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Mesoscale Discussion 797

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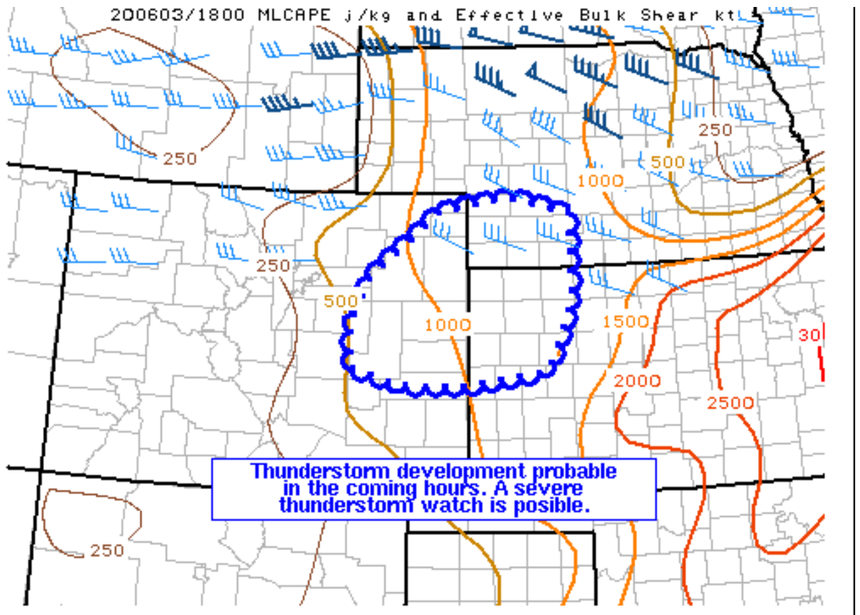

SPC MCD #0797

Mesoscale Discussion 0797
NWS Storm Prediction Center Norman OK
0205 PM CDT Wed Jun 03 2020

Areas affected...East/northeast Colorado...northwest Kansas...and southwest Nebraska

Concerning...Severe potential...Watch possible

Valid 031905Z - 032030Z

Probability of Watch Issuance...40 percent

SUMMARY...Thunderstorm development is probable across eastern to northeastern Colorado in the next 1-2 hours. Storms that develop will pose the risk for strong downburst winds as well as severe hail. A severe thunderstorm watch is possible.

DISCUSSION...Visible satellite imagery reveals a deepening cluster of agitated cumulus on the eastern extent of the Palmer Divide in east-central CO. Additionally, a fine cumulus line is noted extending to the northeast of this cloud cluster, and is indicative of a weakly convergent surface trough draped to the north. Although MLCAPE across this region is reaching into the 500-1000 J/kg range, RAP mesoanalysis and forecast soundings suggest lingering inhibition remains in place. With the synoptic upper-level wave and attendant surface low displaced to the north across the Dakotas and southern Canada, forcing for ascent should remain somewhat weak across this region. Despite this limitation, continued daytime heating will aid in mitigating the remaining inhibition through the late afternoon hours. While the development of one or two storms is probable across eastern CO, confidence is lower on the number/coverage of storms to the northeast.

Storms that do develop will enter into an environment with sufficient instability and increasing deep layer shear to the north/northeast. This will favor a severe hail threat - especially across northeast CO, northwest KS, and southwest NE. Additionally, steep 7-9 C/km low-level lapse rates and a dry sub-cloud layer between 1-2 km AGL will support the potential for severe downburst winds. A watch is possible if sufficient coverage of storms can become established.

..Moore/Grams.. 06/03/2020

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

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