

Got Pirep?

Pilot weather reports shouldn't be kept secret. Your report is truly appreciated by weather pros, fellow pilots, and air traffic controllers.

Pilots reports (aka PIREPs, which I'll write in lower case from here on in otherwise it'll seem that I'm screaming, "PIREPS! SIGMETS! PANIC!") are those rare commodities that pilots just die for.

Pireps are special because they typically answer these basic questions: Where are the cloud tops? What altitude will I likely encounter ice? What is the severity of icing conditions? What is the severity of turbulence or wind shear? Perhaps there's a pirep or two out there that might just fill the void.

All this is fine, but pilots aren't the only ones hungry for pilot reports. On a visit to the Aviation Weather Center (AWC) in Kansas City, I asked one of the forecasters if pireps are important to them. He responded without hesitation, "Oh God, yes," as if his job depended on it. While he could continue to do his job without pireps, a forecaster can do his job better with them.

Meteorologists use pireps when they construct or amend area forecasts (FAs) and terminal aerodrome forecasts (TAFs). More importantly, airmet and sigmet forecasts literally live and die by pireps. An urgent pirep (UUA)—which should be shouted—of severe icing or severe turbulence may trigger meteorologists at the AWC to convert an existing airmet into a sigmet, based solely on the conditions reported by a single pilot. At the other extreme, the AWC may drop an airmet or sigmet because there are no longer reports of icing or turbulence.

Pilot reports not only show where icing might be located, but the type of icing and the icing intensity are also indicated. Icing intensity is typically hard, if not fundamentally impossible, to forecast. This is just one other reason to search out recent pireps.

Forecasters make use of both aged and recent pilot reports to identify trends in the weather. Knowing that a meteorological condition exists or doesn't exist can be utilized to validate or invalidate the forecast. As a result, meteorologists routinely monitor pilot reports.

How Old Is Old?

While it's difficult to pick out a particular length of time, reports of icing conditions that are more than 90 minutes old are typically useless to a pilot. Not unlike thunderstorms, icing conditions and intensity can change rapidly in time and space. Precipitation and clouds come and go as the synoptic,

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or summary, picture changes. Clouds become supercooled due to rapid cold-air advection and other clouds become glaciated (all ice crystals) as temperatures fall below -15 to -20 degrees C.

From an aging perspective, a turbulence pirep has even a shorter shelf life than icing pireps. Turbulence is highly transitory. An eddy of air might be propagating downward after a pilot encounters it. Twenty minutes later the next pilot at that same altitude may not see any bumps since the cause of the turbulence is now at a lower altitude. Again it's hard to agree on a specific time, but after about 45 minutes an isolated report of severe turbulence is probably too old to trust.

Required PIREPs

FAR 91.183(b) requires that a pilot under IFR in controlled airspace re-

port, "any unforecast weather conditions encountered" by radio to ATC. Given this broad-brush regulation, you should limit your report to any forecast errors that are strictly significant to aviation operations. Unless it's urgent, there's no need to make a big deal out of it either.

For example, let's say you depart an uncontrolled field that has no weather reporting capability. The area forecast suggests that ceilings will be 2000 feet MSL. As you climb out, you penetrate the lowest cloud deck at 900 feet MSL; this would be significant to aviation and you should report it to ATC. "Cirrus 1WX, passing one thousand two hundred for four thousand, ceiling nine hundred overcast," is all you need to do. The controller assumes that you're reporting MSL cloud base heights.

While ATC may make use of this report for its own purposes, it's highly unlikely that ATC will assemble your report or any pilot report they receive into an official pirep. To be sure this gets to the rest of us inquiring pilots, take a moment to file that pilot report with Flight Watch when you have the time.

File That Report

You can certainly file a pirep with any Automated Flight Service Station (AFSS). Making contact with the closest AFSS can be a real challenge at times. Typically you have to talk on one frequency and listen on the voice portion of a nearby VOR, not the most elegant solution especially for those of us that can't walk and chew gum at the same time.

One of the important jobs of the Enroute Flight Advisory Service (EFAS), better known as Flight Watch, is to accept pilot reports. Flight Watch is aligned with the Air Route Traffic Control Center (ARTCC) they serve.

The official claim is that if you are 5000 feet AGL or higher, you should be able to contact them on 122.0 MHz anywhere in the country from 6 AM to 10 PM local time.

When contacting Flight Watch you don't use the term "radio" in your call. "Washington Flight Watch, Cirrus 1WX, five south of the Martinsburg V-O-R, over," is the appropriate way to contact Flight Watch if you're within the Washington Center's airspace. The Flight Watch specialist needs to know this approximate location to select the most appropriate transmitter/receiver outlet for communications coverage.

The 122.0 MHz frequency serves all airspace from 5000 feet AGL to 17,500 feet MSL. If you're having trouble contacting Flight Watch on 122.0 MHz at any altitude, try the high-altitude Flight Watch frequencies that are listed in the inside-back cover of the Airport/Facilities Directory (A/FD). These frequencies will also likely be listed in your handheld or panel-mounted GPS database.

Do us all a favor; if you're unable to reach Flight Watch in a certain area, record the altitude and location of your attempt. Once you're safely on the ground give 1-800-WX-BRIEF a call and report the outage. The transmitter/receiver outlet may be out of service or coverage in the area may be lacking. They won't know unless you tell them.

Catch-22?

One of the comments I repeatedly hear from pilots is, "If I report icing conditions, won't I be admitting guilt if I'm piloting an aircraft not certified for flight into known icing conditions?" I'm not a lawyer, however I believe the answer is yes and no. Yes, anything is possible. However, there are no pirep police waiting to nab you. It is highly unlikely it will ever be used against you in a random fashion.

ATC is there to help you out of a bad situation. As always, confess to ATC that you're quickly becoming a flying Popsicle. Be assertive with your request; tell them exactly what you need. For example, "One Whiskey

Xray is in moderate icing and needs an immediate descent to four thousand." If necessary, don't hesitate to declare an emergency and you'll receive priority handling. This is better than becoming a statistic.

In next month's *IFR*, Rick Durden launches into the icy world of the Great Lakes as the winds of November make a thorough mockery of every instrument pilot's plans. In that environment every IFR flight is a known ice event and the last thing anyone needs is a gaggle of lawyers making your go/no-go calls for you.

Pilots Can Help

The best sigmet that can be issued by a forecaster is one that is issued just before the first severe pIREPs start to arrive. A forecaster may create the sigmet, for example, and delay its transmission until the first couple of severe pilots reports arrive before issuing the sigmet. We all know that a report of severe activity is critical. On the other hand, a report of "negative turbulence" or "negative icing" is also just as important to the forecaster.

One of the hardest tasks an AWC forecaster has to accomplish is to know when to let a sigmet die. This is especially true for sigmets that rule

the flight levels. Forecasters hope that a few pilots get brave enough to go through the area covered by the dying sigmet before it ends to test the waters, so to speak. If pilots are still getting bumped around, then the sigmet may be extended for a bit. Forecasters often expect at least one more severe report just before the sigmet has expired, but are trained to wait for additional severe reports before extending the time and location of the sigmet.

The hardworking folks at the AWC only complain when they don't get enough pIREPs. So file that pIREP and give them a reason not to complain. There's nothing worse than a whiny meteorologist.

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Below: *When the weather ahead, around, or below looks, feels, or smells different than what you'd expected, don't hesitate, don't fabricate—just call FSS or ATC and say, "Pirep."*

