Air Quality Summary

Youngstown-Warren Area

May 1 through October 31, 2006

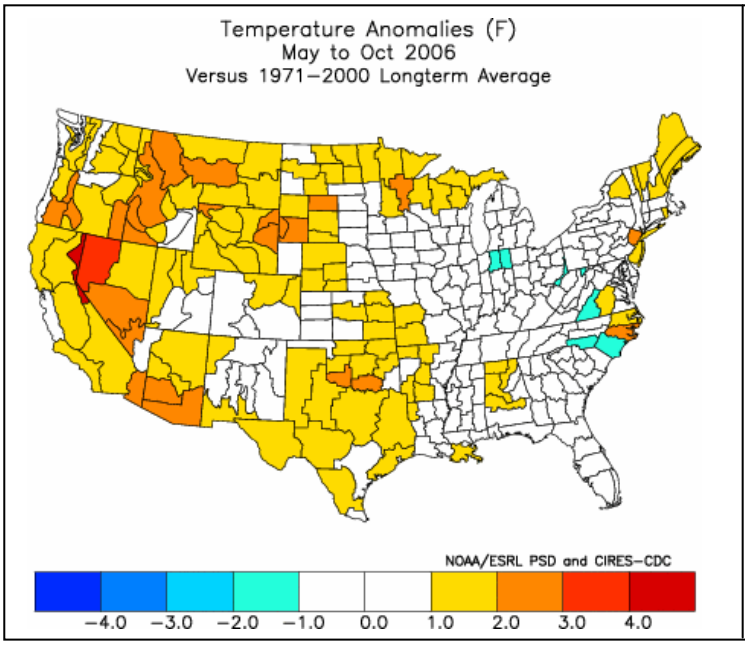
Notice: The U.S. EPA finalized its decision to lower the 24-hour standard for fine particle pollution from 65 to 35 micrograms per cubic meter. This decision was made in an effort to better protect public health. As a result, areas once meeting the standard could be designated as not meeting the new standard. The greater Youngstown-Warren area has the potential to be one such area. This possible designation would come in 2010, based on data collected between 2007 and 2009. Please direct any questions about these changes to Lisa Pompeo at the Eastgate Regional Council of Governments (lpompeo@eastgatecog.org or 330-779-3800).

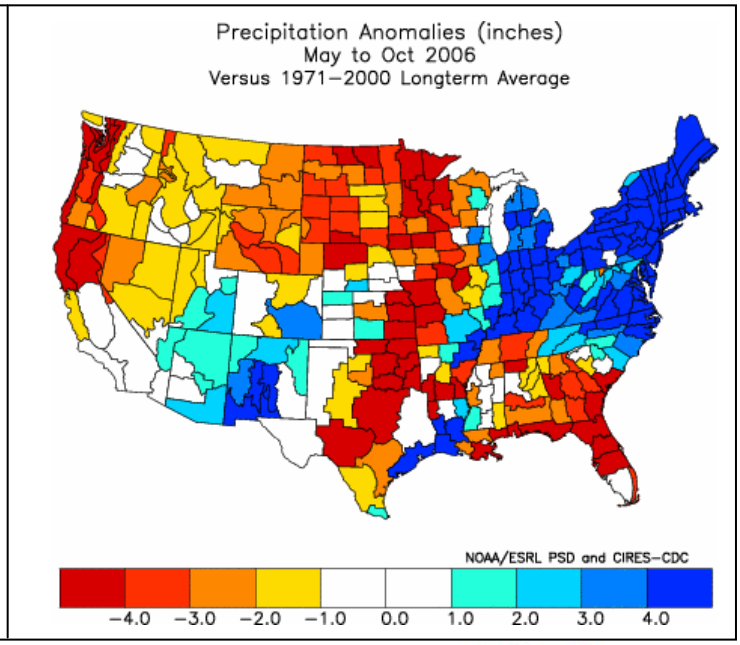
This report provides a summary of seasonal and observed Air Quality Index (AQI) levels in the Youngstown-Warren area from May 1 through October 31, 2006. Seasonal AQI observations from previous years are provided for comparison. In addition, air quality conditions on Air Quality Advisory Days are summarized and next-day forecast statistics are presented.

From May through October, near-normal temperatures were accompanied by wet conditions in the Youngstown-Warren area. Temperatures for the season were within 1 degree of normal and precipitation was over 4 inches above normal.

