State of Illinois
Illinois Environmental Protection Agency

Annual Air Quality Report

Illinois

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2011

November 2012

ILLINOIS ANNUAL AIR QUALITY REPORT 2011

Illinois Environmental Protection Agency
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Acknowledgements

This document is produced by the Illinois Environmental Protection Agency; John J. Kim, Interim Director.

Illinois EPA Bureau of Air personnel contributed their time and expertise to the development of this publication.

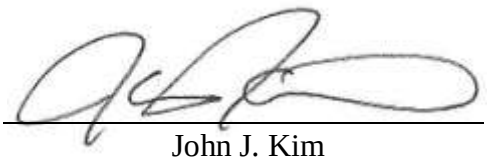
A MESSAGE FROM THE DIRECTOR

The 2011 Annual Air Quality Report was developed to provide a thorough, unbiased assessment of air quality in Illinois. The data compiled in this report were collected from the extensive air monitoring network operated throughout the state. The report includes monitoring data for criteria pollutants (particulate matter, ozone, sulfur dioxide, nitrogen dioxide, carbon monoxide and lead), as well as some heavy metals (e.g., mercury), nitrates, sulfates and volatile organic compounds.

Illinois' air monitoring network underwent a number of changes from 2010 to 2011 and has met U.S. EPA regulatory criteria. Sites and monitors have been discontinued in areas where ambient air quality concentrations have not shown exceedances over the course of five years and with values significantly below National Ambient Air Quality Standards (NAAQS). Overall, Illinois had nine fewer monitoring site locations and 41 fewer monitors in 2011. Additional information on these changes is contained in the report.

Although meteorology often has a significant impact on air quality, and hot weather resulted in more than 40 temperature records tied or broken in 2011, overall air quality for the year was either good or moderate 92 percent of the time, a slight increase from 2010. As with previous years, the 10-year air quality trends continue to show decreases in all criteria pollutants. In addition to providing this report, the Agency also provides air quality data to the public on a daily basis through the Agency's website at www.epa.state.il.us/air/air-quality-menu.html.

Significant progress has been made in terms of air quality in the state. The Illinois EPA continues work to meet NAAQS, even as standards continue to be tightened. The Agency also strives to provide the most accurate information to residents about our air quality. Please contact the Illinois EPA with any comments and/or questions regarding the 2011 Annual Air Quality Report or air pollution control programs.



John J. Kim
Interim Director

Illinois Annual Air Quality Report 2011

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EXECUTIVE SUMMARY

This report presents a summary of air quality data collected throughout the State of Illinois during the calendar year - 2011. Data is presented for the six criteria pollutants (those for which air quality standards have been developed - particulate matter (PM_{10} and $PM_{2.5}$), ozone, sulfur dioxide, nitrogen dioxide, carbon monoxide, and lead) along with some heavy metals, nitrates, sulfates, volatile organic and toxic compounds. Monitoring was conducted at 75 different site locations collecting data from more than 170 instruments.

In terms of the Air Quality Index (AQI) air quality during 2011 was either good or moderate 92 percent of the time throughout Illinois. There were no days when air quality in some part of Illinois was considered Unhealthy (category Red). This compares with zero Unhealthy days in 2010. There were 31 days (25 for 8-hour ozone, 4 for $PM_{2.5}$ and 2 for both 8-hour ozone and $PM_{2.5}$) when air quality in some part of Illinois was considered Unhealthy for Sensitive Groups (category Orange). This compares with 32 Unhealthy for Sensitive Groups days reported in 2010. Air quality trends for the criteria pollutants are continuing to show downward trends or stable trends well below the level of the standards. Percentage changes over the ten year period 2002 – 2011 are as follows: 24-hour Particulate Matter (PM_{10}) 15 percent decrease, annual Particulate Matter ($PM_{2.5}$) 20 percent decrease, 1-hour Sulfur Dioxide 47 percent decrease, annual Nitrogen Dioxide 29 percent decrease, 8-hour Carbon Monoxide 48 percent decrease, Lead 33 percent decrease, and 8-hour Ozone 5 percent decrease.

Stationary point source emission data has again been included. The data in the report reflects information contained in the Emission Inventory System (EIS) as of December 31, 2011. Emission estimates are for the calendar year 2011 and are for the pollutants: particulate matter, volatile organic material, sulfur dioxide, nitrogen oxides and carbon monoxide. Emission trends of these pollutants have been given for the years 1998 to the present. Emissions reported with the Annual Emissions Report have been provided starting with 1998 and are currently available through 2010. In general there has been a trend toward decreasing emissions over this time period.

SECTION 1: AIR POLLUTANTS: SOURCES, HEALTH AND WELFARE EFFECTS

Ozone (O_3)

Photochemical oxidants result from a complex series of atmospheric reactions initiated by sunlight. When reactive (non-methane) hydrocarbons and nitrogen oxides accumulate in the atmosphere and are exposed to the ultraviolet component of sunlight, the formation of new compounds, including ozone and peroxyacetylnitrate, takes place.

Absorption of ultraviolet light energy by nitrogen dioxide results in its dissociation into nitric oxide and an oxygen atom. The oxygen atoms, for the most part, react with atmospheric molecular oxygen (O_2) to form ozone (O_3). In general, nitric oxide will react with ozone to re-form nitrogen dioxide, completing the cycle. A build-up of ozone above the equilibrium concentration defined by the reaction cycle given above results when nitrogen oxide reacts with non-methane hydrocarbons. Oxygen atoms from the hydrocarbon radical oxidize nitric oxide to nitrogen dioxide without ozone being used up. Thus ozone concentrations are not depleted and can build up quickly.

Ozone can also be formed naturally in the atmosphere by electrical discharge, and in the stratosphere by solar radiation. The former process is not capable of producing significant urban concentrations of this pollutant; however, there is some belief that incursion of ozone from the stratosphere can contribute significantly to elevated ground level concentrations of ozone under certain meteorological conditions.

Injury to vegetation is one of the earliest manifestations of photochemical air pollution, and sensitive plants are useful biological indicators of this type of pollution. The visible symptoms of photochemical oxidant produced injury to plants may be classified as:

- Acute injury, identified by cell collapse with subsequent development of necrotic patterns.
- Chronic injury, identified by necrotic patterns or with other pigmented patterns.
- Physiological effects, identified by growth alterations, reduced yields, and changes in the quality of plant products. The acute symptoms are generally characteristic of a specific photochemical oxidant; though chronic injury patterns are not. Ozone injury to leaves is identified as a stripling or flecking. Adverse effects on sensitive vegetation have been observed from exposure to photochemical oxidant concentrations of about 100 ug/m^3 (0.05 ppm) for 4 hours.

Adverse effects on materials (rubber products and fabrics) from exposure to photochemical oxidants have not been precisely quantified, but have been observed at the levels presently occurring in many urban atmospheres.

Ozone accelerates the aging of many materials, resulting in rubber cracking, dye fading and paint erosion. These effects are linearly related to the total dose of ozone and can occur at very low levels, given long duration exposures.

Ozone is a pulmonary irritant that affects the respiratory mucous membranes, other lung tissues and respiratory functions. Clinical and epidemiological studies have demonstrated that ozone impairs the normal mechanical function of the lung, causing alterations in

respiration; the most characteristic of which are shallow, rapid breathing and a decrease in pulmonary compliance. Exposure to ozone results in clinical symptoms such as chest tightness, coughing, and wheezing.
Alterations in airway resistance can occur, especially to those with respiratory diseases (asthma, bronchitis, emphysema). These effects may occur in sensitive individuals, as well as in healthy exercising persons, at short-term ozone concentrations between 0.15 and 0.25 ppm.

Ozone exposure increases the sensitivity of the lung to bronchoconstrictive agents such as histamine, acetylcholine and allergens, as well as increasing the individual's susceptibility to bacterial infection. Simultaneous exposure to ozone and SO_2 can produce larger changes in pulmonary function than exposure to either pollutant alone.

Peroxyacetylnitrate (PAN) is an eye irritant, and its effects often occur in conjunction with the effects of ozone.
Two characteristics of ozone and oxidant exposures should be cited:

- Ozone itself is a primary cause of most of the health effects reported in toxicological and experimental human studies and the evidence for attributing many health effects to this substance alone is very compelling.

- The complex of atmospheric photochemical substances is known to produce health effects, some of which are not attributable to pure ozone but may be caused by other photochemical substances in combination with ozone.

Particulate Matter (PM)

Not all air pollutants are in the gaseous form. Small solid particles and liquid droplets, collectively called particulates or aerosols, are also present in the air in great numbers and may constitute a pollution problem. Particulates entering the atmosphere differ in size and chemical composition. The effects of particulates on health and welfare are directly related to their size and chemical composition.

Particulate matter in the atmosphere consists of solids, liquids, and liquids-solids in combination. Suspended particulates generally refer to particles less than 100 micrometers in diameter (human hair is typically 100 micrometers thick). Particles larger than 100 micrometers will settle out of the air under the influence of gravity in a short period of time.

Typical sources emitting particles into the atmosphere are combustion of fossil fuels (ash and soot), industrial processes (metals, fibers, etc.), fugitive dust (wind and mechanical erosion of local soil) and photochemically produced particles (complex chain reactions between sunlight and gaseous pollutants). Combustion and photochemical products tend to be smaller in size (less than 1 micrometer); fugitive dust and industrial products are typically larger in size (greater than 1 micrometer).

Particles which cause the most health and visibility difficulties are those less than 1.0 micrometer in size. These particles are also the most difficult to reduce in numbers by the various industrial removal techniques. Rainfall accounts for the major removal of these smaller particles from the air.

One of the major problems associated with high concentrations of particulates is that the interaction between the particles, sunlight and atmospheric moisture can potentially result in the climatic effects and diminished visibility (haze). Particles play a key role in the formation of clouds, and emissions of large numbers of particles can, in some instances, result in local increases in cloud formation and, possibly, precipitation. Particles in the size range of 0.1 to 1.0 micrometers are the most efficient in scattering visible light (wave length 0.4 to 0.7 micrometers) thereby reducing visibility. Particles combined with high humidity can result in the formation of haze which can cause hazardous conditions for the operation of motor vehicles and aircraft.

Particulate pollutants enter the human body by way of the respiratory system and their most immediate effects are upon this system. The size of the particle determines its depth of penetration into the respiratory system. Particles over 5 micrometers are generally deposited in the nose and throat. Those that do penetrate deeper in the respiratory system to the air ducts (bronchi) are often removed by ciliary action. Particles ranging in size from 0.5 - 5.0 micrometers in diameter can be deposited in the bronchi, with few reaching the air sacs (alveoli). Most particles deposited in the bronchi are removed by the cilia within hours. Particles less than 0.5 micrometer in diameter reach and may settle in the alveoli. The removal of particles from the alveoli is much less rapid and complete than from the larger passages. Some of the particles retained in the alveoli are absorbed into the blood.

Besides particulate size, the oxidation state, chemical composition, concentration and length of time in the respiratory system contribute to the health effects of particulates. Particulates have been associated with increased respiratory diseases (asthma, bronchitis, emphysema), cardiopulmonary disease (heart attack) and cancer.

Plant surfaces and growth rates may be adversely affected by particulate matter. Particulate air pollution also causes a wide range of damage to materials including corrosion of metals and electrical equipment and the soiling of textiles and buildings.

Sulfur Dioxide (SO_2)

Sulfur dioxide is an atmospheric pollutant which results from combustion processes (mainly burning of fossil fuels containing sulfur compounds), refining of petroleum, manufacture of sulfuric acid and smelting of ores containing sulfur. Reduction of sulfur dioxide pollution levels can generally be achieved through the use of low sulfur content fuels or the use of chemical sulfur removal systems.

Once in the atmosphere some sulfur dioxide can be oxidized (either photochemically or in the presence of a catalyst) to SO_3 (sulfur trioxide). In the presence of water vapor, SO_3 is readily converted to sulfuric acid mist. Other basic oxides combine with SO_3 to form sulfate aerosols. Sulfuric acid droplets and other sulfates are thought to account for about 5 to 20 percent of the total suspended particulate matter in urban air. These compounds can be transported large distances and come back to earth as a major constituent of acid precipitation. Many of the resultant health problems attributed to SO_2 may be a result of the oxidation of SO_2 to other compounds.

The effects of SO_2 on health are irritation and inflammation of tissue that it directly contacts. Inhalation of SO_2 causes bronchial constriction resulting in an increased resistance to air flow, reduction of air volume and an increase of respiratory rate and heart rate.

SO_2 can exacerbate pre-existing respiratory diseases (asthma, bronchitis, emphysema). The enhancement (synergism) by particulate matter of the toxic response to sulfur dioxide has been observed under conditions which would promote the conversion of sulfur dioxide to sulfuric acid. The degree of enhancement is related to the concentration of particulate matter. A twofold to threefold increase of the irritant response to sulfur dioxide is observed in the presence of particulate matter capable of oxidizing sulfur dioxide to sulfuric acid.

Sulfuric acid (H_2SO_4) inhalation causes an increase in the respiratory system's mucous secretions, which reduces the system's ability to remove particulates via mucociliary clearance. This can result in an increase incidence of respiratory infection.

Carbon Monoxide (CO)

The major source of carbon monoxide (CO) is motor vehicles. The USEPA has kept under its jurisdiction the regulation of emission control equipment on new motor vehicles while the State's responsibility for reducing excessive ambient carbon monoxide levels is

exercised by developing transportation plans for congested urban areas.

The toxic effects of high concentrations of CO on the body are well known. Carbon monoxide is absorbed by the lungs and reacts with hemoglobin (the oxygen carrying molecule in the blood) to form carboxyhemoglobin (COHb). This reaction reduces the oxygen carrying capacity of blood because the affinity of hemoglobin for CO is over 200 times that for oxygen. The higher the percentage of hemoglobin bound up in the form of carboxyhemoglobin, the more serious is the health effect.

The level of COHb in the blood is directly related to the CO concentration of the inhaled air. For a given ambient air CO concentration, the COHb level in the blood will reach an equilibrium concentration after a sufficient time period. This equilibrium COHb level will be maintained in the blood as long as the ambient air CO level remains unchanged. However, the COHb level will slowly change in the same direction as the CO concentration of the ambient air as a new equilibrium of CO in the blood is established. The lowest CO concentrations shown to produce adverse health effects result in aggravation of cardiovascular disease. Studies demonstrate that these concentrations have resulted in decreased exercise time before the onset of pain in the chest and extremities of individuals with heart or circulatory disease. Slightly higher CO levels have been associated with decreases in vigilance, the ability to discriminate time intervals and exercise performance.

Evidence also exists indicating a possible relationship between CO and heart attacks, the development of cardiovascular disease and fetal development.

Studies on the existing ambient levels of CO do not indicate any adverse effects on vegetation, materials, or other aspects of human welfare.

Nitrogen Dioxide (NO_2)

Nitrogen gas (N_2) is an abundant and inert gas which makes up almost 80 percent of the earth's atmosphere. In this form, it is harmless to man and essential to plant metabolism. Due to its abundance in the air, it is a frequent reactant in many combustion processes. When combustion temperatures are extremely high, as in the burning of coal, oil, gas and in automobile engines, atmospheric nitrogen (N_2) may combine with molecular oxygen (O_2) to form various oxides of nitrogen (NO_x). Of these, nitric oxide (NO) and nitrogen dioxide (NO_2) are the most important contributors to air pollution; NO_x generally is used to represent these. Nitric oxide (NO) is a colorless and odorless gas. It is the primary form of NO_x resulting from the combustion process. NO_x contributes to haze and visibility reduction. NO_x is also known to cause deterioration and fading of certain fabrics and damage to vegetation. Depending on concentration and extent of exposure, plants may suffer leaf lesions and reduced crop yield.

Sensitivity of plants to nitrogen oxides depends on a variety of factors including species, time of day, light, stage of maturity and the presence or absence of other air pollutants such as sulfur dioxide and ozone.

There is a lack of strong evidence associating health effects with most nitrogen oxide compounds. NO_2, a secondary derivative of atmospheric nitric oxide, however, has been clearly established as exerting detrimental effects on human health and welfare.

NO_2 can cause an impairment of dark adaptation at concentrations as low as 0.07 ppm. NO_2 can cause an increase in airway resistance, an increase in respiratory rate, an increase in sensitivity to bronchoconstrictors, a decrease in lung compliance and an enhanced susceptibility to respiratory infections. NO_2 is a deep lung irritant capable of producing pulmonary edema if inhaled in sufficient concentrations. When NO_2 is inhaled in concentrations with other pollutants, the effects are additive.

NO_x may also react with water to form corrosive nitric acids, a major component of acid precipitation. Additionally, NO_x and various other pollutants (e.g., hydrocarbons) may react in the presence of sunlight to product photochemical oxidants. These are extremely unstable compounds which damage plants and irritate both the eyes and respiratory system of people. Ozone (O_3) and a group of chemicals called peroxyacetylnitrates (PAN) are the major constituents of photochemical oxidants.

Lead (Pb)

Historically atmospheric lead came primarily from combustion of leaded gasoline. However, the use of unleaded gas since 1975 has reduced mobile source lead emissions by over 90%. Currently stationary sources, such as lead smelters, battery manufacturers, iron and steel producers and others can contribute significant amounts of lead to their immediate vicinity.

Lead is a stable compound which persists and accumulates both in the environment and in the human body. Lead enters the human body through ingestion and inhalation with consequent absorption into the blood stream and distribution to all body tissues. No safe level of lead in the blood has been identified. Clinical, epidemiological and toxicological studies have demonstrated exposure to lead has a broad range of health effects.

Since 1990 over 6,000 new health studies have been conducted. These studies have shown that children are the most susceptible to the damaging effects of lead because they are more likely to ingest lead due to hand-to-mouth activity and early body development. Lead exposure has been found to interfere with the developing nervous system including the brain. This can potentially lead to IQ loss, poor academic achievement, permanent learning disabilities and behavioral problems. These effects can persist into early adulthood.

Kidney and neurological cell damage has also been associated with lead exposure. Animal studies have demonstrated that lead can contribute to reduced fertility and birth defects.

Other potential effects from lead exposure are weakened immune systems, restlessness, headaches, increased blood pressure and cardiovascular disease.

Illinois Ambient Air Quality Standards and Episode Levels

Consistent with the intent of the Environmental Protection Act of the State of Illinois, Illinois has adopted ambient air quality and episode standards that specify maximum permissible short-term and long-term concentrations of various contaminants in the atmosphere. Ambient air quality and episode standards are limits on atmospheric concentrations of air contaminants established for the purpose of protecting the public health and welfare.

The Illinois and National Ambient Air Quality Standards consist of a primary and secondary standard for each pollutant (contaminant) as presented in **Table 1**. The Illinois Air Pollution Episode Levels are presented in **Table 2**. The primary standard and episode criteria represents the level of air quality which is necessary to protect the public health. Air entering the respiratory tract must not menace health. Therefore, the air quality standards must, as a minimum, provide air which will not adversely affect, through acute or chronic symptoms, the public health. Air contaminants increase the aggravation and the production of respiratory and cardio-pulmonary diseases. The secondary standard defines the level of air quality which is necessary to protect the public welfare. This includes, among other things, effects on crops, vegetation, wildlife, visibility and climate, as well as effects on materials, economic values and on personal comfort and well-being. The standards are legally enforceable limitations, and any person causing or contributing to a violation of the standards is subject to enforcement proceedings under the Environmental Protection Act. The standards have also been designed for use as a basis for the development of implementation plans by State and local agencies for the abatement and

control of pollutant emissions from existing sources, and for the determination of air contaminant emission limitations to ensure that population, industry and economic growth trends do not add to the region's air pollution problems.

Table 1: Summary of National and Illinois Ambient Air Quality Standards

Pollutant	Averaging Time	Standard	
		Primary	**Secondary**
Standard units are micrograms per cubic meter (ug/m^3) and parts per million (ppm)			
Particulate Matter 10 micrometers (PM_{10})	24-hour	150 ug/m^3	Same as Primary
Particulate Matter 2.5 micrometers ($PM_{2.5}$)	Annual Arithmetic Mean	15.0 ug/m^3	Same as Primary
	24-hour	35 ug/m^3	Same as Primary
Sulfur dioxide	1-hour*	75 ppb	None
	3-hour	None	0.5 ppm
Carbon Monoxide	1-hour	35 ppm	None
	8-hour	9 ppm	None
Ozone	1-hour	0.12 ppm	Same as Primary
	8-hour	0.075 ppm	Same as Primary
Nitrogen Dioxide	Annual Arithmetic Mean	53 ppb	Same as Primary
	1-hour*	100 ppb	None
Lead	Rolling 3-Month Mean	0.15 ug/m^3	Same as Primary

The $PM_{2.5}$ standards are referenced to local conditions of temperature and pressure rather than standard conditions (760 mm and 25 deg C).
Note: The State of Illinois has not adopted the $PM_{2.5}$ or 8-hour ozone standards at this time.
*New standard established starting 2010

Table 2: Illinois Air Pollution Episode Levels

Pollutant	Advisory	Yellow alert	Red Alert	Emergency
Particulate Matter	2-hour	24-hour	24-hour	24-hour
micrograms per cubic meter	420	350	420	500
Sulfur Dioxide	2-hour	4-hour	4-hour	4-hour
parts per million	0.30	0.30	0.35	0.40
Carbon Monoxide	2-hour	8-hour	8-hour	8-hour
parts per million	30	15	30	40
Nitrogen Dioxide	2-hour	1-hour	1-hour	1-hour
parts per million	0.40	0.60	1.20	1.60
		or	or	or
		24-hour	24-hour	24-hour
		0.15	0.30	0.40
Ozone	1-hour	1-hour	1-hour	1-hour
parts per million	0.12	0.20	0.30	0.50

SECTION 2: STATEWIDE SUMMARY OF AIR QUALITY FOR 2011

OZONE

Monitoring was conducted at 34 locations during at least part of the April-October "ozone season" and at least 75 percent data capture was obtained at 34 sites.

Two sites recorded hourly concentrations above the former 0.12 parts per million (ppm) 1-hour standard. University of Chicago recorded the highest 1-hour concentration of 0.139 ppm followed by Zion with a concentration of 0.126 ppm. This compares with the highest concentration of 0.100 ppm in 2010 at both Lemont and Zion. The highest value in the St. Louis Metro East area was 0.109 ppm recorded at Jerseyville compared with a high in 2010 of 0.115 ppm at East St. Louis.

Data is also presented to compare with the 8-hour standard of 0.075 ppm. The appropriate statistic for comparison with the 8-hour standard is the fourth highest value, which is averaged over a three year period. There were 11 sites in Illinois that had a fourth high value above 0.075 ppm in 2011 compared with two sites in 2010. The highest fourth high value was 0.081 ppm at both Maryville and Wood River. The highest level in the Chicago area was 0.079 ppm at the South Water Filtration Plant. For the three year period 2009 – 2011, two sites had a fourth high average above 0.075 ppm (Table B4).

Figure 1 shows for each year the statewide average of each site's highest hourly ozone value for the ten year period 2002-2011. The graph shows some year-to-year fluctuation with high years in 2002 and 2005 and low years in 2004, 2008 and 2009. The statewide average for 2011 was 0.097 ppm compared with 0.087 ppm in 2010 and 0.082 ppm in 2009.

Statewide, the total number of 1-hour excursion days in 2011 was two compared with zero in 2010 and zero in 2009.

Figure 1
Average 1-Hour Ozone Maximum (ppm)

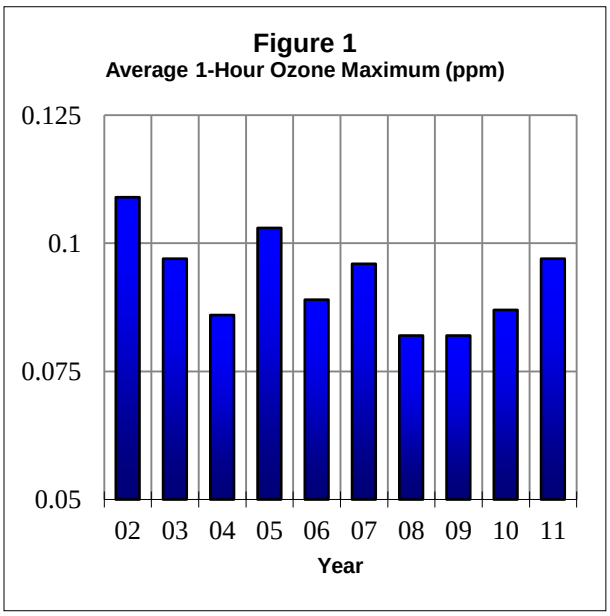


Figure 2
Average 8-Hour Ozone 4th High (ppm)

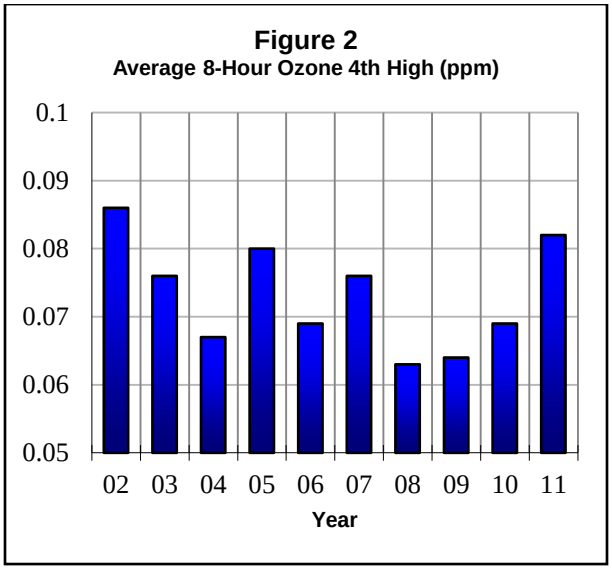


Figure 2 shows for each year the statewide average of the 4th highest 8-hour ozone value for the same period 2002-2011. The statewide average for 2011 was 0.082 ppm

compared with 0.069 ppm in 2010 and 0.064 in 2009.

Overall, Illinois' weather was much above normal in terms of meteorological conditions favorable to ozone formation and transport statewide.

July was the most conducive month in terms of meteorological conditions statewide. In terms of conducive days, the Chicago area and the Metro-East area both had much above average numbers.

PARTICULATE MATTER

Monitoring was conducted at 34 sites for $PM_{2.5}$. Valid annual averages were obtained for 32 of the 34 sites. No sites recorded an average above 15.0 ug/m^3, the level of the annual standard, compared with zero sites in 2010 and zero sites in 2009. The Statewide average of the annual averages was 11.2 ug/m^3 in 2011 compared with 11.6 ug/m^3 in 2010 and 10.6 ug/m^3 in 2009. **Figure 3** shows the trend of the Statewide annual averages for $PM_{2.5}$ for the period 2002-2011. There were 6 exceedances of the 24-hour standard of 35 ug/m^3 in 2011 compared with 31 exceedances in 2010. The Statewide peak of 39.9 ug/m^3 was recorded at Chicago Mayfair Pump Station. The Statewide average of the 98th percentile of 24-hour averages was 25.5 ug/m^3 in 2011 compared with 26.9 ug/m^3 in 2010 and 24.3 ug/m^3 in 2009.

In 2011 there were 5 sites monitoring PM_{10}. The Statewide annual average was 23 ug/m^3 compared with 23 ug/m^3 in 2010 and 20 ug/m^3 in 2009.

For PM_{10} the Statewide average of the maximum 24-hour averages in 2011 was 69 ug/m^3 compared with 62 ug/m^3 in 2010 and 56 ug/m^3 in 2009. **Figure 4** depicts this trend for the period 2002-2011.

No sites exceeded the former primary annual standard of 50 ug/m^3. The highest annual average was 31 ug/m^3 in Granite City. The lowest annual was 13 ug/m^3 in Northbrook. There were no exceedances of the 24-hour primary standard of 150 ug/m^3. The highest 24-hour average was recorded in Lyons Township with a value of 92 ug/m^3 compared with a high 24-hour value of 106 ug/m^3 in Granite City in 2010.

