1999
Annual Report on Air Quality in New England

United States
Environmental Protection Agency
Office of Environmental Measurement and Evaluation
Lexington, MA 02421

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Ecosystems Assessment Unit

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1999 ANNUAL REPORT ON AIR QUALITY IN NEW ENGLAND

This report represents 1999 annual air quality information for all states in New England. The majority of the data included in this report were submitted to EPA by the states from their ambient monitoring networks in accordance with 40 CFR 58. The only data from industrial monitors which have been included are from the Massachusetts Industrial Network, EPA-required networks in New Hampshire and Maine's licensing program which supplements the state network.

This report reflects the status of the AIRS database as of June 2000. The majority of the data used have been evaluated and verified by EPA. However for determining potential nonattainment areas for planning purposes, the data may require further evaluation by both EPA and the states.

The first chart is the NAAQS which defines levels of pollution for the criteria pollutants. Following this is a list of health effects of the criteria pollutants.

The following section lists a summary of criteria pollutant data from sites in each state in New England, and from industrial sites in New Hampshire, Massachusetts, and Maine. The information presented compares the measured values to the level of each NAAQS; it includes the number of exceedences, the maximum and second high values, and the annual means (arithmetic mean or average for SO_2, PM_{10} and NO_2). An annual mean is not valid for intermittent data unless there are four valid quarters. For PM_{10}, 75% of the scheduled samples must be available for a quarter to be considered valid. For continuous data, 75% of the year must be available to calculate a valid annual average.

Included with this section, are graphs of selected air quality monitoring sites that show a ten-year span of data for PM_{10}, CO, SO_2, and NO_2. A graph of the number of days ozone exceeded the standard during the last ten years is used. A discussion of the compliance status for each state is located in the front of the individual states section. In addition, state maps are included which display the location of monitoring sites.

The next table lists the precision and accuracy data submitted by the six New England states. The 95% probability limit for six criteria pollutants are given as a network average for each state.

On page 51 are maps of the PM-10, carbon monoxide and 1-hour ozone nonattainment areas in New England. The 1-hour ozone map is as of January 2001, the effective date of EPA's action to reinstate the appplicability of the 1-hour standard throughout the nation.

Appendix A is a list of AIRS state and regional Air Quality Contacts, their addresses and phone numbers.

NATIONAL AIR QUALITY STANDARDS[a]
For Criteria Pollutants

Pollutant	Averaging Time	Primary Standards[b]	Secondary Standards[c]
SO_2	Annual Arithmetic Mean	80 ug/m^3 (0.03 ppm)	
	24 hours	365 ug/m^3 (0.14 ppm)	
	3 hours	--	1300 ug/m^3 (0.5 ppm)
Pmfine[f]	Annual (3-year average)	15.0 ug/m^3	Same as Primary
	24 hours	3-year average of 98th percentile values $\leq$65 ug/m^3	Same as Primary
PM_{10}[d]	Annual Arithmetic Mean	50 ug/m^3	Same as Primary
	24 hours	150 ug/m^3	Same as Primary
CO	8 hours	9 ppm	Same as Primary
	1 hour	35 ppm	Same as Primary
O_3[e]	1 hour	0.125 ppm	Same as Primary
	8 hour	0.08 ppm	Same as Primary
NO_2	Annual Arithmetic Mean	(0.05 ppm) 100 ug/m^3	Same as Primary
Pb	Calendar Quarter Arithmetic Mean	1.5 ug/m^3	Same as Primary

[a] National standards, other than those based on annual arithmetic means, are not to be exceeded more than once a year.

[b] National Primary Standards: The levels of air quality necessary, with an adequate margin of safety, to protect the public health.

[c] National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

[d] PM_{10} replaced TSP as the ambient particulate standard effective July 31, 1987, and includes only those particles with an aerodynamic diameter of $\leq$ a nominal 10 microns. Expected number of exceedances shall not be more than one per year (3 year average) as determined by Appendix K and N of 40CFR Part 50.

[e] 1-Hour: Expected number of exceedance days shall not be more than one per year (3 year average) as determined by Appendix H of 40CFR Part 50.
8-Hour: The standards are met at an ambient air quality site when the average of the annual fourth-highest daily maximum 8-hour average ozone concentration is less than or equal to 0.08 ppm as determined by Appendix I of 40CRF 50.

[F] Appendix N of 40 CFR Part 50 gives the specific procedures for determining whether the PM2.5 Primary and Secondary Annual and 24 Hour Standards are attained.

Health Effects of Criteria Pollutants

Lead (Pb)

Brain damage, kidney damage, and gastrointestinal distress are seen from short-term exposure to high levels of lead. Long-term exposure to lead in humans results in effects on the blood, central nervous system, blood pressure, kidneys, and Vitamin D metabolism. Children are particularly sensitive to the chronic effects of lead, with slowed cognitive development, reduced growth and other effects reported. The major sources of lead air pollution are lead smelters and battery manufacturing plants.

Ozone (O_3)

Ozone can irritate the respiratory system, causing coughing, throat irritation, and/or an uncomfortable sensation in the chest. Ozone can reduce lung function and make it more difficult to breathe deeply and vigorously. Ozone can aggravate asthma and increase susceptibility to respiratory infections. It injures vegetation, and has adverse effects on materials. Ozone is generally highest on sultry summer afternoons. Ozone is formed in the atmosphere by the reaction of nitrogen oxides, and hydrocarbons in the presence of sunlight.

Sulfur Dioxide (SO_2)

Children and adults with asthma who are active outdoors are most vulnerable to the health effects of sulfur dioxide. The primary effect they experience, even with brief exposure, is a narrowing of the airways, which may cause symptoms such as wheezing, chest tightness, and shortness of breath. Long-term exposure to both sulfur dioxide and fine particles can cause respiratory illness, alter the lung's defense mechanisms, and aggravate existing cardiovascular disease. It combines with water to form acid aerosols and sulfuric acid mist which falls to earth as acid rain, causing plant and structural damage, and acidifying bodies of water. Major sources include power plants and industrial boilers.

Nitrogen Dioxide (NO_2)

In children and adults with respiratory disease, nitrogen dioxide can cause respiratory symptoms such as coughing, wheezing, and shortness of breath, and affect lung function. In children, short-term exposure can increase the risk of respiratory illness. Studies suggest that long-term exposure may cause permanent structural changes in the lungs. The sources of nitrogen dioxide are motor-vehicle exhaust, and fuel combustion sources such as electric power generating facilities.

Carbon Monoxide (CO)

People with cardiovascular disease, such as angina, may experience chest pain and more cardiovascular symptoms if they are exposed to carbon monoxide, particularly while exercising. In healthy individuals, exposure to higher levels of carbon monoxide can affect mental alertness and vision. Carbon monoxide forms when the carbon in fuels does not completely burn. Motor vehicles are the most significant source.

Particulate Matter ($PM_{2.5}$ and PM_{10})

Both fine and coarse particles can accumulate in the respiratory system. When exposed to particulate matter (PM), people with existing heart or lung are at increased risk of premature death or admission to hospitals or emergency rooms. Children and people with existing lung disease may not be able to breathe as deeply or vigorously as they normally would, and they may experience symptoms such as coughing and shortness of breath. PM can increase susceptibility to respiratory infections and can aggravate existing respiratory diseases, causing more use of medication and more doctor visits. PM includes both solid particles and liquid droplets found in air. Many manmade and natural sources emit PM directly or emit other pollutants that react in the atmosphere to form PM. Sources of fine particles include all types of combustion (motor vehicles, power plants, wood burning, etc.) and some industrial processes. Sources of coarse particles include crushing or grinding operations, and dust from paved or unpaved roads.

Site Maps, Narratives, Summary Data and Charts for the Criteria Pollutants in the six New England States

ABBREVIATIONS AND SYMBOLS USED IN TABLE 3

SITE ID Site Identification number

POC Parameter Occurrence Code - differentiates between monitors for a given pollutant

MT Monitor type (1=NAMS, 2=SLAMS, 3=Other, 4=Industrial, 6,7,8=PAMS 0=Unknown, C=Non EPA Federal)

YR Year

REP ORG Reporting Organization

#OBS Number of Observations

MAX 24-HR: 1ST Highest 24-hour value recorded in the year
2ND Second highest 24-hour value for the year
3RD Third highest 24-hour value for the year.
4TH Fourth highest 24-hour value for the year.

ARITH MEAN Arithmetic mean

WTD ARITH MEAN Weighted arithmetic mean

GEO MEAN Geometric mean

GEO STD Geometric standard deviation

QUARTERLY ARITH MEANS:

1ST First quarter arithmetic mean
2ND Second quarter arithmetic mean
3RD Third quarter arithmetic mean
4TH Fourth quarter arithmetic mean

MEANS > 1.5 Number of quarterly means greater than 1.5 ug/m^3 for lead

MAX VALUES: 1ST Highest 24-hour value recorded for the year
2ND Second highest 24-hour value recorded for the year.

METH Method

MAX 1-HR: 1ST Highest 1-hour value recorded in the year
2ND Second highest 1-hour value recorded in the year

OBS > 35 Number of observations greater than 35 ppm for CO

MAX 8-HR: 1ST Highest 8-hour value recorded in the year
2ND Second highest 8-hour value recorded in the year

OBS > 9 Number of 8-hour ave. greater than 9 ppm for CO

OBS > 365 Number of 24-hour ave. greater than 365 ug/m^3 for SO_2

MAX 3-HR: 1ST Highest 3-hour value recorded in the year
2ND Second highest 3-hour value recorded in the year

Obs > 1300 Number of 3-hour ave. greater than 1300 ug/m^3 for SO_2

NUM MEAS The valid number of days measured

NUM REQ The valid number of days in the ozone season

NUM OBS Number of Observations

SCHEDULED NUM OBS Number of observations scheduled

% OBS Percent completed of number of observations scheduled

VALID DAILY 1-HR MAXIMUM:
Maximum hourly values for
1ST the highest day
2ND the second highest day
3RD the third highest day
4TH the fourth highest day

VALS > .125: **MEAS** Number of measured daily maximum $\geq$ 0.125 ppm
EST Number of expected violations

MISS DAYS ASSUMED < STANDARD Number of missing days assumed to be less than the standard

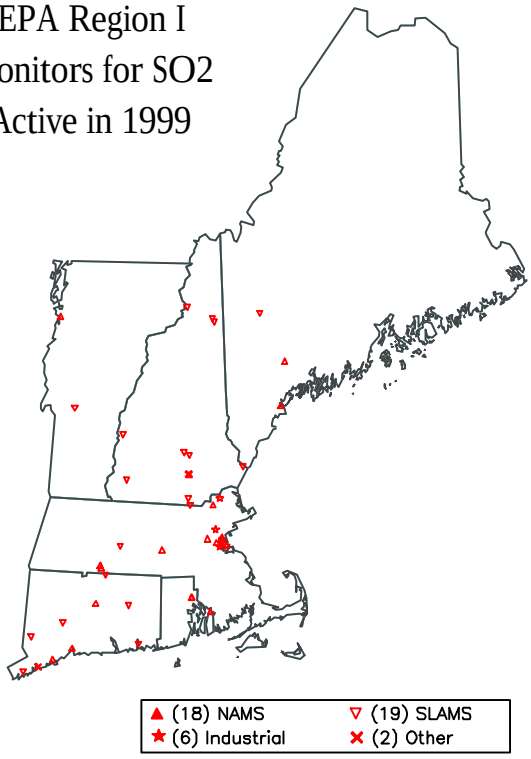
THE DATA IN TABLE 3 CONSISTS OF BOTH STATE AND PRIVATE NETWORKS.

1999 NEW ENGLAND AMBIENT AIR QUALITY SUMMARY

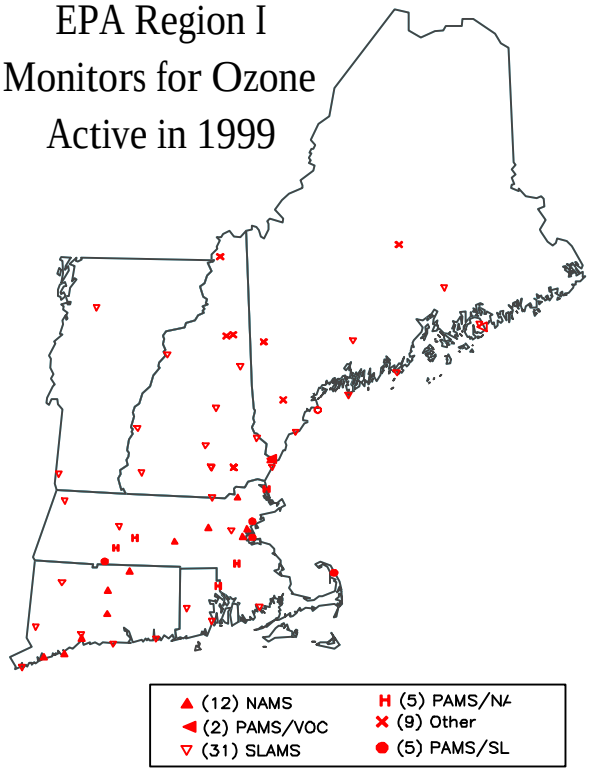
Overall air quality in New England in 1999 was similar to 1997. The summers of 1999 and 1997 were drier and hotter summers than the cooler and wetter summer of 1998 or 1996. Thus, ozone concentrations were relatively higher in 1999 and 1997 than in 1998 or 1996. Continued reductions in ozone precursor emissions throughout the last several years were major factors in mitigating these observed concentrations of ozone. In 1999, twenty-one ozone monitoring sites recorded one or more days over the 1-hour National Ambient Air Quality Standard (NAAQS) for ozone. For comparison the number of ozone monitoring stations recording one or more days over the 1-hour standard was twenty in 1995, seven in 1996 (cool wet summer), twenty-five in 1997 and twelve in 1998 (cool wet summer). For the 8-hour ozone standard thirty-one monitoring sites reported a fourth high day equal to or above 85 parts per billion (ppb) in 1999 versus twenty -six stations in 1998 and thirty-five stations in 1997. Ambient concentrations for the other criteria pollutants continued to be well below National Ambient Air Quality Standards (NAAQSs). Not a single site in New England reported data for any of the criteria air pollutants, other than ozone, above the NAAQSs.

In 1999 the New England states began monitoring for particulate matter of less than 2.5 microns in diameter (PM2.5). Currently there are 70 Federal Reference Method PM2.5 samplers operating in New England. Typical of start-up of any new monitoring program of this magnitude, PM2.5 data capture during 1999 was low. The 1999 data show no exceedances to the 24-hour NAAQS and no station, which met the data capture requirements, exceeded the annual PM2.5 NAAQS.

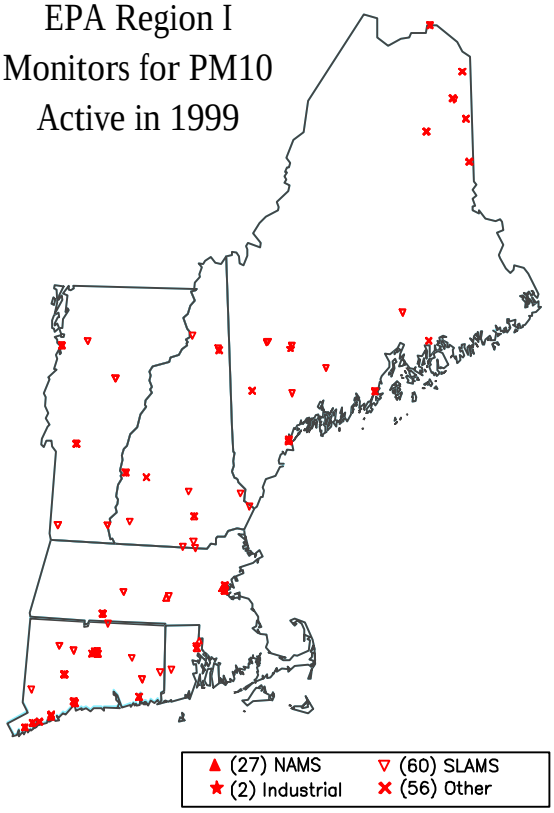
EPA Region I
Monitors for SO2
Active in 1999



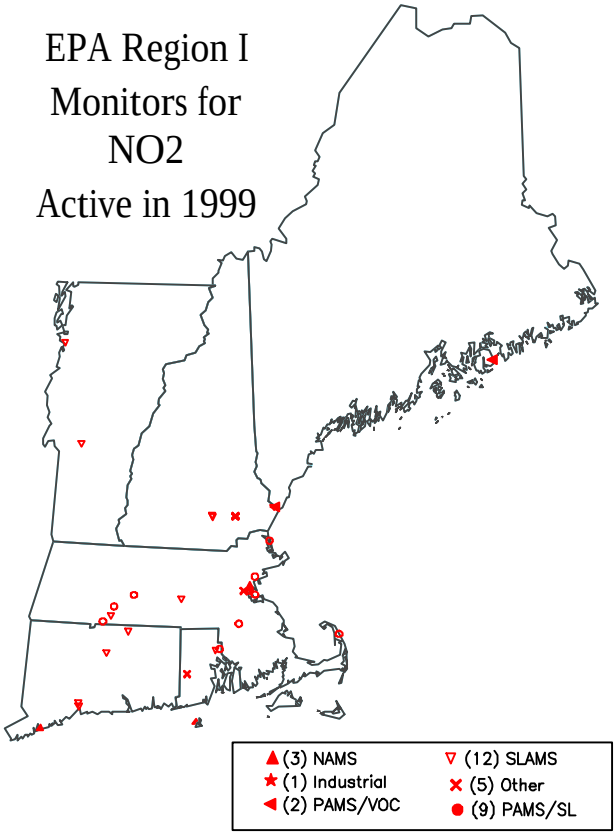
EPA Region I
Monitors for Ozone
Active in 1999



EPA Region I
Monitors for PM10
Active in 1999



EPA Region I
Monitors for
NO2
Active in 1999



Use of Data Qualifiers for PM2.5 Data

EPA has developed a set of generic data qualifiers (flags) which allow data to be entered in AIRS that the State/locals believe have value, but are unsure of its quality. The approach tries to provide a balance of ease of use and specificity. Due to limitations in the current AIRS network, the only place for flags is in the exceptional event area where most letters are already in use. There are 4 flags already associated with PM2.5. The flags T, W, X and Y are the flags associated with the sampler acceptance criteria.. These flags are associated with the sample being out of specifications for flow rate, filter temperature differential, and/or elapsed time. A "T" flag indicates the sample has multiple flags. There are 6 other flags associated with PM2.5. These are listed below:

1. Deviation from a Code of Federal Regulation requirement- Data collected did not or may not meet all of the critical criteria for sampling and analysis as specified in CFR and the Validation Template critical criteria table. State Agencies may use this flag when it is unclear of the effect of the deviation on data quality. This flag should be rarely used, but there may be instances where other QA/QC information tend to validate the sample or changes/updates to the critical criteria table may allow utilization of the data for some purposes.

