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Public Information Notice Updated
National Weather Service Headquarters Silver Spring MD
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From: Jon Gottschalck
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Subject: Updated: Climate Prediction Center changing to
grid-based historical data for production of the
Degree Day Outlook Product beginning with the
March 16, 2017, issuance

Updated to add link to current product:
<http://www.cpc.ncep.noaa.gov/pacdir/DDdir/ddforecast.txt>

A sample of the new product (with the same valid dates as the
current product) is available at

<http://www.cpc.ncep.noaa.gov/pacdir/DDdir/ddforecastg.txt>

The National Centers for Environmental Prediction (NCEP) Climate
Prediction Center (CPC) is accepting comments until March 3,
2017 on an update to the Climate Prediction Center monthly
degree day outlooks.

The outlooks are available at
<http://www.cpc.ncep.noaa.gov/pacdir/DDdir/ddforecast.txt>

Heating and cooling degree days are derived quantities based on
daily mean temperatures that are used to estimate weather-
related energy consumption. Seasonal and monthly degree day
totals are closely related to the seasonal mean temperature
making it possible to use the CPC seasonal temperature outlook
to produce an outlook for monthly degree day totals. Regional
degree day totals are generally based on population-weighted
averages (rather than area-weighting) over geographic areas.
Statistics based on historical data (1961 - 2010) were used to
estimate the relationship between the monthly and seasonal mean
temperature and degree day totals. These statistics are applied
to the CPC Probability of Exceedence temperature outlooks to
obtain a probabilistic estimate of degree day totals.

The historical data for both temperature and degree days are
based on the climate division (CD) data from the National

Centers for Environmental Information (NCEI). Until recently the NCEI based its CD data on regional station averages. The NCEI recently developed methodology to more accurately estimate climate division averages based on terrain adjusted gridded analysis of station data. The modern methodology was applied to historical data, and the NCEI replaced the station-based CD data with the more accurate grid-based CD data in 2014. More information on the NCEI data sets can be found in the following link:

<https://www.ncdc.noaa.gov/monitoring-references/maps/us-climate-divisions.php>.

The grid-based CD data is, in general, slightly cooler than the station-based data, leading to substantial differences in the 30-year normals of both temperature and degree days. This required that the CPC degree day outlook be adjusted to be consistent with the new population-weighted degree day outlooks available from the NCEI.

Beginning with the forecast issued on the third Thursday in March 2017, the revised Degree Day Outlook based on grid-based NCEI data will replace the current station-based degree day product. The impact in the anomaly forecast is minor, but the monthly degree day totals and their climatological values can be substantially different from the existing product.

Send comments to:

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