



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 be entered into  
a statewide traffic crash  
database. The database  
automatically updates  
MoDOT's crash database  
system, which is part of the  
Transportation Management  
System.

## KEEP CUSTOMERS AND OURSELVES SAFE

MAP-21

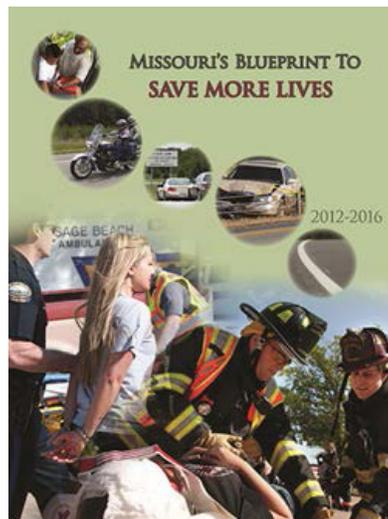
### *Number and rate of fatalities and serious injuries-1a*

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 766.

Year-to-date percent of unbuckled passengers: 2010 – 68 percent; 2011 – 69 percent; 2012 – 71 percent; 2013 – 64 percent and 2014 – 67 percent.

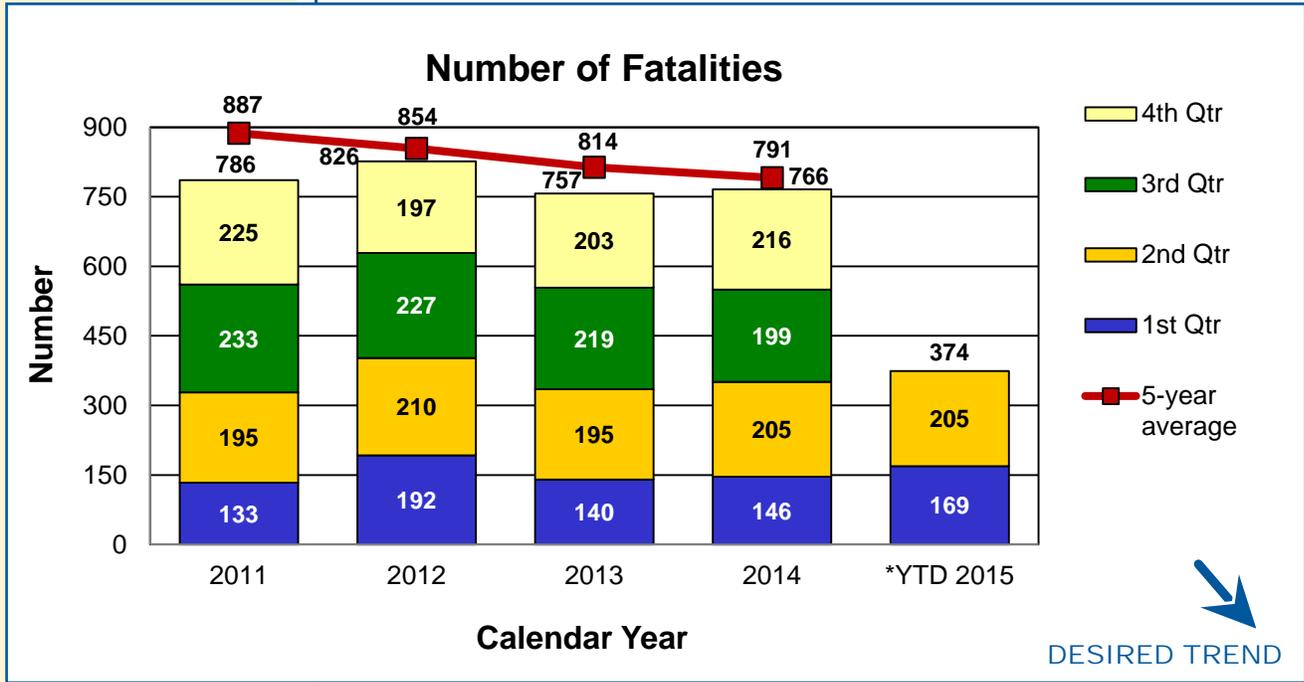
The 2013 fatality rate per 100 million miles traveled fell to the lowest rate on record to 1.09. In 2013, the national fatality rate per 100 million miles traveled was 1.10. Serious injury data for 2014 reflects a continued downward trend for both the number and five-year average of serious injuries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

