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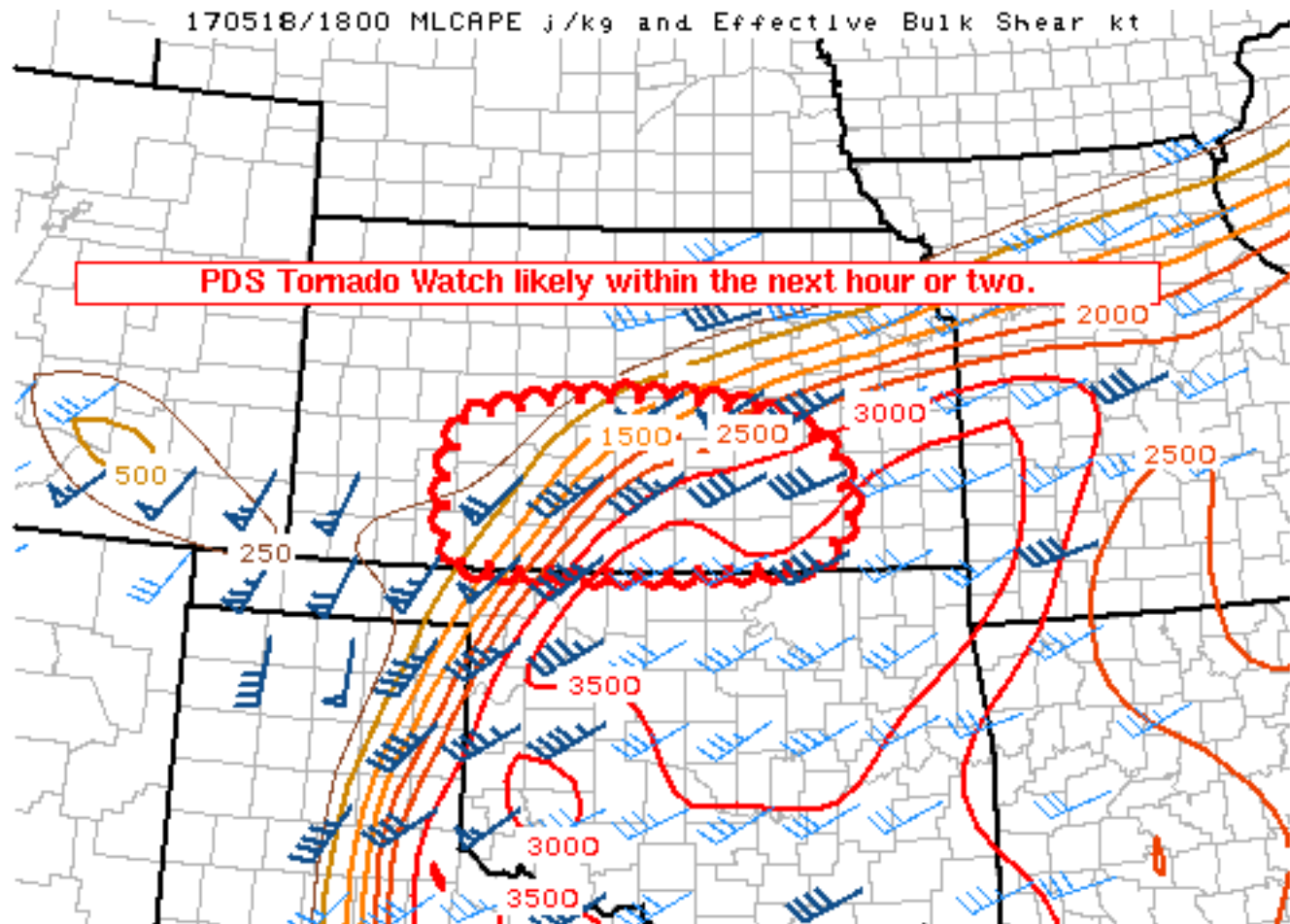
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SPC MCD #0758

Mesoscale Discussion 0758

NWS Storm Prediction Center Norman OK

0200 PM CDT Thu May 18 2017

Areas affected...Portions of southern/central Kansas

Concerning...Severe potential...Tornado Watch likely

Valid 181900Z - 182030Z

Probability of Watch Issuance...95 percent

SUMMARY...Severe thunderstorms will develop across parts of southern and central Kansas this afternoon and evening, with an attendant threat of tornadoes (some of which may be strong), very large hail, and damaging winds. A PDS Tornado Watch will likely be issued within the next hour or two.

DISCUSSION...Surface analyses indicate a warm front is slowly advancing northward across southern Kansas this afternoon. To the south of this front, ample boundary-layer heating has resulted in

considerable mixed-layer buoyancy, with CAPE values upwards of 2500-3000 J/kg. As forcing for ascent continues to increase over the region, low-level moisture will continue to stream north/northwest, promoting a further increase in buoyancy over southern Kansas. With 850-700mb southerly flow strengthening during the late afternoon/evening, warm advection near/south of the warm front will lead to a blossoming of convection over the region. Indeed, current visible satellite data show a developing cumulus field beneath a higher-level canopy. Severe thunderstorms will likely develop out of this cumulus field as it continues to advance north/northwest ahead of the dry line and south of the warm front.

Cells near the warm front will interact with more backed low-level flow, enhancing storm-relative helicity. In turn, with continued north/northwestward transport of rich boundary-layer moisture, the potential exists for a few discrete cells with organized/strong low-level mesocyclones. A tornado threat would likely evolve, with the potential for a few stronger tornadoes, considering the ample low-level helicity. Steep mid-level lapse rates and considerable effective shear will encourage a threat of very large hail. Moreover, somewhat straight mid-level hodographs could yield upscale growth through the evening. While this would reduce the tornado threat some, merging cold pools (aided by dry air aloft) would offer the potential for a few significant severe gusts. In turn, with the potential for all higher-end severe hazards, a PDS Tornado Watch will likely be issued within the next hour or two.

..Picca/Goss.. 05/18/2017

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

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