



2005 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 <http://airnow.gov/>.

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 a forecast is prepared using the AQI format. The forecast is provided 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.

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

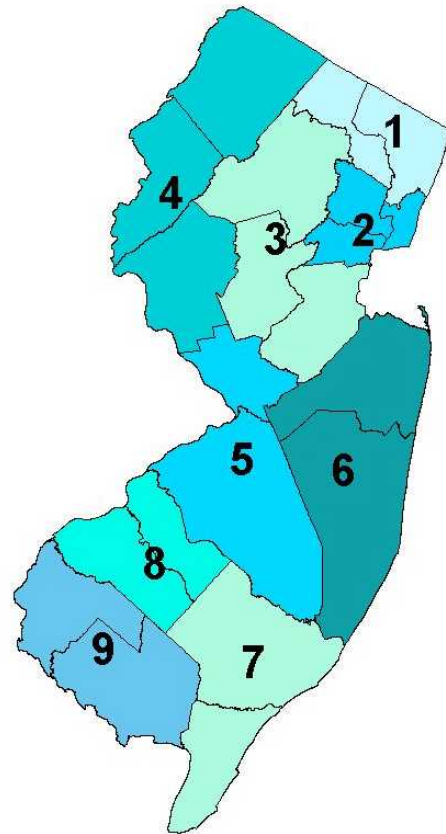


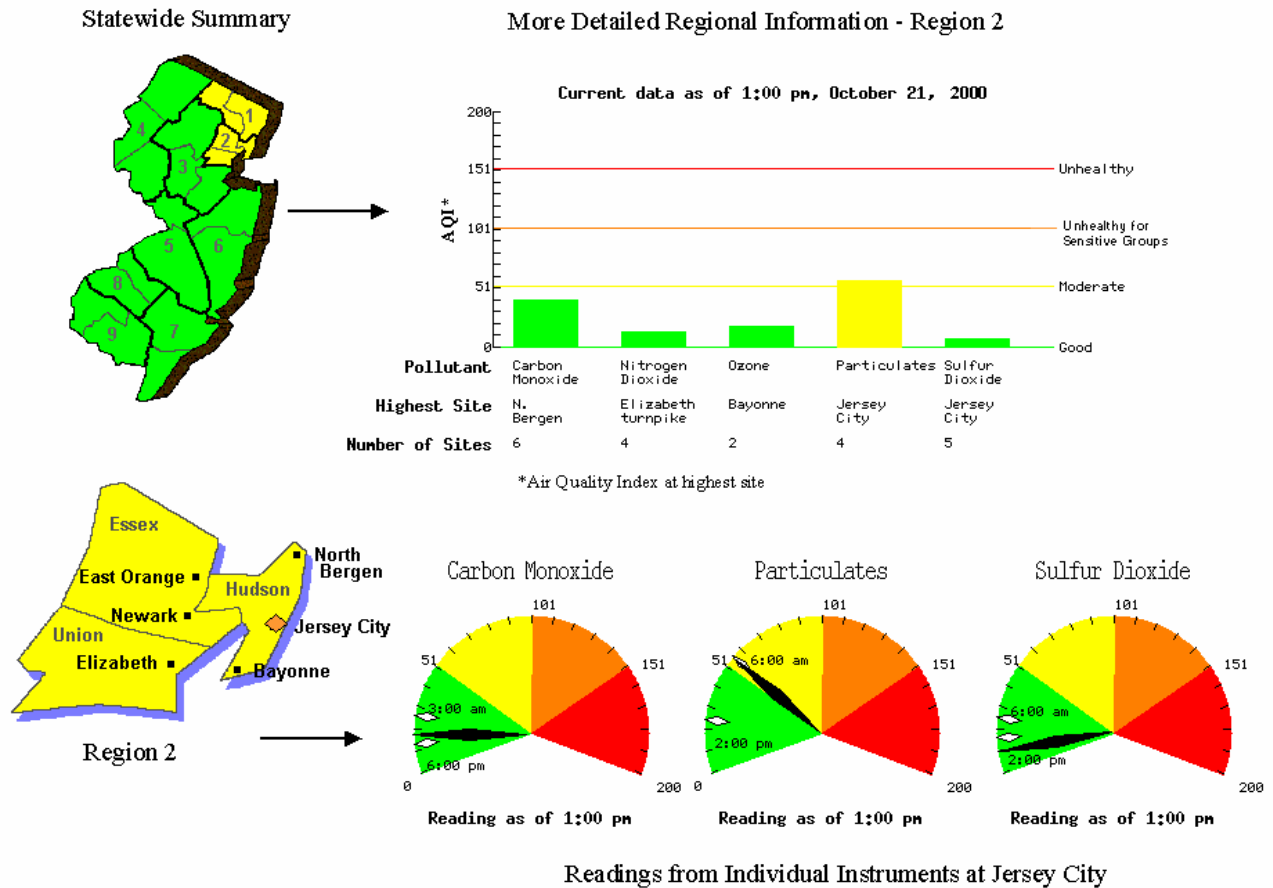
Table 2
Pollutants Monitored According to Air Quality Index Reporting Region - 2005

