



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

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Number and rate of fatalities and serious injuries – 1a

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

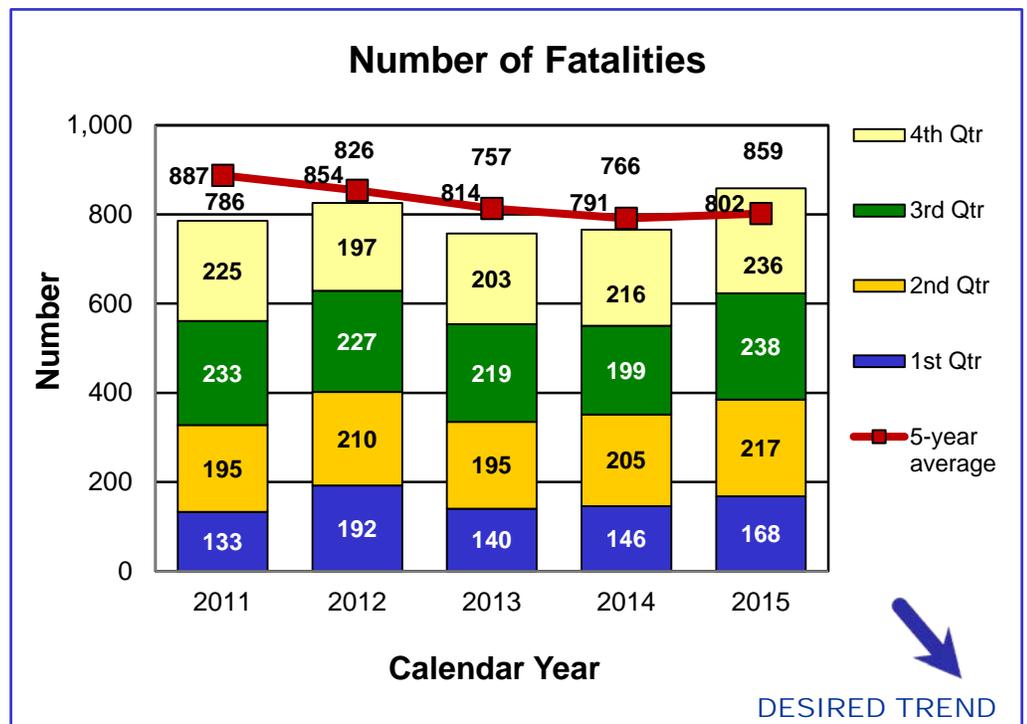
**PURPOSE OF
THE MEASURE:**
The fatal and serious injury
number measures track
quarterly, annual and five-year
average trends resulting from
traffic crashes on all Missouri
roadways.

**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
Management System. The rate
of fatal and serious injury
charts display annual and five-
year average fatality and injury
rates per 100 million vehicle
miles traveled for these same
crashes. In addition, the fatality
rate chart includes the national
average.

Traffic crash prevention is one of MoDOT's highest priorities. In 2015, Missouri experienced 859 fatalities, resulting in a 12 percent increase over 2014. Of those fatalities, 63 percent were unbuckled when the crash occurred. This unbuckled trend has fluctuated from a high of 71 percent in 2013 to current levels.

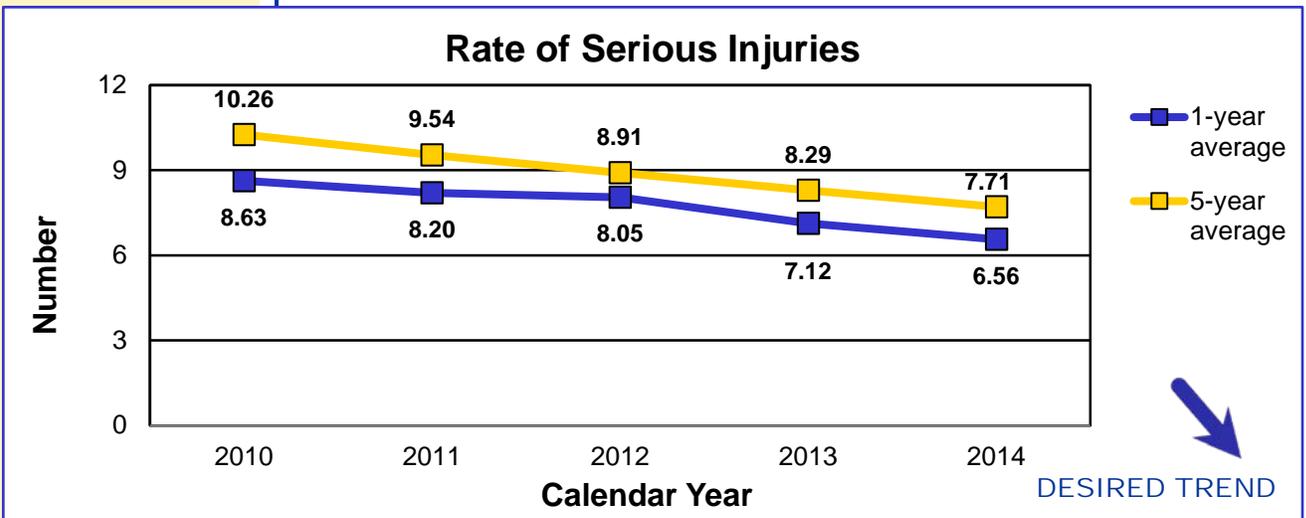
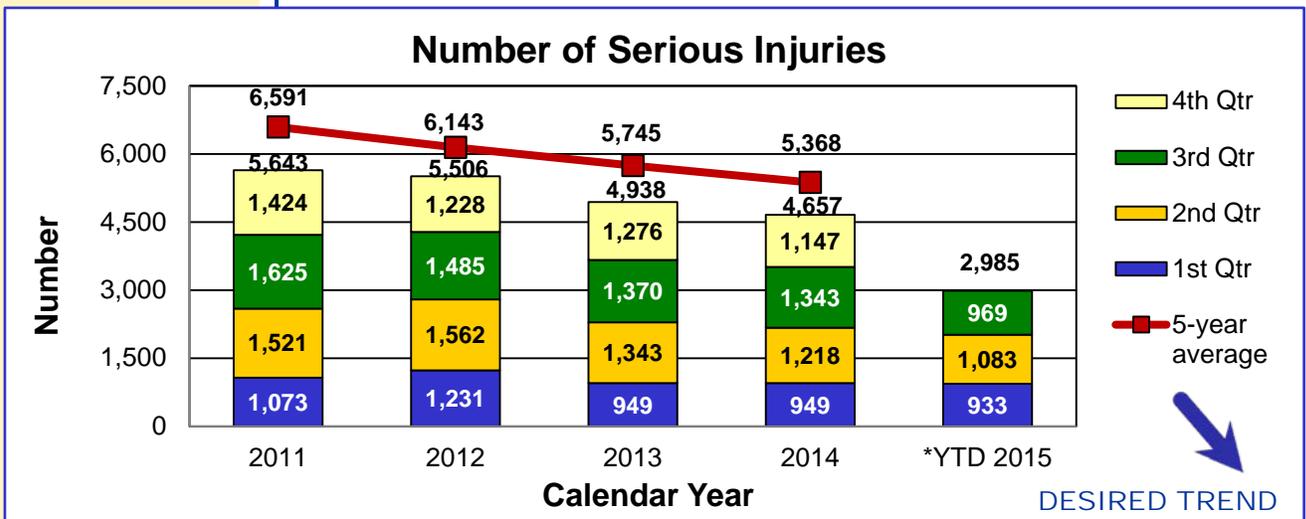
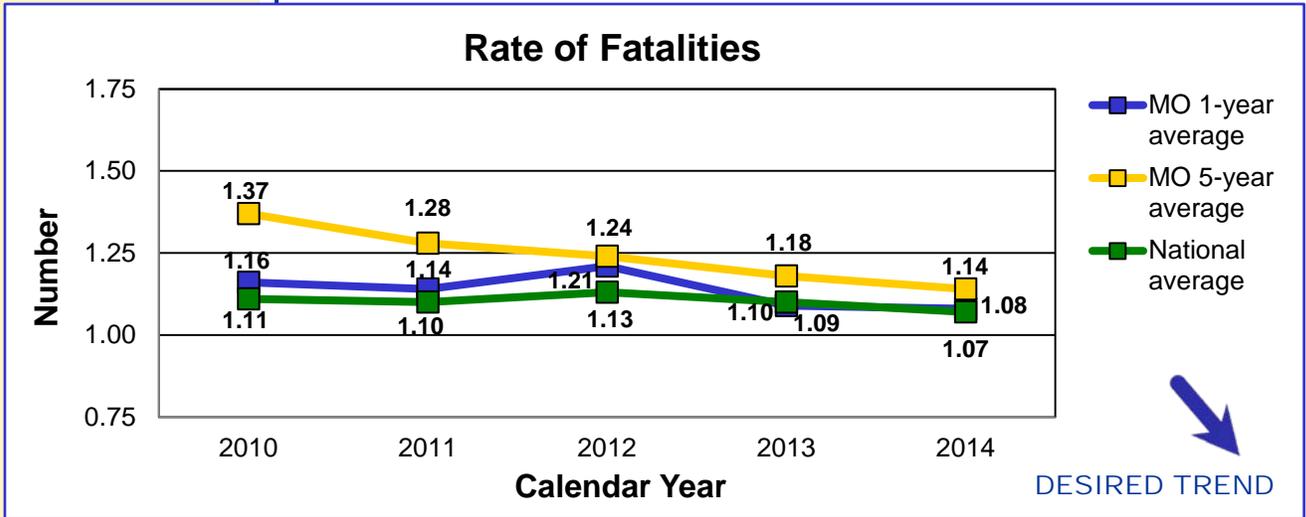
Crash data from 2010 to 2014 showed the leading contributing circumstances that can be attributed to driver behavior were substance impaired driving, driving too fast for conditions, exceeding the speed limit, distraction/inattention, following too closely and fatigue. Crash statistics also showed impaired drivers had an unbuckled fatality rate of 87 percent. This group of drivers makes two deadly decisions: to drive impaired and unbelted. Once 2015 MSHP crash files are closed, more extensive analysis will be completed.

