

**Mesoscale Discussion 1652  
NWS Storm Prediction Center Norman OK  
1227 PM CDT Tue Jul 16 2024**

**Areas affected...Western/central New York into Northern Pennsylvania**

**Concerning...Severe Thunderstorm Watch 546...**

**Valid 161727Z - 161900Z**

**The severe weather threat for Severe Thunderstorm Watch 546 continues.**

**SUMMARY...The threat continues for WW 546, with the primary expected hazards being damaging winds, large hail, and perhaps a tornado with any persistent supercells. Another WW will likely be needed downstream.**

**DISCUSSION...The threat for damaging straight line winds, hail, and perhaps a tornado or two, continues for WW 546 this afternoon. Thunderstorm coverage continues to increase, with the most intense convection on the northern periphery of the watch being associated with a MCV progressing eastward out of Lake Ontario. This remnant MCV will be the greatest short-term threat for damaging winds as it comes onshore over the next hour, in addition to the line forming on its southern periphery.**

**Ahead of the convection, the boundary layer has warmed into the mid-to-upper 80s F, with dewpoints reaching the low-to-mid 70s F. This warm, moist boundary layer and associated instability is overspread by 45-50 kts of deep-layer vertical shear, supporting both supercells and linear bowing segments.**

**Forecast profiles east of the convection show some modest curvature of the low level hodograph, suggesting that the environment does support at least some tornado potential. This tornado potential would be maximized with any supercells that remain discrete or become dominant in an embedded line.**