Service Change Notice 15-37
National Weather Service Headquarters Washington DC
352 PM EDT Mon Jun 15 2015

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From: David Novak
Director, Weather Prediction Center


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 5 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% 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% 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 >= 0.01 inch threshold
12 - 6-hour precipitation >= 0.25 inch threshold
13 - 6-hour precipitation >= 0.50 inch threshold
14 - 6-hour precipitation >= 1.00 inch threshold
15 - 6-hour precipitation >= 2.00 inch threshold
16 - 6-hour precipitation >= 4.00 inch threshold
17 - 24-hour precipitation >= 1.00 inch threshold
18 - 24-hour precipitation >= 2.00 inch threshold
19 - 24-hour precipitation >= 4.00 inch threshold
20 - 24-hour precipitation >= 8.00 inch threshold
21 - 24-hour precipitation >= 16.00 inch threshold
22 - 72-hour precipitation >= 1.00 inch threshold
23 - 72-hour precipitation >= 2.00 inch threshold
24 - 72-hour precipitation >= 4.00 inch threshold  
25 - 72-hour precipitation >= 8.00 inch threshold  
26 - 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:  
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 Product Headers

<table>
<thead>
<tr>
<th>Product</th>
<th>WMO Header</th>
</tr>
</thead>
<tbody>
<tr>
<td>6h  &gt;=0.25 in at F12</td>
<td>HENC12 KWNH</td>
</tr>
<tr>
<td>24h 50th pcnt at F48</td>
<td>HENI55 KWNH</td>
</tr>
</tbody>
</table>

For more information, please contact

David Novak  
Weather Prediction Center  
College Park, MD  
301-683-1484  
david.novak@noaa.gov

National Service Change Notices are online at:
https://www.weather.gov/notification/archive

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