MoDOT has awarded 454 contracts for federal fiscal year 2016 in the areas of education, enforcement and engineering. The goal of these contracts is to prevent and reduce the number and severity of traffic crashes occurring on Missouri's roadways.



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

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

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 serious injuries
of motorcyclists, pedestrians
and bicyclists. These roadway
users are at risk for death or
serious injury when involved in
a motor-vehicle-relate 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.

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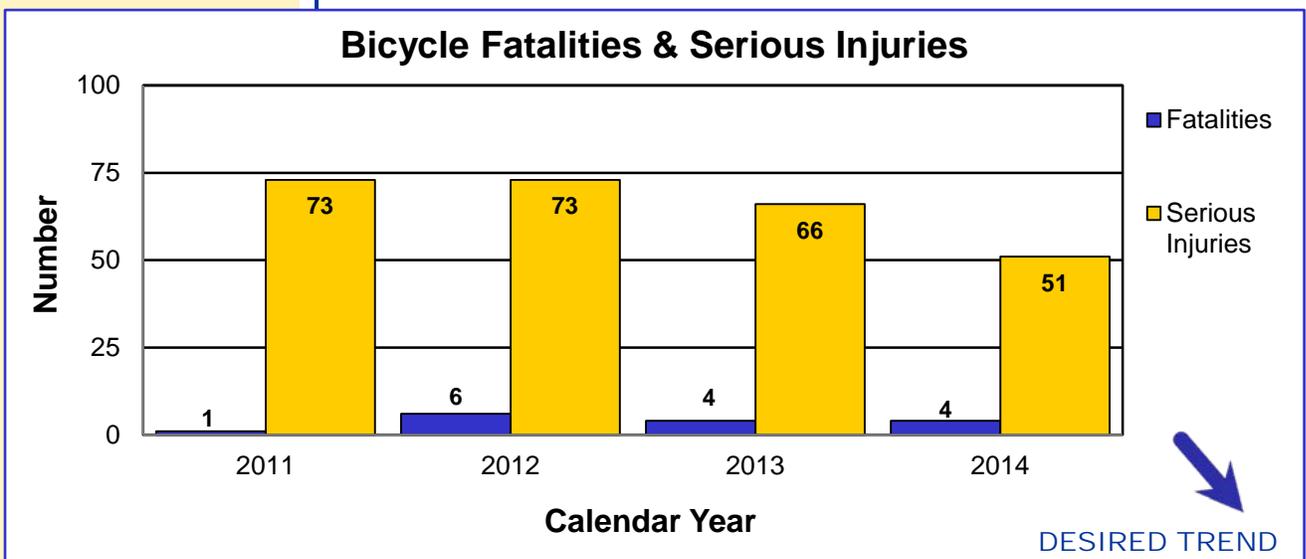
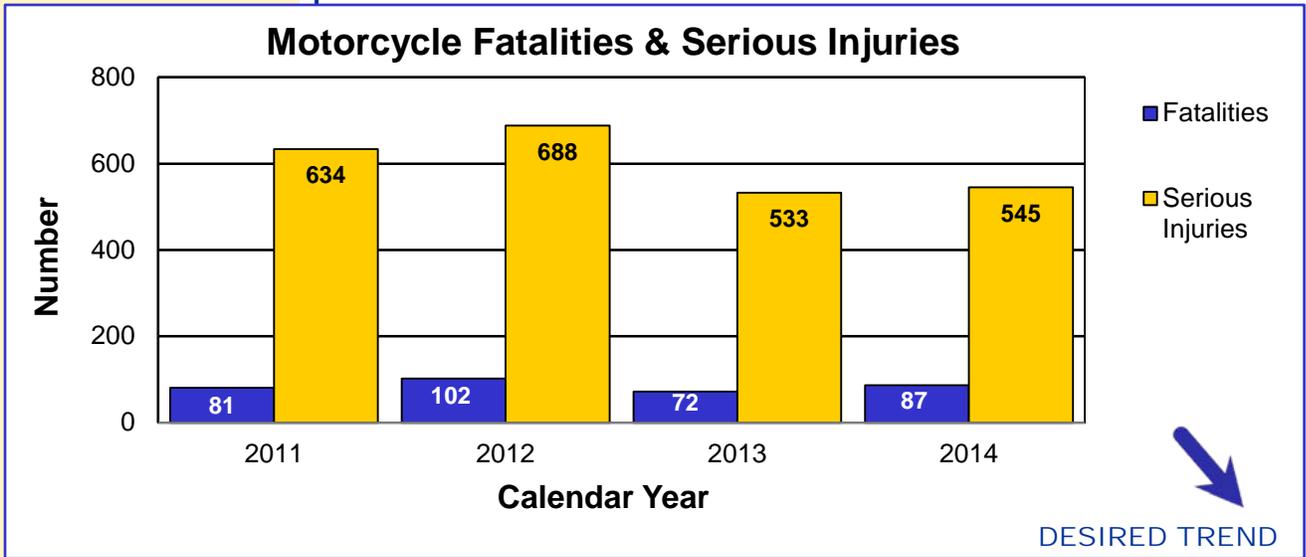
Number of vulnerable roadway user fatalities and serious injuries – 1b

In 2014, vulnerable roadway users were 21 percent of the total number of fatalities. Pedestrian fatalities decreased in 2014 by 8 percent. Motorcycle fatalities increased by 21 percent and bicycle fatalities remained unchanged. Fatality data for 2015 are incomplete.

