



2004 Air Quality Index Summary

New Jersey Department of Environmental Protection

WHAT IS THE AIR QUALITY INDEX (AQI)?

The Air Quality Index (AQI) is a national air quality rating system based on the National Ambient Air Quality Standards (NAAQS). Generally, an index value of 100 is equal to the primary, or health based, NAAQS for each pollutant. This allows for a direct comparison of each of the pollutants used in the AQI (carbon monoxide, nitrogen dioxide, particulate matter, ozone, and sulfur dioxide). The AQI rating for a reporting region is equal to the highest rating recorded for any pollutant within that region. In an effort to make the AQI easier to understand, a descriptive rating, and a color code, based on the numerical rating are used (see Table 1).

For more information on the AQI, visit EPA's web site at www.epa.gov/airnow/aqibroch.

Table 1
Air Quality Index

Numerical AQI Rating	Descriptive Rating	AQI Color Code
0-50	Good	Green
51-100	Moderate	Yellow
101-150	Unhealthy for Sensitive Groups	Orange
151-200	Unhealthy	Red
200-300	Very Unhealthy	Purple

Each weekday morning an air quality summary for the previous day, and a forecast are prepared using the AQI format. These are provided to the Associated Press wire service, the New York Times, and to participating radio and television stations. Each afternoon, an air quality update, which includes the current air quality information and a forecast for the following day, is issued to various newspapers. An extended forecast consisting of the

expected descriptor ratings over the next 72-hour period is also provided for each reporting region on weekdays. A telephone recording of the AQI forecast is taped by 11 a.m., Monday-Friday, and can be heard by dialing **1-800-782-0160**.

For purposes of reporting the AQI, the state is divided into 9 regions (see Figure 1). Table 2 shows the monitoring sites and parameters used in each reporting region to calculate the AQI values.

