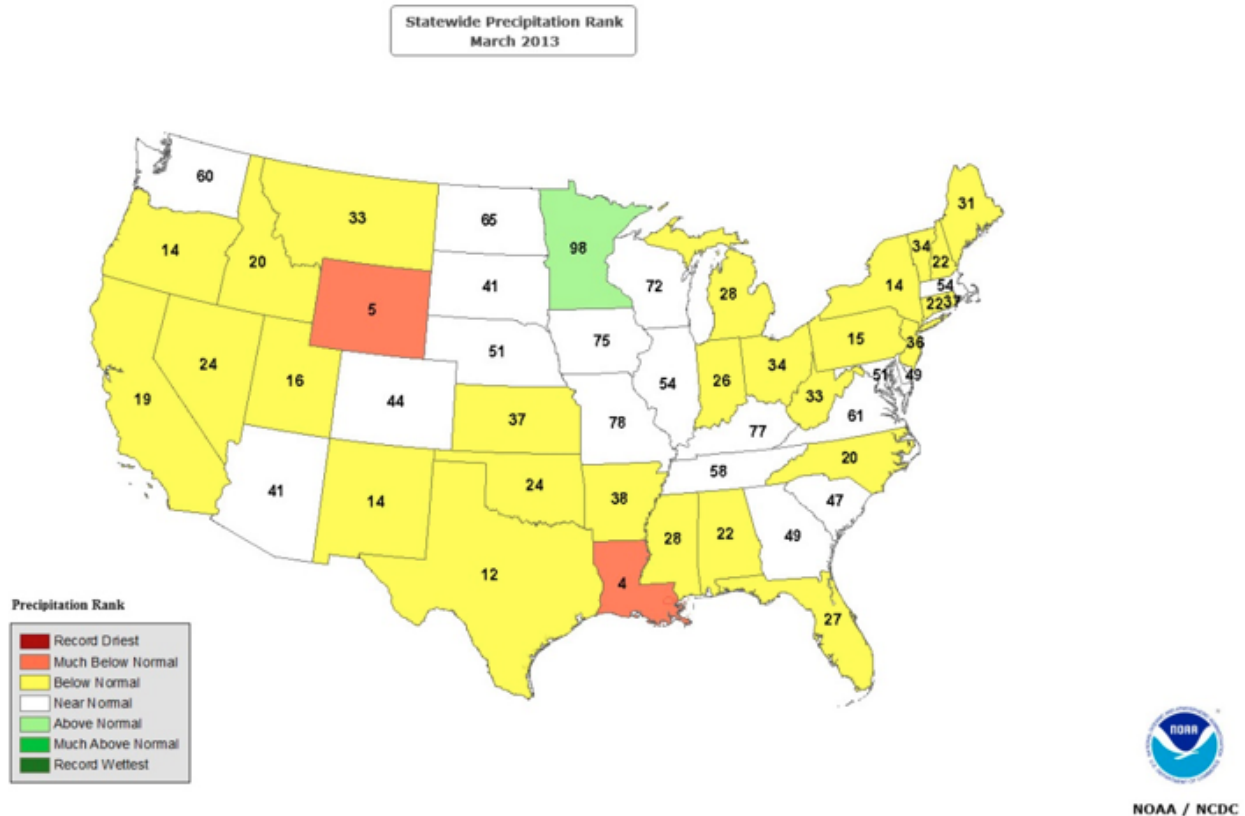


This month's highlight looks back at precipitation across Pennsylvania for the first four months of 2013. Overall, precipitation averaged 10.11", which is 2.04" inches below normal, but the month of March was particularly dry averaging only 2.10" which was 1.25" below normal making it the 15th driest on record. This was coincident with much of the nation which experienced below normal precipitation except for five states in the upper Mississippi valley region (rank > 70).



An interesting question one could ask is: Does below normal precipitation for the months of January through April portend a precipitation anomaly later during the summer? Since climate records exist for many parts of Pennsylvania for over 100 years, a statistical answer to this question can be given by finding what years observed the lowest amounts of precipitation during the months of January through April, and then observing what precipitation fell during the subsequent months of June through August for those same years. To do this, 30 years with the lowest recorded precipitation for January through April in Pennsylvania were ranked and their subsequent June through August precipitation were put into the below table.

Key: MBN = Much Below Normal (< 9.42")
 BN = Below Normal (9.42" to 11.69")
 AN = Above Normal (11.70" to 13.96")
 MAN = Much Above Normal (> 13.96")

Year	January-April	June-August	Result
1941	7.73"	14.49"	MAN
1969	7.86"	13.62"	AN
1968	8.08"	9.03"	MBN
1946	8.18"	13.89"	AN
1985	8.92"	12.09"	AN
1925	9.23"	9.34"	MBN
2009	9.35"	14.86"	MAN
1917	9.45"	14.17"	MAN
1926	9.48"	11.36"	BN
1995	9.48"	8.94"	MBN
1934	9.49"	12.17"	AN
1963	9.50"	8.80"	MBN
1930	9.51"	6.81"	MBN
1931	9.56"	12.09"	AN
1988	9.57"	10.09"	BN
2012	9.57"	11.45"	BN
1919	9.64"	13.13"	AN
1895	9.91"	8.60"	MBN
2001	9.93"	10.14"	BN
1921	10.14"	9.55"	BN
1997	10.15"	10.96"	BN
1906	10.35"	13.27"	AN
1922	10.38"	10.29"	BN
1987	10.39"	13.17"	AN
1989	10.39"	13.83"	AN
1923	10.40"	8.67"	MBN
1905	10.55"	12.93"	AN
1897	10.56"	11.01"	BN
1911	10.58"	13.13"	AN
1920	10.59"	12.08"	AN

So, does below normal precipitation during the months of January through April predict either drier or wetter conditions during the subsequent months of June through August in Pennsylvania? Based on the climate statistics in the above table, the answer is a qualified “no”. Tallying the results from the table:

Subsequent months with precipitation

Much below normal	7
Below normal	8
Above normal	12
Much above normal	3

The subsequent months are equally split between above normal and below normal at 15 years each. The

results do seem to show a tendency to observe more years with much below normal than much above normal subsequent precipitation in June through August when January through April are drier than normal, but more years of data will have to be accumulated before this can be demonstrated with statistical certainty.