WFAS is currently based on weather observations taken at fire weather stations throughout the U.S. and entered into the Weather Information Management System (WIMS). NFDRS calculations are done at the National Computer Center at Kansas City (NCC-KC). The fuel model, index, and fire danger levels are set by local managers. National WFAS maps are produced from fire danger levels using simple inverse distance square interpolation. Satellite "greenness" products are currently stand-alone indicators of fire potential and not integrated into the calculations except in the experimental projects.

NFDRS-based products:

- NFDRS fire weather
- NFDRS dead fuel moisture
- Fire danger, adjective rating

Satellite NDVI-derived products:

- Visual Greenness
- Relative Greenness
- Departure from average

The NFDRS-based products in WFAS are generated as follows:

- Fire weather observations are recorded once per day in mid-afternoon (2 p.m. LST) at each of about 1500 weather stations in the Fire Weather Network. Many of the stations are, however, seasonal and report weather only during the fire season, which varies by location.
- Weather observations are reported to the Weather Information Management System (WIMS). National Fire Danger Rating System (NFDRS) calculations are done at the National Computer Center in Kansas City. Weather observations and site descriptors are used to calculate fuel moistures and fire danger indexes. Local managers select the index and cutoff values for the 5 levels of fire danger adjective rating: low, moderate, high, very high, and extreme.
- Each afternoon Fire Weather Forecasters from the National Weather Service use WIMS to view the local fire weather observations and issue trend forecasts for fire weather forecast zones. WIMS processes these forecasts into next-day index forecasts.
- WFAS queries WIMS each afternoon and generates maps for observed and forecasted weather, fuel moisture, and fire danger. Because trend forecasts are generally issued only during the peak of the fire season, many areas of the country will not have forecast information. The result can be large data gaps and unrealistic interpolations.
- Reporting station locations are indicated with a marker on the maps. Values between

stations are estimated with an inverse distance-squared technique on a 10-km grid. This works pretty well in areas of relatively high station density, but has obvious shortcomings in other areas. Station location is based on the latitude/longitude cataloged by local station managers in WIMS.