



Summer 2020 Outlook for Southeast Michigan

Michigan, Average Temperature, September
1901-2000
Avg. 58.5°F



June, July and August

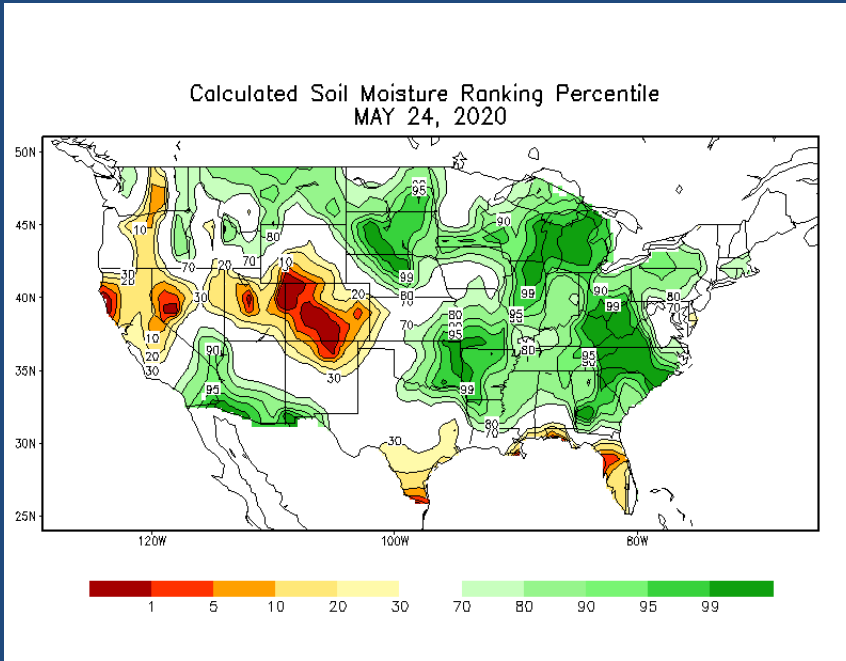




Current Conditions

Soil moisture (left) and drought (right)

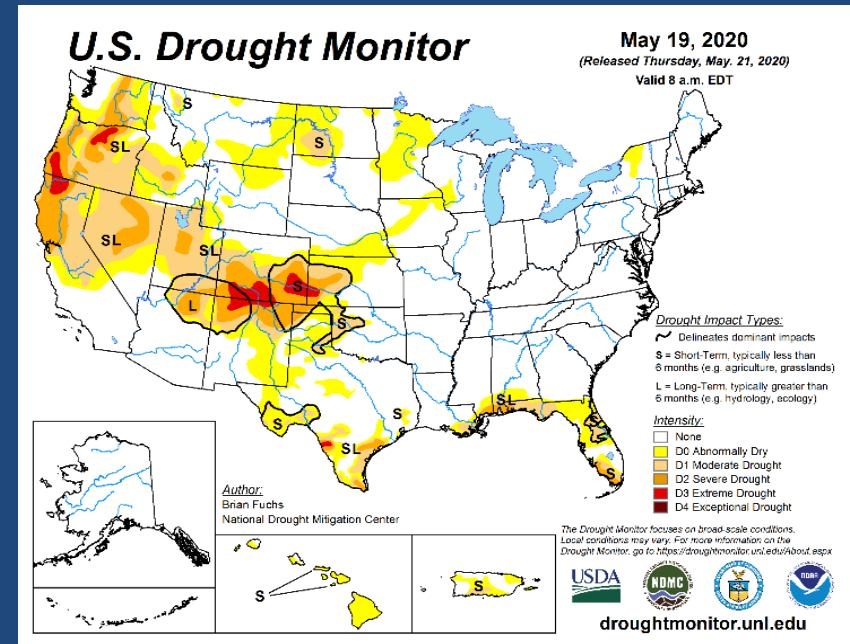
Soil Moisture



Much of the eastern 2/3 of the country is experiencing above-normal soil moisture.

The warm season is particularly sensitive to antecedent conditions, particularly soil moisture and drought. Although drought generally builds into the region from the west, the widespread wet conditions (left) over the eastern US and the limited coverage of drought east of the Rockies as of late May limit concerns.

