



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

City, St



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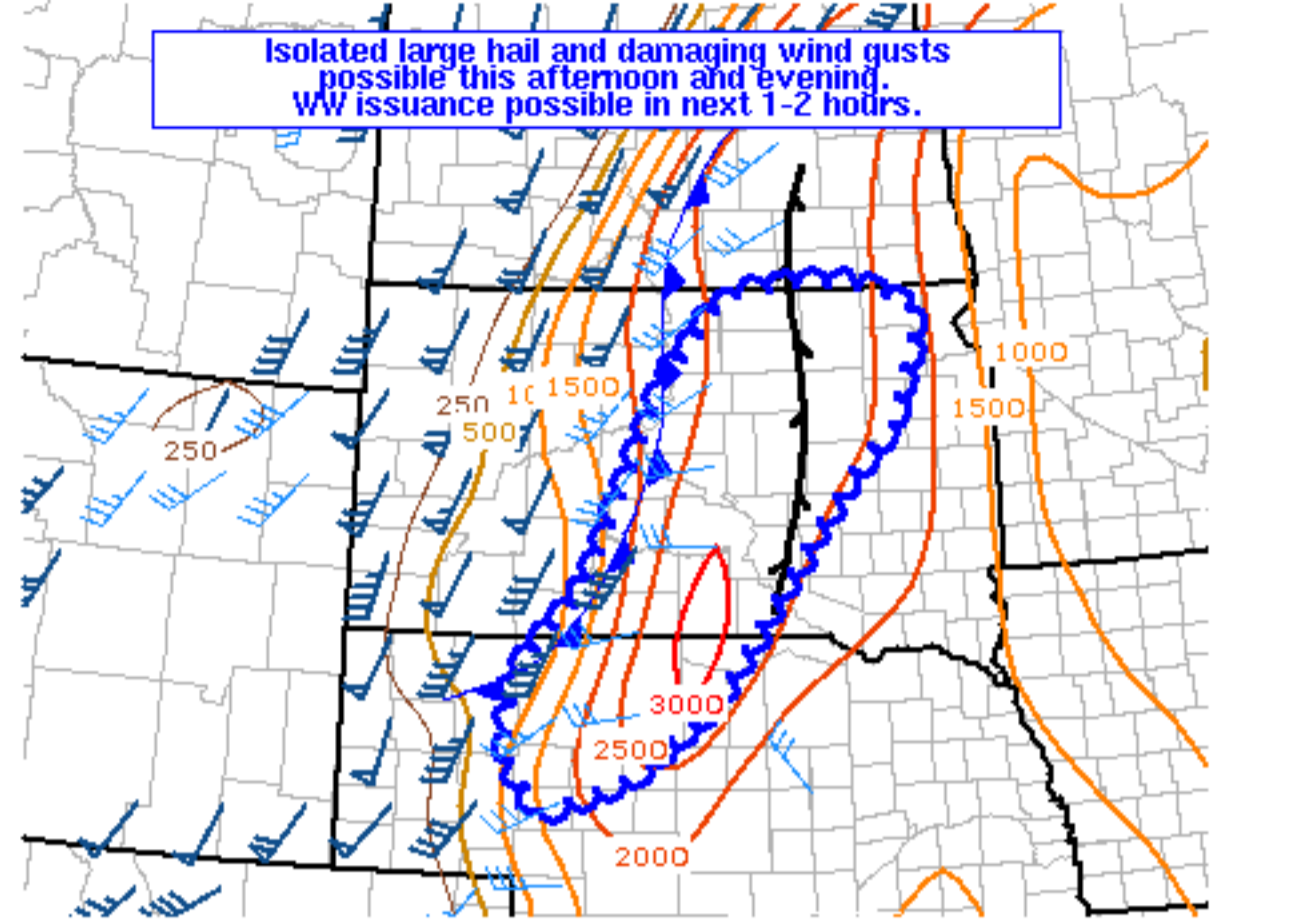
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Mesoscale Discussion 927

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200617/2100 MLCAPE j/kg and Effective Bulk Shear kt



SPC MCD #0927

Mesoscale Discussion 0927
NWS Storm Prediction Center Norman OK
0526 PM CDT Wed Jun 17 2020

Areas affected...Portions of central and eastern South Dakota...north-central Nebraska

Concerning...Severe potential...Watch possible

Valid 172226Z - 180030Z

Probability of Watch Issuance...60 percent

SUMMARY...Storms are in the process of developing both along the cold front and along a pre-frontal confluence band from north-central Nebraska into eastern South Dakota. Damaging wind gusts will be the primary threat overall. Isolated large hail will also be possible, particularly with earlier, more discrete activity. A WW will be possible in the next 1-2 hours.

DISCUSSION...Agitated cumulus have developed along the front in north-central Nebraska. Given the character of these cumulus on visible satellite, it may be a couple of hours before storms initiate. Farther north into central South Dakota, capping appears a bit stronger and storm development may be further delayed. Shear along and just east of the cold front is roughly parallel to the boundary and only a modest 25-35 kts. Still, moderate buoyancy to the east and steep low- and mid-level lapse rates suggests a risk for large hail (despite fairly warm 500 mb temps) and damaging wind gusts will exist. Supercell structures that develop may be short-lived given the boundary parallel shear. The temporal window for large hail will depend on how long storms can remain discrete.

West of Aberdeen, SD, a few more substantial towering cumulus have developed over the last hour or so. This activity is developing in moderate buoyancy (around 2500 J/kg MLCAPE). Deep-layer shear in the open warm sector is weaker than in the vicinity of the cold front to the west. Given the buoyancy and steep mid-level lapse rates, large hail and damaging winds will be possible with this activity. Later in the evening, further storm development along the cold front may occur and move into this area.

A WW is possible in the next 1-2 hours.

..Wendt/Thompson.. 06/17/2020

...Please see www.spc.noaa.gov for graphic product...

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