Figure 3
Particulate Matter ($PM_{2.5}$) Annual Trends (ug/m^3)

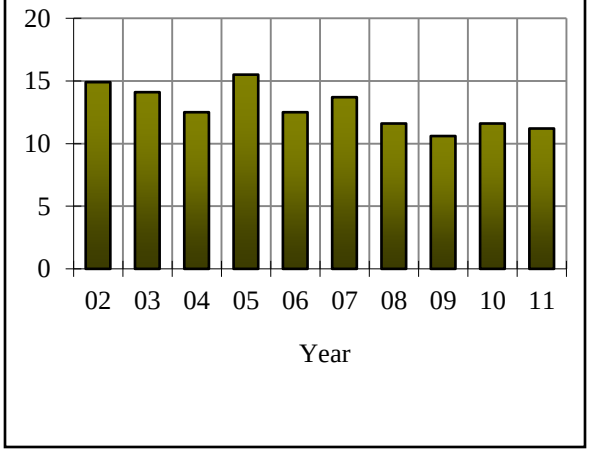
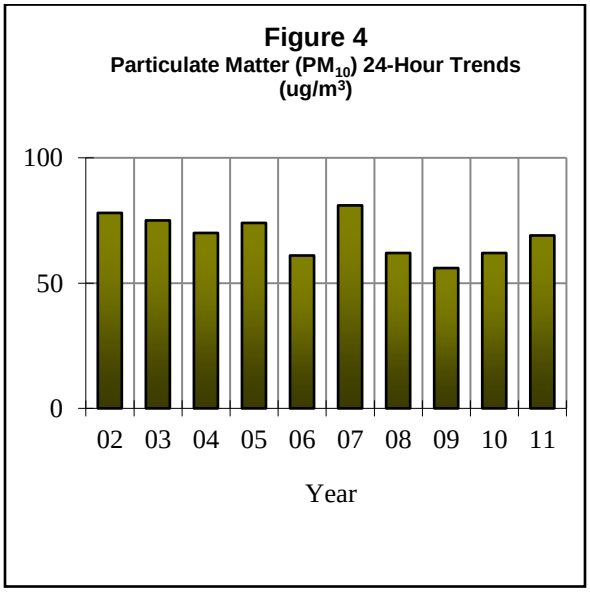


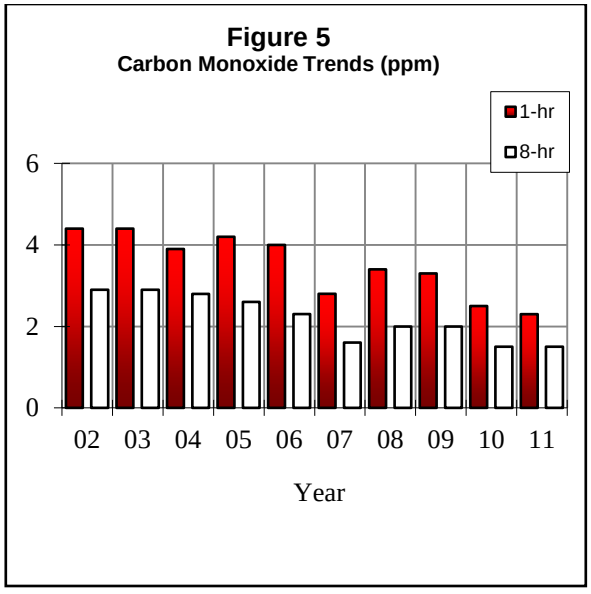
Figure 4
Particulate Matter (PM_{10}) 24-Hour Trends (ug/m^3)



CARBON MONOXIDE

There were no exceedances of either the 1-hour primary standard of 35 ppm or the 8-hour primary standard of 9 ppm in 2011. The highest 1-hour average was 3.3 ppm recorded at Chicago Transit Authority. The highest 8-hour average was 2.0 ppm recorded in Maywood and Peoria.

Figure 5 shows the trend for the period 2002-2011 for the statewide average of the 1-hour and 8-hour high CO values. The overall trend for both averages is downward. The statewide average of the 1-hour high was 2.3 ppm in 2011 compared with 2.5 ppm in 2010. The statewide average for the 8-hour high was 1.5 ppm in 2011 compared with 1.5 ppm in 2010.



SULFUR DIOXIDE

There were 42 exceedances of the new 1-hour primary standard of 75 ppb in 2011 compared with 50 exceedances in 2010. There were no exceedances of the 3-hour secondary standard of 500 ppb in 2011. The annual and 24-hour primary standards were revoked by USEPA in 2010. The highest 1-hour average was 262 ppb recorded in Pekin compared with 331 ppb in Pekin in 2010. The statewide average of the 1-hour high in 2011 was 63 ppb. This compares with 75 ppb in 2010 and 81 ppb in 2009. The highest 3-hour average of 176 ppb was recorded in Pekin in 2011 compared with 223 ppb in Pekin in 2010. There were two sites over the primary 1-hr standard of 75 ppb for the 2009-2011 period compared to four sites for the 2008-2010 period (Table B17).

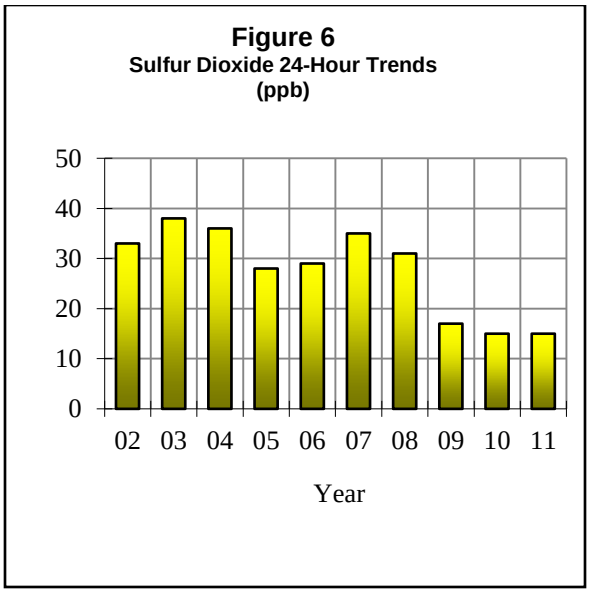
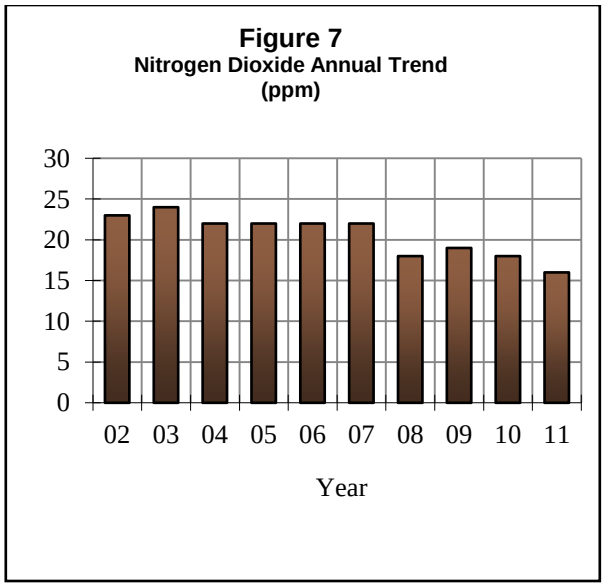


Figure 6 shows the statewide trend for the maximum 24-hour averages for the period 2002-2011. The 24-hour average trend has been overall downward; however a greater degree of year-to-year fluctuations have occurred. The statewide average for 2011 was 15 ppb compared with the 2010 average of 15 ppb. Statewide 1-hour average maximums have also declined. The 2011 average was 63 ppb compared to 75 ppb in 2010.

NITROGEN DIOXIDE

There were no violations of the annual primary standard of 53 ppb recorded in Illinois during 2011. The highest annual average of 23 ppb was recorded at Schiller Park. The Statewide average for 2011 was 16 ppb compared with 18 ppb in 2010 and 19 ppb in 2009. There were no violations of the new 1-hour primary standard in 2011 as well. This compares to zero violations in 2010. There were no sites over the 1-hour primary standard of 100 ppb for the 2009-2011 period compared to zero sites for the 2008-2010 period (Table B20).

One site operated only during part of the ozone season as PAMS. **Figure 7** depicts the trend of statewide averages from 2002-2011. The trend has been generally stable for the period ranging from 16 ppb to 24 ppb. There have been no violations of the annual standard since 1980.



LEAD

Perhaps the greatest success story in controlling criteria pollutants is lead. As a direct result of the Federal Motor Vehicle Control Program which has required the use of unleaded gas in automobiles since 1975, lead levels have decreased by more than 90 percent statewide. Based on new health studies the lead standard was revised in 2008 from a quarterly mean of 1.5 ug/m^3 to a rolling 3-month maximum mean of 0.15 ug/m^3.

There were no violations of the former quarterly lead standard of 1.5 ug/m3. There were three violations of the new rolling 3-month maximum mean standard for the 2009 to 2011 period. Violoations were recorded at Granite City - 15th & Madison with a value of 0.42 ug/m^3, Chicago Perez with a value of 0.29 ug/m^3 and Decatur Mueller with a value of 0.20 ug/m^3. This compares with a statewide high of 0.42 ug/m^3 for 2008 to 2010 at Granite City 15th & Madison.

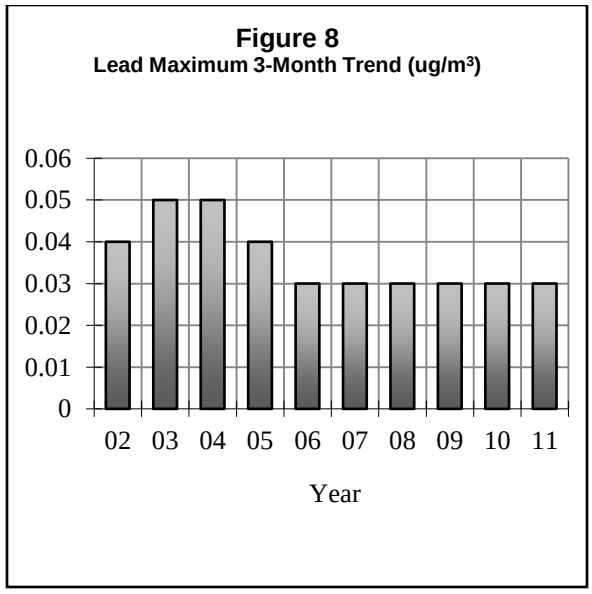


Figure 8 shows the trend of the statewide non-source maximum monthly averages from 2002-2011. The chart shows a general flat trend of ambient lead levels over the last several years. In 2010, several source oriented monitors were installed and one non-source monitor was discontinued. Currently, not enough data exists for the source oriented sites to establish a trend. However, the statewide average for all sites was 0.08 ug/m^3 in 2011 compared to 0.12 ug/m^3 in 2010.

FILTER ANALYSIS RESULTS

The TSP samples analyzed, in addition to lead, for specific metals, sulfates and nitrates. Several of the metals analyzed (arsenic, beryllium, cadmium, chromium, manganese, and nickel) have known toxic properties. Other metals such as iron can be used as tracers to help identify sources of high particulate values. Sulfates and nitrates are precursors of acid precipitation/deposition and add to the understanding of this inter-regional problem. They are also important constituents of the $PM_{2.5}$ values. There are currently no State or Federal ambient air quality standards for these parameters.

The areas with the highest metals concentrations in Illinois are generally the heavy industrialized areas of the Metro-East (Granite City and East St. Louis) and South Chicago, especially for iron and manganese. The highest 24-hour average for arsenic was 0.464 ug/m^3 measured in Granite City. The highest annual average of 0.011 ug/m^3 was also recorded at Granite City. There were no measurable beryllium 24-hour averages recorded statewide. Chicago Perez recorded the highest cadmium concentrations with a maximum 24-hour average of 0.022 ug/m^3. The highest annual average of 0.002 ug/m^3 was also recorded at Chicago - Washington. The highest 24-hour chromium average was 0.092 ug/m^3 recorded at Maywood. Maywood had the highest annual average at 0.023 ug/m^3. The highest iron and manganese values were recorded in South Chicago and the high traffic areas of Maywood. The highest 24-hour average for nickel was recorded at Maywood with a value of 0.016 ug/m^3. The highest annual average was in Maywood with an average of 0.008 ug/m^3. For nitrates, the highest 24-hour average was 34.0 ug/m^3 recorded at Chicago - Washington. The highest annual average was 4.1 ug/m^3 recorded at Maywood, Cermak and Chicago – Washington. For sulfates, the highest 24-hour average was 17.7 ug/m^3 recorded at Maywood. The highest annual average was 7.5 ug/m^3 at Chicago - Washington. In general, metals, nitrate and sulfate values were slightly higher in 2011 than in 2010.

TOXIC COMPOUNDS

Sampling for toxic compounds other than metals (see Filter Analysis Section) was conducted at Northbrook and Schiller Park. Most compounds were below the method detection limits. The highest compounds were toluene, mercury, benzene, acrolein and formaldehyde.

$PM_{2.5}$ SPECIATION

$PM_{2.5}$ samples are also analyzed for numerous constituents at 5 sites. The major constituents (inorganic elements, ammonium, nitrate, sulfate, elemental and organic carbon) are listed in **Table B26**. In general, approximately 62% is ammonium nitrate and ammonium sulfate, 32% is elemental and organic carbon and 6% is inorganic elements.

SECTION 3: AIR QUALITY INDEX

The Air Quality Index (AQI) is the national standard method for reporting air pollution levels to the general public in 2011. An index such as the AQI is necessary because there are several air pollutants, each with different typical ambient concentrations and each with different levels of harm, and to report actual concentrations for all of them would be confusing. The AQI uses a single number and a short descriptor to define the air quality in an easy-to-remember and easy-to-understand way, taking all the pollutants into account.

The AQI is based on the short-term Federal National Ambient Air Quality Standards (NAAQS), the Federal episode criteria, and the Federal Significant Harm levels for six of the "criteria pollutants", namely:

- Ozone (O_3)
- Sulfur dioxide (SO_2)
- Carbon monoxide (CO)
- Particulate matter (PM_{10})
- Particulate matter ($PM_{2.5}$)
- Nitrogen dioxide (NO_2)

In each case (except $PM_{2.5}$ which uses a lower value), the short-term primary NAAQS corresponds to 100 on the AQI scale – the end of the Moderate category. The next concentration above the NAAQS would begin the Unhealthy for Sensitive Groups category at 101 on the AQI scale. The Significant Harm level corresponds to an AQI of 500 and a descriptor of Hazardous, and the episode criteria correspond to intermediate hundreds.

For the AQI the health effects and cautionary statements are pollutant-specific. **Table 3** lists those for 8-hour ozone as an example.

Unhealthy for Sensitive Groups occurs on occasion for 8-hour ozone and $PM_{2.5}$. Unhealthy air quality is uncommon in Illinois, and Very Unhealthful air quality is rare. There has never been an occurrence of Hazardous air quality in Illinois.

The AQI is computed as follows: data from pollution monitors in an area are collected, and the AQI subindex for each pollutant is computed using formulas derived from the index/concentration relations noted above. Nomograms and tables are also available for this purpose. The data used are:

- O_3 estimate of the highest 8-hour average for that calendar day
- SO_2 the highest 1-hour or most recent 24-hour average
- CO the highest 8-hour average so far that calendar day
- PM_{10} the most recent 24-hour average
- $PM_{2.5}$ estimate of the 24-hour average for that calendar day
- NO_2 the highest 1-hour average

Continuous monitors are utilized for all the pollutants including PM_{10} and $PM_{2.5}$.

Table 3: AQI Descriptor Categories and Health Effects

AQI Range	Descriptor Category
0-50	Good (G)
51-100	Moderate (M)
101-150	Unhealthy for Sensitive Groups (USG)
151-200	Unhealthy (UH)
201-300	Very Unhealthy (VUH)
301 and above	Hazardous (HAZ)

Index & Category	Health Effects	Cautionary Statements
101-150, Unhealthy for Sensitive Groups	Increasing likelihood of respiratory symptoms and breathing discomfort in active children and adults and people with respiratory disease, such as asthma.	Active children and adults, and people with respiratory disease, such as asthma, should limit prolonged outdoor activity.
151-200, Unhealthy	Greater likelihood of respiratory symptoms and breathing difficulties in active children and adults and people with respiratory disease, such as asthma. Possible respiratory effects in general population.	Active children and adults, and people with respiratory disease, such as asthma, should avoid prolonged outdoor exertion; everyone else, especially children should limit prolonged outdoor exertion.
201-300, Very Unhealthful	Increasingly severe symptoms and impaired breathing likely in active children and adults and people with respiratory disease, such as asthma: increasing likelihood of respiratory effects in general population.	Active children and adults, and people with respiratory disease, such as asthma, should avoid all outdoor exertion; everyone else, especially children, should limit outdoor exertion.
301-500, Hazardous	Severe respiratory effects and impaired breathing likely in active children and adults and people with respiratory disease, such as asthma: increasingly severe respiratory effects likely in general population.	Everyone should avoid all outdoor exertion.

Once all the subindices for the various pollutants have been computed, the highest is chosen by inspection. That is the AQI for the area, and the pollutant giving rise to it is the "critical pollutant". Thus if, for Anytown, Illinois, we obtained the following subindices:

O_3 = 45
SO_2 = 23
CO = 19
PM_{10} = 41
$PM_{2.5}$ = 61

Anytown's AQI for that day would be 61, which is in the Moderate category, and the Critical Pollutant would be particulates ($PM_{2.5}$). If data for one of the pollutants used in computing AQI is missing, the AQI is computed using the data available, ignoring the missing datum. It occasionally happens that two pollutants have the same subindex; in such cases there are two critical pollutants.

The Illinois EPA issues the AQI for 14 areas, or Sectors, in Illinois (**Table 4**). These correspond to metropolitan areas with populations greater than 100,000.

Illinois AQIs are computed from data up to and including the 3 PM local time readings (4 PM during the summer portion of the Ozone Season) every weekday. A bulletin giving the AQI numbers, descriptors, critical pollutants, and a forecast of the category for the next day's AQI for each of the sectors is issued to both the National Weather Service and the IEPA website (link below), about 3:30 PM each work day (4:30 PM during the summer). Almost all TV stations and many radio stations and newspapers are able to receive this information to inform the public about the AQI either immediately or on the evening news. Additional AQI and forecast information can be obtained on IEPA's web site (http://www.epa.state.il.us/air/aqi/index.html) and EPA's AirNow website (http://www.airnow.gov). The AirNow website shows current AQI information for the larger sectors in Illinois as well as other areas around the country. In the Chicago area, AQIs are also available on phone recordings maintained by the Cook County Department of Environmental Control and the Chicago Department of the Environment. Residents in the Chicago area can access the Partners For Clean Air website (http://www.cleantheair.org/) which includes a 3-day forecast along with a link for updates on Twitter. AQI information can further be obtained via e-mail and/or cell phones through the EnviroFlash program (http://illinois.enviroflash.info/signup.cfm).

If the AQI subindex for any pollutant in any sector should reach or exceed the Unhealthy (or any higher) category late in the afternoon or on weekends when the AQI is not published, the IEPA sends out special bulletins to the National Weather Service. The AirNow website and residents subscribed to EnviroFlash program can also receive alerts when high pollution levels are occurring or expected to occur.

2011 Illinois AQI Summary

In order to present a more representative AQI, 24-hour calendar day $PM_{2.5}$ and PM_{10} values from the total network were used to determine the percentages in **Figure 9** even though some of these values were not available for issuing the daily AQI. Air quality was still in the "Good" category most often in 2011. All sectors had a higher frequency of "Good" than "Moderate" and "Unhealthy for Sensitive Groups". Lake County, Aurora-Elgin, Joliet/Will County, Rockford, Quad Cities, Champaign, Normal, Decatur and Springfield sectors had 70 percent or more of the days in the "Good" category. Within AQI sectors there were 60 occurrences of "Unhealthy for Sensitive Groups" air quality in 2011. The sector breakdown for "Unhealthy for Sensitive Groups" was 6 in Lake County, 9 in Chicago, 8 in North & West Suburbs, 3 in South & West, 2 in Aurora-Elgin, 2 in Will County, 1 in Rockford, 1 in Peoria, 1 in Normal, 4 in Champaign, 2 in Decatur, 4 in Springfield, and 17 in Metro-East. Outside of AQI sectors there were 7 additional occurrence of "Unhealthy for Sensitive Groups". **Figure 9** presents the AQI statistics for each sector. The pie chart shows the percent of time each sector was in a particular category.

In 2011, there were no Ozone Advisories issued in the State. An Advisory is declared when ozone levels have reached the level of the 1-hour standard (0.12 ppm) on a particular day and meteorological conditions are such that these levels are expected again the next day. There were 5 Air Pollution Action Days issued in 2011. This compares with 4 in 2010.

Table 4: AQI Sectors in Illinois

Chicago Metropolitan Area:	
Lake County Sector	Lake County only
North and West Suburbs Sector	Parts of Cook, Du Page, and Mc Henry Counties north of I-290 (the Eisenhower Expressway) and outside of Chicago city limits.
Chicago Sector	All areas within the city limits of Chicago
South and West Suburbs Sector	Parts of Cook and DuPage Counties south of I-290 and outside of Chicago city limits
Will County/Joliet Sector	Will County only
Aurora-Elgin Sector	The eastern part of Kane County
Downstate areas:	
Rockford Sector	Approximately 10 mile diameter circle centered on downtown Rockford
Quad Cities Sector	Illinois portion of the Quad Cities Area
Peoria Sector	Approximately 10 mile diameter circle centered on downtown Peoria in parts of Peoria, Woodford and Tazewell Counties
Champaign Sector	Champaign-Urbana Metropolitan Area
Normal Sector	Bloomington-Normal Metropolitan Area
Decatur Sector	Decatur Metropolitan Area
Springfield Sector	Springfield Metropolitan Area
Metro East Sector	Illinois portion of the St. Louis Metropolitan Area approximately 15 miles wide east of the Mississippi River in Madison and St. Clair Counties

Figure 9: 2011 Air Quality Index Summaries by Sector

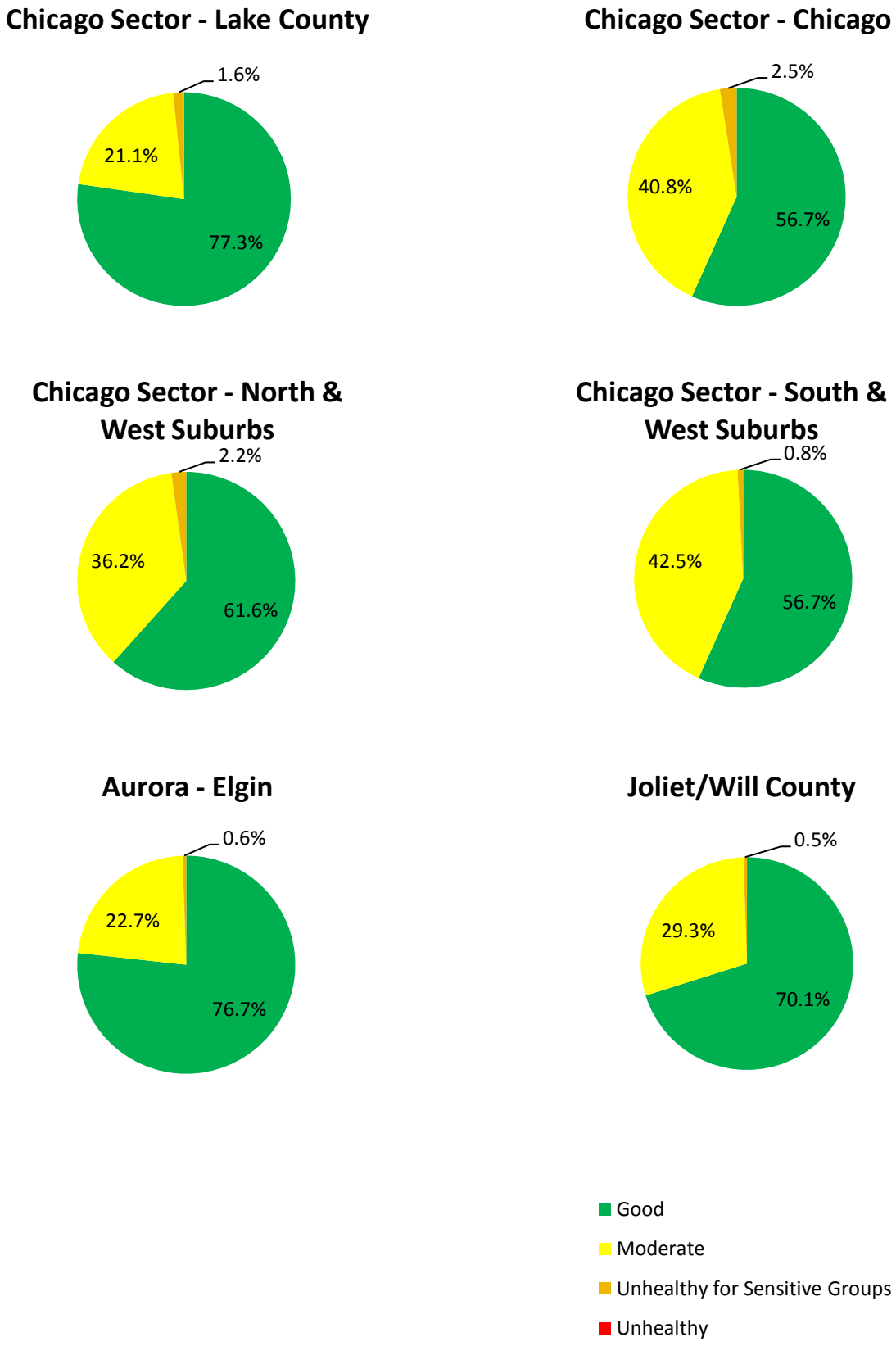


Figure 9: 2011 Air Quality Index Summaries by Sector

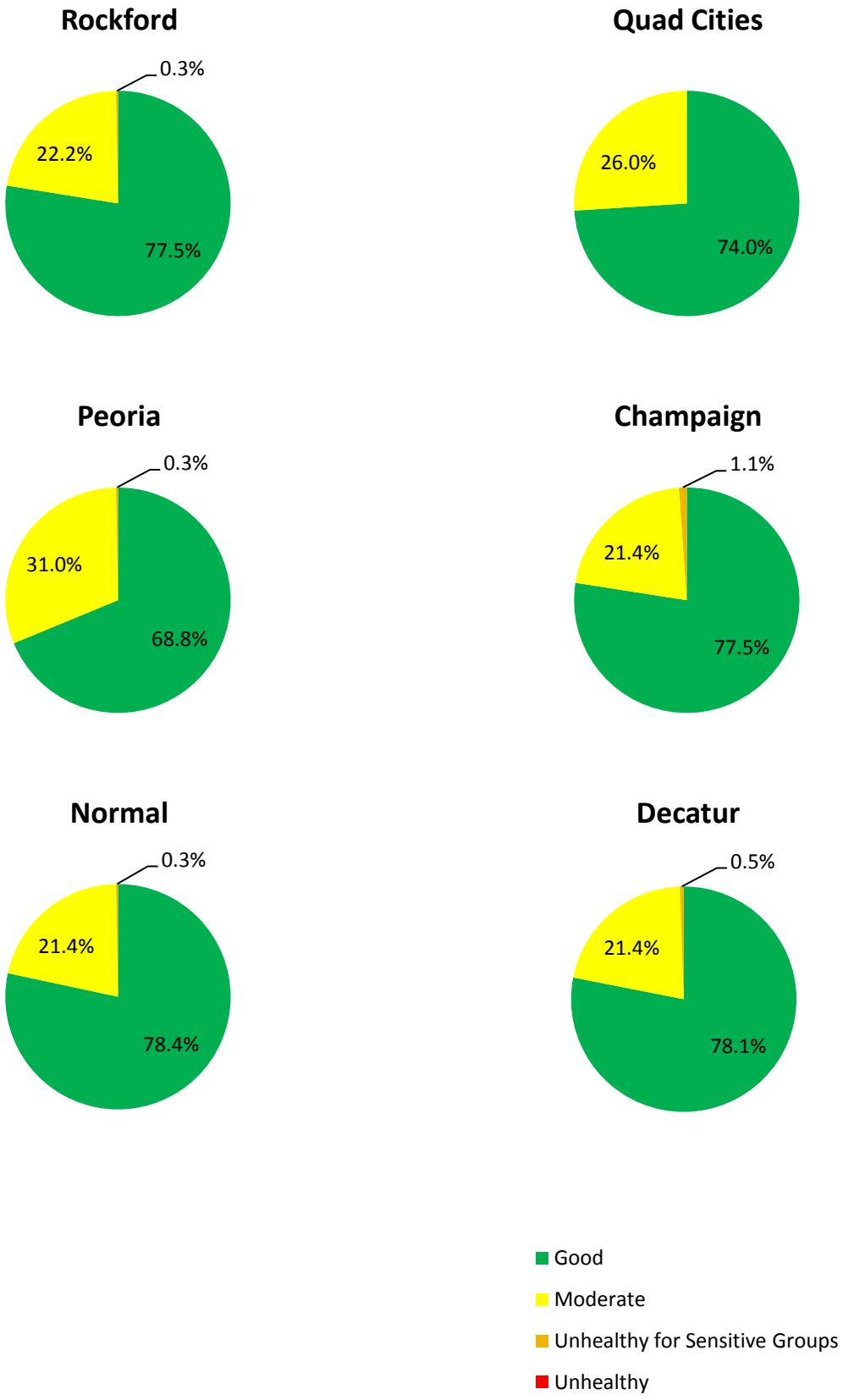
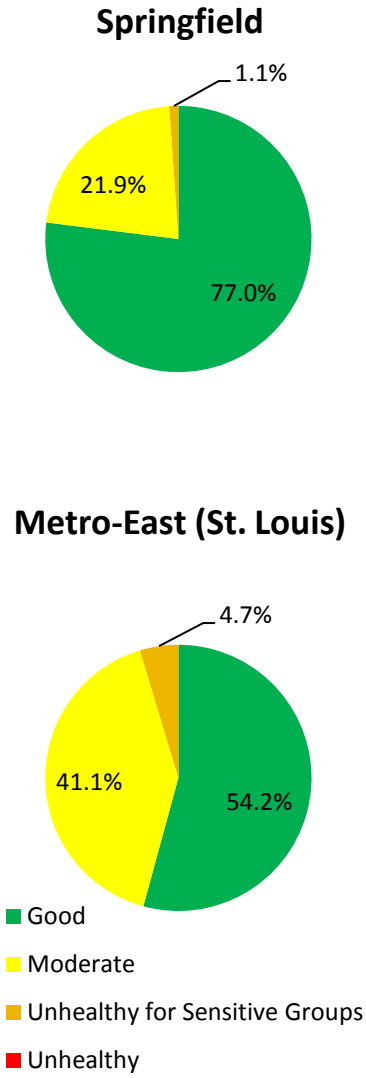


Figure 9: 2011 Air Quality Index Summaries by Sector



SECTION 4: STATEWIDE SUMMARY OF POINT SOURCE EMISSIONS

Since the late 1970s, the Division of Air Pollution Control has maintained a database of stationary point source emissions for the entire State. 40 CFR 51.211 requires Illinois to include in its State Implementation Plan "... procedures for requiring owners or operators of stationary sources to maintain records of... a) Information on the nature and amount of emissions from the stationary source and b) other information as may be necessary..." The emission database maintained by the Division of Air Pollution Control was originally called the Total Air System (TAS). Updates to the database were made through batch transactions every two weeks. In June 1989, the TAS was replaced with an on-line system known as the Emission Inventory System (EIS). Very few new data items to be stored were added when the Division switched to the EIS. The change was mainly to get to an on-line system and to enhance the structure of the database to make it more flexible.

