



Early Estimate of Motor Vehicle Traffic Fatalities in 2011

Summary

A statistical projection of traffic fatalities in 2011 shows that an estimated 32,310 people died in motor vehicle traffic crashes. This represents a decline of about 1.7 percent as compared to the 32,885 fatalities that occurred in 2010, as shown in Table 1. If these projections are realized, fatalities will be lowest on record (since 1949). Also, in 2011, fatalities declined marginally in the first (down 0.1%) and fourth (down 0.7%) quarters and declined in the second (down 3.2%) and third quarters (down 2.5%), as compared to the respective quarters in 2010. Traffic fatalities have been steadily declining over the last 5 years since reaching a near-term peak in 2005, decreasing by about 26 percent from 2005 to 2011. Preliminary data reported

by the Federal Highway Administration (FHWA) shows that vehicle miles traveled (VMT) in 2011 decreased by about 35.7 billion miles, or about a 1.2-percent decrease. On a quarterly basis, the 2011 VMT dropped in all four quarters, decreasing by 0.1 percent during the first quarter, by 1.8 percent in the second quarter, by 2.0 percent in the third quarter, and by 0.7 percent in the fourth quarter. Also shown in Table 1 are the fatality rates per 100 million VMT, by quarter and for the whole year. The fatality rate for 2011 is projected to decline to the lowest on record, to 1.09 fatalities per 100 million VMT, down from 1.11 fatalities per 100 million VMT in 2010.

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

Quarter	1st Quarter (Jan–Mar)	2nd Quarter (Apr–Jun)	3rd Quarter (Jul–Sep)	4th Quarter (Oct–Dec)	Total (Full Year)
Fatalities and Percentage Change in Fatalities for the Corresponding Period From the Prior Year					
2005	9,239	11,005	11,897	11,369	43,510
2006	9,558 [+3.5%]	10,942 [-0.6%]	11,395 [-4.2%]	10,813 [-4.9%]	42,708 [-1.8%]
2007	9,354 [-2.1%]	10,611 [-3.0%]	11,056 [-3.0%]	10,238 [-5.3%]	41,259 [-3.4%]
2008	8,459 [-9.6%]	9,435 [-11.1%]	9,947 [-10.0%]	9,582 [-6.4%]	37,423 [-9.3%]
2009	7,552 [-10.7%]	8,975 [-4.9%]	9,104 [-8.5%]	8,252 [-13.9%]	33,883 [-9.5%]
2010	6,729 [-10.9%]	8,506 [-5.2%]	9,202 [+1.1%]	8,448 [+2.4%]	32,885 [-2.9%]
2011†	6,720 [-0.1%]	8,230 [-3.2%]	8,970 [-2.5%]	8,390 [-0.7%]	32,310 [-1.7%]
Fatality Rate per 100 Million Vehicle Miles of Travel (VMT)					
2005	1.32	1.42	1.54	1.54	1.46
2006	1.35	1.41	1.47	1.44	1.42
2007	1.31	1.35	1.41	1.37	1.36
2008	1.22	1.25	1.33	1.32	1.26
2009	1.09	1.16	1.17	1.12	1.15
2010	0.98	1.09	1.17	1.13	1.11
2011†	0.98	1.08	1.17	1.13	1.09

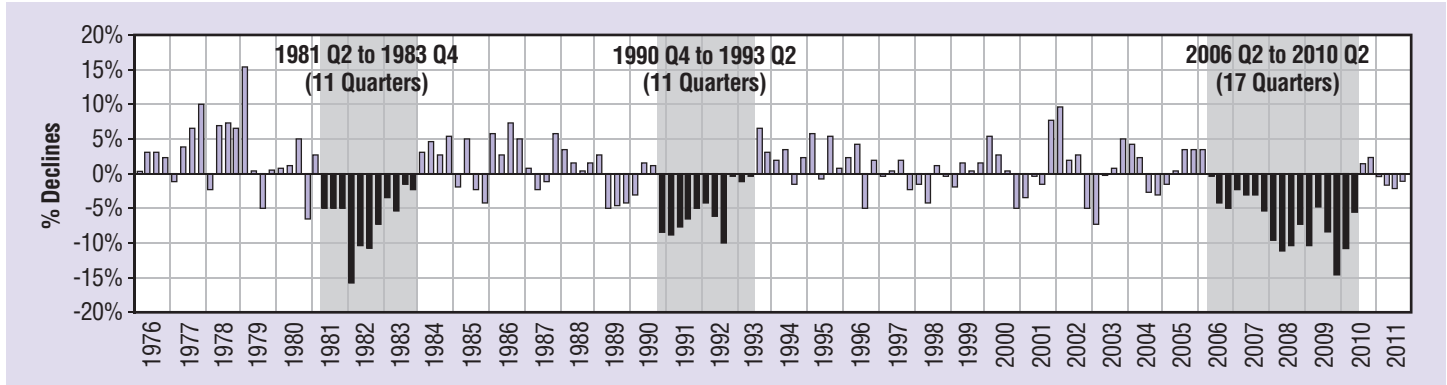
†2011 Statistical projections and rates based on these projections.

Source: Fatalities: 2005-2009 FARS Final File, 2010 FARS Annual Report File VMT: FHWA December 2011 Traffic Volume Trends, Reported February 2012

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 years during the early 1980s and 1990s are the

only two other periods with such significant consecutive quarters with declines as compared to the corresponding quarters of the previous years. Both of these periods had 11 consecutive quarters of declines.

