April 24, 2010 Macroburst

**HIGHLIGHTS:** One of the strongest thunderstorm wind events in the past decade struck the East Prairie area of southeast Missouri with winds estimated around 120 mph. Elsewhere, a microburst and a weak tornado occurred in Christian and Todd Counties of western Kentucky. Several less intense damaging wind events occurred, mainly over western Kentucky.

**BACKGROUND:** A well-organized upper level low moved east from the central Plains into the Mid Missouri Valley during the day. Very strong winds aloft accompanied this system. A streak of very strong mid level winds punched northeast from the Arklatex region into the Lower Ohio Valley during the afternoon. A low level jet from 50 to 60 knots over the Lower Mississippi Valley nosed into the Lower Ohio Valley. At the surface, a low pressure center tracked from north central Arkansas to near St. Louis by late afternoon. Though surface dew points climbed into the lower to mid 60's, extensive cloudcover along and ahead of a warm front limited instability. The instability was generally weak, characterized by cape values below 1000 j/kg.

The Storm Prediction Center issued Tornado Watch 94 at 11:30 A.M., followed by Tornado Watch 96 at 1:20 P.M. Storm surveys, reports, and damage photos are shown below.
PUBLIC INFORMATION STATEMENT
NATIONAL WEATHER SERVICE PADUCAH KY
737 PM CDT MON APR 26 2010

...DAMAGE SURVEY RESULTS FOR EAST PRAIRIE AREA OF MISSISSIPPI AND NEW MADRID COUNTIES IN SOUTHEAST MISSOURI...

THE FOLLOWING IS THE PRELIMINARY DAMAGE ASSESSMENT FOR THE MACROBURST IN SOUTHEAST MISSOURI.

* EVENT DATE - SATURDAY APRIL 24 2010
* EVENT TIME - 125 TO 137 PM CDT
* EVENT TYPE - DOWNBURST /MACROBURST/
* EVENT LOCATION - 5 MILES SOUTHWEST OF EAST PRAIRIE TO 3 MILES NORTHEAST OF EAST PRAIRIE
* PEAK WIND - 120 MPH
* AVERAGE PATH WIDTH - 3 MILES
* PATH LENGTH - 8 MILES
* INJURIES - 1 MINOR
* FATALITIES - NONE

* DISCUSSION/DAMAGE - HIGHEST CONCENTRATION OF DAMAGE WAS IN EAST PRAIRIE. ON COUNTY ROAD 535 ON THE OUTSKIRTS OF EAST PRAIRIE...TWO MOBILE HOMES WERE DEMOLISHED. A SINGLE WIDE MOBILE HOME WAS COMPLETELY SEPARATED FROM THE FRAME...WHICH WAS BLOWN 100 YARDS UNTIL IT STRUCK A BRICK HOUSE. THE SOLE OCCUPANT OF THE MOBILE HOME WAS A YOUNG ADULT WHO RECEIVED ONLY NUMEROUS ABRASIONS. A SECOND SINGLE WIDE MOBILE HOME WAS BLOWN A VERY SHORT DISTANCE INTO TREES. A NEARBY HOUSE LOST MOST OF THE ROOF AND A LARGE SECTION OF THE WINDWARD FACING EXTERIOR WALL.

OFF STATE ROAD OO IN NEARBY NEW MADRID COUNTY...A HOUSE UNDER CONSTRUCTION LOST SOME WALLS AND THE ROOF. IN THE CITY OF EAST PRAIRIE...THREE INDUSTRIAL BUILDINGS WERE HEAVILY DAMAGED OR DESTROYED, ALONG WITH DAMAGE TO THE ROOF OF THE EAST PRAIRIE POLICE DEPARTMENT. NUMEROUS TREES WERE BLOWN DOWN IN AND NEAR EAST PRAIRIE...SOME DAMAGING HOMES. SEVERAL FARM BUILDINGS RECEIVED MINOR TO MAJOR DAMAGE SOUTHWEST OF EAST PRAIRIE.

THE PEAK WIND OF 120 MPH...EQUIVALENT TO AN EF2 TORNADO...WAS SUPPORTED BY DAMAGE TO SEVERAL STRUCTURES INCLUDING INDUSTRIAL BUILDINGS IN EAST PRAIRIE AND HOMES WEST AND SOUTHWEST OF EAST PRAIRIE. THIS WAS ONE OF THE STRONGEST DOWNBURSTS EVER DOCUMENTED IN OUR REGION.

