b>	<b>1,434</b>	<b>4.5</b>	<b>3,371</b>	<b>2.1</b>
Mean	54	2.6	1	16.7	16	4.7	37	2.1
Minimum	1	0.9	0	0.0	0	0.7	0	0.0
Maximum	588	6.2	10	100.0	188	12.0	428	5.0
Adams	12	1.8	0	0.0	0	6.3	12	1.2
Allen	367	3.6	7	10.0	109	6.3	251	2.9
Bartholomew	46	2.7	2	30.0	12	5.1	32	1.7
Benton	3	3.6	0	0.0	0	7.7	3	2.9
Blackford	5	2.3	0	0.0	0	2.5	5	2.3
Boone	27	2.5	0	42.9	4	4.8	23	1.9
Brown	16	2.3	0	0.0	3	1.6	13	2.6
Carroll	19	2.0	1	0.0	5	3.8	13	1.7
Cass	30	2.0	1	28.6	10	1.7	19	1.8
Clark	103	2.5	4	7.7	33	4.0	66	2.2
Clay	22	1.6	0	0.0	5	2.4	17	1.5
Clinton	37	3.1	1	20.0	8	6.4	28	2.5
Crawford	5	2.6	0	0.0	1	2.4	4	2.6
Daviess	15	4.1	0	16.7	7	5.9	8	2.9
Dearborn	41	2.2	1	25.0	9	4.2	31	1.8
Decatur	25	2.5	1	28.6	5	5.2	19	1.8
DeKalb	34	2.2	3	0.0	4	7.1	27	1.4
Delaware	91	2.2	4	10.0	23	4.0	64	1.8
Dubois	35	2.2	0	0.0	12	1.6	23	2.4
Elkhart	146	2.4	5	13.0	47	4.0	94	2.2
Fayette	17	2.0	0	0.0	5	7.7	12	0.9
Floyd	81	2.3	2	0.0	23	4.8	56	1.7
Fountain	8	2.7	0	33.3	3	3.8	5	2.3
Franklin	20	3.1	2	25.0	5	7.8	13	1.7
Fulton	16	1.9	0	0.0	7	10.8	9	0.7
Gibson	23	2.3	0	0.0	12	3.8	11	2.0
Grant	31	1.7	1	28.6	9	1.4	21	1.7
Greene	21	2.0	1	0.0	4	4.0	16	1.7
Hamilton	162	2.1	4	27.8	38	2.9	120	1.9
Hancock	48	2.6	0	0.0	17	3.4	31	2.5
Harrison	36	1.8	5	9.1	6	4.1	25	1.3
Hendricks	104	2.2	0	0.0	30	4.2	74	1.8
Henry	21	1.9	0	33.3	6	4.2	15	1.3
Howard	47	2.6	1	0.0	22	5.5	24	1.9
Huntington	22	1.9	0	25.0	8	4.0	14	1.4
Jackson	28	1.9	2	0.0	5	3.2	21	1.7
Jasper	26	2.9	1	26.7	16	5.1	9	2.1
Jay	8	1.5	1	100.0	3	1.9	4	1.3
Jefferson	38	1.7	3	0.0	6	2.6	29	1.6
Jennings	18	2.1	0	25.0	9	3.3	9	1.6
Johnson	69	2.6	0	0.0	22	3.4	47	2.4
Knox	35	3.8	0	18.2	10	4.5	25	3.4
Kosciusko	69	2.6	3	57.1	22	6.0	44	1.9
LaGrange	24	3.0	1	40.0	8	7.0	15	1.9
Lake	499	3.1	10	27.3	188	6.5	301	2.3
LaPorte	127	3.1	10	40.0	45	5.2	72	2.4
Lawrence	27	2.4	2	0.0	11	4.0	14	2.0
Madison	85	2.1	1	18.8	18	2.9	66	1.9

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Table 95. (continued)

County	Total		Fatal		Non-fatal injury		Property damage	
	Count	Alcohol-impaired as % of total collisions	Count	Alcohol-impaired as % of total fatal collisions	Count	Alcohol-impaired as % of total non-fatal injury collisions	Count	Alcohol-impaired as % of total property damage collisions
Marion	588	2.2	10	33.8	150	3.0	428	1.9
Marshall	31	2.2	0	0.0	8	4.5	23	1.8
Martin	5	3.1	0	33.3	0	5.7	5	2.0
Miami	34	2.1	1	0.0	8	3.0	25	1.9
Monroe	95	2.5	1	7.7	25	2.9	69	2.4
Montgomery	29	1.3	1	66.7	4	2.0	24	0.8
Morgan	31	1.6	1	0.0	5	2.8	25	1.3
Newton	9	3.3	0	100.0	2	10.9	7	1.6
Noble	35	3.5	2	12.5	9	12.0	24	2.1
Ohio	1	4.8	0	0.0	1	3.6	0	5.0
Orange	16	2.7	0	33.3	5	4.8	11	1.9
Owen	23	2.6	1	0.0	4	7.5	18	1.6
Parke	19	2.4	2	0.0	6	6.1	11	1.9
Perry	13	4.7	0	0.0	3	8.5	10	3.9
Pike	6	6.2	1	0.0	1	9.8	4	5.0
Porter	141	3.6	2	14.8	43	7.3	96	2.5
Posey	18	4.5	1	33.3	5	8.9	12	3.5
Pulaski	12	0.9	1	0.0	2	5.0	9	0.2
Putnam	25	1.9	0	0.0	8	4.8	17	1.3
Randolph	12	2.3	1	0.0	4	6.0	7	1.6
Ripley	11	2.7	0	20.0	3	5.7	8	2.0
Rush	12	2.9	0	0.0	6	2.5	6	3.0
Scott	192	2.9	7	26.7	43	4.4	142	2.5
Shelby	7	1.3	0	14.3	2	2.1	5	0.7
Spencer	31	1.8	2	0.0	8	2.6	21	1.6
St. Joseph	22	3.0	0	0.0	7	7.6	15	2.1
Starke	8	1.8	0	0.0	1	1.9	7	1.8
Steuben	30	1.9	0	0.0	6	2.2	24	1.9
Sullivan	17	5.7	1	25.0	5	8.9	11	4.4
Switzerland	5	1.4	1	100.0	2	6.3	2	0.0
Tippecanoe	193	2.9	5	11.1	59	5.7	129	2.5
Tipton	8	2.4	0	0.0	2	3.5	6	2.0
Union	3	3.1	1	0.0	1	3.2	1	3.2
Vanderburgh	165	2.7	2	50.0	45	4.0	118	2.4
Vermillion	12	5.6	1	100.0	7	9.2	4	4.1
Vigo	99	3.2	1	23.5	34	4.1	64	2.8
Wabash	15	1.7	1	10.0	5	0.7	9	1.8
Warren	9	1.1	0	0.0	1	2.5	8	0.9
Warrick	22	2.1	1	0.0	4	3.0	17	2.0
Washington	27	3.2	0	25.0	9	3.8	18	2.9
Wayne	65	1.9	1	0.0	26	2.8	38	1.7
Wells	15	1.8	2	0.0	3	2.4	10	1.7
White	19	2.2	1	0.0	4	5.1	14	1.7
Whitley	19	3.6	1	25.0	3	7.1	15	2.7

Source: Indiana State Police

Notes:

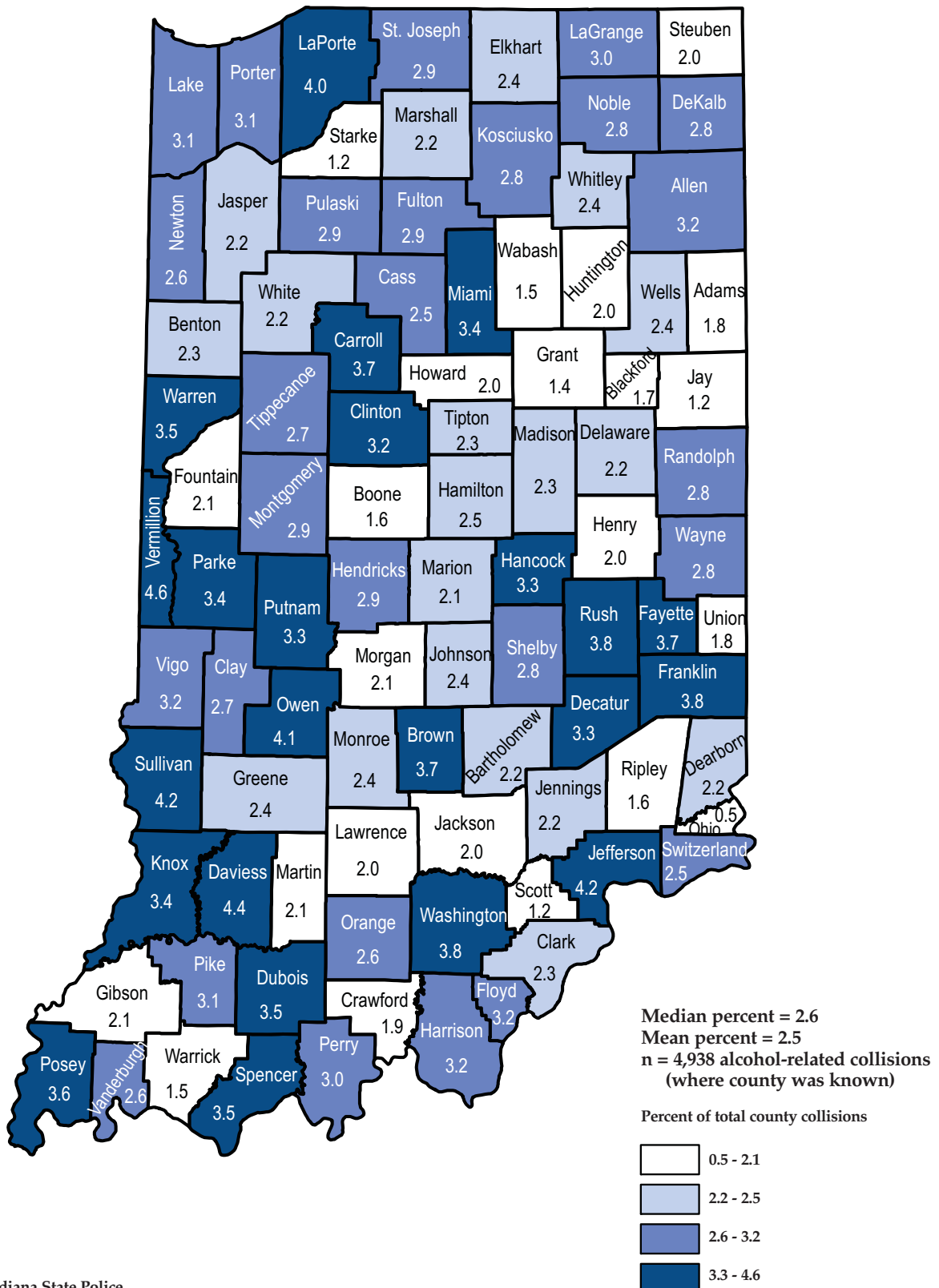
Percent calculations represent the percent of total county collisions (presented in Table 92) in each injury category that are *alcohol-impaired*. Excludes records where county is unknown.

Includes collisions where at least one *alcohol-impaired* driver was involved.

*Non-fatal injury* includes *incapacitating, non-incapacitating, and possible* injury collisions.

See glossary for definition of *alcohol-impaired*.