High humidity generally promotes particle formation. However, the AQI reached Unhealthy for Sensitive Groups (USG) for particles on only three days during the season as compared to last year's five. This decrease is due to frequent storm systems that enhanced mixing and dispersed pollutants in the atmosphere. The 2004 season had similar temperature and precipitation anomalies as 2006, with one day reaching USG for particles.

Ozone levels were low compared with long-term averages. Ozone levels reached USG or higher on two days in 2006, which is fewer than last year's seven and well below the 1996-2005 10-year average of nine.





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Seasonal Summary

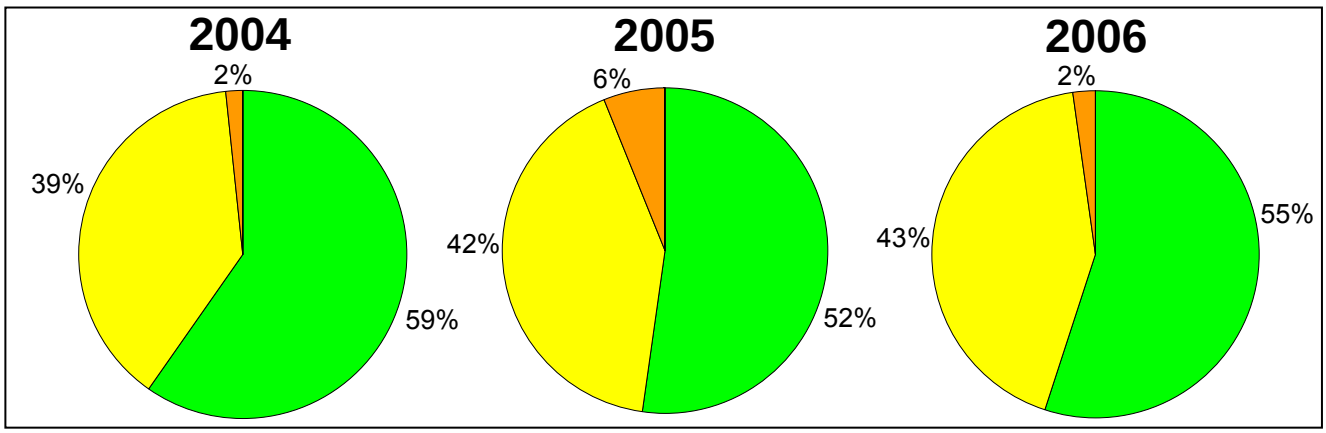
The pie charts illustrate annual variations in the percent distribution of days by maximum observed AQI category. Persistent weather patterns throughout each season can govern the frequency of days in each AQI category. Weather conditions during the 2004 and 2006 seasons were characterized by more frequent storminess and less stagnant conditions than in 2005. As a result, overall air quality in 2005 was the worst of the three years.

The bar chart shows the daily maximum AQI for the 2006 season and the corresponding color for the observed category. This demonstrates the patterns of AQI throughout the season with the summer months (June-August) generally having more days with a higher AQI than either fall or spring.

