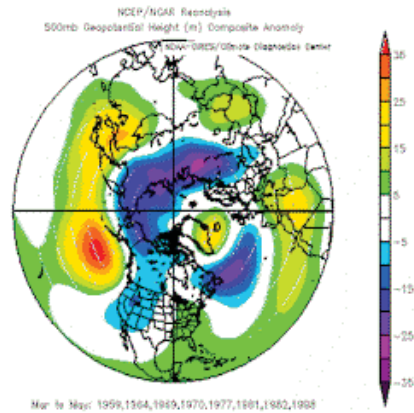


The Pennsylvania Observer

The Pennsylvania State Climatologist



FEATURED CLIMATE HIGHLIGHT

By: Steve Travis

This month's climate highlight selects years in which both temperatures were considerably below average (that is, greater than one standard deviation below the mean) AND precipitation totals were considerably above average (that is, greater than one standard deviation above the mean) for June and July in Massachusetts. These anomalous years were then used to output and compare nationwide temperature and precipitation anomalies for the month of September.

The summer has gotten off to a cool and wet start for the state of Massachusetts. The months of June and July are shaping up to be among the coolest and wettest for the two month period with June numbers both greater than one standard deviation away from the mean and July numbers appear to be following the same path.

This month's climate highlight attempts to put these numbers into perspective for the Commonwealth of Pennsylvania. Years in which both temperatures were considerably below average (that is, greater than one standard deviation below the mean) AND precipitation totals were considerably above average (that is, greater than one standard deviation above the mean) for June and July were compiled (Table 1) and compared with nationwide temperature and precipitation anomalies for the month of September using these anomalous years (Figures 1 and 2).

Year	Precipitation (inches)	Temperature (F)
1903	9.68	64.2
1915	9.71	65.6
1916	10.68	65.8
1982	13.92	65.55
1986	12.54	65.8
2000	11.32	66.25

Table 1: Years in which both an unseasonably wet June/July Precipitation and unseasonably cool June/July mean temperatures existed along with their values. It should be noted that mean values for these variables are 7.12 inches and 67.64 degrees Fahrenheit, respectively.

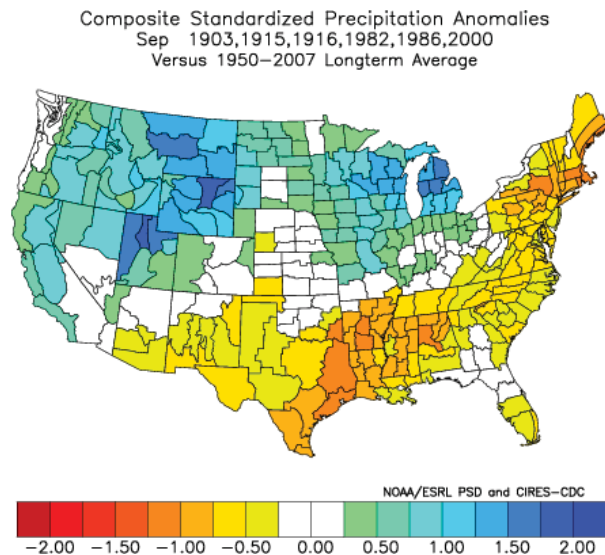


Figure 1: Nationwide precipitation anomalies using the anomalous years above. Orange and yellow colors correspond to below average precipitation while blue corresponds to above average precipitation amounts.

Composite Standardized Temperature Anomalies
Sep 1903,1915,1916,1982,1986,2000
Versus 1950–2007 Longterm Average

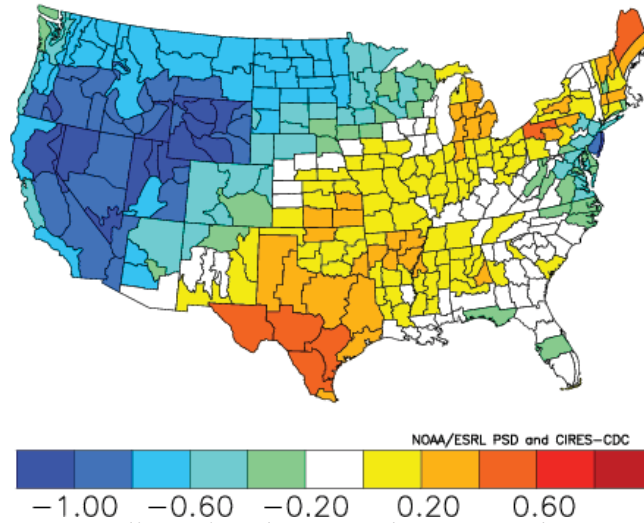


Figure 2: Nationwide temperature anomalies using the anomalous years above. Orange and yellow colors correspond to above average temperatures while blue colors correspond to below average temperatures.

Figure 1 would appear to indicate that, as a result of a wet and cool June and July in Massachusetts, the entire Commonwealth of Pennsylvania is in store for below average rainfall in September. Figure 2 is a little less conclusive. It indicates that below average temperatures are likely for the eastern third of Pennsylvania while temperatures well above average seem likely for the northwestern portion of the state. Climatology indicates that other locations across the state should see temperatures near to slightly above average for September.

Overall, based on climatology, the majority of Pennsylvania will likely be in for a warm, dry September. This may not be the best news for farmers across the state hoping for better crop yield before the end of growing season but good news for those thousands of children headed back to school and outside recess come Labor Day.