Air Monitoring Report
1999

STATE OF FLORIDA
Jeb Bush, Governor

DEPARTMENT OF ENVIRONMENTAL PROTECTION
David B. Struhs, Secretary

DIVISION OF AIR RESOURCE MANAGEMENT
Howard L. Rhodes, Director

Twin Towers Office Building
2600 Blair Stone Road, MS 5510
Tallahassee, Florida 32399-2400
(850-488-0114)

If a disabled individual wishes to obtain the information contained in this document in another form, please contact the ADA representative for the Air Resources Management Division at (850)488-0114, or access the number through the Florida Relay System at 1-800-955-8771.

Printed on recycled paper.

Foreword

This report is prepared annually by the Division of Air Resource Management of the Department of Environmental Protection to inform the public of the air pollution levels throughout the state of Florida. It summarizes the results of monitoring that has been conducted to measure the outdoor concentrations of those pollutants for which the U. S. Environmental Protection Agency and the Department of Environmental Protection have established ambient air quality standards:

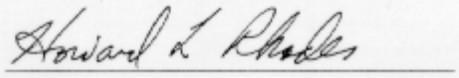
- Carbon Monoxide
- Ozone
- Lead
- Particulate Matter
- Nitrogen Dioxide
- Sulfur Dioxide

It includes general discussions of the sources and effects of each pollutant, along with a description of analysis methods. Pollutant concentration levels which have exceeded the ambient air quality standards are identified, and factors which may have contributed to the occurrence of each such exceedance are described.

This report is not intended to present plans for maintaining pollutant concentration levels below the ambient air quality standards, or for correcting each exceedance situation. Rather, its purpose is to provide the public and units of local, state, and federal governments with information needed to develop such plans. Suggestions for improving future editions of this report are welcomed.

Copies of this report are available on the World Wide Web:

http://www.dep.state.fl.us/air/info.htm



Howard L. Rhodes, P.E.
Director
Division of Air Resource Management

Table of Contents

List of Figures

List of Tables

Executive Summary

The ambient air monitoring network in Florida has changed dramatically in the last twenty years. While monitoring equipment has improved and become easier to operate, analysis methods have become more precise and reliable. As the state grows, the monitoring network has been pressed to expand to keep pace. The monitoring effort has concentrated on the six criteria pollutants—carbon monoxide, lead, nitrogen dioxide, ozone, sulfur dioxide and particulate matter. Currently, there are 219 ambient monitors in the air monitoring network.

A survey of the criteria ambient monitoring results shows:

Carbon Monoxide

One hour standard: 35 parts per million (ppm)

All 26 monitors' concentrations were below 30 percent of standard.

Eight hour standard: 9 ppm

All 26 monitors' concentrations were below 65 percent of standard.

Carbon monoxide is a larger problem in cold climates. Mild winters, more efficient cars and reduced traffic congestion in Florida's downtowns have resulted in no enforcable carbon monoxide exceedances in the last twelve years.

Lead

Quarterly average standard: 1.5 micrograms per cubic meter ($\mu g/m^3$)

Six of the nine monitors recorded concentrations of zero for all quarters. All three monitors which registered lead concentrations were located in the former nonattainment area for lead in Hillsborough County which was converted to a maintenance area January 1, 1996.

With the removal of lead from gasoline, the roadside lead monitoring concentrations have been reduced to nearly zero since the late 1980s. Monitoring attention is now focused on stationary lead sources and has been eliminated from some urban areas entirely.

Nitrogen Dioxide

Annual average standard: 100 $\mu g/m^3$

All 13 monitors' concentrations were less than 35 percent of the standard.

The nitrogen dioxide levels have never threatened the standard in Florida. The importance of monitoring nitrogen dioxide is in helping to understand its influence in the formation of ozone.

Ozone

One hour standard: 0.12 ppm

The one hour standard was vacated in February 1998 in Florida. However, the one hour standard is currently under review.

Three concentrations over the standard occurred at three monitors in Broward, Hillsborough and Pinellas counties.

Eight hour standard: 0.08 ppm

A new NAAQS for ozone based on an 8-hour average was promulgated July 1997 and became effective September 16, 1997. Under the new rule, attainment is reached by having a 3-year average of the annual fourth-highest daily maximum 8-hour average of not greater than 0.08 ppm. However, in May 1998 a lawsuit rendered the 8-hour ozone standard unenforceable.

Seventy-eight concentrations over the standard occurred at 31 monitors in 17 counties.

Particulate Matter

PM_{10}

Twenty-four hour standard: 150 $\mu g/m^3$

Sixty-four of the 66 monitors' concentrations were below 60 percent of the standard.

There was one exceedance of the twenty-four hour standard which occurred in Hamilton County. The DEP has requested and received approval from the EPA to exclude this value from attainment/maintenance because it was due to impact from a wildfire in the area.

Annual standard: 50 $\mu g/m^3$

All 66 monitors' concentrations were less than 75 percent of the standard.

While parts of Florida experience nuisance amounts of particles in the form of dust or pollen, inhalable particulate concentrations have always been less than the standard. PM_{10} is more harmful to humans because it is able to enter the lungs.

$PM_{2.5}$

Twenty-four hour standard: 65 $\mu g/m^3$

Twenty-five of the 30 monitors' concentrations were below the standard.

The highest 24 hour average for 1999 was 108 mg/m^3 in Broward County.

Annual standard: 15.0 $\mu g/m^3$

All of the 30 monitors had an annual average below 15.0 $\mu g/m^3$.

A new NAAQS for PM_{fine} (the PM with a diameter of 2.5 microns or less) was promulgated in July 1997, once again, reflecting EPA's focus on that which poses a greater threat to human health.

Sulfur Dioxide

Three hour standard: 1300 $\mu g/m^3$

All 30 monitors' concentrations were below 40 percent of the standard.

Twenty-four hour standard: 260 $\mu g/m^3$

Twenty-seven of the 30 monitors' concentrations were below 75 percent of the standard.

Annual average: 60 $\mu g/m^3$

All 30 monitors' concentrations were below 35 percent of the standard.

The 1990 Clean Air Act Amendments addressed reducing the emissions of large sulfur dioxide sources. The sulfur dioxide levels near smaller sources occasionally are affected by winter weather patterns which can concentrate plume emissions to the point of exceeding or nearly exceeding the standard.

Chapter 1: Air Quality Monitoring Program

1.1 Introduction

The air quality monitoring program of the state of Florida provides the public and units of local, state, and federal government with measurements of pollutant concentration levels in the ambient air - ambient air being generally defined as that portion of the atmosphere near ground level and external to buildings or other structures. Legal limitations on pollutant concentration levels allowed to occur in the ambient air, or ambient air quality standards, have been established by the U.S. Environmental Protection Agency (EPA) and the Florida Department of Environmental Protection (DEP) for six pollutants: carbon monoxide (CO), lead, nitrogen dioxide (NO_2), ozone (O_3), particulate matter (10 microns or less in diameter (PM_{10}) and 2.5 microns or less in diameter ($PM_{2.5}$)), and sulfur dioxide (SO_2). Since health-based criteria have been used to establish the standards, these six pollutants are referred to as "criteria air pollutants."

An essential component of air quality management in the state is the identification of (1) areas where the ambient air quality standards are being violated and plans are needed to reduce pollutant concentration levels to be in attainment with the standards and (2) areas where the ambient standards are being met but plans are needed to ensure maintenance of acceptable levels of air quality in the face of anticipated population or industrial growth. The end-result of this attainment/maintenance analysis is the development of local and statewide strategies for controlling emissions of criteria air pollutants from stationary and mobile sources. The first step in this process is the annual compilation of the ambient air monitoring results. This report contains that information. The second step is the analysis of the monitoring data for general air quality, exceedances of air quality standards, and pollutant trends.

1.2 Ambient Air Quality Standards

Two types of national ambient air quality standards (NAAQS) have been established by the EPA for the six criteria air pollutants. Primary ambient air quality standards are designed to protect public health with an adequate margin of safety. Secondary ambient air quality standards are designed to protect public welfare-related values including, property, materials, and plant and animal life. In Florida, ambient air quality standards at least as stringent as the national secondary standards have been adopted by the DEP (Table 1.1).

An exceedance of an ambient air quality standard is the occurrence of a pollutant concentration that is greater than the numerical value of the standard. A violation of an ambient standard is the occurrence of more exceedances of the standard than is allowed within a specified period of time. An example would be two or more exceedances of the 24-hour particulate matter standard in one year at one site. Certain exceedances may be excluded, however, in determining whether or not a violation has occurred.

An excludable exceedance is one that occurs as a result of an unusual natural or manmade event such as a severe drought, wildfire, tornado, structural fire, or temporary construction project near a monitor. The question of whether or not an exceedance shall be excluded arises in determining the attainment status of an area.

1.3 Area Designations

All areas within the state are designated with respect to each of the six pollutants as "attainment," in compliance with the standards, "nonattainment," not in compliance with the standards, or "unclassifiable," insufficient data to classify. Attainment areas can be further classified as "maintenance" areas. Maintenance areas are areas previously classified as nonattainment, which have successfully reduced air pollutant concentrations to below the standard, but must maintain some of the nonattainment area plans to stay in compliance with the standards. The purpose of the nonattainment designation is to identify air quality problem areas for which the DEP and the EPA must seek solutions.

All areas of Florida are now attainment areas. Orange County, Duval County, the Tampa Bay area

Table 1.1 *State and federal ambient air quality standards. (Note: In 1987, the ambient air quality standards for particulate matter were revised and made applicable to inhalable particles, i.e., particles less than 10 micrometers in diameter.)*

Pollutant	Averaging Time	Florida Standard	Primary NAAQS	Secondary NAAQS
Carbon Monoxide	8-hour[a]	9 ppm	9 ppm	--
	1-hour[a]	35 ppm	35 ppm	--
Lead	Quarterly[b]	1.5 $\mu g/m^3$	1.5 $\mu g/m^3$	1.5 $\mu g/m^3$
Nitrogen Dioxide	Annual[b]	100 $\mu g/m^3$ (53 ppb)	100 $\mu g/m^3$ (53 ppb)	100 $\mu g/m^3$ (53 ppb)
Ozone	1-hour[c]	0.12 ppm	0.12 ppm	0.12 ppm
	8-hour[d]	0.08 ppm	0.08 ppm	0.08 ppm
Particulate Matter (PM10)	Annual[b]	50 $\mu g/m^3$	50 $\mu g/m^3$	--
	24-hour[c]	150 $\mu g/m^3$	150 $\mu g/m^3$	--
Particulate Matter (PM2.5)	Annual[b]	15.0 $\mu g/m^3$	15.0 $\mu g/m^3$	--
	24-hour[c]	65 $\mu g/m^3$	65 $\mu g/m^3$	--
Sulfur Dioxide	Annual[b]	60 $\mu g/m^3$ (20 ppb)	80 $\mu g/m^3$ (30 ppb)	--
	24-hour[a]	260 $\mu g/m^3$ (100 ppb)	365 $\mu g/m^3$ (140 ppb)	--
	3-hour[a]	1300 $\mu g/m^3$(500 ppb)	--	1300 $\mu g/m^3$(500 ppb)

a - Not to be exceeded more than once per year.
b - Arithmetic mean.
c - Not to be exceeded on more than an average of one day per year over a three-year period.
d - Not to be exceeded by the three-year average of the 4th highest daily max.
e - Not to be exceeded by the three-year average of the 98th percentile of the 24-hour averages.

including Hillsborough and Pinellas Counties and Southeast Florida including Dade, Broward and Palm Beach Counties continue to be classified by the Department as attainment/maintenance areas for the pollutant ozone.

The entire state was designated as not classifiable for PM_{10}. The ambient air quality standard for particulate matter was changed in 1987 to include only particles less than 10 micrometers in diameter. These particles are referred to as PM_{10}. The statewide monitoring network for PM_{10} has not operated long enough to classify it as attainment or nonattainment.

1.4 Monitoring Networks

Ambient air data are collected by 193 monitors in 34 counties throughout the state (Table 1.2). Two types of monitoring networks are used to collect the ambient air data in the state. These networks are distinguished from one another by the general monitoring objectives they are designed to meet (Table 1.3).

State/Local Air Monitoring Station (SLAMS) and National Air Monitoring Station (NAMS) Network

The SLAMS/NAMS network is designed to meet a minimum of four basic objectives:

1. To determine the highest concentrations expected to occur in the area covered by the network.
2. To determine representative concentrations in areas of high population density.
3. To determine the impact on ambient pollution levels of significant sources or source categories.
4. To determine general background concentration levels.

Data from the SLAMS/NAMS network provide an overall view of the state's air quality and are used in the development of statewide control strategies.

Individual stations within the network are designated as either "SLAMS" or "NAMS" sites. The NAMS sites are a subset of the stations selected from the NAMS/SLAMS network with emphasis given to urban and multisource areas. Areas monitored are selected on both urban popu-

lation and pollutant concentration levels. The primary objective is to monitor in areas where the pollutant concentration levels and population exposures are expected to be the highest. Data from the NAMS sites are used by the EPA to develop nationwide control strategies.

Special Purpose Monitoring (SPM) Network

The SPM network is distinct from the SLAMS/NAMS network. It is designed to meet the local and sometimes temporary monitoring objectives of the counties and major metropolitan areas in Florida, and to supplement the SLAMS/NAMS network in data-sparse areas. The data from these stations are used to develop and refine local control strategies, and to verify maintenance of ambient standards in areas not covered by the SLAMS/NAMS network. Similarly, the SPM network is operated in accordance with all applicable state and federal monitoring requirements.

1.5 Monitoring Site Spatial Scales

The concept of spatial scale is used to clarify the link between the general monitoring objective and the physical location of the monitor. The spatial scale of a monitoring

Table 1.2 *1999 County Monitoring Summary.*

County Name	CO	Lead	NO2	Ozone	PM Cont.	PM10	PM2.5	2.5Cont.	SO2	Total
Alachua				1		2	2			5
Baker				1						1
Bay						1				1
Brevard				2		2				4
Broward	6	1	2	3		9	3		1	25
Citrus							1			1
Collier						1				1
Dade	3		2	3		4	2		1	15
Duval	3	2	1	2		3	2		4	17
Escambia			1	3		2	1	1	2	10
Gulf						1				1
Hamilton						1			1	2
Hillsborough	4	3	2	4	1	10	2		7	33
Holmes				1						1
Lake					1					1
Lee				2		1	1			4
Leon				1	1		1			3
Manatee			1	4		1	1		1	8
Marion				1			1			2
Monroe						2				2
Nassau						1			1	2
Orange	2		1	2		4	2		1	12
Osceola				1						1
Palm Beach	2	1	1	2		2	2	1	1	12
Pasco				1						1
Pinellas	4	2	1	3		4	2		4	20
Polk				2	1	1	1		2	7
Putnam						1			1	2
St. Lucie			1	1		1	1			4
Sarasota	2			2		3	1		3	11
Seminole				1		2	1			4
Volusia				2	1	2	1			6
Total	26	9	13	45	5	61	28	2	30	219

Table 1.3 *1999 Criteria Monitor Summary.*

Spatial Scale	CO Station Types (8 counties)				Lead Station Types (5 Counties)			
	NAMS	SLAMS	SPM	TOTAL	NAMS	SLAMS	SPM	TOTAL
Micro	5	5		10	2			2
Middle	1	2	1	4		1	2	3
NBH	7	4	1	12	2	2		4
Total	13	11	2	26	4	3	2	9

Spatial Scale	NO_2 Station Types (10 counties)				Ozone Station Types (23 Counties)			
	NAMS	SLAMS	SPM	TOTAL	NAMS	SLAMS	SPM	TOTAL
Middle								
NBH	4	3	1	8	11	8	3	22
Urban	1	2	2	5	14	6	2	22
Region							1	1
Total	5	5	3	13	25	14	6	45

Spatial Scale	PM_{10} Station Types (26 counties)				PM2.5 Station Types (19 counties)			
	NAMS	SLAMS	SPM	TOTAL	NAMS	SLAMS	SPM	TOTAL
Micro	1	0	1	2				0
Middle	3	2	1	6	1		1	2
NBH	10	33	7	50	2	22		24
Urban		4	4	8		2	2	4
Total	14	39	13	66	3	24	3	30

Spatial Scale	SO_2 Station Types (14 Counties)			
	NAMS	SLAMS	SPM	TOTAL
Micro				
Middle	1	3		4
NBH	11	10	2	23
Urban		2	1	3
Total	12	15	3	30

station describes the size of the ambient air parcel in the vicinity of the monitor which is expected to have the same pollutant concentration as the air sampled by the monitor. One of the goals in siting monitoring stations is to match the spatial scale representing ambient air in a given location with the spatial scale most appropriate for the monitoring objective of the station. The dimensions of these scales are described as follows.

Micro Scale

The micro scale has dimensions from several meters to 100 meters and is used primarily for siting carbon monoxide monitors near roadways and other areas of high vehicular activity. This scale is used because the carbon monoxide usually decreases rapidly with distance from the source area. Measurements on the micro scale typically include concentrations in street canyons, over sidewalks and in areas next to major roadways.

Middle Scale

The middle scale has dimensions ranging from 100 to 500 meters. Many of the measurements of short-term public exposure to particulate matter and carbon monoxide are on this scale. Measurements on the middle scale typically include concentrations in downtown areas and areas adjacent to major roadways and parking lots.

Regional Scale

The regional scale is intended to characterize conditions over areas with dimensions of several hundred kilometers. Regional scale measurements are used most often for sparsely populated areas with reasonably uniform ground cover. Such measurements provide information on background air quality.

Neighborhood Scale

The neighborhood spatial scale is the most widely used. It has dimensions ranging from one-half to four kilometers. Generally these stations represent suburban areas with moderate to high population densities. These measurements provide useful information on trends and compliance with standards.

Urban Scale

The urban scale has dimensions ranging from 4 to 50 kilometers. This scale represents conditions over an entire metropolitan area and is useful in assessing city-wide trends in air quality.

1.6 Monitoring Agencies

The ambient monitoring network in Florida is operated by many agencies. In the counties where pollution control has been a priority, local programs have been established to monitor, permit facilities and enforce regulations. Outside of these counties the Department of Environmental Protection's District Offices operate the monitoring network with support from the Bureau of Air Monitoring and Mobile Sources. The agencies responsible for monitoring are listed in Table 1.4.

Table 1.4 *Monitoring Agencies.*

Agency	Address	Contact
Broward County Department of Natural Resource Protection	218 Southwest First Avenue Ft. Lauderdale, Florida 33301 954/519-1220	Ms. Daniela Banu Director Air Quality Division
Dade County Department of Environmental Resources Management	33 Southwest 2nd Avenue Suite 900 Miami, Florida 33130-1540 305/372-6925	Mr. H. Patrick Wong Chief Air Section
City of Jacksonville Regulatory and Environmental Services Department	117 West Duval Street Suite 225 Jacksonville, Florida 32202 904/630-3484	Mr. James L. Manning Chief Air & Water Quality Division
Hillsborough County Environmental Protection Commission	1410 North 21st Street Tampa, Florida 33605 813/272-5530	Mr. Jerry Campbell Director Air Management Division
Orange County Environmental Protection Department	800 Mercy Drive, Suite 4 Orlando, Florida 32088 407/836-1400	Ms. Marie Driscoll Air Program Supervisor
Palm Beach County Public Health Department	901 Evernia Street Post Office Box 29 W. Palm Beach, Florida 33401 561/355-3070	Mr. James E. Stormer Environmental Administrator Division of Environmental Science and Engineering
Pinellas County Department of Environmental Management	300 South Garden Avenue Clearwater, Florida 33756 813/464-4422	Mr. Peter A. Hessling Administrator Air Quality Division
Sarasota County Natural Resources Department	1301 Cattlemen Road, Bldg. A Sarasota, Florida 34232 941/378-6128	Mr. J. Kent Kimes Manager Pollution Control Division
Northwest District	160 Governmental Center Pensacola, Florida 32501-5794 850/595-8300	Ms. Sandra Veazey Air Program Administrator
Northeast District	7825 Baymeadows Way Suite 200B Jacksonville, Florida 32256-7590 904/448-4300	Mr. Christopher Kirts Air Program Administrator
Central District	3319 Maguire Boulevard Suite 323 Orlando, Florida 32803-3767 407/894-7555	Mr. Len Kozlov Air Program Administrator
Southwest District	3804 Coconut Palm Drive Tampa, Florida 33619-8218 813/744-6100	Mr. Bill Thomas Air Program Administrator
South District	2295 Victoria Avenue Suite 364 Fort Myers, Florida 33901-3381 941/332-6975	Mr. Ron Blackburn Air Program Administrator
Southeast District	400 North Congress Avenue W. Palm Beach, Florida 33401 561/681-6600	Mr. Isidore Goldman Air Program Administrator

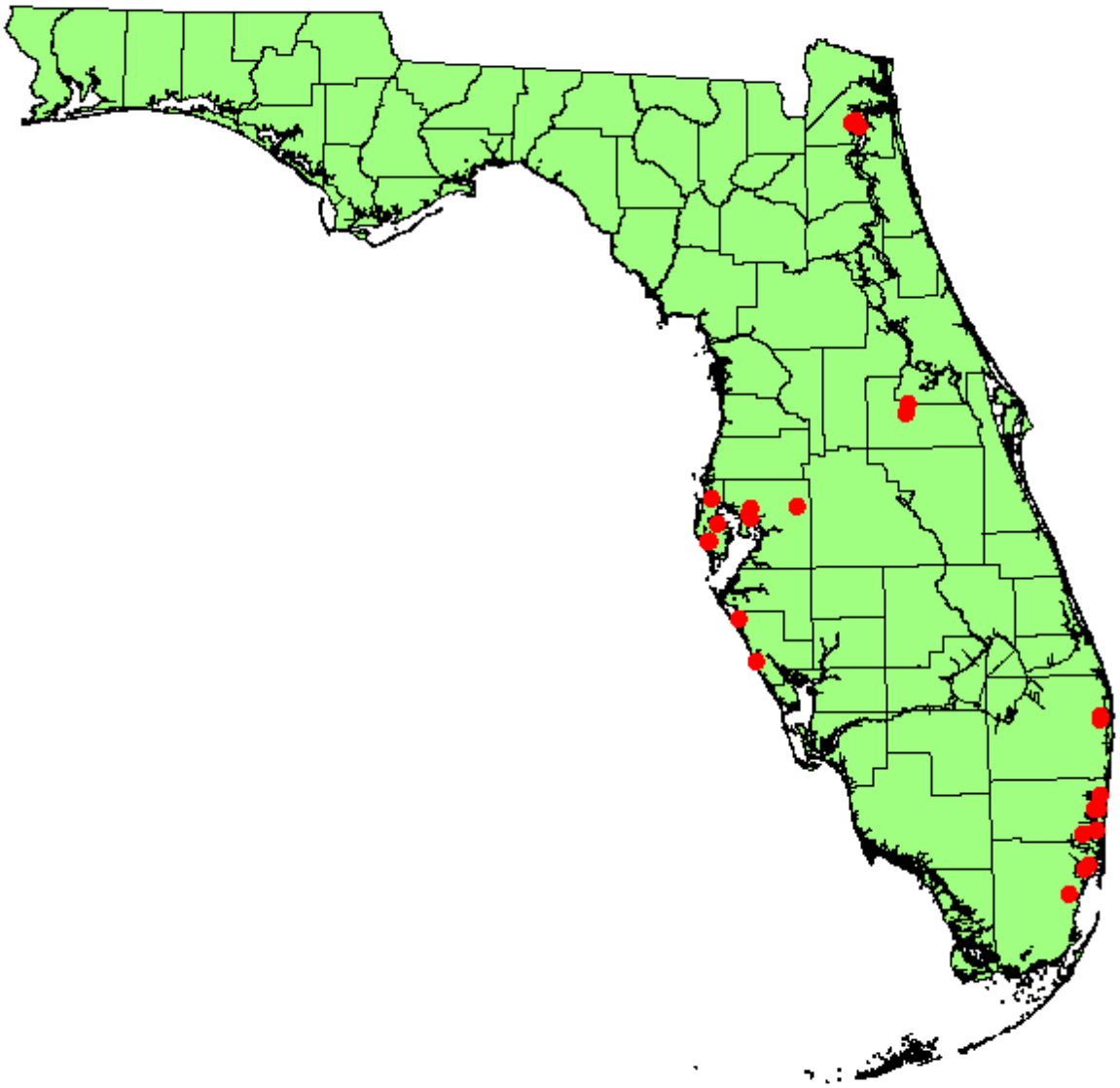
Chapter 2: Carbon Monoxide

2.1 Carbon Monoxide Monitoring Results

There are both natural and man-made sources of carbon monoxide (CO). The natural emissions are widely distributed and result in a relatively low global background CO concentration. On the other hand, man-made emissions tend to be concentrated in local, mainly urban areas, and are responsible for the high CO concentrations associated with adverse health effects. The major man-made source of CO is motor vehicles—primarily automobiles and light trucks with gasoline burning internal combustion engines.

In 1999, the CO monitoring network consisted of 26 monitors strategically located in each of Florida's major urban areas as depicted in Figure 2.1. Maximum CO concentrations at the monitoring sites in Florida during the year were less than 30 percent of the 35 ppm one-hour ambient standard , and less than 65 percent of the 9 ppm eight-hour standard as seen in Figures 2.2 and 2.3. No exceedances of the CO ambient standards were recorded during the last twelve years.

Figure 2.1 *1999 Florida CO Monitoring Network.*



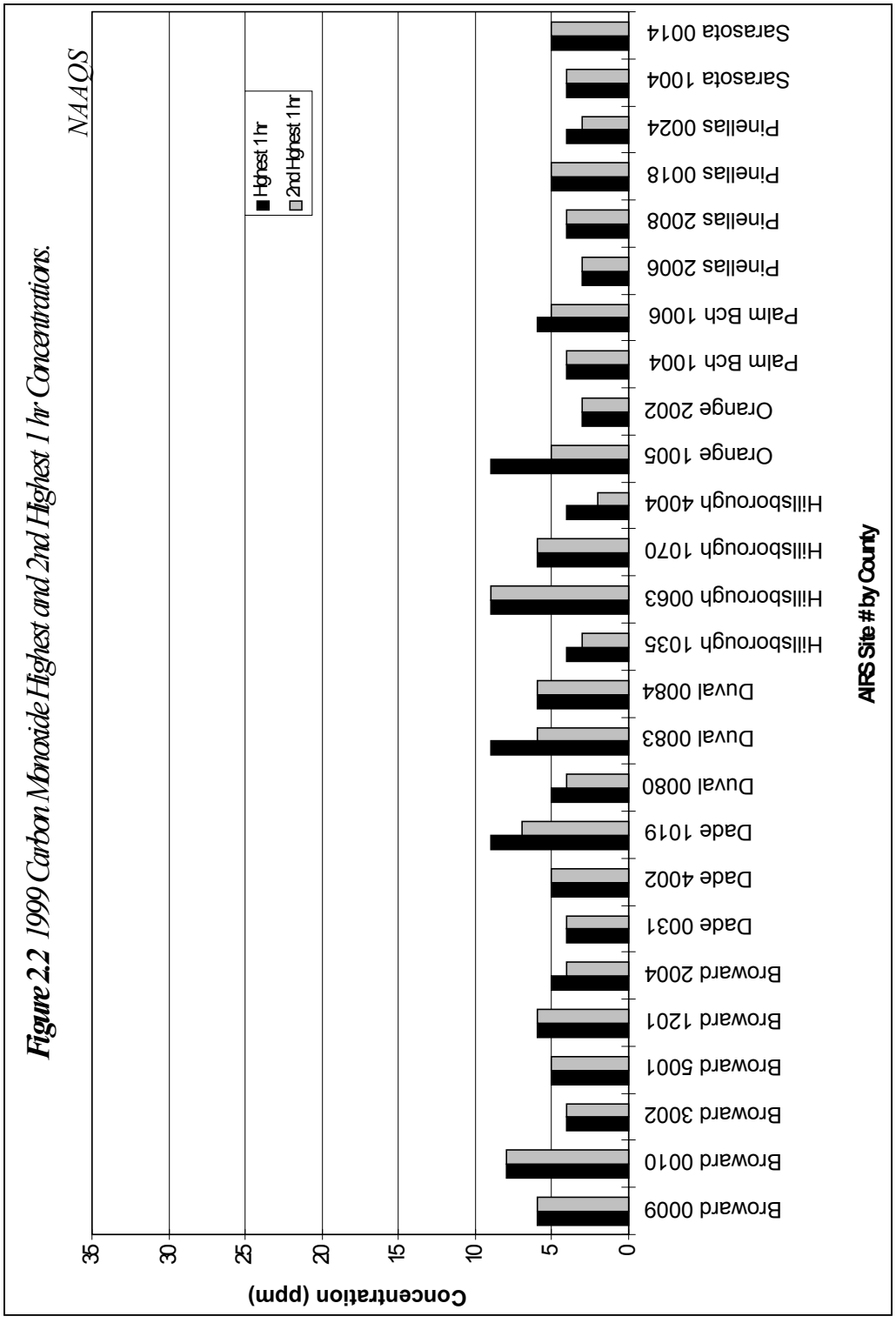


Figure 2.2 1999 Carbon Monoxide Highest and 2nd Highest 1 hr Concentrations.
NAAQS
Highest 1 hr
2nd Highest 1 hr
Concentration (ppm)
0
5
10
15
20
25
30
35
AIRS Site # by County
Broward 0009
Broward 0010
Broward 3002
Broward 5001
Broward 1201
Broward 2004
Dade 0031
Dade 4002
Dade 1019
Duval 0080
Duval 0083
Duval 0084
Hillsborough 1035
Hillsborough 0063
Hillsborough 1070
Hillsborough 4004
Orange 1005
Orange 2002
Palm Bch 1004
Palm Bch 1006
Pinellas 2006
Pinellas 2008
Pinellas 0018
Pinellas 0024
Sarasota 1004
Sarasota 0014

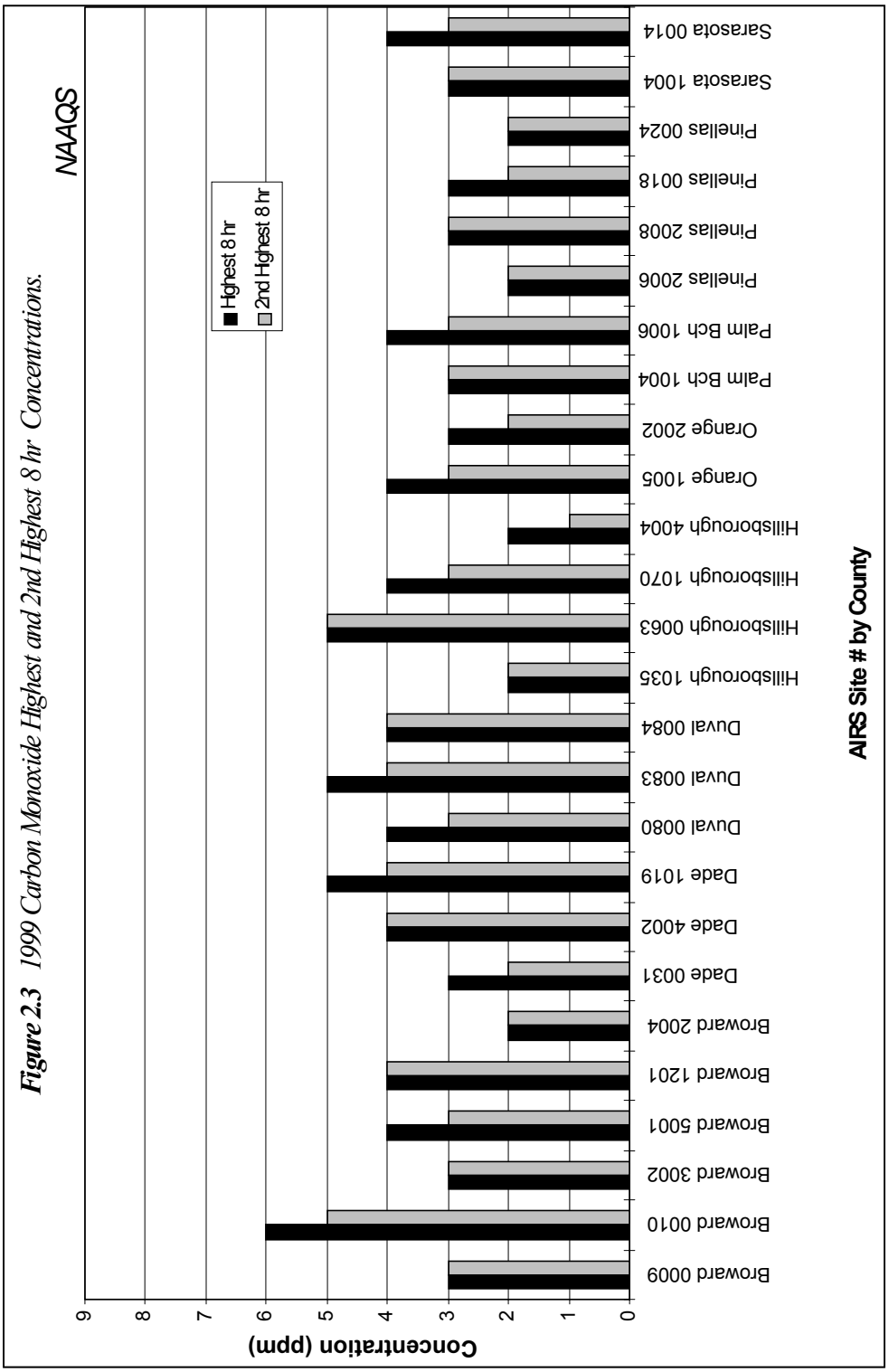


Figure 2.3 *1999 Carbon Monoxide Highest and 2nd Highest 8 hr Concentrations.*

2.2 Sampling and Analysis

Carbon monoxide is sampled using the continuous nondispersive infrared monitoring method. This method is based on the adsorption of infrared light by CO. In the monitoring device, infrared beams of light are directed through two cells—a reference cell and a cell containing unaltered ambient air. The CO concentration is determined by a spectroscopic comparison of the two beams after they have passed though the respective cells.