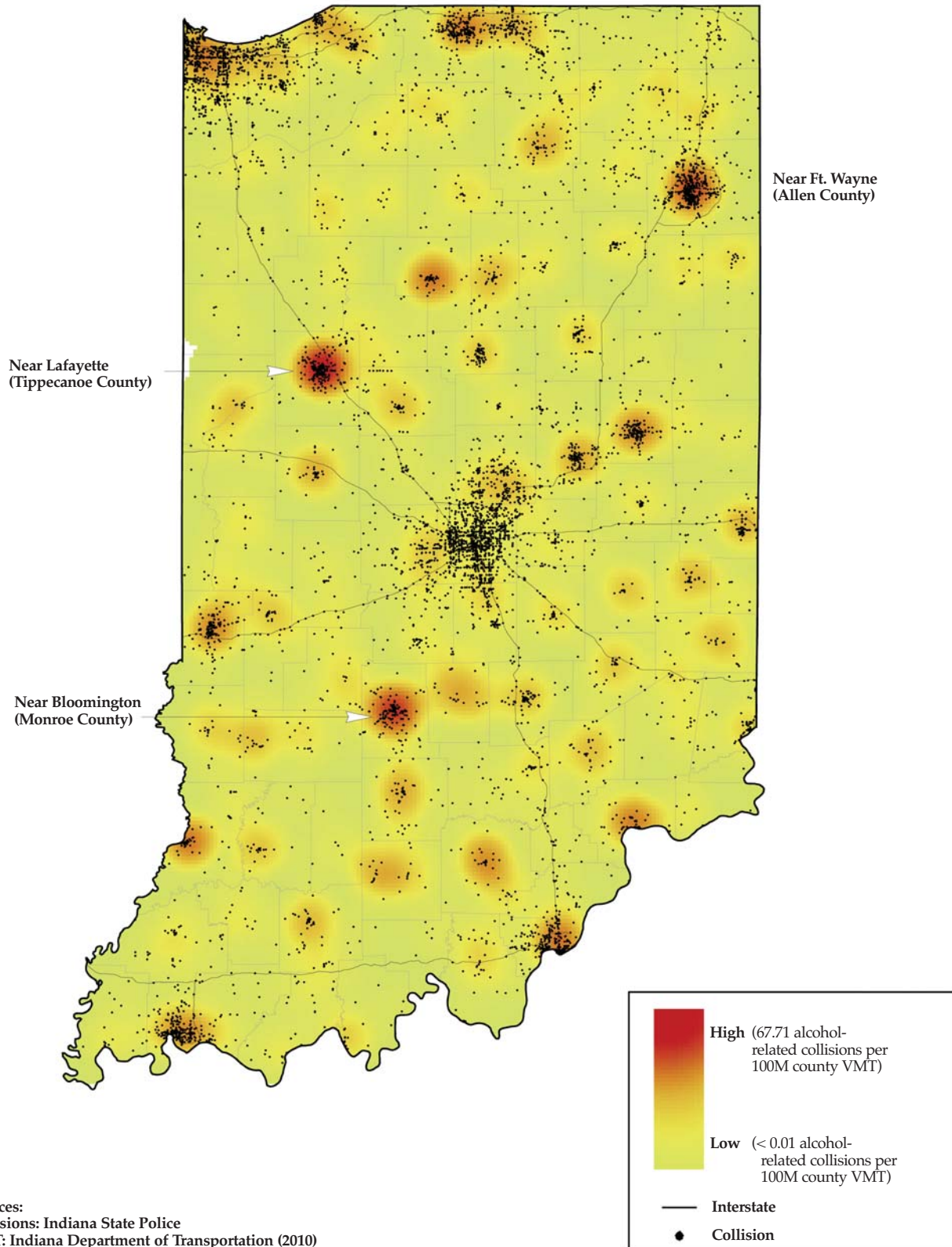
Map 6. Percentage of county collisions that involved an alcohol-impaired driver, 2011



Source: Indiana State Police



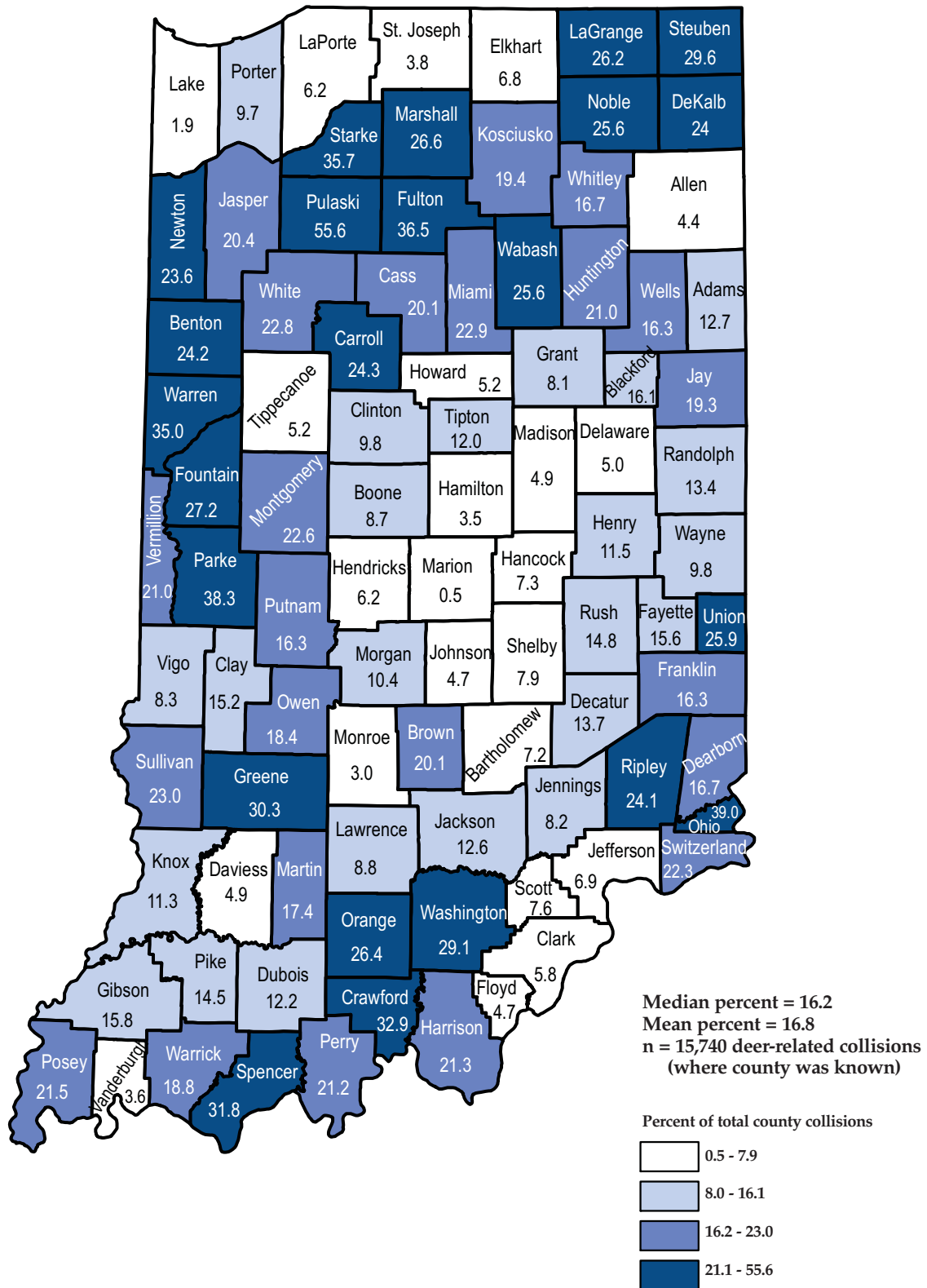
Map 7. Indiana alcohol-related collision concentrations per 100M county vehicle miles travelled (VMT), 2011



Sources:  
 Collisions: Indiana State Police  
 VMT: Indiana Department of Transportation (2010)

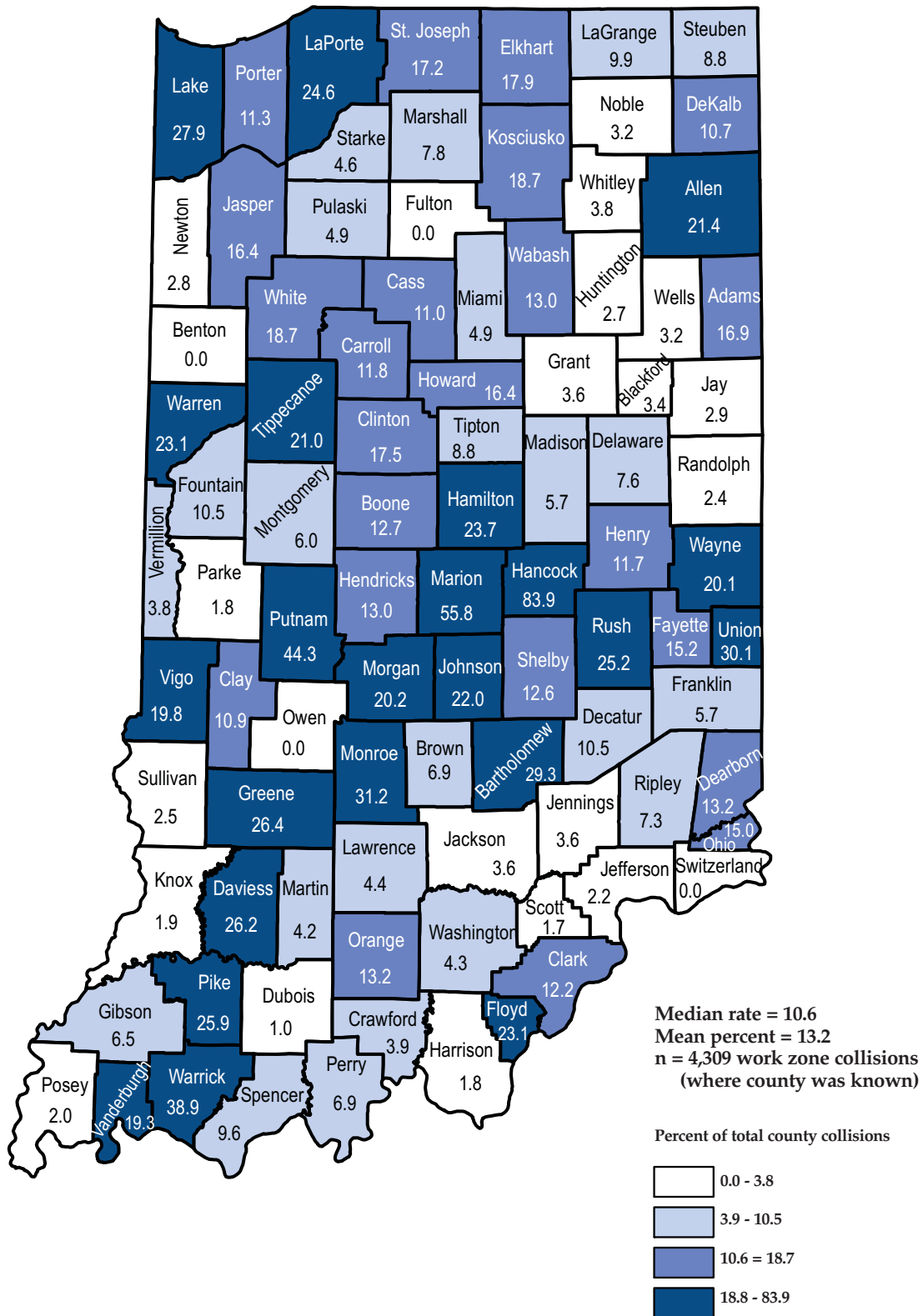
Notes:  
 Density grid is based on points with valid coordinates (7,742/8,355).  
 Labeled places have or are near areas with five or more alcohol-related collisions per 100M VMT.

Map 8. Percentage of county collisions that involved a deer, 2011



Source: Indiana State Police

Map 9. Work zone collisions per 1,000 total county collisions, 2011



Source: Indiana State Police

**Table 96. Vehicle occupants injured in Indiana collisions, by injury status, restraint use, and county, 2011**

	Fatal			Incapacitating			Non- incapacitating		
	Total	Unrestrained	% unrestrained	Total	Unrestrained	% unrestrained	Total	Unrestrained	% unrestrained
<b>Indiana</b>	<b>669</b>	<b>297</b>	<b>44.4</b>	<b>3,081</b>	<b>814</b>	<b>26.4</b>	<b>39,805</b>	<b>3,660</b>	<b>9.2</b>
Mean	7	3	42.7	33	9	32.3	433	40	12.0
Minimum	0	0	0.0	0	0	0.0	23	2	2.7
Maximum	60	24	100.0	360	63	100.0	5,912	445	27.7
Adams	1	1	100.0	11	6	54.5	110	16	14.5
Allen	18	7	38.9	142	30	21.1	2,656	185	7.0
Bartholomew	5	3	60.0	30	8	26.7	664	60	9.0
Benton	2	0	0.0	5	3	60.0	23	3	13.0
Blackford	4	3	75.0	8	2	25.0	58	9	15.5
Boone	9	5	55.6	31	6	19.4	276	20	7.2
Brown	3	1	33.3	27	13	48.1	89	15	16.9
Carroll	4	2	50.0	10	5	50.0	91	12	13.2
Cass	11	5	45.5	13	2	15.4	241	23	9.5
Clark	11	7	63.6	69	23	33.3	954	99	10.4
Clay	1	1	100.0	11	4	36.4	171	34	19.9
Clinton	5	2	40.0	16	4	25.0	185	17	9.2
Crawford	3	0	0.0	7	4	57.1	56	15	26.8
Daviess	5	2	40.0	10	6	60.0	143	27	18.9
Dearborn	7	4	57.1	32	7	21.9	329	26	7.9
Decatur	2	1	50.0	14	4	28.6	126	17	13.5
DeKalb	10	3	30.0	22	3	13.6	142	10	7.0
Delaware	15	7	46.7	54	11	20.4	863	99	11.5
Dubois	3	0	0.0	20	7	35.0	280	36	12.9
Elkhart	31	24	77.4	85	29	34.1	1,003	88	8.8
Fayette	4	2	0.0	9	5	55.6	92	13	14.1
Floyd	5	2	40.0	39	10	25.6	582	43	7.4
Fountain	1	0	0.0	8	3	37.5	63	16	25.4
Franklin	5	4	80.0	15	2	13.3	99	24	24.2
Fulton	2	1	50.0	10	9	90.0	111	19	17.1
Gibson	5	1	20.0	28	8	28.6	232	28	12.1
Grant	9	1	11.1	17	6	35.3	431	54	12.5
Greene	6	3	50.0	17	3	17.6	156	22	14.1
Hamilton	15	6	40.0	92	13	14.1	1,253	61	4.9
Hancock	3	2	66.7	40	11	27.5	365	69	18.9
Harrison	11	5	45.5	45	6	13.3	262	33	12.6
Hendricks	9	3	33.3	84	19	22.6	699	74	10.6
Henry	13	4	30.8	18	4	22.2	236	24	10.2
Howard	9	3	33.3	63	19	30.2	599	53	8.8
Huntington	4	1	25.0	14	4	28.6	220	21	9.5
Jackson	14	7	50.0	23	10	43.5	291	24	8.2
Jasper	6	3	50.0	20	5	25.0	249	29	11.6
Jay	4	2	50.0	30	11	36.7	142	11	7.7
Jefferson	4	3	75.0	16	5	31.3	188	13	6.9
Jennings	4	1	25.0	53	13	24.5	165	25	15.2
Johnson	5	1	20.0	47	11	23.4	695	52	7.5
Knox	5	2	40.0	10	5	50.0	270	35	13.0
Kosciusko	10	8	80.0	37	4	10.8	445	43	9.7
LaGrange	2	0	0.0	10	3	30.0	119	23	19.3
Lake	31	18	58.1	213	63	29.6	3,425	233	6.8
LaPorte	20	11	55.0	66	23	34.8	760	66	8.7
Lawrence	14	5	35.7	55	15	27.3	359	43	12.0
Madison	10	4	40.0	52	12	23.1	772	69	8.9

