

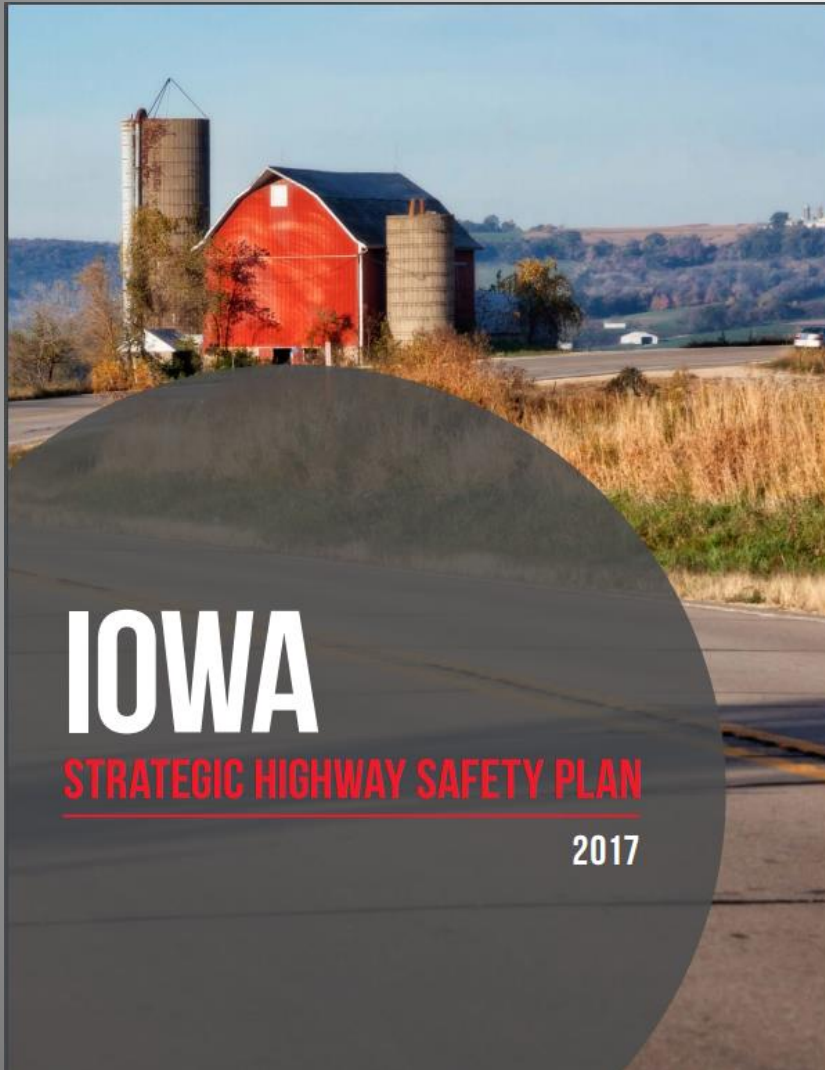
# Safety Performance Measures Targets

3-29-2017

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# Strategic Highway Safety Plan



- Reduce fatalities/serious crashes
- All public roads
- Data driven
- Cross discipline
- Low cost, systemic, effective countermeasures