Figure 1
Air Quality Index Regions

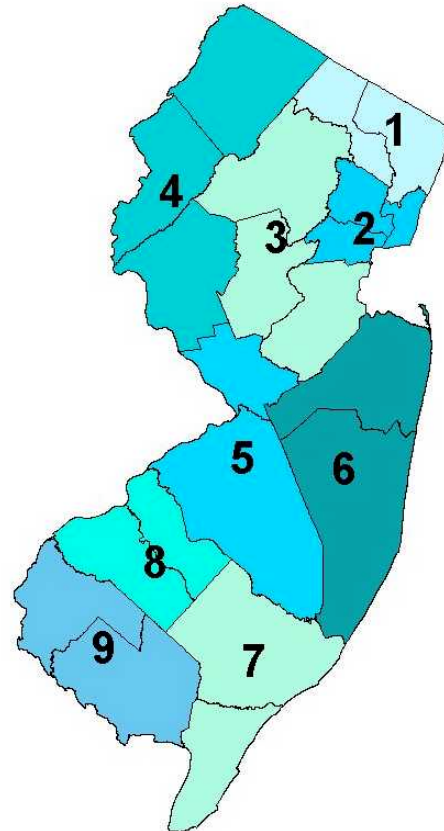


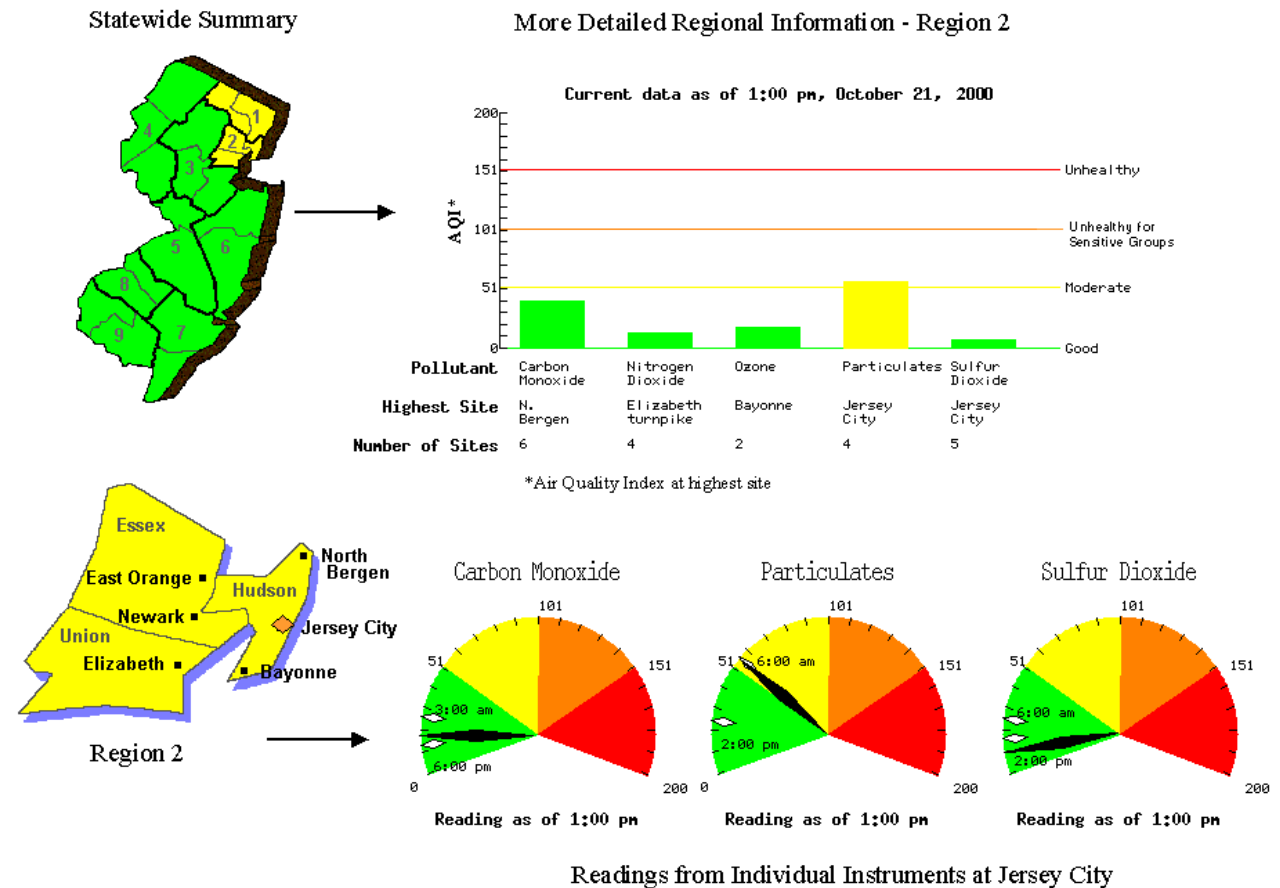
Table 2
Pollutants Monitored According to Air Quality Index Reporting Region - 2004

CO - Carbon Monoxide O₃ - Ozone
SO₂ - Sulfur Dioxide NO₂ - Nitrogen Dioxide
PM - Particulate Matter

Reporting Region	Monitoring Site	CO	SO ₂	PM	O ₃	NO ₂
1. Northern Metropolitan	Fort Lee	X	---	X	---	---
	Hackensack	X	X	X	---	---
	Ramapo	---	---	---	X	---
	Teaneck	---	---	---	X	X
2. Southern Metropolitan	Bayonne	---	X	---	X	X
	East Orange	X	---	---	---	X
	Elizabeth	X	X	X	---	---
	Elizabeth Lab	X	X	X	---	X
	Jersey City	X	X	X	---	---
	Jersey City Firehouse	---	---	X	---	---
3. Suburban	Chester	---	X	---	X	X
	Morristown	X	---	X	---	---
	New Brunswick	---	---	X	---	---
	Perth Amboy	X	X	X	---	---
	Rutgers University	---	---	---	X	X
4. Northern Delaware Valley	Flemington	---	---	X	X	---
5. Central Delaware Valley	Burlington	X	X	X	---	---
	Rider University	---	---	---	X	X
6. Northern Coastal	Colliers Mills	---	---	---	X	---
	Freehold	X	---	X	---	---
	Monmouth University	---	---	---	X	---
7. Southern Coastal	Nacote Creek R. S.	---	X	---	X	---
8. Southern Delaware Valley	Ancora State Hospital	X	X	---	X	---
	Camden Lab	X	X	X	X	X
	Clarksboro	---	X	---	X	---
	South Camden	---	---	X	---	---
9. Delaware Bay	Millville	---	X	---	X	X

