

Information Sources

National Digital Forecast Database

At the heart of NWS Digital Services is the National Digital Forecast Database (NDFD), which consists of graphical forecasts for key weather elements out to 7 days. These forecasts are available for such elements as sky cover, temperature, dew point, wind direction and speed, precipitation probability, and temperature extremes. Forecast images of precipitation and snow amount are also available on a short-term basis.

The NDFD integrates digital forecasts from NWS field offices, working in collaboration with the National Centers for Environmental Prediction (NCEP), into a national mosaic of forecast weather parameters. The database is available to the public for use in creating text, graphic, and gridded products. Higher-resolution graphical products are also available on a local level. For more information, please visit the NDFD web site at <http://www.nws.noaa.gov/ndfd>. Most of the graphical forecasts are also available online at <http://graphical.weather.gov> or <http://digital.weather.gov>.

WFO Paducah Web Page (<http://www.weather.gov/pah>)

Whether it's tomorrow's forecast or last month's climate information, WFO Paducah's Internet page features a wealth of information that's sure to fulfill many of your weather-related needs. To provide a quick assessment of current weather information at a glance, links to local forecast and hazardous weather information, radar images, and weather headlines are front-and-center. Also accessible are details on NOAA Weather Radio All Hazards, information and photographs from historic weather events, a schedule of SKYWARN spotter training, and links to a variety of forecast model data. There are also links to the NOAA, NWS, and Central Region homepages.

Of particular interest is the vast array of current weather information, including:

- ✓ **Weather product Index** (with links to virtually every product we issue)
- ✓ **Hazardous weather information** (outlooks, warnings, storm reports)
- ✓ **Radar and satellite imagery** (including Doppler radar images)
- ✓ **Forecast information** (public, hydrologic, aviation, and fire weather)
- ✓ **Weather graphics** (Weather Story, Graphical Nowcast)
- ✓ **Current observations** (both general weather and hydrologic)
- ✓ **Climatological data** (daily, monthly, and record information)

NOAA Weather Wire Service

Even in the evolving world of rapid communications technology, the NOAA Weather Wire Service is still a viable communications network for disseminating weather information to the mass media, emergency management agencies, and other users. Using a combination of dedicated phone lines and satellite communications, the weather products are placed on the NWWs in a matter of seconds from the time they leave our office.

Every weather product issued by WFO Paducah is identified by a ten-character WMO (World Meteorological Organization) ID (TTAA00 KPAH), along with a six-character AWIPS ID (NNNPAH). For example, a Tornado Warning issued by WFO Paducah carries a WMO ID of WFUS53 KPAH and an AWIPS ID of TORPAH. This guide refers to products using the AWIPS ID. A cross-reference table in Appendix E lists the corresponding AWIPS ID and WMO ID for each product. For programming purposes, the NWWs uses WMO ID's.

For more information on the NOAA Weather Wire Service, visit the NWS web site at <http://www.nws.noaa.gov/nwws>.

Emergency Managers Weather Information Network

The Emergency Managers Weather Information Network (EMWIN) is a relatively low-cost alternative for receiving National Weather Service weather products in both text and graphics format. Available products include hazardous weather watches and warnings, forecasts, weather observations, satellite imagery, and a national radar summary. Users also have the capability of setting various alarms to alert them to a variety of information.

EMWIN was designed to be a cost-effective alternative for emergency managers and public safety officials who may lack access to, or funding for, more costly data services. Because the weather information is free, the only cost is for the receiving equipment and inexpensive commercial software. This digital data stream is available nationwide directly from satellites, and in many locations, in an easier and less costly manner using local radio rebroadcasts and other techniques.

For more information on EMWIN, you are encouraged to consult the EMWIN information page at <http://www.nws.noaa.gov/emwin>. Here, you will find a helpful list of EMWIN vendors that have many variations of systems, software, and options available. You may also contact Rick Shanklin, Warning Coordination Meteorologist for WFO Paducah, at (270) 744-6440 (x726).

NOAA Weather Radio All Hazards

NOAA Weather Radio All Hazards is a service of the National Oceanic and Atmospheric Administration's (NOAA) National Weather Service. As the ***Voice of the National Weather Service***, it provides continuous broadcasts of the latest weather information. Digitized weather messages are repeated every three to five minutes and are routinely revised at least every hour to cover changing weather conditions. NOAA Weather Radio serving the four-state region operates on a 24/7 basis, with the format tailored to the needs of the people within the listening area.

During severe weather, the National Weather Service preempts the routine weather broadcast and substitutes special warning messages. Critical information is broadcast immediately to get the information to the public as soon as possible. An emergency tone alarm is broadcast before the warning message, allowing specially equipped NOAA Weather Radios to audibly or visually alert the user. SAME-equipped weather radios are also capable of displaying a digital message detailing the weather advisory before the information is broadcast over NOAA Weather Radio. SAME (Specific Area Message Encoding) and NOAA Weather Radio work in conjunction with the media and national, state, and local emergency agencies to comprise the Emergency Alert System (EAS).

At this time, numerous NOAA Weather Radio vendors are marketing radios capable of decoding the SAME messages. Owners of these radios can program the radio to alarm for *certain* weather hazards within *specific* counties. To obtain the SAME codes needed to program these radios, you can call 1-888-NWR-SAME or visit the NOAA Weather Radio All Hazards web site at <http://www.nws.noaa.gov/nwr>.