2. Operational Deviations- Data quality may be impacted by sampling and analysis procedures which did not or may not comply with acceptable range or threshold values from either the Validation Template operational evaluations table..

3. Field Issue- Data that may have been effected by events occurring in the field that could potentially have compromised the integrity of the sample (oil crystallization, excessive dust etc.)

4. Laboratory Issue- Data that may have been effected by events occurring in the laboratory that could potentially have compromised the integrity of the sample (cassette off gassing, etc.)

5. Outlier - Data value that appears to be invalid either because it is outside the normal/expected range of concentrations or fails various statistical or comparison tests. However, there is no additional information available that would provide a reason to invalidate the value(s).

6. Quality Assurance Project Plan (QAPP) - Data collection prior to QAPP approval.

CONNECTICUT SUMMARY

There are five carbon monoxide (CO) monitoring sites in Connecticut. In 1999 the Hartford Courthouse site recorded a maximum 8-hour concentration of 5.6 ppm (62% of the NAAQS). This continues a downward trend in the Hartford data where the maximum 1998 8-hour concentration was 7.9 ppm, the 1997 8-hour concentration was 6.1 ppm, the 1996 maximum was 9.1 ppm and the 1995 maximum was 10.1 ppm. The ten-year trend graph for CO shows that the data are well below the standards and the trend lines have slight downward slopes.

At the end of 1996, lead (Pb) monitoring in Connecticut was discontinued at all sites, except Waterbury. There have been no exceedances or violations of the quarterly lead (Pb) NAAQS at any site in Connecticut for many years. In 1999 the Waterbury site reported a maximum quarterly average of 0.01 ug/m3 or 0.7% of the NAAQS.

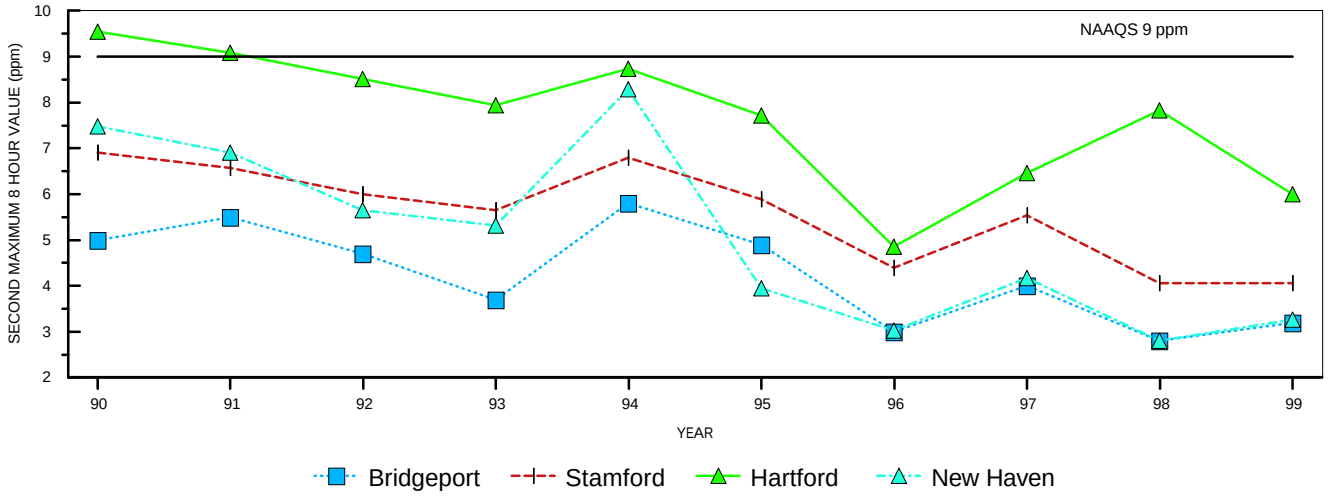
None of the five sites that monitored for nitrogen dioxide (NO2) in 1999 experienced any violations of the NAAQS. New Haven reported values that were 52% of the NAAQS. The photochemical assessment monitoring stations (PAMS) in Stafford Springs, Hamden and Westport that operate during the summer season and had seasonal arithmetic means of 12%, 28%, and 36% of the NAAQS. The PAMS site in East Hartford, which operated for the entire year, had an annual mean that was 36% of the NAAQS. The ten-year trend graph shows that the annual average NO2 concentrations for these sites have been relatively constant with small year to year fluctuations.

In 1999, all twelve ozone (O3) sites in Connecticut had exceedances of the 1-hour ozone standard and were in violation of the 1-hour NAAQS. In 1998, seven of eleven sites reported exceedances above the level of 1-hour ozone NAAQS. In 1997, ten of eleven sites measured exceedances, while in 1996 only five sites reported levels of this magnitude. In 1995 eleven sites reported exceedances of the 1-hour NAAQS. The observed increases in ozone levels in 1999, 1997and 1995 were due in part to the hotter drier summers versus the cooler, wetter summers of 1998 and 1996. Middletown reported the highest 1-hour second maximum value of 0.161 ppm or 134% of the NAAQS. The ten-year trend line for 1-hour ozone concentrations shows large fluctuations in the number of days above the NAAQS. For the 8-hour ozone standard in 1999, all twelve O3 sites reported a fourth high day of at least 85 ppb. The maximum 8-hour average in 1999 was in Stratford at 0.133 ppm. In 1998 the site with the maximum 8-hour average was Stafford with a value of 0.118 ppm. In 1997 the site with the maximum 8-hour average of 0.151 ppm was Madison.

None of the Connecticut sites which collected particulate matter of less than 10 microns in diameter (PM10) recorded any exceedances of the annual or 24-hour standards in 1999. The Hartford site reported the highest 24-hour second maximum value of 81 ug/m3 or 54% of the NAAQS. The New Haven Stiles Street site had annual arithmetic mean of 60% of the NAAQS. The ten-year graph shows slight downward trends for PM10. For PM2.5 Connecticut established a network of12 stations which began in 1999. In general the New Haven area reported the highest PM2.5 concentrations.

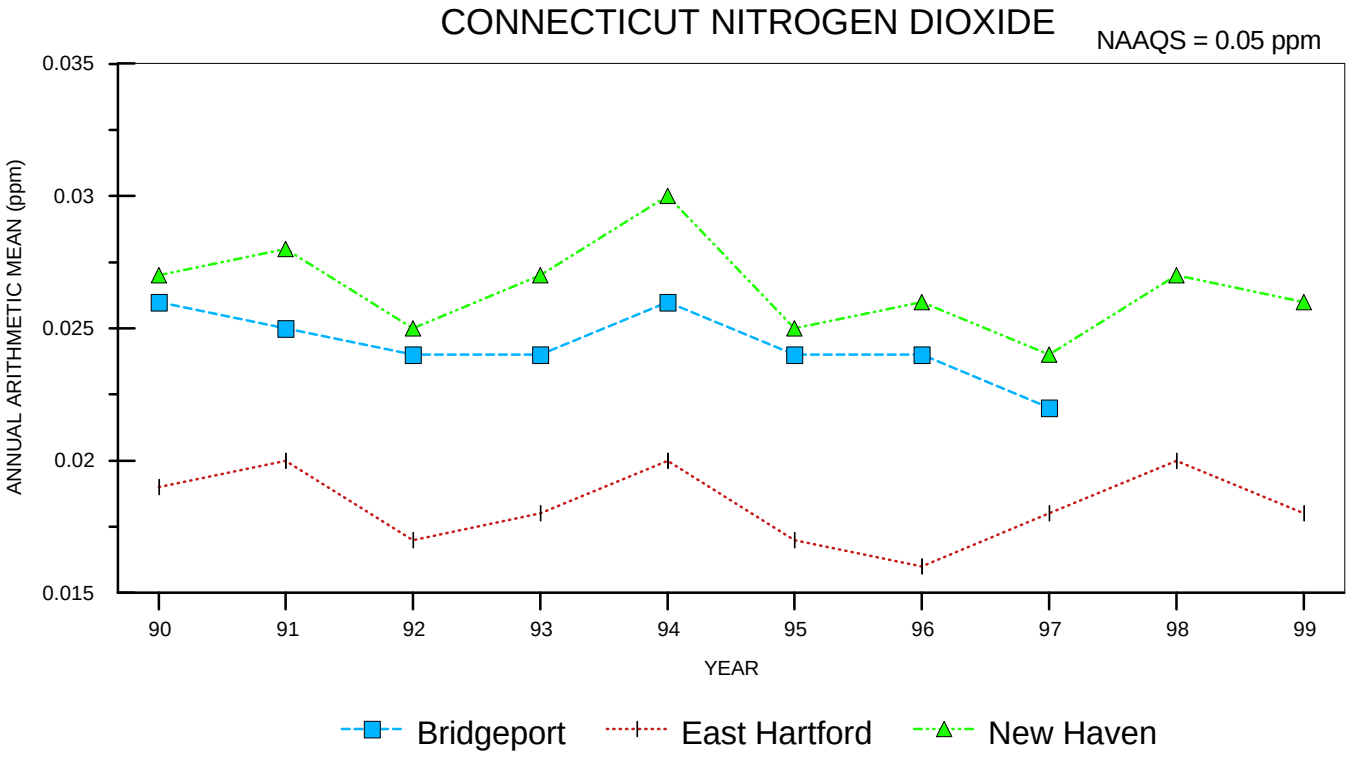
There were no exceedances or violations of the annual, 24-hour, or 3-hour SO2 NAAQSs. The highest annual arithmetic mean was reported at New Haven at 7 ppb or 23% of the NAAQS, while the lowest annual arithmetic mean were reported at East Hartford and Danbury at 4 ppb or 13% of the NAAQS. New Haven reported the highest 24-hour second maximum of 27 ppb or 19% of the NAAQS. Overall the ten-year SO2 trend graphs show decreasing trends.

CONNECTICUT CARBON MONOXIDE



Carbon Monoxide - Connecticut

SITE ID	POC	MT	CITY	COUNTY	ADDRESS	YR	REP ORG	#OBS	MAX 1ST	1-HR 2ND	OBS> 35	MAX 1ST	8-HR 2ND	OBS> 9	METH
09-001-0004	1	2	BRIDGEPORT	FAIRFIELD	JASPER MCLEVY HALL, STAT	99	001	8357	4.8	4.5	0	3.3	3.2	0	54
09-001-0020	1	2	STAMFORD	FAIRFIELD	LIBRARY 96 BROAD ST STA	99	001	8463	6	5.1	0	4.6	3.8	0	54
09-003-0013	1	1	HARTFORD	HARTFORD	401 FLATBUSH AVENUE	99	001	8640	10.5	8.7	0	3.3	3.2	0	54
09-003-0017	1	1	HARTFORD	HARTFORD	COURTHOUSE, 155 MORGAN S	99	001	8399	12.1	11.9	0	5.6	5.5	0	54
09-009-0025	1	2	NEW HAVEN	NEW HAVEN	121 ELM STREET	99	001	8614	4.4	4.2	0	3.3	3.1	0	54

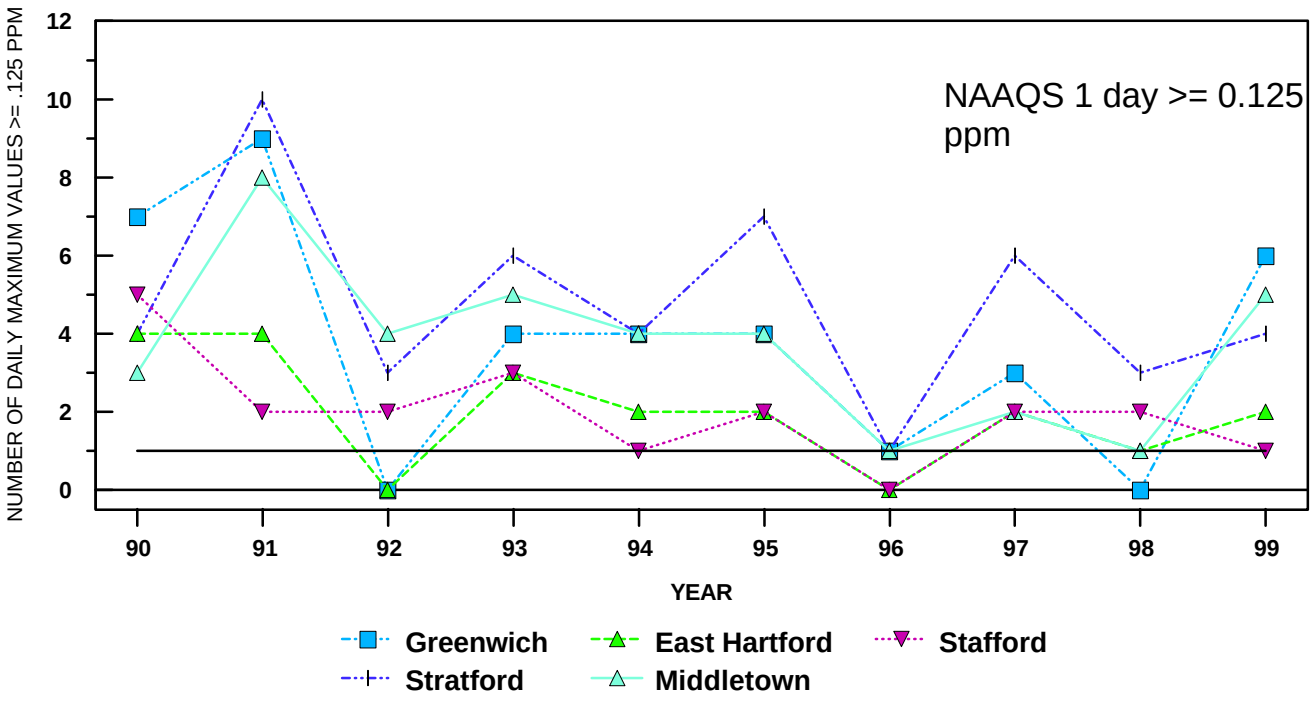


CONNECTICUT
NITROGEN DIOXIDE (NO2) UNITS: 007 PPM

SITE ID	POC	MT	CITY	COUNTY	ADDRESS	YR	REP ORG	#OBS	MAX 1ST	1-HR 2ND	MAX 1ST	24-HR 2ND	ARIT MEAN		METH
09-001-9003	1	1	WESTPORT	FAIRFIELD	SHERWOOD ISLAND STATE PARK	99	001	8281	0.103	0.088			0.018		74
09-003-1003	1	8	EAST HARTFORD	HARTFORD	MCAULIFFEE PARK	99	001	8488	0.071	0.068			0.018		74
09-009-1123	1	2	NEW HAVEN	NEW HAVEN	715 STATE STREET	99	001	8467	0.103	0.080			0.026		74
09-009-9005	1	2	HAMDEN	NEW HAVEN	MILL ROCK BASIN	99	001	3987	0.065	0.065			0.014	?	74
09-013-1001	1	2	STAFFORD	TOLLAND	ROUTE 190, SHENIPSIT STATE	99	001	3908	0.066	0.063			0.006	?	74

? INDICATES THAT THE MEAN DOES NOT SATISFY SUMMARY CRITERIA

CONNECTICUT OZONE



CONNECTICUT
OZONE - 44201 UNITS:007 PPM
OZONE SEASON: APR01 TO SEP 30

SITE ID	POC	MT	CITY	COUNTY	ADDRESS	YR	REP ORG	NUM MEAS	NUM REQ	VALID DAILY 1-HR MAXIMUM ********MAXIMA********* 1ST	2ND	3RD	4TH	VALS>0.125 MEAS	VALS>0.125 EST	MISS DAYS ASSUMED < STANDARD	METH
09-001-0017	1	2	GREENWICH	FAIRFIELD	GREENWICH POINT	99	001	174	183	0.159	0.143	0.142	0.129	6	6.3	0	47
09-001-1123	1	2	DANBURY	FAIRFIELD	TRAILER, W. CONN	99	001	178	183	0.178	0.151	0.136	0.125	4	4.1	2	47
09-001-3007	1	1	STRATFORD	FAIRFIELD	USCG LIGHTHOUSE	99	001	182	183	0.158	0.140	0.133	0.127	4	4	0	47
09-001-9003	1	1	WESTPORT	FAIRFIELD	SHERWOOD ISLAND	99	001	180	183	0.150	0.143	0.142	0.131	4	4	2	47
09-003-1003	1	7	EAST HARTFORD	HARTFORD	MCAULIFFEE PARK	99	001	182	183	0.146	0.132	0.123	0.120	2	2	1	47
09-005-0006	1	2	TORRINGTON	LITCHFIELD	UNIVERSITY ROAD	99	001	182	183	0.141	0.131	0.127	0.125	4	4	1	47
09-007-0007	1	1	MIDDLETOWN	MIDDLESEX	CONN. VALLEY HOS	99	001	179	183	0.167	0.161	0.147	0.128	5	5.1	1	0
09-009-1123	1	1	NEW HAVEN	NEW HAVEN	715 STATE STREET	99	001	182	183	0.142	0.128	0.123	0.119	2	2	1	47
09-009-3002	1	2	MADISON	NEW HAVEN	HAMMONASSET STAT	99	001	154	183	0.153	0.143	0.123	0.121	2	2.4	1	47
09-009-9005	1	2	HAMDEN	NEW HAVEN	MILL ROCK BASIN	99	001	168	183	0.148	0.147	0.147	0.135	5	5.4	1	47
09-011-0008	1	2	GROTON	NEW LONDON	UNIVERSITY OF CO	99	001	183	183	0.151	0.127	0.122	0.119	2	2	0	47
09-013-1001	1	1	STAFFORD	TOLLAND	ROUTE 190, SHENI	99	001	183	183	0.128	0.120	0.116	0.116	1	1	0	47

