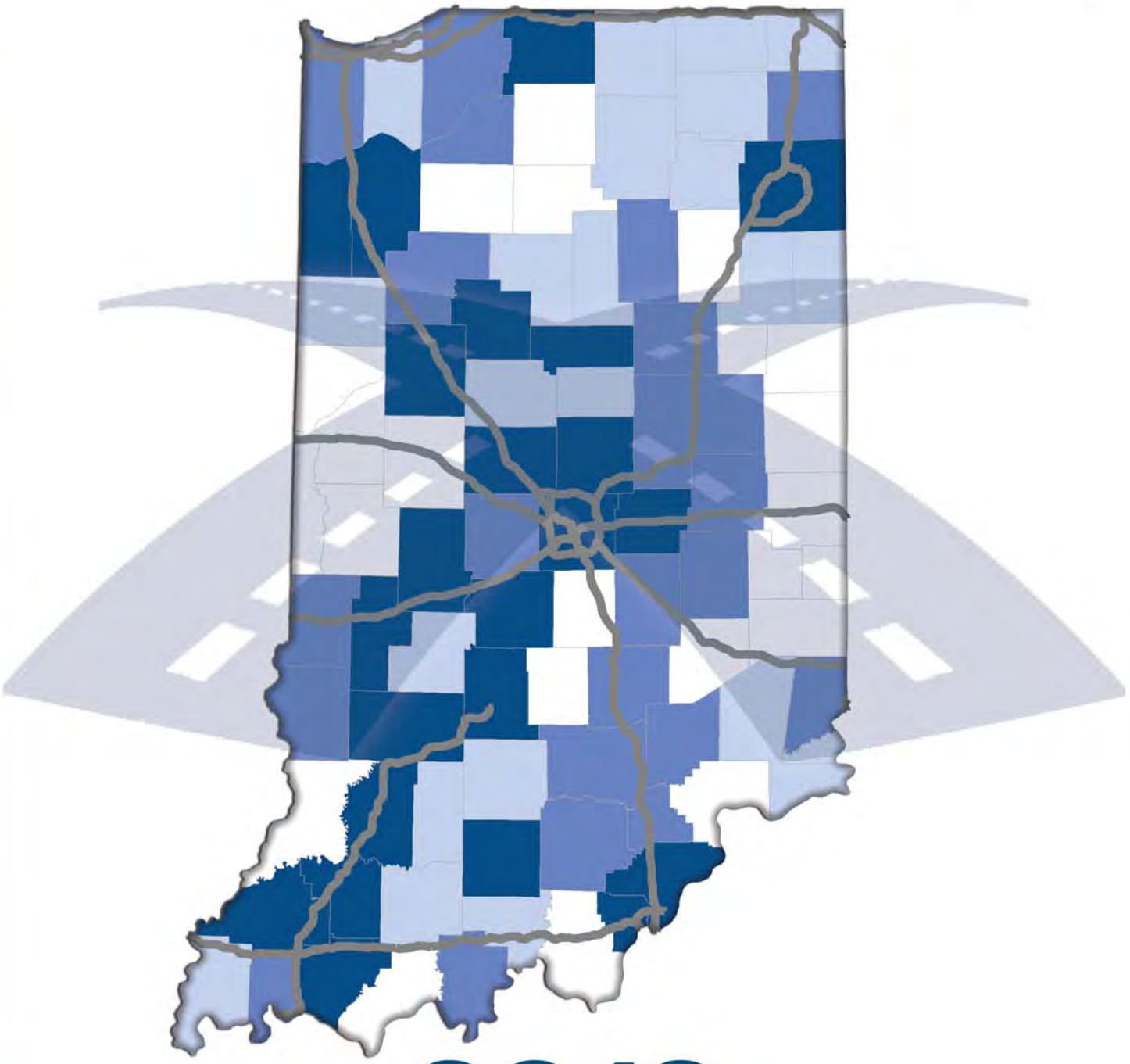
INDIANA CRASH FACTS



2012

INDIANA CRIMINAL JUSTICE INSTITUTE

CENTER FOR CRIMINAL JUSTICE RESEARCH

SCHOOL OF PUBLIC AND ENVIRONMENTAL AFFAIRS
INDIANA UNIVERSITY
IUPUI

INDIANA TRAFFIC SAFETY QUICK FACTS - 2012

- 188,841 traffic collisions resulting in injury or property damage occurred, a 0.4 percent decrease from 2011.
- There were 718 fatal collisions in 2012 (resulting in 779 fatalities), a 6.5 percent increase from 2011.
- 3,498 collisions (1.8 percent of all collisions) occurred in a work zone in 2012.
- 8.8 percent (16,608) of all collisions were speed-related, representing a 5.2 percent decrease from the 2011 number of collisions that were speed-related.
- 22.7 percent (163 of 718) of fatal collisions were speed-related.
- In 2012, there were 150 fatal crashes and 158 fatalities involving a vehicle driver legally impaired by alcohol (i.e., blood alcohol content at or above 0.08 g/dL).
- 20.9 percent (150 of 718) of fatal collisions involved a driver that was legally alcohol-impaired.
- The average economic cost of collisions involving an alcohol-impaired driver was $48,823.
- Collisions involving motorcycles increased 15.6 percent in 2012, while fatal collisions involving motorcycles increased 24.8 percent, from 117 in 2011 to 146.
- Overall collision counts were higher in Indiana *urban* (126,910) and *suburban* (22,849) locales than in surrounding *exurban* (10,707) and *rural* (13,060) areas.
- Rates of serious injury collisions per 1,000 total collisions were higher in *exurban* (40 per 1,000) and *rural* (40) locales than in areas designated as *urban* (16) and *suburban* (35).
- December had the highest frequency of collisions among all months (18,735, or 10 percent of all collisions in 2012).
- The 15 to 20 year old age group had the highest rate of drivers involved in all collisions in 2012 (1,148 per 10,000 licensed drivers).
- Drivers ages 18 to 20 years old had the highest rate of involvement in fatal collisions per 10,000 licensed drivers (4.5), followed by drivers ages 21 to 24 (3.2).
- 82 non-motorists were killed in collisions in 2012 (64 pedestrians, 14 pedalcyclists, and 4 animal drawn vehicle operators).
- 48 percent of persons killed in motor vehicle collisions were known to be restrained.*
- In 2012, the economic costs of motor vehicle collisions in Indiana approached $3.6 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 traveled 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 (http://policyinstitute.iu.edu/), the ICJI traffic safety website (www.in.gov/cji/), or you may contact the Center for Criminal Justice Research at 317-261-3000. This publication may be reproduced free of charge.

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

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

Indiana University Public Policy Institute, Indianapolis
Samuel Nunn, Director, Center for Criminal Justice Research

Traffic Records Research Team:

Dona Sapp, Senior Policy Analyst
Bill Newby, Senior Policy Analyst
Samuel Nunn, Director
Rachel Thelin, Senior Policy Analyst
Kathy Lisby, Senior Policy Analyst

Assisted by:
Tami Barreto, Editor
Susan Hill, Graphic Designer

Cover design is a chloropleth map illustrating the county rate of work zone collisions per 1,000 total county collisions.

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

Curtis Hill, Jr. - Chairman
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Riley Hospital for Children

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Commissioner, Indiana Department of Transportation

James Downey
Retired, National Highway Traffic Safety Administration

David Gilbert
Chief of Police, Marion

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

Dean Hawley, MD
Indiana University School of Medicine

Alex Huskey
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James E. Klaunig, M.D.
Professor of Toxicology, Indiana University School of Medicine

Bruce Lemmon
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Todd Meyer
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Ed Perez
Public Affairs Specialist, State Farm Insurance

David N. Powell
Executive Director, Indiana Prosecuting Attorney's Council

Gary Secrest
Chief Counsel, Attorney General's Office

R. Scott Waddell
Commissioner, Bureau of Motor Vehicles

Joseph E. Wainscott, Jr.
Executive Director, Indiana Department of Homeland Security

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

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

TABLE OF CONTENTS

LIST OF TABLES

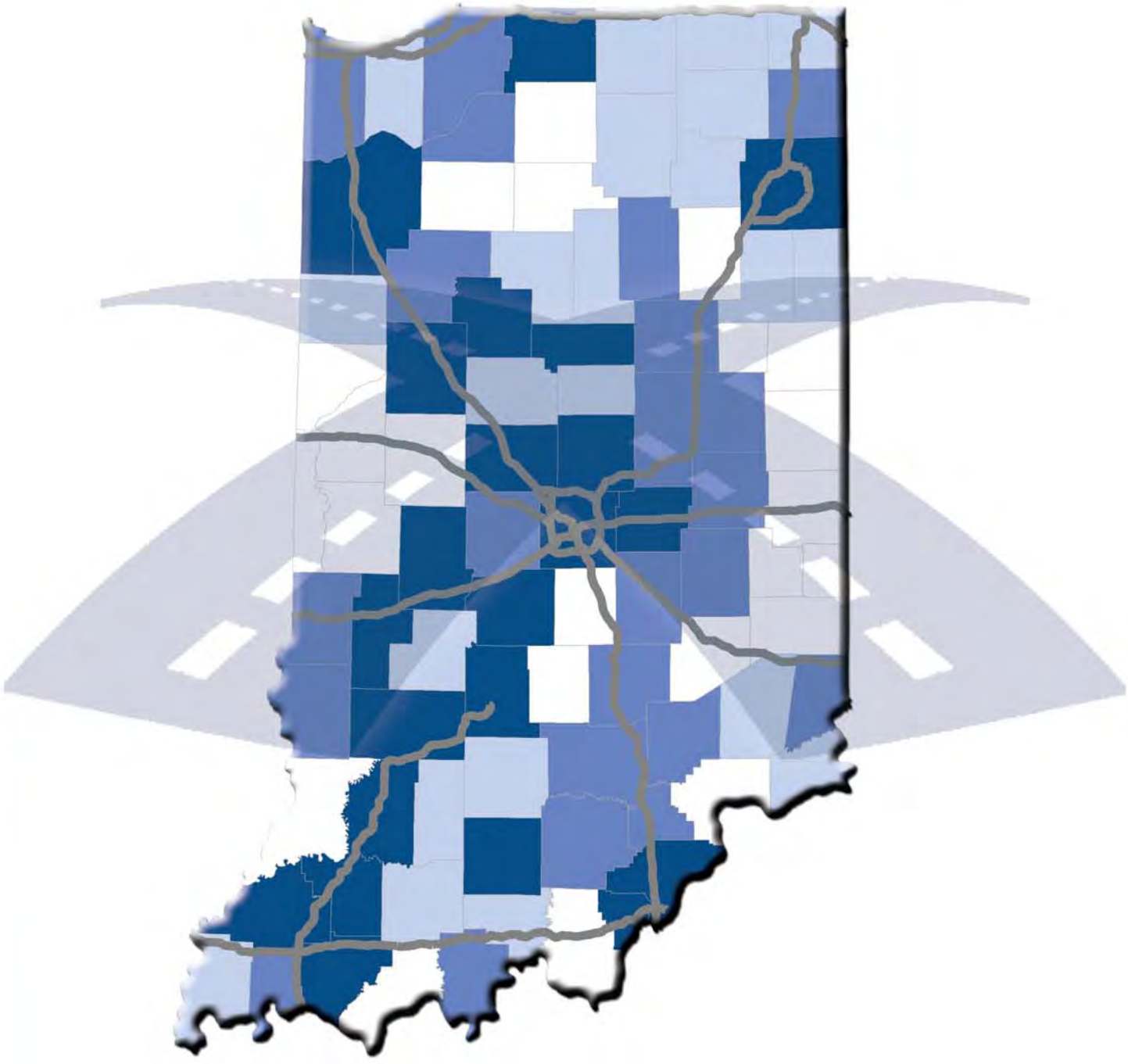
List of Tables, continued

LIST OF FIGURES

LIST OF MAPS

CHAPTER 1

PROBLEM IDENTIFICATION



PROBLEM IDENTIFICATION, 2012

The Traffic Safety Division (TSD) of the Indiana Criminal Justice Institute (ICJI), in conjunction with the Indiana Governor's Council on Impaired and Dangerous Driving, annually develops a set of benchmarks as part of the Highway Safety Plan (HSP) 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 injuries overall, impaired driving, safety equipment usage, young drivers, motorcycle safety, dangerous driving, children, and non-motorist injuries in collisions. Within each area, ICJI establishes specific annual goals and performance measures that relate to the occurrence of collisions and their impact on Indiana. ICJI also works closely with the Indiana Department of Transportation (INDOT) to ensure consistency in goal setting exists between the ICJI HSP, which approaches traffic safety from a policy and law enforcement perspective, and INDOT's Strategic Highway Safety Plan (SHSP), a document that approaches traffic safety from an engineering and transportation planning perspective.

NOTE: Subsequent sections include a general discussion of goals identified in the FY 2014 Indiana Highway Safety Plan. This document, produced annually by ICJI, uses data from the 2012 traffic safety fact sheets 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 April 9, 2013. Discrepancies between figures presented in previous-year Crash Books are due to updates to the collision dataset since the original date of these publications. For more details on specific goals, please refer to the FY 2014 Indiana Highway Safety Plan.

Goal Setting by the Indiana Criminal Justice Institute

Each year, ICJI develops a set of specific short-term and long-term goals to be included in the HSP for each Indiana problem area, and consistent with NHTSA's priority program areas. To assist with this effort, the Indiana University Public Policy Institute's Center for Criminal Justice Research (CCJR) prepares a set of baseline measures utilizing the most recent Indiana crash data, as well as historical data, maintained by the Indiana State Police in the Automated Reporting and Information Exchange System (ARIES). These measures are presented in Table 1.1. Additional information is also provided to ICJI in the traffic safety fact sheet series produced annually by CCJR.

Table 1.1. Performance goals and metrics for Indiana's Highway Safety Plan, 2014

Goals and performance measures	MOST RECENT (2012)	HISTORICAL				Annualized rates of change	
		2011	2010	2009	2008	2011-12	2008-12
Goal: Reduce total fatalities							
Count of fatalities	779	749	754	692	815	4.0%	-1.1%
Rate per 100K population	11.92	11.49	11.63	10.71	12.69	3.7%	-1.6%
Rate per 100M vehicle miles traveled (VMT)	1.03	0.98	1.00	0.90	1.15	5.2%	-2.7%
BY CRASH LOCALITY							
Count of fatalities in URBAN areas	283	279	292	243	324	1.4%	-3.3%
Rate per 10k involved in collisions	13.03	13.10	13.95	11.65	14.49	-0.5%	-2.6%
Count of fatalities in SUBURBAN areas	219	189	140	193	201	15.9%	2.2%
Rate per 10k involved in collisions	64.46	56.14	44.67	59.76	54.60	14.8%	4.2%
Count of fatalities in EXURBAN areas	109	108	128	101	116	0.9%	-1.5%
Rate per 10k involved in collisions	74.05	74.72	94.84	70.15	71.62	-0.9%	0.8%
Count of fatalities in RURAL areas	154	135	123	129	152	14.1%	0.3%
Rate per 10k involved in collisions	88.07	79.93	79.34	78.59	81.47	10.2%	2.0%
Goal: Reduce serious bodily injuries (SBIs)	-	-	-	-	-		
Count of SBIs	3,810	3,405	3,443	3,179	3,382	11.9%	3.0%
Rate per 100K population	58.28	52.25	53.10	49.22	52.64	11.5%	2.6%
Rate per 100M VMT	4.98	4.45	4.54	4.15	4.77	11.9%	1.1%
Goal: Reduce impaired driving in crashes	-	-	-	-	-		
Count of fatalities that involve an impaired driver (any vehicle)	158	140	135	127	173	12.9%	-2.2%
Percent of all fatalities	20.3%	18.7%	17.9%	18.4%	21.2%	8.5%	-1.1%
Rate per 100M VMT	0.21	0.18	0.18	0.17	0.24	12.9%	-4.1%
Count of fatalities that involve an impaired motorcycle operator	36	40	25	22	28	-10.0%	6.5%
Goal: Increase safety belt usage	-	-	-	-	-		
Count of unrestrained occupants of passenger vehicles killed	269	260	287	258	332	3.5%	-5.1%
Observed usage rate for occupants of all passenger vehicles	93.6%	93.2%	92.4%	92.6%	91.2%	0.4%	0.7%
Observed usage rate for occupants of pickup trucks	86.5%	84.8%	84.3%	85.2%	78.7%	2.0%	2.4%
Goal: Reduce involvement of young drivers in fatal crashes	-	-	-	-	-		
Count of drivers ages 15 to 20 in fatal crashes	128	100	123	116	142	28.0%	-2.6%
Goal: Reduce motorcyclist fatalities	-	-	-	-	-		
Count of motorcycle and moped rider fatalities	151	118	110	111	130	28.0%	3.8%
Count of motorcycle and moped operators involved in fatal crashes	149	121	112	118	127	23.1%	4.1%
Rate per 10K registrations	6.65	5.63	5.36	5.82	6.21	18.1%	1.7%
Count of known unhelmeted motorcycle fatalities	122	100	92	90	99	22.0%	5.4%
Goal: Reduce the incidence of dangerous driving in crashes	-	-	-	-	-		
Count of speed-related fatalities	175	150	145	158	225	16.7%	-6.1%
Count of total crashes involving a driver disregarding a signal	4,009	3,955	4,011	3,983	4,343	1.4%	-2.0%
Goal: Reduce fatalities and SBIs for children	-	-	-	-	-		
Count of children ages 15 and under killed	29	38	33	35	47	-23.7%	-11.4%
Count of children with SBIs	243	198	235	235	249	22.7%	-0.6%
Goal: Reduce non-motorist fatalities and SBIs	-	-	-	-	-		
Count of pedestrian fatalities	64	63	62	55	60	1.6%	1.6%
Count of pedestrian SBIs	221	238	251	211	223	-7.1%	-0.2%
Count of pedalcyclist fatalities	14	13	14	7	16	7.7%	-3.3%
Count of pedalcyclist SBIs	97	82	81	64	66	18.3%	10.1%

Sources: Indiana State Police; U.S. Census Bureau; Federal Highway Administration; Indiana Bureau of Motor Vehicles

Notes:

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

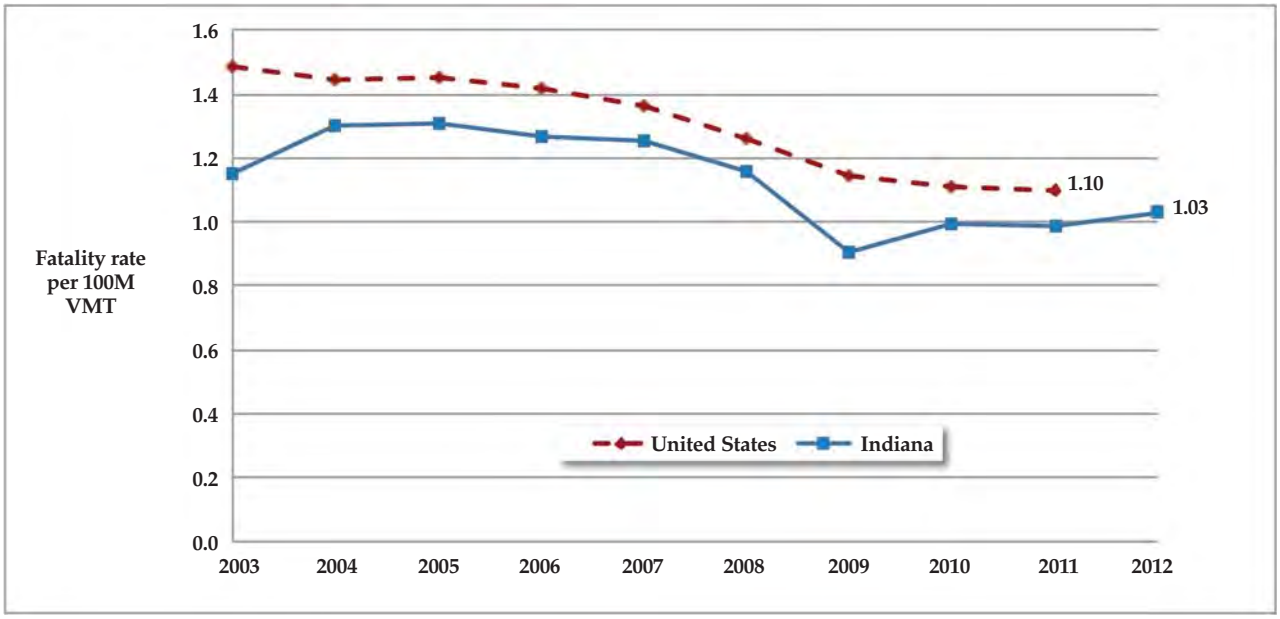
2) Counts of fatalities by locale will not match total fatalities due to the exclusion of fatal records where locale could not be determined.

GOALS: Reducing fatalities and serious bodily injuries

The likelihood of a person dying in a traffic crash is influenced by many factors, including, but not limited to seatbelt 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.

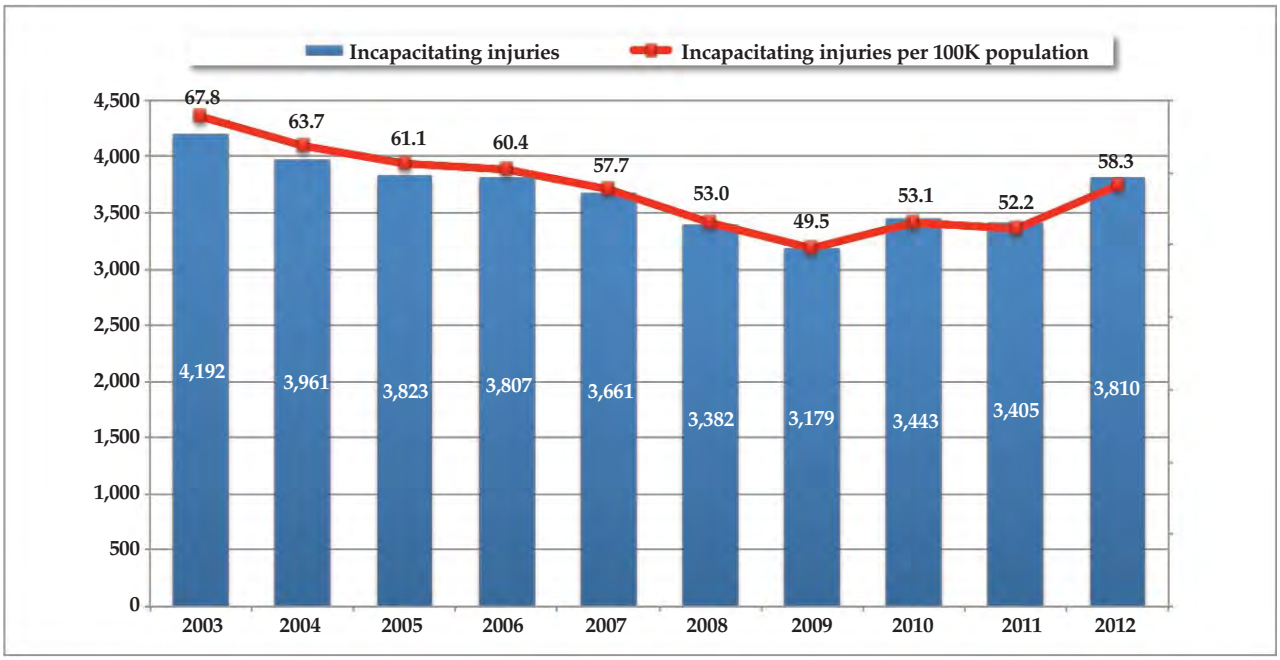
In Indiana and across the country, traffic fatality rates have generally decreased over the last 10 years. Indiana's rates of fatalities per 100M vehicle miles traveled (VMT) have been declining since 2004 and reached an historic low in 2009 (Figure 1.1). Fatality rates in Indiana over this time period (2003 - 2012)

Figure 1.1. Traffic fatalities per 100m vehicle miles traveled (VMT), 2003-2012



Sources: Fatality Analysis Reporting System (FARS); Indiana State Police; Bureau of Transportation Statistics
Note: FARS data for 2012 not yet available.

Figure 1.2. Individuals suffering incapacitating injuries in Indiana collisions, 2003-2012



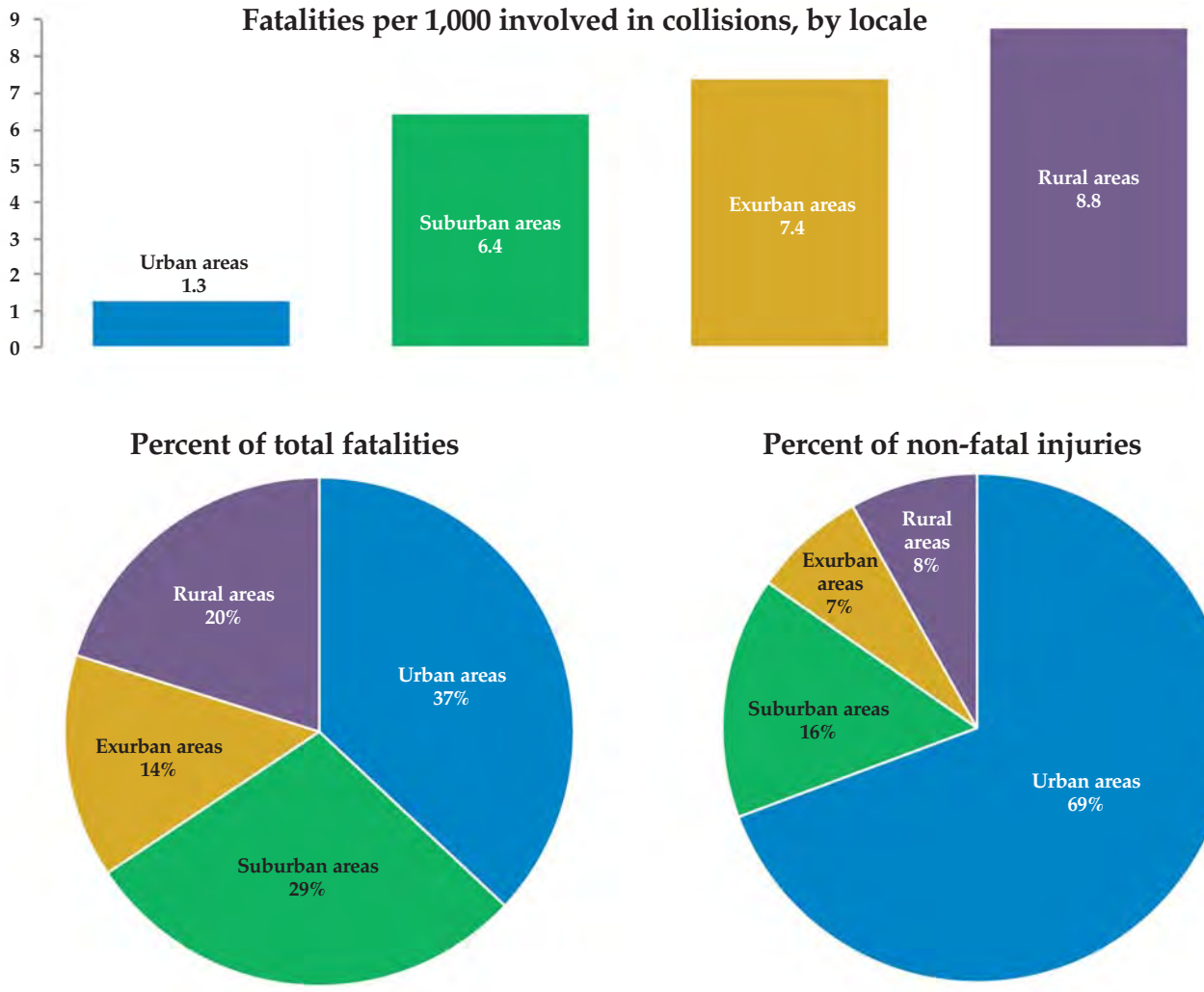
Sources: Indiana State Police; U.S. Census Bureau

have been lower than that of the nation. Fatality rates in the state increased slightly between 2010 and 2012.

The number of incapacitating injuries occurring in Indiana traffic collisions declined steadily between 2003 and 2009 (Figure 1.2). The rate of incapacitating injuries per 100,000 population decreased from 68 to 50 during this time period. The rate increased slightly since 2009, from 49 injuries per 100,000 population to 58 in 2012.

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). In 2012, about 20 percent of all traffic fatalities occurred in rural areas, compared to 8 percent of non-fatal injuries (Figure 1.3). The *rural* rate of fatalities per 1,000 involved in collisions was 8.8 in 2012, compared to 1.3 per 1,000 in *urban* areas.

Figure 1.3. Fatality rates and geographic distribution of fatalities and non-fatal injuries in Indiana crashes, by Census locale, 2012



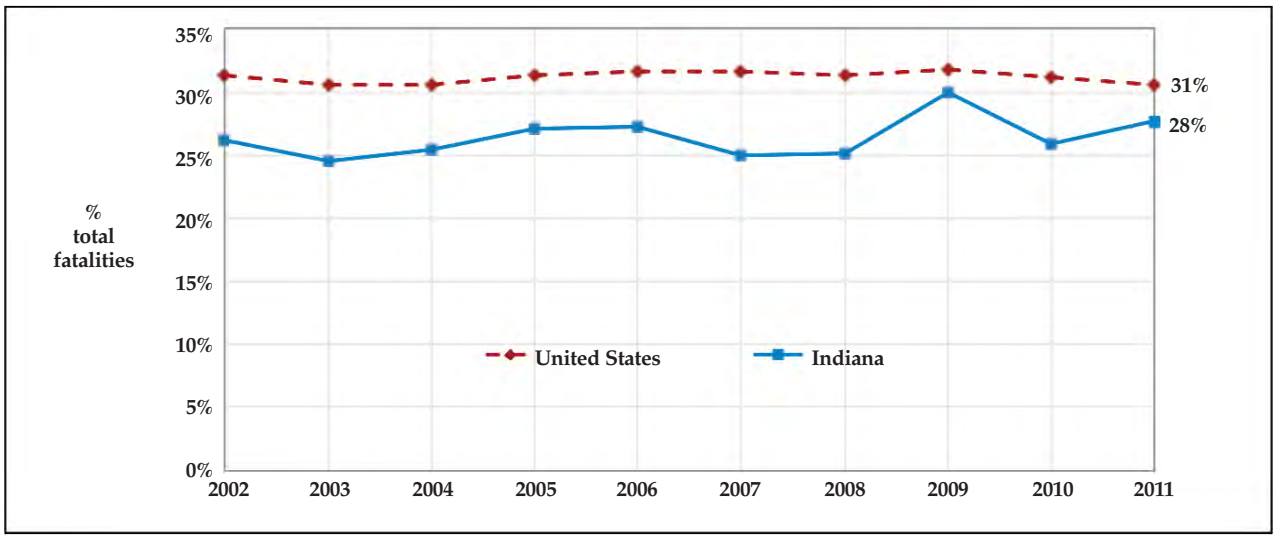
Source: Indiana State Police

Notes:
1) *Non-fatal* injuries include *incapacitating, non-incapacitating,* and *possible* injuries.
2) Excludes cases where locale could not be determined.
3) See glossary for Census locale definitions.

GOAL: Reducing impaired driving

Since 2002, the percent of Indiana traffic fatalities that involved an impaired driver (blood alcohol content [BAC] = .08 grams per deciliter or higher) has been lower than that of the United States (Figure 1.4). According to the most recent data available from the NHTSA's Fatality Analysis Reporting System (FARS), 28 percent of all 2011 Indiana traffic fatalities occurred in crashes involving an alcohol-impaired driver. NHTSA imputations for alcohol-impaired crashes consistently vary from data on alcohol-impaired driving as reported by Indiana law enforcement officers to the Indiana State Police (See Figure 1.5 for comparison), on average amounting to an additional seven percentage points during 2003-2011.

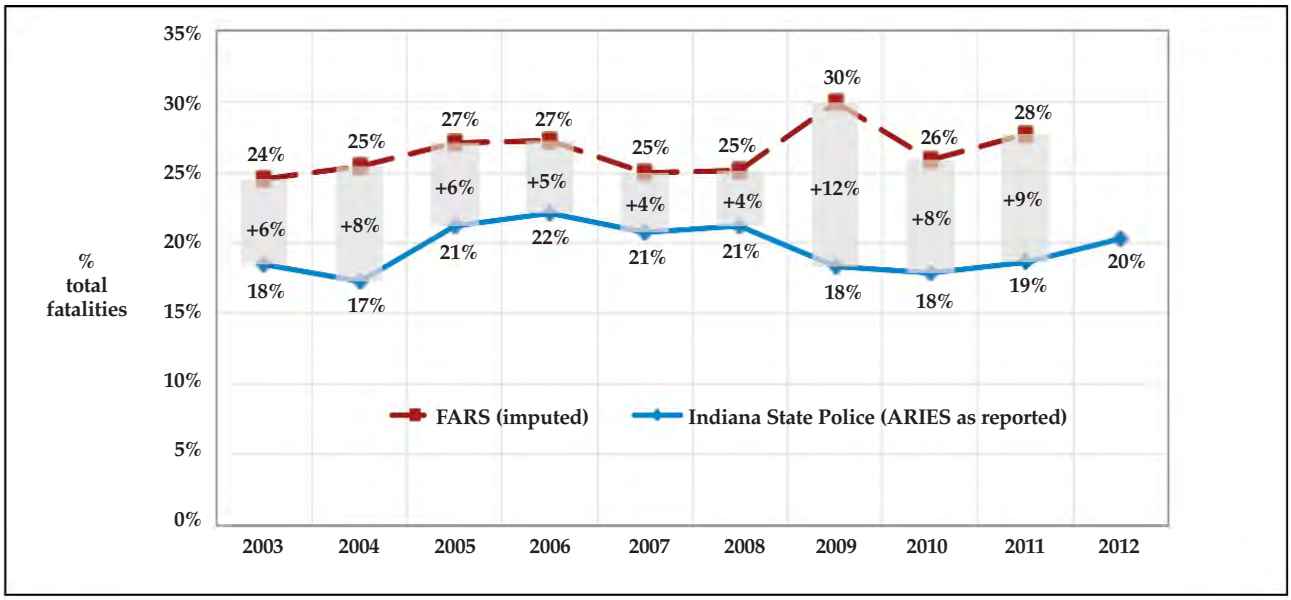
Figure 1.4. Alcohol-impaired traffic fatalities as a percent of total traffic fatalities, 2002-2011



Source: Fatality Analysis Reporting System

Notes:
1) NHTSA imputations for alcohol-impaired crashes consistently vary from data on alcohol-impaired driving as reported by the Indiana State Police (See Figure 5 for comparison).
2) FARS data for 2012 not yet available.

Figure 1.5. Alcohol-impaired traffic fatalities as a percent of total traffic fatalities in Indiana, comparison of FARS imputed data to Indiana ARIES data as reported, 2003-2012

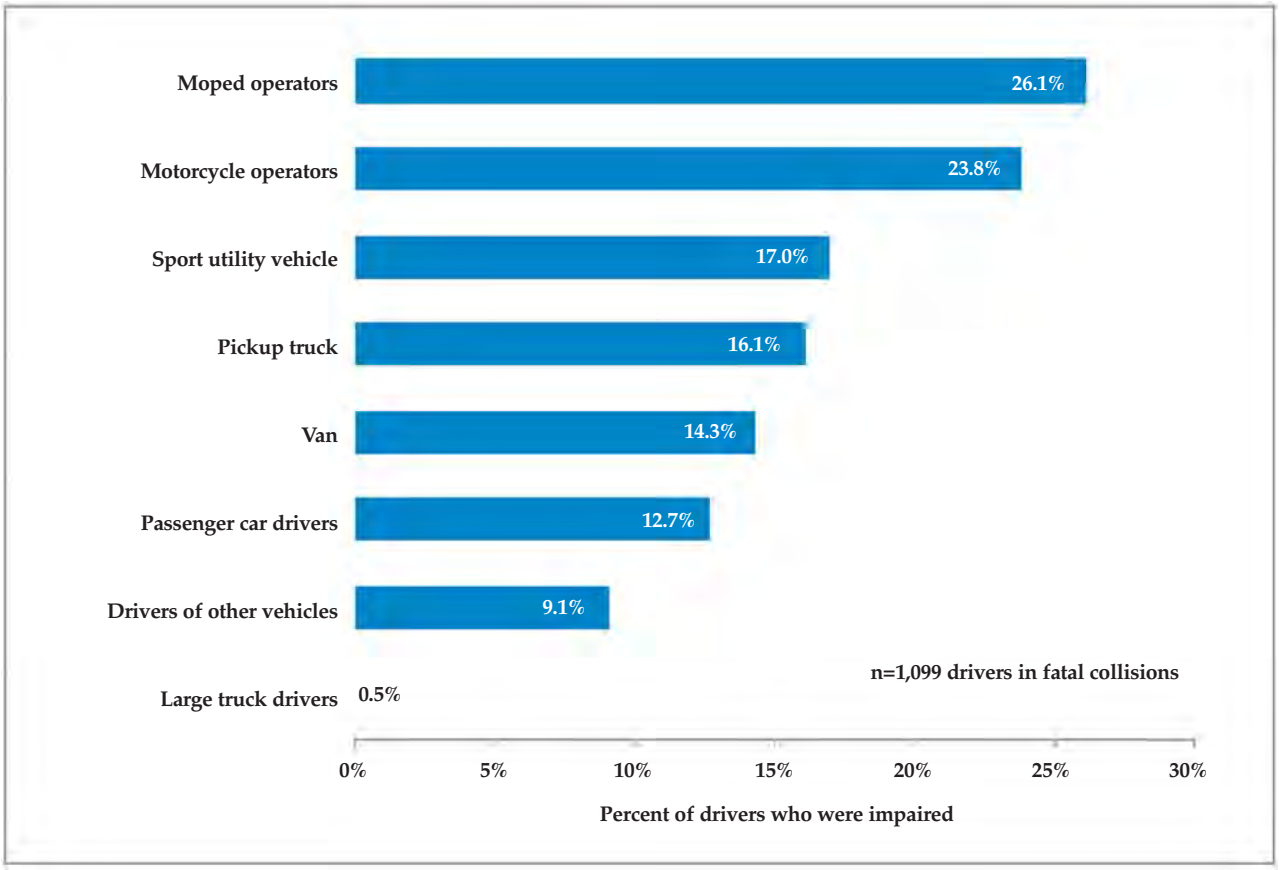


Sources: Fatality Analysis Reporting System, Indiana State Police

Notes:
1) FARS data is imputed by NHTSA from ARIES data. NHTSA imputations for alcohol-impaired crashes consistently vary from data on alcohol-impaired driving as reported by the Indiana State Police.
2) FARS data for 2012 not yet available.

Rates of alcohol impairment vary by vehicle type. Motorcyclists and moped operators are more likely to be impaired in fatal crashes than are drivers of other vehicle types (Figure 1.6). In 2012, about 26 percent of moped operators and 24 percent of all motorcyclists involved in fatal crashes were legally impaired. Over that same time period, 13 percent of passenger car drivers, 16 percent of pickup truck drivers, and less than 1 percent of large truck drivers were impaired.

Figure 1.6. Percent of drivers involved in fatal collisions that were legally impaired, by vehicle type, 2012

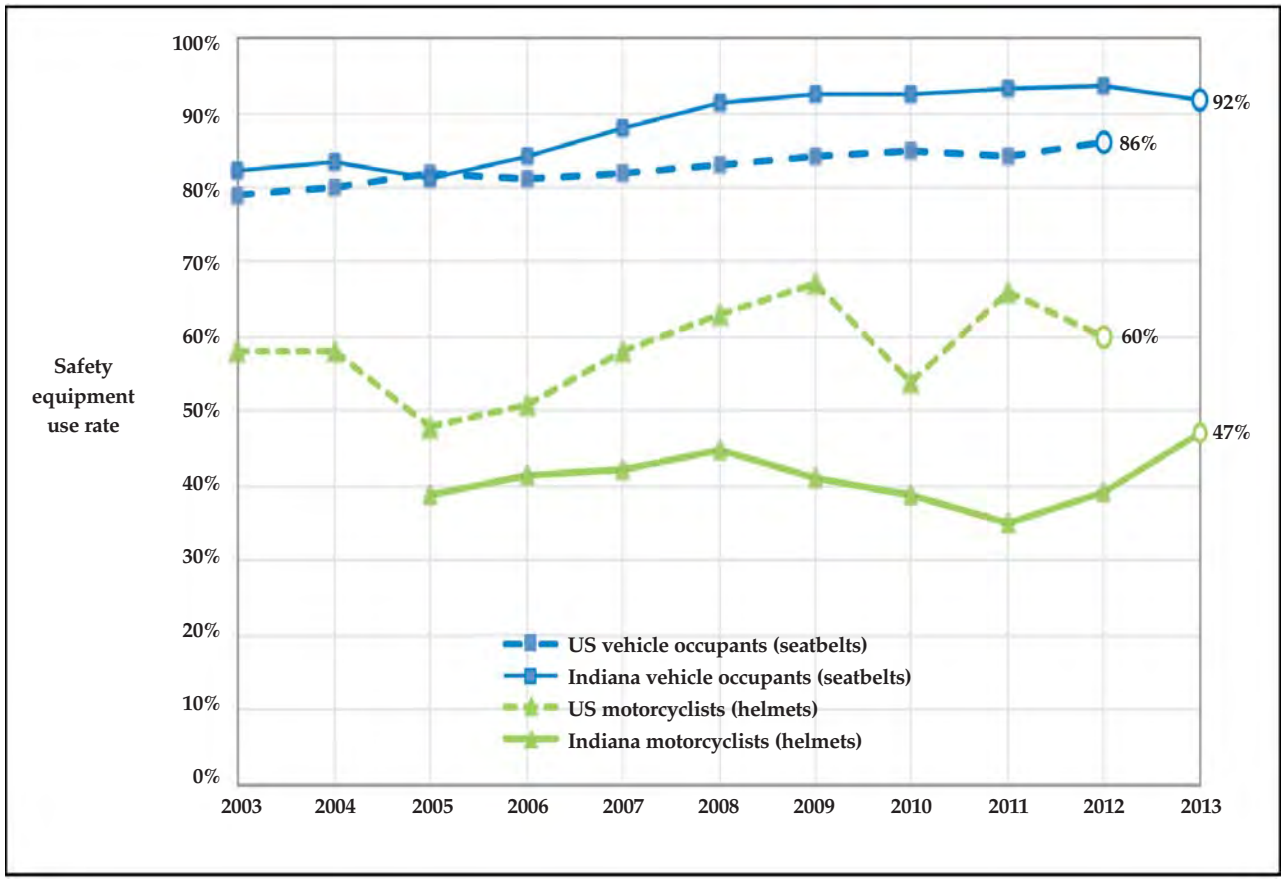


Source: Indiana State Police
Note: *Other vehicles* includes *commercial buses, school buses, farm vehicles,* and *recreational vehicles*.

GOAL: Increasing safety equipment usage

Indiana's observational rate of restraint use among passenger vehicle occupants has increased from 82 percent in 2003 to over 92 percent in 2013, 6 percentage points higher than the national rate in 2012. However, while not legally mandated, helmet use among motorcyclists in crashes in Indiana has lagged far behind the national rate, and stood at 39 percent in 2012 compared to 60 percent nationally (Figure 1.7). According to observational surveys conducted in Indiana, pickup truck restraint use rates have increased dramatically over the last decade, from a rate of 57 percent in 2003 to 82 percent in 2013 (Figure 1.8).

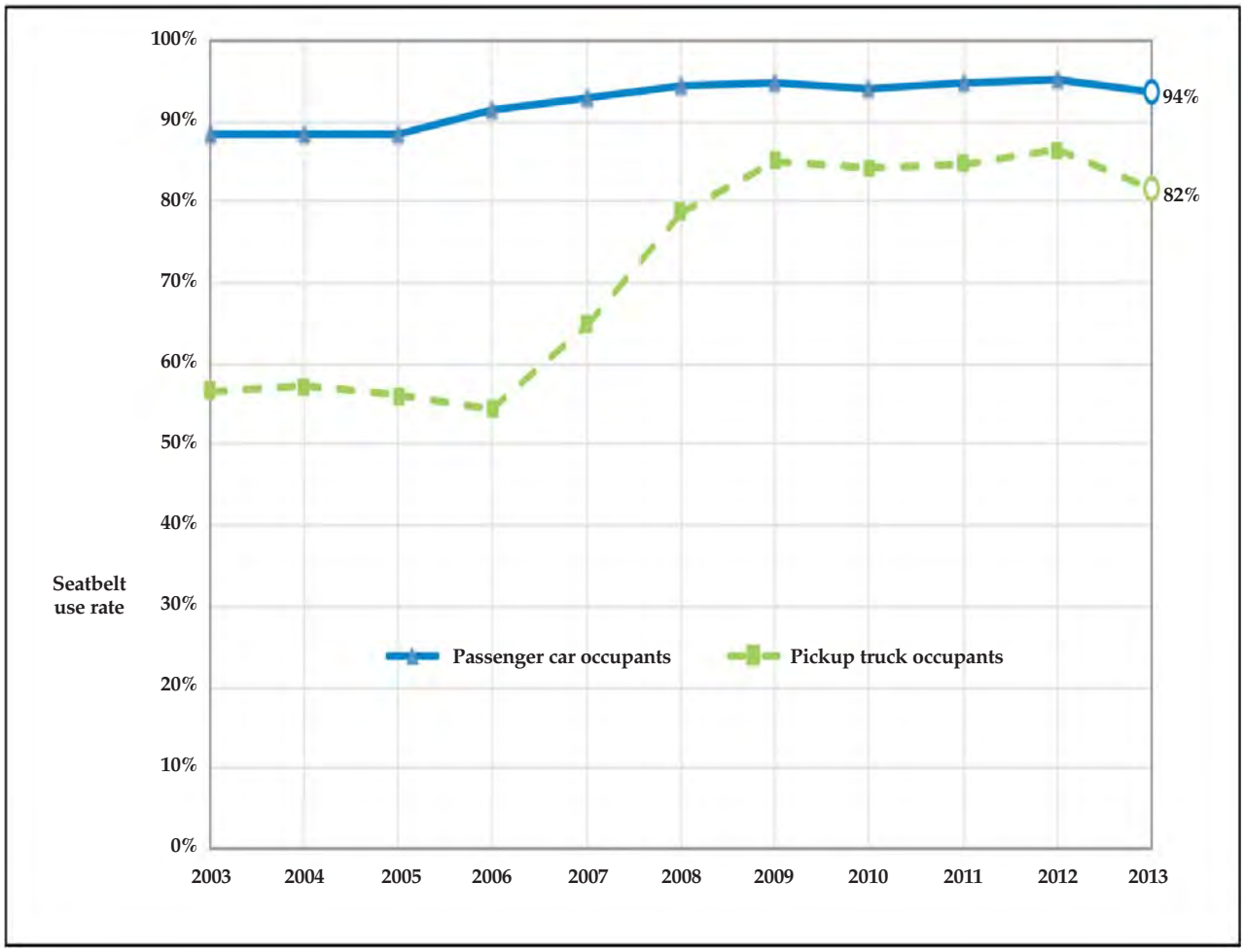
Figure 1.7. Comparison of observed safety equipment usage rates by vehicle type, 2003-2013



Sources:
Seat Belt Use in 2012 - Use Rates in the States and Territories. National Highway Traffic Safety Administration: DOT HS 811 809
Motorcycle Helmet Use in 2012—Overall Results. National Highway Traffic Safety Administration: DOT HS 811 759
Indiana Safety Belt Observational Survey, June 2013, Survey Results. Center for Road Safety, Purdue University

Notes:
1) US vehicle occupant seatbelt use and motocyclist helmet use are not yet available for 2013.
2) Helmet use data for Indiana are not available prior to 2005.
3) In 2013, the Center for Road Safety adopted a new survey methodology approved by NHTSA. This new approach incorporates changes in the weighting of samples that may contribute to the observed decrease in Indiana seatbelt usage in 2013.

Figure 1.8. Observed seatbelt usage rates on Indiana roads by vehicle type, 2003-2013

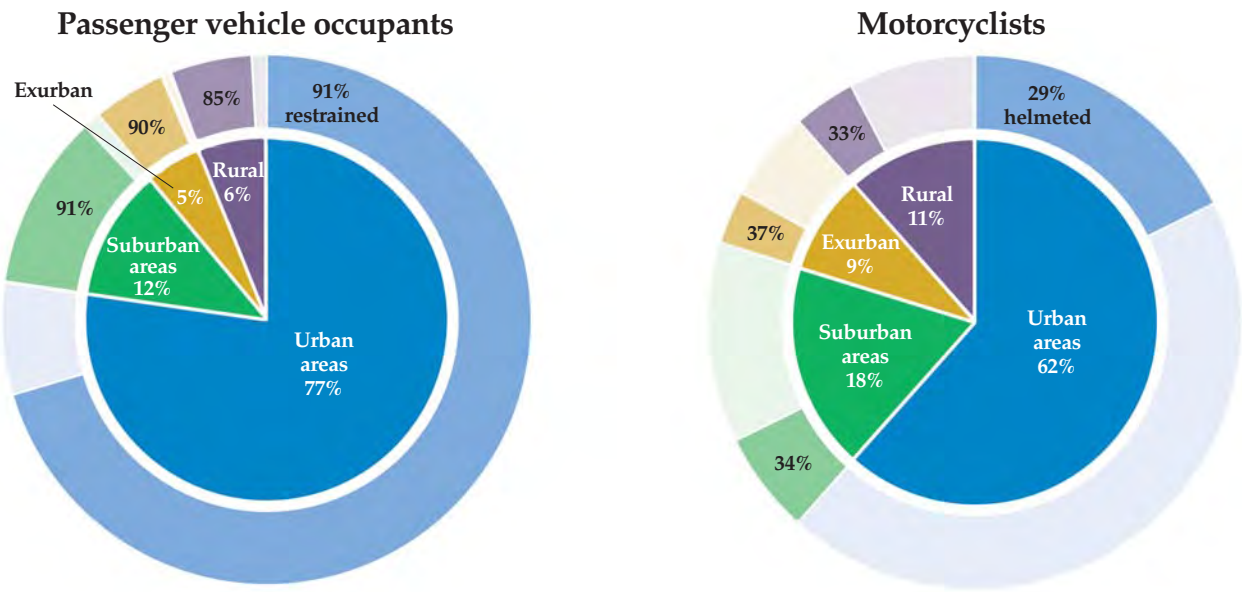


Sources: *Indiana Safety Belt Observational Survey, June, 2013, Survey Results.* Center for Road Safety, Purdue University

Note: In 2013, the Center for Road Safety adopted a new survey methodology approved by NHTSA. This new approach incorporates changes in the weighting of samples that may contribute to the observed decreases in Indiana seatbelt usage in 2013.

Restraint use and helmet use among people involved in crashes varies by crash locale. Restraint use among passenger vehicle occupants tends to increase in more densely populated areas. In 2012, 91 percent of passenger vehicle occupants involved in collisions in *urban* areas were restrained compared to 85 percent for *rural* crashes (Figure 1.9). While motorcycle helmet usage is far lower than seatbelt usage across all locales, helmet usage by motorcyclists involved in crashes is greater outside of urban areas in Indiana. Among motorcyclists in crashes, 29 percent of motorcyclists in crashes in *urban* areas were helmeted, compared to 33 percent in *rural* areas.

Figure 1.9. Geographic distribution of vehicle occupants and motorcyclists in crashes and rates of safety equipment use, 2012



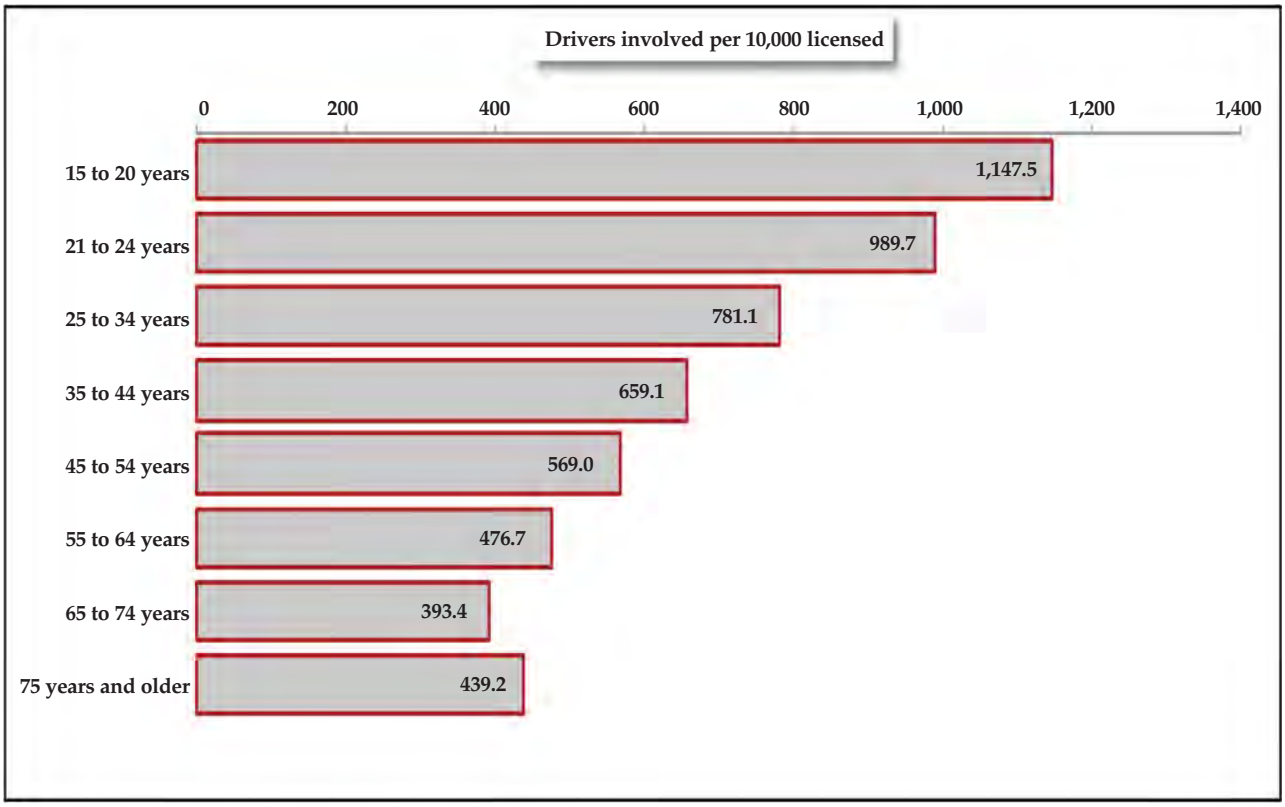
Inner pie: Geographic distribution of occupants involved
Outer ring: Safety equipment use rates, by locality

Source: Indiana State Police
Notes:
1) Passenger vehicles include vehicles reported as a *passenger car, pickup truck, van,* or *sport utility vehicle*.
2) Excludes cases where locale could not be determined.
3) See glossary for Census locale definitions.

GOAL: Reducing young driver involvement in fatal crashes

In 2012, collision involvement rates were much higher among young drivers than any other age group (Figure 1.10). The crash rate among drivers ages 15 to 20 was 1,148 per 10,000 licensed drivers and declined with each age group up to 75 years and older. Crash rates are lowest among drivers ages 65 to 74 (393 per 10,000 licensed) and rise slightly among drivers 75 and older. Young drivers are more likely than older drivers to be involved in accidents due to aggressive driving behavior and a lack of experience. Young drivers are generally more likely than older drivers to lose control or to be distracted when involved in a collision. Among risky driving behaviors, younger drivers are more likely to have been following other vehicles too closely or speeding. Other risk factors for young drivers include nighttime driving, driving with young passengers, and cell phone use (Nagle, 2011).

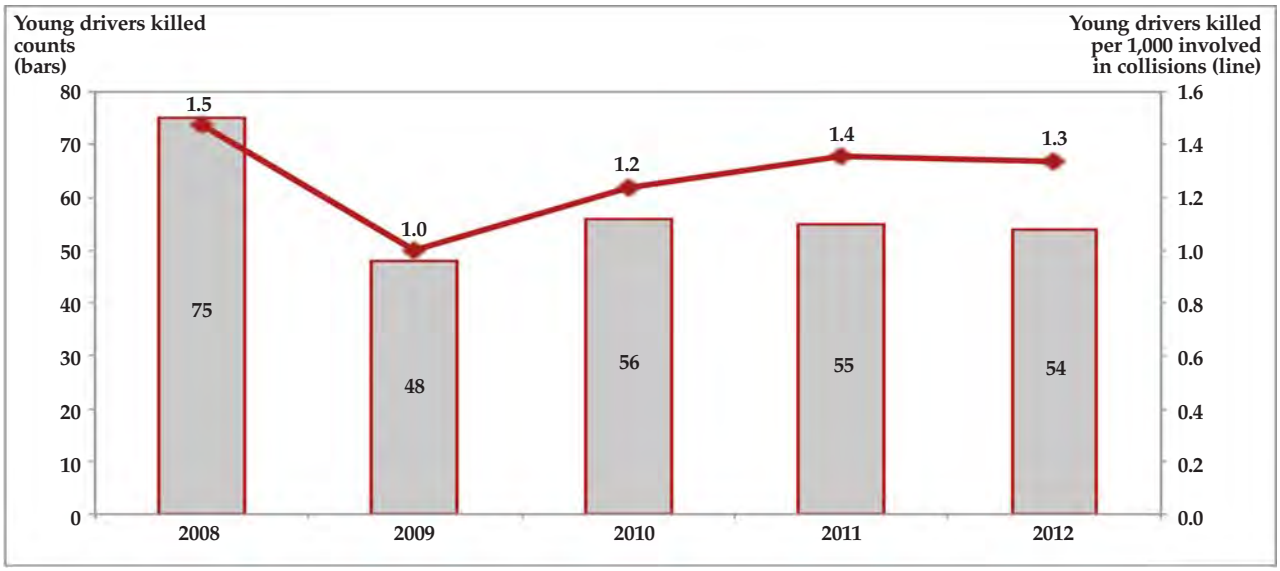
Figure 1.10. Drivers in Indiana crashes per 10,000 licensed, by age group, 2012



Sources: Indiana Bureau of Motor Vehicles, Indiana State Police

While the overall number of young drivers involved in collisions has decreased since the July 2009 implementation of the Indiana Graduated Driver Licensing (GDL) system (from 48,015 young drivers in 2009 to 40,417 in 2012; not shown in Figure 1.11), the number of young drivers killed in collisions has remained steady since 2010. In 2012, 54 young drivers were killed in Indiana collisions (Figure 1.11).

Figure 1.11. Young drivers killed in Indiana collisions, 2008-2012

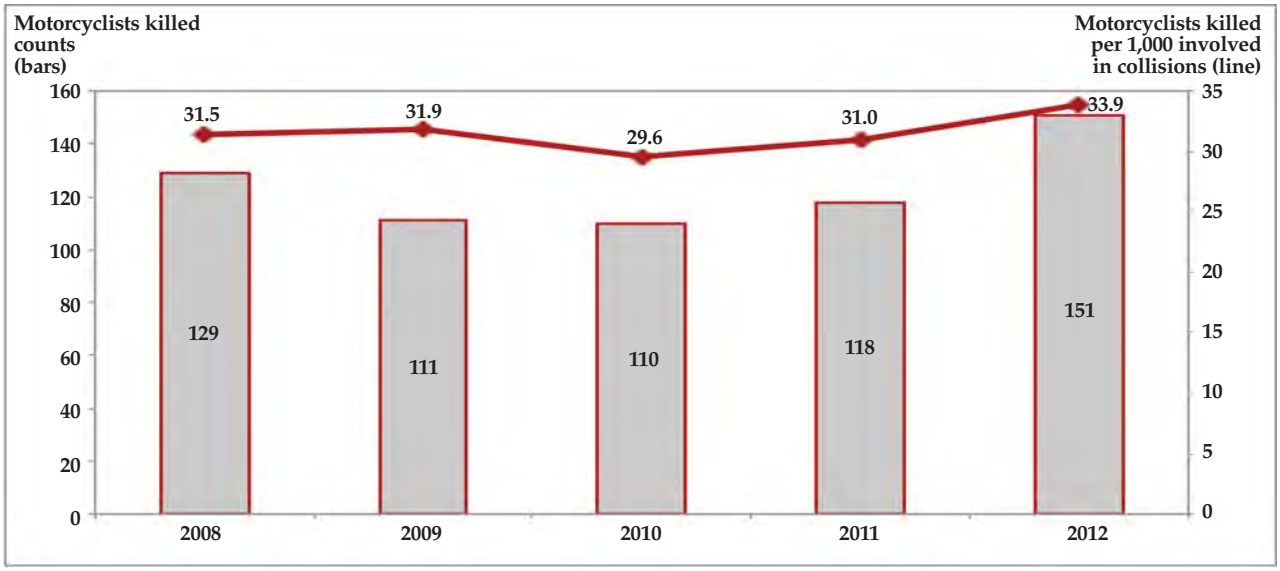


Source: Indiana State Police
Note: *Young drivers* include drivers ages 15 to 20 years old.

GOAL: Reducing motorcyclist fatalities

2012 marked a five-year high in the number of Indiana motorcyclist fatalities (Figure 1.12). The number of motorcyclists killed increased 28 percent from 118 in 2011 to 151 in 2012. The rate per 1,000 motorcyclists involved in crashes increased from 31 per 1,000 in 2011 to 33.9 per 1,000 in 2012. Earlier exhibits demonstrate two major contributing factors to Indiana's motorcycle fatality rate: the high rate of impaired motorcycle operators illustrated in Figure 1.6, and the low rate of helmet usage illustrated in Figure 1.7.

Figure 1.12. Motorcyclists killed in Indiana collisions, 2008-2012



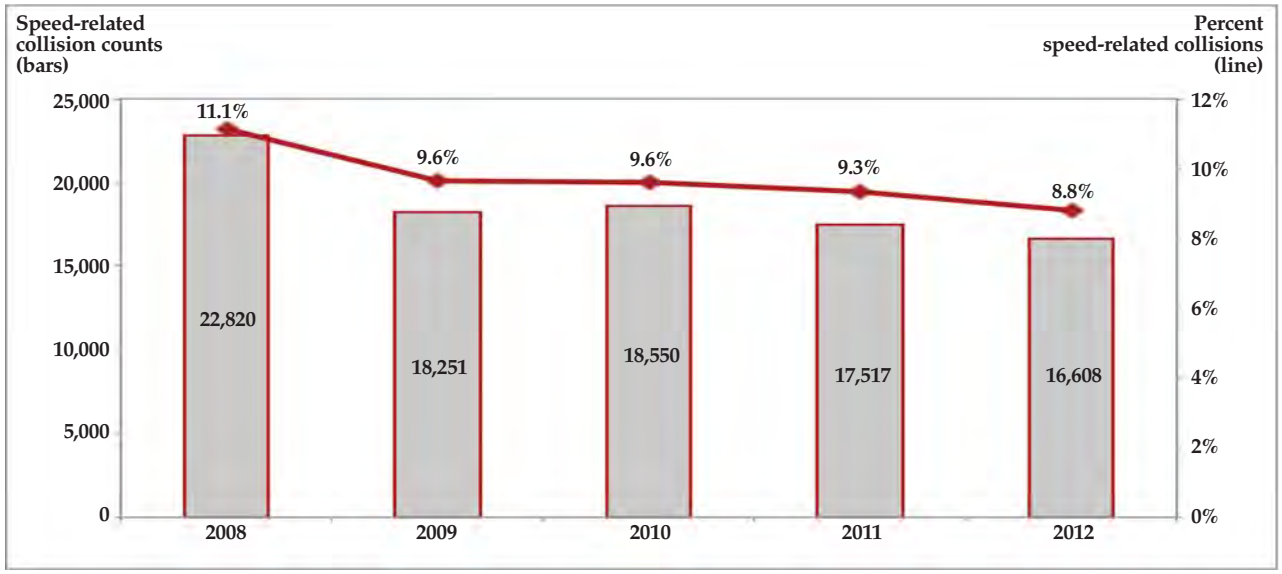
Source: Indiana State Police
Note: *Motorcyclists* include moped operators and passengers.

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). Between 2008 and 2012, the number of Indiana collisions that involved a speeding driver decreased from 22,820 to 16,608, respectively (Figure 1.13). The percent of Indiana collisions that involved a speeding driving dropped from 11 percent in 2008 to 9 percent in 2012.

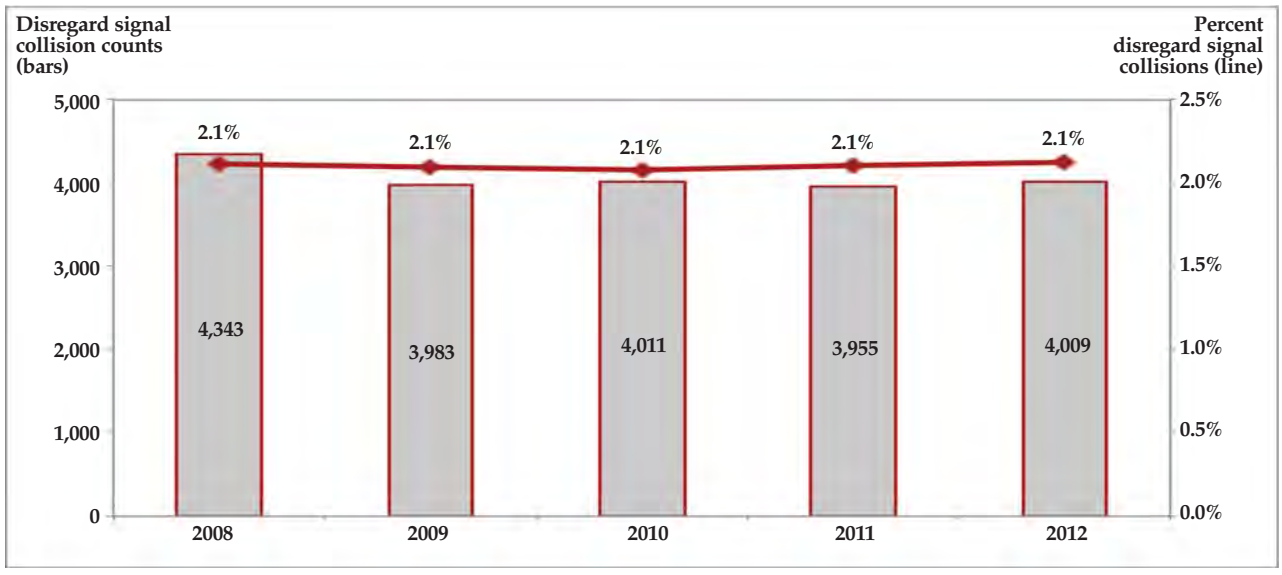
Disregarding signals is also a form of dangerous driving, and is more common among the most inexperienced (ages 15 to 17 years) and most elderly population (ages 65 and older) (not shown in Figure 1.14). While speed is nearly always a conscious behavior for the driver, in certain instances disregarding signals represents a lack of awareness rather than a purposeful choice. Both the number and percent of Indiana collisions that involved a driver that disregarded a signal have remained steady since 2009 (Figure 1.14).

Figure 1.13. Indiana collisions that involved a speeding driver, 2008-2012



Source: Indiana State Police

Figure 1.14. Indiana collisions that involved a driver that disregarded a signal, 2008-2012

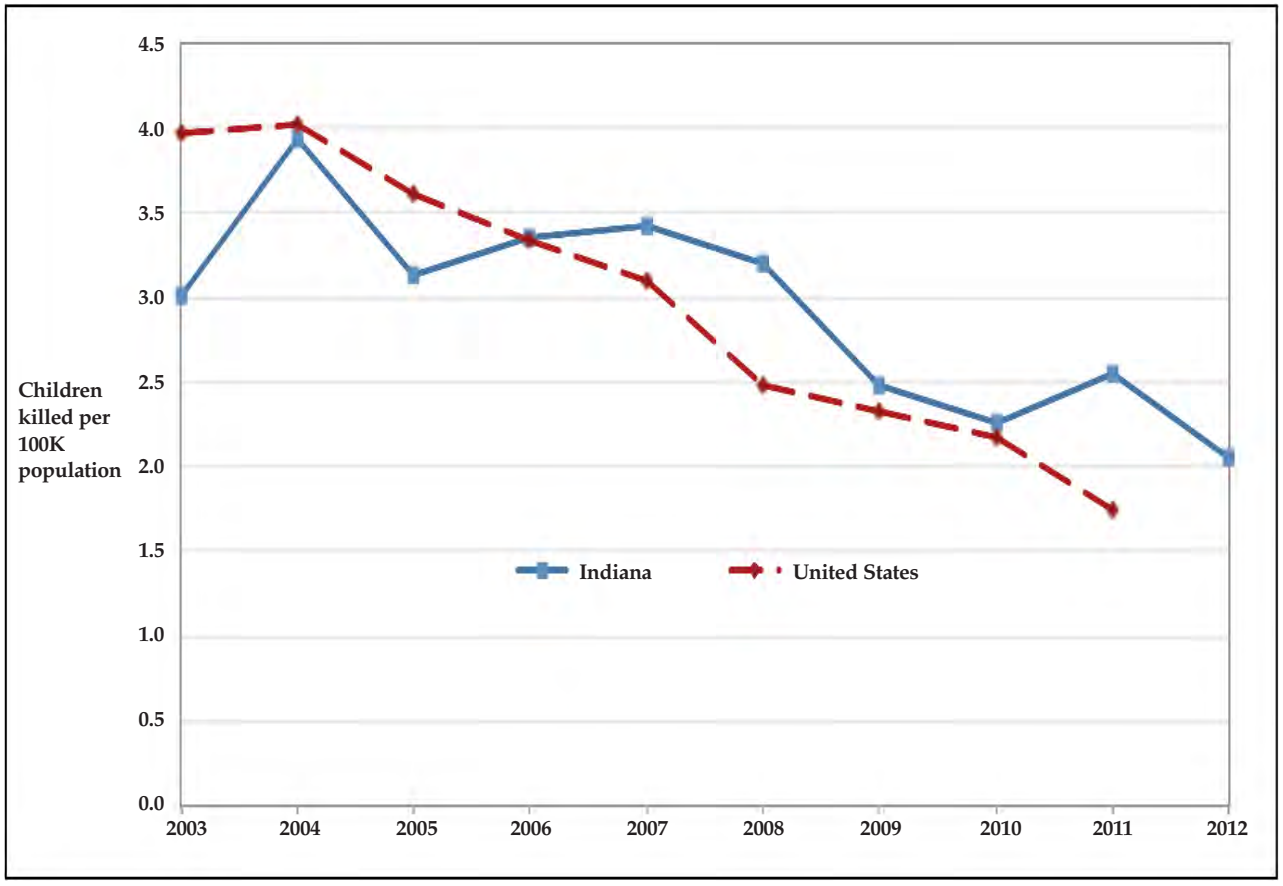


Source: Indiana State Police

GOAL: Reducing fatalities and serious injuries among children

From 2008 to 2012, the number of children killed in Indiana traffic collisions declined from 45 to 29, an annualized decrease of 10 percent (not shown in Figure 1.15). Since 2006, the rate per 100,000 population of children (ages 0 to 15) killed in traffic collisions in Indiana has been higher than the national rate.

Figure 1.15. Children (under age 16) killed in traffic crashes per 100,000 population, 2003-2012

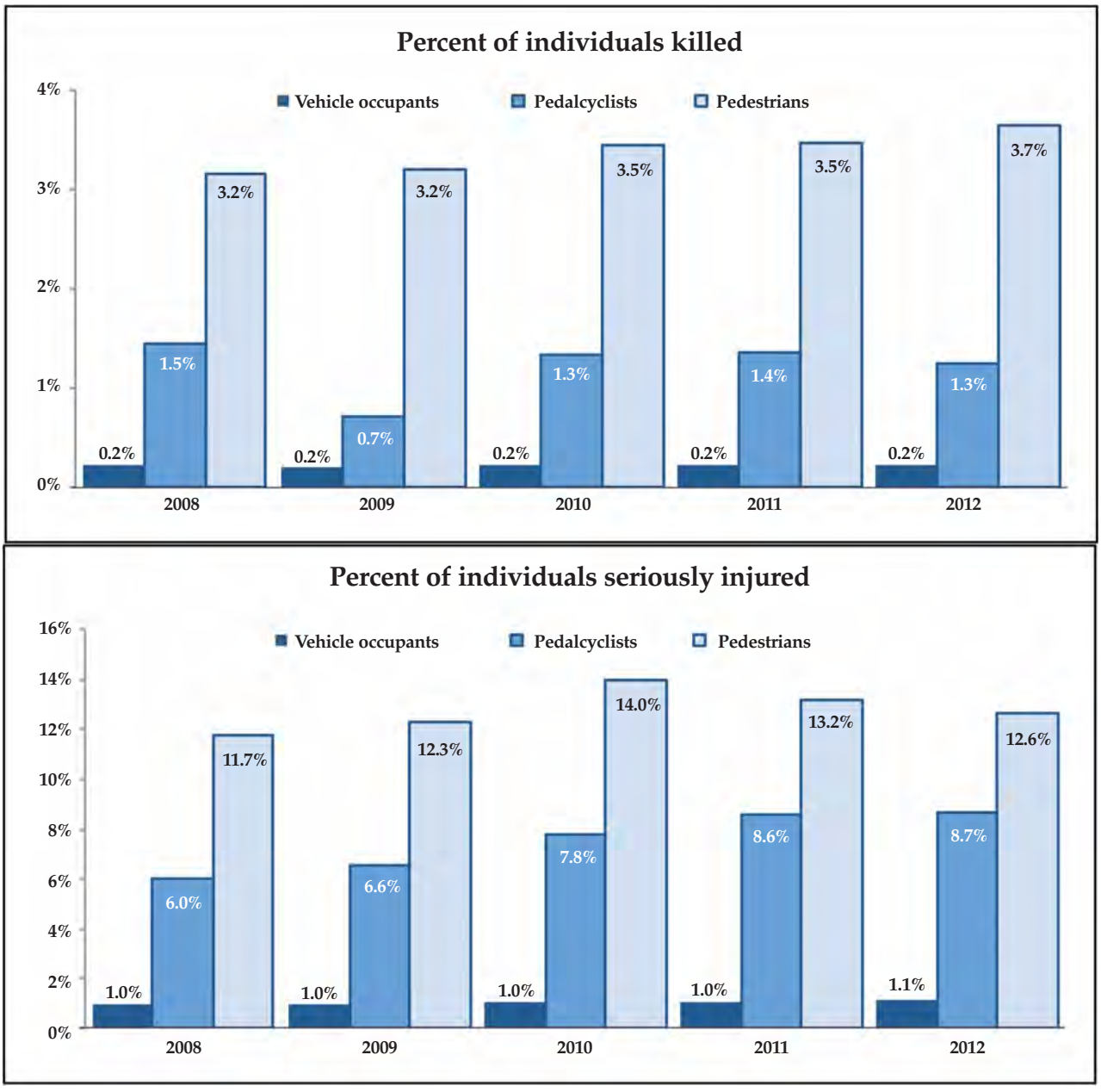


Sources: Fatality Analysis Reporting System (FARS); US Census Bureau; 2012: Indiana State Police
Note: FARS data for 2012 not yet available.

