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Mesoscale Discussion 609

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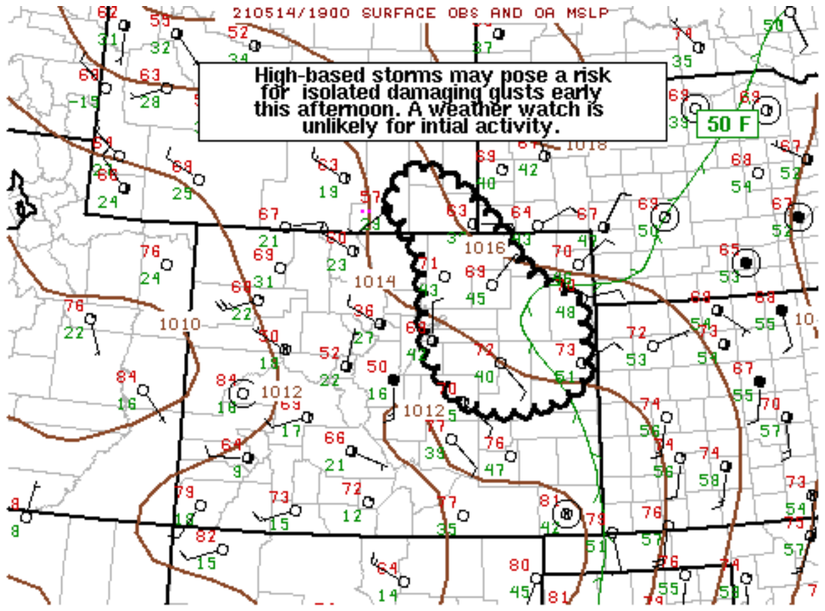

SPC MCD #0609

Mesoscale Discussion 0609
NWS Storm Prediction Center Norman OK
0256 PM CDT Fri May 14 2021

Areas affected...Eastern Colorado...southeast Wyoming...and far western Nebraska

Concerning...Severe potential...Watch unlikely

Valid 141956Z - 142200Z

Probability of Watch Issuance...20 percent

SUMMARY...Scattered thunderstorm development along the Front Range may pose a risk for isolated damaging wind gusts over the next several hours. A greater severe threat may evolve later this afternoon/early this evening as storms move toward eastern Colorado. A weather watch is unlikely in the next couple of hours.

DISCUSSION...As of 1930 UTC, visible satellite showed several areas of high-based convection and weak thunderstorms from the southern Laramie Range across eastern Wyoming into north-central Colorado. Additional convective development appears likely ahead of a weak shortwave trough within northwest flow across the central Rockies. Surface observations showed weak upslope flow was occurring across much of the central High Plains with 40s and 50s F dewpoints slowly advancing westward. SPC Mesoanalysis and hi-res model sounding trends suggest that convection will continue to strengthen as afternoon heating erodes remaining MLCINH and the atmosphere gradually destabilizes. 25-35 kts of effective shear should support only modest storm organization in the form of multi-cell clusters through this afternoon. Large temperature/dew point spreads of 20-30 degrees F suggest the primary threat with any stronger thunderstorms will be damaging wind gusts, though small hail will also be possible given steep mid-level lapse rates around 9 C/km.

As storm development continues later this afternoon and early this evening, consolidating outflow/deeper cold pools may support a gradual increase in convective coverage/organization as storms approach far eastern Colorado and western Kansas. Hi-res guidance hints at the development of an MCS or storm cluster capable of producing a greater damaging wind threat as storms begin to encounter greater buoyancy from increasing boundary-layer moisture (dewpoints 50-60 F). Details on convective evolution remain scant, but a more focused corridor for damaging wind potential, requiring a weather watch, may evolve out of the ongoing storms.

..Lyons/Kerr.. 05/14/2021

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

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