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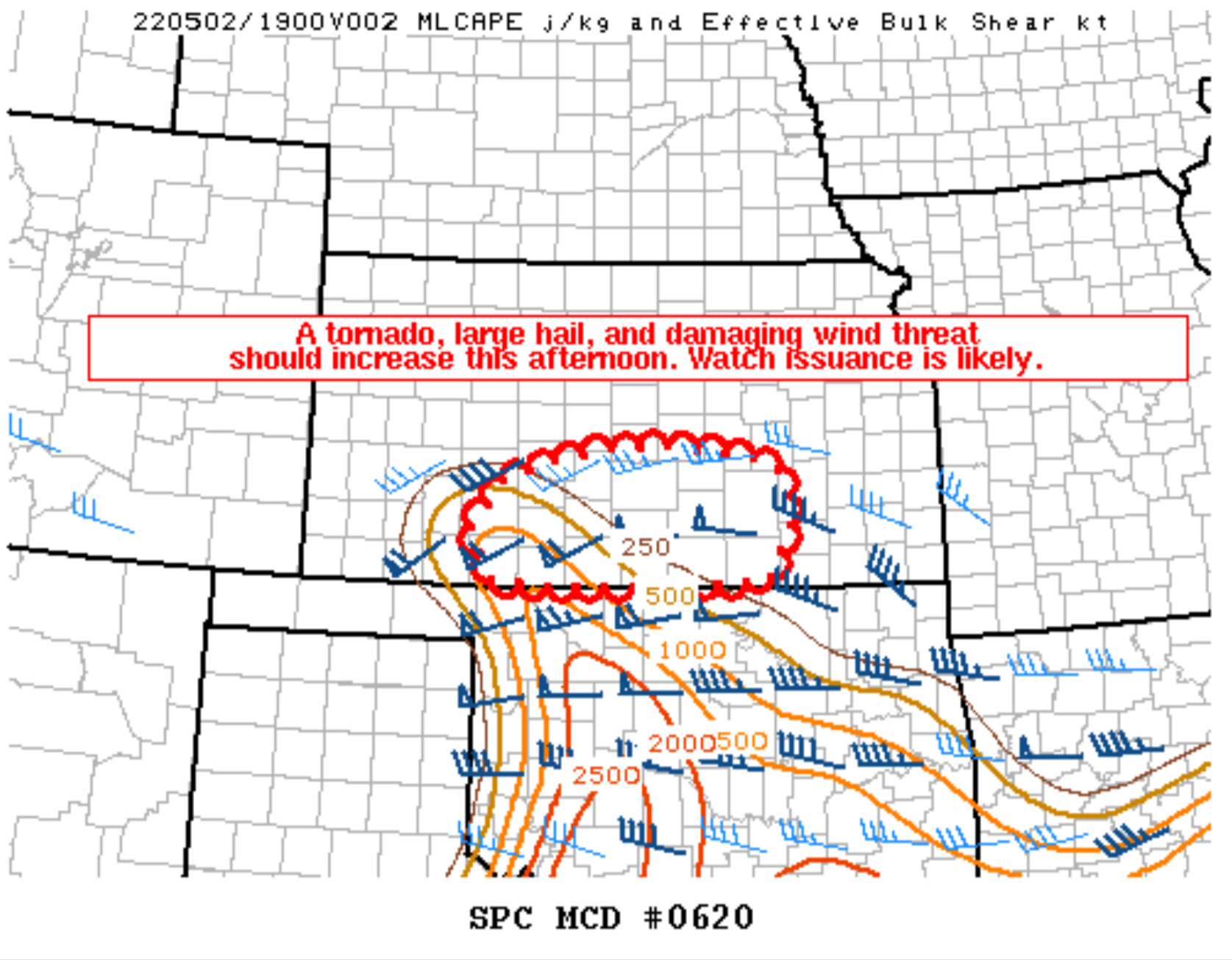
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## Mesoscale Discussion 620

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Mesoscale Discussion 0620  
 NWS Storm Prediction Center Norman OK  
 0110 PM CDT Mon May 02 2022

Areas affected...Portions of southern/central KS

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

Valid 021810Z - 022015Z

Probability of Watch Issuance...80 percent

SUMMARY...A tornado, large hail, and damaging wind threat should increase this afternoon. Watch issuance is likely.

DISCUSSION...18Z surface analysis shows a surface low centered over far southwestern KS, with an attendant cold front sweeping southward over the central Plains. Low-level moisture is returning northward ahead of this low and the front, with mid 50s to low 60s surface dewpoints prevalent across northern OK into southern KS. Recent visible satellite imagery indicates the cu field is becoming agitated across southwestern KS just east of the surface low. Current expectations are for thunderstorms to initiate across this region over the next hour or two as ascent associated with a compact shortwave trough and mid-level jet overspread the central Plains.

A favorable veering/strengthening wind profile for supercells is forecast across southern KS, with 45-50+ kt of effective bulk shear present. The main uncertainty is how much destabilization will occur owing to persistent/widespread cloudiness and the lingering effects of earlier convection across OK and related outflow boundaries. Still, modestly steepened mid-level lapse rates and cool mid-level temperatures associated with the shortwave trough should act in tandem with modest diurnal heating to support around 500-1500 J/kg of MLCAPE. Greater instability will likely remain confined near the OK/KS border.

Any supercells that can develop and persist over the next few hours will pose a threat for isolated tornadoes given the favorable low-level shear noted in recent VWP's from KICT. Large hail and damaging winds may also occur. As convection spreads eastward this afternoon and early evening, some high-resolution guidance suggests upscale growth into a small bowing cluster may occur. Damaging winds would become the main threat across south-central KS if this evolution occurs, but embedded QLCS circulations would also be possible. Tornado Watch issuance appears likely as convective initiation becomes increasingly probable by 19-20Z (2-3 PM CDT).

..Gleason/Hart.. 05/02/2022

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