GOAL: Reducing fatalities and serious injuries among non-motorists

In 2012, non-motorists (pedestrians and pedalcyclists) represented less than 1 percent of all individuals in traffic collisions, but 10 percent of total Indiana traffic fatalities (not shown). The percent of all pedestrians in Indiana crashes that were killed increased from 3.2 percent in 2008 to 3.7 percent in 2012 (Figure 1.16). The percent of all pedestrians in crashes that were seriously injured decreased slightly in 2012 to 12.6 percent.

Figure 1.16. Percent of individuals killed and seriously injured in Indiana crashes, by person type, 2008-2012



Source: Indiana State Police

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

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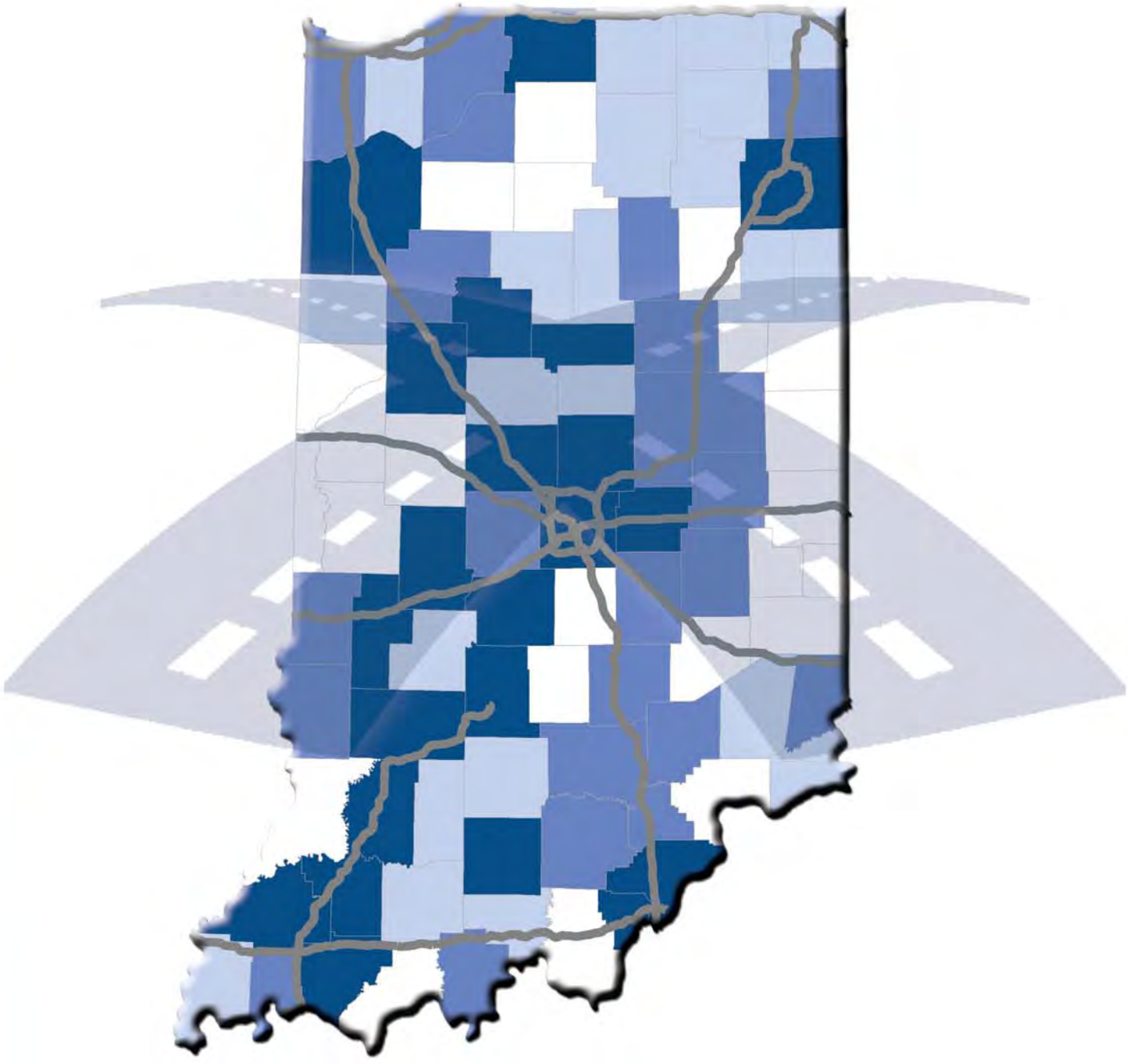
Nagle, M. (2011). *Effects of graduated driver licensing on crash outcomes in Indiana.* Indianapolis: Indiana University Public Policy Institute, Document ID: 11-C01. Retrieved from http://policyinstitute.iu.edu/PubsPDFs/TrafficBrief_GDL2011_Final.pdf

Newby, W. (2012). *Traffic safety facts: Dangerous driving, 2011.* Indianapolis: Indiana University Public Policy Institute, Document ID: 11-C05. Retrieved from http://policyinstitute.iu.edu/PubsPDFs/DangDriving2011_FINAL.pdf

CHAPTER 2

GENERAL TRENDS



GENERAL TRENDS, 2012

Indiana traffic fatalities increased 3.9 percent from 2011 to 2012, but decreased annually on average 0.7 percent since 2003 (Table 2.1). The rate of traffic fatalities per 100 million vehicle miles traveled (VMT) in Indiana increased slightly from 0.99 in 2011 to 1.03 in 2012, with an annualized percent decline of 1.3 percent since 2003. The Indiana traffic fatality rate per 100 million VMT continues to be lower than that of the United States, with the Indiana rate at 0.99 compared to 1.10 for the United States (Figure 2.1) in 2011 (latest U.S. data available).

The number of collisions in Indiana (188,841) increased by 0.4 percent from 2011 to 2012. Between 2008 and 2012, winter months typically had the highest incidence of total collisions while summer months had the highest incidence of fatal collisions (Table 2.2). The lowest incidence of both total collisions and fatal collisions occurred during early spring months during this 5-year period. The total number of fatal collisions increased 6.5 percent from 2011 to 2012.

When looking at all collisions by days of the week, Fridays consistently had the highest incidence of collisions and Sundays had the lowest between 2008 and 2012 (Table 2.3). With the exception of 2011, weekend days had the highest incidence of fatal collisions during this same time period.

While the number of Indiana crashes have remained steady overall since 2009, *aggressive driving* collisions and crashes that involved an *alcohol-impaired* driver have been on the rise during this time period (Figure 2.2). Indiana collisions that involved a *speeding* driving have been on the decline since 2008.

Drivers killed in Indiana traffic collisions have generally made up about 70 percent of all fatalities since 2008 (calculated from Table 2.4). The total number of vehicle occupants (drivers and passengers) and non-motorists killed or injured in Indiana traffic collisions in 2012 (47,915) increased 4.2 percent from 2011 (Table 2.4).

The number of Indiana collisions that involved an *alcohol-impaired* driver increased at an annualized rate of 11 percent between 2008 and 2012 (Table 2.5). Total *alcohol-impaired* collisions (5,152) increased 4.3 percent in 2012, up from 4,938 in 2011. Traffic fatalities that occurred in *alcohol-impaired* collisions increased 12.9 percent in 2012 from the previous year. Eighty-four percent of *alcohol-impaired* traffic fatalities (132 of 158) were drivers (calculated from Table 2.5).

The percentage of Indiana fatal collisions that involve an impaired driver is particularly high during holiday periods. While 12.8 percent of all fatal collisions in 2012 involved an impaired driver, 25 percent of fatal collisions that occurred during the New Year's holiday period involved a driver who was legally impaired (Table 2.6). Likewise, 58.3 percent of fatal collisions that occurred over St. Patrick's Day, and 40 percent of fatal collisions that occurred over Memorial Day involved a driver who was legally impaired.

Aggressive driving collisions (4,494) increased 4.1 percent in 2012, and have increased at an annualized rate of 2.8 percent since 2008 (Table 2.7). The total number of individuals killed or injured in *aggressive driving* crashes increased from 1,795 in 2011 to 1,951 in 2012 (8.7 percent). Thirty-six individuals were killed in 2012 in *aggressive driving* collisions.

The number of Indiana collisions that involved a driver who was *speeding* decreased at an annualized rate of 7.6 percent between 2008 and 2012 (Table 2.8). Total *speed-related* collisions (16,608) decreased 5.2 percent in 2012, down from 17,517 in 2011. While overall *speeding* collisions decreased in 2012, the number of traffic fatalities that occurred in *speeding* collisions increased 16.7 percent in 2012.

The number of individuals killed in Indiana traffic collisions that involved a driver who *disregarded a signal* increased 35.3 percent (up from 17 fatalities in 2011 to 23 fatalities in 2012). Total *disregarding a signal* collisions (4,009) increased 1.4 percent in 2012, but have decreased at an annualized rate of 2 percent since 2008 (Table 2.9). Collisions that involved a *hit-and-run* driver (23,050) followed a similar pattern, increasing 1.8 percent between 2011 and 2012, but decreasing at an annualized rate of 2.1 percent between 2008 and 2012 (Table 2.10). Indiana crashes that involved a driver *distracted by a cell phone* (Table 2.11) decreased from 1,168 in 2011 to 1,132 in 2012 (3.1 percent).

Alcohol-impaired collisions represented just 2.7 percent of all Indiana collisions in 2012 (Table 2.12), while 20.9 percent of fatal crashes involved an impaired driver. Nearly 9 percent of total crashes and 22.7 percent of fatal crashes involved a driver who was *speeding*.

When considering the geography of Indiana collisions, all locales (*urban, suburban, exurban,* and *rural*) saw an increase in 2012 (Figure 2.3). The most dramatic increases occurred among fatal collisions in *suburban* areas (up 19.9 percent, from 166 in 2011 to 199 in 2012) and fatal collisions in *rural* areas (up 21.2 percent, from 113 in 2011 to 137 in 2012).

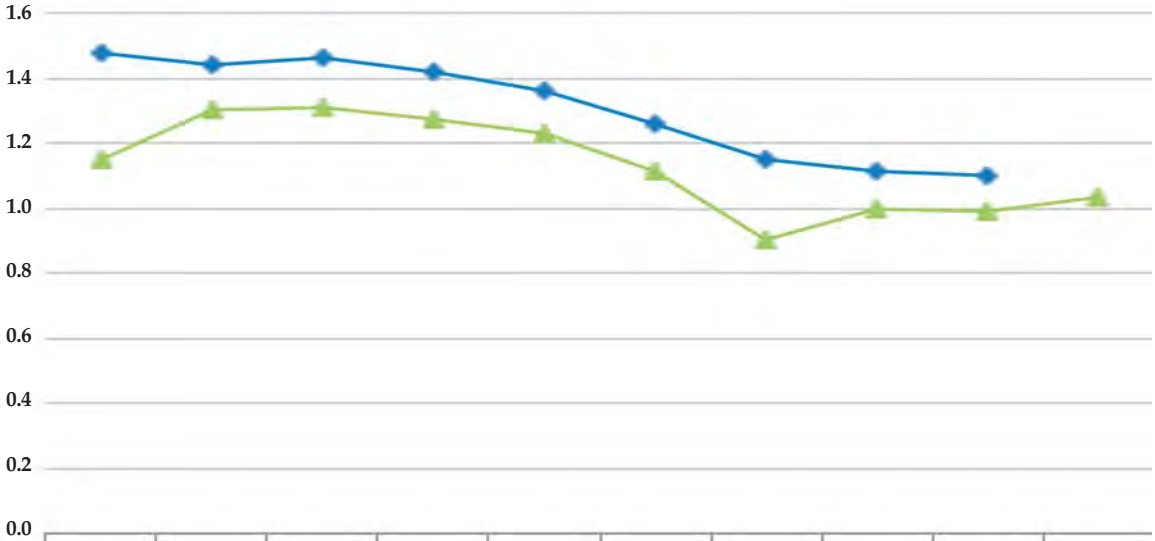
Table 2.1. Indiana traffic fatalities and fatality rates, 2003-2012

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 traveled (billions)	Fatalities per 100m VMT
2003	833	6,197	13.44	4,536	18.36	5,884	14.16	73	1.36
2004	947	6,233	15.19	4,521	20.95	5,678	16.68	73	1.42
2005	938	6,279	14.94	4,246	22.09	5,103	18.38	72	1.46
2006	902	6,333	14.24	4,246	21.24	5,103	17.68	71	1.25
2007	898	6,380	14.08	4,309	20.84	5,103	17.60	73	1.27
2008	820	6,425	12.76	5,550	14.77	6,053	13.55	74	1.09
2009	693	6,459	10.73	5,550	12.49	6,053	11.45	77	1.23
2010	754	6,491	11.62	5,550	13.58	5,903	12.77	76	1.11
2011	750	6,517	11.51	6,570	11.42	6,133	12.23	76	0.90
2012	779	6,537	11.92	4,446*	17.52	6,682*	11.66	76	1.00
									0.99
Annualized rates of change									
2003-2012	-0.7%		-1.3%		-0.5%		-2.1%		-2.2%
2008-2012	-1.3%		-1.7%		4.4%		-3.7%		-5.3%
2011-2012	3.9%		3.5%		53.5%		-4.7%		-0.9%

Sources:
2003-2011: National Highway Traffic Safety Administration, National Center for Statistics and Analysis, *State Traffic Data* (July 2013). DOT HS 811 801
2012: Indiana State Police, US Census Bureau, Indiana Bureau Motor Vehicles, Indiana Department of Transportation

Notes:
1) Indiana vehicle miles traveled for 2012 is a provisional estimate provided by the Indiana Department of Transportation (subject to change).
2) *Differences in BMV query methods for 2012 licensed drivers and registered vehicle counts (from NHTSA estimation models used for 2003-2011) likely contribute to the dramatic increase in *fatalities per 100,000* licensed in 2012.

Figure 2.1. Traffic fatalities per 100m vehicle miles traveled (VMT), 2003-2012



	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
U.S.	1.48	1.44	1.46	1.42	1.36	1.26	1.15	1.11	1.10	
Indiana	1.15	1.30	1.31	1.27	1.23	1.11	0.90	1.00	0.99	1.03

Sources:
2003-2011: National Highway Traffic Safety Administration, National Center for Statistics and Analysis, *State Traffic Data* (July 2013). DOT HS 811 801
2012: Indiana State Police, Indiana Department of Transportation

Notes:
1) Indiana VMT for 2012 is a provisional estimate provided by the Indiana Department of Transportation (subject to change).
2) U.S. fatality numbers for 2012 are not yet available.

Table 2.2. Total and fatal traffic collisions, by month, 2008-2012

Month	Total collisions					Fatal collisions				
	2008	2009	2010	2011	2012	2008	2009	2010	2011	2012
Jan	18,770	20,219	17,060	18,825	17,434	43	50	45	56	45
Feb	20,656	15,255	17,381	16,247	14,169	66	48	41	42	43
Mar	15,641	12,753	13,377	12,742	14,581	47	39	50	34	58
Apr	14,263	14,055	14,166	13,698	13,881	39	46	62	43	49
May	16,044	15,402	15,396	15,126	15,976	54	50	58	59	63
Jun	15,470	14,887	15,432	14,829	15,120	60	66	63	58	84
Jul	14,804	14,118	15,040	14,206	14,422	75	68	72	76	79
Aug	14,877	14,468	14,918	14,992	15,490	76	63	71	71	70
Sep	14,793	14,615	14,905	15,139	14,860	73	64	56	64	62
Oct	17,252	17,576	16,992	17,281	17,608	56	47	71	65	54
Nov	18,662	16,924	17,223	18,401	16,565	75	43	57	49	50
Dec	24,220	19,389	20,995	16,640	18,735	58	47	55	57	61
Total	**205,452**	**189,661**	**192,885**	**188,126**	**188,841**	**722**	**631**	**701**	**674**	**718**
High	*Dec*	*Jan*	*Dec*	*Jan*	*Dec*	*Aug*	*Jul*	*Jul*	*Jul*	*Jun*
Low	*Apr*	*Mar*	*Mar*	*Mar*	*Apr*	*Apr*	*Mar*	*Feb*	*Mar*	*Feb*

Low High

Source: Indiana State Police

Note: Conditional formatting color-scale illustrates months from low to high for the entire 5-year period, 2008-2012.

Table 2.3. Total and fatal traffic collisions, by day of week, 2008-2012

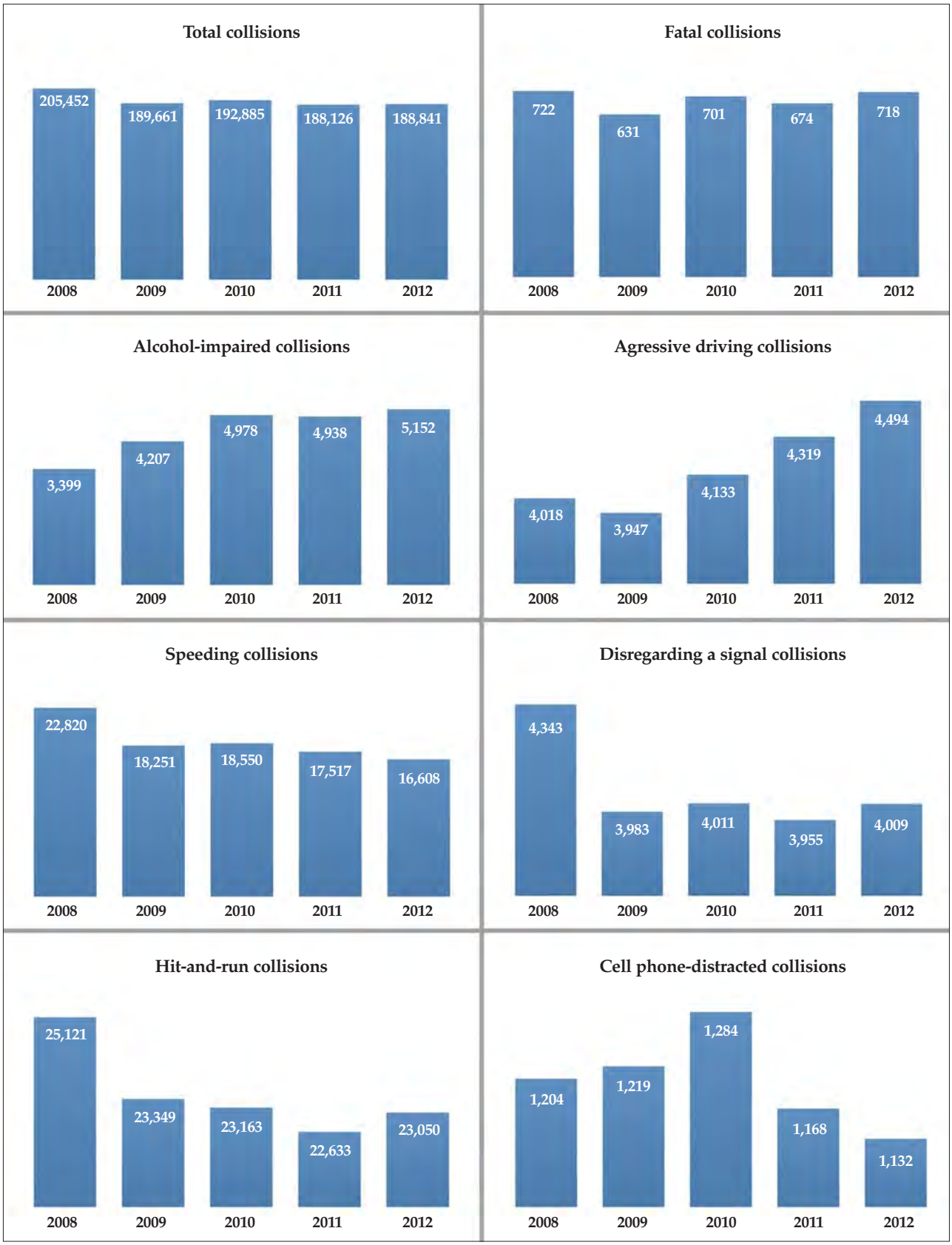
Month	Total collisions					Fatal collisions				
	2008	2009	2010	2011	2012	2008	2009	2010	2011	2012
Sun	19,466	19,955	19,966	18,913	19,187	103	95	96	97	103
Mon	28,546	26,233	27,441	27,088	27,008	96	67	79	92	88
Tue	34,245	28,436	28,483	28,457	26,946	110	87	95	105	92
Wed	31,150	28,701	28,842	26,933	27,537	99	89	74	87	103
Thur	29,113	28,483	29,155	29,204	28,720	92	82	94	93	106
Fri	35,601	31,575	33,474	32,213	33,938	107	96	129	101	113
Sat	27,331	26,278	25,524	25,318	25,505	115	115	134	99	113
Total	**205,452**	**189,661**	**192,885**	**188,126**	**188,841**	**722**	**631**	**701**	**674**	**718**
High	*Fri*	*Fri*	*Fri*	*Fri*	*Fri*	*Sat*	*Sat*	*Sat*	*Tue*	*Fri*
Low	*Sun*	*Sun*	*Sun*	*Sun*	*Sun*	*Thur*	*Mon*	*Wed*	*Wed*	*Mon*

Low High

Source: Indiana State Police

Note: Conditional formatting color-scale illustrates days from low to high for the entire 5-year period, 2008-2012.

Figure 2.2. Indiana collisions, by collision type, 2008-2012



Source: Indiana State Police

Table 2.4. Total traffic collisions and related injuries in Indiana, 2008-2012

	Collisions, by severity						Annual rate of change	
	Severity	**2008**	**2009**	**2010**	**2011**	**2012**	**2011-12**	**2008-12**
	Fatal	722	631	701	674	718	6.5%	-0.1%
	Non-fatal injury	35,358	33,410	34,083	32,734	34,087	4.1%	-0.9%
	Property damage	169,372	155,620	158,101	154,718	154,036	-0.4%	-2.3%
	Total	**205,452**	**189,661**	**192,885**	**188,126**	**188,841**	**0.4%**	**-2.1%**
	Fatal, per 100m VMT	*1.02*	*0.82*	*0.93*	*0.89*	*0.95*	*6.6%*	*-1.7%*
	Total, per 100m VMT	*289.48*	*247.51*	*254.60*	*248.55*	*249.76*	*0.5%*	*-3.6%*
	Injuries, by person type and injury status						**Annual rate of change**	
Person type	**Injury status**	**2008**	**2009**	**2010**	**2011**	**2012**	**2011-12**	**2008-12**
Driver	Fatal	554	491	521	527	541	2.7%	-0.6%
	Incapacitating	2,343	2,162	2,272	2,362	2,596	9.9%	2.6%
	Non-incapacitating	31,554	29,906	30,384	28,833	30,040	4.2%	-1.2%
	Subtotal	**34,451**	**32,559**	**33,177**	**31,722**	**33,177**	**4.6%**	**-0.9%**
Injured occupant	Fatal	185	139	157	146	160	9.6%	-3.6%
	Incapacitating	750	742	839	723	894	23.7%	4.5%
	Non-incapacitating	11,710	11,510	11,733	10,995	11,247	2.3%	-1.0%
	Subtotal	**12,645**	**12,391**	**12,729**	**11,864**	**12,301**	**3.7%**	**-0.7%**
Non-motorist	Fatal	76	62	76	76	78	2.6%	0.7%
	Incapacitating	289	275	332	320	318	-0.6%	2.4%
	Non-incapacitating	2,191	1,994	2,051	2,011	2,041	1.5%	-1.8%
	Subtotal	**2,556**	**2,331**	**2,459**	**2,407**	**2,437**	**1.2%**	**-1.2%**
All	Fatal	815	692	754	749	779	4.0%	-1.1%
	Incapacitating	3,382	3,179	3,443	3,405	3,808	11.8%	3.0%
	Non-incapacitating	45,455	43,410	44,168	41,839	43,328	3.6%	-1.2%
	Total	**49,652**	**47,281**	**48,365**	**45,993**	**47,915**	**4.2%**	**-0.9%**

Sources: Indiana State Police, Bureau of Transportation Statistics

Notes:
1) ***Non-fatal*** **injury collisions are those with no fatalities and at least one injury reported as** ***incapacitating, non-incapacitating,*** **or** ***possible.***
2) ***Non-incapacitating*** **includes injuries reported as** ***non-incapacitating*** **and** ***possible.***
3) ***Driver*** **person type includes** ***animal-drawn vehicle operators.***
4) ***Non-motorist*** **includes** ***pedestrians*** **and** ***pedalcyclists.***

Table 2.5. Alcohol-impaired collisions and related injuries in Indiana, 2008-2012

	Alcohol-impaired collisions, by severity						Annual rate of change	
	Severity	**2008**	**2009**	**2010**	**2011**	**2012**	**2011-12**	**2008-12**
	Fatal	156	120	130	133	150	12.8%	-1.0%
	Non-fatal injury	881	1,217	1,517	1,434	1,507	5.1%	14.4%
	Property damage	2,362	2,870	3,331	3,371	3,495	3.7%	10.3%
	Total	**3,399**	**4,207**	**4,978**	**4,938**	**5,152**	**4.3%**	**11.0%**
	Fatal, per 100m VMT	*0.22*	*0.16*	*0.17*	*0.18*	*0.20*	*12.9%*	*-2.5%*
	Total, per 100m VMT	*4.79*	*5.49*	*6.57*	*6.52*	*6.81*	*4.4%*	*9.2%*
	Injuries in alcohol-impaired collisions, by person type and injury status						**Annual rate of change**	
Person type	**Injury status**	**2008**	**2009**	**2010**	**2011**	**2012**	**2011-12**	**2008-12**
Driver	Fatal	132	105	102	120	132	10.0%	0.0%
	Incapacitating	50	110	181	157	184	17.2%	38.5%
	Non-incapacitating	845	1,124	1,366	1,315	1,341	2.0%	12.2%
	Subtotal	**1,027**	**1,339**	**1,649**	**1,592**	**1,657**	**4.1%**	**12.7%**
Injured occupant	Fatal	34	20	24	19	20	5.3%	-12.4%
	Incapacitating	39	39	68	53	56	5.7%	9.5%
	Non-incapacitating	317	367	449	431	429	-0.5%	7.9%
	Subtotal	**390**	**426**	**541**	**503**	**505**	**0.4%**	**6.7%**
Non-motorist	Fatal	7	2	9	1	6	500.0%	-3.8%
	Incapacitating	11	4	15	15	6	-60.0%	-14.1%
	Non-incapacitating	10	22	25	25	26	4.0%	27.0%
	Subtotal	**28**	**28**	**49**	**41**	**38**	**-7.3%**	**7.9%**
All	Fatal	173	127	135	140	158	12.9%	-2.2%
	Incapacitating	100	153	264	225	246	9.3%	25.2%
	Non-incapacitating	1,172	1,513	1,840	1,771	1,796	1.4%	11.3%
	Total	**1,445**	**1,793**	**2,239**	**2,136**	**2,200**	**3.0%**	**11.1%**

Sources: Indiana State Police, Bureau of Transportation Statistics

Notes:
1) See glossary for definition of *alcohol-impaired*.
2) *Non-fatal injury* collisions are those with no fatalities and at least one injury reported as incapacitating, *non-incapacitating*, or *possible*.
3) *Non-incapacitating* includes injuries reported as *non-incapacitating* and *possible*.
4) *Non-motorist* includes *pedestrians* and *pedalcyclists*.
5) *Driver* person type includes *animal-drawn vehicle operators*.

Table 2.6. Collisions, fatal collisions, and fatalities on legal holidays, by alcohol impairment, 2008-2012

Holiday	Begin	End	Collisions			Fatal collisions			Fatalities		
			Total	Alcohol-impaired	%	Total	Alcohol-impaired	%	Total	Alcohol-impaired	%
New Year's	12/28/07	1/2/08	2,411	143	5.9%	6	1	16.7%	7	1	14.3%
	12/31/08	1/5/09	1,399	144	10.3%	8	2	25.0%	10	3	30.0%
	12/31/09	1/4/10	1,252	102	8.2%	2	0	0.0%	2	0	0.0%
	12/31/10	1/3/11	686	86	12.5%	6	5	83.3%	7	6	85.7%
	12/30/11	1/2/12	848	81	9.6%	4	1	25.0%	4	1	25.0%
St. Patrick's Day	3/14/08	3/18/08	1,310	124	9.5%	1	0	0.0%	1	0	0.0%
	3/13/09	3/18/09	1,761	144	8.2%	6	0	0.0%	6	0	0.0%
	3/16/10	3/18/10	609	37	6.1%	1	1	100.0%	1	1	100.0%
	3/16/11	3/21/11	1,726	114	6.6%	5	1	20.0%	5	1	20.0%
	3/16/12	3/19/12	970	97	10.0%	12	7	58.3%	12	7	58.3%
Memorial Day	5/23/08	5/27/08	1,396	150	10.7%	6	2	33.3%	6	2	33.3%
	5/22/09	5/26/09	1,412	123	8.7%	5	0	0.0%	6	0	0.0%
	5/28/10	6/1/10	1,464	114	7.8%	11	5	45.5%	11	5	45.5%
	5/27/11	5/31/11	1,471	137	9.3%	7	4	57.1%	7	4	57.1%
	5/25/12	5/29/12	1,356	114	8.4%	10	4	40.0%	11	4	36.4%
Independence Day	7/3/08	7/7/08	1,301	131	10.1%	5	3	60.0%	5	3	60.0%
	7/3/09	7/6/09	1,007	107	10.6%	3	1	33.3%	3	1	33.3%
	7/2/10	7/5/10	1,059	97	9.2%	7	3	42.9%	7	3	42.9%
	7/1/11	7/5/11	1,337	118	8.8%	9	2	22.2%	10	3	30.0%
	7/3/12	7/5/12	585	59	10.1%	5	1	20.0%	6	1	16.7%
Labor Day	8/29/08	9/2/08	1,229	105	8.5%	9	7	77.8%	9	7	77.8%
	9/4/09	9/8/09	1,205	103	8.6%	4	2	50.0%	4	2	50.0%
	9/3/10	9/7/10	1,261	111	8.8%	9	3	33.3%	9	3	33.3%
	9/2/11	9/6/11	1,163	117	10.1%	10	2	20.0%	12	2	16.7%
	8/31/12	9/4/12	1,413	130	9.2%	7	2	28.6%	7	2	28.6%
Thanksgiving	11/26/08	12/1/08	2,128	144	6.8%	12	8	66.7%	15	11	73.3%
	11/25/09	11/30/09	1,971	127	6.4%	2	1	50.0%	2	1	50.0%
	11/24/10	11/29/10	2,001	132	6.6%	10	1	10.0%	10	1	10.0%
	11/23/11	11/28/11	2,072	122	5.9%	11	2	18.2%	11	2	18.2%
	11/21/12	11/26/12	1,804	120	6.7%	5	1	20.0%	5	1	20.0%
Christmas	12/24/08	12/29/08	2,368	126	5.3%	8	3	37.5%	13	4	30.8%
	12/24/09	12/28/09	1,937	95	4.9%	3	0	0.0%	3	0	0.0%
	12/24/10	12/27/10	974	47	4.8%	6	1	16.7%	6	1	16.7%
	12/23/11	12/26/11	804	50	6.2%	3	2	66.7%	3	2	66.7%
	12/21/12	12/26/12	2,081	125	6.0%	8	3	37.5%	8	3	37.5%

Table 2.7. Aggressive driving collisions and related injuries in Indiana, 2008-2012

	Aggressive driving collisions, by severity						Annual rate of change	
	Severity	**2008**	**2009**	**2010**	**2011**	**2012**	**2011-12**	**2008-12**
	Fatal	24	22	20	30	33	10.0%	8.3%
	Non-fatal injury	983	982	1,125	1,120	1,215	8.5%	5.4%
	Property damage	3,011	2,943	2,988	3,169	3,246	2.4%	1.9%
	Total	**4,018**	**3,947**	**4,133**	**4,319**	**4,494**	**4.1%**	**2.8%**
	Fatal, per 100m VMT	*0.03*	*0.03*	*0.03*	*0.04*	*0.04*	*10.1%*	*6.6%*
	Total, per 100m VMT	*5.66*	*5.15*	*5.46*	*5.71*	*5.94*	*4.2%*	*1.2%*
	Injuries in aggressive driving collisions, by person type and injury status						**Annual rate of change**	
Person type	**Injury status**	**2008**	**2009**	**2010**	**2011**	**2012**	**2011-12**	**2008-12**
Driver	Fatal	19	19	13	28	24	-14.3%	6.0%
	Incapacitating	66	69	97	107	144	34.6%	21.5%
	Non-incapacitating	964	951	1,147	1,136	1,206	6.2%	5.8%
	Subtotal	**1,049**	**1,039**	**1,257**	**1,271**	**1,374**	**8.1%**	**7.0%**
Injured occupant	Fatal	6	6	6	11	9	-18.2%	10.7%
	Incapacitating	33	28	47	39	57	46.2%	14.6%
	Non-incapacitating	485	412	540	448	477	6.5%	-0.4%
	Subtotal	**524**	**446**	**593**	**498**	**543**	**9.0%**	**0.9%**
Non-motorist	Fatal	5	0	2	0	3	300.0%	-12.0%
	Incapacitating	2	5	1	5	5	0.0%	25.7%
	Non-incapacitating	23	32	21	21	26	23.8%	3.1%
	Subtotal	**30**	**37**	**24**	**26**	**34**	**30.8%**	**3.2%**
All	Fatal	30	25	21	39	36	-7.7%	4.7%
	Incapacitating	101	102	145	151	206	36.4%	19.5%
	Non-incapacitating	1,472	1,395	1,708	1,605	1,709	6.5%	3.8%
	Total	**1,603**	**1,522**	**1,874**	**1,795**	**1,951**	**8.7%**	**5.0%**

Sources: Indiana State Police, Bureau of Transportation Statistics

Notes:
1) See glossary for definition of *aggressive driving*.
2) *Non-fatal injury* collisions are those with no fatalities and at least one injury reported as *incapacitating, non-incapacitating,* or *possible*.
3) *Non-incapacitating* includes injuries reported as *non-incapacitating* and *possible*.
4) *Non-motorist* includes *pedestrians* and *pedalcyclists*.
5) *Driver* person type includes *animal-drawn vehicle operators*.

Table 2.8. Speeding collisions and related injuries in Indiana, 2008-2012

	Speeding collisions, by severity						Annual rate of change	
	Severity	**2008**	**2009**	**2010**	**2011**	**2012**	**2011-12**	**2008-12**
	Fatal	188	136	136	131	163	24.4%	-3.5%
	Non-fatal injury	4,711	4,117	4,143	4,104	4,054	-1.2%	-3.7%
	Property damage	17,921	13,998	14,271	13,282	12,391	-6.7%	-8.8%
	Total	**22,820**	**18,251**	**18,550**	**17,517**	**16,608**	**-5.2%**	**-7.6%**
	Fatal, per 100m VMT	*0.26*	*0.18*	*0.18*	*0.17*	*0.22*	*24.6%*	*-5.0%*
	Total, per 100m VMT	*32.15*	*23.82*	*24.48*	*23.14*	*21.97*	*-5.1%*	*-9.1%*
	Injuries in speeding collisions, by person type and injury status						**Annual rate of change**	
Person type	**Injury status**	**2008**	**2009**	**2010**	**2011**	**2012**	**2011-12**	**2008-12**
Driver	Fatal	153	115	98	105	131	24.8%	-3.8%
	Incapacitating	428	359	380	410	435	6.1%	0.4%
	Non-incapacitating	4,271	3,678	3,754	3,735	3,605	-3.5%	-4.1%
	Subtotal	**4,852**	**4,152**	**4,232**	**4,250**	**4,171**	**-1.9%**	**-3.7%**
Injured occupant	Fatal	67	40	41	38	40	5.3%	-12.1%
	Incapacitating	144	147	171	150	192	28.0%	7.5%
	Non-incapacitating	1,835	1,676	1,583	1,459	1,456	-0.2%	-5.6%
	Subtotal	**2,046**	**1,863**	**1,795**	**1,647**	**1,688**	**2.5%**	**-4.7%**
Non-motorist	Fatal	5	3	6	7	4	-42.9%	-5.4%
	Incapacitating	13	8	15	18	19	5.6%	10.0%
	Non-incapacitating	68	79	78	78	80	2.6%	4.1%
	Subtotal	**86**	**90**	**99**	**103**	**103**	**0.0%**	**4.6%**
All	Fatal	225	158	145	150	175	16.7%	-6.1%
	Incapacitating	585	514	566	578	646	11.8%	2.5%
	Non-incapacitating	6,174	5,433	5,415	5,272	5,141	-2.5%	-4.5%
	Total	**6,984**	**6,105**	**6,126**	**6,000**	**5,962**	**-0.6%**	**-3.9%**

Sources: Indiana State Police, Bureau of Transportation Statistics

Notes:
1) See glossary for definition of *speeding*.
2) *Non-fatal injury* collisions are those with no fatalities and at least one injury reported as *incapacitating*, *non-incapacitating*, or *possible*.
3) *Non-incapacitating* includes injuries reported as *non-incapacitating* and *possible*.
4) *Non-motorist* includes *pedestrians* and *pedalcyclists*.
5) *Driver* person type includes *animal-drawn vehicle operators*.

Table 2.9. Disregarded traffic signal collisions and related injuries in Indiana, 2008-2012

	Disregarded traffic signal collisions, by severity						Annual rate of change	
	Severity	**2008**	**2009**	**2010**	**2011**	**2012**	**2011-12**	**2008-12**
	Fatal	16	14	15	15	22	46.7%	8.3%
	Non-fatal injury	1,590	1,506	1,519	1,451	1,577	8.7%	-0.2%
	Property damage	2,737	2,463	2,477	2,489	2,410	-3.2%	-3.1%
	Total	**4,343**	**3,983**	**4,011**	**3,955**	**4,009**	**1.4%**	**-2.0%**
	Fatal, per 100m VMT	*0.02*	*0.02*	*0.02*	*0.02*	*0.03*	*46.8%*	*6.6%*
	Total, per 100m VMT	*6.12*	*5.20*	*5.29*	*5.23*	*5.30*	*1.5%*	*-3.5%*
	Injuries in disregarded traffic signal collisions, by person type and injury status						**Annual rate of change**	
Person type	**Injury status**	**2008**	**2009**	**2010**	**2011**	**2012**	**2011-12**	**2008-12**
Driver	Fatal	12	12	12	12	14	16.7%	3.9%
	Incapacitating	109	95	82	107	124	15.9%	3.3%
	Non-incapacitating	1,683	1,613	1,662	1,533	1,717	12.0%	0.5%
	Subtotal	**1,804**	**1,720**	**1,756**	**1,652**	**1,855**	**12.3%**	**0.7%**
Injured occupant	Fatal	4	3	3	5	8	60.0%	18.9%
	Incapacitating	53	26	46	35	30	-14.3%	-13.3%
	Non-incapacitating	680	683	669	591	700	18.4%	0.7%
	Subtotal	**737**	**712**	**718**	**631**	**738**	**17.0%**	**0.0%**
Non-motorist	Fatal	0	1	0	0	1	n/a	n/a
	Incapacitating	0	2	0	0	3	n/a	n/a
	Non-incapacitating	18	12	11	14	18	28.6%	0.0%
	Subtotal	**18**	**15**	**11**	**14**	**22**	**57.1%**	**5.1%**
All	Fatal	16	16	15	17	23	35.3%	9.5%
	Incapacitating	162	123	128	142	157	10.6%	-0.8%
	Non-incapacitating	2,381	2,308	2,342	2,138	2,435	13.9%	0.6%
	Total	**2,559**	**2,447**	**2,485**	**2,297**	**2,615**	**13.8%**	**0.5%**

Sources: Indiana State Police, Bureau of Transportation Statistics

Notes:
1) See glossary for definition of *disregarding a signal*.
2) *Non-fatal injury* collisions are those with no fatalities and at least one injury reported as *incapacitating*, *non-incapacitating*, or *possible*.
3) *Non-incapacitating* includes injuries reported as *non-incapacitating* and *possible*.
4) *Non-motorist* includes *pedestrians* and *pedalcyclists*.
5) *Driver* person type includes *animal-drawn vehicle operators*.

Table 2.10. Hit-and-run collisions and related injuries in Indiana, 2008-2012

	Hit-and-run collisions, by severity						Annual rate of change	
	Severity	**2008**	**2009**	**2010**	**2011**	**2012**	**2011-12**	**2008-12**
	Fatal	26	22	28	28	33	17.9%	6.1%
	Non-fatal injury	1,982	1,932	1,850	1,825	1,842	0.9%	-1.8%
	Property damage	23,113	21,395	21,285	20,780	21,175	1.9%	-2.2%
	Total	**25,121**	**23,349**	**23,163**	**22,633**	**23,050**	**1.8%**	**-2.1%**
	Fatal, per 100m VMT	*0.04*	*0.03*	*0.04*	*0.04*	*0.04*	*18.0%*	*4.5%*
	Total, per 100m VMT	*35.40*	*30.47*	*30.57*	*29.90*	*30.49*	*2.0%*	*-3.7%*
	Injuries in hit-and-run collisions, by person type and injury status						**Annual rate of change**	
Person type	**Injury status**	**2008**	**2009**	**2010**	**2011**	**2012**	**2011-12**	**2008-12**
Driver	Fatal	7	7	10	3	14	366.7%	18.9%
	Incapacitating	70	68	56	47	65	38.3%	-1.8%
	Non-incapacitating	1,374	1,311	1,213	1,212	1,251	3.2%	-2.3%
	Subtotal	**1,451**	**1,386**	**1,279**	**1,262**	**1,330**	**5.4%**	**-2.2%**
Injured occupant	Fatal	9	5	4	3	5	66.7%	-13.7%
	Incapacitating	28	40	35	32	60	87.5%	21.0%
	Non-incapacitating	557	559	550	502	543	8.2%	-0.6%
	Subtotal	**594**	**604**	**589**	**537**	**608**	**13.2%**	**0.6%**
Non-motorist	Fatal	13	11	14	22	14	-36.4%	1.9%
	Incapacitating	48	38	44	43	38	-11.6%	-5.7%
	Non-incapacitating	336	340	364	367	298	-18.8%	-3.0%
	Subtotal	**397**	**389**	**422**	**432**	**350**	**-19.0%**	**-3.1%**
All	Fatal	29	23	28	28	33	17.9%	3.3%
	Incapacitating	146	146	135	122	163	33.6%	2.8%
	Non-incapacitating	2,267	2,210	2,127	2,081	2,092	0.5%	-2.0%
	Total	**2,442**	**2,379**	**2,290**	**2,231**	**2,288**	**2.6%**	**-1.6%**

Sources: Indiana State Police, Bureau of Transportation Statistics

Notes:
1) See glossary for definition of *hit-and-run*.
2) *Non-fatal injury* collisions are those with no fatalities and at least one injury reported as *incapacitating, non-incapacitating,* or *possible*.
3) *Non-incapacitating* includes injuries reported as *non-incapacitating* and *possible*.
4) *Non-motorist* includes *pedestrians* and *pedalcyclists*.
5) *Driver* person type includes *animal-drawn vehicle operators*.

Table 2.11. Cell phone-distracted collisions and related injuries in Indiana, 2008-2012

	Cell phone-distracted collisions, by severity						Annual rate of change	
	Severity	**2008**	**2009**	**2010**	**2011**	**2012**	**2011-12**	**2008-12**
	Fatal	4	2	4	5	7	40.0%	15.0%
	Non-fatal injury	289	313	334	319	283	-11.3%	-0.5%
	Property damage	911	904	946	844	842	-0.2%	-1.9%
	Total	**1,204**	**1,219**	**1,284**	**1,168**	**1,132**	**-3.1%**	**-1.5%**
	Fatal, per 100m VMT	*0.01*	*0.00*	*0.01*	*0.01*	*0.01*	*40.2%*	*13.2%*
	Total, per 100m VMT	*1.70*	*1.59*	*1.69*	*1.54*	*1.50*	*-3.0%*	*-3.1%*
	Injuries in cell phone-distracted collisions, by person type and injury status						**Annual rate of change**	
Person type	**Injury status**	**2008**	**2009**	**2010**	**2011**	**2012**	**2011-12**	**2008-12**
Driver	Fatal	4	2	5	4	3	-25.0%	-6.9%
	Incapacitating	21	15	19	18	22	22.2%	1.2%
	Non-incapacitating	275	306	306	290	262	-9.7%	-1.2%
	Subtotal	**300**	**323**	**330**	**312**	**287**	**-8.0%**	**-1.1%**
Injured occupant	Fatal	0	0	0	1	3	200.0%	n/a
	Incapacitating	5	7	3	1	5	400.0%	0.0%
	Non-incapacitating	77	80	110	106	90	-15.1%	4.0%
	Subtotal	**82**	**87**	**113**	**108**	**98**	**-9.3%**	**4.6%**
Non-motorist	Fatal	0	0	0	2	3	50.0%	n/a
	Incapacitating	1	0	3	3	1	-66.7%	0.0%
	Non-incapacitating	13	7	11	11	12	9.1%	-2.0%
	Subtotal	**14**	**7**	**14**	**16**	**16**	**0.0%**	**3.4%**
All	Fatal	4	2	5	7	9	28.6%	22.5%
	Incapacitating	27	22	25	22	28	27.3%	0.9%
	Non-incapacitating	365	393	427	407	364	-10.6%	-0.1%
	Total	**396**	**417**	**457**	**436**	**401**	**-8.0%**	**0.3%**

Sources: Indiana State Police, Bureau of Transportation Statistics

Notes:
1) See glossary for definition of *cell phone-distracted*.
2) *Non-fatal injury* collisions are those with no fatalities and at least one injury reported as *incapacitating, non-incapacitating,* or *possible*.
3) *Non-incapacitating* includes injuries reported as *non-incapacitating* and *possible*.
4) *Non-motorist* includes *pedestrians* and *pedalcyclists*.
5) *Driver* person type includes *animal-drawn vehicle operators*.

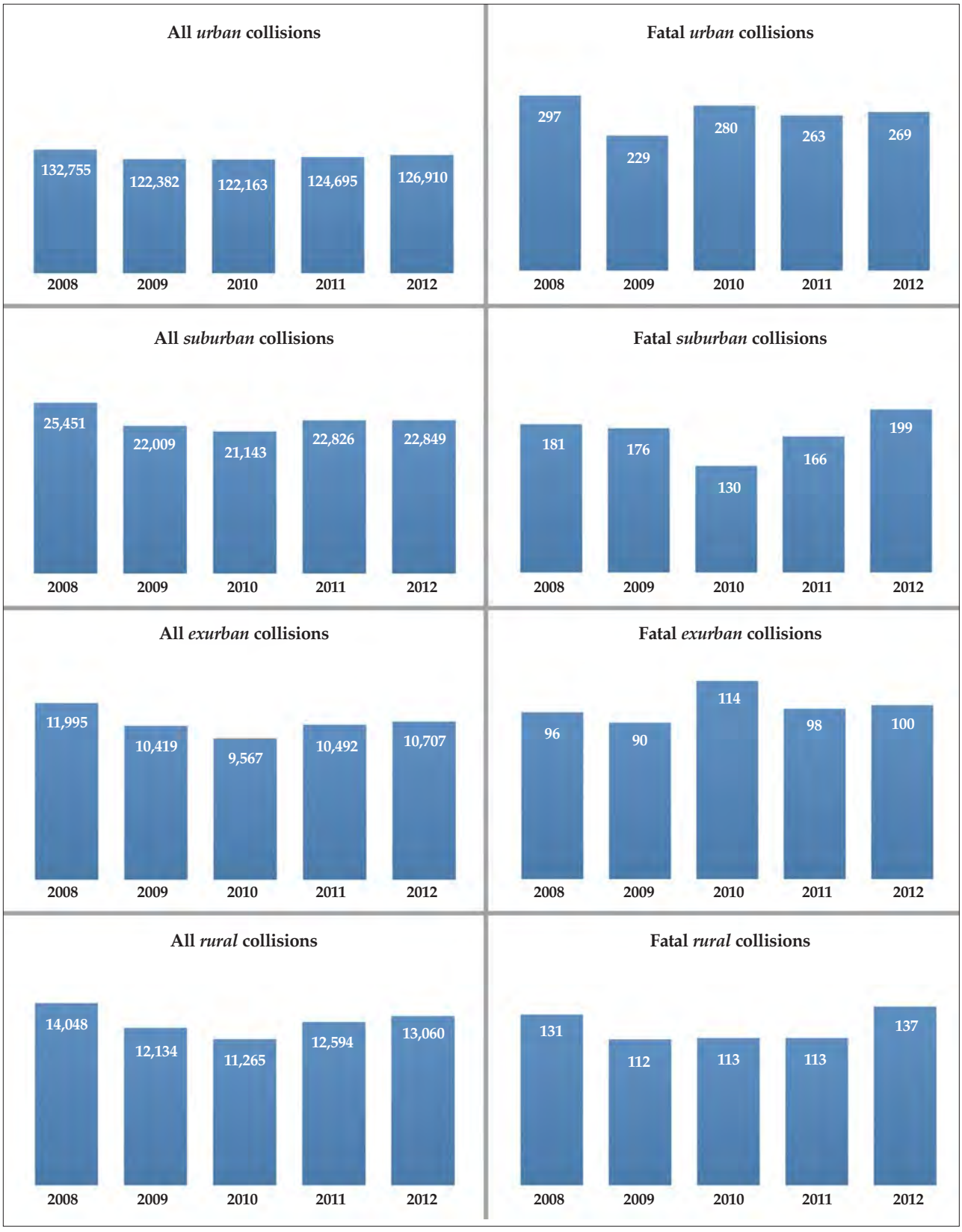
Table 2.12. Indiana collisions and injuries, by driver action, 2008-2012

Action	2008	2009	2010	2011	2012
Total collisions					
Alcohol-impaired	1.7%	2.2%	2.6%	2.6%	2.7%
Aggressive driving	2.0%	2.1%	2.1%	2.3%	2.4%
Speeding	11.1%	9.6%	9.6%	9.3%	8.8%
Disregarded traffic signal	2.1%	2.1%	2.1%	2.1%	2.1%
Hit-and-run	12.2%	12.3%	12.0%	12.0%	12.2%
Cell phone-distracted	0.6%	0.6%	0.7%	0.6%	0.6%
Fatal collisions					
Alcohol-impaired	21.6%	19.0%	18.5%	19.7%	20.9%
Aggressive driving	3.3%	3.5%	2.9%	4.5%	4.6%
Speeding	26.0%	21.6%	19.4%	19.4%	22.7%
Disregarded traffic signal	2.2%	2.2%	2.1%	2.2%	3.1%
Hit-and-run	3.6%	3.5%	4.0%	4.2%	4.6%
Cell phone-distracted	0.6%	0.3%	0.6%	0.7%	1.0%
Total injuries					
Alcohol-impaired	2.9%	3.8%	4.6%	4.6%	4.6%
Aggressive driving	3.2%	3.2%	3.9%	3.9%	4.1%
Speeding	14.1%	12.9%	12.7%	13.0%	12.4%
Disregarded traffic signal	5.2%	5.2%	5.1%	5.0%	5.5%
Hit-and-run	4.9%	5.0%	4.7%	4.9%	4.8%
Cell phone-distracted	0.8%	0.9%	0.9%	0.9%	0.8%
Fatal injuries					
Alcohol-impaired	21.2%	18.4%	17.9%	18.7%	20.3%
Aggressive driving	3.7%	3.6%	2.8%	5.2%	4.6%
Speeding	27.6%	22.8%	19.2%	20.0%	22.5%
Disregarded traffic signal	2.0%	2.3%	2.0%	2.3%	3.0%
Hit-and-run	3.6%	3.3%	3.7%	3.7%	4.2%
Cell phone-distracted	0.5%	0.3%	0.7%	0.9%	1.2%

Source: Indiana State Police

Note: *Total injuries* include injuries reported as *fatal, incapacitating, non-incapacitating,* and *possible*.

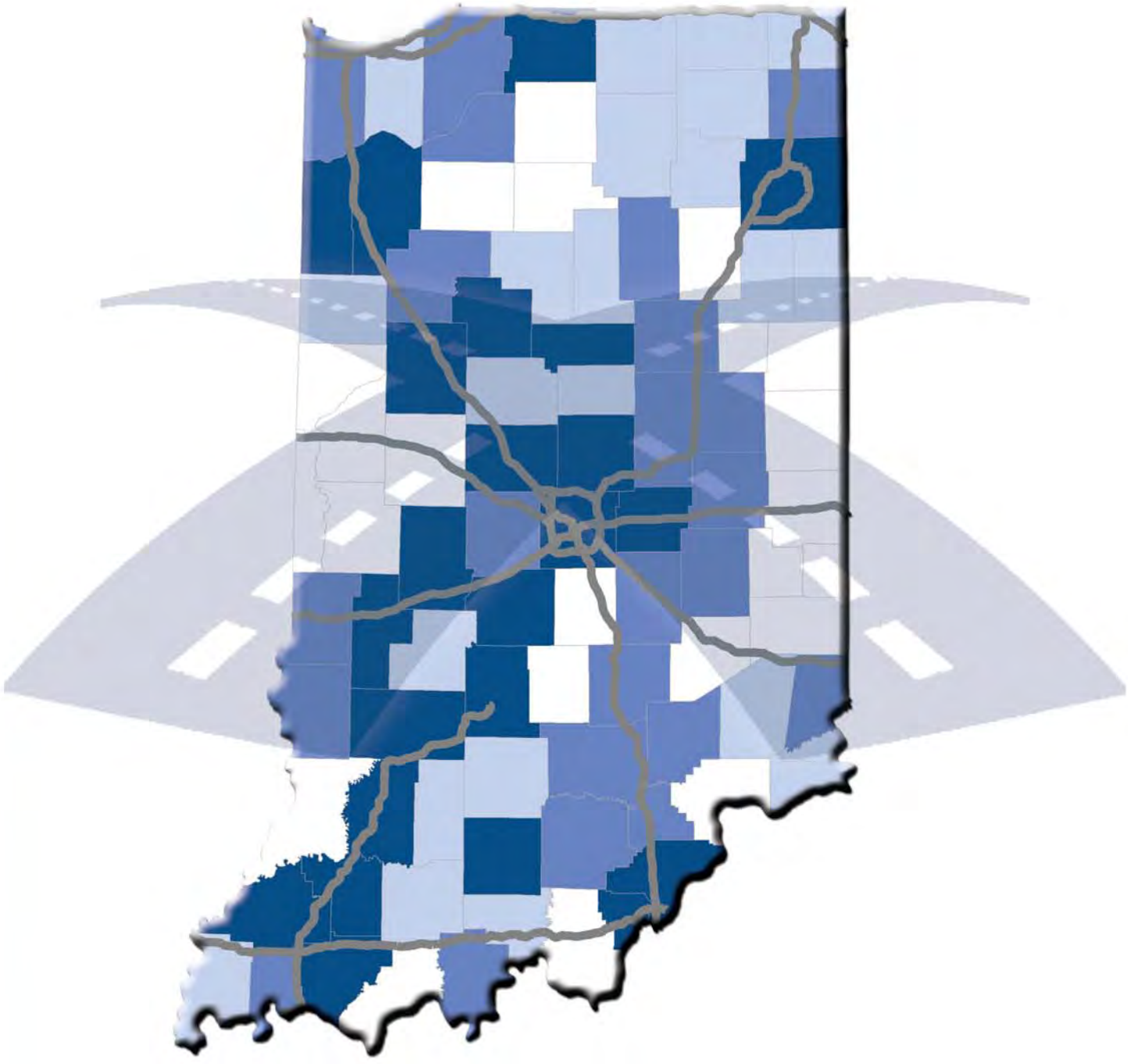
Figure 2.3. Indiana collisions, by locale, 2008-2012



Source: Indiana State Police

Notes:
1) See glossary for definition of census locale.
2) Excludes collisions where locale could not be determined.

CHAPTER 3
COLLISIONS



COLLISIONS, 2012

In 2012, 188,841 traffic collisions occurred in Indiana, a 0.4 percent increase from 2011. Fatal collisions increased 7 percent from 674 in 2011 to 718 in 2012. From 2008 to 2012, the number of total collisions declined 2 percent annually (Table 3.1). The rate of fatal collisions per 1,000 total collisions increased slightly from 3.6 in 2011 to 3.8 in 2012 (Figure 3.1).

Collisions involving non-motorists

In 2012, the number of collisions involving pedestrians declined 2 percent from 1,717 in 2011 to 1,676 in 2012. The rate of pedestrian collisions per 1,000 also fell from 9.1 to 8.9. The number of collisions involving pedalcyclists increased by 17 percent between 2011 (943) and 2012 (1,103). The rate of collisions involving pedalcyclists increased from 5.0 to 5.8 per 1,000 total collisions from 2011 to 2012 (Figure 3.2).

Collisions by month and time of day

The largest number of collisions per month in 2012 occurred in the late fall (October and November) and winter months (December and January). December accounted for the largest monthly total collisions (18,735). Summer months accounted for the highest monthly fatal collisions, with the largest occurring in June (84), July (79), and August (70). The number of fatal collisions occurring in March increased by 71 percent between 2011 (34) and 2012 (58), while the number of fatal collisions occurring in January declined by 20 percent (Table 3.2).

In general, collisions were most common during afternoon rush hour (3pm - 5:59pm) on weekdays. In 2012, the highest proportion of fatal collisions occurred on Sundays and Fridays (1.2 percent) between the hours of midnight and 3am and on Tuesdays and Thursdays (1.1 percent) during the same time frame. High fatal collision counts are also noticeable in the 3pm - 5:59pm period throughout the week (Table 3.3).

On average, monthly counts of daytime collisions are substantially higher than counts of collisions occurring at night. The average monthly count of daytime collisions in 2012 was 10,707 compared to 5,030 nighttime collisions. Daytime collision counts exceeded monthly averages during January, May, August, October, and December. Nighttime collision counts exceeded monthly averages during January, October, November, and December (Figure 3.3).

Monthly average fatal collision counts are only slightly higher during the day (31) than at night (29). Daytime fatal collisions during May, June, July, August, and October exceeded the monthly daytime average. Fatal collisions that occurred at night were above average during the months of May through September. The lowest number of daytime fatal collisions occurred in February (18) and the lowest number of nighttime fatal collisions occurred in January (19) (Figure 3.4).

Collision circumstances

In 2012, *alcohol-impaired* collisions represented 3 percent (5,152) of all collisions. Collisions that involved speeding accounted for 9 percent of total collisions, and *hit-and-run* collisions accounted for 12 percent of total collisions. *Speed-related* collisions were proportionally most likely to occur during winter months of January and December, likely due in part to individuals driving at speeds unsafe for weather conditions. The highest proportion of *alcohol-impaired* collisions occurred during February, September, and June (Table 3.4). In 2012, *alcohol-impaired* collisions represented 21 percent (150 of 718) of fatal collisions (calculated from table). *Speed-related* collisions accounted for 23 percent (163 of 718) of fatal collisions in 2012 (calculated from table).

With regard to time of day, the highest proportion of *alcohol-impaired* and *hit-and-run* collisions occurred from 12am – 5:59am across all days of the week, but in particular on Saturday and Sunday nights. Similarly, proportions of *speed-related* collisions were greater during overnight and early morning hours, especially Friday and Saturday nights (Table 3.5).

Collisions by primary factor

In 2012, driver-related factors accounted for 85 percent of all collisions and 94 percent of fatal collisions (calculated from table). *Driver unsafe actions* represented the largest number (118,933 of 188,841) of collisions in 2012. Within the driver unsafe actions category, primary factors classified as *following too closely* (30,799) and *failure to yield right of way* (29,452) accounted for the largest number of collisions. Proportional to all fatal collisions, *ran off road* was listed as the most common primary factor within the *driver loss of control* category. Rates of serious injury collisions were higher among collisions with primary factors attributed to driver actions (22.9 per 1,000 collisions) than those with primary factors attributed to vehicles (16.3) or the environment (8.8). In 2012, 53 out of every 1,000 collisions where the driver was identified with a *cognitive/physical impairment* were serious injury collisions (Table 3.6).

Fatal collisions were less likely than non-fatal collisions to have been attributable to *driver unsafe actions* (52 percent of fatal collisions compared to 63 percent of non-fatal collisions). *Driver loss of control* accounted for 30 percent of all fatal collisions, but only 9 percent of non-fatal collisions. *Environmental factors* (12 percent) and *driver distractions* (3 percent) were more likely to have been the primary factor in non-fatal collisions than in fatal collisions (Figure 3.5).

Geography of collisions (locale and road class)

Collision counts in 2012 were higher in Indiana *urban* (126,910) and *suburban* (22,849) areas than surrounding *exurban* (10,707) and *rural* (13,060) locales. However, rates of serious injury collisions per 1,000 total collisions were higher in *exurban* (40.4) and *rural* (40.0) locales than in areas identified as *urban* (16.4) and *suburban* (35.3). Between 2010 and 2011, rates of serious injury collisions leveled-off in *urban* areas and declined in other locales. However, between 2011 and 2012, rates rose slightly in *urban* (15.3 in 2011 to 16.4 in 2012) areas, but increased more dramatically in other locales: from 29.7 to 35.3 in *suburban*, 36.8 to 40.0 in *exurban*, and 34.4 to 40.4 in *rural* locales (Figure 3.6).

In general during 2008 to 2012, collision counts were highest on *local/city roads* (85,128 in 2012) and lowest on *interstates* (13,952 in 2012). In 2012, rates of serious injury collisions were higher on *county roads* and *state roads* than on other road types. While serious injury collision rates increased slightly on *local/city roads* from 2011 to 2012 (14.7 to 16.9 per 1,000 total collisions), these have increased more steeply on *county roads* and *state roads* since 2008 (Figure 3.7).

Environmental conditions and external factors

Various factors contribute to the likelihood of a collision, including environmental conditions, traffic control types, road surface, light, and weather conditions. When observing collisions by junction type, 75 percent of fatal collisions occurred at road segments with *no junction* (calculated from table). Collisions that occurred on a *curved* road had a higher rate of serious injury per 1,000 collisions (36.8 in 2012) than those on a *straight* road (19.6) (Table 3.7). *Ran off road* as the manner of collision accounted for 12 percent of all collisions, 33 percent of fatal collisions (calculated from table), and had a serious injury per 1,000 collision rate of 46.6 in 2012 (Table 3.8).

Collisions that involved traffic control types identified as *no passing zone* (43.1), *railroad crossing* (38.2), and *flashing signal* (30.2) had the highest rates of serious injury collisions (Table 3.9). With regard to light conditions, 31 percent of fatal collisions occurred on *dark (not lighted)* roads. Collisions that occurred on roads that were *dark (not lighted)* also had the highest rates of serious injury collisions (29.8 per 1,000 collisions). By weather condition, *fog/smoke/smog* (25.8) had the highest rate of serious injury collisions per 1,000 collisions. Collisions that involved road surface conditions reported as *loose material on road* (39.2) had the highest rate of serious injury collisions per 1,000 collisions (Table 3.10).

Economic cost of collisions

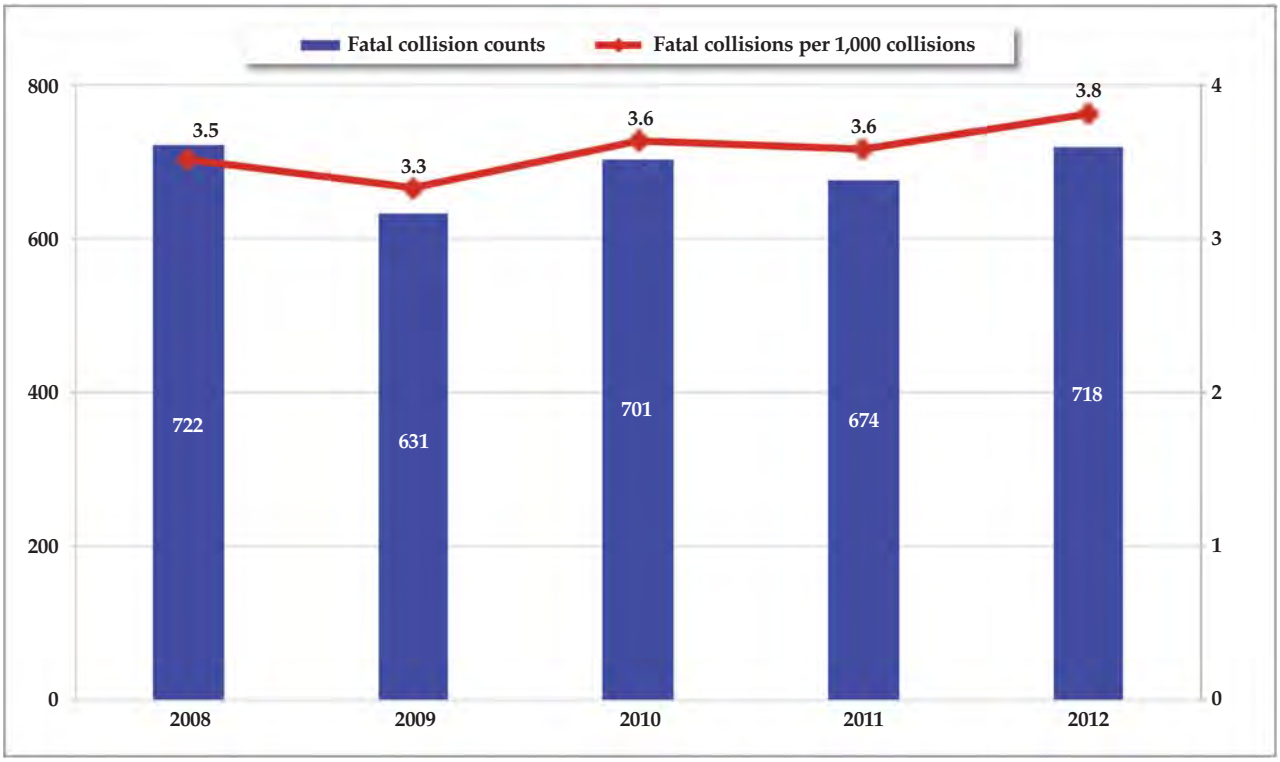
In 2012, the estimated economic cost of Indiana traffic collisions totaled $3.6 billion. On average, the cost of each collision is estimated to be $18,930. The total estimated economic cost of *speed-related* collisions was over $464 million, with an average collision cost of $27,966. The average cost of *alcohol-impaired* collisions was $48,832 and total estimated economic cost of over $251 million. The cost of *work zone* collisions was $67 million, with an average collision cost of $19,155 (Table 3.11 and Figure 3.8).

Table 3.1. Indiana traffic collisions, by collision severity, 2008-2012

						Annual rate of change	
	2008	2009	2010	2011	2012	2011-12	2008-12
Total collisions	**205,452**	**189,661**	**192,885**	**188,126**	**188,841**	**0.4%**	**-2.1%**
Fatal	722	631	701	674	718	6.5%	-0.1%
Incapacitating	2,898	2,732	2,912	2,858	3,234	13.2%	2.8%
Non-incapacitating	32,460	30,678	31,171	29,876	30,853	3.3%	-1.3%
Property damage only	169,372	155,620	158,101	154,718	154,036	-0.4%	-2.3%

Source: Indiana State Police

Figure 3.1. Indiana fatal traffic collisions, 2008-2012



Source: Indiana State Police

Figure 3.2. Indiana collisions involving pedestrians and pedalcyclists, 2008-2012

Source: Indiana State Police

Table 3.2. Indiana traffic collisions, by month, 2011-2012

Month	Fatal collisions			Total collisions			% Change (2011-12)	
	2011	2012	Change	2011	2012	Change	Fatal	Total
Jan	56	45	-11	18,825	17,434	-1,391	-19.6%	-7.4%
Feb	42	43	1	16,247	14,169	-2,078	2.4%	-12.8%
Mar	34	58	24	12,742	14,581	1,839	70.6%	14.4%
Apr	43	49	6	13,698	13,881	183	14.0%	1.3%
May	59	63	4	15,126	15,976	850	6.8%	5.6%
Jun	58	84	26	14,829	15,120	291	44.8%	2.0%
Jul	76	79	3	14,206	14,422	216	3.9%	1.5%
Aug	71	70	-1	14,992	15,490	498	-1.4%	3.3%
Sep	64	62	-2	15,139	14,860	-279	-3.1%	-1.8%
Oct	65	54	-11	17,281	17,608	327	-16.9%	1.9%
Nov	49	50	1	18,401	16,565	-1,836	2.0%	-10.0%
Dec	57	61	4	16,640	18,735	2,095	7.0%	12.6%
Total	**674**	**718**	**44**	**188,126**	**188,841**	**715**	**6.5%**	**0.4%**

Source: Indiana State Police

Low — High

Table 3.3. Indiana traffic collisions, by day of the week, and time of day, 2012

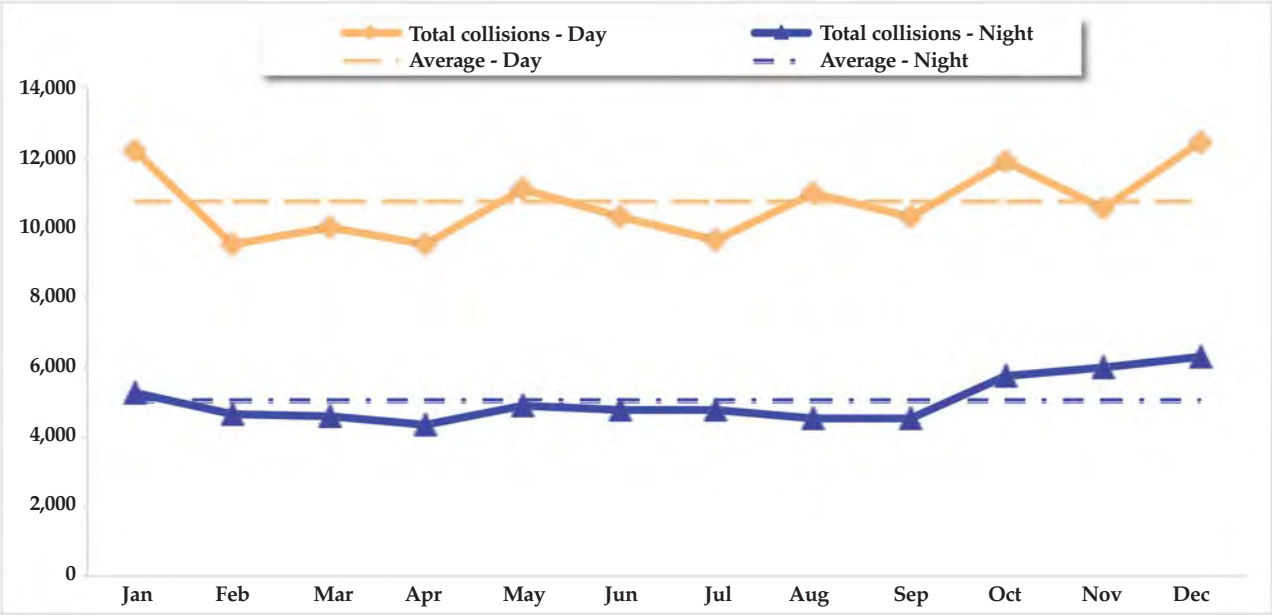
Day of week	Time of day								All hours
	12am-2:59am	3am-5:59am	6am-8:59am	9am-11:59am	12pm-2:59pm	3pm-5:59pm	6pm-8:59pm	9pm-11:59pm	
Total collisions	**8,514**	**8,596**	**23,110**	**24,469**	**34,657**	**46,243**	**27,106**	**16,143**	**188,838**
Sunday	1,998	1,522	1,262	2,252	3,554	3,652	3,057	1,890	19,187
Monday	847	1,035	3,798	3,561	5,062	7,042	3,757	1,904	27,006
Tuesday	826	1,022	4,248	3,496	4,691	7,097	3,719	1,847	26,946
Wednesday	775	989	4,107	3,571	5,006	7,298	3,823	1,968	27,537
Thursday	963	1,162	3,941	3,692	5,189	7,510	3,989	2,273	28,719
Friday	1,173	1,278	3,860	4,138	6,298	8,939	4,947	3,305	33,938
Saturday	1,932	1,588	1,894	3,759	4,857	4,705	3,814	2,956	25,505
Fatal collisions	**80**	**70**	**73**	**70**	**98**	**128**	**116**	**83**	**718**
Sunday	23	15	9	8	9	16	14	9	103
Monday	4	9	13	11	13	15	13	10	88
Tuesday	9	5	10	10	11	20	19	8	92
Wednesday	4	7	11	14	19	19	15	14	103
Thursday	11	12	7	8	18	22	10	18	106
Friday	14	7	14	9	14	21	23	11	113
Saturday	15	15	9	10	14	15	22	13	113
% Fatal	**0.9%**	**0.8%**	**0.3%**	**0.3%**	**0.3%**	**0.3%**	**0.4%**	**0.5%**	**0.4%**
Sunday	1.2%	1.0%	0.7%	0.4%	0.3%	0.4%	0.5%	0.5%	0.5%
Monday	0.5%	0.9%	0.3%	0.3%	0.3%	0.2%	0.3%	0.5%	0.3%
Tuesday	1.1%	0.5%	0.2%	0.3%	0.2%	0.3%	0.5%	0.4%	0.3%
Wednesday	0.5%	0.7%	0.3%	0.4%	0.4%	0.3%	0.4%	0.7%	0.4%
Thursday	1.1%	1.0%	0.2%	0.2%	0.3%	0.3%	0.3%	0.8%	0.4%
Friday	1.2%	0.5%	0.4%	0.2%	0.2%	0.2%	0.5%	0.3%	0.3%
Saturday	0.8%	0.9%	0.5%	0.3%	0.3%	0.3%	0.6%	0.4%	0.4%

Source: Indiana State Police

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

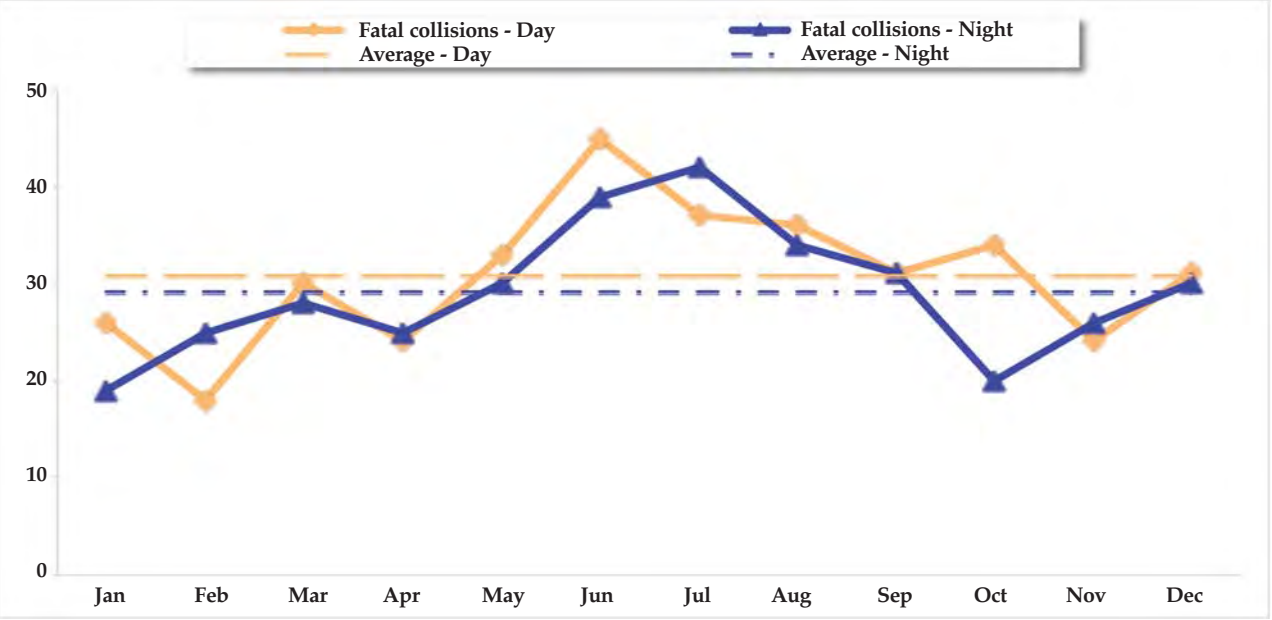
Low — High

Figure 3.3. Indiana traffic collisions, by month and day/night, 2012



Source: Indiana State Police
Note: Day is defined as 6am - 5:59pm. Night is defined as 6pm - 5:59am.

