



# 2002 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](http://www.epa.gov/airnow/aqibroch).

**Table 1**  
**Air Quality Index**

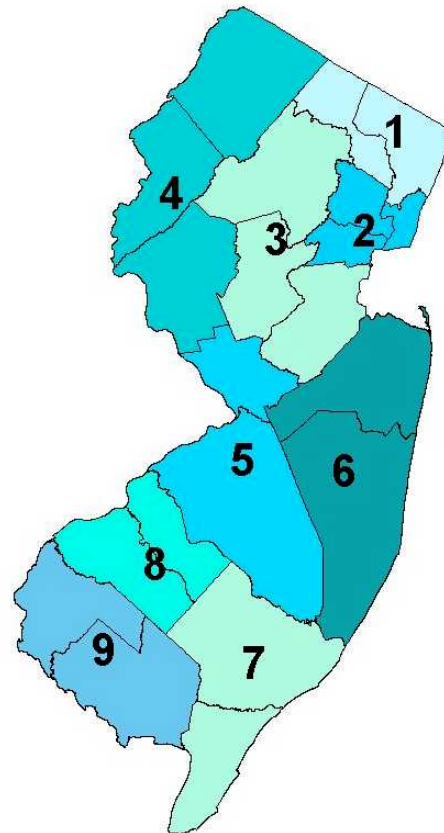
Numerical AQI Rating	Descriptive Rating	AQI Color Code
0-50	Good	Green
51-100	Moderate	Yellow
101-150	Unhealthy for Sensitive Groups	Orange
151-200	Unhealthy	Red
200-300	Very Unhealthy	Purple

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**



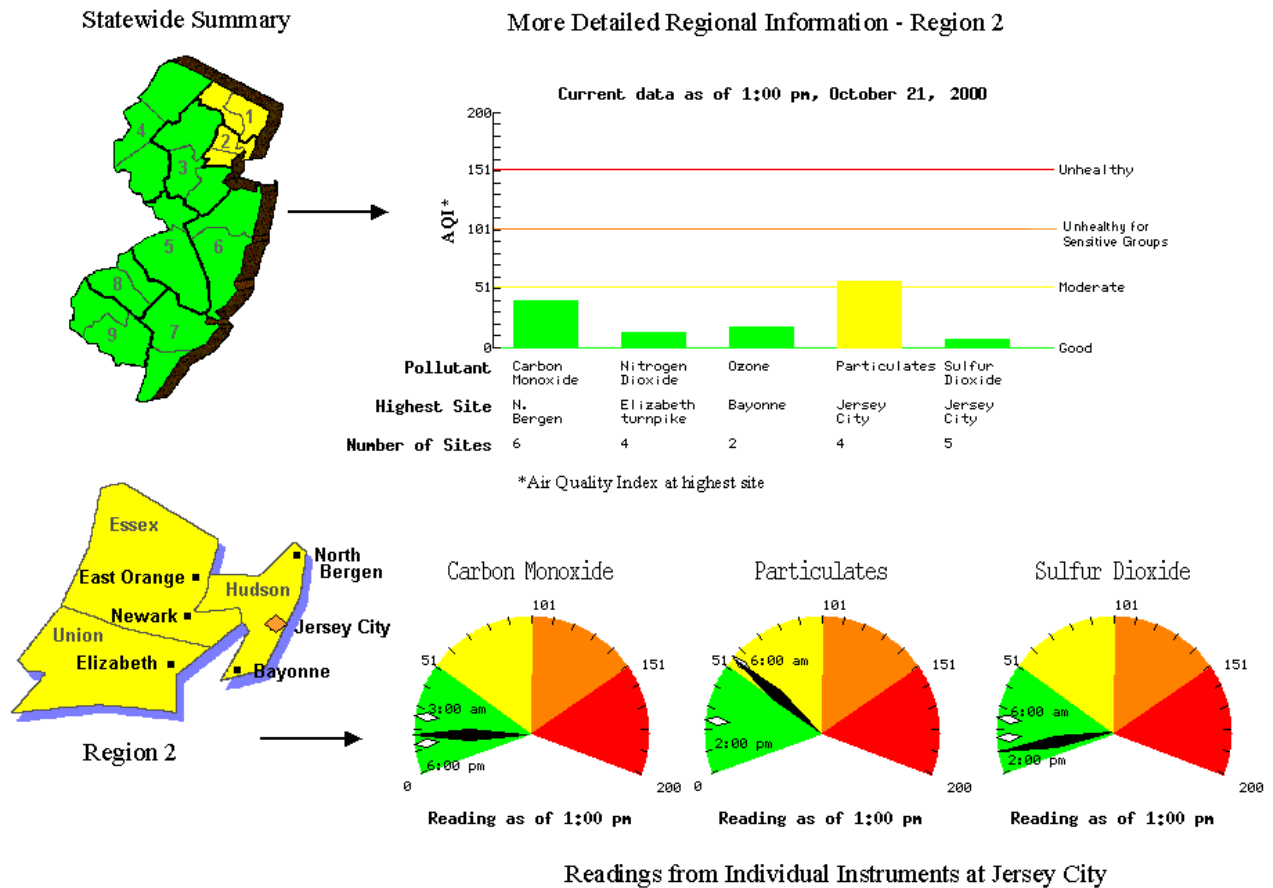
**Table 2**  
**Pollutants Monitored According to Air Quality Index Reporting Region - 2002**