Seven years of available data collected from sites which operated in 1999 are summarized in Table 2.1.

Table 2.1 *Summary of Carbon Monoxide Data.*

County	Site Address	AIRS #	Network	Year	Highest	2nd	Highest	2nd
City	UTM	SAROAD #	Scale		1-hr(ppm)	1-hr(ppm)	8-hr(ppm)	8-hr(ppm)
Broward								
Ft. Lauderdale	1000 E Sunrise	011-0009	NAMS	99*	6	6	3	3
	Holiday Park	1260-009-G01	Micro	98	5	5	3	3
	17-2890.931N-586.616E			97	6	6	5	4
				96	8	6	5	4
				95	8	7	7	5
				94	7	6	4	4
				93	7	7	5	4
Ft. Lauderdale	NW Corner of	011-0010	SLAMS	99	8	8	6	5
	Lincoln Park	1260-010-G02	Neighborhood	98	7	7	4	4
	17-2890.362N-583.252E			97	9	9	7	5
				96	7	7	5	4
				95	10	10	8	7
				94	12	10	7	6
				93	9	8	6	5
Miramar	University Dr &	011-1201	SLAMS	99	6	6	4	4
	Miramar Blvd	2800-001-G01	Micro	98	6	5	3	3
	17-2873.853N-575.297E			97	7	6	4	3
				96	6	5	4	4
				95	8	6	5	4
				94	7	7	5	5
				93	7	7	5	4
Pompano	851 SW 3rd Ave	011-2004	NAMS	99	5	4	2	2
Beach	Cypress Elementary	3700-004-G01	Neighborhood	98	4	3	2	2
	17-2899.870N-587.137E			97	5	5	4	3
				96	6	4	3	2
				95	5	5	4	3
				94	5	5	3	3
				93	5	5	3	3
Hollywood	2701 Plunkett	011-3002	SLAMS	99	4	4	3	3
		1840-002-G01	Neighborhood	98	4	4	3	2
	17-2875.884N-584.030E			97	5	5	3	3
				96	4	4	4	3
				95	6	6	4	4
				94	5	5	3	3
				93	6	6	4	4

* Contains less than 75% of possible readings for the year.
**Excluded from attainment/maintenance analysis due to unusual circumstances.

(continued on next page...)

Table 2.1 *Summary of Carbon Monoxide Data (continued).*

County	Site Address	AIRS #	Network	Year	Highest	2nd	Highest	2nd
City	UTM	SAROAD #	Scale		1-hr(ppm)	1-hr(ppm)	8-hr(ppm)	8-hr(ppm)
Broward								
Lauderdale	3701 N SR7	011-5001	SLAMS	99	5	5	4	3
Lakes		2270-001-G01	Middle	98	4	3	3	3
	17-2894.741N-579.555E			97	4	4	3	3
				96	5	5	4	3
				95	6	5	4	4
				94	6	6	5	3
				93	6	6	4	4
Dade								
Miami	16000 S Dixie Hwy	025-0031	SLAMS	99	4	4	3	2
		0860-031-G01	Neighborhood	98	4	3	3	2
	17-2833.806N-565.731E			97	3	3	3	2
				96	6	4	2	2
				95*	5	4	2	2
				94*	3	3	3	2
				93				
Miami	2201 SW 4th St	025-1019	NAMS	99	9	7	5	4
		2700-019-G01	Neighborhood	98	8	7	4	3
	17-2850.000N-576.867E			97	10	9	4	4
				96	9	8	5	5
				95	13	12	7	5
				94	10	9	5	5
				93	13	12	6	5
Miami	864 NW 23rd St	025-4002	NAMS	99	5	5	4	4
		2700-002-G01	Neighborhood	98	5	5	3	3
	17-2853.408N-579.163E			97	7	6	4	3
				96	7	7	5	4
				95	8	8	5	5
				94	8	8	4	4
				93	9	8	5	5
Duval								
Jacksonville	1605 Minerva St	031-0080	SLAMS	99	5	4	4	3
		1960-080-H01	Neighborhood	98	4**	3	5	3
	17-3350.000N-437.260E			97	3	3	2	2
				96	5	5	3	2
				95	5	5	3	3
				94	7	6	3	3
				93	6	6	3	3
Jacksonville	1184 S McDuff Ave	031-0083	NAMS	99	9	6	5	4
		1960-083-H01	Neighborhood	98	5	5	3	3
	17-3352.640N-432.168E			97	7	5	3	3
				96	6	5	3	3
				95	6	6	4	4
				94	8	8	4	3
				93	9	6	5	5

* Contains less than 75% of possible readings for the year.
**Excluded from attainment/maintenance analysis due to unusual circumstances.

(continued on next page...)

Table 2.1 *Summary of Carbon Monoxide Data (continued).*

County	Site Address	AIRS #	Network	Year	Highest	2nd	Highest	2nd
City	UTM	SAROAD #	Scale		1-hr(ppm)	1-hr(ppm)	8-hr(ppm)	8-hr(ppm)
Duval								
Jacksonville	Rosell & Copeland	031-0084	SLAMS	99	6	6	4	4
		1960-084-H01	Middle	98	6	5	3	3
	17-3354.302N-433.888E			97	6	6	4	3
				96	9	7	5	4
				95	8	7	5	5
				94	9	9	5	4
				93	9	8	6	6
Hillsborough								
Tampa	220 Madison Ave	057-0063	NAMS	99	9	9	5	5
		4360-063-G01	Micro	98	7	6	3	3
	17-3092.192N-356.576E			97	6	6	3	3
				96	4	3	3	2
				95	5	5	3	3
				94	4	4	2	2
				93	5	5	3	3
Tampa	Davis Island	057-1035	NAMS	99	4	3	2	2
		4360-035-G02	Neighborhood	98	3	3	2	2
	17-3089.908N-356.851E			97	4	4	2	2
				96	3	3	2	2
				95	6	4	2	2
				94	3	3	3	2
				93	3	3	2	2
Tampa	4702 Central Ave	057-1070	SLAMS	99	6	6	4	3
		4360-070-G01	Micro	98	8	7	4	4
	17-3096.500N-357.000E			97	7	7	4	4
				96	7	7	6	4
				95	14	10	6	5
				94	8	7	4	3
				93	7	6	4	4
Tampa	One Raider Place	057-4004	SPM	99*	4	2	2	1
		3660-004G01	Neighborhood	98	3	3	2	2
	17-3096.710N-389.300E			97				
				96				
				95				
				94				
				93				
Orange								
Orlando	Orange & Central Ave	095-1005	NAMS	99	9	5	4	3
		3280-005-G01	Micro	98	6	6	4	4
	17-3157.100N-462.960E			97	9	9	5	4
				96	23	12	7	4
				95	16	16	7	4
				94	8	8	5	4
				93	9	9	5	4

* Contains less than 75% of possible readings for the year.
**Excluded from attainment/maintenance analysis due to unusual circumstances.

(continued on next page...)

Table 2.1 *Summary of Carbon Monoxide Data (continued).*

County	Site Address	AIRS #	Network	Year	Highest	2nd	Highest	2nd
City	UTM	SAROAD #	Scale		1-hr(ppm)	1-hr(ppm)	8-hr(ppm)	8-hr(ppm)
Orange								
Winter Park	Morse Blvd & Denning	095-2002	NAMS	99	3	3	3	2
		4900-002-G01	Neighborhood	98	4	4	3	2
	17-3163.490N-464.515E			97	4	4	3	3
				96	4	4	2	2
				95	8	4	4	3
				94	5	5	3	3
				93	9	5	4	3
Palm Beach								
West Palm	3730 Belvedere Rd	099-1004	NAMS	99	4	4	3	3
Beach		4760-004-G01	Middle	98	6	6	3	3
	17-2952.381N-589.524E			97	11	10	7	3
				96	4	4	3	2
				95	7	6	3	3
				94	6	5	3	3
				93	6	5	3	3
West Palm	50 S. Military Trail	099-1006	NAMS	99	6	5	4	3
Beach		4760-006-G01	Micro	98	5	5	3	3
	17-2954.550N-588.350E			97*	6	5	4	3
				96				
				95				
				94				
				93				
Pinellas								
St. Petersburg	7200 22nd Ave	103-0018	NAMS	99	5	5	3	2
	Azalea Park	3980-018-G01	Neighborhood	98	8	7	4	3
	17-3074.500N-328.560E			97	6	5	3	3
				96	4	4	2	2
				95	7	6	3	3
				94	3	3	1	1
				93	4	4	3	2
St. Petersburg	2301 66th St N	103-0024	NAMS	99	4	3	2	2
		3980-024-G01	Micro	98	7	5	3	3
	17-3075.255N-329.745E			97	4	4	3	3
				96	5	4	3	3
				95	6	6	3	3
				94	5	4	4	3
				93	4	4	3	3
Clearwater	3490 McMullen	103-2006	SPM	99	3	3	2	2
	Booth Rd	0620-006-G01	Middle	98	5	4	2	2
	17-3103.450N-331.920E			97	4	4	2	2
				96	4	4	2	2
				95	4	4	2	2
				94	4	4	2	1
				93	5	4	2	2

*Contains less than 75% of possible readings for the year.
**Excluded from attainment/maintenance analysis due to unusual circumstances.

Table 2.1 *Summary of Carbon Monoxide Data (continued).*

County	Site Address	AIRS #	Network	Year	Highest	2nd	Highest	2nd
City	UTM	SAROAD #	Scale		1-hr(ppm)	1-hr(ppm)	8-hr(ppm)	8-hr(ppm)
Pinellas								
Clearwater	13280 34th St N	103-2008	SLAMS	99	4	4	3	3
		3600-008-G01	Micro	98	5	5	3	3
	17-3086.245N-334.583E			97	6	6	4	4
				96	4	4	3	3
				95	6	6	3	3
				94	5	5	3	3
				93*	5	5	3	3
Sarasota								
Sarasota	US 41 Bypass &	115-0014	SLAMS	99	4	4	3	3
	US 41 BUS	4100-014-G01	Micro	98	6	6	3	3
	17-2995.250N-358.780E			97	4	4	3	2
				96	5	5	3	3
				95	5	5	3	3
				94*	5	4	3	3
				93				
Sarasota	2000 N Main St	115-1004	SLAMS	99*	5	5	4	3
		4080-004-G01	Micro	98	14	11	6	6
	17-3024.360N-348.530E			97	8	7	6	5
				96	9	8	6	5
				95	9	9	6	6
				94	8	8	5	5
				93	9	9	7	6

*Contains less than 75% of possible readings for the year.
**Excluded from attainment/maintenance analysis due to unusual circumstances.

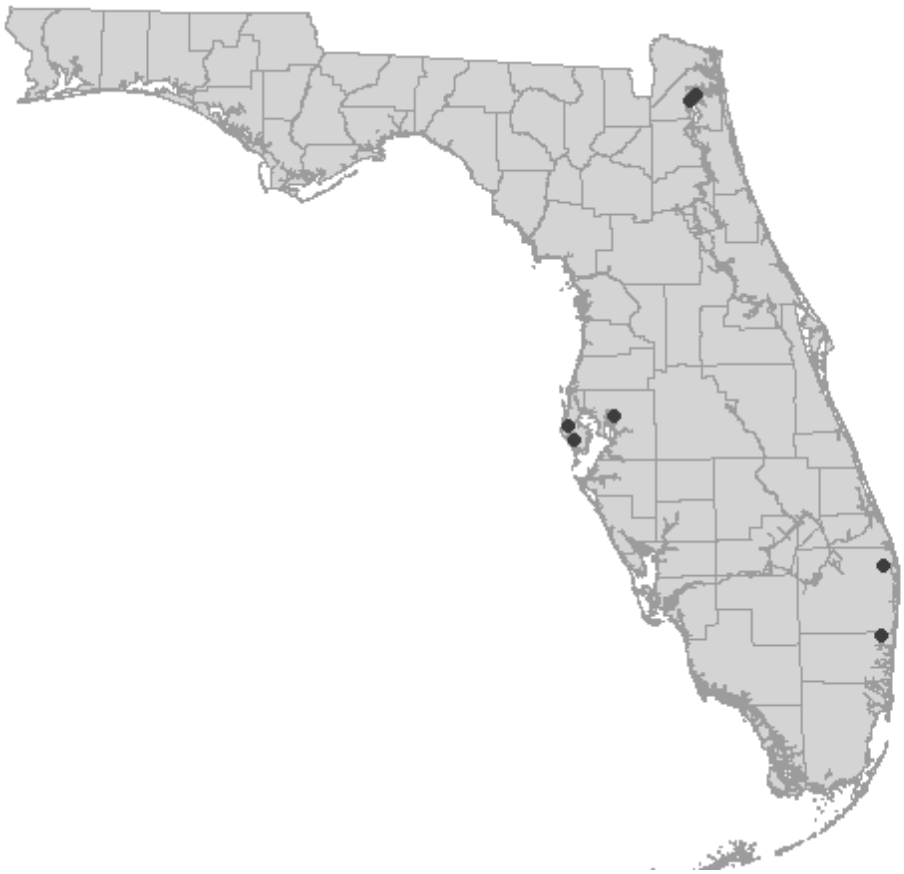
Chapter 3: Lead

3.1 Lead Monitoring Results

Lead occurs in the atmosphere primarily in the form of lead vapors, lead alkyls, very fine lead particles, and organic halogens such as lead bromide, lead chloride and lead bromochloride. Prior to 1990, lead emissions were due largely to motor vehicle emissions. However, since lead has been removed from all gasoline sold in Florida, major sources of lead emissions are now secondary lead smelters, metal recycling and battery manufacturing and recycling.

Lead concentrations were measured at nine stations in five urban counties during 1999 as seen in Figure 3.1. No quarterly average readings above zero were reported from roadside monitors for the year. Quarterly averages between 6% and 25% of the standard were found at three sites located in Hillsbourough County near stationary sources. All of the 24-hour concentrations from these three sites are graphed in Figure 3.2.

Figure 3.1 *1999 Florida Lead Monitoring Network.*



3.2 Sampling and Analysis

The concentration of lead in the ambient air is determined by using a portion of a standard high-volume (hi-vol) particulate filter from a sampler which has run for 24 hours. (The hi-vol sampling method is discussed in detail in Section 6.2, "[Particulate Matter] Sampling and Analysis.") A section of the hi-vol filter is chemically digested to solubilize the lead, which is then measured using atomic absorption spectrometry. This method describes the EPA reference method for determination of ambient lead concentrations. The approximately fifteen 24-hour samples for each calendar quarter (based on a six-day sampling schedule) are averaged arithmetically to determine compliance with ambient standards.

The last seven years of available data collected from sites which operated in 1999 are summarized in Table 3.1.

Figure 3.2 *1999 Hillsborough County Lead Concentrations.*

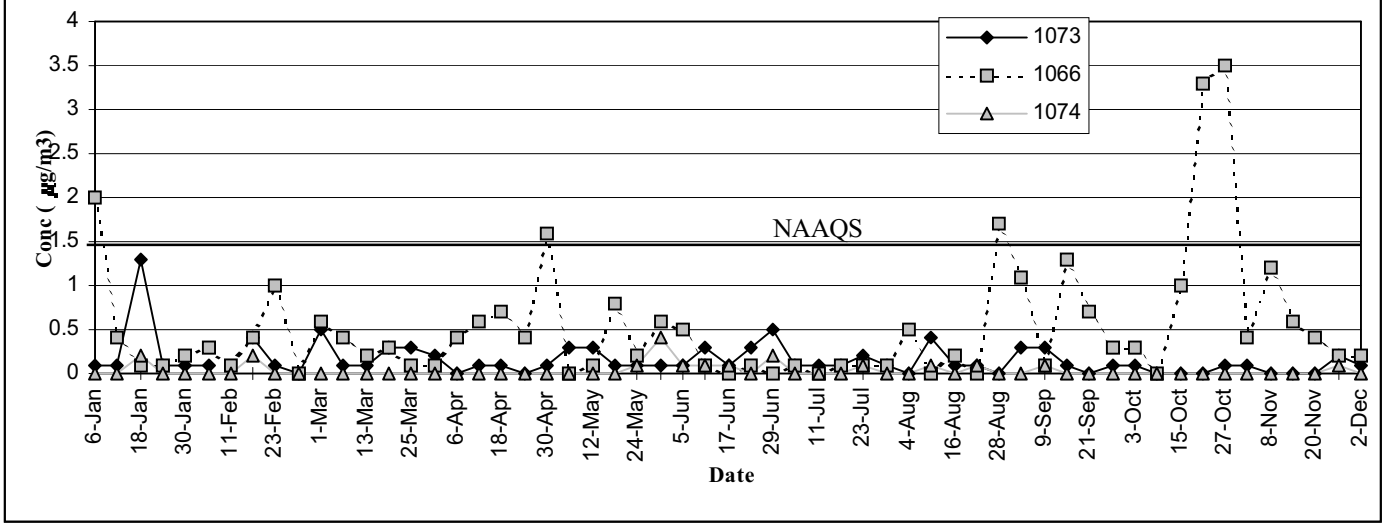


Table 3.1 *Summary of Lead Data.*

County	Site Address	AIRS #	Network	Year	Quarterly Average (ug/m3)			
City	UTM	SAROAD #	Scale		1st	2nd	3rd	4th
Broward								
Coconut Creek	4010 Winston Park Blvd	011-5005	SLAMS	99	0	0	0	0
		0420-005G02	Neighborhood	98	0*	0	0	0
	17-2908.456N-582.089E			97	0	0	0	0
				96	0*	0	0	0
				95				
				94				
				93				
Duval								
Jacksonville	2900 Bennett & Kooker	031-0032	NAMS	99	0	0	0	0
		1960-032-H01	Neighborhood	98	0	0	0	0
	17-3358.243N-438.923E			97	0	0	0	0
				96	0	0	0	0*
				95	0	0	0	0
				94	0	0	0	0
				93	0	0	0	0
Jacksonville	Roselle & Copeland	031-0084	NAMS	99	0	0	0	0
		1960-084-H01	Micro	98	0	0	0	0
	17-3354.302N-433.888E			97	0	0	0	0
				96	0	0	0	0
				95	0	0	0	0
				94	0	0	0	0
				93	0	0	0	0.1
Hillsborough								
Tampa	Gulf Coast Lead	057-1066	SLAMS	99	0.4	0.4	0.4	1
		4360-066-G02	Middle	98	0.4	0.5	0.3	0.4
	17-3093.400N-364.000E			97	0.6	0.4	0.4	0.6
				96	0.7	0.3	0.3	0.7
				95	0.8	0.5	0.2	0.8
				94	0.9	0.3	0.1	0.6
				93	0.5	0.3	0.5	0.7
Tampa	Patent Scaffolding	057-1073	SPM	99	0.3	0.2	0.1	0.1
		4360-073-G02	Middle	98	0.1	0.2	0.1	0.1
	3093.990N-364.310E			97				0.1
				96				
				95				
				94				
				93				

* Based on less than 75% of potential readings.

(continued on next page...)

Table 3.1 *Summary of Lead Data (continued).*

County	Site Address	AIRS #	Network	Year	Quarterly Average (ug/m3)			
City	UTM	SAROAD #	Scale		1st	2nd	3rd	4th
Hillsborough								
Tampa	3100 North 66th St	057-1074	SPM	99	0	0.1	0	0
		4360-074-G02	Middle	98	0.1*	0.1	0	0
	17-3094.640N-364.050E			97				
				96				
				95				
				94				
				93				
Palm Beach								
West Palm Bch	Jog Road	099-0018	NAMS	99	0	0	0	0
	Incinerator	3420-018-G02	Neighborhood	98	0	0	0	0
	17-2964.829N-584.561E			97	0	0	0	0
				96	0	0	0	0
				95	0	0	0	0
				94	0	0	0	0
				93	0.1	0	0	0
Pinellas								
St. Petersburg	2301 66th St N	103-0024	NAMS	99	0			
		3980-024-G01	Micro	98	0	0	0	0
	17-3075.255N-329.745E			97	0	0	0	0
				96	0	0	0	0
				95	0	0	0	0
				94	0	0	0	0
				93	0	0	0	0
Pinellas Park	11401 47th St N	103-3005	SLAMS	99	0	0	0	0
			Neighborhood	98				
	17-3084.42N-333.000E			97				
				96				
				95				
				94				
				93				

* Based on less than 75% of potential readings.

Chapter 4: Nitrogen Dioxide

4.1 Nitrogen Dioxide Monitoring Results

Globally, emissions of nitrogen oxides from natural sources are on the order of 10 times greater than emissions from man-made sources. The man-made sources are of more importance, however, in the occurrence of nitrogen dioxide (NO_2) and ozone air pollution because they are concentrated in the more populated areas. The major man-made source of nitrogen dioxide emissions is high-temperature fuel combustion in motor vehicles and in industrial and utility boilers. These emissions are primarily in the form of nitric oxide (NO) which is oxidized in the atmosphere to NO_2.

Figure 4.1 depicts the 1999 NO_2 monitoring network in Florida which consisted of 13 monitoring stations in 10 counties. NO_2 concentrations in Florida during the year were less than 35 percent of the 100 $\mu g/m^3$ (53ppb) annual average ambient standard. The highest annual average for 1999 was 32 $\mu g/m^3$ (17ppb) in Miami. The annual average, highest and second highest 1-hour concentrations for each site are presented in Figure 4.2.

Figure 4.1 *1999 Florida Nitrogen Dioxide Monitoring Network.*

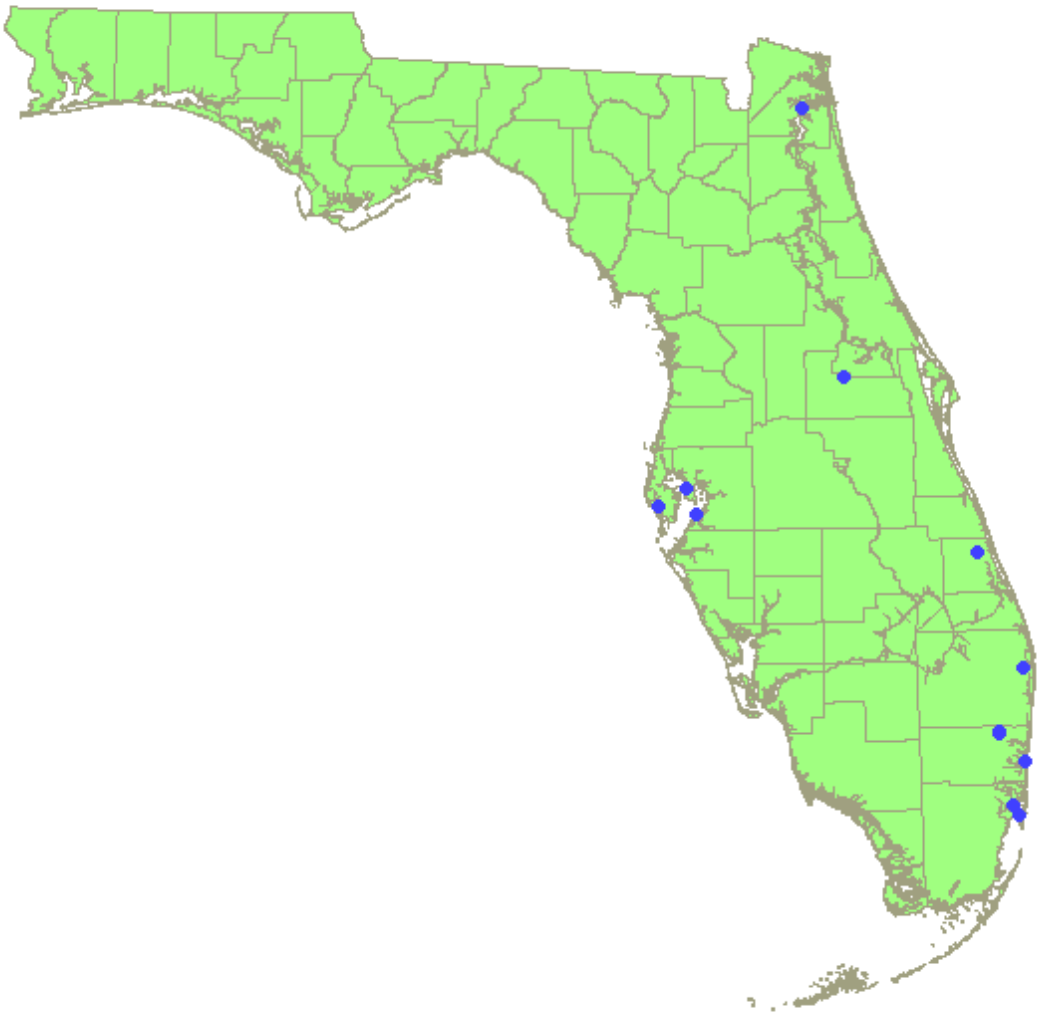
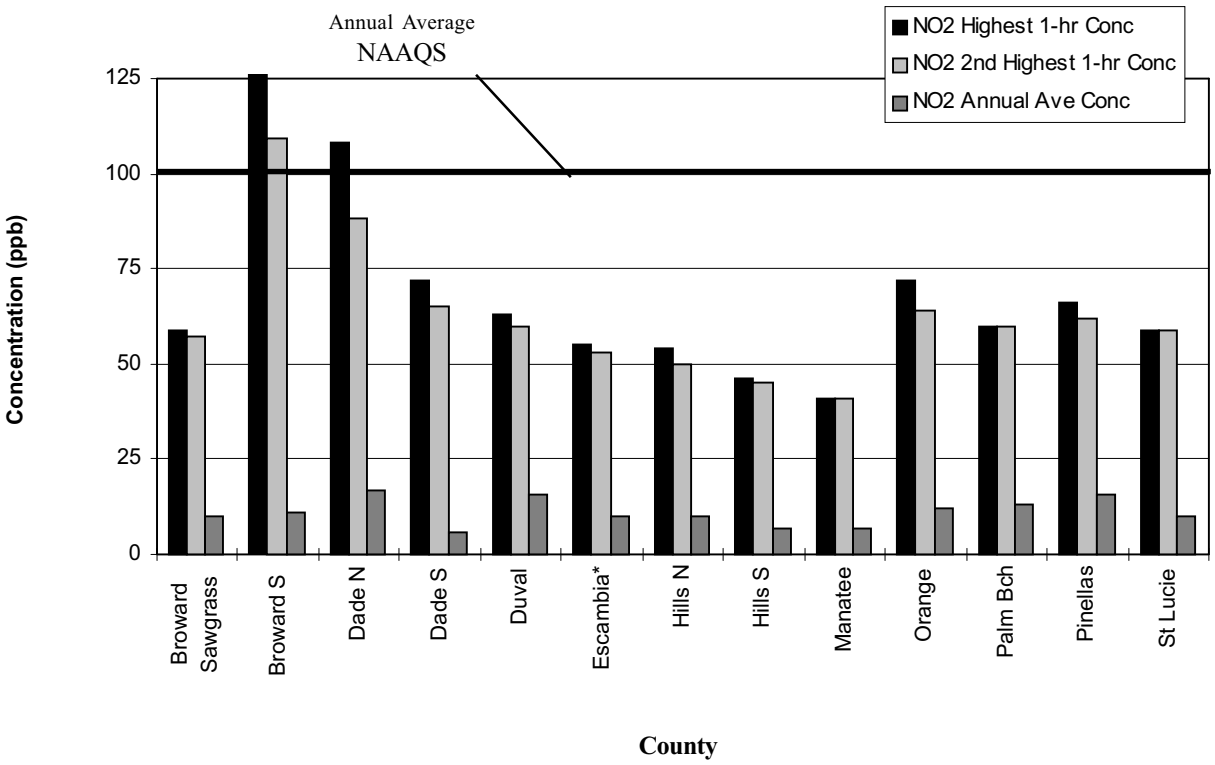


Figure 4.2 *1999 Nitrogen Dioxide Concentrations.*



*Based on less than 75% of possible readings.

4.2 Sampling and Analysis

Nitrogen dioxide is sampled using the continuous chemiluminescent method. In the instrument, NO_2 is converted to nitric oxide and ozone. The nitric oxide and ozone are then allowed to recombine in a reaction chamber and a quantum of light is given off. The intensity of the light, which is proportional to the amount of NO_2 in the air being sampled, is read by a photomultiplier tube.

The last seven years of available data collected from sites which operated in 1999 are summarized in Table 4.1.

Table 4.1 *Summary of Nitrogen Dioxide Data.*

County / City	Site Address / UTM	AIRS # / SAROAD #	Network / Scale	Year	Highest 1-hr (ppb)	2nd 1-hr(ppb)	Annual Avg (ppb)
Broward							
Sawgrass	12600 W Sample Rd	011-0031	SLAMS	99	59	57	10
		0810-031G01	Urban	98	50	50	9
	17-2905.871N-570.365E			97	58	56	9
				96	65	46	8
				95	59	57	10
				94	63	49	9
				93	50	50	9
Dania	John U Lloyd	011-8002	NAMS	99	128	109	11
	State Park	0900-002-G01	Urban	98	69	65	10
	17-2885.443N-588.843E			97	64	64	10
				96	96	85	10
				95	71	68	11
				94	63	58	9
				93	89	74	10
Dade							
Miami	University of Miami	025-0027	NAMS	99	72	65	6
	Rosenstiel	0860-027-G01	Neighborhood	98	54	54	6
	17-2846.153N-584.031E			97	62	57	7
				96	74	71	7
				95	75	68	7
				94	68	66	7
				93	61	61	7
Miami	864 NW 23rd St	025-4002	NAMS	99	108	88	17
		2700-002-G01	Neighborhood	98	66	64	15
	17-2853.408N-579.163E			97	94	81	16
				96	130	83	16
				95	66	66	15
				94	65	62	14
				93	156	110	16
Duval							
Jacksonville	2900 Bennett	031-0032	SLAMS	99	63	60	16
		1960-032-H02	Neighborhood	98	66	66	15
	17-3358.243N-438.923E			97	92	69	14
				96	80	74	15
				95	76	61	16
				94	71	66	14
				93	93	91	15
Escambia							
Pensacola	Ellyson Industrial Pk	033-0004	SPM	99*	55	53	10
		3540-004F01	Neighborhood	98			
	16-3376.800N-480.400E			97			
				96			
				95			
				94			
				93			

*Based on less than 75% of possible readings.

(continued on next page...)

Table 4.1 *Summary of Nitrogen Dioxide Data (continued).*

County City	Site Address UTM	AIRS # SAROAD #	Network Scale	Year	Highest 1-hr (ppb)	2nd 1-hr(ppb)	Annual Avg (ppb)
Hillsborough							
Hillsborough	Simmons Park	057-0081	SPM	99	46	45	7
Bay		1800-081-G03	Urban	98	52	44	6
	17-3069.1000N-355.5440E			97	62	48	6
				96	51	48	7
				95			
				94			
				93			
Tampa	5121 Gandy Blvd	057-1065	NAMS	99	54	50	10
		4360-065-G01	Neighborhood	98	62	60	11
	17-3086.060N-348.560E			97	59	59	10
				96	69	53	10
				95	80	62	11
				94	51	51	10
				93	63	62	10
Manatee							
Bradenton	5502 33rd Ave W	081-4012	SLAMS	99	41	41	7
		0320-012G01	Neighborhood	98			
	17-3040.060N-340.060E			97			
				96			
				95			
				94			
				93			
Orange							
Winter Park	Morse Blvd &	095-2002	SLAMS	99	72	64	12
	Denning	4900-002-G01	Urban	98	71	71	11
	17-3163.490N-464.515E			97	67	66	13
				96	70	65	13
				95	67	67	10
				94	61	55	11
				93	77	72	12
Palm Beach							
West Palm	3730 Belvedere Rd	099-1004	SLAMS	99	60	60	13
Beach		4760-004-G01	Neighborhood	98	60	60	12
	17-2952.381N-589.524E			97	56	55	13
				96*	61	57	12
				95	61	59	12
				94	61	60	12
				93	85	68	13
Pinellas							
St. Petersburg	7200 22nd Ave N	103-0018	NAMS	99	66	62	16
		3980-018-G01	Neighborhood	98	66	63	12
	17-3074.500N-328.560E			97	34	34	6
				96	55	55	11
				95	75	64	12
				94	56	56	10
				93	65	65	12

*Based on less than 75% of possible readings.