Figure 3.4. Indiana fatal collisions, by month and day/night, 2012



Source: Indiana State Police
Note: Day is defined as 6am - 5:59pm. Night is defined as 6pm - 5:59am.

Table 3.4. Collisions by month and collision circumstances, 2012

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	17,434	383	2.2	442	2.5	3,617	20.7	324	1.9	1,992	11.4	594	3.4	65	0.4
Feb	14,169	474	3.3	366	2.6	1,811	12.8	321	2.3	1,778	12.5	713	5.0	94	0.7
Mar	14,581	427	2.9	348	2.4	1,063	7.3	331	2.3	1,860	12.8	808	5.5	94	0.6
Apr	13,881	411	3.0	325	2.3	776	5.6	325	2.3	1,720	12.4	780	5.6	92	0.7
May	15,976	424	2.7	369	2.3	896	5.6	328	2.1	2,002	12.5	947	5.9	123	0.8
Jun	15,120	470	3.1	320	2.1	756	5.0	322	2.1	1,963	13.0	891	5.9	115	0.8
Jul	14,422	434	3.0	334	2.3	819	5.7	347	2.4	1,851	12.8	866	6.0	90	0.6
Aug	15,490	422	2.7	393	2.5	910	5.9	349	2.3	1,964	12.7	952	6.1	97	0.6
Sep	14,860	476	3.2	345	2.3	933	6.3	320	2.2	1,900	12.8	797	5.4	94	0.6
Oct	17,608	444	2.5	452	2.6	1,241	7.0	384	2.2	2,023	11.5	857	4.9	111	0.6
Nov	16,565	354	2.1	325	2.0	724	4.4	322	1.9	1,865	11.3	724	4.4	77	0.5
Dec	18,735	433	2.3	475	2.5	3,062	16.3	336	1.8	2,132	11.4	730	3.9	80	0.4
Total	**188,841**	**5,152**	**2.7**	**4,494**	**2.4**	**16,608**	**8.8**	**4,009**	**2.1**	**23,050**	**12.2**	**9,659**	**5.1**	**1,132**	**0.6**

Source: Indiana State Police

Notes:
1) Color comparisons are applied within collision-type categories.
2) Counts of different collisions circumstances will not sum to the total number of collisions.

Low High

Table 3.5. Indiana traffic collisions, by day, hour, and collision circumstances, 2012

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	1,593	138	8.7	31	1.9	269	16.9	19	1.2	335	21.0	55	3.5	9	0.6
	6am - 11:59am	7,359	32	0.4	185	2.5	671	9.1	192	2.6	665	9.0	359	4.9	34	0.5
	12pm - 5:59pm	12,104	86	0.7	327	2.7	864	7.1	287	2.4	1,131	9.3	709	5.9	70	0.6
	6pm - 11:59pm	5,661	201	3.6	116	2.0	484	8.5	134	2.4	806	14.2	281	5.0	48	0.8
Tue	12am - 5:59am	1,591	142	8.9	35	2.2	240	15.1	29	1.8	321	20.2	61	3.8	7	0.4
	6am - 11:59am	7,744	38	0.5	197	2.5	673	8.7	187	2.4	698	9.0	386	5.0	42	0.5
	12pm - 5:59pm	11,788	71	0.6	296	2.5	603	5.1	267	2.3	1,169	9.9	737	6.3	80	0.7
	6pm - 11:59pm	5,566	209	3.8	95	1.7	391	7.0	119	2.1	788	14.2	284	5.1	40	0.7
Wed	12am - 5:59am	1,519	175	11.5	35	2.3	189	12.4	19	1.3	330	21.7	74	4.9	10	0.7
	6am - 11:59am	7,678	45	0.6	177	2.3	608	7.9	200	2.6	650	8.5	387	5.0	39	0.5
	12pm - 5:59pm	12,304	92	0.7	289	2.3	873	7.1	256	2.1	1,166	9.5	769	6.3	74	0.6
	6pm - 11:59pm	5,791	205	3.5	124	2.1	447	7.7	118	2.0	846	14.6	303	5.2	42	0.7
Thu	12am - 5:59am	1,839	226	12.3	38	2.1	267	14.5	21	1.1	445	24.2	76	4.1	16	0.9
	6am - 11:59am	7,633	30	0.4	181	2.4	768	10.1	194	2.5	635	8.3	341	4.5	40	0.5
	12pm - 5:59pm	12,699	86	0.7	358	2.8	1,074	8.5	268	2.1	1,187	9.3	720	5.7	75	0.6
	6pm - 11:59pm	6,262	270	4.3	129	2.1	535	8.5	105	1.7	951	15.2	278	4.4	35	0.6
Fri	12am - 5:59am	2,077	262	12.6	59	2.8	354	17.0	28	1.3	514	24.7	89	4.3	16	0.8
	6am - 11:59am	7,998	49	0.6	211	2.6	771	9.6	182	2.3	687	8.6	357	4.5	32	0.4
	12pm - 5:59pm	15,237	114	0.7	408	2.7	1,264	8.3	248	1.6	1,402	9.2	848	5.6	79	0.5
	6pm - 11:59pm	8,252	330	4.0	213	2.6	1,002	12.1	145	1.8	1,202	14.6	375	4.5	46	0.6
Sat	12am - 5:59am	2,893	540	18.7	67	2.3	554	19.1	48	1.7	1,003	34.7	110	3.8	34	1.2
	6am - 11:59am	5,653	70	1.2	104	1.8	624	11.0	152	2.7	624	11.0	255	4.5	27	0.5
	12pm - 5:59pm	9,562	156	1.6	250	2.6	774	8.1	235	2.5	1,087	11.4	537	5.6	49	0.5
	6pm - 11:59pm	6,770	409	6.0	153	2.3	635	9.4	122	1.8	1,172	17.3	323	4.8	55	0.8
Sun	12am - 5:59am	2,928	668	22.8	81	2.8	411	14.0	56	1.9	1,080	36.9	145	5.0	40	1.4
	6am - 11:59am	3,514	91	2.6	63	1.8	317	9.0	109	3.1	539	15.3	172	4.9	22	0.6
	12pm - 5:59pm	7,206	126	1.7	164	2.3	493	6.8	176	2.4	875	12.1	394	5.5	34	0.5
	6pm - 11:59pm	4,947	291	5.9	108	2.2	453	9.2	93	1.9	740	15.0	234	4.7	37	0.7
Mon	(Total)	26,717	457	1.7	659	2.5	2,288	8.6	632	2.4	2,937	11.0	1,404	5.3	161	0.6
Tue	(Total)	26,689	460	1.7	623	2.3	1,907	7.1	602	2.3	2,976	11.2	1,468	5.5	169	0.6
Wed	(Total)	27,292	517	1.9	625	2.3	2,117	7.8	593	2.2	2,992	11.0	1,533	5.6	165	0.6
Thu	(Total)	28,433	612	2.2	706	2.5	2,644	9.3	588	2.1	3,218	11.3	1,415	5.0	166	0.6
Fri	(Total)	33,564	755	2.2	891	2.7	3,391	10.1	603	1.8	3,805	11.3	1,669	5.0	173	0.5
Sat	(Total)	24,878	1,175	4.7	574	2.3	2,587	10.4	557	2.2	3,886	15.6	1,225	4.9	165	0.7
Sun	(Total)	18,595	1,176	6.3	416	2.2	1,674	9.0	434	2.3	3,234	17.4	945	5.1	133	0.7
		186,168	**5,152**	**2.8**	**4,494**	**2.4**	**16,608**	**8.9**	**4,009**	**2.2**	**23,048**	**12.4**	**9,659**	**5.2**	**1,132**	**0.6**

Source: Indiana State Police

Notes:

1) Total daily counts exclude collisions with invalid time reported.

2) Color comparisons are applied within collision-type categories.

3) Counts of different collisions circumstances will not sum to the total number of collisions.

Low — High

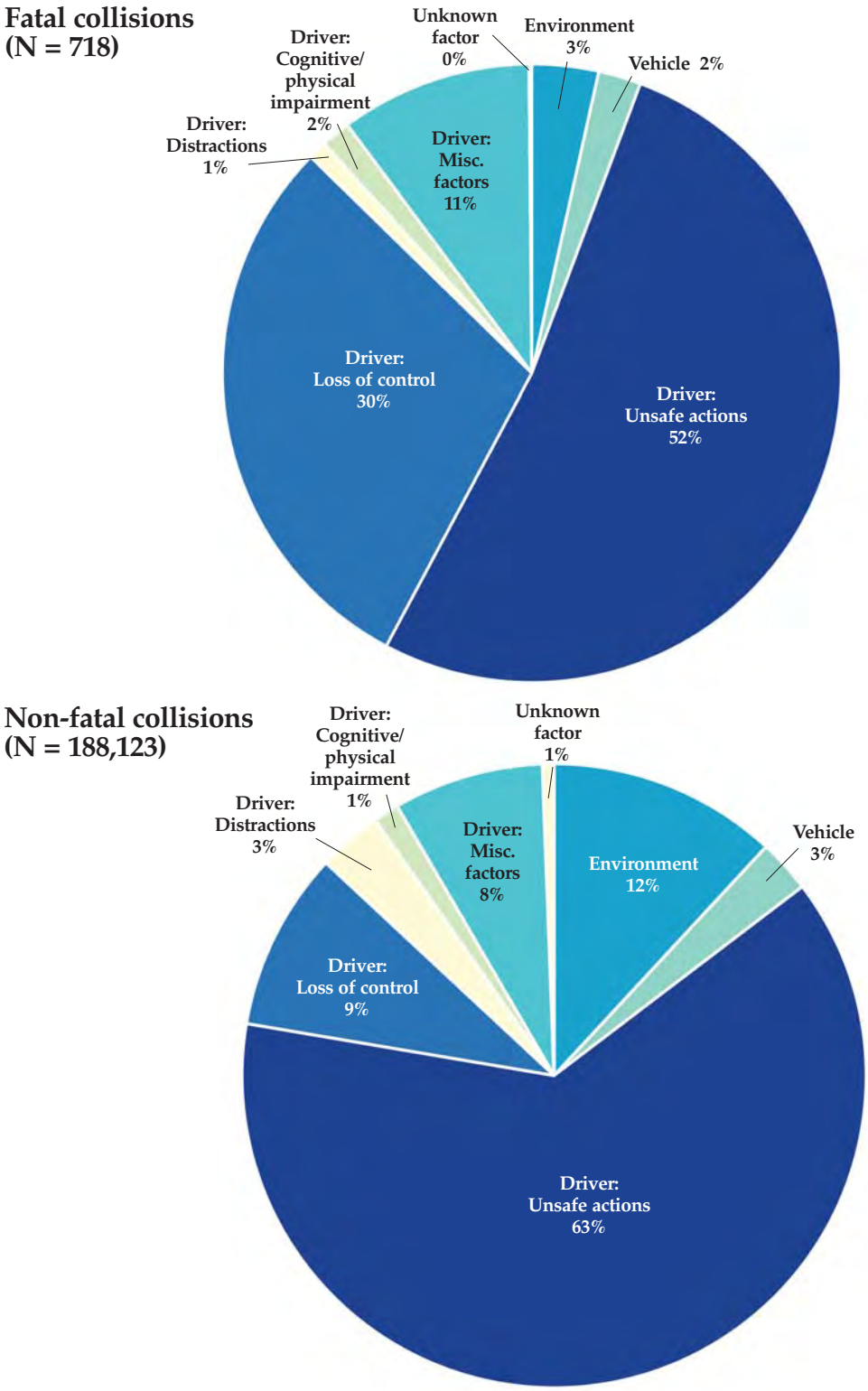
Table 3.6. Indiana collisions, by primary factor and collision severity, 2012

Primary factor	Collisions, by severity					Serious injury per 1,000 collisions
	Total	Fatal	Incapacitating	Non-incapacitating	Property damage	
Driver: Unsafe actions	**118,933**	**374**	**1,758**	**19,956**	**96,845**	**17.9**
Following too closely	30,799	16	232	5,342	25,209	8.1
Failure to yield right of way	29,452	99	621	6,938	21,794	24.4
Unsafe backing	18,010	0	31	340	17,639	1.7
Speed too fast for weather conditions	7,561	23	103	1,142	6,293	16.7
Disregard signal/reg sign	6,786	37	231	2,351	4,167	39.5
Improper turning	6,207	5	41	462	5,699	7.4
Unsafe Lane Movement	5,513	16	55	613	4,829	12.9
Improper lane usage	5,144	6	45	434	4,659	9.9
Unsafe speed	4,336	74	195	1,259	2,808	62.0
Left of center	3,199	89	162	815	2,133	78.5
Improper passing	1,723	7	37	206	1,473	25.5
Wrong way on one way	203	2	5	54	142	34.5
Driver: Loss of control	**17,674**	**212**	**683**	**4,189**	**12,590**	**50.6**
Ran off road	14,604	190	598	3,481	10,335	54.0
Overcorrecting/oversteering	3,070	22	85	708	2,255	34.9
Driver: Distractions	6,271	7	99	1,170	4,995	16.9
Unspecified distraction	5,813	7	89	1,080	4,637	16.5
Cell phone/other electronic device	454	0	9	90	355	19.8
Passenger distraction	4	0	1	0	3	250.0
Driver: Cognitive/physical impairment	**2,528**	**11**	**122**	**842**	**1,553**	**52.6**
Driver asleep or fatigued	1,428	5	36	429	958	28.7
Alcoholic beverages	289	0	3	68	218	10.4
Driver illness	785	6	83	339	357	113.4
Prescription drugs	19	0	0	5	14	0.0
Illegal drugs	7	0	0	1	6	0.0
Driver: Miscellaneous factors	**14,706**	**72**	**330**	**2,511**	**11,793**	**27.3**
Influenced by pedestrian action	851	40	117	551	143	184.5
Violation of license restriction	3	0	0	3	0	0.0
Other (unspecified)	13,812	32	213	1,954	11,613	17.7
(Driver not a factor)	40	0	0	3	37	0.0
Driver factors (all)	**160,112**	**676**	**2,992**	**28,668**	**127,776**	**22.9**
Vehicle factors	**5,200**	**16**	**69**	**716**	**4,399**	**16.3**
Environmental factors	**22,388**	**25**	**171**	**1,423**	**20,769**	**8.8**
Unknown	**1,141**	**1**	**2**	**46**	**1,092**	**2.6**
All collisions	**188,841**	**718**	**3,234**	**30,853**	**154,036**	**20.9**

Source: Indiana State Police

Notes:
1) ***Serious injury*** **collisions include those with one or more** ***fatal*** **or** ***incapacitating*** **injuries.**
2) ***Non-incapacitating*** **collisions include those with one or more** ***non-incapacitating*** **or** ***possible*** **injuries.**

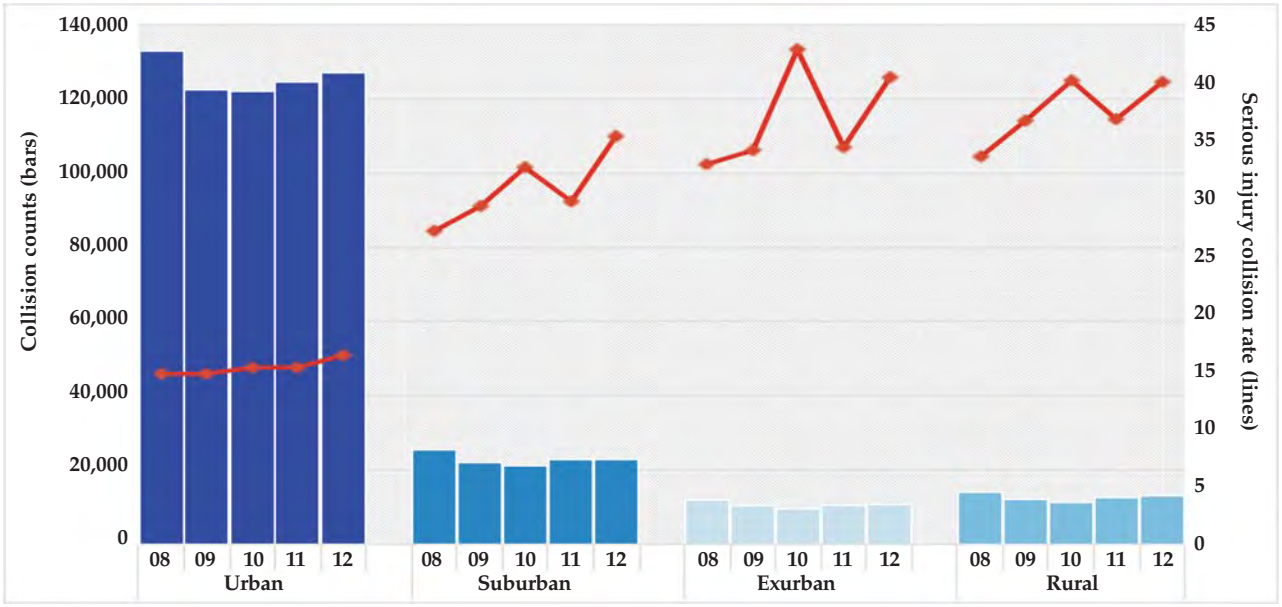
Figure 3.5. Indiana traffic collisions, by primary factor and severity, 2012



Source: Indiana State Police

Notes:
1) See Table 3.6 for definitions of factor categories related to driver actions.
2) Limited to collisions for which the primary factor is known.

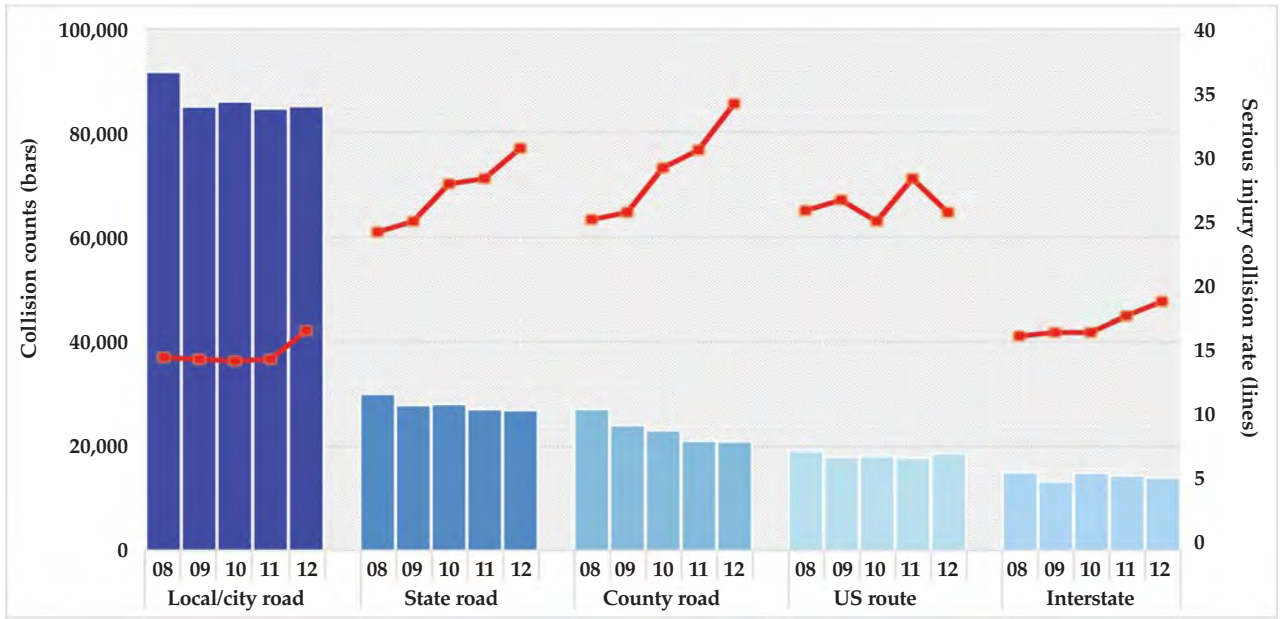
Figure 3.6. Indiana traffic collisions and serious injury collision rates, by locale, 2008-2012



Source: Indiana State Police

Notes:
1) Includes only collisions where valid locale was identified.
2) *Serious injury* collisions include those with one or more *fatal* or *incapacitating* injuries.
3) *Serious injury* collision rate is calculated per 1,000 total collisions in each locale.

Figure 3.7. Indiana traffic collisions and serious injury collision rates, by road class, 2008-2012



Source: Indiana State Police

Notes:
1) Includes only collisions where valid locale was identified.
2) *Serious injury* collisions include those with one or more *fatal* or *incapacitating* injuries.
3) *Serious injury* collision rate is calculated per 1,000 total collisions in each locale.

Table 3.7. Indiana traffic collisions, by severity and road parameters, 2012

	Collisions, by severity					Serious injury per 1,000 collisions
	Total	Fatal	Incapacitating	Non-incapacitating	Property damage	
Total collisions	**188,841**	**718**	**3,234**	**30,853**	**154,036**	**20.9**
By road class						
Local/city road	85,128	183	1,256	15,221	68,468	16.9
State road	26,868	200	630	5,121	20,917	30.9
US route	23,439	13	146	1,200	22,080	6.8
County road	20,853	132	583	3,769	16,369	34.3
Unknown	18,601	114	430	3,622	14,435	29.2
Interstate	13,952	76	189	1,920	11,767	19.0
By junction type						
No junction	124,456	541	2,084	17,719	104,112	21.1
Four-way	38,402	117	706	8,589	28,990	21.4
T-intersection	19,709	43	352	3,519	15,795	20.0
Ramp	2,912	8	36	427	2,441	15.1
Interchange	1,072	3	20	205	844	21.5
Y-intersection	769	1	20	155	593	27.3
Traffic circle/roundabout	734	0	10	73	651	13.6
Five point or more	501	0	3	127	371	6.0
Unknown	286	5	3	39	239	28.0
By road character						
Straight	**164,129**	**555**	**2,656**	**26,937**	**133,981**	**19.6**
Level	137,744	446	2,158	22,466	112,674	18.9
Graded	20,974	73	388	3,481	17,032	22.0
Hillcrest	5,411	36	110	990	4,275	27.0
Curve	**18,765**	**159**	**532**	**3,657**	**14,417**	**36.8**
Level	11,424	90	311	2,158	8,865	35.1
Graded	6,110	58	188	1,234	4,630	40.3
Hillcrest	1,231	11	33	265	922	35.7
Non-roadway crash	5,759	4	45	255	5,455	8.5
Unknown	188	0	1	4	183	5.3
Roadway surface type						
Asphalt	167,203	663	2,916	27,641	135,983	21.4
Concrete	18,181	43	260	2,844	15,034	16.7
Gravel	2,484	8	36	267	2,173	17.7
Other	806	4	22	96	684	32.3
Unknown	167	0	0	5	162	0.0

Source: Indiana State Police

Notes:
1) *Serious injury* collisions include collisions with one or more *fatal* or *incapacitating* injuries.
2) *Serious injury* collision rate is calculated per 1,000 total collisions in each roadway surface type category.

Table 3.8. Indiana traffic collisions, by severity and manner of collision, 2012

Manner of collision	Collisions, by severity					Serious injury per 1,000 collisions
	Total	Fatal	Incapacitating	Non-incapacitating	Property damage	
Total collisions	**188,841**	**718**	**3,234**	**30,853**	**154,036**	**20.9**
Rear end	45,330	62	456	8,495	36,317	11.4
Right angle	30,931	134	670	7,097	23,030	26.0
Ran off road	22,695	239	819	5,219	16,418	46.6
Head on	20,972	166	555	3,422	16,829	34.4
Backing	19,872	1	46	424	19,401	2.4
Same direction sideswipe	18,505	15	99	1,257	17,134	6.2
Left turn	9,025	19	156	1,921	6,929	19.4
Other collision manner	8,240	47	197	1,209	6,787	29.6
Opposite direction sideswipe	4,711	19	57	524	4,111	16.1
Right turn	2,670	1	27	291	2,351	10.5
Non-collision	2,572	14	121	630	1,807	52.5
Left/right turn	2,201	1	23	289	1,888	10.9
Unknown	782	0	3	38	741	3.8
Rear to rear	335	0	5	37	293	14.9

Source: Indiana State Police

Notes:
1) *Serious injury* collisions include collisions with one or more *fatal* or *incapacitating* injuries.
2) *Serious injury* collision rate is calculated per 1,000 total collisions by each manner of collision.

Table 3.9. Indiana collisions, by severity and traffic control type, 2012

Traffic control type	Collisions, by severity					Serious injury per 1,000 collisions
	Total	Fatal	Incapacitating	Non-incapacitating	Property damage	
Total collisions	**188,841**	**718**	**3,234**	**30,853**	**154,036**	**20.9**
Lane control	43,770	228	779	7,370	35,393	23.0
Traffic control signal	33,983	58	504	7,253	26,168	16.5
Stop sign	18,066	55	397	3,979	13,635	25.0
No passing zone	4,526	56	139	939	3,392	43.1
Other regulatory sign	1,352	7	20	190	1,135	20.0
Yield sign	1,514	6	32	249	1,227	25.1
Flashing signal	1,325	7	33	289	996	30.2
Railroad crossing	419	5	11	70	333	38.2
Person directing traffic	223	1	4	53	165	22.4
None	83,350	295	1,315	10,444	71,296	19.3
Unknown	313	0	0	17	296	0.0

Source: Indiana State Police

Notes:
1) *Serious injury* collisions include collisions with one or more *fatal* or *incapacitating* injuries.
2) *Serious injury* collision rate is calculated per 1,000 total collisions by each manner of collision.

Table 3.10. Indiana traffic collisions, by severity and environmental conditions, 2012

	Collisions, by severity					Serious injury per 1,000 collisions
	Total	Fatal	Incapacitating	Non-incapacitating	Property damage	
All collisions	**188,841**	**718**	**3,234**	**30,853**	**154,036**	**20.9**
By light conditions						
Daylight	124,657	366	2,053	21,459	100,779	19.4
Dark (not lighted)	28,453	224	625	3,988	23,616	29.8
Dark (lighted)	25,856	92	414	4,082	21,268	19.6
Dawn/dusk	8,606	32	140	1,305	7,129	20.0
Unknown	1,269	4	2	19	1,244	4.7
By weather conditions						
Clear	124,863	514	2,294	20,752	101,303	22.5
Cloudy	34,955	116	556	5,710	28,573	19.2
Rain	16,234	49	239	2,780	13,166	17.7
Snow	6,861	15	72	812	5,962	12.7
Blowing sand/soil/snow	2,925	10	30	366	2,519	13.7
Sleet/hail/freezing rain	1,036	2	17	171	846	18.3
Fog/smoke/smog	1,125	11	18	192	904	25.8
Severe cross wind	428	1	8	66	353	21.0
Unknown	414	0	0	4	410	0.0
By road surface conditions						
Dry	147,209	601	2,626	24,532	119,450	21.9
Wet	26,172	79	427	4,402	21,264	19.3
Snow/slush	7,544	17	73	828	6,626	11.9
Ice	6,265	13	80	834	5,338	14.8
Loose material on road	638	4	21	152	461	39.2
Water (standing or moving)	528	4	5	94	425	17.0
Muddy	101	0	2	5	94	19.8
Unknown	384	0	0	6	378	0.0

Source: Indiana State Police

Notes:
1) *Serious injury* collisions include collisions with one or more *fatal* or *incapacitating* injuries.
2) *Serious injury* collision rate is calculated per 1,000 total collisions by each manner of collision.

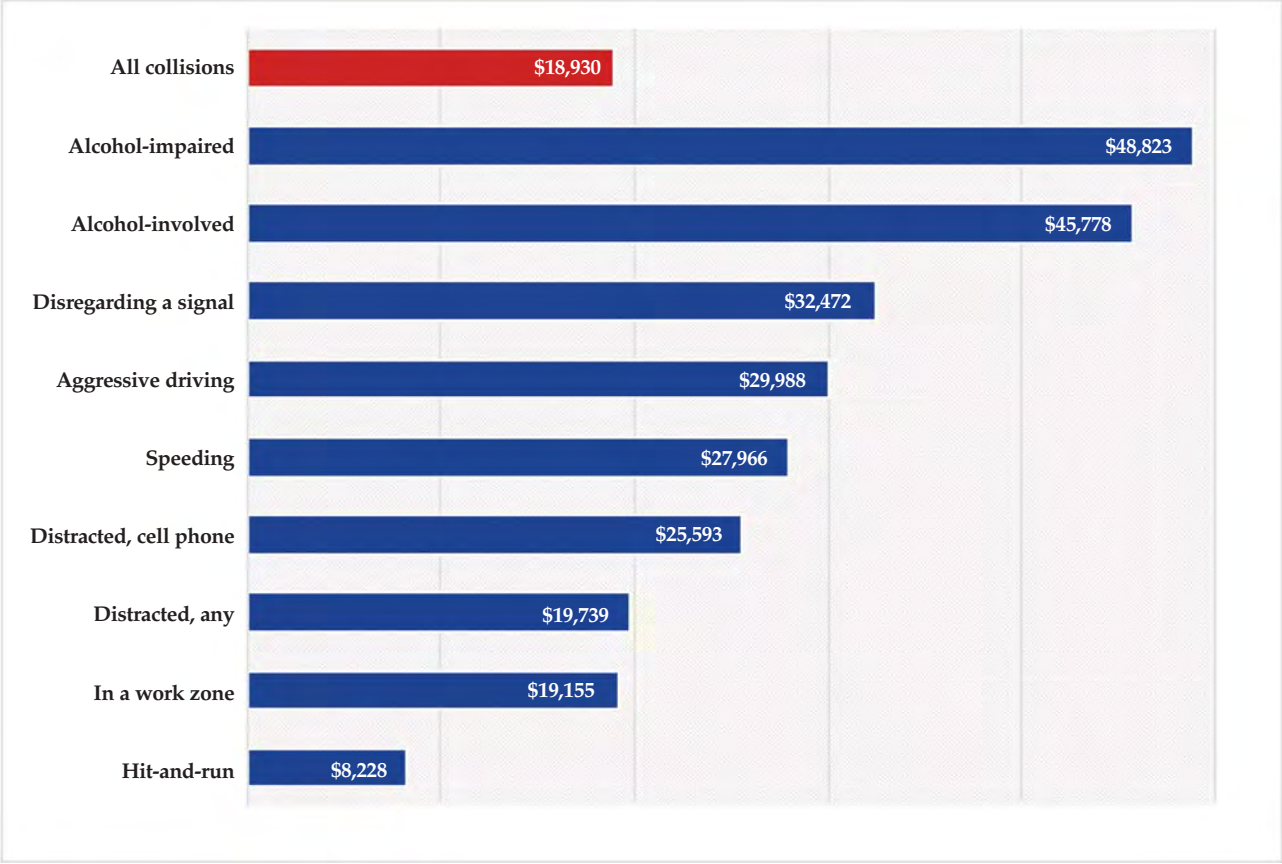
Low — High

Table 3.11. Economic cost of traffic collisions in Indiana, by collision type, 2012

Collision Type	Count of collisions	Total cost (millions)
All collisions	**188,841**	**$3,574.7**
Speeding	16,608	$464.5
Alcohol-involved	8,761	$401.1
Alcohol-impaired	5,152	$251.5
Distracted, any	9,659	$190.7
Hit-and-run	23,050	$189.7
Aggressive driving	4,494	$134.8
Disregarding a signal	4,009	$130.2
In a work zone	3,498	$67.0
Distracted, cell phone	1,132	$29.0

Note: Counts of different collisions circumstances will not sum to total number of collisions.

Figure 3.8. Average economic cost of Indiana traffic collisions, 2012



Source: Indiana State Police
Note: See Appendix A for details on economic cost computations.

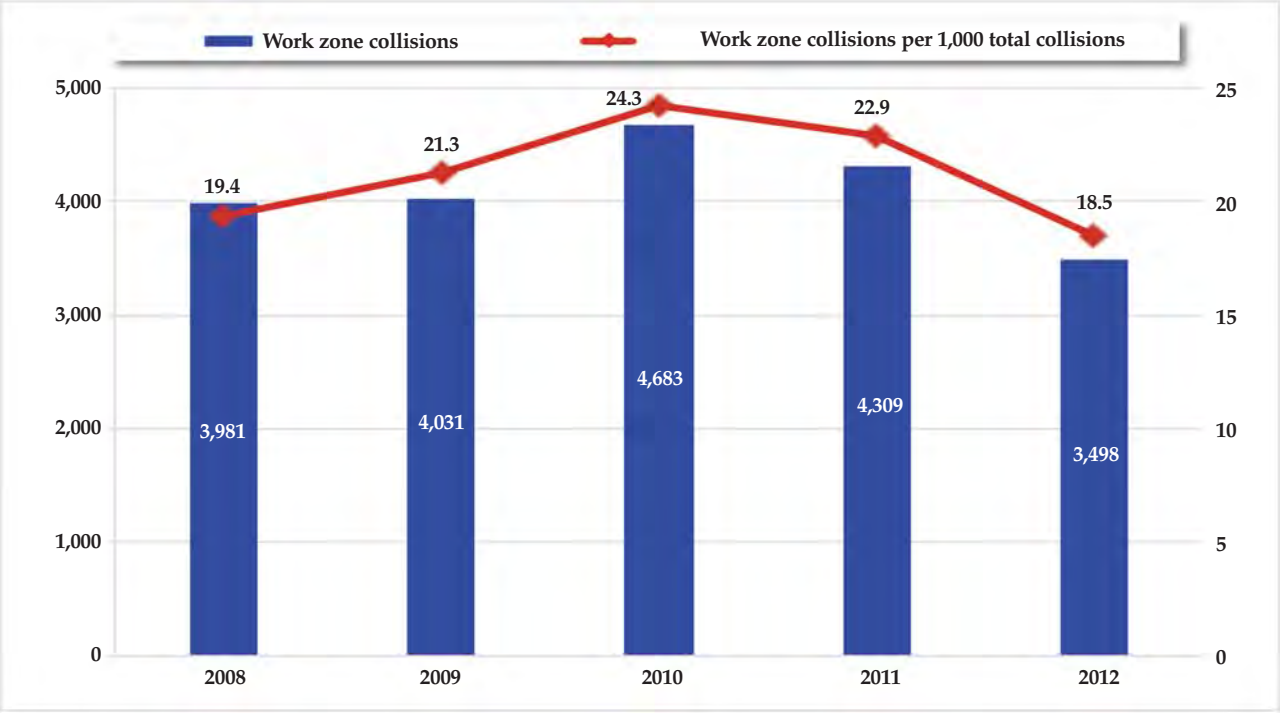
Work Zone Collisions

The number of collisions occurring in work zones increased from 3,981 in 2008 to a five-year high of 4,683 in 2010, then declined to 3,498 by 2012. The work zone collision rate was 18.5 per 1,000 collisions in 2012, down from 24.3 in 2010 (Figure 3.9). In 2012, the serious injury rate for work zones (18.1) was lower than for non-work zone collisions (21.0). Work zone collisions occurring in the construction type of *intermittent/moving work* had the highest rate of serious injury collisions (29.7 per 1,000 collisions), followed by *lane closure* (18.8) (Table 3.12).

In 2012, work zone collision rates per 1,000 total collisions were higher in *urban* (19.7) and *suburban* (18.1) areas than in *exurban* (13.4) and *rural* (9.7) locales. Conversely, serious injury collision rates were higher in *rural* (55.1 per 1,000 work zone collisions) and *exurban* (27.8) areas (Figure 3.10). Work zone collisions rates were highest on *interstates* (67.9 per 1,000 collisions) and lowest on *county roads* (5.3 per 1,000 collisions). However, in 2012 rates of serious injury collisions were highest on *county roads* (27 per 1,000 collisions) (Figure 3.11).

Environmental conditions also affect work zone collisions. While the majority of work zone collisions (75 percent, calculated from table) occurred during *daylight*, serious injury work zone collision rates were highest at *dawn/dusk* (31.7 per 1,000 work zone collisions) and *dark (not lighted)* (29.5 per 1,000 work zone collisions). The weather condition with the highest rate of serious injury in work zone collisions was *blowing sand/soil/snow* (71.4 per 1,000). In 2012, *ice* was the road surface condition with the highest rate of serious injury (100.0) (Table 3.13). While *lane control* collisions represented the largest number of work zone collisions that occurred under traffic control, the highest rate of serious injury rates occurred under *railroad crossing* (71.4 per 1,000 work zone collisions) (Table 3.14). The rate of serious injury on *asphalt* surface was 18.8 per 1,000 work zone collisions (Table 3.15).

Figure 3.9. Indiana work zone collisions, 2008-2012



Source: Indiana State Police

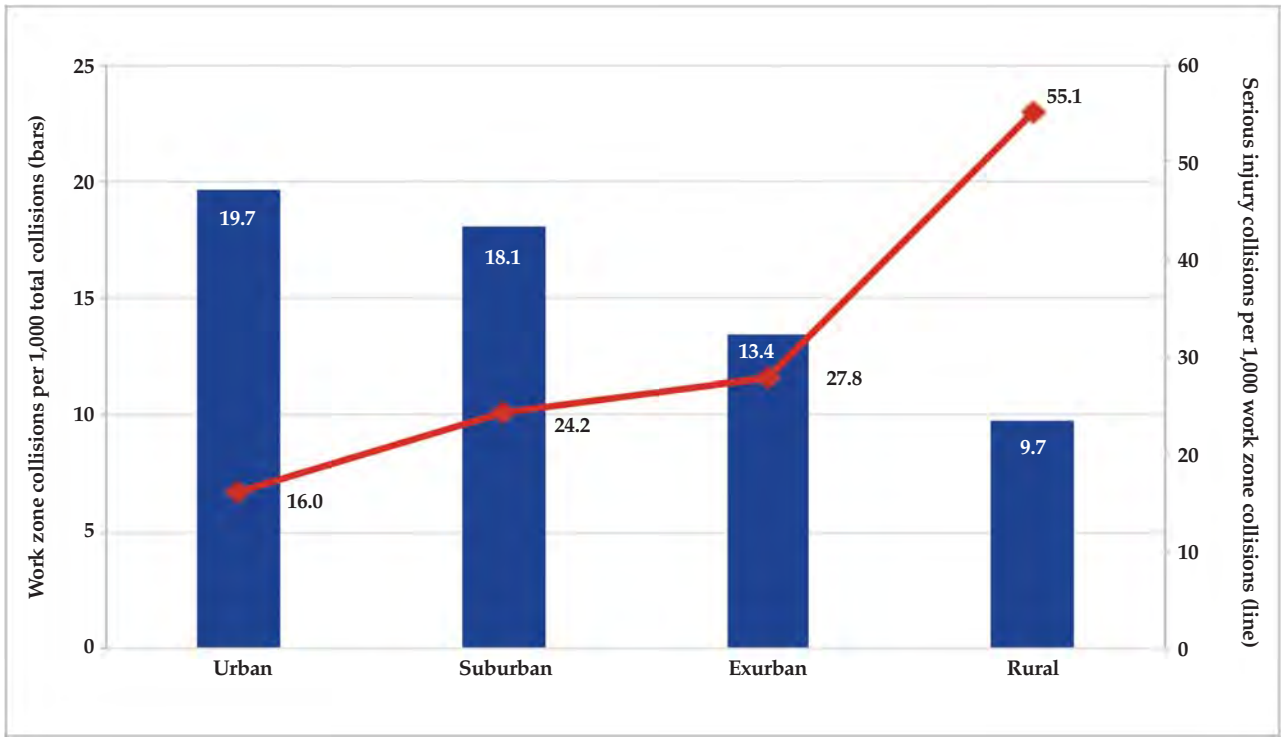
Table 3.12. Indiana collisions in work zones, by severity and construction type, 2012

	Collisions, by severity					Serious injury per 1,000 collisions
	Total	Fatal	Incapacitating	Non-incapacitating	Property damage	
All collisions	**188,841**	**718**	**3,234**	**30,853**	**154,036**	**20.9**
All construction types	3,490	10	53	584	2,843	18.1
Not in construction zone	185,351	708	3,181	30,269	151,193	21.0
Construction zone type						
Lane closure	1,698	5	27	292	1,374	18.8
Cross-over/lane shift	423	1	1	68	353	4.7
Intermittent/moving work	471	4	10	86	371	29.7
Work on shoulder	898		15	138	745	16.7

Source: Indiana State Police

Notes:
1) *Serious injury* collisions include collisions with one or more *fatal* or *incapacitating* injuries.
2) *Serious injury* collision rate is calculated per 1,000 total collisions in each construction zone type.

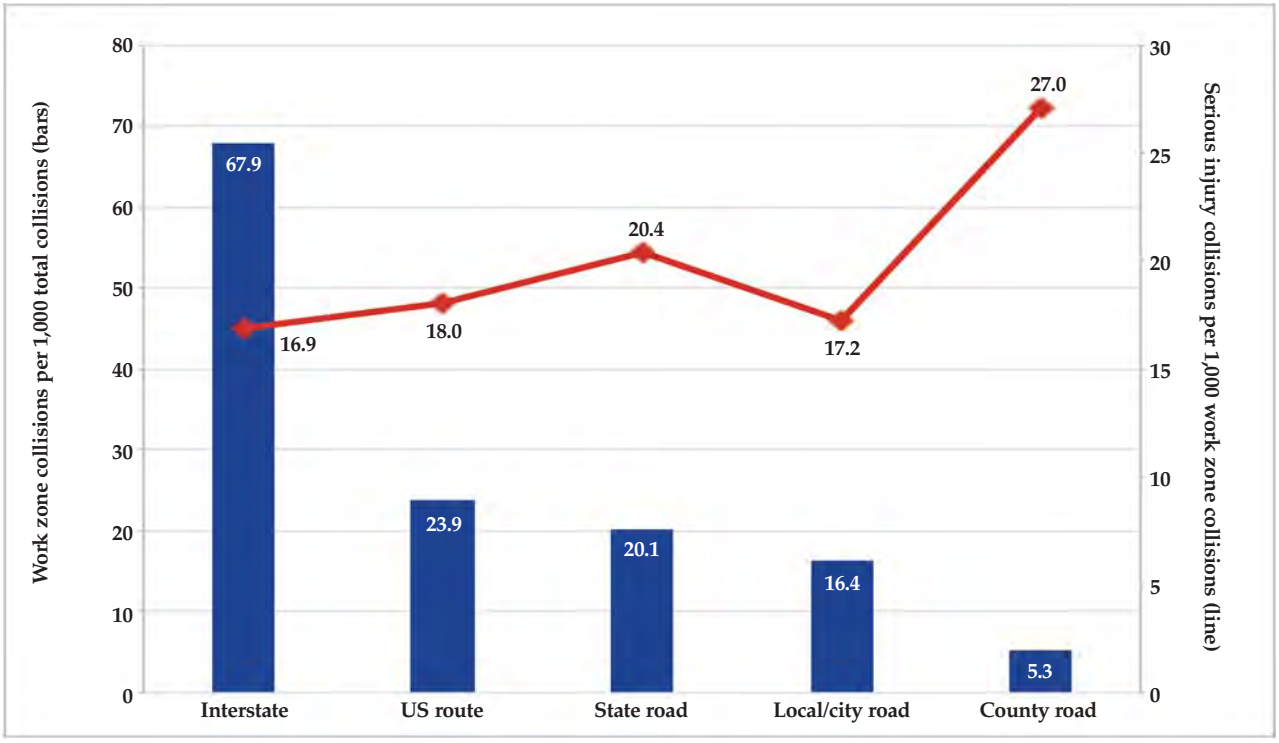
Figure 3.10. Indiana work zone collisions, by locale, 2012



Source: Indiana State Police

Notes:
1) Includes only collisions with valid locale reported.
2) *Serious injury* collisions include collisions with one or more *fatal* or *incapacitating* injuries.
3) *Serious injury* collision rate is calculated per 1,000 total collisions in each construction zone type.

Figure 3.11. Indiana work zone collisions, by road class, 2012



Source: Indiana State Police

Notes:
1) *Serious injury* collisions include collisions with one or more *fatal* or *incapacitating* injuries.
2) Includes only collisions with valid road class reported.

Table 3.13. Indiana work zone collisions, by severity and environmental conditions, 2012

	Work zone collisions, by severity					Serious injury per 1,000 collisions
	Total	Fatal	Incapacitating	Non-incapacitating	Property damage	
All work zone collisions	**3,498**	**10**	**53**	**584**	**2,851**	**18.0**
By light conditions						
Daylight	2,618	6	33	440	2,139	14.9
Dark (not lighted)	373	1	10	61	301	29.5
Dark (lighted)	372	3	6	61	302	24.2
Dawn/dusk	126	0	4	21	101	31.7
Unknown	9	0	0	1	8	0.0
By weather conditions						
Clear	2,596	8	40	437	2,111	18.5
Cloudy	584	2	8	102	472	17.1
Rain	248	0	3	36	209	12.1
Snow	27	0	1	5	21	37.0
Blowing sand/soil/snow	14	0	1	2	11	71.4
Severe cross wind	14	0	0	0	14	0.0
Fog/smoke/smog	9	0	0	2	7	0.0
Sleet/hail/freezing rain	4	0	0	0	4	0.0
Unknown	2	0	0	0	2	0.0
By road surface conditions						
Dry	3,044	9	42	505	2,488	16.8
Wet	352	1	6	60	285	19.9
Snow/slush	25	0	2	2	21	80.0
Ice	20	0	2	3	15	100.0
Loose material on road	38	0	1	13	24	26.3
Water (standing or moving)	9	0	0	1	8	0.0
Muddy	8	0	0	0	8	0.0
Unknown	2	0	0	0	2	0.0

Source: Indiana State Police

Notes:
1) *Serious injury* collisions include collisions with one or more *fatal* or *incapacitating* injuries.
2) *Serious injury* collision rate is calculated per 1,000 total work zone collisions in each environmental condition category.

Table 3.14. Indiana work zone collisions, by severity and traffic control type, 2012

	Work zone collisions, by severity					Serious injury per 1,000 collisions
	Total	Fatal	Incapacitating	Non-incapacitating	Property damage	
All work zone collisions	**3,498**	**10**	**53**	**584**	**2,851**	**18.0**
Traffic control type						
Lane control	1,408	3	29	207	1,169	22.7
Traffic control signal	796	0	9	147	640	11.3
Stop sign	146	0	0	21	125	0.0
No passing zone	60	0	1	16	43	16.7
Other regulatory sign	116	3	1	21	91	34.5
Yield sign	21	0	0	5	16	0.0
Flashing signal	47	0	0	11	36	0.0
Railroad crossing	14	1	0	0	13	71.4
Person directing traffic	88	1	1	22	64	22.7
None	795	2	12	134	647	17.6
Unknown	7	0	0	0	7	0.0

Source: Indiana State Police

Notes:
1) *Serious injury* collisions ainclude collisions with one or more *fatal* or *incapacitating* injuries.
2) *Serious injury* collision rate is calculated per 1,000 total work zone collisions in each traffic control type category.

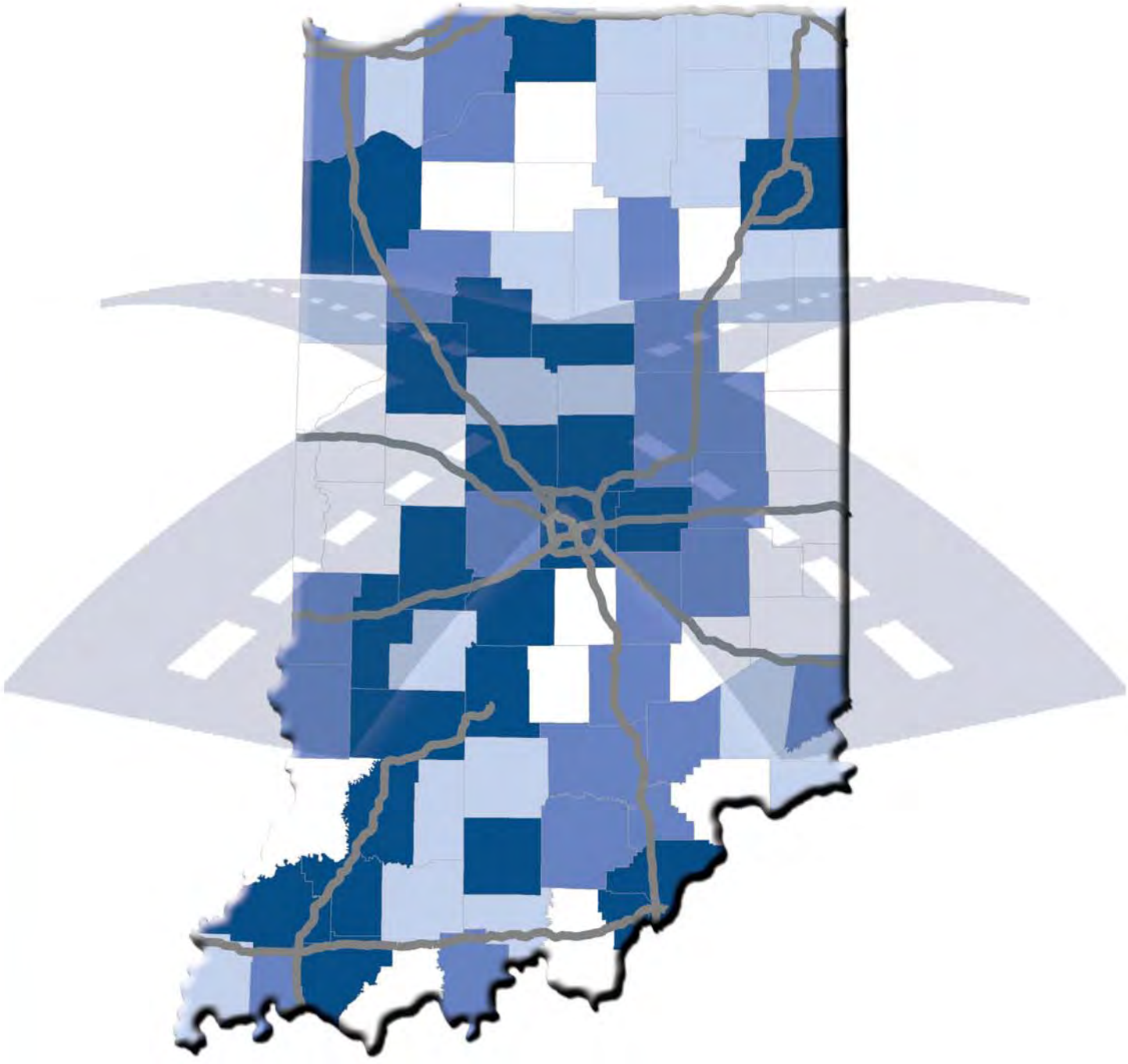
Table 3.15. Indiana work zone collisions, by severity and roadway surface, 2012

	Work zone collisions, by severity					Serious injury per 1,000 collisions
	Total	Fatal	Incapacitating	Non-incapacitating	Property damage	
All work zone collisions	**3,498**	**10**	**53**	**584**	**2,851**	**18.0**
Roadway surface type						
Asphalt	2,766	9	43	469	2,245	18.8
Concrete	672	1	9	105	557	14.9
Gravel	31	0	0	5	26	0.0
Other	27	0	1	5	21	37.0
Unknown	2	0	0	0	2	0.0

Source: Indiana State Police

Notes:
1) *Serious injury* collisions include collisions with one or more *fatal* or *incapacitating* injuries.
2) *Serious injury* collision rate is calculated per 1,000 total work zone collisions in each roadway surface type category.

CHAPTER 4
VEHICLES



VEHICLES, 2012

The vehicle section summarizes data on motor vehicles involved in Indiana collisions in 2012. 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 Motorcycle section of this report and are not otherwise included in this vehicle chapter. Vehicle data are categorized by collision severity, vehicle use, location, road class, and collision primary factors. Note that numbers may vary from previous years due to updated information.

HIGHLIGHTS

There were 331,693 vehicles involved in collisions in Indiana in 2012, a crash rate of 49.6 vehicles per 1,000 registered vehicles. This rate is the lowest crash rate for the five-year period 2008 to 2012 (Figure 4.1). Passenger cars composed 60 percent of the vehicles involved in collisions, while sport utility vehicles (SUVs) composed nearly 14 percent and pickup trucks, 12 percent of vehicles involved. Large trucks accounted for 4 percent of total vehicles in all collisions, but 11 percent of vehicles involved in fatal collisions. Except for motorcycles, large trucks had the highest fatal collision rate per 1,000 in all collisions at 9.6 (Table 4.1).

The majority (92 percent) of vehicles involved in collisions were for personal use. Commercial use vehicles comprised 11 percent of the vehicles involved in fatal collisions, but less than 4 percent of vehicles involved in all collisions. Overall, vehicles were involved in 3.4 fatal collisions per 1,000 collisions, although the fatality rate varied by vehicle use. Commercial vehicles (which include large trucks) had the highest fatality rate (10.2), and highway department vehicles had a fatality rate of 5.4 per 1,000 collisions (Table 4.2).

Prior to all collisions and 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. For fatal collisions, the pre-collision maneuver of *slowing or stopped in traffic* for passenger vehicles (passenger cars, pickup trucks, SUVs, vans) ranged from 4 to 5 percent; however for large trucks in fatal collisions the same pre-collision maneuver was much higher (11 percent). The second highest percentage for passenger cars involved in fatal collisions was *driving left of center* and *turning left* (7 percent) (Table 4.3).

Only 10 percent of large trucks were involved in single-vehicle fatal collisions, compared to over 30 percent for other vehicle types. Approximately 80 percent of vehicles involved in injury collisions were in multiple-vehicle crashes (Table 4.4).

Based on U.S. Census locality definitions (*urban, suburban, exurban,* and *rural*), most passenger vehicles involved in fatal collisions occurred within *urban* locales. Large trucks involved in fatal collisions occurred evenly in *urban* and *suburban* locales (30.2 percent each) (Figure 4.2). For all vehicle types involved in injury collisions, the majority were in *urban* locations (Figure 4.3).

Generally, December, January, and October had proportionately the highest number of vehicles involved in all collisions. For vehicles involved in fatal collisions, however, the month with proportionately the highest number varied by vehicle type (passenger cars – July; pickup trucks – June; SUVs – August; vans – December; large trucks – September). While the distribution per month for all collisions was fairly similar across vehicle types, for fatal collisions, the distribution was more varied (Table 4.5).

For every 1,000 passenger cars involved in collisions, 5.8 were involved in fatal collisions on *state roads* and 5.3 on *county roads*. For every 1,000 large trucks involved, 23.7 were involved in fatal collisions on *U.S. routes* and 17.7 on *state roads*. The highest rates for fatal collisions for pickup trucks occurred on *state roads* (8.9), for SUVs on *interstates* (7.1), and for vans on *county roads* (6.8). *Local/city roads* had the lowest fatal rates for all vehicle types, except large trucks (*county roads*) (Table 4.6).

Every collision is assigned a *primary factor* (or cause) for that particular collision. Over 40 percent of passenger cars, pickup trucks, and SUVs involved in single-vehicle serious injury collisions had *loss of control* as the most common primary factor followed by *unsafe actions* at 24 to 25 percent. Large trucks involved in single-vehicle serious injury collisions had *loss of control* and *all other* primary factors evenly split at 25.5 percent (Table 4.7).

In 2012, in a multiple-vehicle serious injury collision, most passenger cars (82 percent) were involved in some form of *unsafe action.* Considering the likelihood of which vehicle may be at fault (i.e., a vehicle's *contributing circumstance* matched the *primary factor* in the collision), the fault was attributed to 50 percent of the passenger cars. For large trucks involved in multiple-vehicle serious injury collisions, 75 percent were involved in some form of *unsafe* action. However, only 28 percent of those vehicles were attributed to the large truck involved. Pickup trucks were less likely to be at fault when the *primary factor* was *vehicle-related* (Table 4.8).

Considering serious injury collisions, the majority of all passenger vehicles and large trucks collided with *another motor vehicle.* Over 5 percent of passenger cars and vans in serious injury collisions collided with a *pedestrian* (Table 4.9).

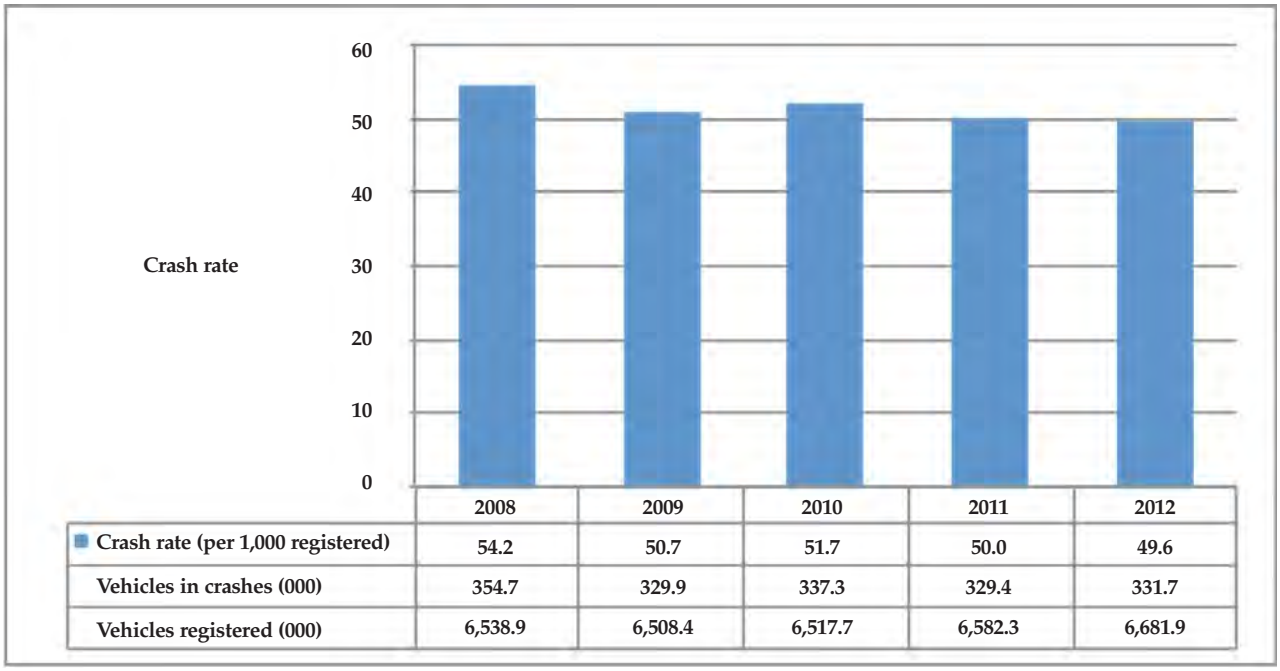
Overall, of the 13,083 large trucks involved in collisions, 1.1 percent (146) had a hazard release in the collision. Of the 126 large trucks involved in fatal collisions, 5 displayed a hazard placard and 3 had a hazard release (Table 4.10).

The mission of the Federal Motor Carrier Safety Administration (FMCSA) is to improve truck and bus safety on U.S. highways. Indiana receives federal funding through the Motor Carrier Safety Grant program each year upon compliance with certain regulations. Qualifications for funding include, but are not limited to, verification of commercial driver's licenses during all roadside inspections and uploading of commercial motor vehicle inspection data. In 2012, inspections of large trucks had a tendency to increase in relation to the severity of the collision. Only 7 percent of large trucks involved in property damage collisions had some type of inspection completed, whereas, 56 percent of large trucks involved in fatal collisions had an inspection. A level 1 inspection (more detailed) was completed more often than a level 3 inspection in serious injury collisions involving large trucks (Table 4.11).

Collisions involving school buses decreased in 2012, from 903 in 2011 to 761 in 2012. This was also the lowest in the five-year period from 2008 to 2012. In all years, the vast majority of collisions involving school buses were property damage only (Table 4.12). In 2012, there was one fatal school bus collision with one fatality of an occupant of the other vehicle involved. Of the 767 school buses involved in collisions, 669 collided with *another vehicle* and 9 collided with a *parked motor vehicle* (Table 4.13).

The most common primary factor for collisions involving school buses was reported as *failure to yield right of way,* followed by *following too closely.* For single-vehicle school bus collisions 19 of the 82 school buses (23 percent) involved had *unsafe backing* as the primary factor for the collisions. Over half of the school buses involved in multi-vehicle collisions had the primary factor attributed to them. Eighty-three of the 87 school buses (95 percent) involved in multi-vehicle collisions where the primary factor was *improper turning* were reported as the vehicle involved in the improper turn. On the other hand, only 6 of the 21 school buses (29 percent) involved in multi-vehicle collisions where the primary factor was *disregard signal/reg sign* were attributed with this action (Table 4.14).

Figure 4.1. Indiana motor vehicle crash rate per 1,000 registrations, 2008-2012



	2008	2009	2010	2011	2012
Crash rate (per 1,000 registered)	54.2	50.7	51.7	50.0	49.6
Vehicles in crashes (000)	354.7	329.9	337.3	329.4	331.7
Vehicles registered (000)	6,538.9	6,508.4	6,517.7	6,582.3	6,681.9

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

Note: Excludes *bicycles* and *pedestrians* as unit types.

Table 4.1. Vehicles involved in Indiana collisions, by vehicle type and collision severity, 2012

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	
Passenger vehicles	**304,736**	**91.9%**	**842**	**73.9%**	**4,384**	**82.7%**	**50,643**	**91.7%**	**248,867**	**92.2%**	**2.8**
Passenger car	198,985	60.0%	509	44.7%	2,739	51.7%	33,163	60.1%	162,574	60.2%	2.6
Pickup truck	41,236	12.4%	159	14.0%	701	13.2%	6,422	11.6%	33,954	12.6%	3.9
Sport utility vehicle (SUV)	44,946	13.6%	118	10.4%	635	12.0%	7,744	14.0%	36,449	13.5%	2.6
Van	19,569	5.9%	56	4.9%	309	5.8%	3,314	6.0%	15,890	5.9%	2.9
Other vehicles	**26,957**	**8.1%**	**297**	**26.1%**	**915**	**17.3%**	**4,573**	**8.3%**	**21,172**	**7.8%**	**11.0**
Buses	1,628	0.5%	3	0.3%	26	0.5%	193	0.3%	1,406	0.5%	1.8
Large trucks	13,090	3.9%	126	11.1%	220	4.2%	1,523	2.8%	11,221	4.2%	9.6
Motorcycle/moped	4,205	1.3%	149	13.1%	603	11.4%	2,371	4.3%	1,082	0.4%	35.4
Other vehicle types	844	0.3%	7	0.6%	24	0.5%	131	0.2%	682	0.3%	8.3
Unknown vehicle type	7,190	2.2%	12	1.1%	42	0.8%	355	0.6%	6,781	2.5%	1.7
Total vehicles	**331,693**	**100.0%**	**1,139**	**100.0%**	**5,299**	**100.0%**	**55,216**	**100.0%**	**270,039**	**100.0%**	**3.4**

Source: Indiana State Police

Notes:
1) *Other vehicle types* include *combination vehicle, farm vehicle, motor home/recreational vehicle,* and *animal drawn vehicle (non-motor vehicle).*
2) *Unknown vehicle type* includes vehicles reported as *unknown*, blank or invalid codes.
3) Excludes *bicycles* and *pedestrians* as vehicle types.

Table 4.2. Vehicles involved in Indiana collisions, by vehicle use and collision severity, 2012

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	304,602	91.8%	994	87.3%	4,955	93.5%	52,442	95.0%	246,211	91.2%	3.3
Commercial	11,833	3.6%	121	10.6%	212	4.0%	1,431	2.6%	10,069	3.7%	10.2
Police	2,292	0.7%	2	0.2%	22	0.4%	271	0.5%	1,997	0.7%	0.9
Other	1,971	0.6%	6	0.5%	42	0.8%	236	0.4%	1,687	0.6%	3.0
Rental, not leased	1,331	0.4%	3	0.3%	13	0.2%	183	0.3%	1,132	0.4%	2.3
School	921	0.3%	2	0.2%	10	0.2%	92	0.2%	817	0.3%	2.2
Ambulance	376	0.1%	0	0.0%	5	0.1%	54	0.1%	317	0.1%	0.0
Highway department	373	0.1%	2	0.2%	6	0.1%	35	0.1%	330	0.1%	5.4
Public utilities	252	0.1%	1	0.1%	1	0.0%	21	0.0%	229	0.1%	4.0
Fire	251	0.1%	1	0.1%	0	0.0%	22	0.0%	228	0.1%	4.0
Bus, not school	203	0.1%	0	0.0%	5	0.1%	24	0.0%	174	0.1%	0.0
Military	52	0.0%	0	0.0%	1	0.0%	4	0.0%	47	0.0%	0.0
Unknown	7,236	2.2%	7	0.6%	27	0.5%	401	0.7%	6,801	2.5%	1.0
Total vehicles	**331,693**	**100.0%**	**1,139**	**100.0%**	**5,299**	**100.0%**	**55,216**	**100.0%**	**270,039**	**100.0%**	**3.4**

Source: Indiana State Police

Notes:
1) *Unknown vehicle use* includes vehicles reported as *unknown*, blank or invalid codes.
2) *Commercial* use includes buses, taxis, carriers, etc.
3) *Other* use includes government, postal, etc.
4) *Public utilities* use includes gas, electric, etc.
5) Excludes *bicycles* and *pedestrians* as vehicles.

Table 4.3. Percentage of vehicles involved in all and fatal collisions, by vehicle type and pre-collision vehicle maneuver, 2012

Vehicle maneuver	All collisions					Fatal collisions				
	Passenger car	Pickup truck	SUV	Van	Large truck	Passenger car	Pickup truck	SUV	Van	Large truck
Count of vehicles	**198,985**	**41,236**	**44,946**	**19,569**	**13,090**	**509**	**159**	**118**	**56**	**126**
Going straight	49.2%	49.1%	45.3%	46.4%	46.2%	68.0%	72.3%	59.3%	76.8%	68.3%
Slowing or stopped in traffic	17.1%	14.2%	20.4%	17.3%	9.4%	5.1%	3.8%	5.1%	5.4%	11.1%
Parked	8.5%	7.7%	7.1%	7.9%	7.1%	1.0%	1.9%	3.4%	0.0%	5.6%
Turning left	7.6%	7.0%	7.2%	7.3%	7.6%	7.1%	6.9%	6.8%	3.6%	4.0%
Backing	5.4%	9.5%	8.0%	8.7%	9.0%	0.8%	0.0%	0.0%	0.0%	0.0%
Turning right	3.1%	3.6%	3.1%	3.6%	8.9%	1.0%	0.0%	0.0%	0.0%	0.0%
Changing lanes	1.9%	1.6%	1.9%	2.0%	4.7%	0.6%	0.0%	3.4%	1.8%	0.8%
Entering traffic lane	1.6%	1.4%	1.5%	1.7%	1.0%	1.0%	1.9%	0.8%	1.8%	0.0%
Starting in traffic	1.4%	1.3%	1.8%	1.6%	1.2%	0.8%	1.9%	0.0%	0.0%	1.6%
Leaving traffic lane	0.8%	0.8%	0.7%	0.6%	0.9%	3.7%	0.0%	6.8%	3.6%	2.4%
Avoiding object in roadway	0.7%	0.8%	0.7%	0.6%	0.6%	0.8%	1.3%	1.7%	0.0%	2.4%
Driving left of center	0.7%	0.9%	0.6%	0.6%	0.4%	7.1%	8.2%	9.3%	5.4%	1.6%
Overtaking/passing	0.6%	0.7%	0.6%	0.6%	0.8%	1.2%	0.6%	3.4%	0.0%	0.8%
Merging	0.4%	0.3%	0.4%	0.4%	0.8%	0.0%	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%	0.6%	0.4%	0.0%	0.0%	1.8%	0.0%
Crossing median	0.2%	0.1%	0.1%	0.1%	0.2%	1.2%	1.3%	0.0%	0.0%	1.6%
Unattended moving vehicle	0.1%	0.2%	0.1%	0.1%	0.2%	0.4%	0.0%	0.0%	0.0%	0.0%
Total	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

Source: Indiana State Police

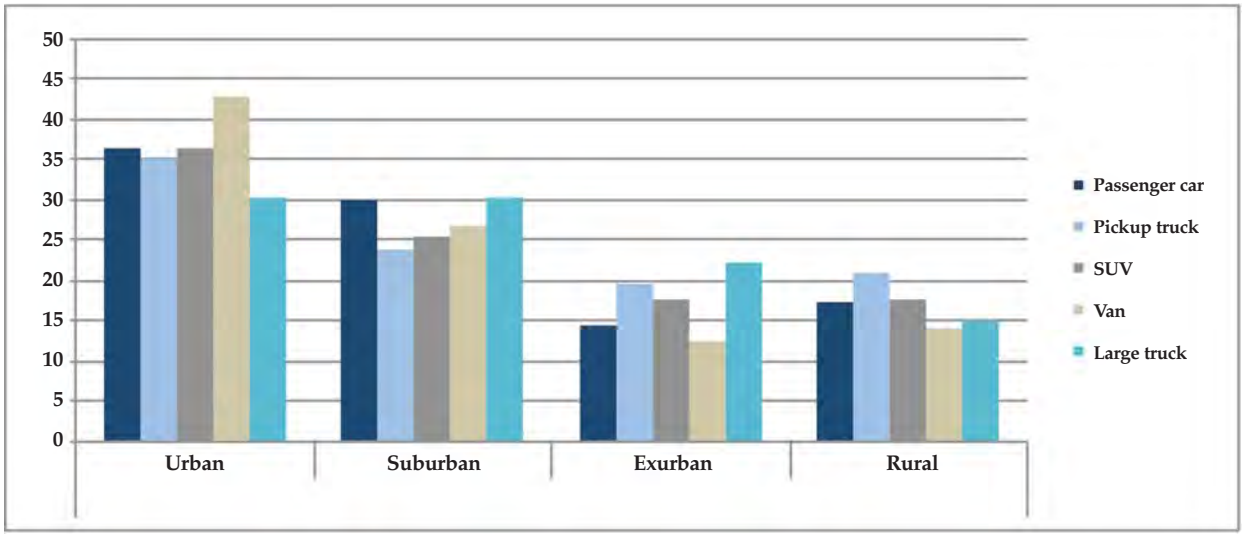
Table 4.4. Vehicles involved in fatal and injury collisions, by vehicle type and collision type, 2012

	Passenger car		Pickup truck		SUV		Van		Large truck	
	Count	%	Count	%	Count	%	Count	%	Count	%
Collision type										
Fatal	**509**	**100.0%**	**159**	**100.0%**	**118**	**100.0%**	**56**	**100.0%**	**126**	**100.0%**
Single-vehicle	185	36.3%	50	31.4%	42	35.6%	22	39.3%	13	10.3%
Multiple-vehicle	324	63.7%	109	68.6%	76	64.4%	34	60.7%	113	89.7%
Injury	**35,902**	**100.0%**	**7,123**	**100.0%**	**8,379**	**100.0%**	**3,623**	**100.0%**	**1,743**	**100.0%**
Single-vehicle	6,423	17.9%	1,501	21.1%	1,541	18.4%	512	14.1%	269	15.4%
Multiple-vehicle	29,479	82.1%	5,622	78.9%	6,838	81.6%	3,111	85.9%	1,474	84.6%

Source: Indiana State Police

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

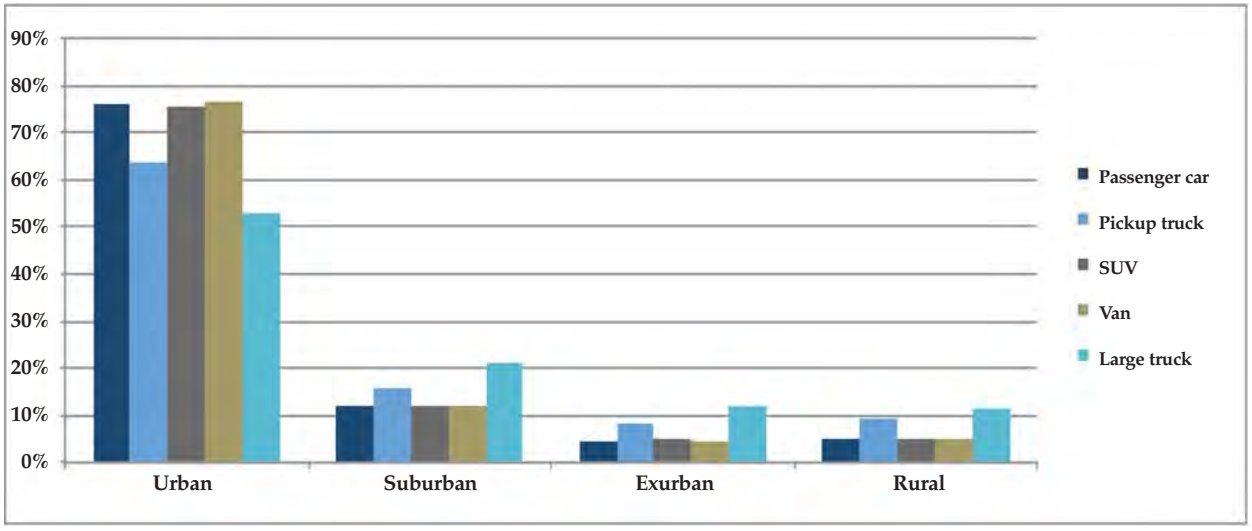
Figure 4.2. Vehicles involved in fatal collisions, by vehicle type and Census locality, 2012



Source: Indiana State Police

Notes:
1) Excludes vehicles where the Census locality was unknown.
2) See glossary for definition of localities (*urban, suburban, exurban, rural*).