CONNECTICUT
OZONE - 44201 UNITS:007 PPM
OZONE SEASON: APR01 TO SEP 30

SITE ID	POC	MT	CITY	COUNTY	ADDRESS	YR	REP ORG	NUM MEAS	NUM REQ	ANN SUM EXCEED PRI ST	8 - HOUR AVERAGE ********MAXIMA********* 1ST	2ND	3RD	4TH	METH
09-001-0017	1	2	GREENWICH	FAIRFIELD	GREENWICH POINT	99	001	174	183	14	0.119	0.114	0.113	0.107	47
09-001-1123	1	2	DANBURY	FAIRFIELD	TRAILER, W. CONN	99	001	178	183	17	0.115	0.111	0.111	0.106	47
09-001-3007	1	1	STRATFORD	FAIRFIELD	USCG LIGHTHOUSE	99	001	182	183	9	0.133	0.104	0.100	0.096	47
09-001-9003	1	1	WESTPORT	FAIRFIELD	SHERWOOD ISLAND	99	001	180	183	13	0.121	0.117	0.113	0.111	47
09-003-1003	1	7	EAST HARTFORD	HARTFORD	MCAULIFFEE PARK	99	001	182	183	11	0.105	0.099	0.095	0.094	47
09-005-0006	1	2	TORRINGTON	LITCHFIELD	UNIVERSITY ROAD	99	001	182	183	12	0.103	0.102	0.100	0.098	47
09-007-0007	1	1	MIDDLETOWN	MIDDLESEX	CONN. VALLEY HOS	99	001	179	183	15	0.128	0.122	0.113	0.107	0
09-009-1123	1	1	NEW HAVEN	NEW HAVEN	715 STATE STREET	99	001	182	183	5	0.102	0.101	0.099	0.092	47
09-009-3002	1	2	MADISON	NEW HAVEN	HAMMONASSET STAT	99	001	154	183	16	0.130	0.114	0.105	0.104	47
09-009-9005	1	2	HAMDEN	NEW HAVEN	MILL ROCK BASIN	99	001	168	183	11	0.117	0.115	0.109	0.105	47
09-011-0008	1	2	GROTON	NEW LONDON	UNIVERSITY OF CO	99	001	183	183	11	0.132	0.104	0.103	0.096	47
09-013-1001	1	1	STAFFORD	TOLLAND	ROUTE 190, SHENI	99	001	183	183	12	0.101	0.098	0.095	0.091	47

PM 2.5 Connecticut

PM 2.5 LOCAL CONDITIONS (88101) CONNECTICUT

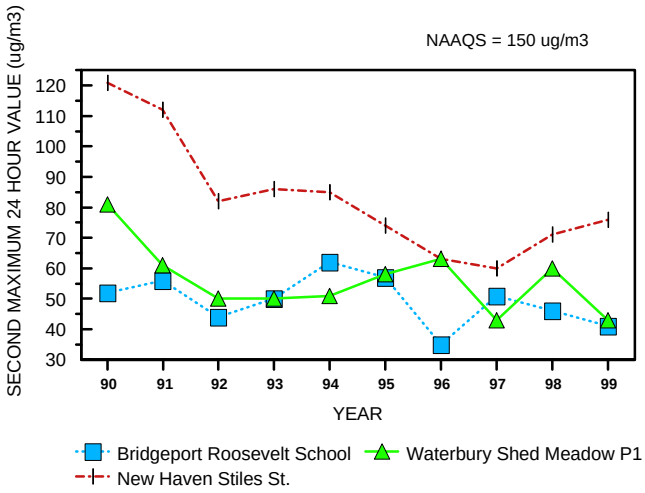
SITE ID	POC	MT	CITY	COUNTY	ADDRESS	REP YR	REP ORG	#OBS	MAXIMUM VALUES 1ST	2ND	3RD	4TH	ARITH MEAN	METH	UNITS	INT
09-001-0010	1	2	BRIDGEPORT	FAIRFIELD	ROOSEVELT SCHOOL PA	99	001	104	37.2	34.2	31.1	30.5	13.07	118	105	7
09-001-0010	2	3	BRIDGEPORT	FAIRFIELD	ROOSEVELT SCHOOL PA	99	001	83	38.7	32.9	32.4	31.1	13.71	118	105	7
09-001-1123	1	2	DANBURY	FAIRFIELD	TRAILER, W. CONNECT	99	001	62	34.0	31.7	29.4	26.3	12.60 ?	118	105	7
09-001-2124	1	3	STAMFORD	FAIRFIELD	HILLANDALE AVENUE	99	001	58	30.3	28.9	28.0	24.3	11.74 ?	118	105	7
09-001-9003	1	3	WESTPORT	FAIRFIELD	SHERWOOD ISLAND STA	99	001	33	33.5	28.5	25.2	24.7	13.38 ?	117	105	7
09-003-1003	1	2	EAST HARTFORD	HARTFORD	MCAULIFFEE PARK	99	001	224	43.9	41.9	34.7	34.5	10.85	118	105	7
09-003-1018	1	2	HARTFORD	HARTFORD	CORNER OF SHELDON S	99	001	63	43.3	37.3	35.5	25.4	12.34 ?	118	105	7
09-009-0018	1	2	NEW HAVEN	NEW HAVEN	STILES STREET.	99	001	97	43.2	42.5	40.4	38.8	17.76	118	105	7
09-009-0018	2	3	NEW HAVEN	NEW HAVEN	STILES STREET.	99	001	85	43.2	42.5	41.2	37.5	17.90	118	105	7
09-009-1123	1	2	NEW HAVEN	NEW HAVEN	715 STATE STREET	99	001	93	39.5	31.7	31.6	31.1	13.72	118	105	7
09-009-1123	2	3	NEW HAVEN	NEW HAVEN	715 STATE STREET	99	001	72	39.9	32.5	31.2	29.4	13.85 ?	118	105	7
09-009-2123	1	2	WATERBURY	NEW HAVEN	SHED MEADOW AND BAN	99	001	100	46.8	38.4	30.2	29.3	13.36	118	105	7
09-009-2123	2	3	WATERBURY	NEW HAVEN	SHED MEADOW AND BAN	99	001	80	38.8	30.7	29.2	28.1	12.90	118	105	7
09-009-9005	1	2	HAMDEN	NEW HAVEN	MILL ROCK BASIN	99	001	50	27.8	24.7	24.1	24.0	11.36 ?	118	105	7
09-011-3002	1	2	NORWICH	NEW LONDON	22 COURT HOUSE SQUA	99	001	71	25.8	23.5	23.4	20.9	10.41 ?	118	105	7

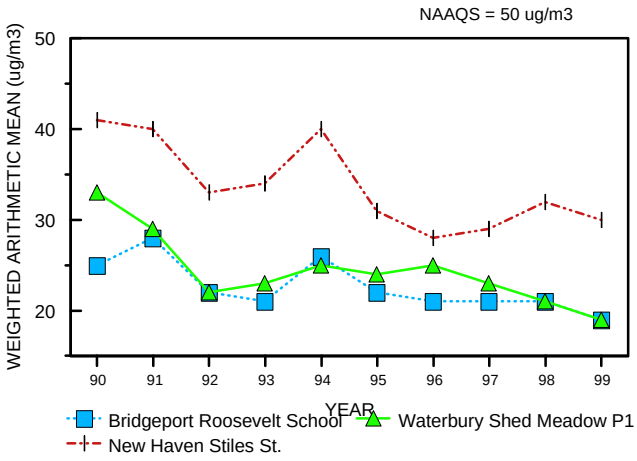
? INDICATES THAT THE MEAN DOES NOT SATISFY SUMMARY CRITERIA

EXCEPTIONAL EVENT DATA EXISTS IN ALL OF THE ABOVE SITES AND IS INCLUDED IN THE SUMMARY CALCULATIONS

Please Note: in the calculation of PM2.5 summary statistics 86 data points with data qualifiers were used. A list and discussion of data qualifiers for PM2.5 darta is presented on Page 8.

CONNECTICUT PM10





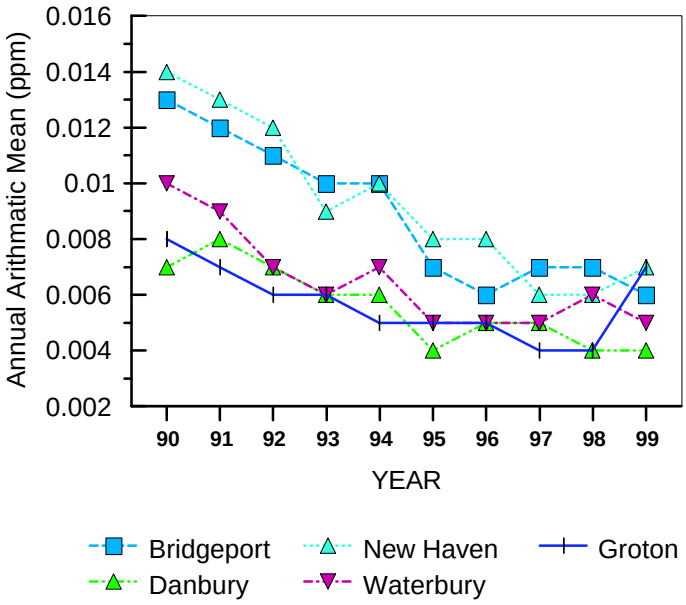
CONNECTICUT
PM10 TOTAL 0-10UM - 81102 UNITS-001 UG/CU METER(25 C)

SITE ID	POC	M T	CITY	COUNTY	ADDRESS	YR	REP ORG	NUM OBS	SCHEDULED NUM OBS	% OBS	NUM REQ	***MAXIMUM VALUES*** 1ST	2ND	3RD	4TH	VALS > 150 MEAS	EST	WTD ARITH MEAN		METH
09-001-0010	1	1	BRIDGEPORT	FAIRFIELD	ROOSEVELT SCHOOL PARK	99	001	60	60	95	63	46	41	37	37	0	0	19		62
09-001-1401	1	1	DARIEN	FAIRFIELD	I-95 AT BROOKSIDE DRI	99	001	60	60	95	63	47	42	42	41	0	0	24		62
09-001-2014	1	1	NORWALK	FAIRFIELD	I-95 AT WEST AVE	99	001	56	56	89	63	50	49	49	47	0	0	29		62
09-001-9003	1	3	WESTPORT	FAIRFIELD	SHERWOOD ISLAND STATE	99	001	54	54	86	63	41	40	33	32	0	0	15	?	62
09-003-0013	1	1	HARTFORD	HARTFORD	401 FLATBUSH AVENUE	99	001	60	60	95	63	47	37	35	33	0	0	17		62
09-003-1018	4	3	HARTFORD	HARTFORD	CORNER OF SHELDON ST.	99	001	117	42	40	181	95	81	75	74	0	0	26	?	79
09-003-1018	5	3	HARTFORD	HARTFORD	CORNER OF SHELDON ST.	99	001	90	90	100	15	95	81	75	74	0	0	32	?	79
09-003-2001	1	2	BURLINGTON	HARTFORD	PUNCH BROOK ROAD AT F	99	001	60	60	95	63	49	35	26	26	0	0	12		62
09-003-2006	1	1	EAST HARTF	HARTFORD	85 HIGH STREET EAST H	99	001	59	59	94	63	46	37	36	31	0	0	17		62
09-003-2006	9	3	EAST HARTF	HARTFORD	85 HIGH STREET EAST H	99	001	59	59	94	63	49	40	39	36	0	0	18		62
09-005-6001	1	2	TORRINGTON	LITCHFIELD	140 MAIN STREET	99	001	56	56	89	63	47	40	29	29	0	0	16		62
09-009-0018	1	1	NEW HAVEN	NEW HAVEN	STILES STREET.	99	001	58	58	74	63	51	50	44	42	0	0	27	?	62
09-009-0018	3	3	NEW HAVEN	NEW HAVEN	STILES STREET.	99	001	340	198	93	365	80	76	75	75	0	0	31	?	79
09-009-0018	4	3	NEW HAVEN	NEW HAVEN	STILES STREET.	99	001	290	290	79	365	80	76	75	75	0	0	30		79
09-009-1123	1	1	NEW HAVEN	NEW HAVEN	715 STATE STREET	99	001	58	58	92	63	44	40	36	36	0	0	20		62
09-009-1123	2	2	NEW HAVEN	NEW HAVEN	715 STATE STREET	99	001	60	60	95	63	43	36	35	34	0	0	19		62
09-009-2123	1	1	WATERBURY	NEW HAVEN	SHED MEADOW AND BANK	99	001	60	60	95	63	48	43	36	34	0	0	19		62
09-009-2123	2	3	WATERBURY	NEW HAVEN	SHED MEADOW AND BANK	99	001	58	58	92	63	55	40	38	35	0	0	20		62
09-009-2123	4	3	WATERBURY	NEW HAVEN	SHED MEADOW AND BANK	99	001	75	75	41	31	60	47	43	42	0	0	21	?	79
09-009-2123	5	3	WATERBURY	NEW HAVEN	SHED MEADOW AND BANK	99	001	75	22	21	181	60	47	43	42	0	0	21	?	79
09-011-0009	1	1	NEW LONDON	NEW LONDON	PERKINS ST TURN-AROUN	99	001	59	59	94	63	39	36	34	31	0	0	16		62
09-011-3002	1	2	NORWICH	NEW LONDON	22 COURT HOUSE SQUARE	99	001	56	56	89	63	42	35	32	29	0	0	17		62

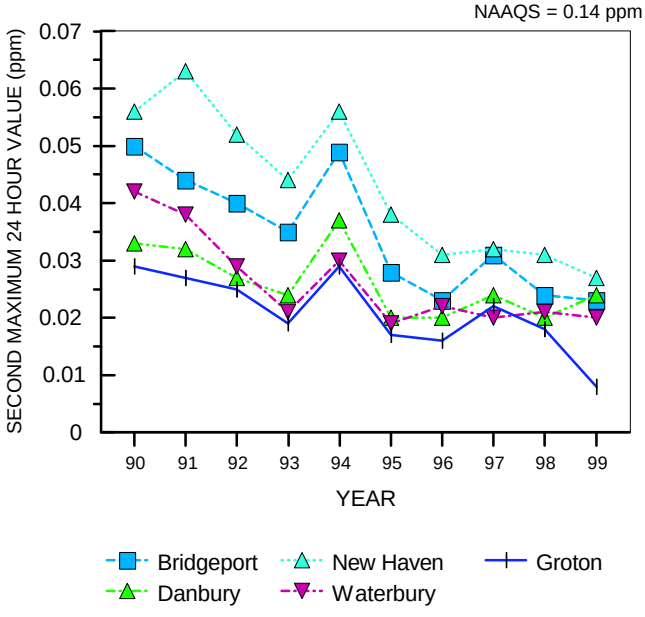
? INDICATES THAT THE MEAN DOES NOT SATISFY SUMMARY CRITERIA

CONNECTICUT SULFUR DIOXIDE

NAAQS = 0.03 ppm



NAAQS = 0.14 ppm



CONNECTICUT
SULFUR DIOXIDE 42401 UNITS:007 PPM

SITE ID	POC	MT	CITY	COUNTY	ADDRESS	YR	REP ORG	#OBS	MAX 24-HR 1ST	MAX 24-HR 2ND	OBS > STD	MAX 3-HR 1ST	MAX 3-HR 2ND	OBS > STD	MAX 1-HR 1ST	MAX 1-HR 2ND	ARIT MEAN	METH
09-001-0012	1	1	BRIDGEPORT	FAIRFIELD	115 BOSTON TERRAC	99	001	8325	0.026	0.023	0	0.056	0.052	0	0.080	0.078	0.006	60
09-001-1123	1	2	DANBURY	FAIRFIELD	TRAILER, W. CONNE	99	001	8269	0.025	0.024	0	0.029	0.028	0	0.044	0.039	0.004	60
09-001-2124	1	2	STAMFORD	FAIRFIELD	HILLANDALE AVENUE	99	001	8280	0.029	0.026	0	0.037	0.035	0	0.051	0.045	0.006	60
09-001-9003	1	3	WESTPORT	FAIRFIELD	SHERWOOD ISLAND S	99	001	8164	0.026	0.021	0	0.040	0.035	0	0.041	0.040	0.005	60
09-003-1005	1	2	ENFIELD	HARTFORD	SHAKER ROAD	99	001	147	0.011	0.008	0	0.019	0.018	0	0.021	0.020	0.007 ?	60
09-003-2006	1	1	EAST HARTFORD	HARTFORD	85 HIGH STREET EA	99	001	8271	0.021	0.019	0	0.033	0.029	0	0.038	0.033	0.004	60
09-009-1123	2	1	NEW HAVEN	NEW HAVEN	715 STATE STREET	99	001	8238	0.029	0.027	0	0.054	0.047	0	0.064	0.061	0.007	60
09-009-2123	1	2	WATERBURY	NEW HAVEN	SHED MEADOW AND B	99	001	8233	0.020	0.020	0	0.042	0.029	0	0.048	0.043	0.005	60
09-011-0007	1	2	GROTON	NEW LONDON	FIRE HEADQUARTERS	99	001	124	0.011	0.008	0	0.020	0.020	0	0.021	0.021	0.007 ?	60
09-013-0003	1	2	MANSFIELD	TOLLAND	NORTH FRONTAGE RO	99	001	260	0.009	0.009	0	0.016	0.015	0	0.018	0.017	0.007 ?	60