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

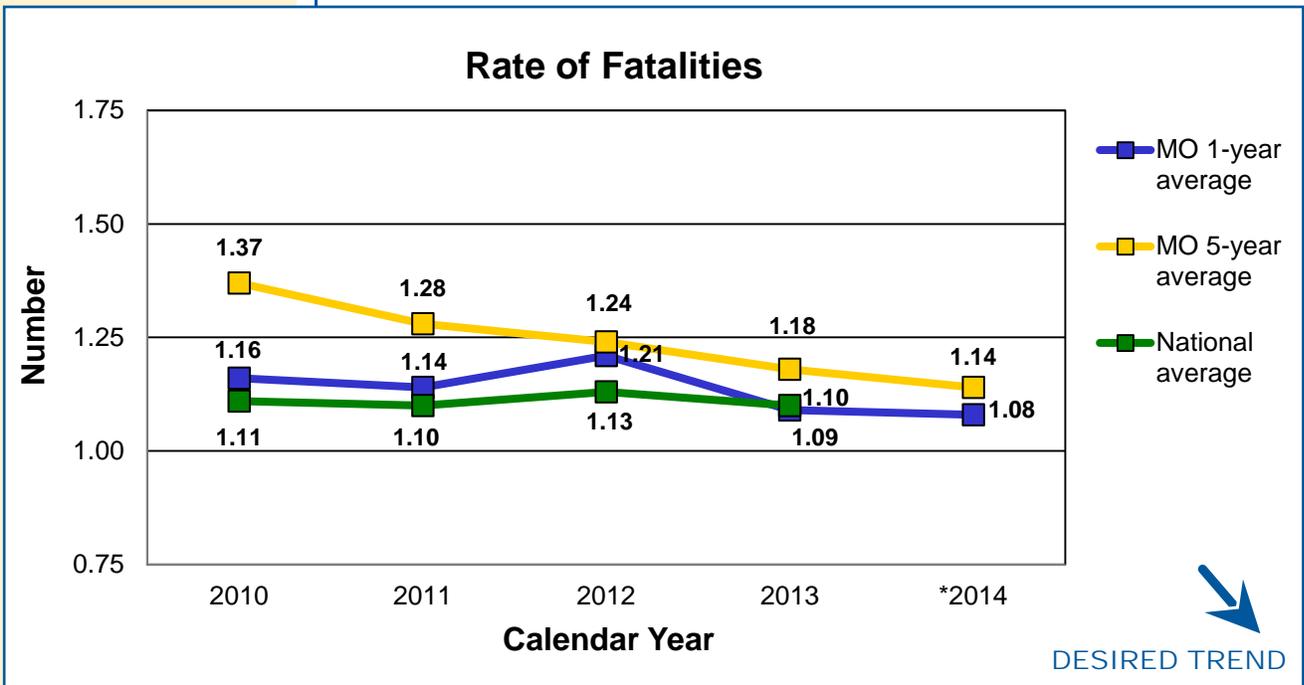


How low can we go?  
**700 by 2016**  
**ARRIVE ALIVE**

# KEEP CUSTOMERS AND OURSELVES SAFE



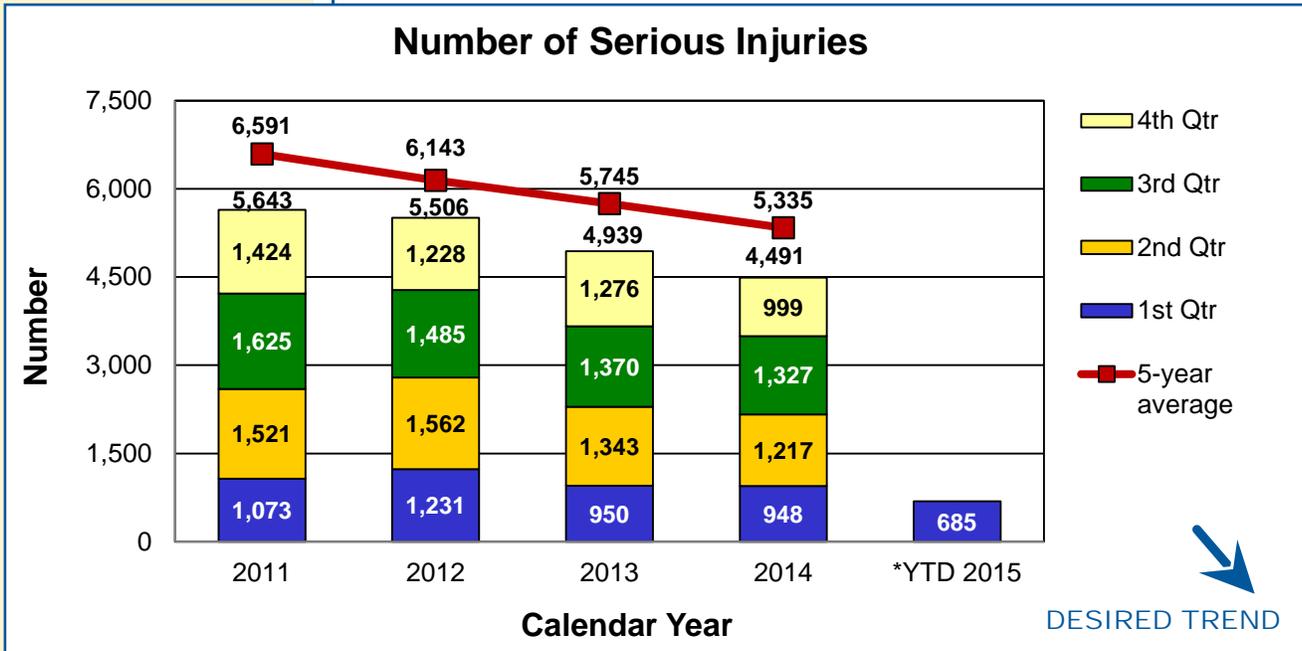
\*YTD 2015 – Second quarter fatalities were derived from MSHP radio reports.



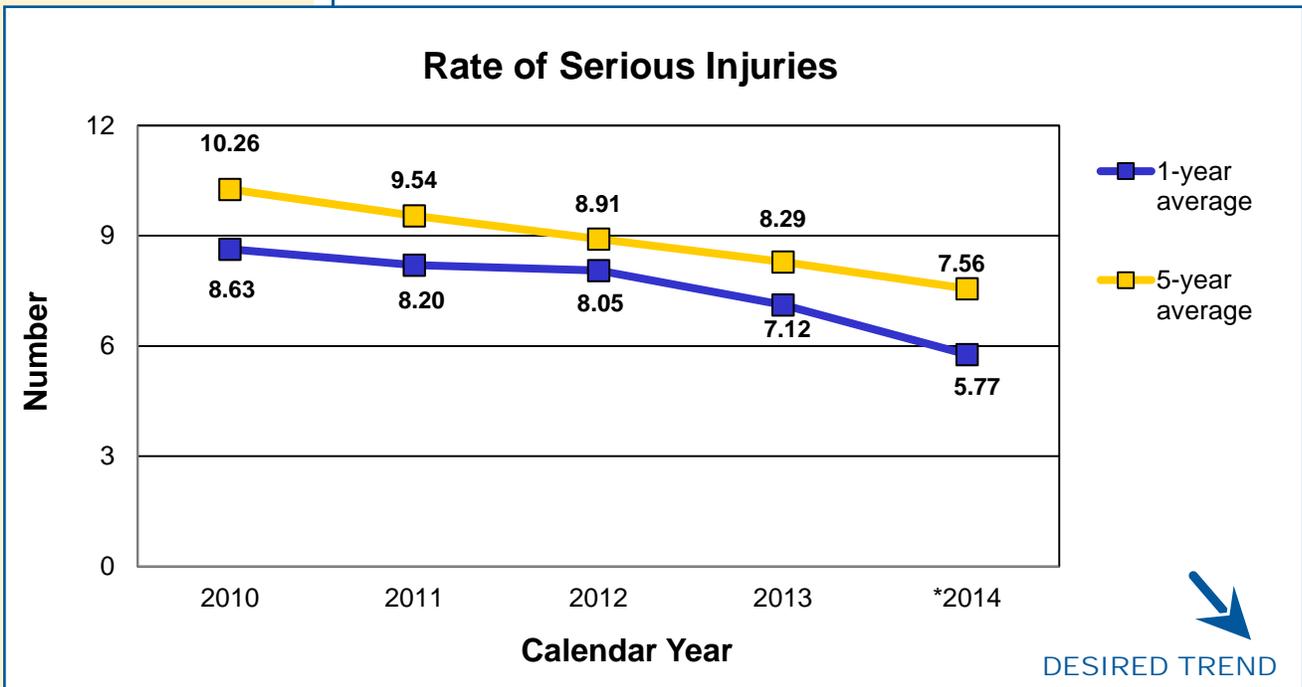
The rate of fatalities' chart displays annual and five-year average fatality rates per 100 million vehicle miles traveled for crashes. In addition, the fatality rate chart includes the national average.

\*The rate of fatalities for 2014 has not been finalized by MSHP.

# KEEP CUSTOMERS AND OURSELVES SAFE



\*YTD 2015 - Due to a backlog of crash reports into STARS, the serious injury measure will only illustrate data derived from TMS. Second quarter 2015 data is not available on the MSHP radio reports and is incomplete in TMS.



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

\*The rate of serious injuries for 2014 has not been finalized by MSHP.

