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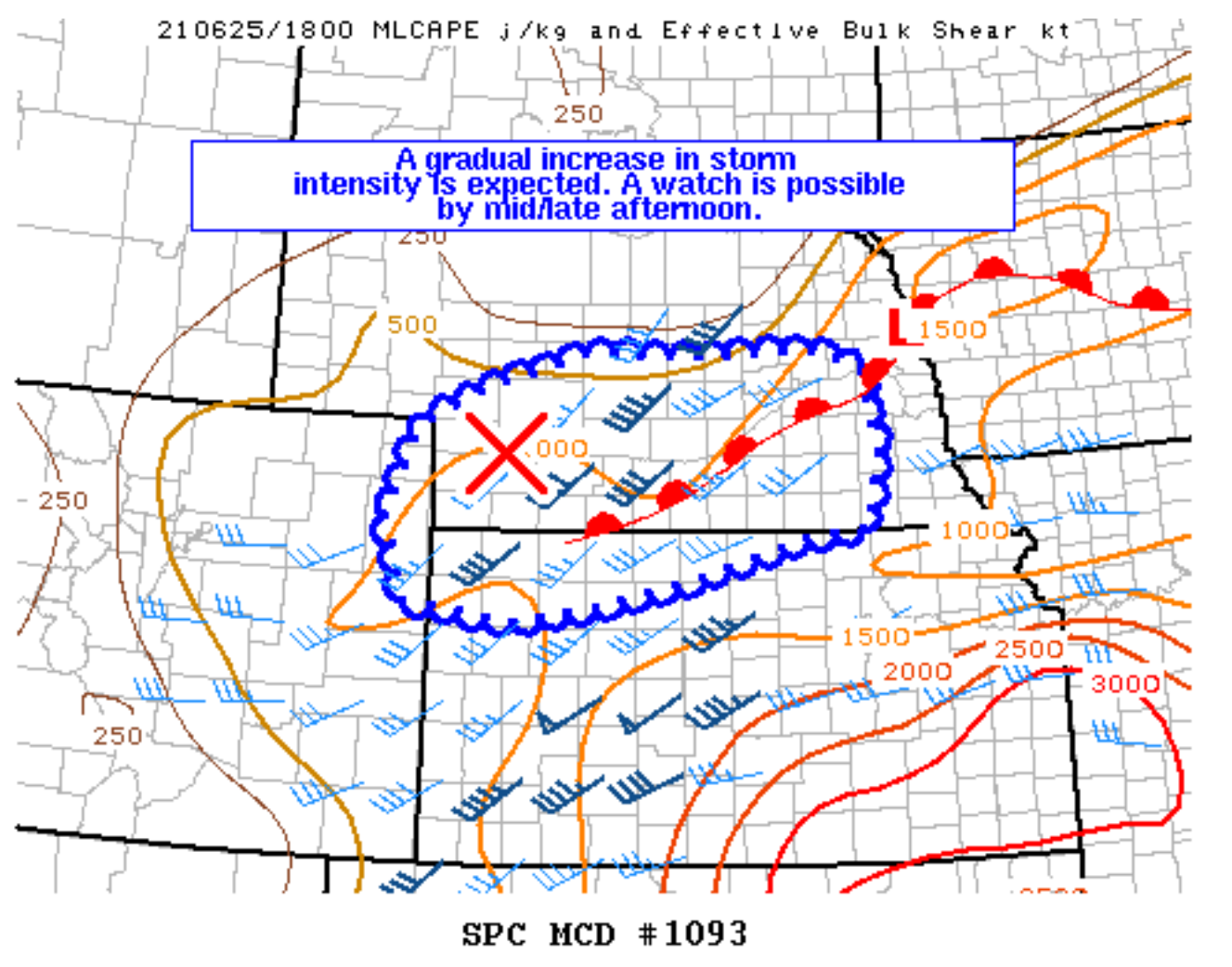
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## Mesoscale Discussion 1093

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210625/1800 MLCAPE j/kg and Effective Bulk Shear kt



SPC MCD #1093

Mesoscale Discussion 1093  
NWS Storm Prediction Center Norman OK  
0121 PM CDT Fri Jun 25 2021

Areas affected...Southern Nebraska

Concerning...Severe potential...Watch possible

Valid 251821Z - 252015Z

Probability of Watch Issuance...40 percent

SUMMARY...Thunderstorm coverage and intensity should gradually increase through the afternoon and into the early evening hours. A watch may be needed to address the severe hail and wind potential.

DISCUSSION...Weak convective showers continue to linger in the vicinity of an MCV across southwest NE. While occasional lightning strikes have been noted with this activity, overall trends have shown little intensification over the past hour. Temperatures across southern NE continue to warm into the upper 70s and low 80s, which is slowly eroding remaining MLCIN and increasing instability to near 1000-1500 J/kg MLCAPE (per recent mesoanalysis and hinted at by diminishing low-level stratus). Upstream convection across far northern CO has been intensifying over the past 30-60 minutes, suggesting that stronger forcing for ascent may be approaching the region. Additionally, a few deepening convective towers are noted in GOES 1-min imagery along the effective warm front ahead of the MCV. These trends support the idea that a gradual increase in convective intensity is likely in the coming hours. While the number of convective showers/towers suggest coverage will increase as well, recent hi-res guidance hints that coverage may be limited to only isolated cells.

Elongated hodographs featuring 35-40 knots of effective bulk shear and a nearly unidirectional wind profile - especially north of an effective warm front where easterly winds are noted - will support organized convection with splitting supercells initially possible. Given sufficient coverage, storm interactions may favor upscale growth and an increasing wind threat as storms move east/northeast along the effective warm front/instability gradient. One or two bowing segments are possible, but confidence is somewhat low given uncertainties in storm coverage. Conditions will continue to be monitored, and a watch may be needed in the coming hours to address the hail and damaging wind potential.

..Moore/Guyer.. 06/25/2021

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