March 2024
Volume 18, Issue 3

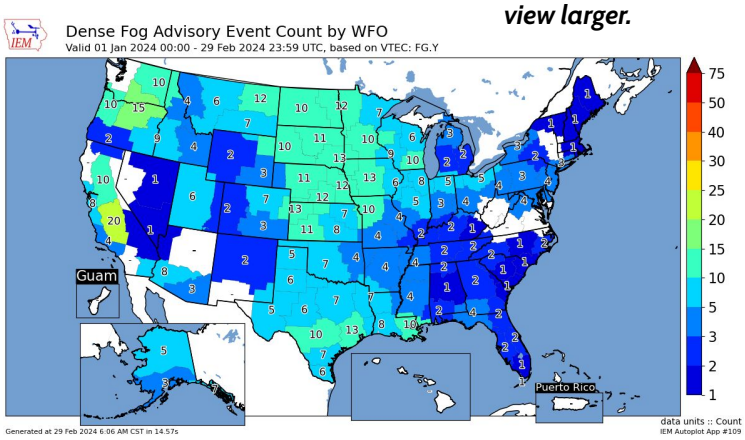
The Weather Whisper

WHAT'S INSIDE?

Foggy Days in Central IA

Kristy Carter, Meteorologist

Click image to view larger.



Count of Dense Fog Advisories issued by NWS office in 2024 as of February 29. Graphic courtesy of Iowa Environmental Mesonet.

Late January into early February 2024 was a foggy period across central Iowa and surrounding areas. NWS Des Moines has already issued 13 Dense Fog Advisories on the year, all but one of them were issued between January 23 and February 4. The fog headlines during that period covered at least some portion of the NWS Des Moines service area and started or ended on every calendar day during that 12-day stretch, as initially teased in the previous newsletter. At 13 Dense Fog Advisories, we are about halfway to the highest number of of fog advisories issued in a calendar year by NWS Des Moines; the record is 27, in 2017, followed by 24 in 2008. With 10 months still to go, we are well on our way to nearing some records! As of February 3, NWS Des Moines was in 2nd place among all NWS offices with 12 fog advisories issued on the calendar year, behind only NWS Hanford, CA (16 fog advisories). With our foggy weather behind us, NWS Des Moines is now in a 4-way tie for 3rd place (13 Dense Fog Advisories issued) among all NWS offices, as of the end of February, behind NWS Hanford, CA (20) and NWS Pendleton, OR (15) as seen above.

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With all this talk about fog headlines and statistics, you may be wondering, what even causes fog? There are several different types of fog but generally speaking fog forms when water vapor condenses into tiny droplets near the earth's surface. **Radiation fog** is one of the most common types of fog in Iowa, especially during the fall and winter, and is favored when winds are light and skies are clear. Radiation fog typically forms during the overnight hours when air near the surface cools and if this cooling leads to saturation, fog will form first at the ground, becoming more dense and thickening as the air above continues to cool. Radiation fog typically burns off near to after sunrise as the sun comes out and temperatures warm. In late January to early February, our fog was predominately **Advection Fog** which forms when warmer (moist) air moves over cold ground. With our hefty snowpack in place along with warmer temperatures to help melt that snowpack, low level saturation remained abundant when combined with the warmer air adding additional moisture by being cooled to saturation by the cold ground below. Once formed, the advection fog remained in place and was difficult to burn off as advection fog is relatively unphased by wind speed or cloudy skies unlike radiation fog. The result of the prolonged advection fog was extended periods of dense fog with visibilities less than ¼ mile at times causing hazardous driving conditions with limited reaction time due to the poor visibilities, as seen in the cover photo on the previous page and the graphic to the right. Interested in learning more about fog? Watch this video on fog formation or read more at weather.gov/safety/fog.

Click image to view larger.