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

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

## KEEP CUSTOMERS AND OURSELVES SAFE

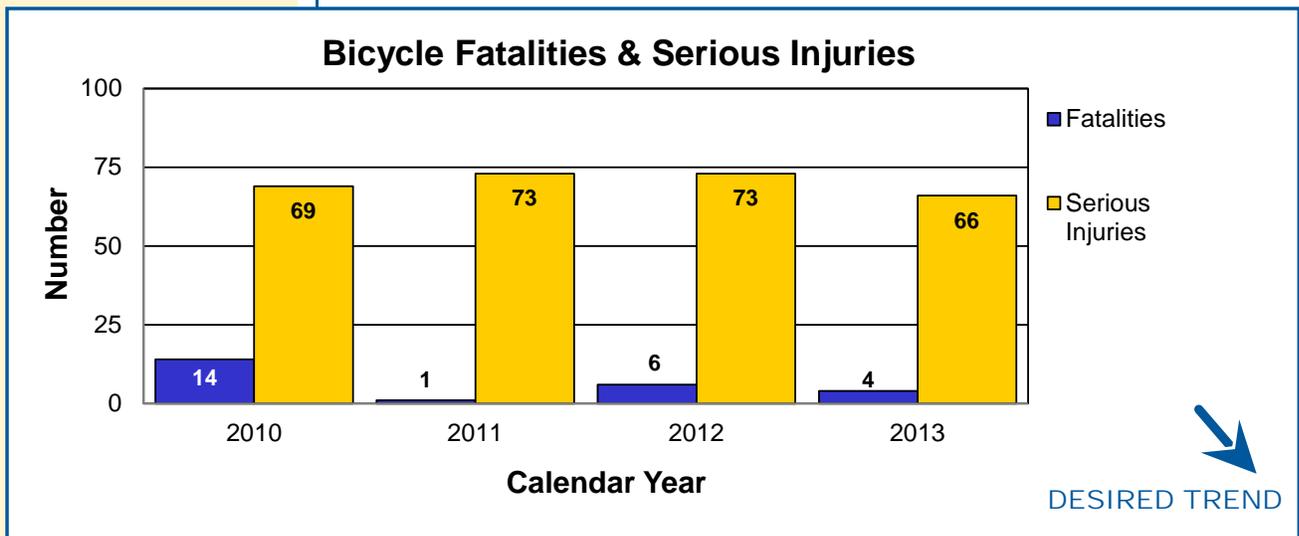
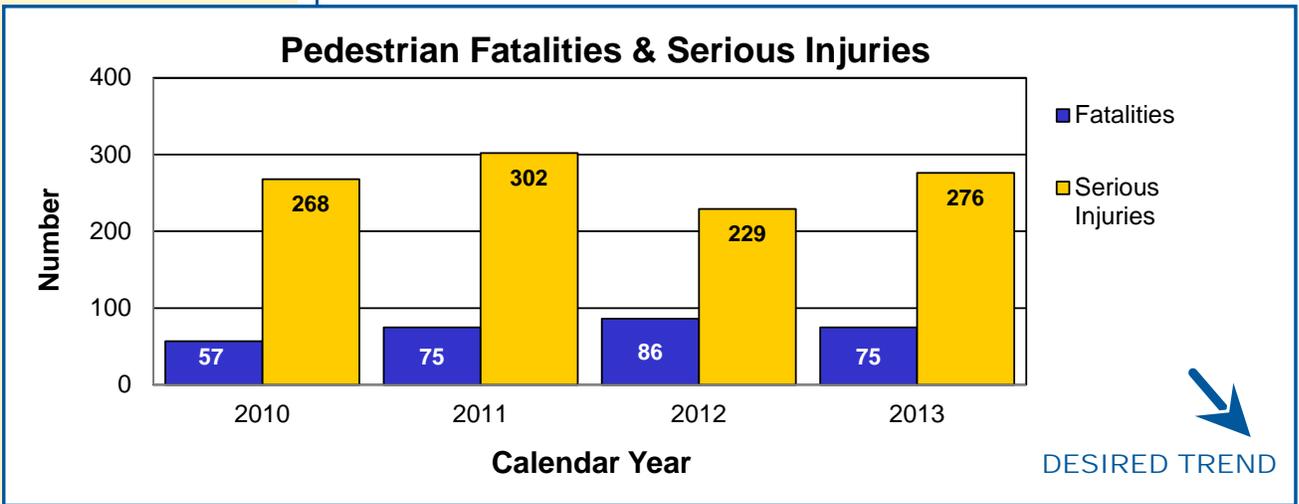
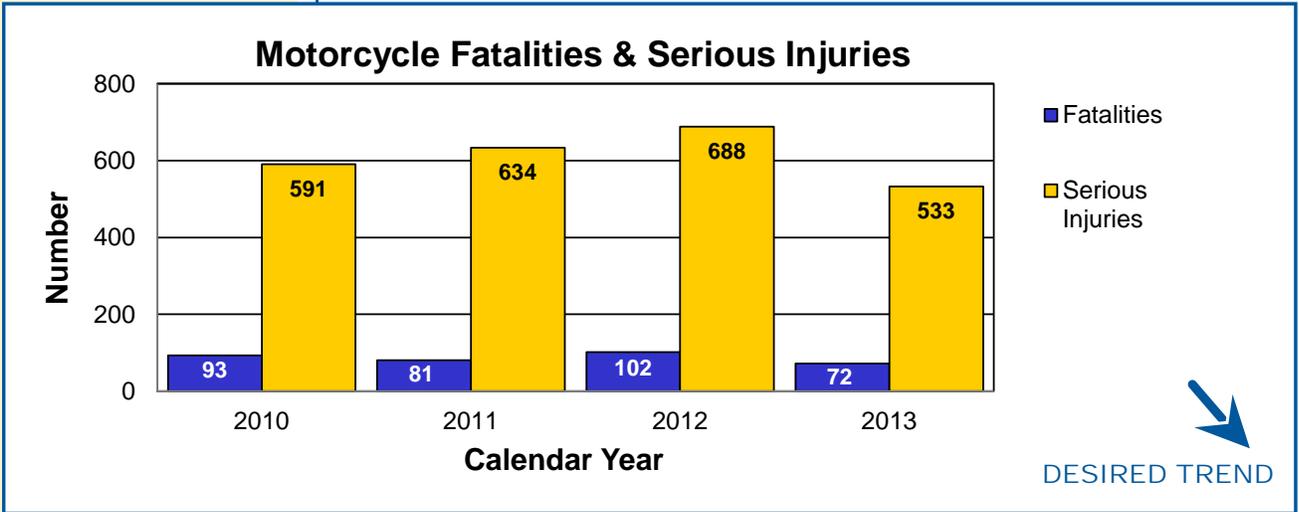
### *Number of vulnerable roadway user fatalities and serious injuries-1b*

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. Fatality 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. Serious injury data for 2014 are still incomplete.



# KEEP CUSTOMERS AND OURSELVES SAFE



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

**MEASUREMENT  
DRIVER:**  
John Miller,  
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 accident report form to the Missouri State Highway Patrol to be entered into a statewide traffic crash database. The database automatically updates MoDOT's crash database system, which is part of the Transportation Management System. 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.