Table 4.1 *Summary of Nitrogen Dioxide Data (continued).*

County	Site Address	AIRS #	Network	Year	Highest	2nd	Annual Avg
City	UTM	SAROAD #	Scale		1-hr (ppb)	1-hr(ppb)	(ppb)
St. Lucie							
Ft. Pierce	101 North Rock Rd	111-1002	SPM	99	59	59	10
		3960-002F01	Urban	98	61	56	8
	17-3036.200N-558.500E			97*	49	49	9
				96			
				95			
				94			
				93			

*Based on less than 75% of possible readings.

Chapter 5: Ozone

5.1 Ozone Monitoring Results

Ozone is not emitted directly into the atmosphere but results from a series of reactions between nitrogen oxides and volatile organic compounds (VOCs) in the presence of sunlight. Nitrogen oxides are important in triggering the sequence of ozone-producing reactions while VOCs are important in sustaining the reactions. Nitrogen oxides are emitted primarily from high-temperature combustion sources such as power plants or volcanos. VOCs are emitted primarily from motor vehicles, but may also arise from the evaporation of gasoline and solvents. Smaller amounts are emitted from other processes such as surface coating operations. There are also many natural sources of VOCs. Biomass burning contributes to 24% of all non-methane hydrocarbons (NMHC) excluding isoprene and turpene and 21% of all nitrogen oxides, thereby accounting for 38% of all ozone produced near the earth's surface.

Prior to September 16, 1997, the ozone standard was attained if the average number of expected exceedances per year of the 1-hour 0.12 ppm standard, over a three-year period, was less than or equal to one. Over the three-year period 1990-1992, the 1-hour standard was attained at all ozone monitors in the State. The process to redesignate all parts of Florida to attainment for ozone was initiated in 1993 and concluded February 5, 1996. Orange County, Duval County, the Tampa Bay area, which includes Hillsborough and Pinellas Counties, and Southeast Florida including Dade, Broward and Palm Beach Counties are classified as attainment/maintenance areas by the Department.

A new NAAQS for ozone based on an 8-hour average was promulgated July 1997 and became effective September 16, 1997. Under the new rule, attainment is reached by having a 3-year average of the annual fourth-highest daily maximum 8-hour average of not greater than 0.08 ppm. It should be noted that this adjustment to the 8-hour standard represents the transition from an exceedance based standard to a concentration based one. The new standard is designed to provide increased protection to the public, particularly those predisposed to respiratory problems. Both the 8-hour and the 1-hour standards remained effective until February 1998, at which time the 1-hour standard was dropped. In May 1998, a lawsuit rendered the eight-hour ozone standard unenforceable.Therefore, the 1-hour standard is under review and may be reinstated to federal law. Florida standards were never changed.

The ozone monitoring network now consists of 45 monitors strategically located in each of Florida's major urban areas as well as certain rural areas chosen for background comparisons. The 1999 ozone monitoring network is presented in Figure 5.1. During 1999, there were 3 exceedances of the 1-hr ozone standard. Table 5.1 presents details of these exceedances. However, these exceedances did not result in a violation which would be seen on Figure 5.2 as a one-hour design value of 0.125 parts per million (ppm) or higher. Typically, the design value is the fourth-highest daily 1-hour maximum over a 3-year period. Conversely, there were 78 concentrations over the 8-hour standard occurring in Brevard, Broward Dade, Duval, Escambia, Hillsborough, Lee, Leon, Manatee, Marion, Orange, Palm Beach, Pasco, Pinellas, Polk, Sarasota, and Seminole Counties. The highest 8-hour readings for each site can be found in Table 5.2. The first attainment determinations under the 8-hour rule will be made in 2000. The data from the 3-year period from 1997 to 1999 will be examined. Results of this review for Escambia and Hillsborough counties show concentrations being above the standard of the average of the annual fourth highest daily 8-hour maximum of 0.08ppm. Figure 5.3 shows these results.

During the previous seven years, ozone concentrations in Florida were generally less than the 0.12 ppm 1-hour ambient standard. However, 33 valid maximum daily ozone concentrations in excess of the standard were recorded during the seven years since 1993.

5.2 Sampling and Analysis

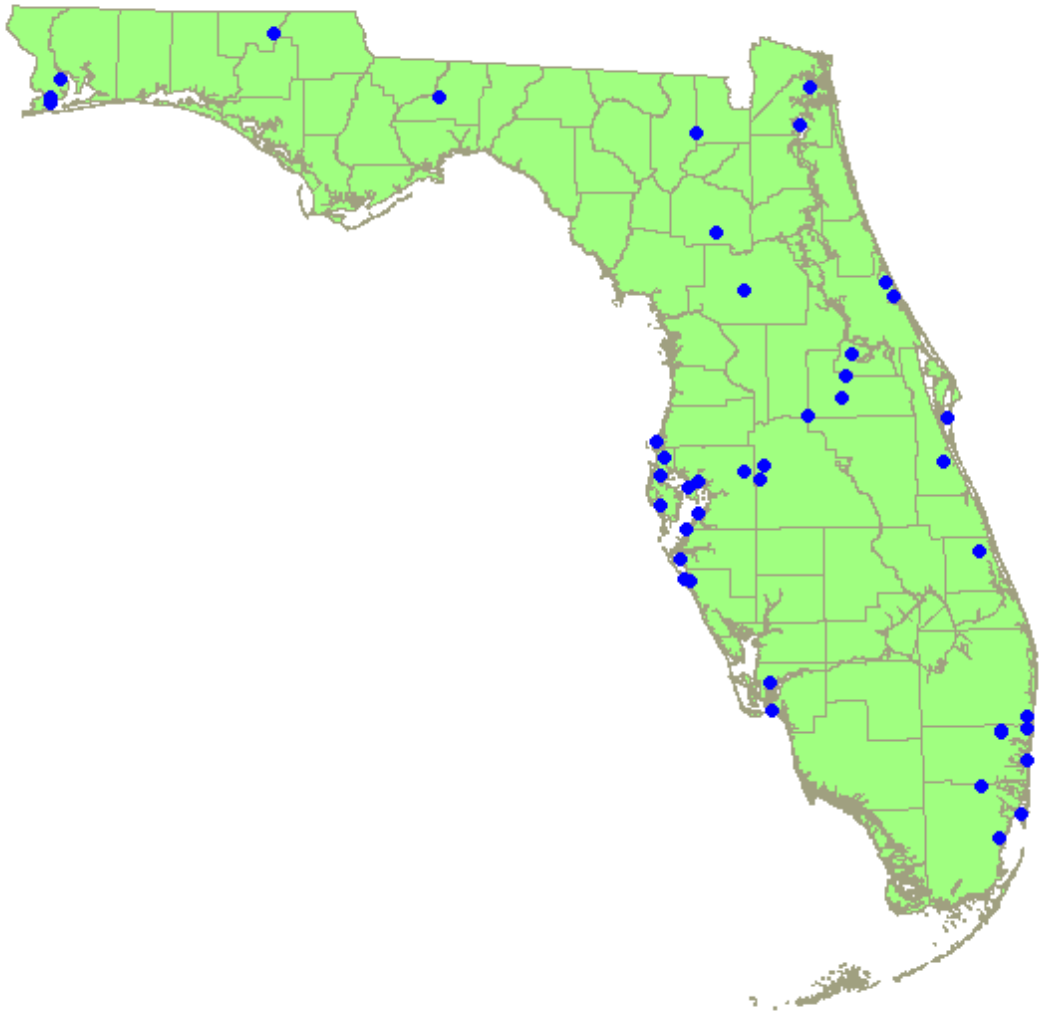
Ozone is sampled using a method of adsorption of ultraviolet light by ozone. In this method, an ultraviolet photometer is used to measure the transmittance of light through a sample of ambient air. The amount of ultraviolet light transmitted is inversely proportional to the concentration of ozone in the air.

The last seven years of available data collected from sites which operated in 1999 are summarized in Tables 5.2 and 5.3.

Table 5.1 *1999 Maximum Daily Ozone Exceedances.*

Site No.	Location City, County	Date	Concentration (ppb)
12-011-8002	Dania, Broward	4-Sep	130
12-057-1065	Gandy, Hillsborough	13-Aug	128
12-103-0018	St. Petersburg, Pinellas	13-Aug	133

Figure 5.1 *1999 Florida Ozone Monitoring Network.*



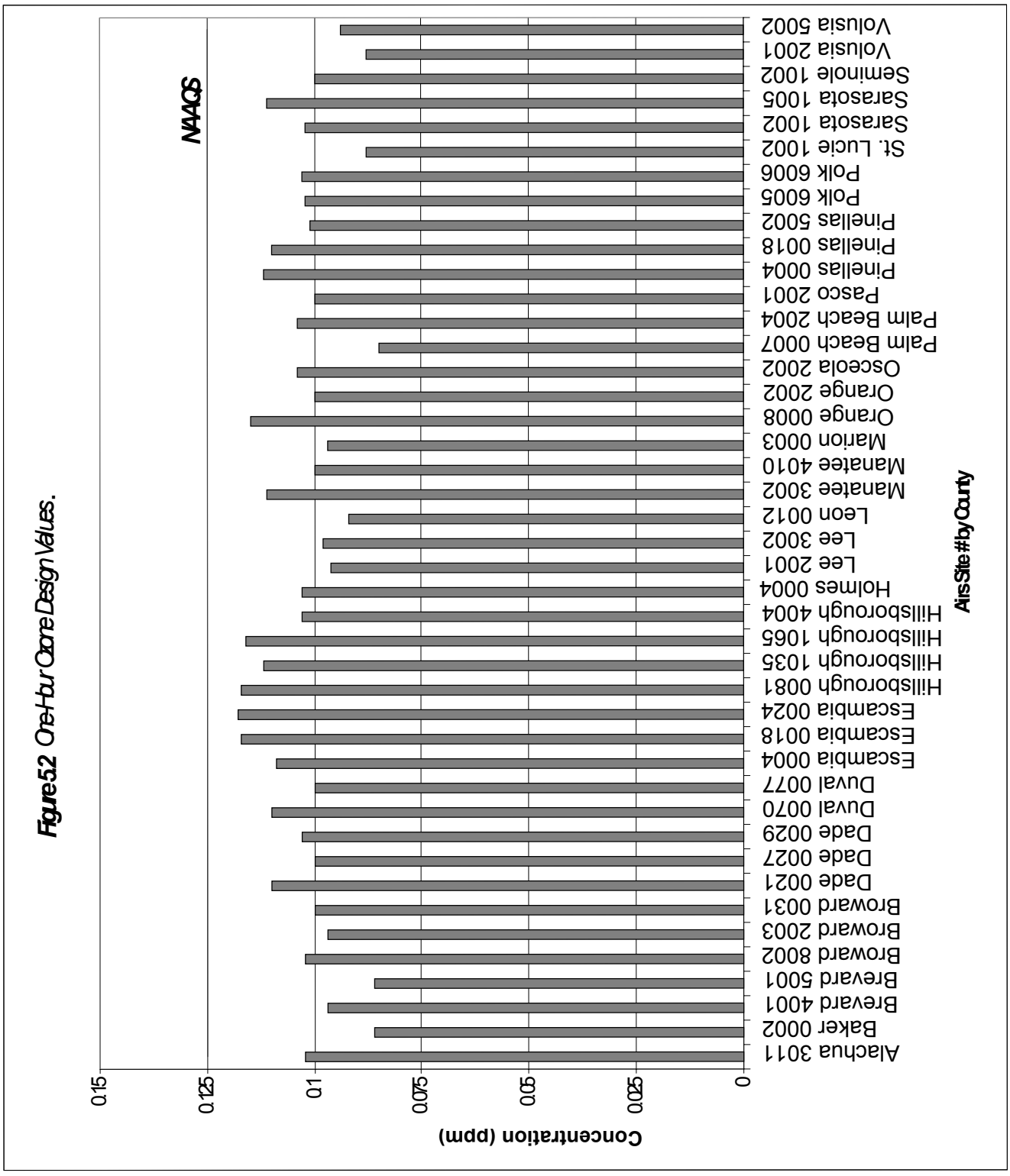


Figure 5.2 One-Hour Ozone Design Values.
NAAQS
Concentration (ppm)
0.15
0.125
0.1
0.075
0.05
0.025
0
AirsSite#byCounty
Alachua 3011
Baker 0002
Brevard 4001
Brevard 5001
Broward 8002
Broward 2003
Broward 0031
Dade 0021
Dade 0027
Dade 0029
Duval 0070
Duval 0077
Escambia 0004
Escambia 0018
Escambia 0024
Hillsborough 0081
Hillsborough 1035
Hillsborough 1065
Hillsborough 4004
Holmes 0004
Lee 2001
Lee 3002
Leon 0012
Manatee 3002
Manatee 4010
Marion 0003
Orange 0008
Orange 2002
Osceola 2002
Palm Beach 0007
Palm Beach 2004
Pasco 2001
Pinellas 0004
Pinellas 0018
Pinellas 5002
Polk 6005
Polk 6006
St. Lucie 1002
Sarasota 1002
Sarasota 1005
Seminole 1002
Volusia 2001
Volusia 5002

Figure 5.3 1999 Eight-Hour Ozone Design Values

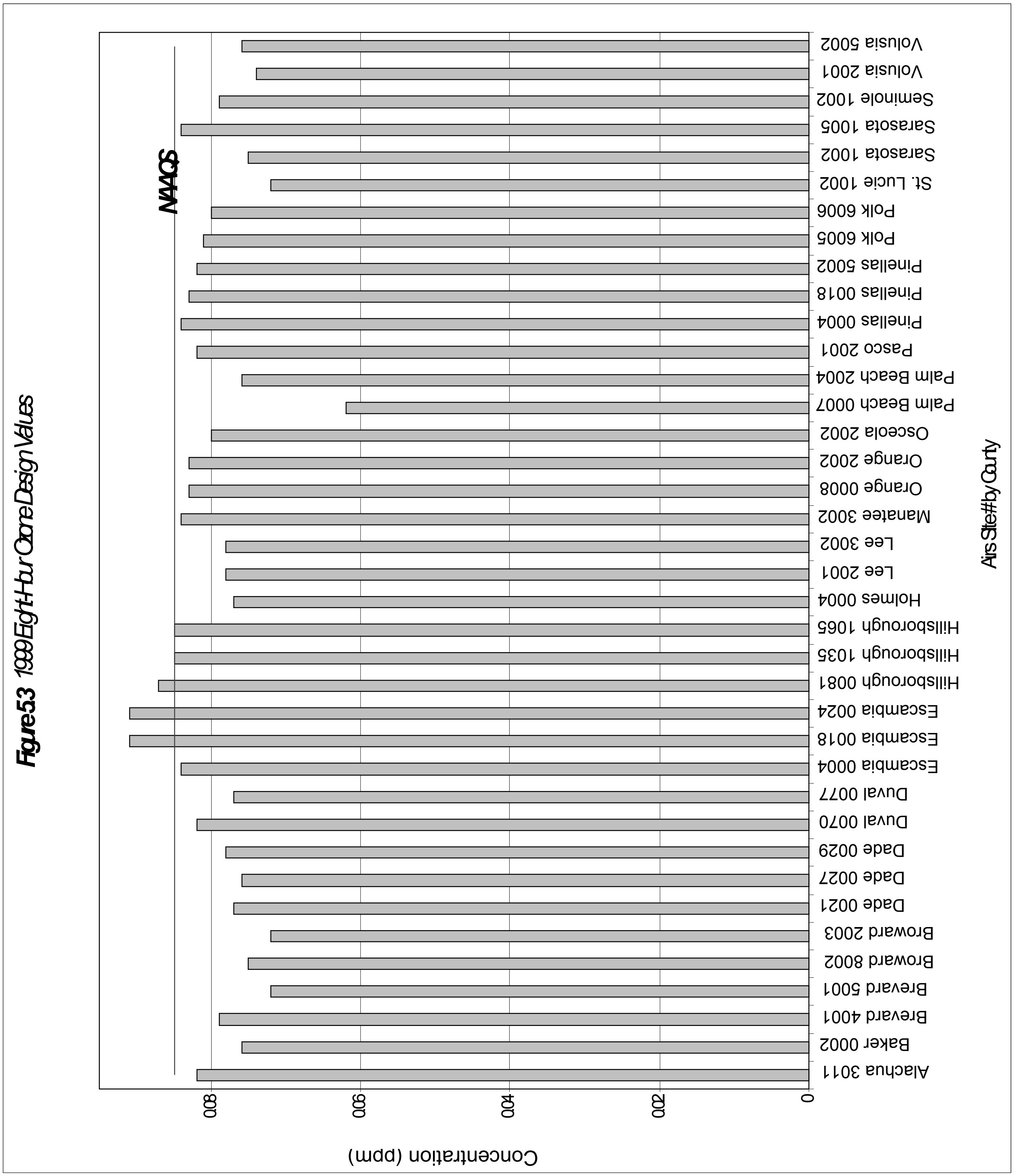


Table 5.2 *Summary of 8-hr Ozone Data.*

County	AIRS #	Network	Year	Eight Hour Ozone Concentration (ppb)							
City	SAROAD #	Scale		Highest	Date	2nd	Date	3rd	Date	4th	Date
Site	UTM			8-hr		8-hr		8-hr		8-hr	
Alachua											
Gainesville	001-3011	SPM	99	84	3/19	84	4/14	82	3/23	80	9/3
100 Savannah Blvd	0020-011-F01	Neighborhood	98	**102**	5/20	**94**	5/14	**93**	5/13	**92**	5/19
	17-3269.080N-374.330E		97*	**85**	9/19	81	9/20	79	9/21	76	10/22
			96								
			95								
			94								
			93								
Baker											
Lake City	003-0002	SPM	99	78	5/10	77	9/16	76	5/21	76	8/2
Osceola Ranger	0160-002F01	Urban	98	84	7/11	83	5/14	82	5/20	80	5/19
Station	17-3341.350N-360.900E		97	73	5/14	72	4/2	71	4/10	71	8/27
			96								
			95								
			94								
			93								
Brevard											
Cocoa Beach	009-4001	NAMS	99	**88**	9/3	**85**	8/2	82	4/20	77	2/26
400 S 4th St	0700-001-F01	Neighborhood	98	**89**	5/22	**89**	8/26	**85**	5/2	84	4/25
	17-3131.500N-537.700E		97	**90**	8/28	83	5/14	79	5/15	77	10/1
			96	83	7/2	78	9/13	70	6/25	70	9/14
			95	76	3/21	70	7/1	69	3/29	67	6/10
			94	**88**	5/25	83	5/24	79	5/23	77	4/2
			93	79	4/14	78	3/29	78	3/30	73	10/13
Palm Bay	009-5001	NAMS	99	82	4/20	82	9/3	73	8/3	71	4/12
525 Pepper St	3380-001-F01	Urban	98	83	4/25	80	5/22	77	5/2	77	5/21
	17-3099.980N-533.570E		97	82	5/15	80	5/14	73	5/1	68	10/11
			96	74	7/2	73	9/14	71	9/13	65	3/14
			95	66	3/21	66	3/29	66	7/1	65	6/10
			94	76	5/24	75	5/23	75	5/25	69	3/6
			93	74	4/14	74	5/14	73	3/30	72	5/15
Broward											
Sawgrass	011-0031	SLAMS	99	76	4/20	70	4/13	69	3/12	69	4/9
12600 W Sample Rd.	0810-031G01	Urban	98	**103**	5/22	84	4/25	83	5/23	79	5/3
	17-2905.871N-570.365E		97								
			96								
			95								
			94								
			93								
Pompano Beach	011-2003	SLAMS	99	79	5/24	79	9/4	71	4/20	71	8/3
1951 NE 48th St	3700-003-G01	Neighborhood	98	84	5/22	80	5/19	79	4/25	77	5/23
	17-2908.000N-590.170E		97	81	7/3	74	4/19	74	10/2	69	10/22
			96	77	9/14	74	9/13	64	3/23	64	4/10
			95	**90**	7/1	77	5/15	65	6/14	64	6/15
			94	78	5/8	74	5/9	70	5/23	69	5/10
			93	**91**	8/18	**85**	4/13	82	5/16	77	4/12

*Based on less than 75% of possible readings.
Values in bold denote concentrations over the standard.

(continued on next page...)

Table 5.2 *Summary of 8-hr Ozone Data (continued).*

County	AIRS #	Network	Year	Eight Hour Ozone Concentration (ppb)							
City	SAROAD #	Scale		Highest	Date	2nd	Date	3rd	Date	4th	Date
Site	UTM			8-hr		8-hr		8-hr		8-hr	
Broward											
Dania	011-8002	NAMS	99	**96**	9/4	84	9/3	78	9/5	75	4/19
John U Lloyd State Park	0900-002-G01	Urban	98	**89**	5/13	80	4/25	79	4/24	77	5/2
	17-2885.400N-588.870E		97	81	4/19	76	10/23	75	7/3	73	3/27
			96	**86**	9/13	77	9/14	69	3/23	68	4/10
			95	83	5/16	75	5/15	68	6/14	67	5/22
			94	**92**	5/10	81	5/8	77	5/9	73	5/23
			93	**97**	3/29	**93**	4/13	**87**	5/15	84	5/21
Dade											
Miami	025-0021	NAMS	99	**89**	4/20	**87**	9/4	77	3/12	76	9/3
Thompson Park	0860-021-G03	Urban	98	**90**	5/13	**88**	4/25	**87**	5/22	**86**	5/23
	17-2867.551N-555.296E		97	**85**	10/2	79	5/14	73	5/27	71	10/23
			96	78	4/11	72	9/13	70	3/13	69	3/23
			95	68	8/20	67	3/27	66	6/14	65	2/25
			94	75	5/24	73	5/23	71	3/6	66	3/17
			93	**98**	4/13	79	4/12	79	5/17	77	4/7
Miami	025-0027	NAMS	99	**94**	9/4	**92**	8/3	**89**	9/3	77	9/5
Univ of Miami	0860-027-G01	Neighborhood	98	**99**	5/3	**85**	4/24	83	4/25	79	4/5
Rosenstiel	17-2846.153N-584.031E		97	**88**	6/4	80	10/2	79	10/23	74	6/7
			96	**98**	9/13	77	10/9	72	4/10	69	6/24
			95	**88**	6/14	**87**	4/9	79	8/15	78	6/19
			94	**87**	5/9	84	3/19	79	5/23	77	5/5
			93	**102**	3/29	**92**	5/22	**88**	10/12	**85**	10/28
Miami	025-0029	SLAMS	99	**94**	9/3	81	4/19	78	9/4	77	5/3
Perdue Medical Center	0860-029-G01	Urban	98	**87**	5/2	**86**	5/13	**85**	4/25	82	4/24
	17-2829.900N-567.600E		97	**86**	10/3	81	10/2	81	10/23	75	4/30
			96	**94**	9/13	76	6/5	73	4/24	73	6/24
			95	84	8/15	81	8/19	77	4/14	77	6/8
			94	83	3/19	75	3/6	75	5/5	74	3/17
			93	**96**	5/15	**91**	5/22	78	5/16	74	3/29
Duval											
Jacksonville	031-0070	NAMS	99	**87**	5/9	79	5/10	78	3/29	77	5/4
Naval Air Station	1960-070-H01	Neighborhood	98	**109**	5/20	**91**	4/25	84	5/19	84	5/21
	17-3345.192N-435.500E		97	**95**	7/3	**94**	9/21	**90**	9/20	**87**	5/7
			96	**86**	6/24	78	6/30	76	6/23	76	9/15
			95	**87**	8/18	84	6/10	83	6/29	80	6/9
			94	**93**	6/12	**85**	5/24	84	5/23	80	8/31
			93	**92**	8/1	**87**	9/24	**85**	7/31	81	7/28
Jacksonville	031-0077	NAMS	99	**86**	7/23	**85**	7/27	84	5/9	80	8/12
13333 Lanier Rd	1960-077-H03	Urban	98	**94**	5/20	83	7/8	81	5/19	80	4/25
Sheffield School	17-3371.662N-443.615E		97	82	7/3	73	5/22	73	7/14	73	9/21
			96	81	4/12	80	6/23	73	4/11	73	6/30
			95	81	8/17	71	6/11	70	7/9	68	4/16
			94	79	5/23	74	5/24	70	5/11	69	5/25
			93	82	6/8	81	8/2	80	5/18	80	8/20

*Based on less than 75% of possible readings.
Values in bold denote concentrations over the standard.

(continued on next page...)

Table 5.2 *Summary of 8-hr Ozone Data (continued).*

County	AIRS #	Network	Year	Eight Hour Ozone Concentration (ppb)							
City	SAROAD #	Scale		Highest	Date	2nd	Date	3rd	Date	4th	Date
Site	UTM			8-hr		8-hr		8-hr		8-hr	
Escambia											
Pensacola	033-0004	NAMS	99	**90**	7/14	**85**	9/14	82	8/5	81	4/19
Ellyson Industrial Park	3540-004-F01	Urban	98	**106**	5/20	**95**	7/7	**91**	8/28	**88**	8/27
	16-3376.800N-480.400E		97	**91**	8/30	**87**	3/22	84	8/7	84	9/15
			96	**92**	5/23	81	6/11	80	7/11	78	7/1
			95	**95**	8/17	**88**	6/21	84	7/19	80	5/23
			94	**95**	9/28	**88**	5/24	83	5/25	81	5/23
			93	82	5/7	81	8/1	78	5/16	76	5/17
Pensacola	033-0018	NAMS	99	**98**	8/27	**90**	4/19	**87**	8/2	**86**	9/14
Naval Air Station	3540-018-F01	Neighborhood	98	**113**	5/20	**113**	8/26	**102**	5/18	**102**	8/27
	16-3359.419N-473.975E		97	**95**	8/30	**91**	3/22	**91**	9/30	**86**	9/29
			96	**110**	7/11	**86**	5/23	80	5/22	80	6/10
			95	**96**	8/16	**91**	8/17	**90**	5/22	**86**	3/20
			94	**104**	9/28	**103**	9/29	**97**	5/24	**89**	5/18
			93	**95**	9/23	**88**	5/7	**87**	8/18	83	10/3
Pensacola	033-0024	SPM	99	**92**	8/27	**88**	4/19	84	6/4	83	5/20
Warrington Elm	3540-0024-F01	Neighborhood	98	**116**	5/20	**110**	8/26	**104**	5/18	**103**	7/19
	16-3362.080N-473.460E		97*	**98**	8/30	**92**	9/15	**89**	9/16	**89**	9/17
			96								
			95								
			94								
			93								
Hillsborough											
Tampa	057-0081	SLAMS	99	**100**	4/21	**98**	8/13	**94**	9/3	**87**	4/13
Simmons Park	1800-081-G03	Urban	98	**122**	5/14	**100**	5/13	**97**	5/20	**89**	4/25
	17-3069.100N-355.544E		97	**90**	7/13	**89**	3/23	**88**	5/14	**86**	5/6
			96	**103**	6/6	**87**	9/14	**86**	7/1	82	6/5
			95	**93**	6/10	84	8/17	82	6/14	79	5/6
			94	**89**	5/24	83	5/6	82	7/22	81	4/2
			93	84	7/11	79	3/10	75	4/12	75	5/22
Tampa	057-1035	SLAMS	99	**92**	8/13	**85**	4/21	**85**	9/3	84	9/24
Davis Island	4360-035-G02	Neighborhood	98	**101**	5/13	**98**	5/20	**95**	5/14	**89**	4/25
	17-3089.908N-356.851E		97	**88**	5/14	**87**	3/23	82	8/24	82	8/28
			96	**87**	6/6	**87**	7/1	**86**	9/14	81	5/13
			95	**104**	6/10	**87**	5/27	82	8/17	81	4/15
			94	78	8/31	72	5/24	72	8/30	66	4/2
			93	65	8/1	62	5/22	62	6/4	60	8/18
Tampa	057-1065	NAMS	99	**100**	8/13	**94**	4/21	**87**	9/3	84	4/13
5121 Gandy Blvd	4360-065-G01	Neighborhood	98	**112**	5/14	**99**	5/20	**90**	5/13	**89**	4/25
	17-3086.060N-348.560E		97	**91**	5/14	**87**	3/23	84	8/28	84	9/19
			96	**103**	9/14	**88**	7/1	82	6/6	79	5/13
			95	**98**	6/10	82	8/17	80	5/27	80	6/14
			94	**87**	5/24	**86**	4/2	**86**	5/6	80	5/25
			93	**92**	9/22	84	7/2	83	4/12	80	8/18

*Based on less than 75% of possible readings.
Values in bold denote concentrations over the standard.

(continued on next page...)

Table 5.2 *Summary of 8-hr Ozone Data (continued).*

County / City / Site	AIRS # / SAROAD # / UTM	Network / Scale	Year	Eight Hour Ozone Concentration (ppb)							
				Highest 8-hr	Date	2nd 8-hr	Date	3rd 8-hr	Date	4th 8-hr	Date
Hillsborough											
Plant City	057-4004	SPM	99	**86**	4/8	**86**	9/3	**85**	4/20	82	2/27
One Raider Place	3660-004G01	Neighborhood	98	**107**	5/21	**92**	5/20	**90**	5/12	**87**	5/22
	17-3096.710N-389.300E		97								
			96								
			95								
			94								
			93								
Holmes											
Bonifay	059-0004	SPM	99	79	5/3	79	5/9	77	5/10	77	7/30
Bonifay Airport	1860-004-F03	Region	98	**92**	8/26	**88**	5/21	**85**	5/18	**85**	5/20
	17-3413.350N-633.450E		97	73	5/14	71	4/10	71	8/27	70	3/22
			96								
			95								
			94								
			93								
Lee											
Cape Coral	071-2001	NAMS	99	**88**	4/20	**87**	4/13	81	9/4	77	3/20
Driver's License Office	0475-001-F01	Urban	98	**95**	5/14	**95**	5/20	**95**	5/21	**92**	5/13
	17-2945.800N-404.400E		97	71	4/17	70	3/23	67	4/24	67	8/29
			96	65	6/6	65	7/11	65	7/12	62	6/5
			95	75	4/14	72	5/6	69	5/22	66	3/21
			94	**85**	5/24	81	3/6	78	5/11	76	4/2
			93	73	5/21	73	5/22	69	4/23	69	5/17
Ft. Myers Beach	071-3002	NAMS	99	**86**	3/12	84	9/4	83	4/20	81	4/13
School & Bay	1304-002-F01	Urban	98	**95**	5/14	**91**	5/13	**91**	5/20	82	4/25
	17-2940.837N-400.824E		97	81	10/3	73	3/23	73	4/24	72	4/17
			96	81	3/14	74	4/17	72	4/11	70	7/11
			95	74	5/22	71	4/14	70	4/15	68	5/6
			94	84	5/24	82	5/11	81	3/6	79	5/25
			93	73	4/12	69	5/22	68	3/7	68	5/21
Leon											
Tallahassee	073-0012	SLAMS	99	**89**	9/3	**85**	8/4	82	9/7	81	8/5
Tallahassee Comm	04340-012F01	Neighborhood	98	83	7/11	82	8/26	79	8/6	77	8/27
College	16-3370.320N-754.670E		97								
			96								
			95								
			94								
			93								
Manatee											
Palmetto	081-3002	SPM	99	**89**	4/21	**88**	9/3	82	4/13	82	9/11
Port Manatee	3440-002-G02	Urban	98	**114**	5/14	**100**	5/15	**92**	5/13	**90**	4/25
	17-3057.318N-347.461E		97	**85**	9/20	81	3/23	79	5/6	77	5/14
			96	81	3/23	79	5/6	77	5/14	75	4/8
			95								
			94								
			93								

*Based on less than 75% of possible readings.

Values in bold denote concentrations over the standard.

(continued on next page...)