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Table 96. (continued)

	Fatal			Incapacitating			Non-incapacitating		
	Total	Unrestrained	% unrestrained	Total	Unrestrained	% unrestrained	Total	Unrestrained	% unrestrained
Marion	60	20	33.3	360	60	16.7	5,912	445	7.5
Marshall	4	0	0.0	13	4	30.8	322	27	8.4
Martin	0	0	na	5	4	80.0	58	11	19.0
Miami	8	2	25.0	25	7	28.0	139	28	20.1
Monroe	10	4	40.0	66	20	30.3	910	74	8.1
Montgomery	7	1	14.3	20	6	30.0	189	21	11.1
Morgan	7	4	57.1	34	5	14.7	339	29	8.6
Newton	5	1	20.0	8	2	25.0	76	5	6.6
Noble	9	3	33.3	41	9	22.0	196	20	10.2
Ohio	0	0	na	1	1	100.0	28	4	14.3
Orange	3	2	66.7	11	4	36.4	131	9	6.9
Owen	3	2	66.7	12	4	33.3	122	15	12.3
Parke	2	0	0.0	16	9	56.3	47	13	27.7
Perry	1	0	0.0	10	3	30.0	92	15	16.3
Pike	2	1	50.0	13	7	53.8	44	4	9.1
Porter	13	6	46.2	81	25	30.9	1,157	84	7.3
Posey	3	0	0.0	6	3	50.0	105	11	10.5
Pulaski	2	1	50.0	8	1	12.5	72	11	15.3
Putnam	3	0	0.0	11	4	36.4	164	10	6.1
Randolph	4	2	50.0	10	3	30.0	51	6	11.8
Ripley	6	3	50.0	13	5	38.5	142	16	11.3
Rush	5	1	20.0	20	2	10.0	81	8	9.9
St. Joseph	18	13	72.2	70	19	27.1	1,616	109	6.7
Scott	2	2	100.0	26	6	23.1	196	25	12.8
Shelby	10	6	60.0	23	6	26.1	336	58	17.3
Spencer	7	2	28.6	14	3	21.4	131	19	14.5
Starke	6	3	50.0	18	1	5.6	98	8	8.2
Steuben	3	1	33.3	15	8	53.3	173	7	4.0
Sullivan	3	2	66.7	16	4	25.0	116	26	22.4
Switzerland	2	1	0.0	3	1	33.3	38	5	13.2
Tippecanoe	14	6	42.9	45	19	42.2	1,198	128	10.7
Tipton	1	1	100.0	9	2	22.2	124	12	9.7
Union	1	1	100.0	0	0	na	39	5	12.8
Vanderburgh	15	5	33.3	82	21	25.6	1,507	116	7.7
Vermillion	1	1	100.0	8	4	50.0	75	2	2.7
Vigo	13	4	30.8	78	12	15.4	690	68	9.9
Wabash	7	4	57.1	20	7	35.0	132	20	15.2
Warren	4	2	50.0	6	3	50.0	44	5	11.4
Warrick	3	1	33.3	31	8	25.8	198	22	11.1
Washington	5	3	60.0	13	6	46.2	165	18	10.9
Wayne	9	2	22.2	34	8	23.5	429	57	13.3
Wells	2	1	50.0	11	4	36.4	98	18	18.4
White	3	0	0.0	5	0	0.0	140	19	13.6
Whitley	3	2	66.7	22	5	22.7	145	16	11.0

Source: Indiana State Police

Notes:

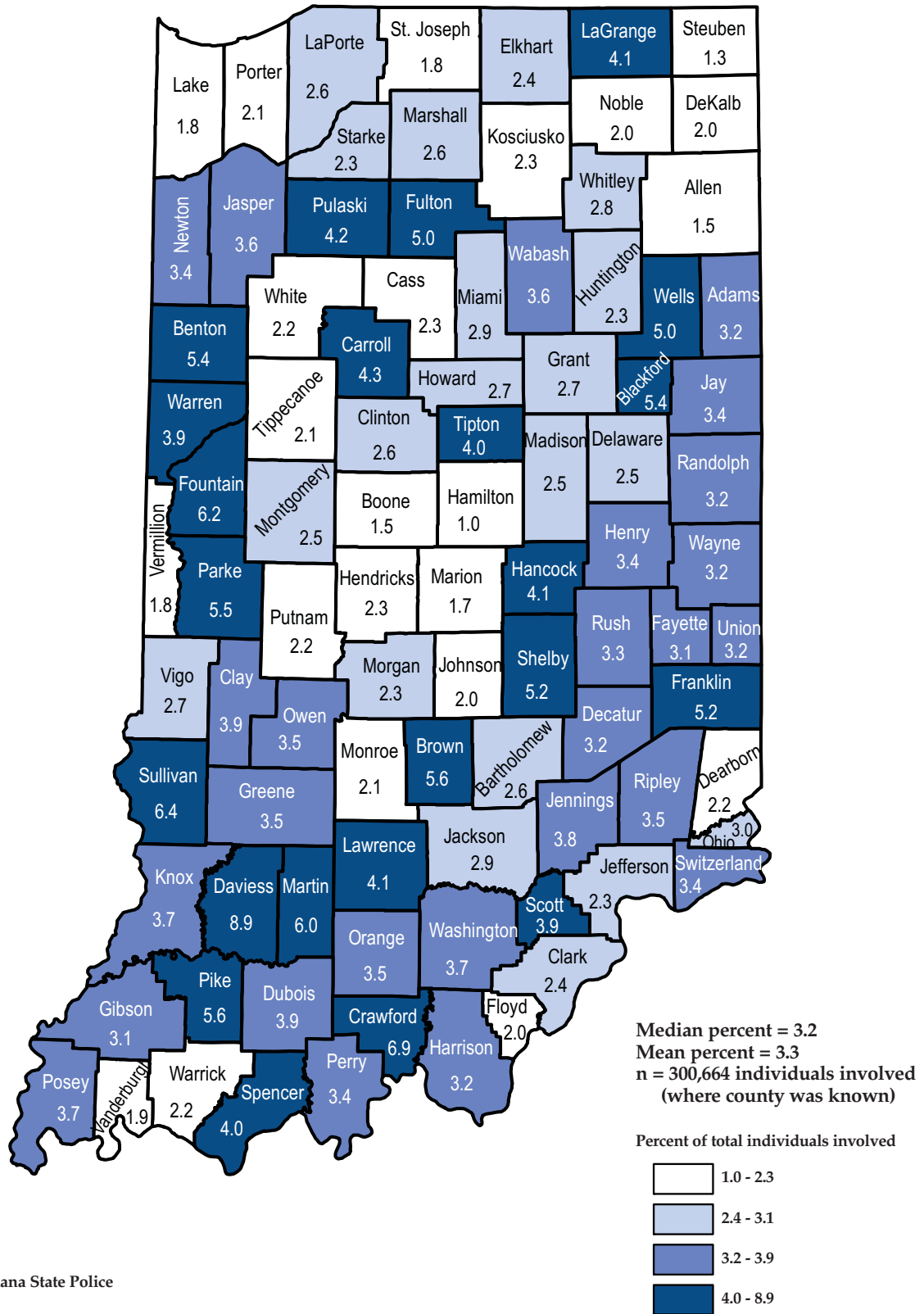
Non-incapacitating injuries include those reported as non-incapacitating and possible.

Includes only vehicle occupants (drivers and passengers). Pedestrians and pedalcyclists are excluded.

Total counts include vehicle occupants identified as restrained, unrestrained, and unknown restraint usage.

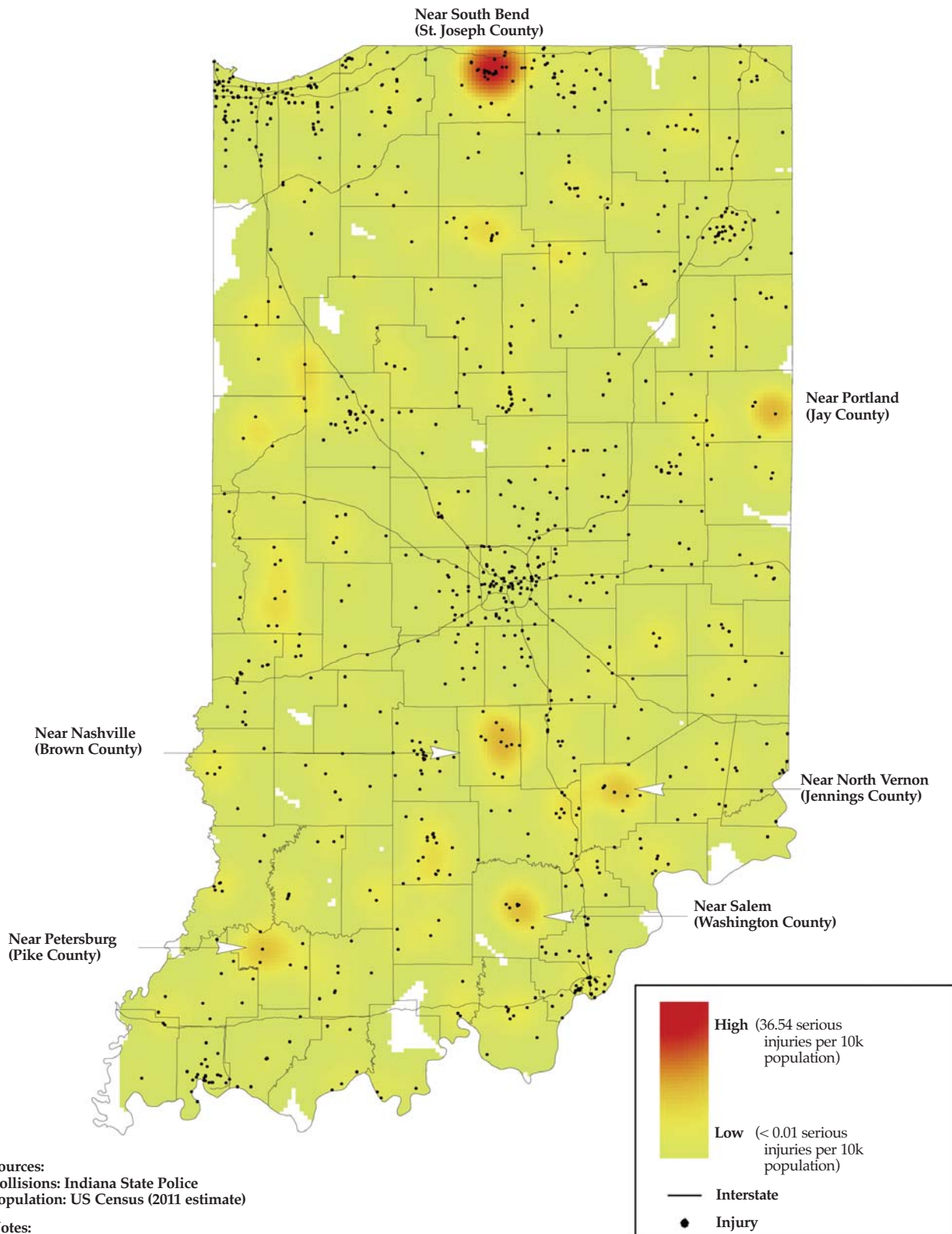
Restrained refers to individuals using the proper safety restraints or equipment including lap belt, shoulder belt, automatic belt, child passenger safety seat, or helmet.

