

The Area Forecast Discussion (AFD)

The Area Forecast Discussion (AFD) is an important product for our customers and partners in the media and emergency management. The primary purpose of the AFD product is to provide the meteorological/scientific reasoning behind the forecast. Additionally, the AFD gives us an opportunity to express how confident we are, what could go wrong, alternate scenarios, etc. The AFD is a highly visible product used to convey forecast insight beyond any other NWS products.

Given the wide variety of severe weather that can occur in central North Carolina throughout the year, the AFD is a *very* important product for our area, particularly during the winter months when relatively small amounts of wintry precipitation can result in significant impacts to life, property, and the local economy/infrastructure.

The AFD consists of two sections. The first is the narrative description of forecast reasoning. This section has 5 components: synopsis, near term, short term, long term, and aviation. The other section of the AFD is a summary of watch/warning/advisory issuances. The AFD is issued whenever adjustments/changes are made to the grids or after analysis of the upper air data and near term model analysis.

The narrative discussion should be professional in tone, focused on the meteorology, and contain a concise, plain language explanation of forecast reasoning. It should **not** contain editorial, political, or casual comments or judgmental opinions of a personal nature. Use of contractions should be limited, and should conform to the Federal Aviation Administration (FAA) Handbook 7340.1U. Acronyms that are well-known within the scientific community for numerical models and meteorological phenomenon are also allowed.

Due to the nature of the AFD (to reflect current thinking/analysis of the forecaster), time stamps are placed at the beginning of each section so that the users of the product know when the entry was submitted. Other discussion sections that can be added to the AFD, but remain optional include: climate, fire weather, hydrology, and marine (for AKQ backup).

Public and fire weather Watch/Warning/Advisory information shall be included in a separate section after the narrative discussion. This does **not** include short duration warnings (of a few hours or less) for convective events and flash floods, severe thunderstorm and tornado watches, and flood warnings.

Formal coding schemes should be utilized in the watch/warning/advisory section of the AFD. Through GHG and the IFPS, the codes should be automatically added onto an AFD segment via the Formatter Launcher. Word contractions and other abbreviations are appropriate for the watch/warning/advisory section.

Here are a few tips for writing the AFD:

Begin writing the AFD after you have familiarized yourself with the current state of the atmosphere, surface/upper air analysis, radar/satellite imagery and model data. Taking notes along the way is a good start. In each section of the AFD, try to be as organized as possible (i.e. avoid long paragraphs, use titles/headers when appropriate, etc). Basically, you want to make it as easy as possible for our customers/partners to read the discussion and to quickly find important information. Be very careful to avoid typos and spelling/grammar errors, which can distract readers. Additionally, a discussion full of typos and errors is less likely to be taken seriously.

Try to connect current observations and trends in surface/radar/satellite imagery to the near term portion of the forecast discussion. This portion of the discussion is generally where we can add the most value, particularly if the forecast models are not handling the situation well. The short term portion of the AFD will be dependent on more model guidance while still respecting the climatological normals. The longer term portion of the AFD will be geared toward the overall pattern implied by model guidance with a generous amount of respect given to climatological normals.

An Example of how the AFD is formatted is shown below:

```
AREA FORECAST DISCUSSION
NATIONAL WEATHER SERVICE RALEIGH NC
600 AM EST FRI FEB 20 2009

.SYNOPSIS...

&&

.NEAR TERM /TODAY/...
AS OF xxx AM FRIDAY...

&&

.SHORT TERM /TONIGHT THROUGH SUNDAY NIGHT/...
AS OF xxx AM FRIDAY...

&&

.LONG TERM /MONDAY THROUGH THURSDAY/...
AS OF xxx AM FRIDAY...

&&

.AVIATION /12Z FRIDAY THROUGH TUESDAY/...
AS OF xxx AM FRIDAY..

&&

.RAH WATCHES/WARNINGS/ADVISORIES...
NONE.

&&

$$

SYNOPSIS...FORECASTER
NEAR TERM...FORECASTER
SHORT TERM...FORECASTER
LONG TERM...FORECASTER
AVIATION...FORECASTER
```