



# SAFE TRANSPORTATION SYSTEM

*Tangible Result Driver – Don Hillis, Director of System Management*

MoDOT works closely with other safety advocates to make our roads and work zones safer. The department supports educational programs that encourage safe driving practices and enforcement efforts that increase adherence to traffic laws. MoDOT will not compromise safety because it believes in the well-being of its employees and customers.

## Number of fatalities and disabling injuries-3a

**Result Driver:** Don Hillis, Director of System Management  
**Measurement Driver:** Leanna Depue, Highway Safety Director

### Purpose of the Measure:

This measure tracks annual trends in fatal and disabling injuries resulting from traffic crashes on all Missouri roadways. This data drives the development and focus of the Missouri Highway Safety Plan. This plan is required annually by the National Highway Traffic Safety Administration and outlines key strategies to reduce these losses. In addition, this data supports Missouri’s Blueprint to Arrive Alive. This document identifies the statewide initiatives with a goal of reducing fatalities to 850 or fewer by 2012.

### Measurement and Data Collection:

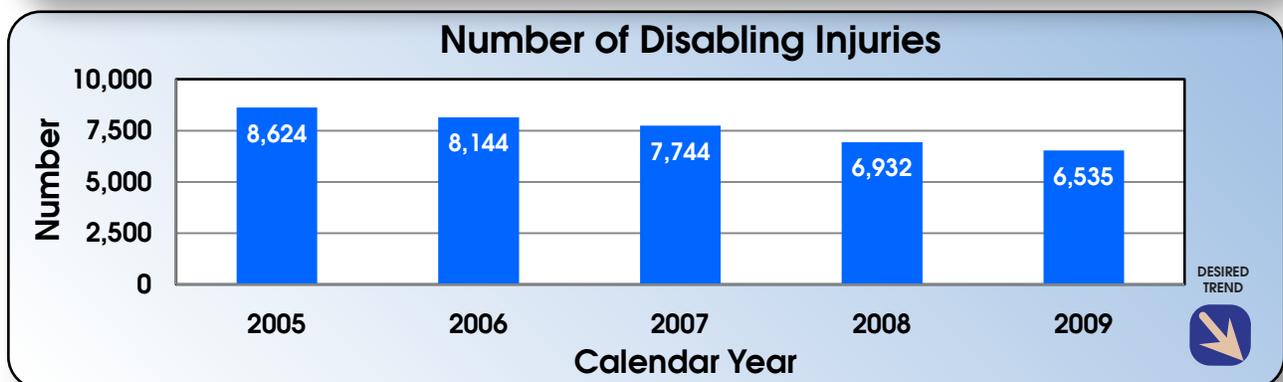
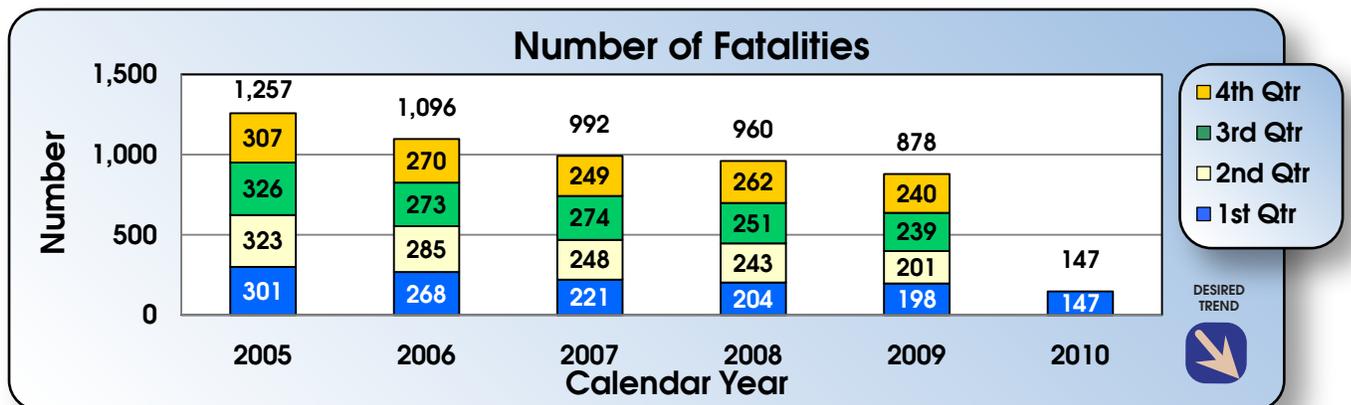
Crash data is collected by the Missouri State Highway Patrol and entered into a traffic accident record system. The record system automatically updates MoDOT’s traffic management system. Crash data reports are available to law enforcement and traffic safety advocates for crash analysis through both databases. Final data is collected on an annual basis and is updated in July of the following year.

**Note:** The 2010 quarterly fatalities are not final numbers.

### Improvement Status:

Fatalities decreased approximately 30 percent from 2005 to 2009 in a continued downward trend. Until 2007, Missouri had not been under 1,000 fatalities since 1993. The Missouri Coalition for Roadway Safety achieved its first goal of reducing fatalities to 1,000 or fewer by 2008. The Coalition will now work towards reducing the volume of fatalities to 850 or fewer by 2012. Fatality numbers from the first quarter of 2010 reflect a positive step towards this direction.

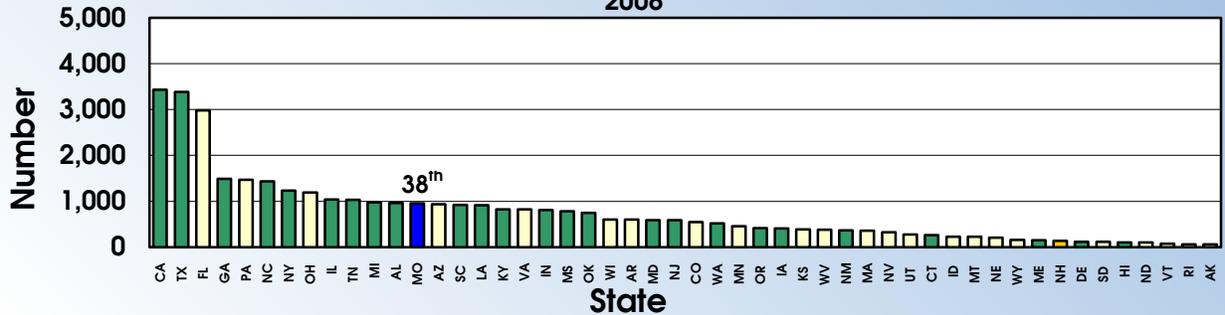
Disabling injuries continue to show a decreasing trend with a reduction of over 2,000 when compared to the 2005 number. In spite of the decrease in fatalities, the national data comparison shows that Missouri moved from 35<sup>th</sup> in 2007 to 38<sup>th</sup> in 2008 for total fatalities. Fatalities and disabling injuries are decreasing due in part to engineering enhancements such as roadway shoulders, three-strand guard cable, rumble strips, and enhanced delineation. Also contributing are strong safety belt and impaired driving public information campaigns combined with increased law enforcement participation in statewide campaigns.



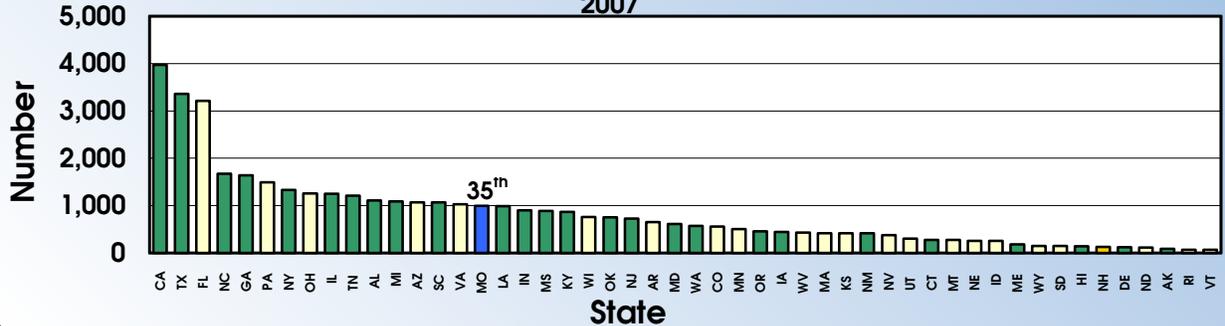
For all graphs on this page, the following legend applies:

- States that have primary seat belt laws
- States that have secondary seat belt laws
- States that have neither a primary nor a secondary seat belt law (1 total)
- Missouri – secondary seat belt law in place (Source: [www.ghsa.org](http://www.ghsa.org), July 2008)

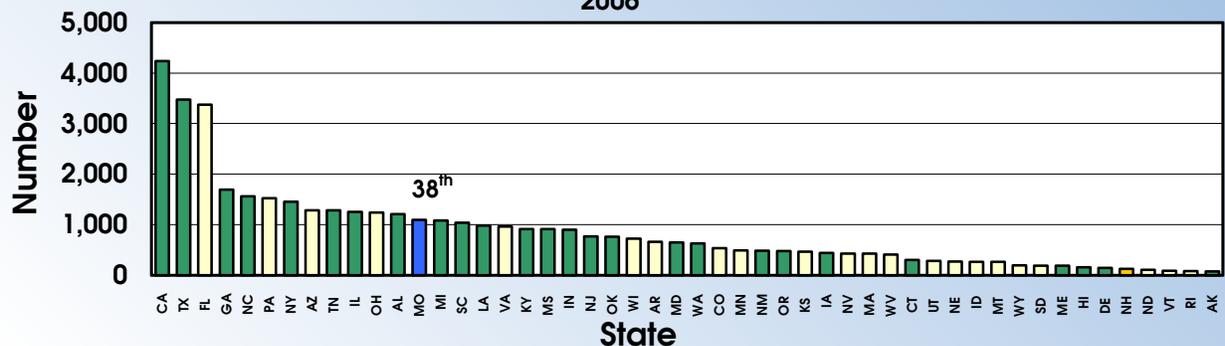
**Missouri's National Ranking by Total Number of Fatalities**  
2008



**Missouri's National Ranking by Total Number of Fatalities**  
2007



**Missouri's National Ranking by Total Number of Fatalities**  
2006



## Number of impaired driver-related fatalities and disabling injuries-3b

**Result Driver:** Don Hillis, Director of System Management

**Measurement Driver:** Leanna Depue, Highway Safety Director

### Purpose of the Measure:

This measure tracks annual trends in fatalities and injuries resulting from traffic crashes on all Missouri roadways involving drivers who are impaired by alcohol and/or drugs. This data drives the development and focus of the Missouri Highway Safety Plan. This plan is required annually by the National Highway Traffic Safety Administration and outlines key strategies to reduce these losses. In addition, this data supports Missouri’s Blueprint to Arrive Alive. This document identifies the statewide initiatives with a goal of reducing fatalities to 850 or fewer by 2012.