Figure 4.3. Vehicles involved in injury collisions, by vehicle type and Census locality, 2012



Source: Indiana State Police

Notes:
1) Excludes vehicles where the Census locality was unknown.
2) See glossary for definition of localities (*urban, suburban, exurban, rural*).
3) *Injury collisions* are those with no fatal injuries, but contain at least one *incapacitating, non-incapacitating, possible* or *other known* injury.

Table 4.5. Percentage of vehicles involved in collisions, by vehicle type and month, 2012

	Passenger car	Pickup truck	SUV	Van	Large truck	Total
All collisions	**198,985**	**41,236**	**44,946**	**19,569**	**13,090**	**317,826**
January	8.5%	9.8%	9.4%	9.3%	9.8%	8.9%
February	7.4%	7.7%	7.8%	7.2%	7.3%	7.5%
March	7.8%	8.0%	7.7%	8.1%	8.1%	7.9%
April	7.5%	7.5%	7.5%	7.3%	7.1%	7.5%
May	8.6%	8.7%	8.5%	8.8%	8.2%	8.6%
June	8.1%	8.0%	7.8%	8.6%	8.6%	8.1%
July	7.8%	7.5%	7.5%	7.7%	8.3%	7.7%
August	8.6%	8.0%	8.3%	8.5%	8.3%	8.5%
September	8.1%	7.7%	7.7%	7.8%	8.1%	8.0%
October	9.5%	9.1%	9.2%	9.1%	9.1%	9.3%
November	8.6%	8.4%	8.4%	8.3%	8.1%	8.5%
December	9.6%	9.6%	10.1%	9.3%	9.0%	9.6%
Fatal collisions	**509**	**159**	**118**	**56**	**126**	**968**
January	7.3%	6.9%	11.0%	7.1%	7.9%	7.7%
February	7.7%	8.2%	5.9%	1.8%	7.9%	7.2%
March	6.7%	5.7%	11.0%	10.7%	4.8%	7.0%
April	6.7%	5.0%	4.2%	8.9%	6.3%	6.2%
May	7.5%	8.8%	7.6%	7.1%	9.5%	8.0%
June	9.6%	13.2%	6.8%	12.5%	10.3%	10.1%
July	11.6%	9.4%	6.8%	7.1%	8.7%	10.0%
August	9.4%	8.2%	16.9%	5.4%	10.3%	10.0%
September	9.2%	8.8%	6.8%	8.9%	14.3%	9.5%
October	6.9%	9.4%	8.5%	12.5%	7.9%	8.0%
November	7.9%	8.2%	5.1%	3.6%	4.8%	6.9%
December	9.6%	8.2%	9.3%	14.3%	7.1%	9.3%

Source: Indiana State Police

Scale of involvement within vehicle type, by month

Low — High

Table 4.6. Vehicles involved in fatal collisions per 1,000 in all collisions, by vehicle type and road class, 2012

	Road class				
Vehicle type	**Local/city**	**County**	**State**	**U.S. route**	**Interstate**
Passenger car	1.3	5.3	5.8	4.8	3.8
Pickup truck	1.5	5.4	8.9	5.9	7.5
SUV	1.5	4.3	5.0	4.7	7.1
Van	1.6	6.8	6.3	4.8	4.0
Large truck	2.0	1.4	17.7	23.7	13.0

Source: Indiana State Police
Note: Excludes unknown road class.

Table 4.7. Vehicles involved in single-vehicle serious injury collisions, by the primary collision factors and vehicle type, 2012

Primary factor	All passenger vehicles & large trucks		Passenger car		Pickup truck		Sport utility vehicle		Van		Large truck	
	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%
Total vehicles	**1,530**	**100.0%**	**924**	**100.0%**	**246**	**100.0%**	**228**	**100.0%**	**85**	**100.0%**	**47**	**100.0%**
Loss of control	659	43.1%	409	44.3%	111	45.1%	102	44.7%	25	29.4%	12	25.5%
Unsafe actions	383	25.0%	229	24.8%	60	24.4%	55	24.1%	29	34.1%	10	21.3%
All other	244	15.9%	156	16.9%	30	12.2%	31	13.6%	15	17.6%	12	25.5%
Environmental	91	5.9%	48	5.2%	17	6.9%	16	7.0%	5	5.9%	5	10.6%
Cognitive impairment	83	5.4%	46	5.0%	13	5.3%	15	6.6%	5	5.9%	4	8.5%
Vehicle related	40	2.6%	18	1.9%	8	3.3%	6	2.6%	4	4.7%	4	8.5%
Distraction	28	1.8%	16	1.7%	7	2.8%	3	1.3%	2	2.4%	0	0.0%
Unknown	2	0.1%	2	0.2%	0	0.0%	0	0.0%	0	0.0%	0	0.0%

Source: Indiana State Police

Notes:
1) *Serious injury collisions* are those with at least one *fatal* or *incapacitating* injury.
2) See definitions for primary factors incorporated into each primary factor category.

Table 4.8. Vehicles involved in multiple-vehicle serious injury collisions, by the primary collision factors, vehicle type, and attributability, 2012

Primary factor	All passenger vehicles & large trucks	Passenger car	Pickup truck	SUV	Van	Large truck
Total vehicles	**4,042**	**2,324**	**614**	**525**	**280**	**299**
Unsafe actions	**3,292**	**1,904**	**510**	**427**	**227**	**224**
% attributable		*50.2%*	*43.3%*	*48.2%*	*47.6%*	*27.7%*
All other	**207**	**108**	**41**	**31**	**17**	**10**
% attributable		*52.8%*	*46.3%*	*45.2%*	*47.1%*	*50.0%*
Distraction	**161**	**97**	**22**	**22**	**7**	**13**
% attributable		*38.1%*	*36.4%*	*59.1%*	*57.1%*	*38.5%*
Cognitive impairment	**121**	**85**	**12**	**10**	**8**	**6**
% attributable		*35.3%*	*58.3%*	*40.0%*	*50.0%*	*16.7%*
Loss of control	**108**	**55**	**8**	**17**	**10**	**18**
% attributable		*54.5%*	*50.0%*	*41.2%*	*30.0%*	*22.2%*
Environmental	**108**	**54**	**12**	**13**	**9**	**20**
% attributable		*64.8%*	*66.7%*	*100.0%*	*55.6%*	*70.0%*
Vehicle related	**44**	**20**	**9**	**5**	**2**	**8**
% attributable		*45.0%*	*22.2%*	*40.0%*	*50.0%*	*50.0%*
Unknown	**1**	**1**	**0**	**0**	**0**	**0**
% attributable		*0.0%*	*na*	*na*	*na*	*na*

Source: Indiana State Police

Notes:
1) *Serious injury collisions* are those with at least one *fatal* or *incapacitating* injury.
2) See definitions for primary factors incorporated into each primary factor category.
3) na=not applicable

Table 4.9. Vehicles involved in serious injury collisions, by the top object collided with, and vehicle type, 2012

Object collided with	Passenger cars	Pickup trucks	Sport utility vehicles	Vans	Large trucks	Total
Total vehicles - all collisions	**198,985**	**41,236**	**44,946**	**19,569**	**13,090**	**317,826**
Total vehicles - serious injury collisions	**3,248**	**860**	**753**	**365**	**346**	**5,572**
Another motor vehicle	67.5%	66.4%	65.9%	72.3%	79.8%	68.2%
Ran off roadway	8.5%	9.3%	10.2%	4.9%	6.1%	8.5%
Pedestrian	5.4%	3.4%	4.4%	5.2%	3.8%	4.8%
Tree	2.0%	2.3%	1.7%	1.6%	0.0%	1.9%
Bicycle	1.6%	2.3%	1.9%	3.8%	0.6%	1.8%
Off roadway	1.7%	1.5%	2.0%	1.9%	0.3%	1.6%
Other	1.5%	1.9%	1.3%	2.2%	1.7%	1.6%
Ditch	1.6%	2.1%	1.5%	1.9%	0.6%	1.6%
Utility pole	1.5%	1.4%	1.1%	0.5%	0.6%	1.3%
Embankment	1.0%	1.4%	1.1%	0.5%	0.0%	1.0%
Curb	0.8%	0.3%	0.9%	0.5%	0.3%	0.7%
Crossing center line/median	0.4%	1.2%	1.3%	0.5%	0.3%	0.6%
Guardrail face	0.4%	0.7%	0.8%	0.5%	0.6%	0.5%
Overturn/rollover	0.2%	0.3%	1.1%	0.0%	1.4%	0.4%
Cargo/equipment shift or loss	0.1%	0.0%	0.0%	0.5%	1.2%	0.2%
Animal drawn vehicle	0.1%	0.0%	0.0%	0.5%	0.6%	0.1%
Top objects subtotal	*3,064*	*813*	*716*	*357*	*338*	*5,288*
Top as % of each vehicle serious injury collision total	*94.3%*	*94.5%*	*95.1%*	*97.8%*	*97.7%*	*94.9%*

Source: Indiana State Police

Notes:
1) **The above represents the top ten *objects collided with* for collisions involving each of the vehicles listed. More than ten are listed due to the top ten being different for each of the vehicles listed and due to ties.**
2) ***Serious injury collisions* are those with at least one *fatal* or *incapacitating* injury.**

Table 4.10. Large trucks involved in collisions, by hazard placard, hazard release, and collision severity, 2012

	Large trucks involved in collisions:									
	All		Fatal		Incapacitating		Non-incapacitating		Property damage only	
	Count	%	Count	%	Count	%	Count	%	Count	%
Large truck w/trailer	**8,139**		**89**		**153**		**945**		**6,952**	
w/hazard placard	235	2.9%	5	5.6%	4	2.6%	37	3.9%	189	2.7%
hazard release	109	1.3%	3	3.4%	1	0.7%	12	1.3%	93	1.3%
placard+release	39	0.5%	3	3.4%	1	0.7%	6	0.6%	29	0.4%
Large truck single unit	**4,944**		**37**		**67**		**576**		**4,264**	
w/hazard placard	67	1.4%	0	0.0%	1	1.5%	10	1.7%	56	1.3%
hazard release	37	0.7%	0	0.0%	0	0.0%	7	1.2%	30	0.7%
placard+release	14	0.3%	0	0.0%	0	0.0%	3	0.5%	11	0.3%
Total large trucks	**13,083**		**126**		**220**		**1,521**		**11,216**	
w/hazard placard	302	2.3%	5	4.0%	5	2.3%	47	3.1%	245	2.2%
hazard release	146	1.1%	3	2.4%	1	0.5%	19	1.2%	123	1.1%
placard+release	53	0.4%	3	2.4%	1	0.5%	9	0.6%	40	0.4%

Source: Indiana State Police

Notes:
1) **Excludes the seven pickup trucks that are designated due to their weight as large trucks.**
2) **Placard and release information is where known.**
3) ***w/hazard placard:* Federal Motor Carriers Safty 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. This is the count of vehicles involved in collisions that had a proper placard posted on the trailer.**
4) ***hazard release:* This is the count of trucks that as a result of the collision released some/all of the hazardous materials they were carrying at the accident site.**

Table 4.11. Large trucks involved in collisions, by type of inspection, 2012

	Large trucks involved in collisions:									
	All		Fatal		Incapacitating		Non-incapacitating		Property damage only	
	Count	%	Count	%	Count	%	Count	%	Count	%
Large truck w/trailer	**8,139**		**89**		**153**		**945**		**6,952**	
Level 1 inspection	315	3.9%	44	49.4%	31	20.3%	92	9.7%	148	2.1%
Level 3 inspection	616	7.6%	12	13.5%	22	14.4%	105	11.1%	477	6.9%
Unknown level	257	3.2%	9	10.1%	6	3.9%	51	5.4%	191	2.7%
Large truck single unit	**4,944**		**37**		**67**		**576**		**4,264**	
Level 1 inspection	105	2.1%	15	40.5%	1	1.5%	41	7.1%	48	1.1%
Level 3 inspection	71	1.4%	0	0.0%	1	1.5%	10	1.7%	60	1.4%
Unknown level	80	1.6%	3	8.1%	3	4.5%	21	3.6%	53	1.2%
Total large trucks	**13,083**		**126**		**220**		**1,521**		**11,216**	
Level 1 inspection	420	3.2%	59	46.8%	32	14.5%	133	8.7%	196	1.7%
Level 3 inspection	687	5.3%	12	9.5%	23	10.5%	115	7.6%	537	4.8%
Unknown level	337	2.6%	12	9.5%	9	4.1%	72	4.7%	244	2.2%

Source: Indiana State Police

Notes:
1) Level 1 inspection - North American Standard Inspection (see definitions in glossary).
2) Level 3 inspection - Driver-only inspection (see definitions in glossary).
3) Unknown level - an inspection occurred but the level is unknown.

Table 4.12. Indiana collisions involving school buses, by collision severity and injuries, 2008-2012

	2008		2009		2010		2011		2012	
	Count	%	Count	%	Count	%	Count	%	Count	%
Total collisions involving school buses	**957**	**100.0%**	**837**	**100.0%**	**808**	**100.0%**	**903**	**100.0%**	**761**	**100.0%**
Fatal	1	0.1%	2	0.2%	3	0.4%	5	0.6%	1	0.1%
Incapacitating	9	0.9%	10	1.2%	5	0.6%	7	0.8%	10	1.3%
Non-incapacitating	59	6.2%	77	9.2%	79	9.8%	87	9.6%	71	9.3%
Property damage only	888	92.8%	748	89.4%	721	89.2%	804	89.0%	679	89.2%
Injuries										
Fatal	**4**	**100.0%**	**2**	**100.0%**	**3**	**100.0%**	**5**	**100.0%**	**1**	**100.0%**
School bus occupant	4	100.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Non-motorist	0	0.0%	2	100.0%	0	0.0%	1	20.0%	0	0.0%
Other vehicle occupant	0	0.0%	0	0.0%	3	100.0%	4	80.0%	1	100.0%
Incapacitating	**10**	**100.0%**	**10**	**100.0%**	**6**	**100.0%**	**8**	**100.0%**	**14**	**100.0%**
School bus occupant	4	40.0%	0	0.0%	2	33.3%	4	50.0%	2	14.3%
Non-motorist	1	10.0%	1	10.0%	0	0.0%	1	12.5%	2	14.3%
Other vehicle occupant	5	50.0%	9	90.0%	4	66.7%	3	37.5%	10	71.4%
Non-incapacitating	**188**	**100.0%**	**227**	**100.0%**	**198**	**100.0%**	**254**	**100.0%**	**166**	**100.0%**
School bus occupant	137	72.9%	167	73.6%	135	68.2%	166	65.4%	103	62.0%
Non-motorist	8	4.3%	5	2.2%	1	0.5%	3	1.2%	6	3.6%
Other vehicle occupant	43	22.9%	55	24.2%	62	31.3%	85	33.5%	57	34.3%

Source: Indiana State Police

Note: *Non-incapacitating injuries* include injuries reported as *non-incapacitating* and *possible* injuries.

Table 4.13. School buses involved in collisions by the top ten objects collided with, and collision severity, 2012

Object collided with	School buses involved in: All collisions	Fatal collisions	Incapacitating collisions	Non-incapacitating collisions	Property damage only collisions
School buses	**767**	**1**	**10**	**72**	**684**
Another motor vehicle	669	1	7	63	598
Other	17	0	0	2	15
Other post/pole or support	10	0	0	0	10
Parked motor vehicle	9	0	0	0	9
Deer	6	0	0	0	6
Curb	6	0	0	1	5
Tree	6	0	0	0	6
Pedestrian	5	0	2	3	0
Utility pole	5	0	0	0	5
Light/luminaire support	4	0	0	0	4
Top 10 subtotal	*737*	*1*	*9*	*69*	*658*
Top 10 as % of school bus total	*96.1%*	*100.0%*	*90.0%*	*95.8%*	*96.2%*

Source: Indiana State Police

Table 4.14. School buses involved in Indiana collisions, by the top ten primary collision factors, type of collision, and collision severity, 2012

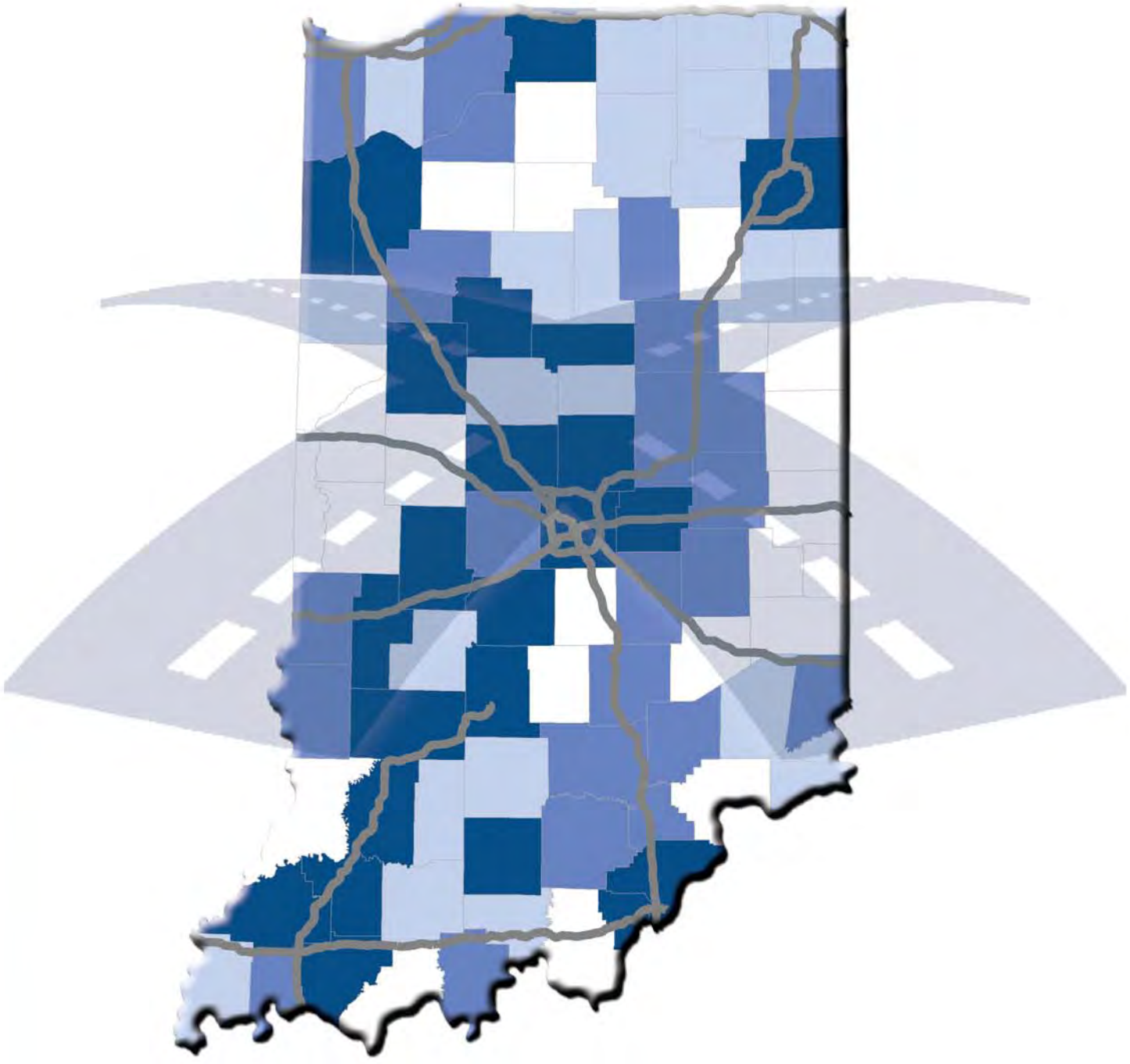
Top primary collision factors	School buses involved in: All collisions	Single vehicle collisions	Multiple vehicle collisions: Count	Count where factor attributable to school bus	% attributable to school bus	Serious injury collisions	Count where factor attributable to school bus
School buses	**767**	**82**	**685**	**387**	**56.5%**	**11**	**1**
Failure to yield right of way	122	4	118	55	46.6%	1	1
Following too closely	101	0	101	25	24.8%	0	0
Unsafe backing	97	19	78	58	74.4%	0	0
Improper turning	96	9	87	83	95.4%	0	0
Other - driver (explained in narrative)	91	11	80	65	81.3%	0	0
Improper passing	31	1	30	13	43.3%	0	0
Left of center	29	1	28	15	53.6%	1	0
Driver distracted	28	2	26	8	30.8%	0	0
Disregard signal/reg sign	22	1	21	6	28.6%	4	0
Improper lane usage	22	0	22	14	63.6%	0	0
Top 10 subtotal	*639*	*48*	*591*	*342*	*57.9%*	*6*	*1*

Source: Indiana State Police

Notes:
1) **Top primary factors are counts of vehicles involved in collisions. For example, there were 101 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.**
2) ***Serious injury collisions* are those with at least one *fatal* or *incapacitating* injury.**

CHAPTER 5

MOTORCYCLES



MOTORCYCLES, 2012

Collisions

Collisions involving motorcycles increased 15.6 percent from 2011 to 2012, while *fatal collisions* increased 24.8 percent, from 117 in 2011 to 146. (Unless specified otherwise, *motorcycles* include *mopeds*.) More than seven of ten motorcycle collisions involved injuries from 2008 to 2012. Each year from 2008 to 2012, there were more *multi-vehicle* (MV) than *single vehicle* (SV) motorcycle collisions. Although MV and SV fatality rates are similar, SV serious injury rates are higher. The *serious injury* percentage for SV motorcycle collisions has been increasing since 2008, to a five-year high of 21.3 percent in 2012 (Tables 5.1 and 5.2).

The proportion of motorcycle involvement in all vehicle collisions varies by time of day. In 2012, MV motorcycle collisions as a proportion of all MV collisions was highest from 7pm to 2am. Peak motorcycle involvement in MV collisions was from 7pm to 9pm. Among all SV collisions, motorcycle involvement was highest from 1pm to 5pm. Single vehicle motorcycle collisions as a percent of all collisions increases steeply from 9am to 4pm. At most times of the day, motorcycles comprise larger proportions of all SV collisions than they do of all MV collisions (Figure 5.1).

Serious injury rates in motorcycle collisions are associated with different collision characteristics. As in previous years, motorcycle collisions in 2012 occurred predominately during *clear weather conditions*, on *straight/level* roads not involving *road junctions*, on local *city roads*, and during *daylight*. The probability of fatal motorcycle collisions was highest under *dark (not lighted)* conditions (7.8 percent), *interstates* (6.5), *highways* (5.9), and *curves* (5.0). The highest serious injury rates in 2012 were for motorcycle collisions under *dark (not lighted)* conditions (25.8 percent) and on *curves* (25 percent) (Table 5.3).

In all MV motorcycle collisions, the likelihood of alcohol impairment is typically higher for motorcyclists than other involved drivers. From 2009 to 2011, motorcycle operators in MV collisions were roughly twice as likely as the other driver to be impaired; however, there was no statistical difference in the respective operators' impairment odds in 2012 (Table 5.4).

In MV motorcycle collisions, there is little difference between motorcyclists and other involved vehicles in terms of which primary factors (to the collision occurrence) predominated, but there is a big difference between the likelihood the motorcycle or the other vehicle was at fault (i.e., a vehicle's *contributing circumstance* matched the *primary factor* in the collision). In 2012, MV collisions involving motorcycles most frequently involved some type of *unsafe action* by either or both the motorcyclist (79.8 percent of motorcycles involved) and the other vehicle (81.2 percent of other vehicles involved). Because the overall relative risk of at-fault attributability (motorcycles versus other vehicles) in 2012 was 0.73, this means motorcyclists were about 27 percent less likely to be at fault than the other vehicles involved. In addition, MV motorcycle collisions in 2012 involving *following too closely, unsafe speed,* and *improper passing* were much more likely to be the fault of motorcyclists. Motorcycles were more likely to be at-fault when primary factors involved cognitive impairment or, especially, *loss of control* (Table 5.5).

When collisions occur, motorcycles are more likely to be speeding. Examining only MV collisions, motorcycles are substantially more likely than other involved vehicles to be categorized as speeding. The odds ratio for *speeding* (motorcycles/other involved) in 2008 was 5.2, but dropped to 4.7 by 2012. In 2012, compared to vehicles in other SV collisions, motorcycles were no more likely to be speeding than other vehicles involved in SV collisions. However, motorcycles in MV collisions were nearly twice as likely to be speeding than vehicles in other non-motorcycle MV collisions (Tables 5.6 and 5.7).

Individuals

From 2011 to 2012, the number of *motorcyclists killed* increased 28 percent, from 118 to 151, and the count of riders with *incapacitating injuries* increased 11 percent, from 553 to 614. From 2008 to 2012, *serious injuries* to motorcyclists increased on average 5.1 percent annually. In 2012, the serious injury rate for motorcyclists was 17.2 percent. Overall in 2012, more than 3,400 motorcycle riders experienced some type of injury (3,279) or death (151) (Table 5.8). Male motorcyclists in 2012 had a fatality rate of 3.6 percent, compared to a 2.5 percent fatality rate for female motorcyclists; however, the rates were not statistically different (Table 5.12). More generally, SV motorcycle collisions result in higher rates of any injury (82.4 percent) than do MV motorcycle collisions (64.5 percent) (Table 5.2).

The likelihood of injuries from motorcycle collisions is partly a function of the objects of impact. Considering the objects with which motorcyclists collided in 2012, among the most deadly were *posts-signs-mailboxes* (10.3 percent fatality rate) and *road/bridge infrastructure* (4.9 percent fatality rate). Likewise, the highest serious injury rates were linked in 2012 to *posts-signs-mailboxes* (25 percent), *off-roadway* crashes (23.3), and *road/bridge infrastructure* (23.2) (Table 5.9).

Among the 151 motorcycle fatalities in 2012, 65 occurred in SV collisions (40 percent impairment rate) and 86 in MV collisions

(10.5 percent impairment rate) (Table 5.10). In terms of blood alcohol content (BAC) results from 2008 to 2012 across all motorcycle collisions, the numbers of motorcycle operators with a BAC of 0.08 g/dL or more grew annually as follows: 7.8 percent per year for operators with 0.08 to 0.14 g/dL, and 26.2 percent a year for operators with 0.15 g/dL or more. The proportion of operators shown as no BAC reported declined from 93.5 in 2008 to 90.9 percent in 2012 (Table 5.11).

Among motorcyclists involved in collisions, helmet use is associated with lower fatality and injury rates. However, most collision-involved riders are not wearing helmets. Of the 145 motorcycle fatalities in 2012 for which helmet use was reported, 116 (80 percent) were not wearing helmets (note: helmet use was unknown for 6 other fatalities). Considering only motorcyclists for whom helmet use was known, those without helmets experienced a serious injury rate of 19.1 percent, compared to a 14.1 percent rate for those wearing helmets. Unhelmeted riders between the ages of 35 and 64 had significantly higher serious injury rates than similarly-aged riders with helmets. Interestingly, helmet use for riders *65 and over* and riders *under 35* was not associated with lower serious injury rates (Table 5.12 and Figure 5.2). In 2012, *unhelmeted* riders experienced injuries to the *neck and above* 35.6 percent of the time, compared to 29.7 percent of the time for riders with helmets (Table 5.13). More than half (57.7 percent) of all motorcyclists killed in 2012 had injuries to the *neck or above* (regardless of helmet use) (Table 5.14).

Approximately 47 percent of all collision-involved motorcyclists in 2012 had proper motorcycle *licenses or endorsements* (Table 5.12). However, motorcycle operators , and especially moped operators, compared unfavorably to other motor vehicle operators along several dimensions related to *drivers' license status* at the time of the collision, as reported by the Indiana Bureau of Motor Vehicles. Motorcycle operators involved in collisions in 2012 had a lower percentage of *valid drivers' licenses* (77.9 percent) than the operators of other motorized vehicles (typically about 85 percent and above)—with the exception of *moped* operators, who had a valid license only 32.1 percent of the time. Further, nearly 42 percent of *moped* operators involved in collisions in 2012 had suspended licenses. Overall, about one-tenth of one percent of collision-involved drivers were classified as *habitual violators*, although nearly 11 percent of *moped* operators were *habitual violators* (Table 5.15).

Motorcycle and moped operators involved in crashes in 2012 were more likely to have previous driving offense convictions than other motor vehicle operators. Eighteen percent of moped operators had *prior alcohol offenses* and 24.1 percent had *prior licensing offenses*, much higher 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 about equally likely to have *prior speeding offenses*, and had the highest rates of *prior speeding offenses* in comparison to other vehicle types (Table 5.16).

Table 5.1. Number of collisions involving motorcycles, by collision severity, 2008-2012

Motorcycle collision severity	2008	2009	2010	2011	2012	Annual rate of change 2008-12	Annual rate of change 2011-12
Fatal	125	111	110	117	146	4.0%	24.8%
Incapacitating	462	438	493	511	580	5.9%	13.5%
Non-incapacitating	2,184	1,786	1,917	1,910	2,312	1.4%	21.0%
Property damage only	1,051	941	909	1,013	1,066	0.4%	5.2%
Total	**3,822**	**3,276**	**3,429**	**3,551**	**4,104**	**1.8%**	**15.6%**
% injury collisions	72.5%	71.3%	73.5%	71.5%	74.0%	0.5%	3.6%
% serious injury collisions	15.4%	16.8%	17.6%	17.7%	17.7%	3.6%	0.0%

Source: Indiana State Police

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

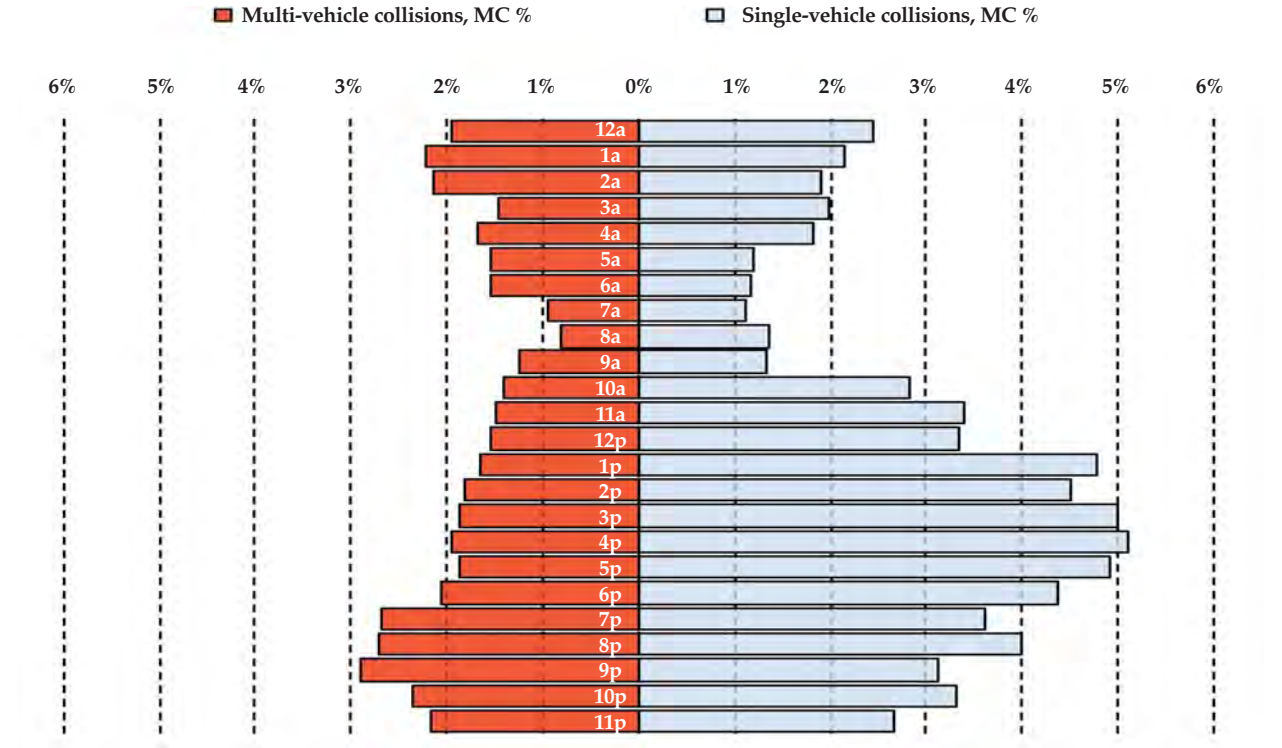
Table 5.2. Probability of motorcycle collision severity, by vehicles involved, 2008-2012

Type of motorcycle collision	Year	Total motorcycle collisions	Collision severity				
			Fatal	Incapacitating	Non-incapacitating	Property damage only	Serious injury percent
Single-vehicle	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%
	2012	1,768	3.6%	17.8%	63.0%	15.7%	21.3%
Multi-vehicle	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%
	2012	2,336	3.6%	11.4%	51.3%	33.7%	14.9%
Mean annual rates							
Single-vehicle		1,636	3.3%	15.8%	63.4%	17.6%	19.1%
Multi-vehicle		2,001	3.4%	11.9%	49.1%	35.5%	15.4%

Source: Indiana State Police

Note: *Serious injury collisions* include those with at least one *fatal* or *incapacitating* injury.

Figure 5.1. Proportion of total motor vehicle collisions with motorcycles (MC) involved, by time of day and number of vehicles involved, 2012



Source: Indiana State Police

Notes:
1) N = 4,104 motorcycle collisions (single-vehicle = 1,768 and multi-vehicle = 2,336).
2) N = 184,734 non-motorcycle collisions (single-vehicle = 55,748 and multi-vehicle = 128,986).
3) Bars present the differential involvement of motorcycles among all single- and multiple-vehicle collisions hourly across a daily cycle.

Table 5.3. Characteristics of motorcycle collisions, by severity of collision, 2012

Characteristics	Number of collisions					Probability of collision severity		
	Fatal	Incapa-citating	Non-incapacitating	Property damage	Total	Fatal	Incapa-citating	Serious injury
Weather conditions								
Clear	127	487	1,911	905	3,430	3.7%	14.2%	17.9%
Cloudy or poor visibility	15	79	311	123	528	2.8%	15.0%	17.8%
Extreme weather	4	14	90	37	145	2.8%	9.7%	12.4%
Road junctions								
No junction involved	102	383	1,408	663	2,556	4.0%	15.0%	19.0%
Intersections	42	184	859	389	1,474	2.8%	12.5%	15.3%
Interchange/ramp	2	13	40	14	69	2.9%	18.8%	21.7%
Road character								
Straight/level	86	335	1,573	750	2,744	3.1%	12.2%	15.3%
Curves	38	150	407	158	753	5.0%	19.9%	25.0%
Straight/grade/hillcrest	22	92	314	135	563	3.9%	16.3%	20.2%
Non-roadway crash	0	3	18	22	43	0.0%	7.0%	7.0%
Road class								
Local/city road	51	273	1,231	544	2,099	2.4%	13.0%	15.4%
Highway	61	170	577	222	1,030	5.9%	16.5%	22.4%
County road	21	110	347	144	622	3.4%	17.7%	21.1%
Interstate	7	12	61	27	107	6.5%	11.2%	17.8%
Light conditions								
Daylight	78	390	1,682	793	2,943	2.7%	13.3%	15.9%
Dark (lighted)	25	74	283	130	512	4.9%	14.5%	19.3%
Dark (not lghted)	37	85	249	101	472	7.8%	18.0%	25.8%
Dawn/dusk	6	31	96	40	173	3.5%	17.9%	21.4%

Source: Indiana State Police

Notes:

1) Excludes collisions where characteristic was *unknown* or *not reported*.

2) 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*.**

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

Table 5.4. Vehicles involved in multi-vehicle motorcycle collisions, by operator alcohol impairment, 2008-2012

Alcohol status/type of vehicle	2008	2009	2010	2011	2012	Annual rate of change 2008-12	Annual rate of change 2011-12
Not alcohol-impaired							
Motorcycles	2,095	1,821	1,893	2,013	2,392	3.4%	18.8%
Other vehicles	2,009	1,745	1,849	1,983	2,290	3.3%	15.5%
Alcohol-impaired							
Motorcycles	26	40	45	45	45	14.7%	0.0%
Other vehicles	15	20	23	27	36	24.5%	33.3%
Odds of alcohol-impaired (within vehicle type)							
Motorcycles	0.012	0.022	0.024	0.022	0.019		
Other vehicles	0.007	0.011	0.012	0.014	0.016		
Odds ratio (MC/other vehicles)	**1.66**	**1.92***	**1.91***	**1.64***	**1.20**		
Lower limit	0.88	1.12	1.15	1.01	0.77		
Upper limit	3.15	3.29	3.17	2.66	1.86		

Source: Indiana State Police

Notes:
1) *Other vehicles* excludes *unknown, pedestrians, bicycles,* and *non-motorized* vehicles.
2) *Motorcycles* includes *mopeds*.
3) Odds of alcohol-impaired calculated as units alcohol-impaired/not alcohol-impaired.
4) *Odds ratio significant p < 0.05.
5) Due to previous year alcohol-impaired updates and vehicle classifications, numbers might not match previous factbooks.

Table 5.5. Vehicles involved in multi-vehicle motorcycle (MC) collisions, by vehicle type, primary factor, and risk of vehicle attributability to collision occurrence, 2012

	Vehicles involved		Count of vehicles attributable		Count of vehicles not attributable		% Attributable		Relative risk of attributability (MC/other)
Primary factor	MC	Other vehicles	MC	Other vehicles	MC	Other vehicles	MC	Other vehicles	
Unsafe actions	**1,944**	**1,888**	**726**	**1,142**	**1,218**	**746**	**37.3%**	**60.5%**	**0.62 *** **
Failure to yield right of way	852	843	160	681	692	162	18.8%	80.8%	0.23 ***
Following too closely	428	405	245	148	183	257	57.2%	36.5%	1.57 ***
Disregard signal/reg sign	122	132	65	54	57	78	53.3%	40.9%	1.30 *
Unsafe backing	129	120	5	113	124	7	3.9%	94.2%	0.04 ***
Improper lane usage	87	82	47	34	40	48	54.0%	41.5%	1.30
Unsafe speed	81	75	67	11	14	64	82.7%	14.7%	5.64 ***
Improper passing	78	76	57	21	21	55	73.1%	27.6%	2.64 ***
Improper turning	79	72	24	50	55	22	30.4%	69.4%	0.44 ***
Left of center	72	67	45	24	27	43	62.5%	35.8%	1.74 **
Speed too fast for weather conditions	9	9	6	4	3	5	66.7%	44.4%	1.50
Wrong way on one way	7	7	5	2	2	5	71.4%	28.6%	2.50
Distraction	**78**	**78**	**37**	**38**	**41**	**40**	**47.4%**	**48.7%**	**0.97**
Driver distracted	75	74	37	35	38	39	49.3%	47.3%	1.04
Cell phone usage	3	4	0	3	3	1	0.0%	75.0%	--
Vehicle-related	**52**	**49**	**35**	**11**	**17**	**38**	**67.3%**	**22.4%**	**3.00 *** **
Environmental	**40**	**34**	**23**	**19**	**17**	**15**	**57.5%**	**55.9%**	**1.03**
Loss of control	**40**	**32**	**35**	**4**	**5**	**28**	**87.5%**	**12.5%**	**7.00 *** **
Cognitive impairment	**10**	**13**	**5**	**5**	**5**	**8**	**50.0%**	**38.5%**	**1.30**
Driver illness	5	7	3	2	2	5	60.0%	28.6%	2.10
Driver asleep or fatigued	3	4	1	2	2	2	33.3%	50.0%	0.67
Alcoholic beverages	2	2	1	1	1	1	50.0%	50.0%	1.00
All other factors	**273**	**232**	**167**	**117**	**106**	**115**	**61.2%**	**50.4%**	**1.21 ** **
Total	**2,437**	**2,326**	**1,028**	**1,336**	**1,409**	**990**	**42.2%**	**57.4%**	**0.73 *** **

Source: Indiana State Police

Notes:
1) 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*.
2) Data exclude single-vehicle collisions involving motorcycles.
3) *Relative risk of attributability* defined as ratio of *% attributable (motorcycles)* to *% attributable (other vehicles)*. A value greater than 1 indicates that motorcycles are more likely to have been attributable to the collision occurring for that particular factor.
4) Relative risk significant: p < 0.05*, < 0.01, < 0.001***.**
5) *Other vehicles* excludes unknown unit type, *pedestrians, bicycles,* and *non-motorized vehicles.*
6) Due to reorganizations of primary factors and vehicle classifications, some numbers are not comparable to previous factbooks.

Table 5.6. Speeding status of motorcycles and other vehicles involved in multi-vehicle motorcycle collisions, 2008-2012

Speeding/type of vehicle	2008	2009	2010	2011	2012	Annual rate of change 2008-12	Annual rate of change 2011-12
Not speeding							
Motorcycles	2,007	1,756	1,845	1,951	2,300	3.5%	17.9%
Other vehicles	2,002	1,749	1,852	1,982	2,297	3.5%	15.9%
Speeding							
Motorcycles	114	105	93	107	137	4.7%	28.0%
Other vehicles	22	16	20	28	29	7.2%	3.6%
Odds of speeding (within vehicle type)							
Motorcycles	0.057	0.060	0.050	0.055	0.060		
Other vehicles	0.011	0.009	0.011	0.014	0.013		
Odds ratio (motorcycle/others)	**5.17**	**6.54**	**4.67**	**3.88**	**4.72**		

Source: Indiana State Police

Notes:
1) Odds ratios significant at p < 0.001.
2) *Other vehicles* exclude *unknown* unit type, *pedestrians*, *bicycles*, and *animal-drawn vehicles*.
3) *Odds of speeding* calculated as type of vehicle speeding/type of vehicle not speeding.
4) Due to changes in vehicle classification, numbers might not match previous factbooks.

Table 5.7. Speeding status of motorcycles and other vehicles involved in all collisions, 2008-2012

Collision type/speeding/type of vehicle	2008	2009	2010	2011	2012	Annual rate of change 2008-12	Annual rate of change 2011-12
Single-vehicle collisions							
Not speeding							
Motorcycles	1,545	1,299	1,319	1,289	1,484	-1.0%	15.1%
Other vehicles	53,898	49,449	48,302	47,061	46,709	-3.5%	-0.7%
Speeding							
Motorcycles	249	194	238	277	284	3.3%	2.5%
Other vehicles	11,503	8,945	9,425	8,533	8,294	-7.9%	-2.8%
Odds of speeding (within vehicle type)							
Motorcycles	0.161	0.149	0.180	0.215	0.191		
Other vehicles	0.213	0.181	0.195	0.181	0.178		
Odds ratio (motorcycle/others)	**0.76***	**0.83***	**0.92**	**1.19***	**1.08**		
Multi-vehicle collisions							
Not speeding							
Motorcycles	2,007	1,756	1,845	1,951	2,300	3.5%	17.9%
Other vehicles	265,516	251,331	259,845	254,306	257,319	-0.8%	1.2%
Speeding							
Motorcycles	114	105	93	107	137	4.7%	28.0%
Other vehicles	10,860	8,921	8,645	8,497	7,875	-7.7%	-7.3%
Odds of speeding (within vehicle type)							
Motorcycles	0.057	0.060	0.050	0.055	0.060		
Other vehicles	0.041	0.035	0.033	0.033	0.031		
Odds ratio (motorcycle/others)	**1.39****	**1.68****	**1.52****	**1.64****	**1.95****		

Source: Indiana State Police

Notes:
1) Odds ratio significant: p < 0.01*, < 0.001.**
2) *Other vehicles* exclude *unknown* unit type, *pedestrians*, *bicycles*, and *animal-drawn vehicles*.
3) *Odds of speeding* calculated as type of vehicle speeding/type of vehicle not speeding.
4) Due to changes in vehicle classification, numbers might not match previous factbooks.

Table 5.8. Motorcycle rider injuries, 2008-2012

Injury status	2008	2009	2010	2011	2012	Annual rate of change 2008-12	Annual rate of change 2011-12
Serious injury	**628**	**579**	**639**	**671**	**765**	**5.1%**	**14.0%**
Fatal	130	111	110	118	151	3.8%	28.0%
Incapacitating	498	468	529	553	614	5.4%	11.0%
Other injury	**2,497**	**2,018**	**2,183**	**2,166**	**2,665**	**1.6%**	**23.0%**
Non-incapacitating	2,459	1,986	2,158	2,148	2,632	1.7%	22.5%
Other injury	38	32	25	18	33	-3.5%	83.3%
Not injured	**979**	**889**	**900**	**972**	**1,028**	**1.2%**	**5.8%**
Total	**4,104**	**3,486**	**3,722**	**3,809**	**4,458**	**2.1%**	**17.0%**
% injured	76.1%	74.5%	75.8%	74.5%	76.9%		
% serious injury	15.3%	16.6%	17.2%	17.6%	17.2%		

Source: Indiana State Police

Table 5.9. Probability of injury status of motorcycle operators and passengers, by first object of impact, 2012

Object of impact	Total	Probability of injury status (sum = 100%) Fatal	Incapacitating	Non-incapacitating	Other	Serious injury rate
Other motor vehicle	2,311	3.5%	11.9%	54.6%	30.0%	15.4%
Off the roadway	609	3.9%	19.4%	59.1%	17.6%	23.3%
Other objects	500	2.2%	12.6%	64.4%	20.8%	14.8%
Fell from vehicle	297	1.3%	15.5%	69.4%	13.8%	16.8%
Road/bridge infrastructure	267	4.9%	18.4%	67.0%	9.7%	23.2%
Animals	212	2.8%	13.7%	63.2%	20.3%	16.5%
Other actions	164	3.0%	14.0%	67.7%	15.2%	17.1%
Posts, signs, mailbox	68	10.3%	14.7%	66.2%	8.8%	25.0%
Other traffic units	23	0.0%	4.3%	47.8%	47.8%	4.3%
Unknown	7	0.0%	0.0%	42.9%	57.1%	0.0%
Total	**4,458**	**3.4%**	**13.8%**	**59.0%**	**23.8%**	**17.2%**

Source: Indiana State Police

Table 5.10. Individuals involved in Indiana motorcycle collisions, by collision type, vehicle type, driver alcohol impairment, and injury status, 2012

Type of vehicle/alcohol status	Individual injury status			Total
	Fatal	Incapacitating	All other	
Single-vehicle collisions				
Motorcycles	**65**	**327**	**1,578**	**1,970**
Alcohol-impaired unit	26	31	128	185
% alcohol-impaired	*40.0%*	*9.5%*	*8.1%*	*9.4%*
Multi-vehicle collisions				
Motorcycles	**86**	**287**	**2,115**	**2,488**
Alcohol-impaired unit	9	12	30	51
% alcohol-impaired	*10.5%*	*4.2%*	*1.4%*	*2.0%*
All other units/vehicles	**0**	**9**	**2,106**	**2,115**
Alcohol-impaired unit	0	1	36	37
% alcohol-impaired	--	*11.1%*	*1.7%*	*1.7%*

Source: Indiana State Police

Notes:
1) See glossary for definitions of *alcohol-impaired*.
2) Excludes *unknown* unit type, *pedestrians*, *pedalcyclists*, and *animal-drawn* vehicles.
3) *All other* injury status includes all other injuries and non-injuries.

Table 5.11. Motorcycle operators involved in Indiana collisions, by blood alcohol content (BAC) (g/dL), 2008-2012

BAC range, g/dL	2008	2009	2010	2011	2012	Annual rate of change 2008-12	Annual rate of change 2011-12
Total motorcycle operators	**3,726**	**3,180**	**3,338**	**3,456**	**4,021**	**1.9%**	**16.3%**
No BAC reported	3,485	2,938	3,060	3,137	3,654	1.2%	16.5%
% total operators	*93.5%*	*92.4%*	*91.7%*	*90.8%*	*90.9%*		
< 0.01	96	76	80	106	123	6.4%	16.0%
% total operators	*2.6%*	*2.4%*	*2.4%*	*3.1%*	*3.1%*		
0.01 < 0.08	40	32	38	35	38	-1.3%	8.6%
% total operators	*1.1%*	*1.0%*	*1.1%*	*1.0%*	*0.9%*		
0.08 < 0.15	51	47	66	54	69	7.8%	27.8%
% total operators	*1.4%*	*1.5%*	*2.0%*	*1.6%*	*1.7%*		
0.15 and greater	54	87	94	124	137	26.2%	10.5%
% total operators	*1.4%*	*2.7%*	*2.8%*	*3.6%*	*3.4%*		

Source: Indiana State Police

Note: g/dL = grams per deciliter.

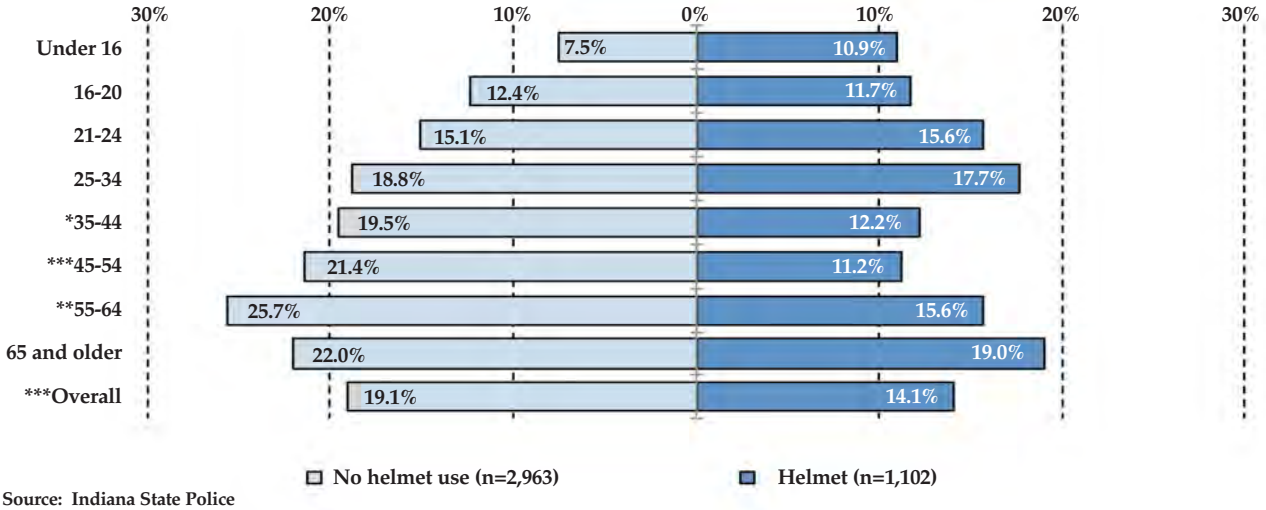
Table 5.12. Motorcyclists involved in collisions, by rider characteristics and injury status, 2012

Characteristics	Individual injury status				Total	Probability of injury status		
	Fatal	Incapa-citating	Non-incapacitating	All other		Fatal	Incapa-citating	Serious injury
Helmet use/age group								
Helmet	**29**	**126**	**670**	**277**	**1,102**	**2.6%**	**11.4%**	**14.1%**
Under 16	0	7	47	10	64	0.0%	10.9%	10.9%
16-20	3	13	97	24	137	2.2%	9.5%	11.7%
21-24	5	15	66	42	128	3.9%	11.7%	15.6%
25-34	5	26	97	47	175	2.9%	14.9%	17.7%
35-44	5	14	97	40	156	3.2%	9.0%	12.2%
45-54	3	20	121	61	205	1.5%	9.8%	11.2%
55-64	5	23	114	37	179	2.8%	12.8%	15.6%
65 and older	3	8	31	16	58	5.2%	13.8%	19.0%
No helmet indicated	**116**	**450**	**1,779**	**618**	**2,963**	**3.9%**	**15.2%**	**19.1%**
Under 16	0	8	76	23	107	0.0%	7.5%	7.5%
16-20	2	36	207	62	307	0.7%	11.7%	12.4%
21-24	9	30	166	54	259	3.5%	11.6%	15.1%
25-34	27	79	351	107	564	4.8%	14.0%	18.8%
35-44	24	86	327	127	564	4.3%	15.2%	19.5%
45-54	20	125	393	140	678	2.9%	18.4%	21.4%
55-64	24	70	191	81	366	6.6%	19.1%	25.7%
65 and older	10	16	68	24	118	8.5%	13.6%	22.0%
Gender								
Male	**135**	**511**	**2,172**	**984**	**3,802**	**3.6%**	**13.4%**	**17.0%**
Operator	135	497	2,093	977	3,702	3.6%	13.4%	17.1%
Injured passenger	0	14	79	7	100	0.0%	14.0%	14.0%
Female	**16**	**102**	**458**	**73**	**649**	**2.5%**	**15.7%**	**18.2%**
Operator	0	38	212	64	314	0.0%	12.1%	12.1%
Injured passenger	16	64	246	9	335	4.8%	19.1%	23.9%
Type of individual								
Operator	135	535	2,306	1,045	4,021	3.4%	13.3%	16.7%
Injured passenger	16	79	326	16	437	3.7%	18.1%	21.7%
Operators' license status								
Motorcycle/endorsement	58	234	1,017	536	1,845	3.1%	12.7%	15.8%
Other operator license	64	238	927	360	1,589	4.0%	15.0%	19.0%
No license	11	57	330	128	526	2.1%	10.8%	12.9%
Percent with MC license	43.6%	44.2%	44.7%	52.3%	46.6%			

Source: Indiana State Police

Notes:
1) **Excludes cases in which *operators' license status, gender, helmet use,* or *age group* was unknown.**
2) **All other injury status includes injuries identified as not reported, null, refused, and unknown.**
3) ***Motorcycle/endorsement license* status includes *motorcycle, chauffeur w/MC endorcement, learner motorcycle, operators w/MC endorsement,* and *PP chauffeur w/MC endorsement.***
4) ***Other injury* includes *non-incapacitating* and *possible.***

Figure 5.2. Serious injuries as percent of total motorcyclist injuries, by helmet use and age group, 2012



Source: Indiana State Police

Notes:
1) Includes cases where *helmet use* and *age* are known.
2) *Serious injuries* include injuries reported as *fatal* or *incapacitating*.
3) Difference of proportions significance: *0.05, **0.01, ***0.001

Table 5.13. Nature and location of injuries to motorcycle operators and passengers, by reported helmet use, 2012

Nature of injury	Location of injury						Percent injuries by nature
	Neck and above	Arms	Entire body	Legs	No injury/ unknown	Total	
Total	**938**	**686**	**309**	**872**	**348**	**3,153**	
Helmet	**111**	**246**	**86**	**278**	**107**	**828**	**100%**
Other injury/burns	58	169	52	177	78	534	64.5%
Fracture/dislocation/severed	8	39	6	76	6	135	16.3%
Minor bleeding/none visible	25	34	11	22	3	95	11.5%
Internal	14	2	16		16	48	5.8%
Severe bleeding	6	2	1	3	4	16	1.9%
Percent injuries by location	*29.7%*	*10.4%*	*33.6%*	*13.4%*	*12.9%*	*100%*	
No helmet indicated	**827**	**440**	**223**	**594**	**241**	**2,325**	**100%**
Other injury/burns	339	279	129	359	177	1,283	55.2%
Fracture/dislocation/severed	44	94	32	172	24	366	15.7%
Minor bleeding/none visible	223	64	20	48	7	362	15.6%
Internal	101	2	29	7	33	172	7.4%
Severe bleeding	120	1	13	8	0	142	6.1%
Percent injuries by location	*35.6%*	*18.9%*	*9.6%*	*25.5%*	*10.4%*	*100%*	

Source: Indiana State Police

Notes:
1) *Other injuries* include *abrasion, complaint of pain, contusion/bruise,* and *other.*
2) *Burns* include *minor burn* and *severe burn.*
3) *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.*
4) Excludes n=1,305 individuals with unknown *nature of injury, location of injury,* or *helmet use.*

Table 5.14. Percentage of total motorcyclist fatalities, by helmet use, and nature and location of injuries, 2012

Helmet use/nature of injury	Location				% by nature	Total fatalities
	Neck and above	Entire body	Torso	Legs		
No helmet	**50.3%**	**22.1%**	**6.0%**	**2.0%**	**80.5%**	**120**
Internal	26.2%	12.8%	2.7%	0.7%	42.3%	63
Severe bleeding	12.8%	4.0%			16.8%	25
Fracture/dislocation/severed	6.7%	1.3%	2.0%	1.3%	11.4%	17
Other injury/burns	4.7%	3.4%	1.3%		9.4%	14
Minor bleeding/none visible		0.7%			0.7%	1
Helmet	**7.4%**	**8.1%**	**4.0%**		**19.5%**	**29**
Internal	4.7%	6.0%	3.4%		14.1%	21
Fracture/dislocation/severed	1.3%	0.7%			2.0%	3
Severe bleeding	1.3%				1.3%	2
Other injury/burns		0.7%	0.7%		1.3%	2
Minor bleeding/none visible		0.7%	0.0%		0.7%	1
% by location	**57.7%**	**30.2%**	**10.1%**	**2.0%**	**100%**	
Total fatalities	**86**	**45**	**15**	**3**		**149**

Source: Indiana State Police

Notes:
1) *No helmet indicated* includes *null* and *unknown* safety equipment types.
2) Excludes fatalities with unknown *location* or *nature of injury.*

Table 5.15. Count of drivers involved in Indiana crashes, by vehicle type and license status, 2012

License status	Vehicle type								Total drivers by license status
	Motor-cycles	Mopeds	Passenger car	Pickup truck	SUV	Van	Large truck	All other vehicles	
Valid	**2,004**	**275**	**132,225**	**27,625**	**30,564**	**12,936**	**5,088**	**2,376**	**213,093**
Suspended	**517**	**447**	**21,631**	**4,838**	**4,570**	**2,077**	**825**	**244**	**35,149**
Suspended - infraction	407	238	18,462	4,069	3,860	1,707	730	211	29,684
Suspended - prior	88	95	2,624	620	611	313	90	26	4,467
Suspended - misdemeanor	9	22	436	108	74	30	4	4	687
Habitual traffic violator	4	34	74	22	16	13	1	0	164
Habitual traffic violator - life	9	58	35	19	9	14	0	3	147
No license or invalid license	**53**	**134**	**2,146**	**349**	**435**	**196**	**26**	**34**	**3,373**
Total drivers by vehicle type (100%)	**2,574**	**856**	**156,002**	**32,812**	**35,569**	**15,209**	**5,939**	**2,654**	**251,615**
Valid	77.9%	32.1%	84.8%	84.2%	85.9%	85.1%	85.7%	89.5%	84.7%
Suspended	19.6%	41.5%	13.8%	14.6%	12.8%	13.5%	13.9%	9.1%	13.8%
Habitual violater	0.5%	10.7%	0.1%	0.1%	0.1%	0.2%	0.0%	0.1%	0.1%
No license	2.1%	15.7%	1.4%	1.1%	1.2%	1.3%	0.4%	1.3%	1.3%

Sources: Indiana State Police, Indiana Bureau of Motor Vehicles

Notes:
1) Data limited to drivers where license status was identified by the Bureau of Motor Vehicles.
2) *Other vehicle type* excludes *non-motorists*.

Table 5.16. Drivers in Indiana crashes, by vehicle type and history of traffic convictions, 2012

Vehicle type	Total drivers in crashes	Count of drivers and nature of prior offenses									
		Any		Alcohol		Licensing		Speeding		Other	
		Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent
Motorcycle	2,574	1,564	60.8%	198	7.7%	300	11.7%	843	32.8%	278	10.8%
Moped	856	558	65.2%	154	18.0%	206	24.1%	119	13.9%	109	12.7%
Passenger car	156,002	72,028	46.2%	5,523	3.5%	9,256	5.9%	38,143	24.5%	14,797	9.5%
Light truck	83,585	39,082	46.8%	3,141	3.8%	4,393	5.3%	19,038	22.8%	7,252	8.7%
Large truck	5,944	3,695	62.2%	57	1.0%	180	3.0%	1,788	30.1%	924	15.5%
Other	2,654	987	37.2%	44	1.7%	62	2.3%	480	18.1%	168	6.3%
All vehicle types	**251,615**	**117,914**	**46.9%**	**9,117**	**3.6%**	**14,397**	**5.7%**	**60,411**	**24.0%**	**23,528**	**9.4%**

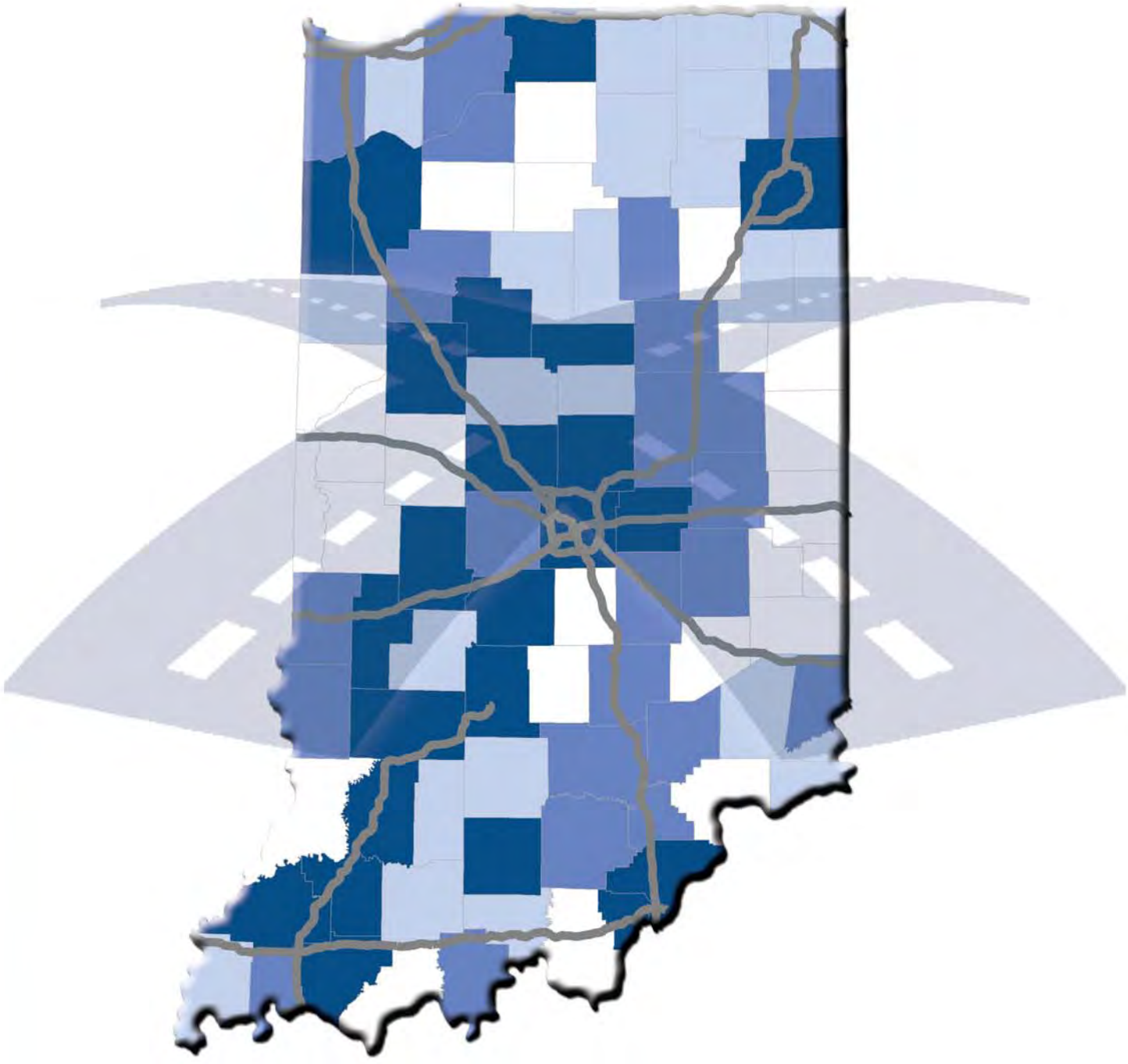
Sources: Indiana State Police; Indiana Bureau of Motor Vehicles

Notes:

1) Limited to drivers identified within the Bureau Motor Vehicles database.

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

CHAPTER 6
PEOPLE



PEOPLE, 2012

This section documents individuals involved in Indiana's fatal and non-fatal collisions in 2012, as well as trends from 2008 to 2012. 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 publications, *Young Drivers, 2012; Dangerous Driving, 2012*; and *Driver History and Crash Outcomes, 2012*. In addition, motorcycle operators and occupants are covered in detail in a separate section of this publication.

In 2012, of the 305,893 individuals involved in collisions, 290,289 (95 percent) were drivers of vehicles (Table 6.1). In addition, 1,750 pedestrians and 1,118 pedalcyclists were involved in collisions. Total numbers of all individuals involved increased slightly (0.8 percent) from 2011 to 2012. The number of pedalcylists involved in collisions increased 17 percent from 2011 to 2012 (956 to 1,118).

Fatality risk is largely a function of the level of protection afforded the individual involved. Enclosed vehicles provide greater protection and result in lower fatality rates. In 2012, 779 individuals were killed in collisions (Table 6.2). Pedestrians, the most vulnerable of person types, were killed at a rate of 36.6 per 1,000 involved. Similarly, motorcyclists were killed at a rate of 34 per 1,000 involved. By contrast, vehicle drivers were killed at a rate of 1.4 per 1,000 involved. Nearly 90 percent of drivers involved in collisions were not injured.

In 2012, of all age groups for males, those ages 21 to 24 had the highest fatality rate per 100,000 population (36), while females ages 75 and over had the highest female fatality rate (14.4) (Table 6.3). Males and females ages 18 to 20 had the highest non-fatal injury rate per 100,000 population (1,531.7 and 1,772.7, respectively). Among the driving age population (16 years and older), males always had significantly higher fatality rates than females, regardless of age; however, up to age 64, females experienced higher non-fatal injury rates than males.

Drivers ages 18 to 20 years old had the highest rate of involvement in fatal collisions per 10,000 licensed drivers (4.5), followed by drivers ages 21 to 24 (3.2) (Table 6.4). Drivers ages 75 and over had the highest rate of drivers killed per 10,000 licensed (1.9), followed closely by drivers ages 18 to 20 and 21 to 24 (1.8 each). Younger drivers (ages 16 to 20) generally had the highest rate of collision involvement.

Nearly 30 percent of drivers killed in 2012 were identified as having an apparent physical condition of *normal* (Table 6.5). Fifteen percent of drivers killed were identified as having a condition of *had been drinking.*

Nearly three-quarters of drivers involved in collisions had a valid license (Table 6.7). Of the drivers killed in collisions, 5.4 percent had no license (Table 6.6), and about 20 percent had some type of suspended license. In addition, those with no license had the lowest non-injury rate of all licensed type drivers (except those with a motorcycle license type).

The number of pedestrians involved in collisions decreased slightly from 2011 to 2012 (Figure 6.1), while the percentage of fatalities for pedestrians increased slightly (from 3.5 to 3.7 percent). In contrast, the number of pedalcyclists involved in collisions increased (from 956 to 1,118), while the percent of fatalities for pedalcyclists decreased slightly (1.4 to 1.3 percent). For non-motorists involved in collisions (pedestrians and pedalcyclists), males ages 8 to 15 had the highest involvement rate, and outnumbered females in all age groups except for the 65 to 74 age group (Figure 6.2).

Among non-motorists, pedestrians while *working on roadway* had the highest fatality rate (14.3 percent) (Table 6.8), while pedalcyclists *riding with traffic* had the highest fatality rate (7.6 percent) (Table 6.9). Non-motorists generally were involved in collisions during the hours of 3pm to 6pm and on weekdays (Table 6.10).

Overall restraint use by individuals involved in collisions remained the same (90.4 percent) from 2011 to 2012 (Table 6.11). In 2012, of the 545 persons killed where restraint use was known, only 48 percent were properly restrained. The extremes of restraint use of individuals killed fell into two age groups: 31 percent of those killed ages 35 to 44 were restrained, while 73 percent of those killed ages 65 to 74 were restrained (Table 6.12). For *passenger cars, SUVs* and *vans*, 88 percent of vehicle occupants involved in collisions were restrained. However, of the 40 males killed in SUVs in 2012, only 28 percent were restrained (Table 6.13).

Unrestrained passenger vehicle occupants were more likely to be *ejected, partially ejected,* or *pinned under* a vehicle than occupants who were restrained. Of those occupants *not ejected* or *trapped in*, 53 percent were restrained while 36 percent were not restrained (Figure 6.3).

Among passenger vehicles (passenger cars, pickup trucks, SUVs, and vans) involved in collisions in 2012, 46 percent of those killed who were in the driver seat were *not restrained* (Figure 6.4). In addition, 53 percent of individuals in the rear left who were *killed* were *not restrained.* Only 2 percent of individuals seated in the right front seat who had *no injury* were not restrained.

Table 6.1. Individuals involved in Indiana collisions, by person type and gender, 2008-2012

	Count of individuals					Annual rate of change	
	2008	2009	2010	2011	2012	2008-12	2011-12
Driver	**309,746**	**288,974**	**295,224**	**288,436**	**290,289**	**-1.6%**	**0.6%**
Male	174,238	160,335	164,380	159,745	160,310	-2.1%	0.4%
Female	134,886	128,024	130,253	128,084	129,351	-1.0%	1.0%
Unknown gender	622	615	591	607	628	0.2%	3.5%
Injured occupant	**13,031**	**12,715**	**13,085**	**12,216**	**12,634**	**-0.8%**	**3.4%**
Male	4,994	4,811	4,984	4,701	4,795	-1.0%	2.0%
Female	8,009	7,855	8,094	7,507	7,827	-0.6%	4.3%
Unknown gender	28	49	7	8	12	-19.1%	50.0%
Pedalcyclist	**1,100**	**975**	**1,045**	**956**	**1,118**	**0.4%**	**16.9%**
Male	852	785	837	776	901	1.4%	16.1%
Female	245	186	205	180	215	-3.2%	19.4%
Unknown gender	3	4	3	0	2	-9.6%	na
Pedestrian	**1,898**	**1,719**	**1,797**	**1,808**	**1,750**	**-2.0%**	**-3.2%**
Male	1,088	972	1,017	1,061	1,028	-1.4%	-3.1%
Female	805	740	778	746	722	-2.7%	-3.2%
Unknown gender	5	7	2	1	0	-100.0%	-100.0%
Animal-drawn vehicle operator	**na**	**6**	**79**	**100**	**102**	**na**	**2.0%**
Male	na	5	55	72	71	na	-1.4%
Female	na	1	22	28	29	na	3.6%
Unknown gender	na	0	2	0	2	na	na
All individuals	**325,775**	**304,389**	**311,230**	**303,516**	**305,893**	**-1.6%**	**0.8%**
Male	181,172	166,909	171,297	166,383	167,136	-2.0%	0.5%
Female	143,945	136,811	139,409	136,617	138,217	-1.0%	1.2%
Unknown gender	658	681	682	716	744	3.1%	3.9%

Source: Indiana State Police

Notes:
1) *Animal-drawn vehicle operator* was added as a person type in late 2009.
2) na=not applicable
3) Data from previous years may vary due to updated information.

Table 6.2. Individuals involved in Indiana collisions, by person type and injury status, 2012

	Injury status							
Unit type/person type	Fatal	Fatalities per 1,000 total involved	Incapa-citating	Non-incapa-citating	Unknown/ other injury	Not injured	Total individuals	% not injured
Vehicle occupants	**546**	**1.8**	**2,872**	**38,646**	**1,850**	**254,314**	**298,228**	**85.3%**
Drivers	405	1.4	2,061	27,734	1,754	254,314	286,268	88.8%
Passengers	141	11.8	811	10,912	96	na	11,960	na
Non-motorists	**78**	**27.2**	**318**	**2,041**	**38**	**393**	**2,868**	**13.7%**
Pedestrians	64	36.6	221	1,259	24	182	1,750	10.4%
Pedalcyclists	14	12.5	97	782	14	211	1,118	18.9%
Motorcycle/moped	**151**	**34.0**	**614**	**2,632**	**33**	**1,015**	**4,445**	**22.8%**
Operators	135	33.6	535	2,306	30	1,015	4,021	25.2%
Passengers	16	37.7	79	326	3	na	424	na
Animal-drawn vehicle	**4**	**33.9**	**6**	**29**	**1**	**78**	**118**	**66.1%**
Operators	1	9.8	2	20	1	78	102	76.5%
Passengers	3	187.5	4	9	0	na	16	na
TOTAL	**779**	**2.5**	**3,810**	**43,348**	**1,922**	**255,800**	**305,659**	**83.7%**

Source: Indiana State Police

Notes:
1) U*nknown/other injury* includes injury status of *not reported, unknown, refused* (treatment), and invalid injury codes.
2) *Non-incapacitating* includes *non-incapacitating* and *possible* injuries.
3) Passengers are only entered into ARIES if some injury occurs, therefore, uninjured passenger counts are not valid and not listed.

