Weeks 3-4 Temperature Outlook
Product Description Document (PDD)

Part I - Mission Connection

a. <u>Product Description</u> – The National Weather Service (NWS), Climate Prediction Center (CPC) delivers real-time products and information in order to monitor and predict climate variations and their potential associated impacts on timescales from weeks to about one year. The objective is to promote effective management of climate risk and a climate-resilient society. The Weeks 3-4 Temperature Outlook will bridge the gap between the Week 2 and 1 Month outlook time periods and will consist of two components: (1) a temperature outlook map targeting the combined Weeks 3-4 outlook period (see details in Part II section a), and (2) prognostic map discussion (PMD) text explaining the rationale for the forecast.

b. <u>Purpose</u> – To provide an outlook for mean temperature for the Weeks 3-4 outlook time period, filling the gap in the NWS suite of products between the Days 8-14 and monthly outlooks. Provide advance notice of potential temperature pattern changes to further assist decision makers in weather and climate sensitive activities in their decisions.

c. <u>Audience</u> – Users include (1) the NWS local and regional field structure, (2) local, state, regional and national government entities (emergency management and planning), (3) the private sector (energy, water resource management, financial, etc. industries) and (4) the general public, among others.

d. <u>Presentation Format</u> – The temperature outlook maps will be displayed as Graphic Interchange Format (GIF) images along with the PMD will be available on a web page. The link is provided below.

   http://www. cpc.ncep.noaa.gov/products/predictions/WK34/index.php

e. <u>Feedback Method</u> -
    Questions and comments may be addressed to:

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Part II - Technical Description

a. Format & Science Basis – These are experimental two-category (above- or below-average) outlook maps, displayed as GIF images. These outlooks differ from official operational three-category outlooks currently used for the monthly and seasonal forecasts.

The shading on the temperature map depicts the favored category, either above-normal (A) or below-normal (B) for 2-week mean temperature with the solid contour lines giving the probability (>50%) of this more likely category (above or below). In areas where the likelihoods of 2-week mean temperature are similar to climatological probabilities and a category cannot be favored, equal chances (EC; 50% probability for each category) is indicated. Centers of maximum probability are labelled with the letters A or B to denote the most likely category.

The scientific basis for the outlook includes information from slowly varying components of the climate system such as the El Nino-Southern Oscillation (ENSO), the Madden-Julian Oscillation (MJO), trends, local sea surface temperature (SST), soil moisture and snow cover anomalies, bias corrected and calibrated dynamical model guidance of several variables and empirical-statistical forecast tools developed to target temperature based on the above short term climate variability.

b. Product Availability –   The product will be released once per week, every Friday between 3-4 PM Eastern time.

c. Additional Information –   An example of the product along with sample PMD text is included below.
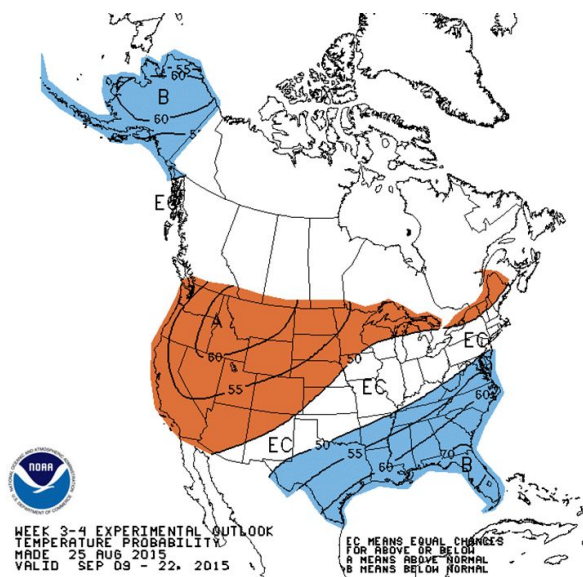
Prognostic Discussion for Operational Weeks 3-4 Temperature
outlooks and Experimental Weeks 3-4 Precipitation Outlook
NWS Climate Prediction Center College Park MD
300PM EDT Fri Aug 14 2015

Weeks 3-4 Forecast Discussion Valid Sat Aug 29 2015-Fri Sep 11
2015

A review of large scale climate factors in mid-August continues
to reflect ongoing and strengthening El Nino conditions across
the equatorial central and eastern Pacific ocean. Soil moisture
anomalies remain high in several areas of the CONUS including
anomalously wet conditions from the Southwest northeastward to
the Ohio Valley and dry conditions increasing across the Pacific
Northwest. Recent MJO activity observed until mid-July has
weakened and does not play a substantial role in the outlook.

The late August to early September two-week outlook depicts
enhanced chances for above median precipitation across the
Southwest monsoon regions northeastward to the north-central
Plains. Below median rainfall is forecast for the Southeast,
with above-average temperatures favored across the Southeast and
Northwest. Below normal temperatures are more likely than not
across northern Alaska.

A consensus among dynamical models, including the ECMWF and CFS,
forms the primary basis for this forecast. There is little
consistency between the dynamical model forecasts for the U.S.
and El Nino composites. This may be due to a blocking pattern
over the northern Pacific that is preventing the typical ENSO
forced wave train from propagating over the mid-latitudes.

Dynamical model guidance and El Nino base state favor above
normal temperatures and precipitation for Hawaii.

	Temperature	Precipitation (experimental)
Hilo	A60	A60
Kahului	A60	A60
Honolulu	A60	A60
Lihue	A60	A60