



## Labor Day 2016 Holiday Period Traffic Fatality Estimate

The 2016 Labor Day holiday period begins at 6:00 p.m., Friday, September 2, and ends at 11:59 p.m., Monday, September 5. Our estimate of traffic fatalities for this 3.25-day holiday period is **438** deaths with a 90% confidence interval (C.I.) of **388** to **493** deaths. Nonfatal medically consulted injuries, i.e. injuries serious enough that a medical professional was consulted, are estimated at 50,300 with a range of 44,600 to 56,700. The Labor Day holiday period is always 3.25 days in length. The estimated fatality total for 2016 is 18% higher than the average actual number of fatalities (371) that occurred during the previous six Labor Day holiday periods for which data are available and would be the highest fatality total since 2008. An evaluation of recent Labor Day holiday period estimates is presented in Table 1.

**Table 1. Evaluation of Recent Labor Day Holiday Period Estimates**

<b>Year</b>	<b>Estimate</b>	<b>90% Confidence Interval</b>	<b>Actual</b>
2009	404	356-457	351*
2010	368	320-422	390
2011	400	337-472	373
2012	405	336-485	378
2013	394	338-459	371
2014	395	338-460	362

\*=outside of 90% confidence interval.

Studies have shown that seat belts, when used, are 45% effective in preventing fatalities among front-seat passenger car occupants. Although the reduction in the risk of fatal injury from wearing seat belts is higher for light-truck occupants at 50%, the lower figure for passenger car occupants is used in the calculations here as the more conservative measure. The most recent data from the Fatality Analysis Reporting System (FARS) indicate that seat belt use by fatally injured passenger car and light truck occupants was 47.4%. Based on this information it is estimated that **170** person's lives may be saved this Labor Day holiday period because they will wear their safety belts and an additional **104** lives could be saved if all wore safety belts.

The average number of traffic fatalities during the six most recent Labor Day holiday periods was 5.7% higher than similar non-holiday periods (371 vs. 351 deaths). The difference is statistically significant at the .05 level.

The terms used in the above discussion were chosen carefully to reflect the level of accuracy of the quantities involved. *Estimate* is used because the fatality figures are calculated approximately, as opposed to the precision of calculation inferred by the use of the word *predict*. *May* is used to indicate the figures express a contingency, whereas *will* is used to express something that may be expected or is supposed to occur.

Details of the estimating methodology and a discussion of holiday deaths compared to non-holiday periods are included in the attached paper.

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