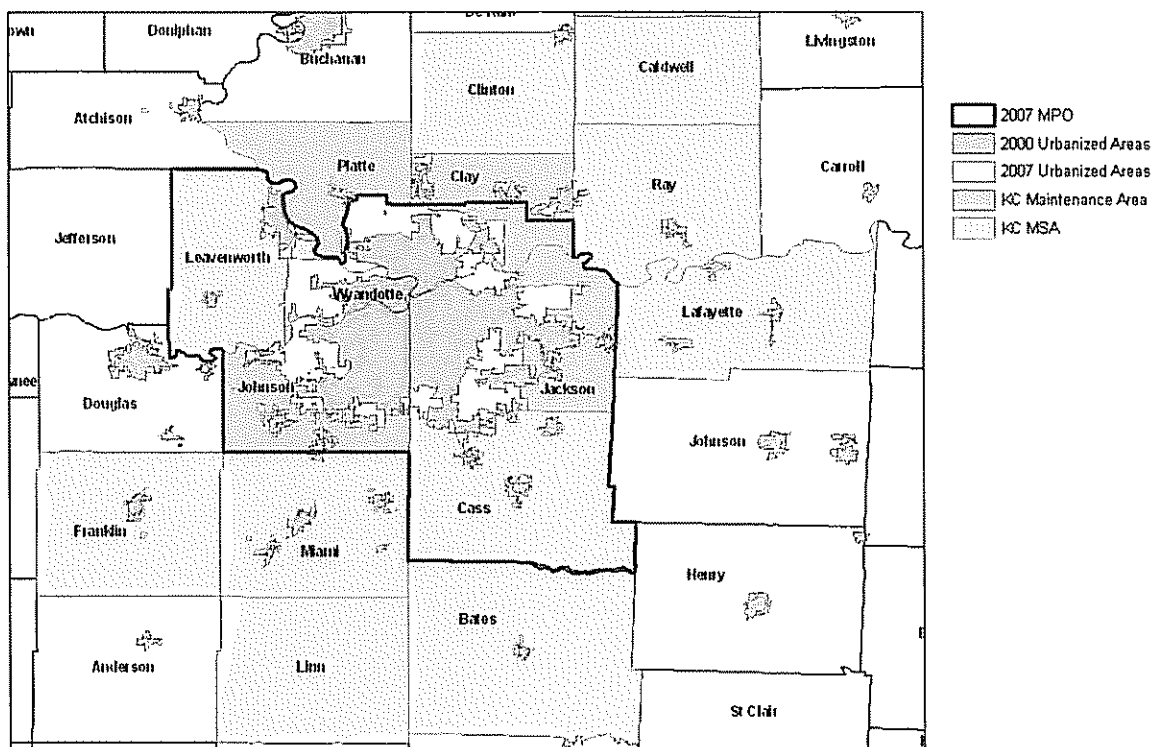


Technical Support Document for the Governor's Recommendation Regarding the 2009 8-hour Ozone Standard Designation for the Kansas City Area

**Kansas City Region Boundaries:
MSA, MPO, Maintenance Area, 2000 Urbanized Areas and 2007 Urbanized Areas**

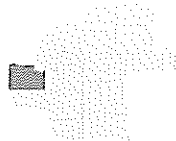


Source: U.S. Census Bureau, U.S. Census 2000 and 2007 boundary files, Mid-America Regional Council.

PREPARED BY
THE KANSAS DEPARTMENT OF HEALTH AND ENVIRONMENT
BUREAU OF AIR AND RADIATION

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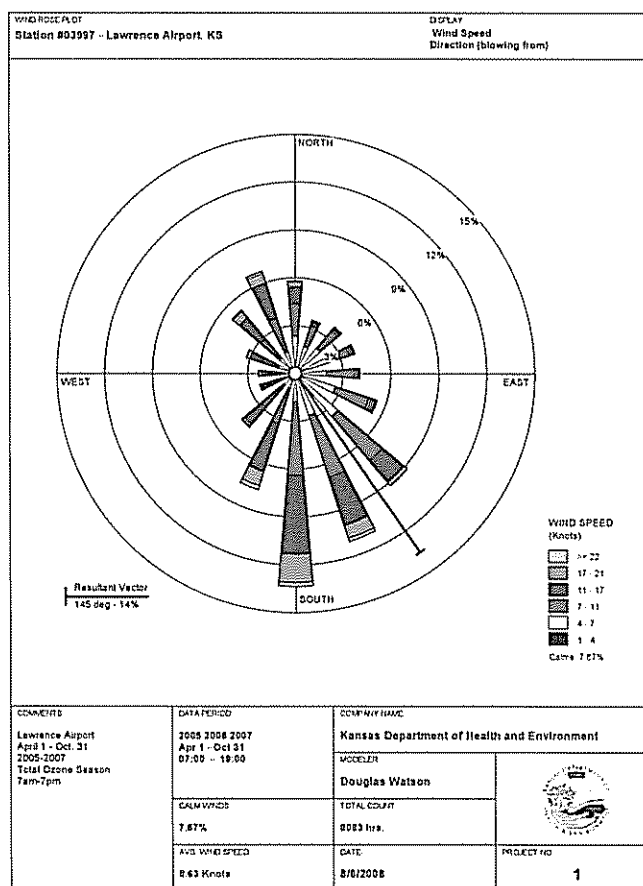
KANSAS CITY AREA — NON KC-MSA COUNTIES OF INTEREST