<http://www.iowadot.gov/traffic/shsp>



# Highway Safety Improvement Program

Federal-aid highway program to reduce traffic fatalities and injuries





Strategic  
Highway  
Safety  
Plan

Highway  
Safety  
Improvement  
Program

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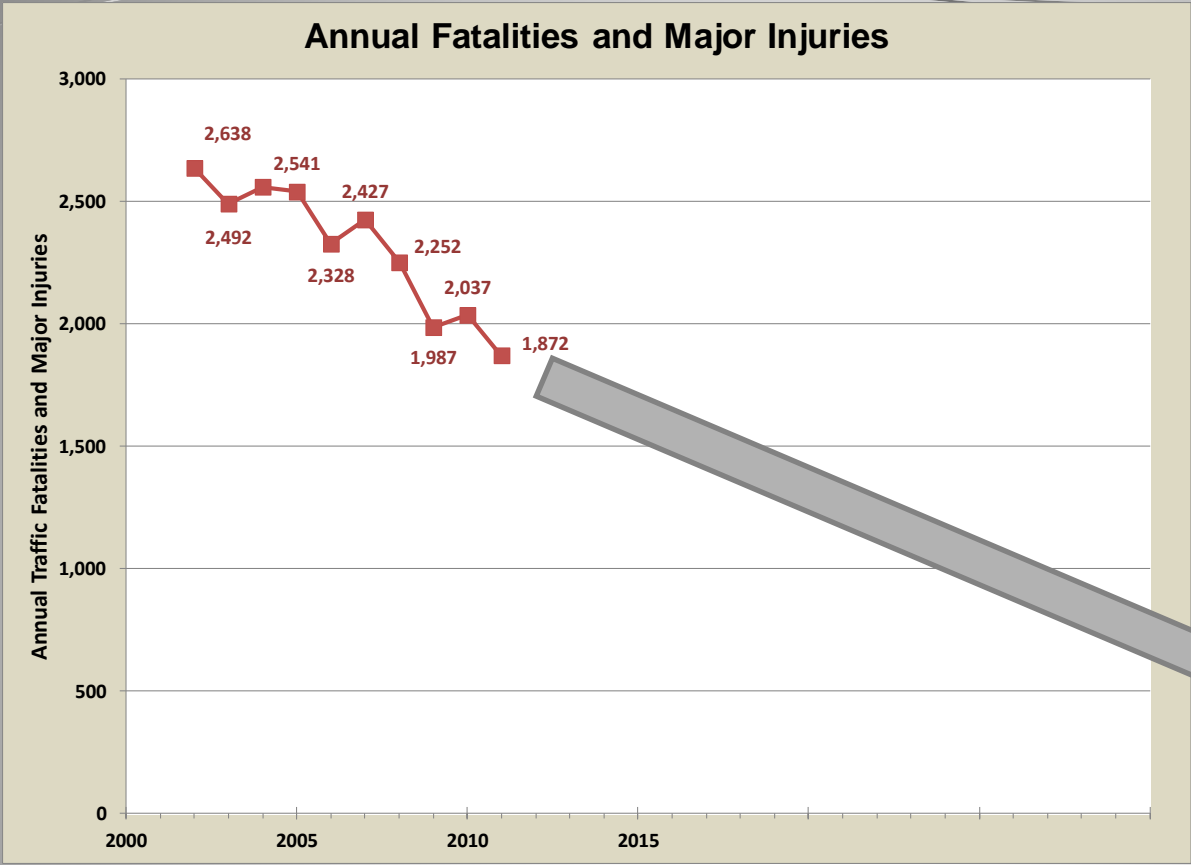
# SAFETEA-LU, MAP-21, and FAST



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# THE VISION:



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# Safety Performance Measure Targets

Five Performance Measures	
✓	Number of Fatalities
✓	Rate of Fatalities per 100 million VMT
✓	Number of Serious Injuries
✓	Rate of Serious Injuries per 100 million VMT
✓	Number of Non-motorized Fatalities and Non-motorized Serious Injuries

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# Coordination





# Plan Coordination Among Agencies

<u>Plan/Report</u>	<u>Responsible Agency</u>
SHSP	Iowa DOT
HSIP	Iowa DOT
Highway Safety Plan	Iowa GTSB
MPO Long Range Plans	Each MPO

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MPOs Support State Target  
or  
Establish Separate MPO Targets

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# Support State Targets

- Address areas of concern for fatalities/serious injuries
- Include targets in Metro Transportation Plan
- Integrate safety objectives into MPO planning efforts
- Describe the anticipated effect of safety efforts in TIP

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# Establish Individual Targets

- Establish targets for all public roads
- Estimate vehicle miles traveled for all
- Include safety targets in MTP
- Integrate safety objectives into MPO planning efforts
- Describe the anticipated effect of safety efforts in TIP

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# Example Targets & Evaluation

Performance Measures	Five Year Rolling Averages			Target Achieved?	Better than baseline?	Met or Made Significant Progress
	2012 Baseline Performance	2014 2018 Target	2014 2018 Actual Performance			
Number of Fatalities	474.0	465.0	472.4	No	Yes	Yes
Fatality Rate	0.988	0.980	0.990	No	No	
Number of Serious Injuries	2,703.2	2,560.0	2,578.4	No	Yes	
Serious Injury Rate	4.288	4.126	4.214	No	Yes	
Number of Non-motorized Fatalities and Serious Injuries	113.2	108.0	107.6	Yes	N/A	

