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NCEP Quarterly

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Mesoscale Discussion 0657 NWS Storm Prediction Center Norman OK 0220 PM CDT Thu May 21 2020

Areas affected...far southeast CO...western KS and portions of the OK Panhandle

Concerning...Severe potential...Watch likely

Valid 211920Z - 212045Z

Probability of Watch Issuance...95 percent

SUMMARY...Thunderstorms are expected to develop in the next couple of hours. Very large hail and locally damaging gusts will be the main hazards with these storms into this evening. A watch will likely be issued by 21z.

DISCUSSION...Vertically developing CU has been increasing across parts of southwest KS near a surface low. Morning cloud cover has diminished across this area, allowing temperatures to warm into the mid and upper 70s. Surface dewpoints generally in the low 60s are being maintained on southeasterly low level flow. Some increase in dewpoints may still occur as mid-to-upper 60s dewpoints reside just downstream across OK/TX, and MLCAPE is expected to increase to around 1500-2500 J/kg across the discussion area. While capping is still in place, MLCIN will continue to erode in the short-term, aided by additional heating and increasing ascent from an eastward ejecting shortwave impulse. As a result, convective initiation is expected near the surface low in the vicinity of the KS/CO border in the next 1-2 hours.

Deep layer flow is not particularly strong across the region, however vertically-veering winds are resulting in 30-40 kt effective shear. This should support rotating updrafts, while very steep midlevel lapse rates favor large hail production. Storm clusters, including supercells, are expected initially. With time, some upscale growth may occur with eastward extent via strong downdrafts resulting in outflow interactions. Low level moisture is somewhat modest, with mean mixing ratios around 10-12 g/kg. Nevertheless, backed low level flow with result in 0-3 km SRH around 150 m2/s2, suggesting some low-end potential for a landspout/tornado or two.

..Leitman/Hart.. 05/21/2020

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

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