Drought

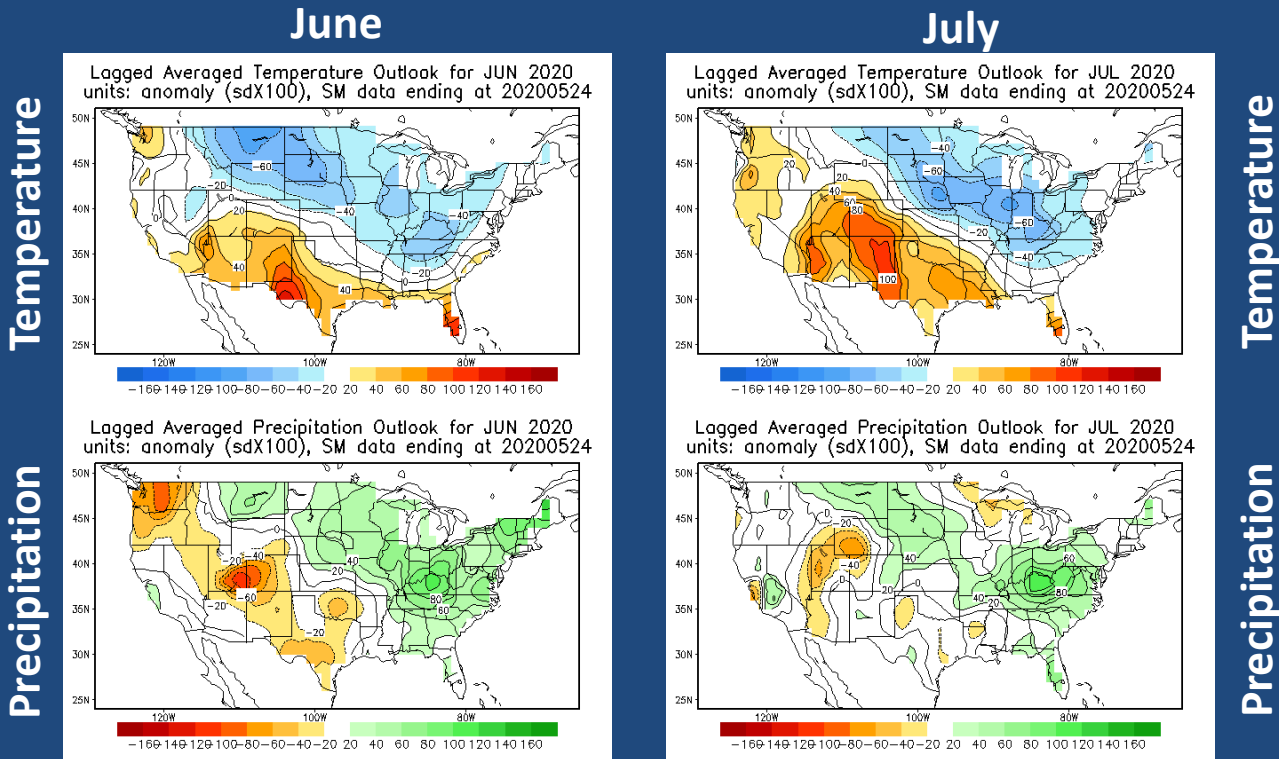


Drought is prominent in the western US, Gulf Coast, and portions of the High Plains.



CPC Soil Moisture Analogs

June output (left) and July output (right)



Soil moisture analogs generally support cooler and wetter conditions through the first 2 months of summer.