? INDICATES THAT THE MEAN DOES NOT SATISFY SUMMARY CRITERIA

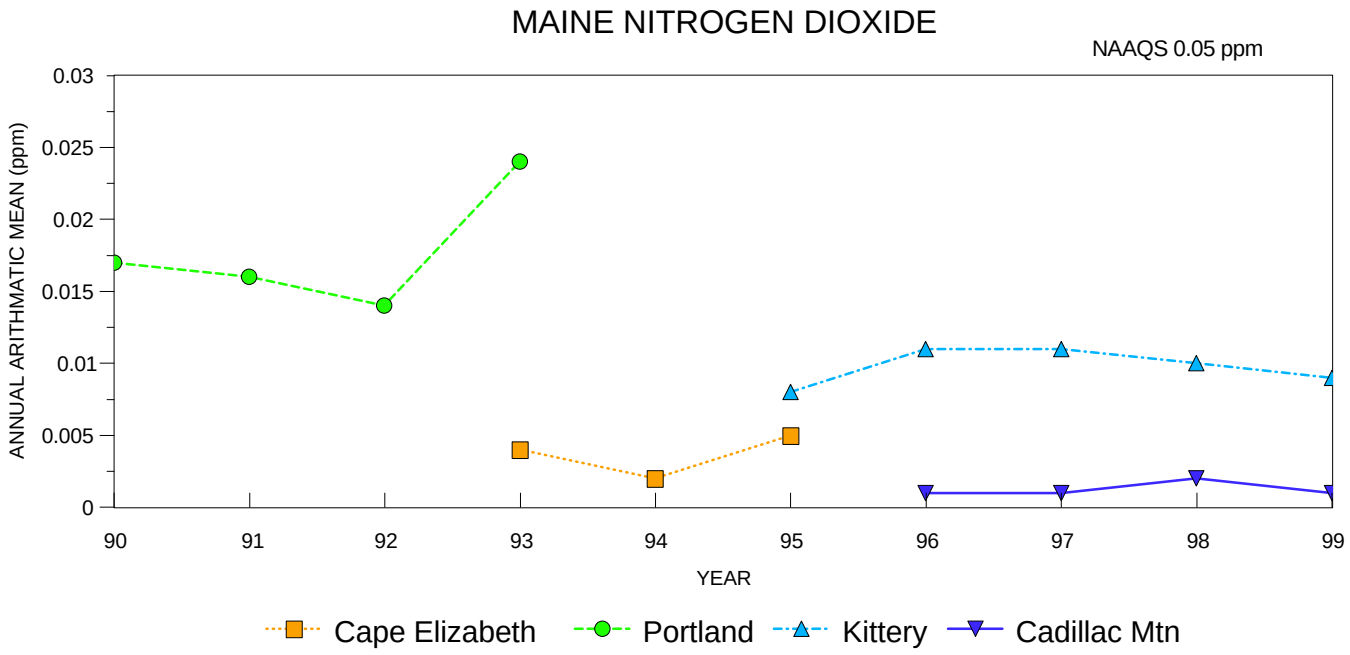
MAINE SUMMARY

In 1999, Maine did not operate any carbon monoxide (CO) monitors. Lead (Pb) monitoring was discontinued several years ago due to the extremely low lead concentrations monitored. In 1999, three photochemical assessment monitoring stations (PAMS) monitored nitrogen dioxide (NO2) during the summer (Kittery operated throughout the year). None of these sites measured any exceedances or violations of the NO2 NAAQS during 1999. The highest NO2 annual arithmetic mean measured was at Kittery. The annual mean was about 20% of the NAAQS.

Three of the Maine twelve ozone (O3) sites had exceedances of the 1-hour O3 NAAQS in 1999. No sites reporting ozone levels above the 1-hour NAAQS in 1996 and seven sites reported at least one day above this NAAQS in 1997. In 1998 five sites reported one or more days over the 1-hour NAAQS. The Cadillac Mountain site in Acadia National Park reported the highest 1-hour second maximum ozone concentration of 0.123 ppm. For the 8-hour ozone standard in 1999, five of the twelve O3 sites reported a fourth high day of at least 85 ppb. In 1999 the Kittery site reported the maximum 8-hour average of 0.112 ppm. For 1998 two sites near Portland reported the state's maximum 8-hour average of 0.116 ppm. In 1997, the site in Phippsburg reported a maximum daily 8-hour value of 0.116 ppm ozone

In 1999 no site in Maine reported 24-hour particulate matter concentrations above the (PM10) NAAQS. The Ashland site reported a PM10 concentration of 94 ug/m3 or 63% of the NAAQS that was the maximum daily concentration in Maine. There were no exceedances or violations of the annual standard in 1998. The Ashland site also reported the maximum annual arithmetic mean of 31 ug/m3 or 62% of the standard. The ten-year trend lines continue to show a slight downward trend. For PM2.5 Maine established a network of15 stations which began operation in 1999. In general the Portland area reported the highest PM2.5 concentrations.

There were no exceedances or violations reported at any of the three sulfur dioxide (SO2) sites in 1999. The highest annual arithmetic mean was reported at the Portland Shelter site at 5 ppb or 17% of the NAAQS. The Lewiston site reported the highest 24-hour second maximum at 16 ppb or 11% of the standard. The highest 3-hour second maximum of 40 ppb or 8% of the standard was also recorded in Lewiston. The ten-year graphs show that SO2 concentrations are well below the NAAQS with small year to year changes.

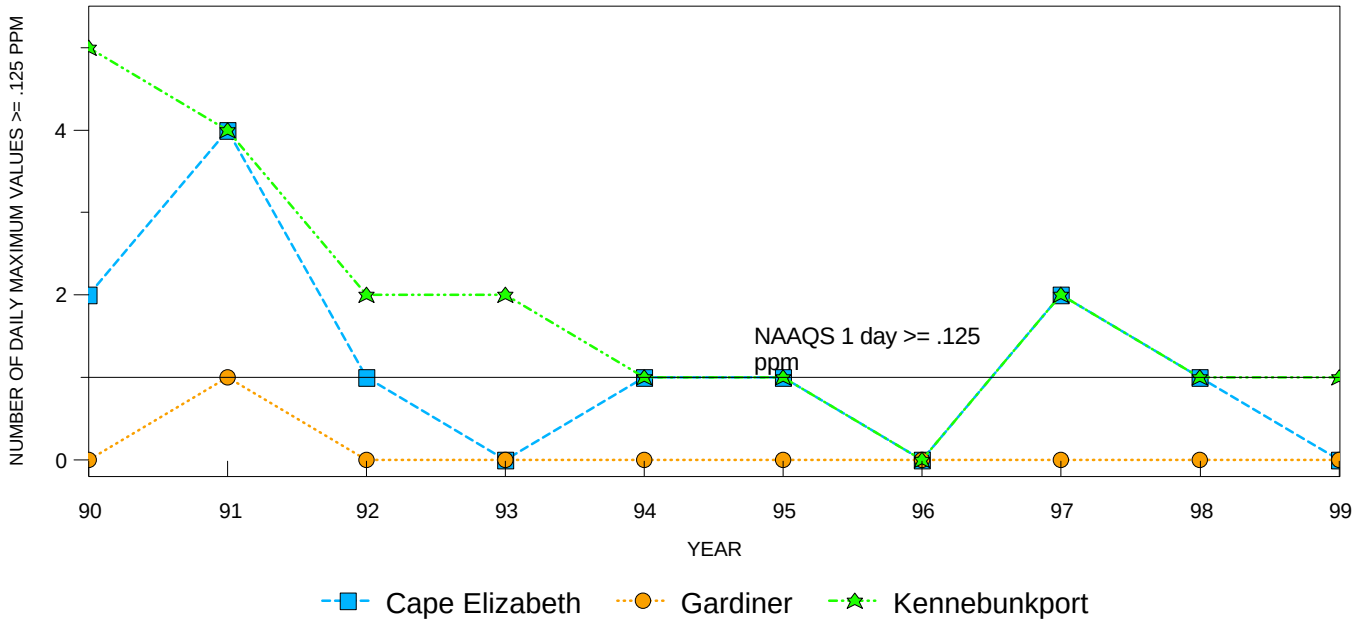


MAINE
NITROGEN DIOXIDE (NO2) UNITS: 007 PPM

SITE ID	POC	MT	CITY	COUNTY	ADDRESS	YR	REP ORG	#OBS	MAX 1ST	1-HR 2ND	MAX 1ST	24-HR 2ND	ARIT MEAN		METH
23-009-0102	1	6	BAR HARBOR	HANCOCK	TOP OF CADILLAC MOUNTAIN	99	001	3563	0.01	0.010			0.001	?	75
23-031-3002	1	6	KITTERY	YORK	FRISBEE SCHOOL, GOODSOE RO	99	019	6523	0.063	0.056			0.009	?	14

? INDICATES THAT THE MEAN DOES NOT SATISFY SUMMARY CRITERIA

MAINE OZONE



MAINE
OZONE - 44201 UNITS:007 PPM
OZONE SEASON: APR01 TO SEP 30

SITE ID	POC	MT	CITY	COUNTY	ADDRESS	YR	REP ORG	NUM MEAS	NUM REQ	VALID DAILY 1-HR MAXIMA 1ST	2ND	3RD	4TH	VALS>0.125 MEAS	VALS>0.125 EST	MISS DAYS ASSUMED < STANDARD	METH
23-005-2003	1	8	CAPE ELIZABET	CUMBERLAND	TWO LIGHTS STATE	99	001	178	183	0.109	0.105	0.097	0.092	0	0	3	47
23-009-0102	1	6	BAR HARBOR	HANCOCK	TOP OF CADILLAC	99	001	170	183	0.127	0.123	0.121	0.096	1	1.1	2	47
23-009-0103	1	2	BAR HARBOR	HANCOCK	MCFARLAND HILL-D	99	001	180	183	0.125	0.120	0.110	0.103	1	1	2	47
23-011-2005	1	2	GARDINER	KENNEBEC	PRAY STREET SCHO	99	001	183	183	0.100	0.097	0.094	0.093	0	0	0	47
23-013-0004	2	2		KNOX	PORT CLYDE, MARS	99	001	182	183	0.116	0.114	0.095	0.090	0	0	1	47
23-017-3001	1	3		OXFORD	ROUTE 5, NORTH L	99	001	182	183	0.083	0.077	0.075	0.073	0	0	1	47
23-019-4008	1	2		PENOBSCOT	SUMMIT OF RIDER	99	001	183	183	0.093	0.088	0.088	0.087	0	0	0	47
23-021-0003	1	3	DOVER-FOXCROF	PISCATAQUIS	DOVER-ANDREWS PR	99	001	181	183	0.096	0.079	0.077	0.074	0	0	0	47
23-023-0003	1	2		SAGADAHOC	NAVY ROAD	99	001	172	183	0.113	0.105	0.104	0.101	0	0	3	47
23-031-0038	1	3		YORK	PLAINS ROAD, HOL	99	001	183	183	0.105	0.102	0.094	0.093	0	0	0	47
23-031-2002	1	2		YORK	OCEAN AVE/PARSON	99	001	182	183	0.126	0.120	0.112	0.109	1	1	1	47
23-031-3002	1	6	KITTERY	YORK	FRISBEE SCHOOL,	99	019	176	183	0.124	0.104	0.103	0.100	0	0	3	11

MAINE
OZONE - 44201 UNITS:007 PPM
OZONE SEASON: APR01 TO SEP 30

SITE ID	POC	MT	CITY	COUNTY	ADDRESS	YR	REP ORG	NUM MEAS	NUM REQ	ANN SUM EXCEED PRI ST	8-HOUR AVERAGE MAXIMA 1ST	2ND	3RD	4TH	METH
23-005-2003	1	8	CAPE ELIZABET	CUMBERLAND	TWO LIGHTS STATE	99	001	178	183	2	0.103	0.090	0.081	0.076	47
23-009-0102	1	6	BAR HARBOR	HANCOCK	TOP OF CADILLAC	99	001	170	183	4	0.107	0.103	0.098	0.090	47
23-009-0103	1	2	BAR HARBOR	HANCOCK	MCFARLAND HILL-D	99	001	180	183	5	0.111	0.094	0.093	0.092	47
23-011-2005	1	2	GARDINER	KENNEBEC	PRAY STREET SCHO	99	001	183	183	1	0.087	0.084	0.082	0.080	47
23-013-0004	2	2		KNOX	PORT CLYDE, MARS	99	001	182	183	2	0.110	0.100	0.083	0.081	47
23-017-3001	1	3		OXFORD	ROUTE 5, NORTH L	99	001	182	183	0	0.076	0.065	0.061	0.061	47
23-019-4008	1	2		PENOBSCOT	SUMMIT OF RIDER	99	001	183	183	0	0.082	0.081	0.080	0.080	47
23-021-0003	1	3	DOVER-FOXCROF	PISCATAQUIS	DOVER-ANDREWS PR	99	001	181	183	1	0.091	0.070	0.067	0.067	47
23-023-0003	1	2		SAGADAHOC	NAVY ROAD	99	001	172	183	4	0.108	0.091	0.089	0.087	47
23-031-0038	1	3		YORK	PLAINS ROAD, HOL	99	001	183	183	1	0.085	0.084	0.083	0.080	47
23-031-2002	1	2		YORK	OCEAN AVE/PARSON	99	001	182	183	5	0.114	0.102	0.092	0.089	47
23-031-3002	1	6	KITTERY	YORK	FRISBEE SCHOOL,	99	019	176	183	4	0.112	0.093	0.091	0.085	11

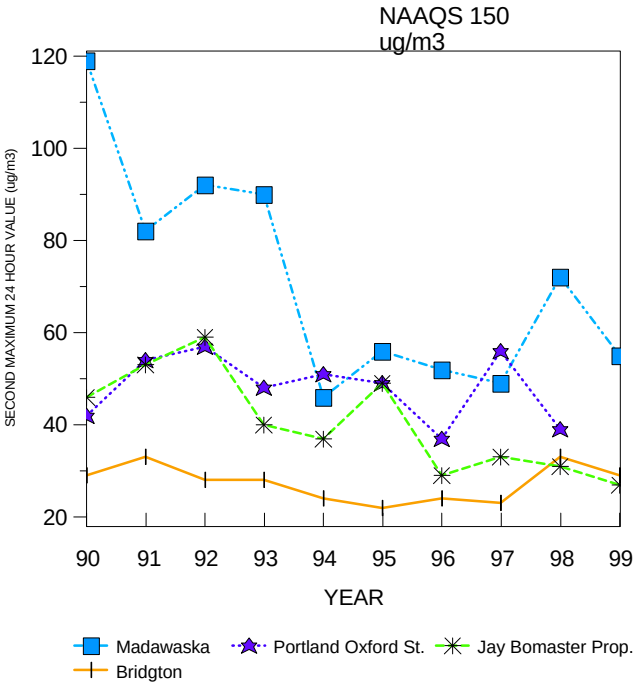
PM 2.5 Maine

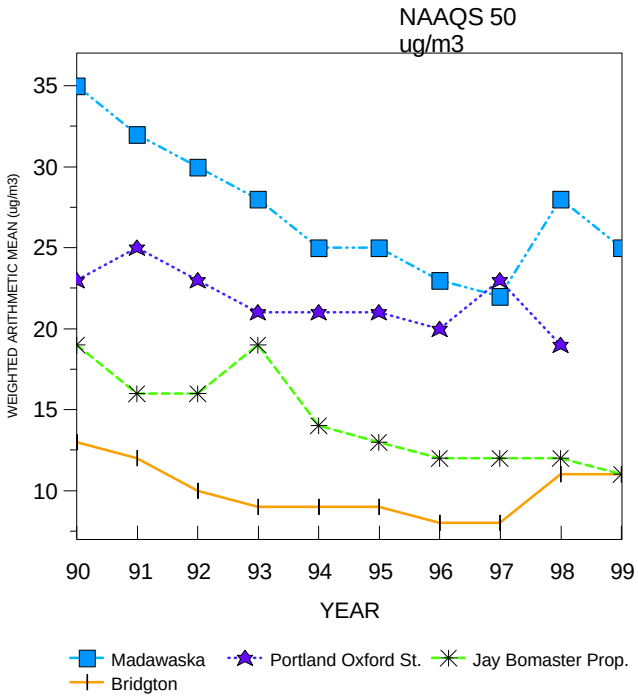
PM2.5 LOCAL CONDITIONS (88101) MAINE

SITE	POC	MT	CITY	COUNTY	ADDRESS	YR	REP ORG	#OBS	MAXIMUM VALUES 1ST	2ND	3RD	4TH	ARITH MEAN		MET	UNITS	INT
23-001-0011	1	3	LEWISTON	ANDROSCOGGIN	COUNTRY KITCHEN LOT	99	001	85	41.7	35.7	24.5	23.7	10.18		118	105	7
23-003-0013	1	2	MADAWASKA	AROOSTOOK	BIG DADDY'S RESTAUR	99	001	109	29.6	27.4	23.9	23.0	10.39		118	105	7
23-003-1011	1	2	PRESQUE ISLE	AROOSTOOK	RIVERSIDE STREET PR	99	001	111	30.1	24.0	21.5	21.1	7.99		118	105	7
23-005-0015	1	3	PORTLAND	CUMBERLAND	TUKEY'S BRIDGE-BEAN	99	001	51	52.1	29.1	25.4	23.1	11.96	?	117	105	7
23-005-0027	1	2	PORTLAND	CUMBERLAND	26 MARGINAL WAY, PO	99	001	93	48.0	34.3	27.9	26.6	10.33		118	105	7
23-005-2003	1	3	CAPE ELIZABETH	CUMBERLAND	TWO LIGHTS STATE PA	99	001	80	48.5	33.3	23.0	22.9	8.77	?	118	105	7
23-009-0103	1	2	BAR HARBOR	HANCOCK	MCFARLAND HILL-DISP	99	001	77	22.0	20.6	17.1	16.2	6.17	?	118	105	7
23-011-0016	1	3	AUGUSTA	KENNEBEC	LINCOLN STREET ELEM	99	001	53	41.9	26.2	25.6	24.0	9.76	?	117	105	7
23-017-2011	1	3	RUMFORD	OXFORD	RUMFORD AVENUE AREA	99	001	53	36.5	22.4	21.9	20.1	10.26		117	105	7
23-019-0002	1	2	BANGOR	PENOBSCOT	PUMP STATION-WASHIN	99	001	100	38.5	28.4	25.7	23.0	9.00		118	105	7
23-019-4003	1	3	OLD TOWN	PENOBSCOT	MARSH ISLAND APTS-S	99	001	52	38.0	25.7	16.2	14.7	8.58		117	105	7
23-031-0008	1	3	SACO	YORK	68 FRONT STREET, SA	99	001	45	47.7	23.4	22.1	19.2	10.31	?	117	105	7