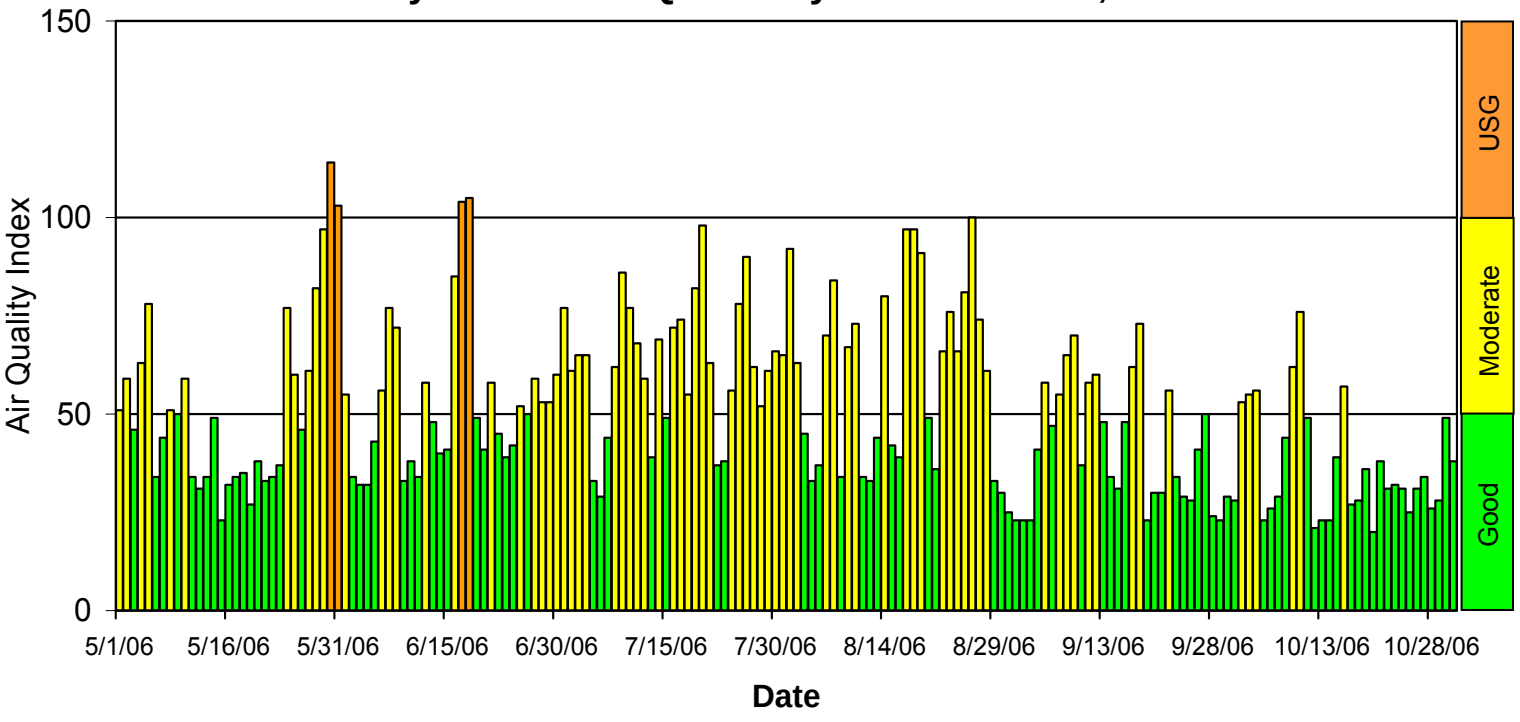
AQI AIR QUALITY INDEX

0 - 50	Good
51 - 100	Moderate
101 - 150	Unhealthy for Sensitive Groups (USG)
151 - 200	Unhealthy
201 - 300	Very Unhealthy