Table 5.2 *Summary of 8-hr Ozone Data (continued).*

County	SAROAD #	Network	Year	Eight Hour Ozone Concentration (ppb)							
City	AIRS #	Scale		Highest	Date	2nd	Date	3rd	Date	4th	Date
Site	UTM			8-hr		8-hr		8-hr		8-hr	
Manatee											
Bradenton	081-4010	NAMS	99*	56	2/6	53	2/5	52	2/11	47	1/16
Manatee Community	0320-010-G01	Urban	98	**110**	5/14	**100**	5/13	**99**	5/15	**87**	11/1
College	17-3036.300N-342.200E		97	80	7/13	78	3/23	78	9/20	77	5/14
			96	**89**	6/6	79	6/5	72	3/14	72	5/13
			95	78	6/10	77	3/29	77	5/6	77	6/14
			94	83	5/6	78	4/2	77	5/24	76	3/6
			93	81	4/12	78	8/18	77	3/10	76	7/11
G.T. Bray	081-4012	NAMS	99	**106**	8/13	**97**	4/21	**90**	9/3	83	4/13
5502 33rd AVE W	0320-012-G01	Neighborhood	98								
	17-3040.540N-340.060E		97								
			96								
			95								
			94								
			93								
Bradenton	081-4013	SLAMS	99	**91**	9/3	**90**	4/21	**89**	8/13	80	4/13
5511 39th Street E	0320-013-G01	Neighborhood	98								
	17-3036.950N-349.570E		97								
			96								
			95								
			94								
			93								
Marion											
Ocala	083-0003	SLAMS	99	**94**	9/3	**86**	4/21	84	4/14	83	9/2
SE 17th ST & SE 30th	3120-003F01	Neighborhood	98	79	8/26	77	7/11	77	8/27	74	8/28
Ave	17-3227.200N-392.950E		97								
			96								
			95								
			94								
			93								
Orange											
Orlando	095-0008	SLAMS	99	**96**	9/2	**91**	9/3	83	4/20	80	7/31
Winegard Elementary	3240-008-G01	Neighborhood	98	**97**	5/13	**96**	8/26	**91**	5/22	**90**	5/21
	17-3147.400N-462.660E		97	**101**	7/3	**89**	5/14	**87**	5/7	79	8/30
			96	**88**	7/1	82	8/28	80	9/14	78	8/9
			95	80	5/3	80	8/13	79	3/29	79	6/9
			94	**88**	5/24	82	5/25	81	5/6	81	5/23
			93	**85**	7/29	82	6/7	80	8/1	79	4/11
Winter Park	095-2002	NAMS	99	**93**	9/2	**89**	9/3	**85**	7/31	84	3/29
Morse Blvd & Denning	4900-002-G01	Neighborhood	98	**97**	8/26	**88**	5/13	**87**	4/25	**87**	5/21
	17-3163.490N-464.515E		97	**85**	5/7	**85**	8/30	84	7/3	78	5/14
			96	**89**	7/1	82	7/19	78	9/14	76	8/9
			95	77	9/22	76	8/13	75	3/29	71	5/17
			94	**90**	5/6	**89**	5/24	**87**	5/25	83	8/31
			93	**85**	8/1	**85**	8/2	83	5/17	82	4/14

*Based on less than 75% of possible readings.
Values in bold denote concentrations over the standard.

(continued on next page...)

Table 5.2 *Summary of 8-hr Ozone Data (continued).*

County	AIRS #	Network	Year	Eight Hour Ozone Concentration (ppb)							
City	SAROAD #	Scale		Highest	Date	2nd	Date	3rd	Date	4th	Date
Site	UTM			8-hr		8-hr		8-hr		8-hr	
Osceola											
8706 W SR 8706	097-2002	SLAMS	99	81	8/13	80	2/27	79	4/13	79	9/3
Kissimmee	2060-002-F01	Neighborhood	98	**94**	5/20	**93**	5/22	**91**	5/14	**87**	5/18
	17-3135.679N-437.601E		97	**89**	5/6	82	5/7	77	5/14	75	5/9
			96	83	7/1	76	5/13	76	6/7	73	3/14
			95	76	4/15	74	3/29	71	5/17	70	6/10
			94	**89**	5/24	80	5/25	77	3/18	77	5/6
			93*	74	9/22	73	9/24	64	9/30	60	9/23
Palm Beach											
Royal Palm Beach	099-0007	NAMS	99*	61	2/25	55	2/20	54	2/21	53	2/7
10999 Okeechobee	3420-007-G01	Neighborhood	98	**90**	5/22	82	5/23	78	4/25	74	5/3
	17-2954.098N-577.945E		97	71	5/14	70	10/2	65	3/23	60	10/23
			96	67	3/15	67	9/14	63	4/11	62	4/10
			95	67	5/17	63	6/14	63	9/21	61	4/14
			94	72	3/6	72	5/24	70	5/23	67	3/18
			93	**90**	3/30	**90**	4/13	76	4/12	75	8/18
Delray	099-2004	NAMS	99	**86**	9/4	83	9/3	82	5/24	79	8/3
202 NW 1st Ave	1000-004-G01	Urban	98	**86**	5/19	**85**	5/22	83	4/25	81	10/31
	17-2927.400N-592.100E		97	70	4/18	70	5/14	69	5/15	68	4/19
			96	80	9/14	78	9/13	69	3/23	66	4/10
			95	68	6/15	67	4/13	67	5/15	67	6/14
			94	78	5/8	76	5/9	75	5/23	74	3/6
			93	**90**	8/18	**89**	4/13	**86**	3/30	79	5/16
Pasco											
Holiday	101-2001	SLAMS	99	**96**	9/17	**87**	9/3	**86**	4/21	79	4/6
3452 Darlington Rd	1815-001-F01	Urban	98	**99**	5/14	**95**	5/20	**93**	5/15	**90**	4/25
	17-3119.882N-327.447E		97	84	3/23	81	10/2	80	3/22	79	5/7
			96	78	9/14	75	5/13	75	5/23	73	6/6
			95	77	6/11	75	5/27	75	7/13	74	5/8
			94	84	5/6	76	4/18	75	3/18	75	4/2
			93	80	7/31	78	7/8	74	5/24	73	4/30
Pinellas											
Clearwater	103-0004	NAMS	99	**104**	8/13	**95**	4/21	**88**	4/6	**87**	9/17
2435 Sharkey Rd	0620-004-G01	Urban	98	**103**	5/14	**95**	5/15	**89**	4/25	**88**	5/20
	17-3095.000N-329.227E		97	78	3/23	78	7/16	78	8/8	78	9/19
			96	83	6/6	74	5/23	72	5/13	70	5/31
			95	78	5/27	74	4/15	74	6/15	73	6/10
			94	**90**	5/6	75	3/6	75	4/2	73	8/30
			93	77	7/2	74	9/25	73	4/19	72	7/8
St. Petersburg	103-0018	NAMS	99	**103**	8/13	**96**	4/21	**88**	4/6	**87**	9/17
7200 22nd Ave N	3980-018-G01	Neighborhood	98	**112**	5/14	**97**	5/15	**91**	5/13	**90**	5/20
Azalea Park	17-3074.500N-328.560E		97	75	9/20	74	6/5	74	9/19	73	5/14
			96	82	6/6	74	5/13	73	3/14	66	9/23
			95	72	6/10	68	8/16	67	5/6	66	4/15
			94	84	5/6	78	3/6	78	4/2	77	8/30
			93	74	3/10	71	5/22	68	6/13	66	6/14

*Based on less than 75% of possible readings.

Values in bold denote concentrations over the standard.

(continued on next page...)

Table 5.2 *Summary of 8-hr Ozone Data (continued).*

County	AIRS #	Network	Year	Eight Hour Ozone Concentration (ppb)							
City	SAROAD #	Scale		Highest	Date	2nd	Date	3rd	Date	4th	Date
Site	UTM			8-hr		8-hr		8-hr		8-hr	
Pinellas											
Tarpon Springs	103-5002	SLAMS	99	**92**	4/21	**86**	9/17	84	5/11	82	4/6
John A Chesnut Sr Park	4380-002-G03	Urban	98	**97**	5/14	**90**	5/15	**89**	4/25	**88**	5/20
	17-3108.174N-332.880E		97	80	3/23	77	5/14	76	3/22	76	5/7
			96	78	9/14	76	6/6	67	5/23	66	4/12
			95	79	5/27	72	6/10	70	5/17	68	5/22
			94	83	5/6	76	4/2	74	5/12	74	5/19
			93	80	4/14	74	6/8	74	7/8	71	4/23
Polk											
Lakeland	105-6005	NAMS	99	80	4/20	80	9/3	78	4/13	78	5/11
Sikes Elementary	2160-005-F01	Urban	98	**105**	5/21	**89**	5/14	**88**	5/20	**87**	5/22
	17-3090.755N-401.588E		97	**91**	5/14	80	7/4	80	8/30	79	3/23
			96	70	3/14	70	5/13	68	3/23	68	5/14
			95	83	5/21	74	7/19	71	3/29	71	6/10
			94	83	5/24	72	3/6	71	4/2	71	7/22
			93	**87**	4/23	83	4/12	80	5/15	80	8/1
Lakeland	105-6006	NAMS	99	**85**	9/3	84	4/20	80	4/8	78	9/5
Baptist Children's Home	2160-006-F01	Neighborhood	98	**100**	5/21	**90**	5/22	**87**	5/18	**86**	5/14
	17-3100.652N-404.435E		97	**87**	8/29	**86**	5/14	78	8/30	77	7/4
			96	81	9/14	77	7/2	73	3/14	71	5/14
			95	78	5/21	77	8/18	76	6/10	74	3/29
			94	82	5/24	75	5/6	74	5/23	72	4/2
			93	**91**	6/3	**87**	8/1	**85**	4/13	83	4/12
St. Lucie											
Ft. Pierce	111-1002	SLAMS	99	80	9/3	73	10/23	72	4/19	71	4/20
	3960-002-F01	Urban	98	**88**	5/22	81	5/11	80	4/25	79	5/3
	3036.500E-3036.200N		97	73	5/14	71	5/15	67	8/29	67	10/1
			96	68	3/15	65	3/14	65	9/14	62	4/10
			95*	64	8/17	62	8/14	60	9/20	59	9/21
			94								
			93								
Sarasota											
Sarasota	115-1002	NAMS	99*	75	3/12	71	2/27	70	3/20	69	3/27
Brookside Middle School	4080-002-G01	Neighborhood	98	**108**	5/14	**99**	5/13	**99**	5/15	82	5/20
	17-3020.375N-349.150E		97	**87**	9/20	84	7/13	77	3/23	76	5/14
			96	83	6/6	74	6/5	72	6/4	72	9/23
			95	83	5/6	81	6/14	77	3/29	74	5/22
			94	82	3/6	82	5/24	81	4/2	79	5/6
			93	**85**	4/12	76	5/22	76	7/11	73	6/13
Sarasota	115-1005	SLAMS	99	**96**	9/3	**94**	4/21	**91**	8/13	**85**	4/13
Lido Park	4080-005-G01	Neighborhood	98	**108**	5/14	**100**	5/13	**97**	5/15	**88**	11/1
	17-3021.250N-344.600E		97	**92**	7/13	**90**	9/20	80	5/14	79	4/8
			96	**85**	6/6	75	4/11	75	9/23	74	6/3
			95	**87**	8/16	82	6/14	78	5/6	77	3/29
			94	**86**	3/6	**86**	5/6	82	4/2	82	5/24
			93	**90**	4/12	80	6/14	78	3/10	77	5/22

*Based on less than 75% of possible readings.
Values in bold denote concentrations over the standard.

(continued on next page...)

Table 5.2 *Summary of 8-hr Ozone data (continued).*

County	AIRS #	Network	Year	Eight Hour Ozone Concentration (ppb)							
City	SAROAD #	Scale		Highest	Date	2nd	Date	3rd	Date	4th	Date
Site	UTM			8-hr		8-hr		8-hr		8-hr	
Seminole											
Sanford	117-1002	NAMS	99	**89**	7/23	83	4/21	79	3/29	79	4/20
Seminole Community Co	4140-002-F01	Urban	98	**92**	4/25	**89**	5/21	83	5/13	83	5/22
	17-3179.640N-469.730E		97	82	5/14	81	8/30	78	7/3	76	5/7
			96	74	7/19	73	9/14	70	7/1	68	3/14
			95	**86**	5/1	78	6/11	75	9/22	74	5/30
			94	83	5/25	78	5/24	77	3/18	72	5/7
			93	**89**	8/1	**88**	5/17	**87**	8/2	81	5/18
Volusia											
Port Orange	127-2001	NAMS	99	79	4/21	77	9/2	75	9/5	74	4/20
5200 Spruce St	3730-001-G01	Urban	98	**87**	8/27	80	8/26	78	5/13	78	5/21
	17-3219.869N-500.591E		97	79	8/29	75	5/14	71	5/9	71	5/15
			96	72	7/2	69	6/23	67	6/25	65	9/13
			95	76	5/18	68	7/20	67	6/14	67	7/9
			94	80	5/24	74	5/23	73	5/25	72	3/18
			93	82	8/2	74	4/14	74	8/1	71	3/10
Daytona Beach	127-5002	NAMS	99	81	9/2	79	4/21	75	7/23	75	7/31
118-A Dunn Ave	0920-002-G01	Urban	98	**92**	5/13	82	5/21	82	8/27	80	8/26
	17-3230.711N-494.831E		97	80	8/22	75	5/14	74	7/3	73	5/7
			96	71	6/25	69	6/23	69	9/14	66	3/14
			95	77	5/18	70	6/15	68	6/14	68	7/20
			94	84	5/24	76	5/23	76	5/25	72	3/6
			93	79	8/2	78	7/31	78	8/1	77	4/14

*Based on less than 75% of possible readings.
Values in bold denote concentrations over the standard.

Table 5.3 *Summary of 1-hr Ozone Data.*

County	AIRS #	Network	Year	One-Hour Ozone Concentration (ppb)							
City	SAROAD #	Scale		Highest 1-hr	Date	2nd 1-hr	Date	3rd 1-hr	Date	4th 1-hr	Date
Site	UTM										
Alachua											
Gainesville	001-3011	SPM	99	103	8/2	98	8/12	98	9/3	97	4/14
100 Savannah Blvd	0020-011-F01	Neighborhood	98	109	5/20	105	5/14	102	5/19	101	5/21
	17-3269.080N-374.330E		97*	101	9/19	91	10/22	90	9/21	89	9/20
			96								
			95								
			94								
			93								
Baker											
Lake City	003-0002	SPM	99	84	4/14	84	5/21	84	8/1	84	8/2
Osceola Ranger	0160-002F01	Urban	98	90	8/26	89	7/11	88	5/14	86	5/21
Station	17-3341.350N-360.900E		97	86	7/14	82	7/15	81	4/25	80	5/16
			96	88	3/14	87	6/30	85	5/2	79	6/5
			95								
			94								
			93								
Brevard											
Cocoa Beach	009-4001	NAMS	99	106	9/3	87	9/2	85	2/26	85	4/20
400 S 4th St	0700-001-F01	Neighborhood	98	111	8/26	98	5/22	89	5/2	88	5/3
	17-3131.500N-537.700E		97	97	8/28	86	5/14	84	10/1	83	7/4
			96	93	7/2	86	9/13	83	6/25	78	3/15
			95	85	3/21	84	7/1	82	6/10	78	8/17
			94	98	5/25	90	5/24	85	5/23	83	4/2
			93	86	3/30	84	3/29	84	4/14	84	10/13
Palm Bay	009-5001	NAMS	99	97	9/3	86	4/20	79	8/3	78	2/26
525 Pepper St	3380-001-F01	Urban	98	88	10/31	86	4/25	86	6/25	86	8/26
	17-3099.980N-533.570E		97	90	5/15	86	5/1	86	5/14	84	12/1
			96	91	7/2	87	9/14	86	9/13	71	3/14
			95	78	7/1	76	8/18	73	6/7	73	6/30
			94	90	5/24	85	5/23	82	5/25	78	4/2
			93	95	11/5	89	10/13	83	5/14	80	3/30
Broward											
Sawgrass	011-0031	SLAMS	99	97	5/25	88	3/12	86	4/20	84	4/9
12600 W Sample Rd	0810-031G01	Urban	98	**128**	5/22	105	7/6	104	5/23	100	5/13
	17-2905.871N-570.365E		97								
			96								
			95								
			94								
			93								
Pompano Beach	011-2003	SLAMS	99	105	9/4	103	5/24	89	8/3	85	7/30
1951 NE 48th St	3700-003-G01	Neighborhood	98	110	5/22	97	5/19	92	6/28	91	7/13
	17-2908.000N-590.170E		97	93	7/3	89	10/2	88	4/19	86	10/1
			96	105	9/14	103	6/28	98	6/18	94	9/18
			95	116	7/1	90	5/15	86	4/13	84	3/28
			94	103	5/8	90	8/6	88	5/9	77	3/6
			93	**131**	8/18	103	9/10	95	4/12	92	8/20

*Based on less than 75% of possible readings.
Values in bold denote concentrations over the standard.

(continued on next page...)

Table 5.3 *Summary of 1-hr Ozone Data.*

County	AIRS #	Network	Year	One-Hour Ozone Concentration (ppb)							
City	SAROAD #	Scale		Highest	Date	2nd	Date	3rd	Date	4th	Date
Site	UTM			1-hr		1-hr		1-hr		1-hr	
Broward											
Dania	011-8002	NAMS	99	**130**	9/4	101	5/24	93	8/3	92	4/11
John U Lloyd State Park	0900-002-G01	Urban	98	118	5/13	102	8/31	99	5/22	97	6/28
	17-2885.400N-588.870E		97	104	4/19	92	7/3	89	10/22	87	3/27
			96	114	9/14	101	8/31	92	9/13	89	6/27
			95	**135**	5/16	103	5/15	92	5/22	89	3/22
			94	107	5/10	103	5/8	96	8/6	94	5/9
			93	111	8/18	101	3/29	99	4/13	98	5/16
Dade											
Miami	025-0021	NAMS	99	101	4/20	100	3/11	93	5/26	91	3/12
Thompson Park	0860-021-G03	Urban	98	122	5/23	112	5/13	110	5/22	110	7/3
	17-2867.551N-555.296E		97	106	5/14	104	10/2	99	6/7	95	8/14
			96	97	9/13	94	4/11	88	3/13	84	2/9
			95	91	8/20	90	6/19	84	6/14	83	2/25
			94	91	3/19	87	5/23	82	3/17	82	5/24
			93	119	4/13	99	10/13	91	5/17	89	4/3
Miami	025-0027	NAMS	99	117	9/4	113	8/3	100	9/3	87	5/25
Univ of Miami	0860-027-G01	Neighborhood	98	113	5/13	93	4/5	92	6/13	91	4/24
Rosenstiel	17-2846.153N-584.031E		97	99	6/4	97	10/2	94	6/7	91	10/3
			96	106	9/13	90	10/9	88	6/5	82	6/24
			95	111	6/19	106	4/9	96	6/14	93	6/30
			94	113	5/9	97	6/21	96	5/5	94	3/19
			93	117	3/29	111	5/22	107	10/28	98	10/12
Miami	025-0029	SLAMS	99	103	9/3	97	10/18	94	5/3	93	9/4
Perdue Medical Center	0860-029-G01	Urban	98	107	7/4	100	5/2	98	5/13	91	4/25
	17-2829.900N-567.600E		97	117	10/3	106	10/2	95	5/14	91	10/23
			96	123	9/13	97	6/5	91	6/24	85	4/24
			95	103	8/19	102	8/15	98	6/8	96	4/14
			94	108	3/19	107	5/12	96	5/18	89	5/5
			93	113	5/22	108	5/15	106	4/27	92	10/27
Duval											
Jacksonville	031-0070	NAMS	99*	101	5/9	95	5/25	90	5/4	90	5/10
Naval Air Station	1960-070-H01	Neighborhood	98	**125**	5/20	101	9/4	100	4/25	95	5/21
	17-3345.192N-435.500E		97	**143**	9/21	116	7/3	110	9/20	106	8/6
			96	111	6/24	96	5/3	90	6/7	87	5/13
			95	**128**	6/29	124	6/30	112	6/10	104	6/9
			94	111	9/6	110	8/31	107	6/12	98	6/4
			93	124	9/24	117	7/28	108	8/1	107	6/11
Jacksonville	031-0077	NAMS	99	106	7/30	103	7/23	103	7/27	89	8/2
13333 Lanier Rd	1960-077-H03	Urban	98	107	5/20	100	6/25	100	7/8	99	6/19
Shefield School	17-3371.662N-443.615E		97	107	7/3	85	7/15	85	7/16	84	9/21
			96	105	6/23	86	4/12	83	3/14	83	9/24
			95	102	6/11	100	8/17	83	7/11	81	4/6
			94	88	7/11	87	5/23	82	7/12	78	5/24
			93	103	8/20	103	9/24	99	6/11	95	7/2

*Based on less than 75% of possible readings.
Values in bold denote concentrations over the standard.

(continued on next page...)

Table 5.3 *Summary of 1-hr Ozone Data (continued).*

County	AIRS #	Network	Year	One-Hour Ozone Concentration (ppb)							
City	SAROAD #	Scale		Highest	Date	2nd	Date	3rd	Date	4th	Date
Site	UTM			1-hr		1-hr		1-hr		1-hr	
Escambia											
Pensacola	033-0004	NAMS	99	101	7/31	97	8/15	96	8/5	96	9/8
Ellyson Industrial Park	3540-004-F01	Urban	98	**127**	5/20	114	7/7	105	8/28	97	8/27
	16-3376.800N-480.400E		97	111	9/18	109	8/7	109	9/15	103	7/27
			96	**125**	5/23	98	7/1	90	7/11	87	7/2
			95	**131**	7/19	113	8/17	101	6/21	100	6/23
			94	123	9/28	104	6/30	94	5/24	94	5/25
			93	115	8/20	93	8/15	88	7/22	88	8/1
Pensacola	033-0018	NAMS	99	116	8/27	106	8/2	97	7/23	96	8/5
Naval Air Station	3540-018-F01	Neighborhood	98	**131**	5/20	**128**	8/26	117	5/18	117	8/27
	16-3359.419N-473.975E		97	113	7/11	110	9/30	104	8/28	101	7/12
			96	**140**	7/11	97	5/22	96	7/12	95	5/23
			95	121	7/12	120	8/16	110	8/17	101	5/22
			94	117	9/29	111	9/28	105	5/24	104	5/18
			93	117	9/23	110	8/15	98	7/31	96	10/3
Pensacola	033-0024	SPM	99	115	8/27	100	8/2	99	7/31	96	6/4
Warrington Elm	3540-0024-F01	Neighborhood	98	**137**	5/20	**126**	8/26	118	5/18	118	7/19
	16-3362.080N-473.460E		97*	103	9/17	102	8/30	102	9/21	101	9/15
			96								
			95								
			94								
			93								
Hillsborough											
Tampa	057-0081	SLAMS	99	120	8/13	116	4/21	111	9/3	104	4/13
Simmons Park	1800-081-G03	Urban	98	**146**	5/14	**131**	5/13	117	5/20	106	6/23
	17-3069.100N-355.544E		97	107	8/19	105	5/6	104	7/13	98	5/14
			96	**134**	6/6	108	7/1	104	9/14	102	9/3
			95	**128**	6/10	109	8/21	108	7/7	100	6/14
			94	106	7/22	101	5/24	97	5/6	90	5/1
			93	98	6/7	96	4/12	93	7/11	93	8/18
Tampa	057-1035	SLAMS	99	119	5/20	106	4/21	106	8/13	100	4/13
Davis Island	4360-035-G02	Neighborhood	98	122	5/13	109	5/14	109	5/20	107	6/23
	17-3089.908N-356.851E		97	115	8/30	112	8/28	108	8/29	106	8/24
			96	**125**	9/14	112	7/1	101	5/13	99	6/6
			95	**143**	6/10	104	5/27	102	5/7	98	8/17
			94	100	8/31	88	8/19	86	10/21	85	7/16
			93	88	7/2	77	6/13	77	8/18	76	6/4
Tampa	057-1065	NAMS	99	**128**	8/13	112	4/21	104	5/11	101	9/24
5121 Gandy Blvd	4360-065-G01	Neighborhood	98	**139**	5/14	**127**	5/13	116	6/23	109	5/15
	17-3086.060N-348.560E		97	111	8/28	109	8/29	105	9/13	105	9/19
			96	121	9/14	113	7/1	105	6/6	101	5/1
			95	**147**	6/10	109	9/21	103	4/15	103	8/21
			94	103	5/24	101	5/6	92	4/2	92	4/17
			93	110	7/2	110	9/22	100	4/12	100	6/8

*Based on less than 75% of possible readings.
Values in bold denote concentrations over the standard.

(continued on next page...)

Table 5.3 *Summary of 1-hr Ozone Data (continued).*

County	SAROAD #	Network	Year	One-Hour Ozone Concentration (ppb)							
City	AIRS #	Scale		Highest	Date	2nd	Date	3rd	Date	4th	Date
Site	UTM			1-hr		1-hr		1-hr		1-hr	
Hillsborough											
Plant City	057-4004	SPM	99	116	4/8	98	9/3	95	2/27	95	5/11
One Raider Place	3660-004G01	Neighborhood	98	122	5/21	112	5/12	103	8/27	101	5/20
	17-3096.710N-389.300E		97								
			96								
			95								
			94								
			93								
Holmes											
Bonifay	059-0004	SPM	99	122	7/25	104	7/30	86	7/23	86	9/16
Bonifay Airport	1860-004-F03	Region	98	103	8/26	97	7/3	95	5/21	92	5/20
	17-3413.350N-633.450E		97	82	8/27	80	3/22	80	5/14	79	4/2
			96*	79	9/24	78	9/13	75	9/25	70	9/14
			95								
			94								
			93								
Lee											
Cape Coral	071-2001	NAMS	99	96	4/13	96	4/20	87	4/17	86	3/20
Driver's License Office	0475-001-F01	Urban	98	117	5/20	109	5/14	100	5/21	96	5/13
	17-2945.800N-404.400E		97	81	4/8	76	3/23	75	4/24	75	8/29
			96	74	8/30	72	7/1	69	6/4	68	3/14
			95	92	5/6	86	4/14	78	5/22	73	3/21
			94	99	5/11	90	3/6	89	5/24	82	5/23
			93	88	5/21	78	5/17	77	5/22	74	4/23
Ft. Myers Beach	071-3002	NAMS	99	96	3/12	93	9/4	91	4/13	89	4/20
School & Bay	1304-002-F01	Urban	98	103	5/20	102	5/13	102	5/14	89	5/21
	17-2940.837N-400.824E		97	98	10/3	83	10/2	82	4/8	80	8/14
			96	89	3/14	80	4/17	77	4/11	73	5/31
			95								
			94								
			93								
Leon											
Tallahassee Comm	073-0012	SLAMS	99	96	7/23	94	9/3	92	8/6	92	8/4
College	4340-012F01	Neighborhood	98	97	9/4	90	10/2	89	7/11	88	8/6
	16-3370.320-754.670E		97								
			96								
			95								
			94								
			93								
Manatee											
Palmetto	081-3002	SPM	99	112	9/3	111	9/11	100	4/21	97	4/13
Port Manatee	3440-002-G02	Urban	98	**133**	5/14	117	5/15	105	5/13	99	11/1
	17-3057.318N-347.461E		97	106	7/13	102	7/17	101	9/21	99	8/24
			96	109	6/6	94	7/1	91	6/5	90	6/4
			95	101	6/10	94	9/20	88	5/22	87	6/14
			94	92	4/2	90	3/6	88	5/6	86	5/5
			93	109	8/18	108	6/4	107	4/12	101	7/2

*Based on less than 75% of possible readings.

Values in bold denote concentrations over the standard.

(continued on next page...)

Table 5.3 *Summary of 1-hr Ozone Data (continued).*

County	AIRS #	Network	Year	One-Hour Ozone Concentration (ppb)							
City	SAROAD #	Scale		Highest	Date	2nd	Date	3rd	Date	4th	Date
Site	UTM			1-hr		1-hr		1-hr		1-hr	
Manatee											
Bradenton	081-4010	NAMS	99*	62	2/5	60	2/6	58	2/11	55	1/16
Manatee Community	0320-010-G01	Urban	98	**127**	5/14	115	5/15	111	5/13	100	5/20
College	17-3036.300N-342.200E		97	99	7/13	99	7/17	94	9/9	90	9/20
			96	96	6/6	91	6/5	89	6/4	84	3/14
			95	99	5/6	92	6/14	92	8/17	87	3/29
			94	94	5/6	94	5/24	93	5/29	89	3/6
			93	96	4/12	94	6/14	88	7/11	86	10/13
G.T. Bray	081-4012	NAMS	99	115	8/4	112	8/13	111	9/3	109	4/21
5502 33rd Ave W	0320-012-G01	Neighborhood	98								
	17-3040.540N-340.060E		97								
			96								
			95								
			94								
			93								
Bradenton	081-4013	SLAMS	99	112	9/3	100	8/13	99	4/21	98	4/13
5511 39th Street E	0320-013-G01	Neighborhood	98								
	17-3036.950N-349.570E		97								
			96								
			95								
			94								
			93								
Marion											
Ocala	083-0003	SLAMS	99	101	9/3	97	8/14	97	9/2	93	4/14
YMCA SE17th St &	3120-003F01	Neighborhood	98	101	7/12	97	7/7	94	7/11	91	8/27
SE 30th Ave	17-3227.200N-392.950E		97								
			96								
			95								
			94								
			93								
Orange											
Orlando	095-0008	SLAMS	99	118	9/2	101	9/3	93	4/5	93	5/20
Winegard Elementary	3240-008-G01	Neighborhood	98	118	8/26	117	5/22	106	6/26	106	7/12
	17-3147.400N-462.660E		97	115	7/3	109	5/7	101	7/13	94	5/14
			96	106	8/28	104	7/1	103	9/14	97	8/9
			95	118	6/9	104	6/10	99	5/3	97	8/14
			94	102	5/24	93	9/1	92	8/30	91	5/6
			93	97	7/29	95	7/28	93	8/18	91	4/11
Winter Park	095-2002	NAMS	99	109	9/2	100	3/29	100	5/20	99	7/31
Morse Blvd & Denning	4900-002-G01	Neighborhood	98	109	8/26	100	5/21	99	5/20	98	8/27
	17-3163.490N-464.515E		97	108	5/7	96	8/30	93	10/2	92	5/8
			96	96	8/9	95	7/1	95	8/16	95	9/14
			95	96	8/13	94	6/10	91	9/22	87	5/30
			94	109	5/6	109	8/31	101	5/24	94	5/25
			93	103	6/7	98	8/2	96	5/17	96	7/7

*Based on less than 75% of possible readings.
Values in bold denote concentrations over the standard.

(continued on next page...)

Table 5.3 *Summary of 1-hr Ozone Data (continued).*

County	AIRS #	Network	Year	One-Hour Ozone Concentration (ppb)							
City	SAROAD #	Scale		Highest 1-hr	Date	2nd 1-hr	Date	3rd 1-hr	Date	4th 1-hr	Date
Site	UTM										
Osceola											
8706 W SR 8706	097-2002	SLAMS	99	100	8/13	95	4/5	90	4/13	89	4/20
Kissimmee	2060-002-F01	Neighborhood	98	**127**	5/20	123	5/22	108	5/18	104	5/14
	17-3135.679N-437.601E		97	100	5/6	88	5/7	88	5/9	88	9/21
			96	102	7/1	96	6/7	93	6/6	90	5/18
			95	97	8/15	91	5/18	86	8/19	83	3/29
			94	97	5/24	94	8/30	93	5/26	92	5/25
			93*	95	9/22	93	9/24	77	9/23	70	9/30
Palm Beach											
Royal Palm Beach	099-0007	NAMS	99*	66	2/25	64	2/4	63	2/20	61	2/21
10999 Okeechobee	3420-007-G01	Neighborhood	98	94	5/22	87	5/23	85	4/25	85	6/29
	17-2954.098N-577.945E		97	87	5/14	78	10/2	74	5/10	70	3/23
			96	87	9/14	85	3/15	76	7/22	74	9/1
			95	88	5/17	77	9/21	74	4/13	72	6/14
			94	84	3/18	82	3/6	82	5/24	77	5/9
			93	114	8/18	112	3/30	101	4/13	91	5/16
Delray	099-2004	NAMS	99	108	5/24	104	9/4	101	9/3	91	9/5
202 NW 1st Ave	1000-004-G01	Urban	98	108	5/22	105	6/28	104	6/29	102	5/19
	17-2927.400N-592.100E		97	94	5/15	86	7/4	85	4/19	81	4/18
			96	97	9/14	90	9/18	89	9/1	86	6/18
			95	98	7/1	88	8/17	87	3/28	82	4/13
			94	101	5/8	86	5/9	83	3/6	79	5/10
			93	**127**	8/18	122	3/30	99	4/13	85	3/29
Pasco											
Holiday	101-2001	SLAMS	99	110	9/17	94	4/21	91	9/3	90	8/13
3452 Darlington Rd	1815-001-F01	Urban	98	103	5/14	103	5/20	100	4/25	97	1/17
	17-3119.882N-327.447E		97	94	7/18	92	7/17	89	10/2	87	9/10
			96	87	4/18	86	7/26	86	9/14	83	6/6
			95	92	5/17	92	6/11	85	5/8	84	3/18
			94	87	5/6	85	10/22	84	5/14	84	6/14
			93	95	7/8	94	7/29	91	7/31	89	8/24
Pinellas											
Clearwater	103-0004	NAMS	99	118	8/13	113	4/21	112	9/17	109	8/16
2435 Sharkey Rd	0620-004-G01	Urban	98	117	5/14	99	5/15	98	5/13	96	4/25
	17-3095.000N-329.227E		97	106	8/8	94	9/19	93	7/16	91	5/6
			96	95	9/20	92	6/6	89	9/14	82	5/23
			95	90	8/21	86	4/15	86	5/7	84	3/29
			94	99	8/30	98	5/6	90	6/15	85	8/31
			93	96	9/25	92	6/8	87	7/2	85	4/19
St. Petersburg	103-0018	NAMS	99	**133**	8/13	112	9/11	110	4/21	107	9/17
7200 22nd Ave N	3980-018-G01	Neighborhood	98	122	5/14	106	5/15	103	5/13	97	5/20
Azalea Park	17-3074.500N-328.560E		97	102	9/19	91	9/4	85	7/14	85	8/18
			96	104	6/6	85	3/14	85	5/15	83	5/13
			95	92	8/16	83	6/10	82	4/15	81	3/30
			94	96	8/30	90	5/6	89	3/6	87	4/2
			93	87	6/13	84	3/10	81	4/12	80	6/4

*Based on less than 75% of possible readings.
Values in bold denote concentrations over the standard.