? INDICATES THAT THE MEAN DOES NOT SATISFY SUMMARY CRITERIA

MAINE PM10



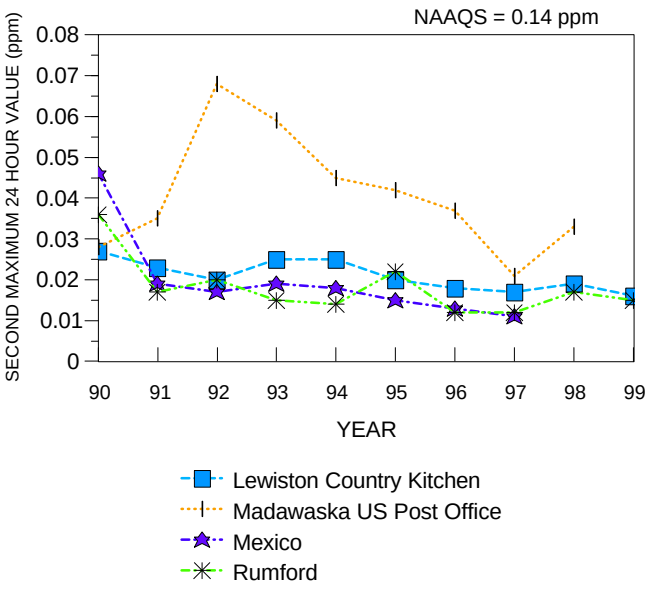


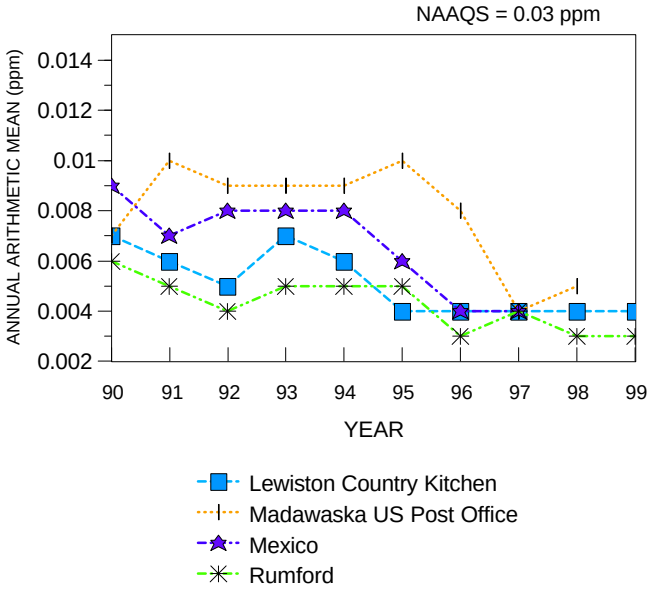
MAINE
PM10 TOTAL 0-10UM - 81102 UNITS-001 UG/CU METER(25 C)

SITE ID	POC	MT	CITY	COUNTY	ADDRESS	YR	REP ORG	NUM OBS	SCHEDULED NUM OBS	% OBS	NUM REQ	***MAXIMUM VALUES*** 1ST	2ND	3RD	4TH	VALS > 150 MEAS	EST	WTD ARITH MEAN		METH
23-001-0011	1	2	LEWISTON	ANDROSCOGG	COUNTRY KITCHEN LOT-C	99	001	51	51	81	63	48	45	37	34	0	0	19	?	64
23-003-0013	2	2	MADAWASKA	AROOSTOOK	BIG DADDY'S RESTAURAN	99	001	57	55	87	63	68	55	48	47	0	0	25		64
23-003-1008	1	3	PRESQUE IS	AROOSTOOK	PI REG OFF 58 CENTRAL	99	001	63	58	92	63	38	31	27	27	0	0	15		63
23-003-1011	2	2	PRESQUE IS	AROOSTOOK	RIVERSIDE STREET PRES	99	001	351	351	96	365	76	68	67	66	0	0	19		79
23-003-1012	1	3	LORING AFB	AROOSTOOK	BUILDING 5100 LORING	99	001	61	60	95	365	32	25	22	20	0	0	10	?	64
23-003-1014	1	3		AROOSTOOK	MAIN STREET MARS HILL	99	001	56	56	89	63	58	49	41	37	0	0	21		64
23-003-1016	1	3		AROOSTOOK	MAIN STREET (ROUTE 11	99	001	59	54	86	63	94	91	79	70	0	0	31		63
23-003-1017	1	3	HOULTON	AROOSTOOK	HOULTON PIONEER TIMES	99	001	57	56	89	63	55	45	41	39	0	0	21		64
23-005-0002	2	3	BRIDGTON	CUMBERLAND	UPPER RIDGE ROAD, ROU	99	001	55	54	86	63	48	29	23	22	0	0	11		62
23-005-0015	1	1	PORTLAND	CUMBERLAND	TUKEY'S BRIDGE-BEAN P	99	001	57	56	89	63	66	61	43	37	0	0	23		64
23-005-0027	1	1	PORTLAND	CUMBERLAND	26 MARGINAL WAY, PORT	99	001	51	51	91	56	59	42	37	35	0	0	23		62
23-007-0003	1	4	JAY	FRANKLIN	JEWELL PROPERTY-CRASH	99	103	77	77	63	123	47	37	27	26	0	0	13	?	63
23-007-0004	3	2	JAY	FRANKLIN	BOMASTER PROPERTY-JAY	99	103	74	74	60	123	43	27	24	24	0	0	11	?	62
23-011-0014	1	2	AUGUSTA	KENNEBEC	RINES HILL PARKING LO	99	001	55	55	87	63	93	76	59	58	0	0	23	?	64
23-013-2001	1	2	THOMASTON	KNOX	MITCHELL PROP.-2 DEXT	99	106	86	86	70	123	60	47	43	40	0	0	15	?	63
23-017-0008	1	2	MEXICO	OXFORD	LABONVILLE'S-ROUTE#2	99	104	165	165	90	183	70	45	43	43	0	0	17	?	62
23-017-2007	1	2	RUMFORD	OXFORD	VILLAGE GREEN-ROUTE#1	99	104	163	163	89	63	44	43	34	29	0	0	13	?	62
23-019-0002	2	2	BANGOR	PENOBSCOT	PUMP STATION-WASHINGT	99	001	61	59	94	63	48	32	27	27	0	0	17		62

? INDICATES THAT THE MEAN DOES NOT SATISFY SUMMARY CRITERIA

MAINE SULFUR DIOXIDE





MAINE
SULFUR DIOXIDE 42401 UNITS:007 PPM

SITE ID	POC	MT	CITY	COUNTY	ADDRESS	YR	REP ORG	#OBS	MAX 24-HR 1ST	MAX 24-HR 2ND	OBS > STD	MAX 3-HR 1ST	MAX 3-HR 2ND	OBS > STD	MAX 1-HR 1ST	MAX 1-HR 2ND	ARIT MEAN	METH
23-001-0011	1	1	LEWISTON	ANDROSCOGGIN	COUNTRY KITCHEN L	99	001	7673	0.017	0.016	0	0.044	0.040	0	0.129	0.055	0.004	60
23-005-0027	1	1	PORTLAND	CUMBERLAND	26 MARGINAL WAY,	99	001	7516	0.014	0.014	0	0.033	0.029	0	0.053	0.048	0.005	60
23-017-2007	2	2	RUMFORD	OXFORD	VILLAGE GREEN-ROU	99	104	7469	0.016	0.015	0	0.029	0.025	0	0.046	0.037	0.003	9

MASSACHUSETTS SUMMARY

Massachusetts maintains nine carbon monoxide (CO) monitoring sites. Four sites are located in Boston (Kenmore Square, Visconti Street-East Boston, Breman Street-East Boston, and the Federal Post Office Building). Two sites are in Springfield (East Columbus Avenue and Liberty Street) and in Worcester (Central Street and Franklin Street), and a single site is in Lowell (Old City Hall). No exceedance or violation of the one-hour or 8-hour NAAQS for CO was recorded at any of the Massachusetts CO monitoring sites in 1999, 1998 or 1997. In 1996 there were for two exceedances of the 8-hour NAAQS 9.5 ppm at the Lowell site and 10.5 ppm at the Springfield East Columbus Avenue site. Overall, the maximum one-hour and 8-hour concentrations of CO were slightly higher in 1999 when compared with 1998 and 1997. This variability in CO concentrations is evident from the ten year data records (1990-1999) and is due in part to changes in meteorology and emission source characteristics. The data, show a small general decrease in the concentration of CO over this period.

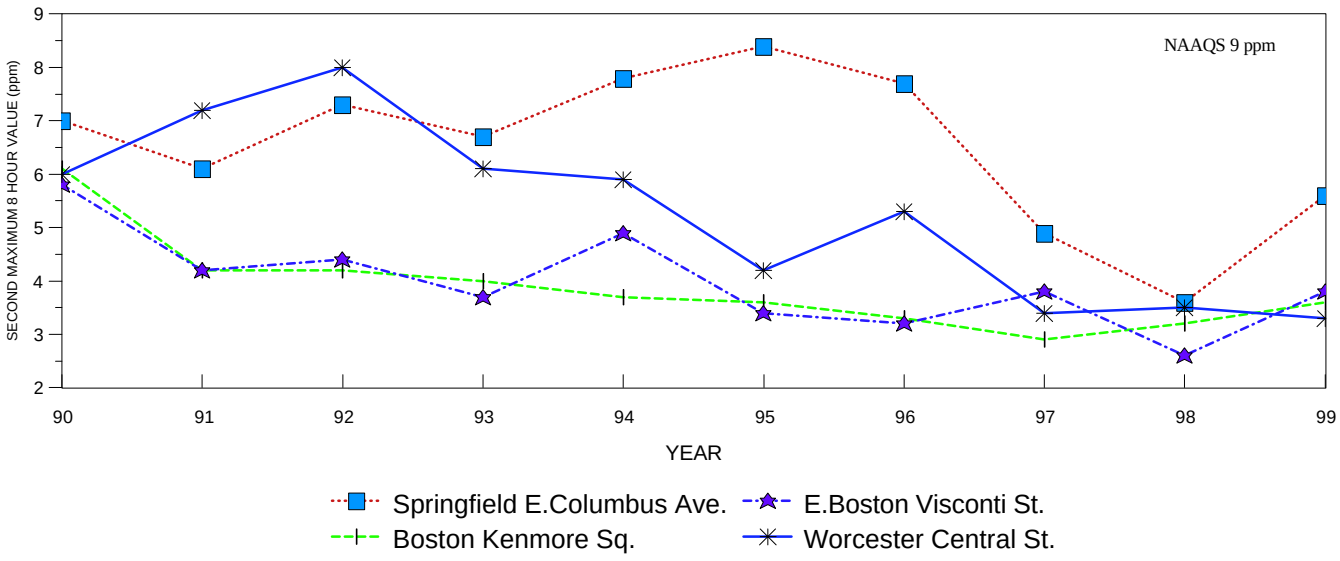
In 1996 Massachusetts discontinued lead (Pb) monitoring at all but one monitoring site in Boston, because air quality levels were well below the NAAQS and at the lowest levels of detection. The maximum 1999 quarterly average at the Kenmore Square site in Boston was 0.03 ug/m^3 or 2% of the NAAQS. Nitrogen dioxide (NO2) measurements were made at fourteen monitoring sites throughout the Commonwealth. The highest annual average concentrations were recorded in the Metropolitan Boston area, Worcester, and Springfield. The lowest concentrations were recorded at some of the rural sites, Quabbin Summit and Newbury. The Kenmore Square monitor recorded the highest 1999 average annual NO2 concentrations of 0.030 ppm NO2. The rural sites recorded average annual concentrations of 0.007 and 0.006 ppm. Yearly variability for the Massachusetts average annual NO2 data is small and no upward or downward trend is evident for the sites, over the past ten years.

Seventeen ozone monitoring sites were operated and maintained during the 1999 summer ozone season. Three monitoring sites recorded ozone concentrations above the 1-hour NAAQS for ozone. Ozone concentrations recorded during 1999 were generally higher than those recorded in 1998. Part of this difference may be due to the drier and hotter summer of 1999 than the cooler and wetter summer of 1998. The highest 1-hour ozone concentration was recorded at the Fairhaven (0.139 ppm) and the Truro (0.138 ppm) monitoring sites. For the 8-hour ozone standard in 1999, ten of the seventeen O3 sites reported a fourth high day of at least 85 ppb. The maximum 8-hour average in 1999 was in Truro at 0.116 ppm Over the most recent five years the maximum concentration of ozone and the frequency of concentration in excess of the ozone NAAQS have fluctuated due to changes in the emissions of ozone precursors and with changes in meteorology.

There are eight particulate matter (PM10) monitoring sites in Massachusetts. With the exception of the Quabbin Summit site, all of the sites are located within urban areas of the Commonwealth. The highest annual average concentrations of PM10 were recorded in Springfield (30 ug/m^3), Boston-City Square (30 ug/m^3), and Boston-Kenmore Sq. (30 ug/m^3). The highest 24-hour PM10 concentrations was recorded at Boston Kenmore (70 ug/m^3). In contrast the lowest average annual concentration was recorded at the Quabbin Summit (14 ug/m^3). Over the past ten years the concentrations of PM10 at the urban sites have shown considerable variability. For PM2.5 Massachusetts established a network of 19 stations which began operation in 1999. In general the Boston and Springfield areas reported the highest PM2.5 concentrations.

Fifteen sulfur dioxide (SO2) monitoring sites were operated in Massachusetts during 1999. No exceedance or violation of the annual or 24-hour (primary), nor the 3-hour (secondary) NAAQS for SO2 was recorded. The highest short-term (3-hour) SO2 concentrations were recorded at the Stoneham monitoring site (86 ppb). This site also recorded the maximum and second maximum 24-hour concentrations of 42 and 40 ppb. The lowest annual average SO2 concentrations were recorded in Springfield, Fall River, Worcester, and Boston-Long Island (4 ppb). The highest annual SO2 concentration was recorded in Boston-Kenmore, Stoneham, and Chelsea (7 ppb). All SO2 monitoring sites in Massachusetts showed a general decline in SO2 levels over the past ten years.

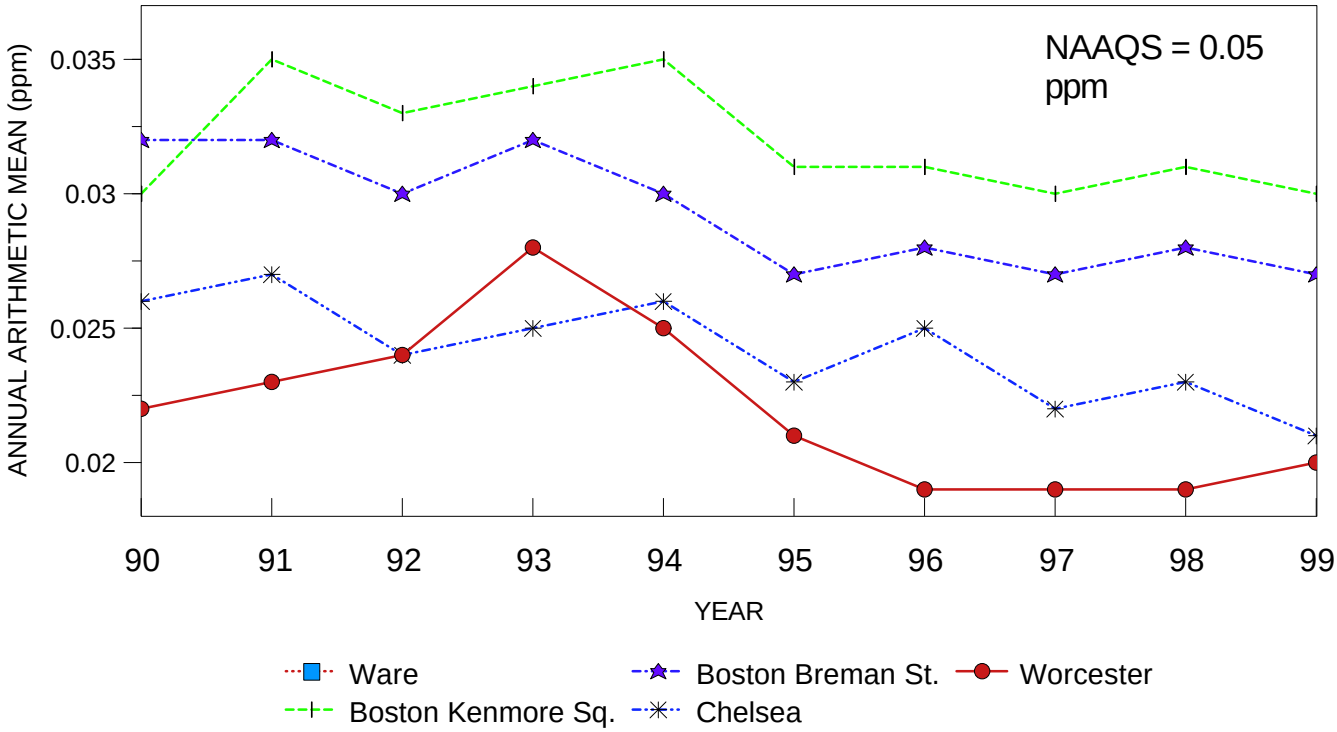
MASSACHUSETTS CARBON MONOXIDE



Carbon Monoxide - Massachusetts

SITE ID	POC	MT	CITY	COUNTY	ADDRESS	YR	REP ORG	#OBS	MAX 1ST	1-HR 2ND	OBS 35	MAX 1ST	8-HR 2ND	OBS> 9	METH
25-013-0016	1	1	SPRINGFIELD	HAMPDEN	LIBERTY STREET PARKING L	99	001	8125	5.1	5.0	0	4.1	4.0	0	67
25-013-2007	1	1	SPRINGFIELD	HAMPDEN	EAST COLUMBUS AVENUE	99	001	7733	11.2	7.9	0	5.6	5.6	0	67
25-017-0007	1	2	LOWELL	MIDDLESEX	OLD CITY HALL, MERRIMACK	99	001	7961	8.6	8.4	0	4.2	4.2	0	67
25-025-0002	1	2	BOSTON	SUFFOLK	KENMORE SQUARE, 590 COMM	99	001	8119	4.8	4.6	0	4.2	3.6	0	0
25-025-0016	1	2	BOSTON	SUFFOLK	VISCONTI STREET, EAST BO	99	001	4040	5.9	5.9	0	5.0	3.8	0	67
25-025-0021	1	1	BOSTON	SUFFOLK	340 BREMAN STREET, EAST	99	001	7201	9.1	7.0	0	5.3	4.2	0	67
25-025-0038	1	1	BOSTON	SUFFOLK	FEDERAL POST OFF BLDG, M	99	001	8154	4.6	4.4	0	3.5	3.3	0	67
25-027-0020	1	2	WORCESTER	WORCESTER	CENTRAL STREET FIRE STAT	99	001	7357	6.1	4.9	0	4.6	3.3	0	67
25-027-0022	1	2	WORCESTER	WORCESTER	FRANKLIN STREET PARKING	99	001	6729	6.8	6.8	0	3.7	3.1	0	67

