To:      Subscribers:
- NOAA Weather Wire Service
- Emergency Managers Weather Information Network
- NOAAPort
- Other NWS Partners and Employees

From:    Jon Gottschalck
         Chief, Operational Prediction Branch

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:


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:

Matthew Rosencrans
Head of Forecast Operations, Climate Prediction Center
College Park, MD
matthew.rosencrans@noaa.gov

For more information, please contact:

Jon Gottschalck
NWS NCEP CPC Operational Prediction Branch
College Park, MD
jon.gottschalck@noaa.gov
National Public Information Statements are online at:

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

NNNN