CO - Carbon Monoxide                      O<sub>3</sub> - Ozone  
SO<sub>2</sub> - Sulfur Dioxide                      NO<sub>2</sub> - Nitrogen Dioxide  
PM - Particulate Matter

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

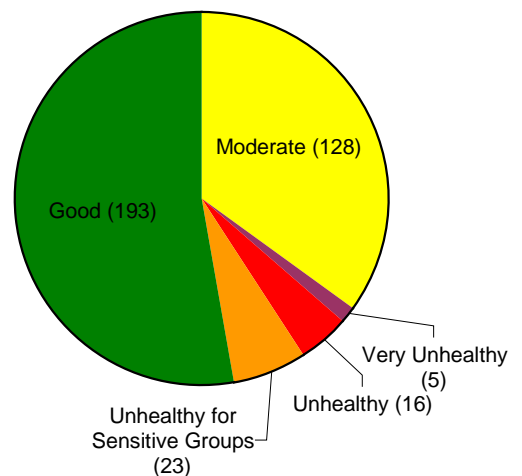
**Figure 2**  
Examples of NJDEP's Air Monitoring Website



## 2002 AQI SUMMARY

A summary of the AQI ratings for New Jersey in 2002 is presented in the pie chart to the right. In 2002 there were 193 "Good" days, 128 were "Moderate", 23 were rated "Unhealthy for Sensitive Groups", 16 were considered "Unhealthy", and 5 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 ten. 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. The map that follows shows the AQI ratings for the year broken down by AQI region.

