

PROBABILITY OF PRECIPITATION: WHAT DOES THE FORECASTER MEAN?



Photo by [Erik Witsoe](#) on [Unsplash](#)

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Forecasts issues by the NWS routinely include a "PoP" (probability of precipitation) statement.

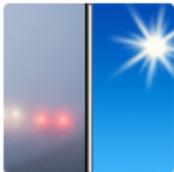
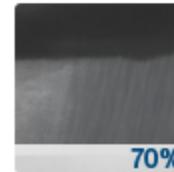
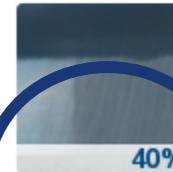
Raleigh / Durham, Raleigh-Durham International Airport (KRDU)
Lat: 35.89°N Lon: 78.78°W Elev: 394ft.

 Fair
53°F
12°C

Humidity 52%
Wind Speed W 6 mph
Barometer 29.95 in (1014.3 mb)
Dewpoint 36°F (2°C)
Visibility 10.00 mi
Wind Chill 51°F (11°C)
Last update 23 Feb 6:51 pm EST

More Information:
[Local Forecast Office](#)
[More Local Wx](#)
[3 Day History](#)
[Mobile Weather](#)
[Hourly Weather Forecast](#)

Extended Forecast for
3 Miles S Raleigh NC

Tonight	Wednesday	Wednesday Night	Thursday	Thursday Night	Friday	Friday Night	Saturday
							
Clear then Areas Fog	Areas Fog then Sunny	Mostly Clear	Mostly Sunny	Partly Cloudy then Slight	Chance Showers	Showers Likely	Chance Showers

What does 40% mean?

12-hour Probability of Precipitation (PoP12)

Is the likelihood, expressed as a percent, of a measurable precipitation event (1/100th of an inch) at a grid point during the indicated valid period.

Probability of precipitation describes:

- The chance of precipitation...
- ...at a particular point
- ...over a certain period of time

Going back to our example on slide 2, there is a 40% chance that at least 0.01" of rain will fall at the RDU Wake County over Saturday, from 7:00 AM EST to 7:00 PM EST.

NWS Forecast Office, Raleigh, NC

[Weather.gov](https://www.weather.gov) > Raleigh, NC

Raleigh, NC
Weather Forecast Office

[Current Hazards](#)

[Current Conditions](#)

[Radar](#)

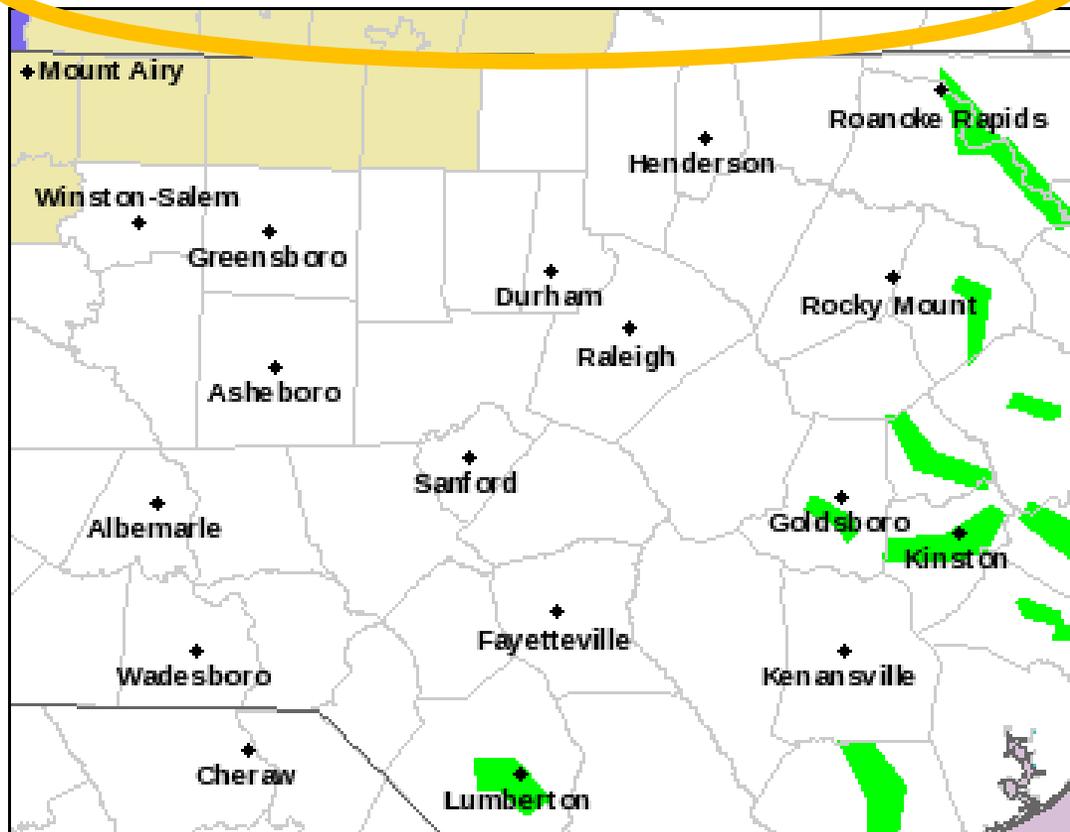
[Forecasts](#)