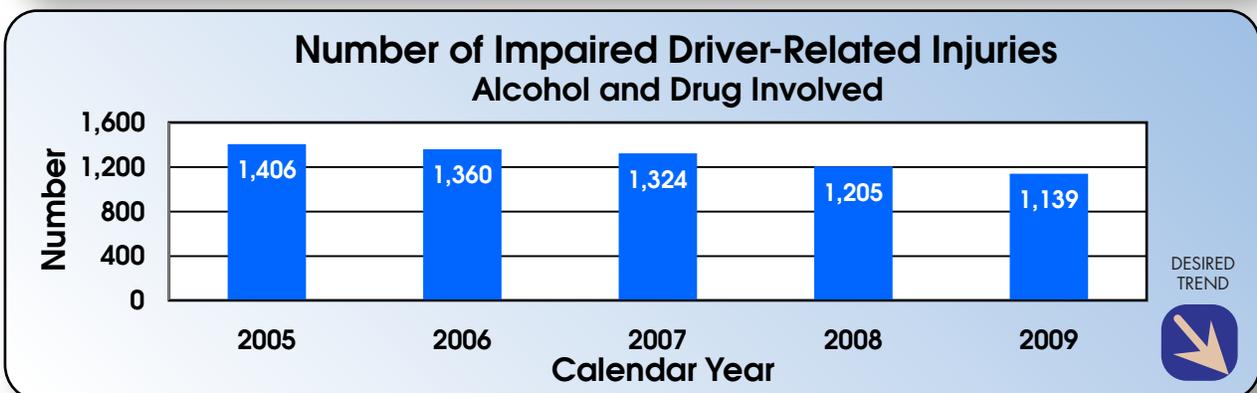
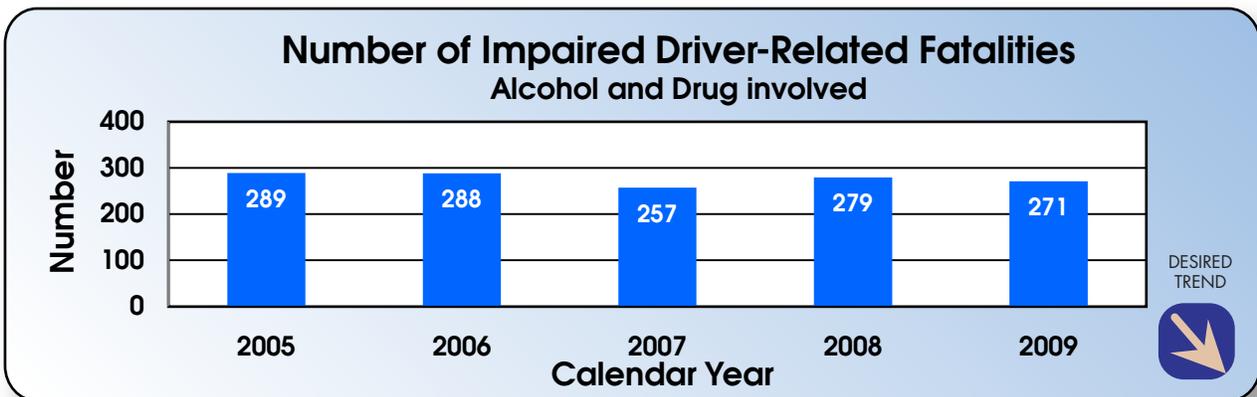
### Measurement and Data Collection:

Crash data is collected by the Missouri State Highway Patrol and entered into a traffic accident record system. The record system automatically updates MoDOT’s traffic management system. Crash data reports are available to law enforcement and traffic safety advocates for crash analysis through both databases. Final data is collected on an annual basis and is updated in July of the

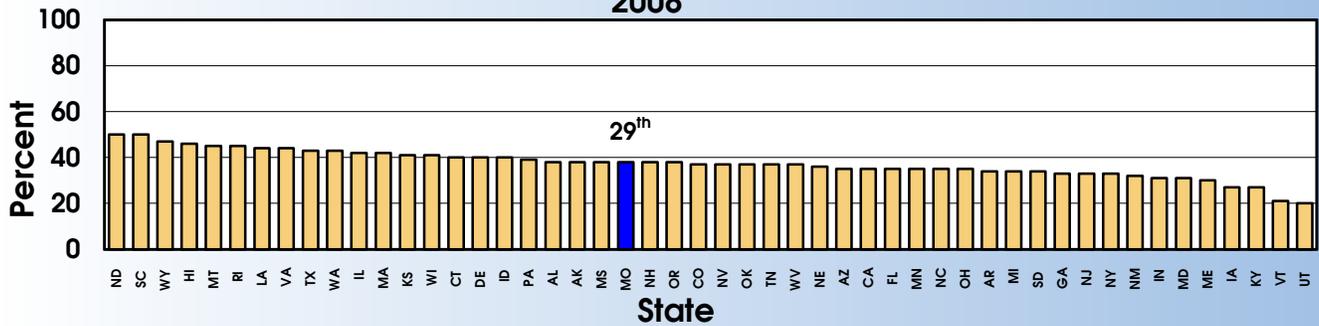
following year. **Note:** The 2009 fatality and injury numbers may not be final.

### Improvement Status:

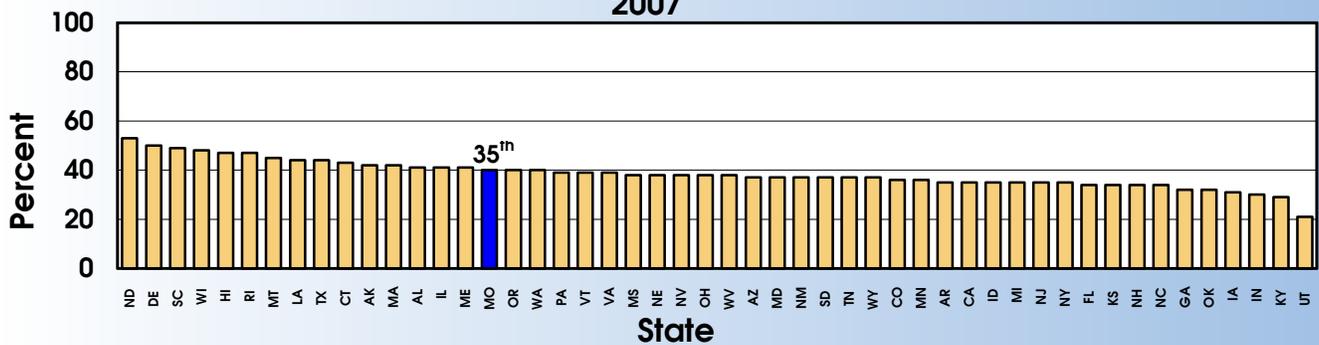
After a 9 percent increase in 2008, alcohol and drug-related fatalities fell by approximately 3 percent in 2009. Disabling injuries continue to decrease in 2009. In addition to Missouri participating in the national “You Drink and Drive, You Lose” campaign, the Missouri Law Enforcement Traffic Safety Advisory Council selected specific days to increase law enforcement activity through December 2010. Public information and education has been directed at high-risk drivers ages 21 to 35. Law enforcement efforts have been concentrated on high-crash corridors, increasing the number of sobriety checkpoints and increasing DWI units in selected locations. These efforts are designed to reduce impaired driving crashes overall and move the fatalities in a downward trend. An increasing number of people who work in liquor establishments are completing the online server training modules that were first developed in 2005.



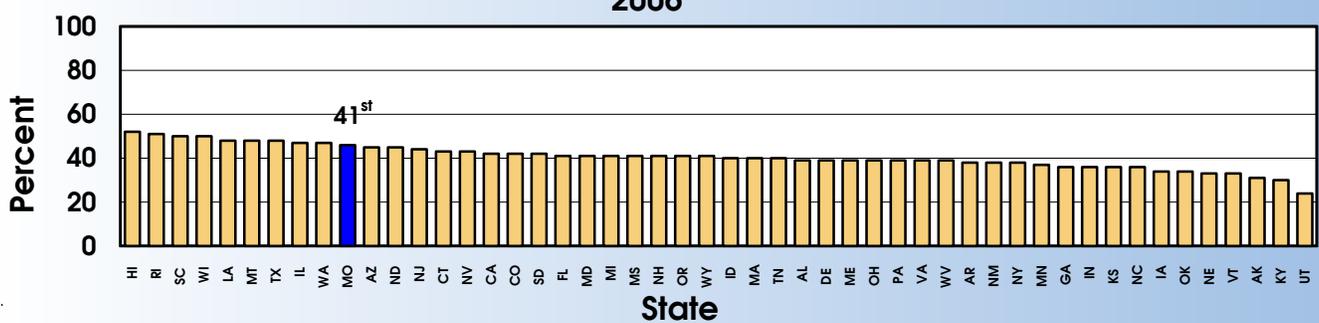
### Missouri's National Ranking by Percent Killed in Alcohol-Related Crashes 2008



### Missouri's National Ranking by Percent Killed in Alcohol-Related Crashes 2007



### Missouri's National Ranking by Percent Killed in Alcohol-Related Crashes 2006



## Rate of annual fatalities and disabling injuries-3c

**Result Driver:** Don Hillis, Director of System Management

**Measurement Driver:** Leanna Depue, Highway Safety Director

### Purpose of the Measure:

This measure tracks annual trends in fatal and disabling injury rates per 100 million vehicle miles traveled (HMVM) in Missouri. This data drives the development and focus of the Missouri Highway Safety Plan. This plan is required annually by the National Highway Traffic Safety Administration and outlines key strategies to reduce these losses. In addition, this data supports Missouri's Blueprint to Arrive Alive. This document identifies the statewide initiatives with a goal of reducing fatalities to 850 or fewer by 2012.

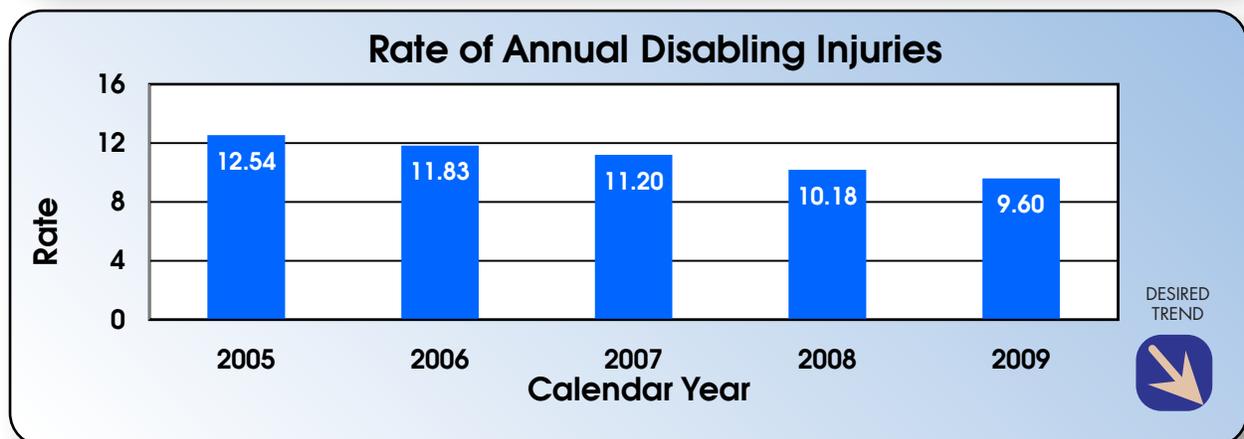
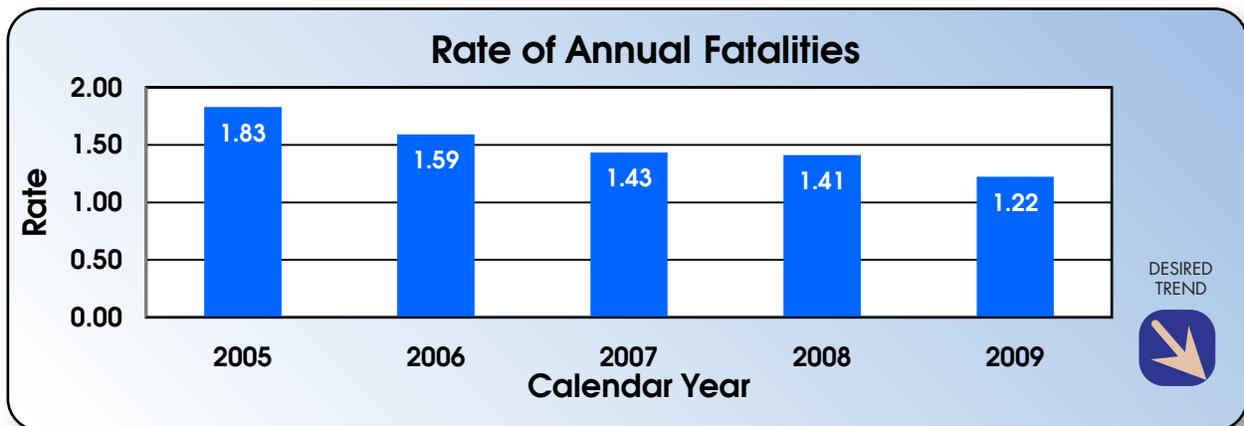
### Measurement and Data Collection:

Crash data is collected by the Missouri State Highway Patrol and entered into a traffic accident record system. The record system automatically updates MoDOT's traffic management system.