## KEEP CUSTOMERS AND OURSELVES SAFE

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

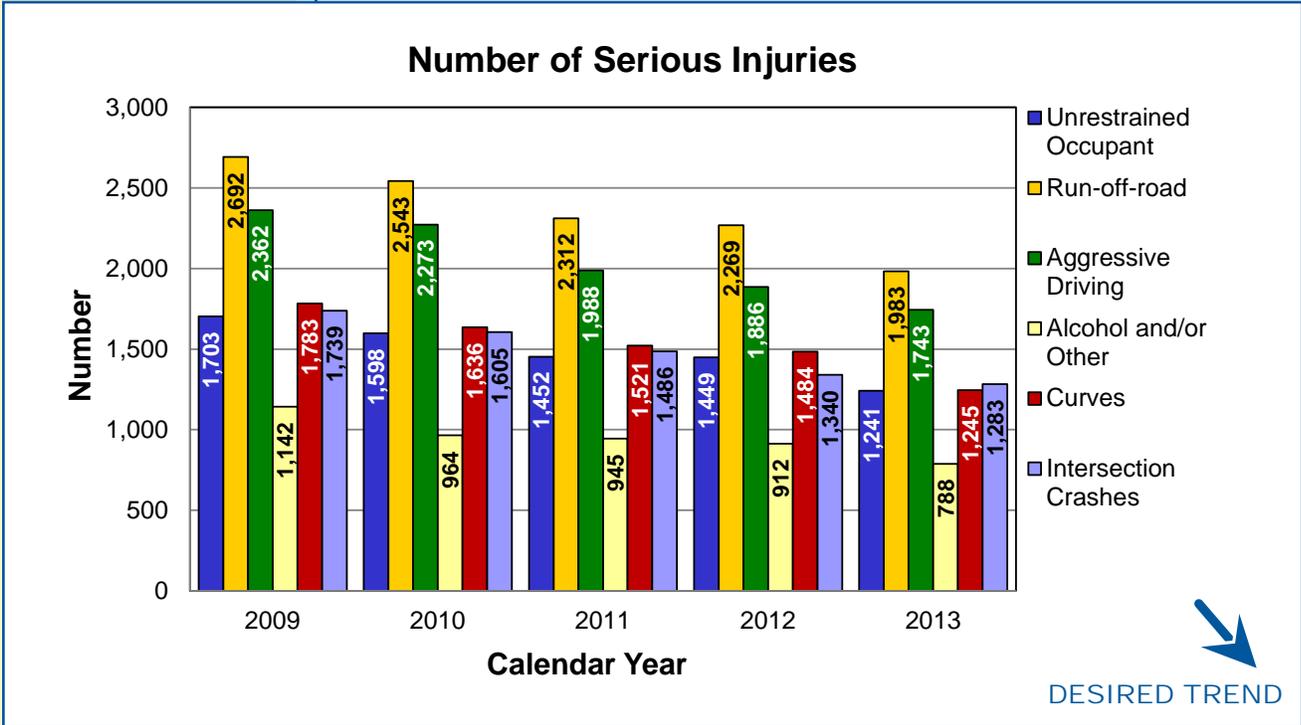
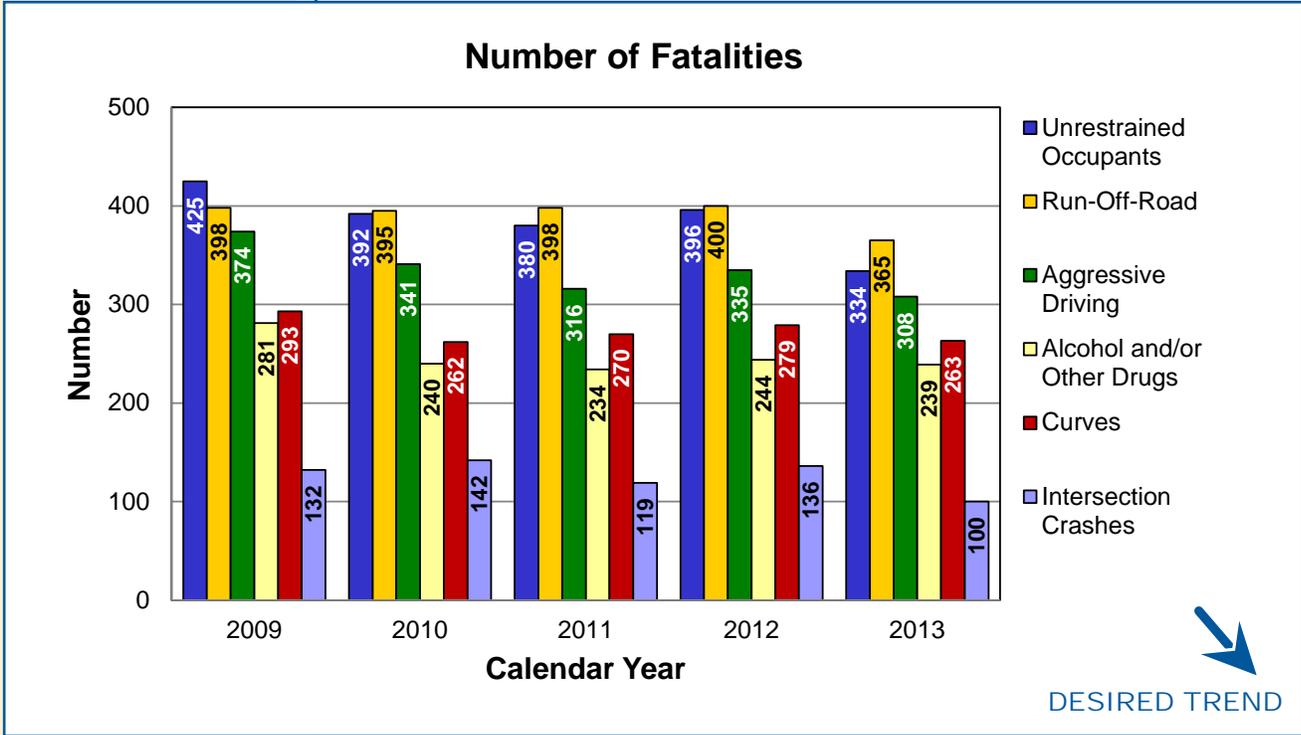
Recording and monitoring crash data is an important part of improving safety for Missouri drivers. But without looking at the causes of these incidents, the data is nothing but numbers. Looking for the reasons why an incident occurs is MoDOT's best approach to address the problem. With that approach, 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 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.



# KEEP CUSTOMERS AND OURSELVES SAFE



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

## KEEP CUSTOMERS AND OURSELVES SAFE

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 be entered into  
a statewide traffic crash  
database. The database  
automatically updates  
MoDOT's crash database  
system, which is part of the  
Transportation Manage-  
ment System. 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.

### *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, motorists need to pay attention, buckle up and drive without distractions.

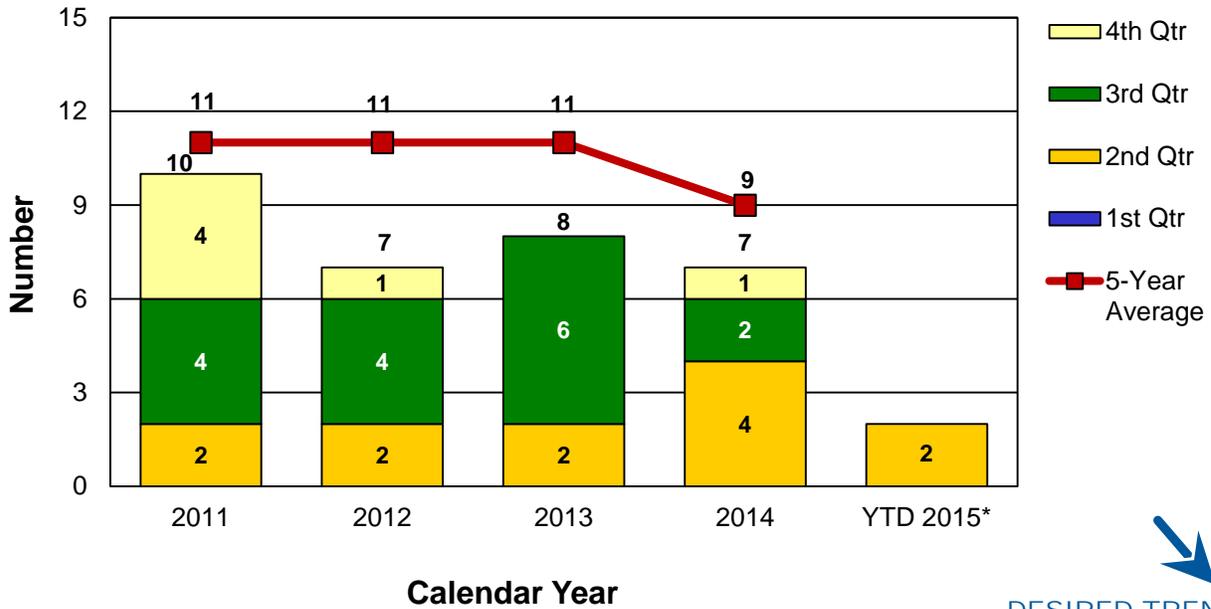
From information currently available for second quarter of calendar year 2015, two fatalities and two serious injuries have occurred in Missouri work zones. For crash reports entered to date for calendar year 2014, seven people were killed in Missouri work zones and never made it home to their families. Three of those killed were not buckled. Forty-four people were seriously injured, 14 more than 2013.

In 2013, Missouri ranked 28th nationally in work zone fatalities. That is two spots lower than the 2012 ranking of 26th.



