



KEEP CUSTOMERS AND OURSELVES SAFE

Eileen Rackers, State Traffic and Highway Safety Engineer



Tracker

MEASURES OF DEPARTMENTAL PERFORMANCE



Safety is a daily commitment for all MoDOT employees. From design and construction to operations and maintenance of the state transportation system, the safety of our customers, partners, and employees is our top priority. We work with our safety partners to promote safe behavior for all users and modes of transportation so everyone goes home safe every day.

RESULT DRIVER:
Eileen Rackers,
State Traffic and Highway
Safety Engineer

MEASUREMENT
DRIVER:
Bill Whitfield,
Highway Safety Director

PURPOSE OF
THE MEASURE:
The fatal and serious injury
number measures track
quarterly, annual and five-
year average trends result-
ing from traffic crashes on
all Missouri roadways. The
rate of fatal and serious
injury charts display annual
and five-year average fatal-
ity and injury rates per 100
million vehicle miles traveled
for these same crashes.
In addition, the fatality rate
chart includes the national
average.

MEASUREMENT
AND DATA
COLLECTION:
Missouri law enforcement
agencies submit a vehicle
accident report form to the
Missouri State Highway
Patrol to enter them into
a statewide traffic crash
database. The database
automatically updates
MoDOT's crash database
system, which is part of the
Transportation Management
System.

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MAP-21

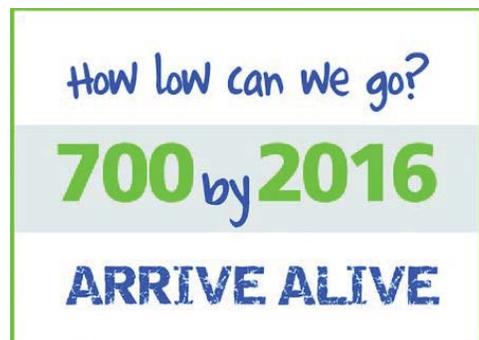
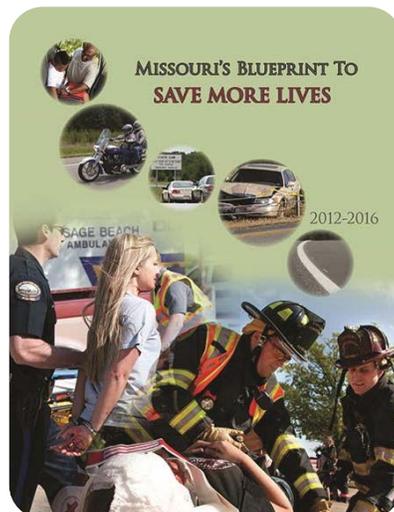
Number and rate of fatalities and serious injuries-1a

Keeping travelers safe is one of MoDOT's highest priorities. Fatalities and serious injuries have experienced a significant decline of 40 percent since 2005. The decrease is due to safety improvements on Missouri roadways, focused enforcement efforts and educational campaigns that have kept these issues in front of motorists. When compared to the previous year, the 2014 traffic fatality count increased by 1.20 percent to a total of 767.

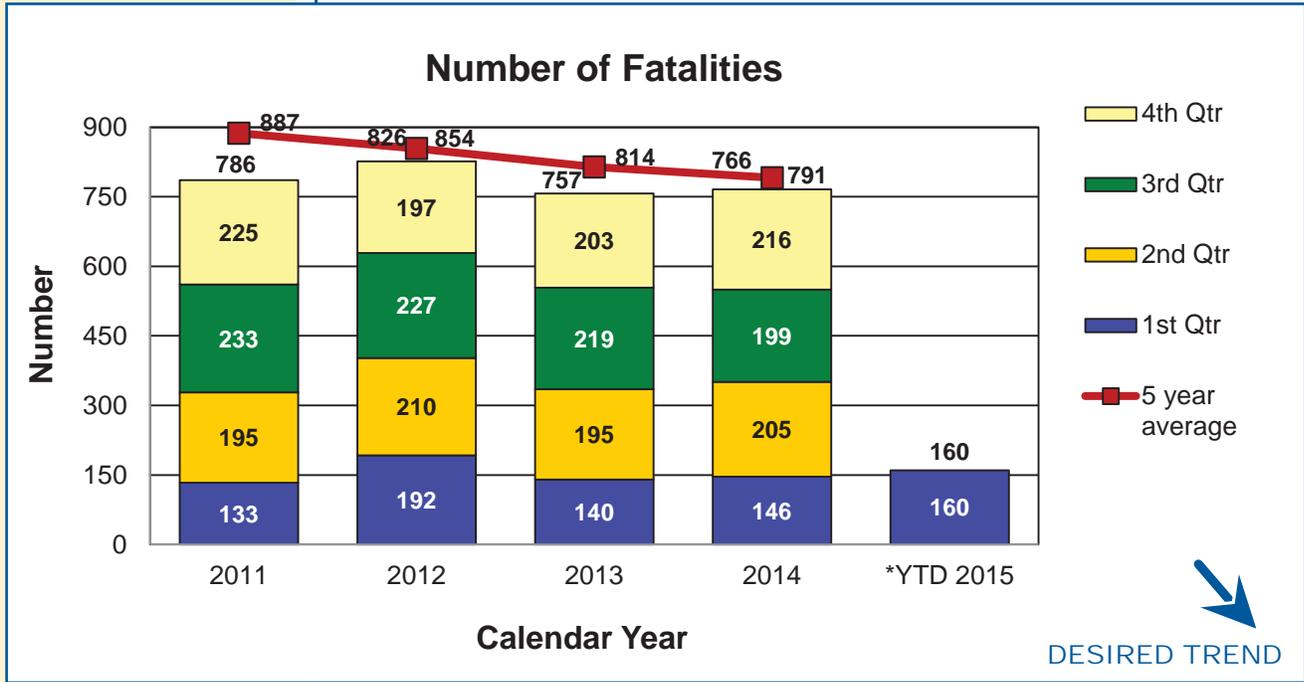
Percent unbuckled – 2010 (68 percent); 2011 (69 percent); 2012 (71 percent); 2013 (64 percent); 2014 (67 percent) year to date.

The 2013 fatality rate per 100 million miles traveled fell to the lowest rate on record to 1.09. In 2013, the national fatality rate per 100 million miles traveled was 1.10. Serious injury data for 2014 reflects a continued downward trend for both the number and five-year average of serious injuries for the ninth straight year.

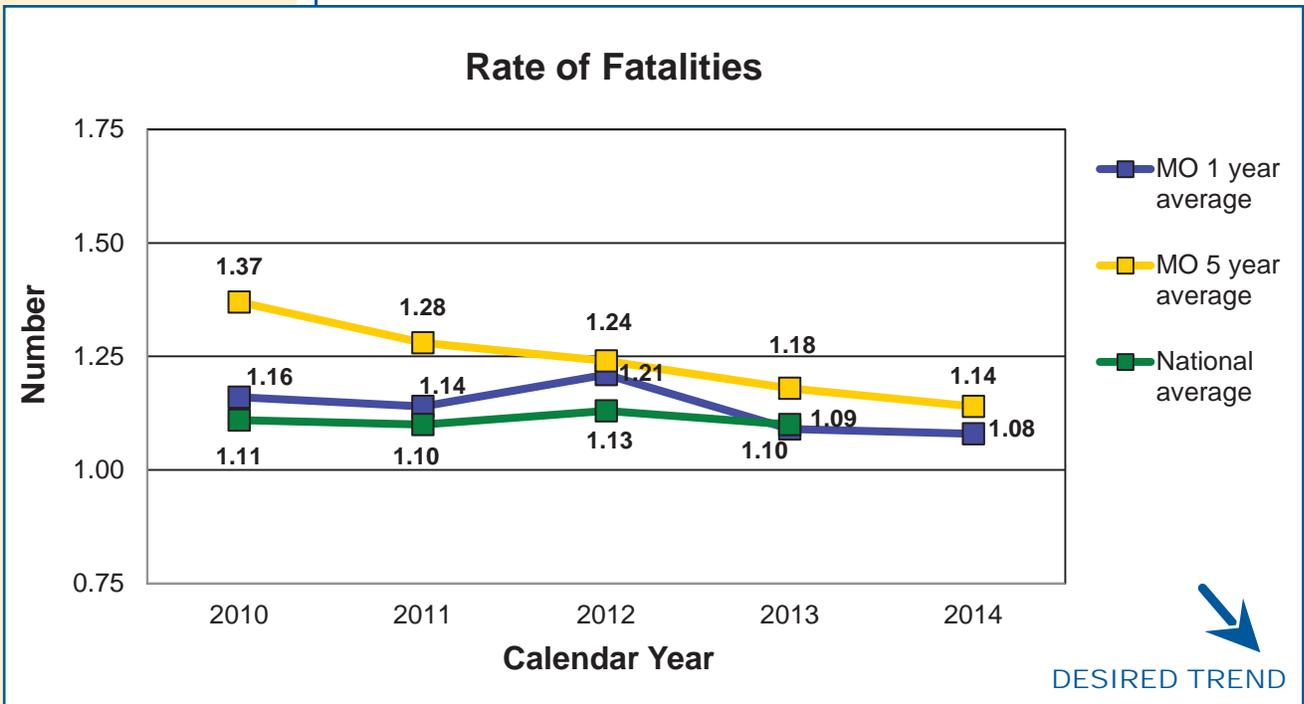
As funding levels decline, MoDOT will be challenged to deliver system-wide safety improvements.



