



Lesson 2 - Rain Maps

Reading Mesonet Rain Maps

Estimated Lesson Time: 30 minutes

Introduction

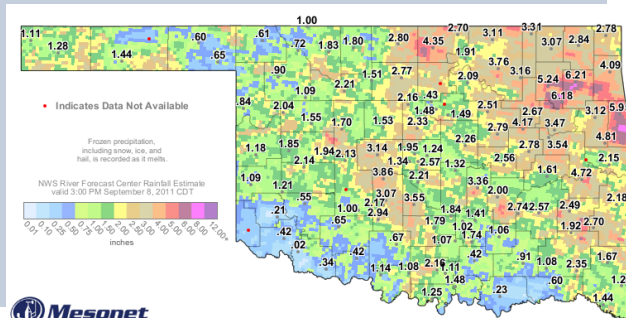
Every morning when you get ready for school, you decide what you are going to wear for the day. Often you might ask your parents what the weather is like or check the weather yourself before getting dressed. Then you can decide if you will wear a t-shirt or sweater, flip-flops or rain boots.

The Oklahoma Mesonet, www.mesonet.org, is a weather and climate network covering the state. The Mesonet collects measurements such as air temperature, rainfall, wind speed, and wind direction, every five minutes. These measurements are provided free to the public online. The Mesonet has 120 remote weather stations across the state collecting data. There is at least one in every county which means there is one located near you.

Our data is used by people across the state. Farmers use our data to grow their crops, and firefighters use it to help put out a fire. Emergency managers in your town use it to warn you of tornadoes, and sound the town's sirens.

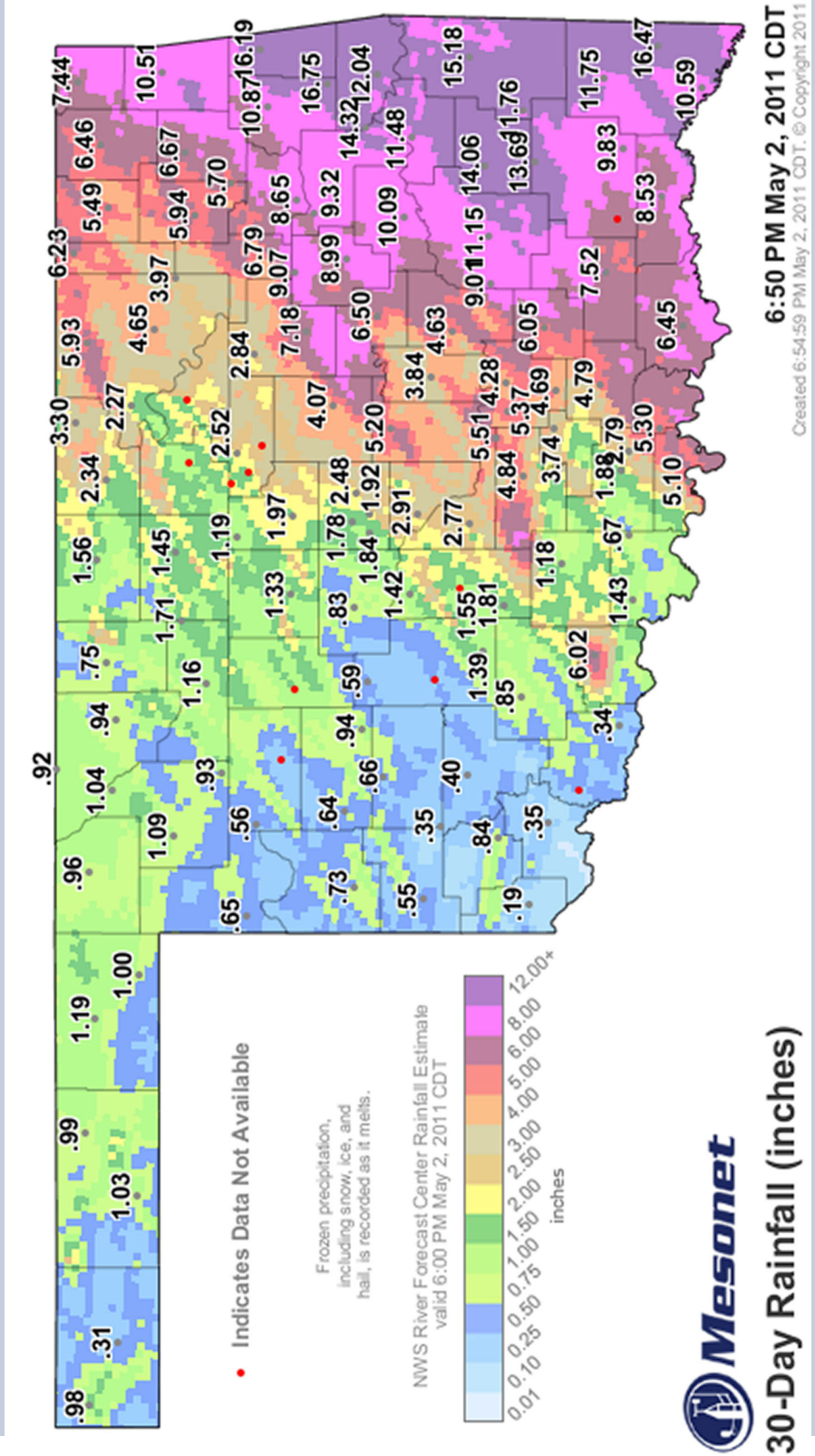
Mesonet rainfall data gives a statewide view, updated every five minutes. When reading the Mesonet rainfall accumulation maps, notice each Mesonet site displays accumulated rainfall. The map also displays the National Weather Service (NWS) River Forecast Center's rainfall **estimates** (in color) across Oklahoma based on radar (an instrument that can locate precipitation and its motion). For example, areas in blue have lower rainfall than areas in red or purple.

