

# INTEROFFICE MEMORANDUM

Date: August 7, 2007  
 To: Arthur L. Williams, Director  
 From: Larry Garrison, Technical Services Supervisor  
 Re: July 2007 FRM PM<sub>2.5</sub> Monitoring Update Report

This is a report of July 2007 Federal Reference Method PM<sub>2.5</sub> monthly averages, annual averages, and 3-year annual design values data summaries. (These data are subject to further quality assurance and are not final.)

## July 2007

**Table 1. PM<sub>2.5</sub> Monthly Data Summary (µg/m<sup>3</sup>)**

	<b>Daily Maximum</b>	<b>Daily Minimum</b>		<b>Monthly</b>
<b>Site Name</b>	<b>Conc. &amp; Date</b>	<b>Conc. &amp; Date</b>	<b>Run Time</b>	<b>Average</b>
Southwick	29.1 (07/25)	7.1 (07/11)	100.0 %	19.1
Wyandotte	34.4 (07/26)	6.5 (07/11)	87.1 %	19.7
Barret	29.1 (07/25)	7.1 (07/11)	90.0 %	16.4
Watson	29.9 (07/24)	6.1 (07/11)	100.0 %	17.8
<b>Overall</b>				<b>18.3</b>

The 24-hour average standard is 35 µg/m<sup>3</sup>. Ref: 40 CFR Part 50, National Ambient Air Quality Standards for Particulate Matter.

**Table 2. PM<sub>2.5</sub> Design Values and Annual Mean Comparisons**

<b>Site Name</b>	<b>Annual Mean (µg/m<sup>3</sup>)</b>							<b>Annual Design Values (2001-2003)</b>	<b>Annual Design Values (2002-2004)</b>	<b>Annual Design Values (2003-2005)</b>	<b>Annual Design Values (2004-2006)</b>	<b>Annual Design Values (2005-2007)<sup>3</sup></b>
	<b>2007<sup>3</sup></b>	<b>2006</b>	<b>2005</b>	<b>2004</b>	<b>2003</b>	<b>2002</b>	<b>2001</b>					
Southwick/ <i>Firearms Trn<sup>1</sup></i>	15.1	15.0	16.7	14.6	15.4	17.2	17.1/ 18.7 <sup>1</sup>	N/A	<b>15.9<sup>2</sup></b>	<b>15.6<sup>2</sup></b>	<b>15.4<sup>2</sup></b>	<b>15.6<sup>2</sup></b>
Wyandotte	14.7	15.1	16.6	14.1	15.2	17.5	17.7	<b>16.8<sup>2</sup></b>	15.6	15.3	15.2	15.5
Barret	14.9	14.1	16.8	14.0	15.2	16.3	16.9	16.1	15.2	15.3	15.0	15.3
Watson	15.3	13.8	16.5	12.7	15.1	15.3	16.3	15.5	14.4	14.7	14.3	15.2

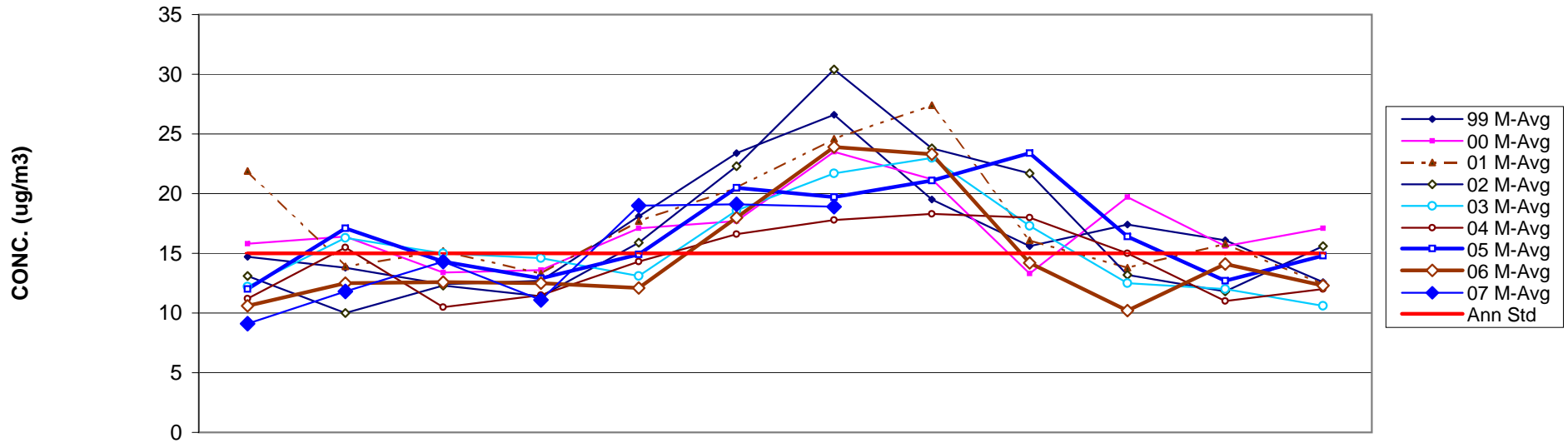
The annual average standard is 15.0 µg/m<sup>3</sup>.