In March, 1999, the Bureau of Air introduced a new emission inventory system known as ISSIS (Illinois Stationary Source Inventory System). This new inventory system, which was developed in Oracle, built upon the structure of the annual emission reporting system (CAERS - Computerized Annual Emission Reporting System) previously developed. Up until then, inventory data resided both in EIS and CAERS. Data from EIS was loaded annually into CAERS. ISSIS did away with this requirement. Now inventory data resides in one database.

ISSIS currently includes emission data on approximately 6,500 active sources throughout the State. The ISSIS data includes source addresses, source emission totals, permit data such as expiration date and status, emission unit data such as name, hours of operation, operating rate, fuel parameters and emissions, control equipment data such as control device name, type and removal efficiencies, and stack parameters. Reported emissions and Agency calculated emissions are stored separately.

Also in March, 1999, the group responsible for the entry of emission inventory data was switched from the Permit Section to the Inventory Unit of the Compliance and Systems Management Section. The Inventory Unit, now in the Air Quality Planning Section, uses permit applications, the issued permit and data reported on annual emission reports to compile the inventory.

The following tables and graphs are an analysis of the emissions data contained in ISSIS at the end of 2011. It is important to note emissions contained in the ISSIS are not necessarily the actual emissions that entered the atmosphere. This is due to the fact that when an air pollution permit is applied for, the applicant provides maximum and average emission rates. The maximum emission rate reflects what the applicant believes the emission rate would be at maximum production. The average emission rate reflects emissions at the applicant's most probable production rate. The Inventory Unit has been updating its estimated emissions to more accurately reflect the reported emissions.

To calculate the distribution of emissions for the individual categories, the source classification code (SCC) field was used from the ISSIS. The SCC is an eight digit code that breaks emission units into logical categories. SCCs are provided by the USEPA.

To produce the following tables, the first three digits of the SCC were used. Only categories that contributed significantly to the overall total are listed in the following sections. The complete category breakdown can be found in **Appendix C**.

VOLATILE ORGANIC MATERIAL

Figure 10
Volatile Organic Material
Emission Trend (1000s of Tons/Year)

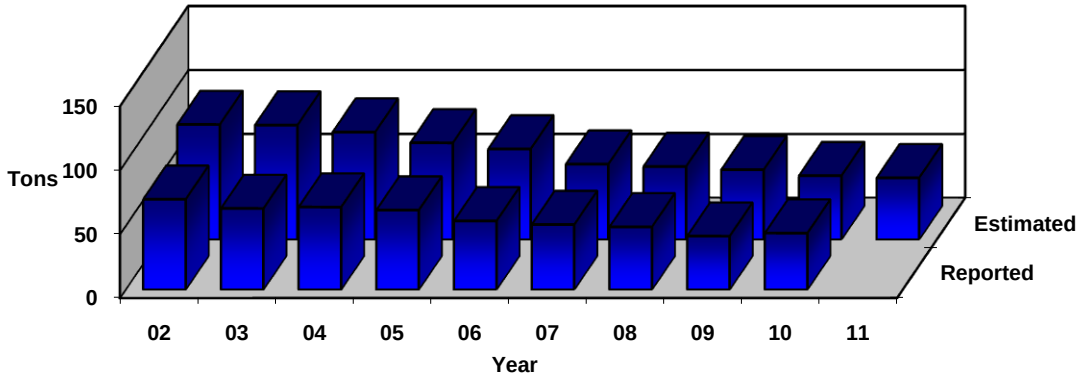


Table 5: Volatile Organic Material Emissions - 2011

Category	Estimated Emissions (tons)	Category Contribution	Cumulative Percent
Food/Agriculture	10,443.2	21.61%	21.61%
Chemical Manufacturing	6,452.1	13.35%	34.96%
Surface Coating Operations	6,367.3	13.18%	48.14%
Printing/Publishing	3,908.0	8.09%	56.23%
Fuel Combustion	3,904.0	8.08%	64.31%
Petroleum Product Storage	2,937.9	6.08%	70.39%
Rubber and Plastic Products	1,921.4	3.98%	74.36%
Petroleum Industry	1,914.2	3.96%	78.32%
Mineral Products	1,605.9	3.32%	81.65%
Bulk Terminal/Plants	1,188.6	2.46%	84.11%
Organic Chemical Storage	819.4	1.70%	85.80%
Secondary Metal Production	727.1	1.50%	87.31%
Fabricated Metal Products	653.0	1.35%	88.66%
Organic Solvent Use	527.8	1.09%	89.75%
Organic Solvent Evaporation	505.6	1.05%	90.80%
Dry Cleaning (petroleum based)	503.8	1.04%	91.84%
All Other Categories	3,943.7	8.16%	100.00%

PM10

Figure 11
PM10 Emission Trend
(1000s of Tons/Year)

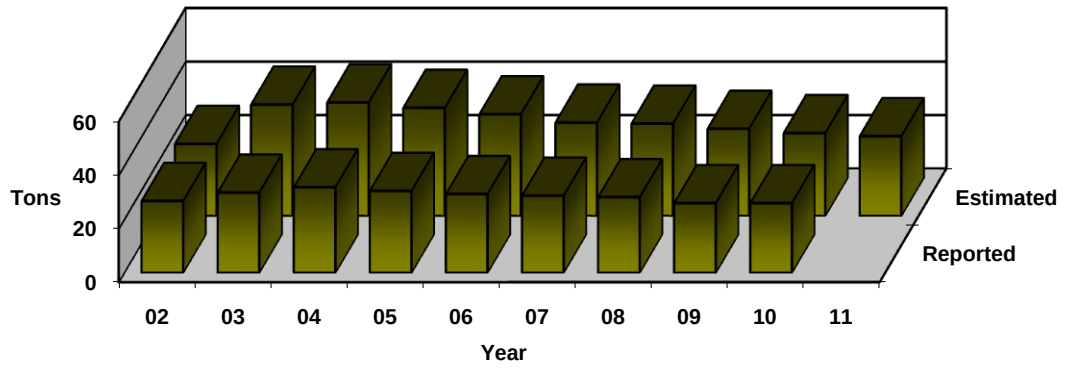


Table 6: Distribution of PM10 Emissions – 2011

Category	Estimated Emissions (tons)	Category Contribution	Cumulative Percent
Fuel Combustion	10,607.8	35.60%	35.60%
Food/Agriculture	6,737.9	22.61%	58.22%
Mineral Products	5,651.0	18.97%	77.18%
Primary Metal Production	1,301.2	4.37%	81.55%
Secondary Metal Production	1,265.0	4.25%	85.79%
Petroleum Industry	993.7	3.34%	89.13%
Chemical Manufacturing	949.1	3.19%	92.31%
Solid Waste Disposal	564.7	1.90%	94.21%
Process Cooling	402.7	1.35%	95.56%
Fabricated Metal Products	266.5	0.89%	96.45%
All Other Categories	1,056.3	3.55%	100.00%

CARBON MONOXIDE

Figure 12
Carbon Monoxide Emission Trend (1000s of Tons/Year)

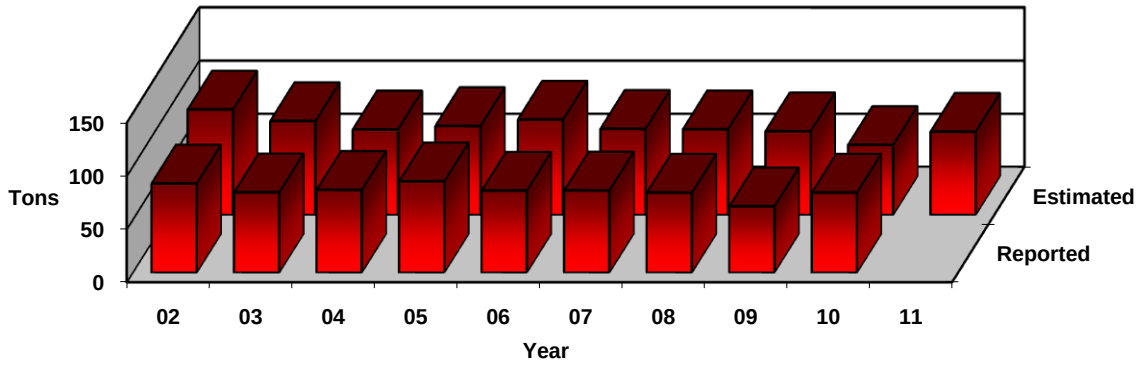


Table 7: Distribution of Carbon Monoxide Emissions - 2011

Category	Estimated Emissions (tons)	Category Contribution	Cumulative Percent
Fuel Combustion	37,585.4	48.01%	48.01%
Primary Metal Production	21,614.7	27.61%	75.62%
Petroleum Industry	4,127.6	5.27%	80.90%
Food/Agriculture	3,142.9	4.04%	84.91%
Solid Waste Disposal	3,074.6	3.93%	88.84%
Mineral Products	2,760.4	3.53%	92.36%
Secondary Metal Production	2,671.3	3.41%	95.78%
Chemical Manufacturing	1,771.4	2.26%	98.04%
In-Process Fuel Use	327.7	0.42%	98.46%
Health Services	311.4	0.40%	98.86%
Fabricated Metal Products	232.1	0.30%	99.15%
Oil and Gas Production	231.2	0.30%	99.45%
All Other Categories	432.4	0.55%	100.00%

SULFUR DIOXIDE

Figure 13
Sulfur Dioxide Emission
Trend (1000s of Tons/Year)

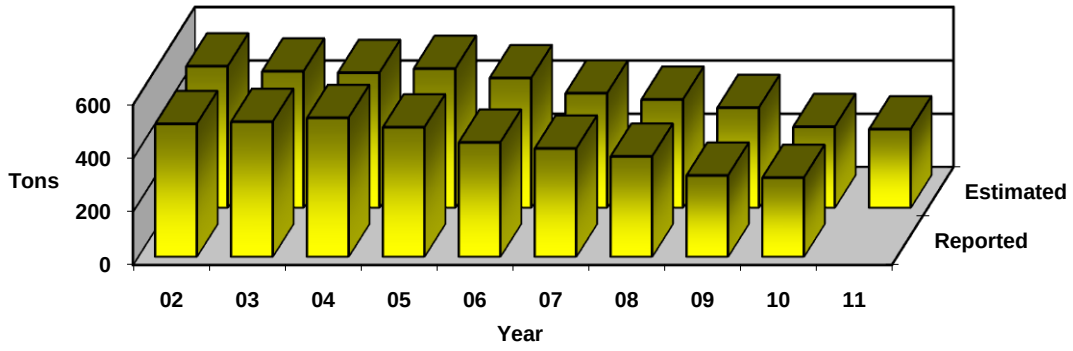


Table 8: Distribution of Sulfur Dioxide Emissions - 2011

Category	Estimated Emissions (tons)	Category Contribution	Cumulative Percent
Fuel Combustion	266,420.5	90.11%	90.11%
Mineral Products	14,814.3	5.01%	95.12%
Petroleum Industry	6,138.4	2.08%	97.20%
Primary Metal Production	2,425.3	0.82%	98.02%
Solid Waste Disposal	1,698.2	0.57%	98.59%
Food/Agriculture	1,464.4	0.50%	99.09%
Chemical Manufacturing	1,462.5	0.49%	99.58%
All Other Categories	1,234.7	0.42%	100.00%

NITROGEN OXIDES

Figure 14
Nitrogen Oxide Emission
Trend (1000s of Tons/Year)

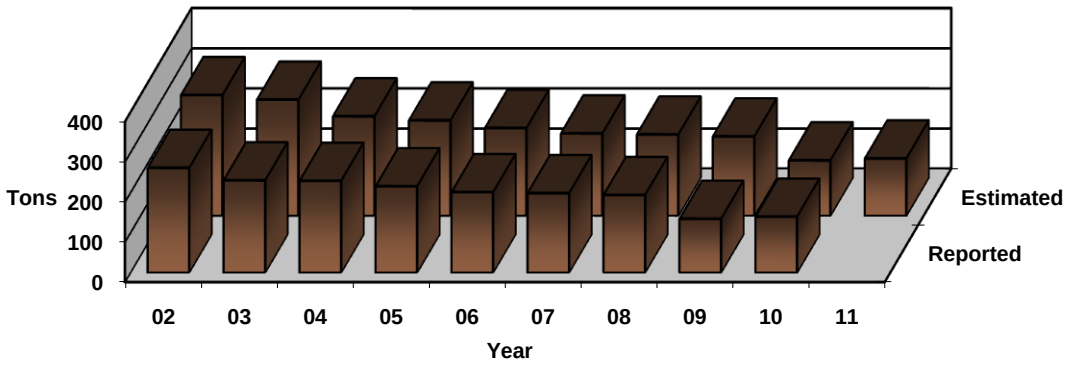


Table 9: Distribution of Nitrogen Oxide Emissions - 2011

Category	Estimated Emissions (tons)	Category Contribution	Cumulative Percent
Fuel Combustion	117,510.7	82.15%	82.15%
Mineral Products	8,117.8	5.68%	87.83%
Petroleum Industry	7,468.6	5.22%	93.05%
Primary Metal Production	2,499.3	1.75%	94.80%
Chemical Manufacturing	1,468.7	1.03%	95.83%
Food/Agriculture	1,412.2	0.99%	96.81%
In-Process Fuel Use	1,077.8	0.75%	97.57%
Secondary Metal Production	982.3	0.69%	98.25%
Solid Waste Disposal	947.9	0.66%	98.92%
Oil and Gas Production	600.9	0.42%	99.34%
All Other Categories	949.2	0.66%	100.00%

APPENDIX A
AIR SAMPLING NETWORK

DESCRIPTION OF THE AIR SAMPLING NETWORK

The Illinois air monitoring network is composed of instrumentation owned and operated by both the Illinois Environmental Protection Agency and by cooperating local agencies. This network has been designed to measure ambient air quality levels in the various Illinois Air Quality Control Regions (AQCR). Historically, each AQCR was classified on the basis of known air pollutant concentrations or, where these were not known, estimated air quality. A map of the AQCR's in Illinois and overlapping into surrounding states can be found at the end of this section.

Many local agencies and volunteers cooperate and support the operation of the Illinois air monitoring network. The network contains both continuous and intermittent instruments. The continuous instruments operate throughout the year, while noncontinuous instruments operate intermittently based on the schedule shown in **Table A1**. This is the official noncontinuous sampling schedule used by the Illinois EPA during 2011.

The Illinois network is deployed along the lines described in the Illinois State Implementation Plan. An updated air monitoring plan is submitted to USEPA each year for review. In accordance with USEPA air quality monitoring requirements as set forth in Title 40 of the Code of Federal Regulations, Part 58 (40 CFR 58), five types of monitoring stations are used to collect ambient air data (SLAMS, NAMS, PAMS, SPMS and NCORE). The types of stations are distinguished from one another on the basis of the general monitoring objectives they are designed to meet.

The SLAMS, NAMS, PAMS, SPMS and NCORE designations for the sites operated within the State of Illinois are provided in the Annual Network Plan (epa.state.il.us/air/monitoring/index.html). All of the industrial sites are considered to be SPMS. **Table A2** is a summary of the distribution of pollutants through the years along with total number of instruments and total number of sites. The Site Directory is listed in **Table A3** and the Monitoring Directory is listed in **Table A4.**

1. **State/Local Air Monitoring Station (SLAMS) Network -** The SLAMS network is designed to meet a minimum of four basis monitoring objectives:

   a. To determine the highest concentrations expected to occur in the area covered by the network.

   b. To determine representative concentrations in areas of high population density.

   c. To determine the air quality impact of significant sources or source categories.

   d. To determine general background concentration levels.

2. **National Air Monitoring Station (NAMS) Network -** The NAMS network is a subset of stations selected from the SLAMS network with emphasis given to urban and multisource areas. The primary objectives of the NAMS network are:

   a. To measure expected maximum concentrations.

Table A1
2011 Noncontinuous Sampling Schedule

JANUARY						
S	M	T	W	R	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

FEBRUARY						
S	M	T	W	R	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28					

MARCH						
S	M	T	W	R	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

APRIL						
S	M	T	W	R	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

MAY						
S	M	T	W	R	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

JUNE						
S	M	T	W	R	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

JULY						
S	M	T	W	R	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

AUGUST						
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21	22	23	24	25	26	27
28	29	30	31			

SEPTEMBER						
S	M	T	W	R	F	S
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18	19	20	21	22	23	24
25	26	27	28	29	30	

OCTOBER						
S	M	T	W	R	F	S
						1
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16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

NOVEMBER						
S	M	T	W	R	F	S
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6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30			

DECEMBER						
S	M	T	W	R	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

13 Every 6 Day Sampling Schedule 22 Every 3 Day Sampling Schedule

b. To measure concentrations in areas where poor air quality is combined with high population exposure.

c. To provide data useable for the determination of national trends.

d. To provide data necessary to allow the development of nationwide control strategies.

3. Photochemical Assessment Monitoring Station (PAMS) Network - The PAMS network is required in serious, severe, and extreme ozone non-attainment areas to obtain detailed data for ozone, precursors (NOx and VOC), and meteorology. VOC and NOx sampling is required for the period June - August each year. Ozone sampling occurs during the ozone season, April - October. Network design is based on four monitoring types. In Illinois PAMS are required in the Chicago metropolitan area only.

a. Type 1 sites are located upwind of the non-attainment area and are located to measure background levels of ozone and precursors coming into the area

b. Type 2 sites are located slightly downwind of the major source areas of ozone precursors.

c. Type 3 sites are located at the area of maximum ozone concentrations.

d. Type 4 sites are located at the domain edge of the non-attainment area and measure ozone and precursors leaving the area.

4. Special Purpose Monitoring Station (SPMS) Network - Any monitoring site that is not a designated SLAMS or NAMS is considered a special purpose monitoring station. Some of the SPMS network objectives are as follows:

a. To provide data as a supplement to stations used in developing local control strategies, including enforcement actions.

b. To verify the maintenance of ambient standards in areas not covered by the SLAMS/NAMS network.

c. To provide data on noncriteria pollutants.

5. National Core Station (NCore) Network - NCore is a multi pollutant network that integrates several advanced measurement systems. It is anticipated that each state operate at least one NCore site by 2011. In Illinois, Northbrook and Bondville will be considered NCore sites. A few of the NCore network objectives are as follows:

a. Support for development of emission strategies and accountability of emission strategy progress through tracking long-term trends of pollutants and their precursors.

b. Support of long-term health assessments that contribute to review of National Standards.

c. Support to scientific studies ranging across technological, health and atmospheric process disciplines.

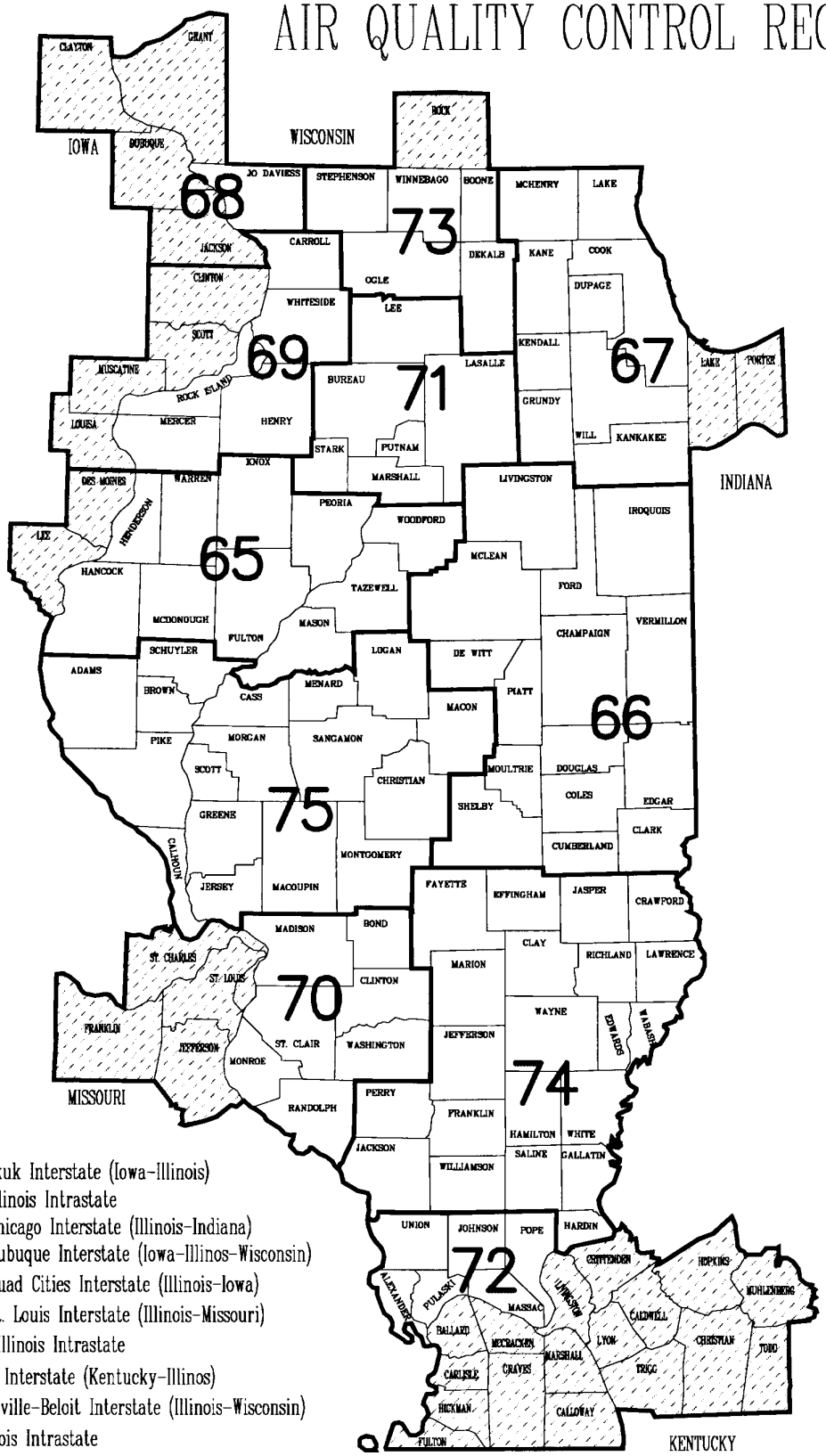
d. Support to ecosystem assessments recognizing that national air quality networks benefit ecosystems assessments.

Table A2
Distribution of Air Monitoring Instruments

	2011	2010	2009	2008	2007
Pariculate Matter ($PM_{2.5}$)	34	38	38	38	38
$PM_{2.5}$ Air Quality Index	12	13	13	13	13
$PM_{2.5}$ Speciation	5	5	5	5	6
Particulate Matter (PM_{10})	5	17	17	17	17
Total Suspended Particulates (TSP)	13	18	13	13	13
Lead	13	18	13	13	13
Continuous Mercury	1	1	1	1	1
Sulfur Dioxide	15	19	19	20	20
Nitrogen Dioxide	7	7	7	7	8
Ozone	34	36	36	36	37
Carbon Dioxide	1	1	1	1	1
Carbon Monoxide	9	9	9	9	9
Volatile Organice Compounds/Toxics	2	2	2	2	4
Wind Systems	17	18	18	18	19
Solar Radiation	2	9	9	9	9
Meteorology	3	3	3	4	4
Total Instruments	173	214	204	206	212
Total Sites	75	84	77	77	79

There were a number of changes to the monitoring network from 2010 to 2011. Five non-source oriented TSP/Lead monitors were discontinued. The discontinued monitors were: Alsip, Summit, Wood River, Peoria and East St. Louis. A special purpose source oriented TSP/Lead monitor was temporarily installed at the Juarez school in Chicago. Five $PM_{2.5}$ monitors were discontinued or site access was lost: Champaign, Chicago Southeast Police Station, Zion, Oglesby and Swansea. A replacement $PM_{2.5}$ site in Champaign was established. Twelve PM_{10} monitors were discontinued: Alsip, Chicago Carver High School, Midlothian, Blue Island, Summit, Oglesby, Nilwood, Wood River, Peoria, East St. Louis, Joliet and Carbondale. Four sulfur dioxide monitors were discontinued: Chicago Southeast Police Station, Chicago CTA, Joliet and Indiana discontinued the Rural Wabash County monitor. Two ozone monitors were discontinued: Chicago Willis Tower and Waukegan. A replacement ozone site was established in Thomasboro for site access lost in Champaign. An additional replacement ozone site was established at the Springfield Illinois Building in the State Fairgrounds for access lost at the Springfield Blandco site.

AIR QUALITY CONTROL REGIONS



65 - Bulington-Keokuk Interstate (Iowa-Illinois)
66 - East Central Illinois Intrastate
67 - Metropolitan Chicago Interstate (Illinois-Indiana)
68 - Metropolitan Dubuque Interstate (Iowa-Illinos-Wisconsin)
69 - Metropolitan Quad Cities Interstate (Illinois-Iowa)
70 - Metropolitan St. Louis Interstate (Illinois-Missouri)
71 - North Central Illinois Intrastate
72 - Paducah-Cairo Interstate (Kentucky-Illinos)
73 - Rockford-Janesville-Beloit Interstate (Illinois-Wisconsin)
74 - Southeast Illinois Intrastate
75 - West Central Illinois Intrastate

Statewide Air Monitoring Site Locations

ID	NAME	XCOORD	YCOORD	AQS CODE
1	Quincy John Wood Community College	642227.44	4419695.50	170010007
2	Champaign	394297.22	4442244.68	170190006
3	Thomasboro	398939.77	4455622.22	170190007
4	Bondville SWS Climate Station	382927.63	4434458.00	170191001
5	Alsip Village Garage	439028.14	4613506.98	170310001
6	Chicago Washington H.S.	455116.70	4615183.98	170310022
7	Chicago Cermak Pump Station	446450.82	4635956.70	170310026
8	Chicago South Water Filtration Plant	454702.37	4622802.04	170310032
9	Chicago Mayfair Pump Station	437859.32	4646216.44	170310052
10	Chicago Springfield Pump Station	440063.88	4640354.22	170310057
11	Chicago CTA Building	447307.81	4636384.48	170310063
12	Chicago University of Chicago	450011.00	4626726.33	170310064
13	Chicago Jardine Water Plant	449590.78	4638386.72	170310072
14	Chicago Comm ED	440680.96	4622421.39	170310075
15	Perez Elementary School	445348.00	4633988.00	170310110
16	Chicago Taft H.S.	434390.00	4648367.48	170311003
17	Lyons Township Village Hall	430877.97	4628036.70	170311016
18	Lemont IEPA Trailer	417538.46	4613403.03	170311601
19	Blue Island Eisenhower H.S.	442015.58	4612496.03	170312001
20	Schiller Park IEPA Trailer	427390.48	4646283.31	170313103
21	Summit Graves Elementary School	433134.91	4626002.30	170313301
22	Cicero IEPA Trailer	437539.20	4633977.22	170314002
23	Des Plaines Regional Office Building	428543.56	4656797.86	170314007
24	Northbrook Water Plant	433953.24	4665668.78	170314201
25	Maywood 1500 Maybrook Drive Platform	431442.48	4635917.35	170316003
26	Maywood Comm ED Maintenance	431199.07	4635910.07	170316004
27	Cicero Liberty School	437852.27	4634984.05	170316005
28	Maywood 4th District Court Building	431466.96	4635994.08	170316006
29	Evanston Water Pumping Station	444223.82	4656857.88	170317002
30	Naperville City Hall	404209.07	4625007.66	170434002
31	Lisle Morton Arboretum	410890.26	4629582.92	170436001
32	Effingham Central Junior H.S.	366000.19	4325369.00	170491001
33	Knight Prairie Township	357489.72	4216177.00	170650002
34	Jerseyville Illini Junior H.S.	731349.00	4332451.50	170831001
35	Elgin McKinley School	394074.74	4656164.53	170890003
36	Elgin Larsen Junior H.S.	394651.06	4656017.29	170890005
37	Aurora Health Department	389528.14	4626729.16	170890007
38	Zion Camp Logan	433408.66	4702013.37	170971007
39	Oglesby IEPA Trailer	328401.31	4573311.00	170990007
40	Cary Grove H.S.	397480.49	4675110.16	171110001
41	Normal ISU Physical Plant	330837.53	4487250.50	171132003
42	Decatur IEPA Trailer	335319.94	4414769.00	171150013
43	Decatur Mueller	333988.00	4414303.00	171150110
44	Nilwood IEPA Trailer	258043.88	4364498.50	171170002
45	Alton Clara Barton Elementary School	747358.56	4308458.00	171190008
46	Granite City Air Products	747522.88	4286713.50	171190010
47	Granite City Gateway Medical	748300.44	4287426.50	171190024
48	Granite City Fire Station 1	748727.63	4287873.00	171191007
49	Maryville Southwest Cable TV	242682.59	4290595.00	171191009
50	South Roxana Grade School	755353.88	4301836.50	171191010
51	Edwardsville RAPS Trailer	757101.44	4298007.00	171192007
52	Alton SIU Dental Clinic	747734.94	4309900.00	171192009
53	Wood River Water Treatment Plant	751122.13	4305295.00	171193007
54	Peoria Fire Station 8	279707.38	4507329.50	171430024
55	Peoria Commercial Building	279203.50	4508748.50	171430036
56	Peoria City Office Building	281616.22	4508336.50	171430037
57	Bartonville Pump Station	276515.00	4503674.00	171430110
58	Mapleton Caterpillar Plant	267429.00	4493834.00	171430210
59	Peoria Heights H.S.	281679.94	4513723.50	171431001
60	Houston Baldwin Site 2 - IEPA Trailer	255745.52	4229049.50	171570001
61	Rock Island Arsenal	707169.75	4598886.00	171613002
62	East St. Louis RAPS Trailer	747238.69	4277551.00	171630010
63	Springfield Sewage Treatment Plant	278158.03	4408840.50	171670006
64	Springfield Federal Building	273312.59	4408832.50	171670008
65	Springfield Illinois Agriculture Building	273728.00	4412449.00	171670012
66	Springfield Illinois Building	274003.78	4412395.53	171670014
67	Pekin Fire Station 3	275274.31	4492892.00	171790004
68	Mount Carmel Division Street	432441.06	4250177.00	171850001
69	Sterling Sauk Medical Clinic	275084.00	4629822.00	171950110
70	Joliet Pershing Elementary School	406854.40	4597853.20	171971002
71	Braidwood Comm ED Maintenance	400173.37	4564033.85	171971011
72	Rockford City Hall	327811.72	4681606.50	172010011
73	Rockford Winnebago County Health Department	327392.16	4681107.00	172010013
74	Rockford J. Rubin and Company	327440.00	4678637.00	172010110
75	Loves Park Maple Elementary School	332121.41	4688981.00	172012003