(continued on next page...)

Table 5.3 *Summary of 1-hr Ozone Data (continued).*

County	AIRS #	Network	Year	One-Hour Ozone Concentration (ppb)							
City	SAROAD #	Scale		Highest 1-hr	Date	2nd 1-hr	Date	3rd 1-hr	Date	4th 1-hr	Date
Site	UTM										
Pinellas											
Tarpon Springs	103-5002	SLAMS	99	101	4/21	101	9/17	97	5/11	95	4/26
John A Chesnut Sr Park	4380-002-G03	Urban	98	109	5/14	103	4/25	98	5/15	95	5/20
	17-3108.174N-332.880E		97	93	10/2	91	7/17	90	7/18	85	6/5
			96	92	9/14	89	5/23	85	6/6	83	1/9
			95	89	6/11	86	5/17	86	5/27	82	5/8
			94	104	10/3	91	5/6	90	6/14	86	4/18
			93	105	6/8	96	7/8	88	4/14	83	8/2
Polk											
Lakeland	105-6005	NAMS	99	99	4/8	92	5/11	90	10/24	89	5/20
Sikes Elementary	2160-005-F01	Urban	98	**125**	5/21	102	5/22	97	5/12	97	5/14
	17-3090.755N-401.588E		97	104	7/4	102	5/14	98	8/30	90	3/23
			96	95	6/6	85	6/25	84	5/14	83	8/28
			95	97	5/21	88	8/18	87	6/10	86	7/19
			94	94	7/22	91	5/24	81	5/12	80	5/25
			93	101	4/23	96	4/12	96	8/1	92	5/22
Lakeland	105-6006	NAMS	99	103	4/8	101	9/3	94	4/20	90	2/27
Baptist Children's Home	2160-006-F01	Neighborhood	98	119	5/21	106	5/18	100	5/12	99	6/19
	17-3100.652N-404.435E		97	110	8/29	100	7/4	99	5/14	93	8/6
			96	99	9/14	92	7/2	89	6/6	89	8/9
			95	91	8/18	90	5/21	86	3/29	86	6/10
			94	87	5/24	85	5/13	82	3/6	82	5/23
			93	118	4/13	109	7/2	104	6/3	100	5/15
St. Lucie											
Ft. Pierce	111-1002	SLAMS	99	83	8/2	83	9/3	80	4/20	79	10/23
	3960-002-F01	Urban	98	95	5/11	95	5/22	90	5/3	88	5/13
	3036.500E-3036.200N		97	85	5/15	82	8/29	77	5/14	77	10/2
			96	82	3/15	72	6/25	72	7/20	71	9/14
			95	85	8/17	71	6/29	70	5/16	67	9/20
			94								
			93								
Sarasota											
Sarasota	115-1002	NAMS	99	84	3/20	83	3/12	77	2/27	76	3/27
Brookside Middle School	4080-002-G01	Neighborhood	98	**128**	5/13	120	5/14	106	5/15	91	11/1
	17-3020.375N-349.150E		97	102	9/20	96	7/13	93	9/9	89	8/30
			96	95	7/11	89	6/6	83	6/5	83	9/23
			95	105	5/6	93	6/14	87	9/20	84	3/29
			94	96	5/11	96	5/24	90	3/6	87	4/17
			93	94	4/12	90	7/11	86	6/13	85	6/14
Sarasota	115-1005	SLAMS	99	111	8/13	111	9/3	102	4/21	100	4/13
Lido Park	4080-005-G01	Neighborhood	98	**131**	5/13	122	5/14	106	5/15	93	11/1
	17-3021.250N-344.600E		97	107	9/20	105	7/13	93	9/9	92	5/28
			96	97	7/11	94	6/6	87	9/23	86	4/17
			95	101	5/6	99	8/16	94	6/14	89	8/17
			94	99	5/24	99	5/26	94	5/11	93	3/6
			93	99	4/12	96	6/14	91	6/13	90	9/24

*Based on less than 75% of possible readings.
Values in bold denote concentrations over the standard.

(continued on next page...)

Table 5.3 *Summary of 1-hr Ozone Data (continued).*

County	AIRS #	Network	Year	One-Hour Ozone Concentration (ppb)							
City	SAROAD #	Scale		Highest	Date	2nd	Date	3rd	Date	4th	Date
Site	UTM			1-hr		1-hr		1-hr		1-hr	
Seminole											
Sanford	117-1002	NAMS	99	108	7/23	99	4/21	95	5/12	95	5/19
Seminole Community Co	4140-002-F01	Urban	98	104	5/25	101	4/25	100	5/21	98	8/26
	17-3179.640N-469.730E		97	100	8/30	96	7/18	95	7/3	92	7/15
			96	92	7/19	92	9/14	87	7/1	87	9/3
			95	97	5/1	93	6/10	90	5/30	89	9/22
			94	99	5/25	91	5/6	87	3/18	87	8/31
			93	106	5/17	100	8/1	98	7/3	95	6/2
Volusia											
Port Orange	127-2001	NAMS	99	87	9/5	86	7/31	85	9/2	85	9/3
5200 Spruce St	3730-001-G01	Urban	98	98	8/27	92	10/30	90	8/26	84	5/13
	17-3219.869N-500.591E		97	88	8/29	84	8/22	82	5/14	80	5/9
			96	91	6/26	85	6/25	81	7/2	74	6/23
			95	90	5/18	75	4/18	74	6/30	73	3/27
			94	90	5/24	81	3/18	81	5/25	79	5/23
			93	94	8/2	94	8/19	86	8/20	85	4/14
Daytona Beach	127-5002	NAMS	99	92	8/30	87	7/31	87	9/2	87	9/16
118-A Dunn Ave	0920-002-G01	Urban	98	97	5/13	96	8/27	94	5/21	94	6/29
	17-3230.711N-494.831E		97	89	8/29	88	8/22	84	7/2	84	7/3
			96	92	6/25	73	6/23	73	6/24	73	9/14
			95	95	5/18	91	7/20	78	8/17	75	4/18
			94	98	5/24	87	5/25	84	3/18	81	5/23
			93	97	8/2	93	7/31	89	4/14	87	8/20

*Based on less than 75% of possible readings.
Values in bold denote concentrations over the standard.

Chapter 6: Particulate Matter

6.1 Particulate Matter Monitoring Results

Particulate matter (PM) is defined as dispersed airborne solid or liquid particles (other than uncombined water) ranging in size from 0.1 to 50 microns in diameter. Particulate matter is emitted from both natural and man-made sources. Globally, natural sources account for the majority of the PM mass in the atmosphere. The annual average natural background concentration of PM over continental areas is estimated to be 20 - 30 $\mu g/m^3$. Most naturally occurring PM consists of particles larger than 1 micron in diameter.

There are two categories of man-made sources of PM. Traditional sources include all confined combustion sources (motor vehicles, commercial ovens, dryers, and utility and industrial boilers) plus many materials-handling processes in industry. Nontraditional sources include reentrained dust from roads; dust-producing agricultural, construction, and mining activities; wildfires and some kinds of open burning; and fugitive emissions from industry.

In 1987, the National Ambient Air Quality Standard (NAAQS) for PM changed. Prior to July 1, 1987, the standard was directed toward total suspended particulate (TSP). TSP is the fraction of PM which could be captured by a high-volume sampler. This form of particulate is referred to as particulate matter throughout this report. Originally, the particles ranging from about 0.1 to 100 microns in diameter were captured, but specifications in 1982 were found to favor particles with diameters up to 25-50 microns.

After July 1, 1987, the NAAQS for PM was no longer based on TSP. It was changed to address PM_{10}—the PM with a diameter of 10 microns or less, which is inhalable. It can pass the body's natural defenses and reach into the lungs where it poses a greater threat to human health. The next NAAQS review brought with it yet another new standard which was promulgated in July 1997, this time for PM_{fine} (the PM with a diameter of 2.5 microns or less). Once again, reflecting EPA's focus on that which poses a greater threat to human health. The new network was in place by mid 1999.

Florida's 1999 PM monitoring network consisted of a PM_{10} network, a $PM_{2.5}$ network and one TSP monitor in Broward County. The PM_{10} network consisted of 66 stations in 27 counties as seen in Figure 6.1. The $PM_{2.5}$ network consisted of 30 stations in 19 counties as seen in Figure 6.2.

The NAAQS for PM_{10} is 50 $\mu g/m^3$ annual arithmetic mean; and 150 $\mu g/m^3$, 24-hour average, not to be exceeded more than once per year. The values for PM_{10} generally are 40 - 60 percent of the TSP concentrations for the same air mass in Florida.

The highest 24-hour average was 160 $\mu g/m^3$, above the 150 $\mu g/m^3$ maximum. This reading was recorded in Hamilton County. The concentration was due to a wildfire. This value has been approved by the EPA for exclusion from attainment/maintenance. Of the 66 monitors, 64 reported concentrations below 60 percent of the 24-hour standard. 1999 concentrations of the non-continuous monitor with the highest 24-hr max for each county are shown in Figures 6.3-6.10. All 66 monitors' concentrations were also below 75 percent of the annual standard of 50 $\mu g/m^3$. While parts of Florida experience nuisance amounts of particles in the form of dust or pollen, PM_{10} concentrations have always been less than the standard.

The NAAQS for $PM_{2.5}$ is 15.0 $\mu g/m^3$ annual arithmetic mean; and 65 $\mu g/m^3$, 24-hour average, not to be exceeded by the three-year average of the 98th percentile. The highest 24-hour average was 108 $\mu g/m^3$ in Broward County, well above the 65 $\mu g/m^3$ maximum. Of the 30 monitors, four reported concentrations above the standard. Table 6.1 presents details of these exceedances. The highest annual average was 14.9 $\mu g/m^3$ recorded in Escambia County.

6.2 Sampling and Analysis

The high volume air sampler (hi-vol) is the EPA reference method for determining PM_{10} concentrations. The hi-vol consists of an electric motor, blower, filter holder, enclos-

ure and a size selective inlet which allows only particles of 10 microns or less to flow through and impact on the filter. Ambient air is pulled through a pre-weighed quartz filter at a rate of about 1.5 cubic meters per minute for a 24-hour period which generally starts at midnight on every sixth day. The amount of particulate captured is the difference in weight of the filter before and after sampling. The average hi-vol flow rate is determined by averaging the flow rates at the beginning and end of the sampling period. Dividing the particulate weight by the volume of air that passed through the device gives the average particulate concentration for the sampling period.

A continuous instrument is being used for real time PM_{10} data collection. The TEOM (tapered element oscillating microbalance) has a size selective inlet of 10 microns. It uses a 3 liter per minute flow. The air passes through a heated column to remove moisture, then impacts a dime sized filter which fits onto a glass yoke. The yoke vibrates at a frequency which decreases as the mass of the particles on the filter increases. This mass is reported hourly. The other instrument being used to monitor PM_{10} continuously is the Beta gauge. It is equipped with a size selective inlet of 10 microns and employs a reeled tape on which the particulate is collected. A radiation source sits below the tape and as particles accumulate the amount of radiation which is able to pass through the tape to the detector attenuates. The level of attenuation relates to the amount of particulate measured.

A method similar to the high volume sampler for PM_{10} is used for $PM_{2.5}$. A large differnece between the two methods is $PM_{2.5}$ uses a low volume sampler. A low volume sampler is used. It is equipped with a size selective inlet which allows only particles 2.5 microns and smaller to pass through to the filter. Ambient air is pulled through a preweighed 47mm Teflon filter at a rate of 16.671/min for a 24-hour period which runs from midnight to midnight. The samples run every three days at most locations and every day at a minimum of one site in each of the largest urban areas in the state. The samplers used are equipped with a mechanism for changing filters automatically at the end of a sample period. The filters are maintained within $\pm$ 5 degrees Celsius of the ambient temperature. The barometric pressure is recorded continuously for correct calculations of the flow. All of these data are electronically stored by the instrument and retrieved by the operator when the filters are retrieved. After collection, the filters are maintained at a temperature at or below 4 degrees Celsius for transportation to the weighing laboratory to avoid volatilization of particles collected.

The last seven years of available data collected from sites which operated in 1999 are summarized in Table 6.2 for PM_{10}, 6.3 for continuous PM_{10}, Table 6.4 for $PM_{2.5}$, Table 6.5 for continuous $PM_{2.5}$ and Table 6.6 for the Particulate Matter monitor (hi-vols) still in operation

Figure 6.1 *1999 Florida PM_{10} Monitoring Network.*

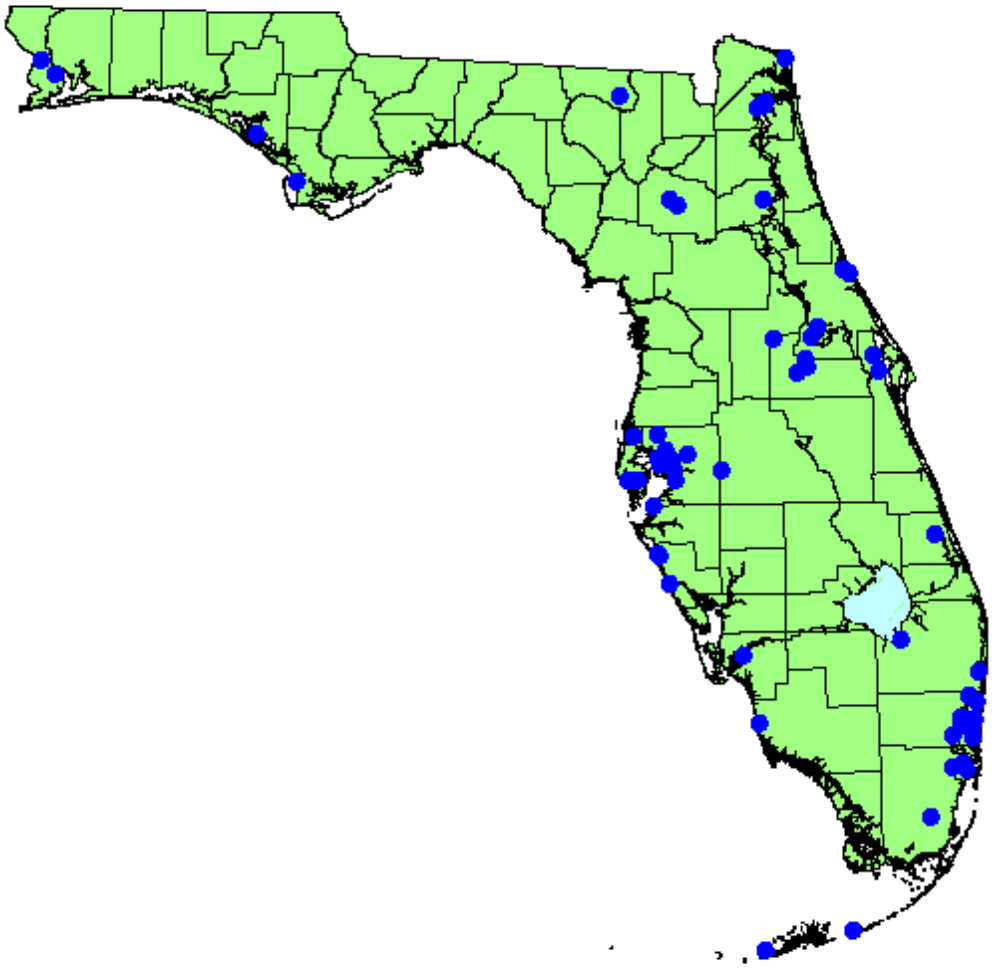


Figure 6.2 *1999 Florida $PM_{2.5}$ Monitoring Network.*

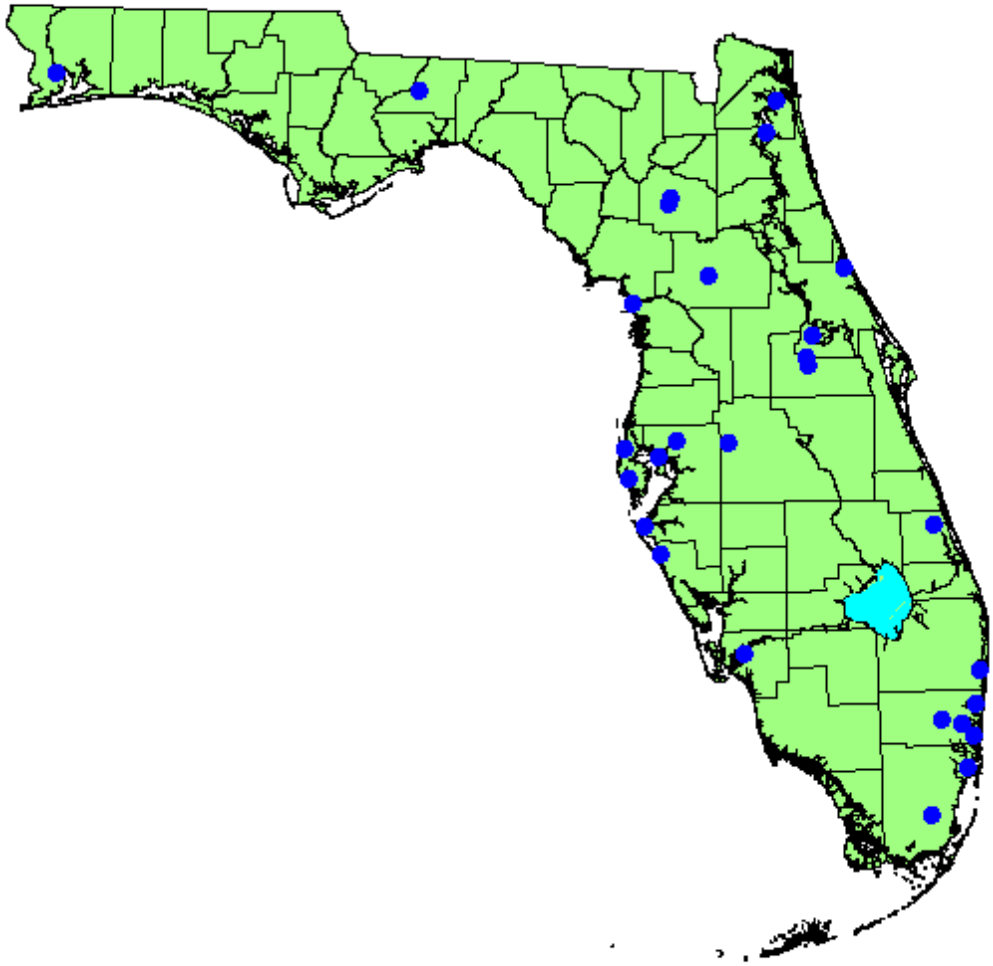


Table 6.1 *1999 PM 2.5 24-Hour Exceedances*

Site No.	Location City, County	Date	Concentration (microgram/cubic meter)
12-011-1002	Davie, Broward	4-Sep	108
12-033-0004	Pensacola, Escambia	28-Oct	67
12-057-1075	Tampa, Hillsborough	26-Sep	87
12-099-1004	Palm Beach, Palm Beach	13-Aug	77

