

Local forecast by "City, St" or "ZIP"

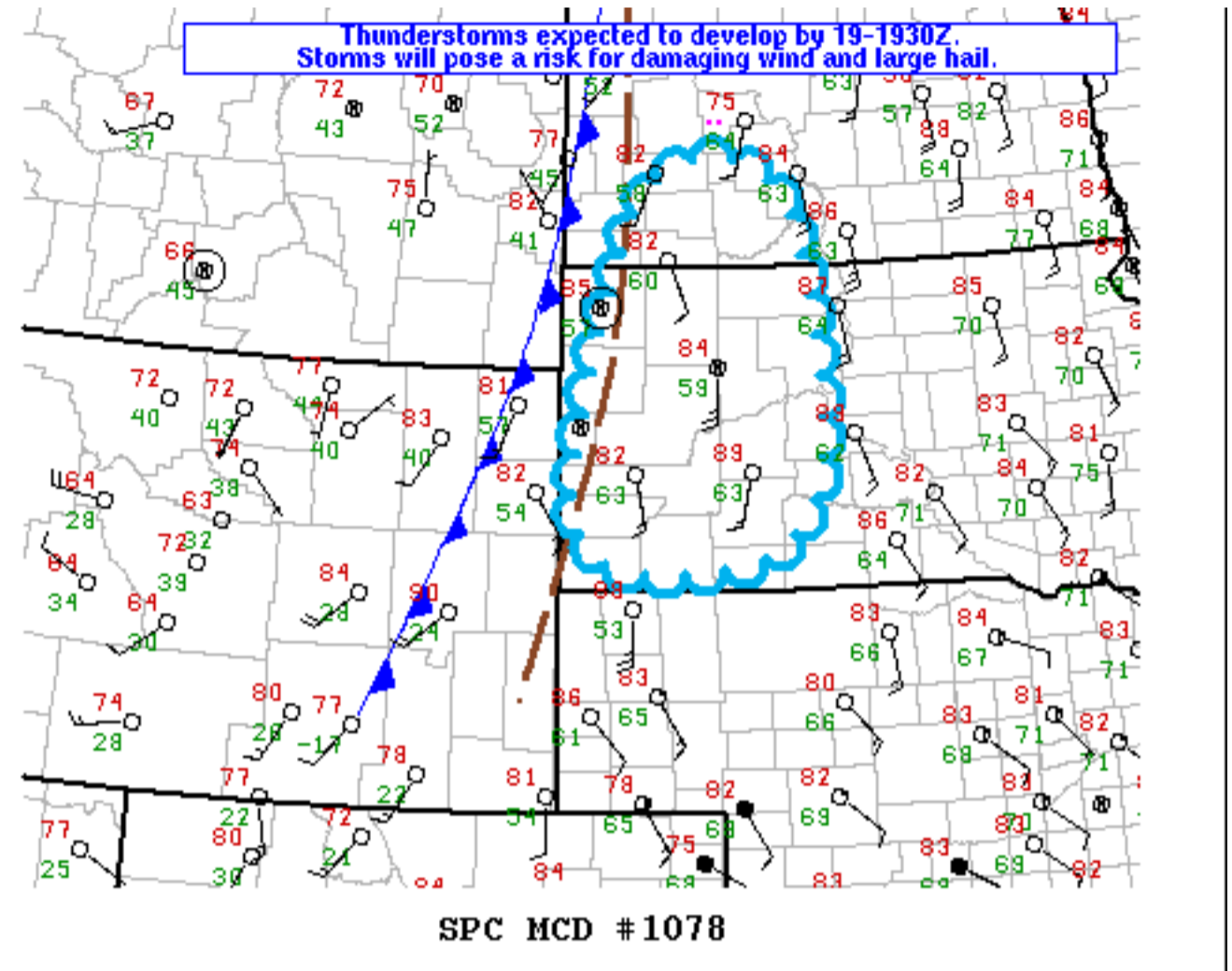
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## Mesoscale Discussion 1078

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Mesoscale Discussion 1078  
 NWS Storm Prediction Center Norman OK  
 1259 PM CDT Thu Jul 02 2020

Areas affected...western South Dakota through southwest North Dakota

Concerning...Severe potential...Severe Thunderstorm Watch likely

Valid 021759Z - 021930Z

Probability of Watch Issuance...80 percent

**SUMMARY...**Thunderstorms are expected to develop across western South Dakota and possibly into southwest North Dakota in the 19-20Z time frame. Large hail and isolated damaging wind gusts will be possible with the stronger storms. A WW will likely be needed once it becomes evident thunderstorm initiation is imminent.

**DISCUSSION...**Early this afternoon a cold front extends from northwest North Dakota through northeast and central WY preceded by a pre-frontal trough. Non-severe elevated convection is ongoing from central ND through west central SD and is associated with a weak shortwave trough moving northeast through the region. In wake of the early storms, strong diabatic heating of the surface layer is occurring, and as temperatures rise to near 90F, MLCAPE should approach 3500 J/kg and convective inhibition will undergo substantial weakening. Initial surface-based storms might develop over the Black Hills, but other storms may initiate along pre-frontal trough and advancing cold front. Much of this region resides southeast of the stronger southwesterly flow aloft, but 30-40 kt effective shear will support both supercells and multicells before activity evolves into linear structures during the evening.

..Dial/Hart.. 07/02/2020

...Please see [www.spc.noaa.gov](http://www.spc.noaa.gov) for graphic product...

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