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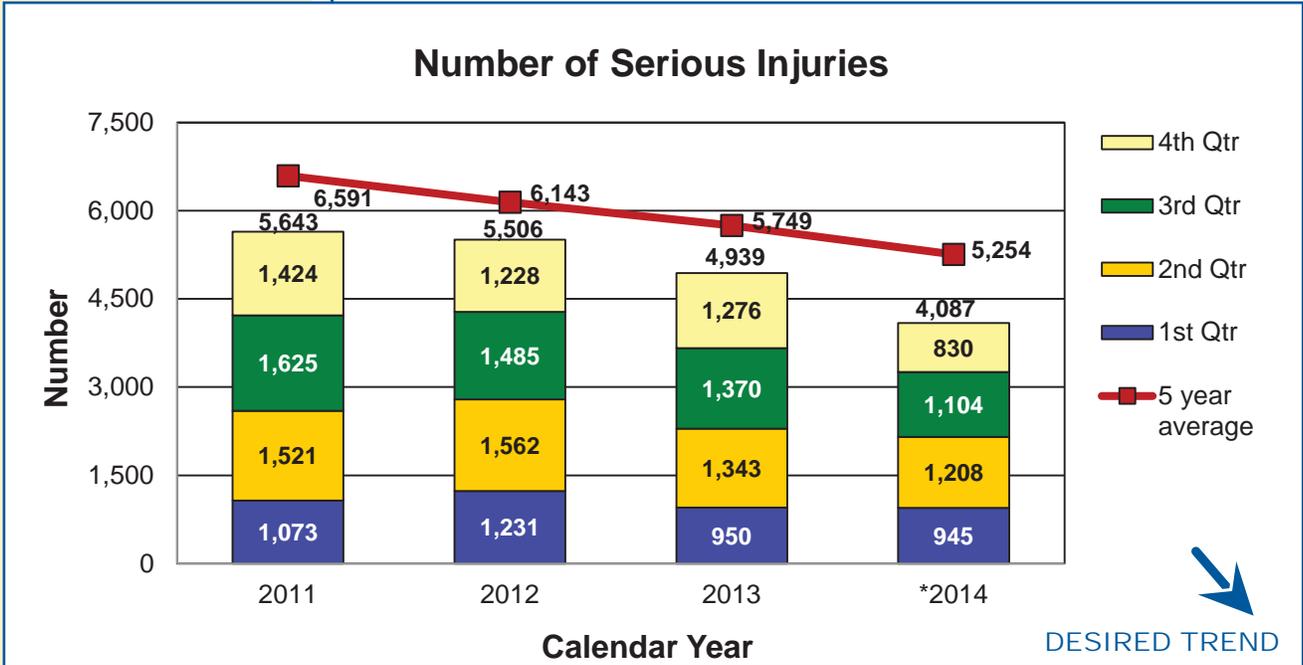


*YTD 2015 – First quarter fatalities were derived from MSHP radio reports.

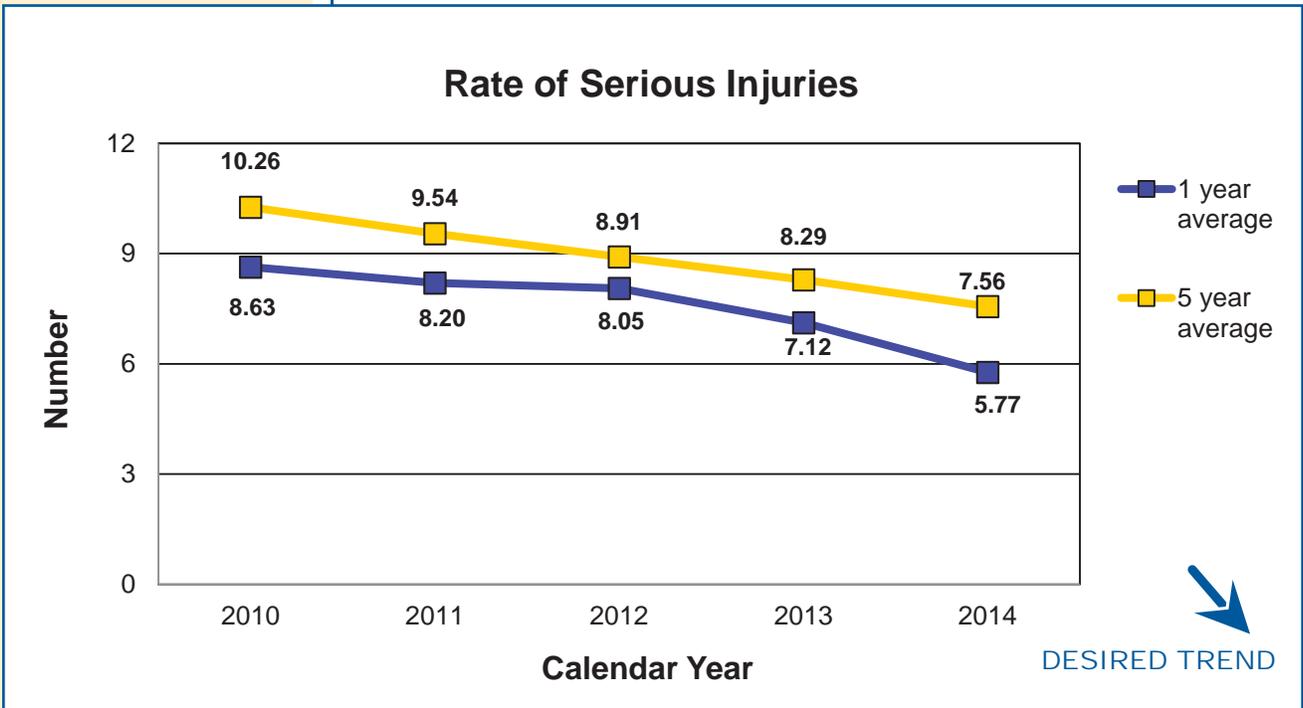


The rate of fatalities' chart displays annual and five-year average fatality rates per 100 million vehicle miles traveled for crashes. In addition, the fatality rate chart includes the national average.

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*2014 - Due to a backlog of crash reports into STARS, the serious injury measure will only illustrate data derived from TMS. First quarter 2015 data is unavailable through the MSHP radio reports.



The rate of serious injuries' chart displays annual and five-year average injury rates per 100 million vehicle miles traveled for these same crashes.

RESULT DRIVER:
Eileen Rackers,
State Traffic and Highway
Safety Engineer

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MEASUREMENT
DRIVER:
Bill Whitfield,
Highway Safety Director

PURPOSE OF
THE MEASURE:
The vulnerable roadway
user measure tracks annual
trends in fatalities and seri-
ous injuries of motorcyclists,
pedestrians and bicyclists.
These roadway users are
most at risk for death or
serious injury when involved
in a motor-vehicle-related
crash.

MEASUREMENT
AND DATA
COLLECTION:
Data is collected by law
enforcement and entered
into the State Traffic Ac-
cident Record System
managed by the Missouri
State Highway Patrol. The
record system automatically
updates MoDOT's Traffic
Management System.

