



Local forecast by "City, St" or "ZIP"

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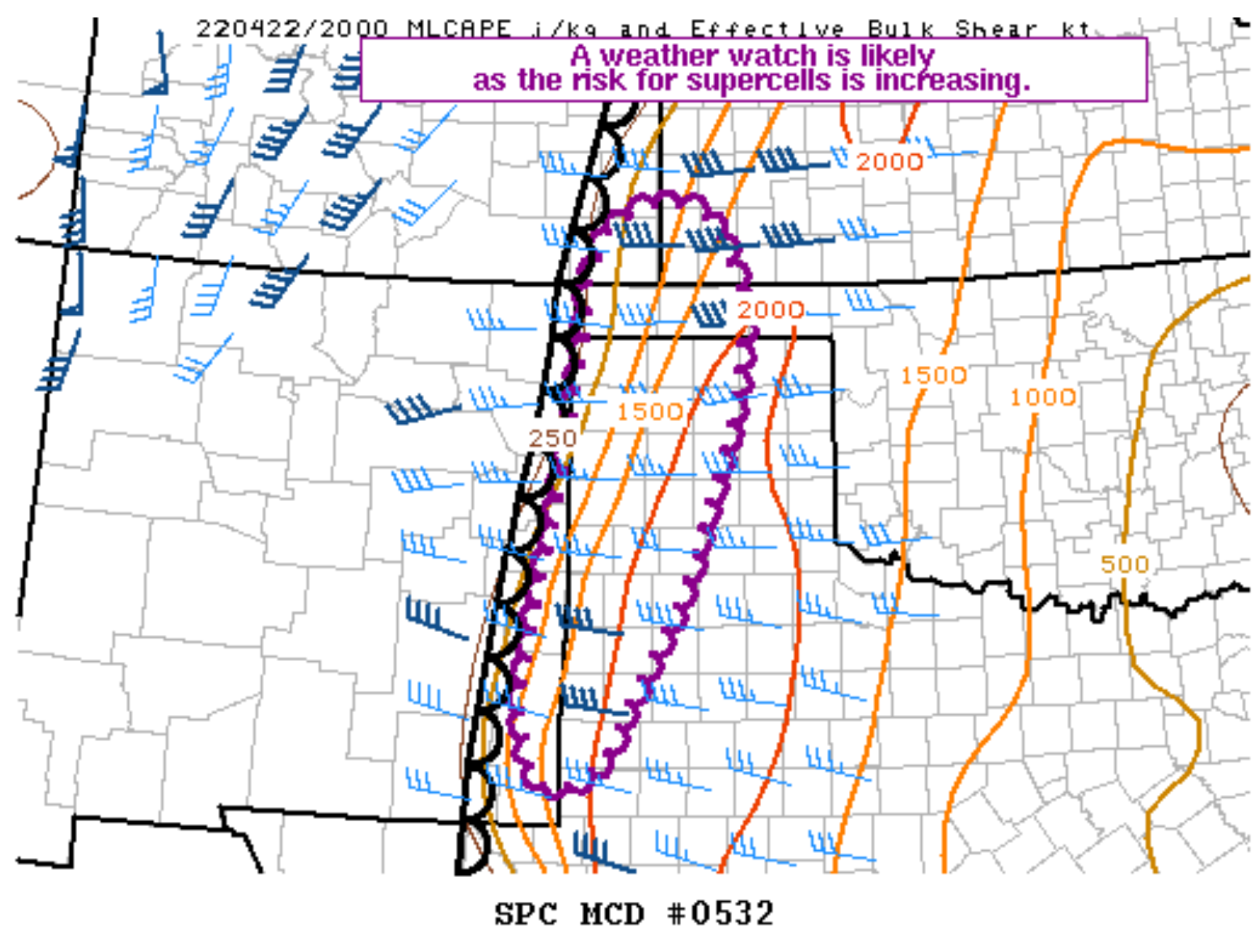
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Mesoscale Discussion 532

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Mesoscale Discussion 0532
NWS Storm Prediction Center Norman OK
0319 PM CDT Fri Apr 22 2022

Areas affected...portions of the southern High Plains

Concerning...Severe potential...Watch likely

Valid 222019Z - 222215Z

Probability of Watch Issuance...95 percent

SUMMARY...Initial high-based storm development is expected along the dryline in the next few hours within the well-mixed airmass across the High Plains. Supercells initially capable of large hail/damaging winds are likely. Deeper low-level moisture farther east may support a tornado threat later this afternoon/evening. A weather watch is likely.

DISCUSSION...To the east of a deep/negatively tilted Four Corners mid-level trough, afternoon visible imagery showed initial cumulus beginning to deepen within the hot and well-mixed airmass near an expansive north-south dryline from eastern CO/western KS, through the Panhandles and into far eastern NM. Manual analysis revealed 1 to 2 mb/hr pressure falls ahead of the dryline which should continue to increase surface confluence this afternoon. As the upper trough approaches, strong forcing for ascent, in combination with heating and mesoscale lift/confluence should initiate high-based thunderstorms across portions of the High Plains. Experimental WOFs guidance shows several corridors of potential CI across the far western TX Panhandle to southwestern KS. Stronger mixing and more limited surface moisture in proximity to a more diffuse dryline protrusion across the latter area casts some uncertainty on the number of storms able to initiate. Regardless, confidence is high that at least a few supercells will develop across the High plains over the next few hours.

0-6km shear vectors oriented perpendicular to the dryline should favor a discrete/supercell storm mode with the initial updrafts. While likely still high-based owing to the significant mixing of relatively shallow surface moisture, 1000-1500 J/kg of MLCAPE and steep mid-level lapse rates will support the potential for large to very large hail and damaging wind gusts especially with any stronger supercells able to become established. Given the higher LCL heights, tornado risk remains uncertain with the initial storms.

As storms progress eastward late this afternoon and into this evening, deeper surface moisture evident from lingering stratocumulus across portions of the eastern TX/OK panhandle may allow for lower cloud bases to interact with increasing shear from the 40-50 kt low-level jet. The favorable mode and large low-level hodographs (0-1km SRH 200-300 m2/s2) do suggest tornadoes will be possible with the stronger supercells in addition to a threat for very large hail/damaging winds. Given the potential for supercells and accompanying severe weather, a watch will likely be needed in the next hour.

..Lyons/Guyer.. 04/22/2022

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

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 36880102 36110111 35580122 34260166 32520262 32290312
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