GA SAFETY MILESTONES – 1961 TO 2011

THE EVOLVING ART

CELEBRATING 50 YEARS OF

As you probably noticed with this issue's throwback cover, *FAA Safety Briefing* is celebrating something very special: our 50th anniversary! That's right. Predating the Department of Transportation (established in 1967) and only three years after the Federal Aviation Agency was created in 1958, for a half century this magazine has kept readers like you informed about aviation safety.

Glancing at the headlines of some the publication's earliest issues, it is interesting to see what made news back then. Like opening an aviation time capsule, the sepia-toned photos of pilots with slicked-back hair and horn-rimmed glasses and diagrams of now-obsolete airspace configurations evoke a sense of nostalgia. As I read these early issues, I began to realize something. The pictures may be weathered and the technology out of date, but the core message of safety awareness was as strong as it is today.

The Numbers Tell the Story

A lot can happen in 50 years, especially in a dynamic industry like aviation. Since 1961, aviation has grown significantly and taken its place as one of the nation's major transportation players. GA has been a big part of that growth, with U.S. manufacturers reaching a peak of producing around 17,000 GA aircraft per year between 1977 and 1979, according to the General Aviation Manufacturers Association. Pilot growth has been steady as well, increasing more than 40 percent over the last 50 years to nearly 595,000 pilots in 2009.

Even with this dramatic growth in pilots and planes, safety has always been paramount as GA safety statistics indicate (see Fig. 1). Despite a temporary uptick in the 1960s, GA accident numbers have decreased steadily all the way to today. NTSB data shows that the fatal accident rate per 100,000 flight hours was 3.13 in 1961, 135 percent greater than the 2009 fatal accident rate of 1.33 per 100,000 flight hours. The total number of GA accidents has also declined—from 4,625 accidents in 1961 to 1,474 in 2009, a 68 percent reduction.

"In the early years, this positive result for improving GA safety had a lot to do with

Photo by Ken Peppard

improvements in engine technology, ATC, and weather services," says Bob Matthews, senior aviation safety analyst with the FAA Office of Accident Investigation and Prevention. "But over the long run, you can attribute the success to the long-term incremental improvements a good regulatory structure provides. You may not perceive any big movements at the time [a law or regulation is published], but you look back 10 years and see some major changes."

Some of the noteworthy achievements and events of the last 50 years that have helped improve GA safety include:

- 1961: FAA launches air share program. FAA officials meet with the GA community in a series of hangar sessions. These meetings give airmen the opportunity to air their views and learn about the safety benefits of improved rules. In October, FAA holds 90 air share meetings throughout the nation on a single day.
- 1971: FAA creates National Accident Prevention Program, predecessor of the FAA Safety Team (FAASTeam), designed to prevent GA accidents through airman education.
- 1976: GA aircraft required to install ELTs.
- 1994: The GA Revitalization Act spurs growth of aircraft production by lowering product liability faced by manufacturers. FAA approves civilian use of GPS for aerial navigation.
- 2000: President Clinton directs that Selective Availability be turned off on May 1. This vastly improves the accuracy of GPS signals available to civilians.
- 2003: Wide Area Augmentation System (WAAS) becomes operational, providing greater reliability for WAAS-certified GPS receivers. WAAS improves the accuracy of GPS position information by removing errors in the signal and enables instrument precision approaches to runways with no instrument landing system.