**Figure 3**  
Air Quality Summary by Days



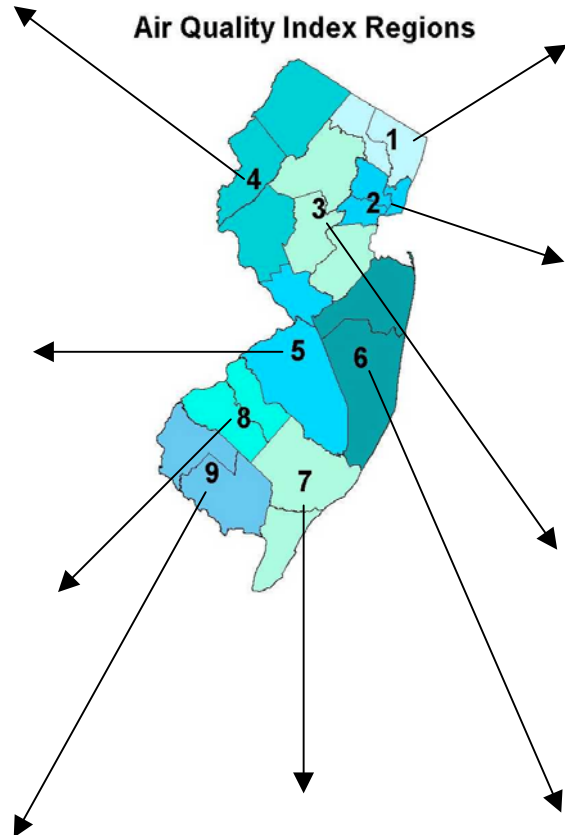
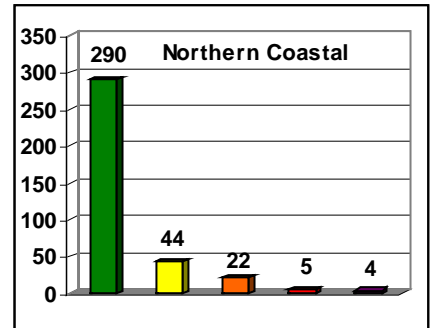
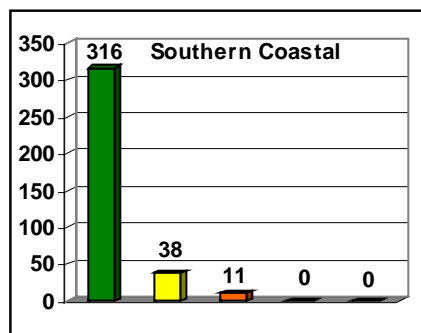
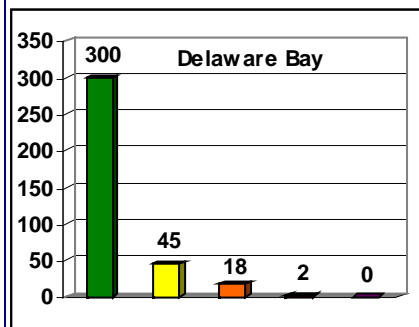
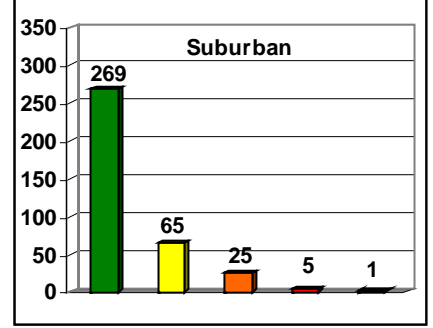
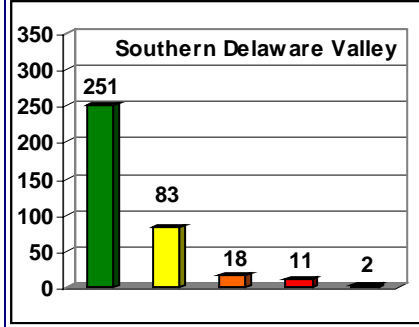
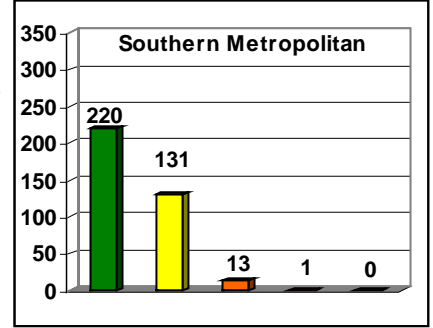
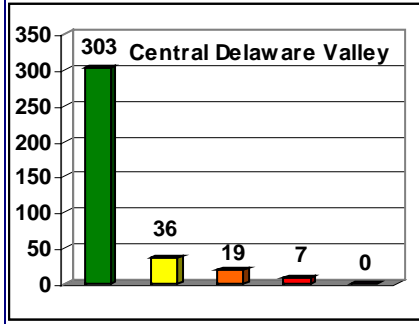
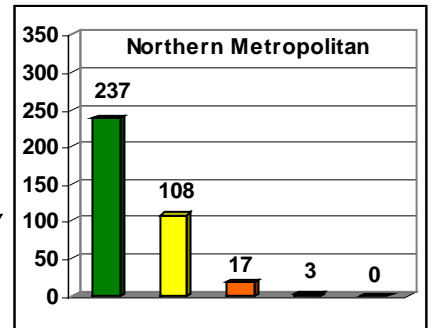
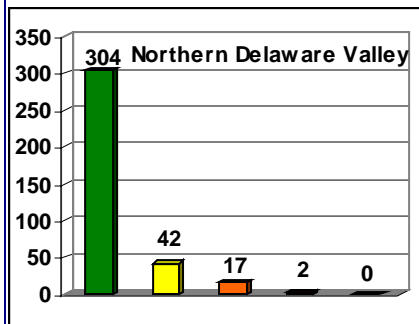
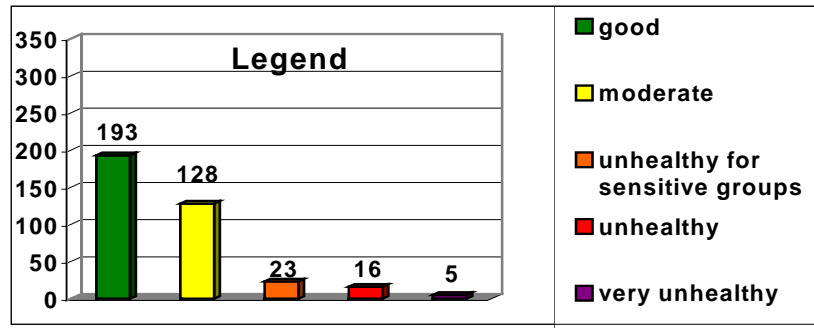
**Table 3  
Air Quality Index (AQI) Exceedances of 100 During 2002**