Percent of Days at Each AQI Level for May 1 – October 31

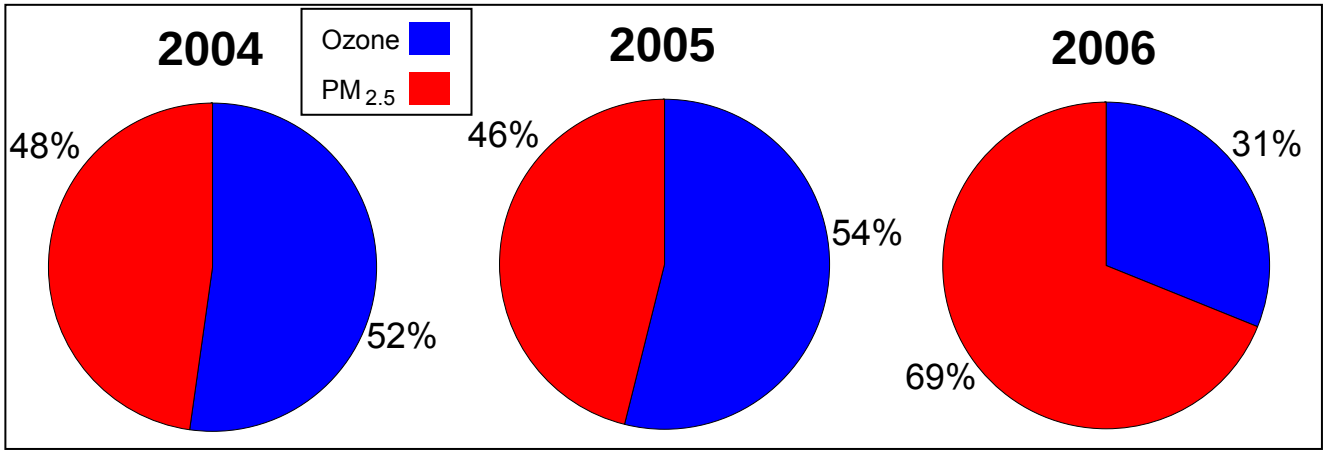


Daily Maximum AQI for May 1 – October 31, 2006



Seasonal Summary

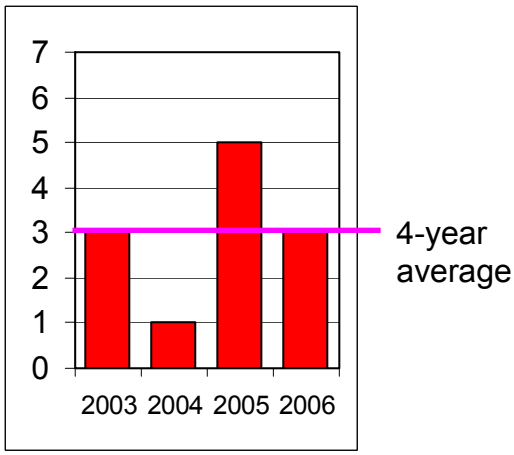
Percent of Days as the Primary Pollutant for May 1 – October 31*



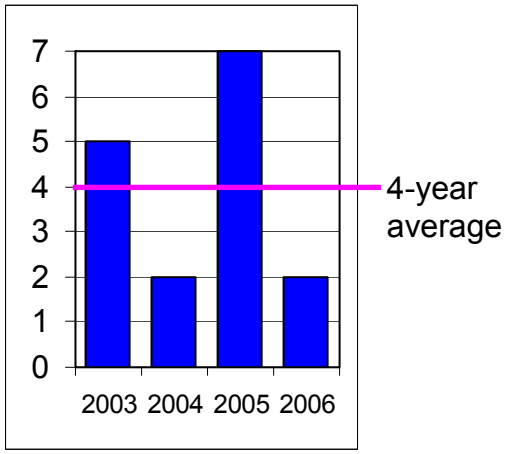
*The Warren – Draper Street $PM_{2.5}$ monitor was added October 21, 2005. Only one monitor, the Youngstown – Head Start monitor was in operation prior to that date. Prevailing wind direction and wetter, cloudier conditions inhibiting ozone formation may have had an influence making particles the primary pollutant in 2006.

Number of USG Days for Each Pollutant for May 1 – October 31

Particles ($PM_{2.5}$)



Ozone



The above charts present the count of observed USG days during the season for each pollutant from 2003 through 2006.

On average, three USG days occurred annually for particles and four USG days occurred annually for ozone from 2003 to 2006. In addition, the 1996-2005 10-year average count for ozone was nine, higher than any of the last four years.

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Highest AQI and Air Quality Advisory Days

Five Highest AQI Days

Date	AQI	Pollutant	Monitoring Site
5/30/06	114	Ozone	Kinsman
6/18/06	105	$PM_{2.5}$	Warren-Draper Street
6/17/06	104	Ozone	Kinsman
5/31/06	103	$PM_{2.5}$	Warren-Draper Street
8/26/06	100	$PM_{2.5}$	Youngstown-Head Start

Four of the five highest AQI levels came as two-day events attributed to stagnant periods during the end of May and the middle of June, allowing both ozone and particles to rise into the USG range.

Air Quality Advisory Days

	Ozone		Particles	
Date	Forecast	Observed	Forecast	Observed
5/29/06	104	97	91	96
5/30/06	106	114	106	105
6/1/06	50	37	102	55
6/17/06	106	104	70	79
7/16/06	101	72	70	61
7/17/06	114	74	70	71
8/1/06	77	56	102	92
8/2/06	104	48	104	63

Air Quality Advisory Days were called on eight days in 2006, with maximum AQI levels reaching USG or higher on two of these days. Of the eight Air Quality Advisory Days, two were issued for both particles and ozone, two exclusively for particles, and four for ozone.

The average maximum observed AQI was 76 on Air Quality Advisory Days not reaching USG or higher. A significant difference between forecast and observed AQI levels occurred June 1 and August 2. On June 1, a cold front moved into Youngstown earlier than expected. Behind it northwesterly winds dispersed pollutants. On August 2, unexpected cloudy skies inhibited ozone formation and gusty winds stronger than forecast dispersed pollutants, causing AQI levels to be lower than forecast.