Commercial radio and TV stations are authorized to rebroadcast any material, especially weather watches and warnings, transmitted over the weather radio, subject only to minimal restrictions stated in FCC Public Notice 70110852876.

Currently, 18 NOAA Weather Radio transmitters serve the 58 counties covered by WFO Paducah. Refer to Appendix E for information on county-by-county transmitter coverage. The broadcasts can be heard as far away as 40 miles from the antenna site, sometimes more. The effective range depends on many factors, particularly the transmitter height and power, local terrain, receiver quality, and present weather. An outdoor antenna can be very effective in improving reception.

Event-Driven Services

WFO Paducah provides several non-routine event-driven services that focus on relaying information on the potential for hazardous weather to our partners in broadcast media, emergency management, law enforcement, transportation, and utilities. These services include **conference calls**, **EM notifications**, and **SPIN messages**.

Conference calls are typically conducted a day or two ahead of a forecasted significant severe, winter, or hydrological event. A notification of the scheduled call is typically sent out via e-mail hours in advance of the call. A conference call typically includes a handful of graphics in a slide briefing accessible via our web page. Each call can normally accommodate about 150 participants. Because our county warning area covers 58 counties, we ask each county do their best to pool interested parties into no more than a couple of groups to better facilitate participation from all counties impacted.

EM notifications are the means by which participants are notified of an upcoming conference call regarding a potentially significant hazardous weather event. EM notifications may also be sent to update partners on conditions that may not necessarily warrant a conference call.

SPIN messages contain more general information that is geared towards our registered SKYWARN spotter group. These messages may be transmitted as a general heads-up of a significant weather event days in advance. SPIN messages may also contain non-weather related information, such as details on upcoming spotter training classes.

Decision Support Services

WFO Paducah also provides highly focused event-driven forecasts for a variety of incidents that may arise at a moment's notice. At the request of an emergency manager or other public safety official, we can generate point forecasts for such incidents as fires, HAZMAT spills, radiological, chemical, or biological releases, terrorist incidents, nuclear incidents, and aircraft accidents.

In some cases, on-site weather support can be provided at Emergency Operations Centers and Incident Command Posts. During large and prolonged incidents, WFO Paducah can dispatch an on-site meteorologist to provide official sky condition, wind, temperature, relative humidity, precipitation, and dispersion forecasts. These on-site meteorologists are trained in the National Incident Management System (NIMS) and can deploy weather equipment to the incident location, download model and weather data on-site, and provide critical weather briefings to the incident command team.

NWSChat

NWSChat is an instant messaging program utilized by NWS operational personnel to share critical warning decision expertise and other types of significant weather information essential to the NWS mission of saving lives and property. The information is exchanged in real-time with the media and emergency response community, who in turn play a key role in communicating our hazardous weather messages to the public.

In order to participate in NWSChat, you must be: (1.) a member of the emergency management community, (2.) a government partner of the NWS, or (3.) a member of the broadcast or electronic media. Participants also consent to terms of use, which include activities that are prohibited in the chat room. Any violation of these terms may result in termination of privileges as an NWSChat participant.

Every effort is made to monitor the NWSChat room 24 hours per day. However, WFO Paducah may not always be available to respond to chat if we are addressing other critical warning or forecast tasks or are experiencing technical issues. During times of limited staffing, it is imperative that warning and forecast operations take priority.

Social Media

Social media outlets, including Facebook and Twitter, have grown exponentially over the past several years. WFO Paducah has fully embraced the rise of social media by routinely posting weather information to both Facebook and Twitter. While a number of items may appear on both outlets, we generally view Facebook as a means to post weather information that may not necessarily be time-sensitive, along with other value-added information. On the other hand, Twitter allows for the posting of more time-sensitive information, including warnings and advisories. Keep in mind that the timely receipt of official information through social media outlets is contingent on the operability of those systems. Follow us on Facebook at <https://www.facebook.com/NWSPaducah> and Twitter at <https://twitter.com/NWSPaducah>.

Multimedia Briefings

We also utilize YouTube to post multimedia briefings on impending hazardous weather. A multimedia briefing for severe weather is generally created when the Storm Prediction Center has at least part of the WFO Paducah forecast area in a moderate or high risk for severe weather. For winter weather, a watch, warning, or advisory usually necessitates the creation of a multimedia briefing. You can find our YouTube page at the following address: <https://www.youtube.com/user/NWSPaducah>.

Weather Information Now

W.I.N.—Weather Information Now—is another outlet through which the public may obtain weather data. On both the Paducah and Evansville W.I.N. telephone systems, the weather information is digitally recorded onto specific message paths as soon as new data becomes available.

The products recorded on W.I.N. include:

- ✓ 7-Day Forecast
- ✓ 8–14 Day Outlook
- ✓ Climate Information
- ✓ River & Lake Information
- ✓ Road Condition Phone Numbers

The user also has the option of speaking to a meteorologist if more detailed information is required. A word of caution though—we are generally prohibited from providing specialized weather information that would infringe upon the business of our partners in the private industry. Weather Information Now is accessible 24 hours a day, all year round. Just dial (270) 744-6331 from the Paducah area or (812) 425-5549 from the Evansville area.