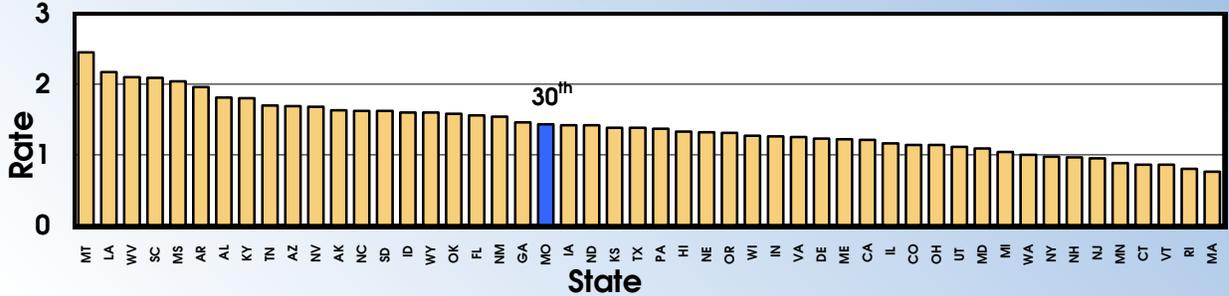
Crash data reports are available to law enforcement and traffic safety advocates for crash analysis through both databases. Data is collected on an annual basis and is updated in July of the following year. **Note:** The 2009 rates are not final numbers.

### Improvement Status:

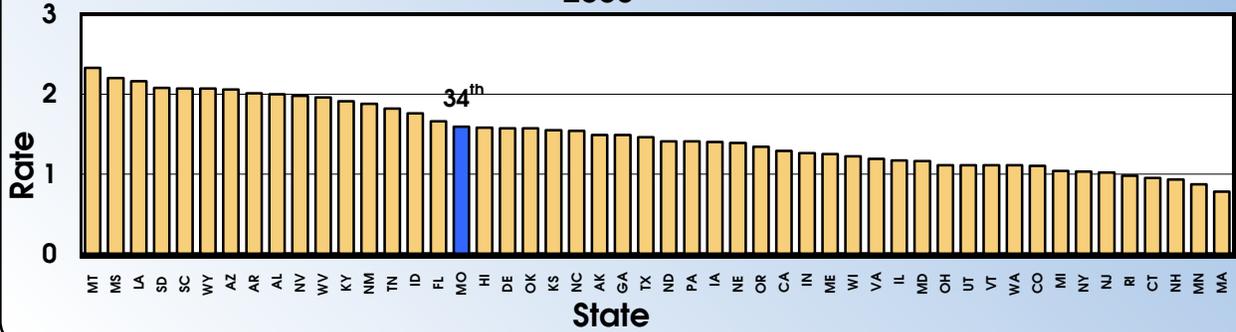
Both the fatality and disabling injury rates in Missouri are at the lowest ever recorded. Missouri has seen a 33 percent decrease since 2005. Based on a national comparison using the most recent data, Missouri ranked 30<sup>th</sup> in 2007. Based on the NHTSA national goal of a 1.0 fatality rate, Missouri is still moving in the right direction. Focused law enforcement efforts, engineering safety enhancements and increased public awareness all contributed to the decrease.



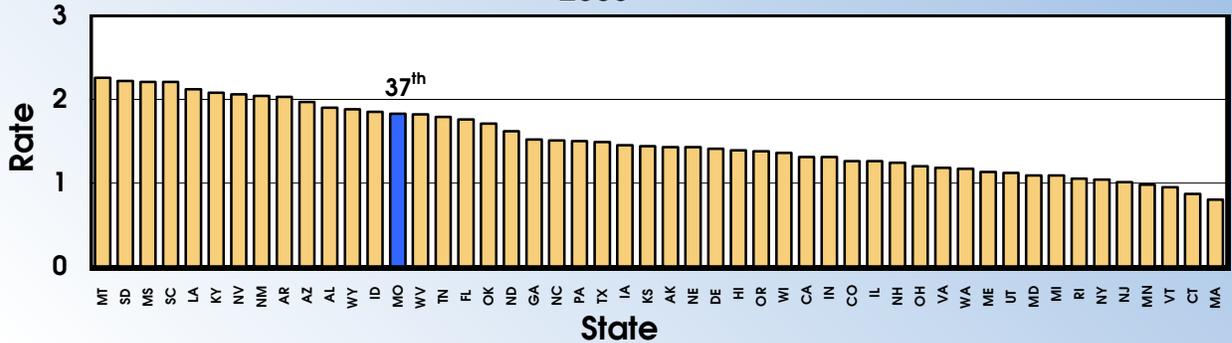
Missouri's National Ranking in State Fatality Rates  
2007



Missouri's National Ranking in State Fatality Rates  
2006



Missouri's National Ranking in State Fatality Rates  
2005



## Percent of safety belt/passenger vehicle restraint use-3d

**Result Driver:** Don Hillis, Director of System Management

**Measurement Driver:** Leanna Depue, Highway Safety Director

### Purpose of the Measure:

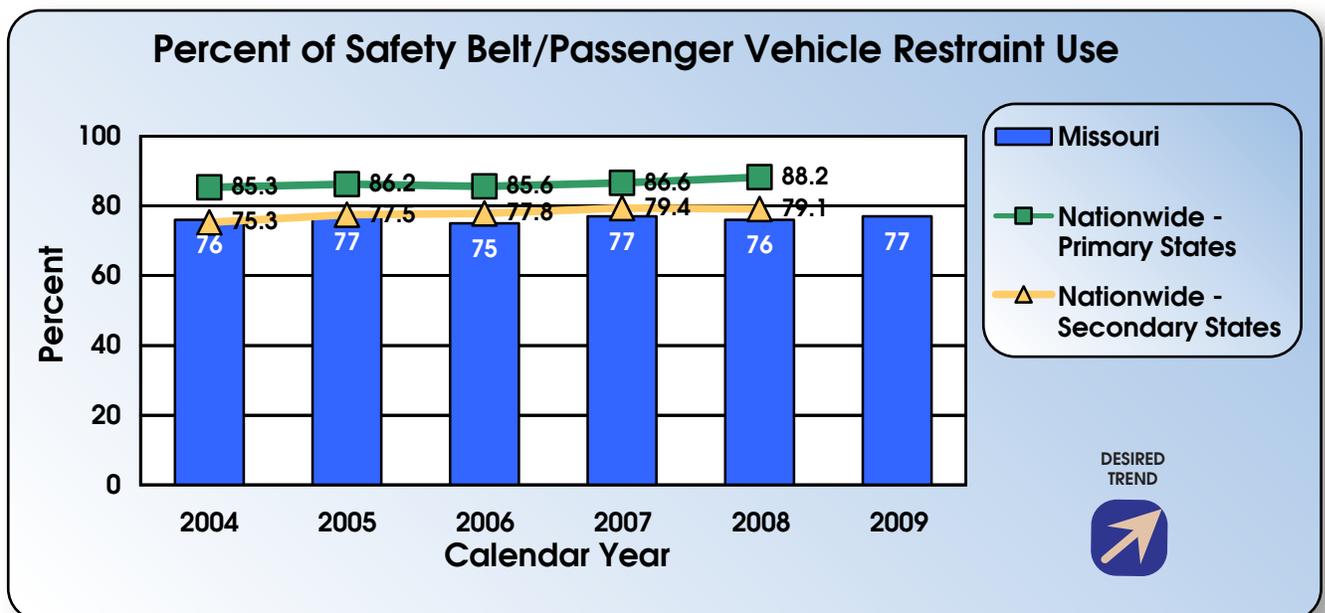
This measure tracks annual trends in safety belt usage by persons in passenger vehicles. This data drives the development and focus of the Missouri Highway Safety Plan. This plan is required annually by the National Highway Traffic Safety Administration and outlines key strategies to reduce these losses. In addition, this data supports Missouri’s Blueprint to Arrive Alive. This document identifies the statewide initiatives with a goal of reducing fatalities to 850 or fewer by 2012.

### Measurement and Data Collection:

Each June, a statewide survey is conducted at 460 pre-selected locations in 20 counties. The data collected at these sites is calculated into a safety belt usage rate by using a formula approved by the National Highway Traffic Safety Administration. The safety belt usage survey enables data collection from locations representative of 85 percent of the state’s population. The data collection plan is the same each year for consistency and compliance with the National Highway Traffic Safety Administration guidelines. Data is collected on an annual basis and is updated in August of the following year. Annual information for the national rankings may not be available from all 50 states.