Figure 6.3 *1999 PM10 Concentrations.*

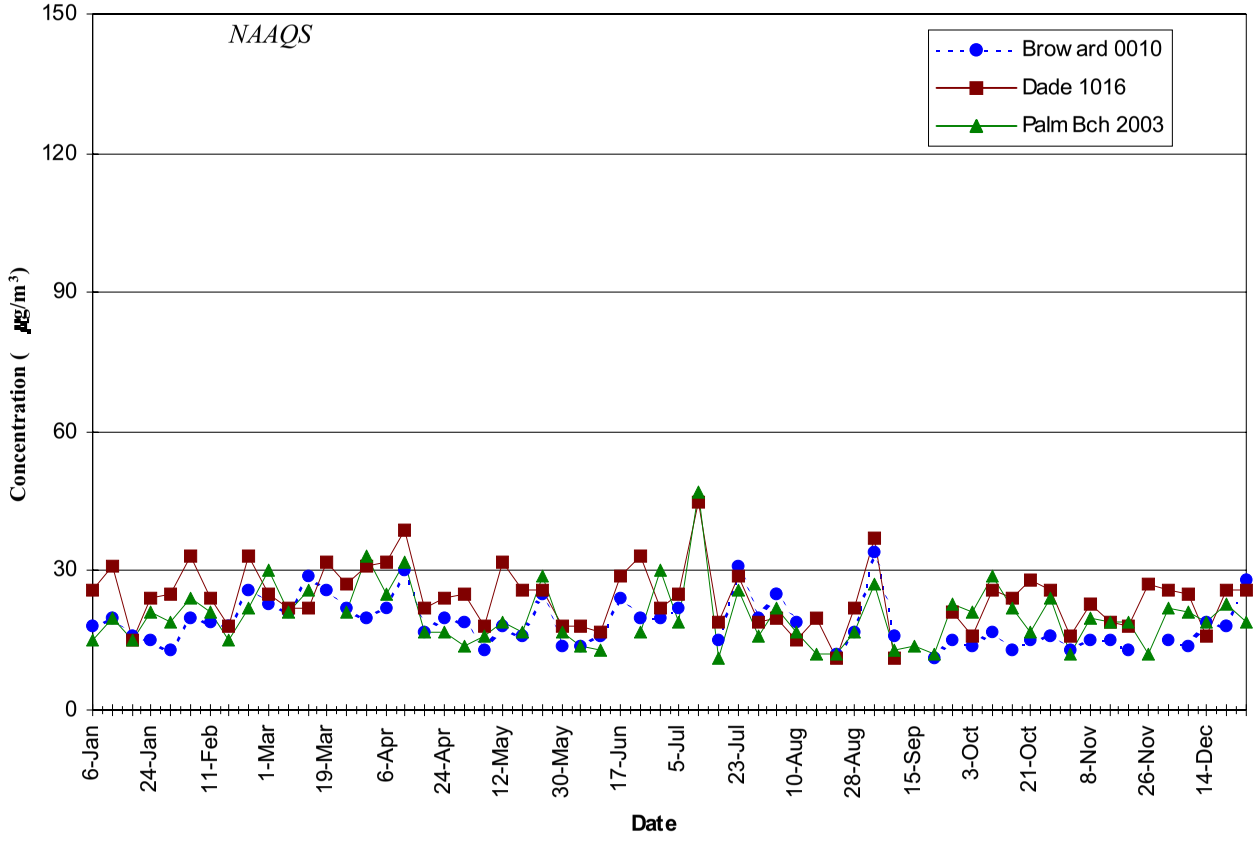


Figure 6.4 *1999 PM10 Concentrations.*

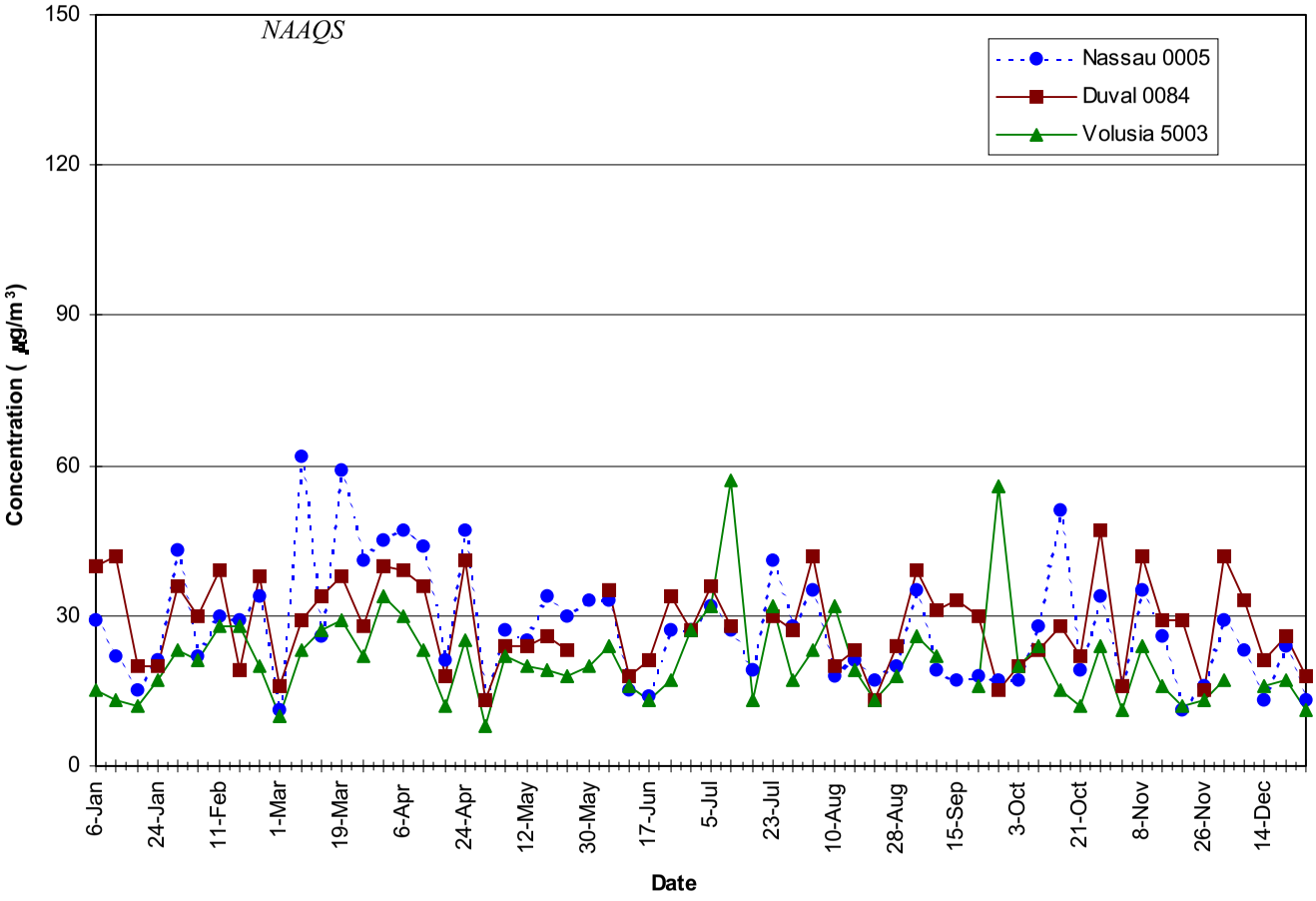


Figure 6.5 *1999 PM10 Concentrations.*

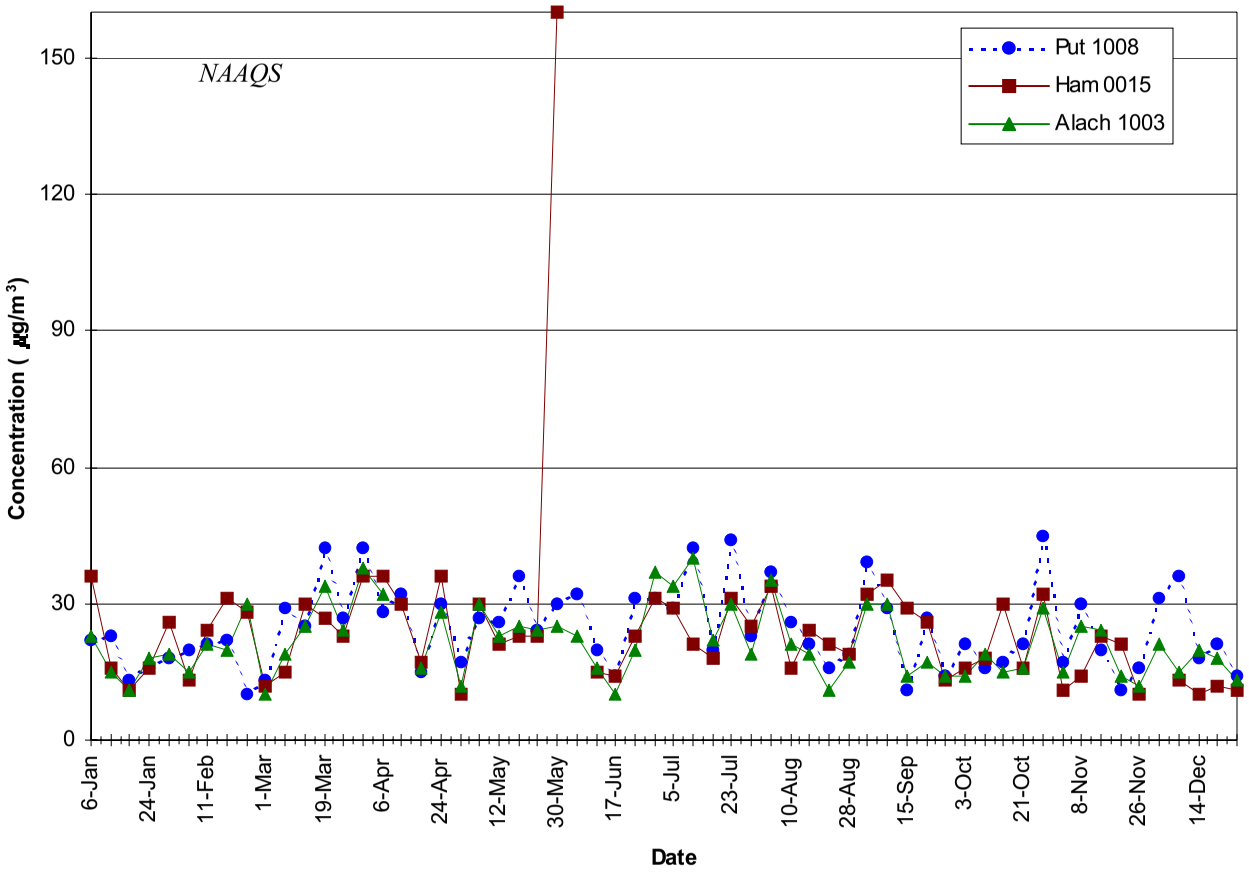


Figure 6.6 *1999 PM10 Concentrations.*

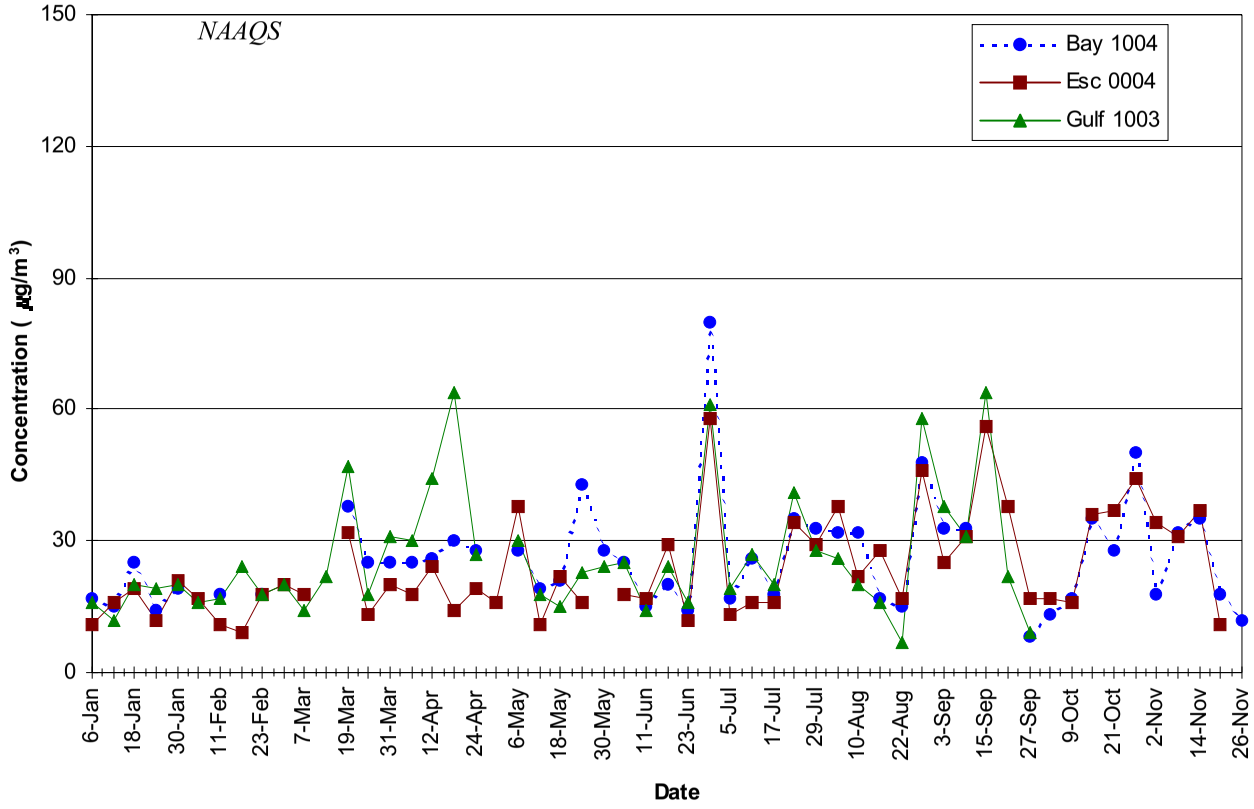


Figure 6.7 *1999 PM10 Concentrations.*

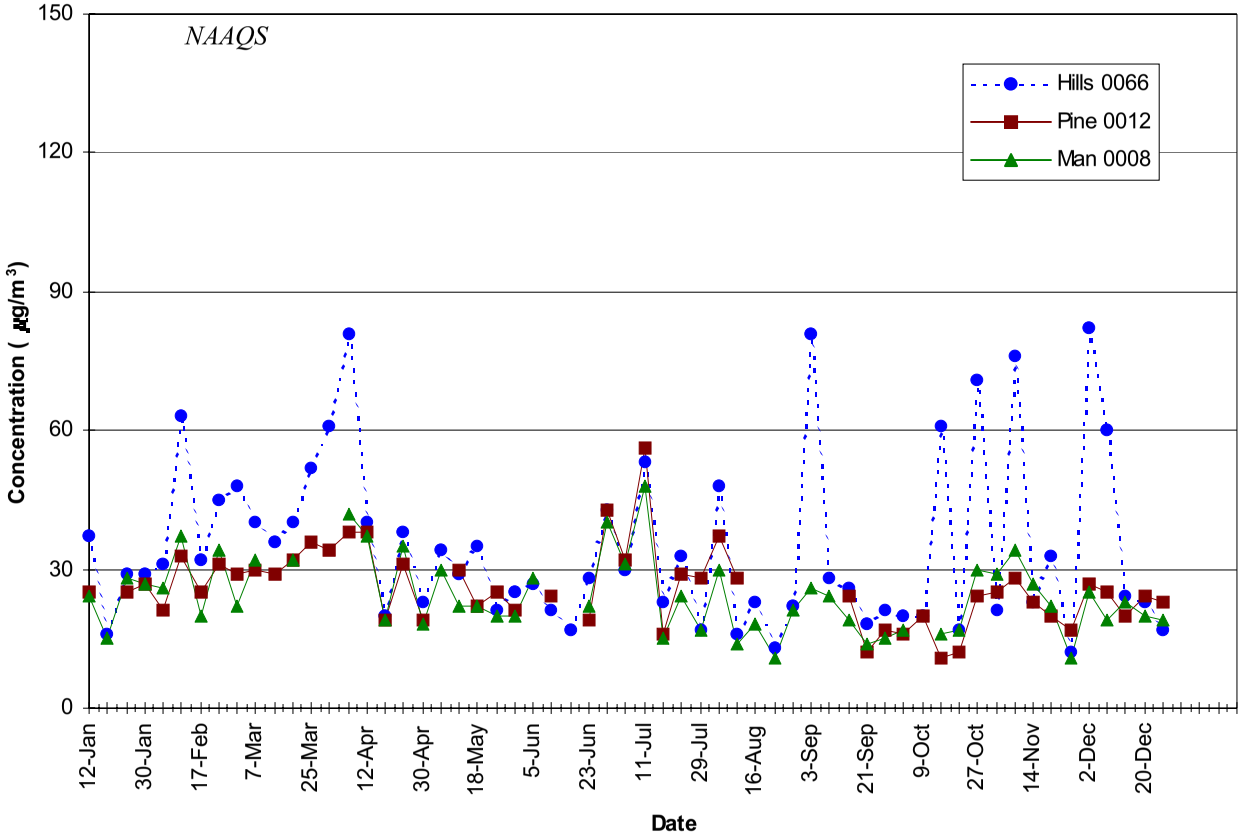


Figure 6.8 *1999 PM10 Concentrations.*

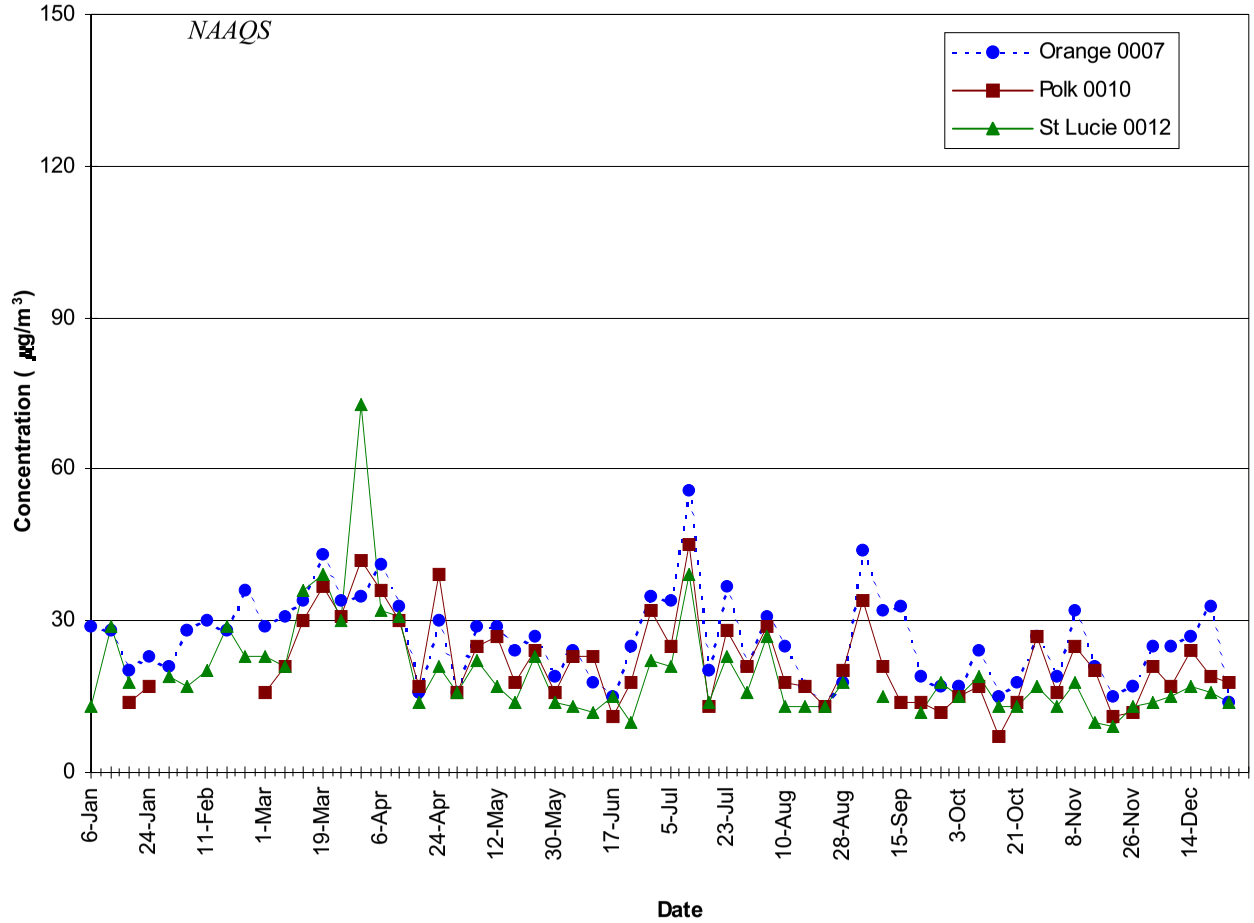


Figure 6.9 *1999PM10 Concentrations.*

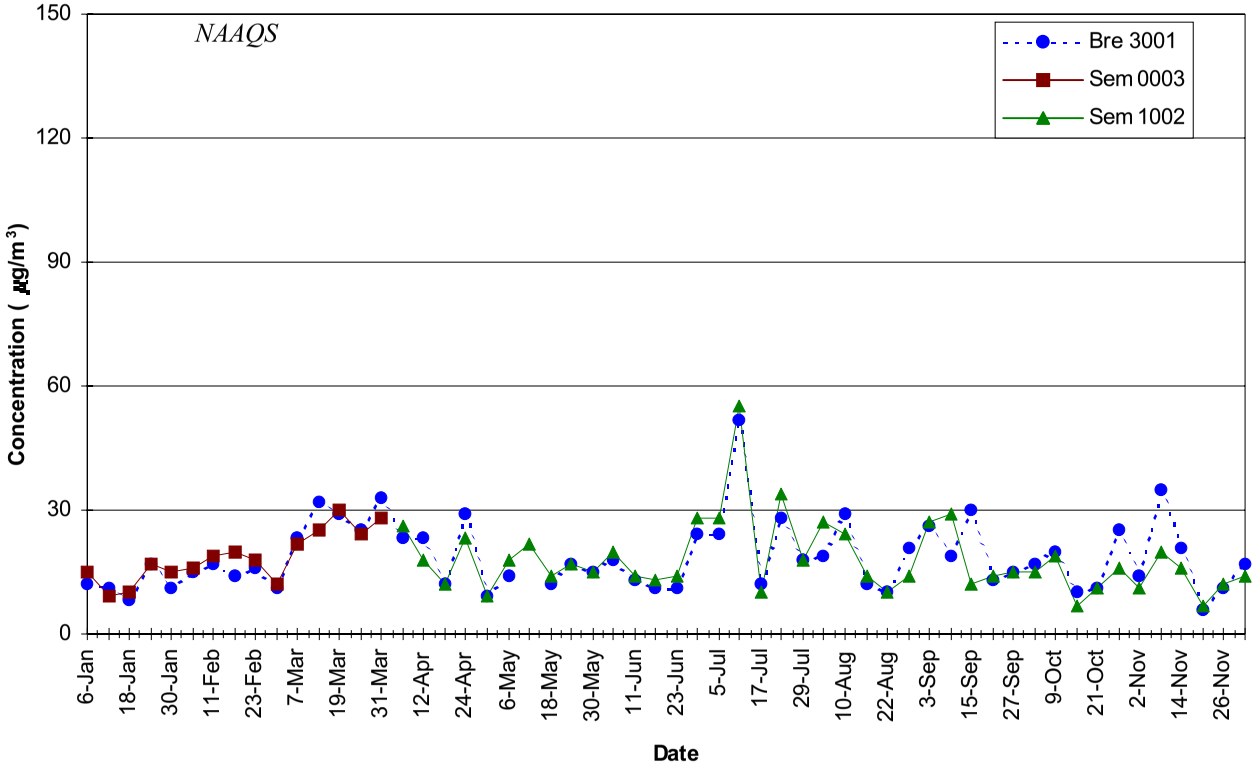


Figure 6.10 *1999 PM10 Concentrations.*

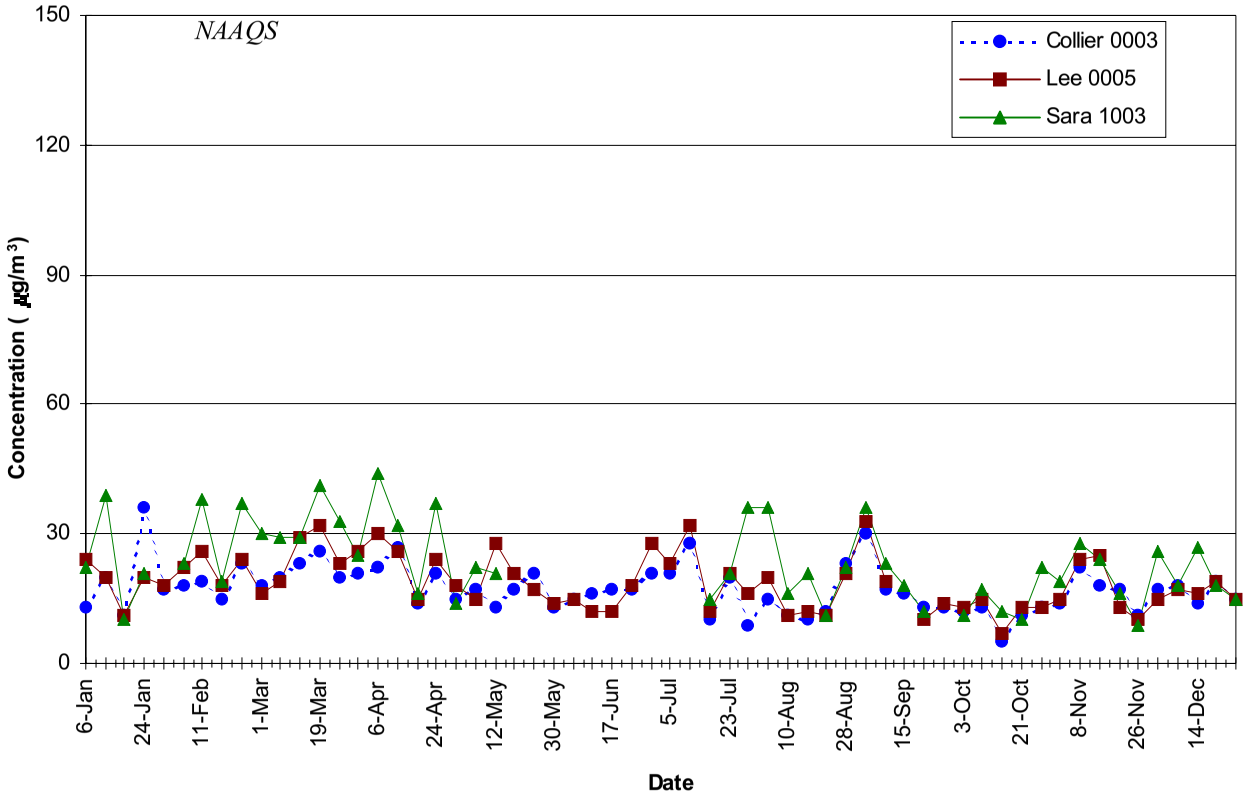


Table 6.2 *Summary of PM_{10} Data*

County / City	Site Address / UTM	AIRS # / SAROAD #	Network Scale	Year	PM10 Concentration (ug/m3) Highest 24-hr	2nd 24-hr	Annual Average	Number of Readings
Alachua								
Gainesville	NW 53rd Ave & 43 St	001-0023	SLAMS	99	37	33	19	57
		1420-023-F02	Neighborhood	98	35	34	20	57
	17-3286.550N-365.400E			97	75	41	21	53
				96	46	41	17	61
				95	43	38	18	59
				94	60	41	19	57
				93	52	33	21	47
Gainesville	721 NW 6th St	001-1003	SLAMS	99	40	38	21	59
		1420-003-F01	Neighborhood	98	53	39	22	57
	17-3281.421N-371.225E			97	45	39	20	60
				96	47	42	19	58
				95	50	37	20	60
				94	62	40	21	60
				93	59	50	23	41
Bay								
Panama City	Cherry St & Henderson Ave	005-1004	SLAMS	99	50	48	25	52
		3480-004-F02	Neighborhood	98	73	52	25	54
	16-3335.400N-633.450E			97	62	52	25	56
				96	58	50	23	57
				95	82	58	24	55
				94	56	39	23	62
				93	58	50	27	62
Brevard								
Titusville	TICO Airport	009-0004	SLAMS	99	56	27	16	58
		0380-004-F02	Neighborhood	98	47	41	17	61
	17-3153.680N-520.100E			97	32	31	17	59
				96	72	42	16	58
				95	33	28	14	60
				94	78	31	16	61
				93	91	34	17	58
Titusville	611 Singleton Ave	009-3001	SLAMS	99	71	52	19	59
		4480-001-F02	Neighborhood	98	49	44	19	60
	17-3165.982N-515.690E			97	42	38	19	60
				96	76	44	18	59
				95	34	30	16	59
				94	81	34	17	61
				93	96	57	19	60
Broward								
Ft. Lauderdale	1000 E Sunrise Blvd	011-0009	NAMS	99	32	28	18	22
		1260-009-G01	Micro	98	71	47	21	58
	17-2890.931N-586.616E			97	57	31	18	60
				96	52	48	17	57
				95	45	32	18	60
				94	58	50	18	61
				93	72	71	21	61

A complete 6-day monitoring schedule for 1999 contains 60 readings.

* Data collected under 2 methods combined.

** Excluded from attainment/maintenance analysis due to unusual cirumstances.

(continued on next page...)

Table 6.2 *Summary of PM_{10} Data (continued).*

County / City	Site Address / UTM	AIRS # / SAROAD #	Network / Scale	Year	PM10 Concentration (ug/m3) Highest 24-hr	2nd 24-hr	Annual Average	Number of Readings
Broward								
Ft. Lauderdale	600 NW 19 Avenue	011-0010	NAMS	99	34	31	19	56
		1260-010-G02	Neighborhood	98	72	51	22	54
	17-2890.032N-583.251E			97	60	39	20	57
				96	53	46	20	58
				95	48	48	20	57
				94	32	28	18	28
				93				
Ft. Lauderdale	1800 SW 4th Avenue	011-0011	SLAMS	99	37	30	18	56
	Croissnat Park Elm	1260-011-G01	Neighborhood	98	73	46	22	56
	17-2886.791N-585.416E			97	57	27	18	49
				96				
				95				
				94				
				93				
Davie	3205 SW 70th Ave	011-1002	SLAMS	99	32	26	16	57
	U of F Ag Research	0910-002-G01	Urban	98	68	44	19	60
	17-2885.161N-575.912E			97	54	26	16	60
				96	51	46	17	60
				95	41	28	15	58
				94	57	51	16	58
				93	77	64	19	59
Hollywood	12701 Plunkett St	011-3002	SLAMS	99	38	28	17	46
		1840-002-G01	Neighborhood	98	71	46	19	53
	17-2875.884N-584.030E			97	58	30	17	53
				96	49	47	17	55
				95	48	31	15	57
				94	57	47	16	57
				93	70	66	19	57
Pembrook Pines	11251 Taft St	011-5002	SLAMS	99	32	27	15	57
		3530-002-G01	Neighborhood	98	68	41	18	60
	17-2878.332N-570.085E			97	57	27	16	61
				96	49	48	16	60
				95	44	26	15	61
				94	57	56	16	61
				93	75	67	18	61
Coconut Creek	4010 Winston Park Blvd	011-5005	SLAMS	99	36	31	17	54
		0420-005-G02	Neighborhood	98	70	43	20	53
	17-2908.456N-582.089E			97	23	22	15	51
				96	53	48	20	56
				95				
				94				
				93				

A complete 6-day monitoring schedule for 1999 contains 60 readings.

* Data collected under 2 methods combined.

** Excluded from attainment/maintenance analysis due to unusual cirumstances.

(continued on next page...)

Table 6.2 *Summary of PM_{10} Data (continued).*

County / City	Site Address / UTM	AIRS # / SAROAD #	Network / Scale	Year	PM10 Concentration (ug/m3) Highest 24-hr	2nd 24-hr	Annual Average	Number of Readings
Broward								
Plantation	1200 NW 72nd	011-6002	SLAMS	99	33	25	15	49
	Mirror Lake Elementary	3640-002-G01	Neighborhood	98	67	43	18	50
	17-2891.264N-575.471E			97	56	25	15	56
				96	48	46	15	54
				95	39	27	14	55
				94	57	53	16	57
				93	78	63	18	59
Pompano Beach	Pompano Beach	011-7002	SLAMS	99	38	33	17	56
	Water Plant	3700-002-G01	Neighborhood	98	77	43	19	59
	17-2902.755N-587.816E			97	56	31	17	52
				96	49	45	17	56
				95	40	31	17	57
				94	57	50	18	56
				93	73	62	20	56
Collier								
Naples	E. Naples Fire Dept.	021-0003	SLAMS	99	36	30	17	60
		2880-003-F01	Urban	98	67	41	19	58
	2890.430N-423.500E			97	46	37	18	58
				96	60	45	16	56
				95	65	34	16	59
				94	32	28	18	28
				93				
Dade								
Miami	NW 36th St & 72nd Ave	025-0020	NAMS	99	57	44	24	56
	Traffic Control	0860-020-G01	Neighborhood	98	95	55	27	59
	17-2854.480N-568.959E			97	63	47	23	61
				96	57	56	25	60
				95	66	47	24	47
				94	70	65	24	59
				93	93	87	27	59
Miami	Fire Station	025-1016	NAMS	99	45	39	24	58
	NW 12th Ave & 20th St	2700-016-G01	Middle	98	94	62	28	57
	17-2852.959N-579.582E			97	71	42	26	60
				96	67	62	28	61
				95	78	39	25	49
				94	79	66	27	57
				93	100	86	30	60
Miami	6400 NW 27th Ave	025-3001	NAMS	99	50	34	23	33
		0860-001-G01	Neighborhood	98	91	53	25	57
	17-2857.327N-575.939E			97	64	35	22	61
				96	66	56	22	55
				95	75	54	22	51
				94	74	69	25	59
				93	92	87	25	60

A complete 6-day monitoring schedule for 1999 contains 60 readings.

* Data collected under 2 methods combined.

** Excluded from attainment/maintenance analysis due to unusual cirumstances.

(continued on next page...)

Table 6.2 *Summary of PM_{10} Data (continued).*

County / City	Site Address / UTM	AIRS # / SAROAD #	Network / Scale	Year	PM10 Concentration (ug/m3) Highest 24-hr	2nd 24-hr	Annual Average	Number of Readings
Dade								
Homestead	Fire Station	025-6001	SLAMS	99	41	37	21	57
	325 NW 2nd St	1880-001-G01	Neighborhood	98	85	56	24	56
	17-2817.102N-551.949E			97	56	52	22	61
				96	88	60	27	58
				95	86	49	29	46
				94	79	74	24	58
				93	90	90	26	55
Duval								
Jacksonville	Sewage Treatment Plant	031-0053	NAMS	99	56	53	28	57
	2221 Buckman St	1960-053-H02	Neighborhood	98	78	64	29	60
	17-3357.801N-439.612E			97	52	50	25	58
				96	59	53	25	60
				95	50	50	26	61
				94	54	48	27	60
				93	66	61	28	57
Jacksonville	Roselle & Copeland	031-0084	NAMS	99	47	42	28	58
	Adjacent to I-10	1960-084-H01	Middle	98	59	50	29	59
	17-3354.302N-433.888E			97	56	44	26	59
				96	54	53	26	61
				95	58	49	26	62
				94	47	47	26	61
				93	65	61	28	61
Jacksonville	637 Georgia ST	031-0089	SLAMS	99	37	37	24	43
			Neighborhood	98				
	17-3355.205N-438.506E			97				
				96				
				95				
				94				
				93				
Escambia								
Cantonment	St Regis Golf Course	033-0003	SLAMS	99	58	47	23	57
		0468-003-F02	Neighborhood	98	60	50	21	59
	16-3387.300N-469.600E			97	53	52	24	55
				96	40	35	21	63
				95	62	54	23	55
				94	118	47	25	60
				93	72	59	26	61
Pensacola	Ellyson Industrial Park	033-0004	SLAMS	99	58	56	23	58
		3540-004-F01	Neighborhood	98	62	47	22	56
	16-3376.800N-480.400E			97	57	56	24	56
				96	54	37	20	61
				95	45	44	21	58
				94	47	46	22	62
				93	78	61	27	61

A complete 6-day monitoring schedule for 1999 contains 60 readings.
* Data collected under 2 methods combined.
** Excluded from attainment/maintenance analysis due to unusual cirumstances.

(continued on next page...)

Table 6.2 *Summary of PM_{10} Data (continued).*

County / City	Site Address / UTM	AIRS # / SAROAD #	Network / Scale	Year	PM10 Concentration (ug/m3) Highest 24-hr	2nd 24-hr	Annual Average	Number of Readings
Gulf								
Port St Joe	Water Plant on Kenny's Rd	045-1003	SLAMS	99	64	64	26	44
		3740-003-F02	Neighborhood	98	73	65	24	61
	16-3300.600N-664.200E			97	65	54	23	53
				96	57	47	20	59
				95	82	47	22	54
				94	38	37	19	60
				93	55	53	26	60
Hamilton								
White Springs	County Rd 137	047-0015	SLAMS	99	**160**	39	25	58
	@ Entrance to Occidental	1660-015-F02	Neighborhood	98	43	40	24	50
	17-3365.500N-328.700E			97	44	43	22	55
				96	81	62	26	57
				95	53	48	23	58
				94	45	40	21	45
				93	151**	56	27	50
Hillsborough								
Tampa	Watrous & Church	057-0030	SPM	99	61	45	24	59
		4360-030-G01	Urban	98	50	45	27	57
	3090.422N-351.467E			97	65	44	26	58
				96	78	50	24	60
				95	46	43	22	42
				94				
				93				
Gibsonton	Hwy 41 N	057-0066	NAMS	99	82	81	35	60
	ICWU Building	1800-066-G02	Neighborhood	98	86	63	32	60
	17-3086.140N-362.014E			97	92	83	36	59
				96	89	81	35	58
				95	85	77	31	61
				94	99	69	30	61
				93	99	79	30	61
No City	Gardinier Park	057-0083	SPM	99	55	39	24	59
		1800-083-G02	Middle	98	49	42	25	56
	3082.701N-363.890E			97	50	47	24	59
				96	74	46	23	53
				95	47	39	22	43
				94				
				93				
No City	Eisenhower Jr. H.S.	057-0085	SPM	99	45	35	20	60
		1800-085-G02	Neighborhood	98	44	40	23	58
	3074.807N-365.199E			97	44	42	21	56
				96	73	42	20	56
				95	45	40	20	41
				94				
				93				

A complete 6-day monitoring schedule for 1999 contains 60 readings.
* Data collected under 2 methods combined.
** Excluded from attainment/maintenance analysis due to unusual cirumstances.

(continued on next page...)

Table 6.2 *Summary of PM_{10} Data (continued).*

County / City	Site Address / UTM	AIRS # / SAROAD #	Network / Scale	Year	PM10 Concentration (ug/m3) Highest 24-hr	2nd 24-hr	Annual Average	Number of Readings
Hillsborough								
Gannon	5012 Causeway Blvd	057-0095	SLAMS	99	58	49	27	60
		1800-095-G01	Neighborhood	98	58	44	29	58
	17-3089.240N-362.100E			97	53	48	28	57
				96	83	54	27	59
				95	59	52	27	59
				94	96	57	28	60
				93	104	62	29	61
Tampa	1105 E Kennedy	057-1002	NAMS	99	64	47	26	60
	Health Department	4360-002-G01	Neighborhood	98	58	48	29	57
	17-3092.154N-357.193E			97	62	45	28	59
				96	82	43	26	60
				95	91	57	27	61
				94	110	62	28	61
				93	110	62	28	61
Tampa	4013 Ragg Road	057-1068	SLAMS	99	57	39	20	58
	Gaither School	4360-068-G01	Neighborhood	98	45	37	21	56
	3109.300N-352.250E			97	60	38	20	61
				96	72	42	20	58
				95	22	21	16	10
				94				
				93				
Tampa	Harbour Island Athletic	057-1069	SLAMS	99	62	51	28	59
	Club	4360-069-G02	Neighborhood	98	55	48	30	57
	17-3090.750N-357.150E			97	67	47	28	60
				96	80	51	26	60
				95	49	48	25	60
				94	92	62	26	60
				93	103	57	28	39
Tampa	4702 Central Ave	057-1070	SPM	99	63	47	28	58
		4360-070-G01	Micro	98	54	50	30	58
	17-3096.500N-257.00E			97	67	52	30	53
				96	82	54	29	46
				95				
				94				
				93				
Brandon	Kingsway Avenue	057-2002	SPM	99	52	37	22	57
		0370-002-G01	Neighborhood	98	45	41	23	55
	3094.200N-374.240E			97	47	40	23	58
				96	73	44	22	58
				95	44	39	21	41
				94				
				93				

A complete 6-day monitoring schedule for 1999 contains 60 readings.
* Data collected under 2 methods combined.
** Excluded from attainment/maintenance analysis due to unusual cirumstances.

(continued on next page...)

Table 6.2 *Summary of PM_{10} Data (continued).*

County / City	Site Address / UTM	AIRS # / SAROAD #	Network / Scale	Year	PM10 Concentration (ug/m3) Highest 24-hr	2nd 24-hr	Annual Average	Number of Readings
Lee								
Fort Myers	Ft Myers WTP	071-0005	SLAMS	99	33	32	19	58
		1300-005-F01	Neighborhood	98	40	37	18	56
	17-2942.575N-412.492E			97	38	33	18	58
				96	65	38	17	57
				95	59	3	16	59
				94	22	22	13	11
				93				
Manatee								
Hollland	HSE 100 yards East	081-0008	SPM	99	48	42	24	55
	of US 41 on Buckeye	2540-008-G02	Neighborhood	98	56	43	24	57
	17-3056.200N-348.100E			97	53	38	22	55
				96	76	41	21	58
				95	36	32	18	59
				94	63	40	17	56
				93	92	45	20	46
Monroe								
Stock Island	JR College Rd & US 1	087-1002	SPM	99	54	30	15	51
		2550-002F01	Neighborhood	98	85	48	21	34
	17-2718.600N-424.4000E			97				
				96				
				95				
				94				
				93				
Marathon	2796 Overseas Hwy	087-2002	SPM	99	30	25	15	50
		2550-002F01	Neighborhood	98	42	40	20	35
	17-2732.865N-490.025E			97	23	20	14	10
				96				
				95				
				94				
				93				
Nassau								
Fernandina Beach	5th St N	089-0005	SLAMS	99	62	59	27	60
	WWTP	1200-005-F02	Neighborhood	98	61	47	25	58
	17-3391.650N-455.600E			97	64	62	26	59
				96	56	54	25	57
				95	52	43	24	58
				94	66	43	21	50
				93	54	43	25	59

A complete 6-day monitoring schedule for 1999 contains 60 readings.
* Data collected under 2 methods combined.
** Excluded from attainment/maintenance analysis due to unusual cirumstances.

(continued on next page...)

Table 6.2 *Summary of PM_{10} Data (continued).*

County / City	Site Address / UTM	AIRS # / SAROAD #	Network / Scale	Year	PM10 Concentration (ug/m3) Highest 24-hr	2nd 24-hr	Annual Average	Number of Readings
Orange								
Orlando	Zellwood Elementary School	095-0004	NAMS	99	35	33	19	57
		3240-004-G01	Neighborhood	98	50	48	20	61
	17-3178.650N-441.220E			97	43	37	19	61
				96	68	42	17	61
				95	34	33	17	60
				94	91	36	20	61
				93	83	32	18	60
Orlando	2401 W 33rd St	095-0007	NAMS	99	56	44	26	60
	Sheriff's Dept	3240-007-G01	Neighborhood	98	59	54	28	61
	17-3153.300N-459.200E			97	53	52	26	62
				96	77	56	26	63
				95	42	41	25	61
				94	93	40	26	61
				93	99	48	27	61
Orlando	595 N Primrose	095-1004	SLAMS	99	54	44	23	60
		3280-004-G01	Neighborhood	98	54	50	23	61
	17-3158.100N-466.200E			97	40	40	21	61
				96	76	53	21	59
				95	36	35	20	61
				94	97	35	21	60
				93	101	34	21	60
Winter Park	Lake Isle Estates	095-2002	SLAMS	99	56	35	21	60
		4900-002-G01	Neighborhood	98	52	46	21	61
	17-3163.490N-464.515E			97	40	38	20	61
				96	81	67	22	59
				95	36	34	18	61
				94	90	34	19	61
				93	93	32	19	61
Palm Beach								
Belle Glade	3875 SR 80	099-0008	SPM	99	33	31	19	55
		0240-008-G01	Neighborhood	98	82	52	26	50
	2955.8N-533.16E			97	45	39	20	61
				96	59	54	23	57
				95	40	36	18	36
				94	76	34	19	60
				93	85	39	20	59
Delray Beach	345 S Congress	099-2003	SLAMS	99	47	33	20	58
		1000-003-G01	Neighborhood	98	56	44	22	59
	17-2926.170N-590.023E			97	67	35	21	60
				96	61	55	19	58
				95	46	37	19	46
				94	60	56	19	56
				93	96	52	21	60

A complete 6-day monitoring schedule for 1999 contains 60 readings.
* Data collected under 2 methods combined.
** Excluded from attainment/maintenance analysis due to unusual cirumstances.

(continued on next page...)

Table 6.2 *Summary of PM_{10} Data (continued).*

County / City	Site Address / UTM	AIRS # / SAROAD #	Network / Scale	Year	PM10 Concentration (ug/m3) Highest 24-hr	2nd 24-hr	Annual Average	Number of Readings
Pinellas								
St Petersburg	1313 19th St N	103-0012	SLAMS	99	56	43	26	51
		3980-012-G01	Neighborhood	98	50	46	26	57
	17-3074.275N-336.490E			97	60	47	25	58
				96	76	50	24	56
				95	48	40	23	57
				94	99	55	25	52
				93	104	54	26	54
St Petersburg	7200 22nd Ave N	103-0018	SLAMS	99	55	37	21	57
	Azalea Park	3980-018-G01	Urban	98	46	40	23	57
	17-3074.500N-328.560E			97	58	43	22	56
				96	74	49	21	59
				95	44	38	20	53
				94	89	52	23	53
				93	74	57	24	57
Largo	1301 Ulmerton Rd	103-3004	NAMS	99	55	49	25	59
	Fleet Maintenance Area	2260-004-G02	Middle	98	46	43	26	61
	17-3086.730N-325.320E			97	55	50	24	60
				96	78	49	24	61
				95	50	48	23	61
				94	94	59	25	61
				93	100	50	27	61
Tarpon Springs	Brooker Creek Park	103-5002	SLAMS	99	52	34	20	58
		4380-002-G03	Neighborhood	98	38	36	20	56
	17-3108.174N-332.880E			97	62	55	21	59
				96	70	43	22	58
				95	47	40	20	58
				94	91	50	21	59
				93	85	51	23	57
Polk								
Mulberry	Anderson & Pine	105-0010	SLAMS	99	45	42	22	53
	Crest Rd	3680-010-F02	Neighborhood	98	54	48	24	61
	17-3081.501N-399.801E			97*	41	36	20	31
				96	75	45	22	61
				95	38	36	21	59
				94				
				93				
Putnam								
Palatka	Comfort Rd & Port Rd	107-1008	SLAMS	99	45	44	24	60
		3780-008-F02	Neighborhood	98	58	40	23	59
	17-3284.160N-436.470E			97	44	44	23	59
				96	63	45	22	61
				95	49	39	22	61
				94	63	42	23	60
				93	89	45	24	59

A complete 6-day monitoring schedule for 1999 contains 60 readings.
* Data collected under 2 methods combined.
** Excluded from attainment/maintenance analysis due to unusual cirumstances.