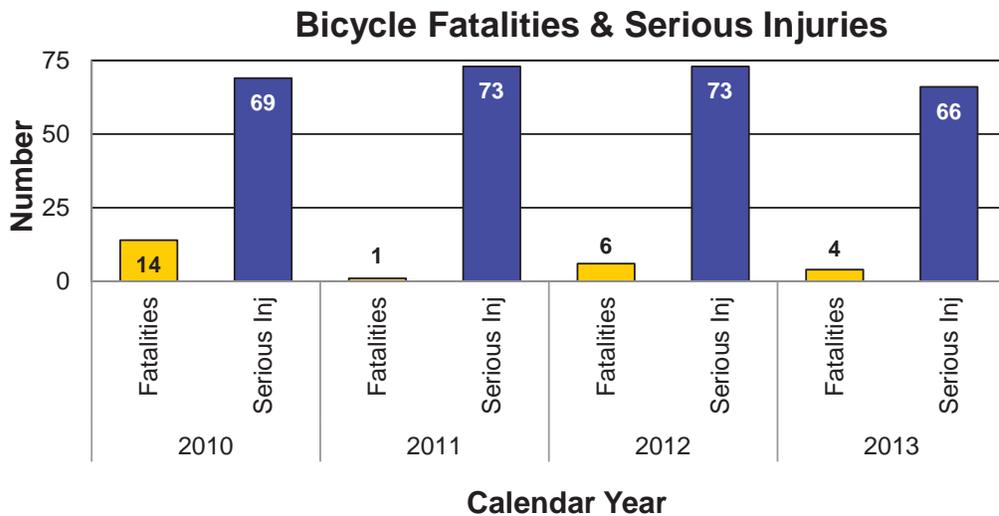
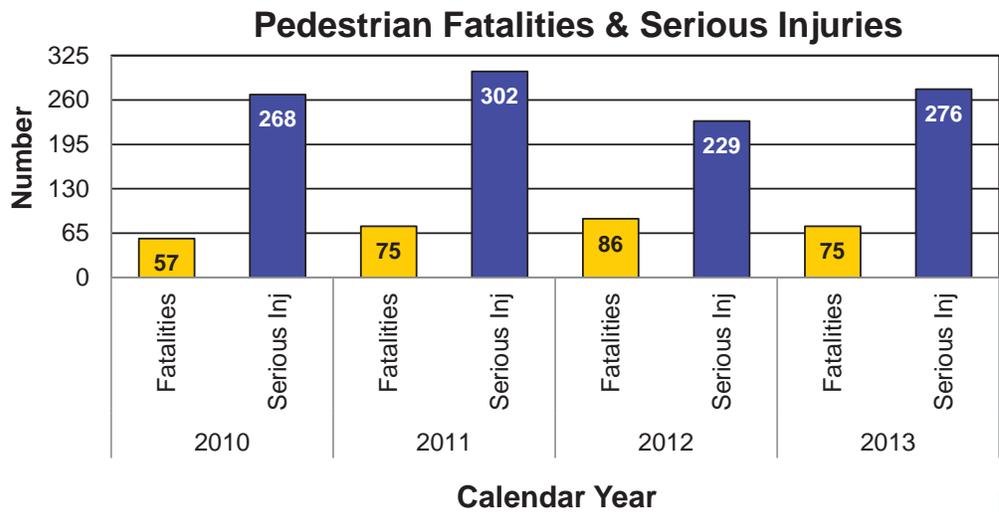
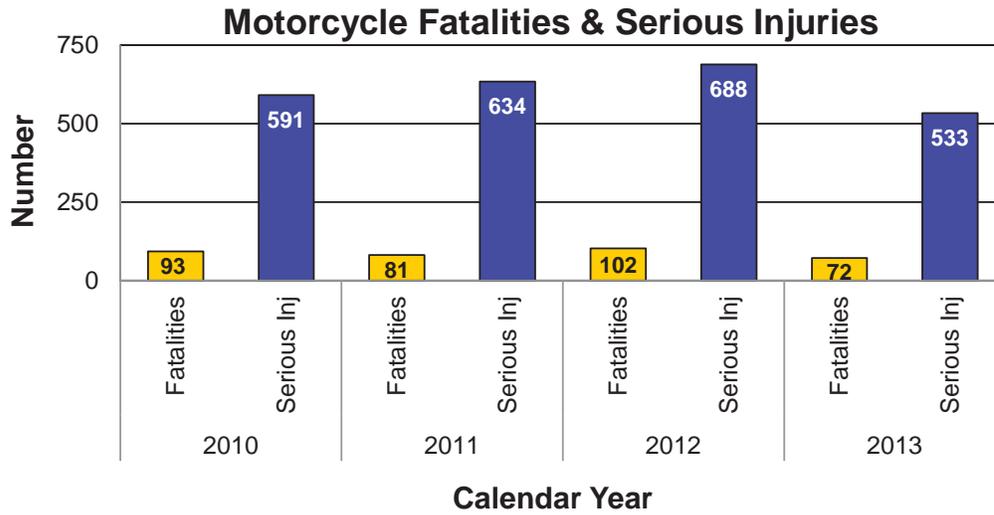
Number of vulnerable roadway user fatalities and serious injuries-1b

In 2013, vulnerable roadway users were 20 percent of the total number of fatalities. Motorcycle, pedestrian, and bicycle fatalities all decreased in 2013 by 29 percent, 13 percent, and 33 percent respectively. Motorcycle fatalities in 2013 were the lowest since 2004.

Serious injury data for 2014 are still incomplete. Motorcycle and bicycle serious injuries are showing a downward trend while pedestrian serious injuries appear to have increased from 2012 to 2013.



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RESULT DRIVER:
Eileen Rackers,
State Traffic and Highway
Safety Engineer

**MEASUREMENT
DRIVER:**
Mike Curtit,
Traffic Liaison Engineer

**PURPOSE OF
THE MEASURE:**
This measure tracks annual trends in motor vehicle related fatal and serious injuries resulting from some of the most common contributing factors or highway features. This data represents six of the top focus areas presented in Missouri's Blueprint to Save More Lives.

**MEASUREMENT
AND DATA
COLLECTION:**
Missouri law enforcement agencies submit a vehicle crash report form to the Missouri State Highway Patrol to enter them into a statewide traffic crash database. MoDOT staff query and analyze this data to determine the number of unrestrained occupants in crashes, how often aggressive driving, alcohol and other drugs contribute to crashes, and whether or not the vehicles ran off the road, or the crash occurred at an intersection or within a curve.

