U.S. Department
of Transportation

**National Highway
Traffic Safety
Administration**

TRAFFIC SAFETY FACTS
Crash • Stats

NHTSA
www.nhtsa.gov

| DOT HS 812 217 | A Brief Statistical Summary | November 2015 |

Early Estimate of Motor Vehicle Traffic Fatalities for the First Half (Jan – Jun) of 2015

Summary

A statistical projection of traffic fatalities for the first half of 2015 shows that an estimated 16,225 people died in motor vehicle traffic crashes. This represents an increase of about 8.1 percent as compared to the 15,014 fatalities that were reported to have occurred in the first half of 2014, as shown in Table 1. Preliminary data reported by the Federal Highway Administration (FHWA) shows that vehicle miles traveled (VMT) in the first 6 months of 2015 increased by about 51.9 billion miles, or about a 3.5-percent increase. Also shown in Table 1 are the fatality rates per 100 million VMT, by quarter. The fatality rate for the first half of 2015 increased to 1.06 fatalities per 100 million VMT, up from 1.01 fatalities per 100 million VMT in the first half of 2014. The actual counts for 2014 and 2015 and the ensuing percentage change from 2014 to 2015 will be further revised as the final file for 2014 and the annual reporting file for 2015 become available next year. These estimates may be further refined when the projections for the first 9 months of 2015 are released in late December.

Table 1: Fatalities and Fatality Rate by Quarter, First Half, and the Percentage Change From the Corresponding Quarter or First Half in the Previous Year

Quarter	1st Quarter (Jan–Mar)	2nd Quarter (Apr–Jun)	3rd Quarter (Jul–Sep)	4th Quarter (Oct–Dec)	Total (Full Year)	1st Half (Jan–Jun)
Fatalities and Percentage Change in Fatalities for the Corresponding Quarter/Half From the Prior Year						
2005	9,239	11,005	11,897	11,369	43,510	20,244
2006	9,558 [+3.5%]	10,942 [-0.6%]	11,395 [-4.2%]	10,813 [-4.9%]	42,708 [-1.8%]	20,500 [+1.3%]
2007	9,354 [-2.1%]	10,611 [-3.0%]	11,056 [-3.0%]	10,238 [-5.3%]	41,259 [-3.4%]	19,965 [-2.6%]
2008	8,459 [-9.6%]	9,435 [-11.1%]	9,947 [-10.0%]	9,582 [-6.4%]	37,423 [-9.3%]	17,894 [-10.4%]
2009	7,552 [-10.7%]	8,975 [-4.9%]	9,104 [-8.5%]	8,252 [-13.9%]	33,883 [-9.5%]	16,527 [-7.6%]
2010	6,755 [-10.6%]	8,522 [-5.0%]	9,226 [+1.3%]	8,496 [+3.0%]	32,999 [-2.6%]	15,277 [-7.6%]
2011	6,726 [-0.4%]	8,227 [-3.5%]	8,984 [-2.6%]	8,542 [+0.5%]	32,479 [-1.6%]	14,953 [-2.1%]
2012	7,521 [+11.8%]	8,612 [+4.7%]	9,171 [+2.1%]	8,478 [-0.7%]	33,782 [+4.0%]	16,133 [+7.9%]
2013	7,128 [-5.2%]	8,166 [-5.2%]	8,971 [-2.2%]	8,454 [-0.3%]	32,719 [-3.1%]	15,294 [-5.2%]
2014	6,843 [-4.0%]	8,171 [+0.1%]	8,782 [-2.1%]	8,879 [+5.0%]	32,675 [-0.1%]	15,014 [-1.8%]
2015[a]	7,425 [+8.5%]	8,800 [+7.7%]	-	-	-	16,225 [+8.1%]
Fatality Rate per 100 Million Vehicle Miles of Travel (VMT)						
2005	1.32	1.42	1.54	1.54	1.46	1.37
2006	1.35	1.41	1.47	1.44	1.42	1.38
2007	1.31	1.35	1.41	1.37	1.36	1.33
2008	1.22	1.25	1.33	1.32	1.26	1.23
2009	1.09	1.16	1.17	1.12	1.15	1.13
2010	0.98	1.09	1.18	1.14	1.11	1.04
2011	0.98	1.09	1.18	1.17	1.10	1.04
2012	1.08	1.12	1.21	1.16	1.14	1.10
2013	1.03	1.06	1.16	1.15	1.09	1.05
2014	0.99	1.03	1.11	1.16	1.07	1.01
2015[a]	1.03	1.08	-	-	-	1.06

[a]2015 Statistical projections and rates based on these projections.
Source: Fatalities: 2005-2012 FARS Final File, 2013 and 2014 FARS Annual Report File   VMT: FHWA August 2015 Traffic Volume Trends

Figure 1 shows the historical trend of the percentage change every quarter from the same quarter in the previous year, going back to 1976. NHTSA has fatality data going back to 1975, and the shading in the chart depicts the years during which there were significant number of consecutive quarters with declines as compared to the corresponding quarters of the previous years. The declines during the early 1980s and 1990s lasted 11 consecutive quarters, while the most recent decline occurred over 17 consecutive quarters ending in the second quarter of 2010.