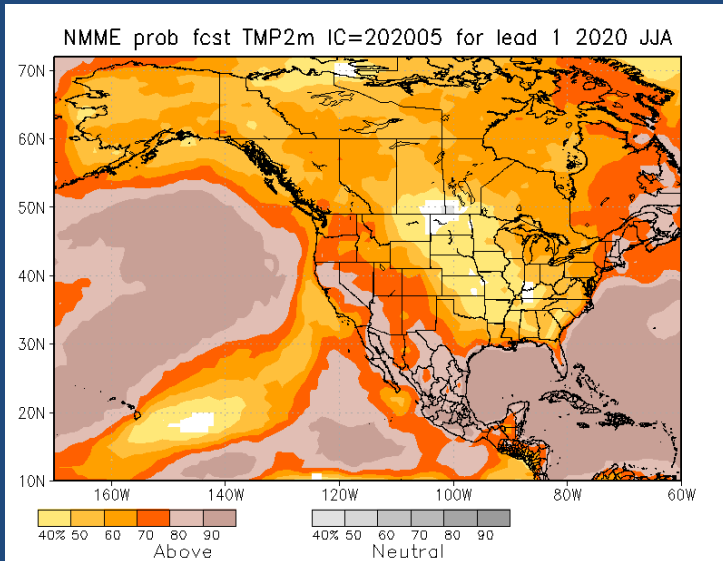
Constructed soil moisture analogs produced by CPC are not themselves a valid forecast. Their purpose is to leverage the fact that soil moisture has predictive value in the warm season by providing a depiction of how similarly wet/dry years evolved. Their usefulness is usually limited to short lead times and they are not necessarily useful every year. Only June and July are shown above.



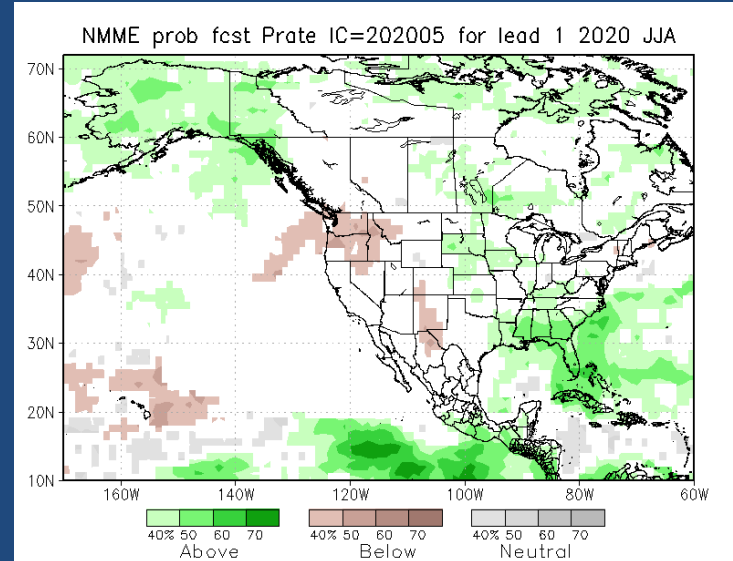
Climate Model Output

North American Multi-model Ensemble (NMME)

Summer 2020 Temperature Probabilities



Summer 2020 Rainfall Probabilities



Left: Probabilities are in favor of a warmer-than-normal summer over much of the country, especially the western US and the northeast. The Great Lakes are also favored.

Right: There is a signal for above-normal fall over the Deep South and then extending north/northwestward into the central US, Southeast Michigan being located just east of this plume.