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 air quality forecast map, introduced during the 1996 ozone season, is televised on New Jersey Network's (NJN) TV News Broadcast. 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:

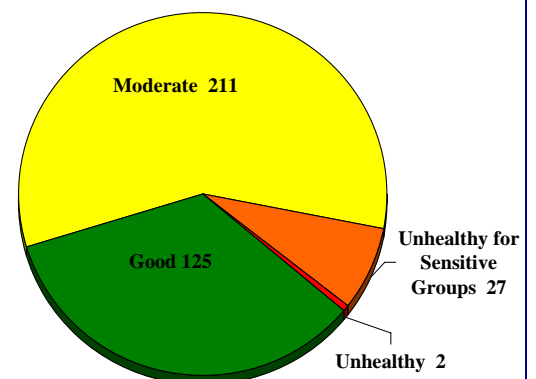
Figure 2
Examples of NJDEP's Air Monitoring Website



2005 AQI SUMMARY

A summary of the AQI ratings for New Jersey in 2005 is presented in the pie chart to the right. In 2005 there were 125 "Good" days, 211 were "Moderate", 27 were rated "Unhealthy for Sensitive Groups", 2 were 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 thirteen. 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



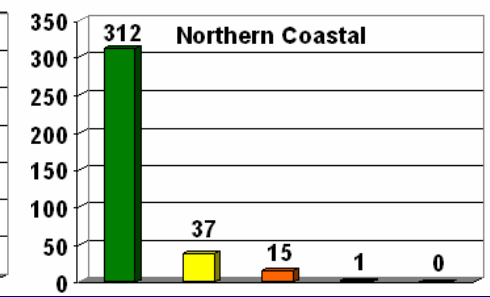
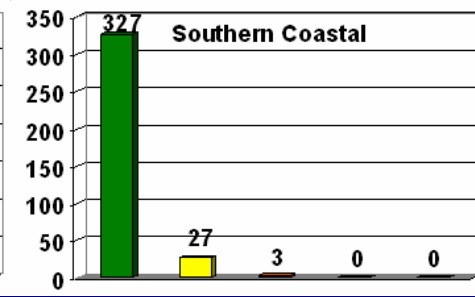
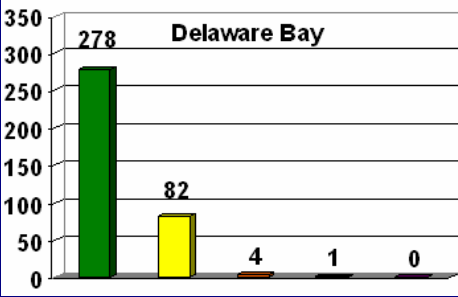
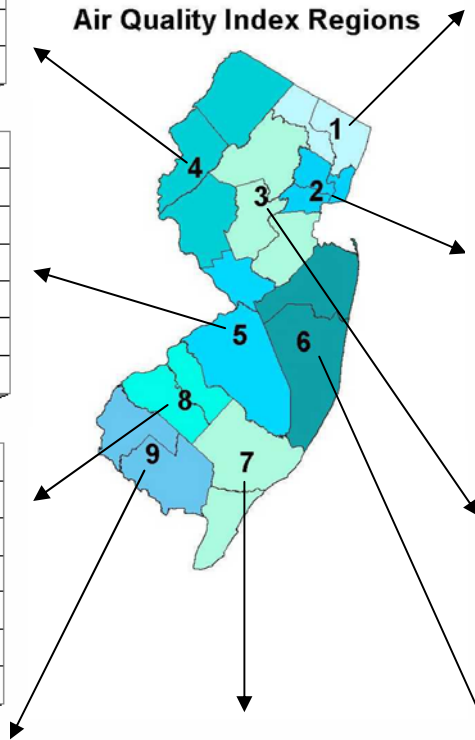
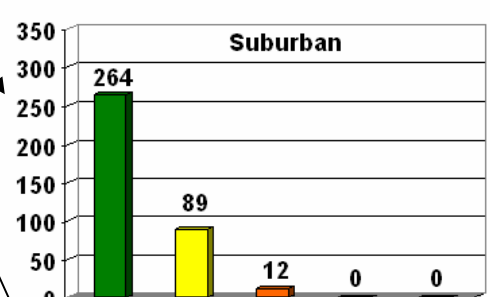
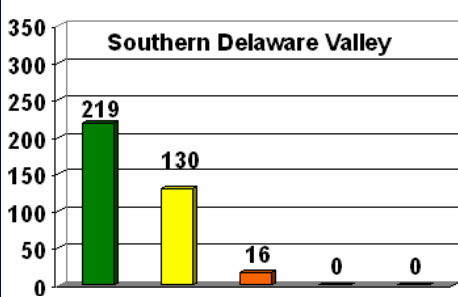
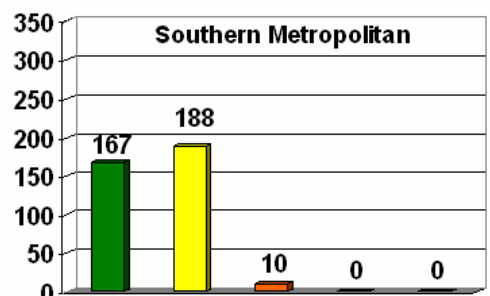
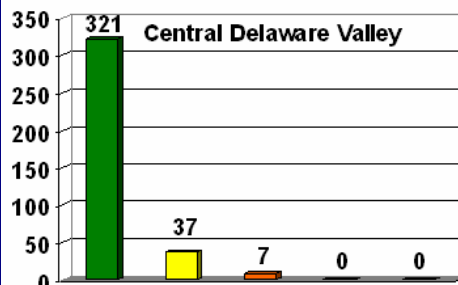
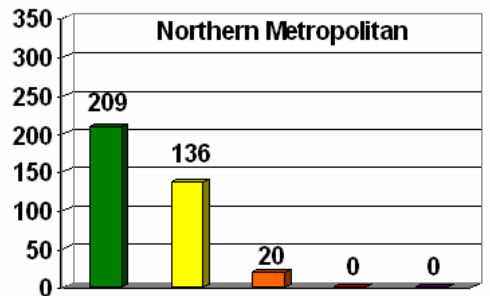
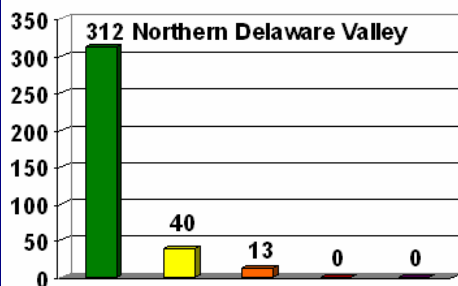
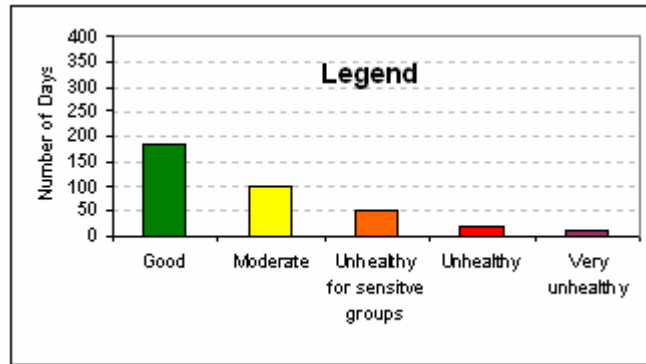
**Table 3
Air Quality Index (AQI) Exceedances of 100 During 2005**