MASSACHUSETTS NITROGEN DIOXIDE

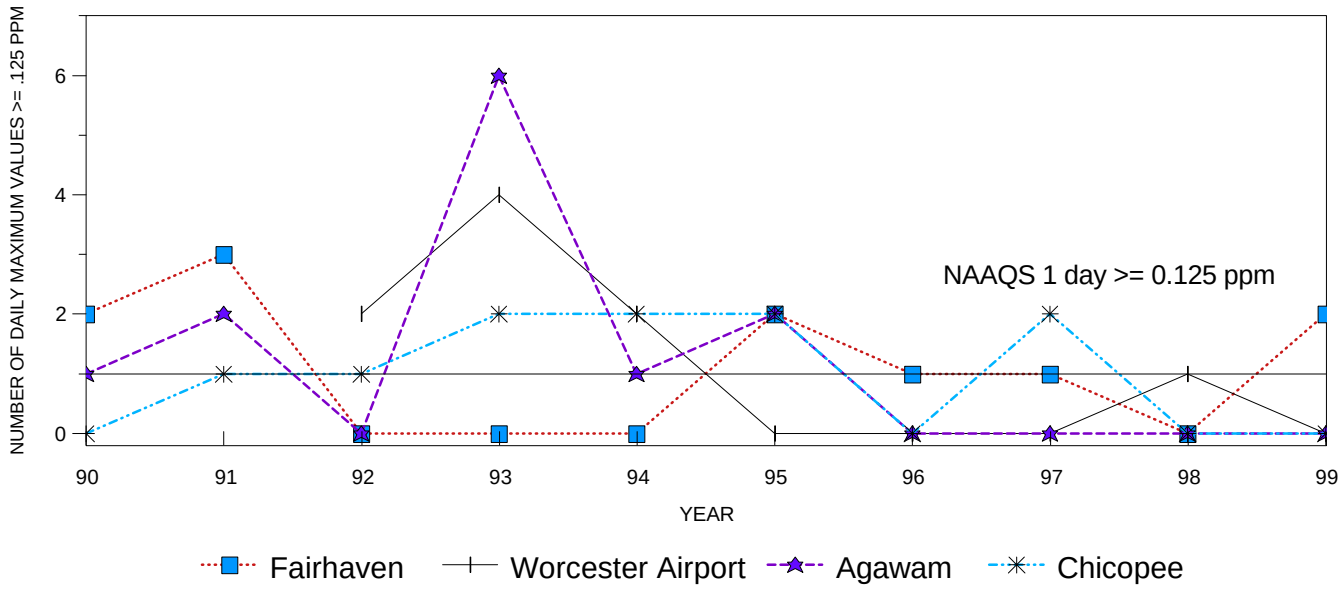


MASSACHUSETTS
NITROGEN DIOXIDE (NO2) UNITS: 007 PPM

SITE ID	POC	MTC	CITY	COUNTY	ADDRESS	YR	REP ORG	#OBS	MAX 1ST	1-HR 2ND	MAX 1ST	24-HR 2ND	ARIT MEAN		METH
25-001-0002	1	8	TRURO	BARNSTABLE	FOX BOTTOM AREA-CAPE COD N	99	001	5579	0.047	0.05			0.004	?	74
25-005-1005	1	8	EASTON	BRISTOL	1 BORDERLAND ST.	99	001	4874	0.041	0.04			0.007	?	74
25-009-2006	1	8	LYNN	ESSEX	390 PARKLAND AVE. (LYNN WA	99	001	5476	0.074	0.07			0.013	?	82
25-009-4004	1	8	NEWBURY	ESSEX	SUNSET BOULEVARD	99	001	4938	0.047	0.05			0.006	?	74
25-013-0003	1	8	AGAWAM	HAMPDEN	152 SOUTH WESTFIELD STREET	99	001	4859	0.060	0.06			0.008	?	74
25-013-0008	1	8	CHICOPEE	HAMPDEN	ANDERSON ROAD AIR FORCE BA	99	001	5535	0.101	0.06			0.012	?	82
25-013-0016	1	2	SPRINGFIELD	HAMPDEN	LIBERTY STREET PARKING LOT	99	001	8043	0.141	0.11			0.022		0
25-015-4002	1	8	WARE	HAMPSHIRE	QUABBIN SUMMIT	99	001	8299	0.057	0.06			0.007		82
25-025-0002	1	3	BOSTON	SUFFOLK	KENMORE SQUARE, 590 COMMON	99	001	8160	0.093	0.09			0.030		82
25-025-0021	1	1	BOSTON	SUFFOLK	340 BREMAN STREET, EAST BO	99	001	7487	0.117	0.10			0.027		74
25-025-0040	1	4	BOSTON	SUFFOLK	531A EAST FIRST STREET	99	005	7745	0.078	0.08			0.021		74
25-025-0041	1	8	BOSTON	SUFFOLK	LONG ISLAND HOSPITAL ROAD	99	001	4116	0.072	0.07			0.013	?	0
25-025-1003	1	1	CHELSEA	SUFFOLK	POWDER HORN HILL	99	001	7514	0.082	0.07			0.021		74
25-027-0020	1	2	WORCESTER	WORCESTER	CENTRAL STREET FIRE STATIO	99	001	7300	0.084	0.08			0.020		74

? INDICATES THAT THE MEAN DOES NOT SATISFY SUMMARY CRITERIA

MASSACHUSETTS OZONE



MASSACHUSETTS
OZONE - 44201 UNITS:007 PPM
OZONE SEASON: APR01 TO SEP 30

SITE ID	POC	MT	CITY	COUNTY	ADDRESS	YR	REP ORG	NUM MEAS	NUM REQ	VALID DAILY 1-HR MAXIMUM ********MAXIMA********* 1ST	2ND	3RD	4TH	MISS DAYS VALS>0.12 MEAS	EST	ASSUMED STAN	METH
25-001-0002	1	8	TRURO	BARNSTABLE	FOX BOTTOM AREA-	99	001	180	183	0.138	0.127	0.115	0.112	2	2	0	87
25-003-4002	1	2	ADAMS	BERKSHIRE	MT. GREYLOCK SUM	99	001	149	183	0.093	0.092	0.092	0.083	0	0	4	87
25-005-1002	1	2	FAIRHAVEN	BRISTOL	LEROY WOOD SCHOO	99	001	180	183	0.139	0.125	0.118	0.118	2	2	3	87
25-005-1005	1	7	EASTON	BRISTOL	1 BORDERLAND ST.	99	001	174	183	0.101	0.099	0.097	0.096	0	0	5	87
25-009-0005	1	1	LAWRENCE	ESSEX	HIGH STREET, STO	99	001	177	183	0.092	0.090	0.082	0.082	0	0	6	87
25-009-2006	1	8	LYNN	ESSEX	390 PARKLAND AVE	99	001	180	183	0.122	0.115	0.108	0.103	0	0	0	87
25-009-4004	1	7	NEWBURY	ESSEX	SUNSET BOULEVARD	99	001	174	183	0.124	0.120	0.109	0.103	0	0	6	87
25-013-0003	1	8	AGAWAM	HAMPDEN	152 SOUTH WESTFI	99	001	177	183	0.104	0.099	0.098	0.097	0	0	4	87
25-013-0008	1	7	CHICOPEE	HAMPDEN	ANDERSON ROAD AI	99	001	180	183	0.113	0.111	0.108	0.103	0	0	3	87
25-015-0103	1	2	AMHERST	HAMPSHIRE	NORTH PLEASANT S	99	001	170	183	0.111	0.110	0.102	0.100	0	0	8	87
25-015-4002	1	7	WARE	HAMPSHIRE	QUABBIN SUMMIT	99	001	171	183	0.125	0.113	0.109	0.108	1	1.1	2	87
25-017-1102	1	1	STOW	MIDDLESEX	US MILITARY RESE	99	001	179	183	0.111	0.108	0.105	0.101	0	0	3	87
25-017-4003	1	2	WALTHAM	MIDDLESEX	BEAVER STREET	99	001	177	183	0.112	0.106	0.103	0.103	0	0	4	87
25-025-0041	1	8	BOSTON	SUFFOLK	LONG ISLAND HOSP	99	001	179	183	0.123	0.114	0.103	0.101	0	0	4	87
25-025-0042	1	2	BOSTON	SUFFOLK	HARRISON AVENUE	99	000	155	183	0.097	0.077	0.072	0.070	0	0	5	47
25-025-1003	1	1	CHELSEA	SUFFOLK	POWDER HORN HILL	99	001	176	183	0.109	0.105	0.102	0.100	0	0	0	87
25-027-0015	1	1	WORCESTER	WORCESTER	WORCESTER AIRPOR	99	001	176	183	0.114	0.113	0.108	0.106	0	0	4	87

MASSACHUSETTS
OZONE - 44201 UNITS:007 PPM
OZONE SEASON: APR01 TO SEP 30

SITE ID	POC	MT	CITY	COUNTY	ADDRESS	YR	REP ORG	NUM MEAS	NUM REQ	ANN SUM EXCEED PRI ST	8-HOUR AVERAGE ********MAXIMA********* 1ST	2ND	3RD	4TH	METH
25-001-0002	1	8	TRURO	BARNSTABLE	FOX BOTTOM AREA-	99	001	180	183	12	0.116	0.115	0.104	0.101	87
25-003-4002	1	2	ADAMS	BERKSHIRE	MT. GREYLOCK SUM	99	001	149	183	1	0.086	0.083	0.080	0.075	87
25-005-1002	1	2	FAIRHAVEN	BRISTOL	LEROY WOOD SCHOO	99	001	180	183	8	0.112	0.109	0.101	0.098	87
25-005-1005	1	7	EASTON	BRISTOL	1 BORDERLAND ST.	99	001	174	183	3	0.091	0.089	0.086	0.083	87
25-009-0005	1	1	LAWRENCE	ESSEX	HIGH STREET, STO	99	001	177	183	1	0.088	0.083	0.075	0.068	87
25-009-2006	1	8	LYNN	ESSEX	390 PARKLAND AVE	99	001	180	183	6	0.109	0.101	0.096	0.088	87
25-009-4004	1	7	NEWBURY	ESSEX	SUNSET BOULEVARD	99	001	174	183	6	0.112	0.108	0.089	0.087	87
25-013-0003	1	8	AGAWAM	HAMPDEN	152 SOUTH WESTFI	99	001	177	183	1	0.088	0.084	0.083	0.081	87
25-013-0008	1	7	CHICOPEE	HAMPDEN	ANDERSON ROAD AI	99	001	180	183	7	0.095	0.093	0.089	0.088	87
25-015-0103	1	2	AMHERST	HAMPSHIRE	NORTH PLEASANT S	99	001	170	183	3	0.098	0.089	0.085	0.084	87
25-015-4002	1	7	WARE	HAMPSHIRE	QUABBIN SUMMIT	99	001	171	183	9	0.106	0.102	0.094	0.094	87
25-017-1102	1	1	STOW	MIDDLESEX	US MILITARY RESE	99	001	179	183	8	0.096	0.095	0.094	0.093	87
25-017-4003	1	2	WALTHAM	MIDDLESEX	BEAVER STREET	99	001	177	183	5	0.104	0.098	0.091	0.091	87
25-025-0041	1	8	BOSTON	SUFFOLK	LONG ISLAND HOSP	99	001	179	183	4	0.102	0.100	0.089	0.087	87
25-025-0042	1	2	BOSTON	SUFFOLK	HARRISON AVENUE	99	000	155	183	0	0.066	0.064	0.064	0.058	47
25-025-1003	1	1	CHELSEA	SUFFOLK	POWDER HORN HILL	99	001	176	183	3	0.102	0.093	0.089	0.084	87
25-027-0015	1	1	WORCESTER	WORCESTER	WORCESTER AIRPOR	99	001	176	183	8	0.101	0.098	0.096	0.093	87

PM 2.5 Massachusetts

PM 2.5 LOCAL CONDITIONS (88101) MASSACHUSETTS

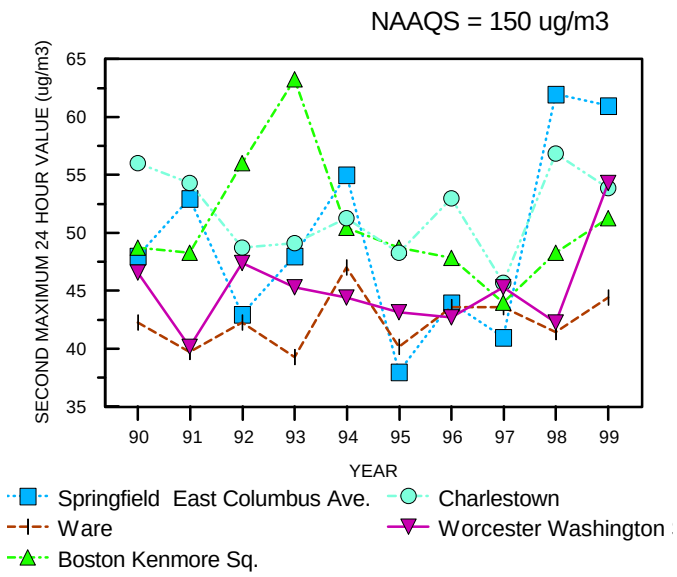
SITE ID	POC	MT	CITY	COUNTY	ADDRESS	YR	REP ORG	#OBS	MAXIMUM VALUES 1ST	2ND	3RD	4TH	ARITH MEAN		METHOD	UNITS	INTERVAL
25-003-5001	1	2	PITTSFIELD	BERKSHIRE	78 CENTER STREET, P	99	001	103	64.8	48.7	47.7	37.0	12.92		120	105	7
25-005-2004	1	2	NEW BEDFORD	BRISTOL	YMCA, 25 WATER STRE	99	001	112	36.0	35.2	30.0	29.6	12.11		120	105	7
25-005-3001	1	2	FALL RIVER	BRISTOL	CENTRAL FIRE STATIO	99	001	112	38.1	37.9	36.0	32.5	11.79		120	105	7
25-009-2006	1	2	LYNN	ESSEX	390 PARKLAND AVE.	99	001	99	46.4	33.0	33.0	27.7	11.26		120	105	7
25-009-5005	1	2	HAVERHILL	ESSEX	WASHINGTON ST. (CON	99	001	104	70.1	46.9	42.3	40.7	12.09		120	105	7
25-009-6001	1	2	LAWRENCE	ESSEX	WALL EXPERIMENT STA	99	001	72	51.0	31.3	29.3	23.8	10.98	?	119	105	7
25-013-0008	1	2	CHICOPEE	HAMPDEN	ANDERSON ROAD AIR F	99	001	181	39.2	27.6	27.3	27.2	9.90	?	120	105	7
25-013-0016	1	2	SPRINGFIELD	HAMPDEN	LIBERTY STREET PARK	99	001	118	47.7	47.6	41.1	39.3	14.67		120	105	7
25-013-0016	2	3	SPRINGFIELD	HAMPDEN	LIBERTY STREET PARK	99	001	100	47.7	42.4	41.4	35.6	13.52		120	105	7
25-013-2007	1	2	SPRINGFIELD	HAMPDEN	EAST COLUMBUS AVENU	99	001	110	47.4	47.0	46.8	43.8	14.55		120	105	7
25-015-4002	1	2	WARE	HAMPSHIRE	QUABBIN SUMMIT	99	001	113	45.6	41.7	31.1	25.1	9.02		120	105	7
25-017-1102	1	2	STOW	MIDDLESEX	US MILITARY RESERVA	99	001	95	29.5	29.2	26.8	25.8	9.60		120	105	7
25-021-0007	1	2	QUINCY	NORFOLK	HANCOCK STREET	99	001	115	46.6	29.9	29.1	28.2	12.20		120	105	7
25-021-0007	2	3	QUINCY	NORFOLK	HANCOCK STREET	99	001	39	23.1	22.9	20.9	19.9	9.73	?	120	105	7
25-023-0004	1	2	BROCKTON	PLYMOUTH	120 COMMERCIAL ST,	99	001	102	42.4	36.3	26.0	25.8	11.27		120	105	7
25-023-0004	2	3	BROCKTON	PLYMOUTH	120 COMMERCIAL ST,	99	001	84	43.7	39.9	29.7	27.0	12.15		120	105	7
25-025-0002	1	2	BOSTON	SUFFOLK	KENMORE SQUARE, 590	99	001	109	50.1	47.6	37.0	36.8	14.88		120	105	7
25-025-0027	1	2	BOSTON	SUFFOLK	ONE CITY SQUARE, CH	99	001	111	49.1	40.5	34.5	34.3	15.39		120	105	7
25-025-0027	2	3	BOSTON	SUFFOLK	ONE CITY SQUARE, CH	99	001	63	49.6	34.3	31.5	30.9	15.42	?	120	105	7
25-025-0042	1	2	BOSTON	SUFFOLK	HARRISON AVENUE	99	001	155	50.8	37.9	30.2	29.7	11.51		120	105	7
25-027-0020	1	2	WORCESTER	WORCESTER	CENTRAL STREET FIRE	99	001	115	49.1	35.5	35.5	35.5	13.38		120	105	7
25-027-0020	2	3	WORCESTER	WORCESTER	CENTRAL STREET FIRE	99	001	104	47.3	40.0	37.0	36.1	13.37		120	105	7
25-027-2004	1	2	FITCHBURG	WORCESTER	67 RINDGE ROAD, FIT	99	001	99	45.2	34.5	24.2	23.8	9.45		120	105	7

