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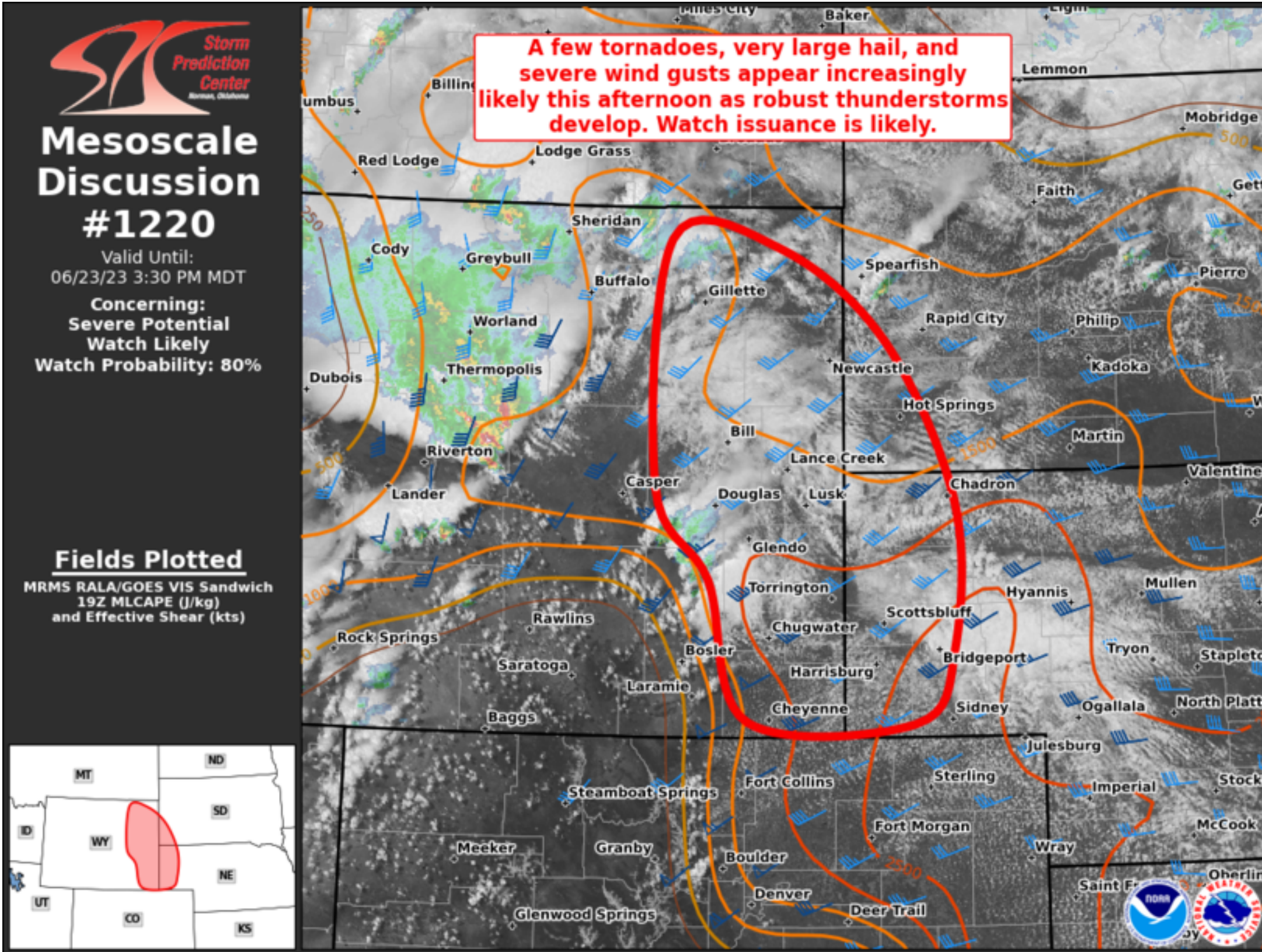
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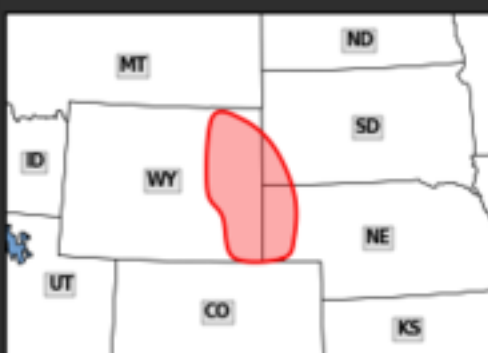
## Mesoscale Discussion 1220

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**Storm Prediction Center**  
**Mesoscale Discussion #1220**  
 Valid Until:  
 06/23/23 3:30 PM MDT  
**Concerning:**  
 Severe Potential  
 Watch Likely  
 Watch Probability: 80%

**Fields Plotted**  
 MRMS RALA/GOES VIS Sandwich  
 19Z MLCAPE (J/kg)  
 and Effective Shear (kts)



Mesoscale Discussion 1220  
 NWS Storm Prediction Center Norman OK  
 0228 PM CDT Fri Jun 23 2023

Areas affected...Portions of eastern WY...southwestern SD...and the NE Panhandle

Concerning...Severe potential...Watch likely

Valid 231928Z - 232130Z

Probability of Watch Issuance...80 percent

**SUMMARY...**A few tornadoes, very large hail, and severe wind gusts appear increasingly likely this afternoon as robust thunderstorms develop. Watch issuance is likely.

**DISCUSSION...**Convection has begun to develop along both the Laramie and Bighorn Mountains in WY this afternoon as large-scale ascent associated with a shortwave trough overspreads the northern High Plains. Additional robust thunderstorms, including a couple of supercells, are ongoing across central WY in a weakly unstable but strongly sheared environment. The airmass downstream of this activity across eastern WY into southwestern SD and the NE Panhandle is slowly destabilizing. But, persistent low-level cloud cover has hampered daytime heating across these areas to some extent. Still, very steep (8 C/km or greater) mid-level lapse rates have overspread the northern High Plains, and around 1500-2500 J/kg of MLCAPE is already present based on 19Z mesoanalysis estimates.

Deep-layer shear of 40-50 kt will easily support supercell structures with any convection that can be sustained. East-southeasterly low-level upslope flow should continue across southeastern WY and the NE Panhandle along/near a surface warm front/outflow boundary. Better tornado potential may be focused over this area through the rest of the afternoon into the early evening, as the backed and slightly stronger low-level flow should promote sufficient low-level shear for updraft rotation and a few tornadoes. Very large hail (2+ inches in diameter) will also be a threat with supercells given the favorable mid-level lapse rates and strengthening southwesterly flow at mid/upper levels.

The severe wind threat will probably remain fairly isolated this afternoon, before eventually increasing by this evening as one or more clusters form with a strengthening south-southeasterly low-level jet. Given the increasing severe threat anticipated this afternoon, watch issuance will likely be needed within the next couple of hours.

..Gleason/Guyer.. 06/23/2023

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

ATTN...WFO...UNR...CYS...

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