

Storm Prediction Center



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Organization

Mesoscale Discussion 862 < Previous MD Next MD > Mesoscale Discussion Increasingly organized convective system likely to evolve through Midnight-#862 2 AM CDT...accompanied by increasing risk for severe gusts Valid Until: 05/21/24 12:00 AM MDT Concerning: **Tornado Watches** #269, #273 **Fields Plotted** 0356Z MRMS RALA 03Z 500 mb Height (dam; blue), 850 mb Temperature (C; red), Surface Pressure (mb; black), and Surface Dewpoint (F; green) CO

Mesoscale Discussion 0862 NWS Storm Prediction Center Norman OK 1059 PM CDT Mon May 20 2024

Areas affected...parts of northeastern Colorado...northwestern Kansas...southwestern Nebraska

Concerning...Tornado Watch 269...273...

Valid 210359Z - 210600Z

The severe weather threat for Tornado Watch 269, 273 continues.

SUMMARY...Supercells will continue to pose a risk for large hail, locally damaging wind gusts and perhaps a tornado or two during the couple of hours, before storms evolve into a more organized cluster with potential for more widespread severe gusts perhaps occasionally in excess of 75 mph as early as Midnight-2 AM CDT. Additional severe weather watches will likely be needed downstream later tonight.

DISCUSSION...Several sustained discrete supercells have evolved in a developing cluster focused within strong warm advection centered around the 700 mb level. This forcing is forecast to continue slowly developing eastward across the western Kansas/Nebraska border area through 05-07Z. Moistening easterly low-level flow beneath this regime (including mid/upper 60s surface dew points advecting across and east of the McCook NE/Hill City KS vicinities) will continue to support increasingly unstable updraft inflow (including CAPE possibly in excess of 2000-3000 J/kg). As this occurs, substantive further upscale growth and organization seems likely in the presence of strong deep-layer shear.

While storm motions are initially slow in the presence of modest southwesterly deep-layer mean flow, which may have weakened some this evening, convective evolution during the next few hours probably will include the development of an increasingly well-defined mesoscale convective vortex. Intensifying rear inflow to the south and southeast of this feature is expected to eventually contribute to a more rapid forward propagation and increasing potential for severe surface gusts.

..Kerr.. 05/21/2024

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

ATTN...WFO...LBF...GLD...BOU...

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