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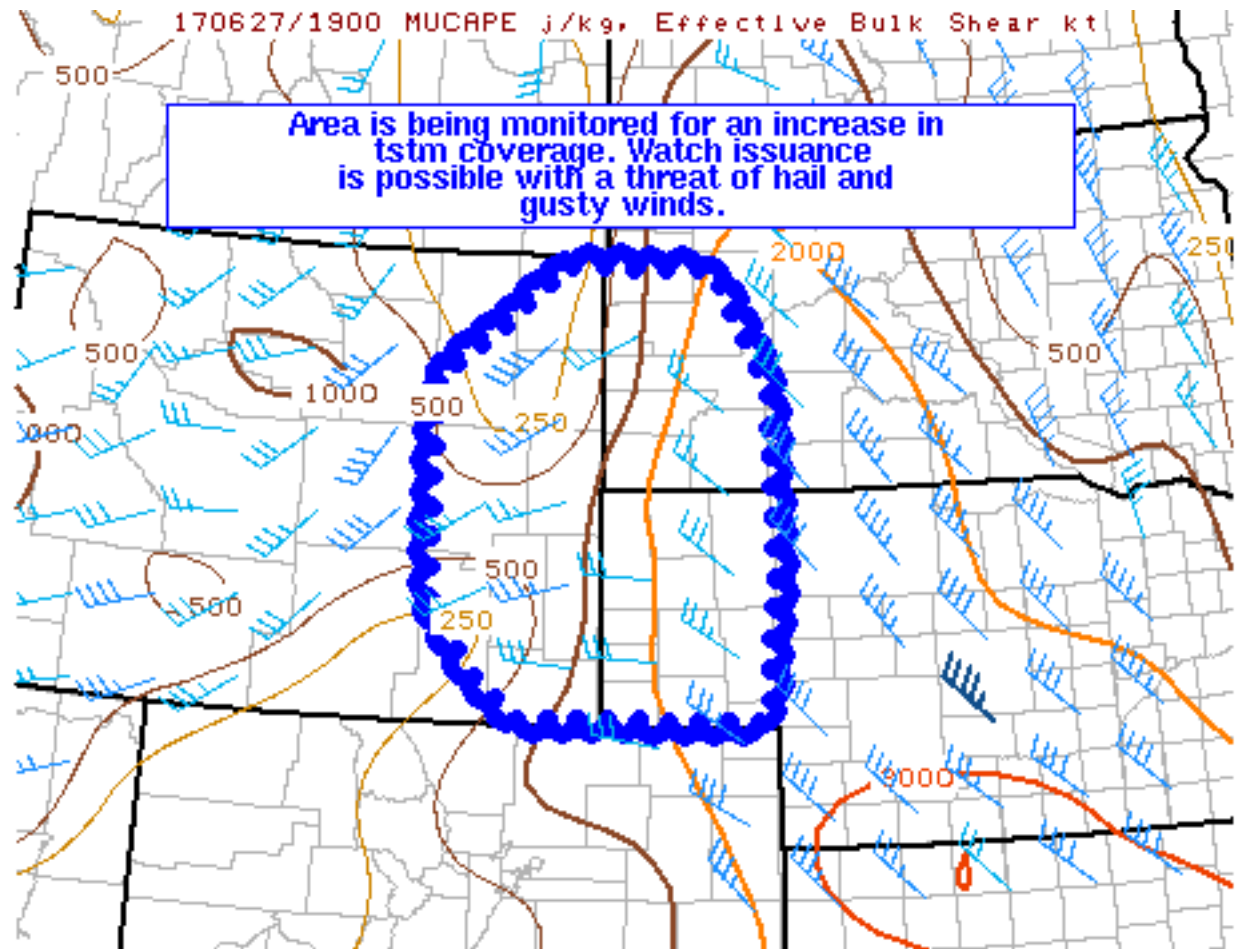
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Mesoscale Discussion 1163

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SPC MCD #1163

Mesoscale Discussion 1163

NWS Storm Prediction Center Norman OK

0304 PM CDT Tue Jun 27 2017

Areas affected...Eastern WY...Western SD...NE Panhandle

Concerning...Severe potential...Watch possible

Valid 272004Z - 272230Z

Probability of Watch Issuance...60 percent

SUMMARY...The area is being monitored for an increase in storm coverage. Watch issuance is possible later this afternoon, with a primary threat of large hail and damaging wind.

DISCUSSION...Thunderstorms have recently intensified across southeast WY, with cumulus development noted further north near DGW, and additional storm development noted upstream across central/western WY. The environment across the MCD area is characterized by a very warm/well-mixed boundary layer and very

steep midlevel lapse rates. Moisture is rather sparse across portions of eastern WY and increases further east into the NE Panhandle into western SD, resulting in a range in SBCAPE of 500-2000 J/kg from west to east. Moderate westerly flow in advance of a compact vort max moving into western/central WY is resulting in effective shear of 30-40 kt, which will support the potential for organization with the strongest updrafts.

Some uncertainty remains in the short term regarding storm coverage, given some remnant SBCINH across the central and eastern portions of the MCD area. However, continued heating will weaken the cap strength with time, and some severe threat will likely persist with the cells moving into the NE Panhandle. With time, with the approach of the vort max from the west, convective coverage is expected to increase, with a mixed mode of discrete rotating cells and larger-scale line segments possible. Steep midlevel lapse rates will favor a hail risk with any discrete cells, while some damaging wind threat will evolve with time as cold pools begin to consolidate. Watch issuance is possible sometime later this afternoon to cover these threats, though the timing of any watch remains uncertain.

..Dean/Guyer.. 06/27/2017

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

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