

CALLBACK

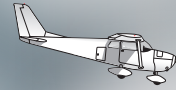
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VFR Flight Into IMC



Every pilot, undoubtedly, has a story to tell about flying VFR into deteriorating weather. Whether or not a flying pilot is instrument-rated, FAA regulations specify minimum visibility and cloud clearance criteria for VFR flight that safeguard both IFR and VFR operations. An unauthorized or inadvertent transition from VFR to IMC jeopardizes both and can be stressful, particularly if the pilot is non-instrument-rated or non-current, or if the aircraft is not IFR equipped. When a VFR flight enters IMC, the pilot is often disadvantaged and the transition challenging. Some pilots may be more suited to handle VFR flight into IMC, but each weather encounter is, in some respect, unique, and no one is exempt from human factors that largely influence outcomes.

This month, *CALLBACK* showcases incidents of VFR flight into IMC. Reporter qualifications vary significantly, as does flight experience. Observe the weather. Take special care to identify the human factors and the decisions and judgments that shaped each situation. Finally, note the lessons and wisdom imparted by these reporters.

Early Lessons

This student pilot learned a good lesson from a situation that has surprised and prepared many who have gone before.

■ *I was on a solo cross country. All forecasts showed overcast clouds at 6,000 feet. My route was 4,500 feet [outbound].... [Enroute], I realized the clouds were not at 6,000 feet as forecast. I continued, as I was still under the cloud level. Just inland, I contacted Departure that I was descending down to 4,000 feet to continue VFR. As I descended, the clouds descended with me. Just a few miles [over] the land, I flew into a cloud accidentally, as the [cloud] layer was much lower. I then put the pitot heat and carb heat on and descended out of the cloud.*

At 2,500 feet, I came out of the cloud [and] noticed the visibility wasn't much better and that the field might go IFR soon. [I] also noticed visible moisture on the windshield and texted my instructor that I had possible icing and that I was returning to [home base]. I then contacted Approach saying that I was [experiencing] possible icing. They then gave me straight...to the runway with no delay.

Thankfully, I was first in line and didn't need to declare an emergency. I flew straight toward [the airport],... landed

safely, and taxied to [the ramp]. Once back, I showed my instructor the icing and discovered moderate mixed icing along all leading edges. I was able to stay calm and make a quick decision with...my instructor's help.... This experience was very humbling, and the decision to go was probably wrong, but I trusted the forecast.

Revelation and Recovery

A non-instrument-rated private pilot began this VFR flight with a plan to skirt multiple cloud layers. A dangerous situation developed, but a tragedy was ultimately avoided.

■ *I had checked the weather, and...it was clear below 6,500 feet...with the exception of the area right around JFK, which reported...multiple layers of clouds. No worries, I thought... For some reason, I felt a huge pressure to make this flight. I wanted to see the mechanic scheduled to do our annual [inspection] in a few weeks.... Whatever the urgency, I soon would reverse my position on how important it really was. Shortly after departing ZZZ, I called for flight following and requested 4,500 feet.... The Controller, however, instructed me to turn direct to Kennedy (JFK) and climb to 6,500 feet. I should have simply replied 'unable,' as I know the weather was sketchy toward Kennedy, but for some unexplainable reason, I complied. Soon, I was struggling to maintain VMC.... The Controller was quite busy, and I was also quite busy trying to stay in legal conditions and control the aircraft.*

Then it all fell apart, and I was truly in unacceptable visual conditions. Trying not to panic, I used the autopilot to keep the plane under control and requested lower. ATC advised me I could not go lower and suggested I climb. I attempted to climb out of the poor visual conditions, but things only became worse. It seemed like quite a long time, probably 10 minutes, with truly inadequate visibility. Then the unthinkable happened; I became disoriented. I began to descend rapidly, airspeed increasing, and although I recognized what was happening, I could not correct the situation without adequate visual cues. It was a life changing event. It could happen to me after all! I had never come close to losing control of my aircraft before. I am usually very conservative...with my flight planning and in controlling 'get-there-itis,' and yet, here I was endangering myself and probably others. I was furious and ashamed of myself (and scared too). I came out of the clouds around

2,400 feet and brought the wings level and slowly pulled back. ATC admonished me, and I told him, "I became disoriented." He said, "Let's try again," and directed me back to JFK, this time a little lower. I...was lucky enough to remain clear of clouds, and soon after, was granted lower still and proceeded direct to ZZZ1 without incident.

I did some serious thinking after this flight on how I got myself into the situation in the first place, and how I should have avoided it. I knew that below 3,000 feet there was no problem with visibility.... I learned that ATC does not have a clear picture of visibility conditions.... Visibility is purely the pilot's responsibility. I decided...to shake off complacency and went to my first FAA Safety Team (FAAST) meeting in years. It was totally worthwhile. I clearly did not understand how compromised visibility was...that afternoon until it was too late. I will never fail to call out 'unable' again.