Along with the forecast, cautionary statements are provided for days when the air quality is expected to be unhealthy. A weekday ozone forecast map, introduced during the 1996 ozone season, is televised on New Jersey Network's (NJN) TV News Broadcast. After the ozone season, an air quality forecast map is substituted. A web page was also created in 1996 to show current air quality levels. This page can be accessed at the following internet address: <http://www.state.nj.us/dep/airmon>. Some examples of the air quality information available on our web site are shown in Figure 2 below:

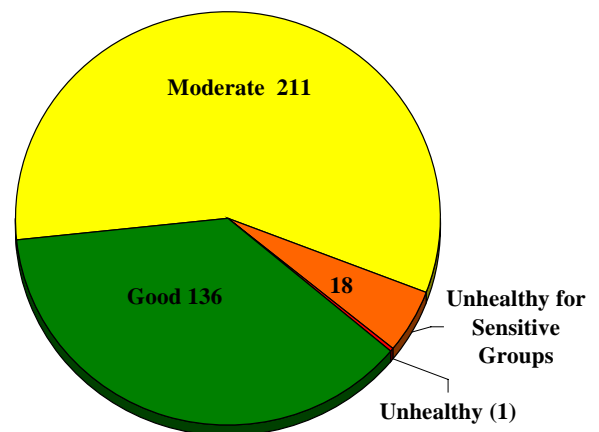
Figure 2
Examples of NJDEP's Air Monitoring Website



2004 AQI SUMMARY

A summary of the AQI ratings for New Jersey in 2004 is presented in the pie chart to the right. In 2004 there were 136 "Good" days, 211 were "Moderate", 18 were rated "Unhealthy for Sensitive Groups", 1 was considered "Unhealthy", and zero were rated "Very Unhealthy". This indicates that air quality in New Jersey is considered good or moderate most of the time, but that pollution is still bad enough to adversely affect some people on about one day in nineteen. Table 3 lists the dates when the AQI exceeded the "Unhealthy for Sensitive Groups" threshold at any monitoring location and shows which pollutant(s) were in that range or higher. Figure 4 shows the AQI ratings for the year broken down by AQI region.

