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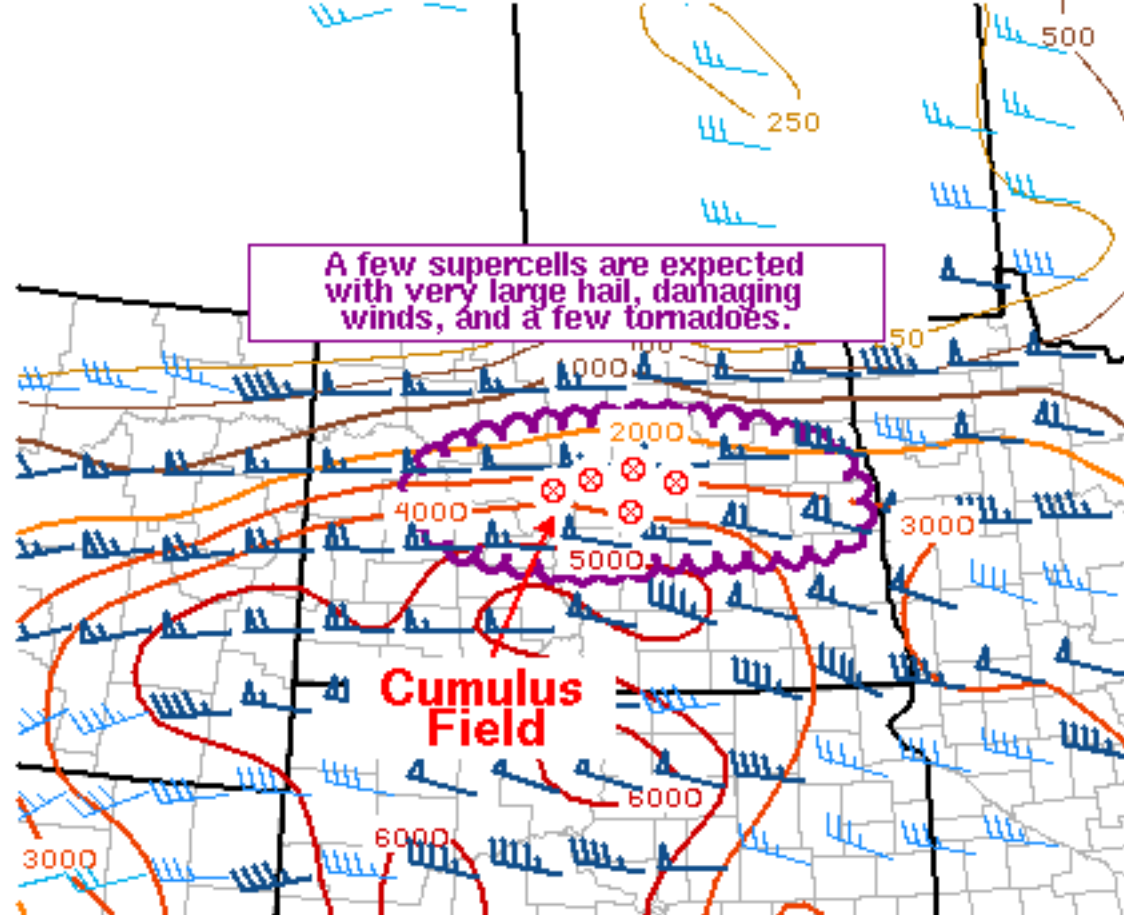
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## Mesoscale Discussion 920

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180628/1700 MUCAPE j/kg, Effective Bulk Shear kt



SPC MCD #0920

Mesoscale Discussion 0920

NWS Storm Prediction Center Norman OK

0106 PM CDT Thu Jun 28 2018

Areas affected...Central North Dakota

Concerning...Severe potential...Watch likely

Valid 281806Z - 282000Z

Probability of Watch Issuance...80 percent

SUMMARY...A few supercells are expected to form this afternoon with large hail, damaging winds, and a few tornadoes possible.

DISCUSSION...A cu field north of Bismark has shown some deeper growth on GOES-16 1 minute mesosector. Modifying the 12Z Bismark sounding for 17Z surface conditions (86/70 at KHZE) yields a nearly uncapped mixed-layer parcel. Despite weak subsidence from building heights aloft, and warming 700mb temps due to an advecting EML, expect a few storms to develop in the next hour or two. With 50 to

60 knots of effective shear and SBCAPE of 5000 J/kg south of this boundary, storms will quickly evolve into supercells. In addition, already steep mid-level lapse rates will continue to steepen through the afternoon. This kinematic and thermodynamic environment will be supportive of very large hail and damaging winds. In addition, backed surface winds and a veering wind profile between the surface and 3 km will support a few tornadoes, however, limited speed shear will be the primary limiting factor for a more significant tornado threat this afternoon. A watch is likely in the next hour or two.

..Bentley/Hart.. 06/28/2018

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

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