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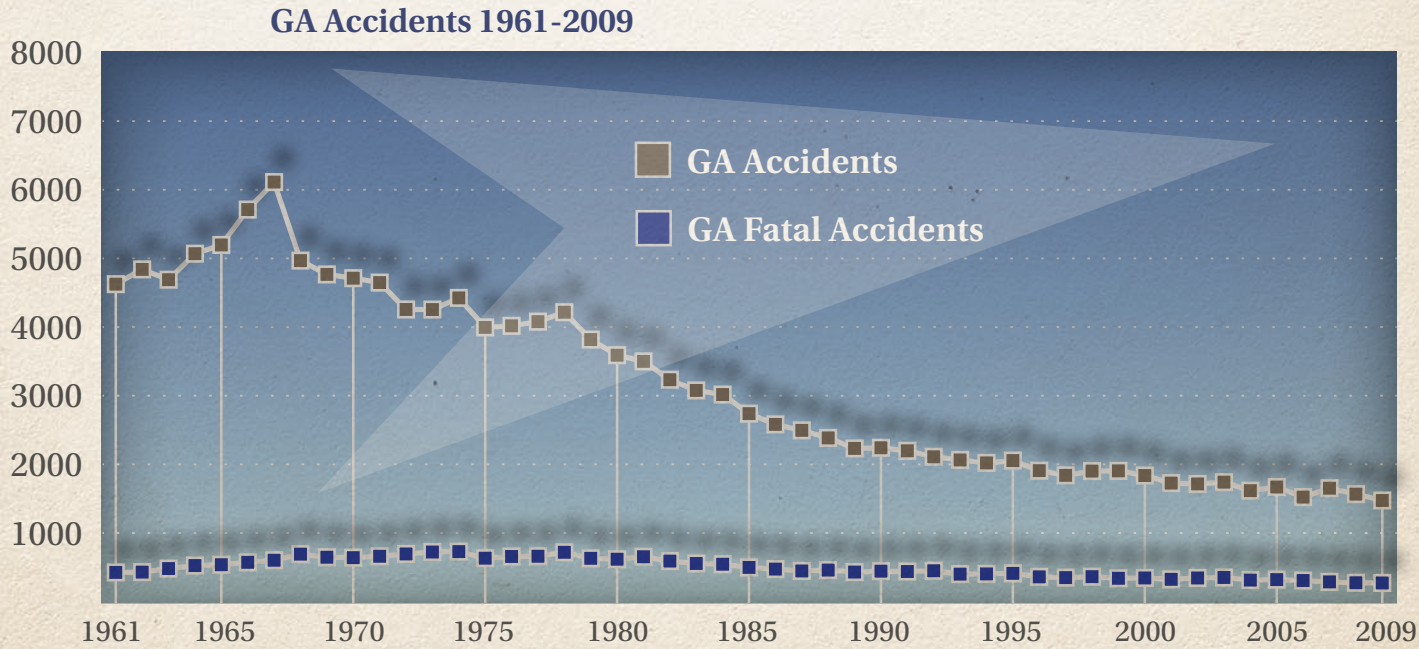

Fig. 1

Looking Ahead to the Next 50 Years of General Aviation Safety

In this issue we celebrate the 50th anniversary of *FAA Safety Briefing* by looking at what we all—FAA and the general aviation community—have accomplished over the last half century. During this time, the GA safety record improved significantly.

"We have come a long way from the 4,625 GA accidents recorded in 1961," says John Hickey, FAA deputy associate administrator for Aviation Safety, "but we are far from satisfied."

"As an agency and as a community we can and must do better," Hickey adds. "New technologies in aircraft, avionics, and the Next Generation Air Transportation System will play a role in improving safety," Hickey explains. "But, the most important role will remain based on the human element—FAA safety professionals, including field inspectors, engineers, and FAA Safety Team members, working across the GA community with pilots, flight instructors, aviation maintenance technicians, and others."

Hickey is championing an ambitious, yet practical, strategy to reduce GA accidents and improve safety. It includes a number of elements, but its linchpin, and essential first step, is starting with a clear identification of the problem: the top 10 causes of GA accidents and the key contributing factors to those causes.

"The next step, which is currently underway, is developing intervention strategies to address the areas of highest risk," Hickey adds.

The FAA is not looking to implement regulatory changes. Instead, the agency anticipates that many significant safety improvements can be gained through outreach efforts, such as working more closely with CFIs, type clubs, and aviation associations, such as the Aircraft Owners and Pilots Association and the Experimental Aircraft Association.

"General aviation includes hundreds of thousands of aircraft operating from thousands of public-use and commercial carrier airports," Hickey says. "GA pilots, aviation maintenance technicians, and others are the foundation of our nation's aviation system.

"It is incumbent on the FAA, as the steward of the public trust, to make GA as safe as we can," Hickey adds. "I am committed to improving GA safety and look forward to working with our employees and the GA community to meet that challenge."

- 2010: FAA publishes rule requiring aircraft operating in controlled airspace be equipped with Automatic Dependent Surveillance-Broadcast (ADS-B), one of the key Next Generation Air Transportation System technologies, by 2020. The rule also includes ADS-B performance requirements.

