

DAY 1 CONVECTIVE OUTLOOK

NWS STORM PREDICTION CENTER NORMAN OK
1129 AM CDT TUE JUL 08 2014

VALID 081630Z - 091200Z

...THERE IS A MDT RISK OF SVR TSTMS PORTIONS CENTRAL/WRN
NY...CENTRAL/WRN PA...EXTREME NRN WV...WRN MD PANHANDLE...

...THERE IS A SLGT RISK OF SVR TSTMS ELSEWHERE FROM OZARKS TO NRN NY
AND NWRN NEW ENGLAND...

...SUMMARY...

SEVERE THUNDERSTORMS CAPABLE OF DAMAGING WINDS AND SOME HAIL APPEAR
LIKELY THIS AFTERNOON AND EVENING FROM THE OZARK PLATEAU TO LOWER
GREAT LAKES AND WESTERN NEW ENGLAND. GREATEST DAMAGING-WIND THREAT
EXISTS IN AND NEAR MODERATE-RISK AREA. A FEW TORNADOES MAY
OCCUR...ESPECIALLY ACROSS PORTIONS OF NEW YORK AND PENNSYLVANIA THIS
AFTERNOON.

...SYNOPSIS...

CONUS SUBSET OF LARGE-SCALE PATTERN WILL CONTINUE TO FEATURE WRN
RIDGE AND ERN TROUGH...WITH BROAD BELT OF CYCLONIC FLOW FROM NRN
PLAINS TO SRN APPALACHIANS TO NEW ENGLAND...ENCOMPASSING GREAT LAKES
AND OH VALLEY. WITHIN THAT...SHORTWAVE TROUGH WAS QUITE EVIDENT IN
MOISTURE-CHANNEL IMAGERY OVER WI AND NWRN IL...MOVING TOWARD LM.
THIS PERTURBATION IS EXPECTED TO REACH LH...SRN ONT AND LE BY
00Z...THEN EJECT NEWD TO QUE WHILE UPSTREAM TROUGH CURRENTLY OVER
NRN MB PIVOTS ACROSS UPPER GREAT LAKES.

AT SFC...COLD FRONT OVER LOWER MI...INDIANA...SRN IL...SRN MO AND
NRN OK IS FCST TO MOVE RAPIDLY EWD ACROSS LOWER GREAT LAKES AND NRN
APPALACHIANS THIS PERIOD...WHILE MOVING MORE SLOWLY SEWD ACROSS TN
VALLEY/OZARKS AND OK.

...NERN CONUS...

SCATTERED-NUMEROUS TSTMS ARE EXPECTED TO DEVELOP OVER PORTIONS OH/PA
THROUGH MID-AFTN AND EXPAND Laterally UPSCALE INTO ONE OR MORE
QUASI-LINEAR COMPLEXES...WHILE MOVING RAPIDLY ENEWD TO NEWD ACROSS
MUCH OF PA/NY AND N-CENTRAL APPALACHIANS REGION. DAMAGING WIND WILL
BE PRIMARY CONCERN WITH ISOLATED SVR HAIL AND SLGT TORNADO RISK ALSO
POSSIBLE. CONVECTIVE EVOLUTION RESEMBLING THOSE THAT HAVE PRODUCED
SERIAL DERECHOS MAY OCCUR OVER AND NEAR 45%-WIND/MDT-RISK
AREA...WHERE DENSITY OF DAMAGING-WIND EVENTS SHOULD BE GREATEST.

REF SPC MESOSCALE DISCUSSION 1314 FOR NEAR-TERM DETAILS.

PRECONVECTIVE BOUNDARY-LAYER AIR MASS THIS AFTN WILL BECOME VERY
WELL-MIXED...ALBEIT RETAINING 60S F SFC DEW POINTS IN MANY LOCALES.
THIS PROCESS WILL HELP TO MAINTAIN PATCHES OF 1000-2000 J/KG MLCAPE
WHILE ALSO AIDING POTENTIAL FOR MOMENTUM TRANSFER AND DOWNBURSTS
GENERATED ALOFT TO REACH SFC AT DAMAGING INTENSITIES. WSWLY FLOW
ALOFT -- ALREADY SUPPORTING FAVORABLE DEEP SHEAR ACROSS THIS REGION
-- WILL STRENGTHEN STEADILY BEFORE CONVECTION PASSES...SUCH THAT
45-50-KT WINDS SHOULD BECOME COMMON IN 700-500-MB LAYER ESPECIALLY
OVER 45%-WIND AREA. NEARLY UNIDIRECTIONAL DEEP-LAYER WIND PROFILES
ARE FCST...CONTRIBUTING TO EXPECTED DOMINANCE OF QLCS MODE.
MEANWHILE LARGE-SCALE ASCENT/DCVA WILL INFLUENCE PRIMARILY AREAS
FROM WRN PA NWD. STRONG UPPER DIFLUENCE ALSO IS EVIDENT ALL ALONG
SRN RIM OF CYCLONIC UPPER-LEVEL FLOW BELT. GIVEN THESE
CONSIDERATIONS...RELATIVE CONCENTRATION OF DAMAGING WIND MAY DEVELOP
OVER PARTS OF PA/NY...PERHAPS EXTENDING SWD INTO PARTS OF WV.