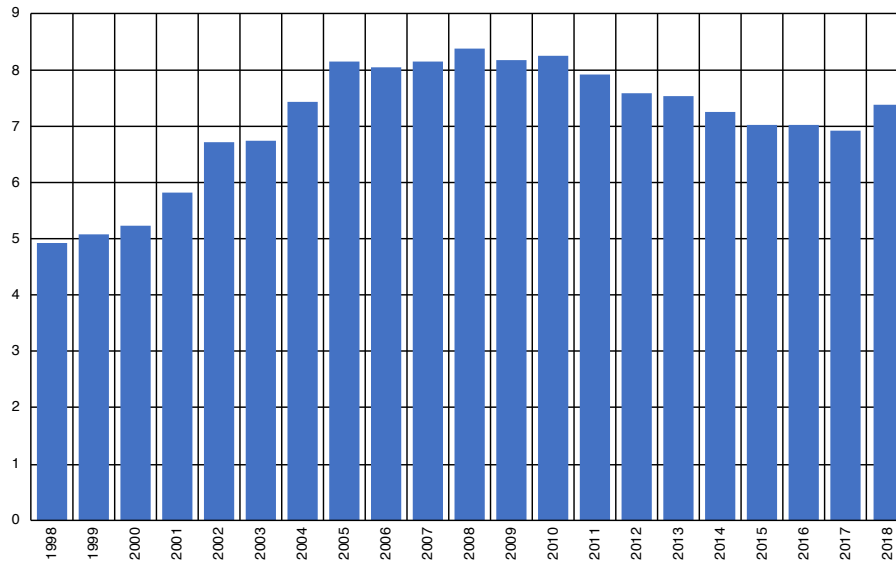
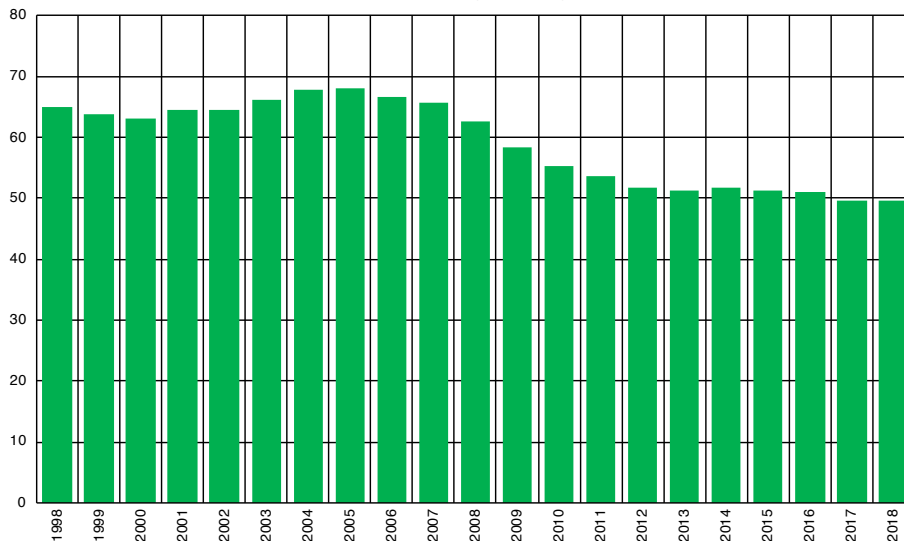


MASSACHUSETTS
Fatal Motorcycle Crashes per Million Population
5 Year Rolling Average



MASSACHUSETTS
Fatal Vehicle Crashes per Million Population
5 Year Rolling Average



Source: NHTSA Fatal Analysis Reporting System (FARS) 1994-2017 FINAL AND 2018 ARF

Why use five-year averaging? We use five-year averaging to provide enough data points to smooth out random fluctuations. The 1998 five-year average count equals the counts 1994+1995+1996+1997+1998 divided by 5. The five year average components are then "rolled" forward one year to obtain the next year's average.

How to use these charts: The bottom chart, Fatal Vehicle Crashes, is the comparison group for top chart, Fatal Motorcycle Crashes. If you divide the values in the top chart by the values in the bottom chart you obtain the percentage of Fatal Vehicle Crashes that included at least one motorcycle. Additionally, since both charts are reported as per million population, you may compare either chart with any other state or the USA total charts directly.

Why do we start with 1998 data? The 1998 average includes counts starting in 1994. After our review of the details described in the *FARS Manual* and *FARS Analytical User Manual*, we have determined that there are material and significant changes in the definitions, variables, and terms used in the FARS data base in the years prior to 1994. This means using earlier years will not be useful for current comparisons without careful analysis, documentation, and other complications. Also, vehicle, roadway, and data collection technologies vastly change over time periods greater than 25 years, which again limits the usefulness or introduces significant errors into many long-term comparisons.