As a constant player in the 50-year positive trend for GA safety, *FAA Safety Briefing* has played an active role in improving safety. Today, the magazine remains an effective communications tool whose objective aligns directly with the FAA's performance goal to reduce GA fatal accidents.

The agency's commitment to providing safety outreach was clear from the start. In a 1961 letter to the Bureau of the Budget, then-Administrator Najeeb Halaby stressed the importance of having a communication tool like *FAA Safety Briefing* to encourage and foster the development of civil aviation. "Understanding is crucial to our mission," Halaby writes. "We plan to publish a magazine which will not only tell what we are doing, but why—it will set our actions and policies in the proper perspective."

Over the years, several well-known aviation figures have contributed to *FAA Safety Briefing*, including aerobatic champions Sean Tucker and Patty Wagstaff, aviation author and humorist Rod Machado, and Experimental Aircraft Association founder Paul Poberezny. In addition, the magazine has had the privilege of profiling such aviation legends and pioneers as test-pilot General Chuck Yeager, aircraft designer Clyde Cessna, and the father of vertical flight, Igor Sikorsky.

My, How Things Have Changed

While remaining true to its original safety mission, *FAA Safety Briefing* continues to evolve. Originally known as *Aviation News*, the magazine grew from a simple 4-page black-and-white newsletter to its current format, a 32-page (or more) full-color magazine, also available online. As illustrated by its new name, introduced in 2010, the FAA has also fine-tuned the presentation and content to keep airmen abreast of safety-critical topics and to be more responsive to reader feedback and questions. Also, *FAA Safety Briefing* recently adopted focused themes for each issue to concentrate on individual topics and serve as reusable resource guides.

With the majority of her 38-year FAA career serving on the magazine's staff, recently retired

associate editor Louise Oertly is no stranger to its evolution. "A 50-year production run is a major accomplishment," says Oertly, "but that would not have been possible without being able to truly understand and adapt to the audience's needs."

Today, better understanding and adapting to reader preferences has never been more important and is a key tenet to future success in preventing accidents and saving lives. In addition to expanding its traditional outreach methods, the magazine began a foray into the world of social media. The *FAA Safety Briefing* staff now regularly sends "tweets" to update followers about special events or breaking aviation safety news. If you have not already signed up to follow us on Twitter, use @FAASafetyBrief or go to www.twitter.com/FAASafetyBrief.

The magazine is also enhancing its Web site presence on www.faa.gov/news/safety_briefing/ and working more closely with the FAASTeam. "The future of GA safety is happening now as we move more toward satellite-based technology," says FAASTeam national outreach manager Bryan Neville, "and having a robust and forward-looking communication strategy to support that plan is a must."

Technology is advancing at an exponential rate and will no doubt fundamentally change how aircraft operate and the way we fly. What GA will look like 50 years from now no one knows. But, wherever the future takes us, there will always be a need for communicating safety, a role that *FAA Safety Briefing* will enthusiastically fulfill.

Tom Hoffmann is associate editor of FAA Safety Briefing. *He is a commercial pilot and holds an A&P certificate.*

Did you know that in 1961…

- there were 76,549 active civil GA aircraft compared with 223,877 active GA and air taxi aircraft today.

  Sources: *FAA Statistical Handbook of Aviation,* 1961 Edition; FAA General Aviation and Part 135 Activity Surveys - CY 2009.

- there were 348,062 active certificated pilots compared with nearly 595,000 today.

  Sources: *FAA Statistical Handbook of Aviation,* 1961 Edition; *FAA Aerospace Forecast, Fiscal Years 2010 – 2030.*

- there were 115,688 active certificated mechanics compared with 370,416 mechanics and repairmen today.

  Sources: *FAA Statistical Handbook of Aviation,* 1961 Edition; FAA U.S. Civil Airmen Statistics, 2009.

- U.S. manufacturers shipped 6,778 new GA aircraft compared with 1,587 in 2009.

  Source: General Aviation Manufacturers Association.

- GA aircraft models with the highest production rates were the Piper PA-22 Colt (1,173 airplanes), the Cessna 172B *Skyhawk* (903 airplanes), and the Cessna 182 (575 airplanes).

  Source: General Aviation Manufacturers Association.

Photo by Ken Peppard