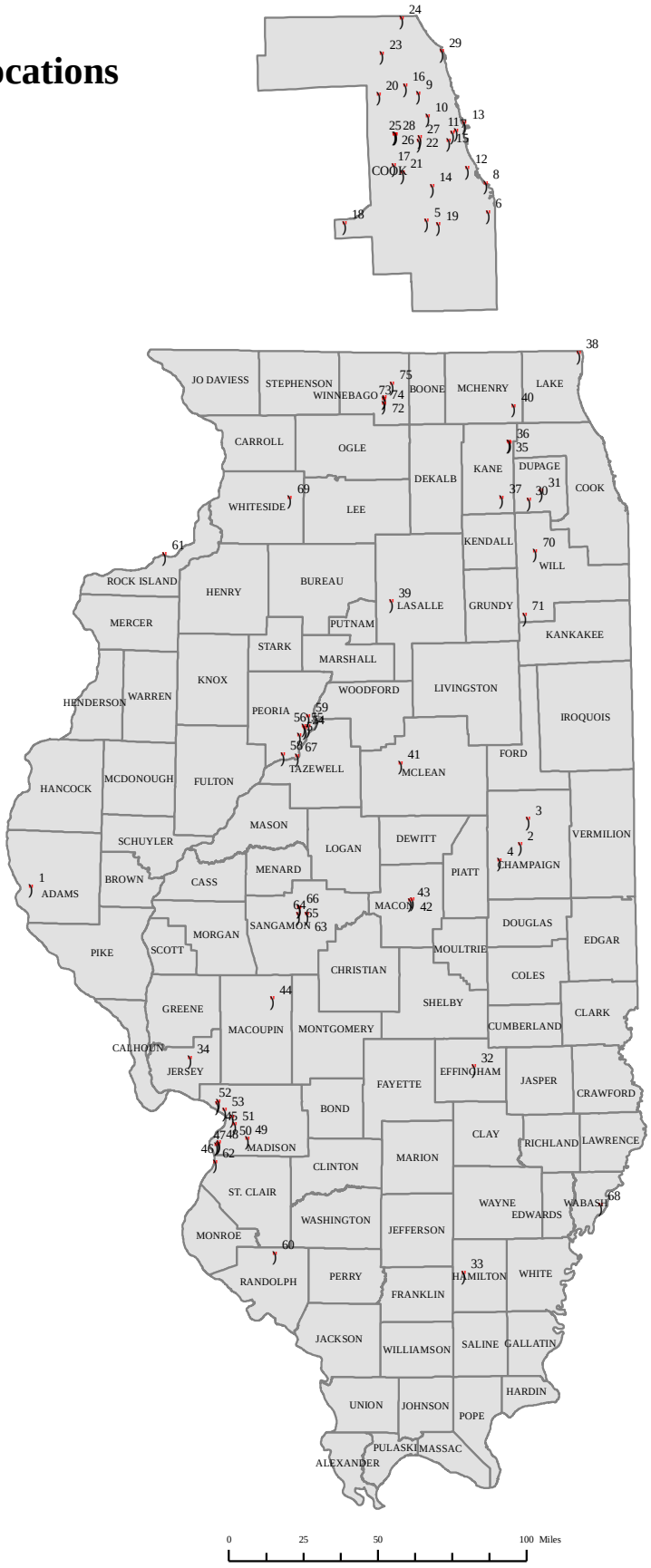


Table A3
2011 Site Directory

AQS ID	County	City	Address	MSA / Area Represented	Latitude Longitude	Owner / Operator
17-001-0007	Adams	Quincy	John Wood Comm. College 1301 South 48th St.	Quincy, IL-MO	+39.91540937 -91.33586832	IL EPA
17-019-1001	Champaign	Bondville	State Water Survey Township Rd. 500 E.	Champaign-Urbana, IL	+40.05224171 -88.37254916	IL EPA/SWS
17-019-0006	Champaign	Champaign	Ameren Substation 904 N. Walnut	Champaign-Urbana, IL	+40.1237962 -88.229531	IL EPA
17-019-0007	Champaign	Thomasboro	North Thomas St.	Champaign-Urbana, IL	+40.244953 -88.188176	IL EPA
17-031-0001	Cook	Alsip	Village Garage 4500 W. 123rd St.	Chicago-Naperville-Michigan City, IL-IN-WI	+41.6709919 -87.7324569	CCDEC
17-031-2001	Cook	Blue Island	Eisenhower High School 12700 Sacramento	Chicago-Naperville-Michigan City, IL-IN-WI	+41.66210943 -87.69646652	CCDEC
17-031-0026	Cook	Chicago	Cermak Pump Station 735 W. Harrison	Chicago-Naperville-Michigan City, IL-IN-WI	+41.87372041 -87.64532569	CCDEC
17-031-0076	Cook	Chicago	Com Ed Maintenance Bldg. 7801 Lawndale	Chicago-Naperville-Michigan City, IL-IN-WI	+41.75139998 -87.71348815	CCDEC
17-031-0063	Cook	Chicago	CTA Building 320 S. Franklin	Chicago-Naperville-Michigan City, IL-IN-WI	+41.877628 -87.635027	IL EPA
17-031-0072	Cook	Chicago	Jardine Water Plant 1000 E. Ohio	Chicago-Naperville-Michigan City, IL-IN-WI	+41.89581227 -87.60768329	IL EPA
17-031-0052	Cook	Chicago	Mayfair Pump Station 4850 Wilson Ave.	Chicago-Naperville-Michigan City, IL-IN-WI	+41.96548483 -87.74992806	CCDEC
17-031-0110	Cook	Chicago	Perez Elementary School 1241 19th St.	H.G. Kramer	+41.855917 -87.658419	CCDEC
17-031-0032	Cook	Chicago	South Water Filtration Plant 3300 E. Cheltenham Pl.	Chicago-Naperville-Michigan City, IL-IN-WI	+41.75583241 -87.54534967	CCDEC
17-031-0057	Cook	Chicago	Springfield Pump Station 1745 N. Springfield Ave.	Chicago-Naperville-Michigan City, IL-IN-WI	+41.91286212 -87.72272345	CCDEC
17-031-1003	Cook	Chicago	Taft High School 6545 W. Hurlbut St	Chicago-Naperville-Michigan City, IL-IN-WI	+41.98433233 -87.7920017	CCDEC
17-031-0064	Cook	Chicago	University of Chicago 5720 S. Ellis Ave.	Chicago-Naperville-Michigan City, IL-IN-WI	+41.79078688 -87.60164649	CCDEC
17-031-0022	Cook	Chicago	Washington High School 3535 E. 114th St.	Chicago-Naperville-Michigan City, IL-IN-WI	+41.68716544 -87.53931548	CCDEC
17-031-4002	Cook	Cicero	Cook County Trailer 1820 S. 51st Ave	Chicago-Naperville-Michigan City, IL-IN-WI	+41.85524313 -87.7524697	CCDEC

Table A3
2011 Site Directory

AQS ID	County	City	Address	MSA / Area Represented	Latitude Longitude	Owner / Operator
17-031-6005	Cook	Cicero	Liberty School 13th St. & 50th Ave.	Chicago-Naperville-Michigan City, IL-IN-WI	+41.86442642 -87.74890238	CCDEC
17-031-4007	Cook	Des Plaines	Regional Office Building 9511 W. Harrison St	Chicago-Naperville-Michigan City, IL-IN-WI	+42.06028469 -87.86322543	IL EPA
17-031-7002	Cook	Evanston	Water Pumping Station 531 E. Lincoln	Chicago-Naperville-Michigan City, IL-IN-WI	+42.06185724 -87.67416716	IL EPA
17-031-1601	Cook	Lemont	Cook County Trailer 729 Houston	Chicago-Naperville-Michigan City, IL-IN-WI	+41.66812034 -87.99056969	CCDEC
17-031-1016	Cook	Lyons Township	Village Hall 50th St & Glencoe	Chicago-Naperville-Michigan City, IL-IN-WI	+41.80116701 -87.8319447	IL EPA
17-031-6003	Cook	Maywood	4th District Court Building 1500 Maybrook Dr.	Chicago-Naperville-Michigan City, IL-IN-WI	+41.87220158 -87.8261648	CCDEC
17-031-6006	Cook	Maywood	4th District Court Building 1500 Maybrook Dr.	Chicago-Naperville-Michigan City, IL-IN-WI	+41.8728972 -87.82587249	CCDEC
17-031-6004	Cook	Maywood	Com Ed Maintenance 1505 S. First Ave	Chicago-Naperville-Michigan City, IL-IN-WI	+41.87211684 -87.82908025	CCDEC
17-031-4201	Cook	Northbrook	Northbrook Water Plant 750 Dundee Rd.	Chicago-Naperville-Michigan City, IL-IN-WI	+42.13999619 -87.79922692	IL EPA
17-031-3103	Cook	Schiller Park	IEPA Trailer 4743 Mannheim Rd.	Chicago-Naperville-Michigan City, IL-IN-WI	+41.96519348 -87.87626473	IL EPA
17-031-3301	Cook	Summit	Graves Elementary School 60th St. & 74th Ave.	Chicago-Naperville-Michigan City, IL-IN-WI	+41.78276601 -87.80537679	CCDEC
17-043-6001	DuPage	Lisle	Morton Arboretum Route 53	Chicago-Naperville-Michigan City, IL-IN-WI	+41.81304939 -88.0728269	IL EPA
17-043-4002	DuPage	Naperville	City Hall 400 S. Eagle St.	Chicago-Naperville-Michigan City, IL-IN-WI	+41.77107094 -88.15253365	IL EPA
17-049-1001	Effingham	Effingham	Central Junior High School Route 45 South	Effingham, IL	+39.06715932 -88.54893401	IL EPA
17-065-0002	Hamilton	Knight Prairie	Ten Mile Creek DNR Office State Route 14	Mt. Vernon, IL	+38.08215516 -88.6249434	IL EPA
17-083-1001	Jerseyville	Jerseyville	Illini Junior High School Liberty St. & County Rd.	St. Louis, MO-IL	+39.11053947 -90.32407986	IL EPA
17-089-0007	Kane	Aurora	Health Department 1240 N. Highland	Chicago-Naperville-Michigan City, IL-IN-WI	+41.78471651 -88.32937361	IL EPA

Table A3
2011 Site Directory

AQS ID	County	City	Address	MSA / Area Represented	Latitude Longitude	Owner / Operator
17-089-0005	Kane	Elgin	Larsen Junior High School 665 Dundee Rd.	Chicago-Naperville-Michigan City, IL-IN-WI	+42.04914776 -88.27302929	IL EPA
17-089-0003	Kane	Elgin	McKinley School 258 Lovell St.	Chicago-Naperville-Michigan City, IL-IN-WI	+42.050403 -88.28001471	IL EPA
17-097-1007	Lake	Zion	Camp Logan Illinois Beach State Park	Chicago-Naperville-Michigan City, IL-IN-WI	+42.4675733 -87.81004705	IL EPA
17-099-0007	La Salle	Oglesby	308 Portland Ave.	Ottawa-Streator, IL	+41.29301454 -89.04942498	IL EPA
17-115-0013	Macon	Decatur	IEPA Trailer 2200 N. 22nd	Decatur, IL	+39.86683389 -88.92559445	IL EPA
17-115-0110	Macon	Decatur	Mueller 1226 E. Garfield	Mueller	+39.862542 -88.940894	IL EPA
17-117-0002	Macoupin	Nilwood	IEPA Trailer Heaton & Dubois	St. Louis, MO-IL	+39.39607533 -89.80973892	IL EPA
17-119-0008	Madison	Alton	Clara Barton School 409 Main St.	St. Louis, MO-IL	+38.89018605 -90.14803114	IL EPA
17-119-2009	Madison	Alton	SIU Dental Clinic 1700 Annex St.	St. Louis, MO-IL	+38.90308534 -90.14316803	IL EPA
17-119-0010	Madison	Granite City	Air Products 15th & Madison	St. Louis, MO-IL	+38.69443831 -90.15395426	IL EPA
17-119-1007	Madison	Granite City	Fire Station #1 23rd & Madison	St. Louis, MO-IL	+38.70453426 -90.13967484	IL EPA
17-119-0024	Madison	Granite City	Gateway Medical Center 2100 Madison Ave.	St. Louis, MO-IL	+38.7006315 -90.14476267	IL EPA
17-119-1009	Madison	Maryville	Southwest Cable TV 200 W. Division	St. Louis, MO-IL	+38.72657262 -89.95996251	IL EPA
17-119-1010	Madison	South Roxana	South Roxana Grade School Michigan St.	St. Louis, MO-IL	+38.82830334 -90.05843262	IL EPA
17-119-3007	Madison	Wood River	Water Treatment Plant 54 N. Walcott	St. Louis, MO-IL	+38.86066947 -90.10585111	IL EPA
17-111-0001	McHenry	Cary	Cary Grove High School 1st St. & Three Oaks Rd.	Chicago-Naperville-Michigan City, IL-IN-WI	+42.22144166 -88.24220734	IL EPA
17-113-2003	McLean	Normal	ISU Physical Plant Main & Gregory	Bloomington-Normal, IL	+40.51873537 -88.99689571	IL EPA
17-143-0110	Peoria	Bartonville	Pump Station Sanitation Rd.	Keystone Steel & Wire	+40.653703 -89.643375	IL EPA
17-143-0210	Peoria	Mapleton	Residential 9725 W. Wheeler Rd.	Caterpillar-Mapleton Plant	+40.562633 -89.747114	IL EPA
17-143-0037	Peoria	Peoria	City Office Building 613 N.E. Jefferson	Peoria, IL	+40.697007 -89.58473722	IL EPA
17-143-0036	Peoria	Peoria	Commercial Building 1005 N. University	Peoria, IL	+40.70007197 -89.61341375	IL EPA
17-143-0024	Peoria	Peoria	Fire Station #8 MacArthur & Hurlburt	Peoria, IL	+40.68742038 -89.60694277	IL EPA
17-143-1001	Peoria	Peoria Heights	Peoria Heights High School 508 E. Glen Ave.	Peoria, IL	+40.74550393 -89.58586902	IL EPA
17-157-0001	Randolph	Houston	IEPA Trailer Hickory Grove & Fallview	Houston, IL	+38.17627761 -89.78845862	IL EPA

Table A3
2011 Site Directory

AQS ID	County	City	Address	MSA / Area Represented	Latitude Longitude	Owner / Operator
17-161-3002	Rock Island	Rock Island	Rock Island Arsenal 32 Rodman Ave.	Davenport-Moline-Rock Island, IA-IL	+41.51472697 -90.51735026	IL EPA
17-167-0012	Sangamon	Springfield	Agricultural Building State Fair Grounds	Springfield, IL	+39.83192087 -89.64416359	IL EPA
17-167-0014	Sangamon	Springfield	Illinois Building State Fair Grounds	Springfield, IL	+39.831522 -89.640926	IL EPA
17-167-0008	Sangamon	Springfield	Federal Building 6th St. & Monroe	Springfield, IL	+39.7993092 -89.64760789	IL EPA
17-167-0006	Sangamon	Springfield	Sewage Treatment Plant 3300 Mechanicsburg Rd.	Springfield, IL	+39.80061377 -89.59122532	IL EPA
17-163-0010	St. Clair	East St. Louis	RAPS Trailer 13th & Tudor	St. Louis, MO-IL	+38.61203448 -90.16047663	IL EPA
17-179-0004	Tazewell	Pekin	Fire Station #3 272 Derby	Peoria, IL	+40.55646017 -89.65402807	IL EPA
17-185-0001	Wabash	Mount Carmel	Division St.	Gibson County, IN-Mt. Carmel, IL	+38.397276 -87.773631	Indiana
17-195-0110	Whiteside	Sterling	Sauk Medical Clinic 705 West 3rd St.	Sterling Steal Co.	+41.788383 -89.706728	IL EPA
17-197-1011	Will	Braidwood	Com Ed Training Center 36400 S. Essex Rd.	Chicago-Naperville-Michigan City, IL-IN-WI	+41.22153707 -88.19096718	IL EPA
17-197-1002	Will	Joliet	Pershing Elementary School Midland & Campbell Sts.	Chicago-Naperville-Michigan City, IL-IN-WI	+41.52688509 -88.11647381	IL EPA
17-201-2001	Winnebago	Loves Park	Maple Elementary School 1405 Maple Ave.	Rockford, IL	+42.33498222 -89.0377748	IL EPA
17-201-0011	Winnebago	Rockford	City Hall 425 E. State	Rockford, IL	+42.26767353 -89.08785092	IL EPA
17-201-0013	Winnebago	Rockford	Health Department 201 Division St.	Rockford, IL	+42.26308105 -89.09276716	IL EPA
17-201-0110	Winnebago	Rockford	J. Rubin & Company 305 Peoples Ave.	Gunite Corporation	+42.240867 -89.091467	IL EPA

Table A4
2011 Monitoring Directory

AQS ID	City	CO	CO2	NO2	Ozone	PM10	PM2.5	PM2.5 AQI	PM2.5 Speciation	SO2	VOC	Toxics	TSP Pb, Metals	Wind System	Solar	Meteorological
17-001-0007	Quincy															
17-019-0004	Champaign															
17-019-0006	Champaign N. Walnut															
17-019-0007	Thomasboro															
17-019-1001	Bondville															
17-031-0001	Alsip															
17-031-0022	Chicago Washington High School					C										
17-031-0026	Chicago Cermak Pump Station															
17-031-0032	Chicago South Water Filtration															
17-031-0042	Chicago Willis Tower															
17-031-0050	Chicago Southeast Police Station															
17-031-0052	Chicago Mayfair Pump Station															
17-031-0057	Chicago Springfield Pump Station															
17-031-0060	Chicago Carver High School															
17-031-0063	Chicago CTA Building															
17-031-0064	Chicago University of Chicago															
17-031-0072	Chicago Jardine Water Plant															
17-031-0076	Chicago Com Ed Maintenance															
17-031-0110	Chicago Perez Elementary															
17-031-1003	Chicago Taft High School															
17-031-1016	Lyons Township					C										
17-031-1601	Lemont															

Active Monitor | Site/Monitor Installed | Site/Monitor Removed

C = Continuous PM10
T = Trace level monitor

Table A4
2011 Monitoring Directory

AQS ID	City	CO	CO2	NO2	Ozone	PM10	PM2.5	PM2.5 AQI	PM2.5 Speciation	SO2	VOC	Toxics	TSP Pb, Metals	Wind System	Solar	Meteorological
17-031-1901	Midlothian															
17-031-2001	Blue Island															
17-031-3103	Schiller Park															
17-031-3301	Summit															
17-031-4002	Cicero Cook County Trailer															
17-031-6005	Cicero Liberty School															
17-031-4007	Des Plaines															
17-031-4201	Northbrook[1]	T								T						
17-031-6003	Maywood 4th District Court															
17-031-6004	Maywood Com Ed Maintenance															
17-031-6006	Maywood 4th District Court															
17-031-7002	Evanston															
17-043-4002	Naperville															
17-043-6001	Lisle															
17-049-1001	Effingham															
17-065-0002	Knight Prairie															
17-077-0004	Carbondale															
17-083-1001	Jerseyville															
17-089-0003	Elgin McKinley School															
17-089-0005	Elgin Larsen Jr. High School															
17-089-0007	Aurora															
17-097-1002	Waukegan															

Active Monitor	Site/Monitor Installed	Site/Monitor Removed	C = Continuous PM10 T = Trace level monitor 1 = Northbrook also measures NOy and black carbon

Table A4
2011 Monitoring Directory

AQS ID	City	CO	CO2	NO2	Ozone	PM10	PM2.5	PM2.5 AQI	PM2.5 Speciation	SO2	VOC	Toxics	TSP Pb, Metals	Wind System	Solar	Meteorological
17-097-1007	Zion															
17-099-0007	Oglesby					C										
17-111-0001	Cary															
17-113-2003	Normal															
17-115-0013	Decatur IEPA Trailer															
17-115-0110	Decatur Mueller															
17-117-0002	Nilwood															
17-119-0008	Alton Clara Barton Elementary															
17-119-2009	Alton SIU Dental Clinic															
17-119-0010	Granite City Air Products															
17-119-0024	Granite City Gateway Medical Center															
17-119-1007	Granite City Fire Station #1					C										
17-119-1009	Maryville															
17-119-1010	South Roxana															
17-119-2007	Edwardsville															
17-119-3007	Wood River															
17-143-0024	Peoria Fire Station #8															
17-143-0036	Peoria Commercial Building															
17-143-0037	Peoria City Office Building															
17-143-0110	Bartonville															
17-143-0210	Mapleton															
17-143-1001	Peoria Heights															
17-157-0001	Houston															

Active Monitor | Site/Monitor Installed | Site/Monitor Removed

C = Continuous PM10
T = Trace level monitor

Table A4
2011 Monitoring Directory

AQS ID	City	CO	CO2	NO2	Ozone	PM10	PM2.5	PM2.5 AQI	PM2.5 Speciation	SO2	VOC	Toxics	TSP Pb, Metals	Wind System	Solar	Meteorological
17-161-3002	Rock Island															
17-163-0010	East St. Louis															
17-163-4001	Swansea															
17-167-0006	Springfield Sewage Treatment Plant															
17-167-0008	Springfield Federal Building															
17-167-0012	Springfield Agricultural Building															
17-167-0013	Springfield Blandco Building															
17-167-0014	Springfield Illinois Building															
17-179-0004	Pekin															
17-185-0001	Mount Carmel															
17-185-1001	Rural Wabash County															
17-195-0110	Sterling															
17-197-0013	Joliet Water Plant West															
17-197-1002	Joliet Pershing Elementary															
17-197-1011	Braidwood															
17-201-0011	Rockford City Hall															
17-201-0013	Rockford Health Department															
17-201-0110	Rockford J. Rubin & Company															
17-201-2001	Loves Park															

Active Monitor	Site/Monitor Installed	Site/Monitor Removed	C = Continuous PM10 T = Trace level monitor

APPENDIX B
AIR QUALITY DATA SUMMARY TABLES

AIR QUALITY DATA INTERPRETATION

In order to provide a uniform procedure for determining whether a sufficient amount of air quality data has been collected by a sensor in a given time period (year, quarter, month, day, etc.) to accurately represent air quality during that time period, a minimum statistical selection criteria was developed.

In order to calculate an annual average for noncontinuous parameters, a minimum of 75% of the data that was scheduled to be collected must be available, i.e., 45 samples per year for an every-six-day schedule (total possible of 60 samples). Additionally, in order to have proper quarterly balance, each site on an every sixth day schedule should have at least 10 samples per calendar quarter. This provides for a 20% balance in each quarter if the minimum required annual sampling is achieved.

PM_{10} and $PM_{2.5}$ samplers operate on one of three sampling frequencies:

- Every-day sampling (68 samples required each quarter for 75% data capture)
- Every-third-day sampling (23 samples required each quarter for 75% data capture)
- Every-six-day sampling (12 samples required each quarter for 75% data capture).

To calculate an annual PM_{10} or $PM_{2.5}$ mean, arithmetic means are calculated for each quarter in which valid data is recorded in at least 75% of the possible sampling periods. The annual mean is then the arithmetic average of the four quarterly means.

To determine an annual average for continuous data 75% of the total possible yearly observations are necessary, i.e., a minimum of 6570 hours (75% of the hours available) were needed in 2011. In order to provide a balance between the respective quarters, each quarter should have at least 1300 hours which is 20% of the 75% minimum annual requirement. To calculate quarterly averages at sites which do not meet the annual criteria, 75% of the total possible observations in a quarter are needed, i.e., a minimum of 1647 hours of 2200 hours available. Monthly averages also require 75% of the total possible observations in a month, i.e., 540 hours as a minimum. Additionally, for short-term running averages (24 hour, 8 hour, 3 hour) 75% of the data during the particular time period is needed, i.e, 18 hours for a 24-hour average, 6 hours for an 8-hour average and 3 hours for a 3-hour average.

For ozone, a valid day for 1-hour samples must have 75% of the hours between 9 a.m. and 9 p.m. otherwise it is considered missing. A missing day can be considered valid if the peak ozone concentration on the preceding and succeeding days is less than 0.090 ppm. The expected exceedences are actual exceedences adjusted for the percent of missing days. For 8-hour samples, forward running averages are computed for each hour which includes the next seven hours as well. A valid 8-hour average has at least 6 valid 1-hour averages within the 8-hour period. A valid 8-hour day contains at least 75% (18) of the possible 8-hour running averages. Complete sampling over a three year period requires an average of 90% valid days with each year having at least 75% valid days.

Data listed as not meeting the minimum statistical selection criteria in this report were so noted after evaluation using the criteria above. Although short term averages (3, 8, 24 hours) have been computed for certain sites not meeting the annual criteria, these averages may not be representative of an entire year's air quality. In certain circumstances where even the 75% criteria is met, the number and/or magnitude of short term averages may not be directly comparable from one year to the next because of seasonal distributional differences.

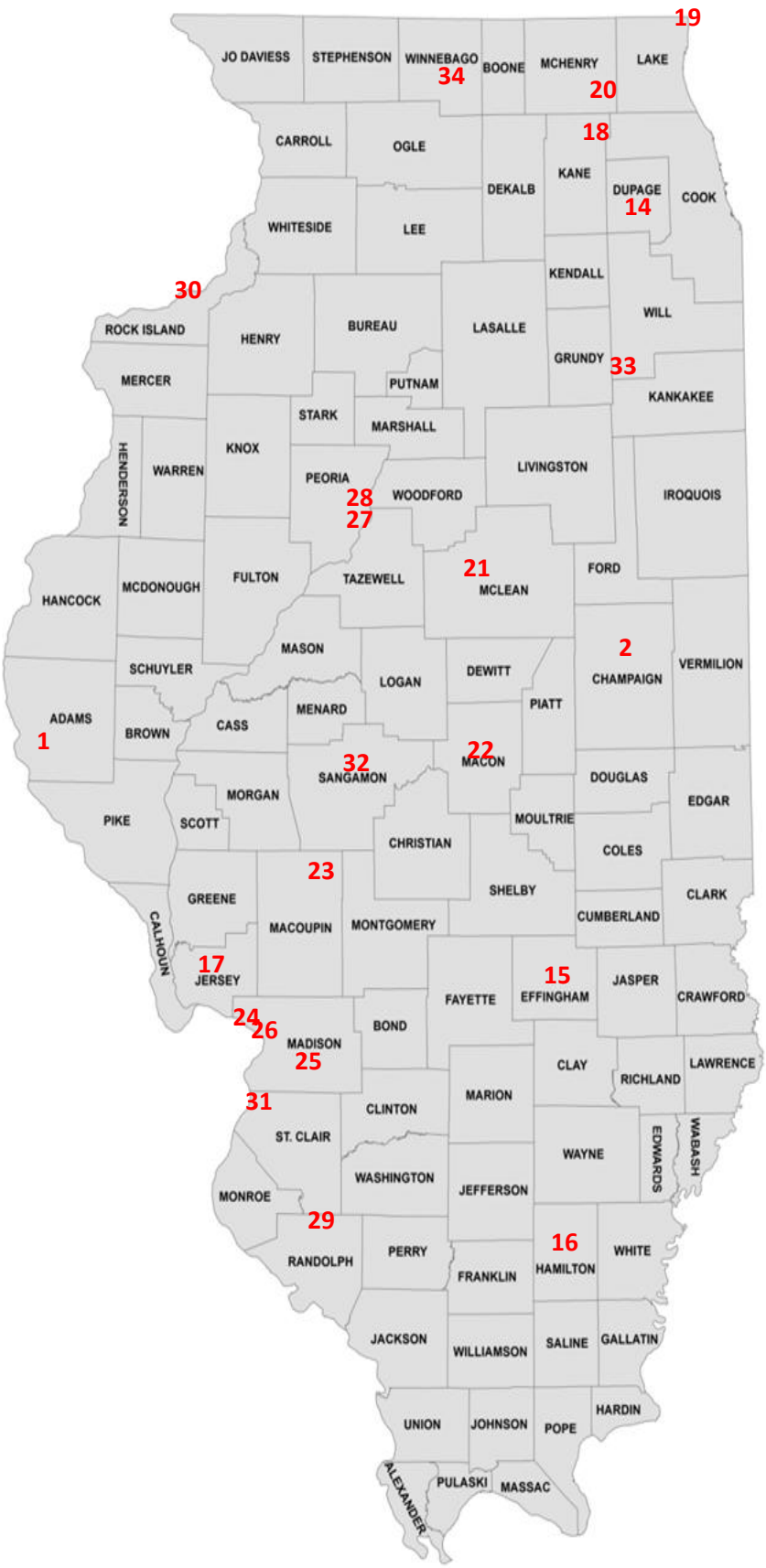
For summary purposes, the data is expressed in the number of figures to which the raw data is validated. Extra figures may be carried in the averaging technique, but the result is rounded to the appropriate number of figures. For example, the values 9, 9, 10 are averaged to give 9; whereas the values 9.0, 9.0, 10.0 are averaged to 9.3. The raw data itself should not be expressed to more significant figures than the sensitivity of the monitoring methodology allows.