Map 10. Percentage of individuals involved in collisions, by county where victim was not properly restrained, 2011



Source: Indiana State Police

Map 11. Concentrations of serious injuries in Indiana collisions where victim was unrestrained, per 10,000 county population, 2011



Sources:  
 Collisions: Indiana State Police  
 Population: US Census (2011 estimate)

Notes:  
 Serious injury defined as fatal and incapacitating injuries.  
 Density grid is based on points with valid coordinates (1,073/1,111).  
 Labeled places have or are near areas with 10 or more serious injuries (victim unrestrained) per 10,000 population.

**Table 97. Young drivers (ages 15 to 20) involved in Indiana collisions, by injury severity and county, 2011**

County	Total		Fatal		Non-fatal injury		Other/no injury	
	Count	% of all county injury statuses	Count	% of all county fatal injuries	Count	% of all county non-fatal injuries	Count	% of all county other/no injury status
<b>All counties</b>	<b>40,537</b>	<b>13.6</b>	<b>55</b>	<b>7.7</b>	<b>4,424</b>	<b>10.6</b>	<b>36,058</b>	<b>14.1</b>
Mean	441	14.8	1	7.6	48	12.4	392	15.3
Minimum	27	9.9	0	0.0	2	6.8	25	9.3
Maximum	5,096	21.2	5	50.0	479	22.1	4,613	22.1
Adams	140	15.1	0	0.0	15	12.6	125	15.5
Allen	2,678	14.6	5	23.8	309	11.3	2,364	15.1
Bartholomew	530	15.1	0	0.0	82	12.3	448	15.8
Benton	27	16.2	0	0.0	2	6.9	25	18.4
Blackford	55	15.2	0	0.0	9	14.5	46	15.4
Boone	342	13.2	0	0.0	35	11.7	307	13.5
Brown	91	16.2	0	0.0	13	11.4	78	17.5
Carroll	116	17.2	1	25.0	12	12.2	103	18.0
Cass	253	14.7	1	9.1	30	11.8	222	15.3
Clark	864	11.5	0	0.0	91	9.3	773	11.9
Clay	173	14.7	0	0.0	29	17.8	144	14.2
Clinton	253	16.1	1	20.0	25	13.0	227	16.5
Crawford	49	15.4	0	0.0	5	8.1	44	17.3
Daviess	95	16.6	1	14.3	21	14.0	73	17.5
Dearborn	399	14.2	0	0.0	37	10.9	362	14.7
Decatur	143	12.9	0	0.0	16	11.3	127	13.2
DeKalb	242	14.4	2	22.2	20	12.3	220	14.6
Delaware	918	14.3	2	12.5	99	10.9	817	14.9
Dubois	281	18.0	1	33.3	54	18.4	226	17.8
Elkhart	1,235	13.3	1	3.6	103	9.4	1,131	13.9
Fayette	90	12.4	1	25.0	9	9.2	80	12.8
Floyd	635	15.2	0	0.0	63	10.5	572	16.0
Fountain	79	16.0	0	0.0	13	19.4	66	15.5
Franklin	148	21.2	0	0.0	18	17.1	130	22.1
Fulton	83	11.0	0	0.0	8	6.8	75	11.8
Gibson	219	14.2	1	20.0	24	9.7	194	15.0
Grant	484	14.6	0	0.0	64	15.0	420	14.6
Greene	168	14.3	0	0.0	23	15.1	145	14.2
Hamilton	1,616	13.8	1	6.7	142	10.8	1,473	14.2
Hancock	407	17.3	0	0.0	54	14.8	353	17.7
Harrison	281	17.0	2	18.2	30	10.7	249	18.3
Hendricks	914	15.3	1	9.1	94	12.7	819	15.7
Henry	216	14.5	0	0.0	25	10.3	191	15.6
Howard	589	14.4	1	12.5	65	10.1	523	15.3
Huntington	217	13.6	0	0.0	21	9.1	196	14.4
Jackson	248	12.3	1	7.1	39	12.4	208	12.3
Jasper	225	14.3	0	0.0	30	12.1	195	14.8
Jay	148	15.9	0	0.0	27	16.4	121	15.9
Jefferson	199	14.8	0	0.0	27	13.7	172	15.0
Jennings	224	17.5	1	25.0	23	11.2	200	18.7
Johnson	763	15.4	0	0.0	70	10.2	693	16.2
Knox	242	15.9	0	0.0	30	10.7	212	17.1
Kosciusko	536	14.8	1	10.0	59	12.6	476	15.2
LaGrange	169	15.8	0	0.0	10	7.8	159	16.9
Lake	2,929	11.0	3	7.5	287	8.1	2,639	11.4
LaPorte	645	13.6	0	0.0	84	10.4	561	14.3
Lawrence	335	16.5	0	0.0	59	15.2	276	16.9
Madison	719	12.5	1	9.1	97	12.0	621	12.6

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Table 97. (continued)

County	Total		Fatal		Non-fatal injury		Other/no injury	
	Count	% of all county injury statuses	Count	% of all county fatal injuries	Count	% of all county non-fatal injuries	Count	% of all county other/no injury status
Marion	5,096	10.8	4	5.1	479	7.7	4,613	11.2
Marshall	291	14.5	0	0.0	42	13.5	249	14.7
Martin	46	14.0	0	0.0	5	8.6	41	15.2
Miami	185	13.9	1	12.5	16	9.9	168	14.5
Monroe	1,028	16.6	1	10.0	99	9.6	928	18.1
Montgomery	193	13.4	0	0.0	20	10.5	173	14.0
Morgan	397	16.8	1	16.7	50	14.2	346	17.2
Newton	76	16.0	1	20.0	10	12.2	65	16.8
Noble	256	15.0	0	0.0	18	7.9	238	16.1
Ohio	33	13.9	0	0.0	4	13.8	29	13.9
Orange	135	16.3	0	0.0	22	15.4	113	16.6
Owen	111	14.5	0	0.0	20	15.9	91	14.3
Parke	111	16.7	0	0.0	14	20.0	97	16.4
Perry	115	18.8	0	0.0	21	22.1	94	18.2
Pike	53	18.7	0	0.0	5	8.6	48	21.5
Porter	977	13.4	4	25.0	134	11.0	839	13.8
Posey	128	18.5	0	0.0	18	17.5	110	18.8
Pulaski	47	9.9	0	0.0	10	13.0	37	9.3
Putnam	160	14.6	0	0.0	29	17.4	131	14.2
Randolph	100	17.0	0	0.0	11	18.3	89	17.0
Ripley	136	14.7	2	50.0	19	12.8	115	14.8
Rush	63	14.9	0	0.0	13	13.3	50	15.6
Scott	136	13.9	1	50.0	22	10.3	113	14.8
Shelby	225	13.7	0	0.0	43	12.3	182	14.2
Spencer	141	17.0	1	14.3	20	16.0	120	17.2
St. Joseph	1,445	12.8	1	5.6	133	8.1	1,311	13.7
Starke	121	14.1	1	16.7	15	13.5	105	14.2
Steuben	240	12.4	1	33.3	23	12.6	216	12.3
Sullivan	89	14.9	0	0.0	15	12.3	74	15.6
Switzerland	31	11.8	0	0.0	4	9.8	27	12.3
Tippecanoe	1,775	16.0	2	13.3	159	12.8	1,614	16.4
Tipton	77	15.6	0	0.0	20	16.1	57	15.4
Union	35	16.3	0	0.0	7	18.9	28	15.8
Vanderburgh	1,591	13.9	1	6.3	144	9.2	1,446	14.7
Vermillion	43	11.6	0	0.0	6	8.5	37	12.3
Vigo	730	14.6	1	7.7	69	9.0	660	15.7
Wabash	209	14.7	0	0.0	15	9.8	194	15.4
Warren	47	14.4	0	0.0	4	8.5	43	15.6
Warrick	361	16.6	0	0.0	29	12.9	332	17.1
Washington	135	14.0	1	16.7	22	13.3	112	14.1
Wayne	441	13.1	0	0.0	54	12.0	387	13.3
Wells	154	17.2	1	50.0	19	18.1	134	17.0
White	184	15.0	0	0.0	18	13.5	166	15.2
Whitley	178	14.8	1	33.3	22	13.8	155	14.9

Source: Indiana State Police

Notes:

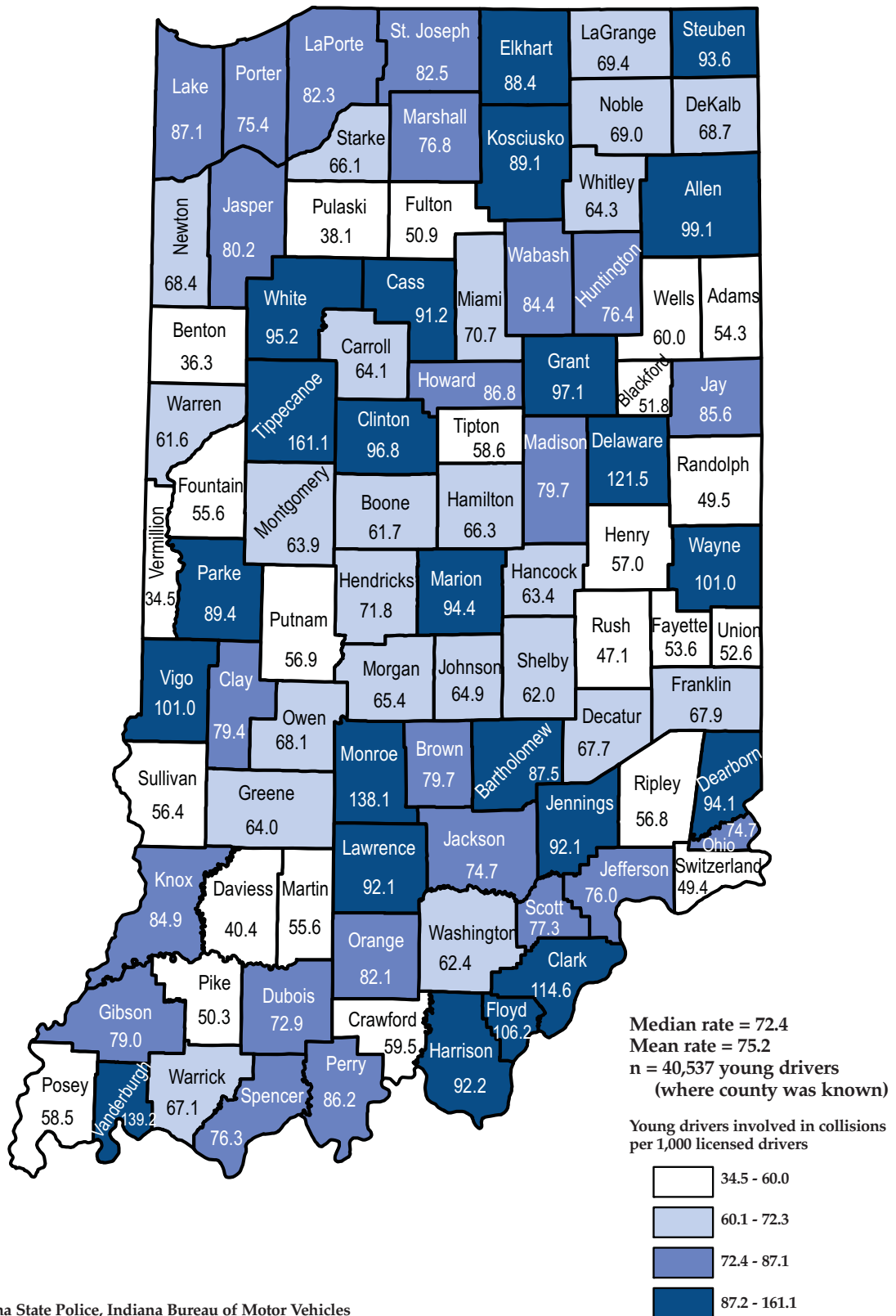
Excludes drivers with invalid age.

Excludes records where county is unknown.