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# FHWA's Proposed Timeline

- Spring 2017 Safety stakeholder coordination
- July 2017 GTSB's HSP published
- Aug 2017 HSIP Annual Report
- Feb 2018 MPO target due date

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# Workshop

MPO

Iowa DOT

Iowa GTSB

FHWA

NHTSA



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# Target-setting Methodology

Evidence-based

Trend analysis

Consider factors

Forecast reductions



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## Iowa

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
--	------	------	------	------	------	------	------	------	------	------	------

## Fatalities

Frequency

439	446	412	371	390	360	365	317	322	320	403
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

Rate

1.38	1.42	1.33	1.19	1.23	1.15	1.16	1.01	1.00	0.97	1.22
------	------	------	------	------	------	------	------	------	------	------

## Major Injuries

Frequency

1889	1982	1841	1615	1644	1501	1629	1545	1509	1467	1491
------	------	------	------	------	------	------	------	------	------	------

Rate

5.95	6.30	5.95	5.16	5.21	4.78	5.16	4.90	4.67	4.43	4.50
------	------	------	------	------	------	------	------	------	------	------

## Non-Motorist

Fatalities and Major Injuries

147	184	152	138	156	157	147	141	129	147	157
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

## VMT (Millions)

31,733	31,481	30,954	31,295	31,579	31,411	31,581	31,542	32,332	33,109	33,109
--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------

	2002 to 2006	2003 to 2007	2004 to 2008	2005 to 2009	2006 to 2010	2007 to 2011	2008 to 2012	2009 to 2013	2010 to 2014	2011 to 2015	2012 to 2016
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## Fatalities 5-year Average

Frequency

425	433	427	424	412	396	380	361	351	337	345
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

Rate

1.34	1.37	1.35	1.35	1.31	1.26	1.21	1.15	1.11	1.05	1.07
------	------	------	------	------	------	------	------	------	------	------

## Major Injuries 5-year Average

Frequency

2087	2037	1995	1883	1794	1717	1646	1587	1566	1530	1528
------	------	------	------	------	------	------	------	------	------	------

Rate

6.60	6.44	6.33	6.00	5.71	5.48	5.25	5.04	4.94	4.78	4.73
------	------	------	------	------	------	------	------	------	------	------