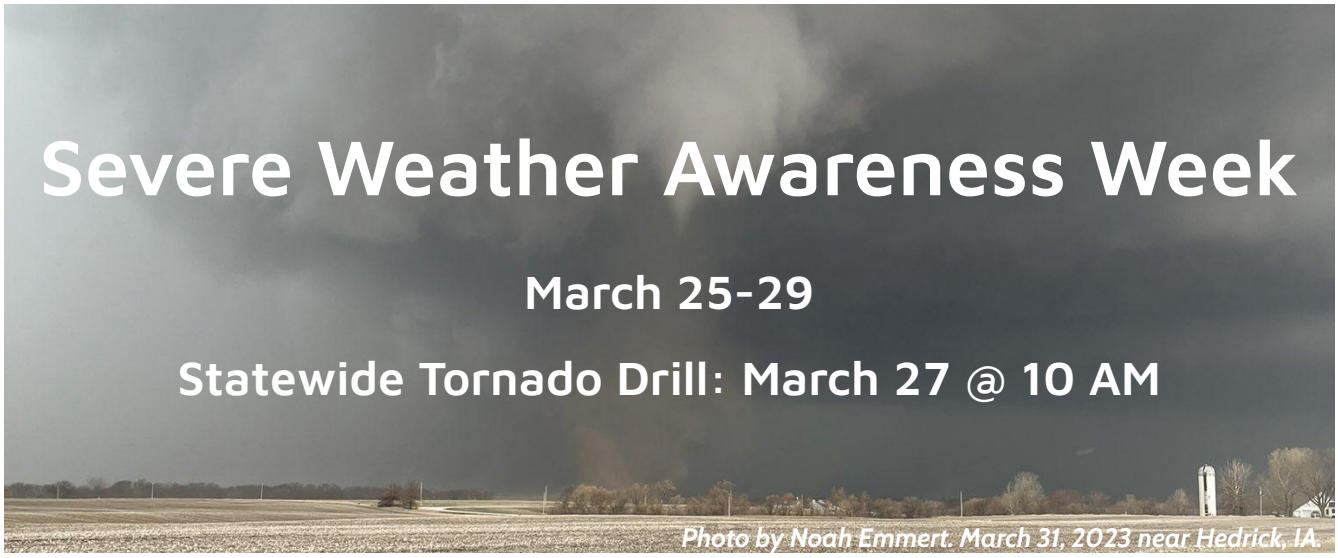


Photo by Noah Emmert. March 31, 2023 near Hedrick, IA.

NWS Des Moines 2024 Storm Spotter Training

MARCH

19 - Creston, IA
20 - Menlo, IA
21 - VIRTUAL (Online)
26 - Des Moines, IA
27 - Adel, IA
28 - Eldora, IA

APRIL

1 - Corning, IA
2 - Waterloo, IA
3 - Greene, IA
4 - Fort Dodge, IA
9 - Northwood, IA
15 - Dedham, IA
16 - Corydon, IA
17 - Reinbeck, IA

APRIL CONT.

18 - Calhoun County*
22 - Hampton, IA
23 - Emmetsburg, IA
24 - Wapello County*
25 - Grinnell, IA
29 - Gilbert, IA
30 - Leon, IA

* - City to be determined

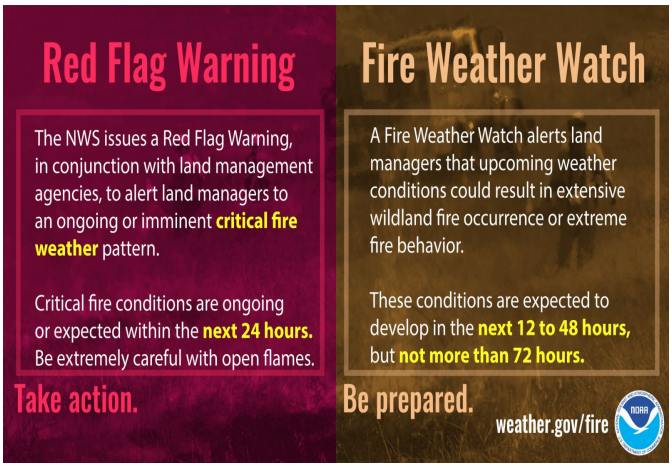
DES MOINES

weather.gov/desmoines/stormspotting

Early Spring Fire Weather Season

Ashley Bury, Meteorologist

Many days over the month of February came with above average temperatures, along with the lack of snowfall and overall dry conditions. These weather conditions, paired with already dried fuels (grasses) has allowed for the spring fire weather season to begin earlier than typically expected. For reference, the official start to the season generally begins around March 1. During each spring fire weather season, the National Weather Service provides weather forecasts that are tailored to land management agencies, who use these forecasts to aid in decision making ahead of and during prescribed burns. For the general public, National Weather Service offices will issue a Fire Weather Watch or a Red Flag Warning when grasses are dry and weather conditions are favorable for fast fire spread, which could pose a risk to life and property. If a **Fire Weather Watch** is issued, it means that conditions could be favorable in the next day or two. If a **Red Flag Warning** is issued, it means conditions are already or soon will be favorable for dangerous and fast fire spread. Simply put, a Red Flag Warning means do not burn outdoors.



Brush Fire just east of Lake Avon in southeast Polk County on February 26th. Photo taken by Trey Fulbright.

Speaking of Red Flag Warnings, the first Red Flag Warning of the spring season was issued February 26th, due to minimum relative humidity values generally between 15-30% and wind gusts around 30-35 mph, paired with very warm temperatures in the mid to upper 70s and dry fuels across all of central Iowa. Unfortunately, a brush fire occurred in southeastern Polk county, along with several field fires in Greene County. It cannot be stressed enough to please avoid burning during any elevated fire weather day, especially ones that result in Red Flag Warnings being issued.

On the Cover:
Iowa DOT webcam showing the foggy conditions on US-20 near Steamboat Rock on the morning of January 25. Photo courtesy of Iowa Department of Transportation.

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