Figure 3
Air Quality Summary by Days



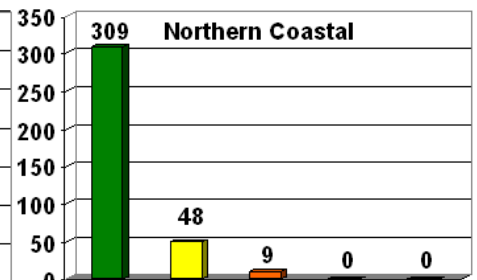
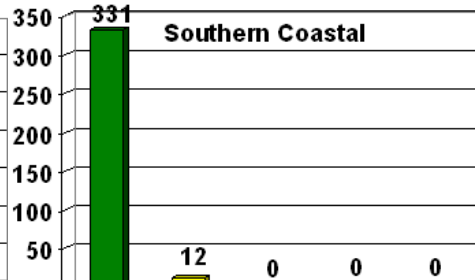
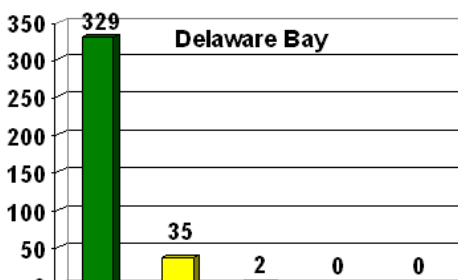
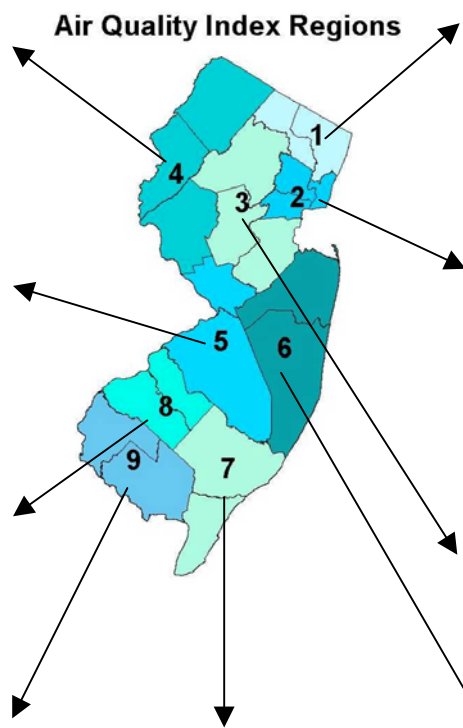
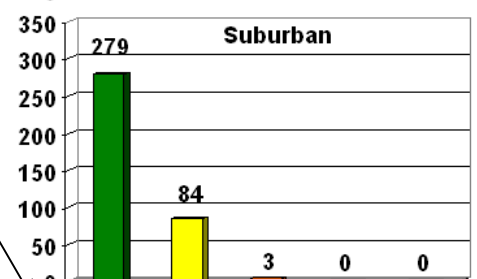
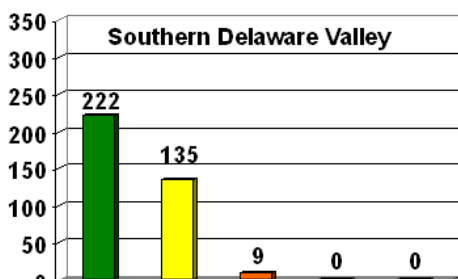
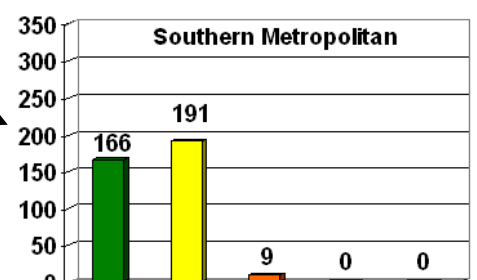
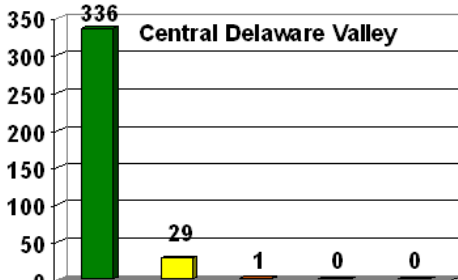
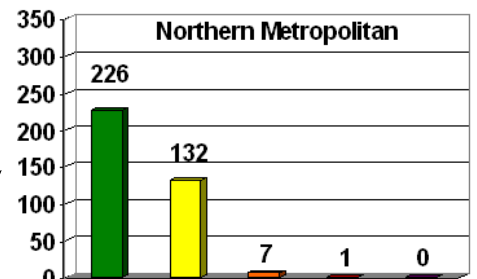
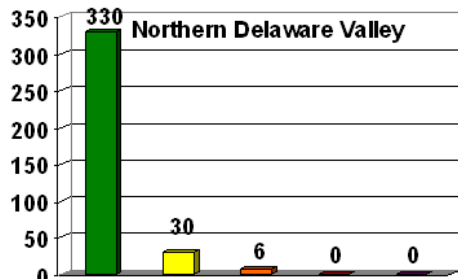
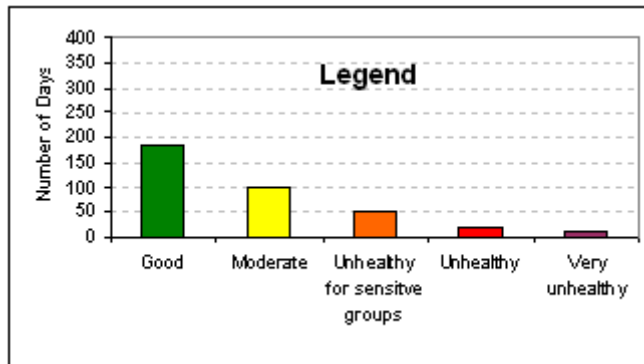
**Table 3
Air Quality Index (AQI) Exceedances of 100 During 2004**