Table 6.3. Individuals killed and injured in Indiana collisions, by age, gender, and injury status, 2012

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	172,988	164,781	337,769	8	4	12	4.6	2.4	3.6	339	364	703	196.0	220.9	208.1
4 - 7	180,605	172,495	353,100	3	4	7	1.7	2.3	2.0	421	433	854	233.1	251.0	241.9
8 - 15	366,901	351,681	718,582	4	7	11	1.1	2.0	1.5	1,187	1,263	2,450	323.5	359.1	340.9
16 - 17	93,355	88,671	182,026	18	9	27	19.3	10.1	14.8	1,149	1,303	2,452	1,230.8	1,469.5	1,347.1
18 - 20	150,616	142,663	293,279	43	18	61	28.5	12.6	20.8	2,307	2,529	4,836	1,531.7	1,772.7	1,648.9
21 - 24	186,230	182,971	369,201	67	12	79	36.0	6.6	21.4	2,507	2,679	5,186	1,346.2	1,464.2	1,404.7
25 - 34	419,442	416,561	836,003	103	34	137	24.6	8.2	16.4	4,221	4,546	8,767	1,006.3	1,091.3	1,048.7
35 - 44	413,266	412,028	825,294	76	24	100	18.4	5.8	12.1	3,432	3,597	7,029	830.5	873.0	851.7
45 - 54	455,884	464,419	920,303	81	26	107	17.8	5.6	11.6	3,497	3,651	7,148	767.1	786.1	776.7
55 - 64	395,812	416,817	812,629	77	21	98	19.5	5.0	12.1	2,517	2,731	5,248	635.9	655.2	645.8
65 - 74	230,271	263,283	493,554	41	22	63	17.8	8.4	12.8	1,249	1,421	2,670	542.4	539.7	541.0
75 and over	152,820	242,774	395,594	42	35	77	27.5	14.4	19.5	754	947	1,701	493.4	390.1	430.0
Unknown age	0	0	0	0	0	0	na	na	na	1	4	5	na	na	na
TOTAL	**3,218,190**	**3,319,144**	**6,537,334**	**563**	**216**	**779**	**17.5**	**6.5**	**11.9**	**23,581**	**25,468**	**49,049**	**732.7**	**767.3**	**750.3**

Low High

Sources:
Individuals in collisions: **Indiana State Police**
Population: **US Census Bureau**

Notes:
1) Excludes unknown gender.
2) *Non-fatal injuries* includes injury status of *incapacitating, non-incapacitating, possible, unknown, not reported, refused* (treatment), and invalid injury categories.

Table 6.4. Drivers in Indiana collisions, by age and rate per 10,000 licensed, 2012

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
15	13,619	0.3%	0	0.0%	0.0	0	0.0%	0.0	344	0.1%	252.6
16 - 17	110,911	2.5%	25	2.3%	2.3	14	2.6%	1.3	12,226	4.2%	1,102.3
18 - 20	227,675	5.1%	103	9.4%	4.5	40	7.4%	1.8	27,847	9.6%	1,223.1
21 - 24	320,013	7.2%	102	9.3%	3.2	57	10.6%	1.8	31,672	10.9%	989.7
25 - 34	731,355	16.5%	202	18.5%	2.8	98	18.2%	1.3	57,124	19.7%	781.1
35 - 44	730,001	16.4%	180	16.5%	2.5	78	14.5%	1.1	48,112	16.6%	659.1
45 - 54	823,711	18.5%	182	16.6%	2.2	79	14.7%	1.0	46,870	16.2%	569.0
55 - 64	753,599	17.0%	145	13.3%	1.9	71	13.2%	0.9	35,923	12.4%	476.7
65 - 74	456,533	10.3%	80	7.3%	1.8	48	8.9%	1.1	17,958	6.2%	393.4
75 and over	278,091	6.3%	75	6.9%	2.7	54	10.0%	1.9	11,205	3.9%	402.9
Total	**4,445,508**	**100.0%**	**1,094**	**100.0%**	**2.5**	**539**	**100.0%**	**1.2**	**289,281**	**100.0%**	**650.7**

Low High

Sources:
Drivers in collisions: **Indiana State Police**
Licensed drivers: **Indiana Bureau of Motor Vehicles**

Notes:
1) Includes only drivers where age was known.
2) Due to revised licensed driver counts from the Indiana BMV in 2013, rates per 10,000 licensed drivers may not be comparable to previous factbooks.

Table 6.5. Drivers killed involved in fatal collisions, by apparent physical condition, 2012

Apparent physical condition	In fatal collisions	
	Killed	% killed of total unique drivers killed
Normal	160	29.7%
Had been drinking	78	14.5%
Handicapped	1	0.2%
Illness	19	3.5%
Asleep/fatigued	7	1.3%
On drugs/medication	24	4.5%
Other/unknown	273	50.6%
Total	**562**	
Total unique drivers killed	**539**	

Source: Indiana State Police

Notes:
1) A driver can be assigned more than one condition type; totals will not match actual unique individual totals.
2) Drivers are those ages 15 to 109.
3) Excludes *bicycles* and *pedestrians* as unit types.

Table 6.6. Drivers involved in Indiana collisions, by license type and injury status, 2012

License type	Driver injury status								
	Fatal	% of total fatal	Incapa-citating	Non-inca-pacitating	Unknown/ other	No injury	% not injured	Total	Fatal, as % overall total
Operator	392	72.7%	2,007	26,035	1,524	224,865	88.2%	254,823	0.2%
Commercial driver	30	5.6%	82	793	101	13,866	93.2%	14,872	0.2%
Motorcycle	65	12.1%	279	1,418	51	5,193	74.1%	7,006	0.9%
Chauffeur	12	2.2%	37	375	18	3,992	90.0%	4,434	0.3%
No license	29	5.4%	109	806	40	3,440	77.8%	4,424	0.7%
Learner permit	7	1.3%	59	401	21	2,015	80.5%	2,503	0.3%
Probationary operator	1	0.2%	3	32	1	233	86.3%	270	0.4%
Unknown license type	3	0.6%	10	95	12	829	87.4%	949	0.3%
Total	**539**	**100.0%**	**2,586**	**29,955**	**1,768**	**254,433**	**88.0%**	**289,281**	**0.2%**

Low — High

Source: Indiana State Police

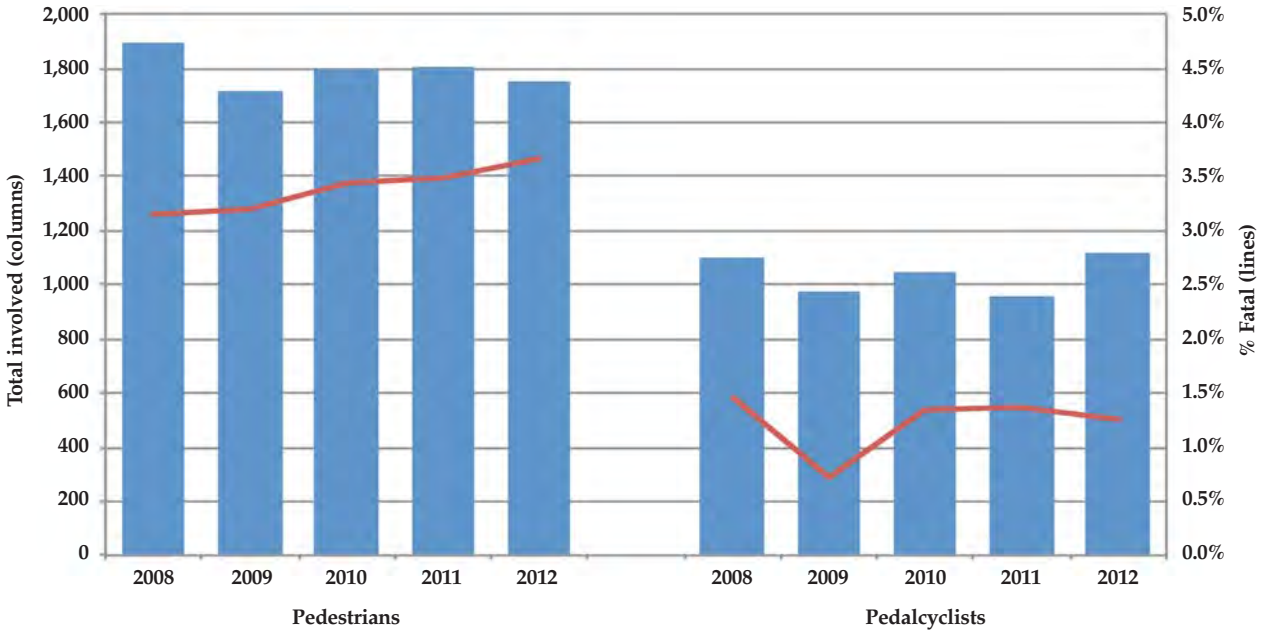
Notes:
1) Includes drivers reported with ages ranging from 15 to 109. Excludes unknown and invalid ages.
2) *Chauffeur* license type includes *chauffeur* and *public passenger chauffeur license.*
3) *Motorcycle license type* includes *motorcycle, chauffeur with MC endorsement, operators with MC endorsement,* and *public passenger chauffer with MC endorsement.*
4) *Learner permit* license type includes *learner permit, drivers education learners permit,* and *learner motorcycle.*
5) *Non-incapacitating injuries* include those reported as *non-incapacitating* and *possible* injuries.

Table 6.7. Drivers involved in Indiana collisions by license status and driver injury status, 2012

	Driver injury status							
License status	Fatal	% Fatal	Incapacitating	Non-incapacitating	Unknown/other	Not injured	Total	% Total
Valid	320	59.4%	1,694	21,434	1,238	188,303	212,989	73.6%
Unknown	87	16.1%	309	3,433	242	33,730	37,801	13.1%
Suspended - infraction	87	16.1%	388	3,724	199	25,266	29,664	10.3%
Suspended - prior	20	3.7%	79	667	41	3,658	4,465	1.5%
Unlicensed	6	1.1%	47	291	28	1,476	1,848	0.6%
Invalid/revoked	0	0.0%	13	108	7	731	859	0.3%
Suspended - misdemeanor	7	1.3%	14	105	7	553	686	0.2%
Cancelled	3	0.6%	13	63	3	429	511	0.2%
Habitual traffic violator	3	0.6%	13	53	3	92	164	0.1%
Habitual traffic violator - life	5	0.9%	11	59	0	72	147	0.1%
Conditional	1	0.2%	4	17	0	115	137	0.0%
Fraudulent	0	0.0%	1	1	0	8	10	0.0%
Total	**539**	**100.0%**	**2,586**	**29,955**	**1,768**	**254,433**	**289,281**	**100.0%**

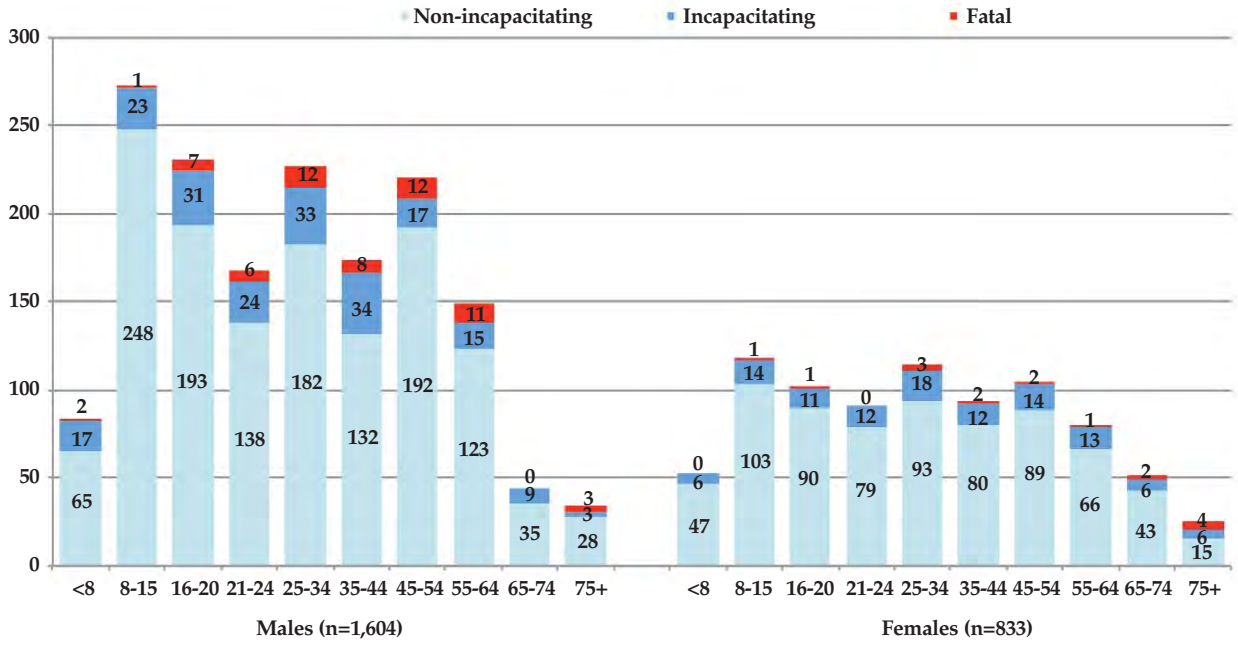
Sources: Bureau of Motor Vehicles, Indiana State Police
Note: Includes drivers reported with ages ranging from 15 to 109. Excludes unknown and invalid ages.

Figure 6.1. Pedestrians and pedalcyclists involved in collisions, 2008-2012



Source: Indiana State Police

Figure 6.2. Injured non-motorists involved in Indiana collisions, by age, gender, and injury status, 2012



Source: Indiana State Police

Notes:
1) Excludes non-motorists with missing or invalid ages or gender.
2) *Non-incapacitating* includes *non-incapacitating* and *possible* injuries.
3) *Non-motorists* include *pedestrians* and *pedalcyclists*.

Table 6.8. Pedestrians involved in Indiana collisions, by pedestrian action and injury status, 2012

Pedestrian action	Fatal	Non-fatal	Total involved	% Fatal
Working on roadway	2	12	14	14.3%
With traffic	4	32	36	11.1%
On shoulder	5	43	48	10.4%
On roadway	18	197	215	8.4%
Not in roadway	10	123	133	7.5%
Crossing not at intersection	15	275	290	5.2%
On designated non-motorist lane	1	28	29	3.4%
Against traffic	1	32	33	3.0%
Getting in/out of vehicle	1	37	38	2.6%
Crossing at intersection	6	373	379	1.6%
Other	1	223	224	0.4%
Moving	0	115	115	0.0%
Standing	0	99	99	0.0%
Unknown	0	94	94	0.0%
Getting off/on school bus	0	3	3	0.0%
Total	**64**	**1,686**	**1,750**	**3.7%**

Source: Indiana State Police

Table 6.9. Pedalcyclists involved in Indiana collisions, by pedalcyclist action and injury status, 2012

Pedalcyclist action	Fatal	Non-fatal	Total involved	% Fatal
With traffic	5	61	66	7.6%
On shoulder	1	24	25	4.0%
Unknown	2	65	67	3.0%
On roadway	3	156	159	1.9%
Crossing not at intersection	1	111	112	0.9%
Moving	1	124	125	0.8%
Crossing at intersection	1	384	385	0.3%
Against traffic	0	68	68	0.0%
Other	0	51	51	0.0%
Standing	0	1	1	0.0%
Not in roadway	0	35	35	0.0%
On designated non-motorist lane	0	24	24	0.0%
Total	**14**	**1,104**	**1,118**	**1.3%**

Source: Indiana State Police

Table 6.10. Non-motorists involved in Indiana collisions, by time of day and day of week, 2012

	Sun	Mon	Tues	Wed	Thur	Fri	Sat	Total by hour	% by hour
12am-	7	1	7	4		7	5	31	1.1%
1am-	12	2	3	1	5	2	7	32	1.1%
2am-	12	1	4	2	5	4	6	34	1.2%
3am-	8	1	1	3	3	2	14	32	1.1%
4am-	6	4	6	1	3	5	3	28	1.0%
5am-		6	5	8	9	5	1	34	1.2%
6am-	1	10	9	10	8	12	2	52	1.8%
7am-	1	26	37	47	25	14	4	154	5.4%
8am-	6	16	16	28	24	7	11	108	3.8%
9am-	7	10	18	16	9	11	13	84	2.9%
10am-	9	11	18	11	12	21	20	102	3.6%
11am-	14	14	16	24	26	20	19	133	4.6%
12pm-	14	23	19	26	28	21	22	153	5.3%
1pm-	15	24	15	9	32	26	12	133	4.6%
2pm-	14	35	29	26	30	40	20	194	6.8%
3pm-	21	42	29	46	44	31	26	239	8.3%
4pm-	22	29	43	43	37	38	21	233	8.1%
5pm-	22	47	39	54	42	41	17	262	9.1%
6pm-	22	40	39	44	27	34	21	227	7.9%
7pm-	12	31	31	31	28	34	24	191	6.7%
8pm-	15	24	16	21	17	21	23	137	4.8%
9pm-	14	24	21	12	21	22	18	132	4.6%
10pm-	6	10	16	14	19	14	14	93	3.2%
11pm-	5	5	6	6	12	7	9	50	1.7%
Total	**265**	**436**	**443**	**487**	**466**	**439**	**332**	**2,868**	**100%**
% by day	**9.2%**	**15.2%**	**15.4%**	**17.0%**	**16.2%**	**15.3%**	**11.6%**	**100%**	

Source: Indiana State Police

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

Table 6.11. Vehicle occupants involved in Indiana collisions, by restraint use and injury status, 2008-2012

Individuals	2008	2009	2010	2011	2012	Annual rate of change 2008-12	Annual rate of change 2011-12
All occupants	**318,311**	**297,800**	**304,235**	**296,527**	**298,016**	**-1.6%**	**0.5%**
% restrained	90.2%	90.0%	90.6%	90.4%	90.4%	0.1%	0.0%
Fatal injuries	**607**	**519**	**565**	**546**	**545**	**-2.7%**	**-0.2%**
% restrained	44.0%	48.0%	46.5%	48.0%	47.9%	2.1%	-0.2%
Incapacitating injuries	**2,588**	**2,433**	**2,576**	**2,522**	**2,853**	**2.5%**	**13.1%**
% restrained	71.4%	71.5%	73.6%	73.0%	71.9%	0.2%	-1.4%
Non-incapacitating injuries	**40,769**	**39,385**	**39,898**	**37,636**	**38,553**	**-1.4%**	**2.4%**
% restrained	87.3%	87.2%	88.4%	88.3%	88.2%	0.2%	-0.2%
Unknown/other injuries	**5,818**	**4,075**	**2,425**	**1,827**	**1,842**	**-25.0%**	**0.8%**
% restrained	88.5%	93.3%	88.3%	87.9%	89.0%	0.1%	1.2%
Not injured	**268,529**	**251,388**	**258,771**	**253,996**	**254,223**	**-1.4%**	**0.1%**
% restrained	91.0%	90.7%	91.2%	91.0%	91.1%	0.0%	0.1%

Source: Indiana State Police

Notes:
1) Excludes unit types of *farm vehicles, motorcycles, mopeds, animal drawn vehicles, bicycles,* and *pedestrians.*
2) *Restraint use* includes the use of one of the following: *Lap belt only, Harness, Airbag deployed and harness, Child restraint,* or *Lap and harness.*
3) *Non-incapacitating injuries* include those injuries reported as *non-incapacitating* and *possible.*
4) *Unknown/other injuries* include *not reported, unknown, refused* (treatment), and invalid injury codes.
5) *Not injured* includes individuals reported with blank values in the injury status code field (mainly drivers in property damage only collisions).

Table 6.12. Vehicle occupants involved in Indiana collisions, by age, restraint use, and injury severity, 2012

Age group	Injury status: Fatal	Incapacitating	Non-incapacitating	Unknown/other injury	Not injured	Total
<16	**23**	**163**	**3,102**	**53**	**961**	**4,302**
% restrained	60.9%	62.0%	83.9%	67.9%	48.8%	74.9%
16 - 17	**25**	**125**	**1,970**	**97**	**10,766**	**12,983**
% restrained	36.0%	72.0%	86.2%	91.8%	91.7%	90.5%
18 - 20	**49**	**298**	**3,892**	**189**	**24,347**	**28,775**
% restrained	36.7%	60.7%	85.1%	90.5%	91.2%	90.0%
21 - 24	**58**	**294**	**4,113**	**208**	**27,647**	**32,320**
% restrained	34.5%	62.2%	85.5%	89.4%	90.8%	89.7%
25 - 34	**89**	**508**	**6,943**	**353**	**50,050**	**57,943**
% restrained	37.1%	66.5%	86.4%	86.7%	90.8%	90.0%
35 - 44	**61**	**444**	**5,424**	**307**	**42,225**	**48,461**
% restrained	31.1%	69.8%	88.8%	88.6%	91.4%	90.8%
45 - 54	**68**	**401**	**5,414**	**280**	**40,892**	**47,055**
% restrained	41.2%	80.0%	91.0%	91.4%	91.4%	91.2%
55 - 64	**56**	**303**	**4,099**	**179**	**31,468**	**36,105**
% restrained	66.1%	84.8%	92.1%	89.9%	91.7%	91.6%
65 - 74	**51**	**186**	**2,152**	**115**	**15,809**	**18,313**
% restrained	72.5%	87.6%	93.4%	92.2%	92.3%	92.4%
75 and over	**65**	**131**	**1,439**	**60**	**9,861**	**11,556**
% restrained	70.8%	82.4%	92.6%	93.3%	91.2%	91.2%

Source: Indiana State Police

Notes:
1) Includes only individuals with valid age.
2) Excludes unit types of *farm vehicles, motorcycles, mopeds, animal-drawn vehicles, bicycles,* and *pedestrians.*
3) *Restraint use* includes the use of one of the following: *Lap belt only, Harness, Airbag deployed and harness, Child restraint,* or *Lap and harness.*
4) *Non-incapacitating injuries* include those injuries reported as *non-incapacitating* and *possible.*
5) *Unknown/other injuries* include *not reported, unknown, refused* (treatment), and invalid injury codes.
6) *Not injured* includes individuals reported with blank values in the injury status code field (mainly drivers in property damage only collisions).

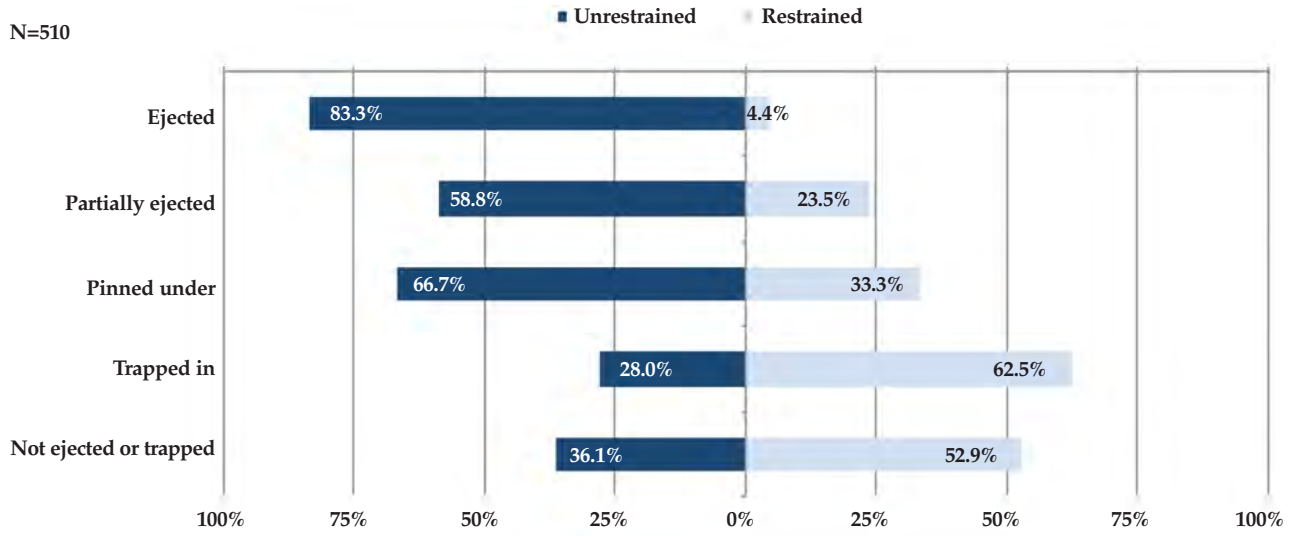
Table 6.13. Vehicle occupants killed or injured in Indiana collisions, by restraint use, vehicle type, and gender, 2012

	Fatal		Non-fatal injury		
Vehicle type	Male	Female	Male	Female	Total
Buses	**1**	**1**	**129**	**145**	**276**
% restrained	100.0%	0.0%	21.7%	17.2%	19.6%
Passenger cars	**215**	**126**	**10,775**	**16,406**	**27,522**
% restrained	44.2%	61.1%	85.1%	91.0%	88.2%
Pickup trucks	**65**	**12**	**3,110**	**1,259**	**4,446**
% restrained	32.3%	66.7%	80.1%	83.3%	80.3%
SUVs	**40**	**19**	**2,232**	**3,717**	**6,008**
% restrained	27.5%	68.4%	84.0%	91.9%	88.4%
Vans	**19**	**20**	**1,164**	**1,670**	**2,873**
% restrained	47.4%	65.0%	86.3%	89.9%	88.0%
Large trucks	**21**	**1**	**540**	**34**	**596**
% restrained	61.9%	0.0%	86.1%	76.5%	84.6%
Other vehicle types	**2**	**3**	**121**	**90**	**216**
% restrained	0.0%	0.0%	24.8%	27.8%	25.5%

Source: Indiana State Police

Notes:
1) Excludes unit types of *farm vehicles, motorcycles, mopeds, animal drawn vehicles, bicycles* and *pedestrians* and individuals with unknown gender.
2) *Other vehicle* types consists of *unknown, combination vehicles,* and *motor homes/RVs.*
3) *Restraint use* includes the use of one of the following: *Lap belt only, Harness, Airbag deployed and harness, Child restraint,* or *Lap and harness.*
4) *Non-fatal injury* includes injury statuses of *incapacitating, non-incapacitating,* and *possible* injuries.

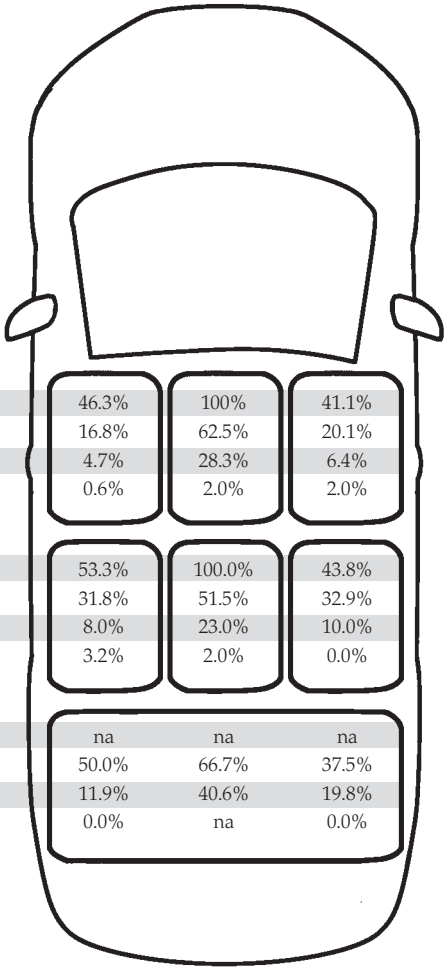
Figure 6.3. Passenger vehicle fatalities in Indiana collisions, by ejection status and restraint use, 2012



Source: Indiana State Police

Notes:
1) Includes vehicle types of *passenger cars, pickup trucks, SUVs,* and *vans.*
2) Excludes unknown ejection status.
3) 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, 83.3 percent represents 75 individuals killed, ejected, and known not restrained out of the total of 90 individuals known to be ejected.

Figure 6.4. Percentage of unrestrained individuals in passenger vehicles involved in Indiana collisions, by seating position and injury status, 2012



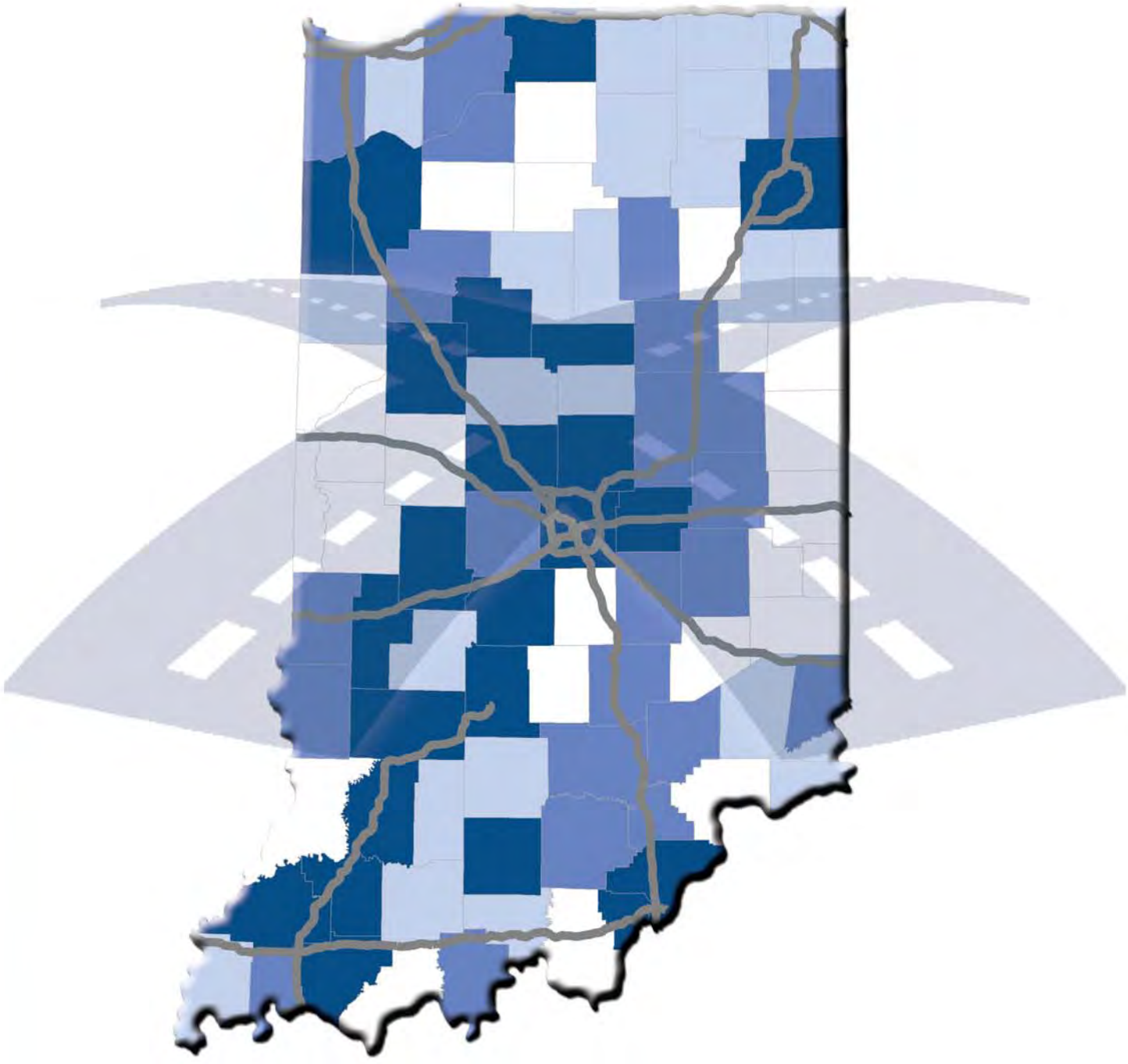
FRONT SEATS			
Fatal	46.3%	100%	41.1%
Incapacitating	16.8%	62.5%	20.1%
Non-incapacitating	4.7%	28.3%	6.4%
No injury	0.6%	2.0%	2.0%
REAR SEATS			
Fatal	53.3%	100.0%	43.8%
Incapacitating	31.8%	51.5%	32.9%
Non-incapacitating	8.0%	23.0%	10.0%
No injury	3.2%	2.0%	0.0%
THIRD ROW			
Fatal	na	na	na
Incapacitating	50.0%	66.7%	37.5%
Non-incapacitating	11.9%	40.6%	19.8%
No injury	0.0%	na	0.0%

Unrestrained in pickup bed
0 - Fatal
1 - Incapacitating
5 - Non-incapacitating
1 - No injury

Source: Indiana State Police

Notes:
1) Calculations include only individuals where injury status, restraint use and seating position were known.
2) Excludes positions of *outside front*, *outside left*, *outside right*, and *outside rear* and unknown positions.
3) 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, 46.3% were not restrained.
4) Includes individuals in *passenger vehicles* (*passenger cars*, *SUVs*, *vans*, and *pickup trucks*) where restraint use was known.
5) na = not applicable; there were no persons in that seat position for that injury status.

CHAPTER 7
ALCOHOL



ALCOHOL, 2012

In 2012, there were 150 fatal crashes and 158 fatalities (both up 13 percent from 2011) involving a vehicle driver legally impaired by alcohol (i.e., blood alcohol content at or above 0.08 g/dL) (Table 7.1). Impaired drivers comprised 117 (74 percent) of the 158 fatalities (Table 7.7). As a proportion of all fatal crashes, those involving an impaired driver increased 1.7 percent annually 2003-2012, but declined 0.8 percent annually since 2008. Persons killed in alcohol-impaired crashes increased 0.3 percent annually 2003-2012 (Table 7.15). Alcohol-impaired drivers in fatal crashes decreased one percent annually since 2008, but increased 12.6 percent from 2011 (Table 7.2).

During the 2008-2012 period, although the numbers of persons killed in crashes involving alcohol-impaired drivers decreased 2.2 percent annually, persons with incapacitating injuries increased 25.2 percent annually (Table 7.1). Each year from 2008 to 2012, approximately two-thirds of impaired drivers in Indiana fatal traffic collisions were between the ages of 21 to 44. In this context, although the incidence of alcohol-impaired drivers 25 to 34 years old in fatal crashes decreased 2.8 percent annually since 2008, from 2011 to 2012 the number of impaired drivers in this age group increased 27.3 percent (Table 7.2).

Males continue to be more likely than females to have been impaired in Indiana collisions (Table 7.3) In 2012 fatal crashes, male drivers were nearly three times as likely as female drivers to be impaired, and overall the male driver impairment rate in all 2012 collisions was twice the rate of female drivers. One-quarter of males aged 25 to 34 in fatal crashes were impaired. Per 10,000 licensed drivers in 2012, both males and females aged 21 to 24 and 25 to 34 years had the highest rates of alcohol impairment in collisions (within respective gender categories) (Table 7.4). It should be noted that among drivers in collisions with serious bodily injury (in which alcohol testing of all involved drivers is required by Indiana Code 9-30-7-3), males were about twice as likely to be tested as females (from data not shown here). Therefore, some of the differences between male and female impairment rates would be explained by testing rates.

Ignoring gender differences, about seven of ten drivers involved in fatal crashes in Indiana were tested for alcohol consumption (Table 7.5). Among surviving drivers with reported results in 2012 fatal collisions, only one of ten drivers was legally impaired; among drivers killed with reported BAC results, about four of ten were legally impaired. Testing rates are generally higher for younger drivers and for drivers in more severe crashes (Table 7.6). In 2012, about 74 percent of fatally injured drivers between the ages of 21 and 44 were tested for alcohol, compared to about 60 percent for drivers over age 45. Among drivers killed and tested for alcohol consumption in Indiana crashes in 2012, the likelihood of those drivers being impaired by alcohol was highest for the 35 to 44 year old age group. Approximately one of every four drivers killed in crashes (and tested) in 2012 had a BAC result of 0.15 g/dL or above (Table 7.8).

Among all persons injured in collisions involving alcohol-impairment in 2012, more than one-half (59 percent) were impaired drivers, 16 percent were the unimpaired drivers involved, and 15 percent were the passengers of impaired drivers (Figure 7.1). Fatalities in crashes involving an impaired driver were most common on local/city roads and county roads. In 2012, one-third of all fatalities on county roads involved an impaired driver (Table 7.9). Incapacitating injuries linked to alcohol-impaired drivers were proportionally largest on county roads (7.9 percent). In addition, alcohol-impaired fatalities were most common in urban areas (62 of 158 alcohol-impaired fatalities), and represented the highest proportion (39 percent) of total fatalities in any geographic locality (Figure 7.2 and Table 7.10).

Alcohol-impaired fatalities and injuries in Indiana vary by month (Figure 7.3). In 2012, the months of May and June had the highest counts of fatal crashes involving alcohol-impaired drivers. The highest rates of alcohol-impaired fatal collisions were March through May. The highest proportion of non-fatal injuries from collisions involving alcohol-impaired drivers was in June 2012. Also in June 2012, 19 people were killed in alcohol-impaired crashes.

Drivers involved in single-vehicle collisions are more likely to be impaired than drivers involved in multiple-vehicle collisions (Tables 7.11 and 7.12). In single-vehicle collisions in 2012, about five percent of drivers were alcohol-impaired, compared to one percent of drivers in multiple-vehicle collisions. Similarly, among drivers killed in single-vehicle collisions, more than one-third were impaired, compared to a ten percent impairment rate among drivers killed in multiple-vehicle crashes.

Impairment rates vary by types of vehicles involved (Table 7.13). In 2012, the highest impairment rates were among drivers killed in sport utility vehicles (34.9 percent) and pickup trucks (31.3 percent), followed by moped operators (26.1 percent), and motorcycle operators (23.2 percent). Considering all Indiana collisions in 2012, moped and motorcycle operators had the highest rates of alcohol-impaired driving of any vehicle class (5.9 percent and 4.9 percent, respectively).

When comparing impaired and non-impaired drivers in 2012, impaired drivers were more likely to collide with something

other than another vehicle (Table 7.14). For example, the most frequent object of impact for non-impaired drivers was another vehicle (80.3 percent), whereas only 42.3 percent of impaired drivers collided with another vehicle. About three of four impaired drivers in fatal crashes collided with either a fixed object (21.4 percent) or generally lost control resulting in an off-road crash (55.6 percent).

Finally, it should be noted that there are substantial annual differences between the counts of Indiana fatal crashes and fatalities involving impaired drivers reported by federal versus state data sources (Table 7.15). Because the National Highway Traffic Safety Administration fatality analysis reporting system (FARS) uses a statistical imputation model on state data submissions (e.g., Indiana ARIES) to correct possible undercounts of alcohol-impairment, the national FARS counts of Indiana impairment-related fatalities are always greater than ARIES counts. On average from 2003 to 2011, FARS reports about 36 percent more fatal crashes and fatalities linked to impaired drivers than does ARIES.

Table 7.1. Indiana collisions and injuries involving alcohol-impaired drivers, 2008-2012

						Annual rate of change	
Crash severity	**2008**	**2009**	**2010**	**2011**	**2012**	**2008-12**	**2011-12**
Collisions involving an alcohol-impaired driver							
Collision severity							
Fatal	156	120	130	133	150	-1.0%	12.8%
Incapacitating	77	126	215	184	204	27.6%	10.9%
Non-incapacitating	804	1,091	1,302	1,250	1,303	12.8%	4.2%
Property damage	2,362	2,870	3,331	3,371	3,495	10.3%	3.7%
Total	**3,399**	**4,207**	**4,978**	**4,938**	**5,152**	**11.0%**	**4.3%**
Individuals injured in collisions involving an alcohol-impaired driver							
Injury status							
Fatal	173	127	135	140	158	-2.2%	12.9%
Incapacitating	100	153	264	225	246	25.2%	9.3%
Non-incapacitating	1,172	1,513	1,840	1,771	1,797	11.3%	1.5%
Total	**1,445**	**1,793**	**2,239**	**2,136**	**2,201**	**11.1%**	**3.0%**

Source: Indiana State Police
Note: For individuals injured, *non-incapacitating* includes *possible* injuries.

Table 7.2. Alcohol-impaired drivers in Indiana fatal collisions, by driver age, 2008-2012

						Annual rate of change	
Crash severity	**2008**	**2009**	**2010**	**2011**	**2012**	**2008-12**	**2011-12**
Under 21	20	10	10	10	11	-13.9%	10.0%
21 to 24	27	14	24	20	22	-5.0%	10.0%
25 to 34	47	39	30	33	42	-2.8%	27.3%
35 to 44	24	33	33	34	35	9.9%	2.9%
45 to 54	28	17	27	24	28	0.0%	16.7%
55 and above	12	10	9	14	14	3.9%	0.0%
Total	**158**	**123**	**133**	**135**	**152**	**-1.0%**	**12.6%**

Source: Indiana State Police

Table 7.3. Drivers in Indiana collisions, by age, gender, and alcohol-impairment, 2012

	Females			Males			All drivers		
Driver age	Alcohol-impaired	Total involved	% impaired	Alcohol-impaired	Total involved	% impaired	Alcohol-impaired	Total involved	% impaired
Fatal collisions	**16**	**264**	**6.1%**	**136**	**834**	**16.3%**	**152**	**1,099**	**13.8%**
Under 16	0	1	0.0%	0	3	0.0%	0	5	0.0%
16 to 20	0	35	0.0%	11	93	11.8%	11	128	8.6%
21 to 24	4	27	14.8%	18	75	24.0%	22	102	21.6%
25 to 34	5	54	9.3%	37	148	25.0%	42	202	20.8%
35 to 44	5	37	13.5%	30	143	21.0%	35	180	19.4%
45 to 54	2	37	5.4%	26	145	17.9%	28	182	15.4%
55 to 64	0	30	0.0%	8	115	7.0%	8	145	5.5%
65 to 74	0	19	0.0%	5	61	8.2%	5	80	6.3%
75 and older	0	24	0.0%	1	51	2.0%	1	75	1.3%
All collisions	**1,379**	**129,351**	**1.1%**	**3,784**	**160,310**	**2.4%**	**5,163**	**290,289**	**1.8%**
Under 16	3	318	0.9%	7	549	1.3%	10	1,150	0.9%
16 to 20	104	18,472	0.6%	298	21,590	1.4%	402	40,073	1.0%
21 to 24	256	14,881	1.7%	710	16,745	4.2%	966	31,672	3.1%
25 to 34	395	26,182	1.5%	1,080	30,902	3.5%	1,475	57,124	2.6%
35 to 44	297	21,332	1.4%	703	26,765	2.6%	1,000	48,112	2.1%
45 to 54	233	20,076	1.2%	577	26,786	2.2%	810	46,870	1.7%
55 to 64	78	15,300	0.5%	307	20,609	1.5%	385	35,923	1.1%
65 to 74	12	7,656	0.2%	82	10,294	0.8%	94	17,958	0.5%
75 and older	1	5,120	0.0%	20	6,057	0.3%	21	11,205	0.2%
Unknown age	0	14	0.0%	0	13	0.0%	0	202	0.0%

Source: Indiana State Police
Note: *All drivers* includes cases where gender information was not reported.

Table 7.4. Alcohol-impaired drivers involved in Indiana collisions and rate per 10,000 licenses, by age and gender, 2012

	Females			Males			All drivers		
Driver age	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	3	6,730	4.5	7	6,890	10.2	10	13,620	7.3
16 to 20	104	166,594	6.2	298	171,992	17.3	402	338,586	11.9
21 to 24	256	158,425	16.2	710	161,588	43.9	966	320,013	30.2
25 to 34	395	368,440	10.7	1,080	362,915	29.8	1,475	731,355	20.2
35 to 44	297	366,706	8.1	703	363,295	19.4	1,000	730,001	13.7
45 to 54	233	418,038	5.6	577	405,673	14.2	810	823,711	9.8
55 to 64	78	385,068	2.0	307	368,531	8.3	385	753,599	5.1
65 to 74	12	238,552	0.5	82	217,981	3.8	94	456,533	2.1
75 and older	1	152,444	0.1	20	125,647	1.6	21	278,091	0.8
All ages	**1,379**	**2,260,997**	**6.1**	**3,784**	**2,184,512**	**17.3**	**5,163**	**4,445,509**	**11.6**

Sources: Indiana State Police; Indiana Bureau of Motor Vehicles
Note: Due to changes in Indiana BMV-reported licensing counts obtained in 2013, rates should not be compared to previous years' exhibits.

Table 7.5. Drivers involved in Indiana fatal collisions by substance test results and fatality status, 2008-2012

	Surviving drivers					Killed drivers				
	2008	2009	2010	2011	2012	2008	2009	2010	2011	2012
Total in fatal crashes	**561**	**500**	**563**	**510**	**559**	**554**	**491**	**520**	**523**	**540**
By test type given										
Alcohol and/or drug	417	316	410	378	405	390	315	341	371	368
Refused	0	0	1	0	3	0	0	0	0	0
None	101	94	47	51	33	112	124	62	48	49
Not reported	43	90	105	81	118	52	52	117	104	123
Tested, as % all	*74.3%*	*63.2%*	*72.8%*	*74.1%*	*72.5%*	*70.4%*	*64.2%*	*65.6%*	*70.9%*	*68.1%*
By BAC result (g/dL)										
Not reported	172	250	224	197	211	188	239	238	218	225
Reported	389	250	339	313	348	366	252	282	305	315
0.00	337	215	292	275	305	229	136	176	186	186
0.01 < 0.08	14	9	6	10	8	16	20	14	12	12
0.08 < 0.15	14	9	10	9	12	37	29	28	29	26
0.15+	24	17	31	19	23	84	67	64	78	91
Reported, as % all	***69.3%***	***50.0%***	***60.2%***	***61.4%***	***62.3%***	***66.1%***	***51.3%***	***54.2%***	***58.3%***	***58.3%***
0.01+ as % reported	*13.4%*	*14.0%*	*13.9%*	*12.1%*	*12.4%*	*37.4%*	*46.0%*	*37.6%*	*39.0%*	*41.0%*
0.08+ as % reported	*9.8%*	*10.4%*	*12.1%*	*8.9%*	*10.1%*	*33.1%*	*38.1%*	*32.6%*	*35.1%*	*37.1%*
0.15+ as % reported	*6.2%*	*6.8%*	*9.1%*	*6.1%*	*6.6%*	*23.0%*	*26.6%*	*22.7%*	*25.6%*	*28.9%*

Source: Indiana State Police

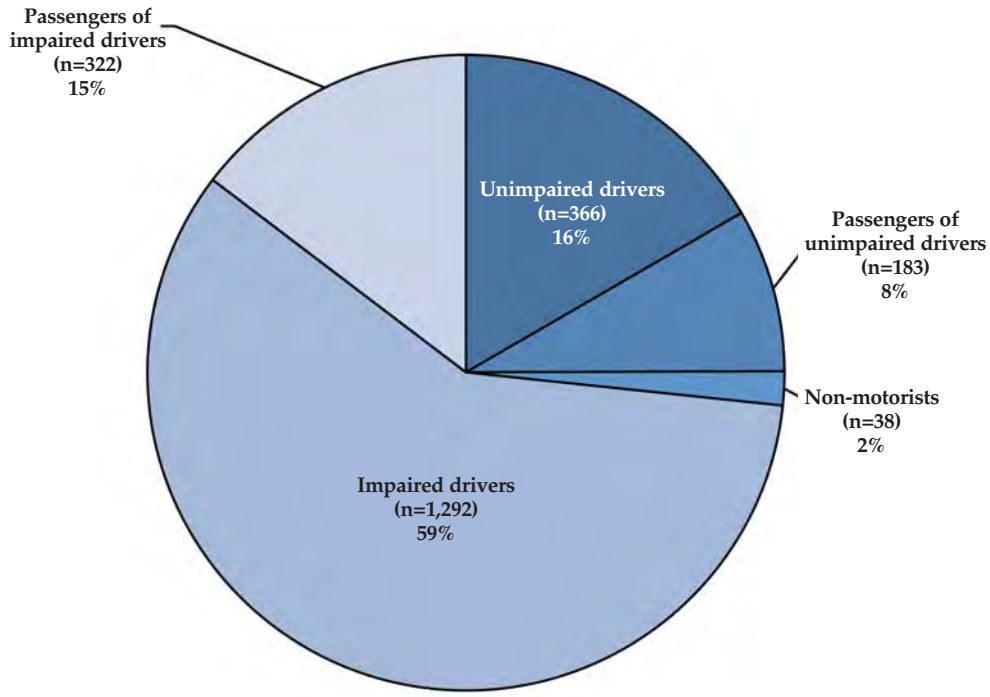
Table 7.6. Drivers in Indiana collisions that were tested for alcohol or other substances, by age and injury severity, 2012

	Driver injuries											
	Fatal			Incapacitating			Non-incapacitating			Other		
Driver age	**Tested**	**Total**	**Tested as % total**	**Tested**	**Total**	**Tested as % total**	**Tested**	**Total**	**Tested as % total**	**Tested**	**Total**	**Tested as % total**
Under 16	0	1	0.0%	4	17	23.5%	14	142	9.9%	21	990	2.1%
16 to 20	44	54	81.5%	83	322	25.8%	402	4,221	9.5%	744	35,476	2.1%
21 to 24	39	57	68.4%	67	265	25.3%	451	3,385	13.3%	1,219	27,965	4.4%
25 to 34	78	98	79.6%	137	496	27.6%	769	5,950	12.9%	2,173	50,580	4.3%
35 to 44	55	78	70.5%	121	438	27.6%	514	4,864	10.6%	1,538	42,732	3.6%
45 to 54	53	79	67.1%	114	465	24.5%	482	4,898	9.8%	1,270	41,428	3.1%
55 to 64	48	71	67.6%	48	334	14.4%	210	3,691	5.7%	676	31,827	2.1%
65 to 74	27	48	56.3%	19	159	11.9%	79	1,770	4.5%	169	15,981	1.1%
75 and older	24	54	44.4%	12	100	12.0%	24	1,116	2.2%	51	9,935	0.5%
Unknown	0	0	--	0	0	--	0	3	0.0%	0	199	0.0%
All ages	**368**	**540**	**68.1%**	**605**	**2,596**	**23.3%**	**2,945**	**30,040**	**9.8%**	**7,861**	**257,113**	**3.1%**

Source: Indiana State Police

Notes:
1) ***Tested*** **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.**
2) ***Non-incapacitating*** **includes** ***possible*** **injuries.**
3) ***Other status*** **includes** ***unknown, refused,*** **and** ***unreported*** **categories.**

Figure 7.1. Individuals injured in Indiana collisions involving an alcohol-impaired driver, by person type, 2012



Source: Indiana State Police

Notes:
1) Includes individuals with *fatal, incapacitating, non-incapaciting,* or *possible* injuries.
2) *Non-motorists* killed or injured were not impaired.

Table 7.7. Persons killed in Indiana collisions involving an alcohol-impaired driver, by person type, 2012

Person type	Killed	Total involved	Fatality rate
Impaired drivers	117	5,164	2.3%
Passengers of impaired drivers	17	333	5.1%
Unimpaired drivers	15	1,595	0.9%
Non-motorists	6	41	14.6%
Passengers of unimpaired drivers	3	188	1.6%
Total	**158**	**7,321**	**2.2%**

Source: Indiana State Police

Table 7.8. Drivers killed in Indiana collisions, by blood alcohol content (BAC) test results, 2012

Driver Age	Total driver fatalities	Drivers tested	% tested	BAC results (g/dL)					Impaired as % tested	Felony impaired as % tested
				0.00	0.01 < 0.08	0.08 < 0.15	0.15+	Not reported		
Under 16	1	0	0%	0	0	0	0	0	--	--
16 to 20	54	44	81.5%	29	1	5	3	6	18.2%	6.8%
21 to 24	57	39	68.4%	15	1	2	11	10	33.3%	28.2%
25 to 34	98	78	79.6%	31	5	5	26	11	39.7%	33.3%
35 to 44	78	55	70.5%	17	2	6	22	8	50.9%	40.0%
45 to 54	79	53	67.1%	18	2	4	18	11	41.5%	34.0%
55 to 64	71	48	67.6%	33	1	2	5	7	14.6%	10.4%
65 to 74	48	27	56.3%	20	0	1	4	2	18.5%	14.8%
75 and older	54	24	44.4%	19	0	1	0	4	4.2%	0.0%
All ages	**540**	**368**	**68.1%**	**182**	**12**	**26**	**89**	**59**	**31.3%**	**24.2%**

Source: Indiana State Police

Notes:
1) *Impaired* is 0.08 g/dL BAC and above.
2) *Felony impaired* is 0.15 g/dL BAC and above.
3) *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.
4) BAC counts are for drivers tested/refused only.

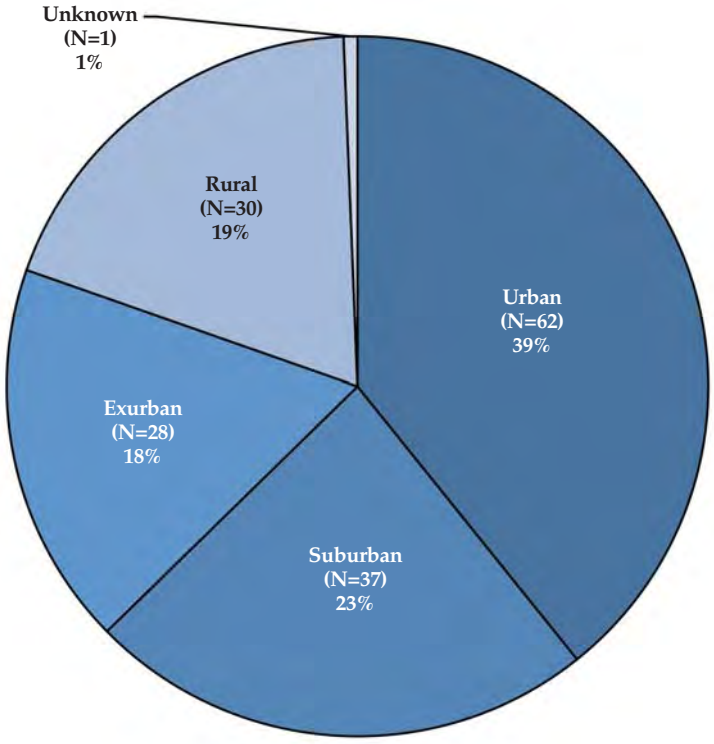
Table 7.9. Indiana collisions and injuries involving an alcohol-impaired driver, by road class, 2012

Road class	Collisions			Individual injuries								
				Fatal			Incapacitating			Non-incapacitating		
	Total	Impaired	As % all collisions in road class	Total	In impaired collisions	As % fatalities in road class	Total	In impaired collisions	As % incap injuries in road class	Total	In impaired collisions	As % non-incap injuries in road class
Local/city roads	85,128	2,435	2.9%	197	47	23.9%	1,421	102	7.2%	20,822	803	3.9%
County roads	20,853	949	4.6%	138	45	32.6%	683	54	7.9%	5,264	365	6.9%
State roads	26,868	619	2.3%	219	40	18.3%	784	39	5.0%	7,595	254	3.3%
US routes	18,601	425	2.3%	128	17	13.3%	516	30	5.8%	5,535	206	3.7%
Interstates	13,952	294	2.1%	84	8	9.5%	251	12	4.8%	2,695	111	4.1%
Not reported	23,439	430	1.8%	13	1	7.7%	155	9	5.8%	1,437	58	4.0%
All roads	**188,841**	**5,152**	**2.7%**	**779**	**158**	**20.3%**	**3,810**	**246**	**6.5%**	**43,348**	**1,797**	**4.1%**

Source: Indiana State Police

Note: *Non-incapacitating* includes *possible* injuries.

Figure 7.2. Fatalities in Indiana crashes involving an alcohol-impaired driver, by locality, 2012



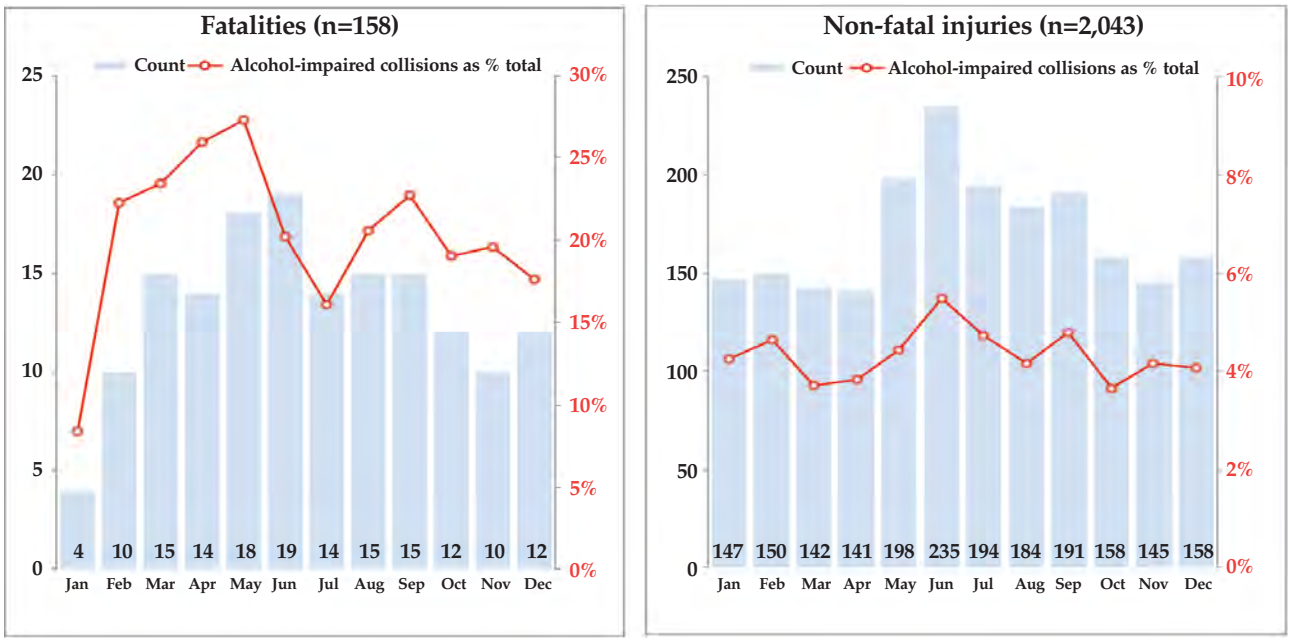
Source: Indiana State Police
Note: See glossary for definition of locality.

Table 7.10. Fatality rates in Indiana collisions involving an alcohol-impaired driver, by locality, 2012

Locality type	All fatalities	Persons killed in impaired collisions	Inpairment rate (by locality)
Urban	283	62	21.9%
Suburban	219	37	16.9%
Exurban	109	28	25.7%
Rural	154	30	19.5%
Unknown	14	1	7.1%
Total	**779**	**158**	**20.3%**

Source: Indiana State Police
Note: See glossary for definition of locality.

Figure 7.3. Fatalities and injuries in collisions involving an alcohol-impaired driver, by month, 2012



Source: Indiana State Police

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

Table 7.11. Drivers in Indiana collisions, by driver age, alcohol impairment, and number of vehicles involved, 2012

	Single-vehicle			Multiple-vehicle		
Driver age	**Alcohol-impaired**	**Total**	**% impaired**	**Alcohol-impaired**	**Total**	**% impaired**
Under 16	3	315	1.0%	7	850	0.8%
16 to 20	266	8,724	3.0%	137	31,375	0.4%
21 to 24	615	6,630	9.3%	351	25,048	1.4%
25 to 34	815	11,167	7.3%	660	45,972	1.4%
35 to 44	519	9,143	5.7%	481	38,982	1.2%
45 to 54	404	8,671	4.7%	406	38,214	1.1%
55 to 64	157	6,050	2.6%	228	29,881	0.8%
65 to 74	39	2,646	1.5%	55	15,316	0.4%
75 and older	7	1,381	0.5%	14	9,824	0.1%
Unknown	0	8	0.0%	0	194	0.0%
Total	**2,825**	**54,735**	**5.2%**	**2,339**	**235,656**	**1.0%**

Source: Indiana State Police

Table 7.12. Drivers killed in Indiana collisions, by driver age, alcohol impairment, and number of vehicles involved, 2012

	Single-vehicle			Multiple-vehicle		
Driver age	**Alcohol-impaired**	**Total**	**% impaired**	**Alcohol-impaired**	**Total**	**% impaired**
Under 16	0	1	0.0%	0	0	--
16 to 20	4	25	16.0%	4	29	13.8%
21 to 24	14	35	40.0%	1	22	4.5%
25 to 34	26	57	45.6%	5	41	12.2%
35 to 44	20	39	51.3%	8	39	20.5%
45 to 54	15	44	34.1%	7	35	20.0%
55 to 64	4	30	13.3%	3	41	7.3%
65 to 74	4	17	23.5%	1	31	3.2%
75 and older	1	8	12.5%	0	46	0.0%
Total	**88**	**256**	**34.4%**	**29**	**284**	**10.2%**

Source: Indiana State Police

Table 7.13. Drivers involved in Indiana collisions, by vehicle type, injury severity, and alcohol impairment, 2012

Vehicle type	Fatal			Incapacitating			Non-incapacitating			Other			All drivers		
	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	44	251	17.5%	74	1,299	5.7%	590	18,585	3.2%	2,400	156,466	1.5%	3,108	176,601	1.8%
Sport utility vehicle	15	43	34.9%	13	286	4.5%	110	3,912	2.8%	529	36,352	1.5%	667	40,593	1.6%
Pickup truck	20	64	31.3%	18	284	6.3%	175	2,991	5.9%	728	33,313	2.2%	941	36,652	2.6%
Van	5	26	19.2%	4	127	3.1%	37	1,607	2.3%	149	15,734	0.9%	195	17,494	1.1%
Large truck	0	17	0.0%	0	38	0.0%	2	462	0.4%	22	11,227	0.2%	24	11,744	0.2%
Motorcycle	26	112	23.2%	24	380	6.3%	67	1,584	4.2%	24	801	3.0%	141	2,877	4.9%
Moped	6	23	26.1%	13	155	8.4%	40	722	5.5%	9	244	3.7%	68	1,144	5.9%
Other vehicles	0	1	0.0%	0	13	0.0%	2	94	2.1%	4	2,085	0.2%	6	2,193	0.3%
Unknown	1	3	33.3%	2	14	14.3%	4	83	4.8%	6	891	0.7%	13	991	1.3%
Total	**117**	**540**	**21.7%**	**148**	**2,596**	**5.7%**	**1,027**	**30,040**	**3.4%**	**3,871**	**257,113**	**1.5%**	**5,163**	**290,289**	**1.8%**

Source: Indiana State Police

Notes:
1) Excludes *non-motorists* and *drivers of animal-drawn vehicles*.
2) *Non-incapacitating* injury includes *possible* injury.
3) *Alcohol-impaired* includes drivers with BAC of 0.08 g/dL or higher.

Table 7.14. Drivers involved in Indiana collisions, by alcohol impairment, injury severity, and object collided with, 2012

Object collided with	Total	NON-IMPAIRED drivers						IMPAIRED drivers					
		Fatal	Incapacitating	Non-incapacitating	Other	Total	Serious injury rate	Fatal	Incapacitating	Non-incapacitating	Other	Total	Serious injury rate
Other vehicles/units	231,194	244	1,405	21,517	205,843	229,009	0.7%	25	38	271	1,851	2,185	2.9%
Non-motorist/animals	17,713	9	51	431	17,174	17,665	0.3%	1	0	8	39	48	2.1%
Off-road/non-collision	17,193	101	591	3,816	11,221	15,729	4.4%	65	71	407	921	1,464	9.3%
Fixed objects/infrastructure	16,880	54	293	2,524	12,786	15,657	2.2%	25	33	282	883	1,223	4.7%
Other actions	6,755	14	105	701	5,723	6,543	1.8%	1	6	57	148	212	3.3%
Unknown/not reported	554	1	3	24	495	523	0.8%	0	0	2	29	31	0.0%
Total	**290,289**	**423**	**2,448**	**29,013**	**253,242**	**285,126**	**1.0%**	**117**	**148**	**1,027**	**3,871**	**5,163**	**5.1%**
% other vehicles/units	*79.6%*	*57.7%*	*57.4%*	*74.2%*	*81.3%*	*80.3%*		*21.4%*	*25.7%*	*26.4%*	*47.8%*	*42.3%*	
% non-motorist/animals	*6.1%*	*2.1%*	*2.1%*	*1.5%*	*6.8%*	*6.2%*		*0.9%*	*0.0%*	*0.8%*	*1.0%*	*0.9%*	
% off-road/non-collision	*5.9%*	*23.9%*	*24.1%*	*13.2%*	*4.4%*	*5.5%*		*55.6%*	*48.0%*	*39.6%*	*23.8%*	*28.4%*	
% fixed objects/infrastructure	*5.8%*	*12.8%*	*12.0%*	*8.7%*	*5.0%*	*5.5%*		*21.4%*	*22.3%*	*27.5%*	*22.8%*	*23.7%*	
% other actions	*2.3%*	*3.3%*	*4.3%*	*2.4%*	*2.3%*	*2.3%*		*0.9%*	*4.1%*	*5.6%*	*3.8%*	*4.1%*	
% unknown	*0.2%*	*0.2%*	*0.1%*	*0.1%*	*0.2%*	*0.2%*		*0.0%*	*0.0%*	*0.2%*	*0.7%*	*0.6%*	

Source: Indiana State Police

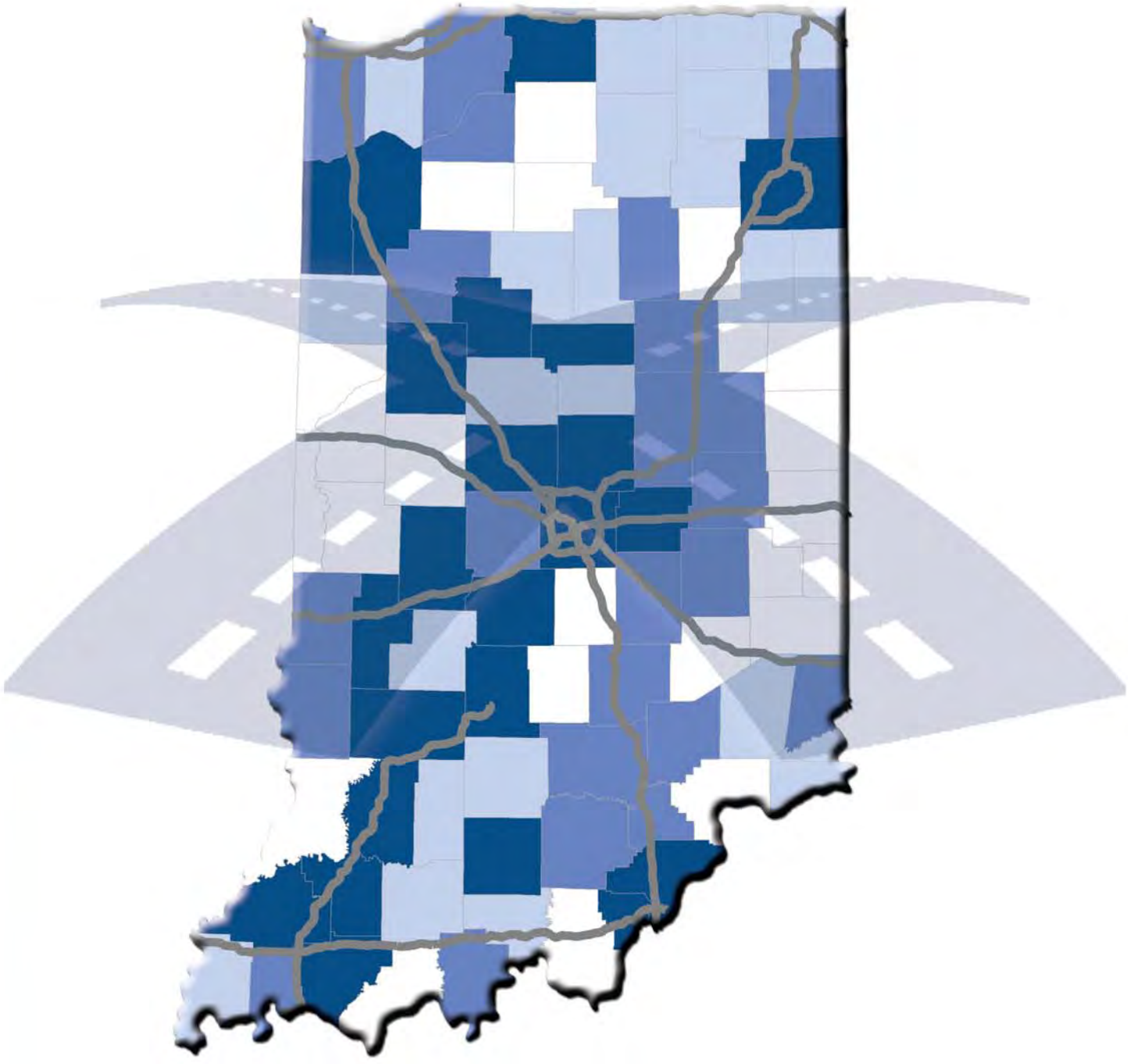
Notes:
1) *Non-incapacitating* includes *possible* injury.
2) *Serious injury* rate includes *fatal* and *incapacitating* injury.

Table 7.15. FARS and ARIES Indiana fatal collisions and fatalities involving an alcohol-impaired driver since 2003

Year	Count of fatal collisions			Count of fatalities		
	Alcohol-impaired	Total	Impaired as % total	Alcohol-impaired	Total	Impaired as % total
FARS data, 2003-2011						
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%
2011	195	675	28.9%	207	750	27.6%
Annualized rates of change						
2003-11	*0.9%*	*-1.4%*	*2.3%*	*0.2%*	*-1.3%*	*1.5%*
2007-11	*-1.1%*	*-4.3%*	*3.3%*	*-2.0%*	*-4.4%*	*2.6%*
2010-11	*4.8%*	*-3.7%*	*8.9%*	*6.2%*	*-0.5%*	*6.7%*
ARIES data, 2003-2012						
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%
2012	150	718	20.9%	158	779	20.3%
Annualized rates of change						
2003-12	*1.2%*	*-0.5%*	*1.7%*	*0.3%*	*-0.7%*	*1.0%*
2008-12	*-1.0%*	*-0.1%*	*-0.8%*	*-2.2%*	*-1.1%*	*-1.1%*
2011-12	*12.8%*	*6.5%*	*5.9%*	*12.9%*	*4.0%*	*8.5%*

Sources: Fatality Analysis Reporting System; Indiana State Police
Note: Latest data available for FARS is 2011.

CHAPTER 8
SPEED



SPEED, 2012

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. Thus, speed involvement is a function of a driver's actions prior to a collision event. In addition, collisions occur within different speed environments, regardless of drivers' actions. In exhibits new to the *2012 Indiana Crash Facts* series, figures 7 and 8 examine the distribution of collisions across high and low speed environments, and the outcomes and circumstances of these collisions.

In Indiana in 2012, nine percent of all collisions were speed-related. These collisions involved 15,988 speeding motor vehicles (six percent of all motor vehicles in collisions), 9,252 motor vehicles that were not speeding, and 35,569 individuals (eight percent of all individuals in collisions).

Trends in speed-related collisions

From 2002 to 2011 (latest data available), Indiana reported fewer fatal speed-related collisions per one billion vehicle miles traveled than the Great Lakes region, each of the other nine US regions, and the United States as a whole, for all years except 2005 and 2008 (Table 8.1). During this ten-year period, the Indiana rate decreased 2.3 percent on an annualized basis, faster than the Great Lakes region (-2 percent), but slower than the United States (-3.7 percent) and all but one other region (Lower New England, -1.2 percent). More recently, during the five-year period 2007 to 2011, Indiana's fatal speed-related collision rate decreased 7.6 percent annually, faster than most other regions. Indiana's average fatal speed-related collision rate (2.5) during the 2002 to 2011 period was the lowest of all regions.

There were 16,608 speed-related collisions in Indiana in 2012, 5.2 percent fewer than in 2011 (Table 8.2). The number has decreased 7.6 percent annually since 2008, five times faster than collisions not involving speeding (-1.5 percent annually). In 2012, 22.7 percent of all fatal collisions involved speeding, the highest proportion since 2008. The number of speed-related collisions with a fatality increased 24.4 percent from 2011 to 2012, compared to 2.2 percent for those not involving speeding. In 2012, collisions involving speeding were three times more likely to result in a fatality than those that did not, the highest relative risk in the past five years.

Considering the three conditions used to define speed involvement, much of the decline in speed-related collisions over the past five years is attributable to fewer collisions involving *speeding too fast for weather conditions* (Table 8.3). Speed-related collisions involving only *speed too fast for weather conditions* and those involving *speed too fast for weather conditions* and a speed-related citation decreased at an annual rate of 12.5 and 10.6 percent, respectively, from 2008 to 2012, as did their share of total speed-related collisions (-5.2 and -3.2 percent, respectively). Conversely, collisions involving combinations of *unsafe speed* and a speed-related citation increased. About 14 percent of speed-related collisions in 2012 resulted in a speed-related citation. Those involving *unsafe speed* were more than twice as likely to result in a speed citation as those involving *speed too fast for weather conditions* (15.8 versus 6.6 percent).

Individuals and vehicles involved in speed-related collisions

There were 35,569 persons in speed-related collisions in 2012, or 8.1 percent of all persons in collisions (Table 8.4). Of these, 175 were killed (22.5 percent of all fatalities), 646 were incapacitated (17 percent of all incapacitating injuries), and 5,141 suffered non-incapacitating injuries (11.9 percent of all non-incapacitating injuries).

In 2012, 5.5 percent of vehicles in collisions were speeding, down from 5.8 percent in 2011 and 6 percent in 2010 (Figure 8.1). Among vehicle types, motorcycles remained the most likely to have been speeding at the time of collision (10.4 percent in 2012). Buses and motor homes/RVs were the only two vehicles types more likely to be speeding in 2012 than 2011.

Injury rates and drivers involved in speed-related collisions

In 2012, 181 of every 1,000 occupants riding in speeding vehicles suffered an injury, compared to 105 of every 1,000 in vehicles not speeding (Figure 8.2). Relative to injury rates in vehicles not speeding, injury rates were greatest for occupants of speeding large vehicles: injury rates were four times greater for those in speeding large trucks than those in large trucks not speeding; injury rates in speeding motor homes/RVs and buses were 6 and 12 times greater, respectively, than those in the same vehicle types where the driver was not speeding.

Generally, serious injury (i.e., fatal and incapacitating injuries) rates are greater for individuals involved in collisions in areas with higher posted speed limits, and greater when speeding is involved than when it's not (Figure 8.3). However, the relative risk of serious injury is greatest for individuals in speed-related collisions in areas with lower posted speed limits.

Among crash-involved drivers, males and young drivers (young males in particular) are the most likely to have been speeding (Table 8.5). Since 2008, speeding rates have declined for all demographic groups, but faster for females of all ages (except 75 and older) than males of the same age. From 2008 to 2012, speeding

rates among female drivers dropped nearly twice as fast as those for male drivers (8.3 percent annual decline versus 4.7 percent for males). Speeding rates for 16 to 20 year old female drivers dropped four times faster than those for 16 to 20 year old male drivers (5.5 percent annual decline versus 1.3 percent for males).

While speeding increases the risk of injury, adding alcohol impairment increases injury risks even more. Given involvement in a collision in 2012, occupants riding in vehicles where the driver was speeding were 4.6 times more likely to suffer a fatality than occupants in vehicles where the driver was not speeding (Table 8.7). If the driver was speeding and impaired, occupants were eight times more likely to suffer a fatality than if the driver was only speeding.

Time, season, and location of speed-related collisions

The likelihood of speed involvement in collisions peaks during early morning (12am-3:59am) hours, declines during late morning hours and through early afternoon (around 1pm), and then steadily increases from late afternoon through the evening and into early morning (Table 8.8). Later weekdays (Thursday, Friday, and Saturday) carry a higher probability of speed involvement.

