

CALLBACK

From NASA's Aviation Safety Reporting System



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ASRS Encounters Turbulence

Dear Readers: We feel that it is important to keep you, the aviation professionals who contribute to, and benefit from, the Aviation Safety Reporting System, informed about the status of the program. The ASRS has been flat funded by the FAA since 1997 and experienced a 20% funding shortfall in 2005. While the future budget has not been finalized, indications are that the situation could be even worse in FY '06.

Back to School



Longtime readers will recognize topics in this **CALLBACK** that have been discussed many times over the years. Although we all need frequent reminders about these safety issues, an additional perspective has been added to this **CALLBACK**. In an effort to reinforce the lessons concerning preventable, weather related accidents, each ASRS incident report is accompanied by a strikingly similar National Transportation Safety Board (NTSB) accident report.

These reports represent two schools of thought. ASRS offers first-hand accounts detailing either close calls or disasters averted by taking the proper course of action. These reports often contain valuable insights into human factors and there is no "cost" to those who report to ASRS. NTSB reports are second-hand narratives that often include statements from witnesses. Being the subject of an NTSB report can cost you dearly.

There is a lesson common to both schools: it pays to learn from the experience of others. Whichever school you prefer, learn the lesson before you take the test. It could be a final exam— with no opportunity for a retake.

Scud-Running

"Scud" is a commonly used term for patches of low, ragged clouds that often form below an overcast. "Scud-running" refers to the practice of flying beneath the scud to avoid Instrument Meteorological Conditions (IMC) and usually involves a violation of Visual Flight Rules (VFR) cloud clearance criteria. Statistically, scud-running is an extremely dangerous practice that accounts for a high percentage of weather related, General Aviation accidents.

The pilots who submitted the following ASRS reports encountered weather similar to the conditions described in two NTSB reports. The successful outcomes related in the ASRS reports were the result of a wise decision in the first instance and a degree of luck in the second.

ASRS Report #1

Aircraft: Piper PA-28. Injuries: None

■ I received clearance to [depart] VFR at night, flying at 2,000 feet MSL. I stayed within legal VFR limits until the weather deteriorated within six miles of my destination. Rather than try to scud-run under the clouds, I contacted approach, told them the conditions, and that I needed to turn around. Approach asked which field I wanted to land at and, after I checked ATIS, I chose [ZZZ]. Approach was very helpful in giving me a few vectors. I learned a great lesson; that weather can deteriorate very quickly and you should turn around as soon as it does and don't hesitate.

NTSB Report #1

Aircraft: Piper PA-28. Injuries: 2 Fatal.

■ Approximately 43 minutes after departure on a night cross-country flight, the airplane was substantially damaged when it failed to maintain clearance with terrain in a heavily wooded area.... The non-instrument rated private pilot and his passenger were fatally injured. The pilot contacted the...Flight Service Station...and requested an enroute weather briefing, initially commenting, "Gonna head over to [ZZZ], VFR. Looks like I'll be 'scudding it.'" The specialist advised the pilot that...[ZZZ2], the closest weather reporting point to the accident site, had just dropped down to a ceiling of 900 feet broken, 1,400 feet overcast, 2 1/2 miles visibility, and ceiling variable between about 700 feet and 1,100 feet.... A Senior NTSB meteorologist reported that it was likely that the flight encountered IMC similar to the conditions being reported in the [ZZZ2] area, just prior to the accident.

ASRS Report #2

Aircraft: Beech 35. Injuries: None.

■ ...A weather briefing was not obtained. I was scud-running until the weather closed in and all visibility was lost. With concern for ground clearance, I gained altitude, struggled with spatial disorientation, contacted ATC on 121.5, and declared an emergency. With ATC's assistance, we determined there was not enough visibility at my final destination and I accepted vectors to [ZZZ]. The flight was completed with IMC (Instrument Meteorological Conditions) prevailing until final descent to the airport where a VFR landing could be made. There was no damage to the aircraft or injuries of any type. The root cause of the problem was attempting a VFR flight when the weather clearly did not support it. I did have 14 hours of IFR training; otherwise this flight would probably have ended in tragedy.

ASRS Alerts Issued in July 2005

Subject of Alert	No. of Alerts
Aircraft or aircraft equipment	5
Airport facility or procedure	3
ATC procedure or equipment	1
Chart, Publication, or Nav Database	1
Company policy or maintenance procedure	9
Total	19

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<http://asrs.arc.nasa.gov/>

July 2005 Report Intake

Air Carrier / Air Taxi Pilots	2152
General Aviation Pilots	794
Controllers	48
Cabin/Mechanics/Military/Other	295
TOTAL	3289

NTSB Report #2

Aircraft: Beech V35. Injuries: 1 Fatal.

