

Products and Services

The Paducah WFO issues numerous products each day for public, aviation, and internal coordination purposes. Routine products intended for the general public include:

- ❖ Area Forecast Discussion
- ❖ 7-day forecasts
- ❖ Forecast Matrices (digital Point & Area forecasts)
- ❖ Area Weather Summary
- ❖ Hazardous Weather Outlook when the chance exists for thunderstorms or other weather hazards
- ❖ Coded Cities Forecasts
- ❖ Climatological data for Paducah and Evansville
- ❖ Short Term Forecasts (0-6 hours)
- ❖ River Data - precipitation, river and lake stages and changes, and 3-day forecasts for 28 locations

Fire weather products are used by many agencies including the U.S. Forest Service. They are issued primarily during the spring and fall fire weather seasons and include:

- ❖ General forecasts addressing weather, relative humidities, temperatures, winds, transport winds, mixing heights, and probability for lightning
- ❖ Coded forecasts for the National Fire Danger Rating System

Aviation products issued are used in support of commercial and general aviation in the area. They include:

- ❖ Terminal forecasts for Cape Girardeau, Paducah, and Evansville
- ❖ Forecasts for two main air routes in the region; Springfield, MO to Cape Girardeau, MO and St. Louis, MO to Cape Girardeau, MO to Memphis, TN

Non-routine products include watches, warnings, and statements for a variety of weather types. A few examples:

- ❖ Watches, warnings, and statements for:
 - Tornadoes
 - Severe Thunderstorms
 - Flash Floods
 - River Floods
 - Winter Weather
- ❖ Local Storm Reports
- ❖ Warnings and advisories for non-precipitation weather hazards including high winds, excessive heat, dense fog, frost and freezes
- ❖ Winter Weather Warnings and Advisories for snow, freezing rain and drizzle, wind chill, blowing snow, blizzards, and ice storms

Where Can You Get Our Products?

Products created by WFO Paducah are available to the public through the Internet, commercial TV and radio, and private services. Most TV and radio stations contract with a private company that collects and distributes NWS data. NWS data is also available through the Emergency Managers Weather Information Network (EMWIN). This is a satellite or radio rebroadcast of NWS products and services in text and graphical format. Public products created by WFO Paducah can be heard on NOAA Weather Radio (NWR).

NOAA Weather Radio

Many products issued by WFO Paducah can be heard on NOAA Weather Radio (NWR), a special radio which receives weather information continuously broadcast by the National Weather Service. NWR receivers cost \$25 and up, depending on features. Newer models allow you to program them to alarm only when a warning is issued for the county or counties you select. WFO Paducah broadcasts on the 11 transmitters below:

Doniphan, MO	WWG-48	162.450 MHz
Piedmont, MO	KXI-66	162.425 MHz
Bloomfield, MO	WXL-47	162.400 MHz
Cape Girardeau, MO	KXI-93	162.550 MHz
Marion, IL	WXM-49	162.425 MHz
McLeansboro, IL	KXI-52	162.400 MHz
Evansville, IN	KIG-76	162.550 MHz
Mayfield, KY	KIH-46	162.475 MHz
Madisonville, KY	WXJ-91	162.525 MHz
Hopkinsville, KY	KXI-26	162.450 MHz
Whitesville, KY	KZZ-61	162.475 MHz

National Weather Service
8250 KY Highway 3520
West Paducah, Kentucky 42086
(270) 744-6440 phone
(270) 744-3828 fax

<http://weather.gov/paducah>

For 24-hour weather information:
(270) 744-6331

In Evansville:
(812) 425-5549

Paducah Weather Forecast Office



Mission Statement

Striving constantly for public service excellence, we shall in team unison, through the full utilization of our science knowledge and state-of-the-art equipment, dedicate ourselves to best serve the people we protect through accurate communication, informative products and statements, and timely warnings.

WFO Paducah

From its humble beginnings taking weather observations out of a double-wide mobile home in 1984, the Weather Service Office in Paducah has blossomed into a Weather Forecast Office (WFO). WFO Paducah is one of 122 field offices in the National Weather Service (NWS). These field offices are supported by the National Centers for Environmental Prediction. The National Weather Service is an agency of the National Oceanic and Atmospheric Administration (NOAA), which is a part of the U.S. Department of Commerce.

