

The Weather Whisper

WHAT'S INSIDE?

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DMX on the Road, Part 2

Kristy Carter, Meteorologist & Joe Price, Electronics Technician

In [October](#), we featured the travel of a number of our forecasters, but our electronics staff has spent many hours on the road and in the field over the last several months as they prepared to install new, modernized equipment at a few NOAA Weather Radio (NWR) and Automated Surface Observing Systems (ASOS) sites, such as retiring old copper wire networks and replacing them with more modern technology (fiber optic cable, wireless, etc). One of the first NWR sites to get an upgrade just so happened to coincide with the relocation of the radio transmitter itself. The NWR which covers much of the Des Moines metro was relocated onto a new tower with a new shelter, and whole new way of communicating. Once the structure was in place, preparations and wiring to support the radio began. This included putting a new antenna on a tower 400 feet high, requiring extra hands from headquarters and a full day of work! In the end, the NWR move was successful and the Des Moines NWR transmitter is the first to move off of the old copper phone lines.

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New Des Moines Weather Radio at the new tower location in Alleman, IA. Photo credit: Joe Price, NWS Des Moines. Click image to view larger.

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Work has also been ongoing to gradually convert the transmission of our ASOS data from dial-up modems to LTE. The ASOS network is the nation's primary surface weather observing system, providing critical weather information to airports and meteorologists every few minutes. In the past few months, the ASOS' at Mason City and Lamoni were the first two to undergo the conversion from older communication infrastructure to newer technology.

With the added capabilities of LTE services, the speed and reliability of ASOS data and NWR transmission will continue to increase as more sites are modernized.

Weather Radio Improvements for Rathbun Lake and Ottumwa

On or before December 6th, NWS Des Moines will be making several enhancements to the NOAA Weather Radio (NWR) services delivered to the Rathbun Lake and Ottumwa transmitters in southern Iowa. Changes forthcoming from this enhancement include:

1. **Separated Programming** - programming will be separated on the Rathbun Lake & Ottumwa transmitters, making broadcast cycles shorter and more geographically targeted. Previously, technology limitations required broadcasts at Rathbun Lake and Ottumwa to be combined.
2. **Reliability** - broadcast relay from NWS Des Moines to the NWR in Ottumwa will change from dedicated copper phone lines to cellular. This will provide better uptime at this site.
3. **County-Level Alerting Changes** - Separated programming at the Rathbun Lake and Ottumwa transmitters will result in refinement of Specific Area Message Encoding (SAME) county-based alerting. Alerts for the Ottumwa NWR will include the following counties: Davis, Keokuk, Mahaska, Monroe, and Wapello (addition of Davis, Mahaska, Monroe due to adequate coverage). Alerts for the Rathbun Lake NWR will include the following counties: Appanoose, Davis, Lucas, Monroe, Wapello, and Wayne (removal of Keokuk and Mahaska due to inability to receive the broadcast).

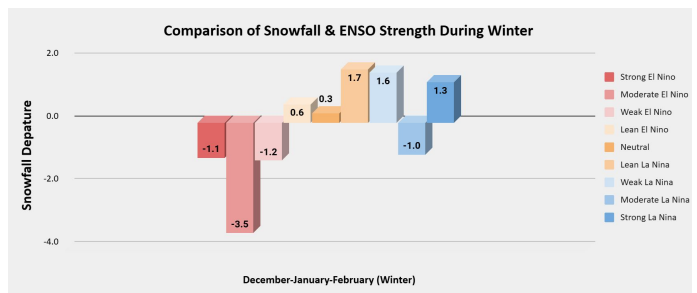
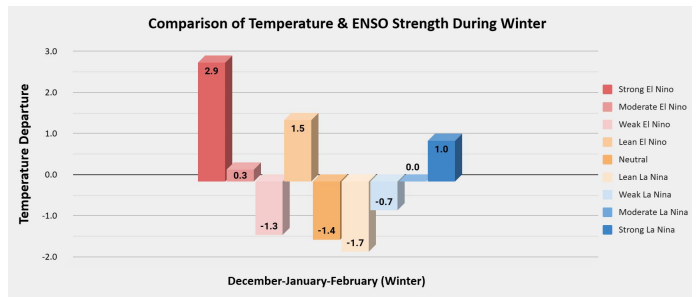
IMPORTANT - There will be no actions necessary for NWR users in these areas. County codes remain unchanged so alerting will not be impacted. Coverage information, including a map, can be found [here](#).

La Niña Winters in Iowa

Brooke Hagenhoff and Craig Cogil, Lead Meteorologists

[Click images to view larger.](#)

As we enter meteorological winter this month, what does La Niña mean for Iowa? This year conditions are in the “Lean towards La Niña” or “Weak La Nina” range. Historically, this would indicate colder than average temperatures through the winter (*upper right*) and slightly more snowfall than average (*lower right*). Of course, each winter is different and La Niña is just one factor that can impact weather patterns. Time will tell how winter ‘24-’25 will play out.



Spotter Feature of the Month: Measuring Ice

The spotter feature of the month series exists to highlight one or more phenomena each month to educate our spotters and Weather Ready Nation Ambassadors on various weather they may see and can [report to their local NWS!](#)

Measuring Ice

We reviewed measuring snow [last month](#), but as we continue our preparations for winter precipitation, here are a few tips to measure ice accurately:



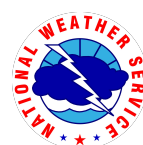
Measuring ice on a branch. Photo credit: Neil Stuart, NWS Albany. [Click image to view larger.](#)

1. Measure the thickness of ice from both sides of a small branch or twig from a tree and average the two values, OR use a flat surface to measure ice accumulation.
2. Repeat in a few different places and then take the average.
3. Send us your averaged report!

*Note, ice accumulation is measured to the nearest 0.1". If the value is less than 0.1" then it is considered a trace.

On the Cover:

Light snow fell across northern Iowa on November 20th. Photo courtesy of Iowa DOT on I-35 near Mason City.



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