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City, St

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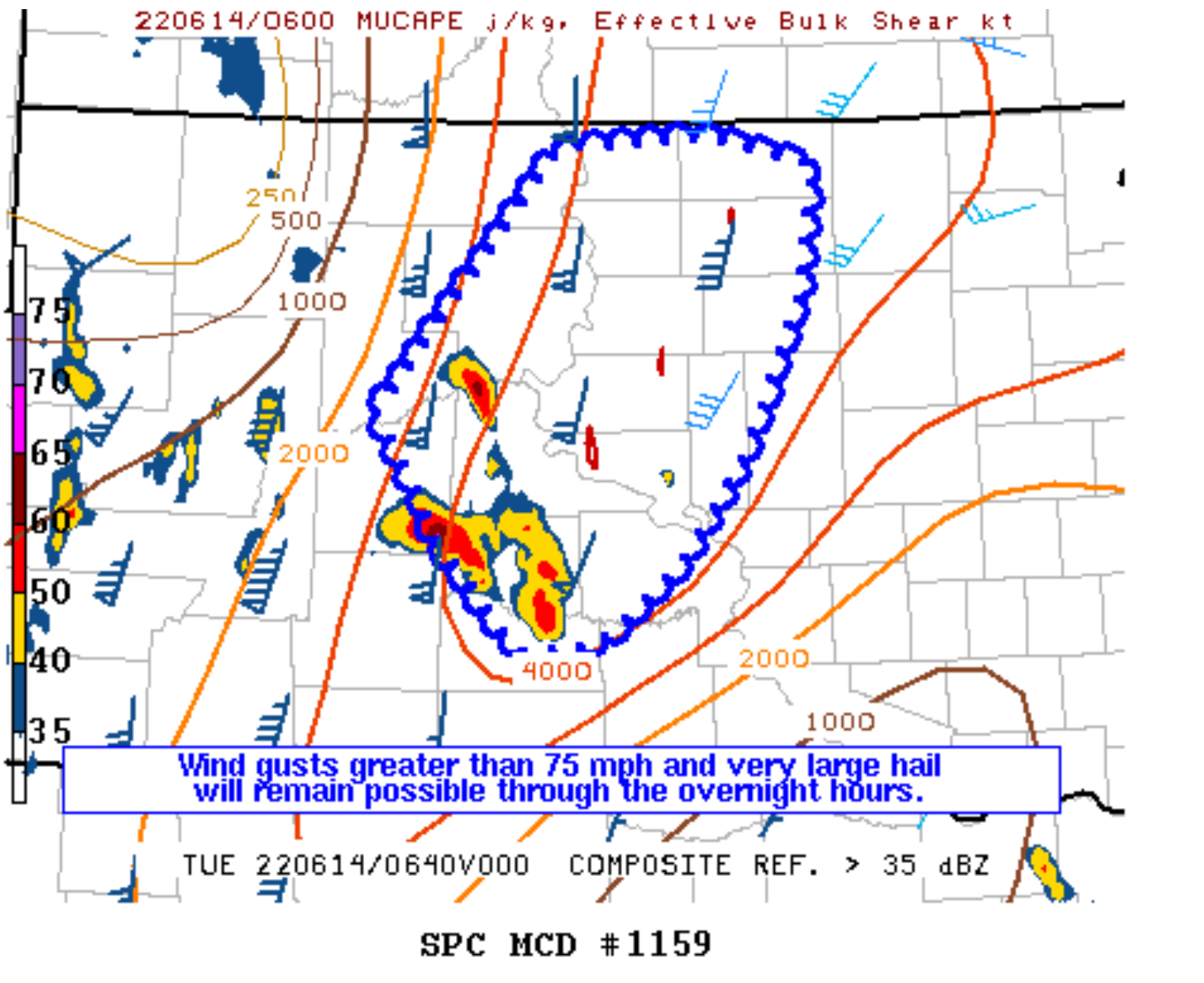
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Mesoscale Discussion 1159

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Mesoscale Discussion 1159
NWS Storm Prediction Center Norman OK
0152 AM CDT Tue Jun 14 2022

Areas affected...Central/northern SD

Concerning...Severe Thunderstorm Watch 363...

Valid 140652Z - 140815Z

The severe weather threat for Severe Thunderstorm Watch 363 continues.

SUMMARY...Wind gusts greater than 75 mph and very large hail will remain possible with an intense thunderstorm cluster overnight.

DISCUSSION...Intense thunderstorms are ongoing at 0645Z across parts of central SD, with recent reports of very large hail (greater than 2 inches in diameter) and severe wind gusts. These storms have developed on the cool side of a cold front, in advance of a strong upper trough moving toward the northern High Plains and a surface low moving north-northeastward across northwest NE.

Despite the post-frontal nature of these storms, rich low-level moisture just above the surface and steep midlevel lapse rates are supporting very strong to extreme buoyancy, with MUCAPE of greater than 4000 J/kg noted per recent mesoanalyses. Meanwhile, deep-layer shear will remain supportive of organized convection overnight, as strong southwesterly midlevel flow continues to overspread the region.

Given the magnitude of instability, very large hail and localized significant wind gusts will continue to be a threat with any supercells that can remain semi-discrete overnight. Evolution into a forward-propagating cluster is possible as storms consolidate with time, and a swath of more widespread intense damaging wind gusts will be possible should organized upscale growth occur.

..Dean.. 06/14/2022

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

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43949973 43590026 43560074 43860103 44080128 44240134
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