

NOUS41 KWBC 151952
PNSWSH

Service Change Notice 15-34
National Weather Service Headquarters Washington DC
352 PM EDT Mon Jun 15 2015

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From: David Novak
 Director, Weather Prediction Center

Subject: Addition of Probabilistic Quantitative Precipitation Forecast
(PQPF) Grids: Effective July 15, 2015

Effective Wednesday, July 15, 2015, at 1800 Coordinated Universal Time (UTC), the National Centers for Environmental Prediction's (NCEP's) Weather Prediction Center (WPC) will begin creating Probabilistic Quantitative Precipitation Forecast (PQPF) grids.

The PQPF provides a probabilistic forecast of rainfall over the continental United States in 6-, 24- and 72-hour increments. The probabilistic quantitative precipitation forecast (PQPF) guidance is used by forecasters and hydrologists to determine the probability of any rainfall amount at a given location. NCEP/WPC will generate the PQPF grids at five km resolution.

The probabilistic QPF forecasts provide information in two different forms:

- Probabilities of exceeding a threshold show probability that the 6-, 24- or 72-hour accumulation of precipitation will equal or exceed the given threshold. As an example, consider the 0.50 inch threshold. If a point of interest falls within the 40 percent contour on the probability map, then the chance of precipitation exceeding 0.50 inch is 40 percent or greater. As the threshold values increase, the probabilities of exceeding them decrease.

- Percentile accumulations show the precipitation amount associated with a given percentile in the distribution. The percentile value is the percent chance of precipitation accumulating less than the depicted amount. From the opposite perspective, 100 minus the percentile is the chance of precipitation exceeding the depicted amount. For example, there is a 10 percent chance of precipitation accumulating less than the amounts shown on the 10th percentile accumulation map; while, there is a 90 percent chance that precipitation will exceed the 10th percentile accumulations. Thus, lower percentile values are associated with smaller accumulations than are higher percentile values.

The product headers may be constructed as follows:

T1 T2 A1 A2 ii CCCC
T1 = H T2 = E A1 = N
CCCC = KWNH

Threshold Values:

A2 specifies the following parameters:

B - F006
C - F012
D - F018
E - F024
F - F030
G - F036
H - F042
I - F048
X - F054
Y - F066
K - F072

ii specifies the following parameters:

- 6-hour precipitation >= 0.01 inch threshold
- 6-hour precipitation >= 0.25 inch threshold
- 6-hour precipitation >= 0.50 inch threshold
- 6-hour precipitation >= 1.00 inch threshold
- 6-hour precipitation >= 2.00 inch threshold
- 6-hour precipitation >= 4.00 inch threshold
- 24-hour precipitation >= 1.00 inch threshold
- 24-hour precipitation >= 2.00 inch threshold
- 24-hour precipitation >= 4.00 inch threshold
- 24-hour precipitation >= 8.00 inch threshold
- 24-hour precipitation >= 16.00 inch threshold
- 72-hour precipitation >= 1.00 inch threshold
- 72-hour precipitation >= 2.00 inch threshold
- 72-hour precipitation >= 4.00 inch threshold
- 72-hour precipitation >= 8.00 inch threshold
- 72-hour precipitation >= 16.00 inch threshold

Percentiles:

A2 specifies the following parameters:

B - F006
C - F012
D - F018
E - F024
F - F030
G - F036
H - F042
I - F048
X - F054
J - F060
Y - F066
K - F072

- ii specifies the following parameters:
- 6-hour precipitation 10th percentile
 - 6-hour precipitation 50th percentile
 - 6-hour precipitation 90th percentile
 - 24-hour precipitation 10th percentile
 - 24-hour precipitation 50th percentile
 - 24-hour precipitation 90th percentile
 - 72-hour precipitation 10th percentile
 - 72-hour precipitation 50th percentile
 - 72-hour precipitation 90th percentile

Table 1: Sample Products Headers:

Product	WMO Header
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6-hour >= 0.25 inch at F12	HENC12 KWNH
24-hour 50th percentile at F48	HENI55 KWNH

For more information, please contact:

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National Service Change Notices are online at:

<https://www.weather.gov/notification/archive>

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