Louisville Metro Air Pollution Control District
$PM_{2.5}$ Monitoring Report
March 2008

This report summarizes $PM_{2.5}$ data collected by Federal Reference Method (FRM) samplers through March 2008. The data are subject to further quality assurance checks and are not final. Table 1 is a summary of the samples collected in January. Table 2 are monthly averages of $PM_{2.5}$ concentrations from 1999-2008.

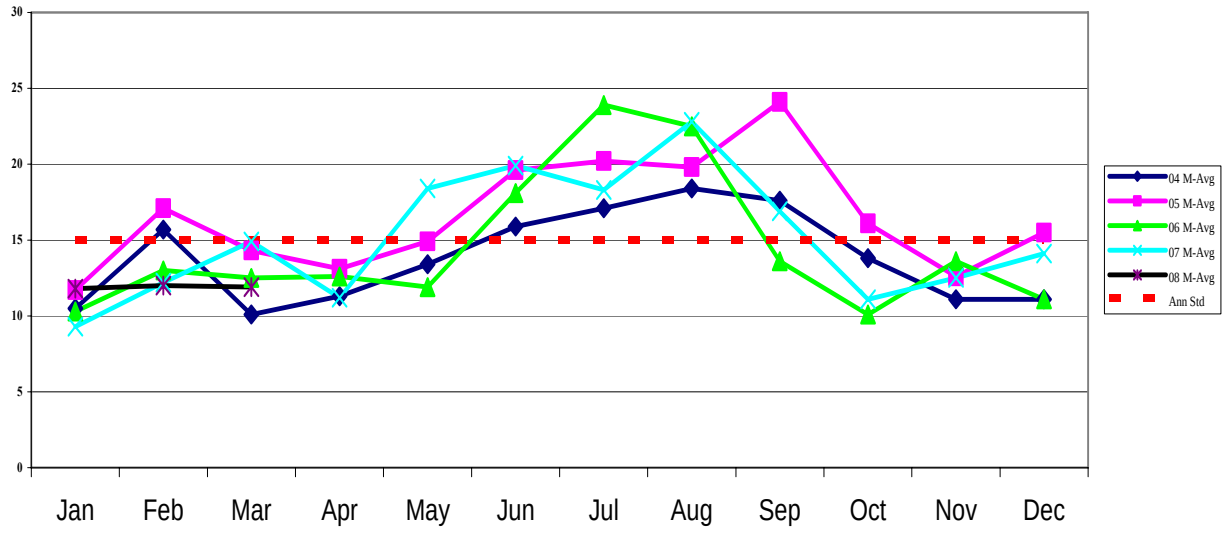
Table 1: $PM_{2.5}$ Monthly Data Summary for March 2008 ($\mu g/m^3$)

Site Name	Daily Maximum Conc. & Date	Daily Minimum Conc. & Date	Sample Recovery	Monthly Average
Southwick	23.2 (03/10)	5.6 (03/04)	96.8 %	12.6
Wyandotte	23.8 (03/10)	3.4 (03/04)	96.8 %	12.4
Barret	22.7 (03/07)	2.9 (03/04)	90.9 %	12.1
Watson	20.1 (03/07)	5.1 (03/01)	100.0 %	10.6
Overall	**23.8 (03/10)**	**2.9 (03/04)**	**96.1%**	**11.9**

Table 2: $PM_{2.5}$ Monthly Averages Tracking Table for 1999-2008

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Months >15.0 ug/m3
Ann Std	15	15	15	15	15	15	15	15	15	15	15	15	
99 M-Avg	14.7	13.8	12.4	12.7	**18.1**	**23.4**	**26.6**	**19.5**	**15.6**	**17.4**	**16.1**	12.6	**7**
00 M-Avg	**15.8**	**16.4**	13.4	13.6	**17.1**	**17.7**	**23.5**	**21.2**	13.3	**19.7**	**15.6**	**17.1**	**9**
01 M-Avg	**21.9**	13.9	**15.2**	13.3	**17.7**	**20.5**	**24.6**	**27.4**	**16.1**	13.8	**15.8**	12.4	**8**
02 M-Avg	13.1	10	12.3	11.4	**15.9**	**22.3**	**30.4**	**23.8**	**21.7**	13.2	11.8	**15.6**	**6**
03 M-Avg	12.2	**16.3**	15	14.6	13.1	**18.6**	**21.7**	**23**	**17.3**	12.5	12	10.6	**5**
04 M-Avg	10.5	**15.7**	10.1	11.3	13.4	**15.9**	**17.1**	**18.4**	**17.6**	13.8	11.1	11.1	**5**
05 M-Avg	11.7	**17.1**	14.3	13.1	14.9	**19.6**	**20.2**	**19.8**	**24.1**	**16.1**	12.6	**15.5**	**7**
06 M-Avg	10.3	13.0	12.5	12.6	11.9	**18.1**	**23.9**	**22.5**	13.6	10.1	13.6	11.1	**3**
07 M-Avg	9.3	12.2	14.9	11.2	**18.4**	**19.9**	**18.3**	**22.8**	**16.9**	11.1	12.5	14.1	**5**
08 M-Avg	11.8	12.0	11.9										**0**

