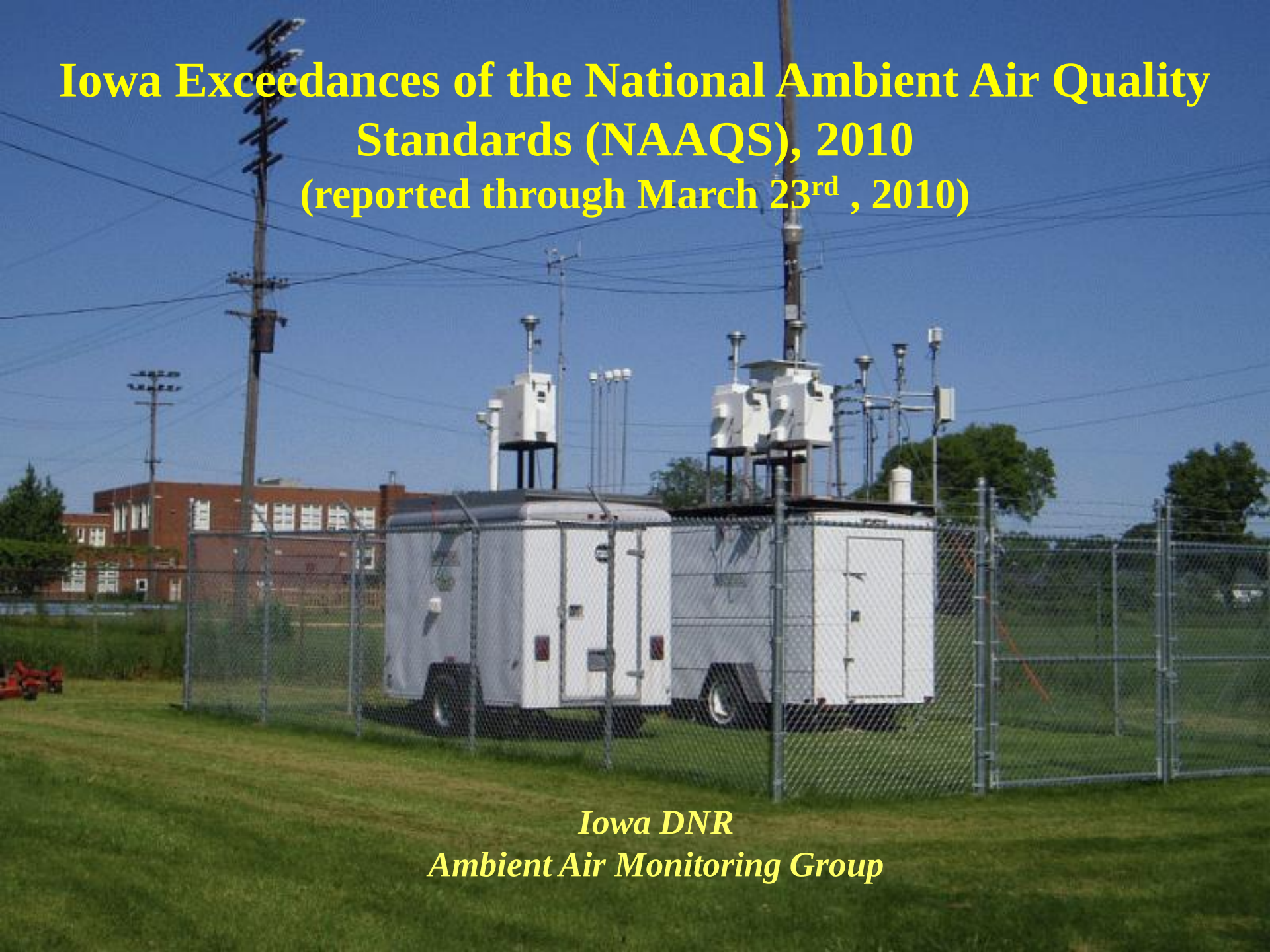
# Iowa Exceedances of the National Ambient Air Quality Standards (NAAQS), 2010

## (reported through March 23rd , 2010)



*Iowa DNR*

*Ambient Air Monitoring Group*

# What Are the NAAQS?

The Clean Air Act requires EPA to set National Ambient Air Quality Standards for pollutants considered harmful to public health and the environment. The Clean Air Act established two types of national air quality standards.

