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Mesoscale Discussion 1240

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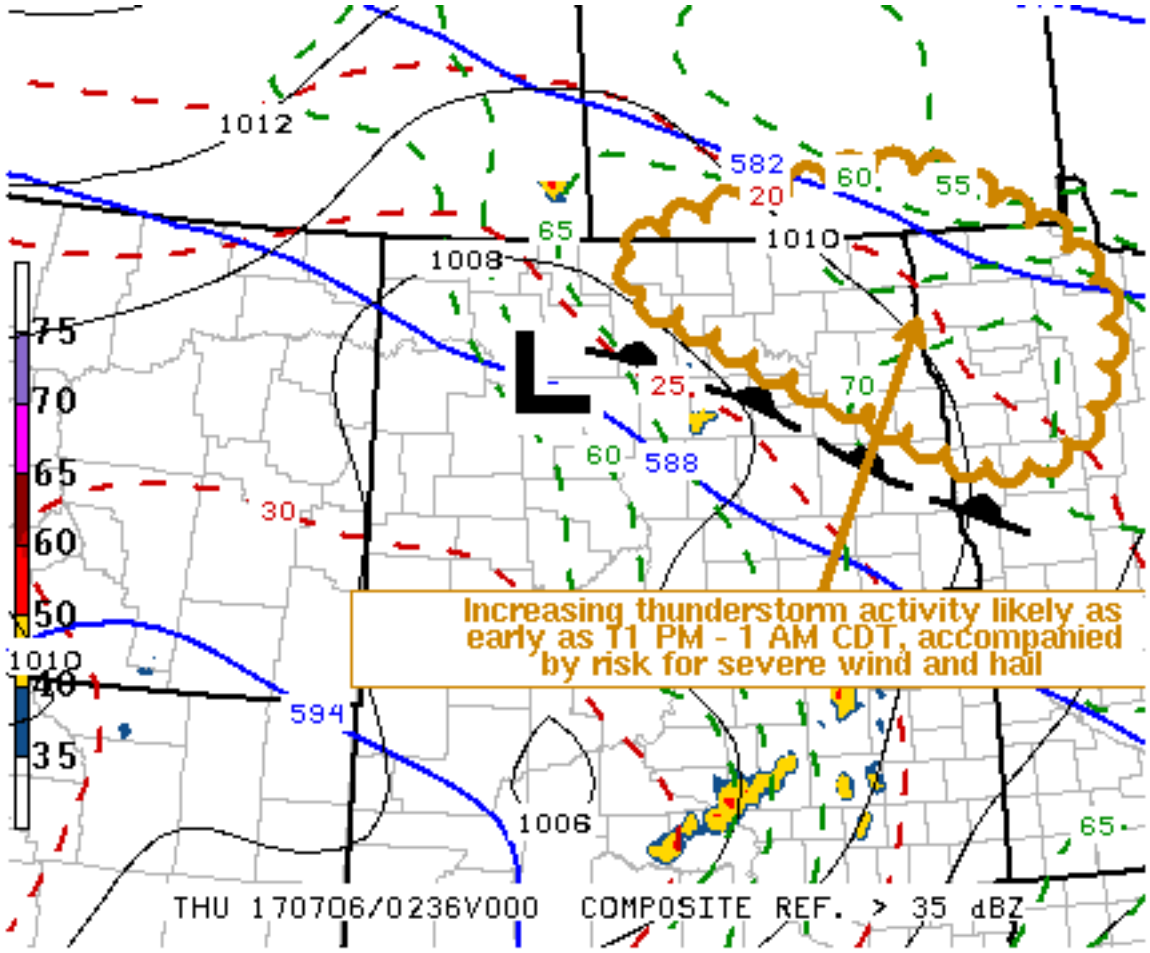

SPC MCD #1240

Mesoscale Discussion 1240
NWS Storm Prediction Center Norman OK
0951 PM CDT Wed Jul 05 2017

Areas affected...Parts of northeastern North Dakota into northwestern Minnesota

Concerning...Severe potential...Watch likely

Valid 060251Z - 060445Z

Probability of Watch Issuance...80 percent

SUMMARY...Severe weather potential with an area of developing thunderstorms appears likely to increase across the region by the 11 PM - 1 AM CDT time frame. Trends are being monitored for a possible watch issuance.

DISCUSSION...An area of developing thunderstorms spreading across southeastern Saskatchewan into southwestern Manitoba probably is being supported by an area of enhanced low-level warm advection,

downstream of a short wave impulse digging across the Canadian Prairies. Trailing the more prominent mid-level wave now digging to the southwest of Hudson Bay, this feature appears likely to continue into/across the central Canadian/U.S. border area overnight, as upstream ridging builds through the Canadian Rockies. As it does, forcing for ascent to maintain ongoing development, and support further upscale convective growth, may overspread the North Dakota/Manitoba border area as early as 04-06z. Guidance is suggestive that this could be preceded by additional thunderstorm development within a strengthening band of downstream lower/mid tropospheric warm advection, across northeastern North Dakota into northwestern Minnesota, perhaps aided by the nocturnal southerly low-level jet as it begins to reach its peak intensity.

Given strong deep layer shear (supported by veering winds with height beneath 40 kt northwesterly 500 mb flow), and thermodynamic profiles characterized by steep lapse rates (above the decoupling boundary layer) and sizable CAPE, the environment appears more than conducive to organized severe storms, including supercells. This seems likely to be accompanied by a risk for severe hail and strong, potentially damaging, surface gusts.

..Kerr/Thompson.. 07/06/2017

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

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Page last modified: July 06, 2017