

Angle of Attack



“Weather” or Not To Go Why Extreme Weather Doesn’t Respect Experience

There’s a simple but practical quote about weather commonly heard in aviation circles; “A thunderstorm is never as bad on the inside as it appears on the outside. It’s worse.” Given the unpredictable nature of extreme weather events like thunderstorms, that’s a pretty accurate assessment. Unfortunately, weather-related accidents continue to be a common occurrence in general aviation, especially the variety that is often preceded by a breakdown in the decision-making process.

Although the 2010 Nall Report indicates a downward trend for overall weather related GA accidents from 2000 to 2009, the accident category VFR into IMC continues to lead the pack. It’s also worth noting in the report that although weather accidents are down, the lethality rate of these accidents are the highest among all major accident categories. The lethality rates for accidents which occurred during Day IMC and Night IMC conditions were 89 percent and 83 percent respectively. And of the 14 VFR-into-IMC accidents in 2009, 12 were fatal.

A similar lethality rate was seen with thunderstorm encounters where six of seven accidents in this category were fatal, along with all seven accidents attributed to deficient execution of instrument procedures by appropriately rated pilots on instrument flight plans. The common link in many of these accidents was simply a matter of extending pilot and plane beyond their capabilities.

Many pilots may remember the famed aviator Scott Crossfield, a rival of Chuck Yeager and the first man to fly twice the speed of sound. On the morning of April 19, 2006, Crossfield came face to face with a ferocious thunderstorm while piloting his Cessna 201A over Ludville, Georgia. Unfortunately, Crossfield did not survive this ugly encounter with Mother Nature. According to the NTSB report, the accident was caused by “the pilot’s failure to obtain updated en route weather information, which resulted in his continued instrument flight into a widespread area of severe convective activity, and

the air traffic controller’s failure to provide adverse weather avoidance assistance, as required by FAA directives, both of which led to the airplane’s encounter with a severe thunderstorm and subsequent loss of control.”

Despite Crossfield’s vast wealth of aeronautical experience, he was clearly no match for the violent thunderstorm. This accident also demonstrates how weather does not discriminate; Being unprepared for a weather event like this can have the same result whether you have 10 or 10,000 hours. Thunderstorms don’t stop to check your logbooks before unleashing their fury, nor will they indicate where and when the peak of their destructive power will occur.

Would the outcome of this accident been different had Crossfield obtained updated weather? Quite possibly. But even without that knowledge, the signs of impending bad weather should be enough of a cue for a pilot to safely alter his/her flight plan to avert danger. This becomes even more critical as we head into the warmer summer months where pop-up thunderstorms can regularly catch pilots off guard. In this kind of environment, escape plans are a must.

One tool that can help you sharpen your plan of action and make safe weather decisions either before or during a flight is the *General Aviation Pilot’s Guide to Preflight Weather Planning, Weather Self-Briefings, and Weather Decision Making*. You might also try the Flight Risk Analysis Tool or FRAT, a newly developed tool to help pilots identify potential flight hazards. Pilots are asked a series of questions regarding their airport and operating environment, their pilot experience, and their aircraft. Once the information is analyzed, pilots receive a flight risk analysis score, which may suggest you review and/or reconsider some of your operational choices. FRAT is accessible from any computer or smart phone and can be accessed at www.aircraftmerchants.com/FRAT.

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