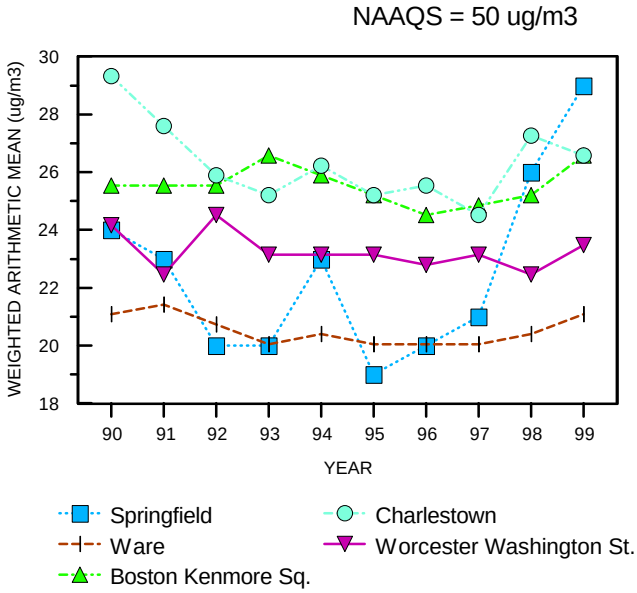
? INDICATES THAT THE MEAN DOES NOT SATISFY SUMMARY CRITERIA

EXCEPTIONAL EVENT DATA EXISTS IN ALL OF THE ABOVE SITES AND IS INCLUDED IN THE SUMMARY CALCULATIONS

Please Note: in the calculation of PM2.5 summary statistics 2415 data points with data qualifiers were used.
A list and discussion of data qualifiers for PM2.5 darta is presented on Page 8.

MASSACHUSETTS PM10



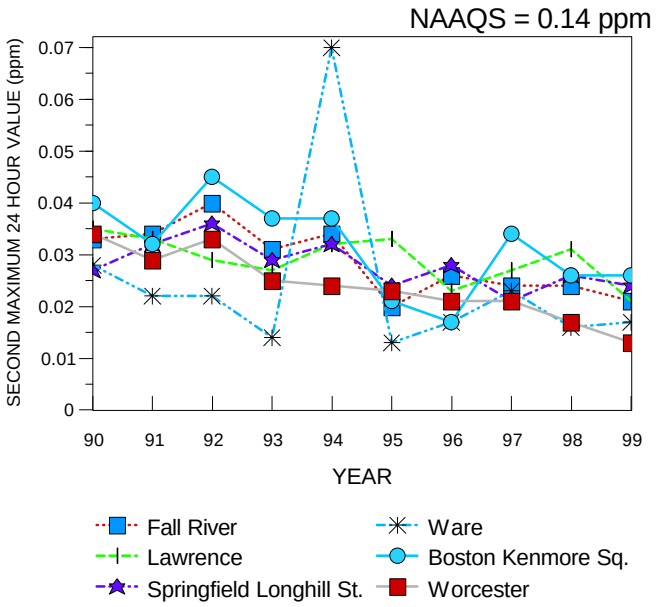


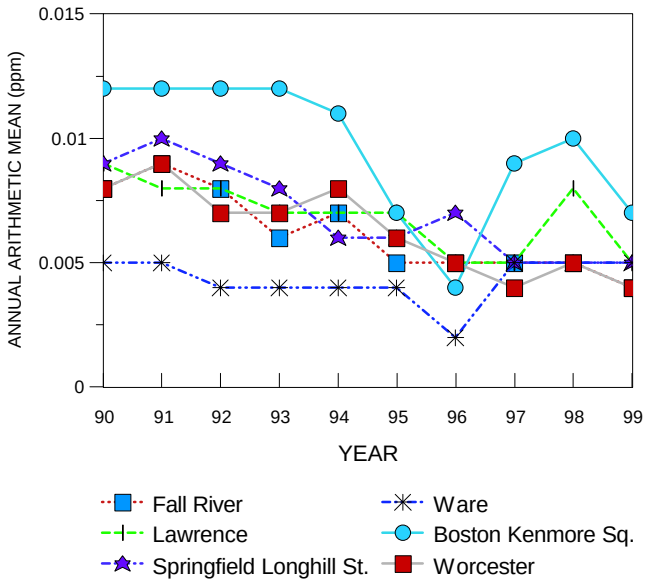
MASSACHUSETTS
PM10 TOTAL 0-10UM - 81102 UNITS-001 UG/CU METER(25 C)

SITE ID	POC	MT	CITY	COUNTY	ADDRESS	YR	REP ORG	NUM OBS	SCHEDULED NUM OBS	% OBS	NUM REQ	***MAXIMUM VALUES*** 1ST	2ND	3RD	4TH	VALS > 150 MEAS	EST	WTD ARITH MEAN		METH
25-013-0011	2	2	SPRINGFIEL	HAMPDEN	59 HOWARD STREET	99	001	55	55	87	63	64	59	46	45	0	0	24		63
25-013-2007	1	1	SPRINGFIEL	HAMPDEN	EAST COLUMBUS AVENUE	99	001	57	56	89	63	69	61	57	55	0	0	29		63
25-013-2007	3	3	SPRINGFIEL	HAMPDEN	EAST COLUMBUS AVENUE	99	001	51	50	79	63	67	66	52	51	0	0	30		63
25-015-4002	1	2	WARE	HAMPSHIRE	QUABBIN SUMMIT	99	001	56	56	89	63	55	42	36	31	0	0	14		62
25-025-0002	1	1	BOSTON	SUFFOLK	KENMORE SQUARE, 590 C	99	001	57	57	90	63	70	58	51	50	0	0	30		63
25-025-0012	1	1	BOSTON	SUFFOLK	115 SOUTHAMPTON STREE	99	001	56	56	89	63	68	65	49	49	0	0	24		62
25-025-0012	2	3	BOSTON	SUFFOLK	115 SOUTHAMPTON STREE	99	001	53	53	84	63	68	47	46	42	0	0	24		62
25-025-0024	1	1	BOSTON	SUFFOLK	200 COLUMBUS AVENUE	99	001	52	52	83	63	61	50	39	39	0	0	24	?	0
25-025-0027	1	1	BOSTON	SUFFOLK	ONE CITY SQUARE, CHAR	99	001	55	55	87	63	70	64	51	49	0	0	30		0
25-025-0027	3	3	BOSTON	SUFFOLK	ONE CITY SQUARE, CHAR	99	001	45	45	71	63	71	60	56	51	0	0	32	?	0
25-027-0016	1	1	WORCESTER	WORCESTER	2 WASHINGTON STREET	99	001	53	53	84	63	66	65	58	47	0	0	21	?	62

? INDICATES THAT THE MEAN DOES NOT SATISFY SUMMARY CRITERIA

MASSACHUSETTS SULFUR DIOXIDE





MASSACHUSETTS
SULFUR DIOXIDE 42401 UNITS:007 PPM

SITE ID	POC	MT	CITY	COUNTY	ADDRESS	YR	REP ORG	#OBS	MAX 24-HR 1ST	MAX 24-HR 2ND	OBS > STD	MAX 3-HR 1ST	MAX 3-HR 2ND	OBS > STD	MAX 1-HR 1ST	MAX 1-HR 2ND	ARIT MEAN	METH
25-005-1004	1	1	FALL RIVER	BRISTOL	GLOBE STREET	99	1	8420	0.033	0.021	0	0.081	0.074	0	0.11	0.10	0.004	77
25-009-0005	1	1	LAWRENCE	ESSEX	HIGH STREET, STOR	99	1	8532	0.024	0.021	0	0.059	0.055	0	0.09	0.07	0.005	60
25-009-5004	1	4	HAVERHILL	ESSEX	NETTLE SCHOOL, BO	99	2	7874	0.02	0.02	0	0.026	0.023	0	0.03	0.03	0.005	09
25-013-0016	1	1	SPRINGFIELD	HAMPDEN	LIBERTY STREET PA	99	1	8441	0.019	0.019	0	0.030	0.030	0	0.05	0.04	0.004	60
25-013-1009	1	1	SPRINGFIELD	HAMPDEN	LONGHILL STREET S	99	1	8440	0.026	0.024	0	0.036	0.036	0	0.04	0.04	0.005	61
25-015-4002	1	2	WARE	HAMPSHIRE	QUABBIN SUMMIT	99	1	8556	0.019	0.017	0	0.030	0.027	0	0.04	0.03	0.005	61
25-017-1701	1	4	STONEHAM	MIDDLESEX	HILL STREET	99	25	7751	0.042	0.04	0	0.086	0.076	0	0.11	0.10	0.007	09
25-017-4003	1	1	WALTHAM	MIDDLESEX	BEAVER STREET	99	1	4092	0.024	0.02	0	0.067	0.059	0	0.10	0.10	0.005 ?	61
25-025-0002	1	1	BOSTON	SUFFOLK	KENMORE SQUARE, 5	99	1	8479	0.027	0.026	0	0.057	0.045	0	0.06	0.06	0.007	61
25-025-0019	1	4	BOSTON	SUFFOLK	LONG ISLAND, BOST	99	5	8349	0.019	0.019	0	0.054	0.035	0	0.07	0.06	0.004	60
25-025-0020	1	4	BOSTON	SUFFOLK	DEWAR STREET, DOR	99	5	8352	0.028	0.023	0	0.058	0.057	0	0.08	0.07	0.006	60
25-025-0021	1	1	BOSTON	SUFFOLK	340 BREMAN STREET	99	1	7893	0.022	0.022	0	0.047	0.046	0	0.07	0.06	0.006	00
25-025-0021	2	4	BOSTON	SUFFOLK	340 BREMAN STREET	99	5	8325	0.023	0.019	0	0.057	0.041	0	0.09	0.08	0.006	60
25-025-0040	1	4	BOSTON	SUFFOLK	531A EAST FIRST S	99	5	8310	0.026	0.025	0	0.055	0.055	0	0.09	0.07	0.007	60
25-025-1003	1	1	CHELSEA	SUFFOLK	POWDER HORN HILL	99	1	8525	0.024	0.024	0	0.057	0.056	0	0.07	0.07	0.007	60
25-027-0020	1	1	WORCESTER	WORCESTER	CENTRAL STREET FI	99	1	7619	0.018	0.013	0	0.025	0.024	0	0.05	0.03	0.004	60

? INDICATES THAT THE MEAN DOES NOT SATISFY SUMMARY CRITERIA

NEW HAMPSHIRE SUMMARY

In 1999, there were no exceedances or violations to the 8-hour or 1-hour NAAQSs at either of the two carbon monoxide monitoring (CO) sites in the state. This is the third year in a row with no exceedances. The last exceedance of the 8-hour carbon monoxide NAAQS was in 1996 with Manchester reporting a value of 13.5 ppm. Nashua reported the highest second maximum 8-hour average in 1999 of 5.3 ppm or 59% of the NAAQS. The ten year graph of CO levels shows significant year to year fluctuations.

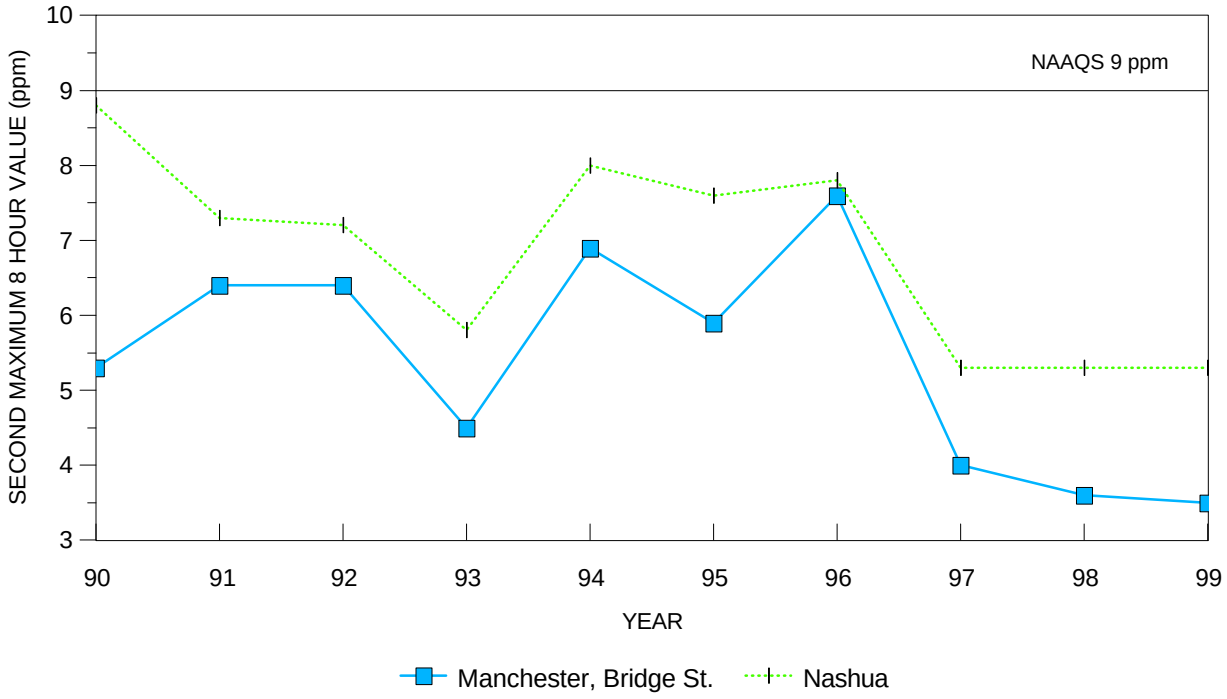
In 1996 New Hampshire discontinued lead (Pb) monitoring, because air quality levels were well below the NAAQS approaching minimum detection levels. In 1999 nitrogen dioxide (NO2) monitoring was conducted at four sites. The Manchester site measured the maximum NO2 annual average of 16 ppb or 32% of the NAAQS. There have been no significant trends for NO2 in the last ten years.

None of the fourteen ozone (O3) sites operating in New Hampshire reported violations to the 1-hour NAAQS in 1999. The Rye Harbor site reported the highest daily maximum 1-hour value of 0.124 ppm or 99% of the standard. 1997 was the last year any sites in New Hampshire reported exceedances or violations to the ozone 1-hour NAAQS. For the 8-hour ozone standard in 1999, two of the twelve O3 sites reported a fourth high day of at least 85 ppb. The maximum 8-hour average in 1999 was in Rye Harbor at 0.111 ppm

None of the thirteen Particulate Matter (with a mass mean diameters of less than 10 microns) (PM10) sites in New Hampshire had any exceedances or violations of the annual or 24-hour NAAQS for PM10 in 1999, 1998 or 1997. The highest 24 hour values were reported at Berlin with a highest second maximum value of 63 ug/m3 or 42 % of the daily standard. The maximum annual average was also recorded in Berlin with a reported concentration of 29 ug/m3 or 58% of the NAAQS. Over the past ten years all the New Hampshire PM10 monitoring sites have recorded particulate matter concentrations below the annual and the 24-hour NAAQS. Yearly variability in the data is common, in part determined by meteorology, transport of particulate matter from distant sources, and changes in the emission strength of local sources. For PM2.5 New Hampshire established a network of 9 stations which began operation in 1999. The Portsmouth and Manchester areas reported the highest PM2.5 concentrations.

There were no exceedances or violations reported at any of the 11 sulfur dioxide (SO2) sites in 1999. The highest annual arithmetic mean was reported in Manchester at 8 ppb or 27% of the NAAQS. Northumberland (Groveton) reported the highest 24-hour second maximum of 34 ppb or 24% of the standard, and Pembroke reported the highest 3-hour second maximum of 113 ppb or 23% of NAAQS. Statewide, the SO2 ten-year data showed no significant trends.