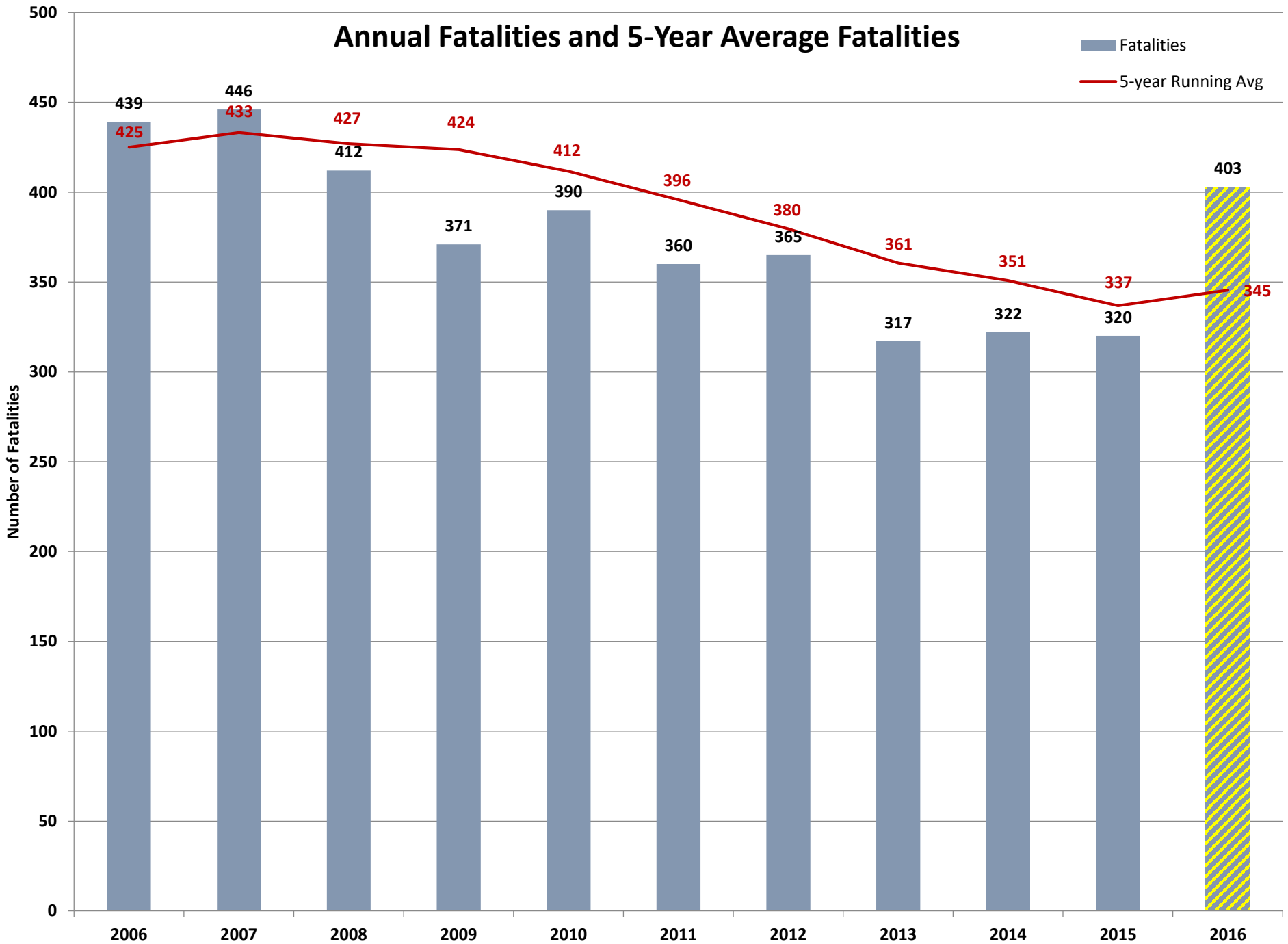
## Non-Motorist 5-year Average

Fatalities and Major Injuries

159	166	165.6	156.6	155.4	157.4	150	147.8	146	144.2	144.2
