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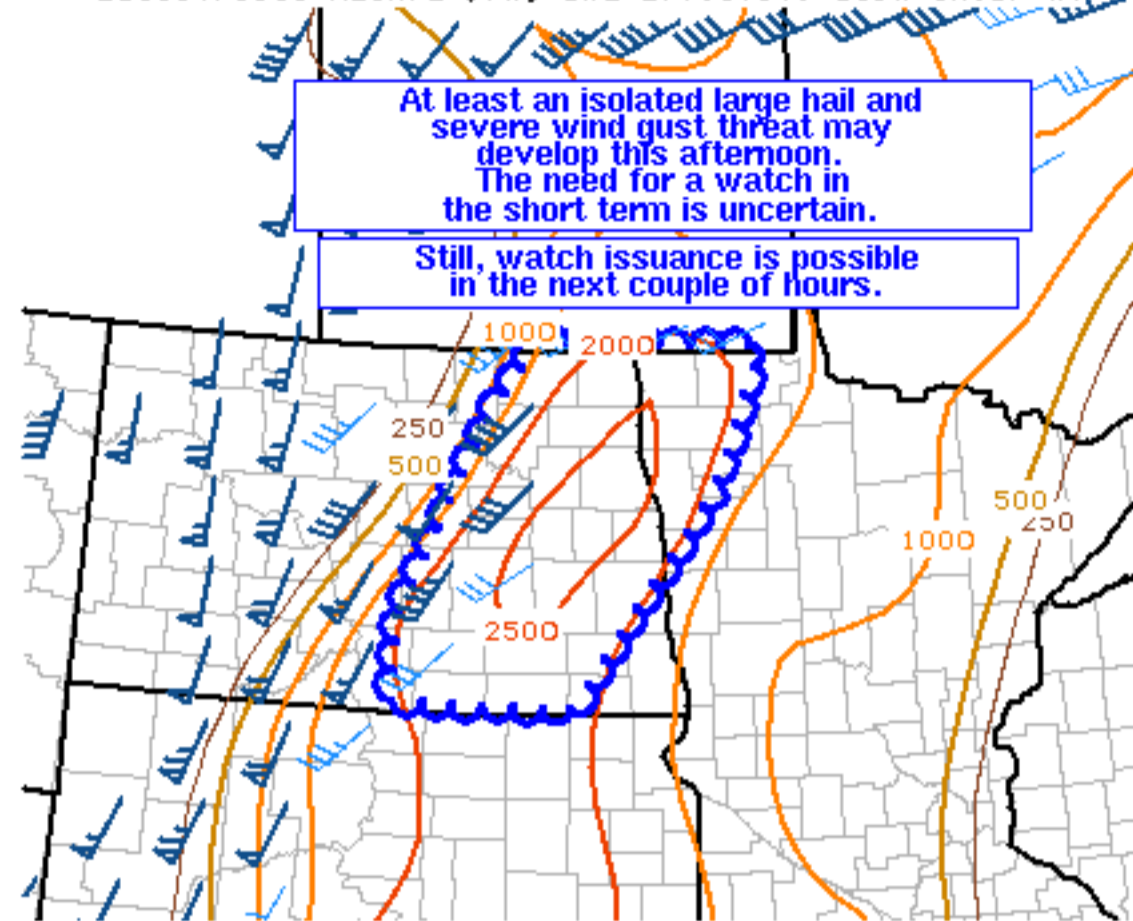
SPC Feedback



Mesoscale Discussion 925

< Previous MD Next MD >

200617/1900 MLCAPE J/kg and Effective Bulk Shear kt



SPC MCD #0925

Mesoscale Discussion 0925

NWS Storm Prediction Center Norman OK

0244 PM CDT Wed Jun 17 2020

Areas affected...Portions of southern/eastern ND and northwestern MN

Concerning...Severe potential...Watch possible

Valid 171944Z - 172145Z

Probability of Watch Issuance...40 percent

SUMMARY...At least an isolated large hail and severe wind gust threat may develop this afternoon. The need for a watch in the short term is uncertain. Still, watch issuance is possible in the next couple of hours.

DISCUSSION...A band of elevated convection from earlier this morning has persisted into the early afternoon across parts of eastern ND. These storms are largely being aided by low-level warm advection. In the wake of this activity, the airmass along/east of a slow-moving front across central ND continues to destabilize this afternoon as surface temperatures warm into the upper 80s and low 90s. The presence of 7.0-7.5 C/km lapse rates in the 700-500 mb layer and mid to upper 60s surface dewpoints is also supporting MLCAPE of 1500-2500 J/kg across the warm sector. Stronger mid-level southwesterly flow is lagging somewhat behind the surface front, but it should still be strong enough to support 30-40 kt of effective bulk shear and a mix of multicells and supercells.

The primary uncertainty remains timing of surface-based convective initiation. Comparison of latest surface observations to recent RAP forecast soundings suggests that diurnal heating has been stronger than forecast, and convective inhibition is nearly eroded along and immediately east of the front in southern/eastern ND. If storms can form in the next couple of hours as subtle large-scale approaches from the southwest, they would likely strengthen and pose at least an isolated large hail and damaging wind threat given the favorable thermodynamic and kinematic environment. Given some veering/strengthening of the low-level wind field, a tornado cannot be ruled out, especially along/near the front while storms remain semi-discrete. The likelihood of storm initiation should increase after 22Z, but it may occur sooner. It remains unclear if watch issuance will be needed in the short term (next 1-2 hours), but observational trends will continue to be closely monitored.

..Gleason/Guyer.. 06/17/2020

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

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