# KEEP CUSTOMERS AND OURSELVES SAFE

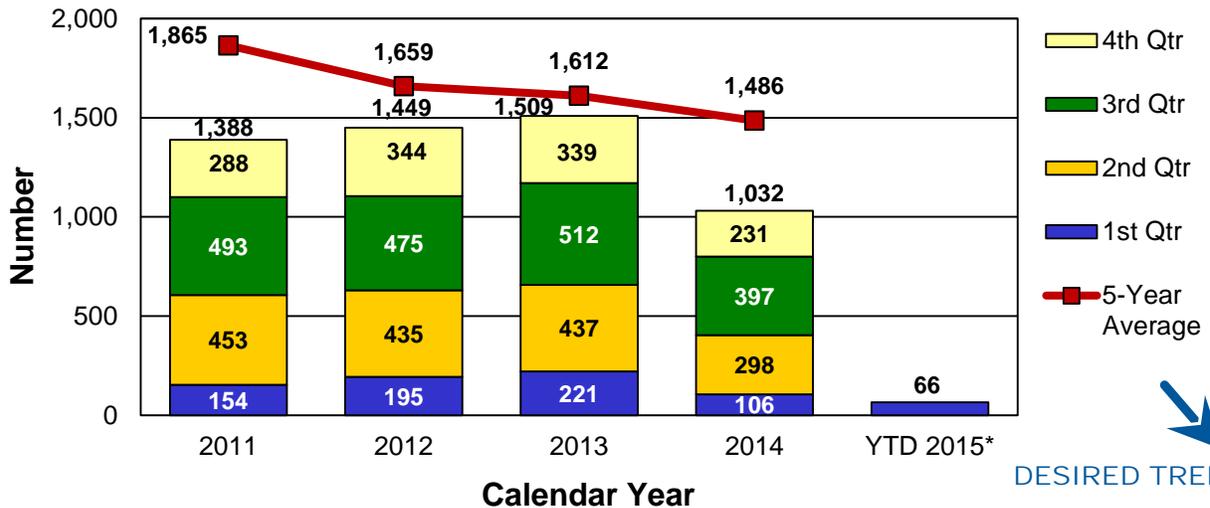
## Number of Fatalities in Work Zones



DESIRED TREND

\*YTD 2015 –First and second quarter fatalities derived from TMS.

## Number of Crashes in Work Zones

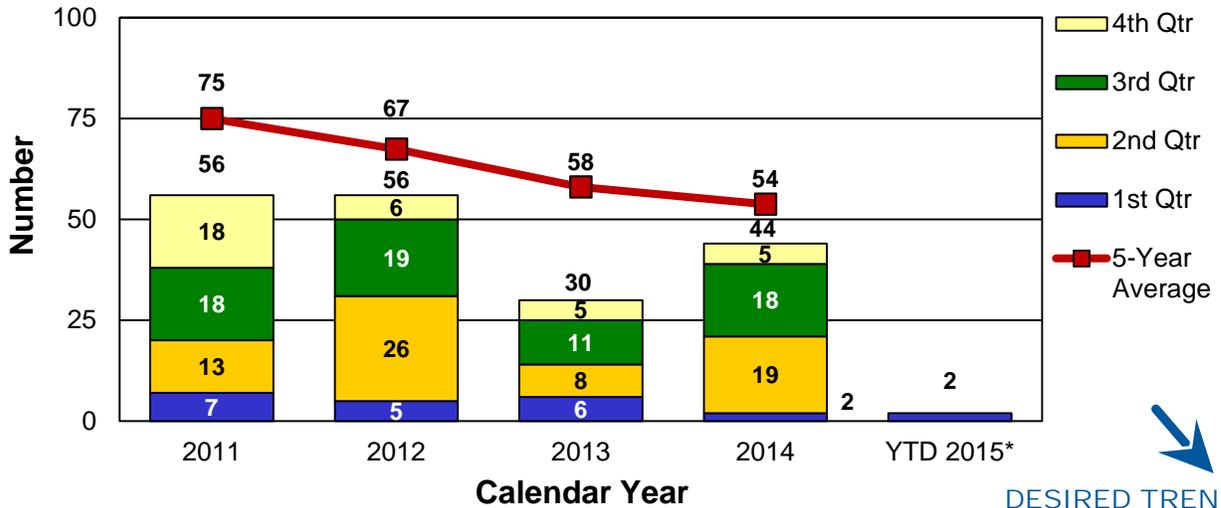


DESIRED TREND

\*YTD 2015 – Due to a backlog of crash reports into STARS, the work zone crash measure will only illustrate data derived from TMS. Second quarter 2015 data is unavailable through the MSHP radio reports and is incomplete in TMS.

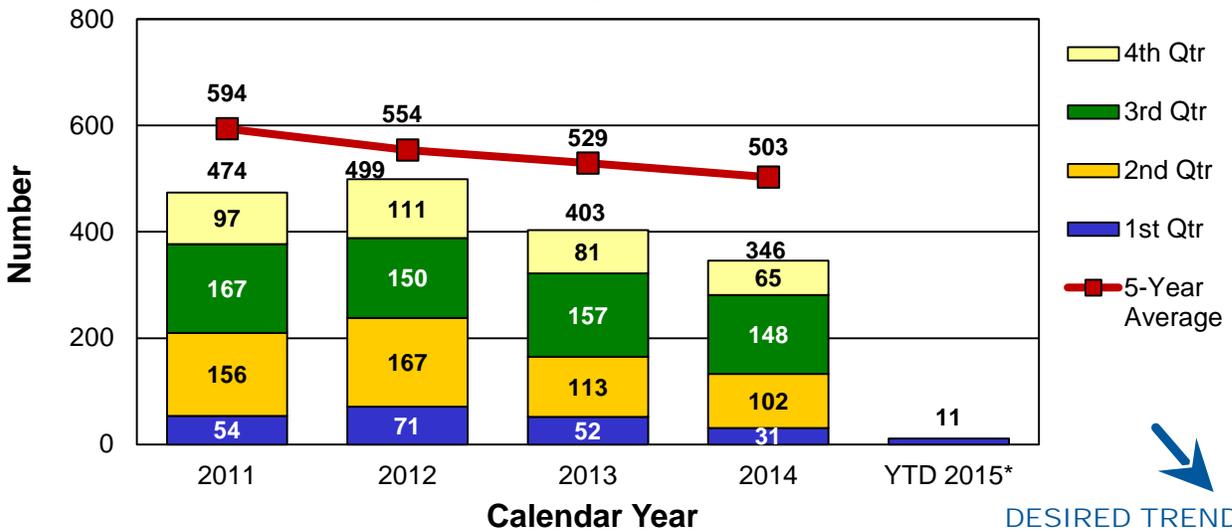
# KEEP CUSTOMERS AND OURSELVES SAFE

## Number of Serious Injuries in Work Zones



\*YTD 2015 – Due to a backlog of crash reports into STARS, the serious injury measure will only illustrate data derived from TMS. Second quarter 2015 data is unavailable through the MSHP radio reports and is incomplete in TMS.

## Number of Minor Injuries in Work Zones



\*YTD 2015 – Due to a backlog of crash reports into STARS, the minor injury measure will only illustrate data derived from TMS. Second quarter 2015 data is unavailable through the MSHP radio reports and is incomplete in TMS.

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

## KEEP CUSTOMERS AND OURSELVES SAFE

**MEASUREMENT  
DRIVER:**  
Scott Jones, Highway  
Safety Program  
Administrator

**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.

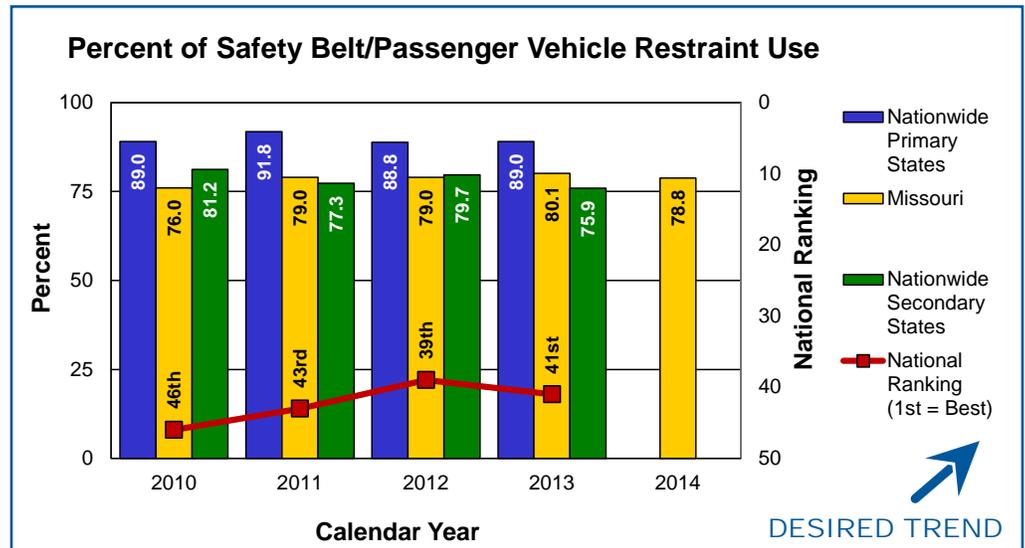
**MEASUREMENT  
AND DATA  
COLLECTION:**  
Each June, a statewide survey is conducted at 560 preselected locations in 28 counties. The data collected is calculated into a safety belt usage rate using a formula approved by the National Highway Traffic Safety Administration. The safety belt usage survey 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 be entered 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.