SURVEYORS...SHANKLIN/ YORK
Damage photos taken by NWS staff:

Mobile home demolished. The frame struck a brick home partially obscured by the trees but was relocated back to the original property before this photo was taken.

Exterior wall of home partially blown in. The pre-existing condition of the house was rather poor.
CHRISTIAN AND TODD COUNTIES, KY: WEAK TORNADO AND MICROBURST

PUBLIC INFORMATION STATEMENT
NATIONAL WEATHER SERVICE PADUCAH KY
846 PM CDT SUN APR 25 2010

...DAMAGE SURVEY RESULTS FOR EXTREME SOUTHEAST CHRISTIAN AND SOUTHWEST TODD COUNTIES...

THE FOLLOWING IS THE PRELIMINARY DAMAGE ASSESSMENT FOR APRIL 24 EVENT # 1 FOR CHRISTIAN AND TODD COUNTIES. IN ADDITION, INITIAL/INCOMPLETE SURVEYING WAS CONDUCTED INTO FAR NORTHERN MONTGOMERY COUNTY IN TENNESSEE.

* EVENT DATE - SATURDAY APRIL 24 2010
* EVENT TIME - 4:43 PM CDT UNTIL 4:55 PM
* EVENT TYPE - MICROBURST
* EVENT LOCATION - FROM 2 MILES SOUTHEAST OF OAK GROVE, KY (ALONG/SOUTH OF THE KY-TN STATE LINE) TO 3 1/2 MILES SOUTHEAST OF TRENTON, KY
* PEAK WIND - 90 MPH
* AVERAGE PATH WIDTH - 1.5 MILES
* MAXIMUM PATH WIDTH - APPROXIMATELY 2 MILES
* PATH LENGTH - 7+ MILES (FOR KENTUCKY PORTION, THE TENNESSEE PORTION MAY BE FURTHER SURVEYED MONDAY)
* INJURIES - NONE
* FATALITIES - NONE

* DISCUSSION/DAMAGE - THE MICROBURST (DOWNBURST LESS THAN 2.5 MILES WIDE) DAMAGE IN KENTUCKY EXTENDED FROM ALONG THE KENTUCKY-TENNESSEE BORDER SOUTHEAST OF OAK GROVE, KY FOR APPROXIMATELY 7 MILES TO THE NORTHEAST TO U.S. HWY 41...ABOUT 3.5 MILES SOUTHEAST OF TRENTON, KY. DAMAGE WAS OBSERVED AT LEAST 1 MILE SOUTH OF THE KY-TN BORDER INTO NORTHERN MONTGOMERY COUNTY TN.

MANY DOZENS OF TREES WERE UPROOTED OR BROKEN. ONE BARN WAS LEVELED, WITH SEVERAL OTHER BARNs RECEIVING MODERATE TO MAJOR DAMAGE. A FEw HOMES SUFFERED MAINLY MINOR DAMAGE (PORCH DAMAGE, PARTIAL LOSS OF SHINGLES, ETC.). DAMAGE WAS OBSERVED ALONG OR NEAR BARKERS MILL RD (HWY 1881), TRENTON RD (HWY 104), HAMMACKSVILLE RD, CHESTER STALL RD, AND U.S. HWY 41.

Pictures from southeast Christian County, KY on Hwy 1881:
Pictures from Todd County, KY
THE FOLLOWING IS THE PRELIMINARY DAMAGE ASSESSMENT FOR APRIL 24 EVENT # 2 FOR CHRISTIAN AND TODD COUNTIES.

* EVENT DATE - SATURDAY APRIL 24 2010
* EVENT TIME - 4:23 PM CDT UNTIL 4:27 PM
* EVENT TYPE - *EF0 TORNADO*
* EVENT LOCATION - 2 MILES SOUTHEAST OF PEMBROKE, KY TO PEMBROKE, KY
* PEAK WIND - 75 MPH
* AVERAGE PATH WIDTH - 40 YARDS
* PATH LENGTH - 2 MILES
* INJURIES - NONE
* FATALITIES - NONE

* DISCUSSION/DAMAGE - SEVERAL TREES OR TREE LIMBS WERE BLOWN DOWN ALONG WITH MINOR DAMAGE TO A HOME (GUTTERS). THE TORNADO TRACK WAS MOSTLY ACROSS FIELDS. THE TORNADO WAS PHOTOGRAPHED NEAR THE INITIAL TOUCHDOWN ABOUT 2 MILES SOUTHWEST OF PEMBROKE, AND WAS ALSO OBSERVED ON THE GROUND LESS THAN 1 MILE FROM PEMBROKE.