***Primary standards*** set limits to protect public health, including the health of "sensitive" populations such as asthmatics, children, and the elderly.

***Secondary standards*** set limits to protect public welfare, including protection against decreased visibility, damage to animals, crops, vegetation, and buildings. The table and key on the following page lists the NAAQS for the six criteria pollutants.

## National Ambient Air Quality Standards

| Pollutant | Averaging Period | Exceedance Level | Units |
|---|---|---|---|
| Ozone | 8hr (1) | 76 | ppb |
| PM 2.5 | 24hr (2) | 35.5 | micrograms per cubic meter |
| | annual (3) | 15.05 | micrograms per cubic meter |
| PM10 | 24hr (4) | 155 | micrograms per cubic meter |
| Sulfur dioxide | 3hr (5) | 0.55 | ppm |
| | 24hr (5) | 0.145 | ppm |
| | annual | 0.0305 | ppm |
| Carbon monoxide | 1hr (5) | 35.5 | ppm |
| | 8hr (5) | 9.5 | ppm |
| Nitrogen dioxide | annual | 0.0535 | ppm |
| Lead | quarterly | 1.55 | micrograms per cubic meter |

**(1)** To attain this standard, the 3-year average of the fourth-highest daily maximum 8-hour average ozone concentrations measured at each monitor within an area over each year must not exceed 75 ppb.

**(2)** To attain this standard, the 3-year average of the 98th percentile of 24-hour concentrations at each population-oriented monitor within an area must not exceed 35.4 µg/m3 (effective December 17, 2006).

**(3)** To attain this standard, the 3-year average of the weighted annual mean PM2.5 concentrations from single or multiple community-oriented monitors must not exceed 15.05 µg/m3.

**(4)** Not to be exceeded more than once per year on average over 3 years.

**(5)** Not to be exceeded more than once per year.

See 40CFR Part 50 for details on attainment calculations

# Ozone Regulation Change

The EPA promulgated new lower standards for ozone that became effective in May of 2008.

The “old” national ambient air quality standard for ozone was 0.080 parts per million (0.084 rounds down). The form of the standard was a three year average of a sites fourth highest annual daily maximum 8-hour average. The new standard is 0.075 parts per million (75 parts per billion) and the form of the standard has not changed with the exception of rounding conventions (0.076 shows non-attainment with the standard).

The ozone NAAQS is currently being reviewed and final standards will be issued by August 31, 2010.

# Data Used for this Report

Particulate data in this report is from filter based samplers where the data is collected over a 24-hour period and then analyzed in a laboratory. Filter samplers are normally operated on a schedule of one sample every third day (1 in 3). In areas of high population or high concentration, the samplers may be operated on an accelerated schedule (1 in 2 or daily).

Ozone is a summertime pollutant and data is collected seasonally from April 1 through October 31. Ozone monitors are continuous instruments that report hourly averages for each hour of each day of the ozone season.