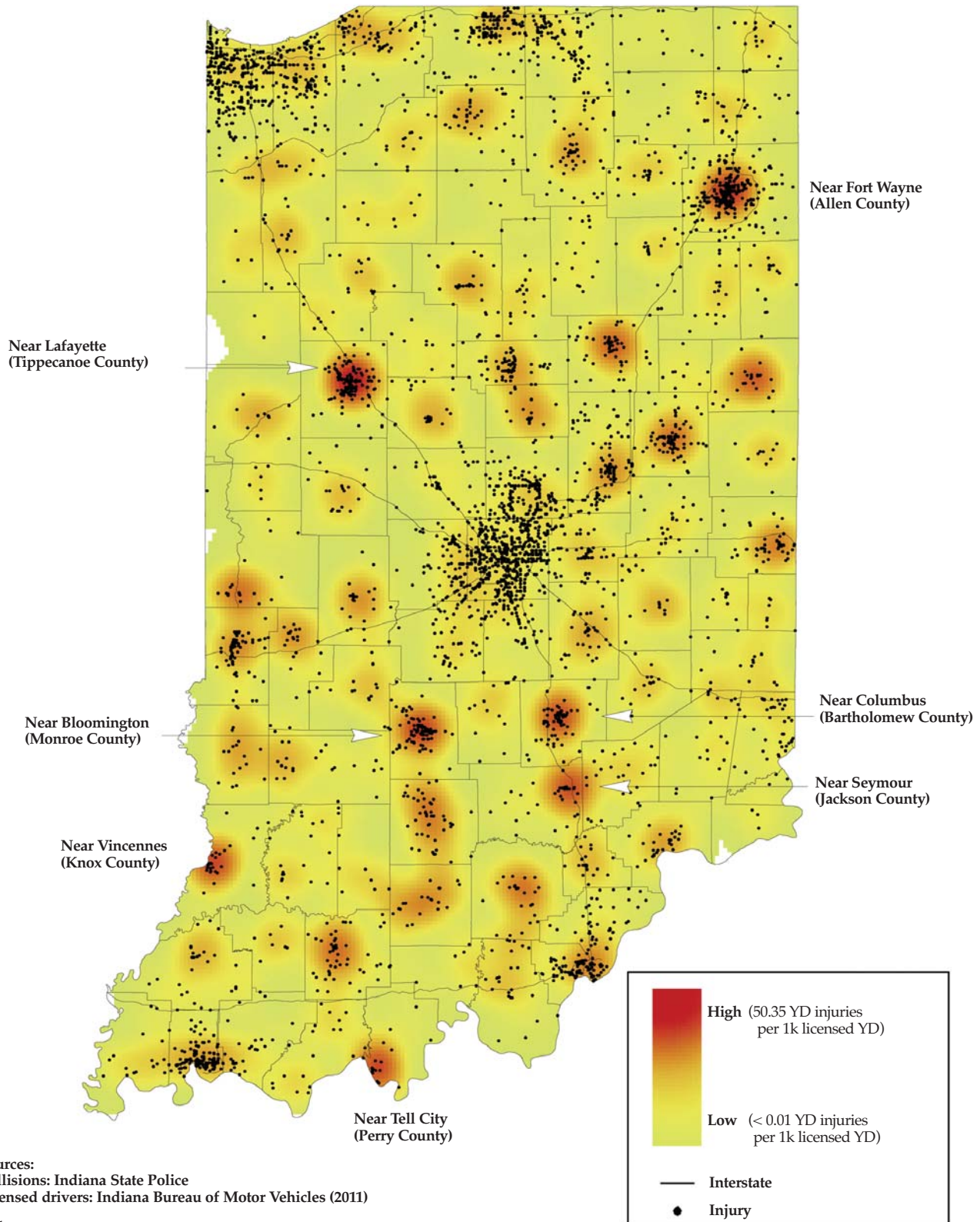
Non-fatal injury includes incapacitating, non-incapacitating, and possible injury collisions.

Other/no injury counts include injury type values identified as not reported, refused, unknown, invalid and missing codes.

Map 12. Young drivers (ages 15 to 20) involved in collisions per 1,000 licensed young drivers, 2011



Map 13. Concentrations of young driver (ages 15 to 20) injuries in Indiana collisions per 1,000 county licensed young drivers, 2011



Sources:  
 Collisions: Indiana State Police  
 Licensed drivers: Indiana Bureau of Motor Vehicles (2011)

Notes:  
 Includes all injury types.  
 Density grid is based on points with valid coordinates (4,624/4,755).  
 Labeled places have or are near areas with 35 or more young driver injuries per 1,000 licensed young drivers.

**Table 98. Indiana collisions involving motorcycles, by severity and county, 2011**

County	Total		Fatal		Non-fatal injury		Property damage only	
	Count	Motorcycle collisions as a % of all county collisions	Count	Motorcycle collisions as a % of total fatal collisions	Count	Motorcycle collisions as % of total non-fatal injury collisions	Count	Motorcycle collisions as % of total property damage collisions
<b>All counties</b>	<b>3,551</b>	<b>1.9</b>	<b>117</b>	<b>17.4</b>	<b>2,421</b>	<b>7.4</b>	<b>1,013</b>	<b>0.7</b>
Mean	39	2.2	1	18.0	26	9.3	11	0.7
Minimum	0	0.0	0	0.0	0	0.0	0	0.0
Maximum	381	8.5	11	100.0	243	32.0	127	1.6
Adams	15	2.3	0	0.0	11	12.5	4	0.7
Allen	191	1.7	4	19.0	137	6.4	50	0.5
Bartholomew	62	3.0	0	0.0	52	9.5	10	0.7
Benton	0	0.0	0	0.0	0	0.0	0	0.0
Blackford	11	3.8	0	0.0	7	15.9	4	1.6
Boone	26	1.5	2	22.2	17	7.3	7	0.5
Brown	37	8.5	3	100.0	31	32.0	3	0.9
Carroll	14	2.7	1	33.3	9	11.5	4	0.9
Cass	19	1.6	1	14.3	11	5.9	7	0.7
Clark	83	1.8	3	23.1	55	7.2	25	0.7
Clay	15	1.8	1	100.0	10	7.4	4	0.6
Clinton	27	2.4	0	0.0	14	9.2	13	1.3
Crawford	9	3.5	0	0.0	8	17.4	1	0.5
Daviess	9	2.6	0	0.0	8	7.1	1	0.4
Dearborn	34	1.8	2	28.6	16	6.1	16	1.0
Decatur	5	0.7	0	0.0	1	0.9	4	0.6
DeKalb	24	2.0	0	0.0	18	12.5	6	0.6
Delaware	85	2.1	3	20.0	59	8.3	23	0.7
Dubois	40	4.0	1	33.3	35	15.3	4	0.5
Elkhart	125	2.1	6	26.1	65	7.5	54	1.1
Fayette	12	2.6	1	33.3	6	8.5	5	1.3
Floyd	38	1.5	1	14.3	30	6.5	7	0.3
Fountain	9	2.4	0	0.0	6	11.1	3	0.9
Franklin	15	2.9	1	20.0	14	16.9	0	0.0
Fulton	21	3.8	1	50.0	19	21.1	1	0.2
Gibson	20	1.9	0	0.0	15	8.2	5	0.6
Grant	60	2.7	1	11.1	35	10.3	24	1.3
Greene	15	1.7	0	0.0	5	4.3	10	1.3
Hamilton	86	1.3	2	14.3	55	5.3	29	0.5
Hancock	31	2.1	1	25.0	25	9.1	5	0.4
Harrison	23	2.0	1	9.1	19	9.6	3	0.3
Hendricks	65	1.8	1	10.0	40	6.9	24	0.8
Henry	18	1.7	0	0.0	8	4.3	10	1.2
Howard	70	2.9	2	28.6	48	9.7	20	1.1
Huntington	18	1.6	0	0.0	12	6.8	6	0.6
Jackson	35	2.5	3	23.1	21	8.8	11	1.0
Jasper	17	1.5	0	0.0	12	6.7	5	0.5
Jay	15	2.2	1	25.0	12	9.1	2	0.4
Jefferson	23	2.6	2	40.0	12	8.0	9	1.2
Jennings	14	1.7	0	0.0	10	6.5	4	0.6
Johnson	61	2.1	3	60.0	45	8.3	13	0.6
Knox	28	2.7	2	40.0	21	9.1	5	0.6
Kosciusko	59	2.4	5	50.0	35	9.5	19	0.9
LaGrange	24	3.0	0	0.0	15	15.0	9	1.3
Lake	201	1.2	6	15.4	140	5.0	55	0.4
LaPorte	60	1.9	4	20.0	41	6.6	15	0.6
Lawrence	39	2.8	2	14.3	32	10.7	5	0.5
Madison	70	1.9	0	0.0	48	7.8	22	0.7

continued on next page

Table 98. (continued)

County	Total		Fatal		Non-fatal injury		Property damage only	
	Count	Motorcycle collisions as a % of all county collisions	Count	Motorcycle collisions as a % of total fatal collisions	Count	Motorcycle collisions as % of total non-fatal injury collisions	Count	Motorcycle collisions as % of total property damage collisions
Marion	381	1.4	11	13.9	243	4.9	127	0.6
Marshall	29	2.1	0	0.0	18	7.6	11	0.9
Martin	8	3.4	0	0.0	6	13.6	2	1.0
Miami	26	2.6	1	14.3	16	12.7	9	1.0
Monroe	83	2.1	3	30.0	61	7.4	19	0.6
Montgomery	21	2.1	2	40.0	17	11.3	2	0.2
Morgan	30	2.0	1	14.3	21	7.4	8	0.7
Newton	10	2.8	0	0.0	7	10.6	3	1.1
Noble	18	1.5	3	33.3	13	8.1	2	0.2
Ohio	7	3.5	0	0.0	5	19.2	2	1.1
Orange	13	2.1	2	66.7	6	5.9	5	1.0
Owen	15	2.7	1	25.0	10	10.0	4	0.9
Parke	17	3.1	0	0.0	12	20.7	5	1.0
Perry	13	3.0	0	0.0	11	14.3	2	0.6
Pike	1	0.5	0	0.0	1	2.2	0	0.0
Porter	83	1.8	2	13.3	65	6.8	16	0.4
Posey	11	2.2	0	0.0	8	10.1	3	0.7
Pulaski	6	1.5	0	0.0	4	7.8	2	0.6
Putnam	13	1.7	0	0.0	10	7.4	3	0.5
Randolph	5	1.2	0	0.0	3	6.3	2	0.5
Ripley	14	2.0	0	0.0	8	6.9	6	1.1
Rush	9	2.8	1	20.0	5	6.8	3	1.3
Scott	21	3.6	0	0.0	15	9.4	6	1.4
Shelby	38	3.4	0	0.0	34	12.6	4	0.5
Spencer	8	1.3	0	0.0	6	6.3	2	0.4
St. Joseph	99	1.5	6	31.6	72	5.4	21	0.4
Starke	7	1.1	0	0.0	6	7.6	1	0.2
Steuben	15	1.0	2	66.7	6	4.4	7	0.5
Sullivan	8	2.0	0	0.0	8	10.4	0	0.0
Switzerland	7	3.6	1	50.0	5	15.6	1	0.6
Tippecanoe	150	2.1	3	21.4	102	10.2	45	0.7
Tipton	4	1.2	1	100.0	2	2.2	1	0.4
Union	5	3.0	0	0.0	3	11.5	2	1.4
Vanderburgh	149	2.4	4	28.6	103	8.6	42	0.8
Vermillion	4	1.5	1	100.0	2	3.6	1	0.5
Vigo	73	2.4	2	14.3	46	7.9	25	1.0
Wabash	25	2.5	0	0.0	15	11.6	10	1.2
Warren	5	1.9	1	20.0	3	9.4	1	0.4
Warrick	24	1.7	0	0.0	18	9.5	6	0.5
Washington	17	2.4	0	0.0	15	11.5	2	0.4
Wayne	63	2.7	2	25.0	38	10.3	23	1.2
Wells	15	2.4	0	0.0	12	13.6	3	0.6
White	10	1.2	0	0.0	6	6.0	4	0.5
Whitley	13	1.6	0	0.0	9	7.5	4	0.6

