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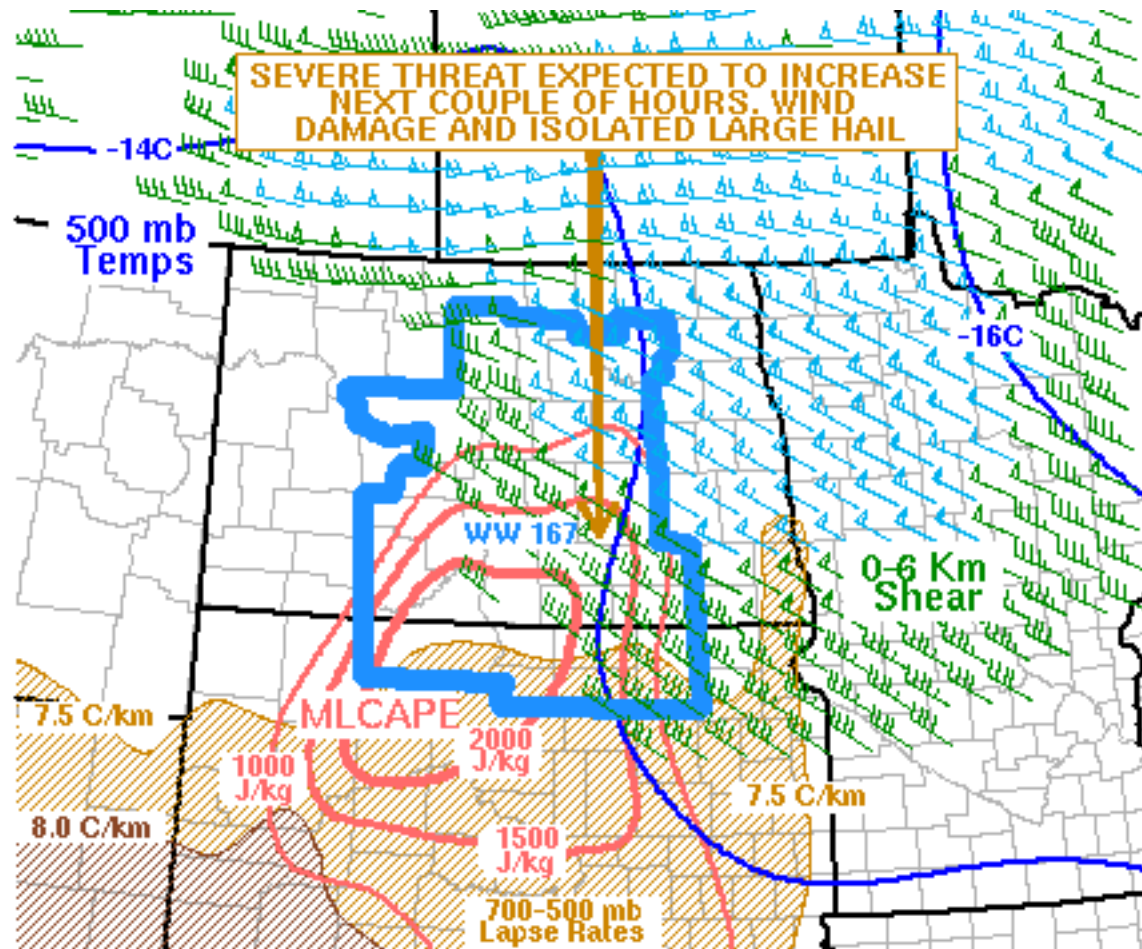
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## Mesoscale Discussion 636

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SPC MCD #0636

Mesoscale Discussion 0636

NWS Storm Prediction Center Norman OK

0608 PM CDT Wed May 15 2019

Areas affected...Central and Eastern North Dakota...Northern South Dakota

Concerning...Severe Thunderstorm Watch [167](#)...

Valid 152308Z - 160115Z

The severe weather threat for Severe Thunderstorm Watch 167 continues.

SUMMARY...The severe threat is likely to increase across parts of central North Dakota over the next couple of hours. Isolated large hail and wind damage should be the primary threats.

DISCUSSION...Latest surface analysis has a 1001 mb low over central North Dakota with a cold front extending south-southwestward into western South Dakota. A narrow corridor of maximized low-level



moisture is present ahead of the front with surface dewpoints in south south-central North Dakota in the upper 50s and lower 60s F. In response, a pocket of moderate instability is present with the RAP estimating MLCAPE values in the 1500 to 2500 J/kg range. Thunderstorms are ongoing just to the east of the surface low on the northern edge of the stronger instability. In addition to moderate instability, the WSR-88D VWP at Bismark has 0-6 km shear near 50 kt suggesting the wind shear environment will support severe thunderstorm development. Shear will increase some over the next few hours as the low-level jet strengthens. This will help increase the severe threat as cells become more mature along the moist axis. Supercells with isolated large hail will be possible. Wind damage may also occur as well.

..Broyles/Guyer.. 05/15/2019

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

ATTN...WFO...FGF...ABR...BIS...UNR...

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 Page last modified: May 16, 2019

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