The number and rate of speed-related collisions are generally three to six times greater in winter months (December, January, February) than other months (Figure 8.4). In contrast, collisions that do not involve speeding tend to occur with similar frequency across months (Figure 8.5). The larger counts of speed-related collisions in winter months are primarily the result of more collisions involving *speeding too fast for weather conditions* when the weather is bad, as described below. In 2012, the number of speed-related collisions in November, December, January, and February were substantially below the respective monthly averages for the 2008-2011 period.

These winter month deviations ultimately contributed to far fewer speed-related collisions in 2012 than average. As shown in Figure 6, this decrease paralleled a decrease in the number of collisions involving drivers *speeding too fast for weather conditions*—one of the three criteria for *speed-related collisions*—which paralleled a decrease in winter weather collisions (i.e., collisions occurring in snow, sleet/hail/freezing rain, blowing sand/soil/snow). In fact, far fewer winter weather collisions in 2012, relative to the average, resulted in far fewer collisions involving drivers *speeding too fast for weather conditions*, which, in turn, resulted in fewer speed-related collisions.

As might be expected, northern Indiana counties (some of which are subject to lake effect snow from Lake Michigan) tend to have higher numbers and rates of winter weather collisions than southern counties (Map 8.1). 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.

Collisions occur in different speed environments, regardless of whether they meet the definition for being speed-related. High speed non-urban areas make up a disproportionate share of fatal collisions—relative to their share of total collisions—and are four to five times more likely than lower speed urban areas to have at least one fatality if a collision occurs (Figure 8.7). Some of the more common risk factors that tend to be associated with fatal collisions do not necessarily explain this increased fatal collision risk (Figure 8.8). For example, higher speed areas do not tend to have younger, riskier drivers involved in collisions: the average age of drivers involved in collisions in high speed areas is similar to that of low speed areas—38 to 39 years old. Similarly, restraint use rates among drivers in collisions in higher speed areas (95 to 97 percent) are similar to those in urban areas (98 percent). Finally, higher speed areas tend to have a smaller number of especially vulnerable non-motorists involved in collisions and collisions in higher speed areas are only slightly more likely to involve an alcohol-impaired driver.

The higher speeds at which collisions occur in non-urban areas—as well as increased emergency response times in these areas—likely contributes to a greater risk of fatal collisions in these areas, as higher speeds exacerbate the effects of collisions involving certain factors (Figure 8.8). For example, while collisions in higher speed areas are less likely than those in urban areas to involve colliding with fixed/large objects, when they do, they are much more likely to result in a fatality. Further, collisions involving *unsafe driving* (e.g., unsafe speed, failure to yield, improper passing/turning/lane usage, etc.) in higher speed areas are also much more likely to result in a fatality than those in urban areas. Finally, because collisions in non-urban areas tend to be farther away from first responders, it typically takes longer for first responders to arrive and administer critical pre-hospital care—roughly 3 to 7 minutes longer for fatal collisions and 4 to 8 minutes longer for non-fatal collisions— which reduces the chances of surviving a serious collision-related injury.

As with higher speed areas, higher speed roads (county roads, state roads, US routes, interstates) account for a disproportionate share of fatal collisions—relative to their share of total collisions—and are more likely than lower speed local/city roads to have at least one fatality if a collision occurs (Figure 8.9).

Table 8.1. Rate of fatal speed-related collisions per 1 billion vehicle miles traveled (VMT), by region, 2002-2011

Geography	Fatal speed-related collisions per 1 billion VMT										Average annual % change	
	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2002-11	2007-11
INDIANA	2.2	2.7	3.1	3.2	2.5	2.5	3.0	2.0	2.3	1.8	-2.3%	-7.6%
UNITED STATES	4.2	4.1	3.9	4.0	4.0	3.9	3.6	3.2	3.2	3.0	-3.7%	-6.0%
Upper New England (CT, ME, MS, NH, RI, VT)	3.7	3.2	3.3	3.1	2.9	2.8	2.3	2.3	2.7	2.3	-5.1%	-4.6%
Lower New England (NJ, NY, PA)	3.7	3.4	3.3	3.7	3.3	3.6	3.5	3.2	3.5	3.3	-1.2%	-1.6%
Mid-Atlantic (DE, DC, KY, MD, NC, VA, WV)	4.2	4.0	4.1	4.0	3.7	4.0	3.4	3.3	3.5	3.4	-2.4%	-4.0%
Southern Atlantic (AL, FL, GA, SC, TN)	4.0	3.9	3.9	3.9	4.3	3.9	3.6	3.1	2.8	2.4	-5.4%	-11.6%
Great Lakes (IL, IN, MI, MN, OH, WI)	3.1	3.3	3.2	3.0	2.9	2.9	2.6	2.3	2.6	2.5	-2.0%	-2.8%
Southern Central (LA, MS, NM, OK, TX)	5.6	5.6	5.3	5.2	5.7	5.2	5.2	4.4	4.3	4.2	-3.1%	-5.1%
Central (AR, IA, KS, MO, NE)	5.1	4.4	3.9	4.2	3.8	3.4	3.2	3.3	3.2	3.0	-5.7%	-3.0%
West (CO, NV, ND, SD, UT, WY)	5.8	5.2	4.9	4.2	3.9	4.2	3.9	3.7	3.3	3.4	-5.6%	-4.7%
Pacific (AZ, CA, HI)	4.5	4.4	4.0	4.5	4.5	4.4	3.6	3.2	2.8	2.8	-5.1%	-10.5%
Upper Northwest (AK, ID, MT, OR, WA)	4.6	4.5	4.1	4.6	4.3	4.0	4.1	3.8	3.1	3.1	-4.1%	-6.1%

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

Notes:
1) Geographic regions are defined by the National Highway Traffic Safety Administration.
2) 2012 FARS data not yet available.

Table 8.2. Indiana collisions, by speed involvement and collision severity, 2008-2012

Speed involvement/collision severity	Count of collisions						Annual rate of change	
	2008	2009	2010	2011	2012	% 2012 total	2011-12	2008-12
All collisions	**205,452**	**189,661**	**192,885**	**188,126**	**188,841**	**100.0%**	**0.4%**	**-2.1%**
Speed-related	**22,820**	**18,251**	**18,550**	**17,517**	**16,608**	**100.0%**	**-5.2%**	**-7.6%**
Fatal	188	136	136	131	163	1.0%	24.4%	-3.5%
Incapacitating	484	425	461	475	508	3.1%	6.9%	1.2%
Non-incapacitating	4,227	3,692	3,682	3,629	3,546	21.4%	-2.3%	-4.3%
Property damage	17,921	13,998	14,271	13,282	12,391	74.6%	-6.7%	-8.8%
Not speed-related	**182,632**	**171,410**	**174,335**	**170,609**	**172,233**	**100.0%**	**1.0%**	**-1.5%**
Fatal	534	495	565	543	555	0.3%	2.2%	1.0%
Incapacitating	2,414	2,307	2,451	2,383	2,726	1.6%	14.4%	3.1%
Non-incapacitating	28,233	26,986	27,489	26,247	27,307	15.9%	4.0%	-0.8%
Property damage	151,451	141,622	143,830	141,436	141,645	82.2%	0.1%	-1.7%
% Speed-related of all	**11.1%**	**9.6%**	**9.6%**	**9.3%**	**8.8%**	**-**	**-5.5%**	**-5.7%**
Fatal	26.0%	21.6%	19.4%	19.4%	22.7%	-	16.8%	-3.4%
Incapacitating	16.7%	15.6%	15.8%	16.6%	15.7%	-	-5.5%	-1.5%
Non-incapacitating	13.0%	12.0%	11.8%	12.1%	11.5%	-	-5.4%	-3.1%
Property damage	10.6%	9.0%	9.0%	8.6%	8.0%	-	-6.3%	-6.6%
Relative risk of fatal collision	2.8	2.6	2.3	2.3	3.0	-	29.6%	2.0%

Source: Indiana State Police

Notes:
1) *Non-incapacitating* includes *non-incapacitating* and *possible* collision severities.
2) Relative risk defined as ratio of speed-related rate (fatal, as % of total *speed-related*) to non speed-related rate (fatal, as % of total *non speed-related*).
3) All *relative risk* estimates are significantly different from 1.0 (where a relative risk of 1.0 signifies no difference in risk).

Table 8.3. Speed-related collisions, by speed criteria, 2008-2012

	Count of collisions						Annual rate of change	
	2008	2009	2010	2011	2012	% 2012 total	2011-12	2008-12
Speed-related collisions	**22,820**	**18,251**	**18,550**	**17,517**	**16,608**	**-5.2%**	**-7.6%**	**-2.1%**
1 of 3 criteria								**-7.6%**
Speed too fast for weather conditions	14,693	11,100	10,992	9,987	8,624	-13.6%	-12.5%	-3.5%
Unsafe speed	5,469	4,639	5,002	4,905	5,514	12.4%	0.2%	1.2%
Speed-related citation	627	618	504	544	660	21.3%	1.3%	
2 of 3 criteria								
Unsafe speed + speed-related citation	927	831	941	943	1,017	7.8%	2.3%	
Speed too fast for weather conditions + speed-related citation	901	880	912	878	575	-34.5%	-10.6%	
Unsafe speed + Speed too fast for weather conditions	175	151	157	200	170	-15.0%	-0.7%	-4.3%
All three criteria	28	32	42	60	48	-20.0%	14.4%	-8.8%
Percent of total speed-related collisions	**100%**	**100%**	**100%**	**100%**	**100%**			**-1.5%**
1 of 3 criteria								1.0%
Speed too fast for weather conditions	64.4%	60.8%	59.3%	57.0%	51.9%	-8.9%	-5.2%	
Unsafe speed	24.0%	25.4%	27.0%	28.0%	33.2%	18.6%	8.5%	
Speed-related citation	2.7%	3.4%	2.7%	3.1%	4.0%	28.0%	9.7%	
2 of 3 criteria								
Unsafe speed + speed-related citation	4.1%	4.6%	5.1%	5.4%	6.1%	13.8%	10.8%	
Speed too fast for weather conditions + speed-related citation	3.9%	4.8%	4.9%	5.0%	3.5%	-30.9%	-3.2%	3.1%
Unsafe speed + Speed too fast for weather conditions	0.8%	0.8%	0.8%	1.1%	1.0%	-10.3%	7.5%	-0.8%
All three criteria	0.1%	0.2%	0.2%	0.3%	0.3%	-15.6%	23.9%	-1.7%
Percent with speed-related citation								**-5.7%**
All speed-related collisions	10.9%	12.9%	12.9%	13.8%	13.8%	0.0%	6.2%	-3.4%
All involving unsafe speed	14.5%	15.3%	16.0%	16.4%	15.8%	-3.9%	2.2%	-6.6%
All involving speed too fast for weather conditions	5.9%	7.5%	7.9%	8.4%	6.6%	-21.5%	3.0%	2.0%

Source: Indiana State Police

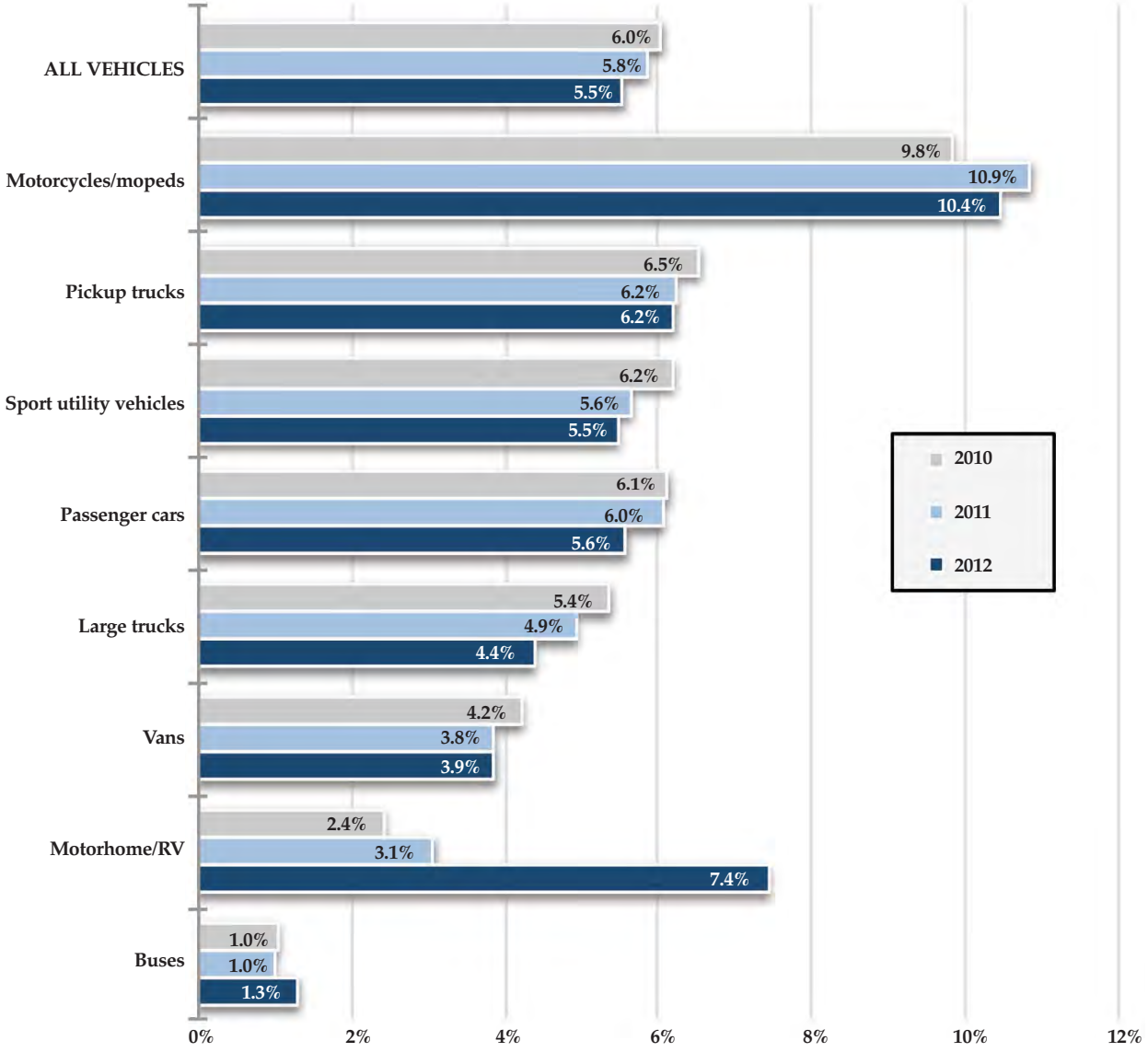
Table 8.4. Individuals involved in Indiana collisions, by speed involvement and injury status, 2008-2012

	Count of individuals						Annual rate of change	
Speed involvement/injury severity	2008	2009	2010	2011	2012	% 2012 total	2011-12	2008-12
All individuals	**468,258**	**442,586**	**446,948**	**435,665**	**437,063**	**100.0%**	**0.3%**	**-1.7%**
Speed-related	**48,079**	**40,190**	**39,581**	**37,710**	**35,569**	**100.0%**	**-5.7%**	**-7.1%**
Fatal	225	158	145	150	175	0.5%	16.7%	-4.5%
Incapacitating	585	514	566	578	646	1.8%	11.8%	3.0%
Non-incapacitating	6,174	5,433	5,415	5,272	5,141	14.5%	-2.5%	-4.4%
Other injury	532	385	226	209	229	0.6%	9.6%	-16.7%
Not injured	40,563	33,700	33,229	31,501	29,378	82.6%	-6.7%	-7.6%
Not speed-related	**420,179**	**402,396**	**407,367**	**397,955**	**401,494**	**100.0%**	**0.9%**	**-1.1%**
Fatal	590	534	609	599	604	0.2%	0.8%	0.9%
Incapacitating	2,797	2,665	2,877	2,827	3,164	0.8%	11.9%	3.4%
Non-incapacitating	39,281	37,977	38,753	36,567	38,207	9.5%	4.5%	-0.6%
Other injury	5,387	3,768	2,279	1,688	1,693	0.4%	0.3%	-23.8%
Not injured	372,124	357,452	362,849	356,274	357,826	89.1%	0.4%	-1.0%
% Speed-related	**10.3%**	**9.1%**	**8.9%**	**8.7%**	**8.1%**	**-**	**-6.0%**	**-5.6%**
Fatal	27.6%	22.8%	19.2%	20.0%	22.5%	-	12.2%	-4.2%
Incapacitating	17.3%	16.2%	16.4%	17.0%	17.0%	-	-0.1%	-0.4%
Non-incapacitating	13.6%	12.5%	12.3%	12.6%	11.9%	-	-5.9%	-3.2%
Other injury	9.0%	9.3%	9.0%	11.0%	11.9%	-	8.1%	7.7%
Not injured	9.8%	8.6%	8.4%	8.1%	7.6%	-	-6.6%	-6.2%

Source: Indiana State Police

Notes:
1) ***Non-incapacitating*** **includes** ***non-incapacitating*** **and** ***possible*** **injuries.**
2) ***Other injury*** **includes injuries reported as** ***refused, unknown,*** **and** ***not reported.***
3) ***Not injured*** **is defined as individuals with no injury status reported.**
4) ***Relative risk*** **defined as ratio of** ***speed-related*** **rate (fatal, as % total speed-related) to** ***non speed-related*** **rate (fatal, as % of total non speed-related).**
5) **All** ***relative risk*** **estimates are significantly different from 1.0 (where a relative risk of 1.0 signifies no difference in risk).**
6) **Includes all persons in crashes (drivers, injured and uninjured passengers, non-motorists).**

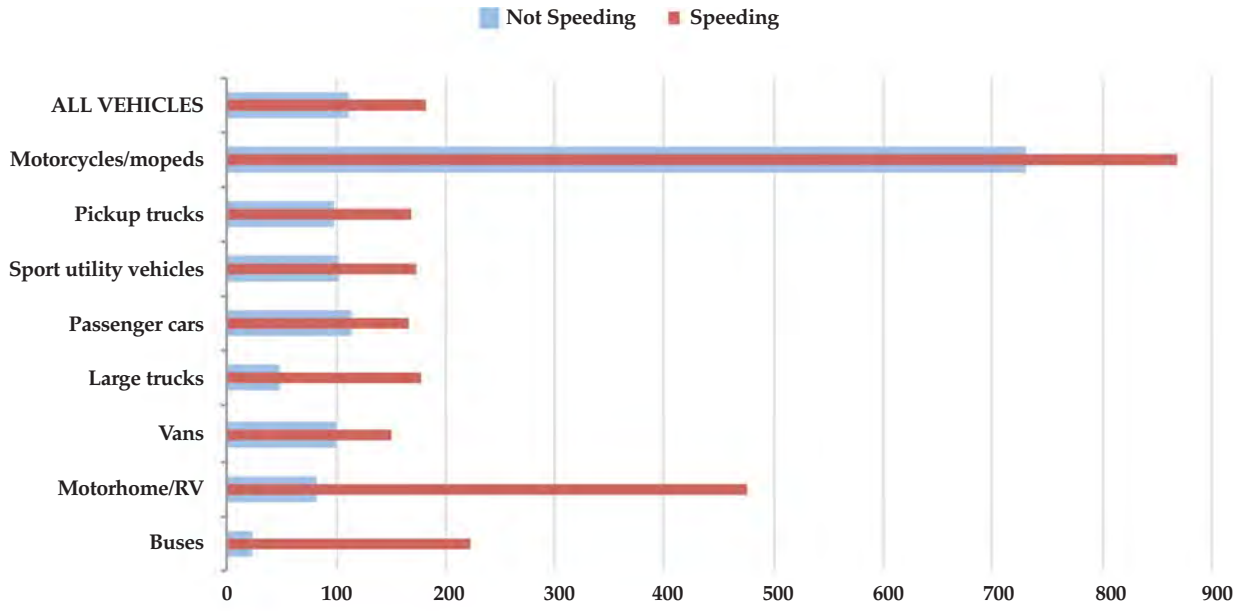
Figure 8.1. Vehicles speeding as a percent of all vehicles involved in Indiana collisions, by vehicle type, 2010-2012



Source: Indiana State Police

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

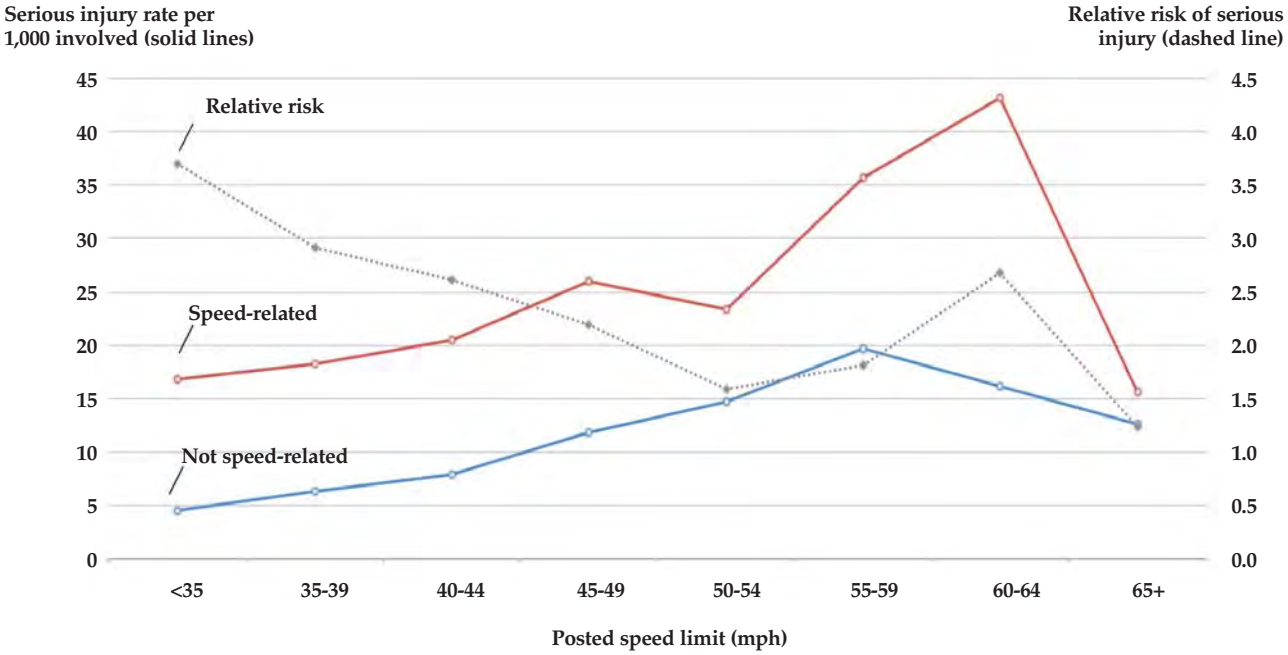
Figure 8.2. Injury rates per 1,000 occupants involved in Indiana collisions, by unit type and speed status, 2012



Source: Indiana State Police

Notes:
1) Excludes vehicle types of *animal drawn vehicle (non-motor vehicle), farm vehicle, combination vehicle, pedestrian, bicycle,* and *unknown* type.
2) Injury includes *fatal, incapacitating, non-incapacitating, possible,* and other injury types.
3) Includes all injured and uninjured occupants of motor vehicles.

Figure 8.3. Seriously injured individuals per 1,000 involved in collisions, by speed limit group and collision speed status, 2012



Source: Indiana State Police

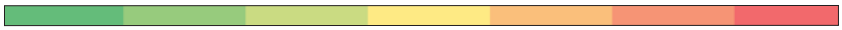
Notes:
1) Serious injuries defined as *fatal* and *incapacitating* injuries.
2) All relative risk estimates are significantly different from 1.0 (where a relative risk of 1.0 signifies no difference in risk) except those in areas with posted speed limits of 65+.
3) Includes all injured and uninjured occupants of motor vehicles.

Table 8.5. Drivers speeding as a percent of all drivers involved in Indiana collisions, by age group and gender, 2008-2012

Age group	2008		2009		2010		2011		2012		Annual rate of change, 2008-12	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
16-20	12.9%	9.2%	12.2%	7.9%	12.2%	8.2%	11.9%	8.1%	12.2%	7.4%	-1.3%	-5.5%
21-24	11.6%	8.3%	10.1%	7.4%	9.9%	6.7%	10.2%	6.9%	9.4%	5.9%	-5.2%	-8.0%
25-34	9.0%	7.0%	7.8%	5.7%	8.0%	5.5%	7.5%	5.6%	7.5%	4.7%	-4.5%	-9.4%
35-44	6.7%	5.6%	5.8%	4.4%	5.7%	4.6%	5.6%	4.5%	5.4%	3.9%	-5.1%	-8.7%
45-54	5.3%	4.4%	4.5%	3.7%	4.8%	3.3%	4.7%	3.5%	4.3%	3.4%	-4.8%	-6.1%
55-64	4.4%	3.8%	3.6%	3.0%	3.8%	2.7%	3.5%	2.5%	3.5%	2.5%	-6.1%	-10.1%
65-74	3.2%	2.4%	2.6%	1.9%	2.9%	1.9%	2.7%	1.9%	2.8%	2.0%	-3.4%	-4.0%
75 +	3.0%	1.9%	2.3%	1.7%	2.9%	1.8%	2.2%	1.7%	2.2%	1.7%	-8.0%	-2.8%
all ages	7.8%	6.1%	6.8%	5.1%	6.9%	4.9%	6.6%	4.9%	6.4%	4.3%	-4.7%	-8.3%

Table 8.6. Relative risk of serious injury, speeding drivers versus non-speeding drivers, by age group and gender, 2008-2012

Age group	2008		2009		2010		2011		2012	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
16-20	2.9	2.0	2.8	1.7	3.0	2.0	2.9		2.9	2.8
21-24	3.4	2.1	3.8	2.6	2.4	2.0	3.4	1.9	3.1	3.2
25-34	2.9	2.1	3.0	1.8	3.4	2.2	3.5	3.0	4.0	2.7
35-44	2.7		3.0	2.1	2.6	2.5	3.8	2.5	3.5	2.3
45-54	2.6	3.8	2.9		2.8	2.5	3.3		3.7	
55-64	1.7		2.4	3.2	2.4	2.4	2.9	3.6		2.2
65-74	3.5		2.8						2.4	
75 +		4.3	3.9				3.2			
all ages	2.6	2.1	2.8	1.9	2.6	2.1	3.0	2.1	3.0	2.2



Low High

Source: Indiana State Police

Notes:

1) Data limited to drivers with valid gender and age reported.

2) Serious injuries defined as *fatal* and *incapacitating* injuries.

3) *Relative risk* defined as 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 one indicates that speeding drivers are more likely to suffer a serious injury than drivers who were not speeding (e.g., In 2012, 16-20 year old male drivers involved in collisions who were speeding were 2.9 times more likely to suffer a serious injury than 16-20 year old male drivers who were not speeding).

4) All relative risk estimates in Table 6 are significantly different from 1.0 (where a relative risk of 1.0 signifies no difference in risk) except those where cell is empty.

5) Color scale applies to all years/genders.

Table 8.7. Vehicle occupants involved in traffic collisions, by driver speed involvement and alcohol impairment, 2012

Vehicle driver speeding?	Vehicle driver impaired?	Vehicle occupants killed	Vehicle occupants surviving	Total occupants involved	Killed, as % total	Risk of fatality
Yes	Yes	43	1,134	1,177	3.7%	8.0
	No	100	21,785	21,885	0.5%	
	Total	143	22,919	23,062		
No	Yes	91	5,052	5,143	1.8%	15.4
	No	466	405,422	405,888	0.1%	
	Total	557	410,474	411,031		
All	Yes	134	6,186	6,320	2.1%	16.0
	No	566	427,207	427,773	0.1%	
	Total	700	433,393	434,093		
Yes	All	143	22,919	23,062	0.6%	4.6
No		557	410,474	411,031	0.1%	
	Total	700	433,393	434,093		

Source: Indiana State Police

Notes:
1) *Impaired drivers* defined as drivers with a BAC of 0.08 g/dL or greater.
2) *Risk of fatality* defined as ratio of the rate of *vehicle occupants killed where driver was impaired* (fatal, as % total driver impaired) to *rate of vehicle occupants killed where driver was NOT impaired* (fatal, as % of total driver not impaired).
3) All *risk of fatality* estimates are significantly different from 1.0 (where a relative risk of 1.0 signifies no difference in risk).
4) Includes all injured and uninjured occupants of motor vehicles.

Table 8.8. Speed-related collisions as a percent of all Indiana collisions, by time of day and day of week, 2012

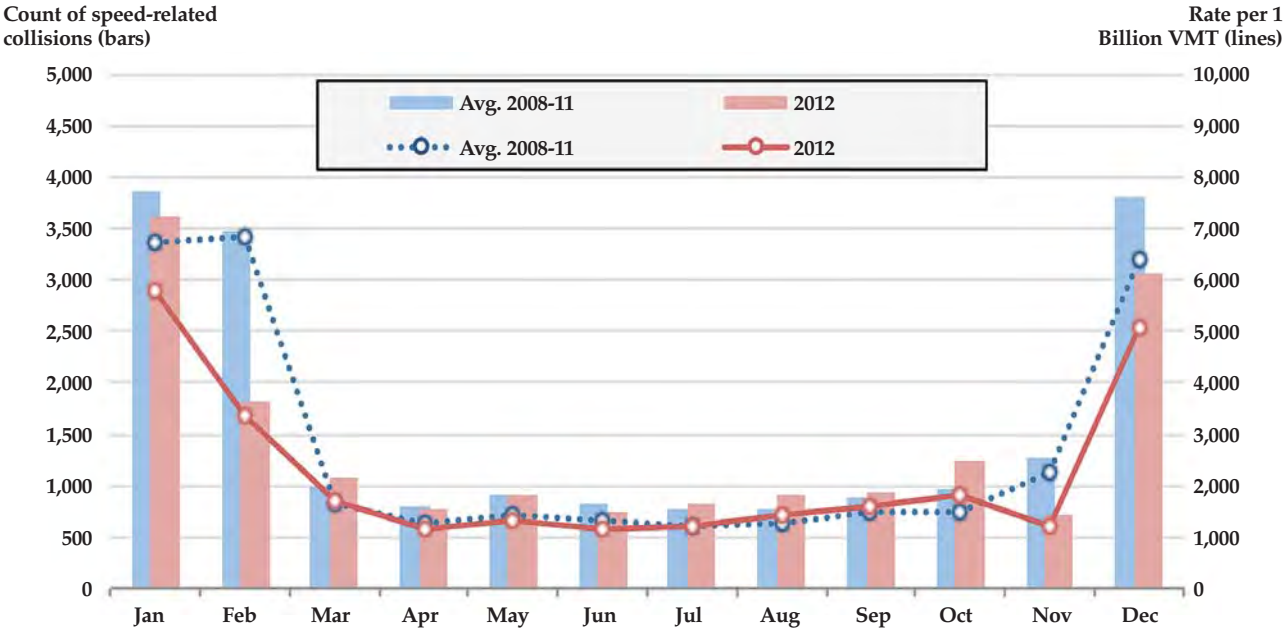
Time	Sun	Mon	Tue	Wed	Thu	Fri	Sat	% Speed-related by hour
12am-	12.6%	15.8%	11.7%	15.6%	13.8%	13.8%	11.1%	13.3%
1am-	13.5%	17.9%	14.3%	9.8%	13.6%	17.5%	11.8%	14.2%
2am-	13.8%	12.7%	13.5%	9.2%	18.2%	16.7%	13.6%	14.4%
3am-	21.5%	6.7%	9.6%	15.9%	15.9%	17.0%	14.2%	15.0%
4am-	15.3%	11.3%	11.4%	14.1%	12.6%	13.9%	8.6%	12.4%
5am-	12.3%	12.2%	7.2%	10.8%	13.0%	15.6%	7.8%	11.4%
6am-	9.8%	12.9%	7.7%	8.7%	10.3%	14.8%	11.2%	10.5%
7am-	9.1%	9.9%	7.4%	8.2%	8.5%	12.9%	8.4%	8.9%
8am-	7.9%	8.9%	8.2%	9.5%	11.9%	14.3%	10.9%	9.8%
9am-	10.3%	8.8%	8.9%	12.3%	10.8%	12.0%	10.0%	10.4%
10am-	9.1%	7.0%	8.1%	13.0%	9.8%	8.9%	8.5%	9.3%
11am-	8.9%	5.0%	7.5%	9.6%	7.8%	8.5%	7.0%	7.9%
12pm-	8.0%	4.8%	7.3%	7.4%	7.5%	7.4%	6.9%	7.1%
1pm-	6.5%	4.5%	7.1%	8.3%	7.9%	6.9%	5.9%	6.8%
2pm-	7.5%	5.9%	6.3%	9.4%	8.3%	6.4%	5.6%	7.2%
3pm-	7.0%	5.5%	7.2%	8.5%	9.2%	8.1%	6.9%	7.6%
4pm-	7.5%	4.5%	7.6%	8.8%	8.4%	10.1%	7.5%	7.7%
5pm-	6.5%	5.4%	7.0%	8.2%	8.1%	10.0%	8.2%	7.5%
6pm-	7.0%	5.5%	6.0%	7.4%	8.5%	8.3%	6.8%	7.2%
7pm-	7.5%	7.1%	6.4%	7.9%	9.8%	7.6%	9.3%	8.0%
8pm-	8.6%	7.0%	7.2%	7.2%	12.2%	11.5%	9.6%	9.2%
9pm-	9.2%	7.2%	9.5%	9.3%	15.0%	10.5%	10.0%	10.4%
10pm-	11.1%	7.9%	9.9%	12.0%	15.0%	9.0%	9.1%	10.9%
11pm-	12.0%	11.1%	11.8%	10.1%	16.9%	10.1%	12.4%	12.3%
% Speed-related by day	**8.5%**	**7.1%**	**7.7%**	**9.2%**	**10.0%**	**10.1%**	**8.7%**	**8.8%**

Source: Indiana State Police

Low — High

Notes:
1) Includes collisions where valid time was reported.
2) Color scale applies to all days/times.

Figure 8.4. Number of speed-related collisions and rate per 1 billion vehicle miles traveled (VMT), by month, average 2008-2011 and 2012



Sources: Indiana State Police; Bureau of Transportation Statistics

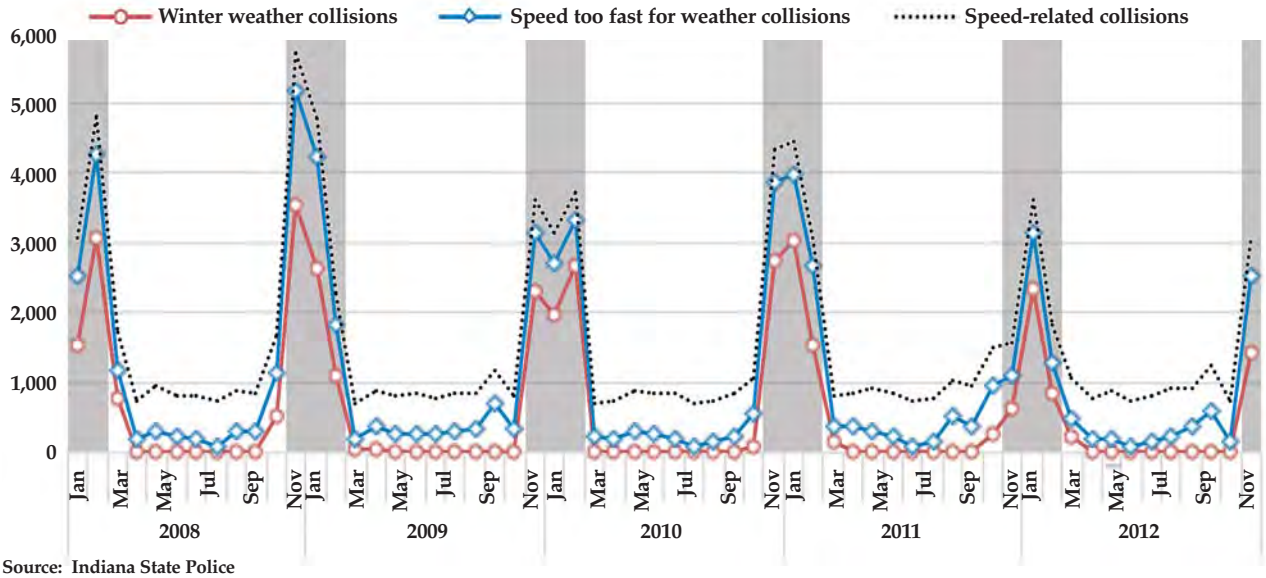
Figure 8.5. Distribution of collisions, by month and speed involvement, 2008-2012

	2008		2009		2010		2011		2012	
	Not speed (n=182,632)	Speed (n=22,820)	Not speed (n=171,410)	Speed (n=18,251)	Not speed (n=174,335)	Speed (n=18,550)	Not speed (n=170,609)	Speed (n=17,517)	Not speed (n=172,233)	Speed (n=16,608)
Jan	9%	13%	9%	26%	8%	17%	8%	25%	8%	22%
Feb	9%	21%	8%		8%		8%		7%	
Mar	8%		7%		7%	20%	7%		8%	
Apr	7%		8%	12%	8%		8%		8%	11%
May	8%	8%	9%		8%	4%	8%	18%	9%	6%
Jun	8%	3%	8%	4%	8%	4%	8%	5%	8%	5%
Jul	8%	4%	8%	5%	8%	5%	8%	5%	8%	5%
Aug	8%	4%	8%	4%	8%	5%	8%	5%	8%	5%
Sep	8%	4%	8%	5%	8%	4%	8%	5%	8%	5%
Oct	9%	7%	10%	5%	9%	4%	10%	4%	10%	6%
Nov	9%	25%	9%	6%	9%	4%	10%	6%	9%	7%
Dec	10%		9%	4%	10%	6%	9%	5%	9%	4%
				20%		23%		9%		18%

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, 22 percent of all speed-related collisions (3,617 of 16,608) in 2012 occurred in January.

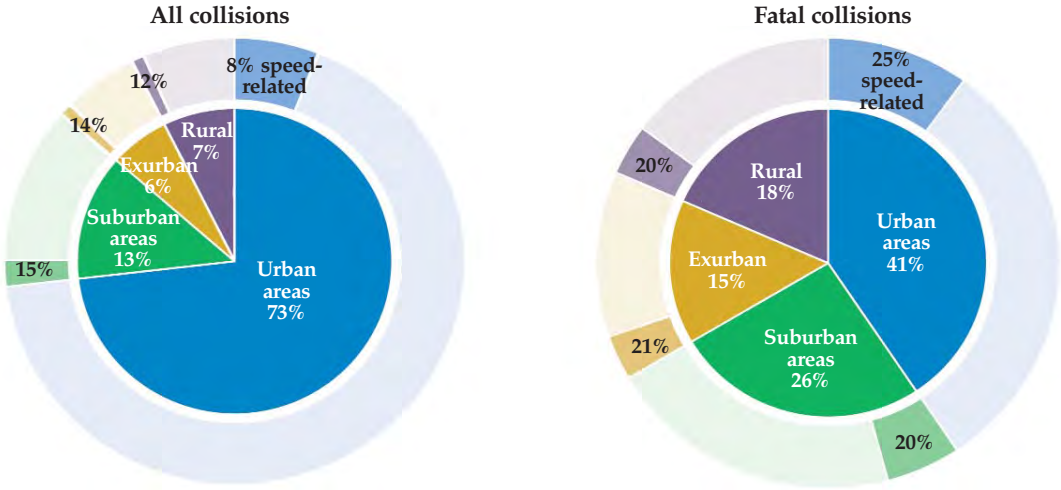
Figure 8.6. The impact of winter weather on the number of speed-related collisions, 2008-2012



Source: Indiana State Police

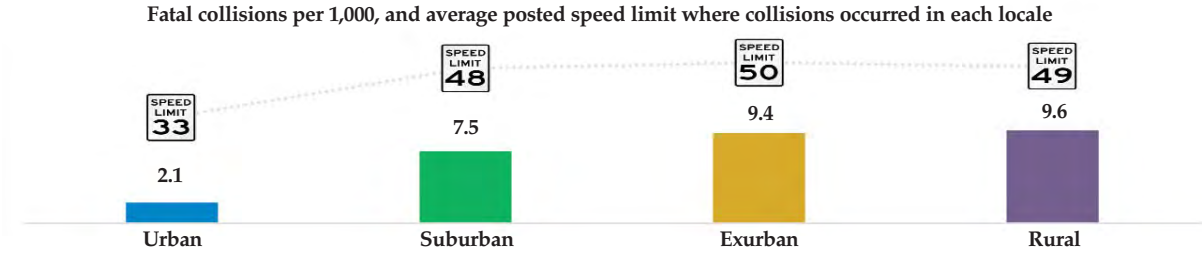
Notes:
1) Shaded areas in chart are winter months (December, January, February).
2) Winter weather collisions include collisions occurring in *snow, sleet/hail/freezing rain*, or *blowing sand/soil/snow.*

Figure 8.7. Distribution of total and fatal crashes and rates of speed involvement, by locale, 2008-2012



Inner pie: Geographic distribution of collisions

Outer ring: Speed involvement rates, by locality



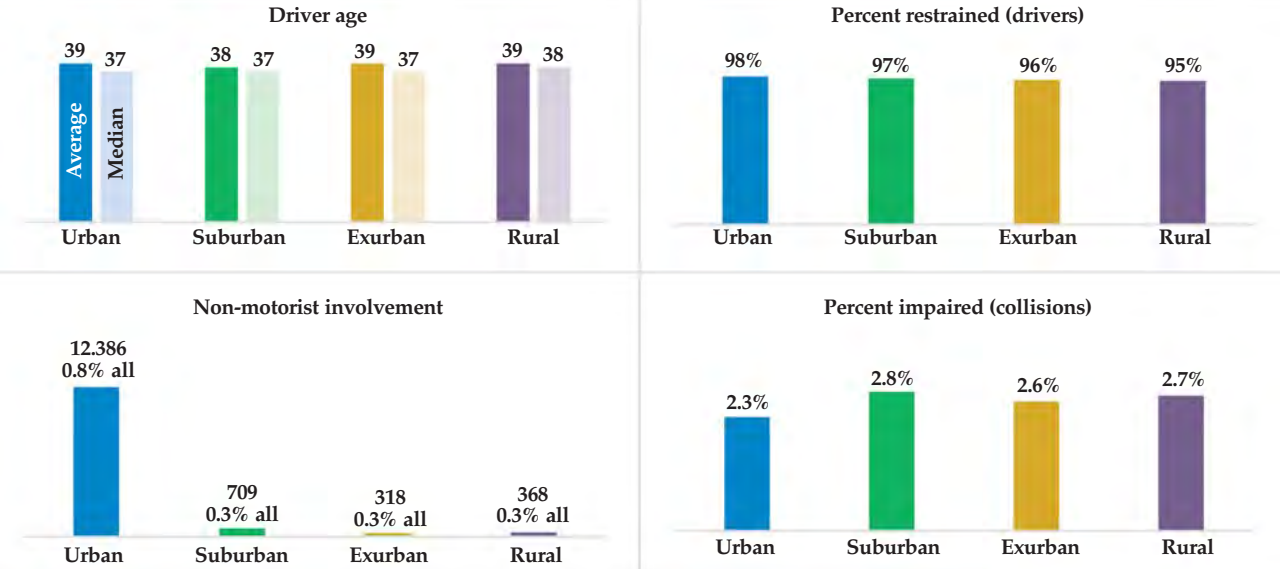
All non-urban fatal collision rates significantly different from urban at p = 0.001.

Source: Indiana State Police

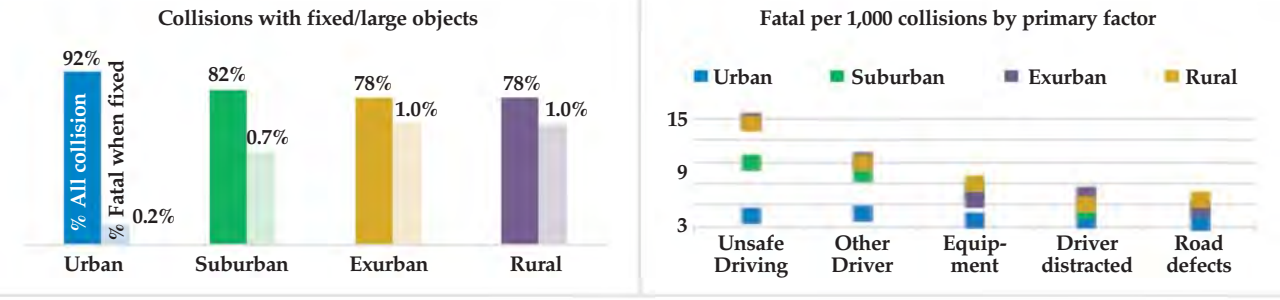
Notes:
1) See glossary for definition of Census locality classes.
2) Includes collisions where valid locale was reported.

Figure 8.8. Collision-related factors affecting fatal collision rates in non-urban areas, 2008-2012

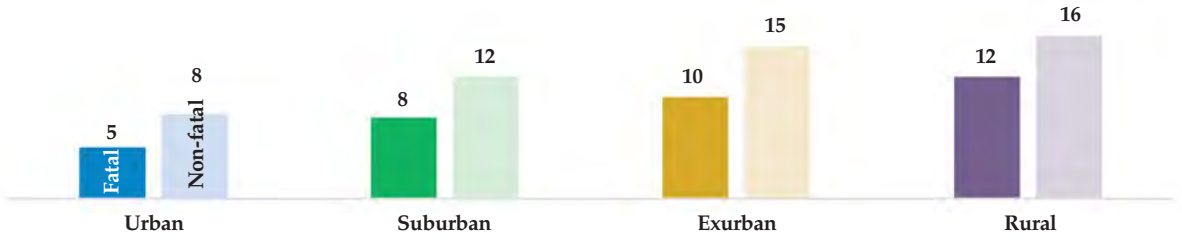
Factors that do not seem to explain higher fatal collision rates in non-urban areas



Factors that likely contribute to higher fatal collision rates in non-urban areas



Median elapsed time (min.) between collision occurrence and officer arrival



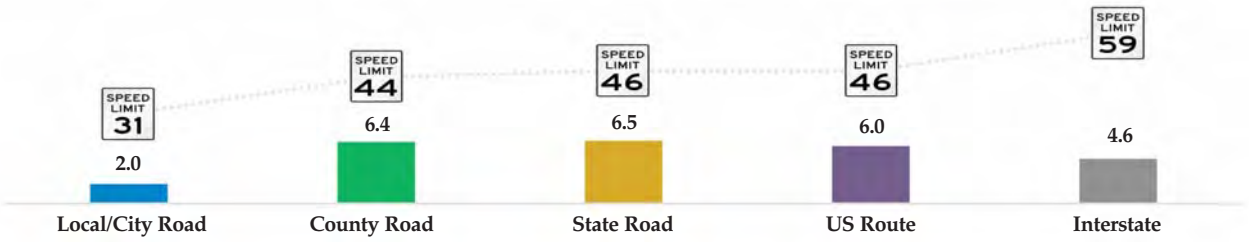
Source: Indiana State Police

Notes:
1) See glossary for definition of Census locality classes.
2) Percent restrained includes drivers where restraint use is known.
3) Fixed/large objects include: *Another Motor Vehicle, Railway Vehicle/Train/Engine, Deer, Animal Drawn Vehicle, Impact Attenuator/Crash Cushion, Bridge Overhead Structure, Bridge Pier or Abutment, Bridge Parapet End, Bridge Rail, Guardrail Face, Guardrail End, Median Barrier, Highway Traffic Sign Post, Overhead Sign Post, Light/Luminaire Support, Utility Pole, Other Post/Pole or Support, Wall/Building/Tunnel, Work Zone Maintenance Equipment, Embankment, Culvert, Tree, Parked Motor Vehicle, Cable Barrier, Concrete Traffic Barrier, Other Traffic Barrier*
   All non-urban fatal collision rates significantly different from urban at p = 0.001.
4) *Unsafe driving* includes collisions caused by: *unsafe speed, failure to yield right of way, disregard signal/sign, left of center, improper passing, improper turning, improper lane usage, following too closely, unsafe backing, wrong way on one way, speed too fast for weather conditions, unsafe lane movement.*
   Other driver includes collisions caused by other driver factors: *violation of license restriction, other (explained in narrative) - driver, driver (multiple). Equipment includes collisions caused by: engine failure or defective, accelerator failure or defective, brake failure or defective, tire failure or defective, headlight defective or not on, other lights defective, steering failure, window/windshield defective, oversize/overweight load, insecure/leaky load, tow hitch failure.*
   Driver distracted includes collisions caused by: *passenger distraction, cell phone usage, other telematics in use, driver distracted (explained in narrative).*
   Road defects includes collisions caused by: *roadway surface condition, holes/ruts in surface, shoulder defective, obstruction not marked, lane marking obscured, traffic control problem.*
   All non-urban fatal collision rates for all primary factors significantly different from urban at p = 0.05.

Figure 8.9. Distribution of total and fatal crashes and rates of speed involvement, by road type, 2008-2012

Inner pie: Geographic distribution of collisions
Outer ring: Speed involvement rates, by locality

Fatal collisions as % of all collisions, and average posted speed limit where collisions occurred in each locale

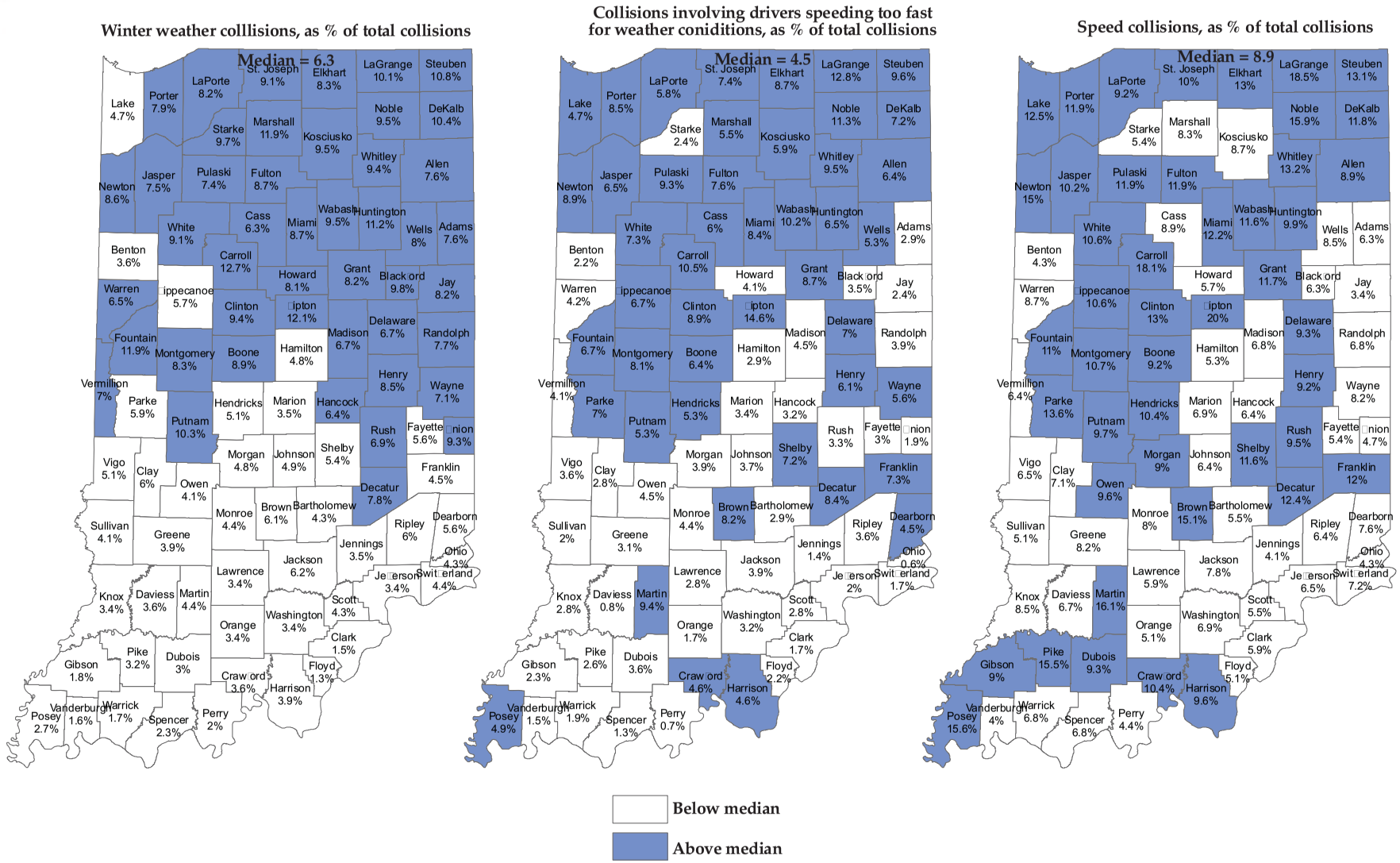


All non-urban fatal collision rates significantly different from urban at p=0.0001.

Source: Indiana State Police

Note: Includes collisions where valid road class was reported.

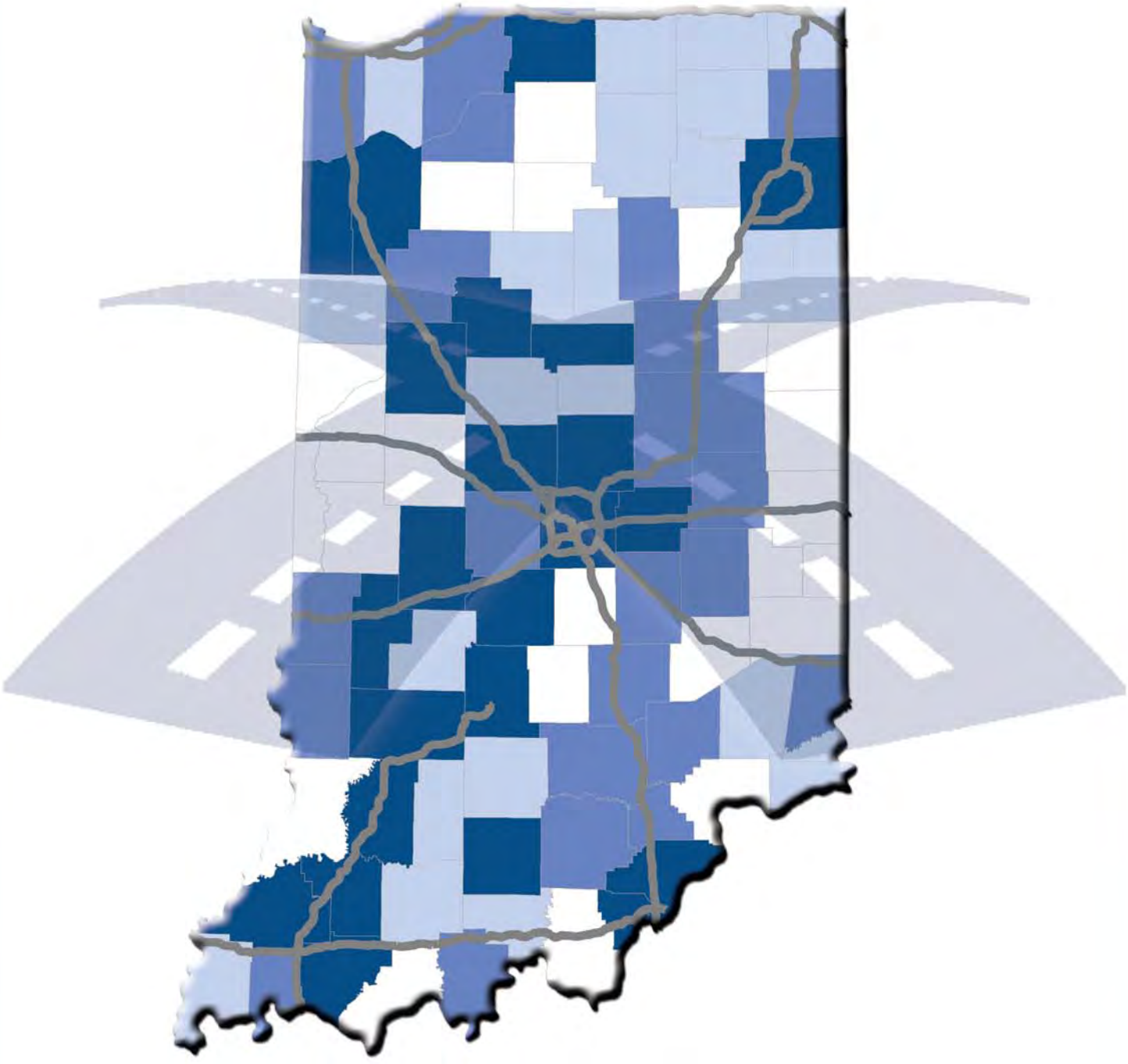
Map 8.1. Winter weather effect on speed-related collisions, 2012



Source: Indiana State Police

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

CHAPTER 9
COUNTIES



COUNTIES, 2012

Understanding the spatial distribution of traffic collisions and injuries can assist officials in developing policies and targeting resources to address the many variables that may impact the geography 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, the number of vehicle miles traveled (VMT), and, perhaps most importantly, human behaviors and social norms that may contribute to the likelihood of particular types of crashes occurring in regions throughout the state. The following *choropleth* and *density grid* maps show collision and injury rates in Indiana counties in 2012. Additionally, Indiana counties are ranked on a variety of collision metrics to determine which counties experienced the highest collision and injury rates in 2012. The economic costs associated with 2012 collisions are also reported for each county.

Notes:
All density grid maps were created using a ten-mile search radius.
*Choropleth maps sho*w counties grouped by quartiles.

Collision severity and injuries

In 2012, 188,841 collisions occurred in Indiana, 718 of which were fatal. The mean number of collisions per county was 2,053, and the mean number of fatal collisions per county was 8 (Table 9.1). Marion County ranked highest in the total number of collisions (28,997), and Pike County ranked highest in the percentage of all collisions that were fatal (3.2), followed by Switzerland County (2.2). The mean county rate of collisions per 100 million (100m) VMT was 225, and the median rate was 221. Tippecanoe County had the highest rate of collisions per 100m VMT (493.2), and Pike County had the lowest (86.8) (Maps 9.1 and 9.2).

The total number of individuals involved in 2012 Indiana collisions was 305,893, and the mean number of individuals involved in collisions per county was 3,325 (Table 9.2). Marion County had the largest number of individuals involved (51,288) and the largest number of traffic fatalities (78), but ranked 81st out of 92 counties in the percentage of all injuries that were fatal. Counties with the highest traffic fatalities as percent of total persons involved included Pike and Switzerland. The median county traffic fatality rate per 100 thousand (100k) of the population was 15.6 (Map 9.3), with White County having the highest rate per 100k (53.2) and Martin and Orange counties having the lowest (0.0).

Speed-related collisions

Speed-related collisions accounted for 8.8 percent of all Indiana collisions in 2012, and 22.7 percent of all fatal collisions (Table 9.3). The mean number of speed-related collisions per county was 181. As in 2011, Tipton County ranked first in the percentage of all collisions that were speed-related (20 percent). The mean percent of speed-related collisions by county was 9.2, and the median county percent of speeding collisions was 8.9. Many counties with the highest percentages of speed-related collisions were clustered in northern portions of the state (Map 9.4).

The density grid analysis presented in Map 9.5 also shows clusters of speeding collisions (per 100m county VMT) near Lafayette in Tippecanoe County and Bloomington in Monroe County.

Alcohol collisions

Indiana collisions that involved an alcohol-impaired driver accounted for 2.7 percent of all Indiana collisions in 2012, and 20.9 percent of all fatal collisions (Table 9.4). The mean number of alcohol-impaired collisions per county was 56, and mean number of fatal alcohol-impaired collisions per county was 2. The mean percent of alcohol-impaired collisions by county was 2.9. Sullivan County had the highest percentage of alcohol-impaired collisions (6.8 percent), and Pulaski, Wabash, and Wells counties in northern Indiana had the lowest (Map 9.6). Map 9.7 presents a density grid analysis illustrating that some of the highest densities of alcohol-impaired collisions (per 100m county VMT) exist near Lafayette, Fort Wayne, Madison, and Salem.

Deer collisions

A large percentage of 2012 collisions that occurred in predominantly rural Indiana counties involved deer (Map 9.8). Counties with the highest percentage of deer-involved collisions were clustered in the northeastern, northwestern, and southern regions of the state. Counties located in the eastern and central portions of Indiana had lower percentages of deer-involved collisions than other areas of the state. Pulaski County had the highest percentage of deer-involved collisions (52.6 percent).

Work zone collisions

There were 3,498 work zone collisions in Indiana in 2012 (Map 9.9). The mean county rate of work zone collisions per 1,000 total collisions was 13.2. Boone County, located just northwest of Indianapolis, had the highest rate of work zone collisions (82.9 per 1,000 collisions). Counties located in Indiana metropolitan areas and along interstate routes had some of the highest work zone collision rates in 2012. 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 from year to year. For example, southwestern Indiana counties located along the I-69 expansion route were also among some of the higher county work zone collision rates in 2012.

Restraint use

Figure 9.1 illustrates the linear relationship between restraint use and rates of serious injury (fatal and incapacitating) in Indiana counties. The scatter plot shows that as county rates of unrestrained vehicle occupants reported in collisions increases, county rates of serious injury also increase (e.g., for every increase of 1 percentage point in unrestrained, serious injury rate increases about one-half of one percentage point). Nearly 49 percent of vehicle occupants killed in Indiana collisions were unrestrained in 2012, while only 10.2 percent of individuals suffering non-incapacitating injuries were unrestrained (Table 9.5).

The median county percent of unrestrained individuals involved in collisions was 3.6 percent. Daviess, Randolph, and Sullivan counties had the highest rates of unrestrained vehicle occupants at 7.4, 6.8, and 6.7 percent, respectively (Map 9.10). Urban counties had the lowest rates of unrestrained injuries. More generally, counties located in the southern region of Indiana have higher rates of unrestrained injuries than counties located in northern portions of the state. The density grid analysis presented in Map 9.11 shows clusters of unrestrained serious injuries near Roselawn in Newton County, Rockville in Parke County, and Bedford, Petersburg, and Dale located in southwestern Indiana.

Young drivers

In 2012, 40,417 young drivers (ages 15 to 20) were involved in collisions (13 percent of all persons involved), of whom 54 suffered fatal injuries, 4,610 personal injuries, and 35,753 other minor injury types or no injuries (Table 9.6). On average, 15 percent of persons involved in collisions in Indiana counties were young drivers; the smallest proportion was reported in Ohio County (9.7 percent) and the largest in Pike County (20.3 percent). The mean county rate of young driver involvement in collisions was 101.7 per 1,000 licensed young drivers, while the median county rate was 98.7. Counties that are the locations of large universities (Tippecanoe, Monroe, Vanderburgh, and Delaware) had the highest rates of young driver involvement in collisions (Maps 9.12 and 9.13).

Motorcycle collisions

Of the 188,841 collisions occurring in Indiana in 2012, 4,104 (2.2 percent) involved motorcycles, 146 of which were fatal, representing 20 percent of all fatal collisions (Table 9.7). On average, 2.4 percent of collisions in Indiana counties involved motorcycles; the smallest proportion was reported in Union County (no motorcycle collisions) and the largest in Brown County (6.7 percent). Based on collisions per 1000 registered motorcycles, several counties show evidence of significant motorcycle collision 'hot spots' including Tippecanoe, Monroe, Knox, Jasper, Shelby, and Allen (Map 9.14).

County ranks

Indiana counties were ranked on six collision-related rates: total collisions (Map 9.15), alcohol-impaired collisions (Map 9.16), speed-related collisions (Map 9.17), dangerous driving collisions (Map 9.18), motorcycle-involved collisions (Map 9.19), and unrestrained serious injuries (Map 9.20). 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. However, a number of factors not accounted for here—such as different population compositions, road types, driving conditions, reporting practices, etc.—may influence collision rankings, so readers should be mindful of these differences when viewing county ranks.

Based on the composite index (Map 9.21), many counties with relatively dangerous traffic safety environments in 2011 remained relatively dangerous in 2012. As in 2011, counties on the northern border of the state around the Gary/Chicago area (e.g., Lake, Porter) and along interstate 80/90 (e.g., Elkhart, LaGrange, Steuben) reported more dangerous traffic safety environments in 2012 than many other areas of the state. A cluster of counties around Tippecanoe County and in the southwest part of the state around Pike County also experienced more dangerous traffic safety environments in 2012. Six of the top ten counties with the most dangerous traffic safety environments in 2011 (Brown, Carroll, Dubois, Franklin, Martin, Parke) were also among the most dangerous in 2012. By this index, Parke County ranked as the most dangerous county in 2012 while Blackford County was the safest.

Economic Costs

Maps 9.22 and 9.23 show economic costs associated with collisions and costs per capita. Because costs are based on the number of collisions and injuries that occur and because more heavily populated areas record higher numbers of collisions and injuries, counties with larger populations had the highest total economic costs of collisions in 2012. Marion County recorded the highest estimated economic costs with $526 million, followed by Lake County ($272 million), Allen County ($207 million), St. Joseph County ($121 million), and Hamilton County ($116 million). (These are the five most populated counties in Indiana). By comparison, the total economic cost for the 46 counties below the median ($19.5 million) was $535 million.

When normalized by estimated 2012 county populations, the economic cost burden associated with collisions changes and many counties with smaller populations bear larger per capita cost burdens. The average population size of the 23 counties with the largest per capita costs was 38,000, compared to 82,000 for remaining counties. Further, only three of the counties with the largest total costs were among the 23 counties with the largest per capita costs. White County recorded the largest per capita costs at $962, while ranking 63rd in population size.