Motorcycle, pedestrian and bicycle serious injuries experienced a downward trend in 2014. Serious injury data for 2015 are incomplete.



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RESULT DRIVER:
Eileen Rackers
State Traffic and Highway
Safety Engineer

**MEASUREMENT
DRIVER:**
John Miller
Traffic Liaison Engineer

**PURPOSE OF
THE MEASURE:**
The measure tracks annual trends in motor-vehicle-related fatal and serious injuries resulting from 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.

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

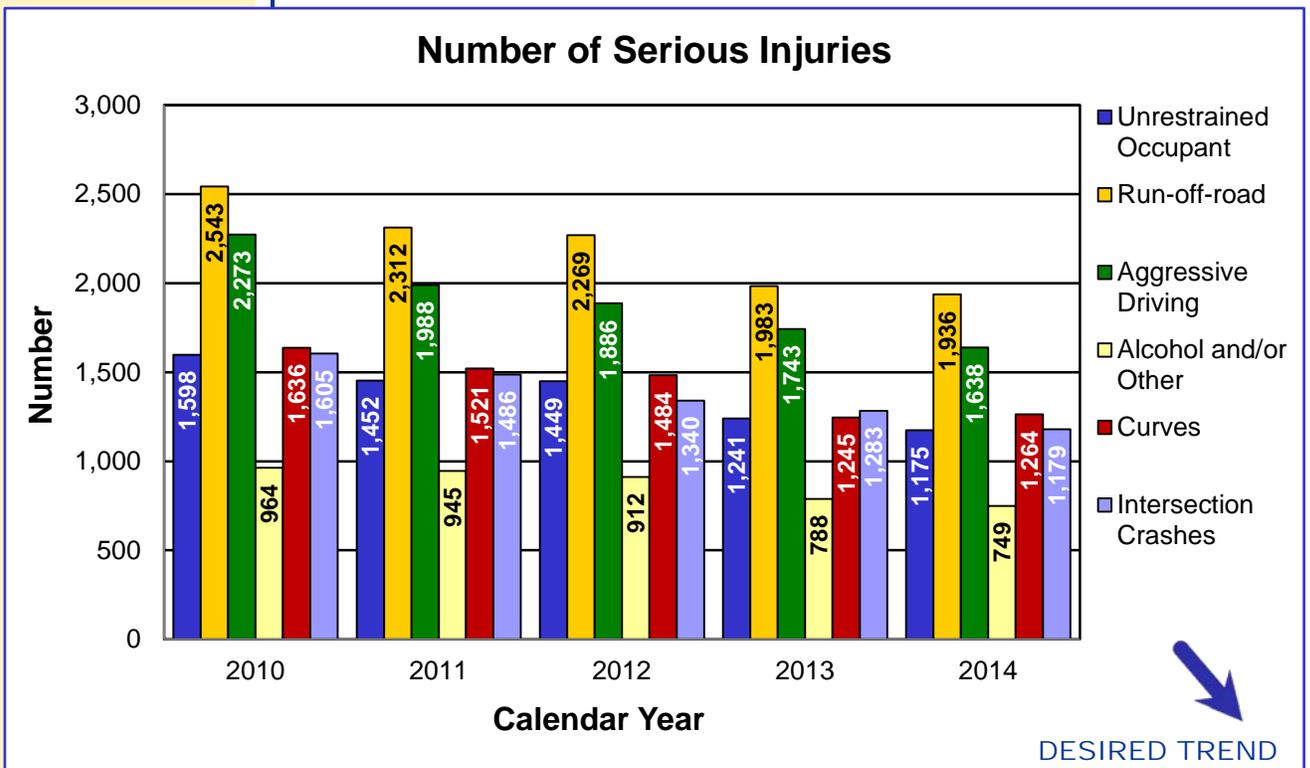
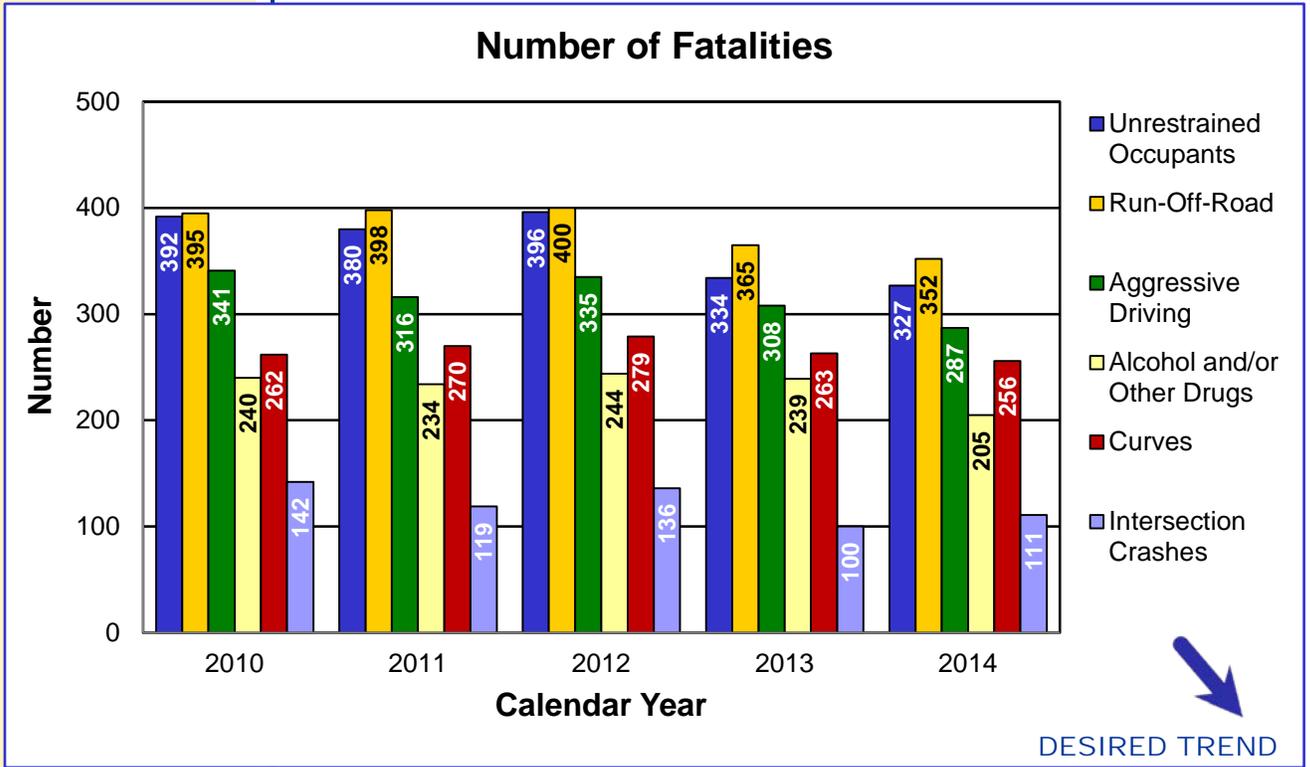
Recording and monitoring crash data is an important part of improving safety for Missouri drivers. But without looking at the causes of these incidents, the data is nothing but numbers. Looking for the reasons why an incident occurs is MoDOT's best approach to address the problem. With that approach, 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 2013 to 2014 shows the following results: 2 percent reduction in unrestrained occupants, 4 percent reduction in run-off-road, 7 percent reduction in aggressive driving, 14 percent reduction in alcohol and/or other drugs, 3 percent reduction in curve related, and an 11 percent increase in intersection related. Comparing the number of serious injuries in 2013 to 2014 shows the following results: 5 percent reduction in unrestrained occupants, 2 percent reduction in run-off-road, 6 percent reduction in aggressive driving, 5 percent reduction in alcohol and/or other drugs, a 2 percent increase in curve related, and an 8 percent reduction in intersection related.