	<u>Ratings</u>		<u>Pollutants</u>
USG	- Unhealthy for Sensitive Groups	PM	- Fine Particle Matter
UH	- Unhealthy	O ₃	- Ozone
VUH	- Very Unhealthy		

* Number in parentheses () indicates the number of monitoring sites exceeding 100 on a given day

Date	Highest Location	Highest AQI Value	Highest Pollutant	Highest Rating	Pollutant(s) with AQI above 100 *	
April 18	Camden/Clarksboro	101	O3	USG	O3 (2)	
April 19	Colliers Mills	101	O3	USG	O3 (1)	
May 11	Colliers Mills	124	O3	USG	O3 (2)	
May 12	South Camden	114	PM	USG	O3 (2)	PM (5)
May 13	Elizabeth Lab	132	PM	USG		PM (3)
June 08	Rutgers University	137	O3	USG	O3 (5)	PM (2)
June 09	Colliers Mills	147	O3	USG	O3 (4)	PM (4)
June 16	Ramapo	114	O3	USG	O3 (1)	
June 24	Flemington	114	O3	USG	O3 (1)	
June 30	Colliers Mills	101	O3	USG	O3 (1)	
July 01	Flemington	101	O3	USG	O3 (1)	
July 02	Clarksboro	119	O3	USG	O3 (5)	
July 21	Ancora S.H.	147	O3	USG	O3 (5)	PM (1)
July 22	Fort Lee	151	PM	UH	O3 (7)	PM (6)
July 23	Elizabeth Lab	124	PM	USG		PM (2)
August 04	Monmouth University	137	O3	USG	O3 (2)	
August 20	South Camden	110	PM	USG		PM (4)
November 18	Jersey City Firehouse	102	PM	USG		PM (1)
December 22	Elizabeth Lab	104	PM	USG		PM (1)

Figure 4
2004 Air Quality Index Summary
Number of Days by Reporting Region



REFERENCES

Air Quality Index, A Guide to Air Quality and Your Health, USEPA, Office of Air Quality Planning and Standards, Research Triangle Park, NC, June 2000, EPA-454/R-00-005, URL: www.epa.gov/airnow/aqi_cl.pdf

Guideline for Reporting of Daily Air Quality - Air Quality Index (AQI), USEPA, Office of Air Quality Planning and Standards, July 1999, EPA-454/R-99-010, URL: www.epa.gov/ttn/oarpg/t1/memoranda/rg701.pdf

Air Quality Index Reporting, Final Rule: Title 40, Part 58, Code of Federal Regulations, August 4, 1999. URL: http://www.epa.gov/ttn/oarpg/t1/fr_notices/airqual.pdf

National Air Quality and Emissions Trend Report, 1999, EPA-454/R-01-004, USEPA, Office of Air Quality Planning and Standards, Research Triangle Park, NC, March 2001, URL: www.epa.gov/oar/aqtrnd99/

Latest Findings on National Air Quality: 2000 Status and Trends, EPA-454/K-01-002, USEPA, Office of Air Quality Planning and Standards, Research Triangle Park, NC, September 2001, URL: www.epa.gov/oar/aqtrnd00/