

# Storm Prediction Center



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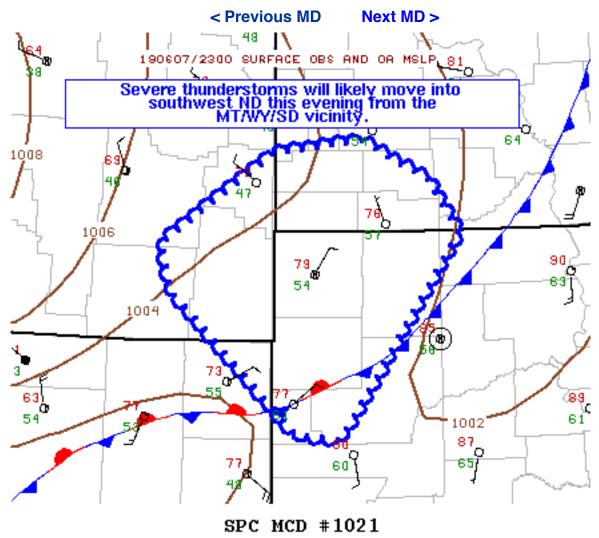
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## **Mesoscale Discussion 1021**



Mesoscale Discussion 1021 NWS Storm Prediction Center Norman OK 0628 PM CDT Fri Jun 07 2019

Areas affected...southeast MT...northwest SD...southwest ND

Concerning...Severe Thunderstorm Watch 340...

Valid 072328Z - 080100Z

The severe weather threat for Severe Thunderstorm Watch 340 continues.

SUMMARY... The severe risk is beginning to ramp up for areas over northwest SD and southwest ND. Severe gusts (60-75mph) and large hail (1-2 inches in diameter) are the threats with the stronger storms.

DISCUSSION...Water-vapor imagery shows a potent mid-level shortwave trough moving through the Northern Rockies and northern InterMountain regions early this evening. Farther east over the



western Dakotas and southeast MT, the initial plume of 700-500mb ascent will overspread this area during the next 1-2 hours according to objective analyses.

Surface analysis via observations and radar fine-line data indicate a cold front is slowly pushing east across central ND with the boundary stalling near the Black Hills. Surface dewpoints in the middle 50s are located over southwest ND into northwest SD. It appears most of the ongoing thunderstorm activity moving into the western Dakotas is preferentially favoring the cool-side of the boundary where shallow frontal lift is more supportive for storm development compared to a capped warm sector farther east.

Some short-term convection-allowing model guidance is suggestive that the ongoing storms over southeast MT and the area along the SD/WY border is the initial evolution of a severe-wind producing cluster of thunderstorms expected to move northeast across southwest ND/northwest SD and eventually into central ND later this evening. A new severe thunderstorm watch will likely be needed farther northeast of severe thunderstorm watch 340. However, during the next 1-2 hours, the expectation is for a gradual intensification of storms over southeast MT moving into the western Dakotas with the risk for severe gusts coincidentally increasing.

..Smith.. 06/07/2019

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

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