With a long-term insufficient funding challenge, it will be difficult to maintain the downward trends for each of these causes, because there will be less money available for significant system-wide safety improvements. The primary current initiatives include adding shoulders and rumble strips to minor roads and improving intersection safety. 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

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

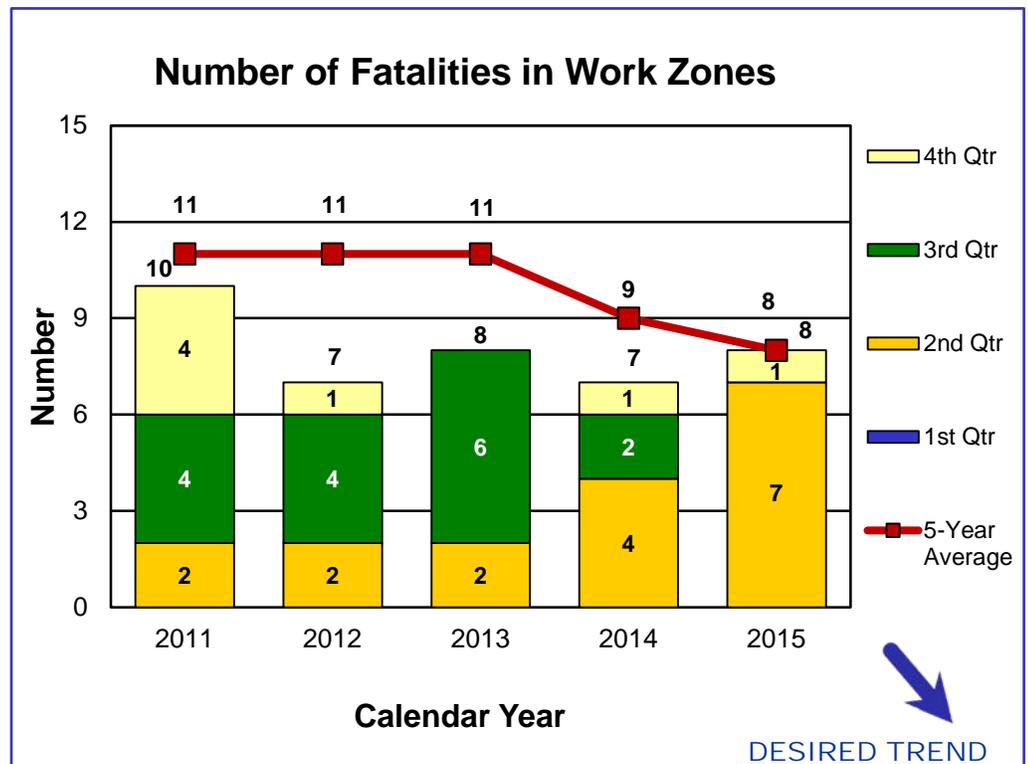
**MEASUREMENT
DRIVER:**
Julie Stotlemeyer
Traffic Liaison Engineer

**PURPOSE OF
THE MEASURE:**
This measure tracks the
number 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
Management 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 and then property
damage only.

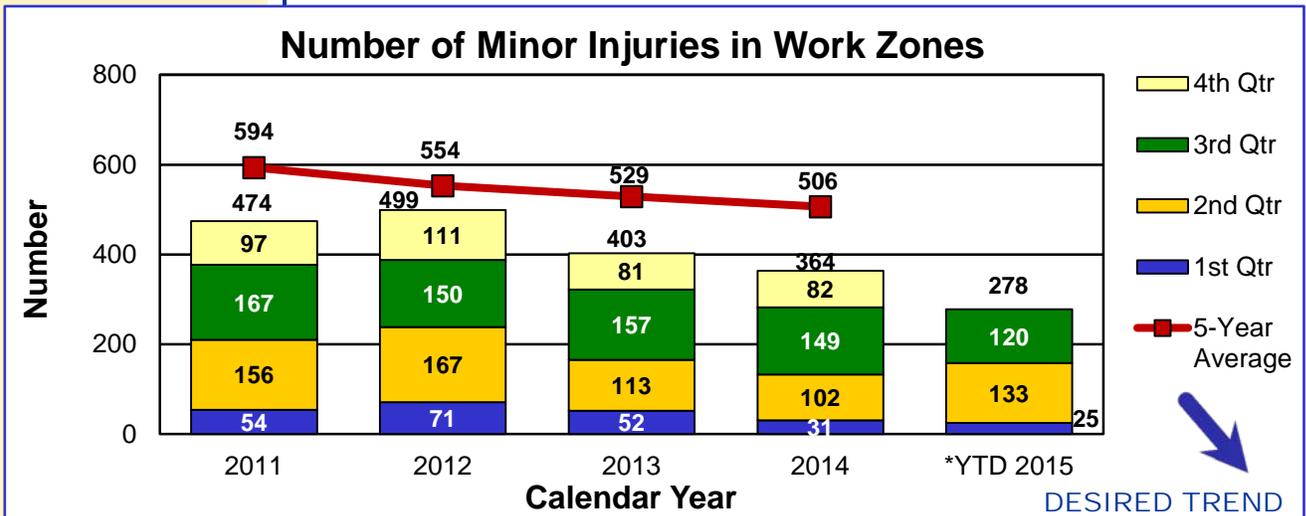
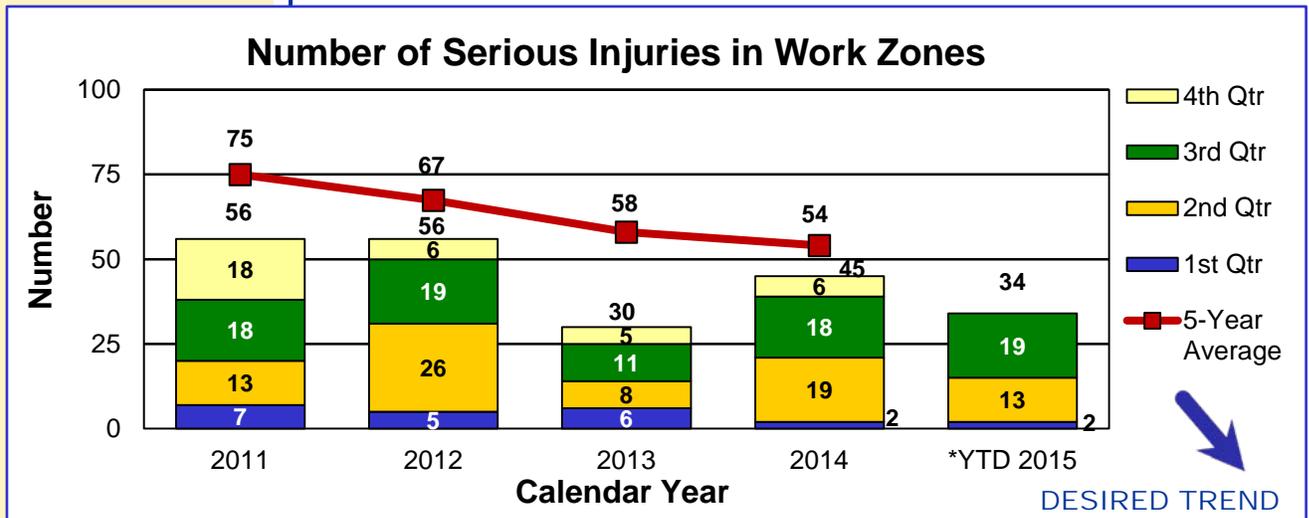
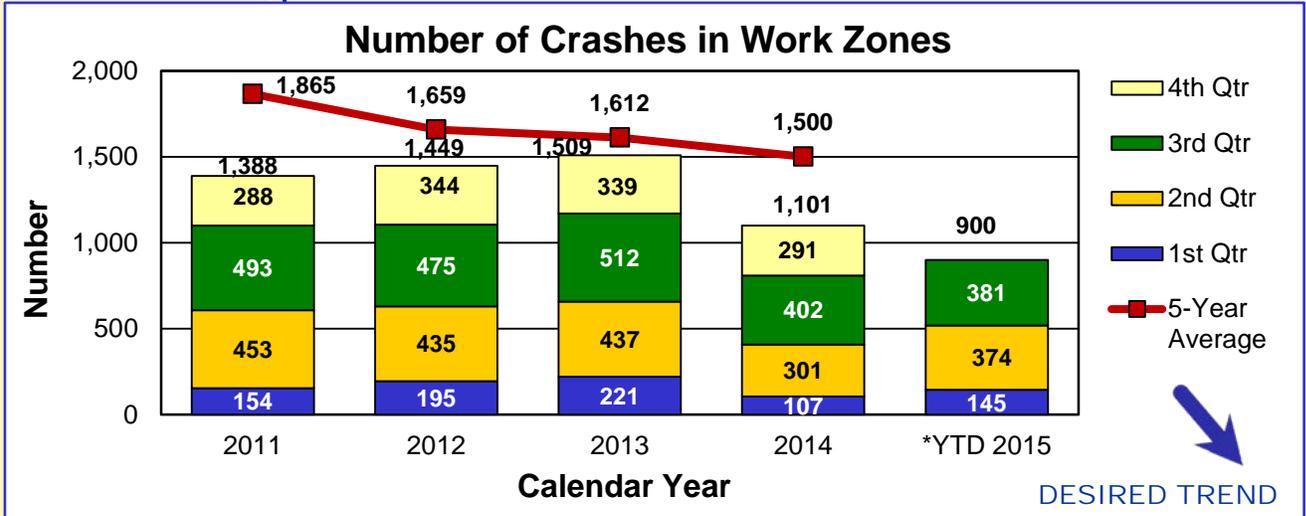
Work zone safety is at the center of MoDOT's safety culture. It is a driving force in all maintenance and construction work. Just as MoDOT expects its crews to be safe and visible, it also expects contractors and utility companies to provide safe work zones and visible workers. This is demonstrated by the partnership MoDOT has with contractors and utility companies using the same personal protection equipment it uses. Staying safe in work zones also is 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 the fourth quarter of 2015, eight fatalities and 34 serious injuries have occurred in Missouri work zones. Of the fatalities that occurred in work zones, three were pedestrians, three involved motorcycles, four involved large trucks, four occurred on divided highways and six were on roadways with a speed limit of 55 mph or greater.



