SAFETY
General Aviation Fatal Accident Rate

Federal Aviation Administration

FY 2009 Performance Target

"Limit the general aviation fatal accident rate to no more than 1.11 fatal accidents per 100,000 flight hours."

Flight Plan Objective and Performance Target

Objective 2: Reduce general aviation fatalities.

Performance Target: Reduce the fatal accident rate per 100,000 flight hours by 10 percent over a 10-year period (2009-2018).

	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Target	N/A	N/A	N/A	N/A	1.11
Actual	N/A	N/A	N/A	N/A	

[1] This is a new measure for FY 2009, replacing the numerical general aviation fatal accident reduction measure. No data are available for prior years.

Definition of Measure

Unit of Measure: Number of fatal accidents per 100,000 flight hours.

Computation: The number of general aviation fatal accidents divided by the number of flight hours.

Formula:

$$\frac{\text{Number of general aviation fatal accidents}}{(\text{Number of general aviation flight hours} / 100{,}000)}$$

Scope of Measure: This measure includes on-demand (non-scheduled FAR Part 135) and general aviation flights. General aviation comprises a diverse range of aviation activities, from single-seat homebuilt aircraft, helicopters, balloons, single and multiple engine land and seaplanes, to highly sophisticated extended range turbojets.

Why the FAA Chooses this Measure

The success of FAA and industry collaborative safety initiatives continues to drive the GA fatal accident rate lower. We have consistently met our GA safety goals and remain on track for FY09. The end of April, 2008, marked a 3-year period that was the safest ever recorded in the history of General Aviation.

The FAA and general aviation community developed the general aviation fatal accident rate rather than the number of fatal accidents as the performance measure because the previous measure was not rate-based and did not reflect fleet activity levels and its relationship to the number of fatal accidents. The new performance measure is a true rate-based metric and tracks changes in the fatal accident rate for a fixed volume of flight hours (per 100,000).

The performance target baseline of 1.12 percent covers the period from May 2005 through April 2008. This 3-year period captures the safest years ever recorded for general aviation. The baseline is substantially more aggressive than the current Flight Plan performance target.

Source of the Data

The data for general aviation fatal accidents comes from the National Transportation Safety Board's (NTSB) Aviation Accident Database. Aviation accident investigators under the auspices of the NTSB develop the data.

Annual flight hours are derived from the FAA's annual *General Aviation and Part 135 Activity Survey*. In order to derive FY09 flight hours, the most recent GA Survey hours (CY2007) will be used as the basis. CY2008 hours will be predicted based on the change in GA and Air Taxi tower counts from 2007 to 2008. The percent change in tower counts will be applied to the 2007 hours to predict 2008 hours. CY2009 hours will be projected from 2008 based on APO forecasts. Annual hours will be distributed into monthly hours based on the 10-year average monthly distribution of towers counts. CY will be converted in FY based on

the monthly hour distribution.

Statistical Issues

The NTSB determines the actual number of general aviation fatal accidents. Since this is a simple count of accidents, there are no statistical issues relevant to this data.

The survey data for activity are highly accurate with a percent-standard error of less than 1 percent. The general aviation community and the General Aviation Joint Steering Committee (GAJSC) of the Safer Skies initiative recommended development of a data collection program that will yield more accurate and relevant data on general aviation demographics and utilization. Improved survey and data collection methodologies have been developed.

As a result of these efforts, the FAA, working with the General Aviation Manufacturers Association, the NTSB, and other aviation industry associations, has made many improvements to the survey. First, the sample size has significantly increased. Second, a reporting form has been created to make it much easier for organizations with large fleets to report. Third, the agency worked with the Aircraft Registry to improve the accuracy of contact information. As a result, a survey was completed in FY 2004 that, for the first time, creates a statistically valid report of activity that the general aviation community agrees on. Each year since 2004, significant improvements have been made which in turn, substantially improved the accuracy of the data.

The GAJSC General Aviation Data Improvement Team has worked closely with the general aviation community and industry to develop this performance measure and target. There is unanimous support and consensus for the measure and target.

Completeness

The number of general aviation fatal accidents, even when reported as preliminary, is very accurate. When final reports are issued, the number of fatal accidents does not change significantly. NTSB classifications are considered final when the Board issues their annual press release. Accidents during a fiscal year are addressed in the NTSB press release issued at the end of the following year.

GA Survey calendar hours are finalized by October 31 of the following year. Hence, the fatal accident rate for FY09 will not be considered final/complete until October 2010.

Reliability

FAA uses performance data extensively for program management, and personnel evaluation and accountability. Most accident investigations are a joint undertaking between FAA and NTSB. NTSB has the statutory responsibility, but, in fact, most of the accident investigations related to general aviation are conducted by FAA Aviation Safety Inspectors without NTSB direct involvement. FAA's own accident investigators and other FAA employees participate in all accident investigations led by NTSB investigators.

As mentioned above, the large sample for FAA's activity survey, along with the ease of data collection, produce highly accurate flight hour data. The low standard error which results ensures the reliability of these data.