[Rivers and Lakes](#)

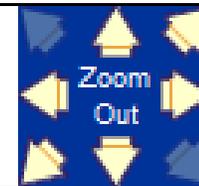
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[Hazardous Weather
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Last Map Update: Fri, Feb. 26, 2021 at 7:20:29 pm EST

National Digital Forecast Database on NWS webpage

12-hour Probability of Precipitation (PoP12)

Is the likelihood, expressed as a percent, of a measurable precipitation event (1/100th of an inch) at a grid point during the indicated valid period.

Graphical Forecasts - North Carolina

[Daily View](#) | [Weekly View](#) | [Loops](#)

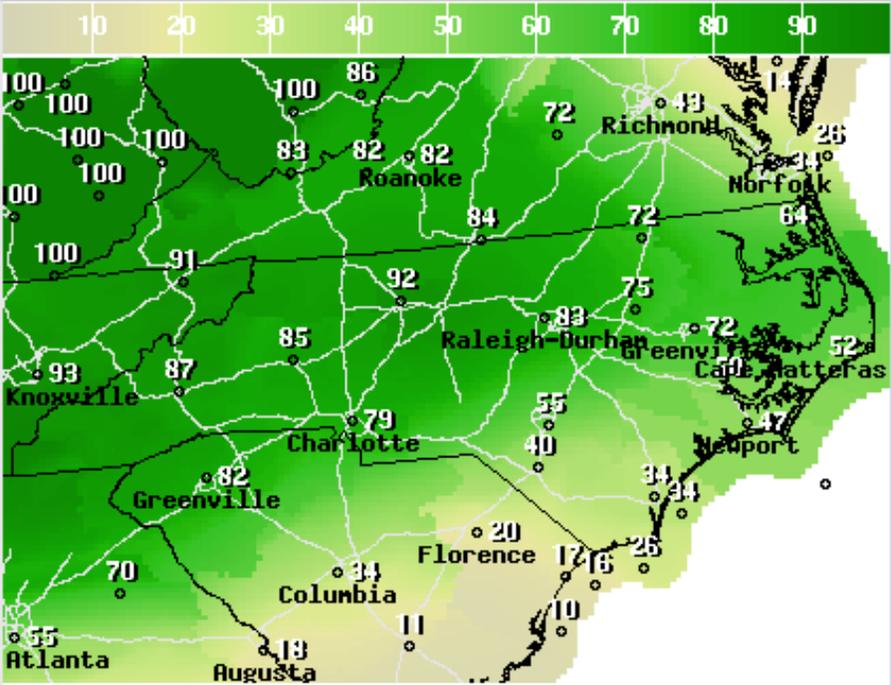
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[Public](#) | [Marine](#) | [Fire Weather](#) | [Tropical](#) | [Hazardous](#)

| View Images | Get Text Forecast

Mouse over the table below to change the forecast image.

▶ Today	◀ -12Hrs +12Hrs ▶			
Max/Min Temperature	High			
Probability of Precip.	12 hr. probability			
Weather	7am	10am	1pm	4pm
Hazards	7am	10am	1pm	4pm
Temperature	7am	10am	1pm	4pm
Dewpoint	7am	10am	1pm	4pm
Wind Speed & Direction	7am	10am	1pm	4pm
Wind Gust	7am	10am	1pm	4pm
Sky Cover	7am	10am	1pm	4pm
Amount of Precip.	QPF		QPF	
Snow Amount	Snow Amount		Snow Amount	
Ice Accumulation	6hr Ice		6hr Ice	
Wave Height	Wave Height		Wave Height	
Apparent Temperature	7am	10am	1pm	4pm
Relative Humidity	7am	10am	1pm	4pm
Next Image	◀		▶	

