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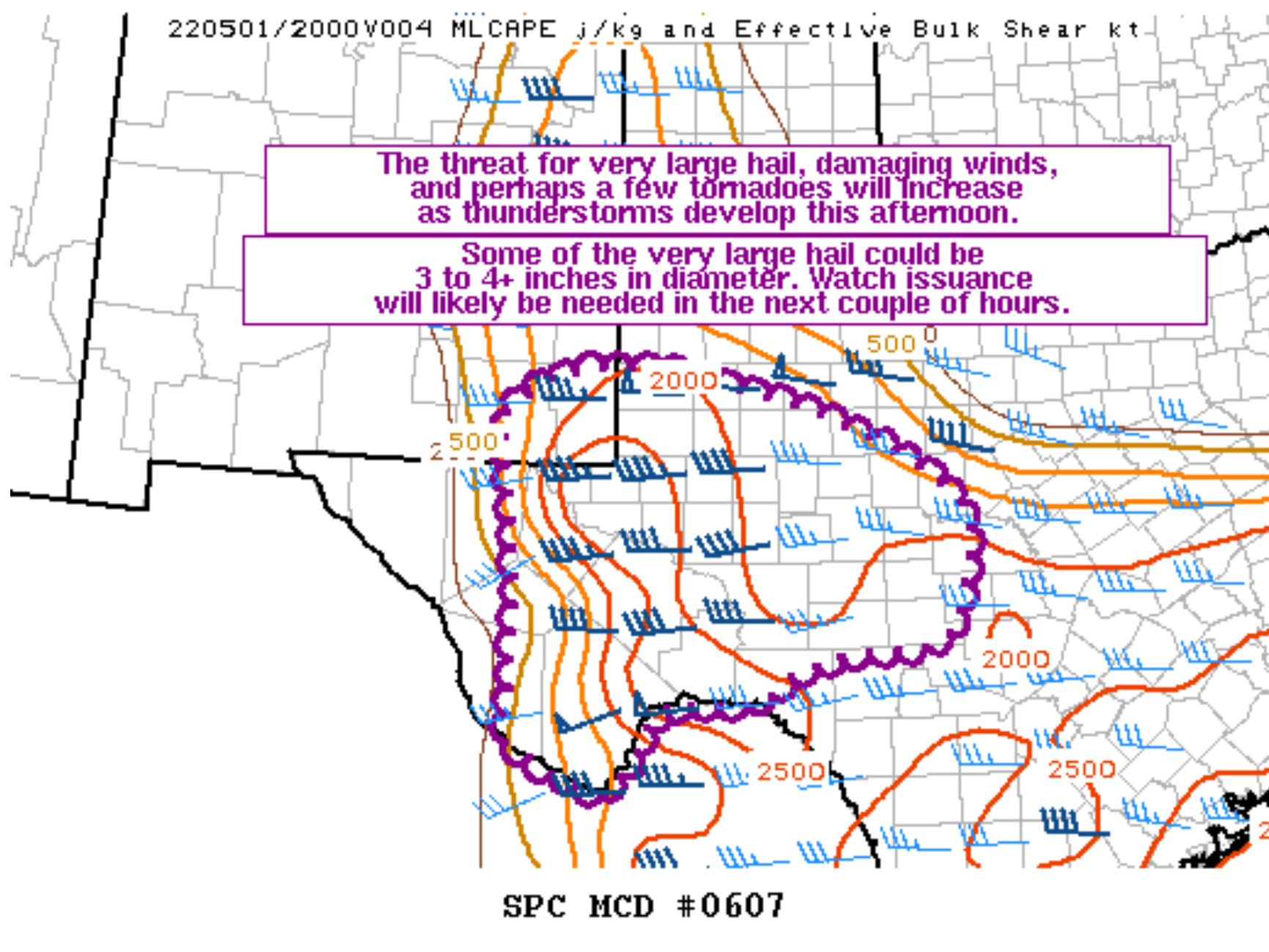
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Mesoscale Discussion 607

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Mesoscale Discussion 0607
 NWS Storm Prediction Center Norman OK
 0104 PM CDT Sun May 01 2022

Areas affected...Portions of far southeastern NM into west TX and the Edwards Plateau

Concerning...Severe potential...Watch likely

Valid 011804Z - 012030Z

Probability of Watch Issuance...95 percent

SUMMARY...The threat for very large hail, damaging winds, and perhaps a few tornadoes will increase as thunderstorms develop this afternoon. Some of the very large hail could be 3 to 4+ inches in diameter. Watch issuance will likely be needed in the next couple of hours.

DISCUSSION...Low-level moisture continues to stream northward early this afternoon in tandem with a 20-25 kt southeasterly low-level jet across parts of west TX and vicinity. Diurnal heating of this moist airmass and the presence of rather steep mid-level lapse rates indicated on the 12Z MAF sounding are already supporting MLCAPE of 1500-2000 J/kg as of 18Z. Additional heating and surface dewpoints generally increasing into the low to mid 60s will likely foster even stronger instability by late afternoon, with MLCAPE of 2500-3500 J/kg possible. The east-southeasterly low-level upslope flow will likely aid convective initiation across the higher terrain of southeastern NM and west TX over the next couple of hours. A veering and strengthening wind profile with height through mid levels will support around 40-50 kt of effective bulk shear, with considerable speed shear noted at mid/upper levels in various NAM/RAP forecast soundings across this region.

This favorable thermodynamic and kinematic environment will easily support scattered supercells with an attendant threat for very large hail. Some of the this hail could be 3 to 4+ inches in diameter given the large reservoir of buoyancy that will be available, presence of steep mid-level lapse rates, and long/straight hodographs in the 3-9 km layer. Although the low-level flow is fairly modest at the moment, some strengthening of the southeasterly low-level jet is forecast by early evening. As low-level hodographs correspondingly increase/lengthen, there should be a risk for a few tornadoes, especially along/near the northward-advancing warm front. Severe/damaging winds could also become a concern as supercells may eventually congeal into small bowing clusters across parts of the Edwards Plateau this evening. Observational trends will be closely monitored for signs of convective initiation across west TX, and a watch will likely be needed in the next couple of hours.

..Gleason/Hart.. 05/01/2022

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

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