6-Month Climate Model Forecast Summary for Pennsylvania
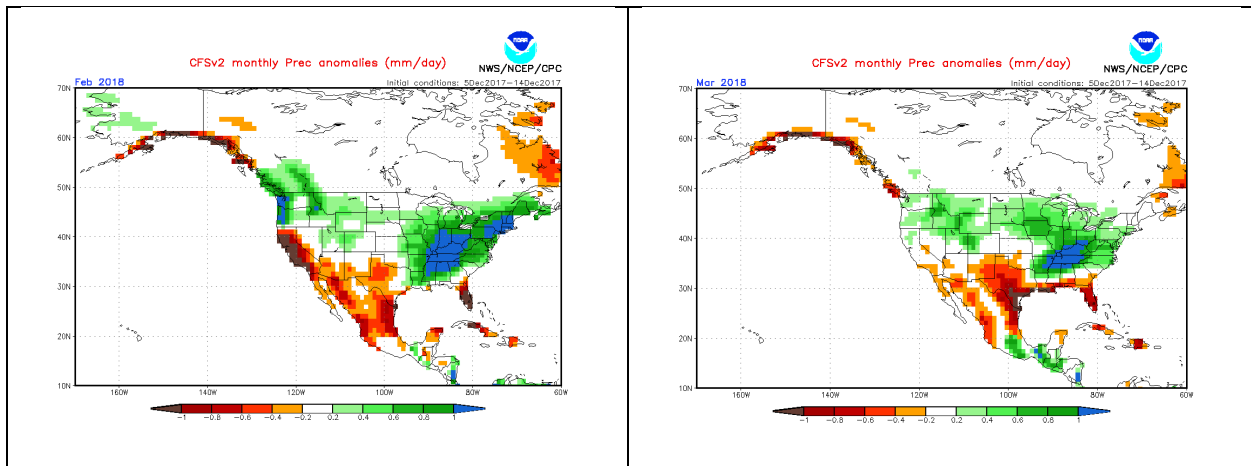
December 15, 2017

Climate models continue to improve and may have some skill in forecasting patterns of temperature and precipitation anomalies several months in advance. However, climate modeling is still a very inexact science. Lacking highly precise observations from the earth's environment (air, land and sea) and a full understanding of the scientific processes that affect the motions in the atmosphere, it is impossible to make precise seasonal-scale weather predictions with any accuracy. Please keep this in mind as you review this forecast.

The following forecast is produced based on analysis of monthly forecast products from the Climate Forecast System Version 2 (CFS) and the North American Multi-Model Ensemble (NMME). Links to forecasts are provided at the end of this document.

Discussion:

As we approach the winter solstice and the official start of the winter season, current climate forecasts indicate a generally wet winter and early spring. Below are images showing the February and March forecasts from the most recent model runs of the CFSv2.

Paired with the relatively wet forecast, temperature forecasts are generally above normal for at least the latter half of the winter, as well. This generally matches the storm tracks typically seen during La Nina conditions – storms tend to move through the Ohio Valley with temperatures on the milder side in the Mid-Atlantic. Thus, even though the forecast is wet, it may be difficult to get persistent periods of snow during the late January through late March timeframe. The remainder of the forecast period is generally near normal levels for both temperature and precipitation. It is important to note that a few model guidance products are showing a rather strong warm signal during the month of June. This signal could be early indications of what may be a rather warm beginning to the summer, especially across the western half of the country.

Forecast:

Changes highlighted in yellow
Previous forecast in parentheses

Month	Temperature	Precipitation
January	U(A)	A(A)
February	A(A)	A(A)
March	A(A)	A(A)
April	N(N)	U(B)
May	N(N)	N (N)
June	A	U

BB = Much Below Normal
B = Below Normal
N = Near Normal
A = Above Normal
AA = Much Above Normal
U = Uncertain

The next forecast will be issued on January 1, 2018.

REFERENCES:

CFSv2 Forecasts:
http://www.cpc.ncep.noaa.gov/products/CFSv2/htmls/glbT2me1Mon.html
CFS Monthly Forecasts:
http://climate.met.psu.edu/CFS/monthly_by_day.php
NMME Forecasts
http://www.cpc.ncep.noaa.gov/products/NMME/monanom.shtml