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Mesoscale Discussion 742

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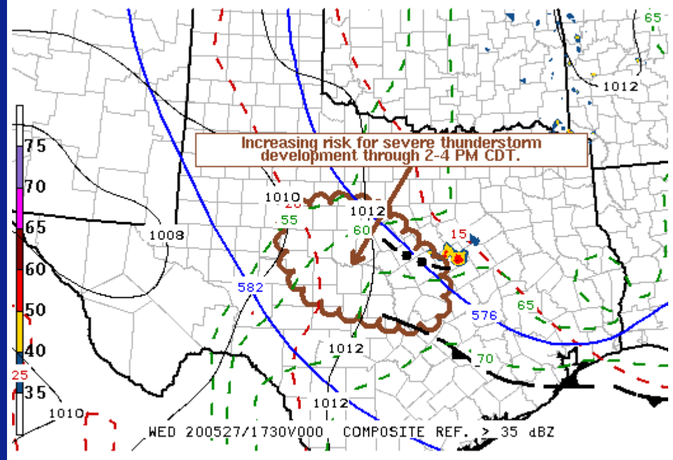

SPC MCD #0742

Mesoscale Discussion 0742
NWS Storm Prediction Center Norman OK
1244 PM CDT Wed May 27 2020

Areas affected...Parts of central Texas

Concerning...Severe potential...Watch likely

Valid 271744Z - 271945Z

Probability of Watch Issuance...80 percent

SUMMARY...Severe thunderstorm development appears increasingly probable through 2-4 PM, accompanied by the risk for large hail and strong wind gusts. A watch likely will be issued within the next couple of hours.

DISCUSSION...Strong surface heating and boundary-layer mixing is underway beneath warmer elevated-mixed layer air across the Permian Basin. This is contributing to a zone of stronger differential surface heating across the South Plains into Edwards Plateau region, along lower/mid tropospheric warm advection is becoming focused, coincident with lingering relatively moist and destabilizing boundary layer. Through mid to late afternoon, mixed-layer CAPE appears likely to increase to 1000-2000+ J/kg, in the presence of steepening lower/mid tropospheric lapse rates.

Weakening inhibition for boundary-layers parcels, coupled with lift associated with the warm advection, and perhaps differential cyclonic vorticity advection associated with a perturbation pivoting around the southern Plains mid-level low, seem likely to support the initiation of thunderstorm activity. Various model output appears generally consistent that this will occur in the 19-21Z time frame, somewhere near/east of Abilene and San Angelo. Southwestward advancing outflow from convection south of the Dallas-Fort Worth Metroplex could also become a focus.

Once storms initiate, within a favorably sheared 30-40 kt northwesterly mean ambient flow regime, the environment likely will be conducive to organized severe storm development. This probably will include supercells initially, and eventually, an upscale growing, increasingly organized convective system with increasing potential to produce severe wind, in addition to large hail.

..Kerr/Hart.. 05/27/2020

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

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