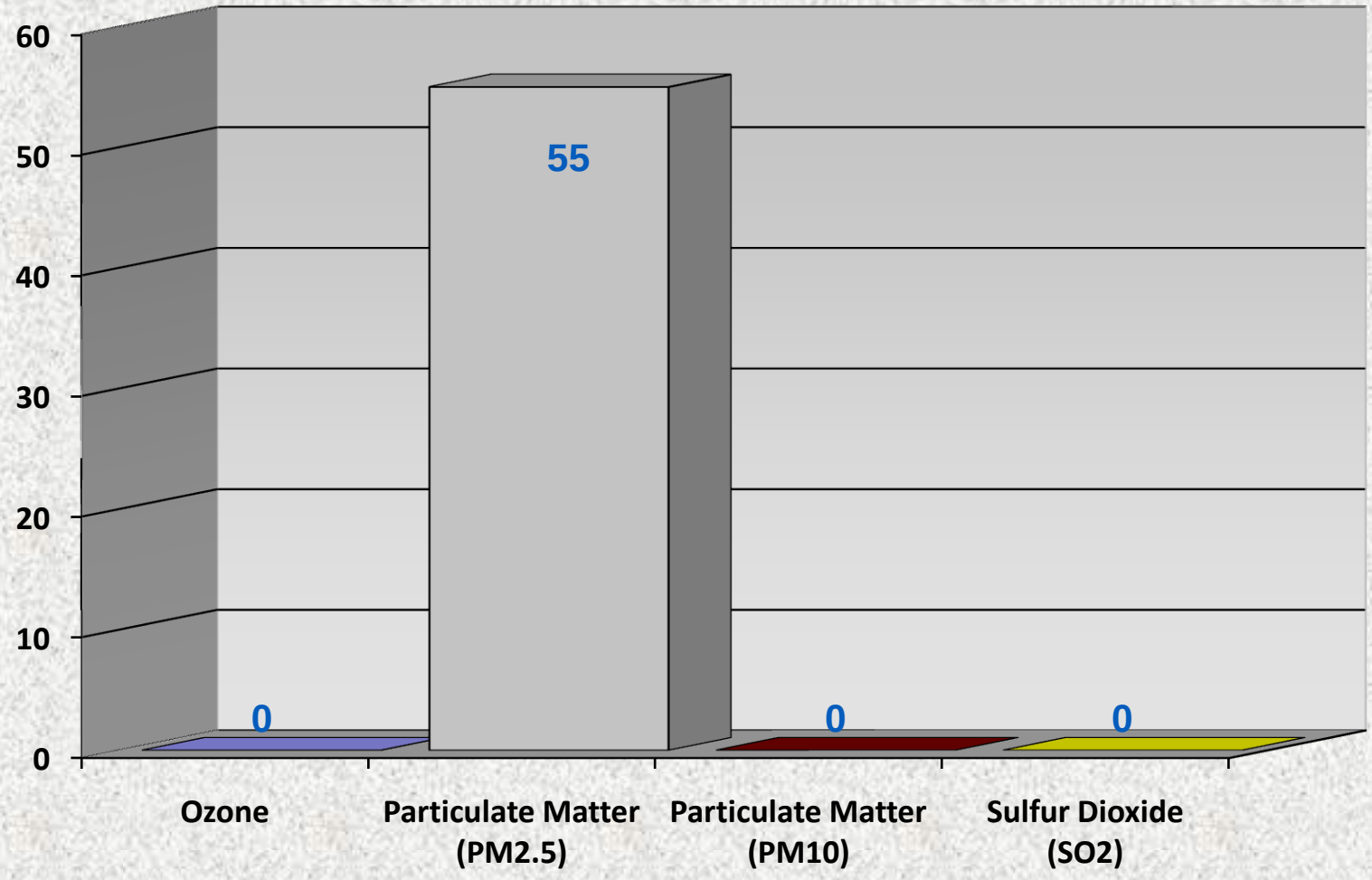
# Iowa NAAQS Exceedances, 2010

## (reported through March 23nd, 2010)

| Date | PM2.5 | PM10 | Ozone |
|---|---|---|---|
| 1/5/10 | 2 | | |
| 1/13/10 | 1 | | |
| 1/20/10 | 1 | | |
| 1/22/10 | 1 | | |
| 1/31/10 | 1 | | |
| 2/1/10 | 4 | | |
| 2/2/10 | 3 | | |
| 2/3/10 | 5 | | |
| 2/4/10 | 16 | | |
| 2/5/10 | 1 | | |
| 2/12/10 | 2 | | |
| 2/13/10 | 3 | | |
| 2/19/10 | 5 | | |
| 3/3/10 | 7 | | |
| 3/4/10 | 1 | | |
| 3/8/10 | 1 | | |
| 3/9/10 | 1 | | |
| TOTAL | 55 | 0 | 0 |