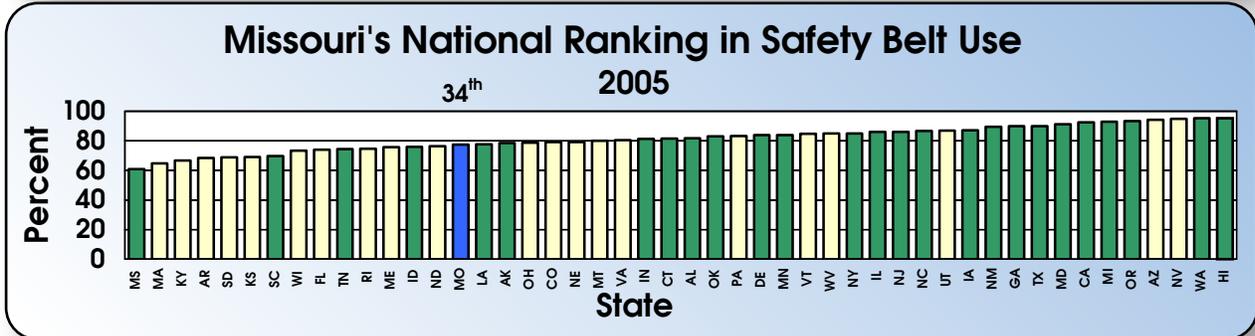
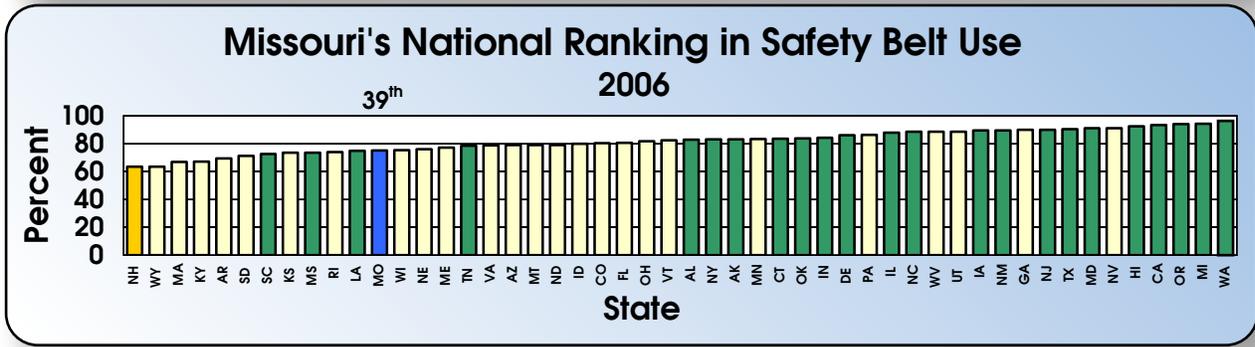
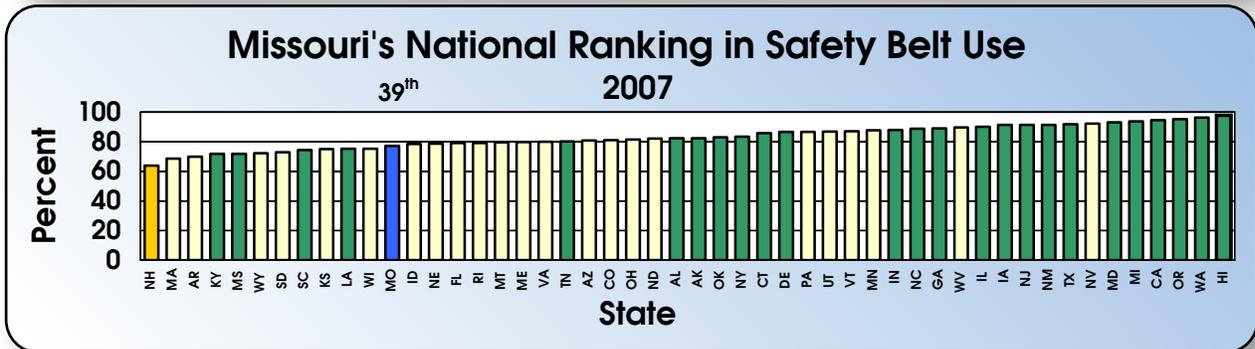
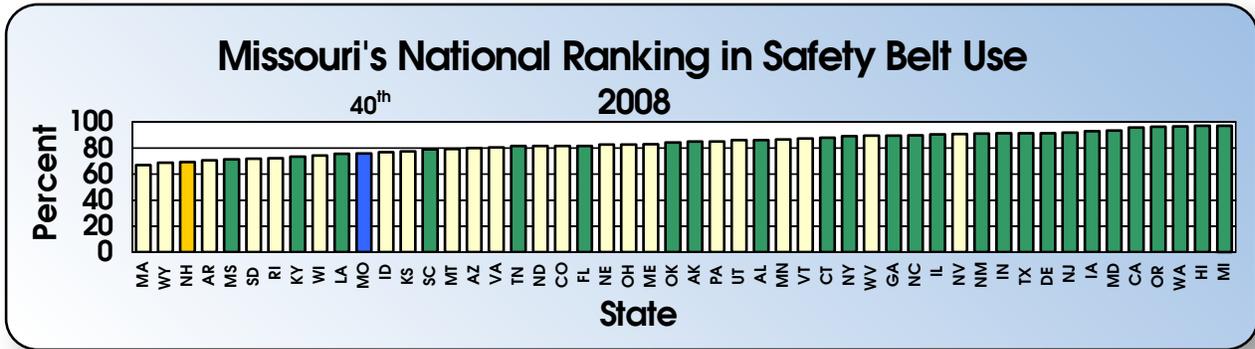
### Improvement Status:

Safety belt use in Missouri has remained fairly constant for the past five years between 75-77 percent. In the 2008 national comparison, Missouri ranked 40<sup>th</sup> in safety belt usage slipping one spot from 39<sup>th</sup> in 2007. The national average for safety belt use for 2008 is 84 percent. Missouri currently has a secondary safety belt law, which means law enforcement may not stop a vehicle solely to determine safety belt compliance. Law enforcement must observe another driving violation to stop a vehicle and issue a safety belt citation. Many states have a primary safety belt law, which means law enforcement may stop a vehicle if they observe an occupant is not wearing a safety belt. Missouri continues to focus efforts through public information and education and law enforcement participation in the national “Click It or Ticket” campaign. The Law Enforcement Traffic Safety Advisory Council (LETSAC) recently added additional quarterly enforcement dates through December 2009 to focus on safety belt use. Battle of the Belts and Get Your Buckle On are focused on increasing seat belt use among teenagers. Promoting the passage of local primary safety belt ordinances is another strategy to increase safety belt use. MoDOT continues to promote the need for a primary safety belt law in Missouri.



For all graphs on this page, the following legend applies:

- States that have primary seat belt laws
- States that have secondary seat belt laws
- States that have neither a primary nor a secondary seat belt law (1 total)
- Missouri – secondary seat belt law in place (Source: <http://www.ghsa.gov/>, June 2008)



## Number of bicycle and pedestrian fatalities and disabling injuries-3e

**Result Driver:** Don Hillis, Director of System Management

**Measurement Driver:** Leanna Depue, Highway Safety Director

### Purpose of the Measure:

This measure tracks annual trends in fatalities and disabling injuries resulting from traffic crashes with bicycles and pedestrians on Missouri roadways. This data drives the development and focus of the Missouri Highway Safety Plan. This plan is required annually by the National Highway Traffic Safety Administration and outlines key strategies to reduce these losses. In addition, this data supports Missouri's Blueprint to Arrive Alive. This document identifies the statewide initiatives with a goal of reducing fatalities to 850 or fewer by 2012.

### Measurement and Data Collection:

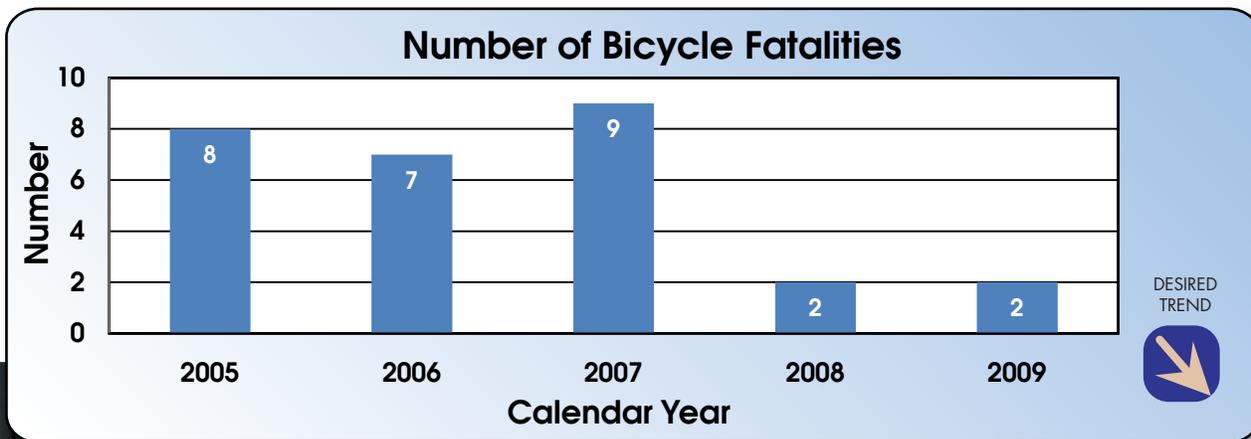
Crash data is collected by the Missouri State Highway Patrol and entered into a traffic accident record system. The record system automatically updates MoDOT's traffic management system. Crash data reports are available to law enforcement and traffic safety advocates for crash analysis through

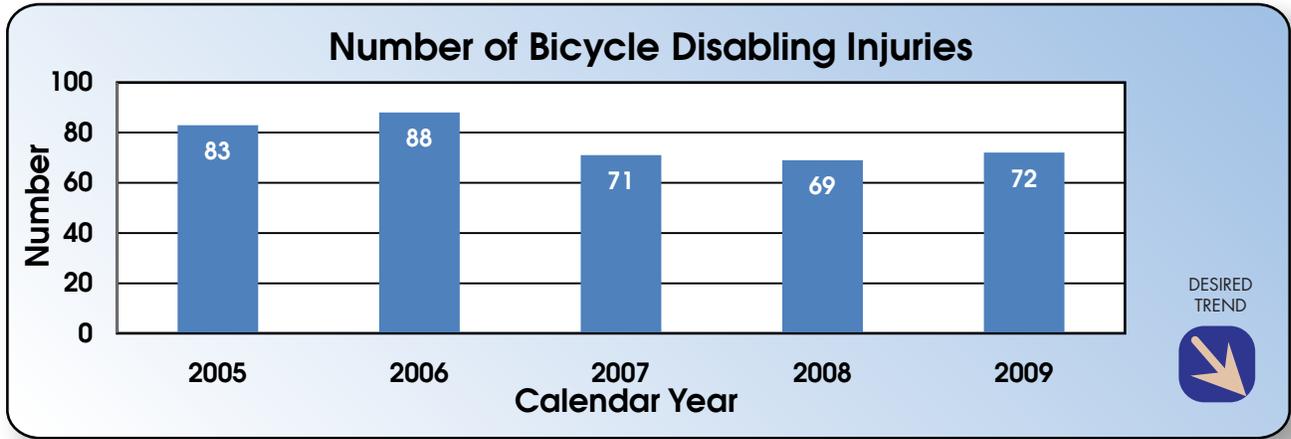
both databases. Final data is collected on an annual basis and updated in July of the following year.

**Note:** The 2009 numbers for fatalities and injuries are not final.

### Improvement Status:

This data reflects the number of fatalities and disabling injuries occurring when a motor vehicle is involved in a crash with a bicycle or pedestrian. Bicycle fatalities remained steady between 2005 and 2007. In 2008, we saw a reduction in fatalities despite MoDOT increasing the miles of dedicated bike lanes. This measure remained constant in 2009. Pedestrian fatalities increased slightly in 2009 while there was a decrease in disabling injuries. MoDOT has worked to make Missouri's pedestrians safer by implementing signaling and dedicated crossing area improvements. Funds have been dedicated to support the Bicycle Pedestrian Advisory Committee.





## Number of motorcycle fatalities and disabling injuries-3f

**Result Driver:** Don Hillis, Director of System Management

**Measurement Driver:** Leanna Depue, Highway Safety Director

### Purpose of the Measure:

This measure tracks annual trends in fatalities and disabling injuries of motorcyclists on all Missouri roadways. This data drives the development and focus of the Missouri Highway Safety Plan. This plan is required annually by the National Highway Traffic Safety Administration and outlines key strategies to reduce these losses. In addition, this data supports the Missouri's Blueprint to Arrive Alive. This document identifies the statewide initiatives with a goal of reducing fatalities to 850 or fewer by 2012.