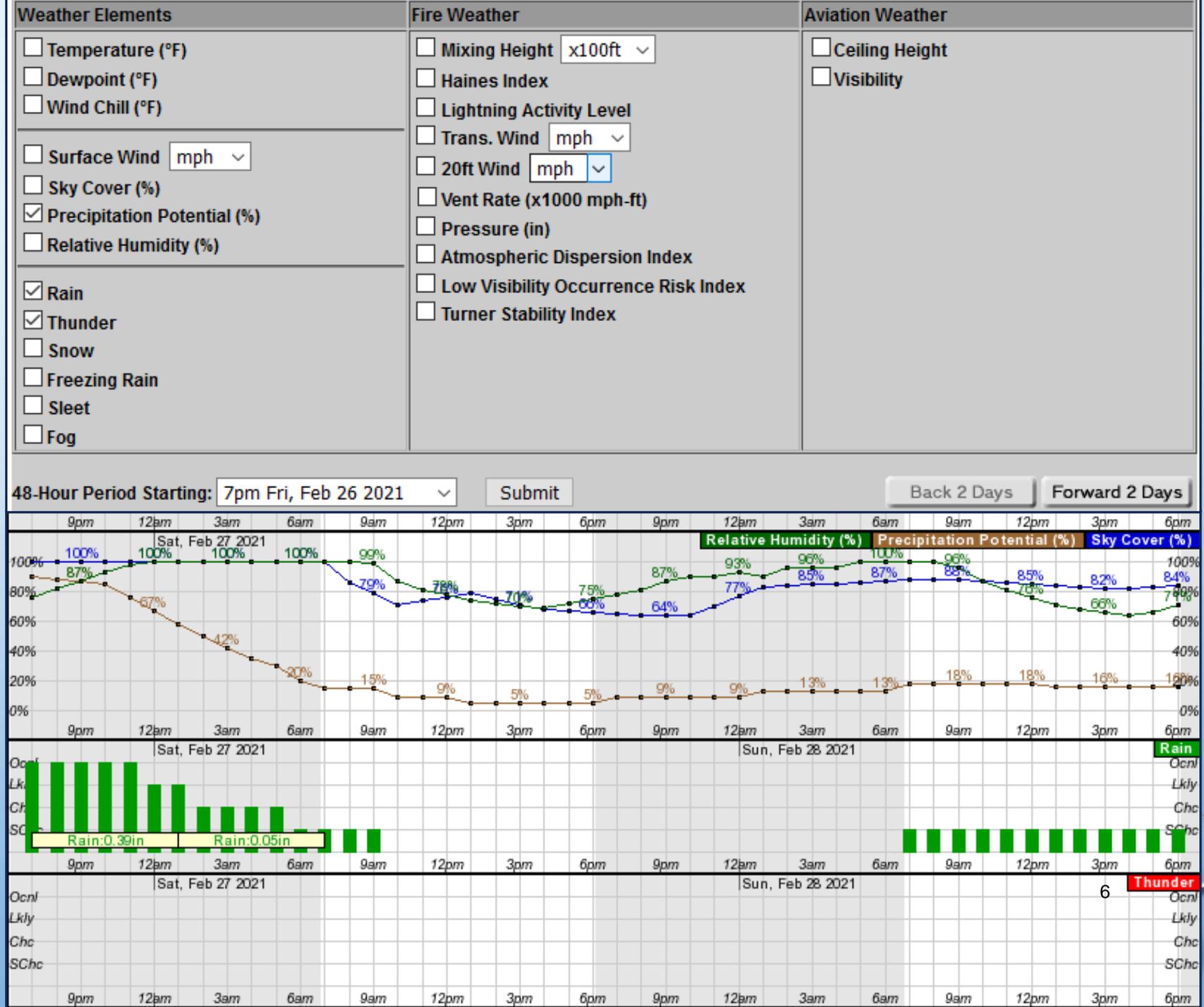


12Hr Prob. Precip (%) Ending Fri Feb 26 2021 7PM EST
(Sat Feb 27 2021 00Z)

 **National Digital Forecast Database**
22z issuance Graphic created-Feb 26 5:42PM EST

Hourly Weather Forecast on NWS webpage

Example is for Eastern Wake County



How is the PoP percentage derived?

Rain chances = Forecaster certainty of rain developing X Percent of area affected



Photo by [Sourav Mishra](#) from [Pexels](#)

If the forecaster was 80% certain that rain would develop but only expected to cover 50% of the forecast area, then the forecast would read "a 40% chance of rain" at the point for which that forecast is valid over the period of time given.

PoP doesn't tell you

- how long it will rain
- how much it will rain
- the intensity of the rain
- whether there will be severe storms

Can be helpful in determining whether to bring an umbrella or not!





Questions?

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