Weather services cost each American about \$13 a year. This investment of tax dollars allows the NWS to issue more than 734,000 forecasts (public, aviation, fire weather, marine) and 850,000 river and flood forecasts annually. Each year, the NWS issues between 45,000 and 50,000 potentially life-saving severe weather warnings.

County Warning Area (CWA)

The Paducah WFO is responsible for meteorological forecasts and warning services for 58 counties over portions of four states. The CWA covers 11 counties in southeast Missouri, 19 counties in southern Illinois, 6 counties in southwest Indiana, and 22 counties in west Kentucky (see map below).



The Hydrologic Service Area (HSA) covers roughly the same area as the CWA. WFO Paducah is responsible for hydrologic forecasts and warning services for 28 points along 11 rivers, including parts of the Ohio and Mississippi Rivers.

Staff

At full staffing, WFO Paducah is comprised of:

- A Meteorologist-in-Charge (Supervisor and administrator of the WFO and its programs)
- A Warning Coordination Meteorologist (Liaison to emergency managers and customers; coordinates WFO services and spotter program)
- A Science and Operations Officer (Science and training leader)
- A Service Hydrologist (River and Flash Flood program leader)
- An Observation Program Leader (Administrator of data collection programs)
- An Electronics Systems Analyst (Oversees all computer and electronic systems)
- An Information Technology Officer
- 5 Senior Forecasters
- 7 Journeyman Forecasters
- 1 Meteorologist Intern
- 3 Hydrometeorological Technicians (HMT)
- An Administrative Support Assistant
- 2 Electronics Technicians
- A Special Liaison Officer (Located in Evansville, Indiana)

The WFO is staffed 24 hours a day, every day of the year. During severe weather, staffing is significantly increased, from the normal complement, to properly handle the event.

The Paducah office is fortunate to be assisted by many volunteers. During severe weather, HAM radio operators take up position in the WFO and communicate with NWS-trained spotters watching storms in the field. There are approximately 3,500 trained storm spotters in the Paducah CWA.

There is also a network of around 100 cooperative observers in our area. They record weather (and even river and lake stage) data each day and call in or send the data to the Paducah staff.

These HAM operators, storm spotters, and cooperative observers are all volunteers and are crucial to the success of the Paducah WFO forecast and warning program.

Technology Tidbits

WFO Paducah uses a wide array of the latest technology to accomplish its mission.

The Automated Surface Observing System (ASOS) was the first piece of technology delivered to move the Paducah office toward a modernized WFO.

- Contains sensors that measure cloud height up to 12,000 feet, visibility, precipitation, precipitation type (light rain vs. heavy rain, rain vs. snow, etc.), temperature, dew point, wind, and pressure.
- In addition to hourly observations, ASOS is capable of taking Special Observations for rapid changes in clouds, visibility, wind shifts, and the beginning or ending of a thunderstorm.
- There are 5 ASOS units in the Paducah CWA:
 - ❖ Poplar Bluff, Missouri
 - ❖ Cape Girardeau, Missouri
 - ❖ Carbondale, Illinois
 - ❖ Paducah, Kentucky
 - ❖ Evansville, Indiana
- There are also several similar systems known as AWOS and AWIS

Weather Surveillance Radar 1988 Doppler, WSR-88D, is the cornerstone of warning operations.

- It stands 100 feet to the top of the tower, 135 feet to the top of the dome
- Inside the dome is a 28 foot diameter dish
- Has less than a 1E beam width for greater resolution
- Operates on 750,000 watts of power
- Has a range of 248 nautical miles
- There are three WSR-88Ds in the CWA

With the arrival of the Advanced Weather Interactive Processing System (AWIPS) WFO Paducah became a fully-modernized NWS office. AWIPS allows forecasters to integrate all resources (radar, satellite, forecast model data, observed data) in one convenient workstation.

- WFO Paducah has six workstations, four servers, and a firewall
- Each workstation is connected via a fiber optic lan that is connected to data and application servers