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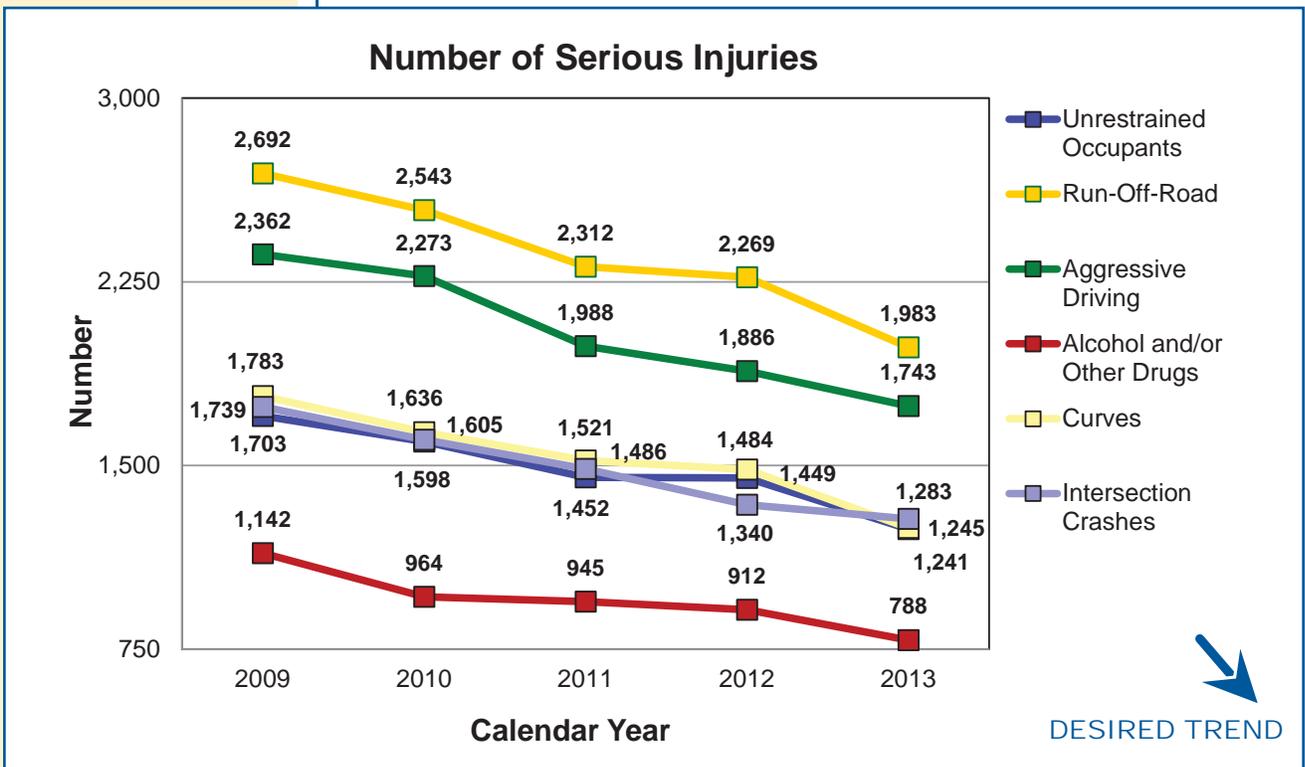
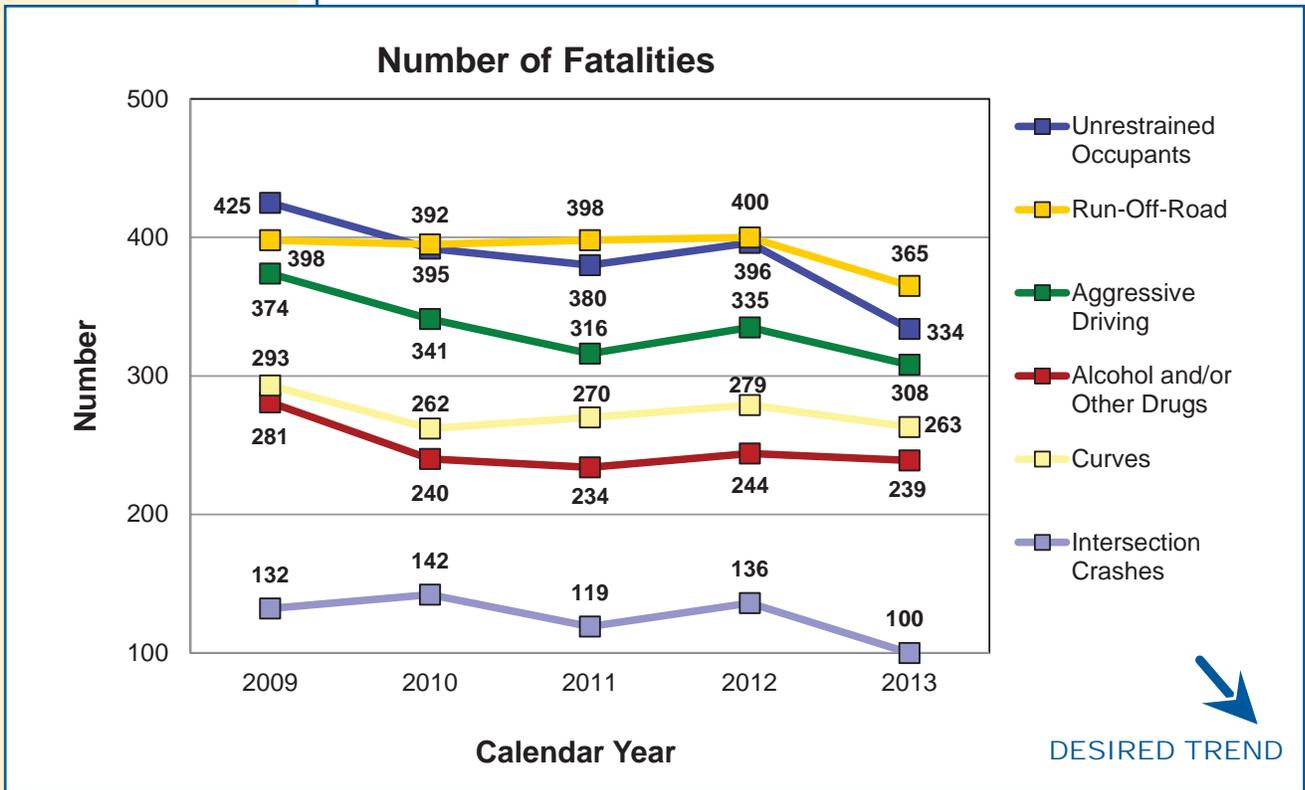
Number of fatalities and serious injuries resulting from the most frequent crash causes-1c

Recording and monitoring crash data is an important part of improving safety for Missouri drivers. But without looking at the causes of these incidents, the data is nothing but numbers. Looking for the reasons why an incident occurs is MoDOT's best approach to address the problem. With that approach, the department finds the most frequent causes continue to be a mix of engineering and behavioral issues.

The general trend for both fatalities and serious injuries has declined for the last five years. Comparing the number of fatalities in 2012 to 2013 shows the following results: 16 percent reduction in unrestrained occupants, 9 percent reduction in run-off-road, 8 percent reduction in aggressive driving, 2 percent reduction in alcohol and/or other drugs, 6 percent reduction in curve related, and 26 percent reduction in intersection related. Comparing the number of serious injuries in 2012 to 2013 shows the following results: 14 percent reduction in unrestrained occupants, 13 percent reduction in run-off-road, 8 percent reduction in aggressive driving, 14 percent reduction in alcohol and/or other drugs, 16 percent reduction in curve related, and 4 percent reduction in intersection related. The safety improvements included in the Smooth Roads Initiative and Better Roads, Brighter Future programs began the downward trends in fatalities and serious injuries. With both of these programs complete and without additional resources to invest in additional system-wide safety measures, the downward trends for each of these causes will be difficult to maintain. Significant improvements to increase safety will not be possible with diminishing funding levels predicted in the next few years. The primary current initiatives include adding shoulders and rumble strips to minor roads and striping all major roads prior to Memorial Day. While driver behavior is difficult to correct, MoDOT continues to focus on using funds to target locations and behaviors based on crash data analysis.



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RESULT DRIVER:
Eileen Rackers,
State Traffic and Highway
Safety Engineer

**MEASUREMENT
DRIVER:**
Julie Stotlemeyer,
Traffic Liaison Engineer

**PURPOSE OF
THE MEASURE:**
An important factor in
evaluating the safety of
Missouri's transportation
system includes the safety
of work zones on the state's
roadway system. This
measure tracks the num-
ber of traffic-related and
non-traffic related fatalities,
injuries and overall crashes
occurring in work zones on
state-owned roadways.

**MEASUREMENT
AND DATA
COLLECTION:**
Missouri law enforcement
agencies submit a vehicle
accident report form to the
Missouri State Highway
Patrol to enter them into
a statewide traffic crash
database. MoDOT staff
query and analyze this data
to identify work zone related
crash statistics. MSHP
prioritizes entry of the crash
reports by fatality, serious
injury, minor injury and
then property damage only.
Currently MSHP is entering
minor injury and property
damage only crash reports
for September 2014. There-
fore, the numbers for these
types of crashes will con-
tinue to change for calendar
years 2014 and 2015.

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Number of fatalities and serious injuries in work zones-1d

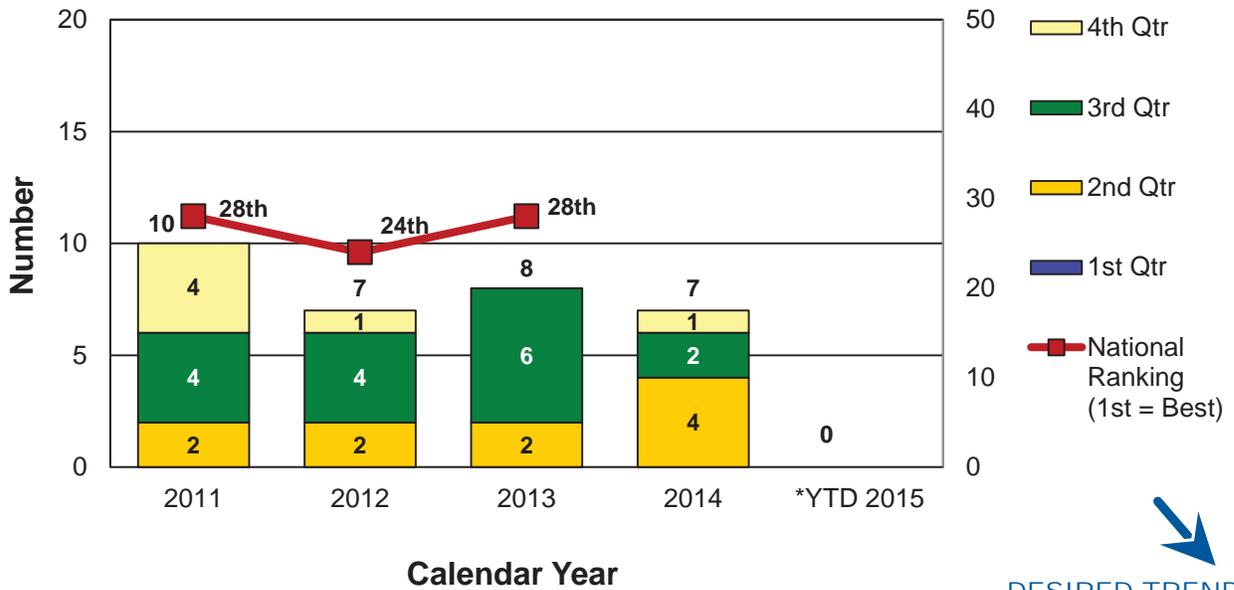
Work zone safety is at the center of MoDOT's safety culture. It is a driving force in all maintenance and construction work. Just as MoDOT expects its crews to be safe and visible, it also expects contractors and utility companies to provide safe work zones and visible workers. This is demonstrated by the partnership MoDOT has with contractors and utility companies using the same personal protection equipment it uses. Staying safe in work zones is also a partnership the department shares with the driving public. MoDOT wants everyone to get home safely. While MoDOT makes every effort to work safely, we are counting on motorists to pay attention, buckle up and drive without distractions.