If there is a red dot on the map, it means data could not be collected for that Mesonet site. Go to <http://www.mesonet.org/index.php/weather/category/rainfall> to view different Mesonet rainfall maps.



The radar estimates are placed beneath the actual recorded rainfall amounts at each Mesonet site. Keep in mind, the radar data are estimates across the state, while the numbers on the map are actual recorded rainfall amounts.

Looking at the 30 day rainfall map, notice the scale relating the radar colors with inches of rainfall. Each number relates with the beginning of the next color on the scale, with 0.01 inches being the lightest blue on the scale.



Activity - Data interpretation

Using the 30-day Rainfall map and the Station ID map provided answer the following questions. If you would like to use a current rainfall map, go to <http://www.mesonet.org/index.php/weather/category/rainfall>.

Questions

1. Which site recorded the highest amount of rainfall by the Mesonet? How much rain was recorded at that site?
2. Where are the areas with the highest amount of rainfall recorded by the radar?
3. Which site recorded the lowest amount of rainfall by the Mesonet?
4. Where are the areas with the lowest amount of rainfall recorded by the radar? How much rain was recorded at the site with the minimum amount of rainfall?
5. Where does the recorded Mesonet data differ from the radar data? Why would there be a difference?
6. What is the 30 day recorded rainfall at the Mesonet site nearest to your hometown?

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*Answers: 1) Cookson, 16.75 inches 2) East to Southeast Oklahoma, in purple
3) Hollis 4) The Panhandle and southwest Oklahoma (areas in blue), 0.19
inches at Hollis 5) Could be several sites that differ. Kenton is one. The Me-
sonet recorded 0.98 inches of rainfall, but the radar shows it in 1.5-2 inches
of rainfall. They vary because the radar is an estimate and general picture of
the state. It cannot measure exact rainfall at certain locations. The Mesonet
data helps provide a complete picture of the state with exact measurements. 6)
Depends on your location*

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