



## 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 2004 through year-to-date 2010 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 2004-2006	Annual Design Values 2005-2007	Annual Design Values 2006-2008	Annual Design Values 2007-2009	Annual Design Values 2008-2010
	2004	2005	2006	2007	2008	2009	2010 <sup>1</sup>					
Southwick	14.5	16.6	15.0	15.1	13.2	12.2	14.6	<b>15.4</b>	<b>15.6</b>	14.4	13.5	13.3
Wyandotte	14.0	16.4	15.2	14.9	13.4	12.5	15.6	15.2	15.5	<b>14.5</b>	<b>13.6</b>	<b>13.8</b>
Cannons Lane*	13.7	16.7	13.9	15.0	13.4	11.7	15.1	14.8	15.2	14.1	13.4	13.4
Watson Lane	12.6	16.4	13.7	15.4	12.8	11.6	13.9	14.2	15.1	13.9	13.3	12.8

**Bold:** Design value site for Louisville.

<sup>1</sup>Year-to-date data for 2010.

\* Cannons Lane replaced Barret in 2009. 2003-2008 data are from Barret.

### 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 2004 through year-to-date 2010 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 65µg/m<sup>3</sup> to 35µg/m<sup>3</sup>. The standard is met when the 24-Hour design value is less than or equal to 35µg/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 2004-2006	24-Hour Design Values 2005-2007	24-Hour Design Values 2006-2008	24-Hour Design Values 2007-2009	24-Hour Design Values 2008-2010
	2004	2005	2006	2007	2008	2009	2010 <sup>1</sup>					
Southwick	31.1	42.9	36.0	34.1	28.7	24.3	30.6	<b>36.7</b>	<b>37.7</b>	32.9	29.0	27.9
Wyandotte	30.6	40.1	36.3	33.5	29.5	25.7	31.8	35.7	36.6	<b>33.1</b>	<b>29.6</b>	<b>29.0</b>
Cannons Lane*	28.8	43.2	36.7	31.9	30.7	24.1	25.2	36.2	37.3	<b>33.1</b>	28.9	26.7
Watson Lane	25.8	36.5	32.5	32.5	28.6	24.7	26.1	31.6	33.8	31.2	28.6	26.5

**Bold:** Design Value for Louisville.

<sup>1</sup>Year-to-date data for 2010.

\* Cannons Lane replaced Barret in 2009. 2003-2008 data are from Barret.