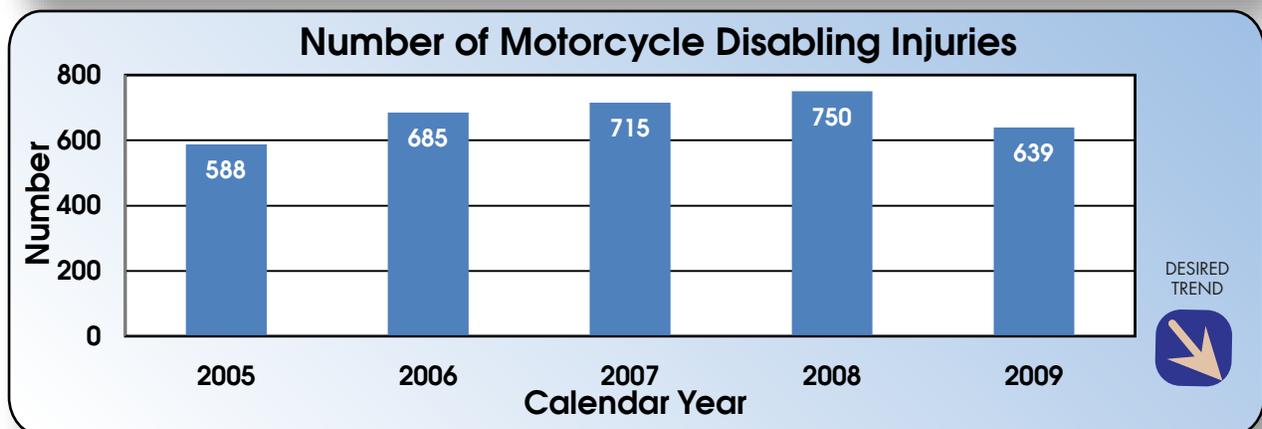
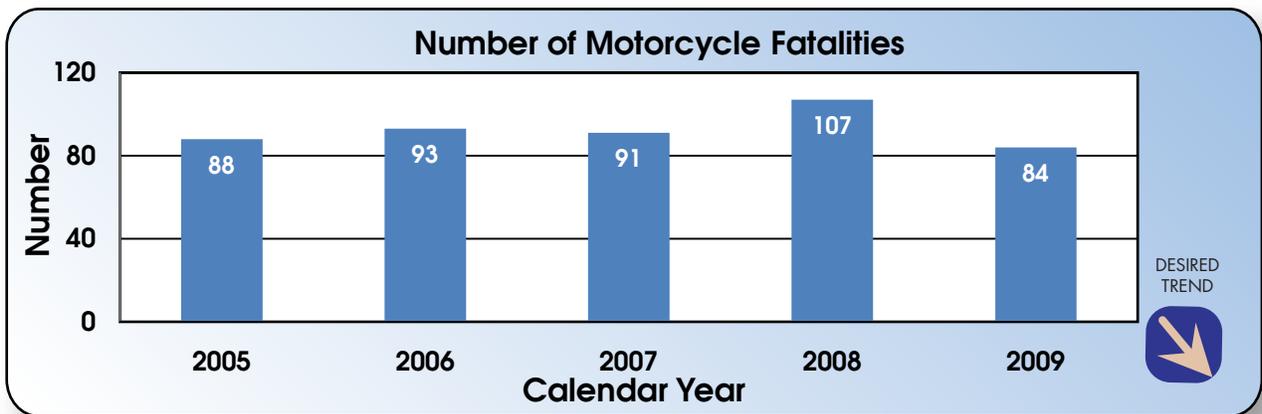
### Measurement and Data Collection:

Crash data is collected by the Missouri State Highway Patrol and entered into a traffic accident record system. The record system automatically updates MoDOT's traffic management system. Crash data reports are available to law enforcement and traffic safety advocates for crash analysis through both databases. Final data is collected on an annual basis and updated in July of the following year.

**Note:** The 2009 numbers for fatalities and injuries are not final.

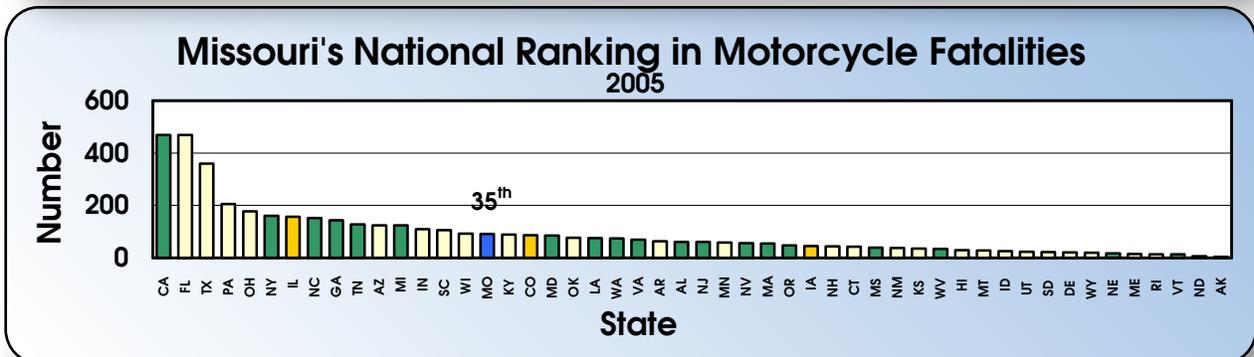
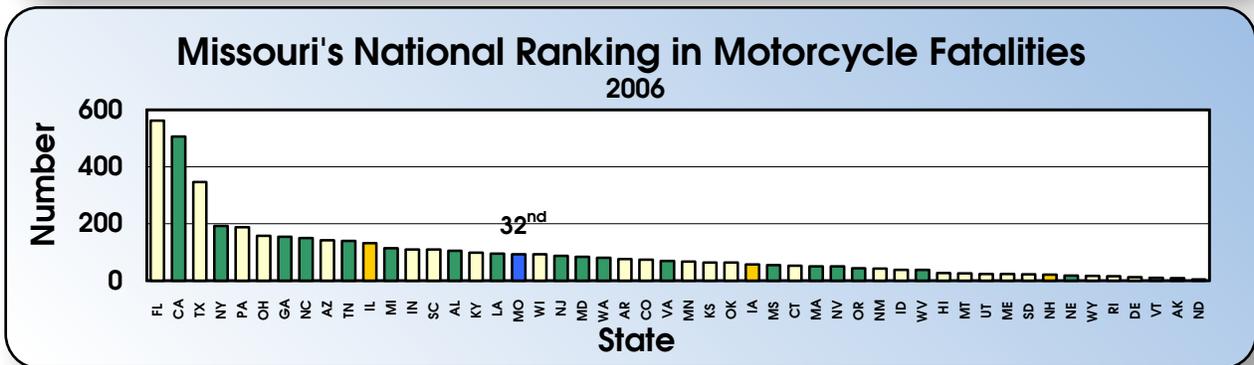
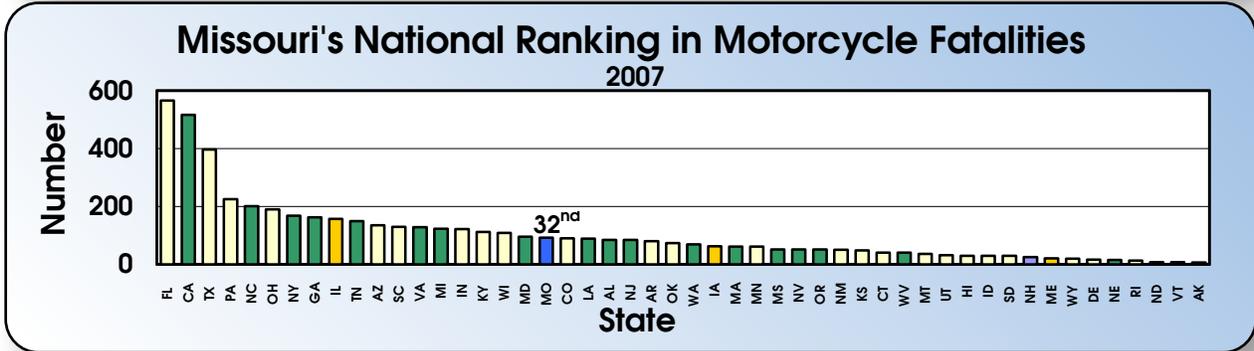
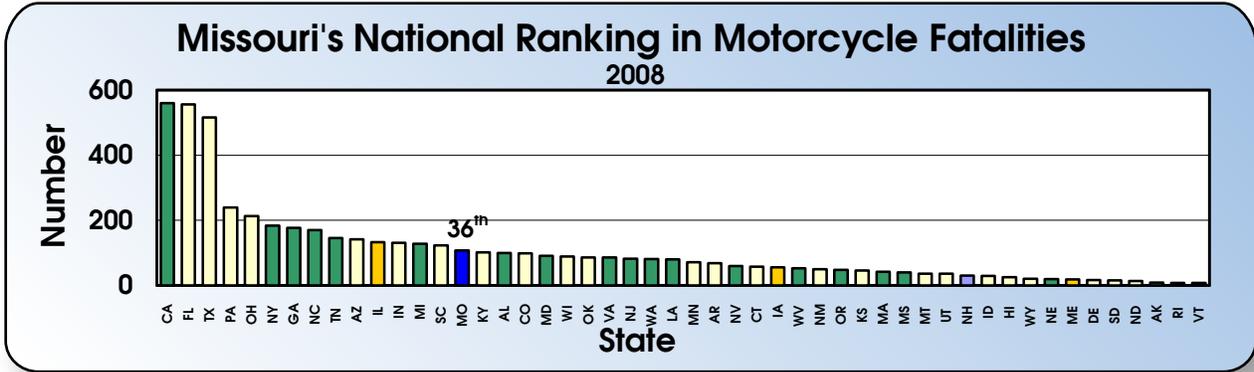
### Improvement Status:

After showing an upward trend from 2005-2008, motorcycle fatalities and disabling injuries decreased in 2009. In 2008, Missouri had the highest number of motorcycle fatalities on record with 107. These accidents decreased by approximately 21 percent in 2009. Longer riding seasons and an increase in the number of licensed motorcycles and riders has increased the exposure rate in recent years. Rider education classes are offered within one hour's driving time throughout Missouri. More than 5,000 riders at 28 sites are trained each year. In 2006, a Motorcycle Safety Task Force was organized and charged with developing a strategic plan. The task force has completed the plan and continues to move forward with implementation.



For all graphs on this page, the following legend applies:

- States that have all rider helmet laws
- States that require use for a specific segment of riders (usually under age 18)
- States that do not require helmet use (3 total)
- Missouri – motorcycle helmet law in place (Source: [www.nhtsa.gov](http://www.nhtsa.gov), January 2008)



## Number of commercial motor vehicle crashes resulting in fatalities-3g

**Result Driver:** Don Hillis, Director of Systems Management

**Measurement Driver:** Mark Biesemeyer, Motor Carrier Services Program Manager

### Purpose of the Measure:

This measure tracks the number of commercial motor vehicles involved in fatal crashes each year. MoDOT uses the information to target educational and enforcement efforts.

