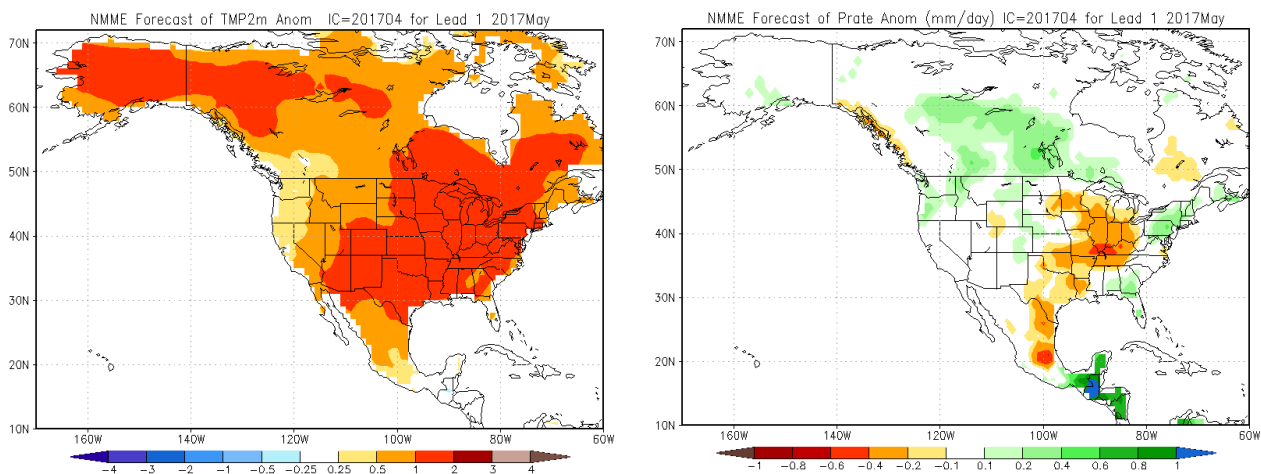# 6-Month Climate Model Forecast Summary for Pennsylvania
April 15, 2017

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:

The two forecasts illustrated above suggest above average temperatures as well as above average precipitation for the month of May in Pennsylvania. This model illustrates temperatures will be roughly 1-2 degrees Celsius above normal. Models initially forecasted May to be much warmer than average but they have now trended closer to normal. Some models had May receiving below average precipitation but the most recent ones are showing above average precipitation. Caution should be taken since there is still some discrepancy between the models. Temperature patterns from May through October vary between normal and above average. Similarly, precipitation patterns indicate an analogous trend.

Forecast:
Changes highlighted in yellow
Previous forecast in parentheses

Month	*Temperature*	*Precipitation*
May	**A (U)**	U (U)
June	A (A)	U (U)
July	**U (A)**	**A (N)**
August	**U (A)**	**N (U)**
September	**A (U)**	U (U)
October	**A**	**B**

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 May 1, 2017.

References:

CFS forecasts:
http://www.cpc.ncep.noaa.gov/products/CFSv2/CFSv2seasonal.shtml
CFS forecasts:
http://www.cpc.ncep.noaa.gov/products/people/mchen/CFSv2FCST/monthly/
NMME forecasts: http://www.cpc.ncep.noaa.gov/products/NMME/monanom.shtml
NMME forecasts:
http://www.cpc.ncep.noaa.gov/products/NMME/verif/monindex.html