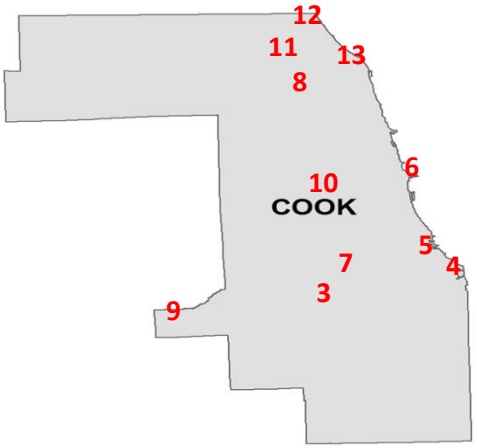
In comparing data to the various air quality standards, the data are implicitly rounded to the number of significant figures specified by that standard. For example, to exceed the 0.12 ppm hourly ozone standard, an hourly value must be 0.125 ppm or higher, to exceed the 9 ppm CO 8-hour standard, an 8-hour average must be 9.5 ppm or higher. Peak averages, though, will be expressed to the number of significant figures appropriate to that monitoring methodology.

National Ambient Air Quality Standards (NAAQS) for sulfur dioxide (SO_2) and carbon monoxide (CO) have short-term standards for ambient air concentrations (24 hours or less) not to be exceeded more than once per year. Particulate Matter (PM_{10}) has a 24-hour standard which cannot average more than 1 over a three year period (total of 3 in three years). Particulate Matter ($PM_{2.5}$) has a 24-hour standard which is a 3-year average of each year's 98^{th} percentile values. In the case of ozone, the expected number of exceedances (one hour per day greater than 0.12 ppm) may not average more than one per year in any period of three consecutive years. The 8-hour ozone standard is concentration based and as such is the average of the fourth highest value each year over a three year period. The standards are promulgated in this manner in order to protect the public from excessive levels of pollution both in terms of acute and chronic health effects.

The following data tables detail and summarize air quality in Illinois in 2011. The tables of short term exceedences list those sites which exceeded any of the short term primary standards (24 hours or less). The detailed data tables list averages and peak concentrations for all monitoring sites in Illinois.

2011 Ozone Monitoring Sites





	Site ID	Site Name
1.	170010007	Quincy
2.	170190007	Thomasboro
3.	170310001	Alsip
4.	170310032	Chicago – South Water Filtration Plant
5.	170310064	Chicago – University of Chicago
6.	170310072	Chicago – Jardine Water Plant
7.	170310076	Chicago – Com Ed Maintenance Bldg.
8.	170311003	Chicago – Taft High School
9.	170311601	Lemont
10.	170314002	Cicero
11.	170314007	Des Plaines
12.	170314201	Northbrook
13.	170317002	Evanston
14.	170436001	Lisle
15.	170491001	Effingham
16.	170650002	Knight Prairie
17.	170831001	Jerseyville
18.	170890005	Elgin
19.	170971007	Zion
20.	171110001	Cary
21.	171132003	Normal
22.	171150013	Decatur
23.	171170002	Nilwood
24.	171190008	Alton
25.	171191009	Maryville
26.	171193007	Wood River
27.	171430024	Peoria
28.	171431001	Peoria Heights
29.	171570001	Houston
30.	171613002	Rock Island
31.	171630010	East St. Louis
32.	171670014	Springfield
33.	171971011	Braidwood
34.	172012001	Loves Park

Table B1
2011 1-Hour Ozone Exceedances

EXCEEDANCES OF THE FORMER 1-HOUR PRIMARY STANDARD OF 0.12 PPM		
Date	**City**	**Concentration**
7/21	Chicago – University of Chicago	0.139
9/1	Zion	0.126
Total Over 0.12 ppm	2	
Total Days Over 0.12 ppm	2	

Table B2
2011 8-Hour Ozone Exceedances

EXCEEDANCES OF THE 8-HOUR PRIMARY STANDARD OF 0.075 PPM						
Date	**City**	**Concentration**		**Date**	**City**	**Concentration**
6/1	East St. Louis	0.076		8/1	Alton	0.081
	Wood River	0.079			Chicago – Jardine Water Plant	0.085
6/2	Knight Prairie	0.078			Chicago – South Water Filtration	0.082
6/3	Northbrook	0.076			Evanston	0.079
	Springfield	0.080			Jerseyville	0.088
	Thomasboro	0.076			Wood River	0.087
6/7	Knight Prairie	0.078		8/18	East St. Louis	0.086
	Nilwood	0.078			Wood River	0.076
	Springfield	0.079		8/31	Decatur	0.076
	Wood River	0.076			Jerseyville	0.076
6/8	Thomasboro	0.081			Nilwood	0.086
6/30	Jerseyville	0.078			Normal	0.084
	Northbrook	0.077			Springfield	0.087
	Zion	0.083			Wood River	0.081
7/1	Alton	0.085		9/1	Alsip	0.076
	Knight Prairie	0.076			Alton	0.077
	Wood River	0.086			Chicago – Com Ed Maintenance	0.082
7/2	Maryville	0.088			Chicago – South Water Filtration	0.079
7/5	Peoria	0.076			Chicago – Taft High School	0.076
	Peoria Heights	0.089			Chicago – University of Chicago	0.077
7/9	Evanston	0.078			Cicero	0.089
	Northbrook	0.080			Decatur	0.090
	Zion	0.085			Des Plaines	0.076
7/10	Zion	0.076			Evanston	0.082
7/11	Maryville	0.084			Jerseyville	0.077
7/12	Wood River	0.076			Lemont	0.082
7/16	Chicago – University of Chicago	0.079			Maryville	0.076
7/19	Braidwood	0.091			Nilwood	0.083
7/21	Chicago – Jardine Water Plant	0.076			Northbrook	0.086
	Chicago – South Water Filtration	0.086			Springfield	0.079
	Chicago – University of Chicago	0.089			Thomasboro	0.088
	Maryville	0.080			Wood River	0.084
7/25	East St. Louis	0.080			Zion	0.095
7/26	Alton	0.076		9/2	Alsip	0.080
7/29	Maryville	0.086			Chicago – Com Ed Maintenance	0.076
7/30	Cary	0.079			Chicago – South Water Filtration	0.089
	Chicago – Com Ed Maintenance	0.078			Thomasboro	0.080
	Elgin	0.078		9/13	East St. Louis	0.076
	Lisle	0.076			Maryville	0.081
7/31	Evanston	0.088				
	Zion	0.076				
Total Over 0.075 ppm				81		
Total Days Over 0.075 ppm				27		

Table B3
2011 Ozone Highs

AQS ID	City	Number Of Days 8hr Greater Than 0.075 ppm			4th Highest Samples 1hr (ppm)				4th Highest Samples 8hr (ppm)			
		2011	2010	2009								
17-001-0007	Quincy	0	1	0	0.078	0.076	0.072	0.072	0.070	0.070	0.067	0.066
17-019-0007	Thomasboro	4	-	-	0.096	0.087	0.086	0.080	0.088	0.081	0.080	0.076
17-031-0001	Alsip	2	1	0	0.092	0.088	0.085	0.081	0.080	0.076	0.073	0.071
17-031-0032	Chicago South Water Filtration	4	1	0	0.104	0.098	0.093	0.090	0.089	0.086	0.082	0.079
17-031-0064	Chicago University of Chicago	3	1	0	0.139	0.090	0.089	0.087	0.089	0.079	0.077	0.074
17-031-0072	Chicago Jardine Water Plant	2	1	0	0.100	0.093	0.089	0.088	0.085	0.076	0.074	0.074
17-031-0076	Chicago Com Ed Maintenance	3	0	0	0.097	0.093	0.084	0.083	0.082	0.078	0.076	0.073
17-031-1003	Chicago Taft High School	1	1	0	0.084	0.083	0.072	0.072	0.076	0.070	0.067	0.067
17-031-1601	Lemont	1	3	1	0.094	0.093	0.082	0.081	0.082	0.073	0.071	0.069
17-031-4002	Cicero Cook County Trailer	1	0	0	0.101	0.089	0.082	0.081	0.089	0.074	0.072	0.072
17-031-4007	Des Plaines	1	0	0	0.089	0.085	0.078	0.077	0.076	0.072	0.068	0.065
17-031-4201	Northbrook	4	2	0	0.108	0.094	0.089	0.086	0.086	0.080	0.077	0.076
17-031-7002	Evanston	4	1	1	0.112	0.099	0.091	0.085	0.088	0.082	0.079	0.078
17-043-6001	Lisle	1	0	0	0.092	0.089	0.081	0.078	0.076	0.073	0.071	0.068
17-049-1001	Effingham	0	0	0	0.079	0.077	0.075	0.073	0.073	0.069	0.067	0.066
17-065-0002	Knight Prairie	3	2	0	0.092	0.087	0.086	0.082	0.078	0.078	0.076	0.074
17-083-1001	Jerseyville	4	0	0	0.109	0.104	0.097	0.088	0.088	0.078	0.077	0.076
17-089-0005	Elgin Larsen Jr. High School	1	1	0	0.092	0.085	0.082	0.081	0.078	0.075	0.074	0.070
17-097-1007	Zion	5	4	2	0.126	0.099	0.097	0.088	0.095	0.085	0.083	0.076
17-111-0001	Cary	1	0	0	0.093	0.086	0.084	0.082	0.079	0.074	0.072	0.071
17-113-2003	Normal	1	0	0	0.099	0.087	0.080	0.077	0.084	0.075	0.070	0.068
17-115-0013	Decatur IEPA Trailer	2	0	0	0.098	0.086	0.084	0.084	0.090	0.076	0.075	0.075
17-117-0002	Nilwood	3	1	0	0.095	0.095	0.091	0.089	0.086	0.083	0.078	0.075
17-119-0008	Alton Clara Barton School	4	13	1	0.095	0.093	0.092	0.091	0.085	0.081	0.077	0.076
17-119-1009	Maryville	6	3	2	0.103	0.101	0.100	0.095	0.088	0.086	0.084	0.081

Table B3
2011 Ozone Highs

AQS ID	City	Number Of Days 8hr Greater Than 0.075 ppm			4th Highest Samples 1hr (ppm)				4th Highest Samples 8hr (ppm)			
		2011	2010	2009								
17-119-3007	Wood River	8	1	1	0.103	0.097	0.097	0.096	0.087	0.086	0.084	0.081
17-143-0024	Peoria Fire Station #8	1	0	0	0.091	0.075	0.074	0.073	0.076	0.069	0.068	0.066
17-143-1001	Peoria Heights	1	0	0	0.111	0.080	0.077	0.076	0.089	0.073	0.071	0.069
17-157-0001	Houston	0	0	0	0.076	0.073	0.072	0.072	0.069	0.067	0.067	0.066
17-161-3002	Rock Island	0	0	0	0.071	0.069	0.068	0.065	0.062	0.062	0.059	0.055
17-163-0010	East St. Louis	4	2	1	0.102	0.098	0.094	0.093	0.086	0.080	0.076	0.076
17-167-0014	Springfield	4	0	0	0.098	0.098	0.093	0.092	0.087	0.080	0.079	0.079
17-197-1011	Braidwood	1	0	0	0.106	0.106	0.075	0.070	0.091	0.074	0.063	0.061
17-201-2001	Loves Park	0	0	0	0.084	0.079	0.073	0.073	0.075	0.070	0.068	0.068
Statewide Average					0.097	0.089	0.084	0.081	0.082	0.076	0.073	0.071
Total Over 0.075 ppm		81	41	9								
Total Days Over 0.075 ppm		27	23	4								

Table B4
2011 Ozone Design Values

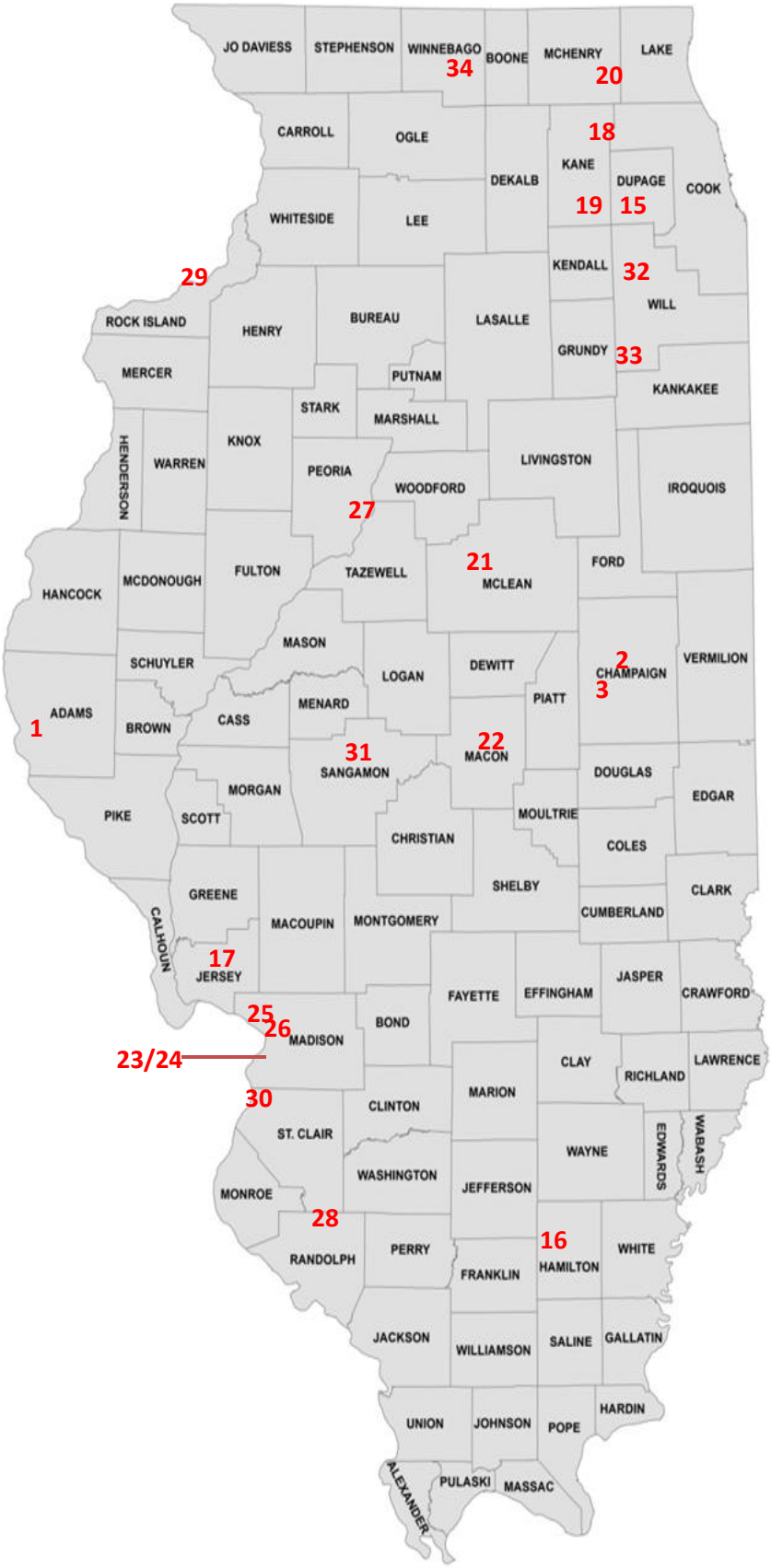
AQS ID	City	4th High 8-hour Concentrations (ppm)					Design Values* (ppm)		
		2011	2010	2009	2008	2007	2009-2011	2008-2010	2007-2009
17-001-0007	Quincy	0.066	0.067	0.061	0.065	0.075	0.064	0.064	0.067
17-019-0004	Champaign	-	-	0.065	0.060	0.071	-	0.062	0.065
17-019-0007	Thomasboro	0.076	-	-	-	-	-	-	-
17-031-0001	Alsip	0.071	0.073	0.069	0.066	0.085	0.071	0.069	0.073
17-031-0032	Chicago South Water Filtration	0.079	0.074	0.065	0.067	0.082	0.072	0.068	0.071
17-031-0064	Chicago University of Chicago	0.074	0.071	0.060	0.063	0.079	0.068	0.064	0.067
17-031-0072	Chicago Jardine Water Plant	0.074	0.071	0.062	0.063	0.075	0.069	0.065	0.066
17-031-0076	Chicago Com Ed Maintenance	0.073	0.068	0.067	0.066	0.080	0.069	0.067	0.071
17-031-1003	Chicago Taft High School	0.067	0.070	0.064	0.064	0.079	0.067	0.066	0.069
17-031-1601	Lemont	0.069	0.073	0.067	0.071	0.085	0.069	0.070	0.074
17-031-4002	Cicero Cook County Trailer	0.072	0.068	0.067	0.060	0.068	0.069	0.065	0.065
17-031-4007	Des Plaines	0.065	0.064	0.057	0.057	0.078	0.062	0.059	0.064
17-031-4201	Northbrook	0.076	0.072	0.069	0.065	0.076	0.072	0.068	0.070
17-031-7002	Evanston	0.078	0.067	0.064	0.058	0.080	0.069	0.063	0.067
17-043-6001	Lisle	0.068	0.064	0.059	0.057	0.072	0.063	0.060	0.062
17-049-1001	Effingham	0.066	0.072	0.067	0.063	0.078	0.068	0.067	0.069
17-065-0002	Knight Prairie	0.074	0.075	0.064	0.066	0.076	0.071	0.068	0.068
17-083-1001	Jerseyville	0.076	0.072	0.068	0.069	0.075	0.072	0.069	0.070
17-089-0005	Elgin Larsen Jr. High School	0.070	0.069	0.068	0.061	0.075	0.069	0.066	0.068
17-097-1007	Zion	0.076	0.078	0.075	0.069	0.080	**0.076**	0.074	0.074
17-111-0001	Cary	0.071	0.065	0.066	0.065	0.074	0.067	0.065	0.068
17-113-2003	Normal	0.068	0.066	0.071	0.067	0.075	0.068	0.068	0.071
17-115-0013	Decatur IEPA Trailer	0.075	0.069	0.067	0.066	0.077	0.070	0.067	0.070
17-117-0002	Nilwood	0.075	0.071	0.064	0.065	0.075	0.070	0.066	0.068
17-119-0008	Alton Clara Barton Elementary	0.076	0.080	0.067	0.068	0.081	0.074	0.071	0.072

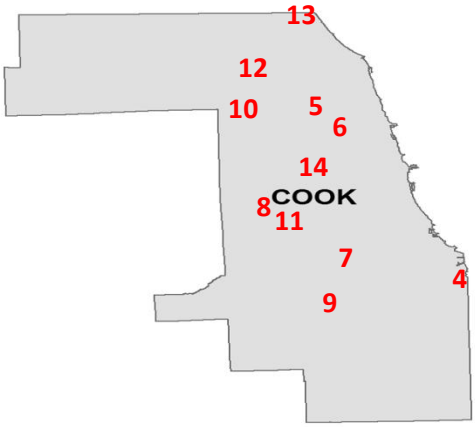
Table B4
2011 Ozone Design Values

AQS ID	City	4th High 8-hour Concentrations (ppm)					Design Values* (ppm)		
		2011	2010	2009	2008	2007	2009-2011	2008-2010	2007-2009
17-119-1009	Maryville	0.081	0.074	0.071	0.070	0.087	**0.076**	0.072	**0.077**
17-119-3007	Wood River	0.081	0.070	0.066	0.067	0.086	0.072	0.067	0.073
17-143-0024	Peoria Fire Station #8	0.066	0.059	0.053	0.060	0.074	0.059	0.057	0.062
17-143-1001	Peoria Heights	0.069	0.069	0.069	0.067	0.081	0.069	0.068	0.072
17-157-0001	Houston	0.066	0.065	0.059	0.065	0.079	0.063	0.063	0.067
17-161-3002	Rock Island	0.055	0.057	0.058	0.058	0.071	0.056	0.057	0.062
17-163-0010	East St. Louis	0.076	0.072	0.069	0.064	0.077	0.072	0.068	0.070
17-167-0010	Springfield Dirkson Parkway	-	-	0.061	0.059	0.072	-	0.060	0.064
17-167-0013	Springfield Blandco	-	0.069	-	-	-	-	-	-
17-167-0014	Springfield State Fairgrounds	0.079	-	-	-	-	-	-	-
17-197-1011	Braidwood	0.061	0.065	0.063	0.060	0.071	0.063	0.062	0.064
17-201-2001	Loves Park	0.068	0.063	0.067	0.060	0.073	0.066	0.063	0.066
Statewide Average		0.071	0.069	0.064	0.063	0.077	0.068	0.065	0.068

*The design value is the 3-year average of the 4th high concentration. Design value greater than 0.075 ppm is a violation of the National Ambient Air Quality Standard.

2011 $PM_{2.5}$ FRM Monitoring Sites





	Site ID	Site Name
1.	170010007	Quincy
2.	170190006	Champaign
3	170191001	Bondville
4.	170310022	Chicago – Washington High School
5.	170310052	Chicago – Mayfair Pump Station
6.	170310057	Chicago – Springfield Pump Station
7.	170310076	Chicago – Com Ed Maintenance Bldg.
8.	170311016	Lyons Township
9.	170312001	Blue Island
10.	170313103	Schiller Park
11.	170313301	Summit
12.	170314007	Des Plaines
13.	170314201	Northbrook
14.	170316005	Cicero
15.	170434002	Naperville
16.	170650002	Knight Prairie
17.	170831001	Jerseyville
18.	170890003	Elgin
19.	170890007	Aurora
20.	171110001	Cary
21.	171132003	Normal
22.	171150013	Decatur
23.	171190024	Granite City – Gateway Medical
24.	171191007	Granite City – 23rd and Madison
25.	171192009	Alton
26.	171193007	Wood River
27.	171430037	Peoria
28.	171570001	Houston
29.	171613002	Rock Island
30.	171630010	East St. Louis
31.	171670012	Springfield
32.	171971002	Joliet
33.	171971011	Braidwood
34.	172010013	Rockford

Table B5
2011 24-Hour PM2.5 Exceedances

EXCEEDANCES OF THE 24-HOUR PRIMARY STANDARD OF 35 ug/m3		
Date	**City**	**Concentration (ug/m3)**
1/3	East St. Louis – 13th & Tudor	37.4
1/26	Chicago – Mayfair Pump Station	35.5
1/28	Granite City – 23rd & Madison	37.1
7/4	Chicago – Mayfair Pump Station	38.7
7/5	Chicago – Mayfair Pump Station	39.9
	Chicago – Springfield Pump Station	38.0
Total Over 35 ug/m3	6	
Total Days Over 35 ug/m3	5	

Table B6
2011 PM2.5 Highs

AQS ID	City	Total Samples	Samples Greater Than 35 ug/m3			Highest Samples							
			2011	2010	2009	1st	2nd	3rd	4th	5th	6th	7th	8th
17-001-0007	Quincy	58	0	0	0	29.2	24.6	20.2	20.0	19.8	17.0	17.0	16.9
17-019-0006	Champaign	58	0	0	0	28.1	24.7	22.9	20.8	19.5	18.1	17.3	16.9
17-019-1001	Bondville	117	0	0	0	26.8	26.0	25.3	23.3	22.6	21.2	20.4	20.4
17-031-0022	Chicago Washington High School	61	0	1	0	28.5	28.5	25.6	25.1	24.0	23.2	21.5	20.7
17-031-0052	Chicago Mayfair Pump Station	358	3	6	1	39.9	38.7	35.5	34.3	32.7	30.0	29.6	28.7
17-031-0057	Chicago Springfield Pump Station	100	1	0	1	38.0	30.5	27.6	25.6	25.5	25.1	22.9	22.1
17-031-0076	Chicago Com Ed Maintenance	116	0	2	0	29.9	29.1	27.1	25.2	25.1	23.9	21.5	20.7
17-031-1016	Lyons Township	349	0	6	3	35.2	34.9	32.5	30.5	29.7	28.7	28.6	28.2
17-031-2001	Blue Island	109	0	1	1	29.6	25.9	25.5	25.4	25.2	24.8	22.3	22.1
17-031-3103	Schiller Park	117	0	0	2	33.7	27.5	27.3	27.3	25.8	25.8	24.8	24.5
17-031-3301	Summit	115	0	2	1	25.5	24.7	24.5	23.9	23.4	23.1	20.3	19.4
17-031-6005	Cicero Liberty School	113	0	1	1	32.4	31.9	29.5	26.7	25.1	24.0	21.5	20.3
17-031-4007	Des Plaines	117	0	2	2	27.0	25.8	24.5	22.7	22.6	22.4	21.6	20.3
17-031-4201	Northbrook	119	0	0	0	25.7	23.5	23.0	22.8	22.2	22.1	21.9	21.1
17-043-4002	Naperville	61	0	0	0	26.1	24.6	19.4	19.0	18.5	17.5	17.1	17.1
17-065-0002	Knight Prairie	57	0	0	0	25.5	20.6	20.2	18.9	17.1	16.3	15.8	15.8
17-083-1001	Jerseyville	54	0	0	0	23.6	20.4	19.7	19.4	18.8	18.0	17.8	16.7
17-089-0003	Elgin McKinley School	61	0	0	0	25.3	24.0	20.5	19.9	18.5	18.1	16.8	16.5
17-089-0007	Aurora	57	0	0	0	27.0	25.8	21.9	19.8	19.0	18.9	18.0	17.7
17-111-0001	Cary	114	0	0	0	27.2	25.7	23.4	22.8	22.5	21.0	21.0	19.9
17-113-2003	Normal	116	0	1	0	29.6	28.7	25.8	25.0	23.8	23.1	19.8	19.6
17-115-0013	Decatur IEPA Trailer	55	0	0	0	25.7	25.5	23.3	22.7	21.0	18.9	18.7	16.9
17-119-2009	Alton SIU Dental Clinic	55	0	0	0	25.4	23.9	22.1	20.9	20.7	20.1	18.7	18.6
17-119-0024	Granite City Gateway Medical Center	108	0	1	0	32.6	32.3	30.6	27.8	24.9	24.5	23.9	23.1
17-119-1007	Granite City Fire Station #1	354	1	2	2	37.1	35.1	34.3	31.0	30.8	30.2	27.9	27.3

Table B6
2011 PM2.5 Highs

AQS ID	City	Total Samples	Samples Greater Than 35 ug/m3			Highest Samples							
			2011	2010	2009	1st	2nd	3rd	4th	5th	6th	7th	8th
17-119-3007	Wood River	115	0	0	0	30.9	29.4	28.6	27.8	26.7	26.1	25.8	22.7
17-143-0037	Peoria City Office Building	119	0	0	0	31.0	27.7	27.7	27.6	26.5	25.2	23.2	23.1
17-157-0001	Houston	59	0	0	0	24.3	20.9	17.4	17.3	16.0	15.3	15.1	14.4
17-161-3002	Rock Island	58	0	0	0	24.4	23.1	22.3	21.6	19.9	18.9	18.6	18.6
17-163-0010	East St. Louis	55	1	0	0	37.4	25.3	24.8	22.3	21.2	20.6	20.1	19.6
17-167-0012	Springfield Agricultural Building	115	0	0	0	29.1	28.3	27.8	24.8	24.8	21.5	19.9	18.4
17-197-1002	Joliet Pershing Elementary	61	0	1	0	27.9	20.8	18.7	18.2	18.1	18.0	16.7	16.3
17-197-1011	Braidwood	60	0	0	0	28.8	25.8	20.9	20.9	18.7	17.0	16.7	16.4
17-201-0013	Rockford Health Department	111	0	2	1	23.5	23.2	22.4	21.8	21.6	19.7	19.6	19.1
Statewide Average						29.2	26.7	24.8	23.6	22.7	21.7	20.7	20.0
Total Samples Over 35 ug/m3			6	31	16								
Total Sites Over 35 ug/m3			4	15	11								
Total Days Over 35 ug/m3			5	8	6								

Table B7
2011 PM2.5 24-Hour Design Values

AQS ID	City	98th Percentile Concentrations (ug/m3)					Design Values* (ug/m3)		
		2011	2010	2009	2008	2007	2009-2011	2008-2010	2007-2009
17-001-0007	Quincy	24.6	22.6	17.3	19.8	28.9	21.5	19.9	22.0
17-019-0006	Champaign	24.7	29.2	19.3	27.1	33.2	24.4	25.2	26.5
17-019-1001	Bondville	25.3	20.6	20.0	25.9	33.5	22.0	22.2	26.5
17-031-0022	Chicago Washington High School	28.5	30.3	26.8	31.2	35.7	28.5	29.4	31.2
17-031-0052	Chicago Mayfair Pump Station	28.7	33.8	32.4	27.8	39.4	31.6	31.3	33.2
17-031-0057	Chicago Springfield Pump Station	30.5	28.6	32.5	27.5	38.9	30.5	29.5	33.0
17-031-0076	Chicago Com Ed Maintenance	27.1	31.0	26.2	29.7	37.2	28.1	29.0	31.0
17-031-1016	Lyons Township	28.6	35.3	30.8	33.9	36.8	31.6	33.3	33.8
17-031-2001	Blue Island	25.5	25.8	27.2	29.5	35.1	26.2	27.5	30.6
17-031-3103	Schiller Park	27.3	25.9	30.0	31.3	36.6	27.7	29.1	32.6
17-031-3301	Summit	24.5	35.0	31.0	29.3	36.7	30.2	31.8	32.3
17-031-6005	Cicero Liberty School	29.5	27.1	27.7	34.1	36.9	28.1	29.6	32.9
17-031-4007	Des Plaines	24.5	28.5	29.4	25.7	33.9	27.5	27.9	29.7
17-031-4201	Northbrook	23.0	30.1	23.7	25.1	36.8	25.6	26.3	28.5
17-043-4002	Naperville	24.6	28.4	23.4	33.1	37.8	25.5	28.3	31.4
17-065-0002	Knight Prairie	20.6	25.3	22.1	25.7	33.4	22.7	24.4	27.1
17-083-1001	Jerseyville	20.4	21.4	19.2	21.6	31.3	20.3	20.7	24.0
17-089-0003	Elgin McKinley School	24.0	32.3	23.7	33.3	35.4	26.7	29.8	30.8
17-089-0007	Aurora	25.8	32.4	26.4	26.3	35.5	28.2	28.4	29.4
17-111-0001	Cary	23.4	29.4	26.0	27.0	28.6	26.3	27.5	27.2
17-113-2003	Normal	25.8	25.0	22.4	24.0	33.3	24.4	23.8	26.6
17-115-0013	Decatur IEPA Trailer	25.5	22.1	21.6	26.6	35.8	23.1	23.4	28.0
17-119-2009	Alton SIU Dental Clinic	23.9	25.0	18.5	30.0	35.0	22.5	24.5	27.8
17-119-0024	Granite City Gateway Medical Center	30.6	28.6	23.7	30.7	-	27.6	27.7	27.2
17-119-1007	Granite City Fire Station #1	27.3	29.2	24.8	31.9	36.0	27.1	28.6	30.9

Table B7
2011 PM2.5 24-Hour Design Values

AQS ID	City	98th Percentile Concentrations (ug/m3)					Design Values* (ug/m3)		
		2011	2010	2009	2008	2007	2009-2011	2008-2010	2007-2009
17-119-3007	Wood River	28.6	22.1	21.7	25.4	34.5	24.1	23.1	27.2
17-143-0037	Peoria City Office Building	27.7	26.0	23.9	27.0	34.7	25.9	25.6	28.5
17-157-0001	Houston	20.9	17.2	21.0	20.8	31.8	19.7	19.7	24.5
17-161-3002	Rock Island	23.1	24.5	19.5	24.0	26.9	22.4	22.7	23.5
17-163-0010	East St. Louis	25.3	22.0	22.8	25.0	33.1	23.4	23.3	27.0
17-167-0012	Springfield Agricultural Building	27.8	24.2	21.7	24.1	34.3	24.6	23.3	26.7
17-197-1002	Joliet Pershing Elementary	20.8	28.3	25.5	31.3	38.8	24.9	28.4	31.9
17-197-1011	Braidwood	25.8	24.1	19.2	25.9	29.3	23.0	23.1	24.8
17-201-0013	Rockford Health Department	22.4	23.9	26.2	28.7	30.4	24.2	26.3	28.4
Statewide Average		25.5	26.9	24.3	27.4	34.2	25.6	26.2	28.6

*The design value is the 3-year average of the 98th percentile concentration. Design value greater than or equal to 35.5 ug/m3 is a violation of the National Ambient Air Quality Standard.