	<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 19	Colliers Mills/ Ft. Lee	116	O3 / PM	USG	O3 (4)	PM (1)
April 20	Ancora S.H.	109	O3	USG	O3 (4)	PM (1)
June 06	Fort Lee	114	PM	USG		PM (2)
June 08	Teaneck	111	O3	USG	O3 (6)	
June 09	J.C. Firehouse	108	PM	USG		PM (1)
June 21	Colliers Mills	129	O3	USG	O3 (4)	
June 24	Flemington	109	O3	USG	O3 (2)	
June 25	Rider University	137	O3	USG	O3 (6)	
June 26	Flemington/Teaneck	140	O3	USG	O3 (5)	
July 06	Fort Lee	104	PM	USG		PM (1)
July 18	Fort Lee	139	PM	USG		PM (1)
July 19	Fort Lee	118	PM	USG		PM (2)
July 21	Colliers Mills	150	O3	USG	O3 (10)	
July 22	Millville	164	O3	UH	O3 (8)	PM (1)
July 26	Colliers Mills	161	O3	UH	O3 (5)	PM (1)
July 27	Colliers Mills	119	O3	USG	O3 (3)	PM (3)
August 02	Ancora S.H.	119	O3	USG	O3 (2)	
August 03	Colliers Mills	127	O3	USG	O3 (6)	
August 04	Colliers Mills	140	O3	USG	O3 (5)	PM (1)
August 05	Colliers Mills	150	O3	USG	O3 (2)	PM (2)
August 11	Ancora S.H.	106	O3	USG	O3 (3)	
August 12	Rutgers University	127	O3	USG	O3 (5)	PM (4)
August 13	Ft. Lee/ J.C. Firehouse	128	PM	USG	O3 (5)	PM (7)
August 14	Fleminton	114	O3	USG	O3 (1)	PM (1)
September 08	Ancora S.H.	132	O3	USG	O3 (8)	
September 12	Colliers Mills	104	O3	USG	O3 (2)	
September 13	Fort Lee	141	PM	USG	O3 (10)	PM (3)
November 06	Fort Lee	106	PM	USG		PM (1)
November 21	Fort Lee	114	PM	USG		PM (1)

Figure 4
 2005 Air Quality Index Summary
 Number of Days by Reporting Region



References

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