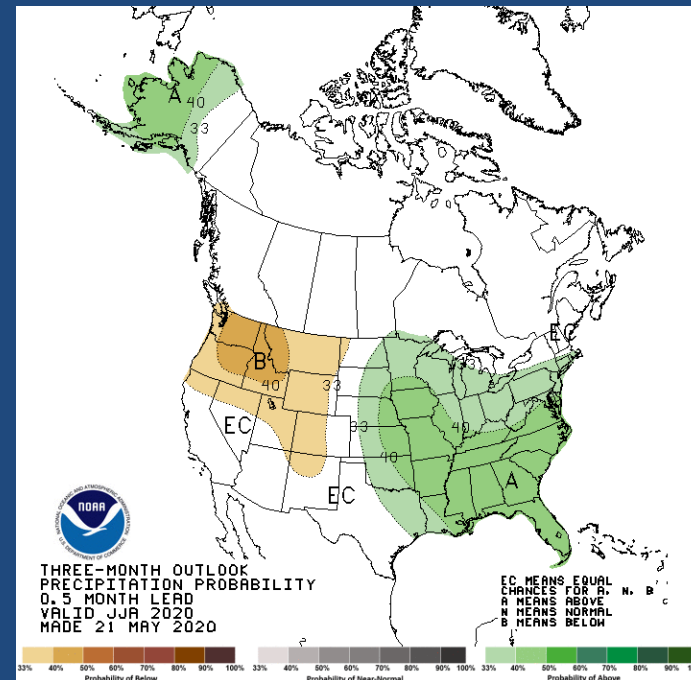
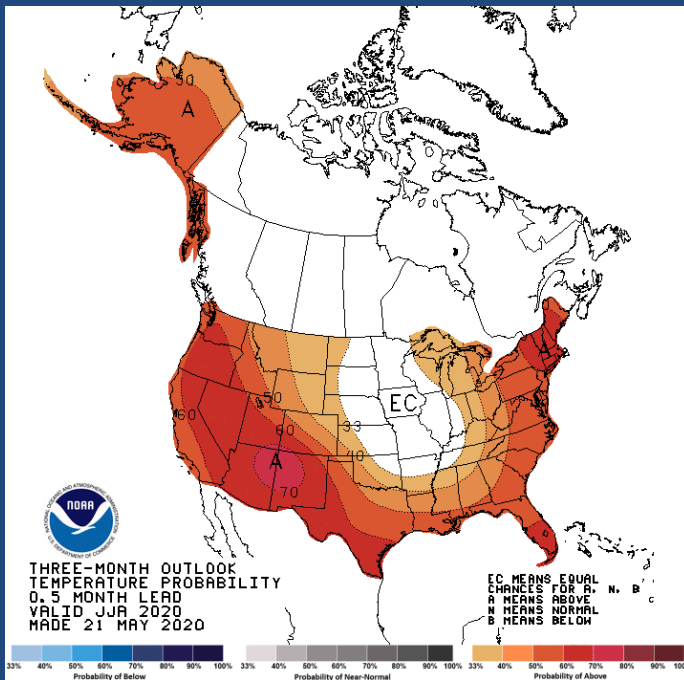
The NMME is the averaged output of several different climate models, but is not itself a valid forecast. It indicates higher probabilities for above normal temperatures nearly everywhere except those places in the central US that see greater rainfall.





Official CPC Summer Outlook

Temperature (left) and Rainfall (right)



CPC favors Southeast Michigan to have an elevated probability of being warmer and wetter than normal by the end of the 90-day June-July-August summer period.

CPC's official outlooks give strong consideration to factors discussed in this outlook as well as others, including intraseasonal variability, long term climate trends, and ENSO (ENSO is less impactful in Michigan in the summer than winter, especially when weak or neutral). **Overall, summer is expected to feature wetter-than-normal and warmer-than-normal conditions in Southeast Michigan.**





Southeast Michigan Summer Records & Trivia

Warmest temperature: Tri-Cities: 111F (7/13/1936), Flint: 108F (7/13/1936), Detroit: 105F (7/24/1934)

Warmest month: Tri-Cities: 77.5F (Jul 1921), Flint: 78.0F (Jul 1921), Detroit: 79.3F (Jul 2011)

Warmest summer: Tri-Cities: 73.0F (1931), Flint: 74.2F (1933), Detroit: 74.9F (2016)

Coldest temperature: Tri-Cities: 33F (6/8/1949), Flint: 33F (6/4/1998), Detroit: 36F (6/11/1972)

Coldest month: Tri-Cities: 60.6F (Jun 1982), Flint: 60.1F (Jun 1969), Detroit: 62.8F (Jun 1985)

Coldest summer: Tri-Cities: 64.8F (1915), Flint: 65.4F (1992), Detroit: 66.5F (1915)

Wettest month: Tri-Cities: 9.43" (Aug 2012), Flint: 11.18" (Aug 1937), Detroit: 8.76" (Jul 1878)

Wettest summer: Tri-Cities: 16.28" (1928), Flint: 18.39" (1937), Detroit: 16.96" (1896)

Driest month: Tri-Cities: 0.27" (Aug 1927), Flint: 0.16" (Jul 1939), Detroit: 0.16" (Aug 1894)

Driest summer: Tri-Cities: 3.54" (1927), Flint: 3.76" (1930), Detroit: 3.58" (1911)

Average first 90 degree temperature: Tri-Cities: Jun 18th, Flint: Jun 18th, Detroit: Jun 19th

Climatological chance of reaching 100 degrees: Approx. 14%, or about 1 in every 7 years.