*YTD 2015 – Fatalities derived from TMS.

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*YTD 2015 – Due to a backlog of crash reports into STARS, these measures will only illustrate data derived from TMS. Fourth 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

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Percent of seat belt/passenger vehicle restraint use – 1e

MEASUREMENT DRIVER:
Scott Jones
Highway Safety Program
Manager

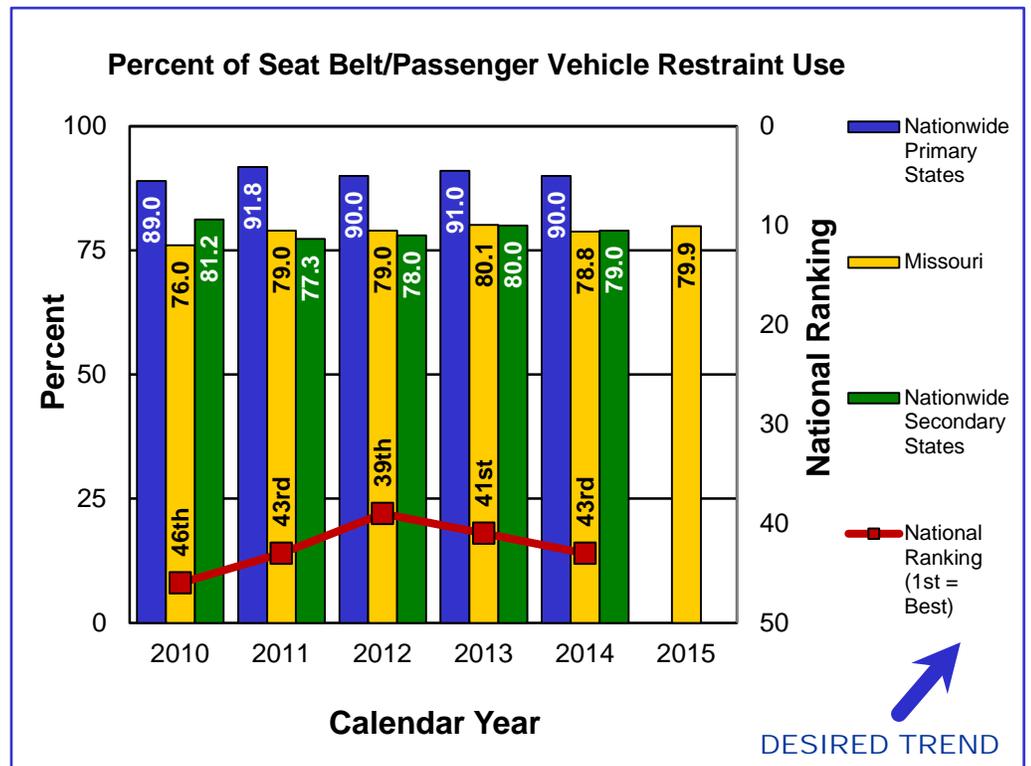
PURPOSE OF THE MEASURE:
This measure tracks annual trends in seat belt use in passenger vehicles. This data drives the development and focus of the Missouri Highway Safety Plan and supports Missouri's Blueprint to Save More Lives.

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 seat belt usage rate using a formula approved by the National Highway Traffic Safety Administration. Data collection locations represent 85 percent of the state's vehicle occupant fatalities. The data collection plan is the same each year for consistency and compliance with NHTSA guidelines.

Seat 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 46 municipalities and two counties that have adopted primary seat belt ordinances, representing 23.3 percent of the state's population.

Seat belt use in Missouri for 2015 was 80 percent. The national average for seat belt use in 2014 was 87 percent. Missouri's national ranking is currently 43rd. Only seven states rank lower in seat belt use than Missouri.

Missouri's seat belt use has plateaued. States with a primary seat belt law rank highest on seat belt use nationwide. States that have a secondary law continue to rate lowest in national rankings.



RESULT DRIVER:
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State Traffic and Highway
Safety Engineer

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

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 and serious injury crashes. MoDOT uses the information to target education, enforcement and improvement of safety features.

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. This measure reports the number of CMVs involved in crashes in which one or more people are seriously injured or die as a result of the crash. Preliminary results for the current year are reported quarterly.

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.