<sup>1</sup> *Firearms Training* temporarily replaced Southwick Community Center monitoring during 2001, due to renovation. Twelve quarters of contiguous data are unavailable. <sup>2</sup> Design value site for Louisville. <sup>3</sup> Year-to-date data for 2007.

**Table 3. Louisville Metro FRM PM<sub>2.5</sub> Monthly Averages Tracking Table for 1999-2007**

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	<b>Months &gt; 15.0 µg/m<sup>3</sup></b>
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	<b>18.1</b>	<b>23.4</b>	<b>26.6</b>	<b>19.5</b>	<b>15.6</b>	<b>17.4</b>	<b>16.1</b>	12.6	<b>7</b>
00 M-Avg	<b>15.8</b>	<b>16.4</b>	13.4	13.6	<b>17.1</b>	<b>17.7</b>	<b>23.5</b>	<b>21.2</b>	13.3	<b>19.7</b>	<b>15.6</b>	<b>17.1</b>	<b>9</b>
01 M-Avg	<b>21.9</b>	13.9	<b>15.2</b>	13.3	<b>17.7</b>	<b>20.5</b>	<b>24.6</b>	<b>27.4</b>	<b>16.1</b>	13.8	<b>15.8</b>	12.4	<b>8</b>
02 M-Avg	13.1	10	12.3	11.4	<b>15.9</b>	<b>22.3</b>	<b>30.4</b>	<b>23.8</b>	<b>21.7</b>	13.2	11.8	<b>15.6</b>	<b>6</b>
03 M-Avg	12.2	<b>16.3</b>	15	14.6	13.1	<b>18.6</b>	<b>21.7</b>	<b>23</b>	<b>17.3</b>	12.5	12	10.6	<b>5</b>
04 M-Avg	11.2	<b>15.5</b>	10.5	11.5	14.3	<b>16.6</b>	<b>17.8</b>	<b>18.3</b>	<b>18</b>	15	11	12	<b>5</b>
05 M-Avg	12	<b>17.1</b>	14.3	12.9	14.9	<b>20.5</b>	<b>19.7</b>	<b>21.1</b>	<b>23.4</b>	<b>16.4</b>	12.7	14.8	<b>6</b>
06 M-Avg	10.6	12.5	12.6	12.5	12.1	<b>18</b>	<b>23.9</b>	<b>23.3</b>	14.2	10.2	14.1	12.3	<b>3</b>
07 M-Avg	9.1	11.8	14.2	11.1	<b>19</b>	<b>19.1</b>	<b>18.9</b>						<b>3</b>

LOUISVILLE METRO FRM PM2.5 MONTHLY AVERAGES TRENDS FOR 1999 - 2007



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
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
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
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
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
03 M-Avg	12.2	16.3	15	14.6	13.1	18.6	21.7	23	17.3	12.5	12	10.6
04 M-Avg	11.2	15.5	10.5	11.5	14.3	16.6	17.8	18.3	18	15	11	12
05 M-Avg	12	17.1	14.3	12.9	14.9	20.5	19.7	21.1	23.4	16.4	12.7	14.8
06 M-Avg	10.6	12.5	12.6	12.5	12.1	18	23.9	23.3	14.2	10.2	14.1	12.3
07 M-Avg	9.1	11.8	14.3	11.1	19	19.1	18.9					
Ann Std	15	15	15	15	15	15	15	15	15	15	15	15