# Iowa NAAQS Exceedances, 2010

**(reported through March 23nd, 2010)**



## 2010 NAAQS Exceedances (reported through March 23, 2010)

| Monitor Type | Site Location | Site Name | Exceedance Date | Concentration | Units | AQI* |
|---|---|---|---|---|---|---|
| PM2.5 | Council Bluffs | Franklin Elementary | 1/5/10 | 48.8 | µg/m3 | 117 |
| PM2.5 | Sioux City | Bryant Elementary | 1/5/10 | 46.2 | µg/m3 | 112 |
| PM2.5 | Davenport | Blackhawk Foundry | 1/13/10 | 40.0 | µg/m3 | 99 |
| PM2.5 | Muscatine | Garfield Elementary | 1/20/10 | 62.9 | µg/m3 | 145 |
| PM2.5 | Muscatine | Garfield Elementary | 1/22/10 | 37.5 | µg/m3 | 94 |
| PM2.5 | Cedar Rapids | Linn Public Health | 1/31/10 | 36.3 | µg/m3 | 92 |
| PM2.5 | Cedar Rapids | Linn Public Health | 2/1/10 | 36.7 | µg/m3 | 93 |
| PM2.5 | Cedar Rapids | Army Reserve | 2/1/10 | 35.8 | µg/m3 | 91 |
| PM2.5 | Muscatine | Garfield Elementary | 2/1/10 | 36.3 | µg/m3 | 92 |
| PM2.5 | Clinton | Chancy Park | 2/1/10 | 35.5 | µg/m3 | 90 |
| PM2.5 | Clinton | Chancy Park | 2/2/10 | 38.7 | µg/m3 | 97 |
| PM2.5 | Clinton | Rainbow Park | 2/2/10 | 36.6 | µg/m3 | 93 |
| PM2.5 | Central Davenport | Jefferson Elementary | 2/2/10 | 35.5 | µg/m3 | 90 |
| PM2.5 | Clinton | Chancy Park | 2/3/10 | 38.0 | µg/m3 | 95 |
| PM2.5 | Clinton | Rainbow Park | 2/3/10 | 36.7 | µg/m3 | 93 |
| PM2.5 | Central Davenport | Jefferson Elementary | 2/3/10 | 37.0 | µg/m3 | 93 |
| PM2.5 | Davenport | Blackhawk Foundry | 2/3/10 | 36.5 | µg/m3 | 92 |
| PM2.5 | Muscatine | Garfield Elementary | 2/3/10 | 36.0 | µg/m3 | 91 |

* EPA is currently revising the Air Quality Index for Fine Particulate

## 2010 NAAQS Exceedances (reported through March 23, 2010) continued

| Monitor Type | Site Location | Site Name | Exceedance Date | Concentration | Units | AQI* |
|---|---|---|---|---|---|---|
| PM2.5 | Cedar Rapids | Linn Public Health | 2/4/10 | 40.2 | µg/m3 | 100 |
| PM2.5 | Cedar Rapids | Army Reserve | 2/4/10 | 36.5 | µg/m3 | 92 |
| PM2.5 | Clinton | Chancy Park | 2/4/10 | 42.8 | µg/m3 | 106 |
| PM2.5 | Clinton | Rainbow Park | 2/4/10 | 42.2 | µg/m3 | 104 |
| PM2.5 | Central Davenport | Jefferson Elementary | 2/4/10 | 40.5 | µg/m3 | 101 |
| PM2.5 | Davenport | Blackhawk Foundry | 2/4/10 | 41.9 | µg/m3 | 104 |
| PM2.5 | Central Davenport | Adams Elementary | 2/4/10 | 40.5 | µg/m3 | 101 |
| PM2.5 | Davenport | Hayes Elementary | 2/4/10 | 40.7 | µg/m3 | 101 |
| PM2.5 | Muscatine | Garfield Elementary | 2/4/10 | 41.3 | µg/m3 | 103 |
| PM2.5 | Muscatine | Greenwood Cemetery | 2/4/10 | 37.2 | µg/m3 | 94 |
| PM2.5 | Muscatine | Franklin Elementary | 2/4/10 | 38.3 | µg/m3 | 96 |
| PM2.5 | Iowa City | Hoover Elementary | 2/4/10 | 39.4 | µg/m3 | 98 |
| PM2.5 | Waterloo | Grout Museum | 2/4/10 | 38.8 | µg/m3 | 97 |
| PM2.5 | Waterloo | Water Tower | 2/4/10 | 37.5 | µg/m3 | 94 |
| PM2.5 | Keokuk | Fire Station | 2/4/10 | 41.2 | µg/m3 | 102 |
| PM2.5 | Keosauqua | Lake Sugema | 2/4/10 | 38.3 | µg/m3 | 96 |
| PM2.5 | Des Moines | Polk County Health | 2/5/10 | 41.5 | µg/m3 | 103 |
| PM2.5 | Clinton | Chancy Park | 2/12/10 | 37.0 | µg/m3 | 93 |
| PM2.5 | Des Moines | Polk County Health | 2/12/10 | 36.3 | µg/m3 | 92 |

