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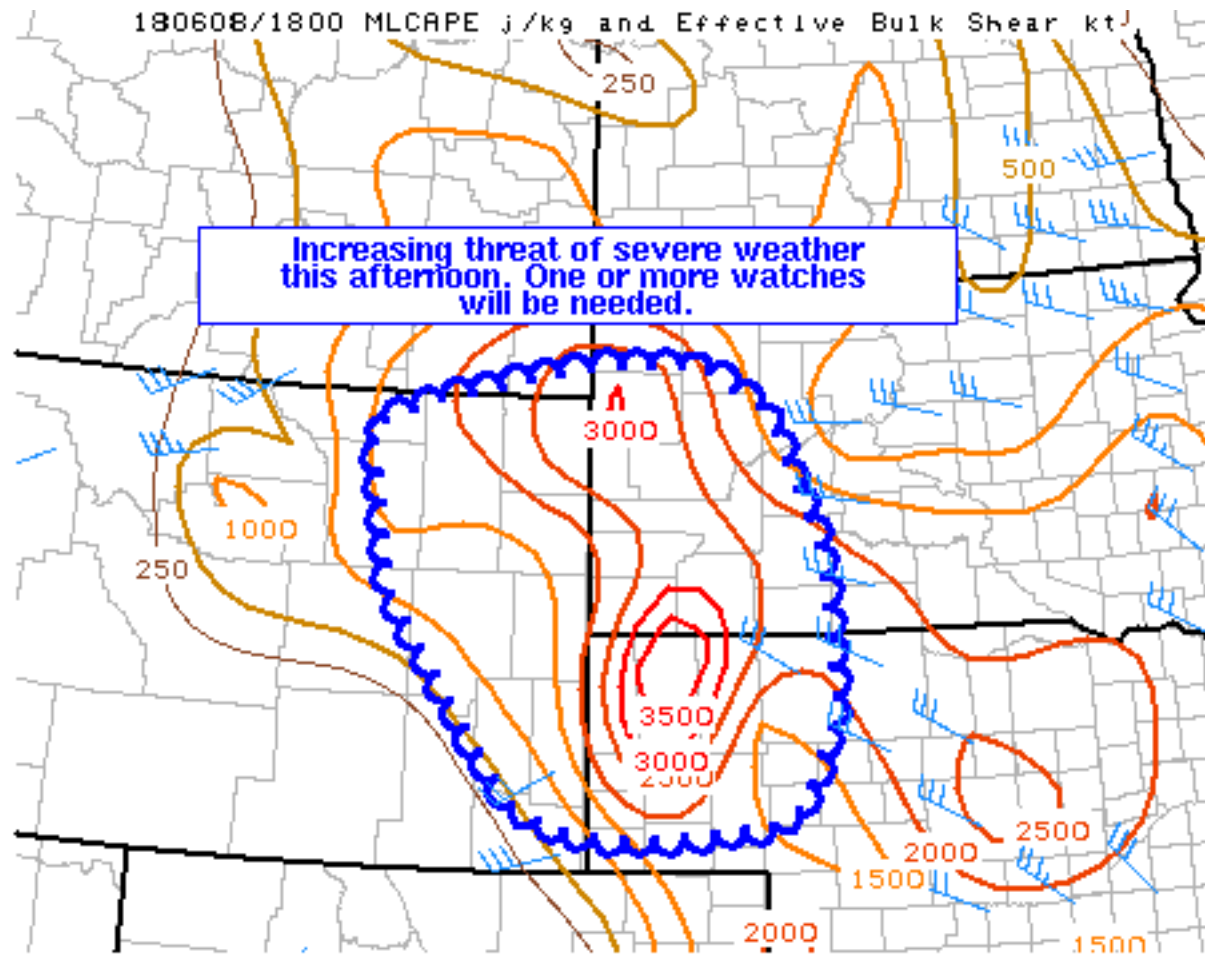
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SPC MCD #0672

Mesoscale Discussion 0672

NWS Storm Prediction Center Norman OK

0201 PM CDT Fri Jun 08 2018

Areas affected...Portions of eastern Wyoming...western South Dakota...and western Nebraska

Concerning...Severe potential...Watch likely

Valid 081901Z - 082100Z

Probability of Watch Issuance...95 percent

SUMMARY...Scattered severe thunderstorms are expected to develop across parts of the region through this evening, with a primary threat of damaging winds and large hail. A couple tornadoes may also occur, primarily in southwestern South Dakota. One or more watches will be needed within the next two hours or so.

DISCUSSION...One-minute visible imagery exhibits several fields of maturing/towering cumulus across the region this afternoon. The

primary corridor for more rapid development exists from the Black Hills southeastward along a weak surface trough, where satellite and radar already have shown a few initial attempts at deep convective initiation. An 18Z UNR sounding sampled warm 700mb temperatures associated with the base of an EML, currently limiting convective growth away from higher terrain. Therefore, initial development should remain rooted to the Black Hills. However, gradual moistening/cooling aloft will overspread the region from the west and increase convective potential at lower elevations through the afternoon.

Steep mid-level lapse rates, increasing effective shear, and continued heating/moistening of the boundary layer will support a primary threat of damaging winds and large hail within a mixture of supercell and multicell modes. Additionally, south/southeastward propagation east of the Black Hills may yield adequate storm-relative helicity for a threat of a couple tornadoes, prior to upscale growth by mid evening.

This threat over South Dakota will likely necessitate watch issuance within the next two hours. Farther west/southwest into Wyoming, higher-based convection will gradually intensify as it reaches richer boundary-layer moisture with eastward extent, posing a damaging wind and large hail threat as well. These cells could be covered in the same watch as the SD threat or may be covered in a later watch, pending the relative timing of the two threats.

..Picca/Grams.. 06/08/2018

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

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