Table B8
2011 PM2.5 Annual Design Values

AQS ID	City	Annual Arithmetic Mean Concentrations (ug/m3)					Design Values* (ug/m3)		
		2011	2010	2009	2008	2007	2009-2011	2008-2010	2007-2009
17-001-0007	Quincy	10.4	10.5	8.3	9.2	11.5	9.7	9.3	9.7
17-019-0004	Champaign	-	-	10.5	10.5	12.7	-	10.5	11.2
17-019-0006	Champaign	10.6	-	-	-	-	-	-	-
17-019-1001	Bondville	10.2	10.5	10.5	10.9	13.2	10.4	10.6	11.5
17-031-0022	Chicago Washington High School	12.6	14.0	11.6	12.5	15.7	12.7	12.7	13.3
17-031-0052	Chicago Mayfair Pump Station	11.8	12.6	12.7	12.2	15.5	12.4	12.5	13.5
17-031-0057	Chicago Springfield Pump Station	11.5	12.0	11.3	12.0	15.2	11.6	11.8	12.8
17-031-0076	Chicago Com Ed Maintenance	11.3	12.3	11.1	11.9	14.3	11.5	11.8	13.2
17-031-1016	Lyons Township	12.6	12.6	12.6	12.9	15.6	12.6	12.7	13.7
17-031-2001	Blue Island	11.6	11.6	11.7	12.5	14.3	11.6	11.9	12.8
17-031-3103	Schiller Park	13.3	12.6	12.9	13.6	15.4	12.9	13.0	14.0
17-031-3301	Summit	11.0	12.2	11.6	12.0	14.8	11.6	11.9	12.8
17-031-6005	Cicero Liberty School	11.4	11.9	12.0	13.3	14.8	11.8	12.4	13.4
17-031-4007	Des Plaines	10.6	10.6	11.0	11.4	12.7	10.7	11.0	11.7
17-031-4201	Northbrook	10.2	9.3	9.3	10.1	13.2	9.6	9.6	10.9
17-043-4002	Naperville	10.5	11.7	9.8	11.3	13.8	10.7	10.9	11.6
17-065-0002	Knight Prairie	10.1	11.3	10.1	12.4	13.4	10.5	11.3	12.0
17-083-1001	Jerseyville	10.5	11.2	9.9	10.1	13.4	10.5	10.4	11.1
17-089-0003	Elgin McKinley School	9.8	11.3	9.6	10.8	13.2	10.2	10.6	11.2
17-089-0007	Aurora	10.8	11.4	10.0	10.3	14.5	10.8	10.6	11.6
17-111-0001	Cary	10.1	10.2	9.6	10.1	11.6	10.0	10.0	10.4
17-113-2003	Normal	10.7	10.6	10.1	10.7	12.4	10.5	10.5	11.1
17-115-0013	Decatur IEPA Trailer	11.6	12.2	11.0	12.0	14.0	11.6	11.7	12.3
17-119-2009	Alton SIU Dental Clinic	11.5	13.3	10.1	12.5	14.9	11.7	12.0	12.5
17-119-0024	Granite City Gateway Medical Center	14.4	14.6	11.4	14.4	-	13.5	13.5	12.9

Table B8
2011 PM2.5 Annual Design Values

AQS ID	City	Annual Arithmetic Mean Concentrations (ug/m3)					Design Values* (ug/m3)		
		2011	2010	2009	2008	2007	2009-2011	2008-2010	2007-2009
17-119-1007	Granite City Fire Station #1	13.3	14.3	11.3	15.7	15.1	13.0	13.8	14.0
17-119-3007	Wood River	12.4	12.0	11.0	12.2	14.2	11.8	11.7	12.5
17-143-0037	Peoria City Office Building	11.7	11.5	10.7	11.1	13.1	11.3	11.1	11.6
17-157-0001	Houston	9.5	10.2	9.7	10.4	14.2	9.8	10.1	11.4
17-161-3002	Rock Island	10.9	9.9	8.5	10.7	12.5	9.8	9.7	10.6
17-163-0010	East St. Louis	12.8	13.0	11.7	12.5	15.6	12.5	12.4	13.3
17-167-0012	Springfield Agricultural Building	10.7	11.5	10.6	11.0	13.0	10.9	11.0	11.5
17-197-1002	Joliet Pershing Elementary	10.2	11.8	10.5	11.7	14.6	10.8	11.3	12.3
17-197-1011	Braidwood	10.4	10.0	8.7	10.3	12.1	9.7	9.7	10.4
17-201-0013	Rockford Health Department	10.2	10.0	9.5	10.7	12.5	9.9	10.1	10.9
Statewide Average		11.2	11.6	10.6	11.6	13.7	11.2	12.0	11.3

*The design value is the 3-year average of the annual arithmetic mean concentrations. Design value greater than 15.0 ug/m3 is a violation of the National Ambient Air Quality Standard.

Shaded cells indicate less than 75% data capture during at least one quarter of the year.

2011 PM_{10} Monitoring Sites

	Site ID	Site Name
1.	170310022	Chicago – Washington High School
2.	170311016	Lyons Township
3.	170314201	Northbrook
4.	171190010	Granite City – 15th and Madison
5.	171191007	Granite City – 23rd and Madison

Table B9
2011 24-Hour PM10 Exceedances

EXCEEDANCES OF THE 24-HOUR PRIMARY STANDARD OF 150 ug/m3		
Date	**City**	**Concentration (ug/m3)**
None	None	None
Total Over 150 ug/m3	0	
Total Days Over 150 ug/m3	0	

Table B10
2011 PM10 24-Hour Highs and Design Values

AQS ID	City	Total Samples	Highest 24-hour Samples								Samples Greater Than 150 ug/m3			3-year Average*
			1st	2nd	3rd	4th	5th	6th	7th	8th	2011	2010	2009	
17-031-0022	Chicago Washington High School	288	83	66	65	62	61	56	55	53	0	0	0	0.0
17-031-1016	Lyons Township	293	92	82	74	74	69	67	67	64	0	0	0	0.0
17-031-4201	Northbrook	56	38	36	33	26	26	23	23	22	0	0	0	0.0
17-119-0010	Granite City Air Products	56	66	65	52	51	50	50	50	49	0	0	0	0.0
17-119-1007	Granite City Fire Station #1	17	67	38	36	36	35	35	35	32	0	0	0	0.0
Statewide Average			69	57	52	48	48	46	46	44				
Total Over 150 ug/m3											0	0	0	
Total Days Over 150 ug/m3											0	0	0	

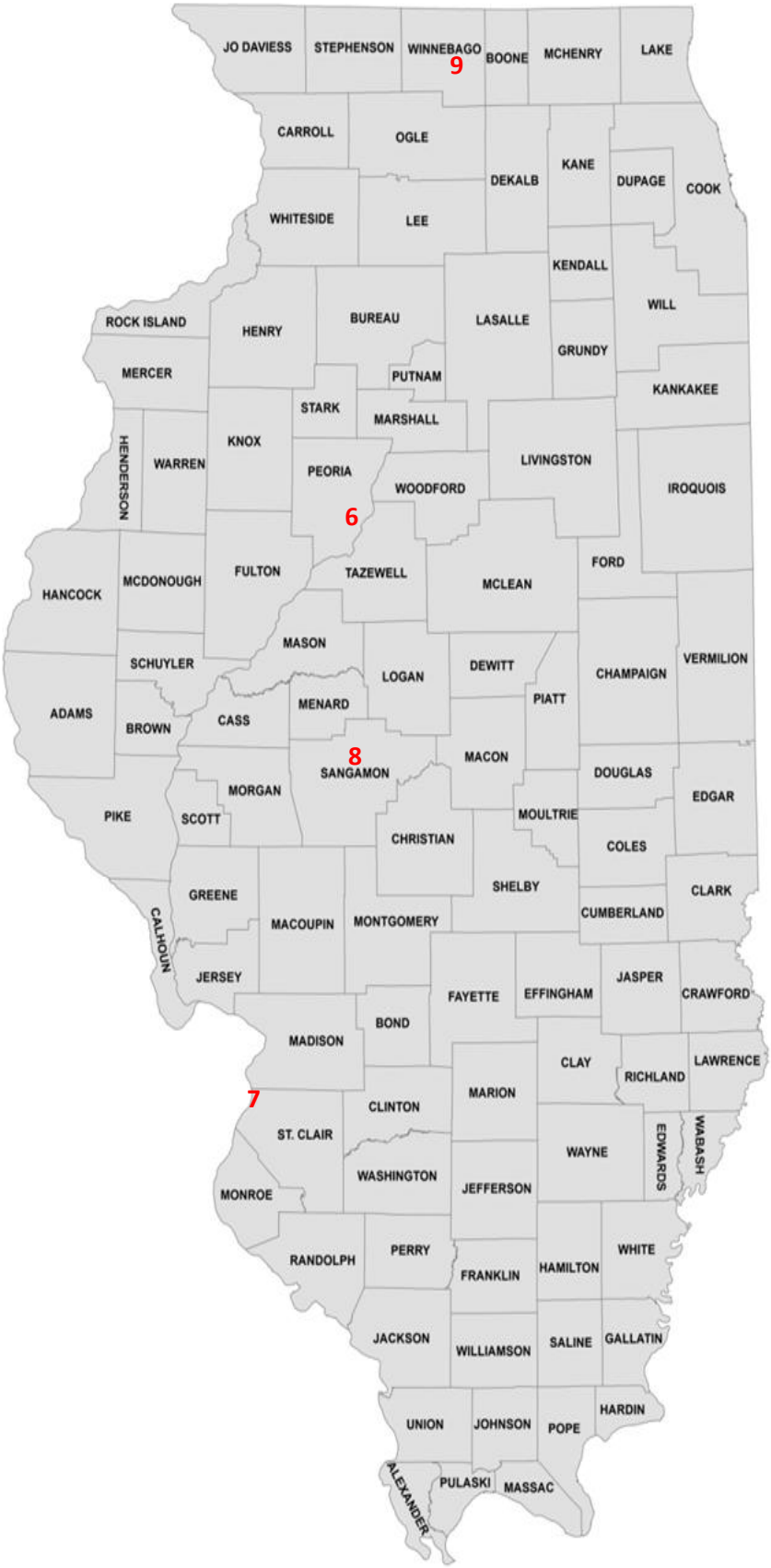
*The 24-hour PM10 standard is an exceedance-based standard set at 150 ug/m3. The level is not to be exceeded more than once per year on average over three years. Three year averages more than one are a violation of the National Ambient Air Quality Standard.

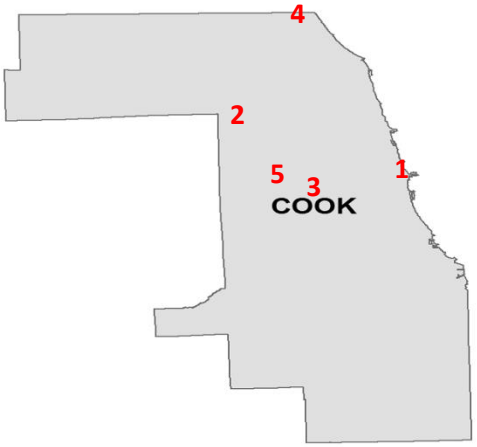
Table B11
2011 PM10 Annual Design Values

AQS ID	City	Annual Arithmetic Mean Concentration (ug/m3)					Design Values* (ug/m3)		
		2011	2010	2009	2008	2007	2009-2011	2008-2010	2007-2009
17-031-0022	Chicago Washington High School	21	22	20	23	26	21	22	23
17-031-1016	Lyons Township	26	27	26	29	33	26	27	29
17-031-4201	Northbrook	13	17	16	17	25	15	17	19
17-119-0010	Granite City Air Products	31	32	25	33	34	29	30	31
17-119-1007	Granite City Fire Station #1	24	-	24	34	40	24	29	33
Statewide Average		23	23	20	22	28	23	22	28

*The annual PM10 standard was revoked in 2007. Previously the standard was a 3-year average of the annual means. Concentrations above 50 ug/m3 were a violation of the former National Ambient Air Quality Standard. Currently only the 24-hour PM10 standard is in place (see Table B10).

2011 Carbon Monoxide Monitoring Sites





	Site ID	Site Name
1.	170310063	Chicago – Chicago Transit Authority
2.	170313103	Schiller Park
3	170314002	Cicero
4.	170314201	Northbrook
5.	170316004	Maywood
6.	171430036	Peoria
7.	171630010	East St. Louis
8.	171670008	Springfield
9.	172010011	Rockford

Table B12
2011 Carbon Monoxide Exceedances

EXCEEDANCES OF EITHER THE 1-HOUR (35 PPM) OR 8-HOUR (9 PPM) PRIMARY STANDARDS			
Date	**City**	**Concentration**	**Averaging Period**
None	None	None	None

Total 1-hour Over 35 ppm	0	Total 8-hour Over 9 ppm	0
Total Days 1-hour Over 35 ppm	0	Total Days 8-hour Over 9 ppm	0

Table B13
2011 Carbon Monoxide Highs

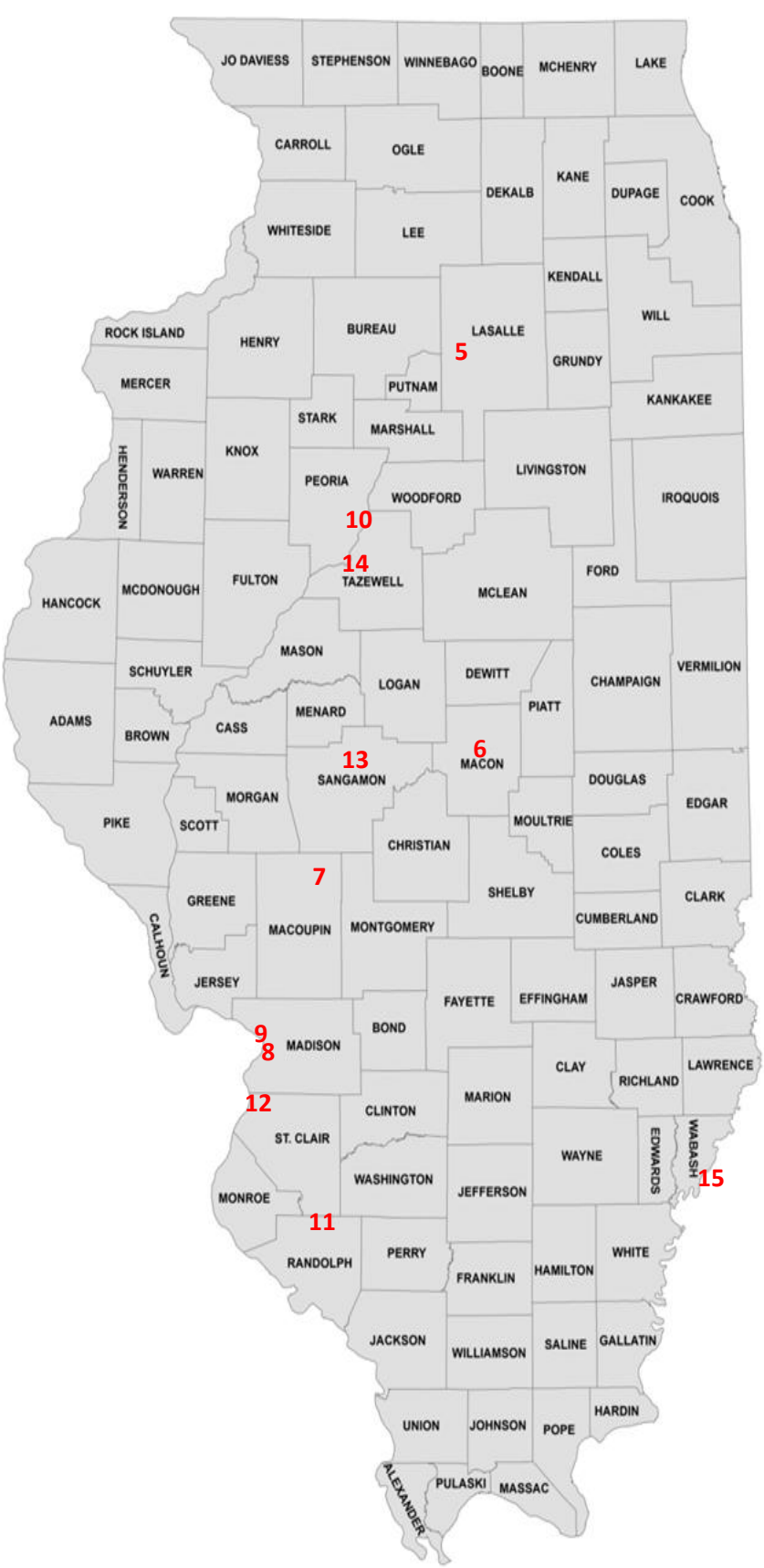
AQS ID	City	Total Hourly Samples	4th Highest Samples 1hr (ppm)				4th Highest Samples 8hr (ppm)			
17-031-0063	Chicago CTA Building	8698	3.3	2.0	1.8	1.7	1.5	1.2	1.1	1.1
17-031-3103	Schiller Park	8664	2.0	1.9	1.8	1.7	1.6	1.6	1.5	1.5
17-031-4002	Cicero Cook County Trailer	8641	2.0	1.7	1.6	1.6	1.3	1.2	1.2	1.1
17-031-4201	Northbrook	7471	1.7	1.6	1.5	1.5	1.3	1.2	1.1	1.0
17-031-6004	Maywood Com Ed Maintenance	7768	2.2	2.2	2.1	2.1	2.0	1.9	1.8	1.8
17-143-0036	Peoria Commercial Building	8552	2.3	2.3	2.2	2.2	2.0	2.0	1.8	1.6
17-163-0010	East St. Louis	8534	2.1	2.0	1.7	1.6	1.3	1.3	1.2	1.1
17-167-0008	Springfield Federal Building	8700	2.8	2.2	1.8	1.3	0.9	0.8	0.8	0.8
17-201-0011	Rockford City Hall	8675	1.9	1.9	1.9	1.8	1.5	1.2	1.2	1.1
Statewide Average			2.3	2.0	1.8	1.7	1.5	1.4	1.3	1.2

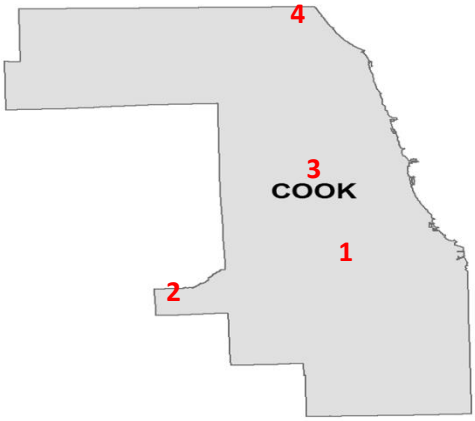
Table B14
2011 Carbon Monoxide 1-Hour and 8-Hour Design Values

AQS ID	City	1-Hour Samples Greater than 35 (ppm)					8-Hour Samples Greater than 9 (ppm)				
		2011	2010	2009	2008	2007	2011	2010	2009	2008	2007
17-031-0063	Chicago CTA Building	0	0	0	0	0	0	0	0	0	0
17-031-3103	Schiller Park	0	0	0	0	0	0	0	0	0	0
17-031-4002	Cicero Cook County Trailer	0	0	0	0	0	0	0	0	0	0
17-031-4201	Northbrook	0	0	0	0	0	0	0	0	0	0
17-031-6004	Maywood Com Ed Maintenance	0	0	0	0	0	0	0	0	0	0
17-143-0036	Peoria Commercial Building	0	0	0	0	0	0	0	0	0	0
17-163-0010	East St. Louis	0	0	0	0	0	0	0	0	0	0
17-167-0008	Springfield Federal Building	0	0	0	0	0	0	0	0	0	0
17-201-0011	Rockford City Hall	0	0	0	0	0	0	0	0	0	0

*The 1-hour and 8-hour carbon monoxide standard is an exceedance-based standard. The 1-hour standard is set at 35 ppm and is not to be exceeded more than once per year. The 8-hour standard is set at 9 ppm and is not to be exceeded more than once per year. More than one exceedance in a year is a violation of the National Ambient Air Quality Standard.

2011 Sulfur Dioxide Monitoring Sites





	Site ID	Site Name
1.	170310076	Chicago – Com Ed Maintenance Bldg.
2.	170311601	Lemont
3.	170314002	Cicero
4.	170314201	Northbrook
5.	170990007	Oglesby
6.	171150013	Decatur
7.	171170002	Nilwood
8.	171191010	South Roxana
9.	171193007	Wood River
10.	171430024	Peoria
11.	171570001	Houston
12.	171630010	East St. Louis
13.	171670006	Springfield
14.	171790004	Pekin
15.	171850001	Mount Carmel

Table B15
2011 Sulfur Dioxide Exceedances

EXCEEDANCES OF THE 1-HOUR PRIMARY STANDARD OF 75 ppb		
Date	**City**	**Concentration (ppb)**
1/1	Pekin	221
1/4	Lemont	78
1/9	Pekin	110
2/8	Lemont	90
2/11	Pekin	146
2/13	Pekin	199
3/9	Pekin	90
3/21	Pekin	126
3/23	Pekin	99
4/1	Pekin	89
4/6	Pekin	101
4/10	Pekin	95
4/23	Pekin	125
4/28	Pekin	113
5/7	Pekin	76
5/12	Pekin	151
5/23	Pekin	121
6/4	Pekin	88
6/7	Pekin	126
6/22	Pekin	164
6/23	Pekin	262
6/24	Lemont	81
6/27	Pekin	144
7/5	Lemont	89
7/26	Lemont	98
8/1	Lemont	86
8/7	Pekin	83
8/8	Pekin	95
8/9	Lemont	136
8/13	Pekin	109
9/1	Pekin	172
9/3	Pekin	85
9/11	Lemont	78
9/12	Pekin	94
9/21	Pekin	139
9/25	Pekin	104
10/15	Pekin	137
	Lemont	85
10/16	Lemont	159
12/7	Pekin	92
12/29	Pekin	125

Table B15
2011 Sulfur Dioxide Exceedances

EXCEEDANCES OF THE 1-HOUR PRIMARY STANDARD OF 75 ppb		
Date	**City**	**Concentration (ppb)**
12/30	Pekin	132
Total Over 75 ppb	42	
Total Days Over 75 ppb	41	

Table B16
2011 Sulfur Dioxide Highs

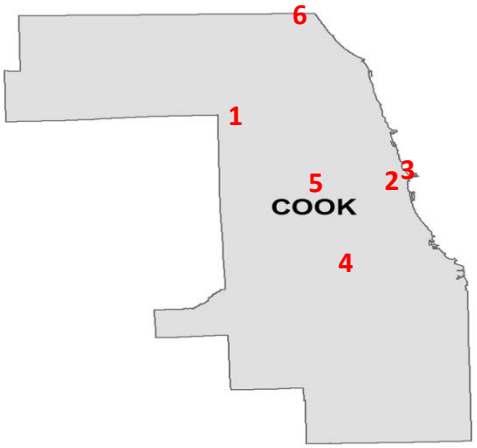
AQS ID	City	Total Valid Sample Days	Samples Greater Than 75 ppb			Highest Daily 1-Hour Samples (ppb)				Highest 3-Hour Block Averages (ppb)	
			2011	2010	2009	1st	2nd	3rd	4th	1st	2nd
17-031-0076	Chicago Com Ed Maintenance	363	0	0	0	29	28	28	27	22	21
17-031-1601	Lemont	365	10	7	10	159	136	98	90	95	80
17-031-4002	Cicero Cook County Trailer	324	0	0	0	47	33	33	29	24	23
17-031-4201	Northbrook	357	0	0	0	25	22	20	19	17	15
17-099-0007	Oglesby	350	0	0	0	9	9	8	8	7	6
17-115-0013	Decatur IEPA Trailer	357	0	0	0	48	41	35	33	30	28
17-117-0002	Nilwood	363	0	0	0	11	10	9	8	9	8
17-119-1010	South Roxana	359	0	0	4	26	25	23	22	23	16
17-119-3007	Wood River	335	0	2	1	47	31	30	28	28	19
17-143-0024	Peoria Fire Station #8	357	0	0	0	53	48	46	45	39	37
17-157-0001	Houston	364	0	0	0	69	46	22	22	51	44
17-163-0010	East St. Louis	360	0	0	0	26	24	23	22	18	16
17-167-0006	Springfield Sewage Treatment Plant	363	0	2	0	59	51	45	27	29	21
17-179-0004	Pekin	362	32	37	50	262	221	199	172	176	175
17-185-0001	Mount Carmel	363	0	2	2	71	56	48	47	53	42
Statewide Average						63	52	44	40	41	37
Total Over 75 ppb			42	50	68						
Total Days Over 75 ppb			41	47	65						

Table B17
2011 Sulfur Dioxide Design Values

AQS ID	City	99th Percentile Concentrations (ppb)					Design Values* (ppb)		
		2011	2010	2009	2008	2007	2009-2011	2008-2010	2007-2009
17-031-0076	Chicago Com Ed Maintenance	27	20	24	26	29	24	23	26
17-031-1601	Lemont	90	90	114	97	119	**98**	**100**	**110**
17-031-4002	Cicero Cook County Trailer	29	31	29	43	33	30	34	35
17-031-4201	Northbrook	19	15	18	13	-	18	15	15
17-099-0007	Oglesby	8	14	8	326	356	10	**116**	**230**
17-115-0013	Decatur IEPA Trailer	33	49	36	44	51	39	43	44
17-117-0002	Nilwood	8	15	16	20	20	13	17	19
17-119-1010	South Roxana	22	57	81	152	84	53	**97**	**106**
17-119-3007	Wood River	28	54	46	67	68	43	56	60
17-143-0024	Peoria Fire Station #8	45	43	21	52	58	36	39	44
17-157-0001	Houston	22	31	26	35	31	26	31	31
17-163-0010	East St. Louis	22	31	30	35	33	28	32	33
17-167-0006	Springfield Sewage Treatment Plant	27	24	24	131	139	25	60	**98**
17-179-0004	Pekin	172	228	233	243	220	**211**	**235**	**232**
17-185-0001	Mount Carmel	47	66	69	90	109	61	75	**89**
Statewide Average		40	47	47	81	88	48	58	71

*The design value is the 3-year average of the 99th percentile concentration. Design value greater than 75 ppb is a violation of the National Ambient Air Quality Standard.