MONTH

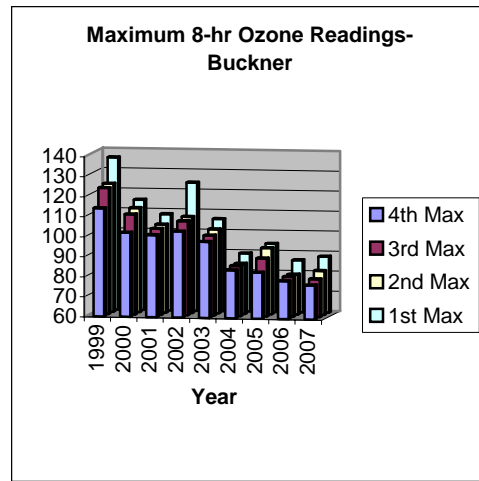
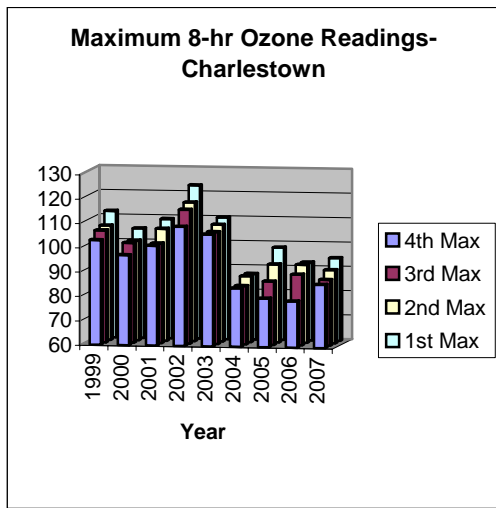
**August 13, 2007**  
**2007 Louisville, MSA 8-Hr Ozone Monitoring Report**  
*(Data are not quality assured)*

**Table 1: 2007 8-Hr Ozone Monitoring Summary Report**

8-hour exceedances - 8 exceedances

8-Hour FCST AQI / Max. ppb	# 8-Hour Exceedances	# of Days with Exceedances	Date	Charlestown (CH) Clark Co. IN	New Albany (NA) Floyd Co. IN	Bates (BA) Jefferson Co. KY	Watson (WS) Jefferson Co. KY	WLKY- TV (WK) Jefferson Co. KY	Buckner (BK) Oldham Co. KY	Shepherdsville (SH) Bullitt Co. KY	# AQAs
	1	1	5/21/2007	<b>90</b>	76	78	76	78	83	77	
111 / 85	1	1	5/22/2007	<b>85</b>	76	76	79	<u>77</u>	77	<u>78</u>	1
111 / 78			5/23/2007	78	66	70	65	66	73	69	2
105 / 73			5/24/2007	73	60	70	65	63	73	69	3
106 / 68			5/30/2007	68	59	59	62	63	67	59	4
			6/11/2007	84	<u>77</u>	71	<u>82</u>	73	81	72	
	2	1	6/12/2007	<b>87</b>	84	77	<b>85</b>	78	84	76	
103 / 84			6/13/2007	84	78	76	82	75	<u>82</u>	76	5
103 / 73			6/14/2007	69	63	57	73	61	67	55	6
			6/16/07	75	70	77	77	71	80	84	
127/88	2	1	6/17/2007	82	79	<b>85</b>	75	79	<b>88</b>	78	7
105/72			6/18/2007	70	58	64	57	59	72	58	8
			6/21/07	84	68	<u>82</u>	74	71	72	82	
	1	1	7/3/07	<b>94</b>	77	69	65	76	78	67	
111/71			7/7/07	63	60	69	71	66	64	64	9
114/86	1	1	7/8/07	67	62	<b>86</b>	72	69	72	64	10
104/78			7/9/07	74	66	69	61	62	78	62	11
104/89	1	1	8/1/07	72	74	70	<b>89</b>	71	67	65	12
135/98	3	1	8/2/07	68	<b>95</b>	<b>93</b>	72	<b>98</b>	73	63	13
120/82			8/3/07	59	64	81	74	74	69	82	14
119/86	1	1	8/4/07	<u>86</u>	73	72	64	71	79	62	15
	1	1	8/12/07	*	*	75	<b>88</b>	74	64	78	
109/			8/13/07	*	*	67	42	60	66	68	16
Total- 10 days / 14 Exceed- ances	14	10		5	1	3	3	1	1	0	