Table 9.1. Indiana collisions, by severity and county, 2012

	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
All counties	**188,841**	**n/a**	**718**	**0.4**	**n/a**	**34,087**	**18.1**	**154,036**	**81.6**
Mean	2,053	n/a	8	0.7	n/a	371	17.7	1,674	81.7
Median	894	n/a	6	1	n/a	157	17	718	82
Minimum	107	n/a	0	0.0	n/a	12	8.6	94	63.9
Maximum	28,997	n/a	76	3.2	n/a	5,433	35.3	23,488	90.7
Adams	680	59	3	0.4	56	102	15.0	575	84.6
Allen	11,309	3	30	0.3	74	2,240	19.8	9,039	79.9
Bartholomew	2,224	22	8	0.4	63	583	26.2	1,633	73.4
Benton	139	91	2	1.4	7	21	15.1	116	83.5
Blackford	254	86	2	0.8	30	28	11.0	224	88.2
Boone	1,954	24	8	0.4	58	288	14.7	1,658	84.9
Brown	523	71	1	0.2	85	101	19.3	421	80.5
Carroll	553	68	2	0.4	62	89	16.1	462	83.5
Cass	1,173	38	4	0.3	64	200	17.1	969	82.6
Clark	4,398	9	14	0.3	67	772	17.6	3,612	82.1
Clay	744	55	6	0.8	29	115	15.5	623	83.7
Clinton	1,002	41	6	0.6	43	156	15.6	840	83.8
Crawford	280	84	3	1.1	14	49	17.5	228	81.4
Daviess	357	78	3	0.8	27	126	35.3	228	63.9
Dearborn	1,831	25	11	0.6	41	252	13.8	1,568	85.6
Decatur	855	48	5	0.6	46	144	16.8	706	82.6
DeKalb	1,259	33	3	0.2	77	179	14.2	1,077	85.5
Delaware	4,034	12	11	0.3	71	721	17.9	3,302	81.9
Dubois	1,166	39	7	0.6	42	242	20.8	917	78.6
Elkhart	6,146	8	25	0.4	59	935	15.2	5,186	84.4
Fayette	427	75	1	0.2	78	93	21.8	333	78.0
Floyd	2,556	18	4	0.2	89	487	19.1	2,065	80.8
Fountain	328	80	4	1.2	10	57	17.4	267	81.4
Franklin	532	69	6	1.1	11	88	16.5	438	82.3
Fulton	564	65	5	0.9	23	85	15.1	474	84.0
Gibson	1,115	40	9	0.8	28	198	17.8	908	81.4
Grant	2,274	20	5	0.2	83	352	15.5	1,917	84.3
Greene	826	51	8	1.0	19	122	14.8	696	84.3
Hamilton	6,861	5	8	0.1	90	1,057	15.4	5,796	84.5
Hancock	1,416	30	7	0.5	52	268	18.9	1,141	80.6
Harrison	1,194	36	8	0.7	36	213	17.8	973	81.5
Hendricks	3,653	14	10	0.3	70	599	16.4	3,044	83.3
Henry	949	44	3	0.3	68	188	19.8	758	79.9
Howard	2,265	21	5	0.2	82	442	19.5	1,818	80.3
Huntington	1,178	37	7	0.6	44	188	16.0	983	83.4
Jackson	1,539	26	11	0.7	34	247	16.0	1,281	83.2
Jasper	1,243	34	8	0.6	37	196	15.8	1,039	83.6
Jay	680	59	5	0.7	32	98	14.4	577	84.9
Jefferson	859	47	9	1.0	15	158	18.4	692	80.6
Jennings	712	57	6	0.8	26	164	23.0	542	76.1
Johnson	2,921	17	5	0.2	86	593	20.3	2,323	79.5
Knox	953	43	5	0.5	51	247	25.9	701	73.6
Kosciusko	2,293	19	10	0.4	57	361	15.7	1,922	83.8
LaGrange	822	52	8	1.0	18	106	12.9	708	86.1
Lake	15,531	2	42	0.3	73	2,763	17.8	12,726	81.9
LaPorte	3,163	15	15	0.5	54	658	20.8	2,490	78.7
Lawrence	1,424	28	11	0.8	31	287	20.2	1,126	79.1
Madison	3,772	13	14	0.4	60	651	17.3	3,107	82.4

continued on next page

Table 9.1. *(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	28,997	1	76	0.3	75	5,433	18.7	23,488	81.0
Marshall	1,307	32	8	0.6	40	190	14.5	1,109	84.9
Martin	180	88	0	0.0	91	41	22.8	139	77.2
Miami	837	49	2	0.2	76	114	13.6	721	86.1
Monroe	4,223	11	9	0.2	84	940	22.3	3,274	77.5
Montgomery	928	46	8	0.9	25	161	17.3	759	81.8
Morgan	1,530	27	11	0.7	33	344	22.5	1,175	76.8
Newton	326	81	4	1.2	9	48	14.7	274	84.0
Noble	1,202	35	2	0.2	88	189	15.7	1,011	84.1
Ohio	162	89	1	0.6	39	14	8.6	147	90.7
Orange	652	62	0	0.0	91	114	17.5	538	82.5
Owen	560	66	5	0.9	22	112	20.0	443	79.1
Parke	559	67	3	0.5	49	71	12.7	485	86.8
Perry	454	74	5	1.1	12	82	18.1	367	80.8
Pike	155	90	5	3.2	1	40	25.8	110	71.0
Porter	4,368	10	10	0.2	81	899	20.6	3,459	79.2
Posey	512	72	3	0.6	45	85	16.6	424	82.8
Pulaski	420	76	2	0.5	53	45	10.7	373	88.8
Putnam	719	56	7	1.0	17	123	17.1	589	81.9
Randolph	483	73	5	1.0	16	93	19.3	385	79.7
Ripley	746	54	4	0.5	50	122	16.4	620	83.1
Rush	304	83	1	0.3	65	77	25.3	226	74.3
St. Joseph	6,636	6	18	0.3	72	1,332	20.1	5,286	79.7
Scott	580	64	4	0.7	35	161	27.8	415	71.6
Shelby	971	42	6	0.6	38	251	25.8	714	73.5
Spencer	531	70	3	0.6	47	94	17.7	434	81.7
Starke	661	61	6	0.9	21	96	14.5	559	84.6
Steuben	1,422	29	4	0.3	69	153	10.8	1,265	89.0
Sullivan	410	77	7	1.7	3	82	20.0	321	78.3
Switzerland	181	87	4	2.2	2	25	13.8	152	84.0
Tippecanoe	6,939	4	16	0.2	80	1,035	14.9	5,888	84.9
Tipton	315	82	5	1.6	4	83	26.3	227	72.1
Union	107	92	1	0.9	20	12	11.2	94	87.9
Vanderburgh	6,446	7	15	0.2	79	1,203	18.7	5,228	81.1
Vermillion	343	79	5	1.5	6	55	16.0	283	82.5
Vigo	3,085	16	10	0.3	66	651	21.1	2,424	78.6
Wabash	931	45	5	0.5	48	134	14.4	792	85.1
Warren	263	85	4	1.5	5	30	11.4	229	87.1
Warrick	1,372	31	5	0.4	61	200	14.6	1,167	85.1
Washington	696	58	9	1.3	8	121	17.4	566	81.3
Wayne	2,169	23	10	0.5	55	378	17.4	1,781	82.1
Wells	589	63	1	0.2	87	94	16.0	494	83.9
White	834	50	9	1.1	13	99	11.9	726	87.1
Whitley	796	53	7	0.9	24	152	19.1	637	80.0
Unknown	9	n/a	0	0.0	n/a	0	0.0	9	100.0

Source: Indiana State Police

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

Table 9.2. Individuals involved in Indiana collisions, by injury status and county, 2012

	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
All counties	**305,893**	**n/a**	**779**	**0.3**	**n/a**	**3,810**	**1.2**	**43,348**	**14.2**	**257,956**	**84.3**
Mean	3,325	n/a	8	0.5	n/a	41	1.8	471	14.9	2,804	82.9
Median	1,316	n/a	6	0	n/a	25	2	206	15	1,087	83
Minimum	140	n/a	0	0.0	n/a	1	0.4	13	8.2	125	69.9
Maximum	51,288	n/a	78	2.2	n/a	441	4.7	6,971	27.2	43,798	89.8
Adams	981	60	5	0.5	36	22	2.2	124	12.6	830	84.6
Allen	18,435	3	34	0.2	70	219	1.2	2,871	15.6	15,311	83.1
Bartholomew	3,798	20	9	0.2	62	57	1.5	720	19.0	3,012	79.3
Benton	186	90	2	1.1	8	1	0.5	28	15.1	155	83.3
Blackford	344	85	2	0.6	29	5	1.5	40	11.6	297	86.3
Boone	3,017	24	9	0.3	56	29	1.0	378	12.5	2,601	86.2
Brown	692	72	1	0.1	84	19	2.7	122	17.6	550	79.5
Carroll	768	66	2	0.3	60	10	1.3	118	15.4	638	83.1
Cass	1,745	35	4	0.2	65	16	0.9	266	15.2	1,459	83.6
Clark	7,308	9	15	0.2	69	95	1.3	963	13.2	6,235	85.3
Clay	1,123	55	6	0.5	33	16	1.4	150	13.4	951	84.7
Clinton	1,447	43	6	0.4	47	24	1.7	221	15.3	1,196	82.7
Crawford	345	84	3	0.9	13	8	2.3	64	18.6	270	78.3
Daviess	578	77	4	0.7	22	13	2.2	157	27.2	404	69.9
Dearborn	2,707	25	13	0.5	41	55	2.0	297	11.0	2,342	86.5
Decatur	1,243	48	6	0.5	39	19	1.5	186	15.0	1,032	83.0
DeKalb	1,789	34	3	0.2	76	25	1.4	217	12.1	1,544	86.3
Delaware	6,535	12	11	0.2	74	71	1.1	957	14.6	5,496	84.1
Dubois	1,822	32	7	0.4	53	29	1.6	309	17.0	1,477	81.1
Elkhart	9,670	8	27	0.3	59	122	1.3	1,149	11.9	8,372	86.6
Fayette	688	73	1	0.1	83	8	1.2	119	17.3	560	81.4
Floyd	4,319	18	7	0.2	77	58	1.3	630	14.6	3,624	83.9
Fountain	444	81	4	0.9	11	10	2.3	72	16.2	358	80.6
Franklin	733	68	6	0.8	14	13	1.8	110	15.0	604	82.4
Fulton	753	67	6	0.8	15	9	1.2	100	13.3	638	84.7
Gibson	1,690	37	10	0.6	28	35	2.1	247	14.6	1,398	82.7
Grant	3,454	21	6	0.2	73	42	1.2	427	12.4	2,979	86.2
Greene	1,136	53	9	0.8	17	24	2.1	150	13.2	953	83.9
Hamilton	12,260	4	10	0.1	90	109	0.9	1,280	10.4	10,861	88.6
Hancock	2,426	27	7	0.3	58	40	1.6	350	14.4	2,029	83.6
Harrison	1,673	38	8	0.5	42	29	1.7	252	15.1	1,384	82.7
Hendricks	6,202	13	10	0.2	78	99	1.6	727	11.7	5,366	86.5
Henry	1,460	42	3	0.2	68	28	1.9	246	16.8	1,183	81.0
Howard	3,928	19	5	0.1	86	32	0.8	574	14.6	3,317	84.4
Huntington	1,658	40	8	0.5	40	15	0.9	256	15.4	1,379	83.2
Jackson	2,259	28	12	0.5	34	49	2.2	321	14.2	1,877	83.1
Jasper	1,724	36	8	0.5	43	37	2.1	258	15.0	1,421	82.4
Jay	920	61	5	0.5	31	25	2.7	121	13.2	769	83.6
Jefferson	1,307	47	9	0.7	23	18	1.4	187	14.3	1,093	83.6
Jennings	1,172	51	6	0.5	35	38	3.2	210	17.9	918	78.3
Johnson	5,147	15	5	0.1	89	64	1.2	748	14.5	4,330	84.1
Knox	1,435	44	9	0.6	25	19	1.3	302	21.0	1,105	77.0
Kosciusko	3,440	22	10	0.3	57	33	1.0	486	14.1	2,911	84.6
LaGrange	1,076	56	8	0.7	20	10	0.9	136	12.6	922	85.7
Lake	26,168	2	42	0.2	79	254	1.0	3,621	13.8	22,251	85.0
LaPorte	4,851	17	18	0.4	54	58	1.2	811	16.7	3,964	81.7
Lawrence	2,107	29	13	0.6	26	39	1.9	351	16.7	1,704	80.9
Madison	6,050	14	14	0.2	64	67	1.1	851	14.1	5,118	84.6

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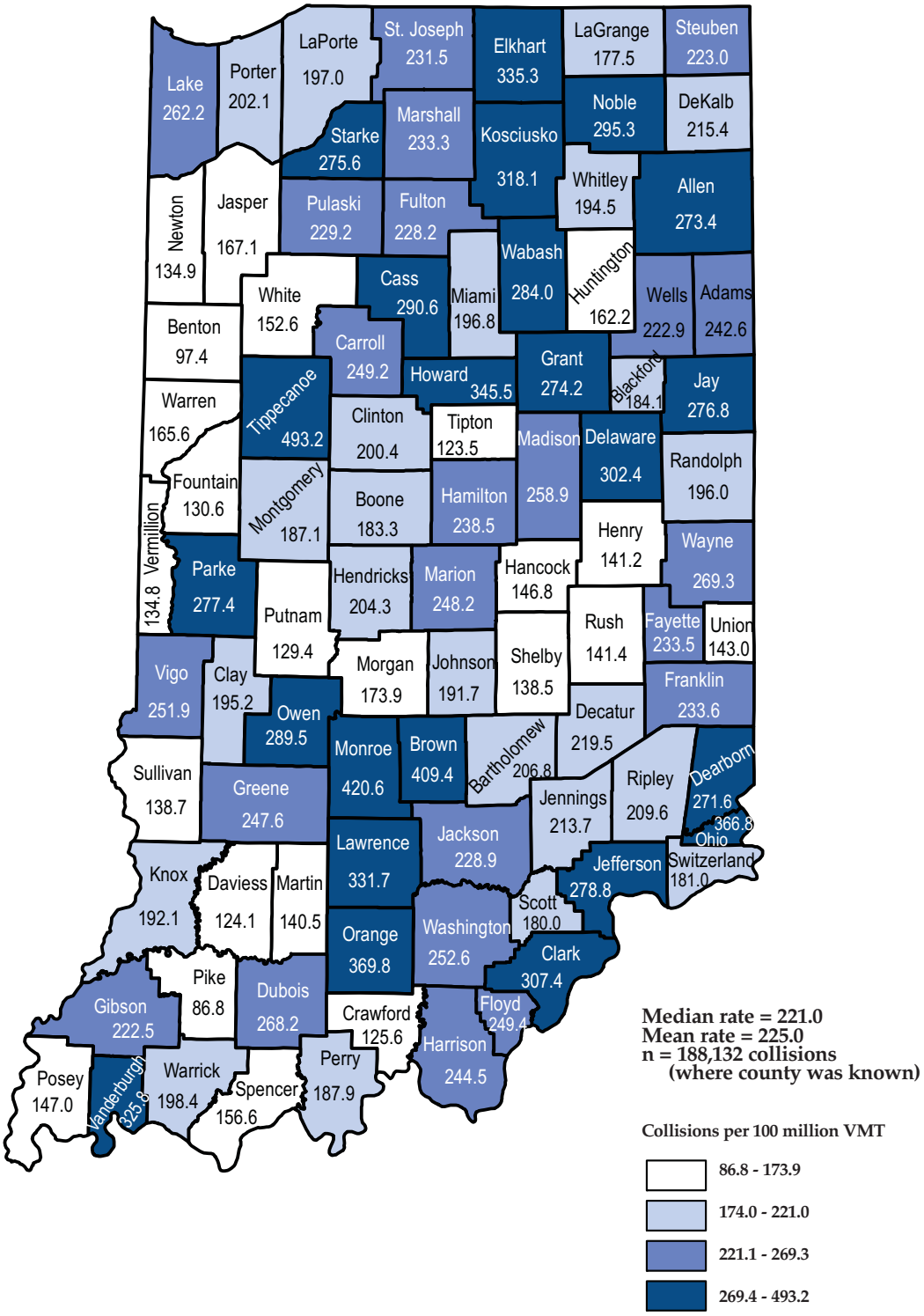
Table 9.2. *(continued)*

	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	51,288	1	78	0.2	81	441	0.9	6,971	13.6	43,798	85.4
Marshall	1,804	33	9	0.5	37	27	1.5	244	13.5	1,524	84.5
Martin	266	87	0	0.0	91	4	1.5	51	19.2	211	79.3
Miami	1,142	52	2	0.2	72	13	1.1	140	12.3	987	86.4
Monroe	6,912	11	11	0.2	80	94	1.4	1,138	16.5	5,669	82.0
Montgomery	1,325	46	8	0.6	27	31	2.3	206	15.5	1,080	81.5
Morgan	2,534	26	11	0.4	45	32	1.3	459	18.1	2,032	80.2
Newton	418	83	4	1.0	9	6	1.4	57	13.6	351	84.0
Noble	1,672	39	2	0.1	87	46	2.8	225	13.5	1,399	83.7
Ohio	186	90	1	0.5	32	1	0.5	17	9.1	167	89.8
Orange	897	62	0	0.0	91	12	1.3	146	16.3	739	82.4
Owen	790	65	6	0.8	18	17	2.2	131	16.6	636	80.5
Parke	697	71	3	0.4	46	23	3.3	77	11.0	594	85.2
Perry	659	75	5	0.8	19	24	3.6	81	12.3	549	83.3
Pike	231	89	5	2.2	1	7	3.0	50	21.6	169	73.2
Porter	7,053	10	10	0.1	85	88	1.2	1,154	16.4	5,801	82.2
Posey	724	70	3	0.4	48	8	1.1	101	14.0	612	84.5
Pulaski	503	78	2	0.4	51	17	3.4	41	8.2	443	88.1
Putnam	1,133	54	9	0.8	16	20	1.8	170	15.0	934	82.4
Randolph	679	74	6	0.9	12	20	2.9	109	16.1	544	80.1
Ripley	1,017	57	4	0.4	52	27	2.7	155	15.2	831	81.7
Rush	426	82	1	0.2	63	20	4.7	87	20.4	318	74.6
St. Joseph	11,317	6	19	0.2	75	102	0.9	1,694	15.0	9,502	84.0
Scott	1,017	57	5	0.5	38	36	3.5	209	20.6	767	75.4
Shelby	1,486	41	6	0.4	50	31	2.1	311	20.9	1,138	76.6
Spencer	728	69	3	0.4	49	28	3.8	124	17.0	573	78.7
Starke	894	63	6	0.7	24	25	2.8	121	13.5	742	83.0
Steuben	1,889	31	4	0.2	67	20	1.1	182	9.6	1,683	89.1
Sullivan	581	76	7	1.2	6	12	2.1	102	17.6	460	79.2
Switzerland	250	88	4	1.6	2	4	1.6	33	13.2	209	83.6
Tippecanoe	11,173	7	20	0.2	71	46	0.4	1,375	12.3	9,732	87.1
Tipton	482	79	6	1.2	5	12	2.5	116	24.1	348	72.2
Union	140	92	1	0.7	21	1	0.7	13	9.3	125	89.3
Vanderburgh	11,869	5	18	0.2	82	101	0.9	1,631	13.7	10,119	85.3
Vermillion	481	80	6	1.2	4	10	2.1	75	15.6	390	81.1
Vigo	5,032	16	11	0.2	66	90	1.8	790	15.7	4,141	82.3
Wabash	1,360	45	6	0.4	44	39	2.9	152	11.2	1,163	85.5
Warren	311	86	4	1.3	3	9	2.9	36	11.6	262	84.2
Warrick	2,100	30	5	0.2	61	43	2.0	241	11.5	1,811	86.2
Washington	988	59	9	0.9	10	17	1.7	166	16.8	796	80.6
Wayne	3,134	23	10	0.3	55	29	0.9	452	14.4	2,643	84.3
Wells	881	64	1	0.1	88	18	2.0	111	12.6	751	85.2
White	1,201	50	13	1.1	7	20	1.7	119	9.9	1,049	87.3
Whitley	1,204	49	7	0.6	29	22	1.8	205	17.0	970	80.6
Unknown	6	n/a	0	0.0	n/a	0	0.0	0	0.0	6	100.0

Source: Indiana State Police

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

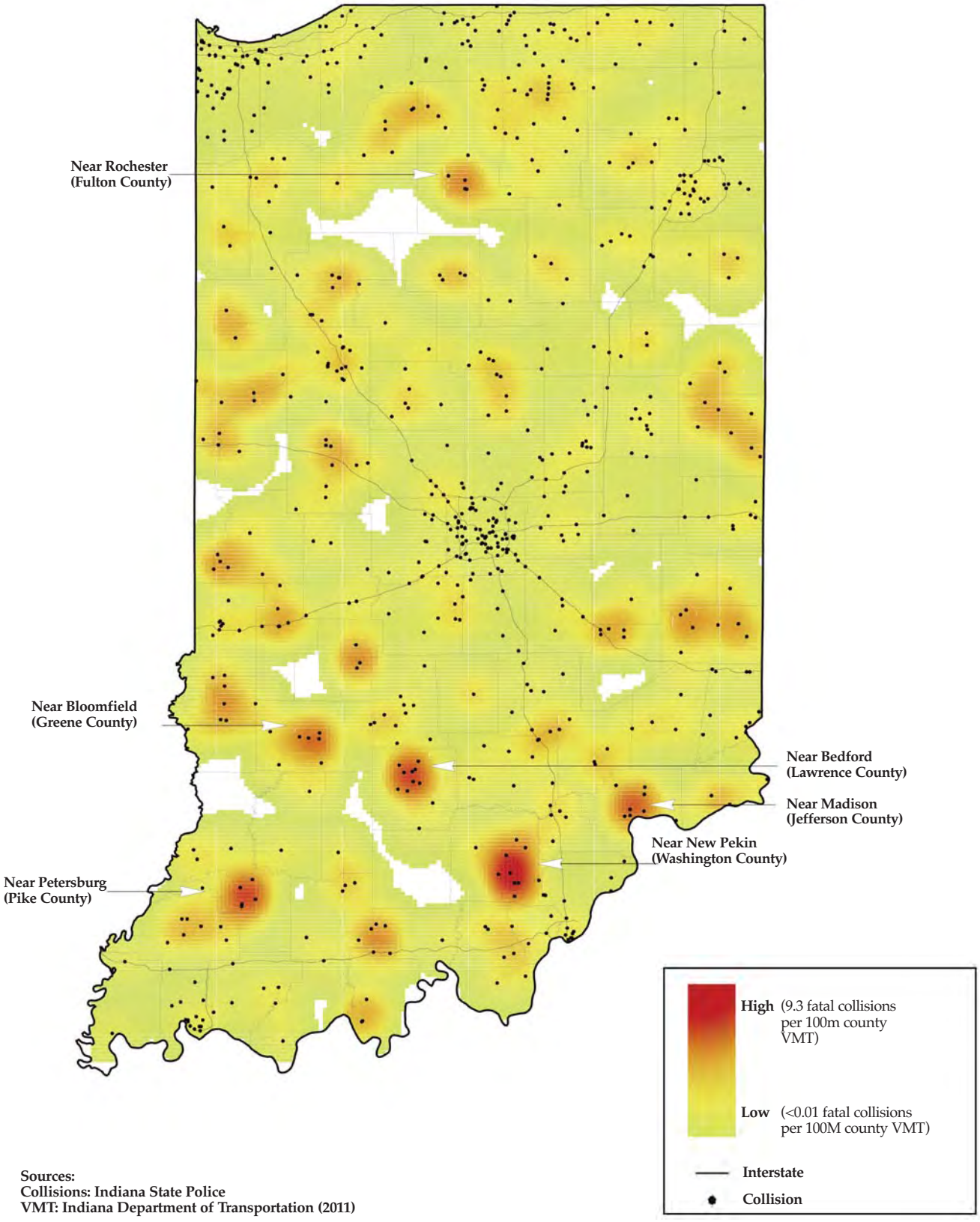
Map 9.1. Traffic collisions per 100m vehicle miles traveled (VMT) by county, 2012



Sources:
Collisions: Indiana State Police
VMT: Indiana Department of Transportation (2011)

Note: 2012 county level VMT not yet available.

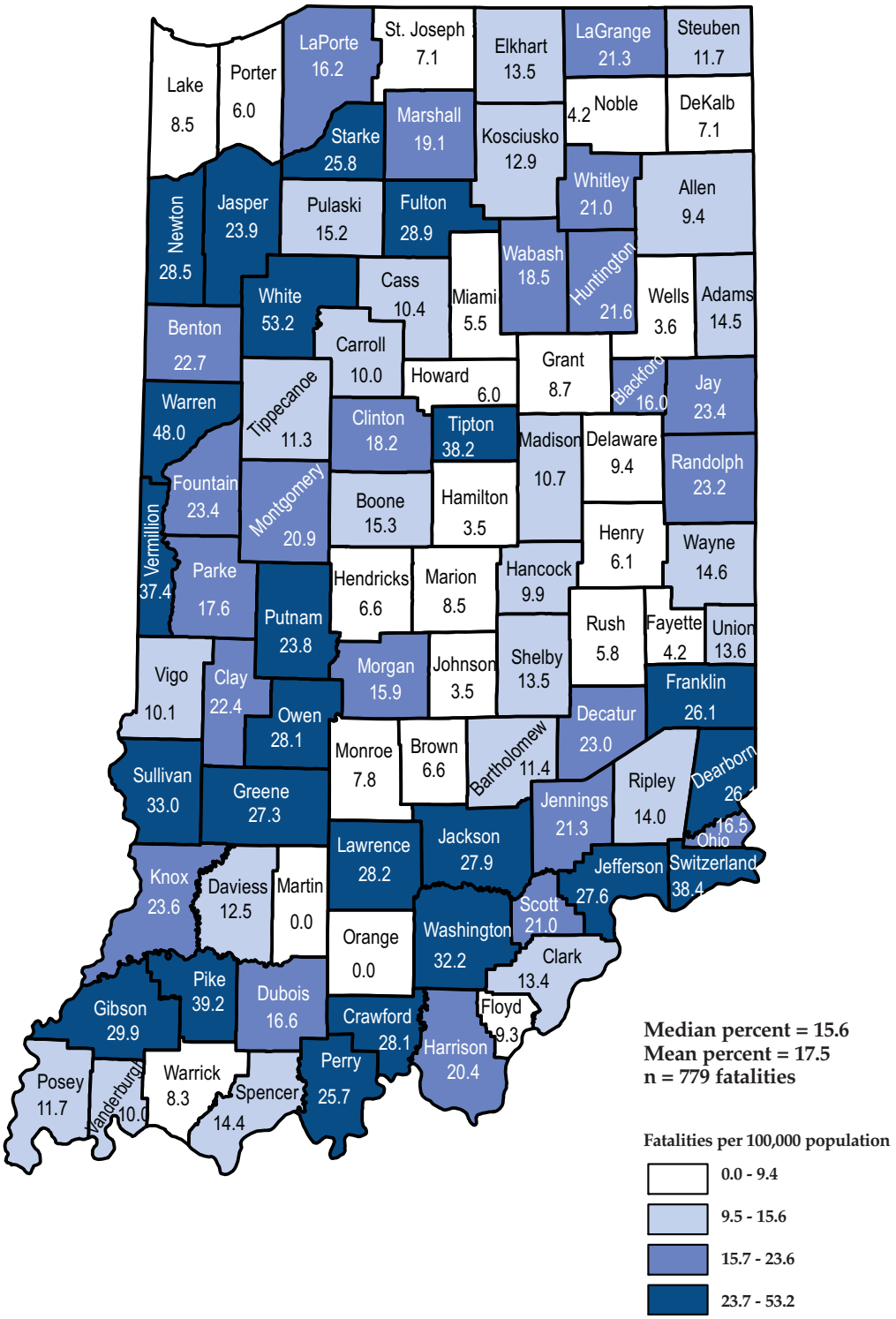
Map 9.2. Indiana fatal collision concentrations per 100m county vehicle miles traveled (VMT), 2012



Sources:
Collisions: Indiana State Police
VMT: Indiana Department of Transportation (2011)

Notes:
1) Density grid is based on points with valid coordinates (705/718).
2) Places that are labeled have or are near areas with five or more fatal collisions per 100m VMT.

Map 9.3. Traffic fatalities per 100k population by county, 2012



Sources:
Fatalities: Indiana State Police
Population: U.S. Census Bureau

Table 9.3. Indiana speed-related collisions, by severity and county, 2012

	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
All counties	**16,608**	**8.8**	**n/a**	**163**	**22.7**	**n/a**	**4,054**	**11.9**	**12,391**	**8.0**
Mean	181	9.2	n/a	2	18.5	n/a	44	14.0	135	8.1
Median	96	9	n/a	1	17	n/a	25	13	67	8
Minimum	5	3.4	n/a	0	0.0	n/a	1	3.6	3	2.0
Maximum	2,007	20.0	n/a	18	75.0	n/a	507	34.8	1,503	17.6
Adams	43	6.3	73	0	0.0	58	12	11.8	31	5.4
Allen	1,008	8.9	46	7	23.3	32	243	10.8	758	8.4
Bartholomew	122	5.5	79	0	0.0	58	42	7.2	80	4.9
Benton	6	4.3	89	0	0.0	58	1	4.8	5	4.3
Blackford	16	6.3	74	1	50.0	5	1	3.6	14	6.3
Boone	180	9.2	41	1	12.5	51	29	10.1	150	9.0
Brown	79	15.1	8	0	0.0	58	26	25.7	53	12.6
Carroll	100	18.1	3	0	0.0	58	31	34.8	69	14.9
Cass	104	8.9	47	0	0.0	58	25	12.5	79	8.2
Clark	259	5.9	76	1	7.1	57	68	8.8	190	5.3
Clay	53	7.1	59	1	16.7	47	18	15.7	34	5.5
Clinton	130	13.0	14	2	33.3	19	32	20.5	96	11.4
Crawford	29	10.4	31	0	0.0	58	12	24.5	17	7.5
Daviess	24	6.7	66	0	0.0	58	9	7.1	15	6.6
Dearborn	140	7.6	57	2	18.2	46	31	12.3	107	6.8
Decatur	106	12.4	16	1	20.0	35	31	21.5	74	10.5
DeKalb	148	11.8	22	0	0.0	58	38	21.2	110	10.2
Delaware	377	9.3	39	3	27.3	27	68	9.4	306	9.3
Dubois	108	9.3	40	3	42.9	13	39	16.1	66	7.2
Elkhart	800	13.0	13	5	20.0	35	141	15.1	654	12.6
Fayette	23	5.4	81	0	0.0	58	5	5.4	18	5.4
Floyd	130	5.1	84	3	75.0	1	38	7.8	89	4.3
Fountain	36	11.0	26	2	50.0	5	12	21.1	22	8.2
Franklin	64	12.0	18	1	16.7	47	11	12.5	52	11.9
Fulton	67	11.9	21	0	0.0	58	15	17.6	52	11.0
Gibson	100	9.0	44	0	0.0	58	34	17.2	66	7.3
Grant	266	11.7	23	2	40.0	15	47	13.4	217	11.3
Greene	68	8.2	53	1	12.5	51	23	18.9	44	6.3
Hamilton	366	5.3	82	1	12.5	51	96	9.1	269	4.6
Hancock	91	6.4	71	2	28.6	24	25	9.3	64	5.6
Harrison	115	9.6	37	2	25.0	28	32	15.0	81	8.3
Hendricks	380	10.4	30	2	20.0	35	88	14.7	290	9.5
Henry	87	9.2	43	0	0.0	58	21	11.2	66	8.7
Howard	130	5.7	77	1	20.0	35	30	6.8	99	5.4
Huntington	117	9.9	34	0	0.0	58	31	16.5	86	8.7
Jackson	120	7.8	56	5	45.5	11	25	10.1	90	7.0
Jasper	127	10.2	32	0	0.0	58	23	11.7	104	10.0
Jay	23	3.4	92	0	0.0	58	4	4.1	19	3.3
Jefferson	56	6.5	68	2	22.2	33	19	12.0	35	5.1
Jennings	29	4.1	90	1	16.7	47	11	6.7	17	3.1
Johnson	188	6.4	69	1	20.0	35	54	9.1	133	5.7
Knox	81	8.5	50	0	0.0	58	31	12.6	50	7.1
Kosciusko	199	8.7	49	1	10.0	56	41	11.4	157	8.2
LaGrange	152	18.5	2	3	37.5	16	29	27.4	120	16.9
Lake	1,944	12.5	15	15	35.7	18	507	18.3	1,422	11.2
LaPorte	291	9.2	42	3	20.0	35	76	11.6	212	8.5
Lawrence	84	5.9	75	0	0.0	58	26	9.1	58	5.2
Madison	255	6.8	65	3	21.4	34	51	7.8	201	6.5

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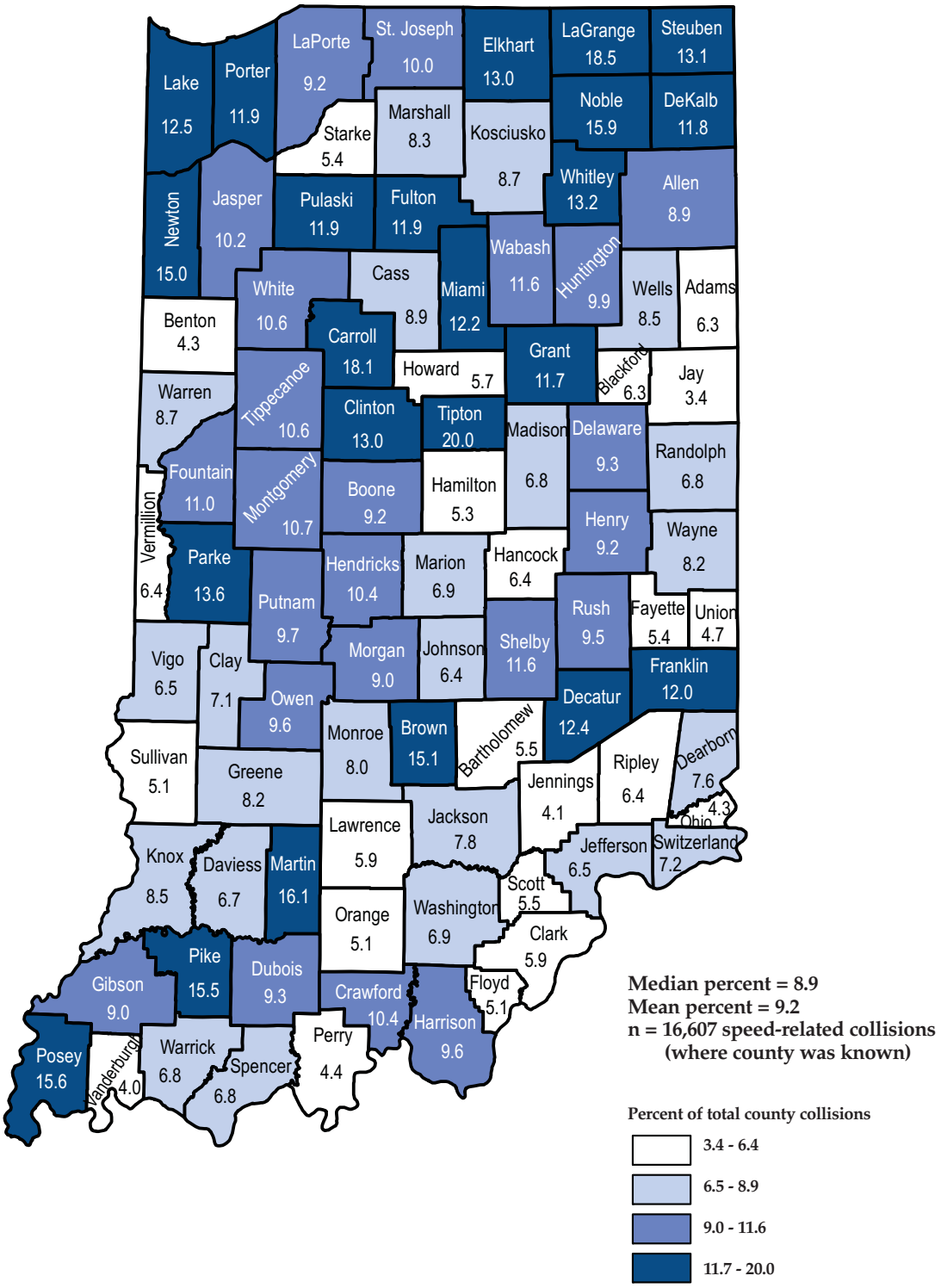
Table 9.3. *(continued)*

	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	2,007	6.9	60	18	23.7	31	486	8.9	1,503	6.4
Marshall	109	8.3	52	4	50.0	5	25	13.2	80	7.2
Martin	29	16.1	4	0	0.0	58	11	26.8	18	12.9
Miami	102	12.2	17	1	50.0	5	17	14.9	84	11.7
Monroe	338	8.0	55	1	11.1	55	91	9.7	246	7.5
Montgomery	99	10.7	27	1	12.5	51	22	13.7	76	10.0
Morgan	137	9.0	45	4	36.4	17	50	14.5	83	7.1
Newton	49	15.0	9	2	50.0	5	9	18.8	38	13.9
Noble	191	15.9	5	0	0.0	58	47	24.9	144	14.2
Ohio	7	4.3	88	1	0.0	58	3	21.4	3	2.0
Orange	33	5.1	85	0	0.0	58	13	11.4	20	3.7
Owen	54	9.6	36	3	60.0	2	16	14.3	35	7.9
Parke	76	13.6	10	0	0.0	58	17	23.9	59	12.2
Perry	20	4.4	87	1	20.0	35	8	9.8	11	3.0
Pike	24	15.5	7	0	0.0	58	9	22.5	15	13.6
Porter	519	11.9	20	6	60.0	2	123	13.7	390	11.3
Posey	80	15.6	6	0	0.0	58	24	28.2	56	13.2
Pulaski	50	11.9	19	0	0.0	58	9	20.0	41	11.0
Putnam	70	9.7	35	3	42.9	13	15	12.2	52	8.8
Randolph	33	6.8	62	0	0.0	58	10	10.8	23	6.0
Ripley	48	6.4	70	1	25.0	28	19	15.6	28	4.5
Rush	29	9.5	38	0	0.0	58	11	14.3	18	8.0
St. Joseph	665	10.0	33	6	33.3	19	150	11.3	509	9.6
Scott	32	5.5	78	0	0.0	58	11	6.8	21	5.1
Shelby	113	11.6	24	0	0.0	58	38	15.1	75	10.5
Spencer	36	6.8	63	0	0.0	58	15	16.0	21	4.8
Starke	36	5.4	80	1	16.7	47	8	8.3	27	4.8
Steuben	186	13.1	12	2	50.0	5	31	20.3	153	12.1
Sullivan	21	5.1	83	2	28.6	24	8	9.8	11	3.4
Switzerland	13	7.2	58	0	0.0	58	5	20.0	8	5.3
Tippecanoe	736	10.6	28	7	43.8	12	141	13.6	588	10.0
Tipton	63	20.0	1	3	60.0	2	20	24.1	40	17.6
Union	5	4.7	86	0	0.0	58	1	8.3	4	4.3
Vanderburgh	259	4.0	91	3	20.0	35	81	6.7	175	3.3
Vermillion	22	6.4	72	1	20.0	35	5	9.1	16	5.7
Vigo	202	6.5	67	3	30.0	22	50	7.7	149	6.1
Wabash	108	11.6	25	1	20.0	35	19	14.2	88	11.1
Warren	23	8.7	48	1	25.0	28	4	13.3	18	7.9
Warrick	93	6.8	64	1	20.0	35	25	12.5	67	5.7
Washington	48	6.9	61	3	33.3	19	10	8.3	35	6.2
Wayne	178	8.2	54	3	30.0	22	38	10.1	137	7.7
Wells	50	8.5	51	0	0.0	58	14	14.9	36	7.3
White	88	10.6	29	0	0.0	58	19	19.2	69	9.5
Whitley	105	13.2	11	2	28.6	24	24	15.8	79	12.4
Unknown	1	11.1	n/a	0	0.0	n/a	0	0.0	1	11.1

Source: Indiana State Police

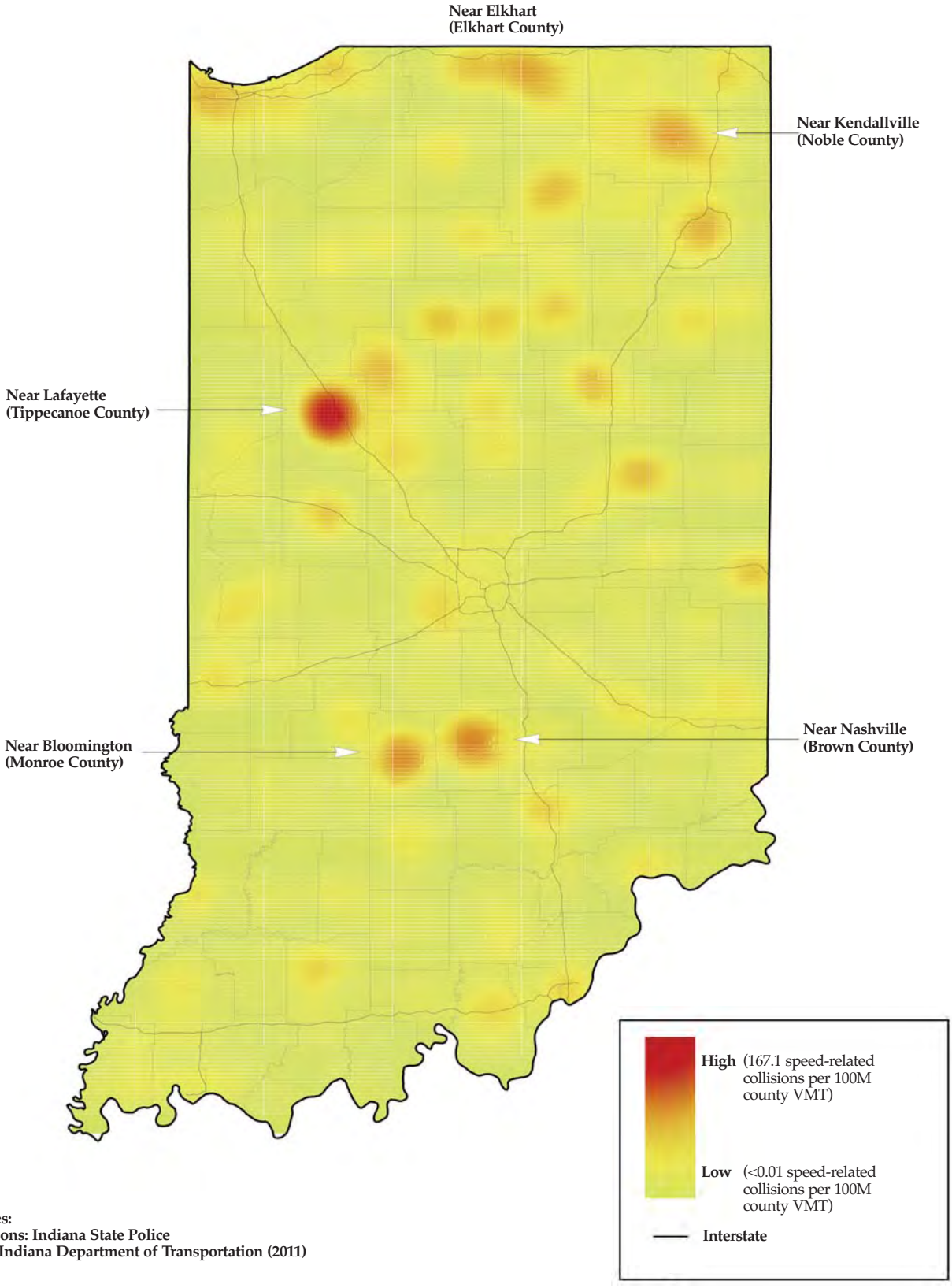
Notes:
1) Percent calculations represent the percent of total county collisions (presented in Table 9.1) in each injury category that are *speed-related*.
2) *Non-fatal injury* collisions include collisions with *incapacitating, non-incapacitating,* and *possible* injuries.
3) Fatal *speed-related* county 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 9.4. Percentage of county collisions that were speed-related, 2012



Source: Indiana State Police

Map 9.5. Indiana speed-related collision concentrations per 100m county vehicle miles traveled (VMT), 2012



Sources:
Collisions: Indiana State Police
VMT: Indiana Department of Transportation (2011)

Notes:
1) Density grid is based on points with valid coordinates (15,034/16,608).
2) Places that are labeled have or are near areas with 75 or more speed-related collisions per 100m VMT.

Table 9.4. Indiana collisions involving an alcohol-impaired driver, by severity and county, 2012

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
All counties	**5,152**	**2.7**	**150**	**20.9**	**1,507**	**4.4**	**3,495**	**2.3**
Mean	56	2.9	2	19.1	16	4.8	38	2.4
Median	29	3	1	17	7	4	17	2
Minimum	3	1.4	0	0.0	0	0.0	1	0.4
Maximum	594	6.8	20	100.0	202	19.0	444	5.3
Adams	10	1.5	0	0.0	4	3.9	6	1.0
Allen	403	3.6	8	26.7	143	6.4	252	2.8
Bartholomew	57	2.6	0	0.0	20	3.4	37	2.3
Benton	5	3.6	0	0.0	4	19.0	1	0.9
Blackford	4	1.6	0	0.0	3	10.7	1	0.4
Boone	41	2.1	0	0.0	13	4.5	28	1.7
Brown	11	2.1	0	0.0	7	6.9	4	1.0
Carroll	16	2.9	1	50.0	5	5.6	10	2.2
Cass	30	2.6	3	75.0	7	3.5	20	2.1
Clark	111	2.5	1	7.1	29	3.8	81	2.2
Clay	20	2.7	0	0.0	4	3.5	16	2.6
Clinton	35	3.5	2	33.3	6	3.8	27	3.2
Crawford	8	2.9	0	0.0	3	6.1	5	2.2
Daviess	14	3.9	1	33.3	3	2.4	10	4.4
Dearborn	55	3.0	2	18.2	15	6.0	38	2.4
Decatur	29	3.4	2	40.0	7	4.9	20	2.8
DeKalb	40	3.2	1	33.3	7	3.9	32	3.0
Delaware	97	2.4	3	27.3	17	2.4	77	2.3
Dubois	30	2.6	1	14.3	12	5.0	17	1.9
Elkhart	149	2.4	4	16.0	44	4.7	101	1.9
Fayette	15	3.5	0	0.0	5	5.4	10	3.0
Floyd	75	2.9	2	50.0	21	4.3	52	2.5
Fountain	14	4.3	0	0.0	2	3.5	12	4.5
Franklin	23	4.3	3	50.0	7	8.0	13	3.0
Fulton	10	1.8	0	0.0	1	1.2	9	1.9
Gibson	27	2.4	1	11.1	9	4.5	17	1.9
Grant	44	1.9	1	20.0	8	2.3	35	1.8
Greene	19	2.3	2	25.0	5	4.1	12	1.7
Hamilton	145	2.1	2	25.0	46	4.4	97	1.7
Hancock	40	2.8	1	14.3	11	4.1	28	2.5
Harrison	38	3.2	1	12.5	13	6.1	24	2.5
Hendricks	89	2.4	1	10.0	25	4.2	63	2.1
Henry	29	3.1	0	0.0	10	5.3	19	2.5
Howard	49	2.2	1	20.0	15	3.4	33	1.8
Huntington	21	1.8	0	0.0	4	2.1	17	1.7
Jackson	44	2.9	0	0.0	15	6.1	29	2.3
Jasper	46	3.7	5	62.5	18	9.2	23	2.2
Jay	11	1.6	1	20.0	6	6.1	4	0.7
Jefferson	32	3.7	1	11.1	14	8.9	17	2.5
Jennings	22	3.1	3	50.0	8	4.9	11	2.0
Johnson	90	3.1	1	20.0	17	2.9	72	3.1
Knox	35	3.7	1	20.0	13	5.3	21	3.0
Kosciusko	56	2.4	5	50.0	15	4.2	36	1.9
LaGrange	22	2.7	3	37.5	7	6.6	12	1.7
Lake	527	3.4	20	47.6	202	7.3	305	2.4
LaPorte	133	4.2	3	20.0	43	6.5	87	3.5
Lawrence	37	2.6	5	45.5	14	4.9	18	1.6
Madison	85	2.3	0	0.0	21	3.2	64	2.1

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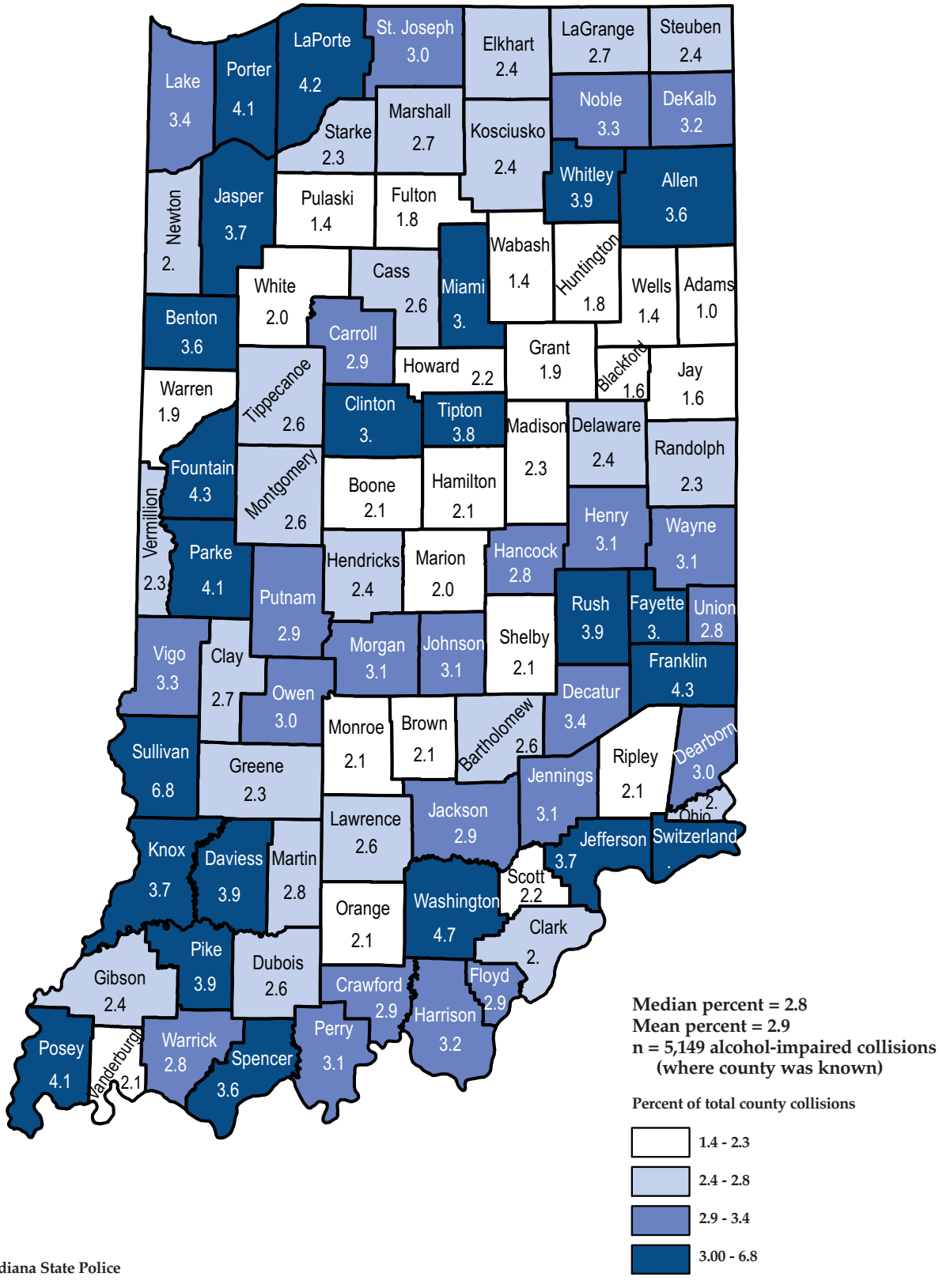
Table 9.4. *(continued)*

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	594	2.0	6	7.9	144	2.7	444	1.9
Marshall	35	2.7	2	25.0	9	4.7	24	2.2
Martin	5	2.8	0	0.0	1	2.4	4	2.9
Miami	29	3.5	0	0.0	5	4.4	24	3.3
Monroe	87	2.1	2	22.2	26	2.8	59	1.8
Montgomery	24	2.6	1	12.5	8	5.0	15	2.0
Morgan	47	3.1	3	27.3	10	2.9	34	2.9
Newton	8	2.5	0	0.0	1	2.1	7	2.6
Noble	40	3.3	0	0.0	12	6.3	28	2.8
Ohio	4	2.5	1	100.0	0	0.0	3	2.0
Orange	14	2.1	0	0.0	5	4.4	9	1.7
Owen	17	3.0	0	0.0	4	3.6	13	2.9
Parke	23	4.1	1	33.3	5	7.0	17	3.5
Perry	14	3.1	0	0.0	4	4.9	10	2.7
Pike	6	3.9	1	20.0	1	2.5	4	3.6
Porter	177	4.1	4	40.0	55	6.1	118	3.4
Posey	21	4.1	0	0.0	4	4.7	17	4.0
Pulaski	6	1.4	1	50.0	0	0.0	5	1.3
Putnam	21	2.9	2	28.6	5	4.1	14	2.4
Randolph	11	2.3	1	20.0	4	4.3	6	1.6
Ripley	16	2.1	0	0.0	1	0.8	15	2.4
Rush	12	3.9	0	0.0	5	6.5	7	3.1
Scott	13	2.2	1	25.0	3	1.9	9	2.2
Shelby	20	2.1	1	16.7	5	2.0	14	2.0
Spencer	19	3.6	0	0.0	8	8.5	11	2.5
St. Joseph	196	3.0	6	33.3	37	2.8	153	2.9
Starke	15	2.3	1	16.7	3	3.1	11	2.0
Steuben	34	2.4	2	50.0	12	7.8	20	1.6
Sullivan	28	6.8	3	42.9	12	14.6	13	4.0
Switzerland	10	5.5	1	25.0	1	4.0	8	5.3
Tippecanoe	183	2.6	5	31.3	52	5.0	126	2.1
Tipton	12	3.8	0	0.0	7	8.4	5	2.2
Union	3	2.8	0	0.0	0	0.0	3	3.2
Vanderburgh	138	2.1	4	26.7	35	2.9	99	1.9
Vermillion	8	2.3	0	0.0	4	7.3	4	1.4
Vigo	102	3.3	2	20.0	30	4.6	70	2.9
Wabash	13	1.4	0	0.0	2	1.5	11	1.4
Warren	5	1.9	0	0.0	0	0.0	5	2.2
Warrick	39	2.8	1	20.0	2	1.0	36	3.1
Washington	33	4.7	3	33.3	9	7.4	21	3.7
Wayne	68	3.1	2	20.0	24	6.3	42	2.4
Wells	8	1.4	0	0.0	3	3.2	5	1.0
White	17	2.0	0	0.0	7	7.1	10	1.4
Whitley	31	3.9	1	14.3	14	9.2	16	2.5
Unknown	3	33.3	0	0.0	0	0.0	3	33.3

Source: Indiana State Police

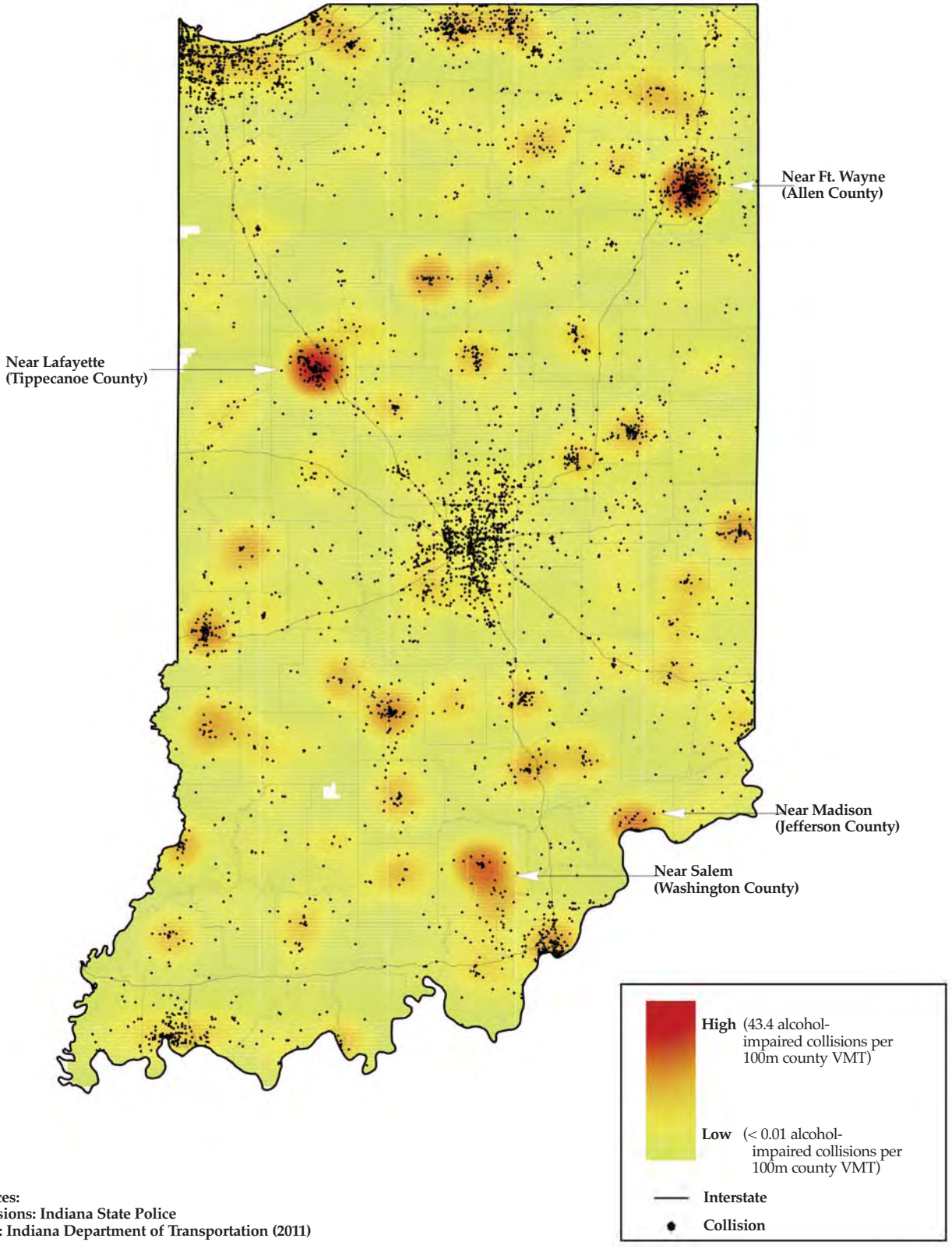
Notes:
1) Percent calculations represent the percent of total county collisions (presented in Table 9.1) in each injury category that are *alcohol-impaired*.
2) Excludes records where county is unknown.
3) Includes collisions where at least one *alcohol-impaired* driver was involved.
4) *Non-fatal injury* includes *incapacitating, non-incapacitating,* and *possible* injury collisions.
5) See glossary for definition of *alcohol-impaired*.

Map 9.6. Percentage of county collisions that involved an alcohol-impaired driver, 2012



Source: Indiana State Police

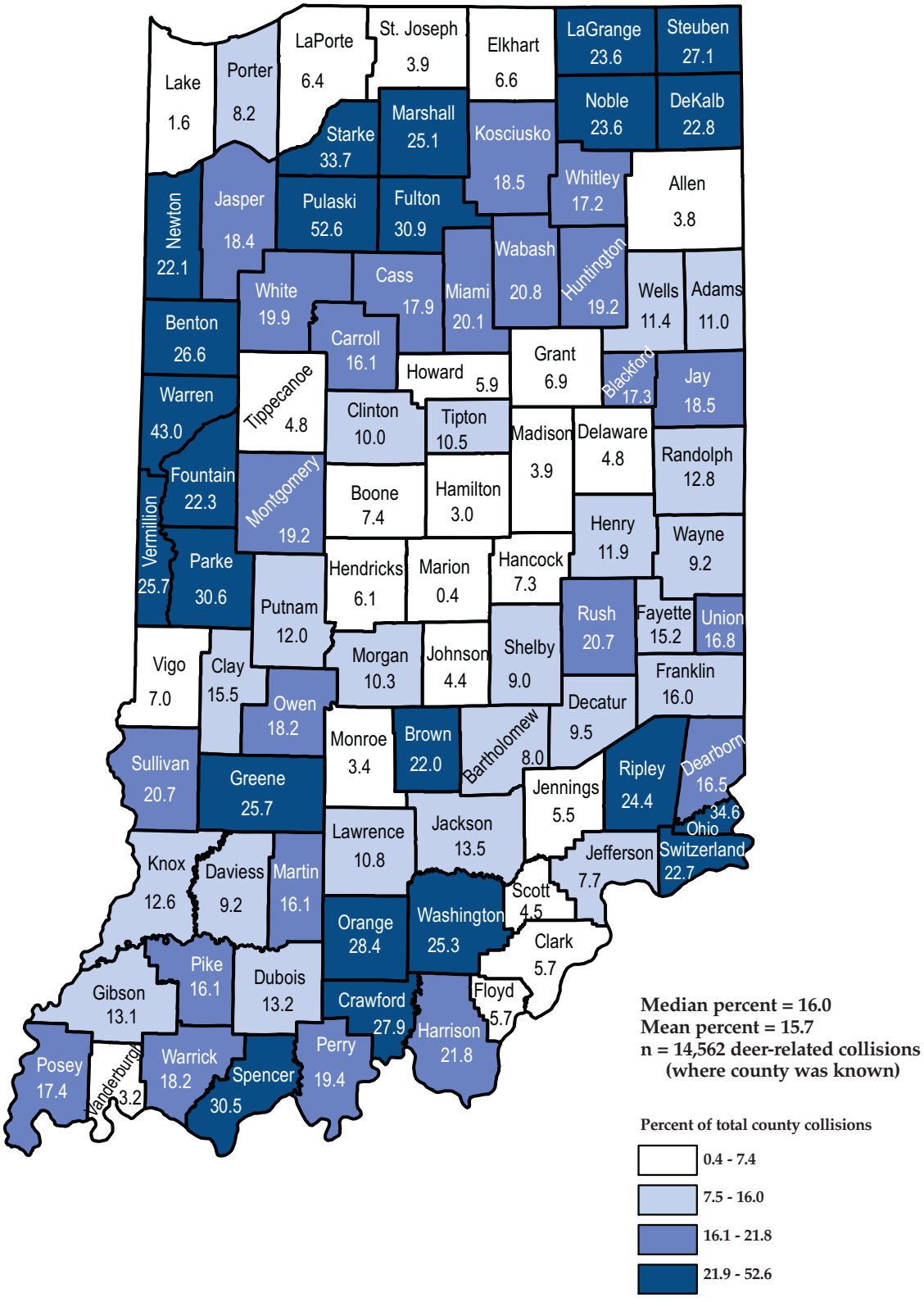
Map 9.7. Indiana alcohol-impaired collision concentrations per 100m county vehicle miles travelled (VMT), 2012



Sources:
Collisions: Indiana State Police
VMT: Indiana Department of Transportation (2011)

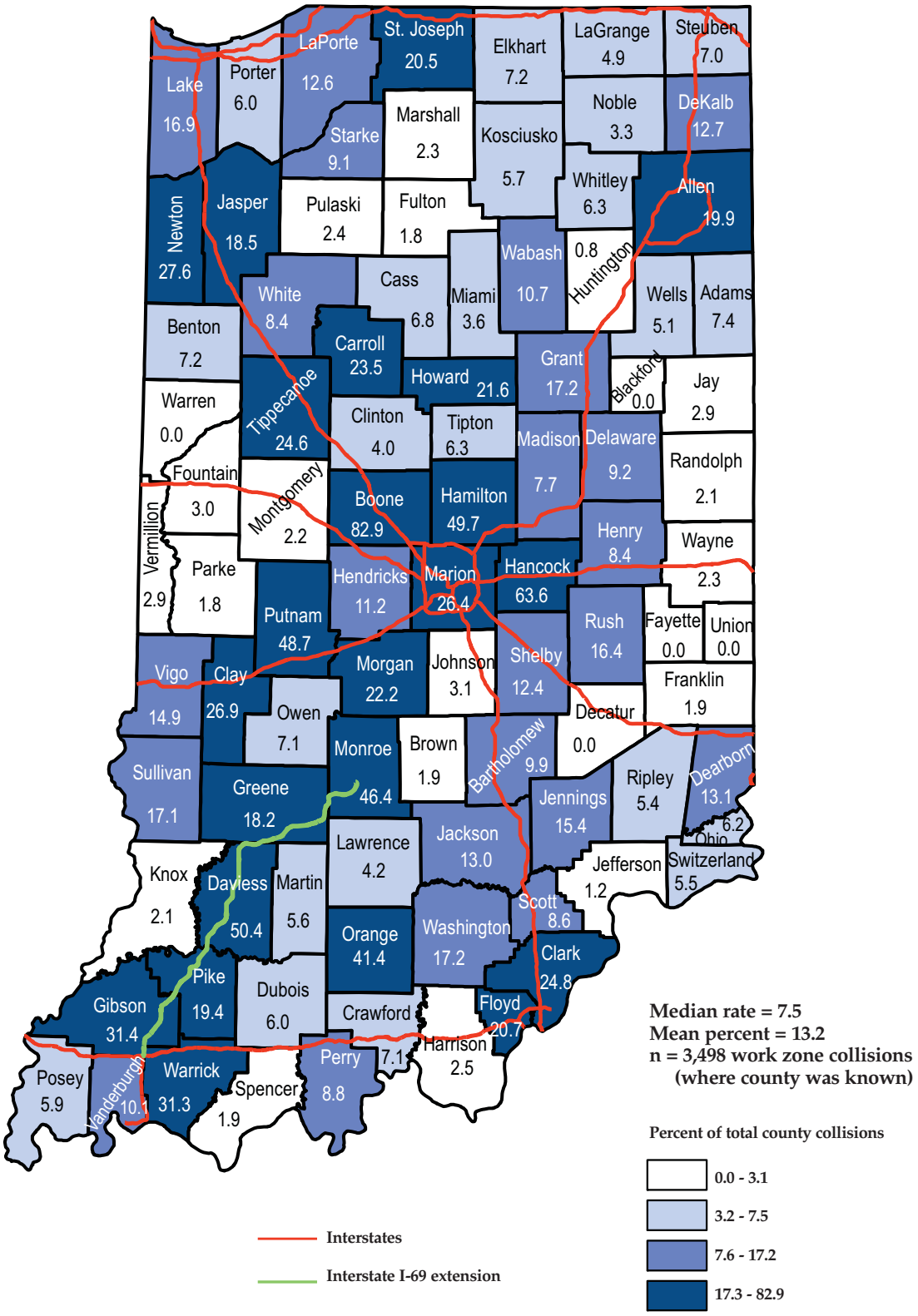
Notes:
1) Density grid is based on points with valid coordinates (4,782/5,152).
2) Places that are labeled have or are near areas with 25 or more alcohol-impaired collisions per 100m VMT.

Map 9.8. Percentage of county collisions that involved deer, 2012



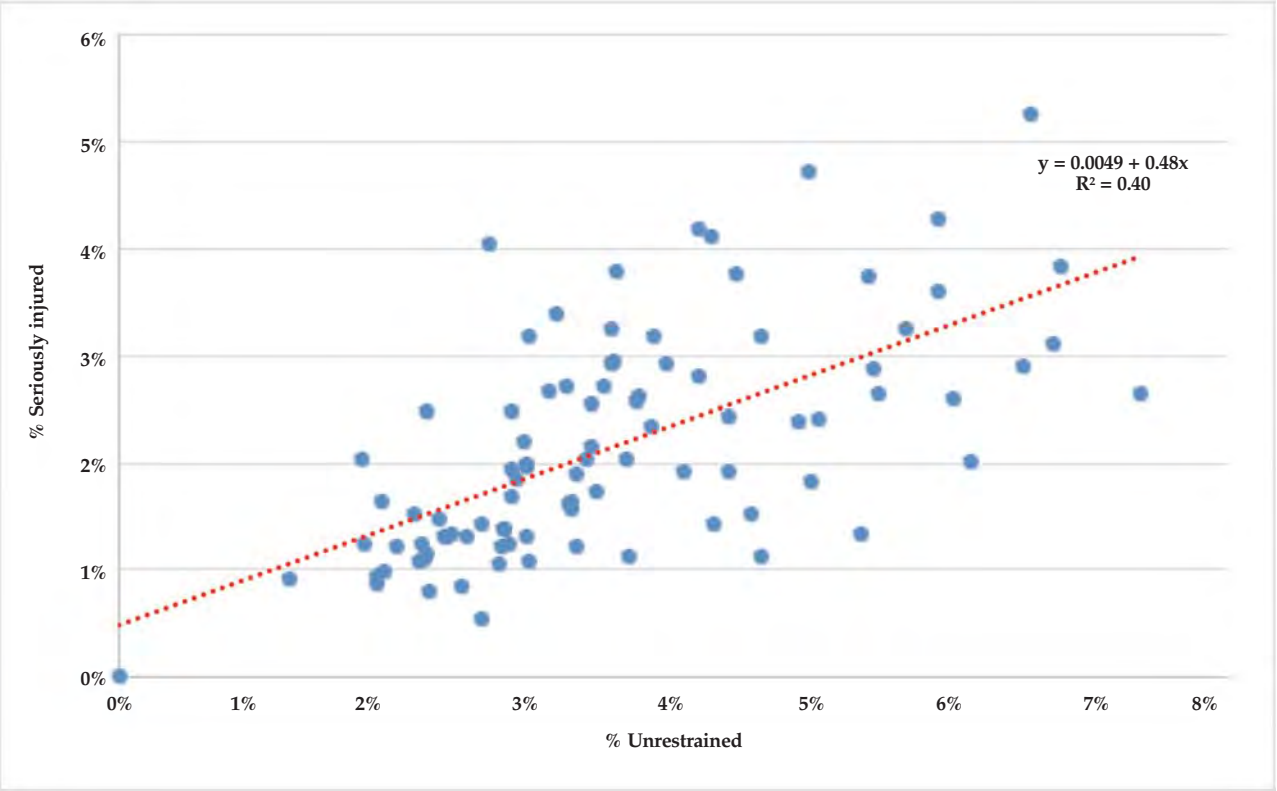
Source: Indiana State Police

Map 9.9. Work zone collisions per 1,000 total county collisions, 2012



Source: Indiana State Police

Figure 9.1. County rates of unrestrained vehicle occupants and serious injuries in collisions, 2012



Source: Indiana State Police

Notes:
1) Points represent each of the 92 Indiana counties: % individuals seriously injured in collisions by % individuals unrestrained in collisions.
2) Serious injuries include those reported as *fatal* and *incapacitating*.

Table 9.5. Vehicle occupants injured in Indiana collisions, by injury status, restraint use, and county, 2012

	Fatal			Incapacitating			Non- incapacitating		
	Total	Unrestrained	% unrestrained	Total	Unrestrained	% unrestrained	Total	Unrestrained	% unrestrained
All counties	**700**	**341**	**48.7**	**3,490**	**993**	**28.5**	**41,287**	**4,192**	**10.2**
Mean	8	4	47.8	38	11	31.4	449	46	12.7
Median	6	3	50	24	7	29	201	25	12
Minimum	0	0	n/a	1	0	0.0	13	1	3.7
Maximum	61	28	100.0	379	84	100.0	6,537	555	25.0
Adams	5	5	100.0	21	3	14.3	116	18	15.5
Allen	30	16	53.3	191	58	30.4	2,738	210	7.7
Bartholomew	8	4	50.0	55	12	21.8	685	69	10.1
Benton	2	1	50.0	1	1	100.0	27	1	3.7
Blackford	2	0	0.0	5	1	20.0	40	4	10.0
Boone	8	2	25.0	29	8	27.6	363	22	6.1
Brown	1	0	0.0	19	7	36.8	120	28	23.3
Carroll	2	2	100.0	10	3	30.0	117	16	13.7
Cass	4	3	75.0	15	4	26.7	257	21	8.2
Clark	11	6	54.5	85	28	32.9	927	88	9.5
Clay	6	2	33.3	16	5	31.3	147	19	12.9
Clinton	5	4	80.0	24	8	33.3	213	53	24.9
Crawford	3	1	33.3	8	3	37.5	64	9	14.1
Daviess	4	1	25.0	11	3	27.3	152	30	19.7
Dearborn	13	6	46.2	54	11	20.4	293	24	8.2
Decatur	6	3	50.0	19	5	26.3	176	25	14.2
DeKalb	3	0	0.0	24	5	20.8	216	19	8.8
Delaware	11	9	81.8	59	16	27.1	912	108	11.8
Dubois	7	2	28.6	28	15	53.6	305	42	13.8
Elkhart	22	11	50.0	105	26	24.8	1,048	112	10.7
Fayette	1	0	0.0	8	4	50.0	114	11	9.6
Floyd	7	1	14.3	56	14	25.0	603	52	8.6
Fountain	4	1	25.0	10	4	40.0	69	8	11.6
Franklin	6	3	50.0	13	6	46.2	108	17	15.7
Fulton	6	0	0.0	9	2	22.2	99	9	9.1
Gibson	10	4	40.0	34	11	32.4	239	29	12.1
Grant	6	3	50.0	41	10	24.4	404	58	14.4
Greene	9	3	33.3	24	10	41.7	146	17	11.6
Hamilton	10	4	40.0	103	24	23.3	1,221	84	6.9
Hancock	6	2	33.3	36	14	38.9	339	41	12.1
Harrison	6	3	50.0	28	8	28.6	246	28	11.4
Hendricks	7	5	71.4	94	23	24.5	705	47	6.7
Henry	3	1	33.3	25	7	28.0	239	23	9.6
Howard	3	1	33.3	28	3	10.7	545	53	9.7
Huntington	8	5	62.5	12	3	25.0	245	29	11.8
Jackson	12	6	50.0	45	18	40.0	303	37	12.2
Jasper	8	7	87.5	36	9	25.0	251	26	10.4
Jay	4	3	75.0	25	6	24.0	119	12	10.1
Jefferson	9	5	55.6	16	4	25.0	182	33	18.1
Jennings	6	5	83.3	38	12	31.6	207	23	11.1
Johnson	5	2	40.0	59	16	27.1	716	64	8.9
Knox	9	1	11.1	17	8	47.1	294	51	17.3
Kosciusko	10	5	50.0	29	6	20.7	468	35	7.5
LaGrange	6	4	66.7	8	4	50.0	121	23	19.0
Lake	38	19	50.0	217	47	21.7	3,438	251	7.3
LaPorte	14	6	42.9	54	12	22.2	755	74	9.8
Lawrence	13	11	84.6	38	13	34.2	342	48	14.0
Madison	12	5	41.7	63	20	31.7	801	91	11.4

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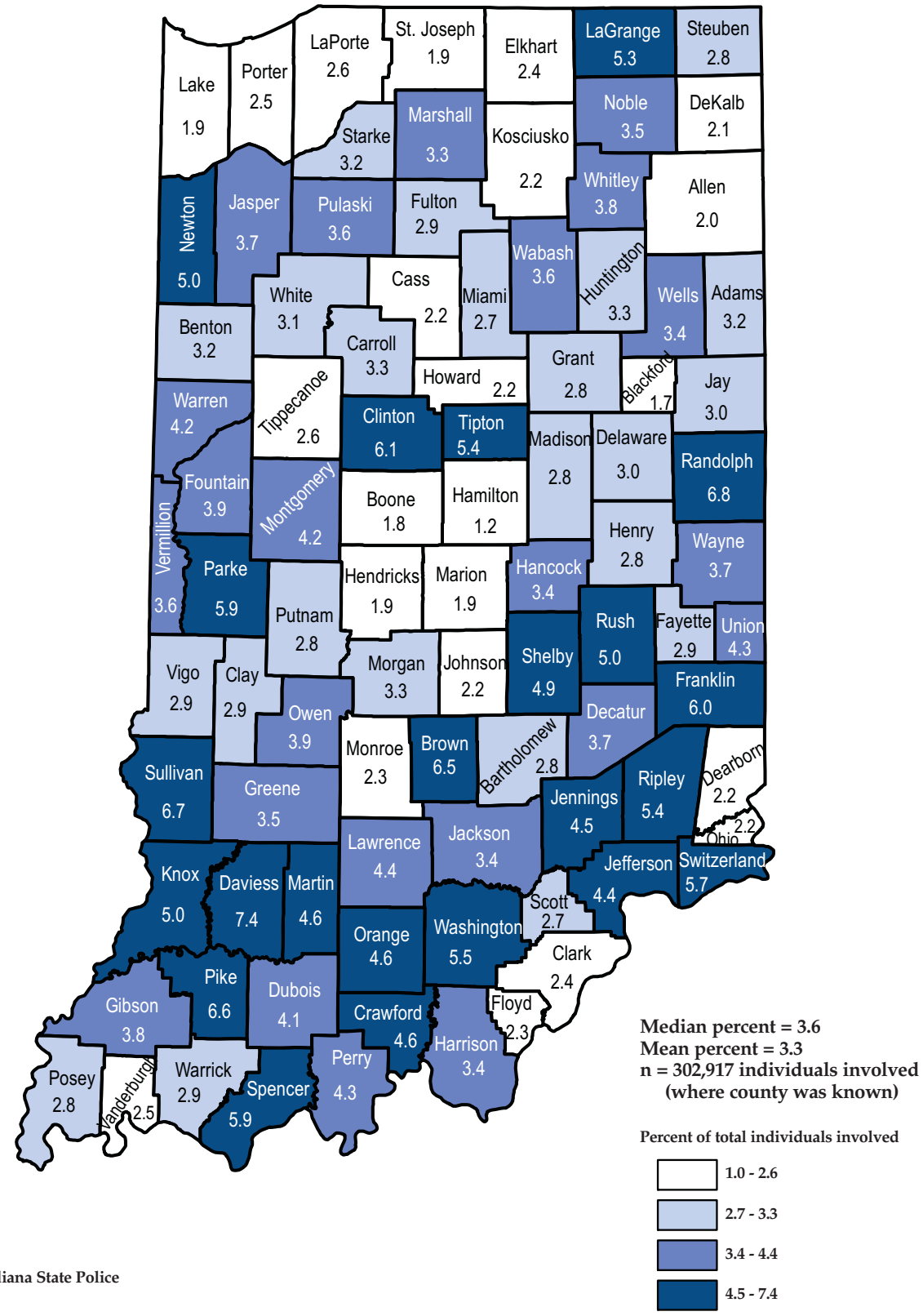
Table 9.5. *(continued)*

	Fatal			Incapacitating			Non- incapacitating		
	Total	Unrestrained	% unrestrained	Total	Unrestrained	% unrestrained	Total	Unrestrained	% unrestrained
Marion	61	28	45.9	379	84	22.2	6,537	555	8.5
Marshall	9	4	44.4	25	9	36.0	236	31	13.1
Martin	0	0	n/a	4	1	25.0	49	7	14.3
Miami	2	1	50.0	10	3	30.0	135	16	11.9
Monroe	10	4	40.0	79	23	29.1	1,042	83	8.0
Montgomery	8	4	50.0	29	13	44.8	202	25	12.4
Morgan	10	4	40.0	31	8	25.8	445	49	11.0
Newton	4	3	75.0	6	1	16.7	56	11	19.6
Noble	1	0	0.0	44	10	22.7	220	22	10.0
Ohio	1	1	100.0	1	0	0.0	16	3	18.8
Orange	0	0	n/a	10	3	30.0	145	30	20.7
Owen	6	2	33.3	17	7	41.2	128	16	12.5
Parke	2	2	100.0	23	13	56.5	77	15	19.5
Perry	4	1	25.0	23	7	30.4	79	11	13.9
Pike	5	4	80.0	7	5	71.4	47	6	12.8
Porter	10	4	40.0	81	28	34.6	1,104	102	9.2
Posey	3	0	0.0	7	2	28.6	99	11	11.1
Pulaski	2	2	100.0	17	5	29.4	40	6	15.0
Putnam	8	3	37.5	20	7	35.0	169	12	7.1
Randolph	6	5	83.3	20	6	30.0	107	21	19.6
Ripley	2	0	0.0	27	9	33.3	152	26	17.1
Rush	1	1	100.0	19	5	26.3	85	13	15.3
St. Joseph	14	7	50.0	91	22	24.2	1,596	120	7.5
Scott	5	2	40.0	36	3	8.3	207	19	9.2
Shelby	6	3	50.0	29	13	44.8	299	42	14.0
Spencer	3	0	0.0	28	10	35.7	124	22	17.7
Starke	6	3	50.0	24	5	20.8	116	12	10.3
Steuben	4	3	75.0	19	7	36.8	178	23	12.9
Sullivan	6	5	83.3	12	9	75.0	101	17	16.8
Switzerland	4	2	50.0	4	0	0.0	32	5	15.6
Tippecanoe	19	11	57.9	41	16	39.0	1,286	186	14.5
Tipton	6	3	50.0	12	3	25.0	115	12	10.4
Union	1	1	100.0	1	0	0.0	13	3	23.1
Vanderburgh	13	9	69.2	87	31	35.6	1,558	176	11.3
Vermillion	6	5	83.3	8	4	50.0	73	5	6.8
Vigo	10	2	20.0	82	23	28.0	750	85	11.3
Wabash	6	2	33.3	38	11	28.9	144	14	9.7
Warren	4	0	0.0	9	4	44.4	36	9	25.0
Warrick	3	2	66.7	43	5	11.6	232	35	15.1
Washington	9	4	44.4	17	3	17.6	165	34	20.6
Wayne	9	4	44.4	26	14	53.8	431	53	12.3
Wells	1	0	0.0	18	7	38.9	110	10	9.1
White	12	3	25.0	20	9	45.0	117	17	14.5
Whitley	7	4	57.1	21	5	23.8	199	30	15.1

Source: Indiana State Police

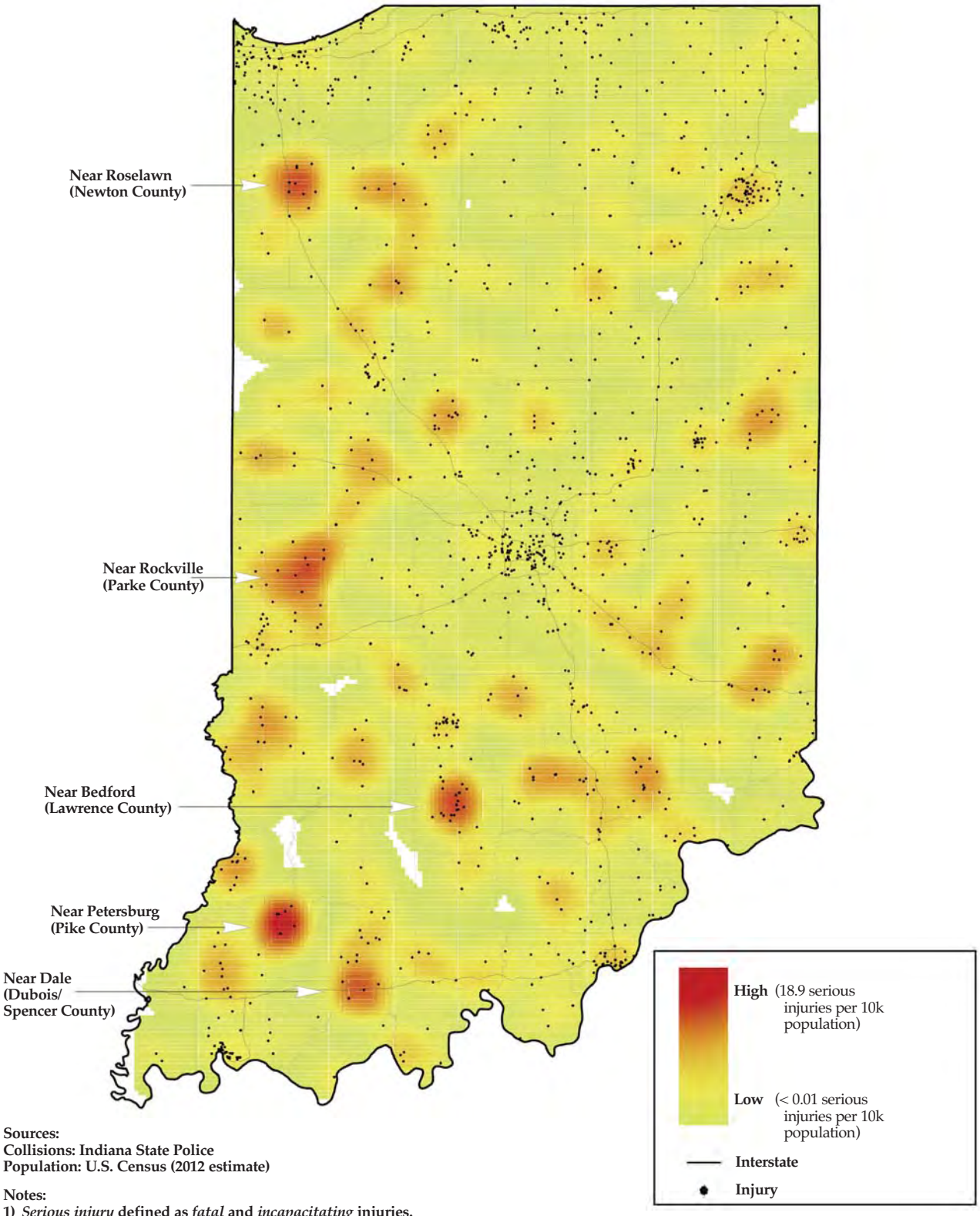
Notes:
1) *Non-incapacitating* injuries include those reported as *non-incapacitating* and *possible*.
2) Includes only vehicle occupants (*drivers* and *passengers*). *Pedestrians* and *pedalcyclists* are excluded.
3) Total counts include vehicle occupants identified as *restrained, unrestrained,* and *unknown* restraint usage.

