



## What About the Weather<sup>©</sup>

Gary Palmer Sept 8 2022

Weather is an amazing thing, for all the advances and technology we have, we still guess wrong (sometimes) and looking outside is often a best option (within limitations).

So when checking the weather, there are several factors to consider; what the weather is doing, what it might do, what we can do and what the airplane can do. All these factors come to play and emphasize the need for personal minimums.

Some of the decisions are easy, a hurricane is no-go. Thunderstorms or ice also produce a no-go. Beyond that we assess if the pilot and plane are up to the conditions. For example, will there be low clouds for a VFR pilot? Is there heavy turbulence predicted which could affect the airplane? How about icing levels. On the ground is one thing, but flying is three dimensional so altitudes affect all these, and more, factors. After earning my Private Pilot certificate I was at first hesitant to fly if there were clouds in the sky, I had a lot to learn!

I am not a professional weather analyst (nor do I profess to be one), I consider myself a beginner (with a few thousand hours flight time) in reading and understanding weather, so I utilize a few aids. I recommend familiarization with [windy.com](http://windy.com). That site animates and forecasts weather at a global scale. I often zoom out all the way to see the entire globe and then animate for a small bit of history with the forecast. Doing this a few days in advance of a longer trip (say over 100 nm) helps understand what is happening and might happen. I can ask for things like thunderstorms, ice, turbulence (winds), cloud tops and bottoms, fog, visibility and more. This helps because it gives an impression of current weather and the more I see yesterdays forecast coming true today the more I hold faith in tomorrows forecast! There are other sites available in addition to Windy.

Next, I go to [Aviation Weather.gov](http://Aviation Weather.gov) which has a Tool called "GFA Tool" (Graphical Forecast for Aviation). This tool uses the national weather information but has constraints, which include limited forecasting; so the closer to departure the more applicable the information. The more we look forward the greater the chance of being incorrect. Aviation Weather does not look as far forward as Windy.

One other excellent resource freely available is [1800-WX-BRIEF](http://1800-WX-BRIEF) (both the website and the telephone service). Here you will have professionals who can help interpret and explain the weather. I will often use their website for a briefing and then call. The briefer on the phone sees the same data as I do

and I can ask questions and explain how I am trying to learn. They have always been friendly and helpful. I think of it as one-on-one training from a professional for free! What better way to learn? They also capture the fact that you received a weather briefing which is part of your required preparation for a flight. Other sites or apps may also capture that you were briefed, you should confirm that your briefing meets the FAA requirements.

Lastly, the idea of your personal minimums. What is safe for you? After that ask what is comfortable. These 2 will often be different. A safe flight helps assure that people and planes are all fine at the end of the flight. Comfortable is a question of your skills and capability to make the flight. If all your skills are current and proficient the flight would be safe and you should be comfortable making it. If the same flight was at night and you had not flown at night for a year except the minimum required for legal reasons, you might not be comfortable making the flight. This can be simplified by asking yourself "if I had my family with me on board, would I fly?" While this also raises a question about proficiency (capable to make the flight safely) versus currency (legally allowed to make the flight), that discussion is a different topic.

The other component is where are you going to fly? It is different to fly 5 miles to a practice area and practice within earshot of your airport. It is another to go to cross country a few hundred miles because the weather at departure may be fine, but en-route or at destination it may be very different.

As an instructor I always respect a student who chooses not to fly due to weather. This gives us a chance to ask several of the questions raised herein. Since the student is also the client, I would not want to pressure them to fly because I think it fine while they express concern. When a student is worried it becomes an opportunity to discuss the type of flight and reason for "no-go".

When a student is trying to decide to fly or not, the decision may be more a gut response than an analysis of weather and conditions. As the student gets more experience, they should start using the weather resources more (and there are many, I just named a couple). The decision moves from a gut to an informed response. The informed response is an assessment of the available data in order to make an informed decision.

The "tipping point" for that informed decision is the student's personal minimum. After reviewing resources, make the decision. Does that mean the CFI always agrees? Not at all. If the CFI disagrees it is one of those "teachable moments" because the CFI's experience differs. The student should not be uncomfortable because they can block learning. If the CFI explains why they are willing to fly and the student agrees, then the flight may take place and be beneficial.

If a student believes it is “no-go” due to weather I respond with a few options:

- 1) Cancel the lesson (honor the decision), plan to fly another day,
- 2) Meet as planned time for a ground lesson, or
- 3) Meet as planned and check weather to see if anything has changed and update the decision accordingly, but have a plan B for a ground lesson.

All these options and perspectives are to encourage the student (client) to explore the weather and develop personal minimum which help define when “no-go” is the best option. Through lessons and practice these minimums will change, and that is a good thing. Weather is never the same as it was, it is a topic for continued learning.