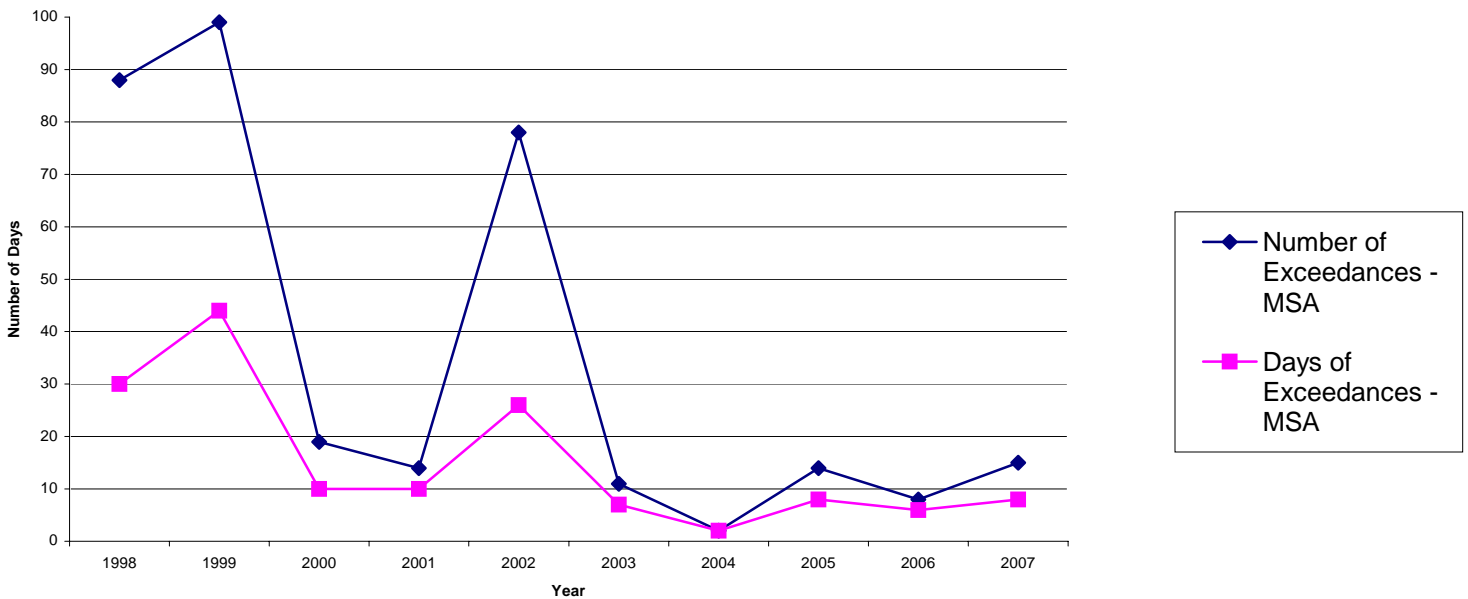
Notes: An 8-hour average of 85 ppb or greater exceeds the new ozone standard. AQA: Air Quality Alert. FCST – Forecast. Bold –greater than 84 ppb. Underline-4<sup>th</sup> max. \*Have not received data.



**Table 2: Louisville 1998 – 2007 8-Hr Exceedance Summary**

Year	Charlestown	New Albany	Bates	Watson	WLKY-TV	Buckner	Shep.	Louisville MSA Total		Jefferson County Total	
								Exceedances	Days	Exceedances	Days
1998	22	14	10	11	7	12	12	88	30	28	15
1999	11	10	16	13	4	34	11	99	44	33	22
2000	4	0	5	1	3	4	2	19	10	9	6
2001	4	0	2	1	1	4	2	14	10	4	3
2002	17	13	4	15	7	12	10	78	26	26	19
2003	4	4	1	0	0	2	0	11	7	1	1
2004	0	0	1	0	0	0	1	2	2	1	1
2005	3	2	0	4	1	4	0	14	8	5	4
2006	3	1	0	1	0	3	0	8	6	1	1
2007	5	1	3	3	1	1	0	14	10	7	6