Chart 1: $PM_{2.5}$ Monthly Averages Trends



National Ambient Air Quality Standards (NAAQS):

National Ambient Air Quality Standards consists of Primary and Secondary Standards. The Primary Standards define levels of air quality which EPA judges are necessary, with an adequate margin of safety, to protect the public health. The Secondary Standards define levels of air quality which EPA judges necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant. For $PM_{2.5}$ the levels of the Primary and Secondary Standards are the same.

Annual Standard:

The annual standard is designed to provide an appropriate level of protection from long-term exposures to $PM_{2.5}$. Table 3 compares data collected from 2002 through year-to-date 2008 to the Annual National Ambient Air Quality Standard for $PM_{2.5}$. The Annual National Ambient Air Quality Standard for $PM_{2.5}$ is met when the annual design value is less than or equal to 15.0 $\mu g/m^3$. The design value is based on 3 consecutive, complete years of air quality data and is calculated by taking the 3-year average of annual means.

Table 3: $PM_{2.5}$ Annual Means and Annual Design Values

Annual Means $\mu g/m^3$								Annual Design Values 2002-2004	Annual Design Values 2003-2005	Annual Design Values 2004-2006	Annual Design Values 2005-2007	Annual Design Values 2006-2008
Site Name	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008[1]**					
Southwick	17.2	16.0	14.5	16.7	15.0	15.0	12.5	**15.9**	**15.7**	**15.4**	**15.6**	**14.6**
Wyandotte	17.5	15.4	14.1	16.5	15.2	14.9	12.6	15.7	15.3	15.3	15.5	14.2
Barret	16.4	15.5	13.7	16.8	14.0	15.2	12.1	15.2	15.3	14.8	15.3	13.8
Watson	15.7	14.9	12.6	16.5	13.7	15.7	10.4	14.4	14.7	14.3	15.3	13.3

BOLD: Design value site for Louisville. [1]Year-to-date data for 2008.

24-Hour Standard:

The 24-Hour standard is designed to provide an appropriate level of protection from short-term exposures to $PM_{2.5}$. Table 4 compares data collected from 2002 through year-to-date 2008 to the 24-Hour National Ambient Air Quality Standard for PM2.5. In December 2006 the EPA changed the 24-hour standard from 65 $\mu g/m^3$ to 35 $\mu g/m^3$. The standard is met when the 24-Hour design value is less than or equal to 35 $\mu g/m^3$. The design value is based on 3 consecutive, complete years of air quality data and is calculated by taking the average of the 98th percentile value for each of the 3 years. The 98th percentile is the daily value out of a year of $PM_{2.5}$ monitoring data below which 98 percent of all daily values fall.

Table 4: $PM_{2.5}$ Annual 98th Percentiles and 24-Hour Design Values

Annual 98th Percentile Value. $\mu g/m^3$								24-Hour Design Values 2002-2004	24-Hour Design Values 2003-2005	24-Hour Design Values 2004-2006	24-Hour Design Values 2005-2007	24-Hour Design Values 2006-2008
Site Name	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008[1]**					
Southwick	47	36	31	43	36	34	23	**38.0**	**36.7**	**36.7**	37.7	31.0
Wyandotte	45	38	31	40	36	34	24	38.0	36.3	35.7	36.7	31.3
Barret	45	36	29	43	37	37	23	36.7	36.0	36.3	**39.0**	**32.3**
Watson	31	33	26	37	33	36	20	30.0	32.0	32.0	35.3	29.7

BOLD: Design Value for Louisville. [1]Year-to-date data for 2008.

In 2007 the District submitted Exceptional Events Demonstrations to EPA indicating that certain monitoring data collected in 2004-2007 have been flagged under the exceptional event rule. If EPA concurs with these demonstrations the data flagged will not be used for regulatory purposes and the design values for the Annual and 24-Hour standards will change. Those changes will be reflected in future reports if they occur.