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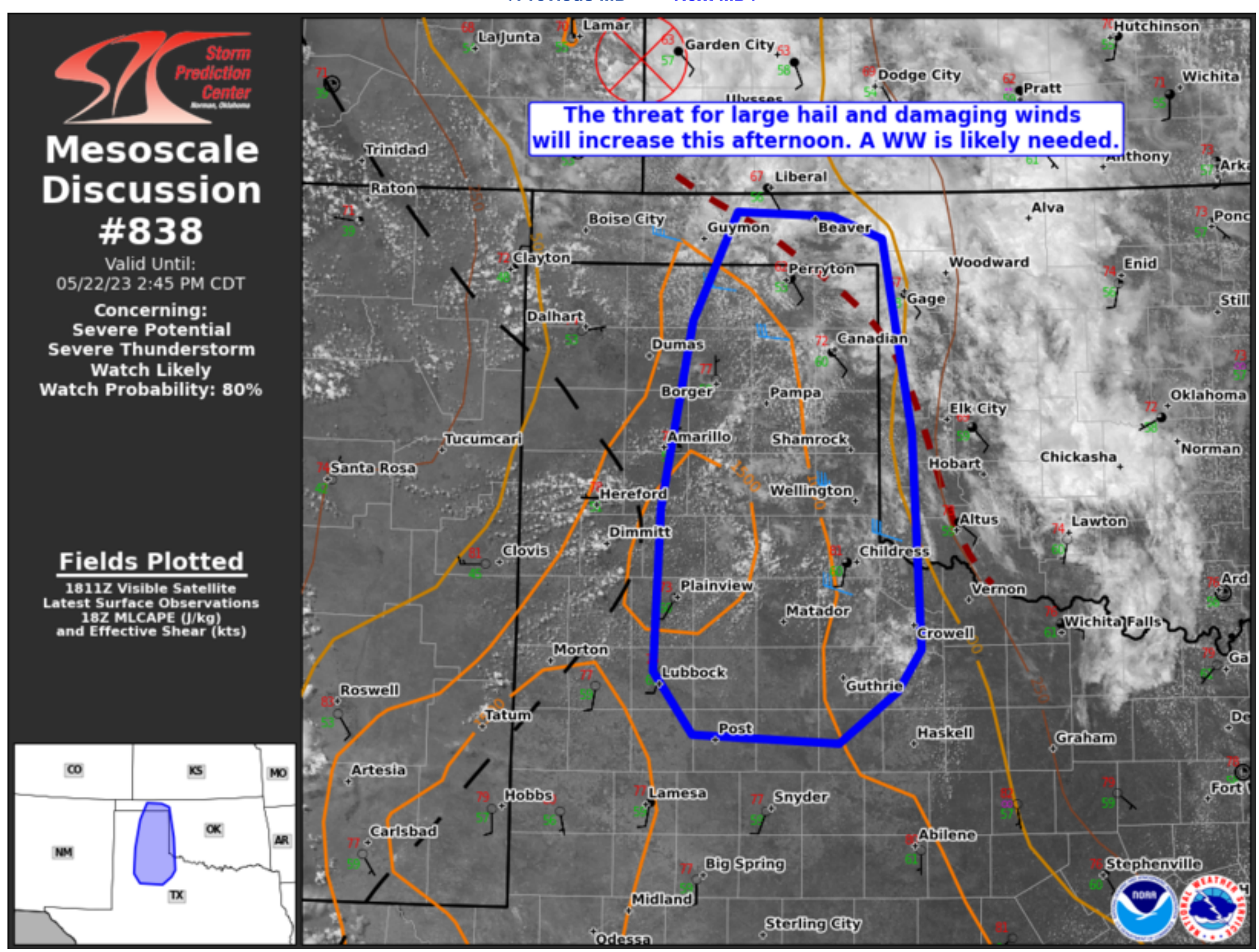
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**Mesoscale Discussion 838**  
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**Mesoscale Discussion #838**  
 Valid Until:  
 05/22/23 2:45 PM CDT  
 Concerning:  
 Severe Potential  
 Severe Thunderstorm  
 Watch Likely  
 Watch Probability: 80%

**Fields Plotted**  
 1811Z Visible Satellite  
 Latest Surface Observations  
 18Z MLCAPE (J/kg)  
 and Effective Shear (kts)



Mesoscale Discussion 0838  
 NWS Storm Prediction Center Norman OK  
 0117 PM CDT Mon May 22 2023

Areas affected...portions of the Oklahoma and Texas Panhandles into far western Oklahoma.

Concerning...Severe potential...Severe Thunderstorm Watch likely

Valid 221817Z - 221945Z

Probability of Watch Issuance...80 percent

SUMMARY...Scattered thunderstorms are expected to develop in proximity to a remnant MCV and surface trough this afternoon. Large hail and damaging wind gusts are possible. A Severe Thunderstorm Watch will likely be needed this afternoon.

DISCUSSION...As of 1815 UTC, visible satellite imagery showed several area of agitated cumulus gradually deepening over the TX/OK Panhandles in proximity to a remnant MCV and a weak surface pressure trough. Early afternoon heating has removed most of the remnant MLCINH across the region, with SPC mesoanalysis already showing around 1000-1500 J/kg of MLCAPE in place. As the air mass continues to warm, heating and subtle convergence along the aforementioned surface features should result in thunderstorm development by 19-20z.

Mid-level flow is somewhat enhanced to the south of the MCV across the southern and eastern Panhandles. Backed low-level flow was also aiding in locally elongating area hodographs. As storms develop this afternoon, 30-35 kt of effective shear should support organized multicells and a few supercells this afternoon. While not overly steep, mid-level lapse rates near 7 C/km along the eastern fringe of the EML will be sufficient to support large hail, especially with more sustained rotating storms. Steeper low-level lapse rates will also favor damaging outflow gusts. Hi-res guidance suggests storms may eventually consolidate into a forward-moving cluster with a locally greater risk for damaging winds later this evening. A Severe Thunderstorm Watch will likely be needed this afternoon to cover the threat for large hail and damaging gusts.

..Lyons/Grams.. 05/22/2023

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

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