I believe an AFW instrument pilot's recent experience flying into KBFI is worth sharing with our WA Wing Instrument Rated pilots.

It reminds us atmospheric conditions and wind flow over nearby terrain can cause dramatic changes in wind direction and velocity.

Wind sheer needs to be considered during both approach and departure phases of flight.

George Futas - CFII, AFW-WA Wing Safety Officer

Wind Sheer experience –Paul Henderson, CFII, Oregon Wing ASO

I was flying a blood delivery mission from HIO to BFI. It was a pretty lousy day -- rain and wind but high freezing levels and a forecast for improvement so I went. Geoff Tyson from the Washington Wing went along as a mission assistant. The flight up went fine.

We were IMC practically the whole way. As expected, ATC started vectoring me to the ILS 14R approach and got me on my approach course north of ASOGE at 2200 msl with a clearance for the approach to maintain 2200 until established. No problem. I intercepted the localizer and the glide slope and contacted the tower. It was pretty much textbook.

ATIS said that the ceiling was 1200 OVC but it was actually at about 800. At about 1500 I was locked on course with the localizer and GS needles centered. The wind was coming out of the East but not very strong and it was an easy correction to stay on course.

Suddenly, at about 1500 msl I began to drift rapidly off course to the right. I mean RAPIDLY. I checked my second ILS and it confirmed the deviation. I made drastic left correction to get back on the localizer which slowed but didn't stop the drift.

I was just about at full needle deflection and going to call a missed approach when I came out of the clouds and saw the runway about 1/4 mile to my left. I had enough time to get back on course and land successfully.

The tower asked if I had a problem and I told them I did but I wasn't sure what it was. They seemed satisfied with that.

I scratched my head. In 26 years of instrument flying I had never had such an experience.

Thinking about it the next day. I remembered that I had read a PIREP from about two hours before the approach where a B737 had reported "wind shear" on approach to SEA.

I called my good friend who is a retired airline captain and my IFR guru and ran it past him. "Wind shear" was his almost immediate response. It made sense.

Two important lessons came out of this for me:

Wind shear comes from any direction. So much of our training focuses on wind shear that turns a strong head wind into an equally strong or greater tailwind on approach, causing a stall. I don't recall much emphasis on cross wind shear.

My airline captain friend gave me a good tip - **most of us with at least some electronic flight systems have a wind speed and direction indicator on the panel.** I do on my Aspen EFD 1000. He suggested including that indicator in the scan on approach looking for strong deviations. We never had such things when I got my instrument ticket, it didn't occur to me to do that. It does now.

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