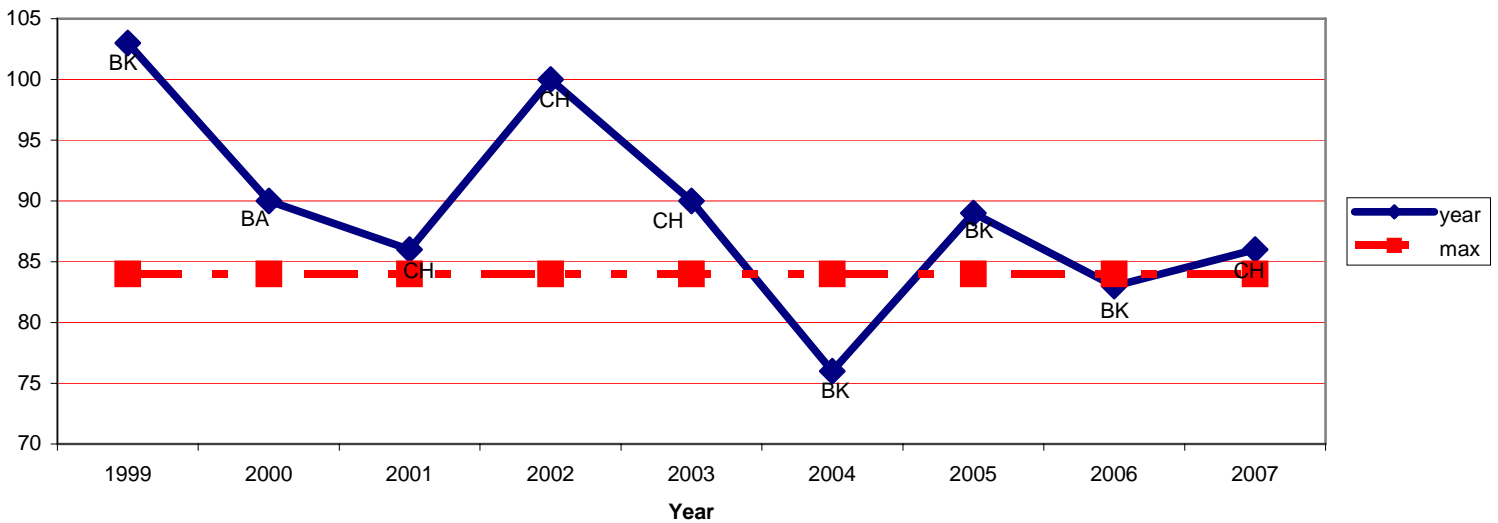
**8-hr Ozone Exceedances**



**Table 3: 8-Hr Ozone 4<sup>th</sup> Maximum**

Year	Louisville, MSA	Charles-Town (CH)	New Albany (NA)	Bates (BA)	Watson (WS)	WLKY-TV (WK)	Buckner (BK)	Shepherdsville (SH)
2007	86	86	77	82	82	77	82	78
2006	83	79	76	74	77	67	83	71
2005	89	80	80	79	85	74	89	80
2004	76	74	71	70	70	68	76	68
2003	90	90	86	72	75	73	82	72
2002	100	100	97	85	96	88	91	91
2001	86	86	76	81	81	77	86	82
2000	90	85	77	90	76	84	85	82
1999	103	89	94	97	100	86	103	93

**8-Hr Ozone Annual 4th Maximum Reading for Metro Louisville**



**Table 4: 8-Hour Ozone Design Value Summary**

Year	Louisville, MSA	Charles-town	New Albany	Bates	Watson	WLKY-TV	Buckner	Shepherds-ville
05-07 Avg.	<b>84 BK</b>	81	77	78	81	72	84	76
04-06 Avg.	<b>82 BK</b>	77	75	72	77	69	82	73
03-05 Avg.	<b>82 BK</b>	81	79	73	76	71	82	73
02-04 Avg.	<b>88 CH</b>	88	84	74	80	76	82	77
01-03 Avg.	<b>92 CH</b>	92	86	77	84	79	86	81
00-02 Avg.	<b>90 CH</b>	90	83	85	84	83	87	85
99-01 Avg.	<b>91 BK</b>	86	82	89	85	82	91	85

Bold –Design Value Sites for respective periods.

**8-Hr NAAQS:** Attainment of the 8-Hr Ozone National Ambient Air Quality Standard (NAAQS) at an individual monitor is achieved when the three-year average of the annual fourth-highest daily maximum (4<sup>th</sup> maximum) 8-hr average ozone concentration is less than or equal to 84 ppb. This three-year average is the design value for that monitor.

# 8-Hour Ozone Design Value

