

NOUS41 KWBC 221951  
PNSWSH

Service Change Notice 15-37  
National Weather Service Headquarters Washington DC  
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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) 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 5 km resolution.

The probabilistic QPF forecasts provide information in two different forms:

1. 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% or greater. As the threshold values increase, the probabilities of exceeding them decrease.
2. 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% 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

J - F060

Y - F066

K - F072

ii specifies the following parameters

11 - 6-hour precipitation  $\geq$  0.01 inch threshold

12 - 6-hour precipitation  $\geq$  0.25 inch threshold

13 - 6-hour precipitation  $\geq$  0.50 inch threshold

14 - 6-hour precipitation  $\geq$  1.00 inch threshold

15 - 6-hour precipitation  $\geq$  2.00 inch threshold

16 - 6-hour precipitation  $\geq$  4.00 inch threshold

17 - 24-hour precipitation  $\geq$  1.00 inch threshold

18 - 24-hour precipitation  $\geq$  2.00 inch threshold

19 - 24-hour precipitation  $\geq$  4.00 inch threshold

20 - 24-hour precipitation  $\geq$  8.00 inch threshold

21 - 24-hour precipitation  $\geq$  16.00 inch threshold

22 - 72-hour precipitation  $\geq$  1.00 inch threshold

23 - 72-hour precipitation  $\geq$  2.00 inch threshold

24 - 72-hour precipitation  $\geq$  4.00 inch threshold

25 - 72-hour precipitation  $\geq$  8.00 inch threshold

26 - 72-hour precipitation  $\geq$  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

51 - 6-hour precipitation 10th percentile  
52 - 6-hour precipitation 50th percentile  
53 - 6-hour precipitation 90th percentile  
54 - 24-hour precipitation 10th percentile  
55 - 24-hour precipitation 50th percentile  
56 - 24-hour precipitation 90th percentile  
57 - 72-hour precipitation 10th percentile  
58 - 72-hour precipitation 50th percentile  
59 - 72-hour precipitation 90th percentile

Table 1: Sample products headers

Product	WMO Header
6h >=0.25 in at F12HENC12 KWNH	
24h 50th pcnt at F48	HENI55 KWNH

For more information, please contact

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National Service Change Notices are online at:

<http://www.weather.gov/os/notif.htm>

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