Figure 1: Percentage Change in Fatalities in Every Quarter as Compared to the Fatalities in the Same Quarter During the Previous Year
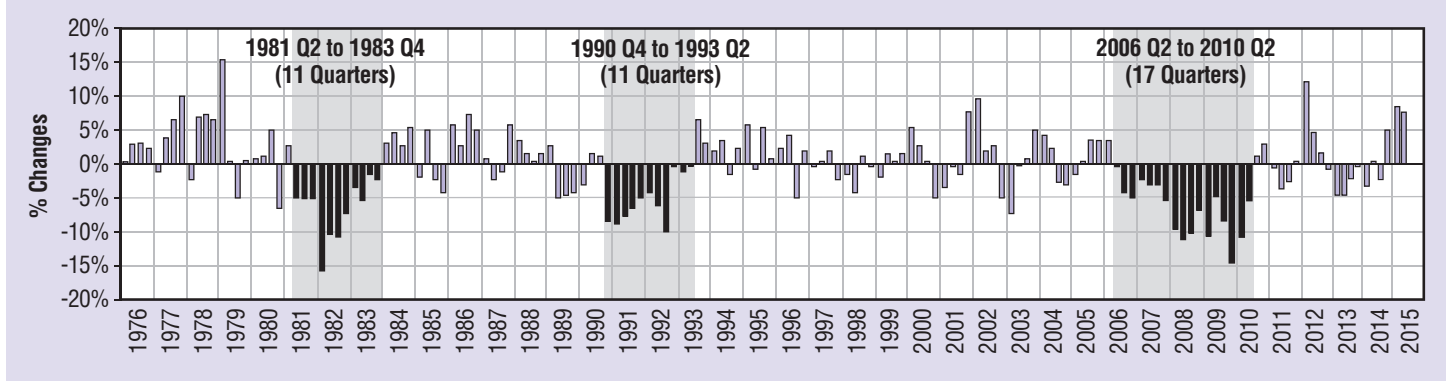

Regional Differences

As discussed in a methodology Research Note (Statistical Methodology to Make Early Estimates of Motor Vehicle Traffic Fatalities, Report No. DOT HS 811 123), the statistical procedures employed in these projections were generated for each NHTSA administrative region and were collated to create the national estimate. This allows for the comparison of regional estimates in 2015 with the reported regional totals in 2014, as depicted by the estimated percentage changes in Figure 2. Nine of the 10 NHTSA regions experienced increases in 2015 as compared to 2014. The estimated regional year-to-year percentage changes shown in Figure 2 are subject to change as fatality counts for 2014 and 2015 are finalized.