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## 2010 NAAQS Exceedances (reported through March 23, 2010) continued

| Monitor Type | Site Location | Site Name | Exceedance Date | Concentration | Units | AQI* |
|---|---|---|---|---|---|---|
| PM2.5 | Clive | Indian Hills | 2/13/10 | 40.3 | 100 | 100 |
| PM2.5 | Des Moines | Polk County Health | 2/13/10 | 41.6 | 103 | 103 |
| PM2.5 | Keokuk | Fire Station | 2/13/10 | 40.7 | µg/m3 | 101 |
| PM2.5 | Muscatine | Garfield Elementary | 2/19/10 | 37.9 | µg/m3 | 95 |
| PM2.5 | Muscatine | Greenwood Cemetery | 2/19/10 | 36.0 | µg/m3 | 91 |
| PM2.5 | Muscatine | Franklin Elementary | 2/19/10 | 36.3 | µg/m3 | 92 |
| PM2.5 | Waterloo | Grout Museum | 2/19/10 | 36.7 | µg/m3 | 93 |
| PM2.5 | Waterloo | Water Tower | 2/19/10 | 35.8 | µg/m3 | 91 |
| PM2.5 | Muscatine | Garfield Elementary | 3/3/10 | 35.9 | µg/m3 | 91 |
| PM2.5 | Muscatine | Franklin Elementary | 3/3/10 | 35.6 | µg/m3 | 91 |
| PM2.5 | Waterloo | Grout Museum | 3/3/10 | 37.7 | µg/m3 | 95 |
| PM2.5 | Waterloo | Water Tower | 3/3/10 | 37.8 | µg/m3 | 95 |
| PM2.5 | Cedar Rapids | Linn Public Health | 3/3/10 | 39.2 | µg/m3 | 98 |
| PM2.5 | Cedar Rapids | Army Reserve | 3/3/10 | 36.2 | µg/m3 | 92 |
| PM2.5 | Iowa City | Hoover Elementary | 3/3/10 | 38.6 | µg/m3 | 96 |
| PM2.5 | Cedar Rapids | Linn Public Health | 3/4/10 | 38.8 | µg/m3 | 97 |
| PM2.5 | Clinton | Chancy Park | 3/8/10 | 37.8 | µg/m3 | 95 |
| PM2.5 | Clinton | Chancy Park | 3/9/10 | 37.1 | µg/m3 | 94 |

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# Web Resources

**Real-time Air Monitoring Data:**

***In Polk County:***
***http://www.airquality.co.polk.ia.us/***

***In Linn County:***
***http://www.linncleanair.org/***

***Outside Polk and Linn Counties:***
***http://www.uhl.uiowa.edu/services/ambient/realtime.xml***

***Attainment Calculations:***
***http://epa.gov/airtrends/values.html***

***National Ozone and Particulate Maps:***
***http://airnow.gov/***

***Historical Air Monitoring Data for Iowa and Other States:***
***http://www.epa.gov/air/data/***