(continued on next page...)

Table 6.2 *Summary of PM_{10} Data (continued).*

County / City	Site Address / UTM	AIRS # / SAROAD #	Network / Scale	Year	PM10 Concentration (ug/m3) Highest 24-hr	2nd 24-hr	Annual Average	Number of Readings
St. Lucie								
Ft. Pierce	6120 SW Glades Cutoff Rd	111-0012	SPM	99	73	39	20	58
		1320-012-F02	Neighborhood	98	82	45	20	58
	17-3029.700N-559.450E			97	35	35	17	61
				96	73	39	18	31
				95				
				94				
				93				
Sarasota								
Sarasota	Bee Ridge Park	115-0013	SLAMS	99	39	34	19	57
		4100-013-G01	Neighborhood	98	39	34	19	52
	17-3019.350N-350.800E			97	52	37	19	60
				96	70	34	17	60
				95	49	31	17	59
				94	83	42	18	60
				93	95	63	23	60
Sarasota	1642 12th St	115-1003	SLAMS	99	44	42	24	49
	Reverse Osmosis Plant	4080-003-G01	Middle	98	43	42	23	61
	17-3020.350N-349.310E			97	47	45	23	58
				96	79	42	21	60
				95	52	42	22	57
				94	90	53	26	50
				93	113	68	28	60
Venice	448 E Venice Ave	115-2001	NAMS	99	38	34	20	58
		4560-001-G01	Neighborhood	98	41	39	20	60
	17-2998.130N-357.550E			97	50	35	19	43
				96	53	37	25	25
				95	57	45	25	59
				94	92	48	25	59
				93	102	100	29	59
Seminole								
Sanford	City Hall	117-0003	SLAMS	99	30	28	19	15
		4040-003-F02	Neighborhood	98	49	46	19	58
	17-3187.260N-473.800E			97	39	36	18	59
				96	74	49	18	59
				95	33	32	16	61
				94	83	32	17	59
				93	90	31	17	60
Sanford	Seminole Comm College	117-1002	SLAMS	99	55	34	18	30
		4140-002F01	Neighborhood	98				
	17-3179.640N-469.730E			97				
				96				
				95				
				94				
				93				

A complete 6-day monitoring schedule for 1999 contains 60 readings.

* Data collected under 2 methods combined.

** Excluded from attainment/maintenance analysis due to unusual cirumstances.

Table 6.2 *Summary of PM_{10} Data (continued).*

County / City	Site Address / UTM	AIRS # / SAROAD #	Network / Scale	Year	PM10 Concentration (ug/m3) Highest 24-hr	2nd 24-hr	Annual Average	Number of Readings
Volusia								
Daytona Beach	1185 - A Dunn Ave	127-5002	SLAMS	99	54	29	19	57
	Division of Blind Sevices	0920-002-F01	Urban	98	47	46	20	58
	17-3230.711N-494.831E			97	34	34	19	61
				96	69	63	20	61
				95	63	38	21	61
				94	81	43	20	61
				93	98	50	20	60
South Daytona	Williamson Blvd & US 92	127-5003	SLAMS	99	57	56	21	58
		0920-003-F01	Middle	98	51	47	22	59
	17-3227.841N-499.221E			97	39	38	20	61
				96	69	49	21	61
				95	36	35	20	61
				94	104	63	26	61
				93				

A complete 6-day monitoring schedule for 1999 contains 60 readings.
* Data collected under 2 methods combined.
** Excluded from attainment/maintenance analysis due to unusual cirumstances.

Table 6.3 *Summary of PM_{10} Continuous Data.*

County / City	Site Address / UTM	AIRS # / SAROAD #	Network / Scale	Year	PM10 Concentration (ug/m3) Highest 24-hr	2nd 24-hr	Annual Average	Number of Readings
Hillsborough								
Tampa	Davis Island	057-1035	NAMS	99	57	51	25	364
	Coast Guard Station	4360-035-G02	Neighborhood	98	108	105	27	352
	17-3089.908N-356.851E			97	111	87	26	352
				96				
				95				
				94				
				93				
Lake								
	HWY 19	069-0001	SPM	99	63	49	19	352
	Ocala National Forest	2100-001-F03	Urban	98	69	63	19	343
	17-3219.900N-438.410E			97	51	43	16	341
				96				
				95				
				94				
				93				
Leon								
Tallahassee	Rt 16 Wakulla Work Station	073-1005	SPM	99	96	55	19	349
	Apalachicola National	2340-005-F01	Urban	98	107	63	19	323
	16-3362.000N-762.500E			97	45	43	16	354
				96*	42	33	16	149
				95				
				94				
				93				
Polk								
Mulberry	Mulberry High School	105-2006	SLAMS	99	50	50	22	326
	NW 4th Circle	2860-006-F02	Neighborhood	98	108	91	25	333
	17-3086.000N-405.500E			97*	40	36	25	149
				96				
				95				
				94				
				93				
Volusia								
Daytona Beach	1185 - A Dunn Ave	127-5002	SPM	99	59	54	21	337
	Division of Blind Sevices	0920-002-F01	Urban	98*	95	75	21	168
	17-3230.711N-494.831E			97				
				96				
				95				
				94				
				93				

***** Contains less than 75% of possible readings.

Table 6.4 *Summary of $PM_{2.5}$ Data.*

County / City	Site Address / UTM	AIRS # / SAROAD #	Network / Scale	Year	PM2.5 Concentration (ug/m3) Highest 24-hr	2nd 24-hr	Annual Average	Number of Readings
Alachua								
Gainesville	NW 53rd Ave & 43 St	001-0023	SLAMS	99	27	26	11.3	112
		1420-023-F02	Neighborhood	98				
	17-3286.550N-365.400E			97				
				96				
				95				
				94				
				93				
Gainesville	721 NW 6th St	001-0024	SLAMS	99	20	18	10	36
		1420-003-F01	Neighborhood	98				
	17-3281.421N-371.225E			97				
				96				
				95				
				94				
				93				
Broward								
Davie	3205 SW 70th Ave	011-1002	SLAMS	99	**108**	59	9.2	334
	U of F Ag Research	0910-002-G01	Urban	98				
	17-2885.161N-575.912E			97				
				96				
				95				
				94				
				93				
Hollywood	851 SW 3rd Ave	011-2004	NAMS	99	47	26	8.4	251
		3700-004G01	Neighborhood	98				
	17-2889.870N-587.137E			97				
				96				
				95				
				94				
				93				
Hollywood	2701 Plunkett St	011-3002	SLAMS	99	21	21	8.1	85
		1840-002-G01	Neighborhood	98				
	17-2875.884N-584.030E			97				
				96				
				95				
				94				
				93				
Citrus								
Crystal River	Power Line Road	017-0005	SPM	99	25	24	11.3	97
			Urban	98				
	17-3206.85N-334.370E			97				
				96				
				95				
				94				
				93				

(continued on next page...)

Table 6.4 *Summary of $PM_{2.5}$ Data (continued).*

County / City	Site Address / UTM	AIRS # / SAROAD #	Network / Scale	Year	PM2.5 Concentration (ug/m3) Highest 24-hr	2nd 24-hr	Annual Average	Number of Readings
Dade								
Miami	Fire Station	025-1016	NAMS	99	57	48	11.8	275
	NW 12th Ave & 20th St	2700-016-G01	Middle	98				
	17-2852.959N-579.582E			97				
				96				
				95				
				94				
				93				
Homestead	Fire Station	025-6001	SLAMS	99	23	20	8.5	101
	325 NW 2nd St	1880-001-G01	Neighborhood	98				
	17-2817.102N-551.949E			97				
				96				
				95				
				94				
				93				
Duval								
Jacksonville	14932 Mandarin Road	031-0098	SLAMS	99	31	30	12.3	134
			Neighborhood	98				
	17-3333.810N-438.920E			97				
				96				
				95				
				94				
				93				
Jacksonville	9429 Merrill Road	031-0099	SLAMS	99	34	33	12.5	139
			Neighborhood	98				
	17-3358.150N-447.340E			97				
				96				
				95				
				94				
				93				
Escambia								
Pensacola	Ellyson Industrial Park	033-0004	SLAMS	99	37	30	14.9	112
		3540-004-F01	Neighborhood	98				
	16-3376.800N-480.400E			97				
				96				
				95				
				94				
				93				
Hillsborough								
Tampa	Watrous & Church	057-0030	SLAMS	99	34	29	12.8	308
		4360-030-G01	Urban	98				
	3090.422N-351.467E			97				
				96				
				95				
				94				
				93				

(continued on next page...)

Table 6.4 *Summary of $PM_{2.5}$ Data (continued).*

County / City	Site Address / UTM	AIRS # / SAROAD #	Network / Scale	Year	PM2.5 Concentration (ug/m3)			
					Highest 24-hr	2nd 24-hr	Annual Average	Number of Readings
Hillsborough								
Tampa	6700 Whiteway Drive	057-1075	SLAMS	99	**87**	48	13.0	303
		4360-075-G01	Neighborhood	98				
	17-3103.340N-364.560E			97				
				96				
				95				
				94				
				93				
Lee								
Fort Myers	Ft Myers WTP	071-0005	SLAMS	99	24	22	10.0	110
		1300-005-F01	Neighborhood	98				
	17-2942.575N-412.492E			97				
				96				
				95				
				94				
				93				
Leon								
Tallahassee	Tallahassee Comm Coll	073-0012	SLAMS	99	43	35	14.1	111
		4340-012F01	Neighborhood	98				
	16-3370.320N-754.670E			97				
				96				
				95				
				94				
				93				
Manatee								
Bradenton	5502 33rd Ave W	081-4012	SLAMS	99	53	38	11.6	92
			Urban	98				
	17-3040.540N-340.060E			97				
				96				
				95				
				94				
				93				
Marion								
Ocala	SE17th St & SE30th Ave	083-0003	SLAMS	99	26	21	11.4	96
		3120-003F01	Neighborhood	98				
	17-3227.200N-392.950E			97				
				96				
				95				
				94				
				93				

(continued on next page...)

Table 6.4 *Summary of $PM_{2.5}$ Data (continued).*

County / City	Site Address / UTM	AIRS # / SAROAD #	Network / Scale	Year	PM2.5 Concentration (ug/m3) Highest 24-hr	2nd 24-hr	Annual Average	Number of Readings
Orange								
Orlando	595 N Primrose	095-1004	SLAMS	99	27	27	11.2	345
		3280-004-G01	Neighborhood	98				
	17-3158.100N-466.200E			97				
				96				
				95				
				94				
				93				
Winter Park	Lake Isle Estates	095-2002	SLAMS	99	33	27	11.3	352
		4900-002-G01	Neighborhood	98				
	17-3163.490N-464.515E			97				
				96				
				95				
				94				
				93				
Palm Beach								
Royal Palm WW	980 Crestwood Blvd N	099-0009	SLAMS	99	24	21	9.6	21
			Neighborhood	98				
	17.2889.490N-560.850E			97				
				96				
				95				
				94				
				93				
Delray Beach	345 S Congress	099-2003	SLAMS	99	27	25	9.3	319
		1000-003-G01	Neighborhood	98				
	17-2926.170N-590.023E			97				
				96				
				95				
				94				
				93				
Pinellas								
St Petersburg	7200 22nd Ave N	103-0018	NAMS	99	63	36	11.9	348
	Azalea Park	3980-018-G01	Neighborhood	98				
	17-3074.500N-328.560E			97				
				96				
				95				
				94				
				93				
Dunedin	896 Union Street	103-1008	SLAMS	99	30	24	11.8	112
			Neighborhood	98				
	17-3098.290N-325.320E			97				
				96				
				95				
				94				
				93				

(continued on next page...)

Table 6.4 *Summary of $PM_{2.5}$ Data (continued).*

County	Site Address	AIRS #	Network	Year	PM2.5 Concentration (ug/m3)			
City		SAROAD #	Scale		Highest 24-hr	2nd 24-hr	Annual Average	Number of Readings
	UTM							
Polk								
Lakeland	Baptist Children's Home	105-6006	SLAMS	99	50	23	10.8	77
		2160-006F01	Neighborhood	98				
	17-3100.000N-404.435E			97				
				96				
				95				
				94				
				93				
St. Lucie								
Ft. Pierce	101 North Rock Rd	111-1002	SLAMS	99	24	23	9.6	115
		3960-002F01	Neighborhood	98				
	17-3036.200N-558.500E			97				
				96				
				95				
				94				
				93				
Sarasota								
Sarasota	Bee Ridge Park	115-0013	SLAMS	99	34	25	10.6	110
		4100-013-G01	Neighborhood	98				
	17-3019.350N-350.800E			97				
				96				
				95				
				94				
				93				
Seminole								
Sanford	Seminole Comm College	117-1002	SLAMS	99	27	23	10.9	105
		4140-002F01	Neighborhood	98				
	17-3179.640N-469.730E			97				
				96				
				95				
				94				
				93				
Volusia								
Daytona Beach	1185 - A Dunn Ave	127-5002	SLAMS	99	52	29	11.4	110
	Division of Blind Sevices	0920-002-F01	Neighborhood	98				
	17-3230.711N-494.831E			97				
				96				
				95				
				94				
				93				

Table 6.5 *Summary of $PM_{2.5}$ Continuous Data.*

County / City	Site Address / UTM	AIRS # / SAROAD #	Network / Scale	Year	PM2.5 Concentration (ug/m3) Highest 24-hr	2nd 24-hr	Annual Average	Number of Readings
Escambia								
Pensacola	Ellyson Industrial Park	033-0004	SPM	99	**67**	60	14.3	8070
		3540-004-F01	Neighborhood	98	48	46	**17.6**	7783
	16-3376.800N-480.400E			97				
				96				
				95				
				94				
				93				
Palm Beach								
Palm Beach	3700 Belvedere Rd	099-1004	SPM	99	**77**	**72**	10.4	5636
		4760-004G01	Middle	98				
	17-2952.381N-589.524E			97				
				96				
				95				
				94				
				93				

Table 6.5 *Summary of Particulate Matter.*

Site Address	Airs #	Network	Year	Particulate Concentration (ug/m3)			
	SAROAD #	Scale		Highest	2nd	Annual	Number of
UTM				24-hr	24-hr	Average	Readings
4010 Winston Park Blvd	011-5005	SPM	99	75	70	32	58
	0420-005G02	Neighborhood	98	114	93	41	47
17-2908.456N-582.089E			97	80	47	31	58
			96	**828**	180	**60**	51
			95				
			94				
			93				

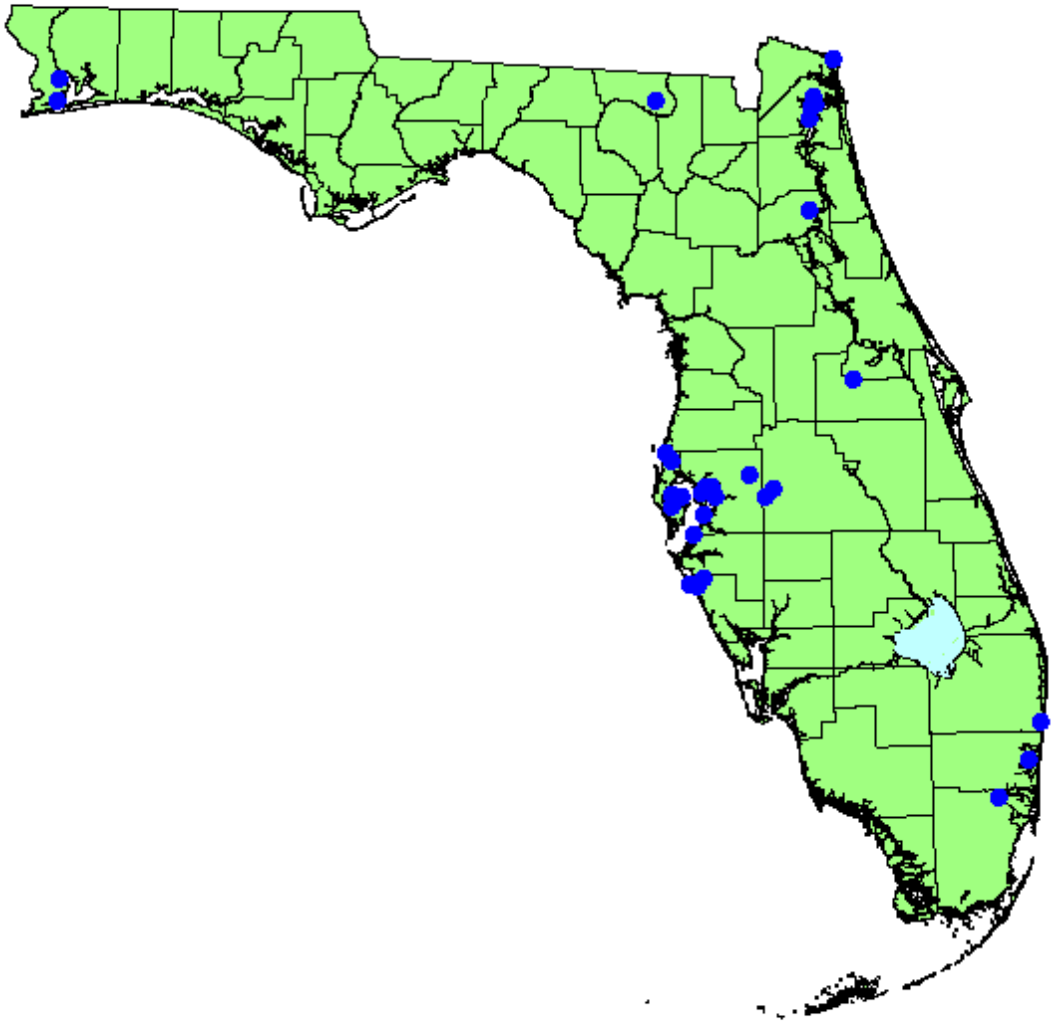
Chapter 7: Sulfur Dioxide

7.1 Sulfur Dioxide Monitoring Results

Globally, man-made emissions of sulfur dioxide (SO_2) account for about one-third of the total emissions of sulfur compounds into the atmosphere. The major source of these emissions is the burning of sulfur-laden coal and oil in industrial and utility boilers.

Florida's 1999 SO_2 monitoring network consisted of 30 stations in 14 counties as seen in Figure 7.1. SO_2 concentrations in Florida were less than 35 percent of the 65 $\mu g/m^3$ annual average ambient standard. The three-hour averages were less than 45 percent of the 1300 $\mu g/m^3$ standard and the 24-hour averages were less than 50 percent of the 260 $\mu g/m^3$ standard calculated with a running average as seen in Figures 7.2 and 7.3. In 1999, there were no exceedances of the SO_2 standard in Florida.

Figure 7.1 *1999 Florida SO_2 Monitoring Network.*



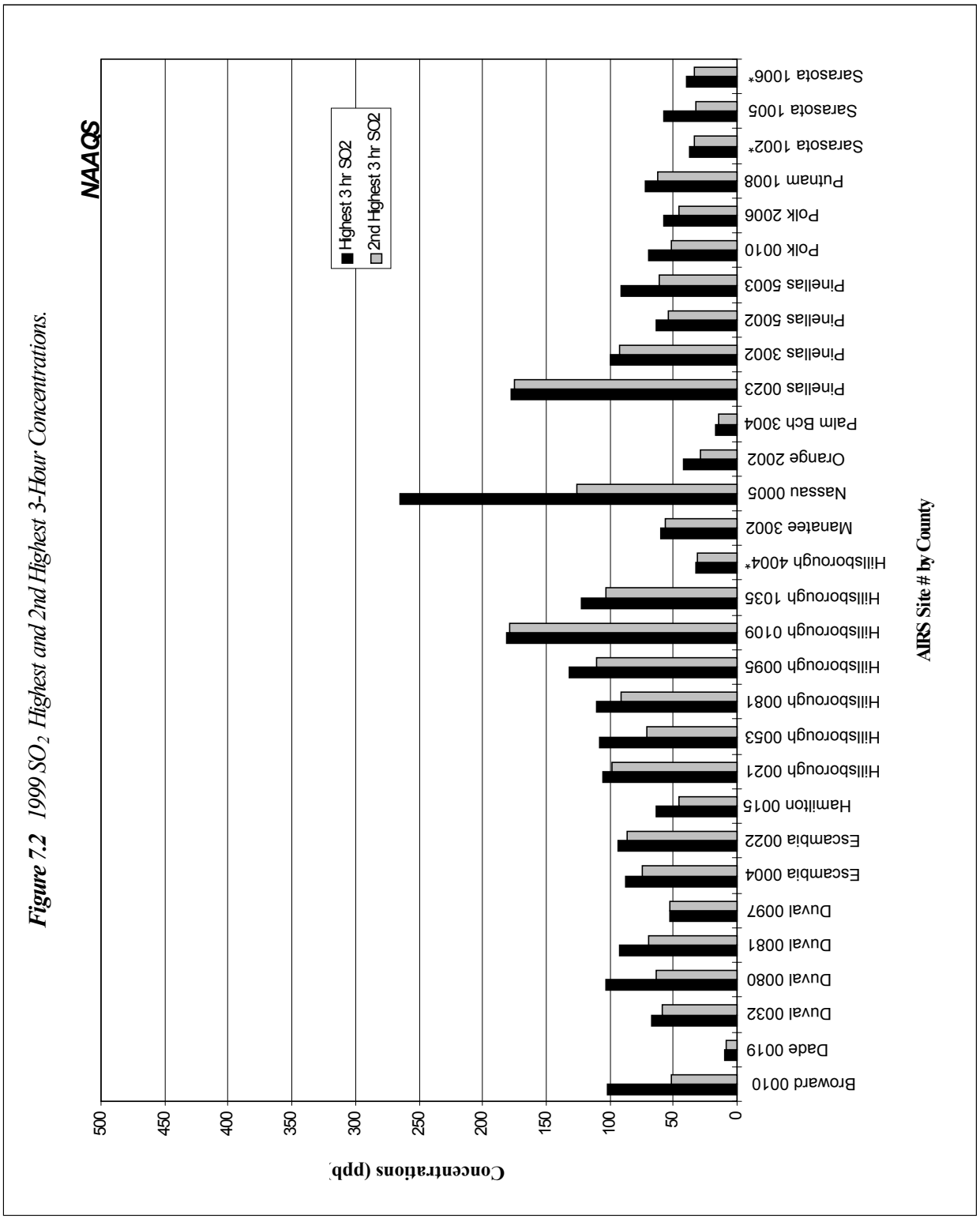


Figure 7.2 *1999 SO_2 Highest and 2nd Highest 3-Hour Concentrations.*

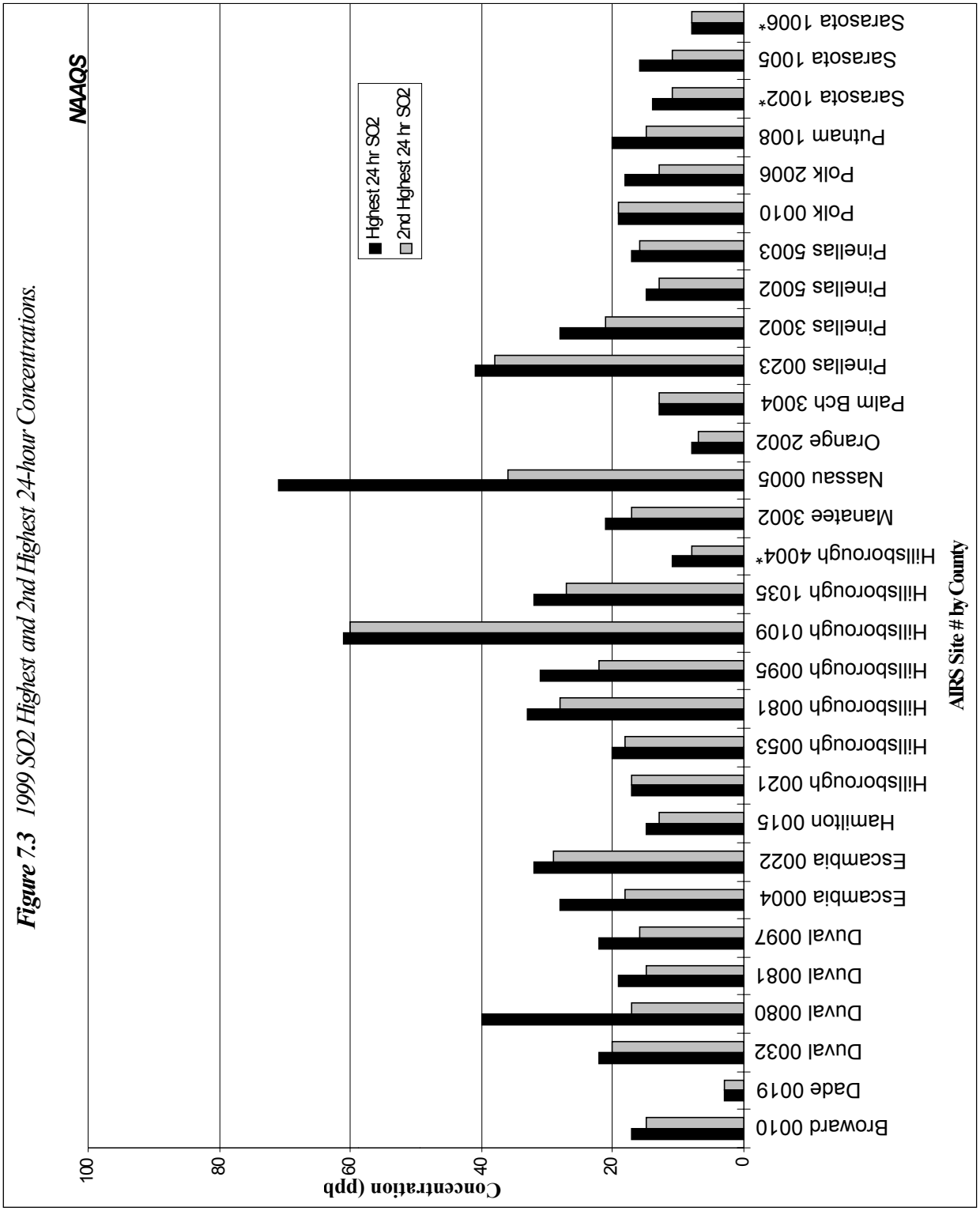


Figure 7.3 *1999 SO2 Highest and 2nd Highest 24-hour Concentrations.*

7.2 Sampling and Analysis

Sulfur dioxide is sampled using continuous monitors. These monitors sample the air as it is passed through a pulsed ultraviolet light chamber where the SO_2 molecules receive energy and become "excited", (an increase in frequency of vibration). As the molecules return to their original state, energy is released. This energy release provides a measure of the SO_2 concentration.

The last seven years of available data collected from sites which operated in 1999 are summarized in Table 7.1.

Table 7.1 *Summary of Sulfur Dioxide Data.*

County	AIRS #	Network	Year	Sulfur Dioxide Concentrations (ppb)				
City	SAROAD #	Scale		Highest 3-hr	2nd 3-hr	Highest 24-hr	2nd 24-hr	Annual Average
Site Address	UTM							
Broward								
Ft. Lauderdale	011-0010	NAMS	99	102	51	17	15	3
NW Corner of Lincoln	1260-010-G02	Neighborhood	98	65	50	20	17	3
	17-2890.362N-583.252E		97	68	43	14	13	2
			96	39	33	11	8	2
			95	37	26	10	8	2
			94	61	55	15	14	2
			93	53	51	13	12	2
Dade								
Miami	025-0019	SLAMS	99	9	8	3	3	1
US27 & SR821	0860-019-G02	Neighborhood	98	13	13	5	4	1
	17-2864.469N-561.837E		97	12	10	5	5	1
			96	11	10	6	5	2
			95	11	11	6	5	2
			94	14	11	6	5	1
			93	13	11	5	4	2
Duval								
Jacksonville	031-0032	NAMS	99	67	59	22	20	4
2900 Bennett	1960-032-H02	Neighborhood	98	99	81	40	37	4
	17-3358.243N-438.923E		97	51	47	31	18	2
			96	68	55	22	19	2
			95	44	32	11	10	2
			94	71	66	23	17	3
			93	63	59	17	16	3
Jacksonville	031-0080	SLAMS	99	103	63	40	17	3
1605 Minerva St	1960-080-H02	Middle	98	50	49	19	16	2
	17-3350.000N-437.260E		97	44	41	19	17	2
			96	111	97	42	27	2
			95	62	55	31	17	2
			94	161	124	106	63	3
			93	163	121	75	37	3
Jacksonville	031-0081	SLAMS	99	92	69	19	15	3
6801 Cedar Bay Rd	1960-081-H02	Middle	98	104	93	25	23	3
	17-3365.560N-440.360E		97	82	81	19	16	3
			96	65	57	14	14	2
			95	79	46	15	11	2
			94	110	70	19	17	3
			93	135	124	23	23	3

* Based on less than 75% of possible readings.

(continued on next page...)

Table 7.1 *Summary of Sulfur Dioxide Data (continued).*

County	AIRS #	Network	Year	Sulfur Dioxide Concentrations (ppb)				
City	SAROAD #	Scale		Highest 3-hr	2nd 3-hr	Highest 24-hr	2nd 24-hr	Annual Average
Site Address	UTM							
Duval								
Jacksonville	031-0097	NAMS	99	53	53	22	16	4
6241 Fort Carolina Rd	1960-097-H02	Neighborhood	98	84	72	32	17	3
	17-3359.447N-442.911E		97	58	54	13	13	2
			96	56	47	23	16	2
			95	44	43	14	12	2
			94	126	126	69	38	3
			93	142	97	51	34	3
Escambia								
Pensacola	033-0004	NAMS	99	88	74	28	18	4
Ellyson Industrial Park	3540-004-F01	Neighborhood	98	97	82	23	22	4
	16-3376.800N-480.400E		97	89	73	37	29	4
			96	92	74	18	16	3
			95	100	94	26	19	3
			94	213	168	44	39	4
			93	151	147	54	39	5
Pensacola	033-0022	NAMS	99	94	86	32	29	4
University W Florida	3540-022-F02	Neighborhood	98	101	81	24	24	4
	16-3378.961N-479.281E		97	127	123	44	33	5
			96	164	92	41	35	5
			95	120	73	30	27	3
			94	220	196	65	56	6
			93	189	170	66	52	6
Hamilton								
White Springs	047-0015	SLAMS	99	64	45	15	13	4
Occidental Chemical	1660-015-F02	Middle	98	45	45	22	21	4
	17-3365.509N-328.671E		97	98	85	42	32	3
			96	66	44	22	20	3
			95	121	116	43	39	5
			94	180	125	42	35	5
			93	254	227	90	69	6
Hillsborough								
Tampa	057-0021	SLAMS	99	106	98	17	17	3
Big Bend & Hwy 672	1800-021-G02	Neighborhood	98	115	104	25	23	4
	17-3074.860N-365.940E		97	134	130	30	27	4
			96	189	137	29	29	4
			95	203	136	36	34	3
			94	127	102	31	21	3
			93	111	68	20	14	2
Tampa	057-0053	NAMS	99	108	71	20	18	5
Interbay & Ballast	4360-053-G02	Neighborhood	98	92	74	24	19	5
	17-3085.361N-354.169E		97	154	98	28	22	5
			96	95	73	27	21	5
			95	147	118	46	26	5
			94	144	95	40	30	5
			93	75	74	27	22	5

(continued on next page...)

* Based on less than 75% of possible readings.

