



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

City, St  Go

Find us on Facebook SPC on Facebook

@NWSSPC

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

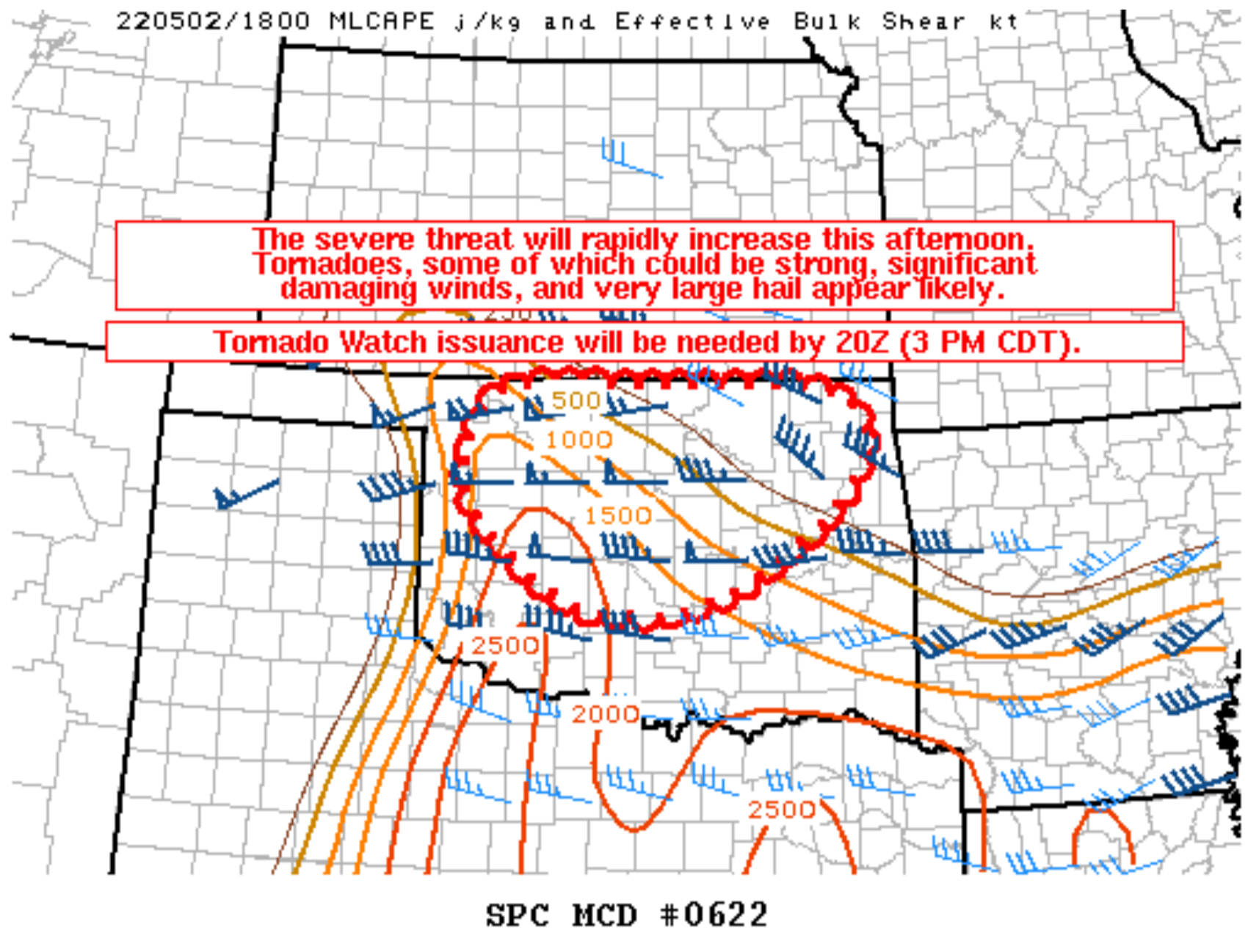
- Misc.
- Staff
- Contact Us
- SPC Feedback



## Mesoscale Discussion 622

< Previous MD Next MD >

220502/1800 MLCAPE J/kg and Effective Bulk Shear kt



SPC MCD #0622

Mesoscale Discussion 0622  
NWS Storm Prediction Center Norman OK  
0130 PM CDT Mon May 02 2022

Areas affected...Portions of OK

Concerning...Severe potential...Tornado Watch likely

Valid 021830Z - 022030Z

Probability of Watch Issuance...95 percent

SUMMARY...The severe threat will rapidly increase this afternoon. Tornadoes, some of which could be strong, significant damaging winds, and very large hail all appear likely. Tornado Watch issuance will be needed by 20Z (3 PM CDT).

DISCUSSION...A surface low is present over southwestern KS at 1830Z, with a dryline extending southward from the low across the far eastern TX Panhandle into western OK. An effective warm front/outflow boundary from earlier convection extends southeastward from the surface low into northwestern and central OK. Surface temperatures have generally warmed into the 70s and low 80s along/south of this boundary, with dewpoints increasing into the low to mid 60s. At least isolated thunderstorms are expected to initiate along the dryline across northwestern OK by 20Z (3 PM CDT), as forcing for ascent associated with a shortwave trough over the central High Plains overspreads the warm sector.

Modestly steepened mid-level lapse rates overlying the moist low-level airmass and continued diurnal heating will likely support moderate to strong instability by late afternoon, with MLCAPE ranging from around 2000-3000+ J/kg. Veering/strengthening wind profiles with height through mid levels will easily support supercells with initial development off the dryline. Effective SRH of 200-250+ m2/s2 this afternoon will foster low-level rotation with any thunderstorms that develop, with a corresponding threat for tornadoes. Some of the tornadoes could be strong given the rather favorable thermodynamic and kinematic environment, especially along the effective warm front/outflow boundary from earlier convection. Very large hail will also be possible with any supercells that can persist and remain at least semi-discrete.

The most probable area for initiation will be close to the surface triple point in northwestern OK, where the cu field is already becoming agitated. Most high-resolution guidance continues to suggest one or more intense supercells will form across this region and spread eastward into north-central OK this afternoon and early evening. The greatest threat for strong tornadoes will likely be associated with this activity. The potential for additional convective development farther south along the dryline across west-central OK remains unclear, as the better forcing associated with the compact shortwave trough and mid-level jet should remain focused along/near the OK/KS border area. Still, if a thunderstorm or two can form farther south, they would likely become severe quickly while also posing a threat for tornadoes and very large hail.

The supercells across north-central OK should grow upscale into a bowing squall line this evening, with a continued threat for embedded tornadoes and significant severe/damaging winds as convection spreads east-southeastward into central/eastern OK. Tornado Watch issuance will be needed by 20Z (3 PM CDT), as convective initiation across northwestern OK appears likely by this time.

..Gleason/Hart.. 05/02/2022

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

ATTN...WFO...TSA...OUN...

LAT...LON	35969950	36369954	36919913	36979865	36979679	36959620
	36949574	36849512	36419489	35999516	35689548	35429584
	35089638	34839720	34879816	35239880	35729934	35969950

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

Weather Topics:

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

National Weather Service • Since 1870

National Weather Service • Since 1870