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

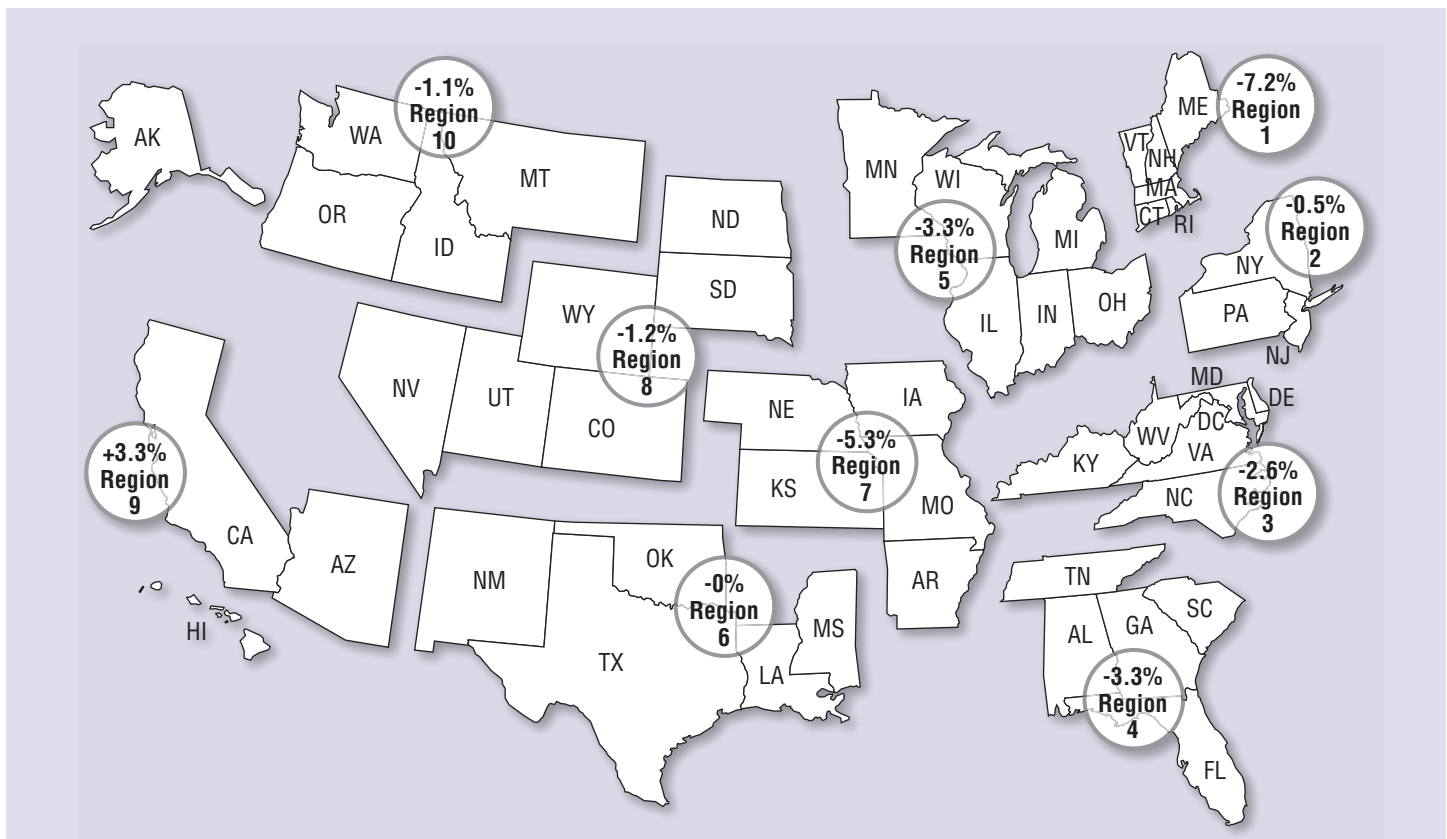


Regional Differences

As discussed in a methodology Research Note (Statistical Methodology to Make Early Estimates of Motor Vehicle Traffic Fatalities, DOT HS 811 123), the statistical procedures employed in these projections were generated for each NHTSA administrative Region (see Figure 2) and were collated to create the national estimate. This allows for the comparison of regional estimates in 2011 with the reported 2010 counts, as depicted in the map in Figure 2.

The estimated percentage changes are depicted in Figure 2. Eight of the 10 NHTSA Regions experienced declines in 2011 as compared to 2010. The States in Region 9 (AZ, CA and HI) collectively were the only region with an increase in fatalities in 2011, estimated at about 3.3 percent. The estimated number of fatalities in Region 6 was flat in 2011, as compared to 2010. Actual fatality counts for 2011 will be reported through FARS in the fall of 2012.

Figure 2: Percentage Change in Estimated Fatalities in 2011 From Reported 2010 Fatality Counts, by NHTSA Region



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 result in the fatality 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 2009 and FARS Annual Report file in 2010 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 January 2012 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 2011, 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. The methodology used to generate the estimates for 2011 is the same as the one used by NHTSA to project the decline in the fatalities for the whole of 2010 (Early Estimates of Motor Vehicle Traffic Fatalities in 2010, DOT HS 811 451) as well as projections of fatalities for the first half of 2011 (Early Estimates of Motor Vehicle Traffic Fatalities in the First Half (January-June) of 2011, DOT HS 811 518).