For crash reports entered to date for calendar year 2014, seven people were killed in Missouri work zones and never made it home to their families. Three of those killed were not buckled. Forty-two people have been seriously injured, more than the previous year. More serious injuries occurred every time a lane was closed in 2014 than 2013. From information currently available for first quarter calendar year 2015, zero fatalities have occurred in Missouri work zones.



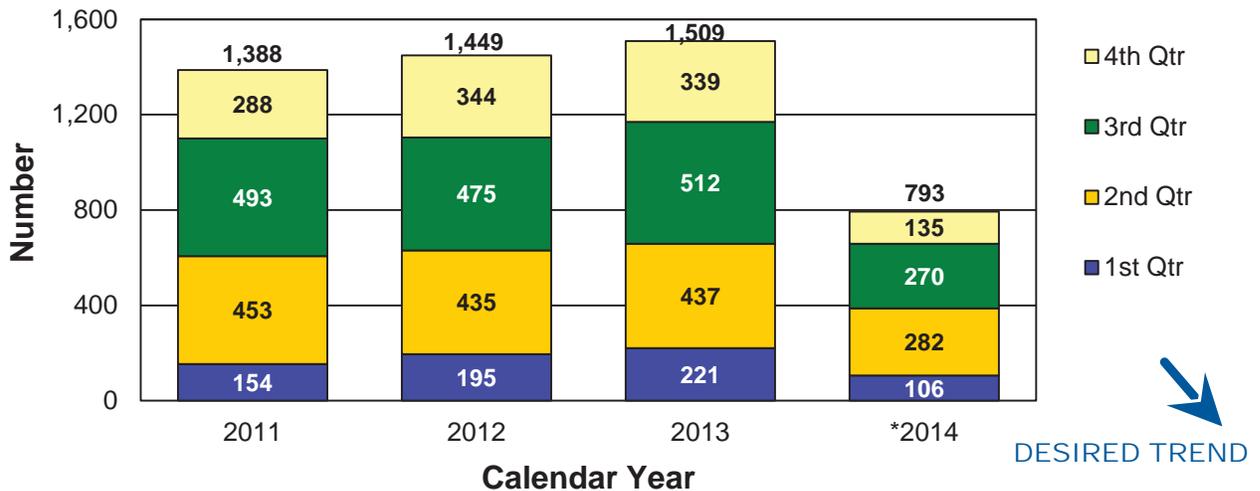
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Number of Fatalities in Work Zones



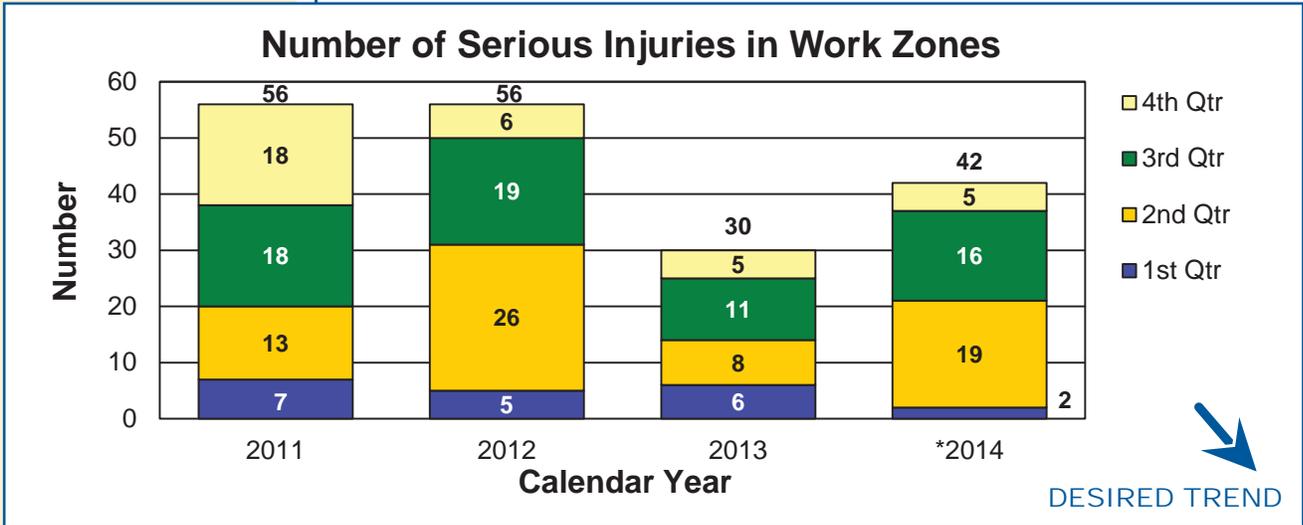
*YTD 2015 –First quarter fatalities derived from MSHP radio reports.

Number of Crashes in Work Zones

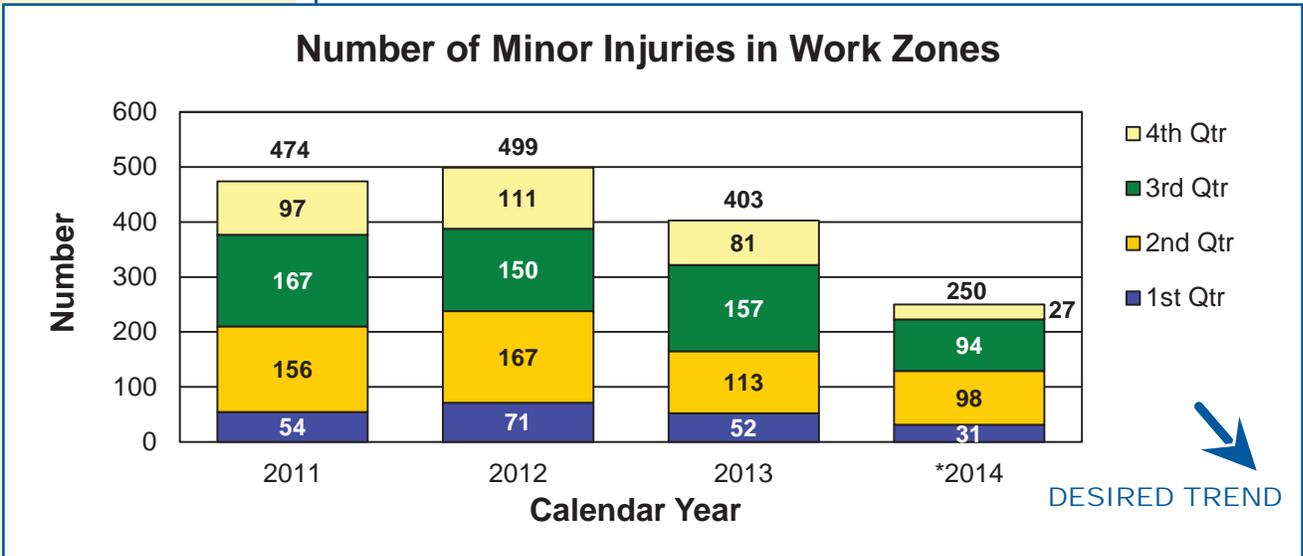


*2014 – Due to a backlog of crash reports into STARS, the serious, minor injury and work zone crash measures will only illustrate data derived from TMS. First quarter 2015 data is unavailable through the MSHP radio reports.

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*2014 – Due to a backlog of crash reports into STARS, the serious, minor injury and work zone crash measures will only illustrate data derived from TMS. First quarter 2015 data is unavailable through the MSHP radio reports.



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RESULT DRIVER:
Eileen Rackers,
State Traffic and Highway
Safety Engineer

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**MEASUREMENT
DRIVER:**
Bill Whitfield,
Highway Safety Director

**PURPOSE OF
THE MEASURE:**
This measure tracks annual trends in safety belt use in passenger vehicles. This data drives the development and focus of the Missouri Highway Safety Plan, which is required annually by the National Highway Traffic Safety Administration. In addition, this data supports Missouri's Blueprint to Save More Lives that identifies the statewide initiatives with a goal of reducing fatalities to 700 or fewer by 2016.

