6-Month Climate Model Forecast Summary for Pennsylvania

October 1, 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:

Recent models have shown that the temperature forecast for the next six months will stay near or above normal temperature values. The greatest chance for above normal temperatures appear to be during the months of November and December. This is in good agreement between both the NMME and the CFS models.

The most recent trends show precipitation amounts at or slightly below normal for the state until the end of the year, with the greatest chance of below normal precipitation in November. Models also suggest above normal precipitation for the month of January. Finally, models have also began to back off on the idea of above normal precipitation anomalies for February. This is especially notable in the CFS model output.

Forecast:

Changes highlighted in yellow
Previous forecast in parentheses

Month	Temperature	Precipitation
October	N(N)	N(N)
November	A(N)	B(N)
December	A(A)	N(N)
January	N(N)	A(A)
February	N(N)	N(A)
March	U(U)	U(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 October 15, 2017.

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