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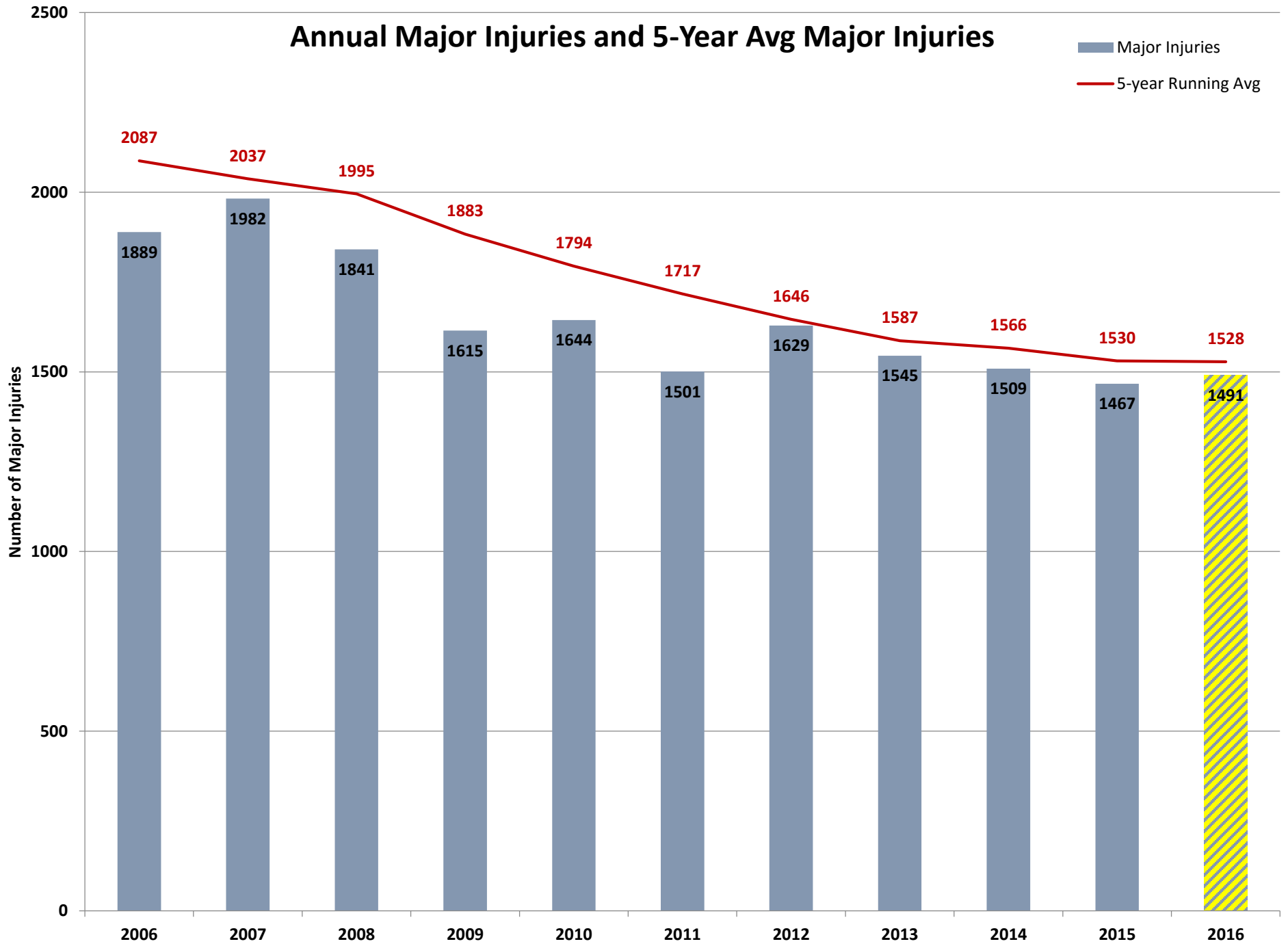
# Annual Fatalities and 5-Year Average Fatalities

