

## Weather resources for turf managers

May 29, 2019

Turf managers constantly keep a close eye on the weather. This week was no exception with heavy rainfall and storms across much of the state. The weather impacts basic management like mowing, irrigation, and cultivation. It also has a heavy influence on growth rate and pest outbreaks. There are many online resources that can help turf managers stay one step ahead of the ever-changing Nebraska weather.

- **Weather.Gov** – There are many good commercial weather websites out there, but don't forget about National Weather Service (<https://weather.gov>). In addition to daily and hourly forecast maps, there is radar and satellite imagery. Don't overlook the forecast discussion, too. This short (although sometimes technical) summary is written by the local weather forecasting professionals at the NWS offices. It informs users about the certainty/uncertainty within a forecast and gives hints at the longer term trends.
- **Forecasted Reference Evapotranspiration (FRET)** – It can be difficult to estimate how much water the turf will use over the next day or two. Several services can tell you how much water was lost yesterday, but future forecasts can be tricky. This is because ET is highly affected by solar radiation, which is difficult to estimate. There is a free website, <https://digital.weather.gov>, that has an interactive map of the forecasted water use by day and week. Simply scroll down to the 'Water Resources' section and select the Daily or Weekly FRET. Remember, cool-season grasses use an average of 80% of the FRET value. That means a cool-season stand would likely use 0.20" of water if the FRET value is 0.25". Warm-season turf uses only 60% of FRET.
- **Climate Trends** – The Climate Prediction Center also produces a helpful website to see what the weather may bring over the next few weeks to months. They look at different large scale climate factors to assign risk of above/below average rainfall and temperature. The bad news for Nebraska, the CPC graphic shows an elevated risk of above average rainfall for most of the western and central US over the next two weeks. You can find these climate predictions here: <https://www.cpc.ncep.noaa.gov/>
- **Short-term, High Resolution Models** – Inevitably you've seen weather model results on local and national weather broadcasts. Models like the GFS (US), European, RPM, NAM, etc. are used to predict what the weather will do over the next hours to days. Frequently these models don't agree. Even small disagreements can result in big changes at any specific location. This is one reason I suggest skimming the NWS Forecast Discussion. But, sometimes turfgrass managers need to know what the weather is going to do in the immediate future. Can you mow or apply fertilizer before the rain? Will the fog clear this morning to let golfers out? Is it going to be too windy to spray at noon? Fortunately, there are some very high resolution models that get updates hourly to help answer these questions. No model is perfect, but they can be another free tool to help plan your day.

The high resolution rapid refresh model (HRRR) is updated hourly with tons of weather parameters to view. These models generally go out 18 hours and the times are "Military" zulu time. For reference, Eastern Nebraska (Central daylight time) is five hours behind (1700z = 12pm CDT or 11am MDT). I have a short tutorial video to help guide you through the HRRR interface: [https://youtu.be/fXzPzo\\_Y\\_8M](https://youtu.be/fXzPzo_Y_8M). Find these models at <https://rapidrefresh.noaa.gov/hrrr/>.

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