

MITIGATING WEATHER RISKS

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JOHN KOSAK *Weather Program Manager, NBAA Air Traffic Services*

pilots to comprehend and faster for them to visualize, compared to text. Graphics also can provide runway orientation at a glance by showing the arrival runway with crosswind and tailwind vectors.

“Some apps just show vectors without splitting them into crosswind and tailwind components,” Pokodner warned. “Don’t take one when you need to do the math. This [a weather encounter] is a heavy workload time.”

The FAA also is starting to study how effective weather avoidance voice commands would work in the cockpit. Scrolling through electronic pages or pushing buttons only adds to heads-down time. A pilot should just be able to say, “Show me the closest icing,” Pokodner suggested.

Despite all the cockpit automation, the incidence of weather-related accidents involving general aviation pilots remain high. An FAA study on using mobile devices found that many designs are not compatible with the way pilots use them. Pushing

tiny buttons or tapping windows on a glaring screen to plod through complex, multi-level menus to reach vital information isn’t efficient or safe. It adds to a pilot’s workload, resulting in more head-down time and distractions. Single pilots should be navigating the aircraft, not the device.

This study concluded that automation should be “synchronized with the pilot’s workflow...so only a glance at the mobile application screen” is needed to show information needed for that phase of flight.

DON’T FORGET PIREPS

For the best source of actual weather conditions, PIREPs can’t be beat, since they’re accounts of actual conditions aloft. Check them against METARS and other weather information sources to gauge the accuracy of forecasts.

“PIREPs improve the weather information and safety for all aircraft operations to avoid encounters with hazardous weather and prevent accidents,” states the NTSB.

“PIREPs offer a three-dimensional look at the atmosphere,” added John Kosak, weather program manager for NBAA Air Traffic Services. “Any piece of information that a meteorologist is able to plug into a forecasting model helps the next forecast be that much better.”

Some pilots are reluctant to file a PIREP. They may have a heavy workload or feel the report won’t benefit them. But if they can file a PIREP, it will help dozens of other aviators. ✈

Review NBAA’s weather resources at www.nbaa.org/weather.



Winds are responsible for most weather-related accidents. Researchers who assessed fatal aircraft accidents from 1982 to 2013 involving winds found that gusts caused 31 percent of those accidents; tailwinds, 26 percent; high winds, 22 percent.

SOURCE: Northern Illinois University



Albuquerque, NM



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