Source: Indiana State Police

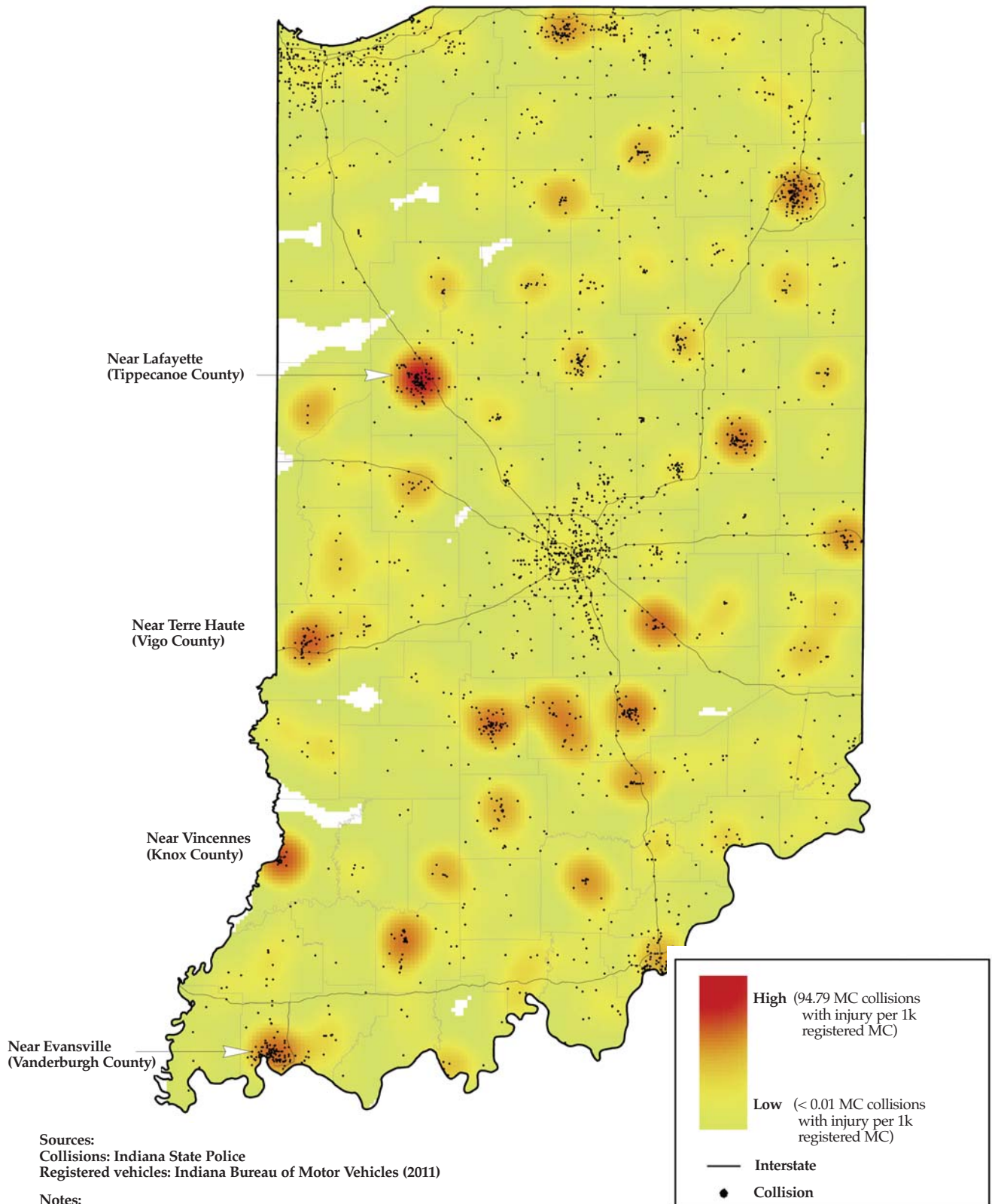
Notes:

Excludes records where county is unknown.

Includes collisions where at least one motorcycle or moped was involved.

Non-fatal injury collisions include incapacitating, non-incapacitating, and possible injury collisions.

Map 14. Concentrations of motorcycle collisions with injuries in Indiana per 1,000 county registered motorcycles, 2011



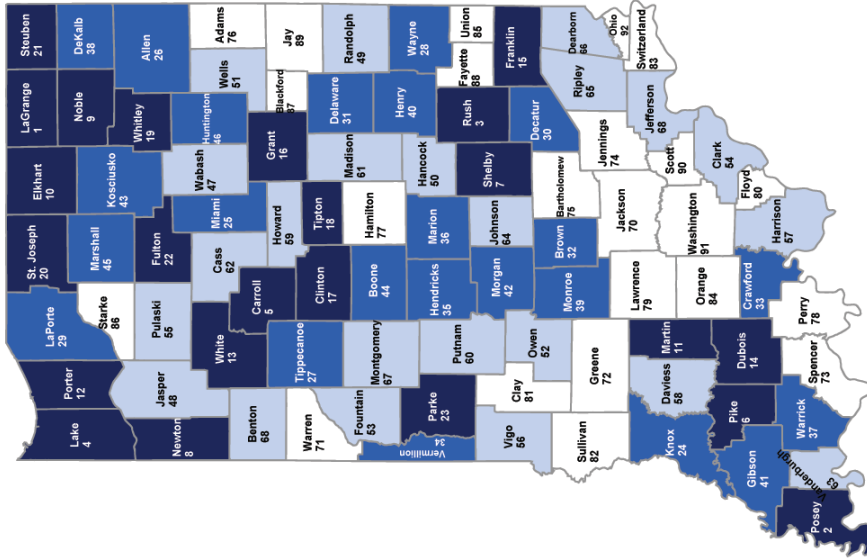
Sources:  
 Collisions: Indiana State Police  
 Registered vehicles: Indiana Bureau of Motor Vehicles (2011)

Notes:  
 Includes *fatal*, *incapacitating*, and *non-incapacitating* collision severities.  
 Density grid is based on points with valid coordinates (2,472/2,538).  
 Labeled places have or are near areas with 60 or more motorcycle collisions per 1,000 registrations.

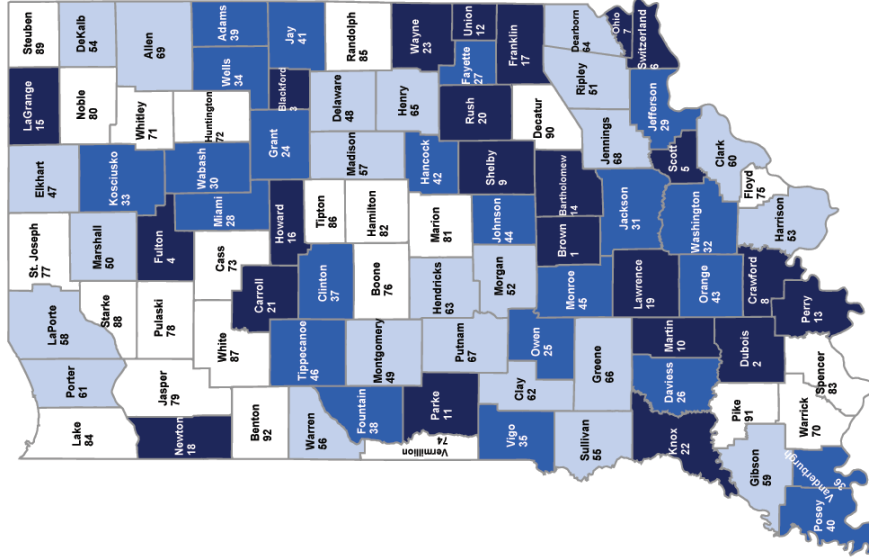


## County ranks (descending order), by collision metric, 2011 (continued)

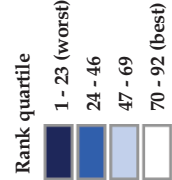
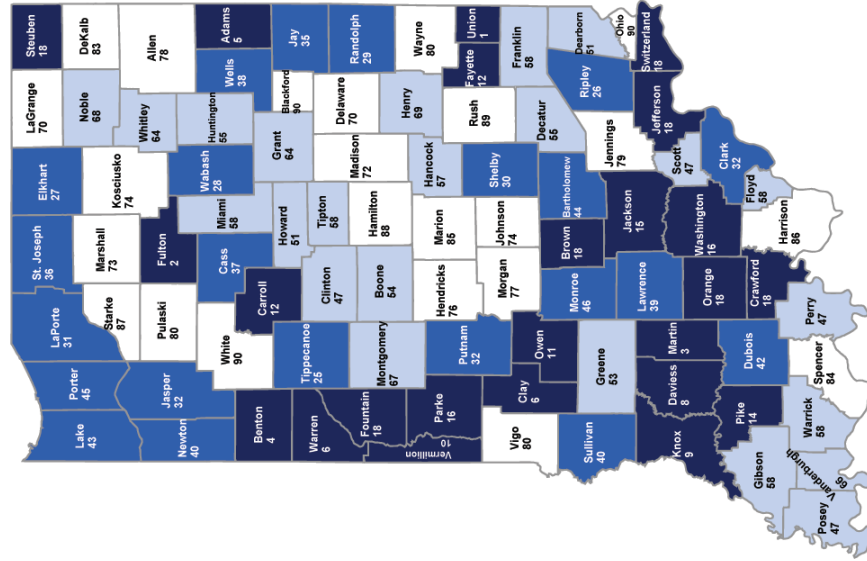
Map 18. Dangerous driving collisions as % of total collisions



Map 19. Motorcycle-involved collisions as % of total collisions



Map 20. Unrestrained serious injuries as % of total serious injuries

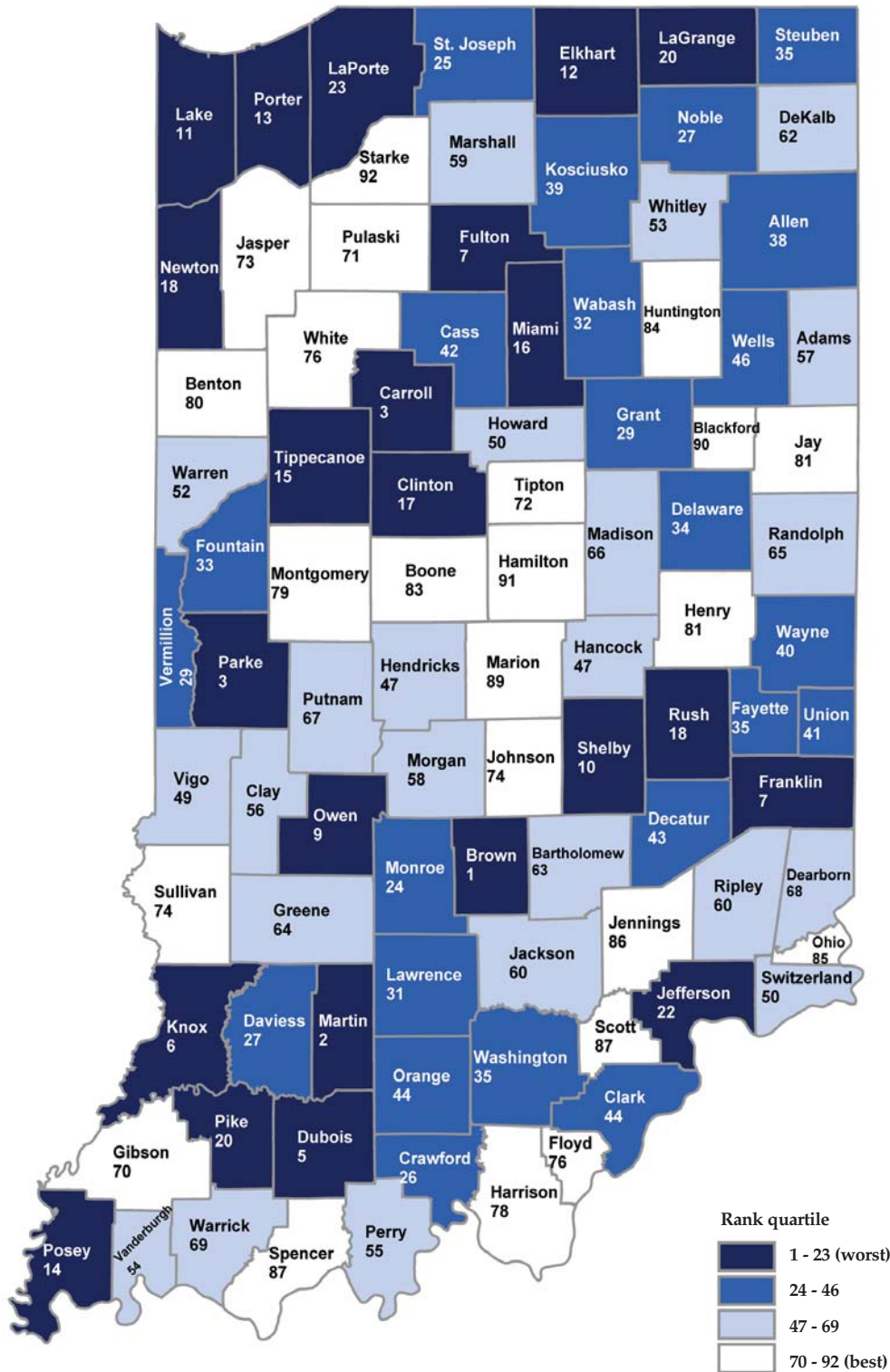


Source: Indiana State Police

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.



