



Local forecast by "City, St" or "ZIP"

City, St



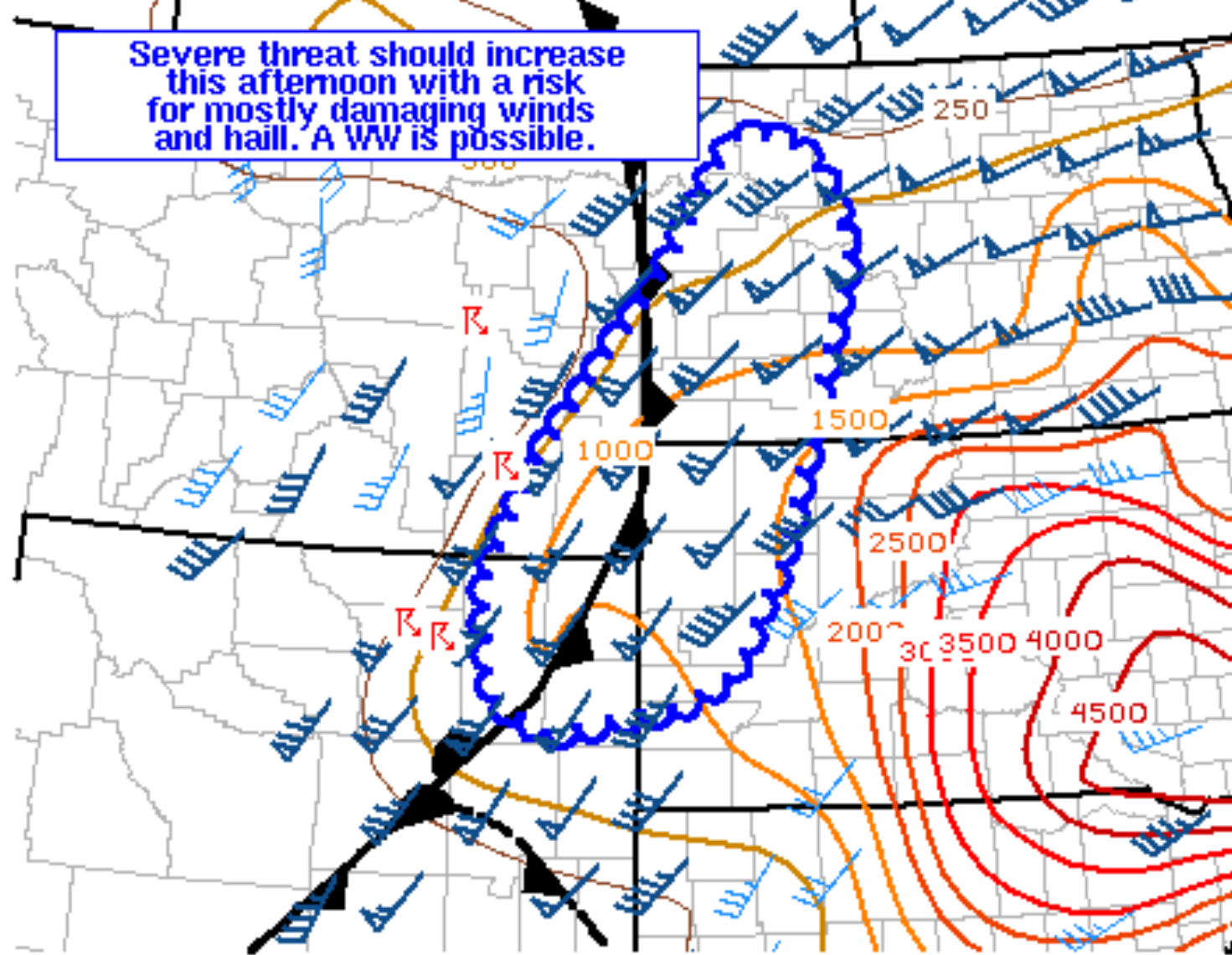
NCEP Quarterly Newsletter

- Home (Classic)
- SPC Products
 - All SPC Forecasts
 - Current Watches
 - Meso. Discussions
 - Conv. Outlooks
 - Tstm. Outlooks
 - Fire Wx Outlooks
 - RSS Feeds
 - E-Mail Alerts
- Weather Information
 - Storm Reports
 - Storm Reports Dev.
 - NWS Hazards Map
 - National RADAR
 - Product Archive
 - NOAA Weather Radio
- Research
 - Non-op. Products
 - Forecast Tools
 - Svr. Tstm. Events
 - SPC Publications
 - SPC-NSSL HWT
- Education & Outreach
 - About the SPC
 - SPC FAQ
 - About Tornadoes
 - About Derechos
 - Video Lecture Series
 - WCM Page
 - Enh. Fujita Page
 - Our History
 - Public Tours
- Misc.
 - Staff
 - Contact Us
 - SPC Feedback

Mesoscale Discussion 1144

[< Previous MD](#) [Next MD >](#)

220613/1900 MLCAPE J/kg and Effective Bulk Shear kt



SPC MCD #1144

Mesoscale Discussion 1144
NWS Storm Prediction Center Norman OK
0253 PM CDT Mon Jun 13 2022

Areas affected...portions of eastern montana/Wyoming and the western Dakotas.

Concerning...Severe potential...Watch possible

Valid 131953Z - 132200Z

Probability of Watch Issuance...60 percent

SUMMARY...Thunderstorm development is expected later this afternoon across portions of Montana and Wyoming. Supercells and bowing segments capable of damaging wind gusts, large hail and perhaps a couple tornadoes will be possible through this evening. A weather watch is possible.

DISCUSSION...Ahead of an anomalously deep mid-level trough across the northern/central Rockies, afternoon visible imagery showed agitated cumulus and early thunderstorm development underway across portions of northeastern WY and southeastern MT. Located near the axis of a modifying cold front, east/northeasterly low-level winds were transporting rich surface moisture (dewpoints in the upper 50s to low 60s F) westward toward the higher terrain. Gradual destabilization has been noted with SPC mesoanalysis showing between 500 and 1000 J/kg of MLCAPE and minimal remaining inhibition. Winds aloft are strong (55-70 kt) as sampled by the RIW VAD supporting ample effective shear for organized storms including supercells. As heating and upslope forcing continue this afternoon, additional thunderstorm development and organization appears plausible. The strong vertical shear and steepening mid-level lapse rates will support a risk for large hail and damaging winds, some of which could be significant. Stronger low-level shear from backed surface flow near the frontal zone may also support a conditional risk for a couple of tornadoes with the more organized supercells.

Hi-res ensemble guidance suggests a gradual increase in storm development/intensification should occur by 20-22z as remaining inhibition is removed. Upscale growth along and east of the front may occur later in the evening with a greater risk for damaging winds possible across the western Dakotas. Given the potential for more organized storms and a subsequent severe risk, a weather watch is possible this afternoon.

..Lyons/Guyer.. 06/13/2022

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

ATTN...WFO...BIS...UNR...BYZ...GGW...

LAT...LON 47270377 48020325 48440287 48400222 48030177 47470155
 45840212 44940243 44080300 43800360 43590510 43890568
 44800575 45270550 45750525 47270377

[Top/All Mesoscale Discussions/Forecast Products/Home](#)

Weather Topics:
[Watches](#), [Mesoscale Discussions](#), [Outlooks](#), [Fire Weather](#), [All Products](#), [Contact Us](#)