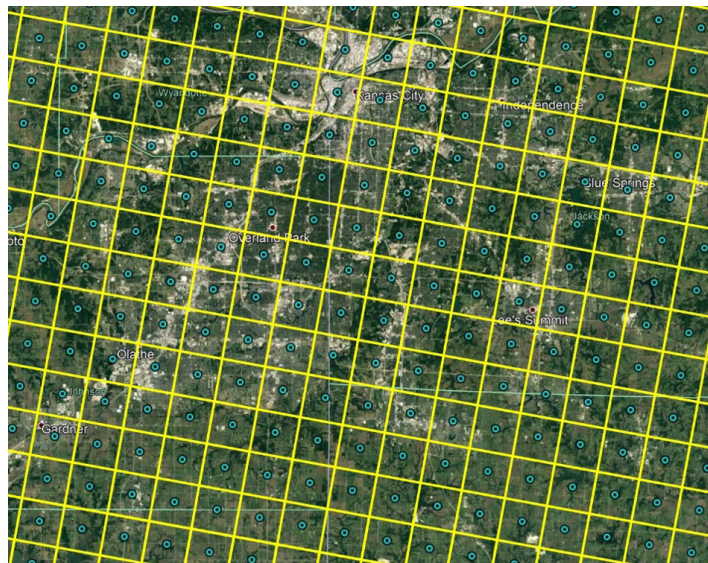


National Stage IV QPE Product, referred to as Stage Gridded Data, is a rainfall measurement and recording system. Stage Gridded Data uses radar and a set of rain gauges to determine hourly rainfall measurements within the U.S. Stage Gridded Data is collected and processed by River Forecast Centers (RFCs), a part of the U.S. government’s National Oceanic Atmospheric Administration (NOAA). This system has been operational since 2001. Stage Gridded Data is often used to validate other NOAA products. For reporting, Stage Gridded Data uses the national grid system, developed by NOAA, to designate grid sections for rainfall value assessment.

Each grid section is an area comprised of an approximately 4km by 4km (≈2.5 miles x 2.5 miles) square**. Radar analyses are averaged across each defined grid section to estimate preliminary rain measurements. This average rain value is compared to rain gauges within the defined section and may be adjusted for accuracy using the rain gauge values. If gauge measurements are missing within a section, gauges in nearby sections can be utilized. After final analyses, a rain measurement value for the grid is computed. All points within the defined grid section will have the same rain measurement value for the defined time period.

Preliminary values for Stage Gridded Data are available within one day of the time defined by the data files. Stage



Example of the national grid system sections used to determine Stage Gridded Data

Gridded Data adjustments may occur for up to 8 days as late rain gauge data is acquired and analyzed by people at the RFCs, improving the accuracy of the rainfall value. Therefore, final values for an event will not be available until the 8th day after the event.

For more information, please visit <https://www.emc.ncep.noaa.gov/mmb/SREF/pcpan/>.

Comparison of Stage Gridded Data hourly data (inches) for a location compared to a third-party meteorologist’s determination using radar analyses and sourced data

Location & Date of Hourly Measurements	Stage Gridded Data	3rd-Party Meteorologists
Raleigh/Durham, NC—September 27, 2021	0.30	0.31
Salem, VA—July 1, 2021	0.36	0.41
Fort Wayne, IN—July 27, 2019	0.02	0.01
Richmond, VA—October 13, 2019	0.15	0.15

* National Centers for Environmental Prediction (NCEP) Stage IV Quantitative Precipitation Estimation Product (QPE)

** Please note vertices for defined sections within the grid are not perfectly square due to the earth’s curvature.