# 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.

## (75) Dogwood East Prairie Macroburst April 24, 2010 Airline Acres State Hwy B (105) 75 (80) ast Prairie (75) (80) (102) Peak Winds 120 mph Selkirk Conservation (102)

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#### **East Prairie, MO Macroburst Information**

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 **EFO 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

		CITY LOCATIONCOUNTY LOCATION		
0130 PM 04/24/2010	TRAILER BLOWN OVE TRAPPING YOUNG BO TREES DOWN IN EAS	EAST PRAIRIE MISSISSIPPI ER ON COUNTY ROAD 53 DY INSIDE FOR A SHOR ST PRAIRIE. PART OF I. POWER OUTAGES IN	MO 5 IN T PEF ROOF	EMERGENCY MNGR EAST PRAIRIE RIOD OF TIME. BLOWN OFF OF THE
0131 PM 04/24/2010		2 SW KARNAK PULASKI NED STORM SPOTTER.		
0145 PM 04/24/2010		VIENNA JOHNSON ND POWER LINES DOWN	IL	LAW ENFORCEMENT
0146 PM 04/24/2010	TSTM WND GST E70.00 MPH	KARNAK PULASKI	IL	37.29N 88.98W TRAINED SPOTTER
0147 PM	HAIL	KARNAK		37.29N 88.98W

04/24/2010	M1.00 INCH	PULASKI	IL	TRAINED SPOTTER		
0245 PM 04/24/2010	HEAVY RAIN M1.71 INCH	KEVIL BALLARD	KY	37.08N 88.89W AMATEUR RADIO		
	NEARLY ONE AND THREE QUARTER INCH OF RAIN WITHIN ONE HOUR.					
0314 PM 04/24/2010	REPORT OF TREES I	HAZEL CALLOWAY DOWN IN THE COMMUNIT ED WITH THIS STORM.	KY 'Y OF	36.51N 88.33W EMERGENCY MNGR HAZEL. DIME SIZE		
0320 PM 04/24/2010		6 ESE MURRAY CALLOWAY REES DOWN. 10-15 WER ES ALSO DOWN	KY	EMERGENCY MNGR		
0329 PM 04/24/2010	WATER OVER STATE	2 S ELDORADO SALINE ROUTE 142 2 MILES S CIDENT AT LOCATION.	IL SOUTH	37.78N 88.44W LAW ENFORCEMENT OF ELDORADO.		
0353 PM 04/24/2010		COBB CALDWELL CH RAIN IN 14 MINUTE		37.02N 87.76W CO-OP OBSERVER		
		4 S MADISONVILLE HOPKINS				
0405 PM 04/24/2010	STANDING WATER AI	S ELDORADO SALINE LONG STATE ROUTE 142 ERAL ROADWAYS IN EAS	ONE	HALF MILE SOUTH		
	U0.00 INCH	2 E HOPKINSVILLE CHRISTIAN INOR FLOODING REPORT	KY	TRAINED SPOTTER		
0426 PM 04/24/2010	TORNADO UNCONFIRMED.	PEMBROKE CHRISTIAN	KY	36.77N 87.36W TRAINED SPOTTER		
0426 PM 04/24/2010		PEMBROKE CHRISTIAN ORT. THIS EVENT IS U				
	M1.00 INCH	8 NE HOPKINSVILLE CHRISTIAN E INCH WITHIN 15 MIN	KY	TRAINED SPOTTER		

### ROADWAY FLOODING IN THE COMMUNITY OF LACY.

0446 PM 04/24/2010	TSTM WND GST M62.00 MPH	2 NE PHILPOT DAVIESS	KY	37.75N 86.96W BROADCAST MEDIA
0448 PM 04/24/2010	M1.05 INCH	POWDERLY MUHLENBERG FED WITHIN 40 MINUT: D COUNTYWIDE.	KY	TRAINED SPOTTER
	TSTM WND GST E70.00 MPH POWER OUTAGES REI		KY	36.66N 87.17W TRAINED SPOTTER
0507 PM 04/24/2010	LATE REPORTFE	TRENTON TODD W TREES DOWN THAT WI F COMMUNITY. MINOR I	ERE B	LOCKING A ROAD ON
0517 PM 04/24/2010	U0.00 INCH	ELKTON TODD PRODUCED STANDING W. IDE.	KY	TRAINED SPOTTER
0643 PM 04/24/2010		BENTON FRANKLIN DIAMETER TREE DOWN	IL	38.01N 88.92W TRAINED SPOTTER
0645 PM 04/24/2010	SEVERAL TREES DOWN	1 E MOUNT VERNON JEFFERSON WN ON GOLF COURSE J TAGES IN THE AREA.	IL	PUBLIC
0345 PM 04/24/2010	TSTM WND DMG SEVERAL TREES RE	TRIGG		36.87N 87.82W LAW ENFORCEMENT