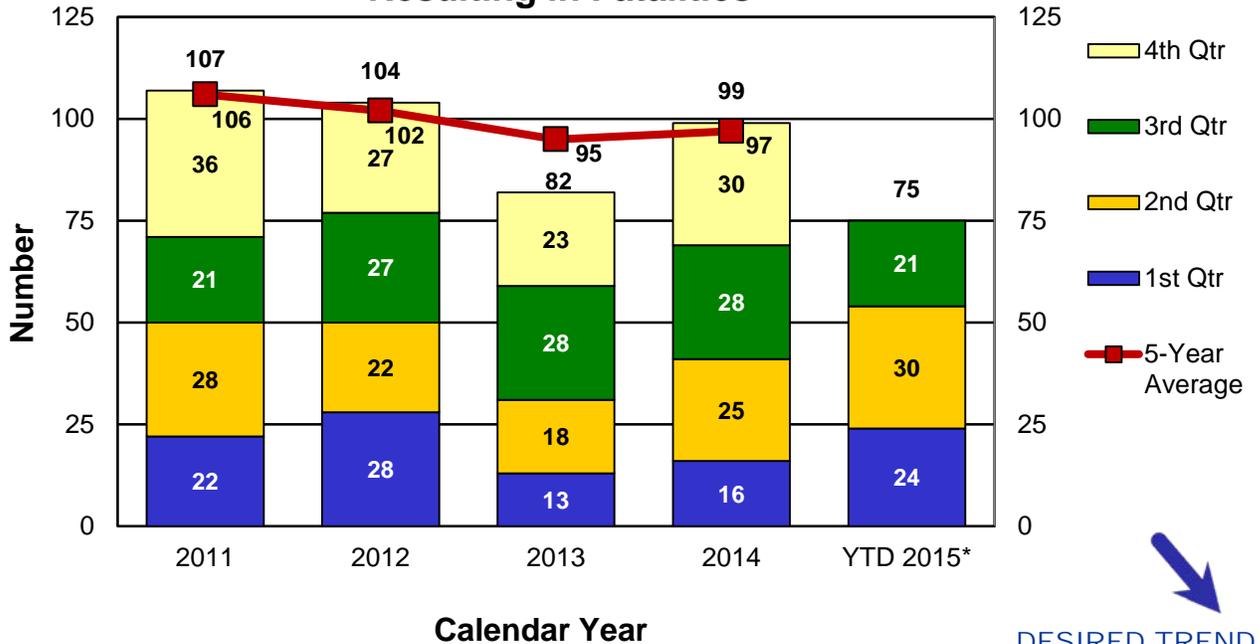
These efforts are making a difference in the number of fatality and serious injury crashes. Between 2011 and 2014, fatal crashes involving a CMV decreased by 7.5 percent. However, in 2014 the 99 fatality crashes Missouri experienced was 2 percent higher than what Missouri averaged over the most recent five years. The number of fatal crashes reported through the third quarter of 2015 is 75, which is six more than the same period in 2014. This is an increase of 8.7 percent.

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 through the third quarter of 2015 is 203, which is nine fewer than the same period in 2014. This is a decrease of 4.2 percent.

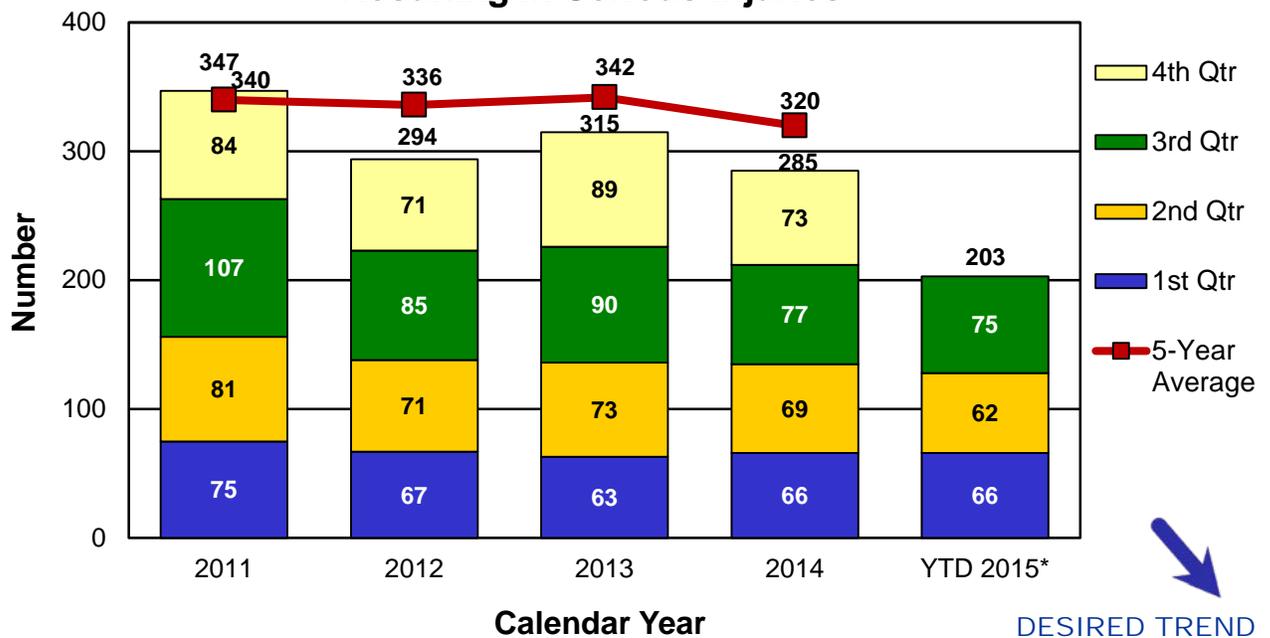


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Number of Commercial Motor Vehicle Crashes Resulting in Fatalities



Number of Commercial Motor Vehicle Crashes Resulting in Serious Injuries



*YTD 2015 – Due to a backlog of crash reports into STARS, these measures will only illustrate data derived from TMS.

RESULT DRIVER:
Eileen Rackers
State Traffic and Highway
Safety Engineer

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Number of lost workdays – 1g

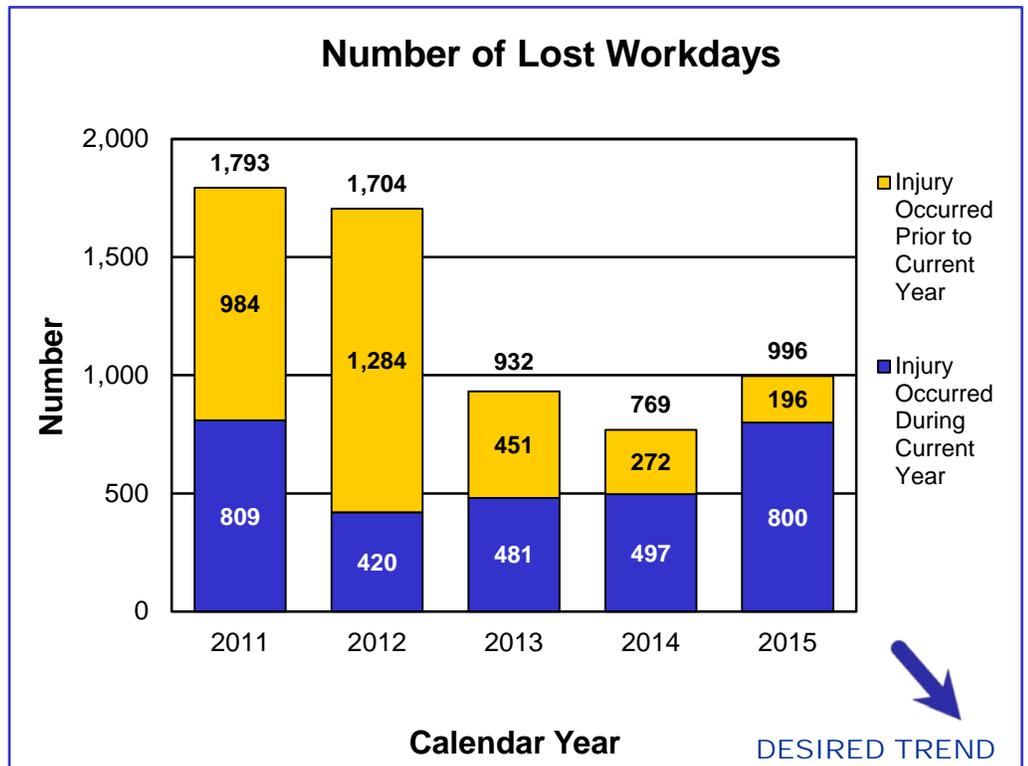
MEASUREMENT DRIVER:
Roberta Jacobson
Claims Administration Manager

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

MEASUREMENT AND DATA COLLECTION:
The data for this measure is collected from Riskmaster, the department's risk management claims administration software.

