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City, St

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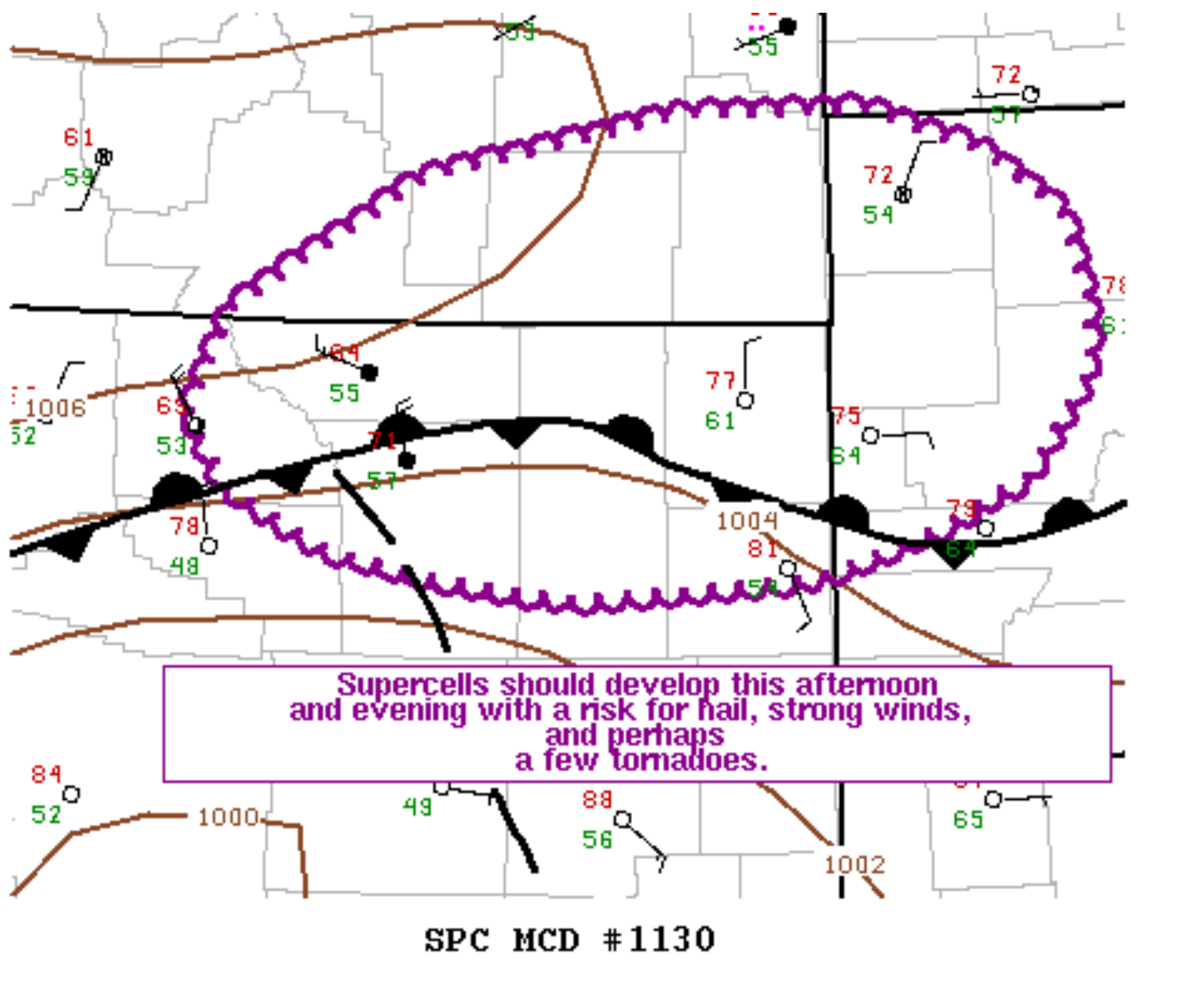
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Mesoscale Discussion 1130

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Mesoscale Discussion 1130
NWS Storm Prediction Center Norman OK
0324 PM CDT Sun Jun 12 2022

Areas affected...Northeastern Wyoming southeastern Montana and western South Dakota

Concerning...Severe potential...Watch likely

Valid 122024Z - 122200Z

Probability of Watch Issuance...80 percent

SUMMARY...Strong to severe storms, should develop this afternoon from the higher terrain near a quasi-stationary front. Evolving supercell structures will likely pose a risk for large to very large hail, strong damaging winds and perhaps a couple tornadoes. A weather watch is likely before 21z.

DISCUSSION...Mid afternoon water vapor imagery showed an anomalously deep mid-level trough moving onshore across the Pacific Northwest and spreading eastward across the central Rockies. Height falls ahead of this feature are evident in the broad clouds/stratiform precipitation ongoing across eastern ID and western MT/WY roughly marking the position of an east-west oriented quasi stationary front. Over the last half hour lightning has emerged along the front across northern WY likely in response to strong diurnal heating and subsequent surface destabilization. As ascent from the approaching mid-level trough, weak upslope forcing, and surface heating/moistening along the front continue, remaining MLCINH should dissipate, resulting in vigorous thunderstorm development across southern MT and northern WY. 1500 J/kg of MLCAPE and 50+ kt of effective shear evident on VAD WVPs and the 19z UNR special sounding suggests supercells will be the dominate storm mode. Strong vertical shear and the degree of buoyancy/lapse rates suggest large to very large hail is possible along with damaging wind gusts. Already backed surface winds hint that low-level hodographs will likely enlarge through this evening in response to increasing ascent and strong east/northeasterly upslope flow. The large 0-2km storm relative winds and enhanced vorticity ingestion along the front suggest a few tornadoes will also be possible with the more discrete supercells able to develop. A weather watch is likely needed by 21z across portions of MT, SD and WY.

..Lyons/Guyer.. 06/12/2022

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

ATTN...WFO...BIS...UNR...BYZ...RIW...

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	45050236	44740238	44280279	44060336	43850412	43800501
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