## KEEP CUSTOMERS AND OURSELVES SAFE

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

Commercial motor vehicles are the lifeblood of Missouri's 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, MoDOT 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.

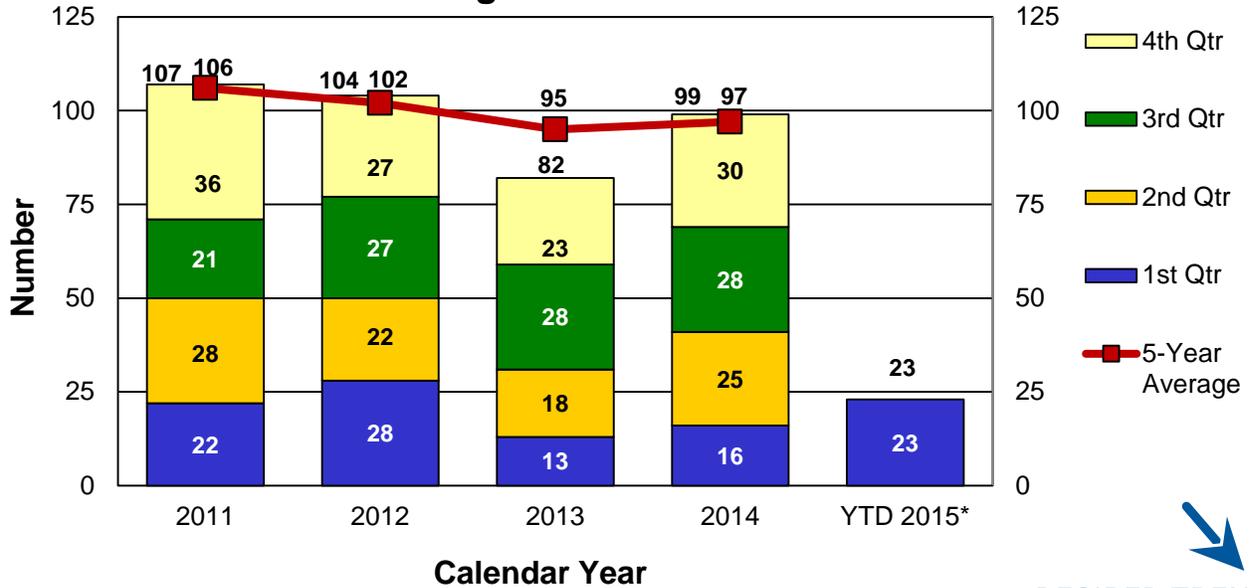
These efforts are making a difference in the number of fatality and serious injury crashes. Between 2011 and 2014, fatal crashes involving a CMV decreased by 7.5 percent. However, in 2014 the 99 fatality crashes Missouri experienced was 2 percent higher than what Missouri averaged over the most recent five years. The number of fatal crashes reported for the first quarter of 2015 is 23, which is seven more than reported through the first quarter of 2014, or a 43.8 percent increase.

Between 2011 and 2014, CMV serious injury crashes decreased by 17.9 percent and the 285 serious injury crashes Missouri experienced in 2014 was 10.9 percent lower than the most recent five-year average. The number of serious injury crashes reported for the first quarter of 2015 is 58, which is eight less than reported through the first quarter of 2014, or a decrease of 12.1 percent. However, diminished funding may hamper the department's ability to make significant safety improvements in the future.



# KEEP CUSTOMERS AND OURSELVES SAFE

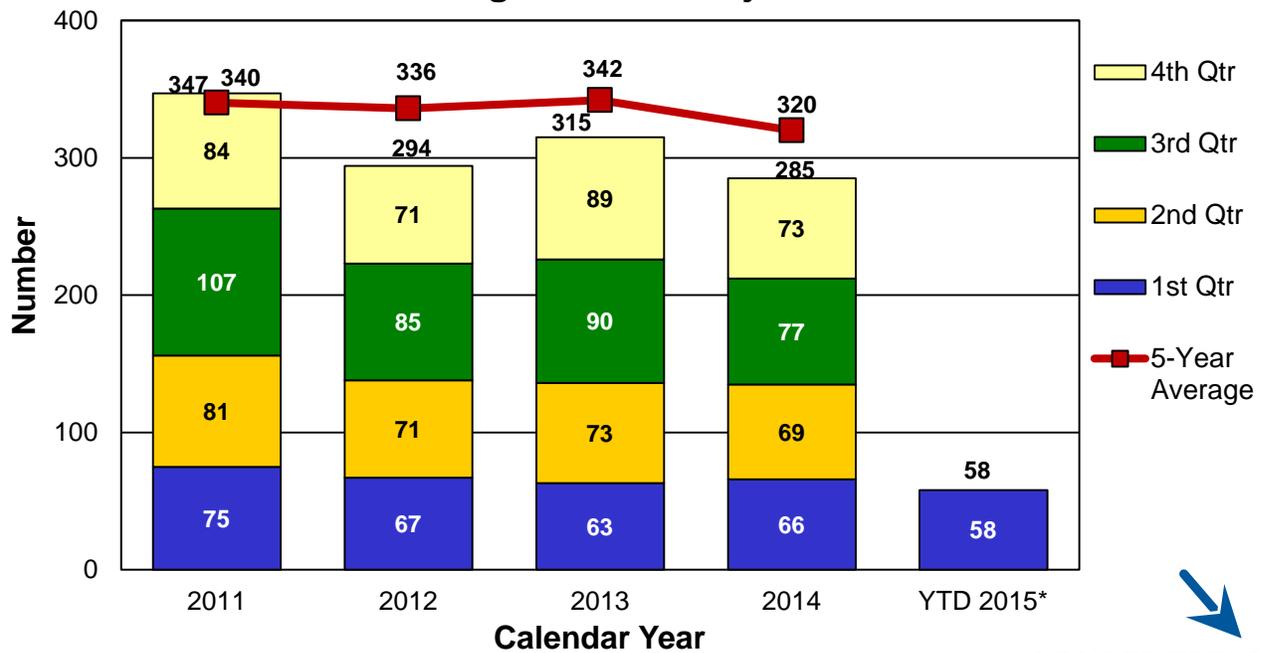
## Number of Commercial Motor Vehicle Crashes Resulting in Fatalities



DESIRED TREND

\*YTD 2015 - Due to a backlog of crash reports into STARS, the fatality measure for the first quarter of 2015 will only illustrate data derived from TMS.

## Number of Commercial Motor Vehicle Crashes Resulting in Serious Injuries



DESIRED TREND

\*YTD 2015 - Due to a backlog of crash reports into STARS, the serious injury measure for the first quarter of 2015 will only illustrate data derived from TMS.