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.

For 2015, the total number of lost workdays increased 30 percent from 2014. There were four incidents in which employees were lifting MoDOT equipment or materials, accounting for 38 percent of the lost workdays. Another 13 percent of the lost workdays were attributable to three incidents involving weed or brush cutting activities. Three motor vehicle injuries involving another party accounted for 10 percent of the lost workdays while one incident involving snow removal accounted for 8 percent of the lost workdays.



RESULT DRIVER:
Eileen Rackers
State Traffic and Highway
Safety Engineer

MEASUREMENT
DRIVER:
Jeff Padgett
Risk and Benefits
Management Director

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

MEASUREMENT
AND DATA
COLLECTION:
The calculation for incidence
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
recordable incident as a work-
related injury or illness that
results in death, days away
from work or medical treatment
resulting in cost to the
department. The injury data is
collected from Riskmaster, the
department's risk management
claims administration software.
The number of hours worked is
taken from MoDOT's payroll
data.

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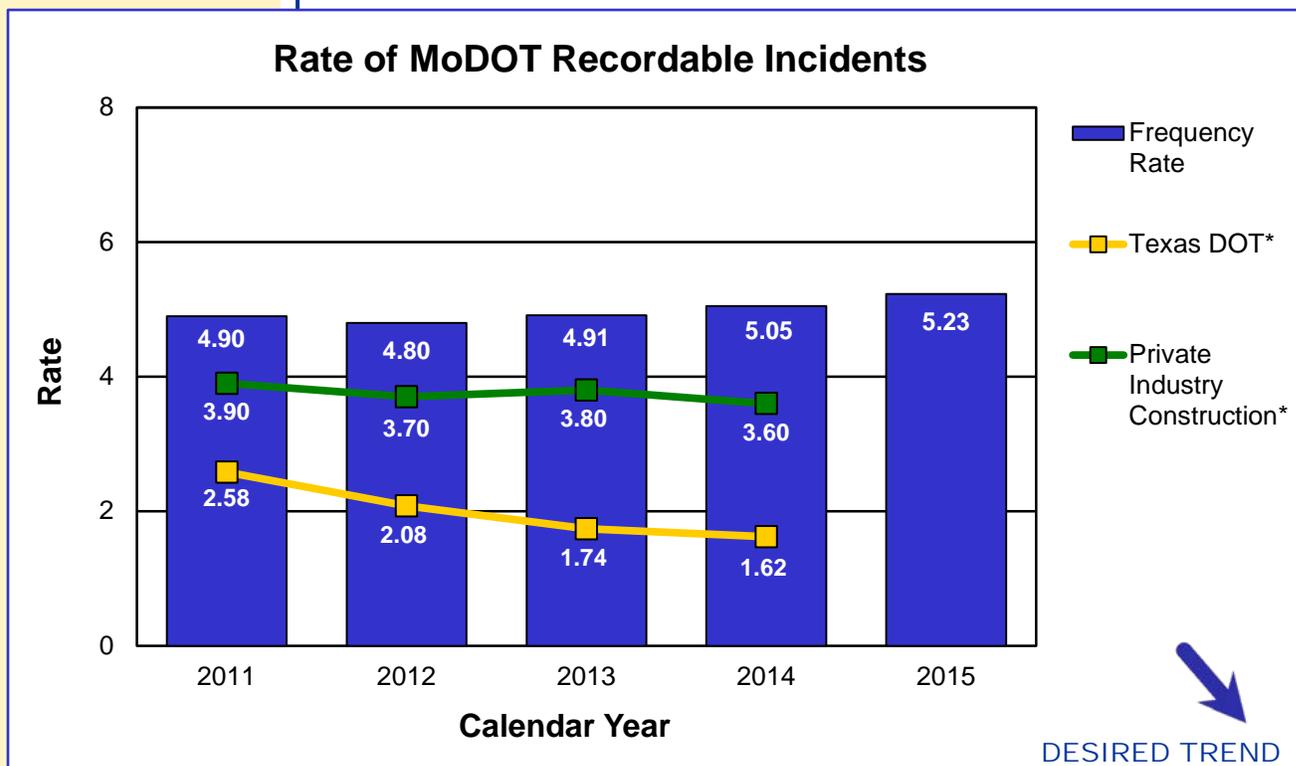
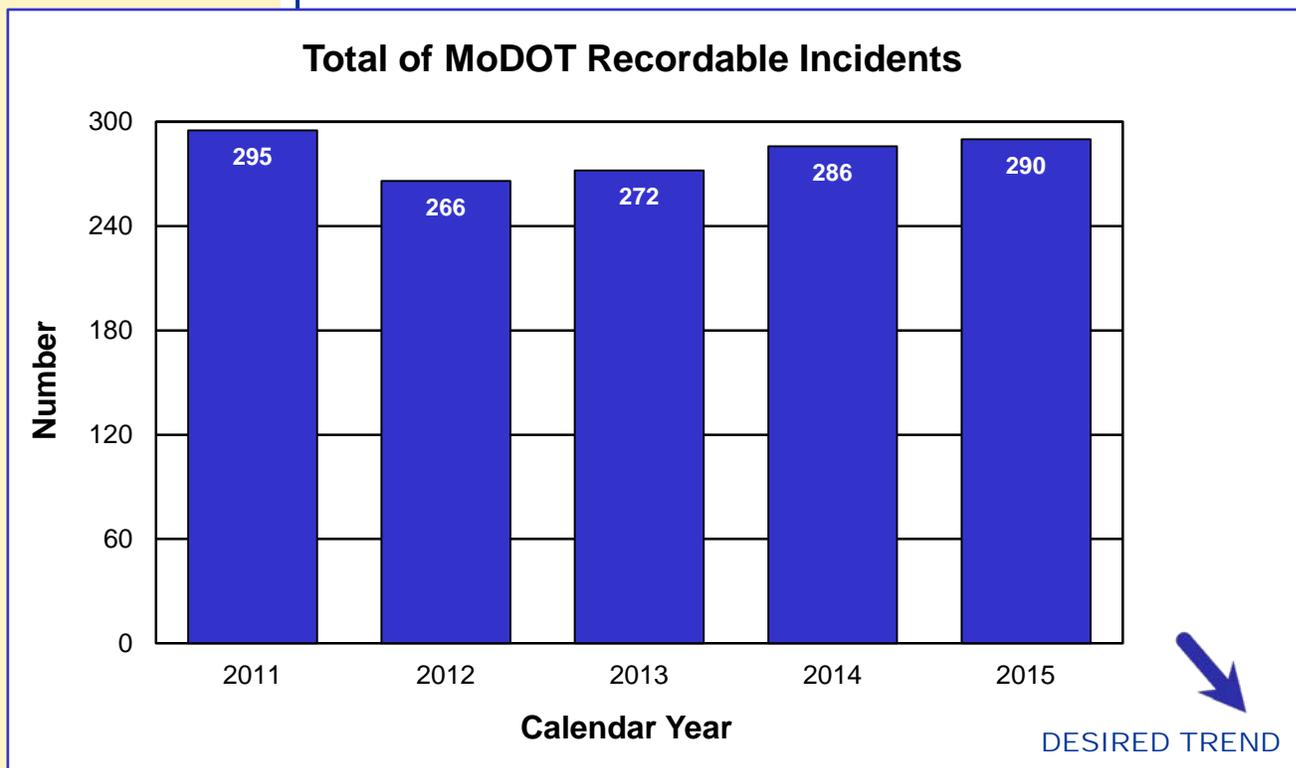
Total and rate of MoDOT recordable incidents – 1h

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 reminds all employees that safety is a personal responsibility.