### Measurement and Data Collection:

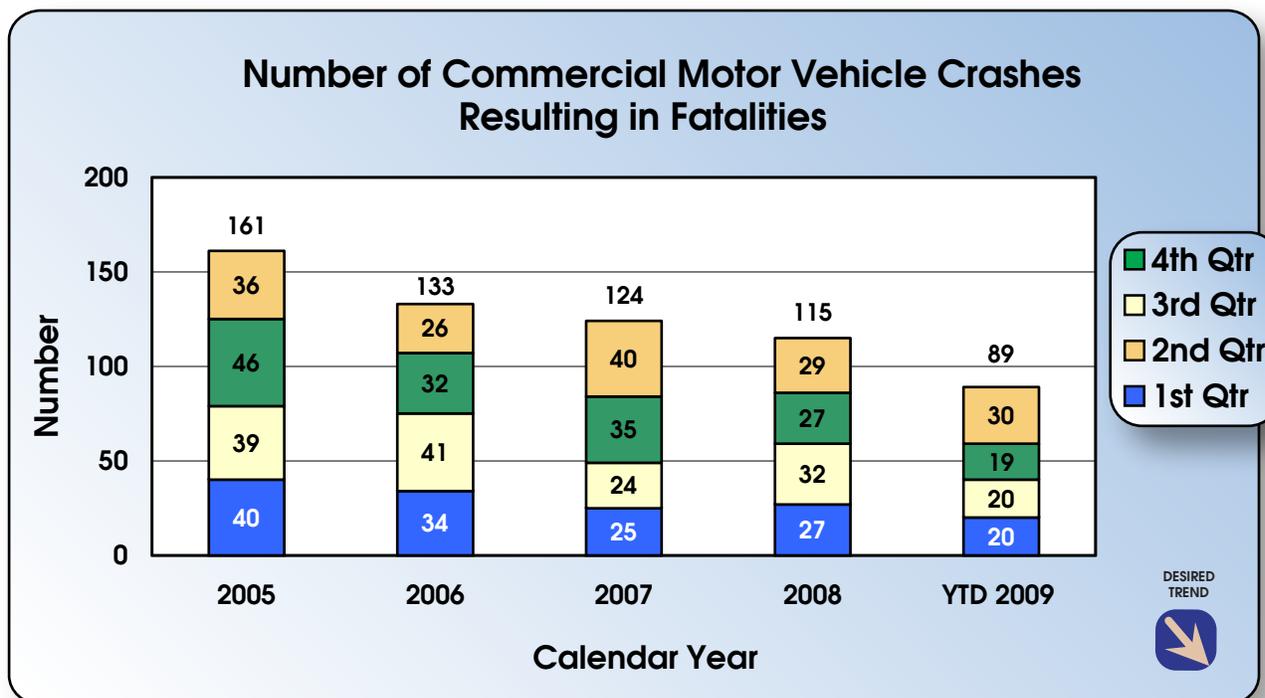
The Missouri State Highway Patrol collects and records the crash statistics used in this measure. The data used in this measure reports the number of commercial motor vehicles involved in a crash where one or more people die within 30 days as a result of the crash. This is an annual measure, updated each July for the previous year.

### Improvement Status:

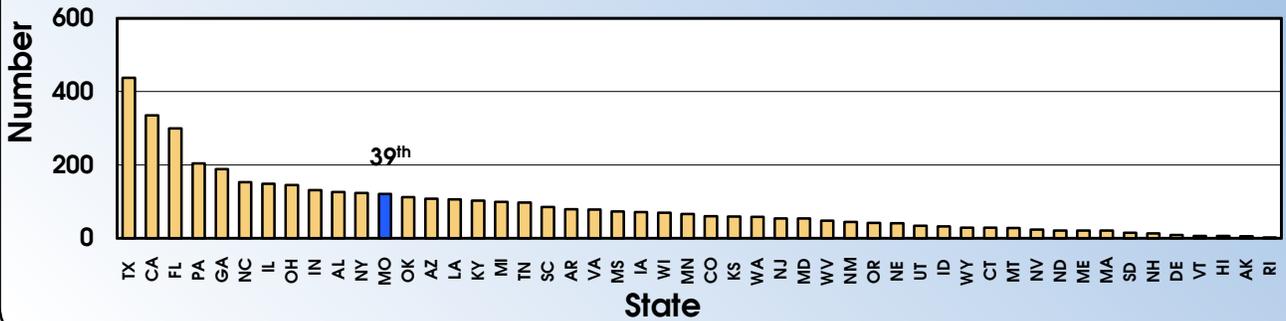
The preliminary number of fatal crashes reported for 2009 is 89. This is 26 fewer than reported at this point in 2008, a reduction of 22.7 percent in one year. Between 2005 and 2008, the number of Missouri commercial motor vehicle fatal crashes dropped from 161 to 115, a 28.6 percent decrease.

MoDOT coordinates its efforts to reduce fatal crashes with the Missouri State Highway Patrol, the Federal Motor Carrier Safety Administration Missouri Division and the Kansas City and St. Louis police departments. MoDOT efforts include the installation of larger highway signs, highly reflective pavement markings, cable guardrails, roundabout intersections, incident management alert signs, roadside rumble strips, and intelligent transportation systems at scales. MoDOT conducts carrier safety training, regulation compliance reviews, safety audits of new motor carrier firms and truck inspections at terminals and destinations. The MSHP, St. Louis and Kansas City Police Departments conduct commercial vehicle roadside inspections in order to remove unsafe drivers and vehicles from the road.

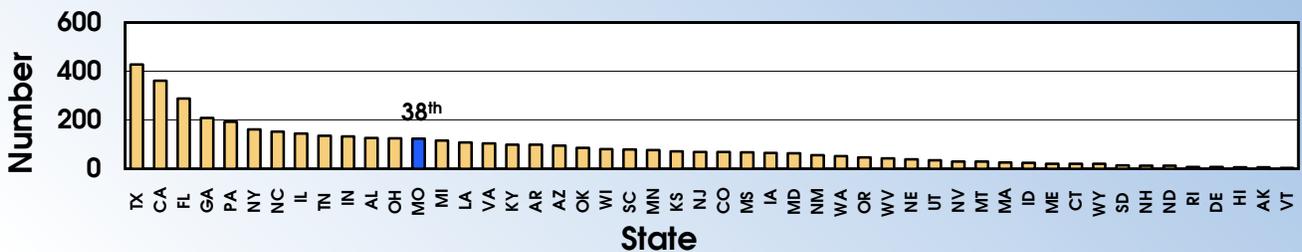
Missouri ranked 39<sup>th</sup> in the number of fatality crashes nationwide in 2008.



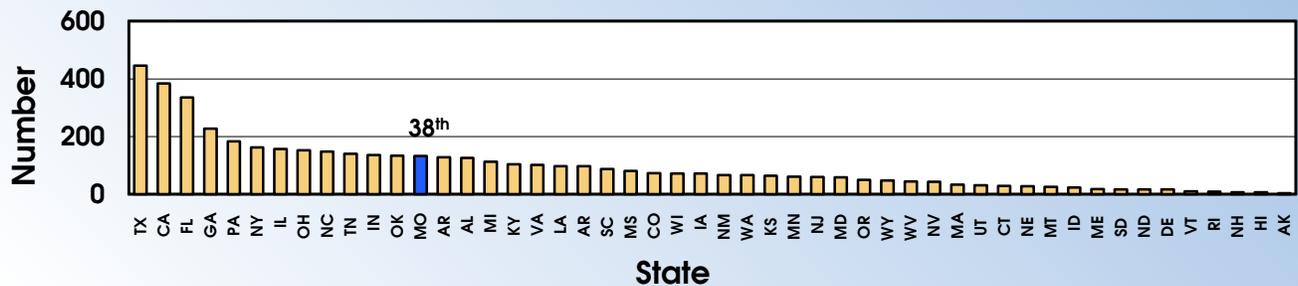
Missouri's National Ranking in Number of Fatal Commercial Vehicle Crashes  
2008



Missouri's National Ranking in Number of Fatal Commercial Vehicle Crashes  
2007



Missouri's National Ranking in Number of Fatal Commercial Vehicle Crashes  
2006



## Number of commercial motor vehicle crashes resulting in injuries-3h

**Result Driver:** Don Hillis, Director of Systems Management

**Measurement Driver:** Mark Biesemeyer, Motor Carrier Services Program Manager

### Purpose of the Measure:

This measure tracks number of commercial motor vehicles involved in injury crashes each year. MoDOT uses the information to target educational and enforcement efforts.

### Measurement and Data Collection:

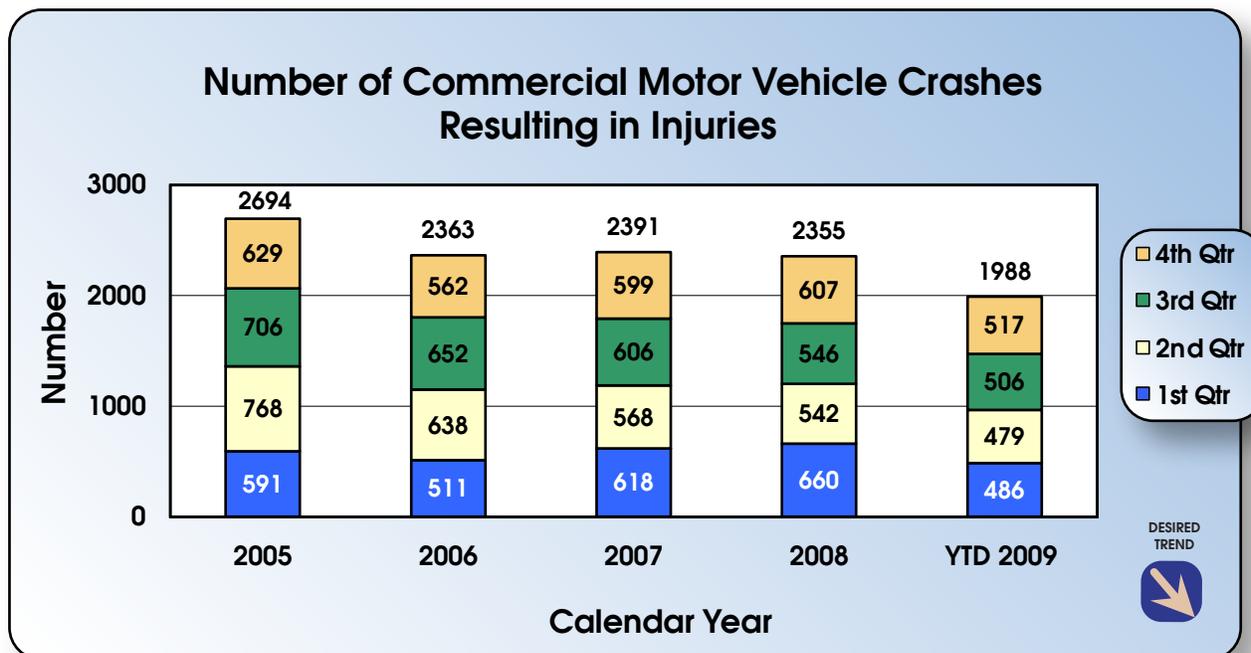
The Missouri State Highway Patrol collects and records crash statistics. The data for this measure reflects the number of commercial motor vehicles involved in crashes where one or more people are injured. This is an annual measure and will be updated each July for the previous year.

### Improvement Status:

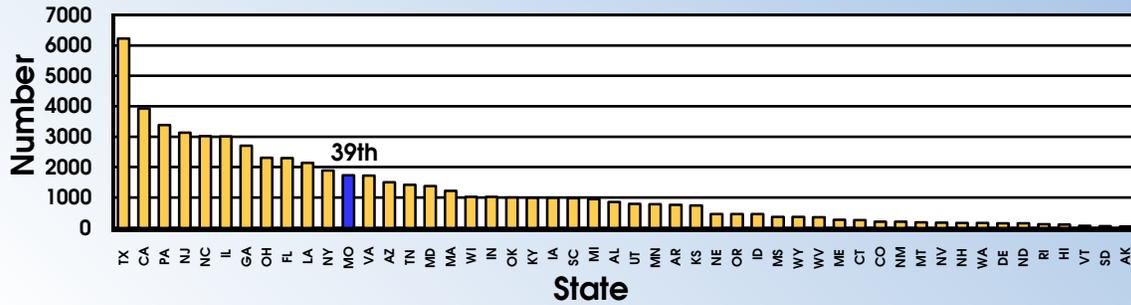
The preliminary number of injury crashes reported for 2009 is 1988. This is 367 fewer than reported at this point in 2008, a 15.6 percent reduction in one year. Between 2005 and 2008, the number of commercial motor vehicle crashes resulting in injuries dropped from 2,694 to 2,355, a decrease of 12.6 percent.