Douglas County

Air quality: There was no ozone monitor operated in Douglas County for the entire three-year period from 2006 to 2008; however, KDHE operated an ozone monitor for the 2004 - 2006 ozone monitoring seasons in Lawrence. This monitor was located at the Lawrence Municipal Airport, north of the City of Lawrence. The 4th high 8-hour value for the monitor was 0.064 ppm in 2004, 0.073 ppm in 2005 and 0.081 ppm in 2006. The highest 8-hour average ozone value measured at this monitor was 0.088 ppm, in 2006. The 2004-06 design value was 0.072 ppm.

Emissions: Total Douglas County NO_x emissions for 2005 were 8,955 tons. Although the county is not part of the Kansas City MSA, this represents 6% of the MSA's total NO_x emissions. Point source emissions were 5,271 tons, with the bulk coming from the Westar Energy - Lawrence coal-fired power plant (5,151 tons) in the north-central part of the county. Projected 2020 point source NO_x emissions in Douglas county will likely decrease with the installation of low NO_x burners at the Lawrence Energy Center on units 3, 4 and 5 as agreed to as part of a regional haze agreement with Westar. Non-point source emissions were 415 tons in 2005. Projected 2020 nonpoint source NO_x emissions are 536 tons, which represents a 29% increase from 2005. On-road mobile source NO_x emissions were 1,771 tons and nonroad mobile emissions were 1,497 tons in 2005. Year 2020 on-road NO_x emissions are expected to decrease to 541 tons, which is a decline of 69% from 2005 levels.



Total Douglas County VOC emissions for 2005 were 5,719 tons. This represents 6% of the total VOC emissions for the Kansas City MSA. Point source VOC emissions were 239 tons, with API Foils (128 tons), located in the north-central part of the county, having emissions greater than the major source threshold. Point source VOC emissions in the county are expected to rise to 307 tons by 2020, which

Table 3. Eight-Hour Ozone Exceedances
April 1 – October 31, 2008

Daily Maximum 8-Hour Value (ppb)								
	Liberty	JFK	Rocky Creek	Richards-Gebaur	Watkins Mill	Heritage Park	Trimble	Leavenworth
6/18							78	
7/17			77				78	
8/5				79				

*The Trimble and Leavenworth monitors are outside the maintenance area boundary but are used to verify SkyCast ozone forecasts due to their proximity to the boundary

Kansas City Ozone Design Values, 2003 - 2008

Compliance with the eight-hour ozone standard is based on the three-year average of the fourth-highest ozone reading from each monitor. Under the current standard, if a monitor's three-year average value is 85 parts per billion (ppb) or higher, that monitor is in violation. Under the 2008 eight-hour standard, violations will occur when the three-year average is 76 ppb or higher. Table 4 shows the fourth-high eight-hour readings for 2003 – 2008, as well as the design values, or three-year averages, for 2005 through 2008.

Table 4. Fourth-High Readings and Design Values, 2003-2008

Fourth-High Eight-Hour Values							Design Values			
<i>Missouri</i>	2003	2004	2005	2006	2007	2008	03-05	04-06	05-07	06-08*
Liberty	88	71	88	93	81	66	82	84	87	80
Watkins Mill	85	67	79	91	73	69	77	79	81	77
Rocky Creek	88	69	87	87	89	69	81	81	87	81
Richards-Gebaur	82	61	81	78	72	66	74	73	77	72
Trimble		71	87	85	83	70	n/a	81	85	79
<i>Kansas</i>										
JFK (KCK)	84	63	79	81	73	63	75	74	77	72
Heritage Park	81	66	81	76	71	62	76	74	76	69
Leavenworth	82	67	78	74	80	64	75	73	77	72

*The 2008 eight-hour monitored ozone readings have not been quality assured and may contain errors. Readings in **bold** represent design values above the 75 ppb standard.

Table 5. 2008 Fourth-High Values That Would Trigger a Violation
Of the 84-ppb standard

Missouri	8-Hr Value (ppb)	Kansas	8-Hr Value (ppb)
Liberty	81	JFK (KCK)	101
Watkins Mill	91	Heritage Park	108
Rocky Creek	79	Leavenworth	101
Richards Gebaur	105		
Trimble	87		