The Good, the Bad, and the Ugly

This instrument rated, commercial pilot made a preflight decision that trumped good judgment and allowed friendly pressure to develop into a bad idea and a worse situation.

■ Conditions were VFR at ZZZ.... We were returning after completing an uneventful VFR flight earlier in the afternoon.... Our destination was VFR. We were flying [my] friend's PA-28 and had originally planned a VFR flight, departing around sunset and returning at night. However, there was [forecast] scattered light to moderate rain enroute, and since it appeared to be a relatively easy IFR flight at our planned 4,000 foot altitude, it seemed like an opportunity to give my VFR pilot friend some experience in IMC, as he is planning on starting his instrument training soon. He mentioned that he's done quite a bit of hood time and felt comfortable flying his aircraft from the left seat. Reluctant at first, I agreed that he could be left seat, but I would be PIC. As the IFR rated pilot, I would do radio and navigation work. His...job was to keep a good course and altitude while I advised him. I could fly from the right [seat] if needed.... We talked...how the flight would go and then started the aircraft.

Departure [from ZZZ] was VFR and uneventful. We were switched to Departure and given 6,000 feet direct JFK. We entered IMC during the climb. My friend at the controls was having some trouble reaching our target altitude and staying on heading.... At 6,000 feet,... my passenger pilot was having trouble keeping heading despite my instructions. We were off intended heading by as much as 40 degrees at times. Our altitude control was better, but we [were] off at least 200 feet at times, maybe more. It was clear that ATC was getting concerned with our situation. We corrected multiple times before ATC asked if we were having trouble and needed

assistance. I only advised that we were correcting course, but after more deviations, the Controller asked if we [wanted priority handling].... It was clear from the Controller that we were not performing well at all, so after an initial pause, I accepted [the priority handling]. When asked what I wanted to do, I suggested that we return to ZZZ. We were given vectors back and advised to expect a visual approach. The return was uneventful. We returned to the FBO to catch our breath and reassess the weather with the intent to return VFR when the rain cleared. An hour later or so, we departed on a northerly route around New York airspace and returned VFR uneventfully.

Lessons - It was a huge mistake letting a VFR pilot fly left seat in IFR conditions and in an airplane I was unfamiliar with flying in [IMC] from the right seat. I was very unprepared to take over so soon after departure and fly his aircraft, let alone from the right seat....

How the problem arose - Unexpected weather deterioration,... perceptions, judgments, and decisions...

Little Room for Error

A certified flight instructor took off with weather thought to have been safe for VFR flight. Deteriorating conditions forced a decision that had less than ideal consequences.

■ Weather at the time of departure from ZZZ1: Visibility 6SM, Sky Condition OVC 011. TAF for destination at the time of arrival: Visibility 6SM, [Sky Condition] SCT 035.

Before the flight, I reviewed the weather and determined the ceilings would be lifting enough to make a safe flight. I Departed ZZZ1 and remained in Class G airspace. I flew safely for one hour...remaining below cloud ceilings and remaining 500 feet from persons, vehicles, vessels, and structures. Approximately thirty minutes after passing ZZZ, the cloud ceiling lowered and fog moved in, reducing visibility to less than 1SM. I decided to make a precautionary landing in a plowed soybean field and landed safely with no damage to persons, aircraft, structures, or vehicles. I tied down the aircraft...and retrieved it three days later.

...The safer decision would have been to wait a few days for the weather to pass. Another choice would have been to make a precautionary landing sooner on a runway at an established airport when the weather first began to collapse, instead of continuing flight in hopes it would improve.

I believe the flight ended safely due to my comfortability, willingness, and experience with landing in a field as opposed to continuing flight into IMC.

To learn more about this topic please see our ASRS research paper: [GA Weather Encounters](#) study on the ASRS website.

ASRS Alerts Issued in October 2020	
Subject of Alert	No. of Alerts
Aircraft or Aircraft Equipment	2
Airport Facility or Procedure	10
ATC Equipment or Procedure	6
TOTAL	18

491
A Monthly Safety
Newsletter from
The NASA
Aviation Safety
Reporting System
P.O. Box 189
Moffett Field, CA
94035-0189
<https://asrs.arc.nasa.gov>

October 2020 Report Intake	
Air Carrier/Air Taxi Pilots	2,699
General Aviation Pilots	1,275
Flight Attendants	361
Controllers	249
Military/Other	226
Mechanics	188
Dispatchers	120
TOTAL	5,118