Fatalities  
5-year Running Avg

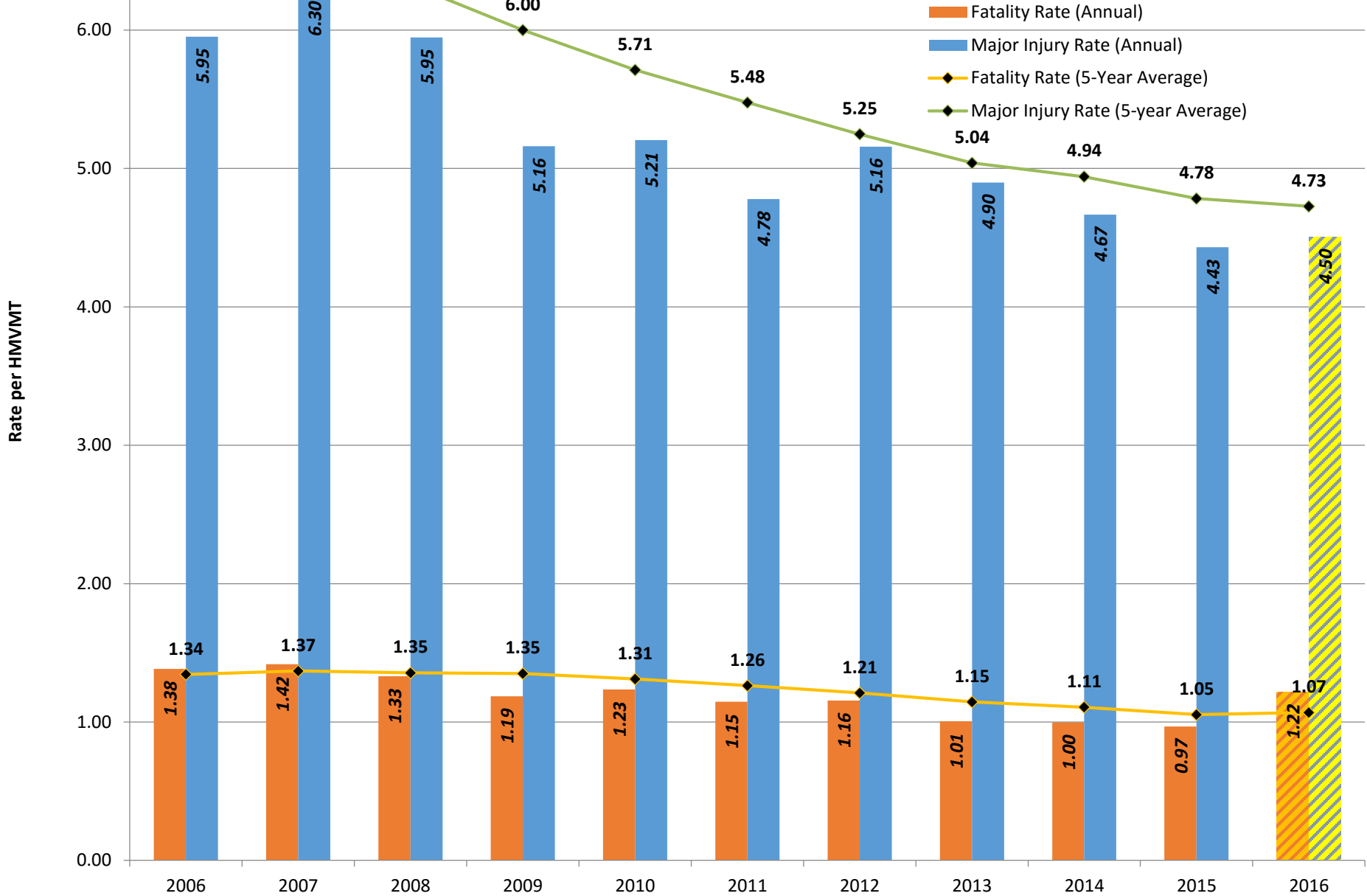


# Annual Major Injuries and 5-Year Avg Major Injuries

Major Injuries  
5-year Running Avg

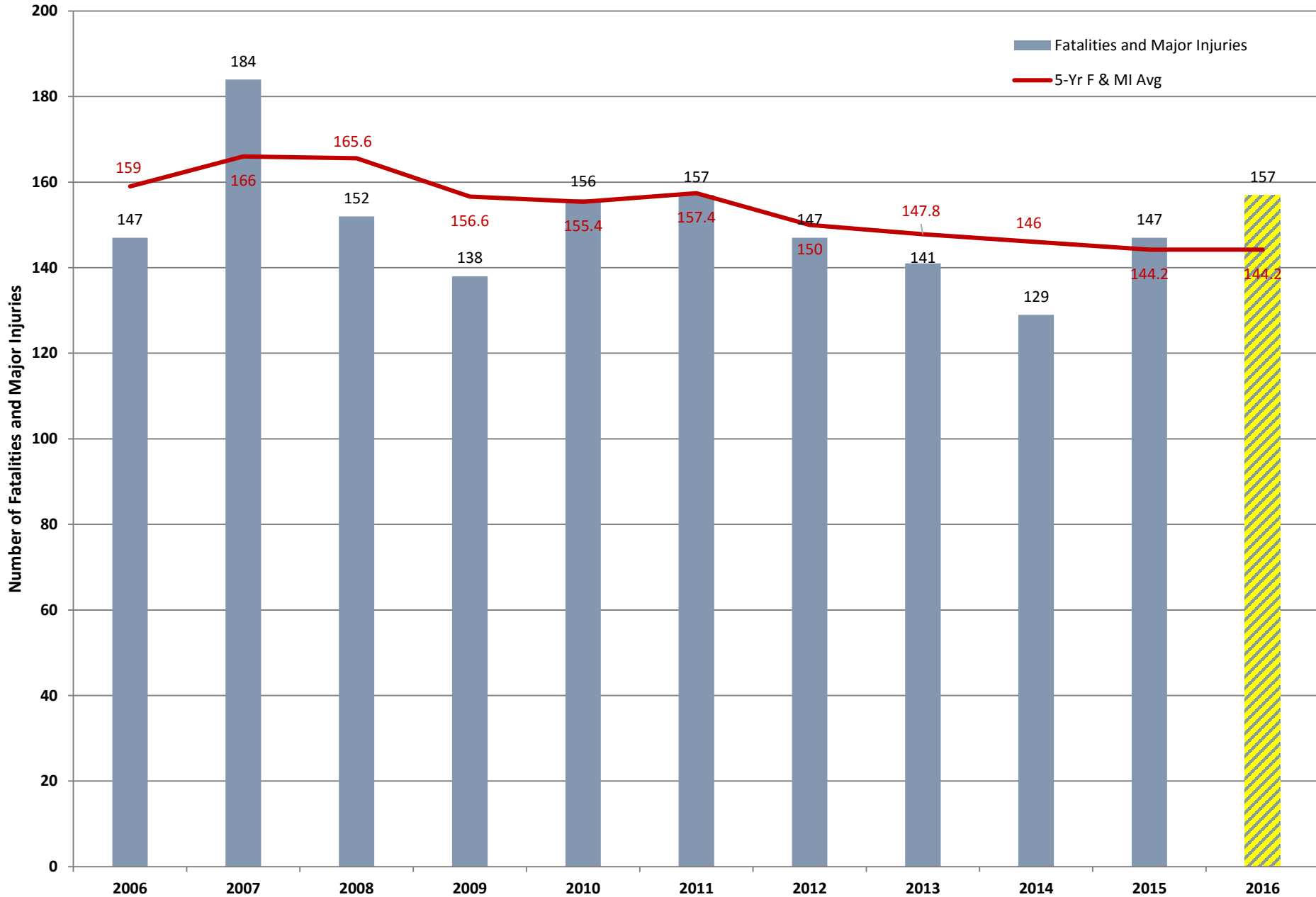


# Annual Fatality Rate vs Major Injury Rate and 5-Year Average Fatality Rate vs 5-Year Average Major Injury Rate

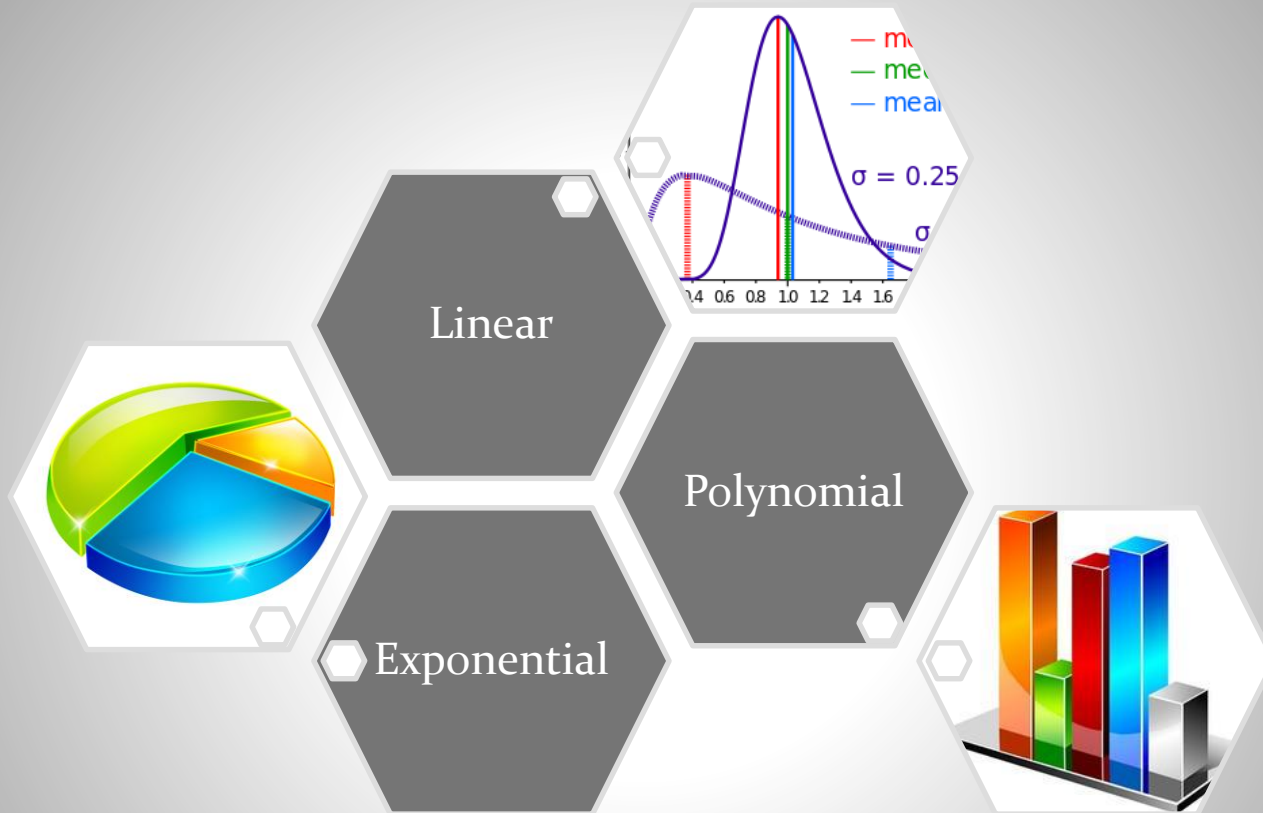


# Annual P&B Fatalities and Major Injuries

## (5-Year Average P&B Fatalities and Major Injuries)



# Statistics



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**Iowa**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Positing				Positing			
												2017	2017	2017	2017	2018	2018	2018	2018
<b>Fatalities</b>												50	70	75	80	50	70	75	80
Frequency	439	446	412	371	390	360	365	317	322	320	403	370	390	395	402	369	392	399	406
Rate	1.38	1.42	1.33	1.19	1.23	1.15	1.16	1.01	1.00	0.97	1.19	1.07	1.12	1.14	1.16	1.02	1.08	1.10	1.12
<b>Serious Injuries</b>																			
Frequency	1889	1982	1841	1615	1644	1501	1629	1545	1509	1470	1492	1493	1626	1664	1706	1428	1621	1676	1737
Rate	5.95	6.30	5.95	5.16	5.21	4.78	5.16	4.90	4.67	4.44	4.41	4.30	4.68	4.79	4.91	3.94	4.47	4.62	4.79
