



## 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<sub>2.5</sub> 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<sub>2.5</sub>. Table 3 compares data collected from 2002 through year-to-date 2008 to the Annual National Ambient Air Quality Standard for PM<sub>2.5</sub>. The Annual National Ambient Air Quality Standard for PM<sub>2.5</sub> is met when the annual design value is less than or equal to 15.0 µg/m<sup>3</sup>. 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<sub>2.5</sub> Annual Means and Annual Design Values**

Site Name	Annual Means µg/m <sup>3</sup>							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
	2002	2003	2004	2005	2006	2007	2008 <sup>1</sup>					
Southwick	17.2	16.0	14.5	16.7	15.0	15.0	12.5	<b>15.9</b>	<b>15.7</b>	<b>15.4</b>	<b>15.6</b>	<b>14.2</b>
Wyandotte	17.5	15.4	14.1	16.5	15.2	14.9	12.8	15.7	15.3	15.3	15.5	14.3
Barret	16.4	15.5	13.7	16.8	14.0	15.2	12.2	15.2	15.3	14.8	15.3	13.8
Watson	15.7	14.9	12.6	16.5	13.7	15.7	10.0	14.4	14.7	14.3	15.3	13.1

**BOLD:** Design value site for Louisville. <sup>1</sup>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<sub>2.5</sub>. Table 4 compares data collected from 2002 through year-to-date 2008 to the 24-Hour National Ambient Air Quality Standard for PM<sub>2.5</sub>. In December 2006 the EPA changed the 24-hour standard from 65 µg/m<sup>3</sup> to 35 µg/m<sup>3</sup>. The standard is met when the 24-Hour design value is less than or equal to 35 µg/m<sup>3</sup>. The design value is based on 3 consecutive, complete years of air quality data and is calculated by taking the average of the 98<sup>th</sup> percentile value for each of the 3 years. The 98<sup>th</sup> percentile is the daily value out of a year of PM<sub>2.5</sub> monitoring data below which 98 percent of all daily values fall.

**Table 4: PM<sub>2.5</sub> Annual 98<sup>th</sup> Percentiles and 24-Hour Design Values**

Site Name	Annual 98 <sup>th</sup> Percentile Value. µg/m <sup>3</sup>							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
	2002	2003	2004	2005	2006	2007	2008 <sup>1</sup>					
Southwick	47	36	31	43	36	34	28	<b>38.0</b>	<b>36.7</b>	<b>36.7</b>	37.7	32.7
Wyandotte	45	38	31	40	36	34	28	38.0	36.3	35.7	36.7	32.7
Barret	45	36	29	43	37	37	21	36.7	36.0	36.3	<b>39.0</b>	31.7
Watson	31	33	26	37	33	36	18	30.0	32.0	32.0	35.3	29.0

**BOLD:** Design Value for Louisville. <sup>1</sup>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.