The overall downward trend is due to the coordinated safety efforts of MoDOT, the Missouri State Highway Patrol, the Federal Motor Carrier Safety Administration Missouri Division, and the Kansas City and St. Louis police departments. MoDOT efforts include the installation of larger highway signs, highly reflective pavement markings, cable guardrails, roundabout intersections, incident management alert signs, rumble stripes, and intelligent transportation systems at scales. MoDOT conducts carrier safety training, regulation compliance reviews, safety audits of new motor carrier firms and truck inspections at terminals and destinations. The MSHP, St. Louis and Kansas City police departments conduct commercial vehicle roadside inspections in order to remove unsafe drivers and vehicles from the road.

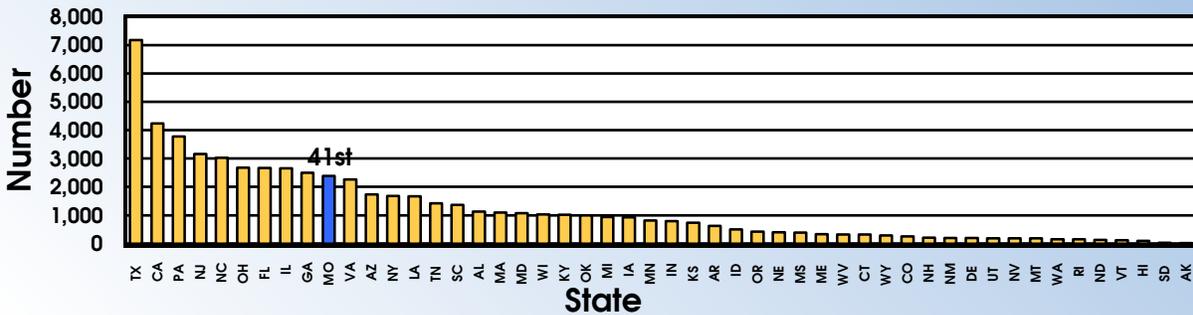
Missouri ranked 39th in the number of injury crashes nationwide in 2008.



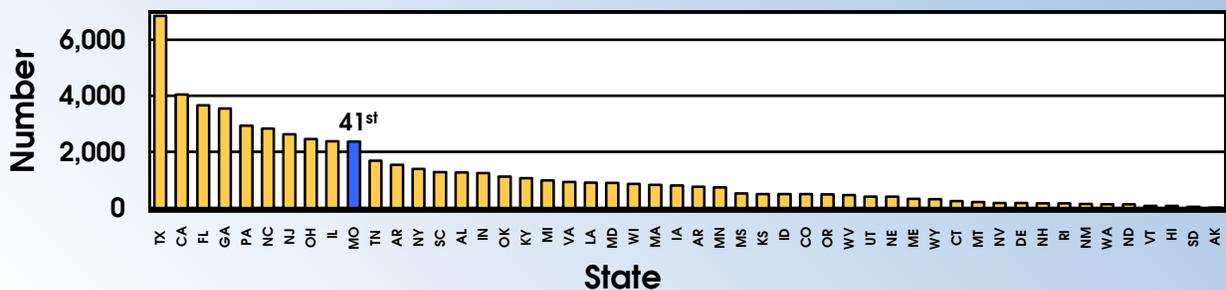
Missouri's National Ranking in Number of Injury Commercial Vehicle Crashes  
2008



Missouri's National Ranking in Number of Injury Commercial Vehicle Crashes  
2007



Missouri's National Ranking in Number of Injury Commercial Vehicle Crashes  
2006



## Number of fatalities and injuries in work zones-3i

**Result Driver:** Don Hillis, Director of System Management

**Measurement Driver:** Troy Pinkerton, Traffic Liaison Engineer

### Purpose of the Measure:

An important factor in evaluating the safety of Missouri's transportation system is determining the safety of work zones on the state's roads. This measure tracks the number of traffic-related fatalities, injuries, and overall crashes occurring in work zones on any Missouri public road.

### Measurement and Data Collection:

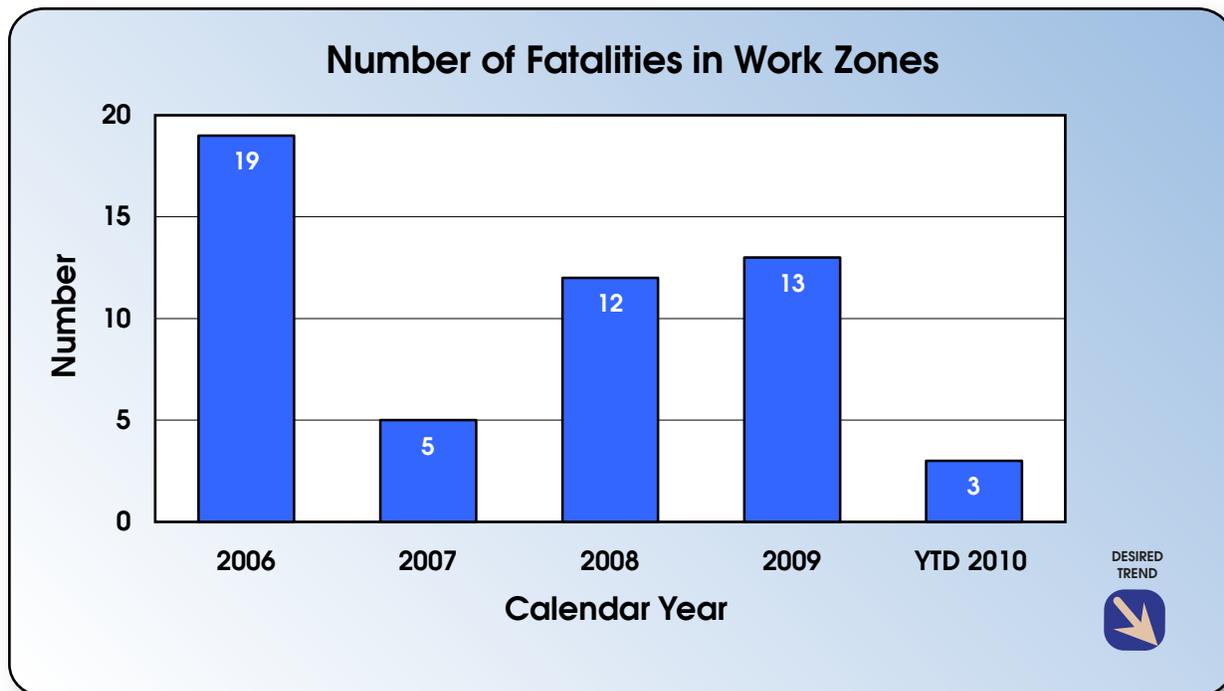
Missouri law enforcement agencies are required to report crashes by submitting a standardized vehicle accident report form to the Missouri State Highway Patrol. MSHP personnel enter these reports into a statewide traffic crash database. MoDOT staff query and analyze this data to identify work zone-related crash statistics quarterly and report the results via this measurement.

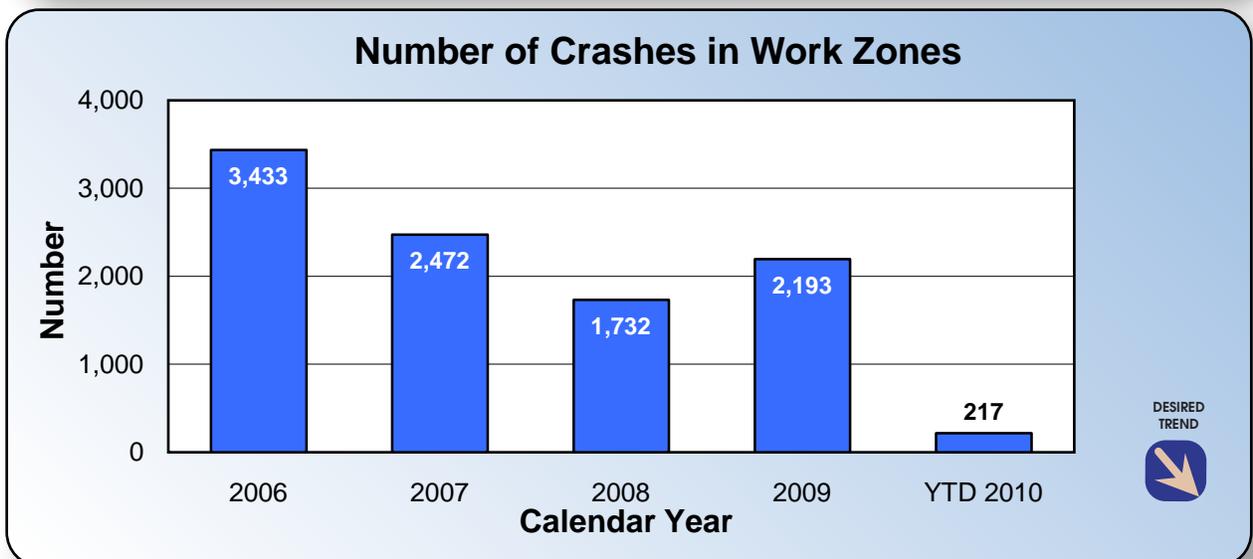
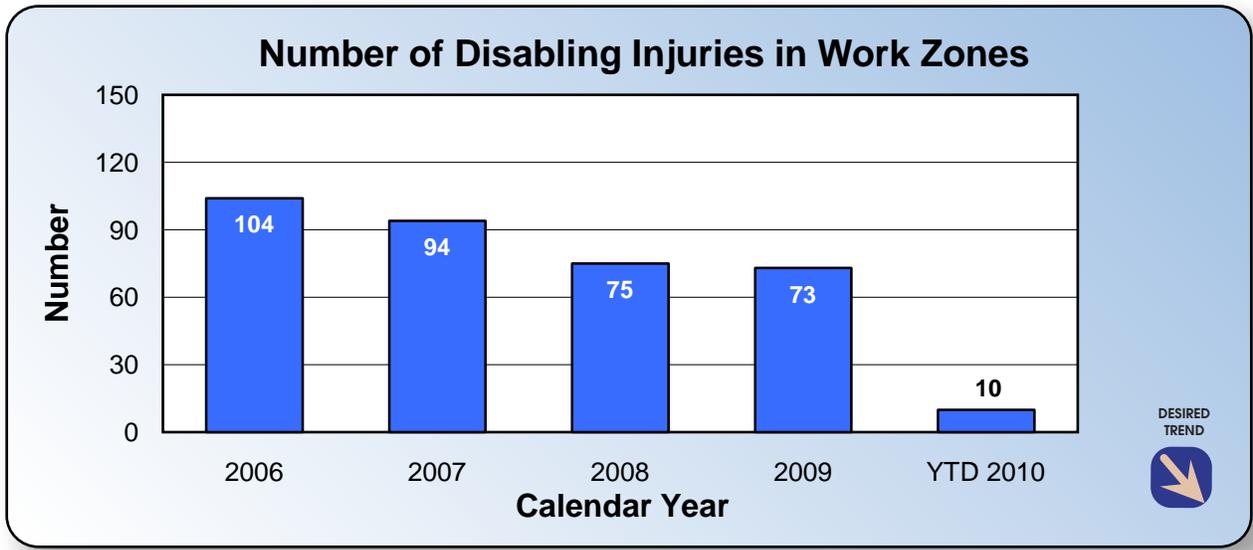
### Improvement Status:

In this first quarter of calendar year 2010, there were three fatal accidents resulting in three fatalities. For this same reporting period in 2009 we had no fatalities in work zones on record. The trend is up for injuries and number of crashes as well. This is due to an increased exposure as compared to this period last year.