<b>Non-Motorist</b>																			
Fatalities and Serious Injuries	147	184	152	138	156	157	147	141	129	147	157	152	159	161	163	150	158	160	162
<b>VMT (Millions)</b>	31,733	31,481	30,954	31,295	31,579	31,411	31,581	31,542	32,332	33,109	33,844	34,720	34,720	34,720	34,720	36,260	36,260	36,260	36,260
	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2013	2013	2013	2014	2014	2014	2014
	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2017	2017	2017	2018	2018	2018	2018
<b>Fatalities 5-year Average</b>																			
Frequency	425	433	427	424	412	396	380	361	351	337	345	346	350	351	353	357	365	368	371
Rate	1.34	1.37	1.35	1.35	1.31	1.26	1.21	1.15	1.11	1.05	1.06	1.05	1.06	1.06	1.07	1.05	1.07	1.08	1.09
<b>Serious Injuries 5-year Average</b>																			
Frequency	2087	2037	1995	1883	1794	1717	1646	1587	1566	1531	1529	1502	1528	1536	1544	1478	1544	1562	1583
Rate	6.60	6.44	6.33	6.00	5.71	5.48	5.25	5.04	4.94	4.78	4.71	4.54	4.62	4.64	4.66	4.34	4.53	4.59	4.65
<b>Non-Motorist 5-year Average</b>																			
Fatalities and Serious Injuries					155.4	157.4	150.0	147.8	146.0	144.2	144.2	145.2	146.6	147.0	147.4	147.0	150.0	150.8	151.6

**United States**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Fatalities</b>										
US Fatal Crash Rate	1.27	1.22	1.14	1.04	1.02	1.01	1.04	1.01	0.99	
US Fatality Rate	1.41	1.36	1.25	1.15	1.11	1.10	1.13	1.09	1.08	1.13
<b>Serious Injuries</b>										
US Injury Crash Rate	57.55	56.12	54.47	51.31	51.97	51.93	55.11	53.24	54.21	
US Injury Rate	84.88	81.70	78.39	74.98	75.46	75.25	79.66	77.40	76.90	

# Proposed Targets

Performance Measures	Five Year Rolling Averages	
	2012-2016 Baseline	2014-2018 Target
Number of Fatalities	345	368
Fatality Rate	1.06	1.08
Number of Serious Injuries	1529	1562
Serious Injury Rate	4.71	4.59
Non-Motorized Fatalities and Serious Injuries	144.2	150.8

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# Safety Performance Measures Targets

**Questions/Comments**

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CRASH ON A COUCH  
NOT A ROAD

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DON'T DRIVE DROWSY

BE ALERT  
YOUR LIFE DEPENDS  
ON

AIR BAGS ARE NOT  
PILLOWS  
REST BEFORE DRIVING

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