■ *The pilot told the lineman he was preparing to depart since he had to get back to work.... The pilot said he was going to scud run to his intended destination...but would turn around if he couldn't make it. The lineman said, "I couldn't believe what he was telling me. I told him that every year, we get two or three airplanes trying to scud run, and they run into the mountains." The pilot told him that he was instrument rated, but was not current.... The pilot took off...and disappeared into clouds a mile south of the airport. The wreckage was located the following day in a canyon. Radar data showed the airplane tracking along an interstate highway before turning left and entering the canyon. As it went further east into the canyon, it made four consecutive climbing left turns before radar contact was lost.*

Icing

Icing is another factor often cited in weather related accidents. The following ASRS and NTSB reports deal with events in which pilots encountered icing conditions while flying aircraft that did not have anti-icing or de-icing capabilities. The pilots who submitted the ASRS reports were fortunate to survive...and to learn from their experience.

ASRS Report #3

Aircraft: Beech 35. Injuries: None

■ *In solid stratus at 4,000 feet, the temperature is -4 degrees C and I start picking up some trace ice.... As I continue down to 2,300 feet for an approach, the precipitation increases significantly and I quickly load up with ice. So at eight miles south of [ZZZ], I tell ATC I'm loading up with ice and request direct [ZZZ2]. No delay at all, cleared direct; climb to 3,000 feet; contact approach. At 2,800 feet, I cease climbing. Requested lower; given 2,300 feet. I keep climb power and 140 MPH and continue losing altitude.... Drifting through 2,300 feet, I go to full power, tell approach I can't maintain 2,300, and get a left turn to 090 [degrees] to avoid an antenna farm. Finally, at 1,800 feet with max power, I'm holding altitude. And hey, the ILS for Runway 16 comes in. Great! Break out hot and high at about 600 feet (the runway is over 9,000 feet long), fling down the gear, and hold about 120 'till flare. After landing, big chunks of ice begin falling off the leading edges.... I give the tower a brief explanation; thank them profusely for their very quick professional help.... Hindsight: First sign of ice, I should have done the famous 180. In part I had a mind-set to get to [ZZZ], and with the information I had, thought this has got to be just a little patch of precipitation, soon to be left behind. I was just too damn slow to make the 180 degree divert decision. Could have possibly stayed high 'till over [ZZZ], and then done the approach, but maybe then wind up low, not breaking out, and 600 feet over [ZZZ] with a load of ice, and no place to go.*

A little older, a little smarter, I'll screw something up again, but it won't be a repeat of this little story. If it's ice, I'm "outta" here!

NTSB Report #3

Aircraft: Beech A36. Injuries: 2 Fatal.

■ *...The pilot reported to ATC that the airplane had accumulated structural ice. The pilot passed several airports before ultimately diverting to a nearby airport because of degraded aircraft performance. The pilot told ATC, "We're going to need vectors...We're not going to make it up there. We're already in stall mode...This airplane is full of ice." The airplane impacted trees and terrain about 4.3 nautical miles south of the airport. The accident occurred at night in IMC. An AIRMET for icing conditions had been issued for occasional moderate rime and mixed icing while in clouds and precipitation below 15,000 feet MSL. Several Pilot Reports (PIREP's) indicated moderate rime and mixed icing between 2,500 and 6,000 feet MSL. The airplane was not equipped with deicing equipment and was not approved for flight into known icing conditions. The aircraft's Pilot Operating Handbook states, "Flight into icing conditions is prohibited."*

ASRS Report #4

Aircraft: Piper PA-32. Damage: None. Injuries: None

■ *I encountered light to moderate rime icing in clouds on the approach into [ZZZ]. The aircraft I was flying was not equipped with deice or anti-ice equipment. I was able to land, however it was a hair-raising experience. While there were AIRMETS for possible icing on my flight weather briefing, I foolishly dismissed them for two reasons. First, the weather was clearing from the west and secondly, in all my years of flying a "no flight into known icing" airplane, I have never actually encountered ice. Icing AIRMETS are common in this area and from now on I will consider every one a real possibility.*

NTSB Report #4

Aircraft: Piper PA-32. Damage: Substantial. Injuries: 1 Minor

■ *The airplane sustained substantial damage during a forced landing in a field. The private pilot received a weather briefing.... The pilot reported, "It seemed that there were only a few reports of light icing and layers between the clouds with no moisture." There was an AIRMET for icing and instrument meteorological conditions along the route of flight. Thirty minutes after departure, the pilot noticed light mixed icing on the wings. The airplane's airspeed had dropped to 130 knots and it was unable to maintain a climb. The airspeed continued to drop to 120 knots, and the pilot requested to divert to a nearby airport with an instrument approach. The pilot reported that he flew the approach at 3,000 feet at 120 knots until he reached the final approach fix. He then lowered the landing gear and selected 10 degrees of flaps. When the airplane was about 500 feet AGL it began to buffet and the pilot reported that he began to lose directional control. The pilot chose to land in a field that was about 100 yards to the south of the runway.... The landing gear was sheared off and the propeller struck the ground.... One witness reported, "I observed large amounts of ice on the antennas, on the wings and other portions of the airplane." The airplane was equipped with a placard in full view of the pilot that stated, "THIS AIRCRAFT APPROVED FOR V.F.R., I.F.R., DAY AND NIGHT NON-ICING FLIGHT WHEN EQUIPPED IN ACCORDANCE WITH FAR 91 AND FAR 135."*