* SURVEYOR/S.....SHANKLIN/ POWELL
### Summary of storm events

**PRELIMINARY LOCAL STORM REPORT...SUMMARY**  
**NATIONAL WEATHER SERVICE PADUCAH KY**  
737 PM CDT SAT APR 24 2010

<table>
<thead>
<tr>
<th>TIME</th>
<th>EVENT</th>
<th>CITY LOCATION</th>
<th>LAT.LON</th>
<th>DATE</th>
<th>MAG.</th>
<th>COUNTY LOCATION</th>
<th>ST.</th>
<th>SOURCE</th>
<th>REMARKS</th>
</tr>
</thead>
<tbody>
<tr>
<td>0130 PM</td>
<td>TSTM WND DMG</td>
<td>EAST PRAIRIE</td>
<td>36.78N 89.38W</td>
<td>04/24/2010</td>
<td></td>
<td>MISSISSIPPI</td>
<td>MO</td>
<td>EMERGENCY MNGR</td>
<td>TRAILER BLOWN OVER ON COUNTY ROAD 535 IN EAST PRAIRIE</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>TRAPPING YOUNG BOY INSIDE FOR A SHORT PERIOD OF TIME.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>TREES DOWN IN EAST PRAIRIE. PART OF ROOF BLOWN OFF OF THE</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>LOCAL POLICE DEPT. POWER OUTAGES IN WYATT, CHARLESTON AND</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>EAST PRAIRIE.</td>
</tr>
<tr>
<td>0131 PM</td>
<td>FUNNEL CLOUD</td>
<td>2 SW KARNAK</td>
<td>37.27N 89.00W</td>
<td>04/24/2010</td>
<td></td>
<td>PULASKI</td>
<td>IL</td>
<td>TRAINED SPOTTER</td>
<td>REPORTED BY TRAINED STORM SPOTTER.</td>
</tr>
<tr>
<td>0145 PM</td>
<td>TSTM WND DMG</td>
<td>VIENNA</td>
<td>37.41N 88.89W</td>
<td>04/24/2010</td>
<td></td>
<td>JOHNSON</td>
<td>IL</td>
<td>LAW ENFORCEMENT</td>
<td>NUMEROUS TREES AND POWER LINES DOWN IN AND SOUTH OF</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>VIENNA ILLINOIS.</td>
</tr>
<tr>
<td>0146 PM</td>
<td>TSTM WND GST</td>
<td>KARNAK</td>
<td>37.29N 88.98W</td>
<td>04/24/2010</td>
<td></td>
<td>PULASKI</td>
<td>IL</td>
<td>TRAINED SPOTTER</td>
<td></td>
</tr>
<tr>
<td>0147 PM</td>
<td>HAIL</td>
<td>KARNAK</td>
<td>37.29N 88.98W</td>
<td>04/24/2010</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
04/24/2010 M1.00 INCH PULASKI IL TRAINED SPOTTER
04/24/2010 HEAVY RAIN KEVIL 37.08N 88.89W
04/24/2010 M1.71 INCH BALLARD KY AMATEUR RADIO
NEARLY ONE AND THREE QUARTER INCH OF RAIN WITHIN ONE HOUR.

0314 PM TSTM WND DMG HAZEL 36.51N 88.33W
04/24/2010 CALLOWAY KY EMERGENCY MNGR
REPORT OF TREES DOWN IN THE COMMUNITY OF HAZEL. DIME SIZE HAIL ALSO REPORTED WITH THIS STORM.