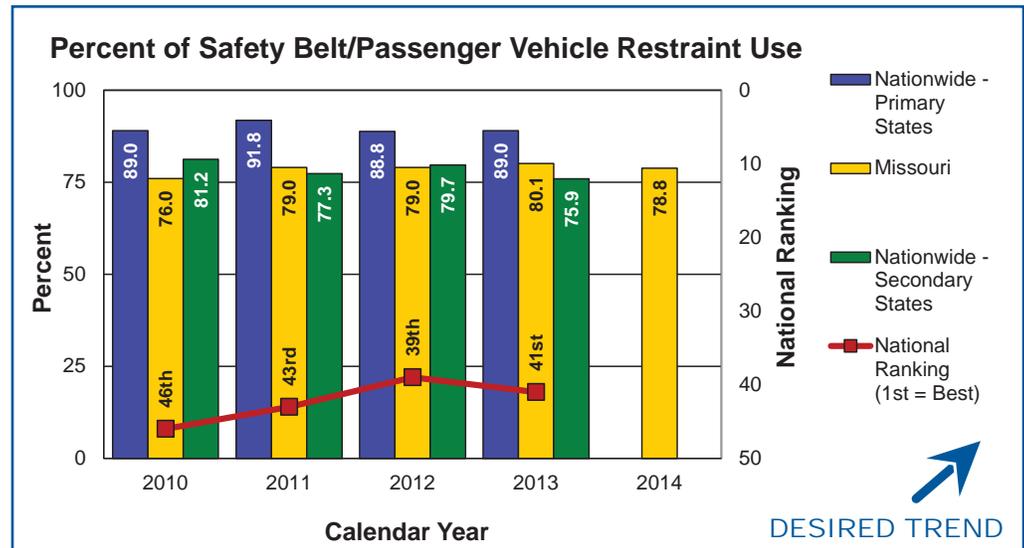
**MEASUREMENT
AND DATA
COLLECTION:**
Each June, a statewide survey is conducted at 560 pre-selected locations in 28 counties. The data collected is calculated into a safety belt usage rate using a formula approved by the National Highway Traffic Safety Administration. The safety belt usage survey collects data from locations representing 85 percent of the state's vehicle occupant fatalities. The data collection plan is the same each year for consistency and compliance with National Highway Traffic Safety Administration guidelines.

Percent of safety belt/passenger vehicle restraint use-1e

Safety belts save lives. But getting people to use them – even to protect their own lives – is a challenge. Public education is one way to keep the issue in front of motorists. Legislation is another. MoDOT supports both approaches, attacking the problem with focused marketing campaigns and reinforcing it with hard facts to back legislative efforts. Several municipalities across the state are taking matters into their own hands enacting primary ordinances within city limits. Missouri currently has 44 communities with a primary safety belt ordinance representing 21.6 percent of the state's population.

Safety belt use in Missouri for 2014 was 79 percent. The national average for safety belt use in 2013 was 87 percent. Missouri's national ranking is currently 41st. Only nine states rank lower in safety belt use than Missouri.

Missouri's safety belt use has plateaued. The number of states with a primary safety belt use law, result in a higher rate of use for those states. States that have a secondary law continue to fall down the list in the national rankings.



RESULT DRIVER:
Eileen Rackers,
State Traffic and Highway
Safety Engineer

**MEASUREMENT
DRIVER:**
Mark Biesemeyer,
Motor Carrier Services
Program Manager

**PURPOSE OF
THE MEASURE:**
This measure tracks the
number of Commercial Mo-
tor Vehicles involved in fatal
and serious injury crashes
each year. MoDOT uses
the information to target
educational, enforcement
and improvement of safety
feature efforts.

**MEASUREMENT
AND DATA
COLLECTION:**
Missouri law enforcement
agencies submit a vehicle
accident report form to the
Missouri State Highway
Patrol to enter them into
a statewide traffic crash
database. The measure re-
ports the number of CMVs
involved in crashes in which
one or more people are
seriously injured or die as a
result of the crash. Prelimi-
nary results for the current
year are reported quarterly.

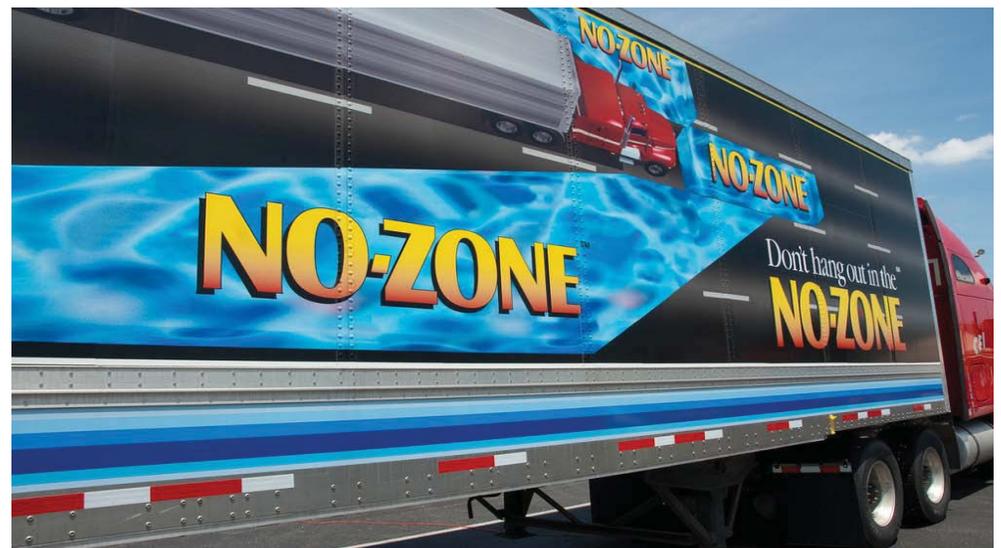
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Number of commercial motor vehicle crashes resulting in fatalities and serious injuries-1f

Commercial Motor Vehicles are the lifeblood of our economy. They transport the goods and materials that keep the nation moving. Partnering with the Missouri State Highway Patrol and St. Louis and Kansas City police departments, MoDOT does everything in its power to keep CMV drivers safe and their vehicles on the road. By tracking the number of CMV crashes resulting in fatalities and serious injuries, the department can target educational and enforcement efforts, and also improve safety features such as highway signs, reflective pavement markings, guard cables, rumble strips and incident management alert signs.

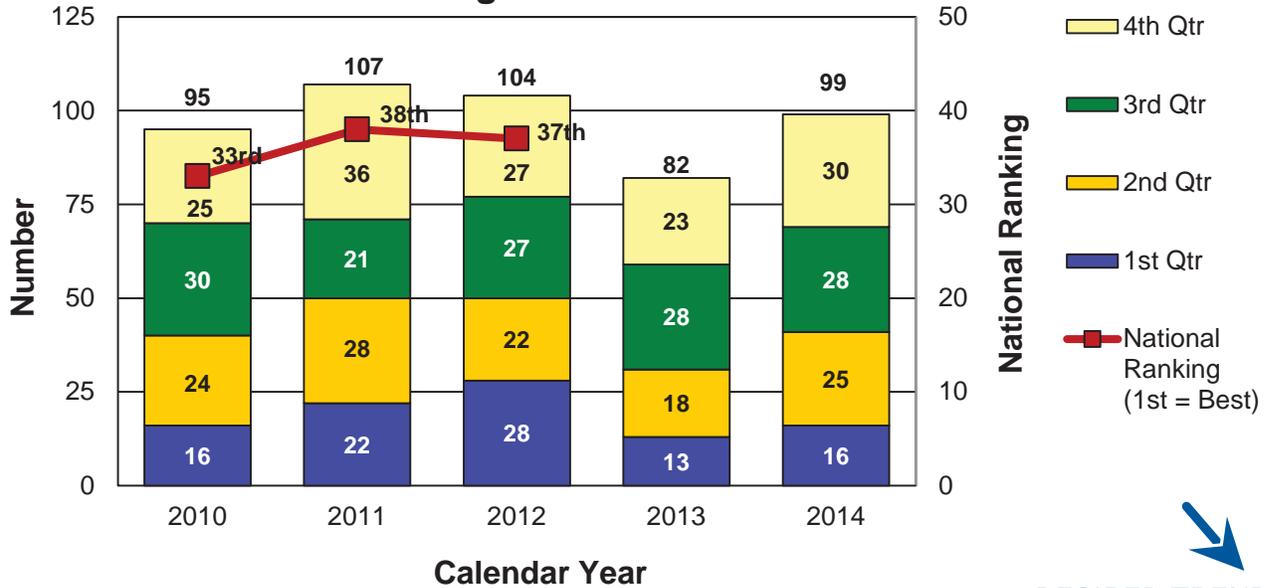
These efforts are making a difference in the number of fatality and serious injury crashes. Between 2011 and 2014, fatal crashes involving a CMV decreased by 7.4 percent. However, the number of fatal crashes reported for 2014 is 99, which is 17 more than reported for 2013, or a 20.7 percent increase.

