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Mesoscale Discussion 907

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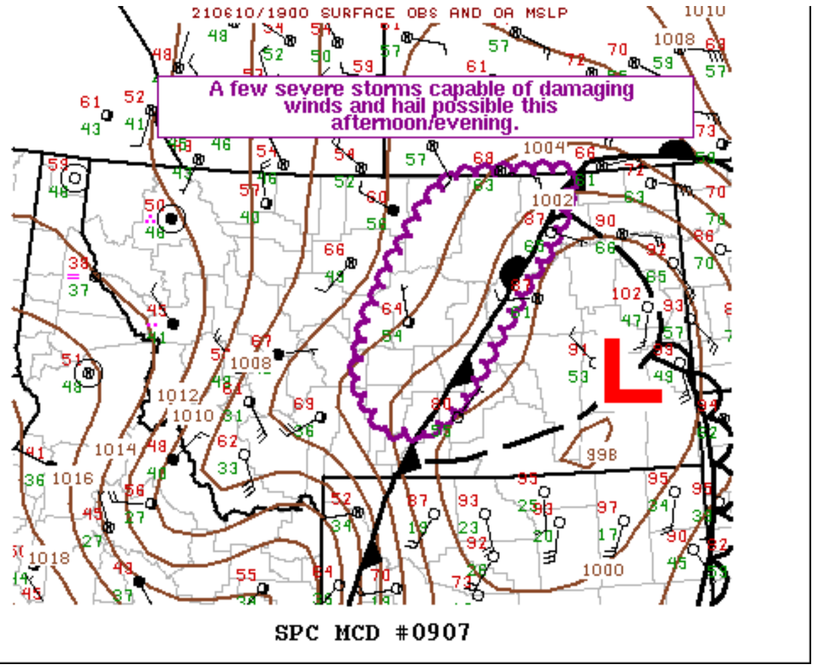

Mesoscale Discussion 0907
NWS Storm Prediction Center Norman OK
0247 PM CDT Thu Jun 10 2021

Areas affected...west-central/northeast Montana

Concerning...Severe potential...Watch possible

Valid 101947Z - 102115Z

Probability of Watch Issuance...60 percent

SUMMARY...A few severe storms may develop early this afternoon to the northwest of a deepening surface low across southwestern Montana. Isolated supercells capable of severe wind gusts, large hail, and perhaps tornadoes will track northward toward the Canadian border into this evening.

DISCUSSION...Afternoon water vapor imagery showed a well-defined upper-trough and jet streak approaching the northern Rockies. As deep-layer ascent and stronger southwesterly flow aloft have begun to overspread western and central Montana, new updrafts have been observed along the crests of the higher terrain. Easterly low-level advection north of the surface low was noted transporting higher theta-e air with 40s and 50s F dewpoints as far west as LWT. As ascent from the approaching trough continues to increase, steepening mid-level lapse rates and the warming/moistening airmass should result in weak to moderate destabilization by mid afternoon. Deep-layer shear is strong, with 60-70 kts of 0-6km shear noted from the 12z Glasgow and Great Falls RAOBs. Sufficient buoyancy and plentiful shear will act to organize any updrafts into supercells or short line segments as they track north-northeastward this afternoon/evening. The primary severe risk appears to be the potential for large hail and damaging wind gusts given strong background flow and steep mid-level lapse rates. Hodographs are long, but weak in the lowest several kilometers. A tornado or two cannot be ruled out given the potential for rotating storms and locally backed northeasterly flow near the stationary front north of the low. Convective trends will be monitored for a possible watch issuance in the next 1 to 2 hours.

..Lyons/Guyer.. 06/10/2021

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

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