



AOPA Hover Power

The Indispensable AFD

October 2, 2015 by Matt Johnson

I'm not talking about the handy little green book that so many of us lugged around for years prior to the advent of wonderful flight apps like Foreflight.

I'm talking about an AFD in a totally different realm of aviation-the Aviation Forecast Discussion. The AFD has become an absolutely indispensable part of my daily and subsequent on-going weather "go-to" resources as a helicopter pilot.

What is it?

For starters, have you ever read a terminal forecast and wondered what the heck were they thinking when they made the forecast? Now you can know exactly what they were thinking. The Aviation Forecast Discussion quite simply is a discussion on the particular elements that made a particular TAF or set of TAF's for a geographical region. I'm not suggesting this is a new product but in my experience it surely seems to be a great source that many pilots know nothing about. AFDs are issued by each Weather Forecast Office (WFO) and essentially describe weather conditions within their particular region.

As described on the NOAA Aviation Weather Center's website the AFD, "provides the local office forecaster's thoughts, reasoning, and uncertainty factors considered for aviation weather, ceiling, and visibility information contained in the TAFs." Wow! This is a powerful statement. This is more than a TAF that has been "translated" via an app or other software process. The AFD offers insight from the forecaster on why one may see the presence (or lack thereof) of various conditions in a TAF. Additionally, the AFD may very well contain various aviation related weather issues that cannot be encoded into the TAF. Conveniently the AFD is typically generated every 6 hours to coincide with the release of the latest TAF for a particular WFO.

Let's take a look

Let's take a look at one example. On a warm summer late afternoon in the Southwestern Ohio Valley this is the colorful radar snapshot of what I saw on the screen.



And this was the most recent TAF for the area:

KCVG 041730Z 0418/0524 25006KT P6SM VCTS BKN050CB
FM050100 VRB03KT P6SM SCT060
FM050900 VRB03KT 5SM BR SKC
FM051300 13004KT P6SM SCT040
FM051900 09005KT P6SM BKN050

By looking at the radar snapshot and the TAF it was obvious the forecaster had some uncertainty about when the storm may move out of the area as indicated by the “VCTS” in the trend section of the TAF and not listed at any particular timeframe.

When going to the AFD for that area and taking a quick read it was obvious why the TAF appeared the way that it did and the radar showed something totally different (for a particular timeframe).

This is what the AFD contained:



The screenshot shows the Aviation Weather Center website interface. At the top, there are logos for NOAA and the National Weather Service, followed by the text "AVIATION WEATHER CENTER" and "NOAA NATIONAL WEATHER SERVICE". Below this is a navigation bar with links for "Local Forecast", "Go", "HOME", "ADVISORIES", "FORECASTS", "OBSERVATIONS", and "TOOLS". A dropdown menu is open, showing "Aviation Forecasts Discussions (AFD)" and "KILN - Wilmington OH". The main content area displays the following text:

(EXTRACTED FROM FXUS61 KILN 042115)
NATIONAL WEATHER SERVICE WILMINGTON OH 515 PM EDT FRI SEP 4 2015
ISOLATED SHOWERS AND THUNDERSTORMS HAVE BEEN POPPING UP ACROSS THE AREA AGAIN THIS
AFTERNOON IN THE CONTINUED WARM AND UNSTABLE AIRMASS. EXPECT TO SEE A GRADUAL
INCREASE IN COVERAGE THROUGH THE REST OF THE AFTERNOON AS WE CONTINUE TO
DESTABILIZE. TOUGH TO TIME THE STORMS IN TO ANY OF THE TAF SITES THOUGH SO WILL
STICK WITH THE TREND OF COVERING THE THREAT WITH A VCTS THROUGH THE DAYTIME
PERIOD. EXPECT THUNDERSTORM ACTIVITY AND CU TO DISSIPATE THIS EVENING WITH THE
LOSS OF DAYTIME HEATING. THIS WILL LEAD TO SOME PATCHY MVFR TO LOCALLY IFR BR/FG
RESTRICTIONS LATER TONIGHT... ESPECIALLY AT KLUK. WITH THE SAME AIR MASS STILL IN
PLACE ON SATURDAY... ISOLATED THUNDERSTORM ACTIVITY WILL ONCE AGAIN BE POSSIBLE
HEADING INTO THE AFTERNOON HOURS. OUTLOOK...

NO SIGNIFICANT WEATHER EXPECTED.

BINGO! The AFD told me many things that clarified the current conditions that I was observing. As predicted in the TAF the conditions would in fact improve, but isolated showers and thunderstorms were popping up across the area due to a continued warm and unstable air mass. This made it difficult for the forecaster to be more precise in the TAF as evidenced by the statement, “tough to time the storms in to any of the TAF sites though so will stick with the trend of covering the threat with a VCTS through the daytime period.” What was evident based on the TAF and the AFD was that the thunderstorm activity was dissipating much slower than expected but one could in fact expect improving conditions as it related to the showers and storms. (But note the possibility of “patchy MVFR” and the probability that the same air mass will be in place the following day.)_

How to find the AFD for your area

The AFD can be easily accessed. Simply go to www.aviationweather.gov and click on “FORECASTS” and scroll down to “Aviation Forecast Discussion.” From there simply click on the region you are most interested in.

After clicking on your region you will get a textual discussion from that particular WFO giving you an idea of what to expect.

It’s free, it’s basic and just a few sentences from the AFD can give you an idea of the “big picture” of what to expect for a small geographic area.

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