Between 2011 and 2014, CMV serious injury crashes decreased by 21.9 percent. The number of serious injury crashes reported for 2014 is 271, which is 44 less than reported for 2013, or a decrease of 13.9 percent. However, diminished funding may hamper the department's ability to make significant safety improvements in the future.



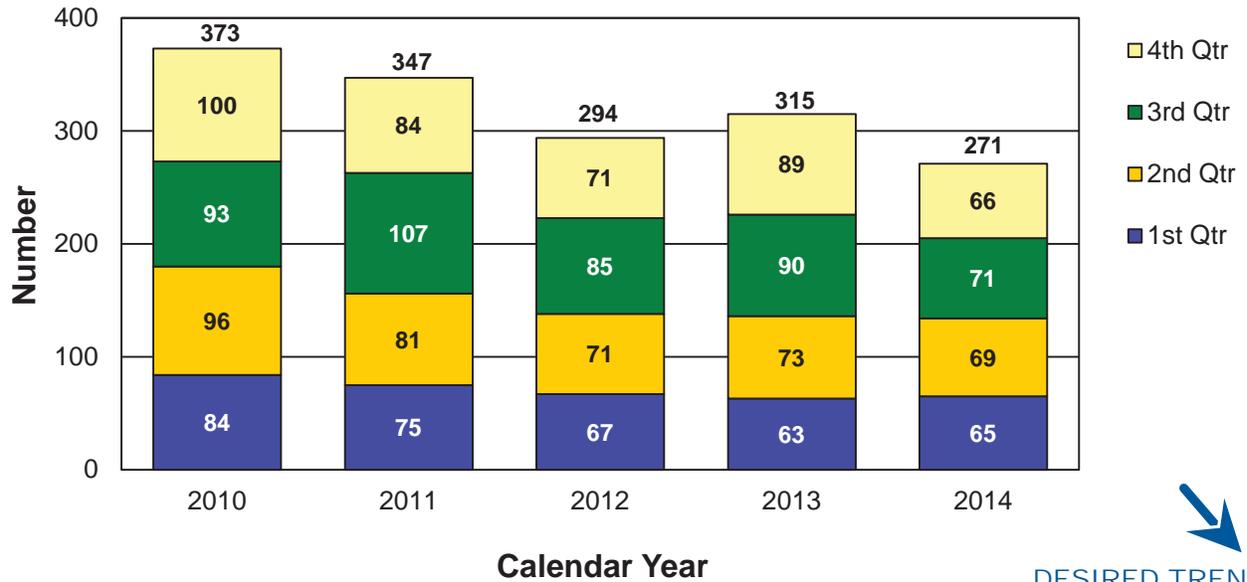
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Number of Commercial Motor Vehicle Crashes Resulting in Fatalities



DESIRED TREND

Number of Commercial Motor Vehicle Crashes Resulting in Serious Injuries



DESIRED TREND

*2014 - Due to a backlog of crash reports into STARS, the fatality and serious injury measures for the fourth quarter of 2014 will only illustrate data derived from TMS.

RESULT DRIVER:
Eileen Rackers,
State Traffic and Highway
Safety Engineer

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**MEASUREMENT
DRIVER:**
Roberta Jacobson,
Claims Administration
Manager

**PURPOSE OF
THE MEASURE:**
This measure tracks the
actual number of days em-
ployees cannot work due to
work-related injuries.

**MEASUREMENT
AND DATA
COLLECTION:**
The data is collected
from Riskmaster, the
department's risk manage-
ment claims administration
software.

Number of lost workdays-1g

The impact of work-related injuries cannot be underestimated. Employees injured at work not only affect the department, but can disrupt the personal lives of MoDOT employees and their families. Measuring lost workdays shows more than a number on a chart. These are people whose lives can be changed by a split second of inattention or poor preparation. Watching this number fall over the years, shows that something is going right.

For the first quarter of 2015, the total number of lost workdays decreased 33 percent from the same time period in 2014. There were three incidents in which employees were lifting MoDOT equipment or materials, accounting for 40 percent of the lost workdays. Another 11 percent of the lost workdays were attributable to two incidents involving slips, trips or falls, half of which were due to snow or ice conditions. One incident involving a third party accounted for 10 percent of the lost workdays, and 7 percent of the lost workdays were due to weed or brush cutting activities.

Employees are paying attention. They are wearing proper safety gear and taking proper precautions before engaging in a safety-sensitive task. The drop in this number is more than a statistic. It means more people are going home safe.



RESULT DRIVER:
Eileen Rackers,
State Traffic and Highway
Safety Engineer

KEEP CUSTOMERS AND OURSELVES SAFE

MEASUREMENT
DRIVER:
Jeff Padgett,
Risk and Benefits
Management Director

PURPOSE OF
THE MEASURE:
This measure tracks the
number of recordable inju-
ries, in total and as a rate of
injuries per 100 workers.

MEASUREMENT
AND DATA
COLLECTION:
The calculation for inci-
dence rate is the number of
recordables times 200,000
divided by the number of
hours worked. The 200,000
used in the calculation is
the base for 100 full-time
workers (working 40 hours
per week, 50 weeks per
year). MoDOT defines a re-
cordable incident as a work-
related injury or illness that
results in death, days away
from work or medical treat-
ment resulting in cost to the
department. The injury data
is collected from Riskmas-
ter, the department's risk
management claims ad-
ministration software. The
number of hours worked is
taken from MoDOT's payroll
data.

Total and rate of MoDOT recordable incidents-1h

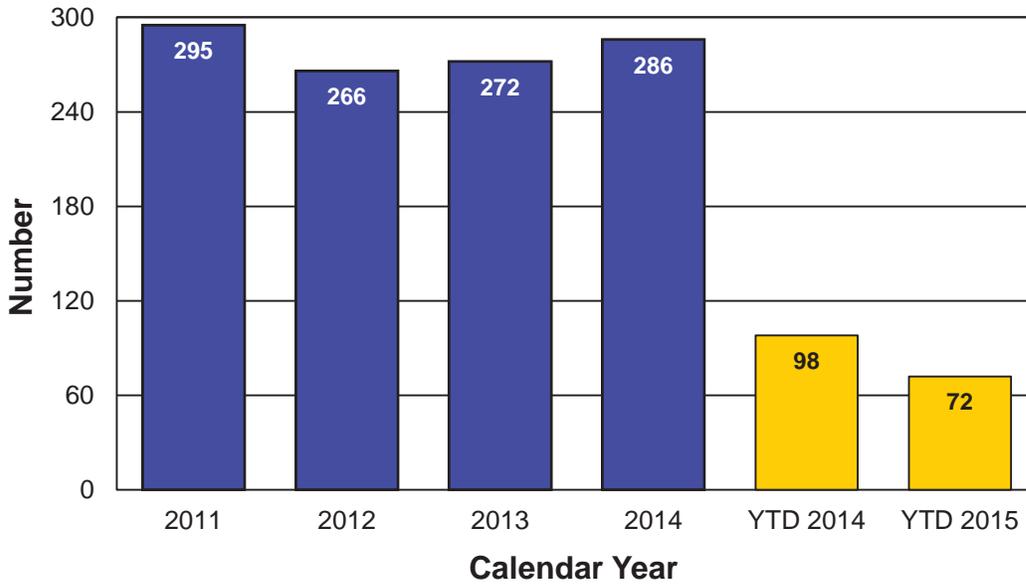
MoDOT is dedicated to employee safety. Getting home safely is a responsibility every employee shares. To reinforce this value, the "Safety Begins with Me" program was launched in 2013 to remind all employees that safety is a personal responsibility.

Both the number of recordable incidents and the rate of recordable incidents have decreased for the first quarter of 2015 compared to the same time period in 2014. Leading causes of incidents during this reporting period were: slips, trips and falls at 25 percent; struck or injured at 15 percent; motor vehicle and cut/puncture at 13 percent each. When looking at the work activity the employee was doing at the time of the incident, 29 percent of these injuries were equipment related. Another 16 percent were snow/ice related, and 16 percent were related to brush cutting activities.