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

## KEEP CUSTOMERS AND OURSELVES SAFE

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

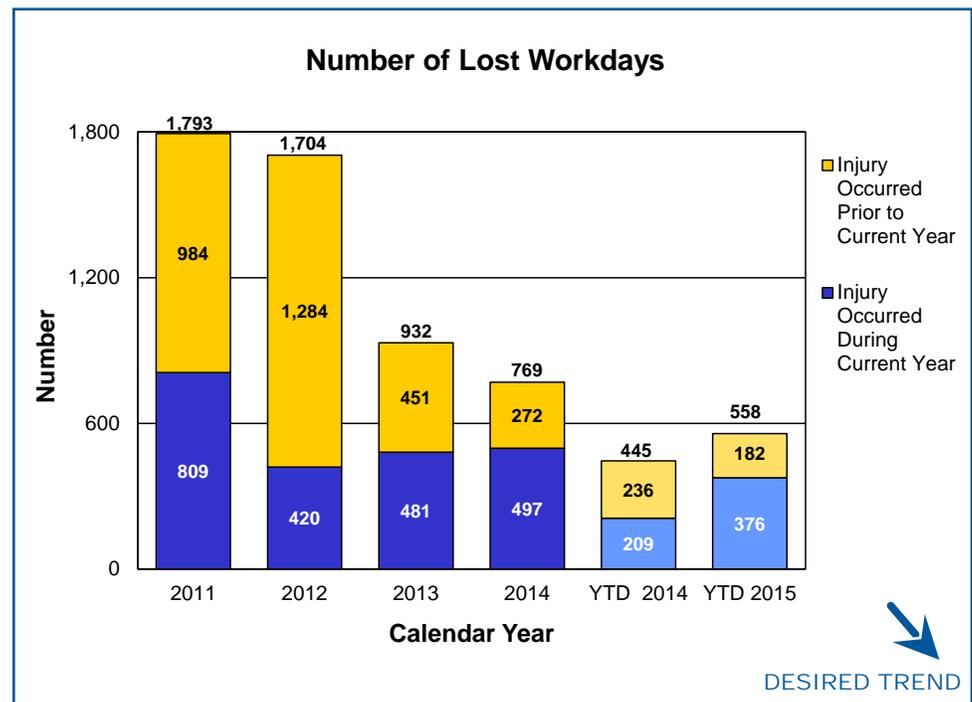
**PURPOSE OF  
THE MEASURE:**  
This measure tracks the  
actual number of days em-  
ployees cannot work due to  
work-related injuries.

**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 two quarters of 2015, the total number of lost workdays in-  
creased 25 percent from the same time period in 2014. There were three  
incidents in which employees were lifting MoDOT equipment or materials,  
accounting for 29 percent of the lost workdays. Another 23 percent of the  
lost workdays were attributable to three incidents involving weed or brush  
cutting activities. One incident involving snow removal accounted for 13  
percent of the lost workdays.



**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*

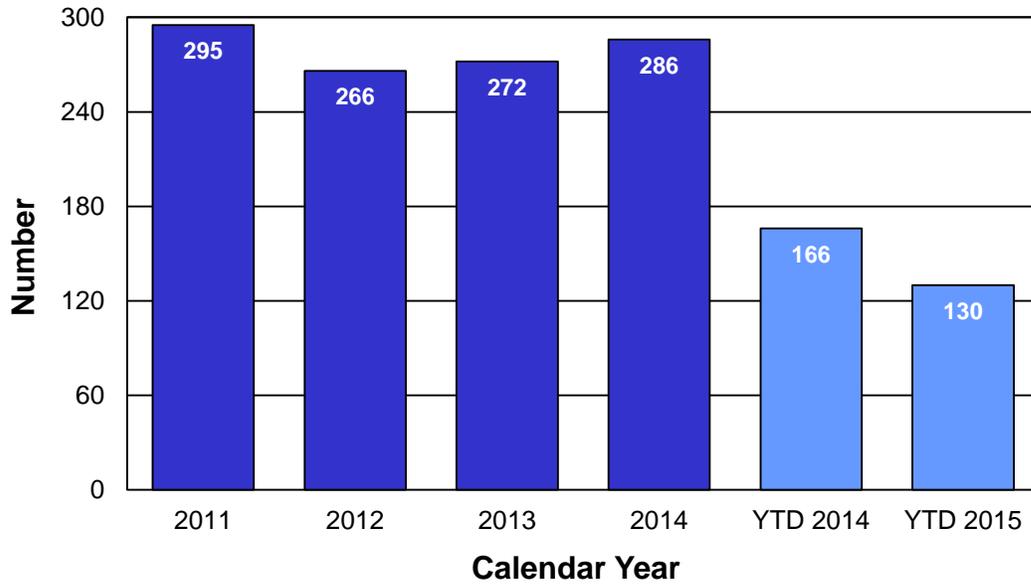
MoDOT is dedicated to employee safety. Getting home safely is a responsibility every employee shares. To reinforce this value, the "Safety Begins with Me" program was launched in 2013 to remind all employees that safety is a personal responsibility.

Both the number of recordable incidents and the rate of recordable incidents have decreased for the first two quarters of 2015 compared to the same time period in 2014. Leading causes of incidents during this reporting period were: slips, trips and falls at 22 percent; struck or injured at 15 percent; motor vehicle at 13 percent and cut/puncture at 12 percent. 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 15 percent were related to mowing/brush cutting, and snow/ice and materials activities had 9 percent each.