0320 PM TSTM WND DMG 6 ESE MURRAY 36.58N 88.22W
04/24/2010 CALLOWAY KY EMERGENCY MNGR
NUMEROUS LARGE TREES DOWN. 10-15 WERE BLOCKING ROADS. SEVERAL POWERLINES ALSO DOWN

0329 PM FLASH FLOOD 2 S ELDORADO 37.78N 88.44W
04/24/2010 SALINE IL LAW ENFORCEMENT
WATER OVER STATE ROUTE 142 2 MILES SOUTH OF ELDORADO. MAJOR VEHICLE ACCIDENT AT LOCATION.

0353 PM HEAVY RAIN COBB 37.02N 87.76W
04/24/2010 M0.75 INCH CALDWELL KY CO-OP OBSERVER
THREE QUARTER INCH RAIN IN 14 MINUTES.

0400 PM TSTM WND GST 4 S MADISONVILLE 37.28N 87.51W
04/24/2010 M62.00 MPH HOPKINS KY MESONET

0405 PM FLASH FLOOD S ELDORADO 37.81N 88.44W
04/24/2010 SALINE IL LAW ENFORCEMENT
STANDING WATER ALONG STATE ROUTE 142 ONE HALF MILE SOUTH OF ELDORADO. SEVERAL ROADWAYS IN EASTERN SALINE COUNTY ARE UNDER WATER.

0414 PM HEAVY RAIN 2 E HOPKINSVILLE 36.85N 87.45W
04/24/2010 U0.00 INCH CHRISTIAN KY TRAINED SPOTTER
HEAVY RAIN AND MINOR FLOODING REPORTED EAST OF HOPKINSVILLE.

0426 PM TORNADO PEMBROKE 36.77N 87.36W
04/24/2010 CHRISTIAN KY TRAINED SPOTTER
UNCONFIRMED.

0426 PM TORNADO PEMBROKE 36.77N 87.36W
04/24/2010 CHRISTIAN KY TRAINED SPOTTER
REPEAT STORM REPORT. THIS EVENT IS UNCONFIRMED.

0430 PM HEAVY RAIN 8 NE HOPKINSVILLE 36.94N 87.39W
04/24/2010 M1.00 INCH CHRISTIAN KY TRAINED SPOTTER
HEAVY RAIN OF ONE INCH WITHIN 15 MINUTES REPORTED AND
ROADWAY FLOODING IN THE COMMUNITY OF LACY.

0446 PM  TSTM WND GST  2 NE PHILPOT    37.75N 86.96W
04/24/2010 M62.00 MPH  DAVIESS  KY  BROADCAST MEDIA

0448 PM  HEAVY RAIN  POWDERLY    37.24N 87.16W
04/24/2010 M1.05 INCH  MUHLENBERG  KY  TRAINED SPOTTER
HEAVY RAIN REPORTED WITHIN 40 MINUTES. MINOR ROADWAY
FLOODING REPORTED COUNTYWIDE.

0500 PM  TSTM WND GST  GUTHRIE    36.66N 87.17W
04/24/2010 E70.00 MPH  TODD  KY  TRAINED SPOTTER
POWER OUTAGES REPORTED.

0507 PM  TSTM WND DMG  TRENTON    36.72N 87.26W
04/24/2010  TODD  KY  EMERGENCY MNGR
LATE REPORT...FEW TREES DOWN THAT WERE BLOCKING A ROAD ON
SOUTHWEST SIDE OF COMMUNITY. MINOR LOW-LYING STREET
FLOODING.

0517 PM  HEAVY RAIN  ELKTON    36.81N 87.16W
04/24/2010  0.00 INCH  TODD  KY  TRAINED SPOTTER
HEAVY RAINS HAD PRODUCED STANDING WATER ALONG MANY
ROADWAYS COUNTYWIDE.

0643 PM  TSTM WND DMG  BENTON    38.01N 88.92W
04/24/2010  FRANKLIN  IL  TRAINED SPOTTER
ONE TWELVE INCH DIAMETER TREE DOWN

0645 PM  TSTM WND DMG  1 E MOUNT VERNON  38.32N 88.89W
04/24/2010  JEFFERSON  IL  PUBLIC
SEVERAL TREES DOWN ON GOLF COURSE JUST EAST OF MOUNT
VERNON. POWER OUTAGES IN THE AREA.

0345 PM  TSTM WND DMG  CADIZ    36.87N 87.82W
04/24/2010  TRIGG  KY  LAW ENFORCEMENT
SEVERAL TREES REPORTED DOWN

&&