2011 Nitrogen Dioxide Monitoring Sites



	Site ID	Site Name
1.	170190004	Schiller Park
2.	170310042	Chicago – Chicago Transit Authority
3.	170310072	Chicago – Jardine Water Plant
4.	170310076	Chicago – Com Ed Maintenance Bldg.
5.	170314002	Cicero
6.	170314201	Northbrook
7.	171630010	East St. Louis

Table B18
2011 1-Hour Nitrogen Dioxide Exceedances

EXCEEDANCES OF THE 1-HOUR PRIMARY STANDARD OF 100 PPB		
Date	**City**	**Concentration (ppb)**
None	None	None
Total Over 100 ppb	0	
Total Days Over 100 ppb	0	

Table B19
2011 Nitrogen Dioxide Highs

AQS ID	City	Total Valid Sample Days	Samples Greater Than 100 ppb			Highest Samples							
			2011	2010	2009	1st	2nd	3rd	4th	5th	6th	7th	8th
17-031-0063	Chicago CTA Building	351	0	0	11	89	74	69	68	67	67	66	65
17-031-0072	Chicago[1] Jardine Water Plant	111	0	0	0	61	59	59	59	58	56	53	53
17-031-0076	Chicago Com Ed Maintenance	360	0	0	1	67	67	65	65	61	58	57	57
17-031-3103	Schiller Park	349	0	0	1	73	72	66	65	65	65	64	64
17-031-4002	Cicero Cook County Trailer	350	0	0	2	79	71	68	66	63	63	62	61
17-031-4201	Northbrook	251	0	0	0	50	47	46	45	45	41	40	40
17-163-0010	East St. Louis	341	0	0	0	45	42	41	40	40	37	37	37
Statewide Average						66	62	59	58	57	55	54	54
Total Over 100 ppb			0	0	15								
Total Days Over 100 ppb			0	0	12								

[1] Chicago Jardine site operated only during ozone season.

Table B20
2011 Nitrogen Dioxide Design Values

AQS ID	City	98th Percentile Concentrations (ppb)					Design Values* (ppb)		
		2011	2010	2009	2008	2007	2009-2011	2008-2010	2007-2009
17-031-0063	Chicago CTA Building	65	71	79	132	119	72	94	110
17-031-0072	Chicago Jardine Water Plant	59	52	58	61	64	56	57	61
17-031-0076	Chicago Com Ed Maintenance	57	56	58	56	61	57	57	58
17-031-3103	Schiller Park	64	60	64	72	75	63	65	70
17-031-4002	Cicero Cook County Trailer	62	64	60	66	67	62	63	64
17-031-4201	Northbrook	45	53	54	50	47	51	52	50
17-163-0010	East St. Louis	37	43	49	48	52	43	47	50
Statewide Average		56	57	60	69	69	58	62	66

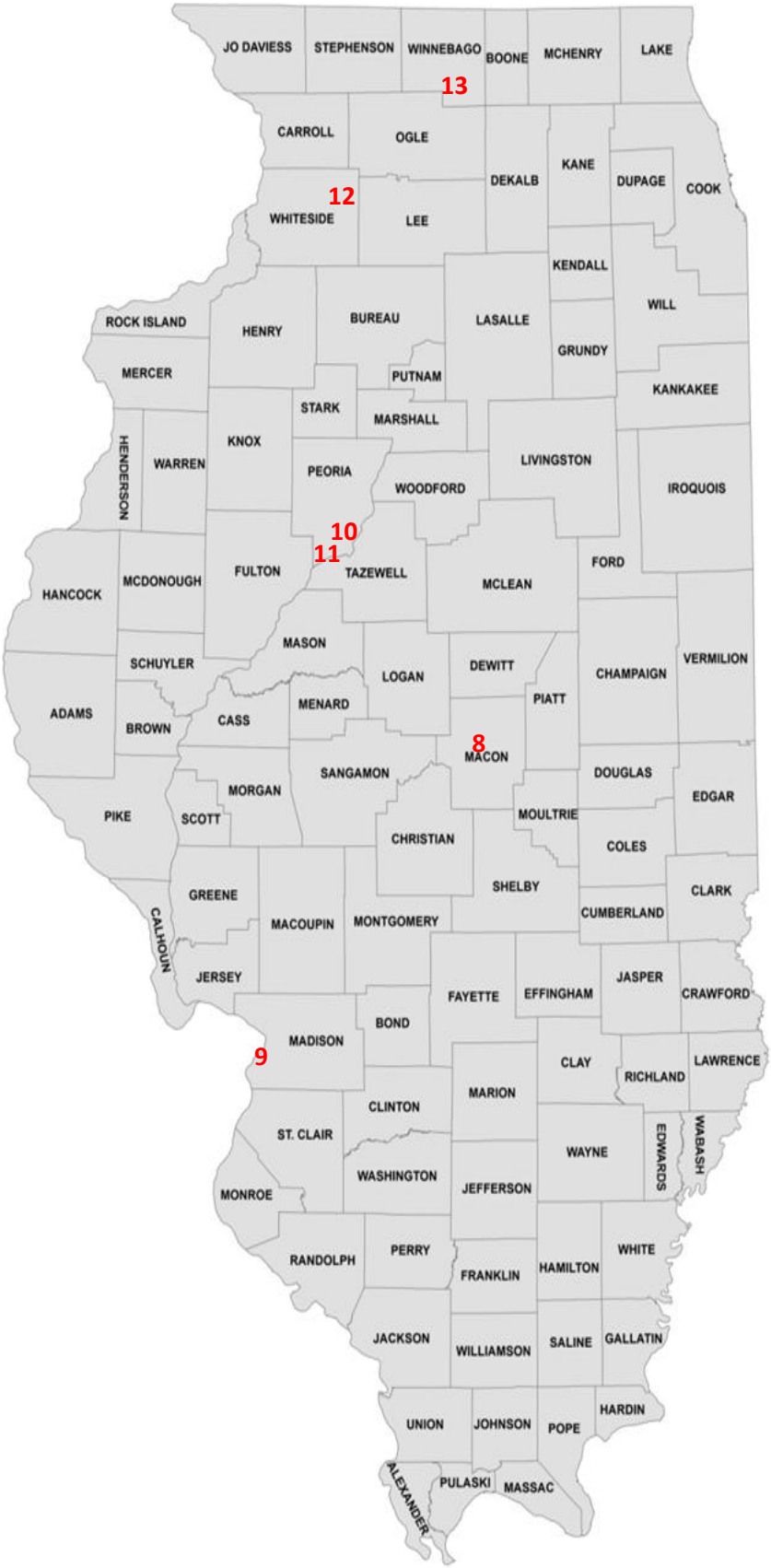
*The design value is the 3-year average of the 98th percentile concentration. Design value greater than 100 ppb is a violation of the National Ambient Air Quality Standard.

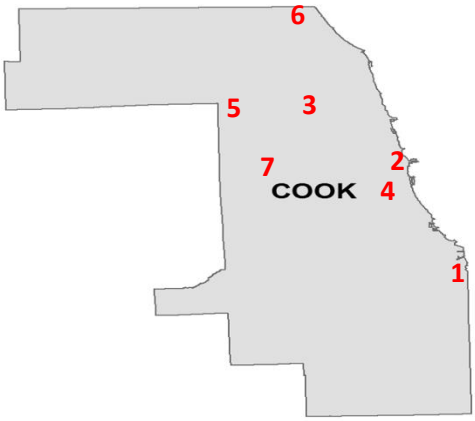
Table B21
2011 Nitrogen Dioxide Annual Design Values

AQS ID	City	Annual Arithmetic Mean Concentrations* (ppb)				
		2011	2010	2009	2008	2007
17-031-0063	Chicago CTA Building	21	25	25	31	33
17-031-0076	Chicago Com Ed Maintenance	16	17	17	17	18
17-031-3103	Schiller Park	23	23	23	27	28
17-031-4002	Cicero Cook County Trailer	18	20	20	20	22
17-031-4201	Northbrook	11	12	12	14	15
17-163-0010	East St. Louis	9	12	14	14	16
Statewide Average		16	18	19	21	22

*The design value is the highest annual average concentration during the most recent two years. Design value greater than 53 ppb is a violation of the National Ambient Air Quality Standard.

2011 Lead Monitoring Sites





	Site ID	Site Name
1.	170310022	Chicago – Washington High School
2.	170310026	Chicago – Cermak Pump Station
3.	170310052	Chicago – Mayfair Pump Station
4.	170310110	Chicago – Perez Elementary
5.	170313103	Schiller Park
6.	170314201	Northbrook
7.	170316003	Maywood
8.	171150110	Decatur – Mueller
9.	171190010	Granite City – 15th and Madison
10.	171430110	Bartonville
11.	171430210	Mapleton
12.	171950110	Sterling
13.	172010110	Rockford – J. Rubin & Company

Table B22
2011 Lead Highs

AQS ID	City	Total Sample Days	Highest Monthly Means					Maximum 3-Month Mean
			1st	2nd	3rd	4th	5th	
17-031-0022	Chicago Washington High School	60	0.06	0.05	0.05	0.04	0.03	0.05
17-031-0026	Chicago Cermak Pump Station	60	0.03	0.02	0.02	0.02	0.02	0.02
17-031-0052	Chicago Mayfair Pump Station	61	0.02	0.02	0.02	0.01	0.01	0.02
17-031-0110	Chicago Perez Elementary	105	0.23	0.05	0.04	0.04	0.03	0.29
17-031-3103	Schiller Park	58	0.01	0.01	0.01	0.01	0.01	0.01
17-031-4201	Northbrook	57	0.01	0.01	0.01	0.01	0.01	0.01
17-031-6003	Maywood 4th District Court	60	0.03	0.02	0.02	0.02	0.02	0.03
17-115-0110	Decatur Mueller	58	0.39	0.15	0.09	0.09	0.07	0.20
17-119-0010	Granite City Air Products	58	0.17	0.15	0.14	0.10	0.05	0.21
17-143-0110	Bartonville	56	0.02	0.01	0.01	0.01	0.01	0.01
17-143-0210	Mapleton	60	0.03	0.01	0.01	0.01	0.01	0.02
17-195-0110	Sterling	59	0.03	0.03	0.03	0.03	0.02	0.03
17-201-0110	Rockford J. Rubin & Company	55	0.07	0.04	0.04	0.04	0.03	0.04
Statewide Average			0.08	0.04	0.04	0.03	0.02	0.07

Table B23
2011 Lead Design Values

AQS ID	City	Maximum 3-Month Rolling Mean (ug/m3)					Design Values* (ug/m3)		
		2011	2010	2009	2008	2007	2009-2011	2008-2010	2007-2009
17-031-0022	Chicago Washington High School	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
17-031-0026	Chicago Cermak Pump Station	0.02	0.03	0.03	0.05	0.04	0.03	0.05	0.05
17-031-0052	Chicago Mayfair Pump Station	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
17-031-0110	Chicago Perez Elementary	0.29	0.24	-	-	-	**0.29**	**0.24**	-
17-031-3103	Schiller Park	0.01	0.01	0.01	0.01	0.02	0.01	0.01	0.02
17-031-4201	Northbrook	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
17-031-6003	Maywood 4th District Court	0.03	0.04	0.03	0.03	0.03	0.04	0.04	0.03
17-115-0110	Decatur Mueller	0.20	0.12	-	-	-	**0.20**	0.12	-
17-119-0010	Granite City Air Products	0.21	0.42	0.12	0.28	0.20	**0.42**	**0.42**	**0.28**
17-143-0110	Bartonville	0.01	0.02	-	-	-	0.02	0.02	-
17-143-0210	Mapleton	0.02	0.02	-	-	-	0.02	0.02	-
17-195-0110	Sterling	0.03	0.02	-	-	-	0.03	0.02	-
17-201-0110	Rockford J. Rubin & Company	0.04	0.06	-	-	-	0.06	0.06	-
Statewide Average		0.07	0.07	0.03	0.05	0.04	0.07	0.07	0.05

*The design value is the maximum 3-month rolling mean over the latest 3-year period. Design value greater than 0.15 ug/m3 is a violation of the National Ambient Air Quality Standard.

Table B24
2011 Filter Analysis Data

AQS ID	City	Arsenic				Beryllium				Cadmium			
		Total Samples	Highs 1st	Highs 2nd	Annual Mean	Total Samples	Highs 1st	Highs 2nd	Annual Mean	Total Samples	Highs 1st	Highs 2nd	Annual Mean
17-031-0022	Chicago Washington High School	57	0.007	0.005	0.001	-	-	-	-	60	0.004	0.004	0.002
17-031-0026	Chicago Cermak Pump Station	57	0.009	0.004	0.001	-	-	-	-	60	0.005	0.003	0.001
17-031-0052	Chicago Mayfair Pump Station	58	0.008	0.004	0.001	-	-	-	-	61	0.002	0.002	0.001
17-031-0110	Chicago Perez Elementary	105	0.005	0.005	0.000	93	0.000	0.000	0.000	105	0.022	0.004	0.000
17-031-3103	Schiller Park	58	0.000	0.000	0.000	58	0.000	0.000	0.000	58	0.000	0.000	0.000
17-031-4201	Northbrook	57	0.005	0.000	0.000	57	0.000	0.000	0.000	57	0.000	0.000	0.000
17-031-6003	Maywood 4th District Court	57	0.007	0.006	0.001	-	-	-	-	60	0.003	0.003	0.001
17-115-0110	Decatur Mueller	58	0.000	0.000	0.000	58	0.000	0.000	0.000	58	0.004	0.002	0.000
17-119-0010	Granite City Air Products	58	0.464	0.058	0.011	58	0.000	0.000	0.000	58	0.002	0.000	0.000
17-143-0110	Bartonville	56	0.029	0.003	0.001	56	0.000	0.000	0.000	56	0.000	0.000	0.000
17-143-0210	Mapleton	60	0.000	0.000	0.000	60	0.000	0.000	0.000	60	0.000	0.000	0.000
17-195-0110	Sterling	59	0.004	0.000	0.000	59	0.000	0.000	0.000	59	0.005	0.004	0.000
17-201-0110	Rockford J. Rubin & Company	55	0.008	0.005	0.000	55	0.000	0.000	0.000	55	0.000	0.000	0.000

Table B24
2011 Filter Analysis Data

AQS ID	City	Chromium				Iron				Manganese			
		Total Samples	Highs 1st	Highs 2nd	Annual Mean	Total Samples	Highs 1st	Highs 2nd	Annual Mean	Total Samples	Highs 1st	Highs 2nd	Annual Mean
17-031-0022	Chicago Washington High School	60	0.066	0.037	0.014	60	3.54	3.40	0.95	60	0.434	0.355	0.107
17-031-0026	Chicago Cermak Pump Station	60	0.030	0.029	0.011	60	2.14	1.73	0.95	60	0.118	0.108	0.035
17-031-0052	Chicago Mayfair Pump Station	61	0.032	0.029	0.011	61	2.87	2.09	0.64	61	0.359	0.083	0.030
17-031-0110	Chicago Perez Elementary	105	0.022	0.020	0.003	105	3.54	2.32	0.69	105	0.097	0.080	0.025
17-031-3103	Schiller Park	58	0.008	0.007	0.003	58	1.88	1.88	0.94	58	0.100	0.064	0.028
17-031-4201	Northbrook	57	0.009	0.005	0.000	57	5.30	1.55	0.46	57	0.055	0.049	0.014
17-031-6003	Maywood 4th District Court	60	0.092	0.059	0.023	60	4.36	4.31	2.17	60	0.189	0.187	0.055
17-115-0110	Decatur Mueller	58	0.006	0.005	0.001	58	1.90	1.56	0.75	58	0.130	0.090	0.030
17-119-0010	Granite City Air Products	58	0.015	0.014	0.004	58	5.39	3.28	1.19	58	0.334	0.327	0.081
17-143-0110	Bartonville	56	0.022	0.017	0.003	56	2.89	2.79	0.67	56	0.219	0.159	0.037
17-143-0210	Mapleton	60	0.004	0.004	0.000	60	2.24	2.12	0.48	60	0.075	0.061	0.019
17-195-0110	Sterling	59	0.026	0.024	0.006	59	4.82	4.08	1.23	59	0.414	0.400	0.090
17-201-0110	Rockford J. Rubin & Company	55	0.014	0.013	0.004	55	6.41	6.09	1.97	55	0.519	0.507	0.112

Table B24
2011 Filter Analysis Data

AQS ID	City	Nickel				Nitrates				Sulfates			
		Total Samples	Highs 1st	Highs 2nd	Annual Mean	Total Samples	Highs 1st	Highs 2nd	Annual Mean	Total Samples	Highs 1st	Highs 2nd	Annual Mean
17-031-0022	Chicago Washington High School	60	0.015	0.014	0.006	55	34.0	13.3	4.1	58	13.5	12.8	7.5
17-031-0026	Chicago Cermak Pump Station	60	0.011	0.008	0.006	55	31.3	20.2	4.1	58	15.8	12.4	6.9
17-031-0052	Chicago Mayfair Pump Station	61	0.010	0.009	0.005	56	29.1	13.7	4.1	59	12.5	12.1	6.2
17-031-0110	Chicago Perez Elementary	105	0.011	0.009	0.001	-	-	-	-	-	-	-	-
17-031-3103	Schiller Park	58	0.004	0.004	0.000	-	-	-	-	-	-	-	-
17-031-4201	Northbrook	57	0.019	0.000	0.000	-	-	-	-	-	-	-	-
17-031-6003	Maywood 4th District Court	60	0.016	0.015	0.008	55	31.5	14.9	3.6	58	17.7	16.1	6.7
17-115-0110	Decatur Mueller	58	0.011	0.006	0.001	-	-	-	-	-	-	-	-
17-119-0010	Granite City Air Products	58	0.004	0.000	0.000	-	-	-	-	-	-	-	-
17-143-0110	Bartonville	56	0.004	0.004	0.000	-	-	-	-	-	-	-	-
17-143-0210	Mapleton	60	0.003	0.000	0.000	-	-	-	-	-	-	-	-
17-195-0110	Sterling	59	0.007	0.006	0.001	-	-	-	-	-	-	-	-
17-201-0110	Rockford J. Rubin & Company	55	0.012	0.007	0.002	-	-	-	-	-	-	-	-

Table B25
2011 Toxic Compounds[1]

AQS ID	City	Compounds	Highest 24-hour Samples (ppbc)				Annual Average
			1st	2nd	3rd	4th	
17-031-4201	Northbrook	1,3 Butadiene	4.84	2.18	.54	.22	.21
		Methylene Chloride	10.90	6.10	3.56	2.68	1.03
		Chloroform	6.72	6.71	4.98	4.49	1.24
		Carbon Tetrachloride	.15	.14	.13	.13	.10
		Tetrachloroethylene	.71	.64	.50	.31	.10
		Trichlorethylene	.11	.08	.06	.05	.03
		1,2 Dichloropropane	.03	.03	.03	.03	.03
		Vinyl Chloride	.03	.03	.02	.02	.01
		Benzene	4.90	3.40	2.82	2.26	.97
		Toluene	7.47	6.67	5.54	4.22	2.11
		Formaldehyde[3]	11.1	6.63	6.56	6.21	2.05
		Acetaldehyde[3]	2.28	1.92	1.69	1.54	.78
		Acrolein	7.20	4.29	4.02	2.86	1.32
		Chromium VI[2]	.07	.04	.03	.03	.00
17-031-3103	Schiller Park	1,3 Butadiene	1.37	.93	.75	.48	.28
		Methylene Chloride	.68	.63	.50	.43	.25
		Chloroform	.05	.05	.04	.04	.02
		Carbon Tetrachloride	.13	.12	.12	.12	.09
		Tetrachloroethylene	.51	.42	.26	.19	.09
		Trichlorethylene	3.12	2.68	1.08	.87	.24
		1,2 Dichloropropane	.03	.03	.03	.03	.03
		Vinyl Chloride	.07	.03	.02	.01	.01
		Benzene	5.83	3.58	3.22	2.93	1.60
		Toluene	13.79	10.22	8.05	7.14	3.08
		Formaldehyde	7.3	6.9	5.6	5.4	2.67
		Acetaldehyde	16.1	12.5	8.9	8.5	3.26
		Acrolein	5.55	4.26	2.87	2.72	1.58

[1] – Toxic metals data (As, Be, Cd, Cr, Mn, Ni) summarized in Table B24 - Filter Analysis Data

[2] – Units of nanograms per cubic meter

[3] – Units of parts per billion

Table B26
2011 PM2.5 Speciation

AQS ID	City	Major Constituents	Highest 24-hour Samples (ug/m3)				Annual Average
			1st	2nd	3rd	4th	
17-031-0076	Chicago Com Ed Maintenance	Inorganic Elements	1.4	1.3	1.2	1.2	0.5
		Ammonium	5.1	4.9	3.5	3.3	1.1
		Nitrate	9.2	8.9	8.4	7.4	2.0
		Sulfate	9.8	6.3	6.2	5.8	2.1
		Elemental Carbon	1.3	0.9	0.9	0.9	0.4
		Organic Carbon	5.4	5.3	4.8	4.2	2.3
17-031-0057	Chicago Springfield Pump Station	Inorganic Elements	6.8	1.6	1.6	1.4	0.8
		Ammonium	5.0	4.7	3.9	3.2	1.2
		Nitrate	10.7	9.4	8.4	6.9	2.2
		Sulfate	6.1	6.1	6.1	5.6	2.3
		Elemental Carbon	2.0	1.1	1.0	1.0	0.5
		Organic Carbon	5.5	5.5	5.5	4.7	2.8
17-031-4201	Northbrook	Inorganic Elements	3.4	1.0	1.0	1.0	0.4
		Ammonium	5.0	4.4	4.0	3.9	1.1
		Nitrate	10.7	9.8	8.7	8.2	2.0
		Sulfate	9.0	6.7	6.2	6.1	2.0
		Elemental Carbon	1.0	1.0	0.9	0.6	0.3
		Organic Carbon	4.6	4.6	4.5	4.5	2.1
17-043-4002	Naperville	Inorganic Elements	0.9	0.9	0.9	0.8	0.5
		Ammonium	5.6	5.1	3.8	3.2	1.2
		Nitrate	11.5	8.8	6.9	6.4	2.1
		Sulfate	6.0	5.9	5.6	5.5	2.2
		Elemental Carbon	0.6	0.6	0.6	0.6	0.3
		Organic Carbon	5.6	5.3	5.2	4.4	2.4

Table B26
2011 PM2.5 Speciation

AQS ID	City	Major Constituents	Highest 24-hour Samples (ug/m3)				Annual Average
			1st	2nd	3rd	4th	
17-119-0024	Granite City Gateway Medical Center	Inorganic Elements	5.1	5.1	4.7	3.7	1.6
		Ammonium	3.9	3.7	3.6	3.4	1.1
		Nitrate	9.8	8.2	8.2	4.2	1.6
		Sulfate	7.5	7.1	5.5	5.4	2.8
		Elemental Carbon	2.5	1.4	1.3	1.2	0.7
		Organic Carbon	16.5	6.8	5.0	4.6	3.3

Table B27
2011 Carbon Dioxide (CO_2)

AQS ID	City	Annual Means (ppm)					
		2011	2010	2009	2008	2007	2006
17-117-0002	Nilwood	389	394	384	380	379	390
Hawaii	Mauna Loa	392	390	387	386	384	382

APPENDIX C
POINT SOURCE EMISSION INVENTORY SUMMARY TABLES

Table C1

Carbon Monoxide Point Source Emission Distribution (Tons/Year)

Category	2007	2008	2009	2010	2011
External Fuel Combustion					
Electric Generation	14,623.7	15,185.6	15,467.6	18,540.9	19,340.9
Industrial	7,266.8	7,488.4	8,004.3	7,261.6	7,244.6
Commercial/Institutional	2,143.3	2,063.5	2,039.0	1,830.2	1,870.1
Space Heating	22.7	21.3	22.8	23.8	21.5
Internal Fuel Combustion					
Electric Generation	2,571.4	3,158.0	3,129.5	3,196.8	3,404.7
Industrial	4,852.8	5,573.0	5,878.8	5,178.2	5,185.1
Commercial/Institutional	631.5	409.9	373.3	355.6	300.0
Engine Testing	406.8	359.9	377.5	316.4	218.5
Industrial Processes					
Chemical Manufacturing	2,474.4	2,366.9	2,246.2	1,446.1	1,771.4
Food/Agriculture	3,430.3	3,483.1	3,598.5	3,237.1	3,142.9
Primary Metal Production	22,408.7	20,480.0	20,831.4	9,947.8	21,614.7
Secondary Metal Production	3,497.9	4,683.5	3,173.4	2,646.3	2,671.3
Mineral Products	5,880.0	5,524.0	4,793.9	3,640.1	2,760.4
Petroleum Industry	6,087.8	5,970.0	4,736.0	4,018.8	4,127.6
Paper and Wood Products	38.3	38.3	65.5	38.0	1.5
Rubber and Plastic Products	40.1	37.9	79.5	33.5	32.8
Fabricated Metal Products	1,058.0	299.8	272.9	235.9	232.1
Oil and Gas Production	307.0	339.5	252.2	211.5	231.2
Electrical Equipment	2.3	2.2	2.2	2.2	2.2
Transportation Equipment	7.7	8.0	5.1	5.1	3.5
Health Services	268.6	306.6	317.6	343.1	311.4
In-Process Fuel Use	398.2	364.3	338.3	154.4	327.7
Miscellaneous Manufacturing	100.5	71.3	88.0	143.8	123.5
Organic Solvent Emissions					
Organic Solvent Use	0.0	0.0	0.0		
Surface Coating Operations	188.7	177.6	150.8	164.8	194.3
Petroleum Product Storage	0.0	0.0	0.0		
Bulk Terminals/Plants	19.4	17.5	17.4	17.5	17.5
Printing/Publishing	33.6	10.1	5.8	5.6	6.0
Petroleum Marketing/Transport	8.8	0.0	57.4	6.7	10.5
Organic Chemical Storage (large)	0.9	0.4	0.4		
Organic Chemical Transportation	0.0	0.0	0.0		
Organic Solvent Evaporation	37.5	37.1	30.2	30.3	40.6
Solid Waste Disposal					
Government	1,506.9	1,526.1	1,495.1	1,993.0	2,117.5
Commercial/Institutional	108.3	90.6	86.9	68.7	47.3
Industrial	515.4	515.6	764.3	689.0	893.6
Site Remediation	29.1	16.2	16.2	14.2	16.2

Table C1

Carbon Monoxide Point Source Emission Distribution (Tons/Year)

Category	2007	2008	2009	2010	2011
MACT Processes					
Food and Agriculture Processes	1.3	0.0	0.0		
Vinyl Based Resins	0.1	0.0	0.0	0.1	0.1
Totals	**80,968.8**	**80,627.9**	**78,719.6**	**65,797.2**	**78,283.1**

Table C2

Nitrogen Oxides Point Source Emission Distribution (Tons/Year)

Category	2007	2008	2009	2010	2011
External Fuel Combustion					
Electric Generation	122,337.1	118,842.1	121,547.1	73,871.1	77,280.9
Industrial	16,403.3	14,271.4	14,397.1	11,915.1	13,211.3
Commercial/Institutional	2,962.7	2,904.5	2,783.7	2,527.3	2,550.5
Space Heating	112.4	105.2	114.3	117.4	106.2
Internal Fuel Combustion					
Electric Generation	4,386.3	4,447.1	3,220.6	2,820.0	2,759.3
Industrial	18,984.8	22,643.7	21,769.7	20,921.5	20,450.5
Commercial/Institutional	1,016.7	887.9	829.0	773.8	573.2
Engine Testing	1,010.2	939.2	896.3	573.2	578.8
Industrial Processes					
Chemical Manufacturing	1,355.3	1,223.8	1,197.9	1,484.9	1,468.7
Food/Agriculture	1,127.1	1,300.7	1,617.3	1,751.1	1,412.2
Primary Metal Production	2,207.5	2,298.8	2,251.9	1,199.6	2,499.3
Secondary Metal Production	1,201.0	1,303.2	1,182.3	865.9	982.3
Mineral Products	16,827.3	16,048.8	13,508.7	8,692.5	8,117.8
Petroleum Industry	10,594.2	11,237.7	8,564.1	7,751.7	7,468.6
Paper and Wood Products	35.4	35.4	17.0	6.9	1.3
Rubber and Plastic Products	38.9	36.3	84.5	42.4	40.9
Fabricated Metal Products	416.0	395.5	363.5	316.9	304.7
Oil and Gas Production	1,058.0	830.7	811.3	756.3	600.9
Miscelaneous Machinery	2.9	2.6	9.1	9.2	9.2
Electrical Equipment	4.7	3.4	2.9	3.0	3.0
Transportation Equipment	0.3	0.2	0.1	0.2	0.1
Health Services	7.1	7.1	7.0	7.1	7.1
Textile Products	0.9	0.9	0.9	0.9	0.9
In-Process Fuel Use	1,872.5	1,653.4	1,596.1	450.1	1,077.8
Miscellaneous Manufacturing	47.0	41.5	46.5	53.8	47.3
Organic Solvent Emissions					
Organic Solvent Use	0.0	0.0	0.0		
Surface Coating Operations	437.8	413.4	394.0	415.8	459.2
Petroleum Product Storage	0.0	0.0	0.0		
Bulk Terminals/Plants	24.5	16.4	16.4	16.4	16.5
Printing/Publishing	53.0	13.7	13.2	9.0	8.8
Petroleum Marketing/Transport	5.8	2.3	25.3	4.8	7.0
Organic Chemical Storage (large)	0.2	0.1	0.1		
Organic Chemical Transportation	0.0	0.0	0.0		
Organic Solvent Evaporation	42.7	42.3	40.0	40.1	42.6