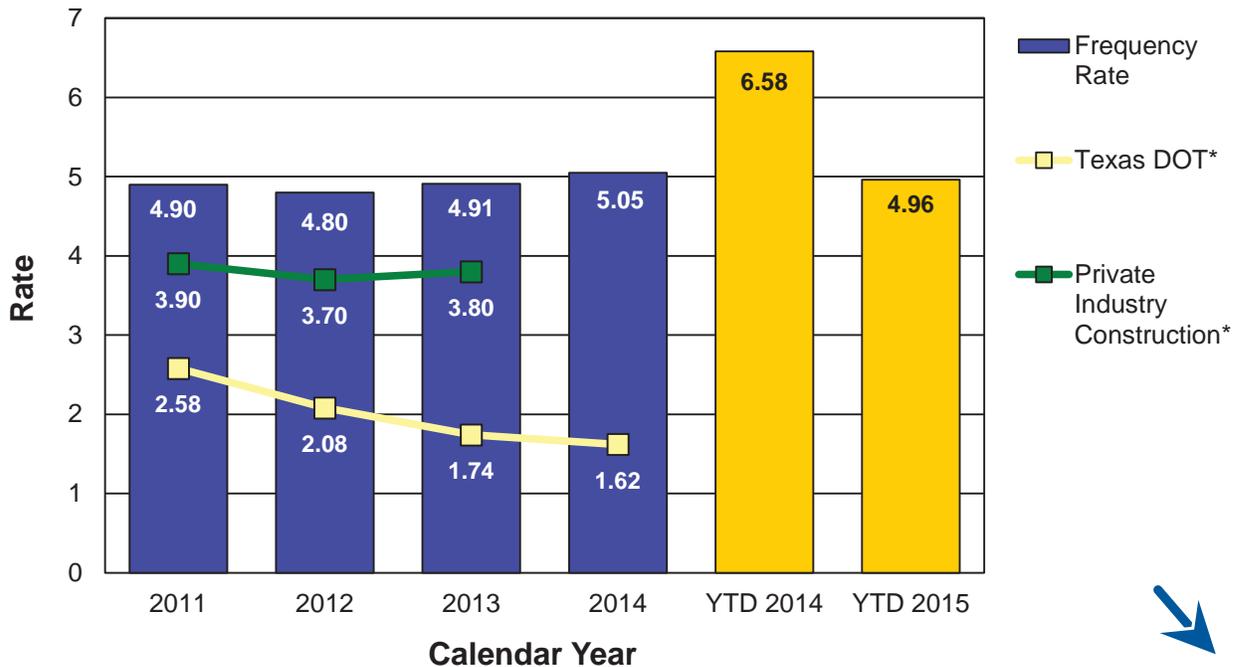
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Total of MoDOT Recordable Incidents



DESIRED TREND

Rate of MoDOT Recordable Incidents



DESIRED TREND

*Private Industry Construction category data, from the OSHA website, are not yet available for 2014.

RESULT DRIVER:
Eileen Rackers,
State Traffic and Highway
Safety Engineer

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MEASUREMENT
DRIVER:
Steve Patterson, Safety and
Claims Manager

PURPOSE OF
THE MEASURE:
This measure tracks the
number of general liability
claims filed and amount
paid.

MEASUREMENT
AND DATA
COLLECTION:
General liability claims
arise from allegations of
injuries/damages caused
by the dangerous condition
of MoDOT property and the
injury/damage that directly
resulted from the dangerous
condition. In addition, an
employee must be negligent
and create the dangerous
condition or MoDOT must
have actual or constructive
notice of the dangerous
condition in sufficient time
prior to the injury/damage
to have taken measures to
protect the public against
the dangerous condi-
tion. Claims data is col-
lected from Riskmaster, the
department's risk manage-
ment claims administration
software.

General liability claims and costs-1i

Keeping ourselves and the public safe is MoDOT's top priority. Controlling damage to vehicles and reducing personal injury in work zones, right of way and other areas under department control helps MoDOT accomplish this goal. Compared to the first quarter 2014, there was a decrease of 11 percent in the number of claims. The majority of first quarter 2015 claims were attributed to pavement defects. During the same timeframe, payment was made on 104 claims against the department totaling \$2,340,723.80 – a decrease of 1 percent from this quarter a year ago. Four claims accounted for 62 percent of this quarter's payments.

An arbitration panel found the department 20 percent at fault based on a significant edge drop-off. The incident occurred in 2008, where the driver and one of the six passengers (on a school bus) endured substantial injuries. Based on the 20 percent findings, the school district filed suit against the department to recuperate its losses. The claim was settled out of court. The combined cost to the department was roughly \$378,000.

The department settled a claim occurring in 2010 for \$375,000, based on the dangerous condition of a minor route where a box culvert system failed, resulting in a fatality. There was piping/voiding of the substructure (depth and width) on both sides of the culvert system from rain events before and during this incident.

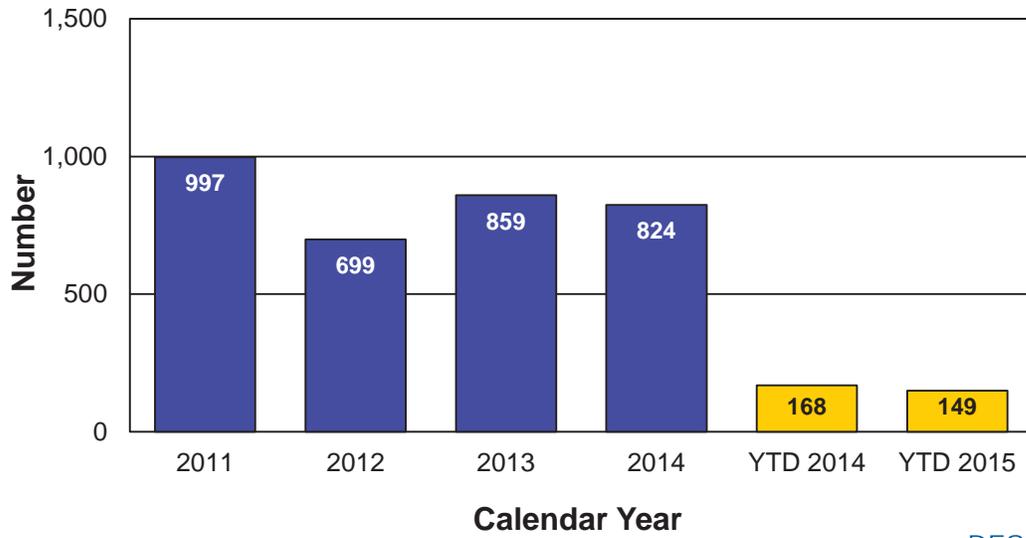


The department settled a claim occurring in 2010 for \$360,000, based on the dangerous condition in the median, where a multidirectional breakaway base should have been used versus a two directional breakaway base. The direction of impact did not allow the sign to break away, but snapped down crushing the driver's side roof, causing serious, permanent injuries to the driver.

The department settled a claim occurring in 2012 for \$325,000, based on the dangerous condition of the right of way, resulting in a fatality. There was a jagged outcrop, steep slope and absence of guardrail within the established 30-foot clear zone.

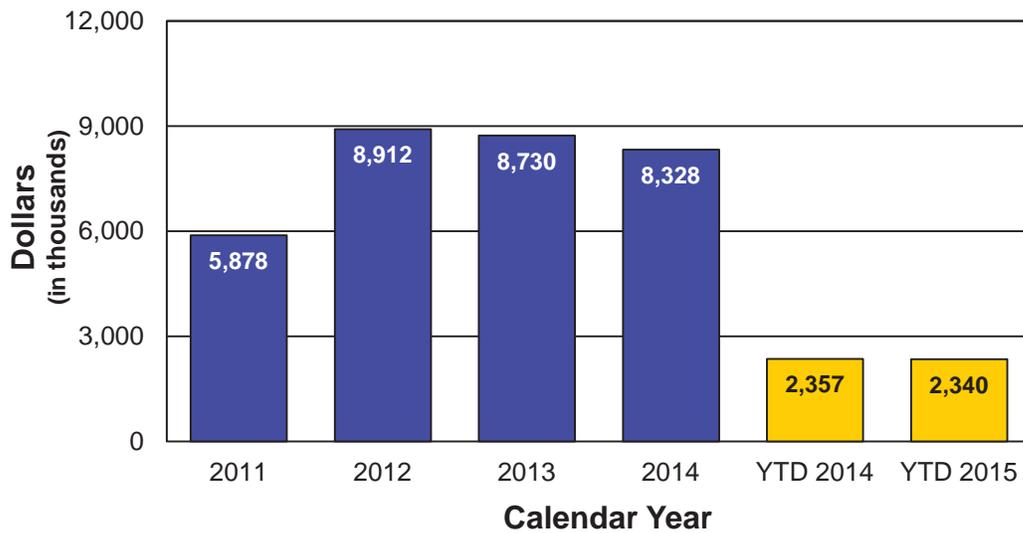
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Number of Claims for General Liability



DESIRED TREND

Amount Paid in Claims for General Liability



DESIRED TREND