

6-Month Climate Model Forecast Summary for Pennsylvania

December 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:

The NMME model shows consistent confidence in above average temperatures through the month of March. The CFS showed a trend of lacking confidence when compared to the NMME. Considering that, above average temperatures will be expected through March, with closer to average temperatures in April and May. Near average precipitation amounts are to be expected through the end of this month (December), with above average precipitation amounts expected through March. Near to below average precipitation anomalies are expected from April to Mar. The models do not differ that much in confidence when focusing on precipitation, rather they differ on overall spatially averaged anomalies.

The results were concluded via averaging special anomalies throughout the state of Pennsylvania between both models and then averaging the overall trends of each model after that.

Forecast:

Changes highlighted in yellow
Previous forecast in parentheses

Month	Temperature	Precipitation
December	A(A)	N(A)
January	A(A)	A(AA)
February	A(A)	A(A)
March	A(A)	A(AA)
April	N(A)	B(N)
May	N	N

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 December 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>