The number of recordable incidents and the rate of recordable incidents have increased for 2015 compared to 2014. Leading causes of incidents during this reporting period were: slips, trips and falls at 18 percent; strains or injuries at 14 percent; struck or injured by at 13 percent and cuts/punctures at 12 percent. When looking at the work activity the employee was doing at the time of the incident, 27 percent of these injuries were equipment related. Another 16 percent were related to mowing/brush cutting, and roadway maintenance activities had 11 percent.



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*OSHA private industry and Texas DOT data is not yet available for 2015.

RESULT DRIVER:
Eileen Rackers
State Traffic and Highway
Safety Engineer

MEASUREMENT
DRIVER:
Steve Patterson
Safety and Claims Manager

PURPOSE OF
THE MEASURE:
This measure tracks the
number of general liability
claims and the 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
condition. Claims data is
collected from Riskmaster, the
department's risk management
claims administration software.

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General liability claims and costs – 1i

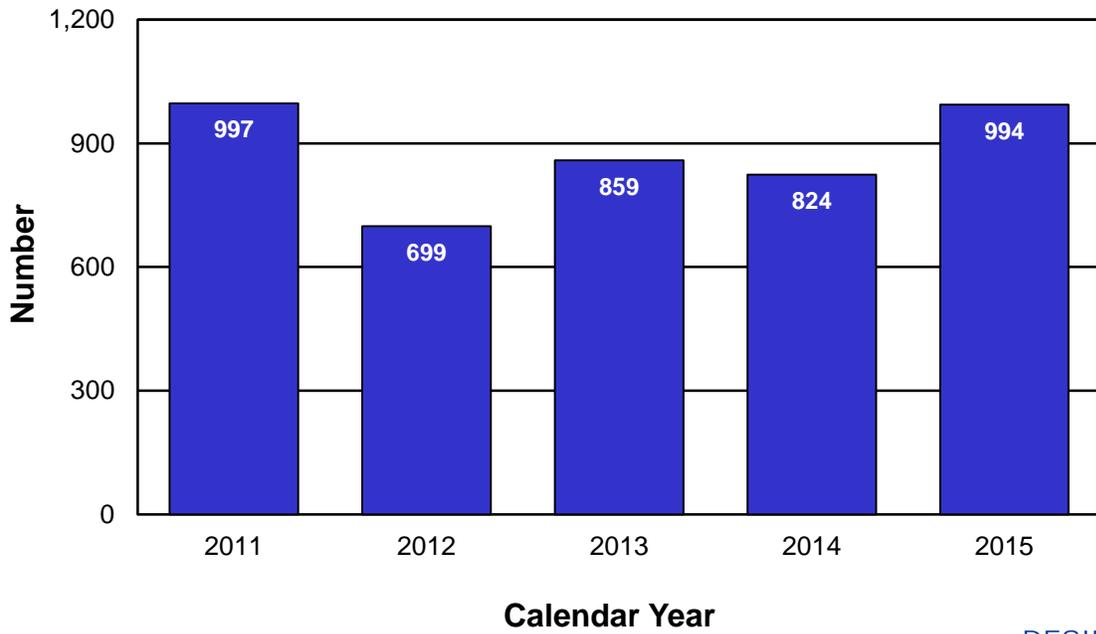
Keeping ourselves and the public safe is MoDOT's top priority. Controlling damage to vehicles and reducing personal injury in work zones, on right of way and other areas under department control helps MoDOT accomplish this goal. Compared to 2014, there was an increase of 21 percent in the number of claims. The majority of claims for 2015 were attributed to pavement defects. During the same timeframe, there was a 15 percent increase in the amount paid. This quarter, payment was made on 125 claims against the department totaling more than \$1.9 million.

Three claims accounted for 60 percent of this quarter's payments. The department received an unfavorable arbitration on a claim occurring in 2011 based on poor sight distance at an intersection. The incident occurred when a vehicle turned into on-coming traffic and caused a collision. The award on this claim was \$409,123. Another claim occurring in 2012 was settled based on a dangerous condition where a patch unraveled creating loose debris. This caused a vehicle to run off the road and overturn, resulting in severe injuries. This claim was settled for \$358,000. In the third claim, a judgment was entered against the department for \$409,123. The department was found to have created a dangerous condition based on inadequate and improper signing. This 2013 incident caused two vehicles to collide resulting in a fatality.



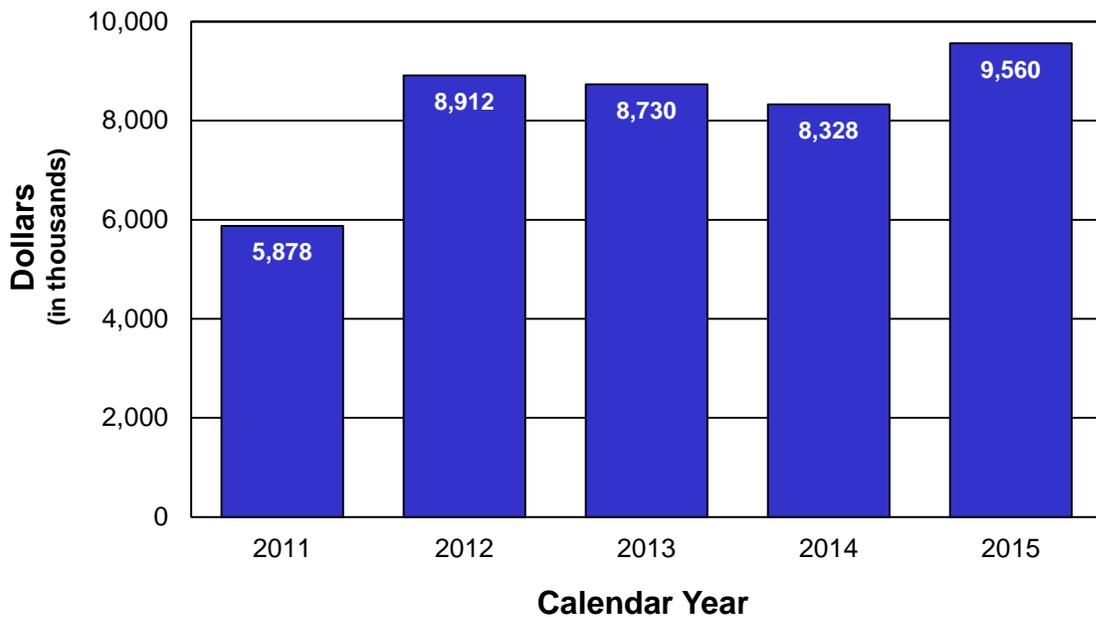
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Number of Claims for General Liability



↓
DESIRED TREND

Amount Paid in Claims for General Liability



↓
DESIRED TREND