Map 21. County rank, composite (average, six metrics), 2011

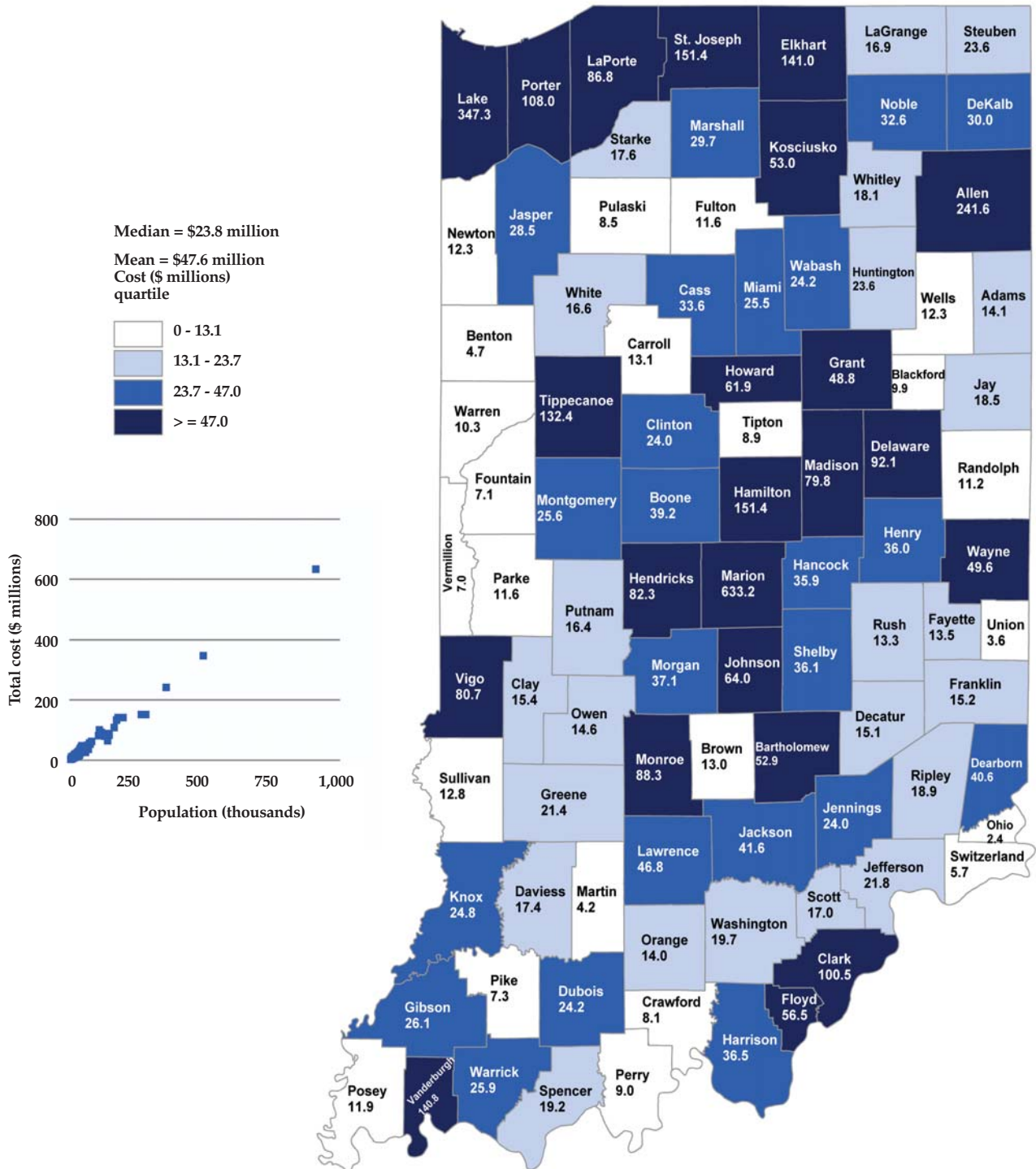


Source: Indiana State Police

Notes:

Composite rank is the descending order rank of the average county ranks. For example, the average rank of the six metrics for Adams County is 53.3. This results in a composite rank of 57 when compared to the average ranks of the remaining 91 counties. Ties received the same rank.

Map 22. Estimated costs of Indiana collisions (\$ millions), by county, 2011



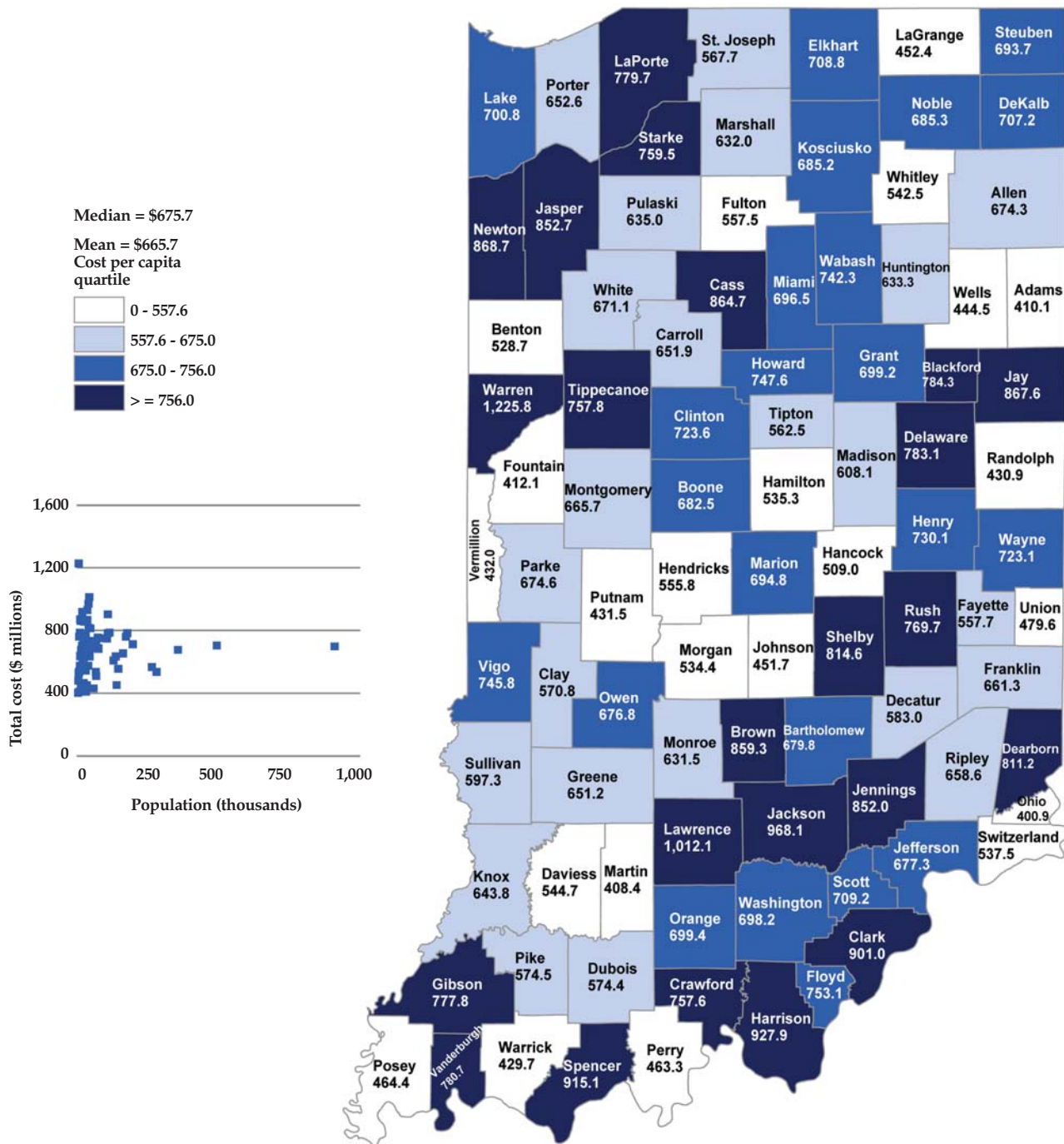
Source: Indiana State Police

Notes:

All costs in 2011 dollars.

See Appendix A for discussion of cost calculations.

Map 23. Estimated costs per capita of Indiana collisions, by county, 2011

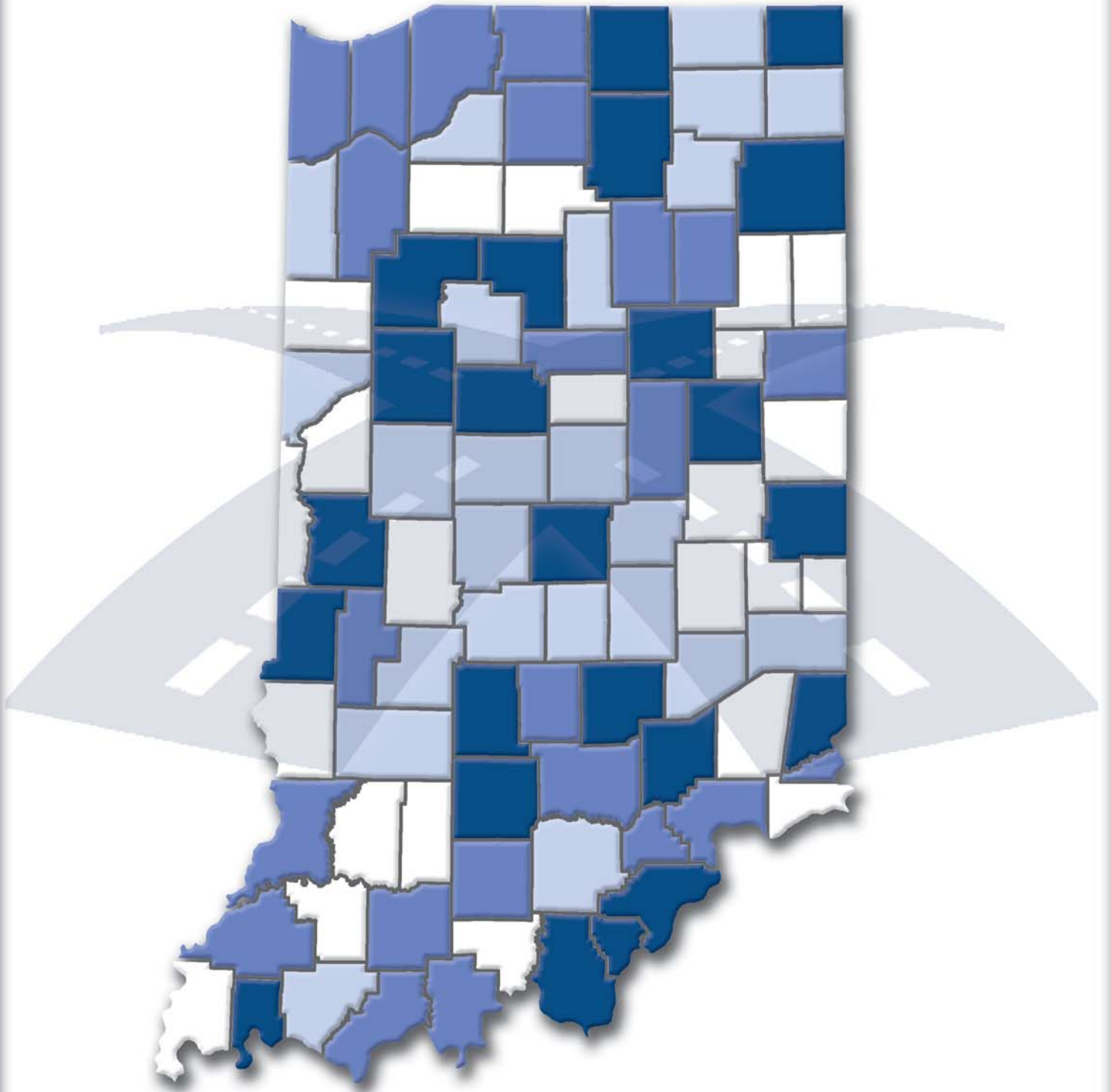


Sources:  
 Collisions: Indiana State Police  
 Population: US Census (2011 estimate)

Notes:  
 All costs in 2011 dollars.  
 See Appendix A for discussion of cost calculations.



# DATA SOURCES

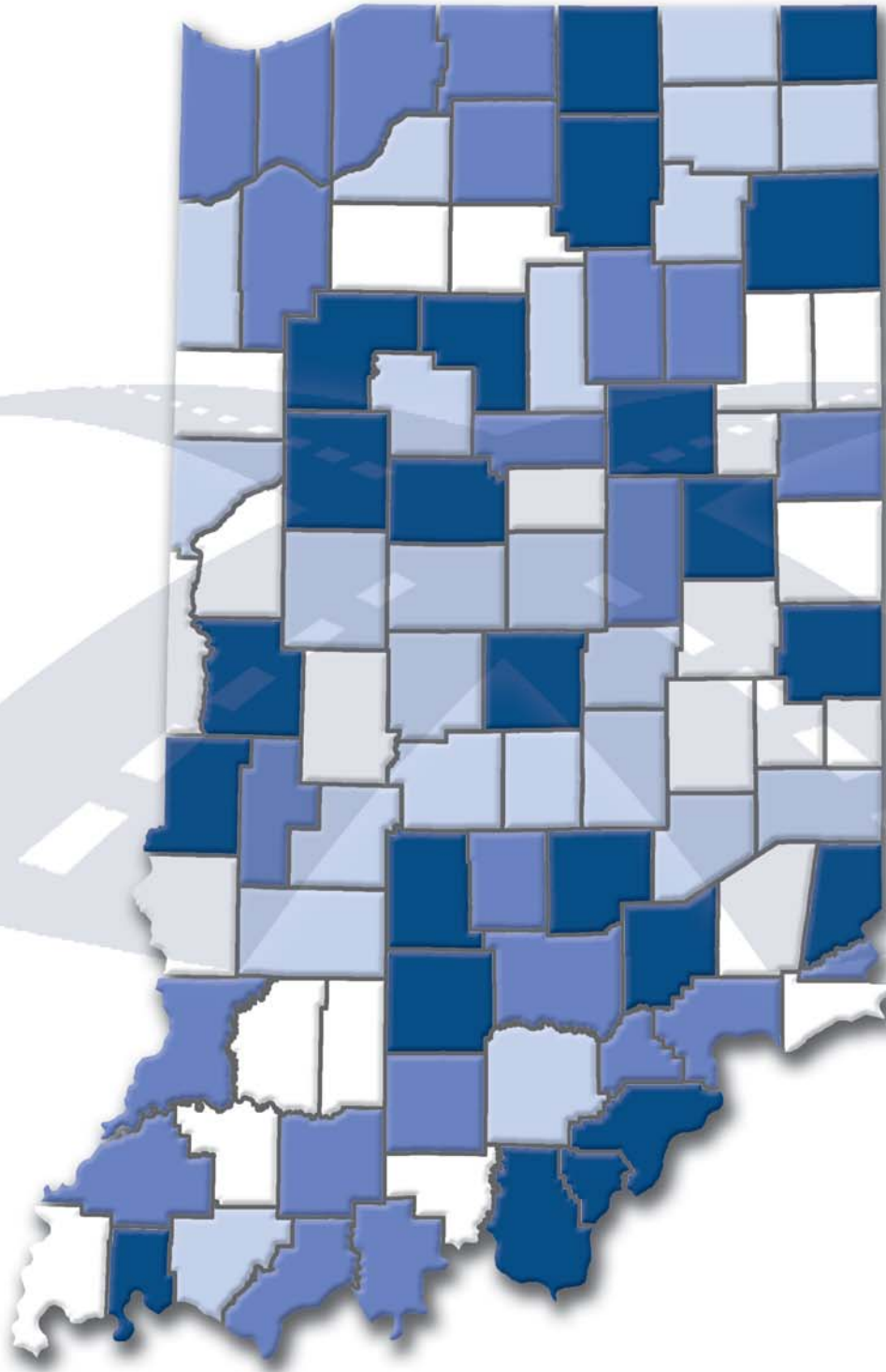


## DATA SOURCES

Data in this publication come from the following sources:

- Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 20, 2012.
- Indiana Bureau of Motor Vehicles, current as of March 20, 2012.
- Indiana Department of Transportation, county level VMT, 2010.
- Bureau of Transportation Statistics, State Transportation Statistics, current as of March 30, 2012.  
[http://www.bts.gov/publications/state\\_transportation\\_statistics/](http://www.bts.gov/publications/state_transportation_statistics/)
- Fatality Analysis Reporting System, National Highway Traffic Safety Administration, current as of March 30, 2012.  
<http://www-fars.nhtsa.dot.gov/Main/index.aspx>
- Federal Highway Administration, Traffic Volume Trends, current as of March 30, 2012.  
<http://www.fhwa.dot.gov/ohim/tvtw/tvtpage.cfm>
- U.S. Census Bureau, Population Division, Table 2. Intercensal Estimates of the Resident Population by Sex and Age: April 1, 2000 to July 1, 2010 (ST-EST00INT-02-18), accessed May 2012, at <http://www.census.gov/popest/states/asrh/>

# INDIANA STANDARD CRASH REPORT, GLOSSARY, APPENDIX







Local ID

<b>Type of Crash</b>					
<b>Time Notified</b>	<b>Time Arrived</b>	<b>Other Location of Investigation</b>			
<b>Assisting Officer</b>		<b>ID No.</b>	<b>Agency</b>	<b>Investigation Complete?</b>	<b>Photos Taken?</b>
<b>Assisting Officer</b>		<b>ID No.</b>	<b>Agency</b>	<b>Date of Report</b>	
<b>Investigating Officer</b>		<b>ID No.</b>	<b>Agency</b>	<b>Reviewing Officer</b>	

**Narrative**

UNIT INFORMATION				Page	of
Local ID					
Driver's Name (Last, First, MI)			Safety Equipment Used		
Address (Street, City, State, Zip)			Safety Equipment Effective?		
			Ejection/Trapped		
Date of Birth	Age	Gender	EMS No.	Inmed Attn	Driver Injury Status
Driver's License #	Lic Type	CDL Class	Lic State	Nature of Most Severe Injury	
<b>Apparent Physical Status</b> <input type="checkbox"/> Normal <input type="checkbox"/> Had Been Drinking <input type="checkbox"/> Handicapped <input type="checkbox"/> Ill <input type="checkbox"/> Asleep/Fatigued <input type="checkbox"/> Drugs/Medication <input type="checkbox"/> Unknown		<b>Restrictions</b> <input type="checkbox"/> Glasses/Contact Lenses <input type="checkbox"/> Outside Rearview Mirror <input type="checkbox"/> Daylight Driving <input type="checkbox"/> Automatic Transmission <input type="checkbox"/> Special Controls <input type="checkbox"/> Employment Only <input type="checkbox"/> Motorcycle Only <input type="checkbox"/> Tol/From Employment		<input type="checkbox"/> Employer's Vehicle Only <input type="checkbox"/> State-Owned Vehicles <input type="checkbox"/> PP Chauffeurs Taxi Only <input type="checkbox"/> Power Steering <input type="checkbox"/> Special Restrictions <input type="checkbox"/> Probation DWI <input type="checkbox"/> Probation HTO <input type="checkbox"/> None	
Test Given NONE		Type Given <input type="checkbox"/> Blood <input type="checkbox"/> Urine <input type="checkbox"/> Breath <input type="checkbox"/> SFST <input type="checkbox"/> PBT		Location of Most Severe Injury	
Alcohol Results PBT		Certified Test <input type="checkbox"/> Pending		Drug Results	
Veh#	Color	Vehicle Year	Make	Model	Style
# Occupants	Lic Year	License #	License State		
# Axles	Speed Limit	Insured By	Phone Number		
Vehicle Identification#					
Registered Owner's Name (Last, First, MI)				<input type="checkbox"/> Same as Driver	
Address (Street, City, State, Zip)					
Towed? To By Reason					
Lic State	Lic Year	Registered Owner's Name (Last, First, MI) <input type="checkbox"/> Same as Driver			
License#		Address (Street, City, State, Zip)			
Veh Year	Make				
Lic State	Lic Year	Registered Owner's Name (Last, First, MI) <input type="checkbox"/> Same as Driver			
License#		Address (Street, City, State, Zip)			
Veh Year	Make				
Commercial Vehicle: Carrier's Name and Address					
HAZMAT Proper Shipping Name:			State DOT#		
US DOT#	ICC#	CMV Inspection	If Yes		
Gross Vehicle Weight Rating		Cargo Body Type			
HAZMAT Placard	HAZMAT Release of Cargo	HAZMAT 4-Digit ID#	Hazzard Class #		
Initial Impact Area			Areas Damaged (Multiples)		
<input type="checkbox"/> Undercarriage <input type="checkbox"/> Trailer <input type="checkbox"/> None <input type="checkbox"/> Unknown			<input type="checkbox"/> Undercarriage <input type="checkbox"/> Trailer <input type="checkbox"/> None <input type="checkbox"/> Unknown		
<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">Front</div> <div style="text-align: center;">Rear</div> </div>			<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">Front</div> <div style="text-align: center;">Rear</div> </div>		
Vehicle Use					
Emergency Run?				Fire?	
				NO	
Vehicle Type					
Pre-Crash Vehicle Action					
Direction of Travel					
Type of Primary/Secondary Roadway					
One Way Traffic		Two Way Traffic			
<input type="checkbox"/> One Lane		<input type="checkbox"/> Two Lanes		<input type="checkbox"/> Private Drive	
<input type="checkbox"/> Two Lanes		<input type="checkbox"/> Multi-Lane Divided (3 or more)		<input type="checkbox"/> Alley	
<input type="checkbox"/> Multi-Lanes (3 or more)		<input type="checkbox"/> Multi-Lane Undivided 2 way left turn			
		<input type="checkbox"/> Multi-Lane Undivided (3 or more)			
Event Collision With					

# 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

The terms “alcohol-related” or “alcohol-involved” do not indicate that a crash or fatality was caused by the presence of alcohol.

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 alcohol-involved 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.

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 .08 g/dL or more indicates that the person was impaired.

## Bus

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

## Census-based Locale

*Urban* is defined as Census 2000 Urban Areas, *suburban* as areas within 2.5 miles of urban boundaries, *exurban* as areas within 2.5 miles of suburban boundaries, and *rural* as areas beyond exurban boundaries (i.e., everything else).

## Cited/Citation

When a person involved in a collision is charged (traffic or criminal) with 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. *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. *Bus*. A motor vehicle designed to transport nine 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.

## Collision/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*.

## Glossary, continued

### **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.

### **Dark (Not lighted)**

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.

### **Incorporated Limits Locale**

*Urban* is defined as any area inside the incorporated limits of a city. *Rural* is defined as any area outside the incorporated limits of a city.

### **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.

## Glossary, continued

### **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.

### **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.

### **Non-occupant/Non-motorist**

Any person who is not an occupant of a motor vehicle in transport and includes the following: (1) pedestrians; (2) pedalcyclists; (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 bicycle or 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).

## Glossary, continued

### **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.

### **Seating Position**

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.

### **Serious Injury**

An injury reported as *fatal* or *incapacitating*.

### **Serious Injury Collision**

A collision with at least one *fatal* or *incapacitating* injury.

### **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.

### **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](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](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](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., & Spicer, R. (May 2002). *The economic impact of motor vehicle crashes, 2000*. (DOT HS809 446). Washington D.C.: National Highway Traffic Safety Administration.

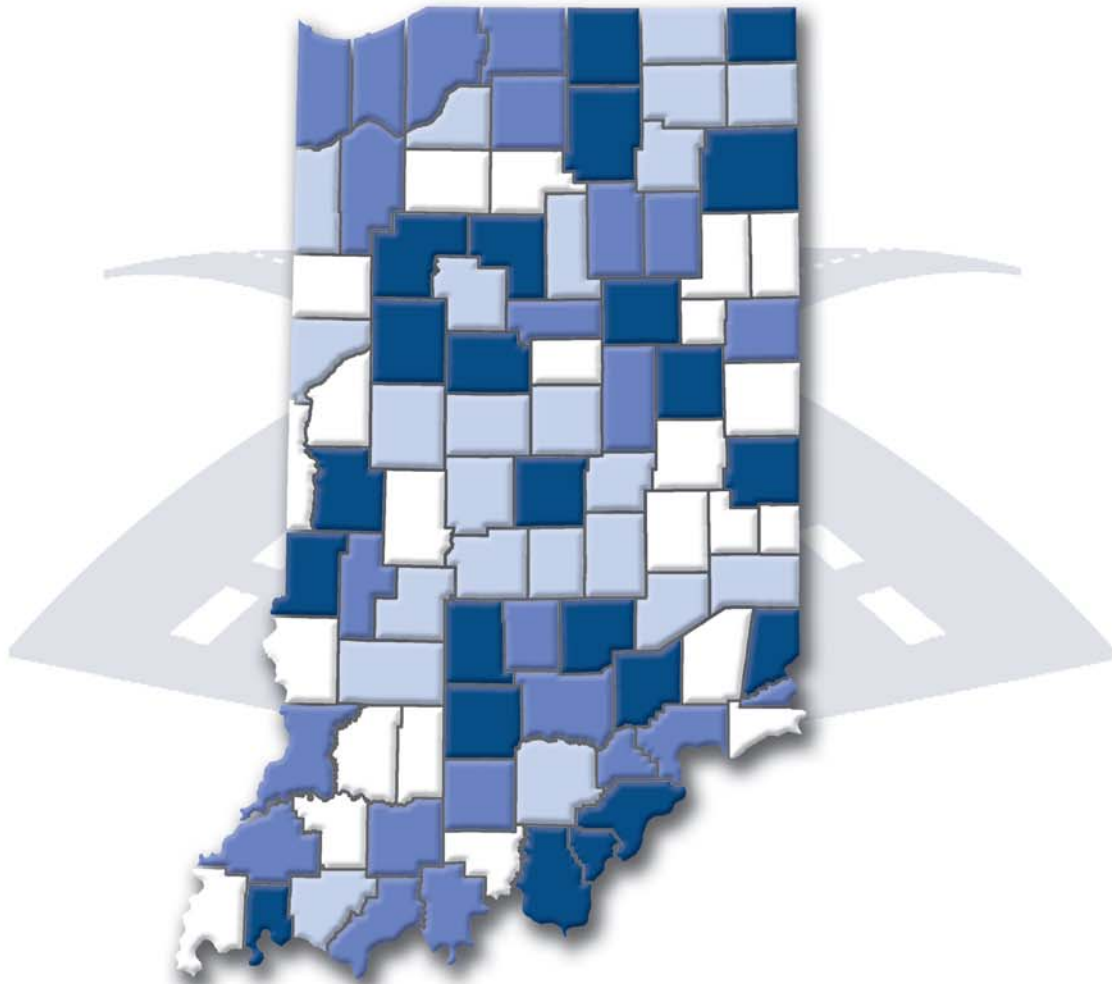
<sup>2</sup>Association for the Advancement of Automotive Medicine. Retrieved from <http://www.carcrash.org>

<sup>3</sup>[http://www.nhtsa-tsis.net/projects/NHTSA/NHTSA\\_NASS.htm](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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