Map 9.10. Percentage of individuals involved in collisions who were not properly restrained, by county, 2012



Source: Indiana State Police

Map 9.11. Concentrations of serious injuries in Indiana collisions where victim was unrestrained per 10,000 county population, 2012



Sources:
Collisions: Indiana State Police
Population: U.S. Census (2012 estimate)

Notes:
1) *Serious injury* defined as *fatal* and *incapacitating* injuries.
2) Density grid is based on points with valid coordinates (1,298/1,334).
3) Places that are labeled have or are near areas with ten or more serious injuries (victim unrestrained) per 10,000 population.

Table 9.6. Young drivers (ages 15-20) involved in Indiana collisions, by injury severity and county, 2012

	Total		Fatal		Non-fatal injury		Other/no injury	
County	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
All counties	**40,417**	**13.2**	**54**	**6.9**	**4,610**	**9.8**	**35,753**	**13.9**
Mean	439	14.8	1	8.8	50	12.3	389	15.3
Median	203	15	0	0	27	12	168	15
Minimum	18	9.7	0	0.0	1	5.6	17	10.2
Maximum	5,012	20.3	3	100.0	464	25.9	4,545	20.6
Adams	158	16.1	0	0.0	22	15.1	136	16.4
Allen	2,566	13.9	1	2.9	283	9.2	2,282	14.9
Bartholomew	558	14.7	0	0.0	84	10.8	474	15.7
Benton	24	12.9	0	0.0	4	13.8	20	12.9
Blackford	60	17.4	1	50.0	7	15.6	52	17.5
Boone	378	12.5	1	11.1	60	14.7	317	12.2
Brown	108	15.6	0	0.0	21	14.9	87	15.8
Carroll	138	18.0	0	0.0	19	14.8	119	18.7
Cass	237	13.6	0	0.0	21	7.4	216	14.8
Clark	897	12.3	0	0.0	102	9.6	795	12.8
Clay	147	13.1	1	16.7	20	12.0	126	13.2
Clinton	209	14.4	1	16.7	20	8.2	188	15.7
Crawford	57	16.5	0	0.0	6	8.3	51	18.9
Daviess	93	16.1	2	50.0	21	12.4	70	17.3
Dearborn	375	13.9	1	7.7	36	10.2	338	14.4
Decatur	187	15.0	0	0.0	23	11.2	164	15.9
DeKalb	264	14.8	1	33.3	29	12.0	234	15.2
Delaware	954	14.6	0	0.0	96	9.3	858	15.6
Dubois	310	17.0	0	0.0	56	16.6	254	17.2
Elkhart	1,298	13.4	1	3.7	134	10.5	1,163	13.9
Fayette	103	15.0	0	0.0	18	14.2	85	15.2
Floyd	646	15.0	1	14.3	65	9.4	580	16.0
Fountain	69	15.5	1	25.0	11	13.4	57	15.9
Franklin	142	19.4	0	0.0	19	15.4	123	20.4
Fulton	80	10.6	0	0.0	11	10.1	69	10.8
Gibson	236	14.0	1	10.0	36	12.8	199	14.2
Grant	436	12.6	0	0.0	58	12.4	378	12.7
Greene	148	13.0	1	11.1	15	8.6	132	13.9
Hamilton	1,769	14.4	0	0.0	144	10.4	1,625	15.0
Hancock	354	14.6	1	14.3	44	11.3	309	15.2
Harrison	272	16.3	2	25.0	47	16.7	223	16.1
Hendricks	929	15.0	1	10.0	90	10.9	838	15.6
Henry	183	12.5	0	0.0	25	9.1	158	13.4
Howard	571	14.5	0	0.0	68	11.2	503	15.2
Huntington	238	14.4	1	12.5	27	10.0	210	15.2
Jackson	302	13.4	2	16.7	44	11.9	256	13.6
Jasper	247	14.3	0	0.0	36	12.2	211	14.8
Jay	135	14.7	0	0.0	22	15.1	113	14.7
Jefferson	201	15.4	1	11.1	25	12.2	175	16.0
Jennings	219	18.7	0	0.0	30	12.1	189	20.6
Johnson	760	14.8	1	20.0	91	11.2	668	15.4
Knox	243	16.9	1	11.1	39	12.1	203	18.4
Kosciusko	511	14.9	1	10.0	58	11.2	452	15.5
LaGrange	167	15.5	1	12.5	16	11.0	150	16.3
Lake	2,813	10.7	2	4.8	291	7.5	2,520	11.3
LaPorte	616	12.7	0	0.0	74	8.5	542	13.7
Lawrence	316	15.0	2	15.4	39	10.0	275	16.1
Madison	728	12.0	0	0.0	97	10.6	631	12.3

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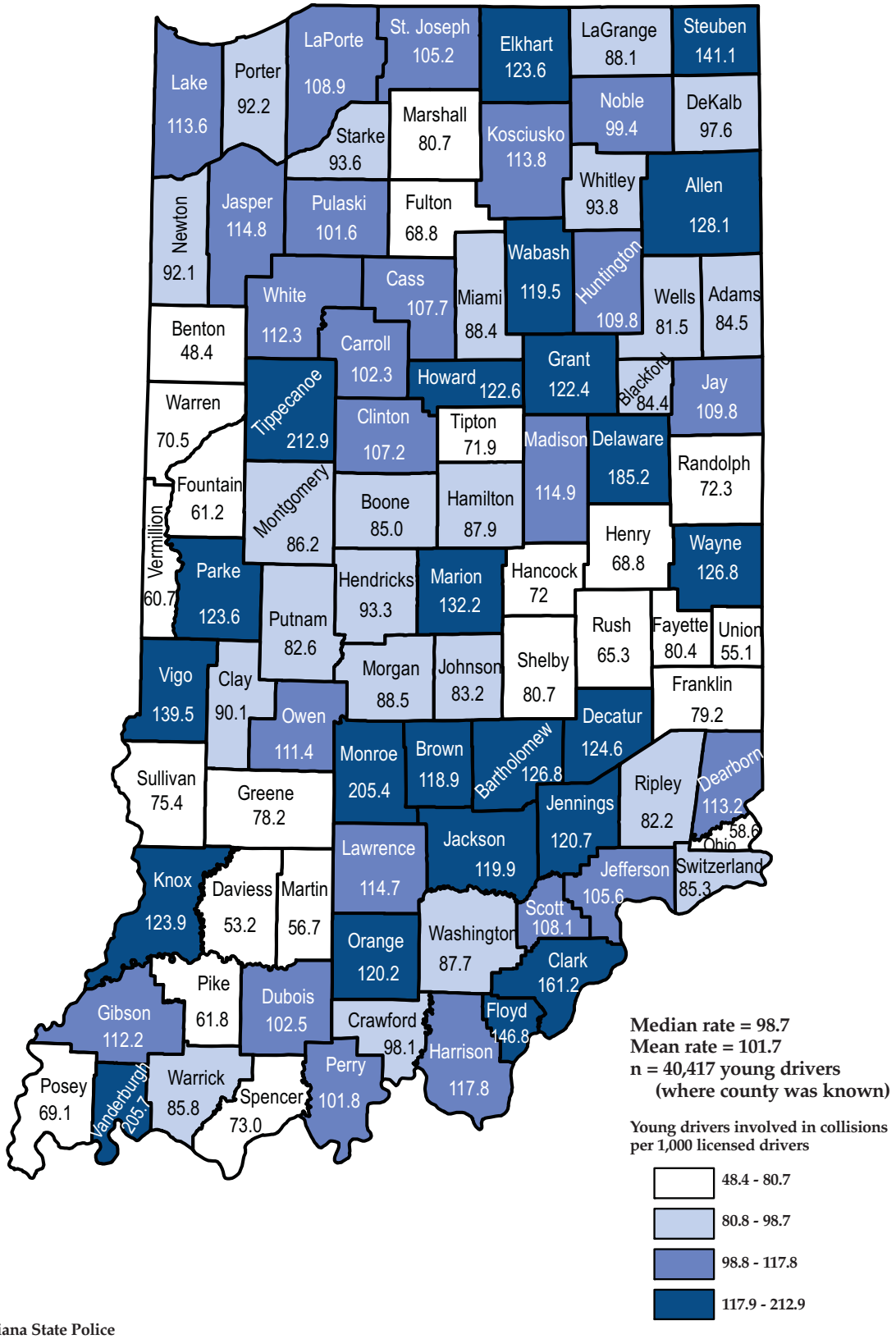
Table 9.6. *(continued)*

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	5,012	9.8	3	3.8	464	6.3	4,545	10.4
Marshall	235	13.0	1	11.1	32	11.8	202	13.3
Martin	38	14.3	0	0.0	7	12.7	31	14.7
Miami	173	15.1	0	0.0	19	12.4	154	15.6
Monroe	1,122	16.2	0	0.0	126	10.2	996	17.6
Montgomery	188	14.2	1	12.5	21	8.9	166	15.4
Morgan	403	15.9	0	0.0	55	11.2	348	17.1
Newton	71	17.0	1	25.0	10	15.9	60	17.1
Noble	278	16.6	0	0.0	37	13.7	241	17.2
Ohio	18	9.7	0	0.0	1	5.6	17	10.2
Orange	151	16.8	0	0.0	27	17.1	124	16.8
Owen	130	16.5	1	16.7	28	18.9	101	15.9
Parke	102	14.6	1	33.3	13	13.0	88	14.8
Perry	102	15.5	2	40.0	18	17.1	82	14.9
Pike	47	20.3	0	0.0	13	22.8	34	20.1
Porter	907	12.9	1	10.0	104	8.4	802	13.8
Posey	119	16.4	0	0.0	14	12.8	105	17.2
Pulaski	85	16.9	0	0.0	15	25.9	70	15.8
Putnam	181	16.0	0	0.0	21	11.1	160	17.1
Randolph	110	16.2	1	16.7	21	16.3	88	16.2
Ripley	156	15.3	0	0.0	29	15.9	127	15.3
Rush	69	16.2	0	0.0	22	20.6	47	14.8
Scott	141	13.9	1	20.0	34	13.9	106	13.8
Shelby	218	14.7	0	0.0	53	15.5	165	14.5
Spencer	104	14.3	0	0.0	20	13.2	84	14.7
St. Joseph	1,389	12.3	2	10.5	137	7.6	1,250	13.2
Starke	125	14.0	2	33.3	17	11.6	106	14.3
Steuben	276	14.6	0	0.0	20	9.9	256	15.2
Sullivan	86	14.8	2	28.6	15	13.2	69	15.0
Switzerland	40	16.0	0	0.0	5	13.5	35	16.7
Tippecanoe	1,705	15.3	2	10.0	146	10.3	1,557	16.0
Tipton	73	15.1	0	0.0	15	11.7	58	16.7
Union	25	17.9	1	100.0	3	21.4	21	16.8
Vanderburgh	1,651	13.9	0	0.0	151	8.7	1,500	14.8
Vermillion	56	11.6	1	16.7	8	9.4	47	12.1
Vigo	701	13.9	0	0.0	79	9.0	622	15.0
Wabash	224	16.5	0	0.0	23	12.0	201	17.3
Warren	40	12.9	0	0.0	5	11.1	35	13.4
Warrick	347	16.5	0	0.0	38	13.4	309	17.1
Washington	150	15.2	0	0.0	27	14.8	123	15.5
Wayne	401	12.8	0	0.0	46	9.6	355	13.4
Wells	151	17.1	0	0.0	13	10.1	138	18.4
White	161	13.4	1	7.7	19	13.7	141	13.4
Whitley	204	16.9	0	0.0	35	15.4	169	17.4

Source: Indiana State Police

Notes:
1) ***Non-fatal*** **injury includes** ***incapacitating, non-incapacitating*** **and** ***possible*** **injuries.**
2) ***Other injury*** **includes** ***refused, unknown*****, invalid, and** ***uninjured*** **injury statuses.**

Map 9.12. Young drivers (ages 15-20) involved in collisions per 1,000 licensed young drivers, 2012



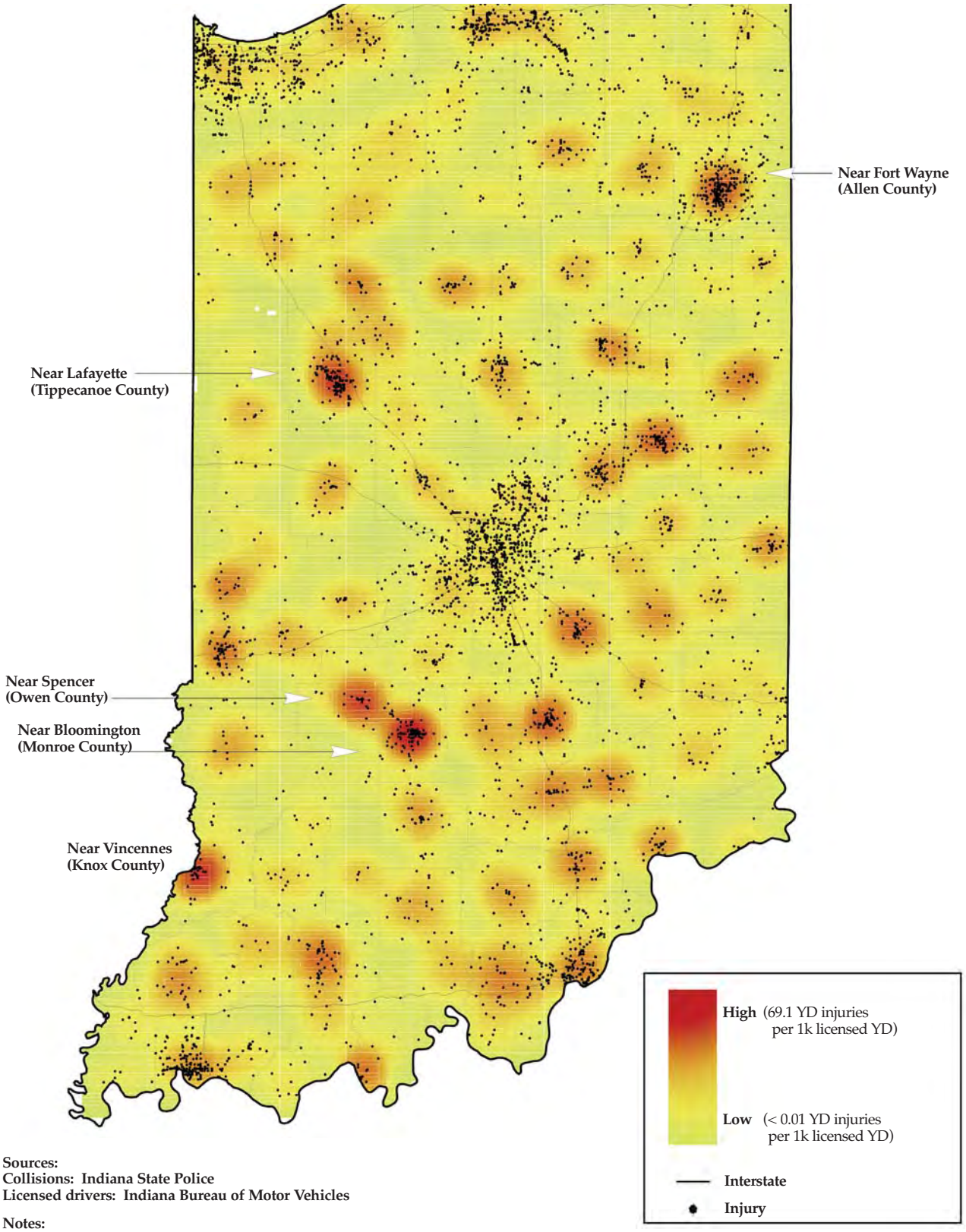
Median rate = 98.7
Mean rate = 101.7
n = 40,417 young drivers (where county was known)

Young drivers involved in collisions per 1,000 licensed drivers

- 48.4 - 80.7
- 80.8 - 98.7
- 98.8 - 117.8
- 117.9 - 212.9

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

Map 9.13. Concentrations of young driver (ages 15-20) injuries in Indiana collisions per 1,000 county licensed young drivers, 2012



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

Notes:
1) Includes all injury types.
2) Density grid is based on points with valid coordinates (4,790/4,951).
3) Places that are labeled have or are near areas with 50 or more young driver injuries per 1,000 licensed young drivers.

Table 9.7. Indiana collisions involving motorcycles, by severity and county, 2012

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
All counties	**4,104**	**2.2**	**146**	**20.3**	**2,892**	**8.5**	**1,066**	**0.7**
Mean	45	2.4	2	16.6	31	9.8	12	0.7
Median	23	2.2	1	12.2	15	9.1	5	0.7
Minimum	0	0.0	0	0.0	0	0.0	0	0.0
Maximum	490	6.7	19	100.0	331	22.8	140	2.9
Adams	12	1.8	1	33.3	5	4.9	6	1.0
Allen	236	2.1	9	30.0	170	7.6	57	0.6
Bartholomew	59	2.7	2	25.0	50	8.6	7	0.4
Benton	3	2.2	0	0.0	1	4.8	2	1.7
Blackford	3	1.2	0	0.0	3	10.7	0	0.0
Boone	23	1.2	0	0.0	14	4.9	9	0.5
Brown	35	6.7	0	0.0	23	22.8	12	2.9
Carroll	10	1.8	0	0.0	9	10.1	1	0.2
Cass	21	1.8	2	50.0	14	7.0	5	0.5
Clark	92	2.1	4	28.6	61	7.9	27	0.7
Clay	12	1.6	0	0.0	9	7.8	3	0.5
Clinton	31	3.1	1	16.7	22	14.1	8	1.0
Crawford	5	1.8	0	0.0	4	8.2	1	0.4
Daviess	10	2.8	0	0.0	10	7.9	0	0.0
Dearborn	24	1.3	0	0.0	18	7.1	6	0.4
Decatur	16	1.9	1	20.0	10	6.9	5	0.7
DeKalb	26	2.1	0	0.0	19	10.6	7	0.6
Delaware	98	2.4	3	27.3	60	8.3	35	1.1
Dubois	45	3.9	0	0.0	43	17.8	2	0.2
Elkhart	159	2.6	4	16.0	100	10.7	55	1.1
Fayette	16	3.7	0	0.0	12	12.9	4	1.2
Floyd	52	2.0	0	0.0	43	8.8	9	0.4
Fountain	5	1.5	1	25.0	4	7.0	0	0.0
Franklin	19	3.6	1	16.7	12	13.6	6	1.4
Fulton	12	2.1	1	20.0	7	8.2	4	0.8
Gibson	24	2.2	1	11.1	18	9.1	5	0.6
Grant	78	3.4	2	40.0	52	14.8	24	1.3
Greene	19	2.3	0	0.0	12	9.8	7	1.0
Hamilton	120	1.7	0	0.0	91	8.6	29	0.5
Hancock	27	1.9	0	0.0	19	7.1	8	0.7
Harrison	30	2.5	0	0.0	24	11.3	6	0.6
Hendricks	58	1.6	1	10.0	42	7.0	15	0.5
Henry	17	1.8	0	0.0	14	7.4	3	0.4
Howard	75	3.3	0	0.0	54	12.2	21	1.2
Huntington	23	2.0	3	42.9	16	8.5	4	0.4
Jackson	39	2.5	2	18.2	29	11.7	8	0.6
Jasper	23	1.9	4	50.0	12	6.1	7	0.7
Jay	10	1.5	2	40.0	6	6.1	2	0.3
Jefferson	29	3.4	1	11.1	17	10.8	11	1.6
Jennings	23	3.2	3	50.0	15	9.1	5	0.9
Johnson	74	2.5	2	40.0	59	9.9	13	0.6
Knox	35	3.7	0	0.0	32	13.0	3	0.4
Kosciusko	63	2.7	3	30.0	32	8.9	28	1.5
LaGrange	15	1.8	2	25.0	4	3.8	9	1.3
Lake	225	1.4	13	31.0	147	5.3	65	0.5
LaPorte	73	2.3	2	13.3	57	8.7	14	0.6
Lawrence	47	3.3	6	54.5	30	10.5	11	1.0
Madison	96	2.5	4	28.6	62	9.5	30	1.0

continued on next page

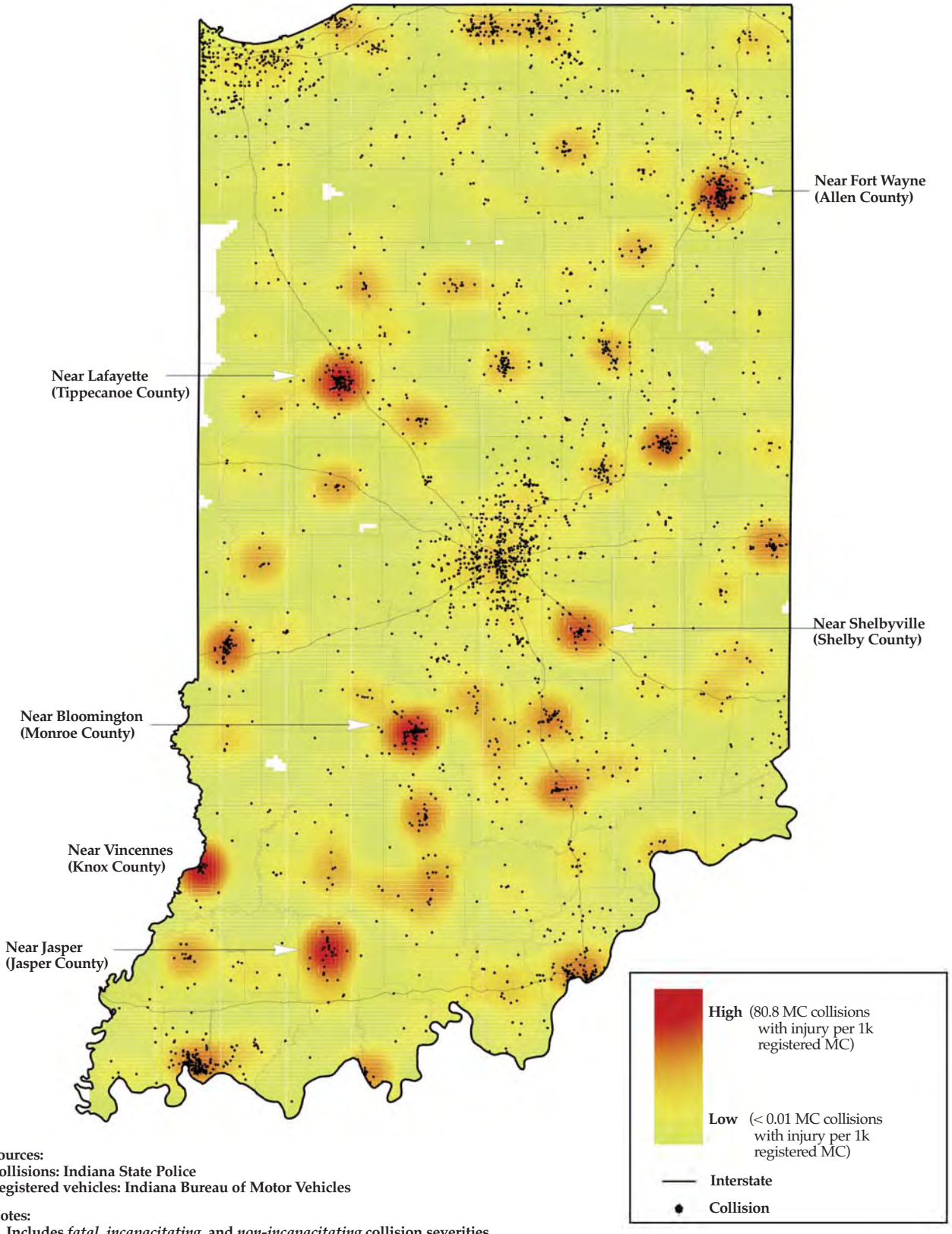
Table 9.7. *(continued)*

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	490	1.7	19	25.0	331	6.1	140	0.6
Marshall	26	2.0	2	25.0	22	11.6	2	0.2
Martin	9	5.0	0	0.0	9	22.0	0	0.0
Miami	17	2.0	1	50.0	11	9.6	5	0.7
Monroe	111	2.6	2	22.2	84	8.9	25	0.8
Montgomery	23	2.5	2	25.0	16	9.9	5	0.7
Morgan	47	3.1	3	27.3	31	9.0	13	1.1
Newton	4	1.2	0	0.0	3	6.3	1	0.4
Noble	27	2.2	1	50.0	14	7.4	12	1.2
Ohio	3	1.9	0	0.0	2	14.3	1	0.7
Orange	18	2.8	0	0.0	17	14.9	1	0.2
Owen	12	2.1	0	0.0	12	10.7	0	0.0
Parke	14	2.5	0	0.0	9	12.7	5	1.0
Perry	23	5.1	0	0.0	17	20.7	6	1.6
Pike	5	3.2	0	0.0	4	10.0	1	0.9
Porter	88	2.0	5	50.0	74	8.2	9	0.3
Posey	15	2.9	0	0.0	10	11.8	5	1.2
Pulaski	4	1.0	0	0.0	3	6.7	1	0.3
Putnam	15	2.1	2	28.6	6	4.9	7	1.2
Randolph	15	3.1	1	20.0	9	9.7	5	1.3
Ripley	12	1.6	0	0.0	11	9.0	1	0.2
Rush	6	2.0	1	100.0	5	6.5	0	0.0
Scott	14	2.4	0	0.0	13	8.1	1	0.2
Shelby	48	4.9	2	33.3	41	16.3	5	0.7
Spencer	8	1.5	0	0.0	5	5.3	3	0.7
St. Joseph	103	1.6	1	5.6	80	6.0	22	0.4
Starke	12	1.8	1	16.7	8	8.3	3	0.5
Steuben	33	2.3	2	50.0	21	13.7	10	0.8
Sullivan	9	2.2	0	0.0	7	8.5	2	0.6
Switzerland	7	3.9	0	0.0	4	16.0	3	2.0
Tippecanoe	157	2.3	5	31.3	98	9.5	54	0.9
Tipton	5	1.6	0	0.0	5	6.0	0	0.0
Union	0	0.0	0	0.0	0	0.0	0	0.0
Vanderburgh	192	3.0	3	20.0	141	11.7	48	0.9
Vermillion	7	2.0	0	0.0	5	9.1	2	0.7
Vigo	81	2.6	3	30.0	60	9.2	18	0.7
Wabash	28	3.0	0	0.0	16	11.9	12	1.5
Warren	5	1.9	0	0.0	5	16.7	0	0.0
Warrick	30	2.2	1	20.0	24	12.0	5	0.4
Washington	22	3.2	3	33.3	11	9.1	8	1.4
Wayne	68	3.1	1	10.0	49	13.0	18	1.0
Wells	10	1.7	0	0.0	5	5.3	5	1.0
White	15	1.8	2	22.2	12	12.1	1	0.1
Whitley	19	2.4	2	28.6	15	9.9	2	0.3

Source: Indiana State Police

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

Map 9.14. Concentrations of motorcycle collisions with injuries in Indiana per 1,000 county registered motorcycles, 2012

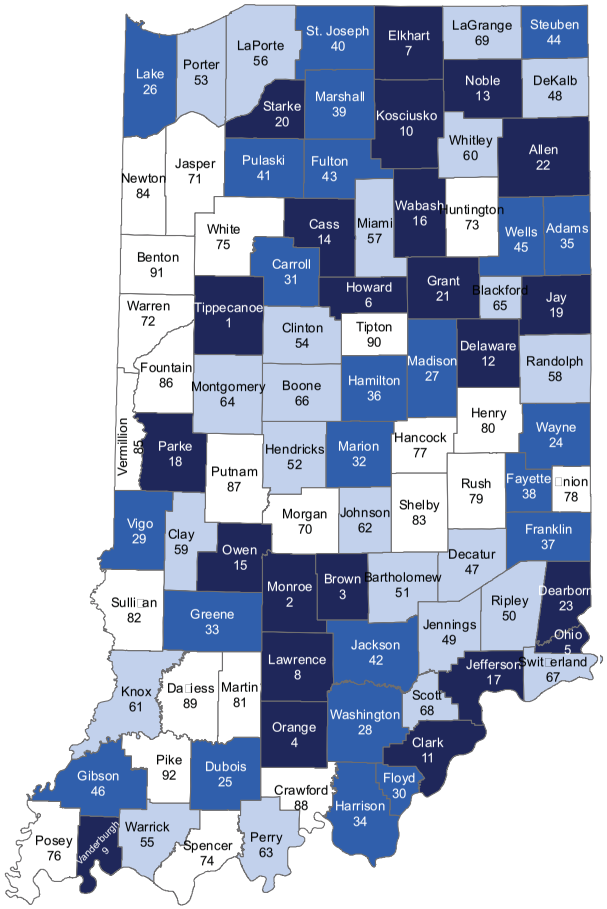


Sources:
Collisions: Indiana State Police
Registered vehicles: Indiana Bureau of Motor Vehicles

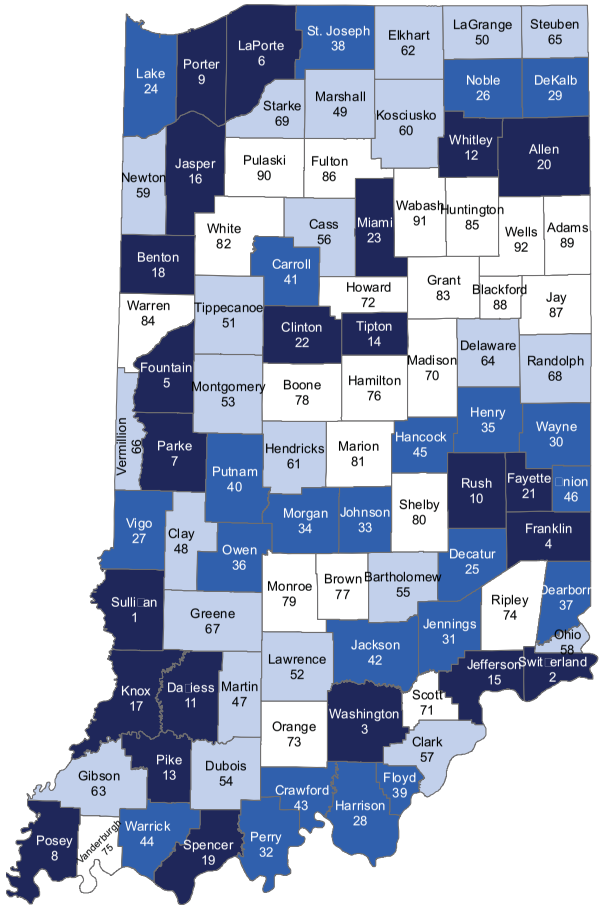
Notes:
1) Includes *fatal, incapacitating,* and *non-incapacitating* collision severities.
2) Includes collisions where at least one motorcycle or moped was involved.
3) Density grid is based on points with valid coordinates (2,968/3,038).
4) Places that are labeled have or are near areas with 60 or more motorcycle collisions per 1,000 registrations.

County ranks (descending order), by collision metric, 2012

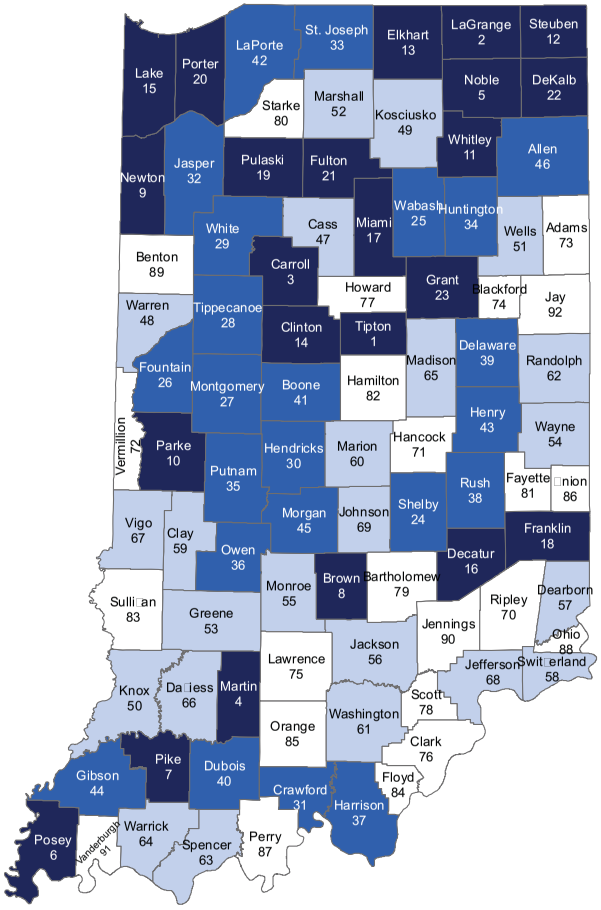
Map 9.15. Total collisions, per 100m vehicle miles traveled (VMT)



Map 9.16. Alcohol-impaired collisions, as % of total collisions



Map 9.17. Speed-related collisions, as % of total collisions



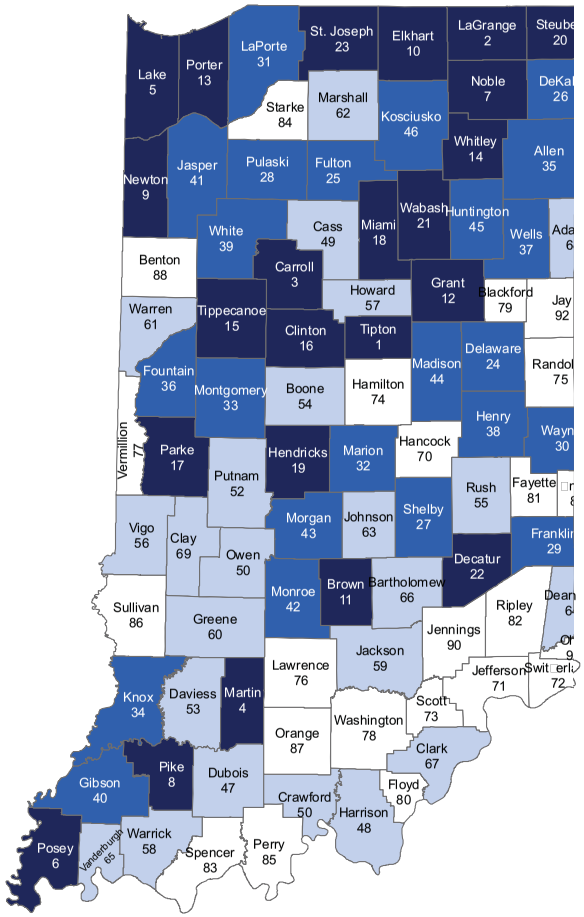
Rank quartile

- 1 - 23 (worst)
- 24 - 46
- 47 - 69
- 70 - 92 (best)

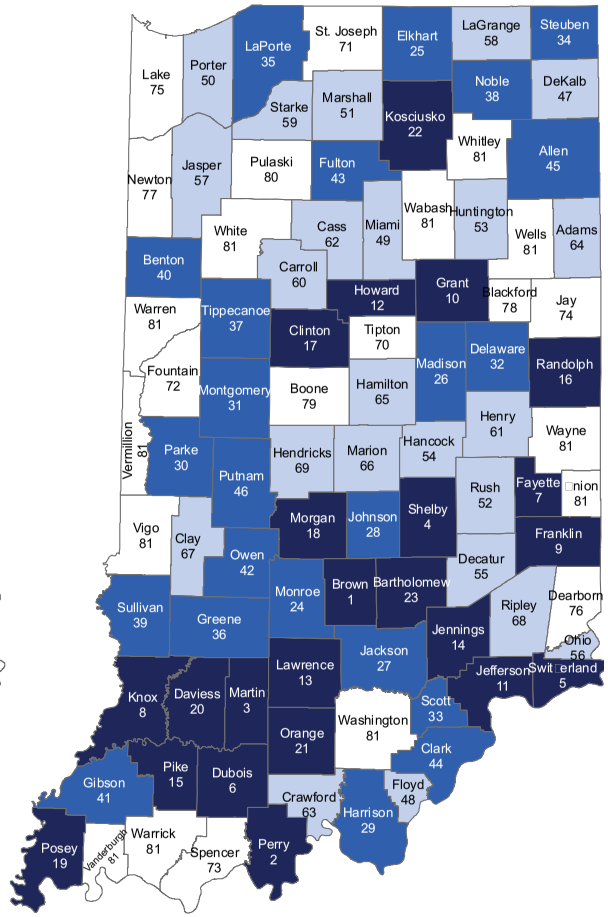
Sources:
Collisions: Indiana State Police
VMT: Indiana Department of Transportation (2011)

County ranks (descending order), by collision metric, 2012 (continued)

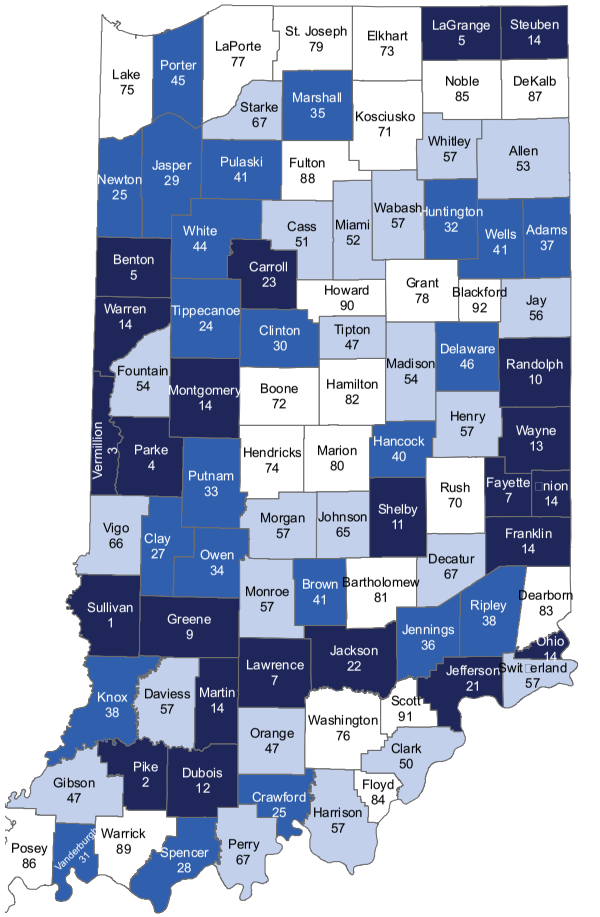
Map 9.18. Dangerous driving collisions, as % of total collisions



Map 9.19. Motorcycle-involved collisions, as % of total collisions



Map 9.20. Unrestrained serious injuries, as % of total serious injuries



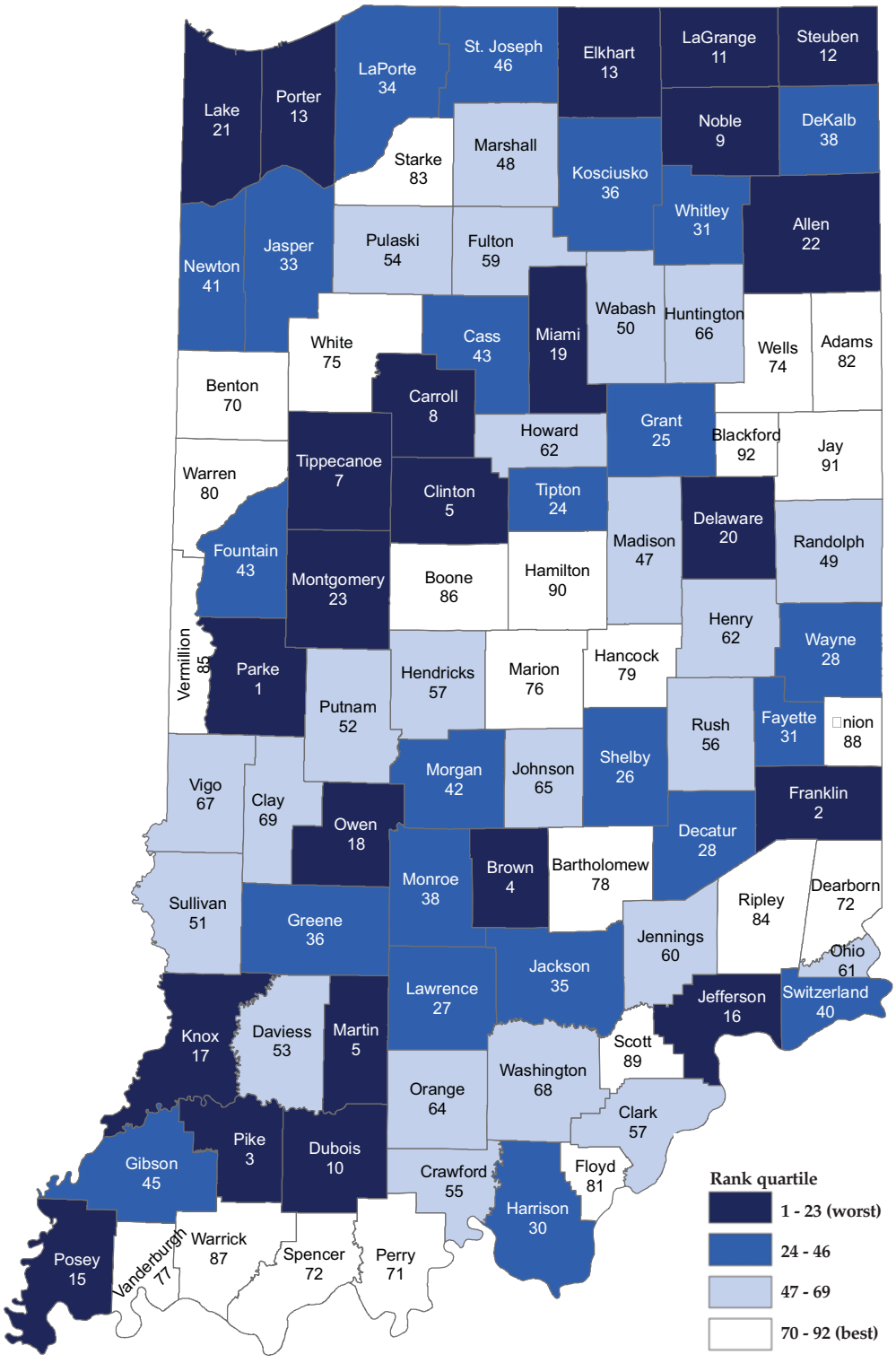
Rank quartile

- 1 - 23 (worst)
- 24 - 46
- 47 - 69
- 70 - 92 (best)

Source: Indiana State Police

Notes:
1) *Dangerous driving* includes collisions involving *aggressive driving, disregarding traffic signals*, or *speeding*.
2) Motorcycle collisions defined as collisions with at least one motorcycle or moped involved.
3) *Serious injuries* defined as *fatal* and *incapacitating* injuries.
4) Ties received the same rank.

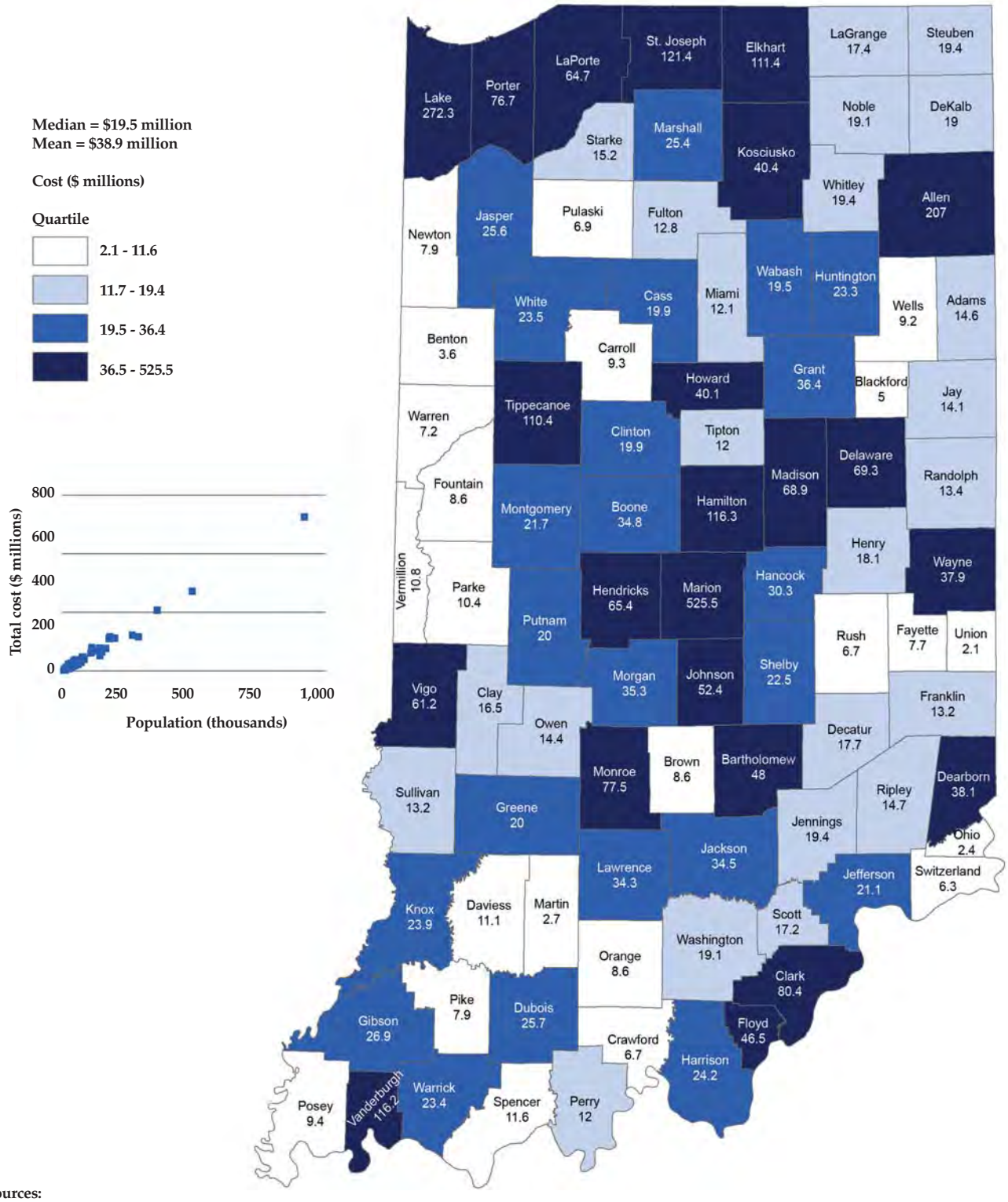
Map 9.21. County rank, composite (average, six metrics), 2012



Source: Indiana State Police

Notes:
1) Composite rank is the ascending order rank of the average county ranks. For example, the average rank of the six metrics for Adams County is 54.4. This results in a composite rank of 68 when compared to the average ranks of the remaining 91 counties.
2) Ties received the same rank.

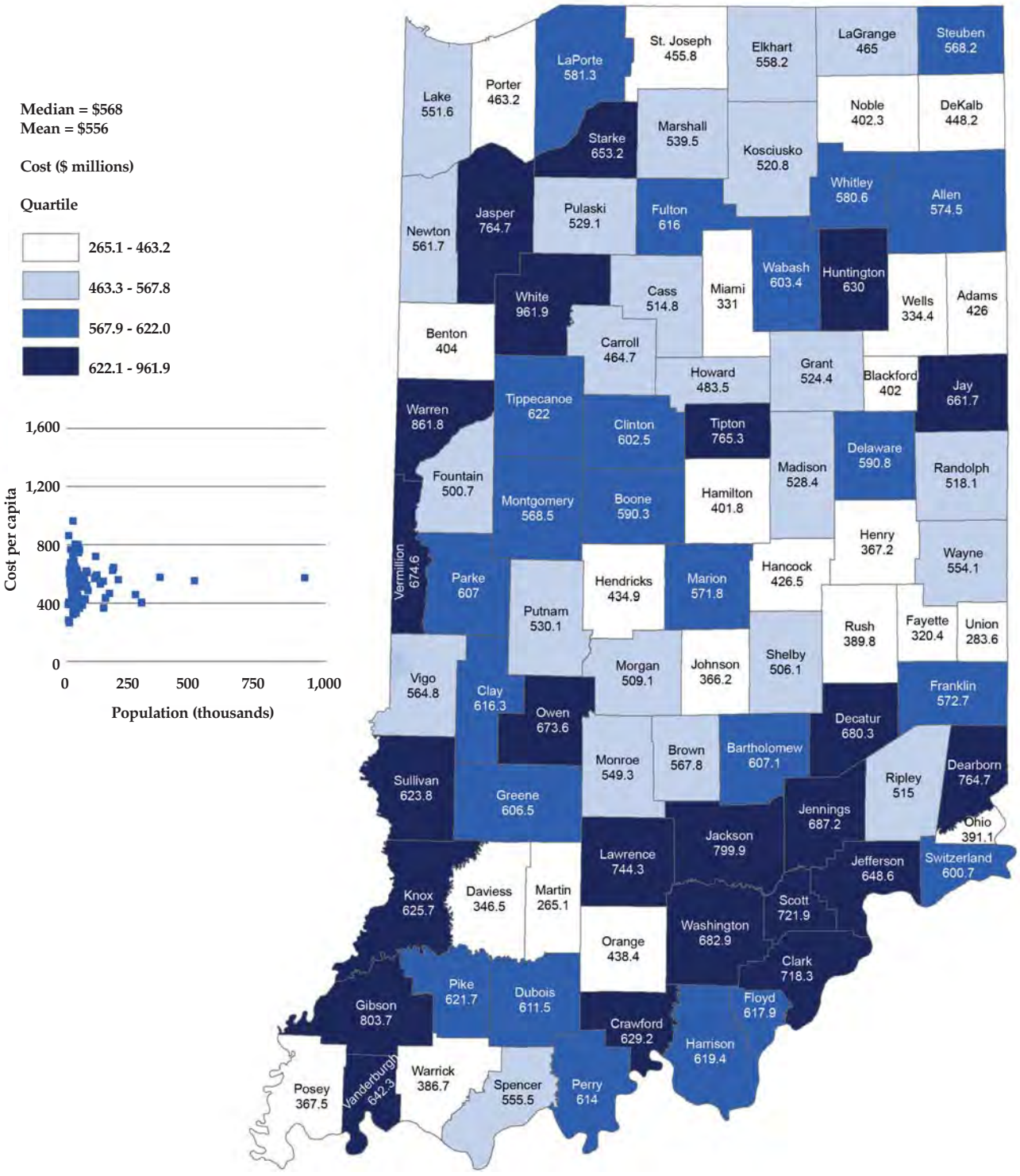
Map 9.22. Estimated costs of Indiana collisions ($ millions), by county, 2012



Sources:
Collisions: Source: Indiana State Police
Cost: Blincoe, L., Seay, A., Zaloshnja, E., Miller, T., Romano, E., Luchter, S., Spicer, R. (2000)
***The economic impact of motor vehicle crashes, 2000*. National Highway Traffic Safety Administration, DOT HS 809 446.**
Bureau of Labor Statistics, http://www.bls.gov.

Notes:
1) All costs in 2012 dollars.
2) See Appendix A for discussion of cost calculations.

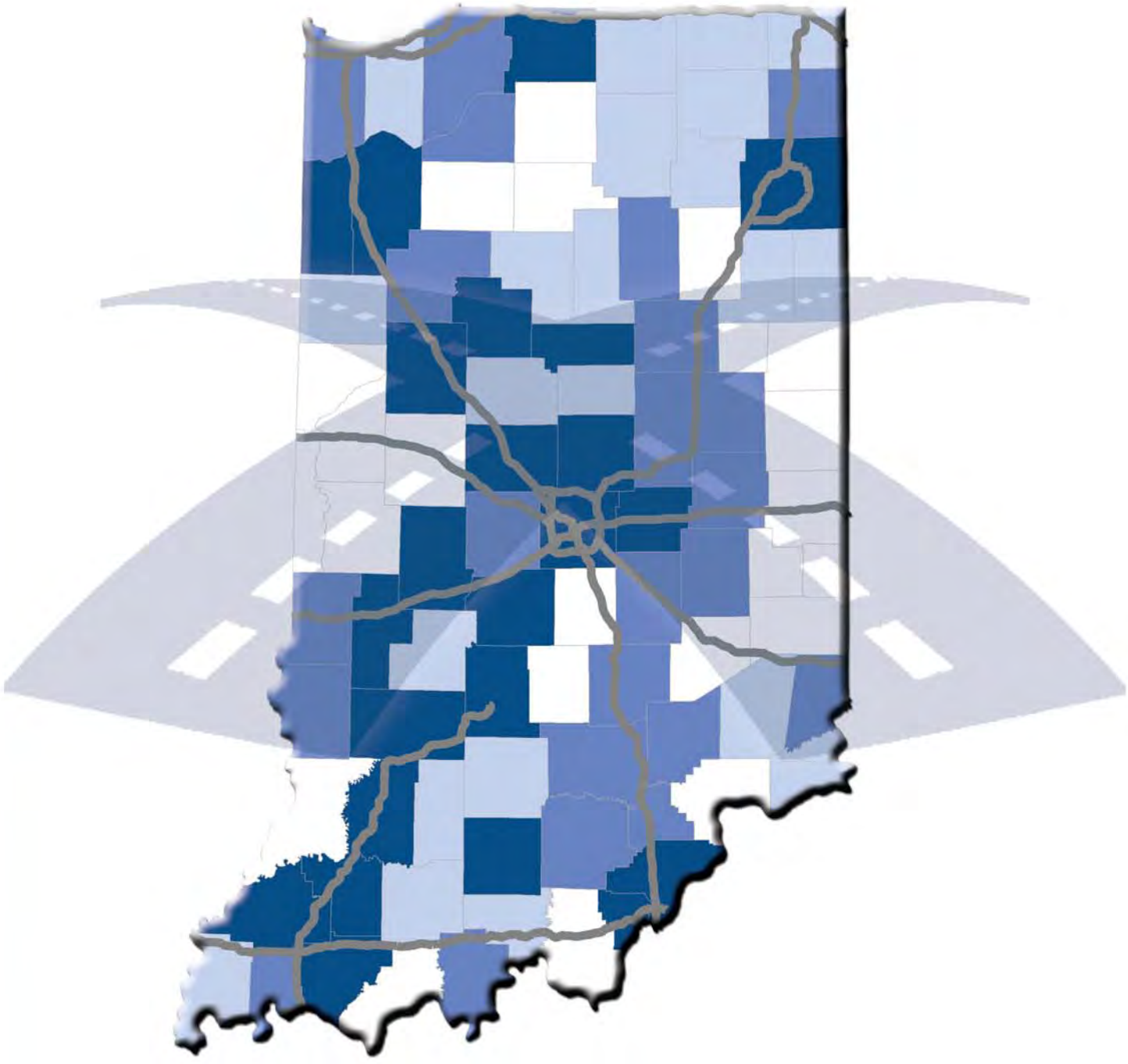
Map 9.23. Estimated costs per capita of Indiana collisions, by county, 2012



Sources:
Collisions: Source: Indiana State Police
Cost: Blincoe, L., Seay, A., Zaloshnja, E., Miller, T., Romano, E., Luchter, S., Spicer, R. (2000)
The economic impact of motor vehicle crashes, 2000. National Highway Traffic Safety Administration, DOT HS 809 446.
Bureau of Labor Statistics, http://www.bls.gov.

Notes:
1) All costs in 2012 dollars.
2) See Appendix A for discussion of cost calculations.

DATA SOURCES

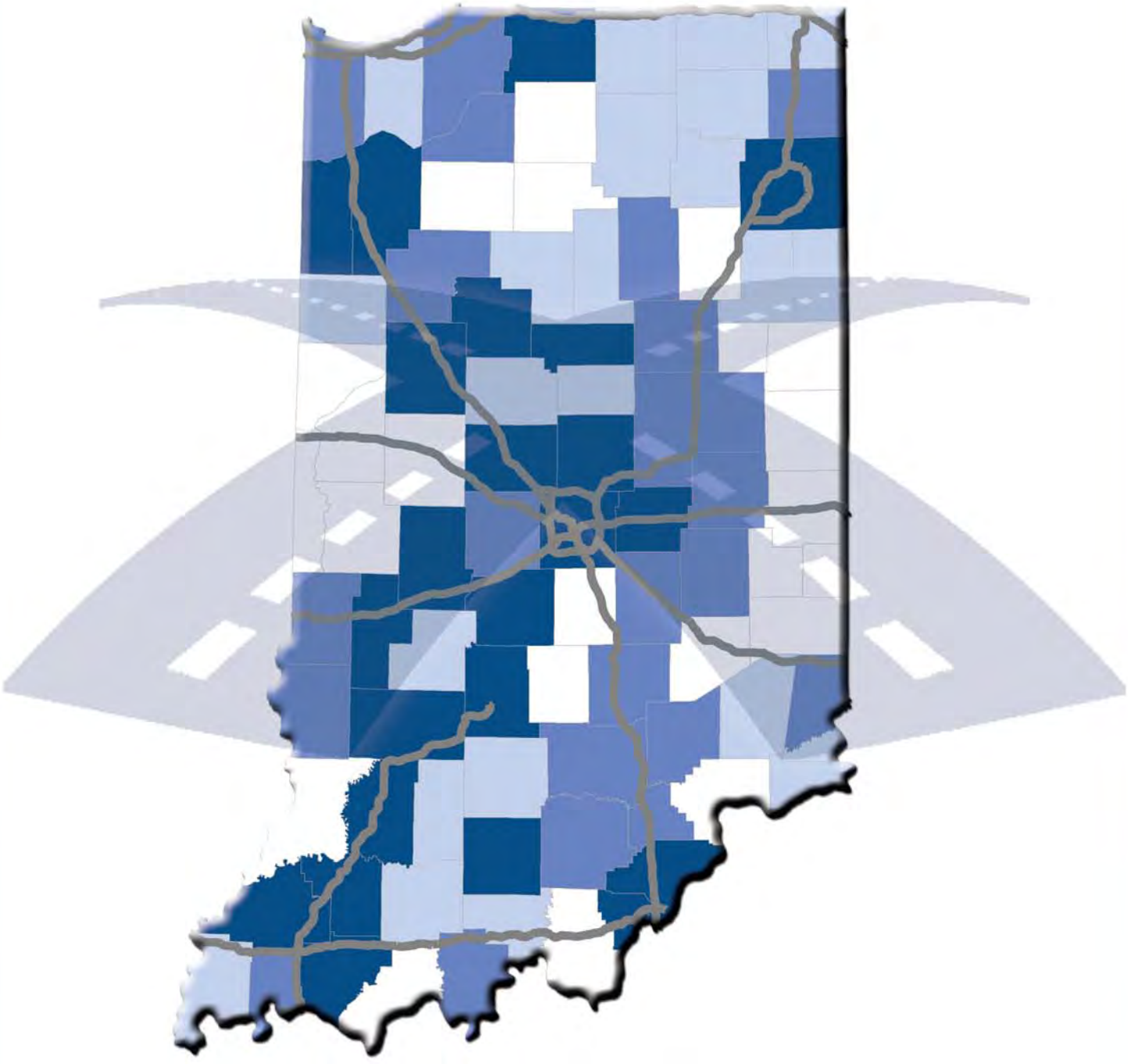


DATA SOURCES

Data in this publication come from the following sources:

- Indiana State Police Automated Reporting Information Exchange System (ARIES), current as of April 9, 2013
- Indiana Bureau of Motor Vehicles, current as of April 9, 2013
- Indiana Department of Transportation, county level VMT, 2011
- Bureau of Transportation Statistics, State Transportation Statistics, accessed at http://www.bts.gov/publications/state_transportation_statistics/
- Fatality Analysis Reporting System, National Highway Traffic Safety Administration, accessed at http://www-fars.nhtsa.dot.gov/Main/index.aspx
- 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 at http://www.census.gov/popest/data/intercensal/state/state2010.html
- U.S. Census Bureau, Population Division, Table 1. Annual Estimates of the Resident Population by Sex and Age: April 1, 2010 to July 1, 2012 (NST-EST2012-01), accessed at http://www.census.gov/popest/data/state/totals/2012/index.html
- U.S. Census Bureau, Annual Estimates of the Resident Population by Single-Year of Age and Sex for the United States and States (2011), provided by the Indiana Business Research Center, Indiana University

INDIANA STANDARD CRASH REPORT, GLOSSARY, APPENDIX



INDIANA OFFICER'S STANDARD CRASH REPORT

INDIANA OFFICER'S STANDARD CRASH REPORT

Electronic Version

Page | of | Local ID

Date of Crash	Day of Week	Actual Local Time	County	Township	# Motor Vehicles	# Injured	# Dead	# Commercial Vehicles	# Deer

Road Crash Occurred On	Nearest/Intersecting Road/MileMarker/Interchange	If not an intersection, number of feet from	Direction	Road Classification

Inside Corporate Limits?	City/Town or Nearest City/Town	Property?	Crash Latitude	Crash Longitude

Driver #1	Driver #2	Driver #3	Driver #4

Driver Contributing Circumstances	Primary Cause	Vehicle 1	Vehicle 2	Vehicle 3	Vehicle 4
Alcoholic Beverages					
Illegal Drugs					
Prescription Drugs					
Driver Asleep or Fatigued					
Driver Illness					
Unsafe Speed					
Failure to Yield					
Disregard Signal					
Left of Center					
Improper Passing					
Improper Turning					
Improper Lane Usage					
Following Too Closely					
Unsafe Backing					
Overcorrecting					
Ran off Road					
Wrong Way on One Way					
Pedestrian's Action					
Passenger Distraction					
Restriction Violation					
Jackknifing					
Cell Phone Usage					
Other Telematics					
Driver Distracted					
Speed/Weather Conditions					
Other					
None					

Vehicle Contributing Circumstances	Primary Cause	Vehicle 1	Vehicle 2	Vehicle 3	Vehicle 4
Engine Failure or Defective					
Accelerator Failure or Defective					
Brake Failure or Defective					
Tire Failure or Defective					
Headlight(s) Defective or Not On					
Other Lights Defective					
Steering Failure					
Window/Windshield Defective					
Oversize/Overweight Load					
Insecure/Leaky Load					
Tow Hitch Failure					
Other					
None					

Environment Contributing Circumstances	Primary Cause	Vehicle 1	Vehicle 2	Vehicle 3	Vehicle 4
Glare					
Roadway Surface					
Holes/Ruts in Surface					
Shoulder Defective					
Road Under Construction					
Severe Crosswinds					
Obstruction Not Marked					
Lane Marking Obscured					
View Obstructed					
Animal/Object in Roadway					
Traffic Ctl Inop/Missing/Obscure					
Utility Work					
Other					
None					

Area Information

- Hit and Run
- School Zone
- Rumble Strips
- Locality
- Light Condition
- Weather Conditions
- Surface Condition
- Type of Median
- Type of Roadway Junction
- Road Character
- Roadway Surface
- Construction | If Yes, Construction Type
- Traffic Control Devices
- Traffic Control Device Operational?
- Was this crash the result of aggressive driving?

Total Estimate of all damage in the Crash:

Other Property Damage (1)	State Property	Owner's Name and Address
Other Property Damage (2)	State Property	Owner's Name and Address

Witness/Other Participant

- ☐ Witness ☐ Other Participant | # | Name
- Address etc.
- Phone # | Location at Time of Crash
- ☐ Witness ☐ Other Participant | # | Name
- Address etc.
- Phone # | Location at Time of Crash

Non-Motorist

- (Last Name, First Name, MI)
- Non-Motorist Type | Non-Motorist Action
- Apparent Physical Condition
- Cited? | Direction
- Street/Highway
- Traffic Control? | If yes, was traffic control operational?

Page of

Local ID

Type of Crash

Time Notified	Time Arrived	Other Location of Investigation			
Assisting Officer		ID No.	Agency	Investigation Complete?	Photos Taken?
Assisting Officer		ID No.	Agency	Date of Report	
Investigating Officer		ID No.	Agency	Reviewing Officer	

Narrative

UNIT INFORMATION

Page of

Local ID

Driver's Name (Last, First, MI)

Address (Street, City, State, Zip)

Date of Birth | Age | Gender

Driver's License # | Lic Type | CDL Class | Lic State

Apparent Physical Status
- ☐ Normal
- ☐ Had Been Drinking
- ☐ Handicapped
- ☐ Ill
- ☐ Asleep/Fatigued
- ☐ Drugs/Medication
- ☐ Unknown

Restrictions
- ☐ Glasses/Contact Lenses
- ☐ Outside Rearview Mirror
- ☐ Daylight Driving
- ☐ Automatic Transmission
- ☐ Special Controls
- ☐ Employment Only
- ☐ Motorcycle Only
- ☐ To/From Employment
- ☐ Employer's Vehicle Only
- ☐ State-Owned Vehicles
- ☐ PP Chauffeurs Taxi Only
- ☐ Power Steering
- ☐ Special Restrictions
- ☐ Probation DWI
- ☐ Probation HTO
- ☐ None

Test Given: NONE | Type Given: ☐ Blood ☐ Urine ☐ Breath ☐ SFST ☐ PBT

Alcohol Results | Drug Results

PBT | Certified Test | ☐ Pending

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) ☐ Same as Driver

Address (Street, City, State, Zip)

Towed? | To / By | Reason

Lic State | Lic Year | Registered Owner's Name (Last, First, MI) ☐ Same as Driver

License# | Address (Street, City, State, Zip)

Veh Year | Make

Lic State | Lic Year | Registered Owner's Name (Last, First, MI) ☐ 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 #

Safety Equipment Used

Safety Equipment Effective?

Ejection/Trapped

EMS No. | Immed Attn | Driver Injury Status

Nature of Most Severe Injury

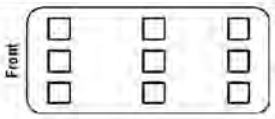
Location of Most Severe Injury

If Cited?
- ☐ Infraction
- ☐ Misdemeanor
- ☐ Felony

IC Codes

Initial Impact Area
- ☐ Undercarriage
- ☐ Trailer
- ☐ None
- ☐ Unknown

Areas Damaged (Multiples)
- ☐ Undercarriage
- ☐ Trailer
- ☐ None
- ☐ Unknown



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	
☐ One Lane	☐ Two Lanes	☐ Private Drive
☐ Two Lanes	☐ Multi-Lane Divided (3 or more)	☐ Alley
☐ Multi-Lanes (3 or more)	☐ Multi-Lane Undivided 2 way left turn	
	☐ 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 0.01 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.

Automated Reporting Information Exchange System (ARIES)
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 (0.01 g/dL and higher) indicates that alcohol was consumed by the person tested; a BAC level of 0.08 g/dL or more indicates that the person was legally 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 2010 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 with a violation (traffic or criminal) relating to the motor vehicle crash. The document produced is a citation.

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

Commercial Vehicle
1. *A Truck.* A vehicle equipped for carrying property and having a Gross Vehicle Weight Rating (GVWR) or Gross Combination Weight Rating (GCWR) over 10,000 pounds.
2. *A Bus.* A motor vehicle designed to transport 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.

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 non-incapacitating injury; or (3) a possible, not visible injury.
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.

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.

Glossary, continued

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

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.

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.

Inspection Level 1 - North American Standard Inspection
An inspection that includes examination of driver's license, medical examiner's certificate and waiver, if applicable, alcohol and drugs, driver's record of duty status as required, hours of service, seat belt, vehicle inspection report, brake system, coupling devices, exhaust system, frame, fuel system, turn signals, brake lamps, tail lamps, head lamps, lamps on projecting loads, safe loading, steering mechanism, suspension, tires, van and open-top trailer bodies, wheels and rims, windshield wipers, emergency exits on buses and hazardous materials (HM) requirements, as applicable.http://www.fmcsa.dot.gov/safety-security/safety-initiatives/mcsap/insplevels.htm

Inspection Level 3 - Driver-only inspection
A roadside examination of the driver's license, medical certification and waiver, if applicable, driver's record of duty status as required, hours of service, seat belt, vehicle inspection report, and HM requirements, as applicable.
http://www.fmcsa.dot.gov/safety-security/safety-initiatives/mcsap/insplevels.htm

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

ISP
Indiana State Police.

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

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

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

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-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.

Odds
Odds are calculated as the ratio of the count of an incident occurring to the count of the incident not occurring. For example, in 100 crashes, if there are 24 involving serious bodily injury, the odds of a serious bodily injury serious bodily injury (SBI) collision = 24/76 = .32).

Odds ratio
The ratio of the odds of an event occurring in one group to the odds of it occurring in another group. For example, if the odds of SBI for motorcycle riders and passenger car occupants is .21 and .01, respectively, the OR of motorcyclists compared to car occupants = .21/.01 = 19.2 (i.e., motorcyclists are 19.2 times more likely to experience an SBI than are car occupants).

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.

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 (normally included in non-incapacitating injury category).

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 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.

Cognitive impairment include primary factors of *driver asleep* or *fatigued, driver illness, alcoholic beverages, prescription drugs* and *illegal drugs.*

Distraction include primary factors of *driver distracted (explained in narrative), cell phone usage, other telematics in use* and *passenger distraction.*

Environmental include primary factors of *animal on roadway, roadway surface condition, view obstructed, other (explained in narrative) — environment, obstruction not marked, severe crosswinds, traffic control problem, holes/ruts in surface, glare, lane marking obscured, road under construction* and *shoulder defective.*

Loss of control include primary factors of r*an off road right, ran off road left* and *overcorrecting/oversteering.*

Unsafe actions include primary factors of *following too closely, failure to yield right of way, unsafe backing, disregard signal/reg sign, improper turning, speed too fast for weather conditions, unsafe lane movement, improper lane usage, unsafe speed, left of center, improper passing* and *wrong way on one way.*

Vehicle-related include primary factors of *brake failure or defective, other (explained in narrative) — vehicle, tire failure or defective, insecure/leaky load, steering failure, accelerator failure or defective, engine failure or defective, oversize/overweight load, headlight defective or not on, tow hitch failure* and *other lights defective.*

Unknown include primary factors of *unknown* and invalid.

All other include primary factors of *other (explained in narrative) — driver, pedestrian action, not a factor-driver, not a factor-vehicle, violation of license restriction and not a factor-environment.*

Glossary, continued

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

Relative Risk
A measure of the risk of injury determined by comparing the likelihood of an injury in collisions involving certain circumstances with the likelihood of an injury in collisions not involving those circumstances (e.g., the likelihood of a fatal injury when a collision involves speeding versus when it does not). If two percent of collisions involving speeding result in a fatality and one percent of collisions not involving speeding result in a fatality, the relative risk of a fatality when speed is involved equals two (2% / 1%); that is, collisions that involve speeding are two times more likely to result in a fatality than those that do not. Relative risk is often used to measure the risk of a fatal injury but can be used to measure the risk of any type of injury.

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 Traveled
The annual vehicle distance traveled 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).[1] 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.[2] 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."[3, 4] These data encompass a representative survey 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.[5] The data are in year 2000 US dollars and accordingly must be adjusted for the effects of the time value of money and for regional price differences. These adjustments were made using annual average price indexes for the United States and Midwest published by the Bureau of Labor Statistics.[6]

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.

[1]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) National Highway Traffic Safety Administration, Washington D.C.

[2]Association for the Advancement of Automotive Medicine. http://www.carcrash.org

[3]http://www.nhtsa-tsis.net/projects/NHTSA/NHTSA_NASS.htm

[4]National Automotive Sampling System, 1982-1986; Ejection Mitigation Using Advanced Glazing: A Status Report, November 1995, NHTSA

[5]Blincoe et al., 2002.

[6]Bureau of Labor Statistics. Average Price Data (Consumer Price Index – CPI). http://www.bls.gov/cpi/#tables.

INDIANA CRASH FACTS

2012

An electronic copy of this document can be accessed via the PPI website (www.policyinstitute.iu.edu), the ICJI traffic safety website (http://www.in.gov/cji/), or you may contact the Center for Criminal Justice Research at 317-261-3000.

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