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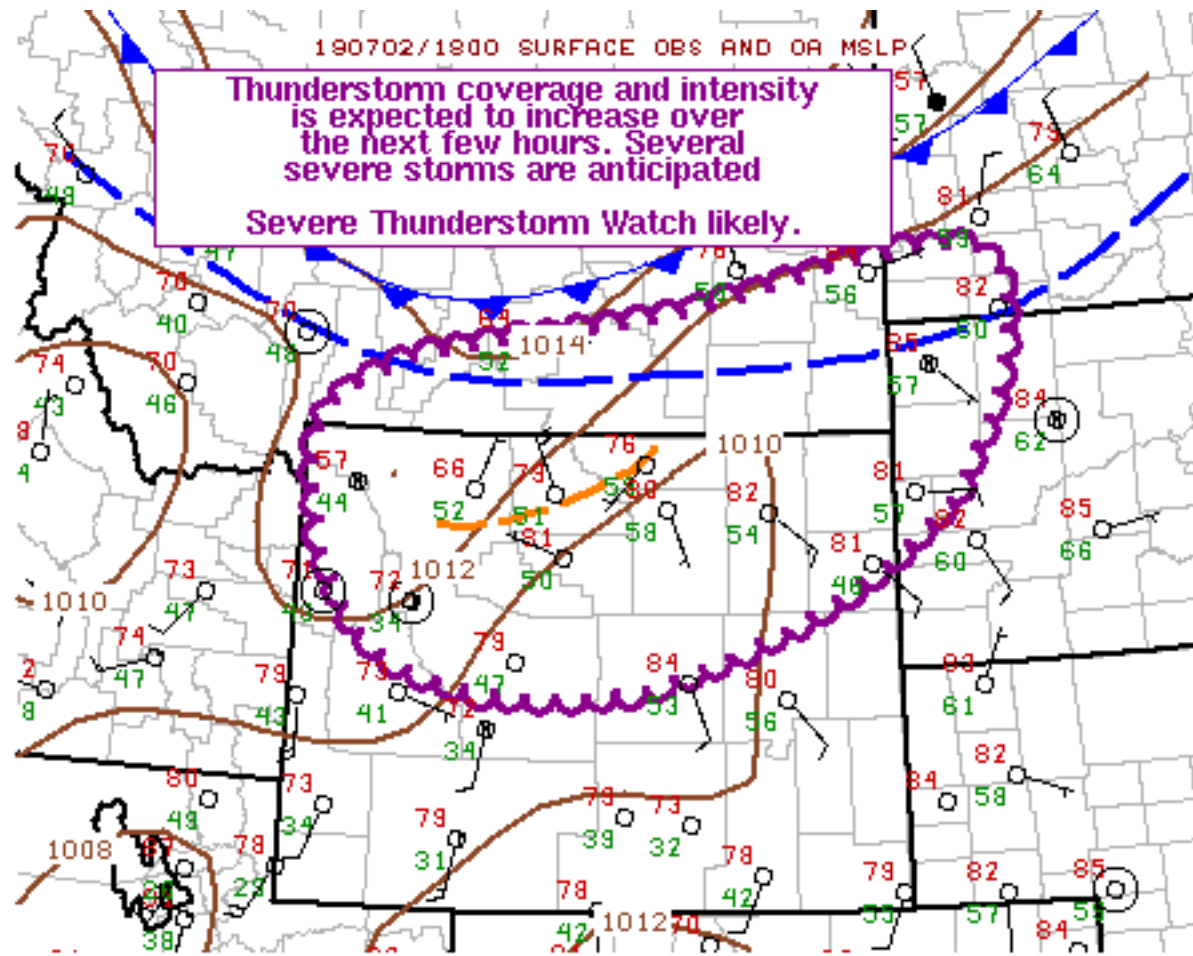
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Mesoscale Discussion 1341

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SPC MCD #1341

Mesoscale Discussion 1341

NWS Storm Prediction Center Norman OK

0144 PM CDT Tue Jul 02 2019

Areas affected...South-Central/Southeast MT...Northern/Central WY...Far Western SD...Far Southwest ND

Concerning...Severe potential...Severe Thunderstorm Watch likely

Valid 021844Z - 022045Z

Probability of Watch Issuance...80 percent

SUMMARY...Thunderstorm coverage and intensity is expected to increase over the next few hours. Some of these storms will be capable of producing strong wind gusts and large hail. A watch is likely.

DISCUSSION...Recent surface analysis places a cold front from northwest ND southwestward to about 50 miles north of BIL and then back northwestward into northwest MT. A pre-frontal trough/wind



shift exists ahead of this cold front, from far southwest ND/far northwest SD westward to about 25 miles south of BIL and then back northwest towards MSO. Cumulus ahead of the pre-frontal trough in south-central/southeast MT and northern WY has become deeper and more widespread over the past hour as the leading edge of the forcing for ascent attendant to an approaching shortwave interacts with a diurnally destabilizing air mass. Thunderstorm initiation has already occurred over Park County WY and over the Bighorns in southeast MT. Gradually increasing thunderstorm coverage is anticipated as forcing for ascent strengthens, the air mass continues to destabilize, and orographic enhancement persists.

Stronger mid-level winds attendant to approaching shortwave will result in increasing vertical shear while steep mid-level lapse rates contribute to moderate buoyancy (i.e. MLCAPE increasing from 250 J/kg across western WY to over 1500 in far northeast WY/southeast MT). Expectation is for gradually increasing storm coverage and intensity over the next few hours. Given the supportive instability and vertical shear, a few supercells capable of damaging wind gusts are hail are possible. Increasing storm organization is anticipated as the storms move eastward/northeastward, with the development of an organized line possible later this afternoon/evening. Expected coverage and severity of the storms will likely merit watch issuance, especially with northeastward extent.

..Mosier/Grams.. 07/02/2019

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

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