

# **Evaluating Ozone Control Programs in the Eastern United States: Focus on the NO<sub>x</sub> Budget Trading Program, 2004**

State and Local Information for EPA Region 7

Iowa  
Missouri

U.S. Environmental Protection Agency  
Office of Air and Radiation  
Office of Air Quality Planning and Standards

October 2005

## Iowa

### Emissions

State total emissions of NO<sub>x</sub> and VOCs have decreased from 1997 to 2004.

**Ozone Season (May-September) Emission Totals by Major Source Categories (tons)**

Source Category	1997	2002	2004
<b>NO<sub>x</sub> Emissions</b>			
Power Industry	31,302	33,845	31,071
Mobile On-Road	45,834	39,150	35,021
Other	62,792	62,748	61,505
<b>VOC Emissions</b>			
Mobile On-Road	30,191	22,211	19,806
Solvent Usage	46,059	38,461	38,158
Other	34,031	32,545	31,475

The emissions data used in the report are measured or estimated values from EPA's National Emissions Inventory (NEI). Starting in 1997, the NEI incorporated power industry data measured by the Continuous Emissions Monitoring System (CEMS). For 2002, the preliminary version of the NEI was used, which includes the 2002 CEMS data, but does not include 2002 data for other sources submitted by state, local, and tribal air agencies.

EPA used CEMS data for the power industry for 2003 and 2004. Emissions for other sources for that period were estimated by interpolating between the 2002 preliminary NEI data and a projected 2010 emission inventory developed to support the Clean Air Interstate Rule.

For additional information use the following online resources:

National Emissions Inventory (NEI): [www.epa.gov/ttn/chief/net](http://www.epa.gov/ttn/chief/net) .

Emissions data for the power industry: <http://cfpub.epa.gov/gdm> .

Information on mobile sources: [www.epa.gov/otaq](http://www.epa.gov/otaq) .

## **Ozone**

On average, ozone has declined between 1997 and 2004. These improvements in ozone are in response to both state and regional reductions in NO<sub>x</sub> and VOC emissions. The level of ozone improvement varies from site to site.

### **Highest Fourth Daily Maximum 8-hour Ozone Concentration by Metropolitan Statistical Area, 1997, 2002 and 2004**

<b>Metropolitan Statistical Area</b>	<b>1997 O<sub>3</sub> 8-hr (ppm)</b>	<b>2002 O<sub>3</sub> 8-hr (ppm)</b>	<b>2004 O<sub>3</sub> 8-hr (ppm)</b>
Cedar Rapids, IA MSA	0.07	0.07	0.06
Davenport--Moline--Rock Island, IA--IL MSA	0.07	0.08	0.07
Des Moines, IA MSA	0.06	0.06	0.06
Omaha, NE--IA MSA	0.07	0.07	0.07
Level of the NAAQS is .08 ppm. Units are parts per million (ppm).			
Notes: <ul style="list-style-type: none"><li>• Data from exceptional events are not included.</li><li>• The reader is cautioned that this summary is not adequate in itself to numerically rank MSAs according to their air quality.</li><li>• The monitoring data represent the quality of air in the vicinity of the monitoring site and, for some pollutants, may not necessarily represent urban-wide air quality.</li></ul>			

## Missouri

### Emissions

State total emissions of NO<sub>x</sub> and VOCs have decreased from 1997 to 2004. After 2002 the largest emission reductions were NO<sub>x</sub> emissions from power generating sources.

#### **Ozone Season (May-September) Emission Totals by Major Source Categories (tons)**

Source Category	1997	2002	2004
<b>NO<sub>x</sub> Emissions</b>			
Power Industry	82,298	56,277	40,610
Mobile On-Road	95,336	80,135	72,245
Other	73,527	82,139	79,854
<b>VOC Emissions</b>			
Mobile On-Road	63,338	47,805	42,873
Solvent Usage	48,690	38,921	38,117
Other	65,670	62,867	60,393

The emissions data used in the report are measured or estimated values from EPA's National Emissions Inventory (NEI). Starting in 1997, the NEI incorporated power industry data measured by the Continuous Emissions Monitoring System (CEMS). For 2002, the preliminary version of the NEI was used, which includes the 2002 CEMS data, but does not include 2002 data for other sources submitted by state, local, and tribal air agencies.

EPA used CEMS data for the power industry for 2003 and 2004. Emissions for other sources for that period were estimated by interpolating between the 2002 preliminary NEI data and a projected 2010 emission inventory developed to support the Clean Air Interstate Rule.

For additional information use the following online resources:

National Emissions Inventory (NEI): [www.epa.gov/ttn/chief/net](http://www.epa.gov/ttn/chief/net) .  
Emissions data for the power industry: <http://cfpub.epa.gov/gdm> .  
Information on mobile sources: [www.epa.gov/otaq](http://www.epa.gov/otaq) .

## Ozone

On average, ozone has declined between 1997 and 2004. These improvements in ozone are in response to both state and regional reductions in NO<sub>x</sub> and VOC emissions. The level of ozone improvement varies from site to site.

### **Highest Fourth Daily Maximum 8-hour Ozone Concentration by Metropolitan Statistical Area, 1997, 2002 and 2004**

Metropolitan Statistical Area	1997 O <sub>3</sub> 8-hr (ppm)	2002 O <sub>3</sub> 8-hr (ppm)	2004 O <sub>3</sub> 8-hr (ppm)
Kansas City, MO--KS MSA	0.1	0.09	0.07
St. Louis, MO--IL MSA	0.09	0.1	0.08
Springfield, MO MSA	0.07	0.08	0.06

Level of the NAAQS is .08 ppm. Units are parts per million (ppm).

Notes:

- Data from exceptional events are not included.
- The reader is cautioned that this summary is not adequate in itself to numerically rank MSAs according to their air quality.
- The monitoring data represent the quality of air in the vicinity of the monitoring site and, for some pollutants, may not necessarily represent urban-wide air quality.

Trends for 1997-2004 with 95 percent confidence limits are presented below. Ozone season averages of daily maximum 8-hour ozone were adjusted to remove the influence of year-to-year variability in meteorology.

### **Seasonal Average 8-hour Ozone Trends**