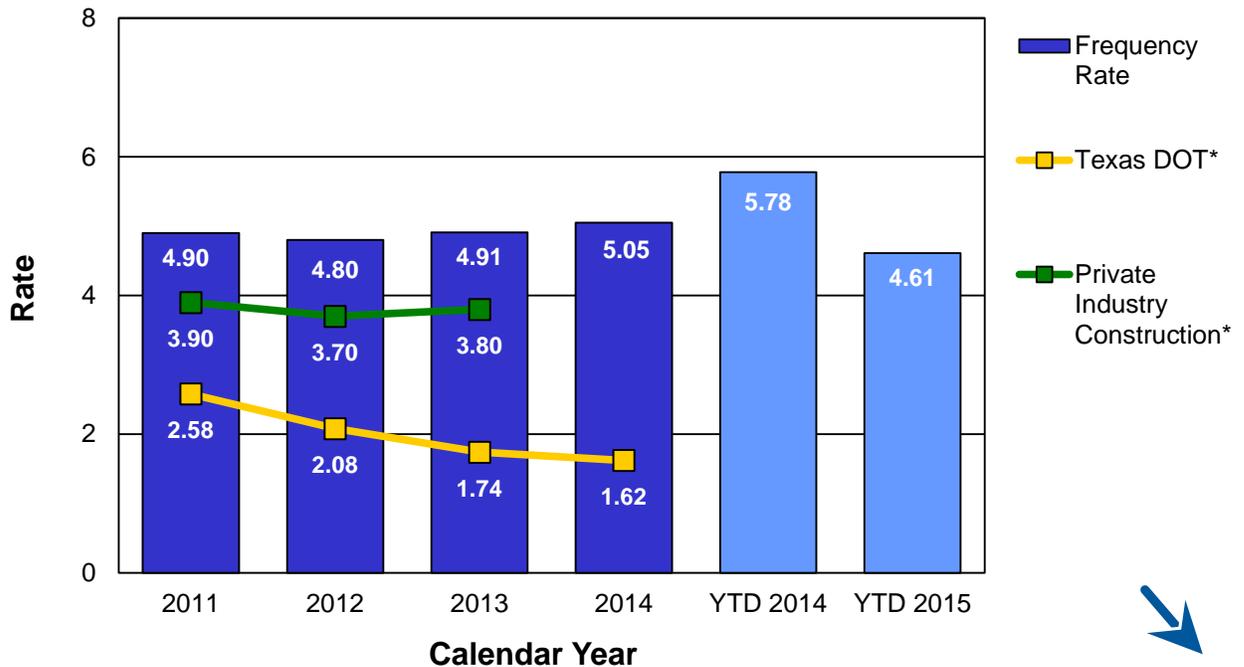
# KEEP CUSTOMERS AND OURSELVES SAFE

## Total of MoDOT Recordable Incidents



DESIRED TREND

## Rate of MoDOT Recordable Incidents



DESIRED TREND

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

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

## KEEP CUSTOMERS AND OURSELVES SAFE

MEASUREMENT  
DRIVER:  
Steve Patterson,  
Safety and Claims  
Manager

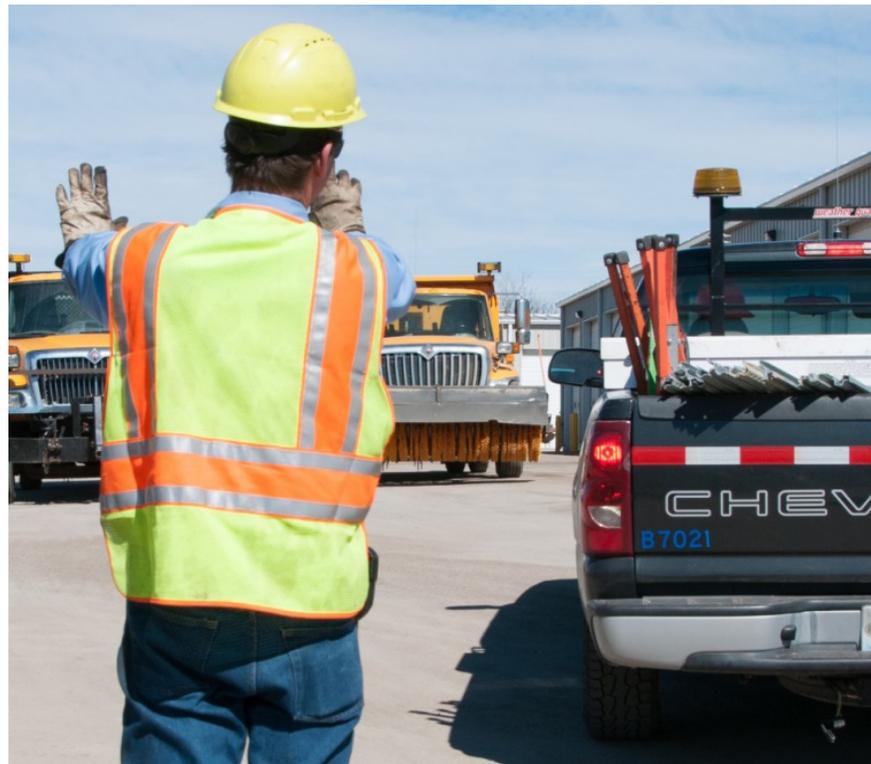
PURPOSE OF  
THE MEASURE:  
This measure tracks the  
number of general liability  
claims filed and amount  
paid.

MEASUREMENT  
AND DATA  
COLLECTION:  
General liability claims  
arise from allegations of  
injuries/damages caused  
by the dangerous condition  
on 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*

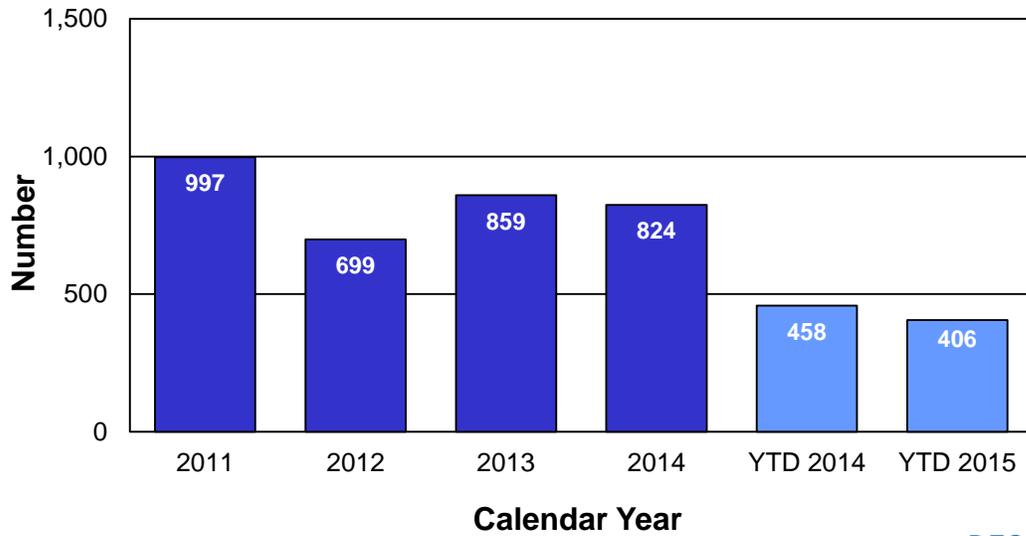
Keeping ourselves and the public safe is MoDOT's top priority. Controlling damage to vehicles and reducing personal injury in work zones, right of way and other areas under department control helps MoDOT accomplish this goal. Compared to the first two quarters of 2014, there was a decrease of 11 percent in the number of claims. The majority of claims for the first two quarters of 2015 are attributed to pavement defects. During the same timeframe, there was a 30 percent increase in the amount paid. This quarter, payment was made on 138 claims against the department totaling \$3,711,319.

Two claims accounted for 84 percent of this quarter's payments. The department settled a claim occurring in 2009 based on three deficiencies of the roadway: improper signing, improper striping, and roadway edge drop-off. This was a two-vehicle collision, which resulted in four fatalities. The claim was settled for \$1,135,007. In the other claim, an arbitration panel found the department 100 percent at fault based on poor road design and inadequate signing. The incident occurred in 2009 when a van collided with a fire truck resulting in three fatalities and personal injuries to two minors. The combined cost to the department was \$1,972,907.



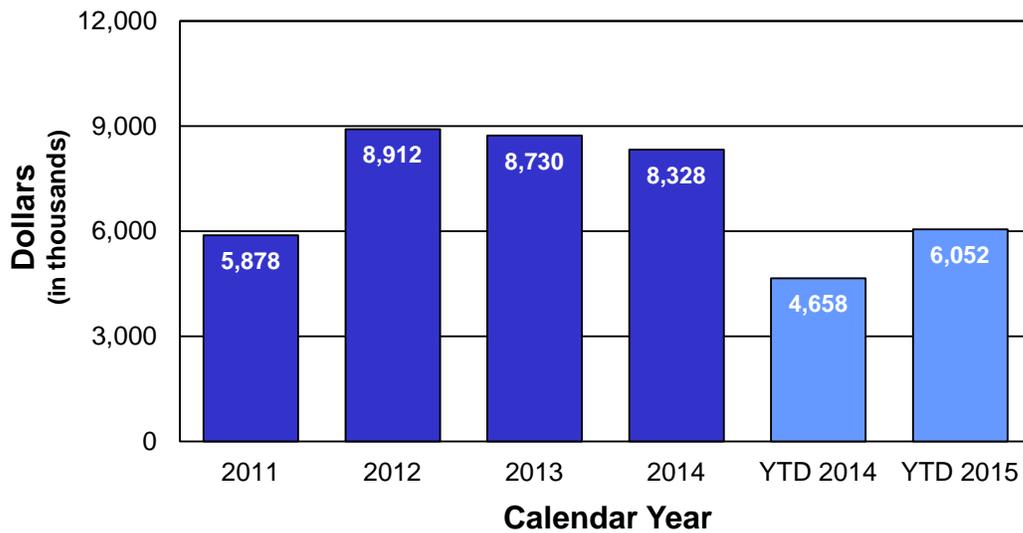
KEEP CUSTOMERS  
AND OURSELVES SAFE

**Number of Claims for General Liability**



DESIRED TREND

**Amount Paid in Claims for General Liability**



DESIRED TREND