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

Date	Highest Location	Highest AQI Value	Highest Pollutant	Highest Rating	Pollutant(s) with AQI above 100 *	
May 24	Colliers Mills	122	O <sub>3</sub>	USG	O <sub>3</sub> (7)	
June 05	Chester	119	O <sub>3</sub>	USG	O <sub>3</sub> (1)	
June 11	Camden Lab	166	O <sub>3</sub>	UH	O <sub>3</sub> (11)	PM(2)
June 12	Ancora State Hospital	132	O <sub>3</sub>	USG	O <sub>3</sub> (5)	
June 20	Rutgers University	124	O <sub>3</sub>	USG	O <sub>3</sub> (5)	
June 21	Flemington	111	O <sub>3</sub>	USG	O <sub>3</sub> (1)	
June 22	Colliers Mills	156	O <sub>3</sub>	UH	O <sub>3</sub> (10)	
June 23	Colliers Mills	135	O <sub>3</sub>	USG	O <sub>3</sub> (9)	
June 24	Ancora State Hospital	150	O <sub>3</sub>	USG	O <sub>3</sub> (7)	
June 25	Clarksboro	161	O <sub>3</sub>	UH	O <sub>3</sub> (9)	PM(1)
June 26	Rutgers University	116	O <sub>3</sub>	USG	O <sub>3</sub> (4)	
"	Elizabeth Lab	116	PM	USG		PM(2)
July 01	Rider University	132	O <sub>3</sub>	USG	O <sub>3</sub> (10)	
July 02	Colliers Mills	201	O <sub>3</sub>	VUH	O <sub>3</sub> (12)	PM(3)
July 03	Ancora State Hospital	151	O <sub>3</sub>	UH	O <sub>3</sub> (7)	
July 07	Camden Lab	169	PM	UH	O <sub>3</sub> (2)	PM(4)
July 08	Colliers Mills	202	O <sub>3</sub>	VUH	O <sub>3</sub> (15)	PM(4)
July 09	Colliers Mills	206	O <sub>3</sub>	VUH	O <sub>3</sub> (15)	PM(4)
July 13	Flemington	101	O <sub>3</sub>	USG	O <sub>3</sub> (1)	
July 15	Colliers Mills	111	O <sub>3</sub>	USG	O <sub>3</sub> (2)	
July 17	Colliers Mills	179	O <sub>3</sub>	UH	O <sub>3</sub> (8)	
July 18	Ancora State Hospital	169	O <sub>3</sub>	UH	O <sub>3</sub> (14)	PM(3)
July 19	Clarksboro	154	O <sub>3</sub>	UH	O <sub>3</sub> (9)	PM(3)
July 22	Chester	137	O <sub>3</sub>	USG	O <sub>3</sub> (7)	
July 23	Teaneck	129	O <sub>3</sub>	USG	O <sub>3</sub> (5)	
July 28	Rider University	106	O <sub>3</sub>	USG	O <sub>3</sub> (1)	
July 29	Ancora State Hospital	116	O <sub>3</sub>	USG	O <sub>3</sub> (3)	PM(1)
July 31	Ancora State Hospital	114	O <sub>3</sub>	USG	O <sub>3</sub> (2)	
August 01	Colliers Mills	174	O <sub>3</sub>	UH	O <sub>3</sub> (6)	
August 02	Camden Lab	179	O <sub>3</sub>	UH	O <sub>3</sub> (12)	
August 03	Camden Lab	129	O <sub>3</sub>	USG	O <sub>3</sub> (5)	
August 04	Rider University	177	O <sub>3</sub>	UH	O <sub>3</sub> (8)	
August 05	Ancora State Hospital	124	O <sub>3</sub>	USG	O <sub>3</sub> (3)	
August 10	Rider University	151	O <sub>3</sub>	UH	O <sub>3</sub> (8)	
August 11	Rider University	164	O <sub>3</sub>	UH	O <sub>3</sub> (9)	
August 12	Chester	203	O <sub>3</sub>	VUH	O <sub>3</sub> (11)	
August 13	Colliers Mills	201	O <sub>3</sub>	VUH	O <sub>3</sub> (15)	PM(3)
August 17	Monmouth University	127	O <sub>3</sub>	USG	O <sub>3</sub> (2)	
August 19	Colliers Mills	135	O <sub>3</sub>	USG	O <sub>3</sub> (4)	
August 22	Chester	104	O <sub>3</sub>	USG	O <sub>3</sub> (1)	
Sept. 08	Chester	151	O <sub>3</sub>	UH	O <sub>3</sub> (4)	
Sept. 09	Colliers Mills	137	O <sub>3</sub>	USG	O <sub>3</sub> (7)	
Sept. 10	Chester	159	O <sub>3</sub>	UH	O <sub>3</sub> (1)	

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

Figure 4  
 2002 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](http://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](http://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](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/](http://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/](http://www.epa.gov/oar/aqtrnd00/)