Table 7.1 *Summary of Sulfur Dioxide Data (continued).*

County	AIRS #	Network	Year	Sulfur Dioxide Concentrations (ppb)				
City	SAROAD #	Scale		Highest 3-hr	2nd 3-hr	Highest 24-hr	2nd 24-hr	Annual Average
Site Address	UTM							
Hillsborough								
Tampa	057-0081	SLAMS	99	110	91	33	28	5
Simmons Park	1800-081-G03	Urban	98	75	74	24	20	4
	17-3069.100N-355.544E		97	114	101	50	33	5
			96	102	81	31	24	4
			95	115	108	34	32	4
			94	202	175	78	48	5
			93	144	140	63	43	5
Gannon	057-0095	NAMS	99	132	110	31	22	5
5012 Causeway Blvd	1800-095-G02	Middle	98	201	124	42	28	5
	17-3089.240N-362.100E		97	147	130	29	27	5
			96	174	161	35	29	5
			95	165	155	30	29	5
			94	138	124	34	30	5
			93	156	156	41	34	5
Tampa	057-0109	SLAMS	99	181	179	61	60	6
9851 HWY 41 South	1800-109G02	Neighborhood	98	144	143	45	45	6
	17-3081.853N-363.758E		97	144	143	45	45	6
			96	153	109	39	38	5
			95					
			94					
			93					
Tampa	057-1035	SLAMS	99	122	103	32	27	8
Coast Guard Station	4360-035G02	Neighborhood	98	141	112	34	33	8
Davis Island	17-3089.908N-356.851E		97	133	109	40	35	8
			96	146	100	35	32	7
			95					
			94					
			93					
Tampa	057-4004	SPM	99*	32	31	11	8	3
One Raider Place	3660-004G01	Neighborhood	98	192	126	39	36	3
	17-3096.710N-389.300E		97					
			96					
			95					
			94					
			93					
Manatee								
Palmetto	081-3002	SPM	99	60	56	21	17	4
Port Manatee	3440-002-G02	Urban	98*	106	86	34	19	5
	17-3057.318N-347.461E		97	127	111	31	25	5
			96	101	62	24	24	4
			95	108	81	21	20	4
			94	232	177	75	56	5
			93	186	181	71	68	5

* Based on less than 75% of possible readings.

(continued on next page...)

Table 7.1 *Summary of Sulfur Dioxide Data (continued).*

County	AIRS #	Network	Year	Sulfur Dioxide Concentrations (ppb)				
City	SAROAD #	Scale		Highest 3-hr	2nd 3-hr	Highest 24-hr	2nd 24-hr	Annual Average
Site Address	UTM							
Nassau								
Fenandina Beach	089-0005	SLAMS	99	265	126	71	36	4
5th St Water Plant	1200-005-F02	Neighborhood	98	57	57	23	22	3
	17-3391.650N-455.600E		97	139	108	52	35	4
			96	108	98	40	35	6
			95	245	233	121	69	6
			94	248	187	97	65	5
			93	127	118	60	48	5
Orange								
Winter Park	095-2002	NAMS	99	42	29	8	7	2
Morse Blvd & Denning	4900-002-G01	Neighborhood	98	29	27	8	7	2
	17-3163.490N-464.515E		97	29	20	7	7	2
			96	48	29	12	11	2
			95	31	22	22	17	2
			94	35	31	16	14	2
			93	45	45	15	12	2
Palm Beach								
W. Palm Beach	099-3004	SLAMS	99	17	14	13	13	2
1050 15th St W	3840-004-G02	Neighborhood	98	68	12	9	4	1
	17-2916.800N-592.350E		97	63	59	19	14	2
			96	77	70	18	16	2
			95	114	109	26	19	2
			94	92	84	19	16	2
			93	110	102	29	29	4
Pinellas								
St. Petersburg	103-0023	NAMS	99	177	175	41	38	7
10100 San Martin	3980-023-G02	Neighborhood	98	176	171	50	48	6
	17-3082.975N-340.173E		97	156	142	47	42	6
			96	156	124	47	40	6
			95	166	121	47	35	5
			94	167	158	74	52	7
			93	252	244	66	61	8
Pinellas Park	103-3002	SPM	99	99	92	28	21	4
11500 43rd Ave N	3620-002G05	Neighborhood	98	230	220	89	82	3
	17-3083.930N-333.450E		97	103	84	25	20	3
			96	110	85	25	22	3
			95	65	60	21	20	3
			94	117	99	41	28	4
			93	161	159	53	48	5
Tarpon Springs	103-5002	NAMS	99	63	54	15	13	3
John A Chesnut Sr Park	4380-002-G03	Neighborhood	98	79	56	19	16	3
	17-3108.174N-332.880E		97	73	58	18	15	3
			96	90	59	16	15	3
			95	125	94	27	17	3
			94	74	61	16	13	3
			93	71	68	17	16	3

* Based on less than 75% of possible readings.

(continued on next page...)

Table 7.1 *Summary of Sulfur Dioxide Data (continued).*

County	AIRS #	Network	Year	Sulfur Dioxide Concentrations (ppb)				
City	SAROAD #	Scale		Highest 3-hr	2nd 3-hr	Highest 24-hr	2nd 24-hr	Annual Average
Site Address	UTM							
Pinellas								
Tarpon Springs	103-5003	SLAMS	99	91	61	17	16	3
40671 US 19 North	4380-003-G03	Neighborhood	98*	31	24	7	6	2
	17-3113.970N-329.14E		97					
			96					
			95					
			94					
			93					
Polk								
Nichols	105-0010	SLAMS	99	70	52	19	19	7
SR640 & Anderson Rd	3680-010-F02	Neighborhood	98	78	69	29	27	6
	17-3081.600N-399.800E		97	67	56	20	18	6
			96	165	98	33	31	6
			95	73	48	19	16	5
			94	74	65	18	17	4
			93	102	84	23	21	4
Mulberry	105-2006	SLAMS	99	57	46	18	13	4
Mulberry High School	2860-006-F02	Neighborhood	98	70	53	17	16	5
	17-3086.000N-405.500E		97	64	51	19	15	4
			96	57	47	22	16	4
			95	44	43	15	15	3
			94	61	58	16	16	3
			93	77	76	21	18	3
Putnam								
Palatka	107-1008	SLAMS	99	72	62	20	15	3
Comfort Road	3780-008-F02	Neighborhood	98	59	58	14	12	3
	17-3284.160N-463.470E		97	97	69	17	15	2
			96	100	83	22	22	3
			95	159	88	34	23	3
			94	89	73	23	19	3
			93	82	72	25	19	3
Sarasota								
Sarasota	115-1002	NAMS	99*	37	33	14	11	3
Brookside Middle School	4080-002-G01	Neighborhood	98	60	57	20	19	2
	17-3020.375N-349.150E		97	43	38	15	12	2
			96	75	61	23	19	2
			95	34	33	11	11	2
			94	87	61	35	21	3
			93	83	67	24	19	3
Sarasota	115-1005	SLAMS	99	58	32	16	11	2
450 McKinley Drive	4080-005-G01	Urban	98	56	56	15	14	3
	17-3021.250N-344.600E		97	37	35	14	12	2
			96	58	53	31	18	2
			95	71	45	18	16	2
			94*	39	36	13	12	3
			93					

* Based on less than 75% of possible readings.

Table 7.1 *Summary of Sulfur Dioxide Data (continued).*

County	AIRS #	Network	Year	Sulfur Dioxide Concentrations (ppb)				
City	SAROAD #	Scale		Highest 3-hr	2nd 3-hr	Highest 24-hr	2nd 24-hr	Annual Average
Site Address	UTM							
Sarasota								
Sarasota	115-1006	NAMS	99*	39	33	8	8	2
4570 17th ST		Neighborhood	98					
	17-3025.910N-353.620E		97					
			96					
			95					
			94					
			93					

Chapter 8: Quality Assurance

8.1 Quality Assurance

It is the policy of the Department that there shall be sufficient quality control and quality assurance activities to ensure that all ambient air data used by the Department are of acceptable completeness, comparability, representativeness, precision and accuracy to support the regulatory actions based upon them. Comparability refers to the data from various reporting agencies being reported in consistent units and collected and analyzed by consistent methods to allow direct comparisons between agency readings. Representativeness refers to the nature of the condition being measured and includes considerations of probe siting criteria, spatial scales, monitoring objectives, and times of sampling to denote peak pollutant levels. Precision is defined as the measure of reproducibility of the data, while accuracy is the closeness to reality of the measurements.

To implement this policy, the "State-Wide Quality Assurance Air Program Plan" was developed by the Air Quality Audit Section in June 1980 and has been incorporated into all interagency agreements and grants. The plan includes a series of standard operating procedures (SOPs). These SOPs were developed to supplement the quality assurance plan following input from a number of experts. Since 1993, the Florida Air Monitoring Advisory Committee (FAMAC), made up of ambient air monitoring representatives from each of the district and local programs, have reviewed and updated the QA Plan and related policies.

Intermittent Instruments

The collection and processing of data in the field are divided into two areas of activities. One is concerned with the operation of continuous instruments and the other with the operation of intermittent instruments. The intermittent instruments encompass PM_{10} , $PM_{2.5}$ and Lead. These samples collected on replaceable filter media and these samplers run on a midnight to midnight schedule. The PM_{10} and Lead samplers run every six days so that over a period of time, an equal number of samples are taken for each day of the week. The six day schedule produces approximately 60 samples per year (15 per quarter) if all of the planned samples are actually obtained. The analyses for these filters is normally completed in the reporting agency's laboratory. The $PM_{2.5}$ samplers run on either a three day or daily schedule, producing approximately 120 or 365 samples per year, respectively. The $PM_{2.5}$ filters, to meet the much tighter EPA-mandatated control standards, are collected and shipped, via a DEP courier, to a central weighing laboratory in Tallahassee, operated by the DEP's Chemistry Section. A field technician visits the intermittent sites once or twice a week to collect the exposed filters and replace them with new ones. The flow rate through the instruments is checked both before and after the instruments' run to ensure that the volume of air passing through the filters can be accurately determined. This measurement process is manually accomplished on the PM_{10} and Lead samplers and electronically by an onboard computer in the $PM_{2.5}$ sampler.

Continuous Instruments

A field technician visits each continuous monitoring site on an average of twice a week to check on the operation of the instruments and the shelters in which they are housed. To further ensure the reliability of each instrument, a zero plus three-point, or more, calibration is run by the technician annually. For quality assurance and data validation purposes, the field technician runs a bi-weekly span and precision check on each instrument.

Audit Program

The Ambient Monitoring Section carries out performance audits on air monitoring equipment throughout the state on a quarterly schedule. The schedule is designed such that each individual instrument is audited at least once a year and that at least one instrument for each pollutant monitored by each agency is audited each quarter. Annually, a systems audit is performed at one third of the reporting agencies where in the management of the quality control program involving the integrated laboratory and field components of the sampling, monitoring, data gathering, and reporting systems are comprehensively evaluated.

8.2 Precision and Accuracy

Based on information generated by the statewide quality assurance audit program, and by the quality assurance activities in the field, determinations of the precision and accuracy of the data are made quarterly and summarized annually. The precision and accuracy determinations are expressed as the probability limits within which 95% of the measurements can be assumed to be precise or accurate. Since the determinations vary from agency to agency, and throughout the operating ranges of the various types of instruments, it is not possible to assign a single set of limits for the precision and accuracy of all the data collected throughout the state. However, by averaging the 95% probability limits for each agency and quarter, it is possible to determine "typical" percentage ranges for the precision and accuracy of the data.

The EPA has established goals for the 95% probability limits. Precision limits for all pollutants and accuracy limits for Particulate Matter should be equal to or less than $\pm$15%, while all other accuracy limits should be equal to or less than $\pm$20%. All statewide "typical" probability limits met these goals.

Precision and Accuracy Limits of Intermittent Data

The precision of the PM and lead samplers is based on the collocation of two samplers. Accuracy for PM samplers is based on an audit of the flow while lead accuracy is based on a two-level audit of the laboratory analysis. EPA specifies a 0.15 $\mu g/m^3$ cutoff for lead, a 20 $\mu g/m^3$ cutoff for PM_{10} and a 6 $\mu g/m^3$ cutoff for $PM_{2.5}$ in determining national precision levels. That is, all values equal to or below the cutoff are not used for precision determination. The precision and accuracy of intermittent data is presented in Table 8.1.

Data.

Pollutant	Year	Precision(+/-%)	Accuracy (+/-%)	Percent Data Below Cutoff
PM2.5	99	N/A*	N/A*	N/A*
	98	N/A*	N/A*	N/A*
	97			
	96			
	95			
	94			
	93			
PM10	99	7	4	58
	98	8	2	44
	97	5	3	55
	96	5	5	63
	95	7	4	54
	94	7	3	56
	93	8	5	36
Lead	99	N/A*	5	75
	98	N/A*	7	75
	97	N/A*	8	84**
	96	N/A*	7	84**
	95	N/A*	5	88**
	94	N/A*	6	92**
	93	N/A*	8	90***

* Not determined due to lack of data.

** Five of six reporting agencies had no lead data sets above the cutoff limit.

*** 6 of 7 agencies had all data below cutoff limit.

Precision and Accuracy of Continuous Data

The precision for all continuous instruments is based on a single point span check in the 0.08 to 0.10 ppm (8 to 10 ppm for CO) range. The accuracy audit levels for all continuous instruments are set such that typical ambient concentrations fall in the low-level audit range (0.03 - 0.08 ppm), concentrations near the ambient standards fall in the middle-level audit range (0.15 - 0.20 ppm), and concentrations in the upper portion of the instrument's operating range fall in the upper-level audit range (0.35 - 0.45 ppm). For carbon monoxide, these ranges are 3 - 8 ppm, 15 - 20 ppm, and 35 - 45 ppm, respectively. For those sulfur dioxide monitors which are operated on a range of zero to one ppm, as opposed to the other continuous instruments which operate on a range of zero to 0.5 ppm, an additional high level audit point is run in the 0.80 - 0.90 ppm range. The precision and accuracy of continuous data is presented in Table 8.2.

Table 8.2 *Precision and Accuracy of Continuous Data.*

Pollutant	Year	Precision	Accuracy				
		(+/-%)	Low	Middle	Upper	High	Over all
Sulfur Dioxide	99	5	7	4	4	2	4
	98	5	6	6	6	3	5
	97	4	8	9	8	4	8
	96	5	8	6	6	5	7
	95	10	12	9	8	none	9
	94	7	13	12	7	none	9
	93	5	3	8	12	8	7
Nitrogen Dioxide	99	5	18	14	12	none	15
	98	7	7	6	5	none	6
	97	6	13	11	10	none	11
	96	6	5	6	6	none	6
	95	14	12	7	8	none	9
	94	8	10	9	8	none	9
	93	7	10	9	9	none	9
Carbon Monoxide	99	6	3	2	3	none	3
	98	5	7	5	6	none	6
	97	4	6	4	6	none	5
	96	5	3	2	3	none	3
	95	5	9	6	8	none	8
	94	7	8	6	5	none	6
	93	4	17	11	7	none	12
Ozone	99	3	5	3	2	2	3
	98	3	4	3	2	2	3
	97	3	5	4	3	none	4
	96	3	4	4	3	none	4
	95	6	5	3	4	none	5
	94	4	6	5	4	none	4
	93	3	6	4	3	none	4

Chapter 9: Air Quality Index

The Air Quality Index has been developed by the EPA to provide a simplified method to advise the public daily of any possible adverse health effects due to air pollution. It uses measured levels of five criteria pollutants (excluding lead which has only a average quarterly standard). These are combined to create a single number that can be translated into a descriptor word that describes the air quality. The descriptor words used are: good, moderate, unhealthy for sensitive groups, unhealthy, and very unhealthy. Figure 9.1 shows how the reported values correspond to the descriptors. Generally, the AQI value of 100, marking the beginning of the unhealthy for sensitive groups range, corresponds to the air quality standard for that pollutant. The AQI value of 50, marking the beginning of the moderate range, corresponds to the concentration of the pollutant that is half of the value of the air quality or annual standard. Figure 9.1 depicts this relationship.

The AQI report is based on the pollutant(s) with the highest index value of all of the pollutants being monitored at specified sites in an urban area (Table 9.1). Normally only one pollutant will have the highest index value, although it is possible for two or more pollutants to tie for the highest value on a given day. Monthly and annual totals greater than the actual number of days are due to AQI readings where two or more pollutants tied for the highest value.

The AQI is reported in eighteen Florida cities—Bradenton, Daytona, Fernandina Beach, Ft.Lauderdale, Ft. Myers, Jacksonville, Kissimmiee, Lakeland, Melbourne, Miami, Ocala, Orlando, Pensacola, St. Petersburg, Sanford, Sarasota, Tampa, and West Palm Beach. The values determined by the AQI are meant to be used to compare the air quality in one urban area day to day. They are not designed to compare one urban area to another. The AQl values for the years 1993 - 1999 are listed in Tables 9.2 - 9.19.

AIR QUALITY INDEX

Air Quality	Air Quality Index (AQI) AQI=100 corresponds to EPA's air quality standard	What does it mean?
Good	0 to 50	No health impacts are expected when air quality is in this range.
Moderate	51 to 100	Unusually sensitive people should consider limiting prolonged outdoor exertion.
Unhealthy for Sensitive Groups	101 to 150	Active children and adults, and people with respiratory disease, such as asthma, should limit prolonged outdoor exertion.
Unhealthy	151 to 200	Active children and adults, and people with respiratory disease, such as asthma, should avoid prolonged outdoor exertion; everyone else, especially children should limit prolonged outdoor exertion.
Very Unhealthy	201 to 300	Active children and adults, and people with respiratory disease, such as asthma, should avoid all outdoor exertion; everyone else,

Figure 9.1 *Relationship of AQI values and descriptors.*

Table 9.1 *1999 Air Quality Index Network.*

Urban Area	Responsible	AQI Network				
	Agency	CO	NO2	O3	PM	SO2
Daytona	Central Florida District	NR	NR	127-5002 127-2001	127-5002	NR
Fernandina Bch	Northeast District	NR	NR	NR	NR	089-0005
Ft. Lauderdale	Broward County	011-0010 011-3002 011-5001 011-1201 011-2004	011-8002 011-0031	011-0031 011-8002 011-2003	011-3002 011-0010	011-0010
Ft. Myers	South Florida District	NR	NR	071-2001 071-3002	NR	NR
Jacksonville	City of Jacksonville	031-0080 031-0083 031-0095	031-0032	031-0070 031-0077	031-0084	031-0080 031-0032
Kissimmee	Central Florida District	NR	NR	097-2002	NR	NR
Lakeland	Southwest District	NR	NR	105-6005 105-6006 101-2001	NR	NR
Bradenton	Manatee County	NR	NR	081-3002 081-4012 081-4013		
Melbourne	Central Florida District	NR	NR	009-4001 009-5001	NR	NR
Miami	Dade County	025-0031 025-1019 025-4002	NR	025-0021 025-0027 025-0029	025-1016	NR
Ocala	Central Florida District	NR	NR	083-0003	069-0001	NR
Orlando	Orange County	095-1005	NR	095-2002 095-0008	095-1004 095-2002	NR
Pensacola	Northwest District	NR	NR	033-0004 033-0018 033-0024	033-0004	NR
St. Petersburg	Pinellas County	103-1002	NR	103-0004 103-0018 103-5002	103-0012 103-0018 103-5002	103-0023 103-5002
Sarasota	Sarasota County	NR	NR	115-1005	NR	NR
Sanford	Central Florida District	NR	NR	117-1002	NR	NR
Tampa	Hillsborough County	057-1070 057-4004	057-1065 057-0081	057-0081 057-1035 057-1065 057-4004	057-1035 057-0030 057-1075	057-0081 057-0095 057-1035 057-0053 057-0109 057-4004
W. Palm Beach	Palm Beach County	NR	NR	099-2004 099-0007 099-0009	099-1004	NR

NR = Not Required

Table 9.2 *Daytona AQI Summary.*

1999 New AQI	Number of Days				
	Good	Moderate	Unhealthy for Sensitive Groups(101-150)	Unhealthy (151-200)	Very Unhealthly (201-300)
January	31				
February	24	4			
March	14	17			
April	19	11			
May	21	10			
June	27	3			
July	21	10			
August	20	11			
September	15	14			
October	27	4			
November	28	2			
December	31				
Total 1999	192	80			
1993-1998	**Number of Days**				
	Good	**Moderate**	**Unhealthful(100-200)**	**Very Unhealthful(200-300)**	**Hazardous(300-500)**
Total 1998	277	83	4	2	1
Total 1997	85	7			
Total 1996	312	54			
Total 1995	309	56			
Total 1994	310	55			
Total 1993	203	78			

Table 9.3 *Bradenton AQI Summary.*

1999 New AQI	Number of Days				
	Good	Moderate	Unhealthful for Sensitive Groups(101-150)	Unhealthy (151-200)	Very Unhealthly (201-300)
January	31				
February	20	8			
March	13	18			
April	15	14	1		
May	17	14			
June	21	9			
July	26	5			
August	20	11			
September	17	13			
October	23	8			
November	25	5			
December	31				
Total 1999	259	105	1		
1993-1998	**Number of Days**				
	Good	**Moderate**	**Unhealthful(100-200)**	**Very Unhealthful(200-300)**	**Hazardous (300-500)**
Total 1998	274	80	8		
Total 1997					
Total 1996					
Total 1995					
Total 1994					
Total 1993					

Table 9.4 *Fernandina Beach AQI Summary.*

1999 New AQI	Number of Days				
	Good	Moderate	Unhealthful for Sensitive Groups(101-150)	Unhealthy (151-200)	Very Unhealthly (201-300)
January	31				
February	27	1			
March	29	2			
April	29				
May	31				
June	30				
July	31				
August	31				
September	24				
October	30	1			
November	29	1			
December	31				
Total 1999	353	5			
1993-1998	**Number of Days**				
	Good	**Moderate**	**Unhealthful(100-200)**	**Very Unhealthful(200-300)**	**Hazardous (300-500)**
Total 1998	363	2			
Total 1997					
Total 1996					
Total 1995					
Total 1994					
Total 1993					

Table 9.5 *Ft. Lauderdale AQI Summary.*

1999 New AQI	Number of Days				
	Good	Moderate	Unhealthful for Sensitive Groups(101-150)	Unhealthy (151-200)	Very Unhealthly (201-300)
January	31				
February	18	10			
March	16	15			
April	17	13			
May	20	11			
June	30				
July	27	4			
August	25	6			
September	21	6	1		
October	29	2			
November	28	2			
December	27	4			
Total 1999	289	73	1		
1993-1998	**Number of Days**				
	Good	**Moderate**	**Unhealthful(100-200)**	**Very Unhealthful(200-300)**	**Hazardous (300-500)**
Total 1998	286	73	2		
Total 1997	307	58			
Total 1996	319	47			
Total 1995	303	61	1		
Total 1994	293	72			
Total 1993	293	72			

Table 9.6 *Ft. Myers AQI Summary.*

1999 New AQI	Number of Days				
	Good	Moderate	Unhealthful for Sensitive Groups(101-150)	Unhealthy (151-200)	Very Unhealthly (201-300)
January	30	1			
February	20	8			
March	14	16	1		
April	17	11	2		
May	23	8			
June	26	4			
July	29	2			
August	26	5			
September	24	6			
October	29	2			
November	26	4			
December	31				
Total 1999	295	67	3		
1993-1998	**Number of Days**				
	Good	**Moderate**	**Unhealthful(100-200)**	**Very Unhealthful(200-300)**	**Hazardous (300-500)**
Total 1998	291	66	4		
Total 1997	309	56			
Total 1996	331	35			
Total 1995	322	43			
Total 1994	321	44			
Total 1993	325	36			

Table 9.7 *Jacksonville AQI Summary.*

1999 New AQI	Number of Days				
	Good	Moderate	Unhealthful for Sensitive Groups(101-150)	Unhealthy (151-200)	Very Unhealthly (201-300)
January	30	1			
February	22	6			
March	15	16			
April	13	17			
May	15	15	1		
June	23	7			
July	21	10			
August	16	15			
September	20	9			
October	24	5			
November	28	2			
December	30	1			
Total 1999	257	104	1		
1993-1998	**Number of Days**				
	Good	**Moderate**	**Unhealthful(100-200)**	**Very Unhealthful(200-300)**	**Hazardous (300-500)**
Total 1998	257	98	9		
Total 1997	280	84	1		
Total 1996	276	90			
Total 1995	291	72	2		
Total 1994	302	63			
Total 1993	265	99	1		

Table 9.8 *Kissimmee AQI Summary.*

1999 New AQI	Number of Days				
	Good	Moderate	Unhealthful for Sensitive Groups(101-150)	Unhealthy (151-200)	Very Unhealthly (201-300)
January	31				
February	22	6			
March	14	17			
April	15	15			
May	20	11			
June	25	5			
July	27	4			
August	24	7			
September	19	11			
October	21				
November	28	2			
December	31				
Total 1999	277	78			
1993-1998	**Number of Days**				
	Good	**Moderate**	**Unhealthful(100-200)**	**Very Unhealthful(200-300)**	**Hazardous (300-500)**
Total 1998	274	83	8		
Total 1997					
Total 1996					
Total 1995					
Total 1994					
Total 1993					

Table 9.9 *Lakeland AQI Summary.*

1999 New AQI	Number of Days				
	Good	Moderate	Unhealthful for Sensitive Groups(101-150)	Unhealthy (151-200)	Very Unhealthly (201-300)
January	31				
February	23	5			
March	12	19			
April	11	19			
May	16	14			
June	22	8			
July	23	8			
August	22	9			
September	17	13			
October	28	3			
November	28	3			
December	31				
Total 1999	264	101			
1993-1998	**Number of Days**				
	Good	**Moderate**	**Unhealthful(100-200)**	**Very Unhealthful(200-300)**	**Hazardous (300-500)**
Total 1998	265	90	10		
Total 1997	288	77			
Total 1996	307	59			
Total 1995	294	71			
Total 1994	310	56			
Total 1993	293	72			

Table 9.10 *Melbourne AQI Summary.*

1999 New AQI	Number of Days				
	Good	Moderate	Unhealthful for Sensitive Groups(101-150)	Unhealthy (151-200)	Very Unhealthly (201-300)
January	31				
February	22	6			
March	12	19			
April	13	17			
May	19	12			
June	27	3			
July	22	9			
August	22	8			
September	20	7			
October	29	2			
November	28	2			
December	29	2			
Total 1999	274	87			
1993-1998	**Number of Days**				
	Good	**Moderate**	**Unhealthful(100-200)**	**Very Unhealthful(200-300)**	**Hazardous (300-500)**
Total 1998	273	86	6		
Total 1997	298	67			
Total 1996	318	48			
Total 1995	311	54			
Total 1994	213	37			
Total 1993	259	70			

Table 9.11 *Miami AQI Summary.*

1999 New AQI	Number of Days				
	Good	Moderate	Unhealthful for Sensitive Groups(101-150)	Unhealthy (151-200)	Very Unhealthly (201-300)
January	31				
February	19	9			
March	13	18			
April	13	16	1		
May	16	15			
June	28	2			
July	27	4			
August	26	5			
September	22	8			
October	28	3			
November	28	2			
December	30	1			
Total 1999	281	83	1		
1993-1998	**Number of Days**				
	Good	**Moderate**	**Unhealthful(100-200)**	**Very Unhealthful(200-300)**	**Hazardous (300-500)**
Total 1998	279	79	7		
Total 1997	303	62			
Total 1996	300	65	1		
Total 1995	293	72			
Total 1994	305	60			
Total 1993	287	78			

Table 9.12 *Ocala AQI Summary.*

1999 New AQI	Number of Days				
	Good	Moderate	Unhealthful for Sensitive Groups(101-150)	Unhealthy (151-200)	Very Unhealthly (201-300)
January	30	1			
February	22	6			
March	15	16			
April	14	15	1		
May	16	15			
June	26	4			
July	22	9			
August	19	12			
September	19	11			
October	28	3			
November	27	3			
December	31				
Total 1999	269	95	1		
1993-1998	**Number of Days**				
	Good	**Moderate**	**Unhealthful(100-200)**	**Very Unhealthful(200-300)**	**Hazardous (300-500)**
Total 1998	180	37	2		
Total 1997					
Total 1996					
Total 1995					
Total 1994					
Total 1993					

Table 9.13 *Orlando AQI Summary.*

1999 New AQI	Number of Days				
	Good	Moderate	Unhealthful for Sensitive Groups(101-150)	Unhealthy (151-200)	Very Unhealthly (201-300)
January	30	1			
February	21	7			
March	14	17			
April	12	18			
May	15	16			
June	18	12			
July	18	13			
August	17	14			
September	16	13			
October	27	4			
November	28	2			
December	31				
Total 1999	247	117			
1993-1998	**Number of Days**				
	Good	**Moderate**	**Unhealthful(100-200)**	**Very Unhealthful(200-300)**	**Hazardous (300-500)**
Total 1998	252	103	10		
Total 1997	284	81			
Total 1996	294	72			
Total 1995	267	98			
Total 1994	213	39			
Total 1993	206	42			

Table 9.14 *Pensacola AQI Summary.*

1999 New AQI	Number of Days				
	Good	Moderate	Unhealthful for Sensitive Groups(101-150)	Unhealthy (151-200)	Very Unhealthly (201-300)
January	29	2			
February	25	3			
March	11	20			
April	15	14	1		
May	6	25			
June	17	13			
July	21	10			
August	10	21			
September	9	21			
October	22	9			
November	24	6			
December	31				
Total 1999	220	144	1		
1993-1998	**Number of Days**				
	Good	**Moderate**	**Unhealthful(100-200)**	**Very Unhealthful(200-300)**	**Hazardous (300-500)**
Total 1998	254	97	14		
Total 1997	252	113			
Total 1996	248	116	2		
Total 1995	271	92	2		
Total 1994	295	69	1		
Total 1993	269	96			

Table 9.15 *St. Petersburg AQI Summary.*

1999 New AQI	Number of Days				
	Good	Moderate	Unhealthful for Sensitive Groups(101-150)	Unhealthy (151-200)	Very Unhealthly (201-300)
January	31				
February	19	9			
March	11	20			
April	14	14	2		
May	16	14	1		
June	19	11			
July	18	13			
August	17	13	1		
September	19	11			
October	21	10			
November	26	4			
December	31				
Total 1999	242	119	4		
1993-1998	**Number of Days**				
	Good	**Moderate**	**Unhealthful(100-200)**	**Very Unhealthful(200-300)**	**Hazardous (300-500)**
Total 1998	267	91	7		
Total 1997	270	95			
Total 1996	299	67			
Total 1995	284	81			
Total 1994	297	68			
Total 1993	284	81			

Table 9.16 *Sanford AQI Summary.*

1999 New AQI	Number of Days				
	Good	Moderate	Unhealthful for Sensitive Groups(101-150)	Unhealthy (151-200)	Very Unhealthly (201-300)
January	31				
February	21	7			
March	15	16			
April	14	16			
May	16	15			
June	23	7			
July	19	12			
August	22	9			
September	19	11			
October	27	4			
November	28	2			
December	31				
Total 1999	266	99			
1993-1998	**Number of Days**				
	Good	**Moderate**	**Unhealthful(100-200)**	**Very Unhealthful(200-300)**	**Hazardous (300-500)**
Total 1998	267	92	6		
Total 1997					
Total 1996					
Total 1995					
Total 1994					
Total 1993					

Table 9.17 *Sarasota AQI Summary.*

1999 New AQI	Number of Days				
	Good	Moderate	Unhealthful for Sensitive Groups(101-150)	Unhealthy (151-200)	Very Unhealthly (201-300)
January	31				
February	18	10			
March	8	23			
April	17	11	2		
May	19	12			
June	24	6			
July	28	3			
August	22	9			
September	17	13			
October	26	5			
November	27	3			
December	31				
Total 1999	268	95	2		
1993-1998	**Number of Days**				
	Good	**Moderate**	**Unhealthful(100-200)**	**Very Unhealthful(200-300)**	**Hazardous (300-500)**
Total 1998	264	94	5		
Total 1997	261	104			
Total 1996	311	49			
Total 1995	255	110			
Total 1994	296	69			
Total 1993	262	103			

Table 9.18 *Tampa AQI Summary.*

1999 New AQI	Number of Days				
	Good	Moderate	Unhealthful for Sensitive Groups(101-150)	Unhealthy (151-200)	Very Unhealthly (201-300)
January	30	1			
February	18	10			
March	7	24			
April	6	20	4		
May	11	19	1		
June	14	16			
July	12	19			
August	16	14	1		
September	14	16			
October	21	10			
November	24	6			
December	27	4			
Total 1999	200	159	6		
1993-1998	**Number of Days**				
	Good	**Moderate**	**Unhealthful(100-200)**	**Very Unhealthful(200-300)**	**Hazardous (300-500)**
Total 1998	222	130	13		
Total 1997	207	158			
Total 1996	234	130	2		
Total 1995	227	137	1		
Total 1994	182	67			
Total 1993	174	87			

Table 9.19 *West Palm Beach AQI Summary.*

1999 New AQI	Number of Days				
	Good	Moderate	Unhealthful for Sensitive Groups(101-150)	Unhealthy (151-200)	Very Unhealthly (201-300)
January	31				
February	20	8			
March	17	14			
April	21	9			
May	26	5			
June	30				
July	27	4			
August	27	4			
September	23	7			
October	29	2			
November	28	2			
December	31				
Total 1999	222	51			
1993-1998	**Number of Days**				
	Good	**Moderate**	**Unhealthful(100-200)**	**Very Unhealthful(200-300)**	**Hazardous (300-500)**
Total 1998	298	65	2		
Total 1997	316	49			
Total 1996	319	47			
Total 1995	314	51			
Total 1994	329	36			
Total 1993	248	2			