Please be reminded that we need your feedback to help keep our work zones safe and traffic moving efficiently. Our Work Zone Survey is available to the public and can be submitted online at:

<http://www.modot.mo.gov/workzones/Comments.htm>





## Number of highway-rail crossing fatalities and collisions-3j

**Results Driver:** Don Hillis, Director of System Management

**Measurement Driver:** Rod Massman, Administrator of Railroads

### Purpose of the Measure:

This measure tracks annual trends in fatalities and collisions resulting from train-vehicle crashes at public railroad crossings in Missouri. This data drives the development and focus of a portion of the Missouri Highway Safety Plan. This plan is required annually by the National Highway Traffic Safety Administration and outlines key strategies to reduce these losses. In addition, this data supports the Missouri Blueprint for Safer Roadways. This document identifies the statewide initiatives with a goal of reducing fatalities in all areas of highway safety, including highway-rail crossing safety.

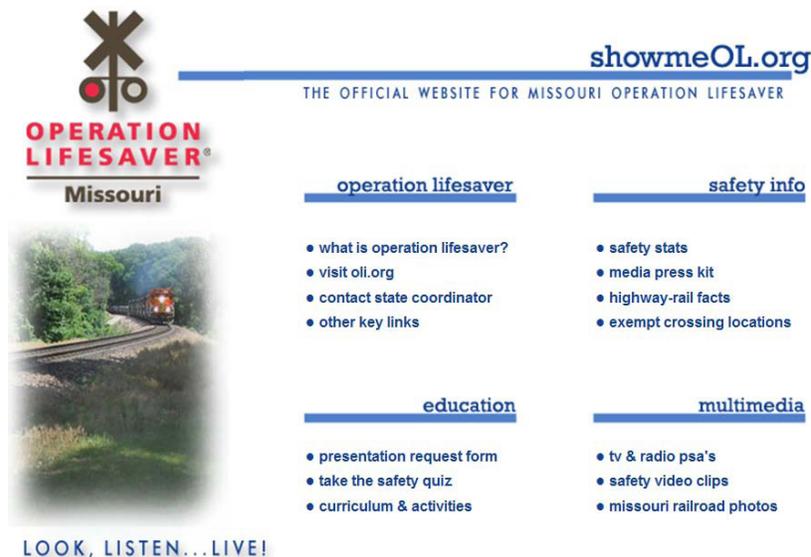
### Measurement and Data Collection:

MoDOT collects crash data and enters it in a railroad safety information system, which also updates MoDOT's traffic management system. This does not include fatalities or collisions from those on railroad property at areas other than at public railroad crossings, which are tabulated separately. Missouri is then ranked with all other states using data from the Federal Railroad Administration that consists of the numbers of collisions and fatalities in each state. Data is updated quarterly.

### Improvement Status:

In the first three months of 2010, there was one crossing fatality. While this is one too many, this

number is an indicator that the many efforts to reduce these casualties are working. The overall number of fatalities per year has generally not risen in the last four years, but MoDOT continues to focus on driving the overall number of fatalities still lower each year. In order to accomplish this, MoDOT has increased and implemented more public outreach efforts along with engineering improvements. This has included participating in various kinds of safety fairs, which includes presenting rail issues alongside other safety-related topics, renewing efforts to present rail crossing information at driver's education and other high school and grade school classes, and certifying additional MoDOT employees in giving Operation Lifesaver presentations. MoDOT also continues its improvements in various cities all around the state in which the city as a whole is studied and all of the crossings in each town are evaluated, which closes some crossings and redirects traffic to other fully-equipped crossings with lights and gates. The continuing focus is the three Es: engineering, education and enforcement. This effort is designed to increase public awareness and discussion of the need for increased safety and heightened awareness at railroad crossings and the dangers of walking on tracks or other railroad property.



**showmeOL.org**  
THE OFFICIAL WEBSITE FOR MISSOURI OPERATION LIFESAVER

**OPERATION LIFESAVER®**  
Missouri

**operation lifesaver**

- what is operation lifesaver?
- visit oli.org
- contact state coordinator
- other key links

**safety info**

- safety stats
- media press kit
- highway-rail facts
- exempt crossing locations

**education**

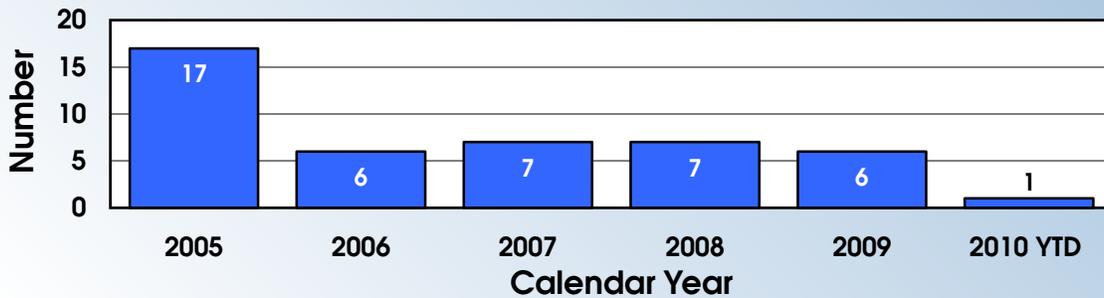
- presentation request form
- take the safety quiz
- curriculum & activities

**multimedia**

- tv & radio psa's
- safety video clips
- missouri railroad photos

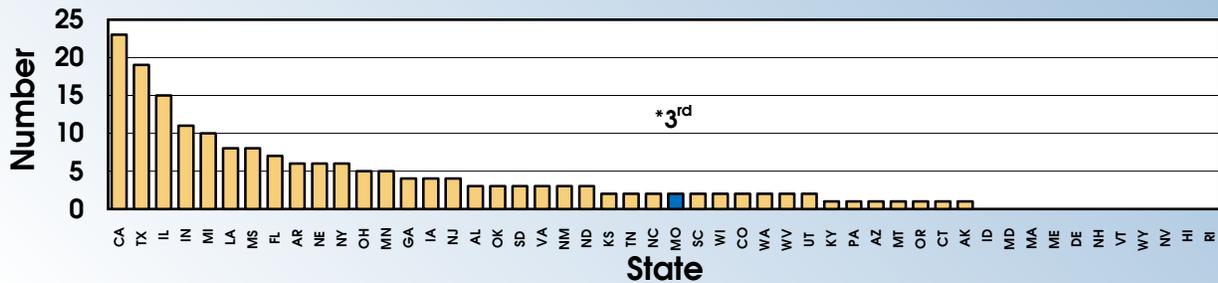
LOOK, LISTEN...LIVE!

### Number of Highway-Rail Crossing Fatalities

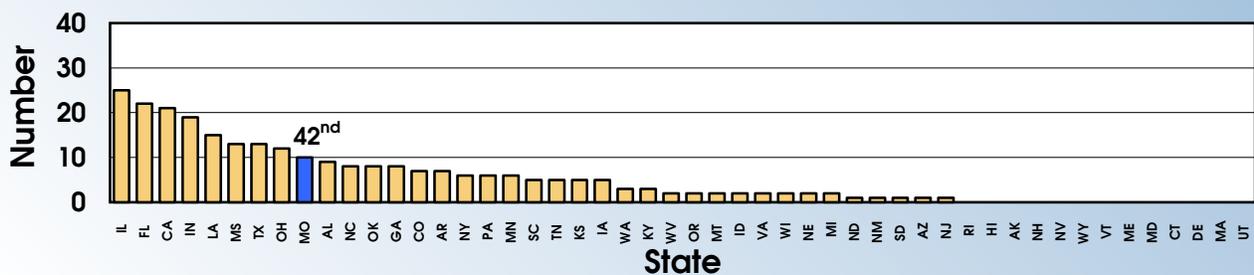


\*Tied for third with 10 other states

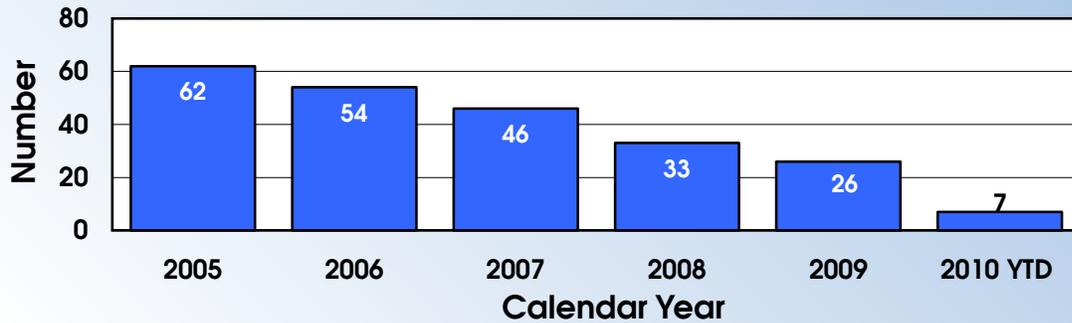
### Missouri's National Ranking in Number of Highway-Rail Crossing Fatalities January-October 2009



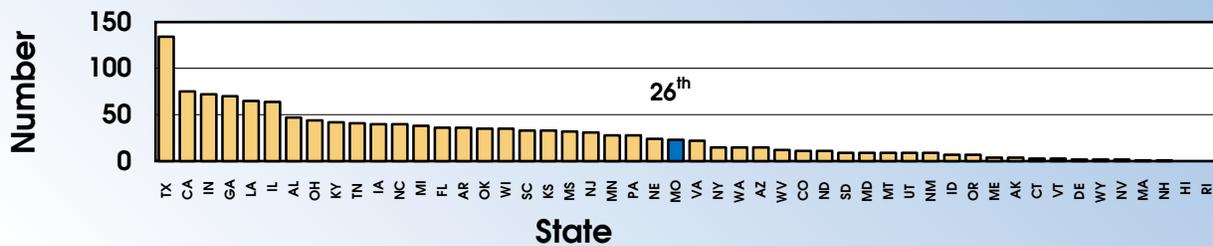
### Missouri's National Ranking in Number of Highway-Rail Crossing Fatalities January-December 2008



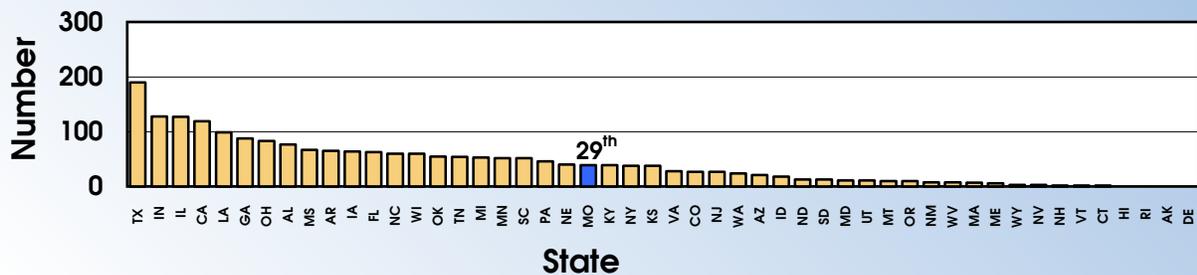
### Number of Highway-Rail Crossing Collisions



### Missouri's National Ranking in Number of Highway-Rail Crossing Collisions January-October 2009



### Missouri's National Ranking in Number of Highway-Rail Crossing Collisions January-December 2008



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