Figure 2: Percentage Change in Estimated Fatalities in 2015 From Reported 2014 Fatality Counts, by NHTSA Region
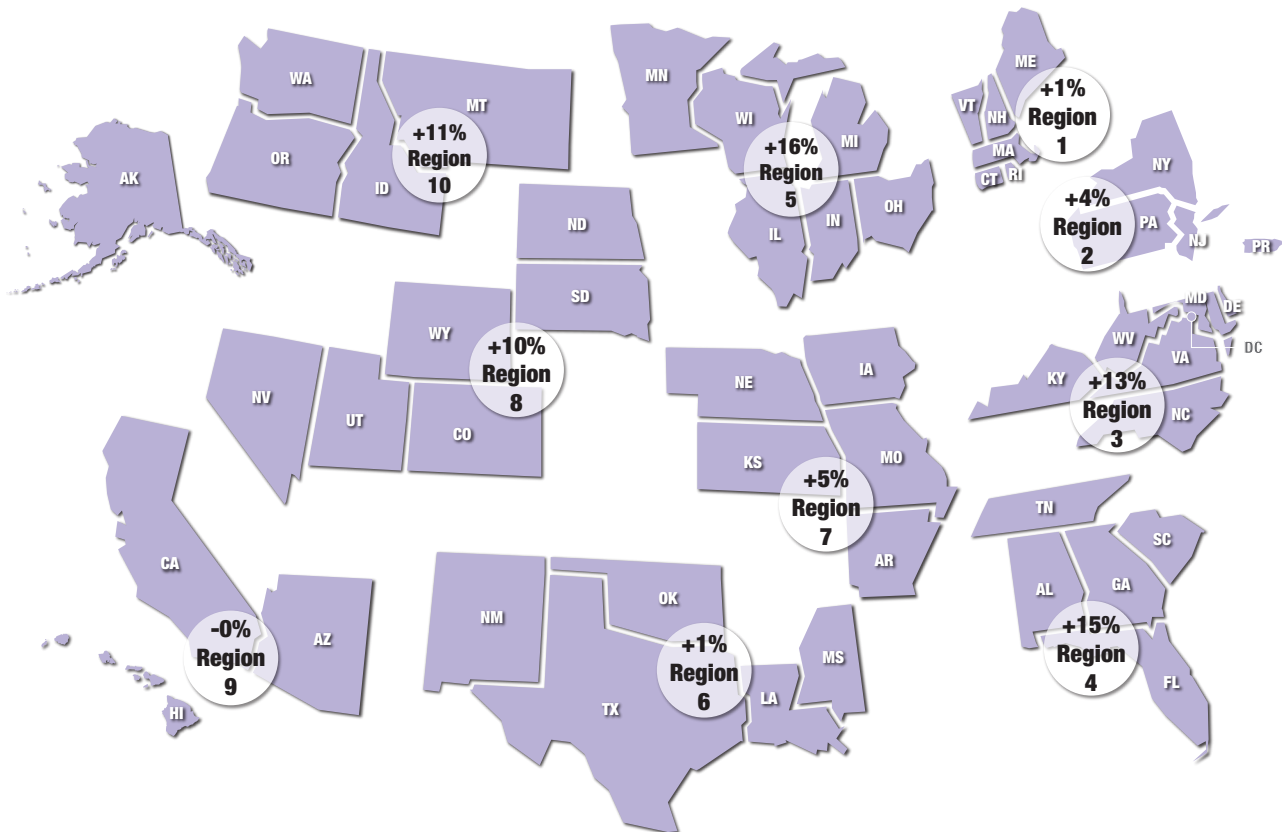
Discussion

The data used in this analysis comes from several sources: NHTSA is continuing to gather/finalize data on crash fatalities for 2014 and 2015 using information from police accident reports and other sources. It is too soon to speculate on the contributing factors or potential implications of any changes in deaths on our roadways. The final data for 2014 as well as the annual file for 2015 will be available in late fall of 2016 which usually results in the revision of fatality totals and the ensuing rates and percentage changes.

In the last few years, since recording a significant increase of 11.8 percent during the first quarter of 2012, the magnitude of the increases steadily declined during each subsequent quarter. Fatalities are reported to have increased by about 4.7 percent in the second quarter and by about 2.1 percent in the third quarter of 2012. Subsequently, beginning with the fourth quarter of 2012, fatalities have declined seven out of eight quarters (2014 Q2 was a marginal 0.1% increase) until the 5.0-percent increase estimated for the fourth quarter of 2014. The fatality rates per 100 million in 2014 VMT, when compared to the rates for the corresponding quarters in 2013, are lower for the first three quarters of 2014 and higher for the fourth quarter of 2014.

Data

The data used in this analysis comes from several sources: NHTSA's Fatality Analysis Reporting System (FARS), FastFARS (FF), and Monthly Fatality Counts (MFC); and from FHWA's VMT estimates. FARS is a census of fatal traffic crashes in the 50 States, the District of Columbia, and Puerto Rico. To be included in FARS, a crash must involve a motor vehicle traveling on a trafficway and must result in the death of at least one person (occupant of a vehicle or a nonoccupant) within 30 days of the crash. FARS final files from January 2003 to December 2012 and FARS Annual Report file in 2013 are used. The FF program is designed as an Early Fatality Notification System to capture fatality counts from States more rapidly and in real-time. It aims to provide near-real-time notification of fatality counts from all jurisdictions reporting to FARS. The MFC data provides monthly fatality counts by State through sources that are independent from the FastFARS or FARS systems. MFCs from January 2003 up to July 2015 are used. MFCs are reported mid-month for all prior months of the year.

In order to estimate the traffic fatality counts for each month of 2014, time series cross-section regression was applied to analyze the data with both cross-sectional values (by NHTSA region) and time series (by month), to model the relationship among FARS, MFC and FF, the details of which are available in a companion Research Note mentioned above (DOT HS 811 123). The methodology used to generate the estimates for the first quarter of 2015 is the same as the one used by NHTSA to project the decline in the fatalities for the whole of 2014 (Early Estimates of Motor Vehicle Traffic Fatalities in 2014, DOT HS 812 160).

Non-Standard Adjustments: A non-standard adjustment (outside the scope of usual adjustments documented in the methodology note) was made to account for significant reporting issues in both the FastFARS and MFC counts for a particular state. The MFC and FastFARS counts were below the counts from prior years by a large order of magnitude. In order to mitigate the effect of this discrepancy, the counts were adjusted to the average changes observed across the rest of the Nation.