Table C2

Nitrogen Oxides Point Source Emission Distribution (Tons/Year)

Category	2007	2008	2009	2010	2011
Solid Waste Disposal					
Government	727.6	779.5	567.7	681.3	643.8
Commercial/Institutional	24.8	18.3	16.8	14.3	14.3
Industrial	234.5	240.0	258.8	226.9	263.2
Site Remediation	39.3	24.9	24.9	22.7	26.6
MACT Processes					
Food and Agriculture Processes	1.1	0.0	0.0		
Vinyl Based Resins	0.4	0.4	0.4	0.4	0.4
Totals	**205,602.5**	**203,013.7**	**198,178.1**	**138,343.8**	**143,035.4**

Table C3

PM10 Point Source Emission Distribution (Tons/Year)

Category	2007	2008	2009	2010	2011
External Fuel Combustion					
Electric Generation	8,126.1	7,740.7	8,454.8	8,065.1	8,134.8
Industrial	2,008.5	1,779.6	1,739.4	1,553.5	1,601.1
Commercial/Institutional	283.4	285.5	282.0	245.6	273.2
Space Heating	3.8	3.5	3.6	3.9	3.5
Internal Fuel Combustion					
Electric Generation	252.7	295.0	229.2	243.0	283.3
Industrial	269.7	320.4	315.7	275.7	260.9
Commercial/Institutional	39.7	37.4	43.7	43.9	36.9
Engine Testing	22.0	21.9	29.6	19.7	14.1
Industrial Processes					
Chemical Manufacturing	1,024.0	961.9	943.2	927.9	949.1
Food/Agriculture	7,350.8	7,516.1	7,083.1	7,141.3	6,737.9
Primary Metal Production	1,298.8	1,269.4	1,213.7	790.9	1,301.2
Secondary Metal Production	1,473.8	1,575.5	1,573.9	1,351.6	1,265.0
Mineral Products	8,398.1	8,347.5	6,565.1	6,486.5	5,651.0
Petroleum Industry	2,104.5	1,990.6	1,708.4	1,593.4	993.7
Paper and Wood Products	197.3	252.5	227.6	219.4	180.1
Rubber and Plastic Products	157.7	159.9	189.5	192.7	192.2
Fabricated Metal Products	285.1	273.3	282.9	320.8	266.5
Oil and Gas Production	4.2	6.0	7.0	7.5	11.6
Building Construction	0.0	0.0	3.0	2.0	1.6
Miscelaneous Machinery	20.0	13.4	13.4	13.5	13.5
Electrical Equipment	4.1	3.5	2.8	2.5	2.4
Transportation Equipment	17.8	17.6	14.0	7.8	18.7
Health Services	56.3	74.2	83.2	94.2	93.5
Leather and Leather Products	3.5	3.3	3.3	3.3	3.3
Textile Products	0.1	0.0	0.0	0.1	0.1
Process Cooling	349.0	387.1	375.3	384.4	402.7
In-Process Fuel Use	161.1	150.2	143.7	43.3	144.8
Miscellaneous Manufacturing	50.4	33.9	30.0	25.3	22.3
Organic Solvent Emissions					
Organic Solvent Use	0.3	0.0	0.0		
Surface Coating Operations	213.9	229.0	224.7	199.7	199.4
Petroleum Product Storage	0.0	0.0	0.0		
Bulk Terminals/Plants	1.3	1.3	1.3	12.9	1.3
Printing/Publishing	9.3	6.1	3.1	2.9	11.1
Petroleum Marketing/Transport	0.0	0.0	0.4	0.4	0.8
Organic Chemical Storage (large)	0.9	6.3	3.7	4.8	4.8
Organic Chemical Transportation	0.0	0.0	0.0		
Organic Solvent Evaporation	2.5	1.7	1.7	1.7	6.6

Table C3

PM10 Point Source Emission Distribution (Tons/Year)

Category	2007	2008	2009	2010	2011
Solid Waste Disposal					
Government	341.9	354.1	349.8	355.9	401.5
Commercial/Institutional	21.3	16.1	14.9	11.0	9.8
Industrial	125.4	106.7	95.9	84.7	102.6
Site Remediation	21.7	84.8	75.9	48.2	50.8
MACT Processes					
Food and Agriculture Processes	0.1	0.0	0.0	0.0	0.0
Styrene or Methacrylate Based Resins	2.0	1.9	0.7	0.8	0.8
Alkyd Resin Production	3.5	3.8	72.0	4.8	3.0
Vinyl Based Resins	127.4	127.3	129.8	129.9	129.9
Miscellaneous Polymers	8.6	8.5	9.8	9.6	9.6
Inorganic Chemicals				0.3	0.3
Consumer Products Manufacturing	0.2	0.3	0.3	0.2	0.2
Paint Stripper Use	1.0	0.2	0.2		
Miscellaneous Processes	0.1	1.0	1.0	1.0	1.0
Phthalate Plasticizers Production	3.1	3.1	3.1	3.2	3.2
Totals	**34,846.6**	**34,474.1**	**32,551.4**	**30,930.9**	**29,795.9**

Table C4

Sulfur Dioxide Point Source Emission Distribution (Tons/Year)

Category	2007	2008	2009	2010	2011
External Fuel Combustion					
Electric Generation	292,645.7	284,032.6	271,264.7	242,045.6	230,522.6
Industrial	51,539.0	35,257.4	35,929.6	30,458.6	30,428.2
Commercial/Institutional	5,360.3	5,227.7	4,528.6	4,265.9	4,828.9
Space Heating	0.9	0.9	0.6	0.8	0.7
Internal Fuel Combustion					
Electric Generation	141.2	163.8	185.8	330.8	497.9
Industrial	134.9	147.9	118.5	108.9	84.8
Commercial/Institutional	58.1	60.4	55.4	64.8	48.6
Engine Testing	26.2	19.5	99.6	66.7	8.8
Industrial Processes					
Chemical Manufacturing	15,286.7	9,901.2	8,107.9	1,020.1	1,462.5
Food/Agriculture	1,698.9	1,602.3	1,387.4	1,341.0	1,464.4
Primary Metal Production	2,126.7	2,413.2	2,282.7	1,119.7	2,425.3
Secondary Metal Production	122.7	130.1	151.3	122.0	124.7
Mineral Products	13,465.2	18,028.2	17,905.4	13,347.2	14,814.3
Petroleum Industry	42,599.4	45,037.0	29,034.1	7,875.6	6,138.4
Paper and Wood Products	1.3	1.2	1.7	0.6	0.0
Rubber and Plastic Products	4.6	4.5	4.8	4.7	4.6
Fabricated Metal Products	16.3	16.3	16.3	16.2	16.1
Oil and Gas Production	618.0	618.1	402.9	378.3	378.4
Miscelaneous Machinery	0.0				
Electrical Equipment	0.6	0.0	0.0	0.0	0.0
Transportation Equipment	0.2	0.1	0.1	0.1	0.1
Health Services	7.6	7.6	7.6	7.7	7.7
Process Cooling	2.1	2.0	2.0	0.0	0.0
In-Process Fuel Use	3,271.7	3,227.5	3,082.3	669.3	416.7
Miscellaneous Manufacturing	64.6	28.4	28.4	63.0	71.5
Organic Solvent Emissions					
Surface Coating Operations	0.0	0.0	0.0	3.1	3.3
Petroleum Product Storage	3.1	3.0	2.6	7.7	7.7
Printing/Publishing	0.3	0.0	7.4	0.0	0.4
Petroleum Marketing/Transport					0.4
Organic Chemical Transportation	0.0	0.0	0.0		
Organic Chemical Storage (large)	0.0	0.1	0.0	0.1	0.1
Organic Solvent Evaporation	3.2	3.2	3.1	3.2	3.2

Table C4

Sulfur Dioxide Point Source Emission Distribution (Tons/Year)

Category	2007	2008	2009	2010	2011
Solid Waste Disposal					
Government	374.2	378.0	425.9	691.8	886.3
Commercial/Institutional	6.5	3.7	3.2	2.7	2.7
Industrial	189.3	380.9	559.0	487.3	802.7
Site Remediation	5.7	6.0	5.6	5.7	6.5
MACT Processes					
Food and Agriculture Processes	200.8	200.5	200.5	199.7	199.7
Miscellaneous Processes	0.2	0.0	0.0	0.0	0.0
Totals	**429,976.3**	**406,904.8**	**375,806.5**	**304,708.9**	**295,658.3**

Table C5

Volatile Organic Material Point Source Emission Distribution (Tons/Year)

Category	2007	2008	2009	2010	2011
External Fuel Combustion					
Electric Generation	1,513.6	1,602.0	1,582.7	1,312.9	1,419.0
Industrial	405.9	482.3	385.3	354.3	351.5
Commercial/Institutional	120.9	116.0	106.9	101.3	103.6
Space Heating	5.6	5.4	5.7	6.2	5.6
Internal Fuel Combustion					
Electric Generation	721.5	715.5	709.6	656.5	793.2
Industrial	878.4	1,044.5	1,043.1	1,032.3	1,119.9
Commercial/Institutional	100.8	74.0	68.4	70.7	59.6
Engine Testing	69.1	64.8	125.9	116.7	51.6
Fugitive Emissions	0.0				
Industrial Processes					
Chemical Manufacturing	9,093.7	7,502.8	6,606.6	6,349.6	6,452.1
Food/Agriculture	12,040.9	11,785.6	11,887.5	10,549.7	10,443.2
Primary Metal Production	693.8	709.5	681.1	379.9	497.0
Secondary Metal Production	1,180.3	1,209.6	1,024.8	812.4	727.1
Mineral Products	1,857.2	1,734.3	1,702.0	1,504.6	1,605.9
Petroleum Industry	2,290.7	2,098.4	2,068.4	2,021.2	1,914.2
Paper and Wood Products	164.7	178.8	150.2	169.3	213.3
Rubber and Plastic Products	2,378.0	2,322.9	2,200.9	2,130.5	1,921.4
Fabricated Metal Products	784.5	810.7	778.1	748.3	653.0
Oil and Gas Production	276.7	321.7	302.7	314.1	305.8
Miscelaneous Machinery	85.5	86.9	90.7	65.9	57.4
Electrical Equipment	93.5	87.3	64.2	50.9	48.3
Transportation Equipment	322.6	342.1	261.3	135.8	107.6
Health Services	47.1	42.2	41.9	47.7	43.7
Leather and Leather Products	68.5	50.4	50.0	42.7	16.9
Textile Products	5.5	5.4	3.0	3.0	3.0
Process Cooling	242.8	212.9	225.0	272.5	275.8
In-Process Fuel Use	25.5	25.2	20.7	18.5	9.7
Miscellaneous Manufacturing	285.4	273.2	255.0	196.7	179.1
Organic Solvent Emissions					
Organic Solvent Use	691.8	630.0	646.4	607.5	527.8
Surface Coating Operations	9,131.0	8,786.0	7,707.3	6,644.3	6,367.3
Petroleum Product Storage	3,124.4	3,034.0	2,970.0	3,083.8	2,937.9
Bulk Terminals/Plants	1,289.1	1,225.3	1,350.8	1,338.1	1,188.6
Printing/Publishing	4,610.1	4,845.3	5,061.3	4,675.8	3,908.0
Petroleum Marketing/Transport	466.4	467.9	464.9	548.9	515.5
Organic Chemical Storage (large)	1,066.7	1,114.4	1,207.0	1,100.8	819.4
Organic Chemical Transportation	180.3	84.5	106.9	84.1	94.7
Dry Cleaning (petroleum based)	590.6	611.8	565.3	524.1	503.8
Organic Chemical Storage (small)	0.0	0.0	0.0		
Organic Solvent Evaporation	491.0	512.1	556.4	525.4	505.6

Table C5

Volatile Organic Material Point Source Emission Distribution (Tons/Year)

Category	2007	2008	2009	2010	2011
Solid Waste Disposal					
Government	404.8	408.2	454.9	420.2	339.0
Commercial/Institutional	10.8	8.3	6.9	5.4	5.4
Industrial	90.9	92.1	94.8	80.0	396.3
Site Remediation	556.9	738.3	464.2	386.7	327.9
MACT Processes					
Food and Agriculture Processes	24.0	23.8	100.3	26.0	26.0
Agricultural Chemical Production	1.1	1.0	1.0	1.1	1.1
Styrene or Methacrylate Based Resins	48.2	40.1	17.6	16.2	16.6
Alkyd Resin Production	59.5	78.0	86.8	87.7	57.5
Vinyl Based Resins	89.7	89.7	100.7	94.1	113.3
Miscellaneous Polymers	13.8	14.2	0.9	1.0	1.0
Inorganic Chemicals Manufacturing	3.2	16.2	16.2	16.3	16.3
Consumer Product Mfg Facilities	310.0	392.9	228.6	228.8	260.1
Paint Stripper Use	3.0	3.0	3.0	3.0	3.1
Miscellaneous Processes	6.3	11.1	12.0	12.0	12.5
Phthalate Plasticizers Production	4.3	0.0	0.0		
Totals	**59,020.8**	**57,135.4**	**54,668.4**	**49,975.4**	**48,323.0**

Table C6

2011

Estimated County Stationary Point Source Emissions (Tons/Year)

County	Carbon Monoxide	Nitrogen Oxides	PM10	Sulfur Dioxide	Volatile Organic Material
Adams	364.3	554.3	315.5	981.0	814.1
Alexander	87.3	187.4	60.0	573.2	405.0
Bond	15.1	10.9	24.3	0.3	26.4
Boone	89.1	108.0	76.2	1.7	398.8
Brown	0.0	0.0	2.8	0.0	0.0
Bureau	40.9	60.2	67.8	2.2	67.2
Calhoun	0.6	0.7	5.9	0.0	3.7
Carroll	25.9	25.8	40.3	1.1	27.6
Cass	32.9	35.2	34.3	49.1	23.7
Champaign	403.3	769.8	196.9	705.4	396.1
Christian	683.0	16,104.4	349.2	15,286.5	393.4
Clark	53.2	5.9	67..6	3.8	100.4
Clay	21.0	18.1	41.8	0.2	136.9
Clinton	717.3	2,382.5	114.5	404.8	160.0
Coles	85.5	127.6	98.9	17.0	824.4
Cook	12,471.7	8,813.3	3,705.1	14,238.1	8,336.6
Crawford	1,063.5	2,348.7	554.7	11,242.1	1,282.8
Cumberland	5.1	4.7	24.1	0.0	39.2
DeKalb	138.4	146.5	80.6	98.5	182.4
DeWitt	183.2	85.4	67.5	38.7	56.3
Douglas	1,037.9	4,360.1	175.7	8,589.0	426.6
DuPage	811.4	851.4	307.5	133.4	1,654.7
Edgar	17.4	47.8	86.3	1.6	133.6
Edwards	0.5	3.8	16.9	0.0	41.4
Effingham	13.8	23.7	73.0	0.4	297.3
Fayette	68.8	221.9	35.2	378.3	40.5
Ford	79.1	141.0	249.8	41.8	860.0
Franklin	23.2	31.9	33.2	5.5	128.1
Fulton	386.8	1,174.6	67.0	773.6	102.1
Gallatin			20.1		0.0
Greene			14.7	0.2	5.5
Grundy	782.4	1,702.2	374.3	128.3	941.9
Hamilton	1.3	5.6	39.8	0.1	20.5
Hancock	1.7	0.1	47.6	0.0	4.1

Table C6

2011

Estimated County Stationary Point Source Emissions (Tons/Year)

County	Carbon Monoxide	Nitrogen Oxides	PM10	Sulfur Dioxide	Volatile Organic Material
Hardin	5.8	8.8	101.5	0.0	2.2
Henderson	1.2	1.3	17.1	2.5	2.5
Henry	611.2	1,584.8	165.4	19.7	308.2
Iroquois	28.3	23.9	127.9	4.3	391.7
Jackson	150.0	139.4	43.7	705.4	74.1
Jasper	1,120.6	3,834.0	474.0	23,483.8	164.3
Jefferson	45.2	49.3	49.5	0.4	251.6
Jersey	0.7		7.4		10.3
Jo Daviess	827.4	852.9	144.8	2.1	538.0
Johnson	24.7	21.6	44.4	237.4	6.2
Kane	553.2	587.3	272.3	57.8	1,205.5
Kankakee	692.6	1,633.7	233.3	108.2	775.2
Kendall	478.7	860.3	186.5	22.3	277.2
Knox	36.5	40.5	93.0	6.0	45.3
Lake	2,606.0	3,791.0	901.4	11,748.2	650.6
La Salle	440.0	1,464.0	863.0	548.2	1,062.4
Lawrence	11.0	14.9	13.1	1.6	27.0
Lee	252.2	175.2	227.3	79.2	209.5
Livingston	357.0	417.3	150.3	24.6	261.0
Logan	70.7	483.3	154.4	473.4	77.2
McDonough	109.0	160.0	56.8	862.9	191.2
McHenry	270.3	368.4	182.6	7.8	483.4
McLean	220.1	309.8	260.4	12.9	706.9
Macon	4,204.5	4,471.6	2,644.7	12,472.8	5,190.6
Macoupin	7.7	13.1	50.2	1.3	6.3
Madison	18,019.7	10,514.4	2,212.8	17,308.9	3,145.7
Marion	38.5	47.0	54.3	14.1	569.4
Marshall	24.0	152.9	214.4	82.7	366.7
Mason	494.0	576.9	95.1	7,288.8	70.6
Massac	1,974.7	9,999.3	1,118.4	27,416.8	401.1
Menard			21.6		6.7
Mercer	0.4	0.5	18.6	0.0	7.7
Monroe	15.3	39.1	17.3	0.8	17.5
Montgomery	782.2	1,609.3	135.3	215.5	137.6

Table C6

2011

Estimated County Stationary Point Source Emissions (Tons/Year)

County	Carbon Monoxide	Nitrogen Oxides	PM10	Sulfur Dioxide	Volatile Organic Material
Morgan	276.6	1,100.5	112.7	3,230.2	149.5
Moultrie	1.9	2.8	35.8	0.1	301.7
Ogle	711.9	366.7	343.7	478.2	866.8
Peoria	2,104.3	5,315.9	758.4	14,591.5	1,840.2
Perry	119.5	99.9	51.6	0.8	25.5
Piatt	314.6	3,226.6	63.4	0.4	97.8
Pike	192.4	917.3	94.1	1,563.7	44.4
Pope					
Pulaski	40.1	67.8	35.5	14.4	8.0
Putnam	425.7	1,727.9	221.3	7,074.6	158.8
Randolph	1,850.6	3,821.0	1,486.8	22,061.3	373.7
Richland	0.6	2.6	5.3	0.0	12.7
Rock Island	707.2	634.1	214.6	1,458.2	783.3
St. Clair	679.0	437.9	359.8	153.3	709.1
Saline	35.5	11.4	15.7	9.6	15.4
Sangamon	860.0	2,240.9	334.0	3,579.2	206.4
Schuyler	5.2	6.1	11.1	0.0	6.1
Scott	32.8	21.6	43.8	6.6	2.6
Shelby	12.5	64.9	60.5	1.8	42.3
Stark			19.7		7.8
Stephenson	57.2	85.1	94.7	5.0	194.4
Tazewell	857.1	14,914.5	1,795.8	33,495.9	675.8
Union	60.8	61.1	39.5	749.3	5.8
Vermilion	494.8	1,535.8	253.4	2,182.8	1,916.8
Wabash	3.0	2.9	41.2	2.5	8.1
Warren	69.4	65.2	73.8	144.6	16.3
Washington	6.7	7.5	38.7	1.4	39.5
Wayne	322.1	1,084.0	12.5	0.7	73.5
White	647.2	944.6	34.8	3.1	40.0
Whiteside	1,662.9	468.4	168.5	256.6	195.7
Will	9,814.5	17,150.9	3,425.4	39,441.4	2,594.2
Williamson	1,075.0	1,632.8	136.3	8,107.9	157.0
Winnebago	656.1	405.9	543.0	136.4	694.8
Woodford	7.1	11.4	48.7	0.1	86.1

Table C7

Annual Estimated Emissions Trends (Tons)

Year	Carbon Monoxide	Nitrogen Oxides	PM10	Sulfur Dioxide	Volatile Organic Material
1981	240,421	826,427		1,577,992	270,814
1982	163,704	693,054		1,404,040	233,951
1983	144,622	759,453		1,363,292	207,405
1984	110,922	746,367		1,435,066	197,418
1985	107,876	715,556		1,406,300	191,070
1986	109,777	676,181		1,400,761	180,148
1987	98,213	644,511		1,379,407	176,406
1988	127,758	653,521		1,393,628	165,792
1989	132,214	610,214		1,254,474	193,499
1990	134,744	623,466		1,272,445	170,378
1991	148,667	619,161		1,239,690	154,008
1992	129,054	610,214	181,775	1,228,949	156,867
1993	130,097	556,460	113,482	1,170,549	152,288
1994	127,848	555,893	50,730	1,158,555	140,492
1995	127,661	505,966	48,839	1,273,786	141,381
1996	130,040	495,267	43,950	1,183,278	139,445
1997	117,046	510,729	41,078	1,197,404	136,541
1998	108,117	509,676	43,392	1,196,461	134,924
1999	120,906	421,993	40,598	1,085,828	99,121
2000	122,702	424,609	36,885	1,070,058	101,147
2001	96,970	358,263	34,233	653,797	95,221
2002	99,173	301,216	30,422	531,343	90,014
2003	88,367	289,921	41,589	512,321	89,579
2004	80,479	248,245	42,402	507,142	84,080
2005	83,671	238,026	40,359	522,677	75,690
2006	89,717	219,200	37,979	487,588	70,858
2007	80,969	205,602	34,847	429,976	59,021
2008	80,628	203,014	34,474	406,905	57,135
2009	78,720	198,178	32,551	375,807	54,668
2010	65,797	138,344	30,931	304,709	49,975
2011	78,283	143,035	29,796	295,658	48,323

Table C8

Annual Source Reported Emissions Trends (Tons)

Year	Carbon Monoxide	Nitrogen Oxides	PM10	Sulfur Dioxide	Volatile Organic Material
1992	112,403	381,938	49,377	1,045,113	143,853
1993	113,781	418,209	36,737	1,001,123	108,847
1994	116,192	404,486	34,086	967,213	108,897
1995	160,256	366,978	31,491	814,229	103,144
1996	84,258	407,683	30,850	914,295	87,271
1997	71,408	404,289	25,648	974,232	76,350
1998	79,147	377,191	31,828	964,262	77,952
1999	91,153	360,850	27,663	863,759	71,514
2000	90,315	329,141	30,482	620,592	71,063
2001	83,453	291,778	28,929	531,504	62,647
2002	83,795	261,202	26,900	498,754	70,703
2003	75,511	230,068	29,939	507,338	63,495
2004	77,847	229,127	31,896	521,808	64,594
2005	85,892	215,366	30,535	486,534	62,251
2006	77,099	200,832	29,367	429,573	53,791
2007	77,211	198,073	28,784	406,405	50,933
2008	75,183	193,637	28,194	376,627	49,112
2009	62,285	134,274	25,988	305,297	41,839
2010	75,277	139,508	25,993	297,254	44,245

APPENDIX D

THE BUREAU OF AIR/ DIVISION OF AIR POLLUTION CONTROL

Organization and Programs

The Bureau of Air consists of two divisions: the Division of Air Pollution Control and the Division of Vehicle Inspection and Maintenance. The focus of this section is on the programs of the Division of Air Pollution Control which is responsible for developing, implementing and enforcing regulations to assure that the air we breathe is clean and healthful. This mission is accomplished by finding, correcting and controlling air pollution hazards. The Division of Air Pollution Control also works to prevent air quality problems from occurring in areas which have clean air.

The basic strategy to improve air quality is to control the pollutants which are emitted by industry and motor vehicles. This strategy requires the IEPA to monitor the air, identify emission sources, impose limitations on the amount of emissions which can be released to the air and take the necessary enforcement action against violators.

The Division of Air Pollution Control is divided into five sections: Air Monitoring, Air Quality Planning, Compliance and Enforcement, Permits, and Field Operations. Each of these sections is briefly described below.

Air Monitoring

The Division of Air Pollution Control operates a statewide air quality monitoring network which includes more than 200 monitors. The Air Monitoring Section is responsible for the maintenance of this network, which operates year round monitoring the quality of the air that we breathe.

The IEPA monitors the air for a variety of pollutants including particulate matter, sulfur dioxide, ozone, carbon monoxide, lead and nitrogen dioxide. Specialized sampling projects for other hazardous pollutants are also conducted by the Air Monitoring Section.

Illinois residents can be proud of the IEPA's record of efficiency in data collection. The system ranks as one of the best in the nation with over 90 percent efficiency in the collection of high quality data. This high efficiency rate guarantees that the network is operating with a minimum amount of "down-time" thereby providing the IEPA with a complete and accurate description of air quality in Illinois.

The Air Monitoring Section is also responsible for validating and summarizing the data in this report. It provides notification of air quality exceedances and issues any air pollution advisories as required. Special air quality studies are performed which identify pollution trends and evaluate special air quality problems.

Air Quality Planning

The Air Quality Planning Section is responsible for developing Agency programs which are designed to achieve and maintain National Ambient Air Quality Standards and to prevent deterioration of air quality. This is accomplished by:

- Assessment of strategies and technologies for the elimination or reduction of air pollutant emissions.
- Conducting and reviewing detailed air quality studies using computerized air quality models.

- Proposing and supporting regulatory revisions where they are necessary to attain or maintain healthful air quality.

- Coordination with local planning agencies to ensure compatibility of air quality programs between state and local jurisdictions.

- Coordination of the Bureau's Stationary Source Inventory.

Compliance and Enforcement

The Compliance and Enforcement Section provides Management oversight for all aspects of the compliance program.

The work of the section is currently focused on the following areas:

- Formulating and interpreting policy regarding the Bureau's Air Pollution Compliance and Enforcement Program.

- Coordinating the Air Pollution Compliance and Enforcement Program with USEPA's Compliance and Enforcement Program.

- Coordinating, through the Bureau's Compliance Decision Group, the work of the Bureau's staff in order to provide an effective and efficient compliance program.

- Evaluate the Annual Emission Reports provided by Illinois industry.

- Oversees the source emissions monitoring program including continuous emission monitors (cems), stack testing, and escess emissions reporting

Permits

Permits are required in Illinois prior to construction and operation of emission sources and control equipment. The permit program provides a consistent and systemic way of ensuring that air emission sources are built and operated in compliance with air pollution control regulations.

In a permit application the IEPA requires: a description of the emission source, a list of types and amounts of the contaminants which will be emitted, and a description of the emission control equipment to be utilized. This information is used to determine if the emissions comply with standards adopted by the Illinois Pollution Control Board. Operating permits are granted for periods up to five years, after which they must be renewed. Operating permits for smaller facilities may run indefinitely. When a facility constructs a new emission source or makes modifications to existing emission sources, it must apply for a new construction permit.

Large sources also need a Federal Operating Permit which is administered by the IEPA. Under the Clean Air Act Permit Program (CAAPP) these large sources will be required to consolidate all of their existing State operating permits into one permit which will be available for public review and is subject to Federal oversight.

Field Operations

The Field Operations Section investigates sources of air pollution and works with industry to control air pollution. The major functions of the Field Operations Section include locating and identifying sources of air pollution, determining the amount of pollution emitted and verifying the information which industry submits when applying for a permit. Field Operations also initiates much of the IEPA's enforcement activities when violations are discovered. Approximately 3,000 investigations and inspections are conducted each year.

Table D1

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Appendix E
Links

IEPA's Website Information

To access the online version of the Annual Air Quality Report, the evening Air Quality Index numbers, various pollutant averages and exceedances, the monitoring network plan and emission trends:

- http://www.epa.state.il.us/air/air-quality-menu.html

Air Quality Index Information

To view current Air Quality Index numbers and forecasts across the country:

- http://www.airnow.gov

To sign up for air quality information such as forecasts and pollution alerts:

- http://www.illinois.enviroflash.info/signup.cfm

EnviroFlash on Twitter:

- http://www.illinois.enviroflash.info/EnviroFlashTwitter.cfm

Monitoring Data Access Information

To access yearly Air Quality Index summaries, air quality statistics and monitoring concentrations:

- http://www.epa.gov/airdata

To access more detailed monitoring data:

- http://www.epa.gov/ttn/airs/aqsdatamart
- http://www.epa.gov/ttn/airs/airsaqs/detaildata (click "files of detailed data")

To access historical Design Values (statistic to compare to the National Ambient Air Quality Standards):

- http://www.epa.gov/airtrends/values.html

Nonattainment Areas and Designations (regions in violation of the various National Ambient Air Quality Standards):

- http://www.epa.gov/oar/oaqps/greenbook/index.html

Other

- Ambient Monitoring Technology Information Center: http://www.epa.gov/ttnamti1
- Midwest Haze Camera Network: http://www.mwhazecam.net
- Toxic Release Inventory Search: http://iaspub.epa.gov/triexplorer/tri_release.chemical