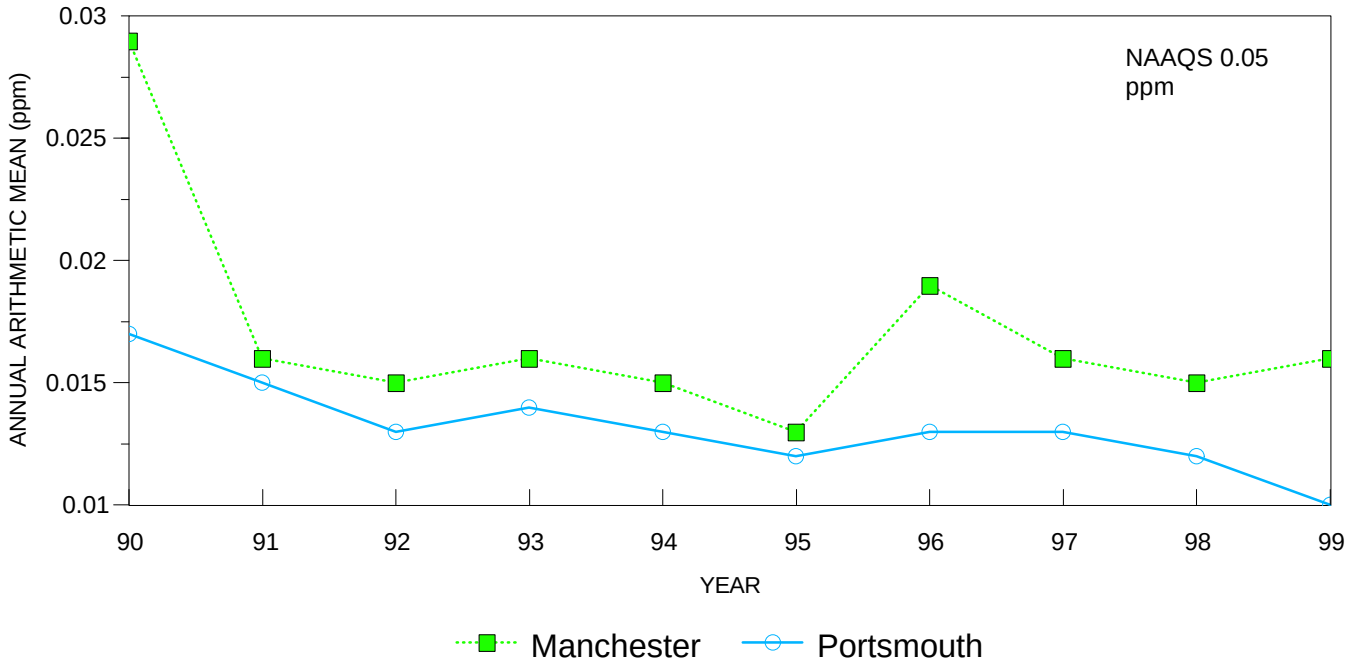
NEW HAMPSHIRE CARBON MONOXIDE



Carbon Monoxide - New Hampshire

SITE ID	POC	MT	CITY	COUNTY	ADDRESS	YR	REP ORG	#OBS	MAX 1ST	1-HR 2ND	OBS> 35	MAX 1ST	8-HR 2ND	OBS> 9	METH
33-011-0018	1	2	MANCHESTER	HILLSBOROUGH	20 BRIDGE STREET	99	001	7652	15	8	0	5.6	3.5	0	11
33-011-1009	1	2	NASHUA	HILLSBOROUGH	25 MAIN STREET, MATARAZZ	99	001	8156	12	12	0	6.0	5.3	0	11

NEW HAMPSHIRE NITROGEN DIOXIDE

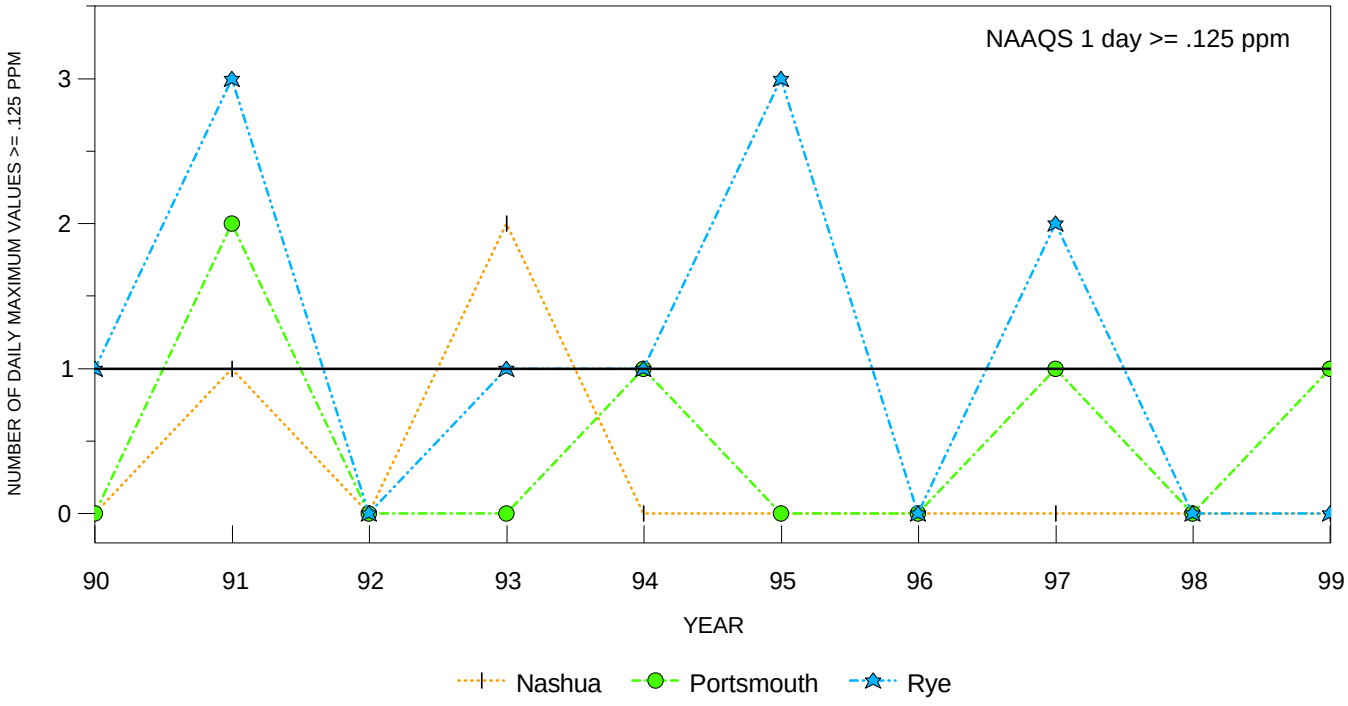


NEW HAMPSHIRE
NITROGEN DIOXIDE (NO2) UNITS: 007 PPM

SITE ID	POC	MT	CITY	COUNTY	ADDRESS	YR	REP ORG	#OBS	MAX 1ST	1-HR 2ND	MAX 1ST	24-HR 2ND	ARIT MEAN		METH
33-011-0016	1	2	MANCHESTER	HILLSBOROUGH	HARTNETT PARK, MUNICIPAL P	99	001	3201	0.155	0.096			0.016	?	14
33-011-0019	1	2	MANCHESTER	HILLSBOROUGH	NORTH COMMERCIAL STREET	99	001	876	0.038	0.038			0.013	?	14
33-015-0009	1	2	PORTSMOUTH	ROCKINGHAM	VAUGHAN STREET	99	001	7704	0.053	0.048			0.010		14
33-015-0013	1	3		ROCKINGHAM	SOUTH ROAD BRENTWOOD NH	99	001	8133	0.050	0.043			0.006		14

? INDICATES THAT THE MEAN DOES NOT SATISFY SUMMARY CRITERIA

NEW HAMPSHIRE OZONE



NEW HAMPSHIRE
OZONE - 44201 UNITS:007 PPM
OZONE SEASON: APR01 TO SEP 30

SITE ID	POC	MT	CITY	COUNTY	ADDRESS	YR	REP ORG	NUM MEAS	NUM REQ	VALID DAILY 1-HR MAXIMUM ********MAXIMA********* 1ST	2ND	3RD	4TH	MISS DAYS VALS>0.12 MEAS	ASSUMED < EST	STANDA	METH
33-001-2003	1	2	LACONIA	BELKNAP	LACONIA MUNICIPA	99	001	179	183	0.098	0.088	0.084	0.084	0	0	2	11
33-003-1002	1	2	CONWAY	CARROLL	KANKAMAUGUS HIGH	99	001	164	183	0.093	0.087	0.083	0.082	0	0	2	11
33-005-0007	1	2	KEENE	CHESHIRE	RAILROAD STREET	99	001	163	183	0.121	0.107	0.093	0.093	0	0	4	11
33-007-4001	1	3		COOS	MT. WASHINGTON	99	002	121	183	0.100	0.097	0.089	0.089	0	0	1	20
33-007-4002	1	3		COOS	CAMP DODGE, ROUT	99	002	117	183	0.089	0.077	0.071	0.070	0	0	4	20
33-009-0008	1	2	HAVERHILL	GRAFTON	HAVERHILL ARMORY	99	001	169	183	0.089	0.087	0.084	0.079	0	0	5	11
33-011-0016	1	2	MANCHESTER	HILLSBOROUG	HARTNETT PARK, M	99	001	47	183	0.063	0.057	0.056	0.056	0	0	1	11
33-011-1010	1	2	NASHUA	HILLSBOROUG	SANDERS ASSOCIAT	99	001	168	183	0.103	0.100	0.100	0.099	0	0	2	11
33-013-0007	1	2	CONCORD	MERRIMACK	STORRS STREET	99	001	170	183	0.093	0.085	0.083	0.082	0	0	7	11
33-015-0009	1	1	PORTSMOUTH	ROCKINGHAM	VAUGHAN STREET	99	001	176	183	0.127	0.110	0.107	0.098	1	1	1	11
33-015-0012	1	2	RYE	ROCKINGHAM	RYE HARBOR STATE	99	001	178	183	0.124	0.123	0.111	0.105	0	0	1	11
33-015-0013	1	3		ROCKINGHAM	SOUTH ROAD BRENT	99	001	181	183	0.107	0.100	0.098	0.096	0	0	0	11
33-017-3002	1	2	ROCHESTER	STRAFFORD	ROCHESTER HILL R	99	001	180	183	0.107	0.104	0.103	0.095	0	0	0	11
33-019-0003	1	2	CLAREMONT	SULLIVAN	SOUTH STREET	99	001	177	183	0.104	0.097	0.096	0.087	0	0	2	11

NEW HAMPSHIRE
OZONE - 44201 UNITS:007 PPM
OZONE SEASON: APR01 TO SEP 30

SITE ID	POC	MT	CITY	COUNTY	ADDRESS	YR	REP ORG	NUM MEAS	NUM REQ	ANN SUM NUM EXCEED PRI ST	8-HOUR AVERAGE ********MAXIMA********* 1ST	2ND	3RD	4TH	METH
33-001-2003	1	2	LACONIA	BELKNAP	LACONIA MUNICIPA	99	001	179	183	0	0.082	0.080	0.076	0.075	11
33-003-1002	1	2	CONWAY	CARROLL	KANKAMAUGUS HIGH	99	001	164	183	0	0.079	0.074	0.070	0.068	11
33-005-0007	1	2	KEENE	CHESHIRE	RAILROAD STREET	99	001	163	183	1	0.089	0.080	0.080	0.079	11
33-007-4001	1	3		COOS	MT. WASHINGTON	99	002	121	183	2	0.091	0.087	0.081	0.081	20
33-007-4002	1	3		COOS	CAMP DODGE, ROUT	99	002	117	183	0	0.078	0.066	0.064	0.061	20
33-009-0008	1	2	HAVERHILL	GRAFTON	HAVERHILL ARMORY	99	001	169	183	0	0.078	0.078	0.073	0.072	11
33-011-0016	1	2	MANCHESTER	HILLSBOROUG	HARTNETT PARK, M	99	001	47	183	0	0.055	0.052	0.051	0.050	11
33-011-1010	1	2	NASHUA	HILLSBOROUG	SANDERS ASSOCIAT	99	001	168	183	8	0.090	0.089	0.089	0.089	11
33-013-0007	1	2	CONCORD	MERRIMACK	STORRS STREET	99	001	170	183	0	0.080	0.078	0.077	0.074	11
33-015-0009	1	1	PORTSMOUTH	ROCKINGHAM	VAUGHAN STREET	99	001	176	183	5	0.107	0.093	0.090	0.089	11
33-015-0012	1	2	RYE	ROCKINGHAM	RYE HARBOR STATE	99	001	178	183	3	0.111	0.096	0.085	0.084	11
33-015-0013	1	3		ROCKINGHAM	SOUTH ROAD BRENT	99	001	181	183	1	0.085	0.082	0.080	0.079	11
33-017-3002	1	2	ROCHESTER	STRAFFORD	ROCHESTER HILL R	99	001	180	183	2	0.094	0.090	0.084	0.084	11
33-019-0003	1	2	CLAREMONT	SULLIVAN	SOUTH STREET	99	001	177	183	0	0.084	0.080	0.078	0.077	11

PM 2.5 New Hampshire

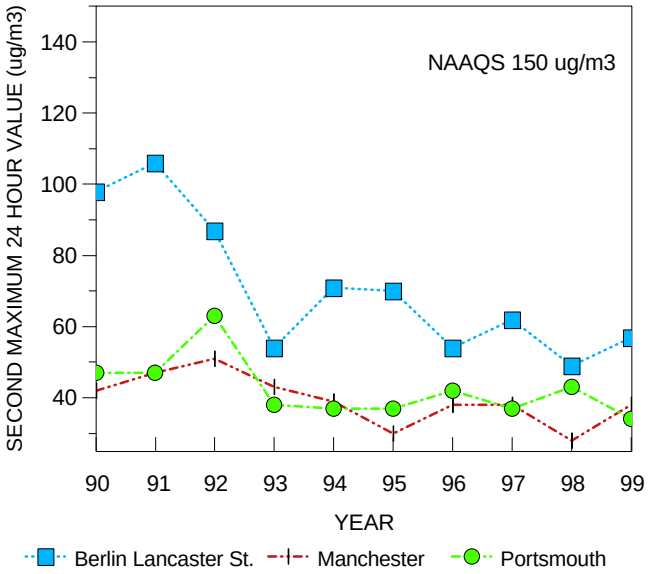
PM 2.5 LOCAL CONDITIONS (88101) NEW HAMPSHIRE

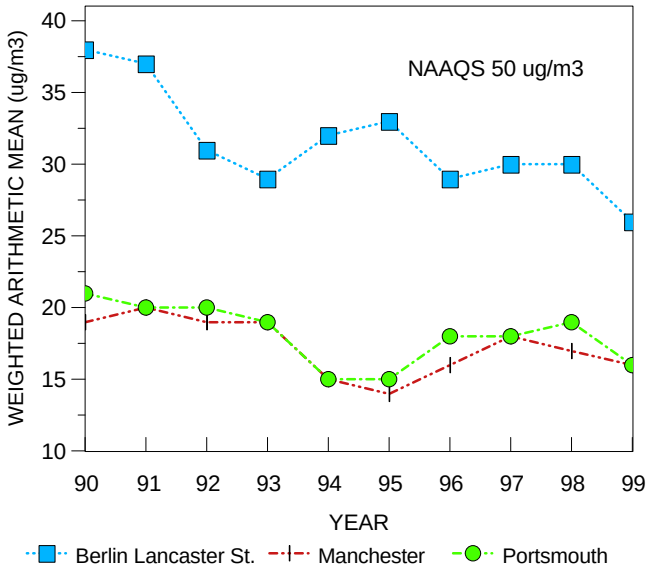
SITE ID	POC	M T	CITY	COUNTY	ADDRESS	YR	REP ORG	#OBS	MAXIMUM VALUES 1ST	2ND	3RD	4TH	ARITH MEAN		MET	UNITS	INT
33-001-2003	1	2	LACONIA	BELKNAP	LACONIA MUNICIPAL A	99	001	49	53.3	47.0	29.4	25.0	11.33	?	119	105	7
33-007-0014	1	2	BERLIN	COOS	LANCASTER STREET TR	99	001	99	51.4	45.6	29.1	28.6	12.66		120	105	7
33-011-0019	1	2	MANCHESTER	HILLSBOROUGH	NORTH COMMERCIAL ST	99	001	36	38.3	22.0	21.8	19.5	10.57	?	120	105	7
33-011-1007	1	2	NASHUA	HILLSBOROUGH	MAIN STREET	99	001	95	58.6	50.9	34.5	32.3	12.97		120	105	7
33-013-0003	1	2	CONCORD	MERRIMACK	NO. STATE HOUSE	99	001	101	50.6	32.4	28.6	25.5	10.79		120	105	7
33-013-5001	1	2		MERRIMACK	MT. SUNAPEE	99	001	54	45.2	28.9	26.5	19.8	8.26		119	105	7
33-015-0009	1	2	PORTSMOUTH	ROCKINGHAM	VAUGHAN STREET	99	001	52	54.3	27.6	25.0	24.2	13.18	?	120	105	7
33-019-0003	1	2	CLAREMONT	SULLIVAN	SOUTH STREET	99	001	48	47.2	46.7	33.3	26.8	12.58	?	119	105	7

? INDICATES THAT THE MEAN DOES NOT SATISFY SUMMARY CRITERIA
EXCEPTIONAL EVENT DATA EXISTS IN ALL OF THE ABOVE SITES AND IS INCLUDED IN THE SUMMARY CALCULATIONS

Please Note: in the calculation of PM2.5 summary statistics 534 data points with data qualifiers were used. A list and discussion of data qualifiers for PM2.5 darta is presented on Page 8.

NEW HAMPSHIRE PM10



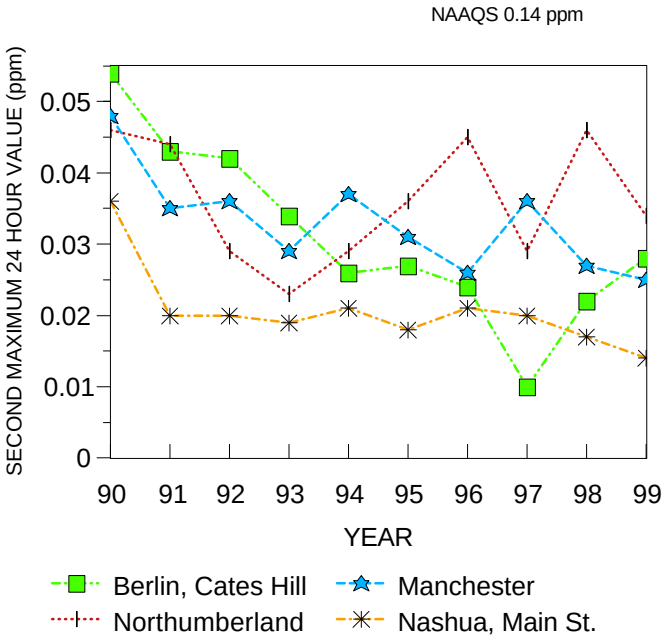


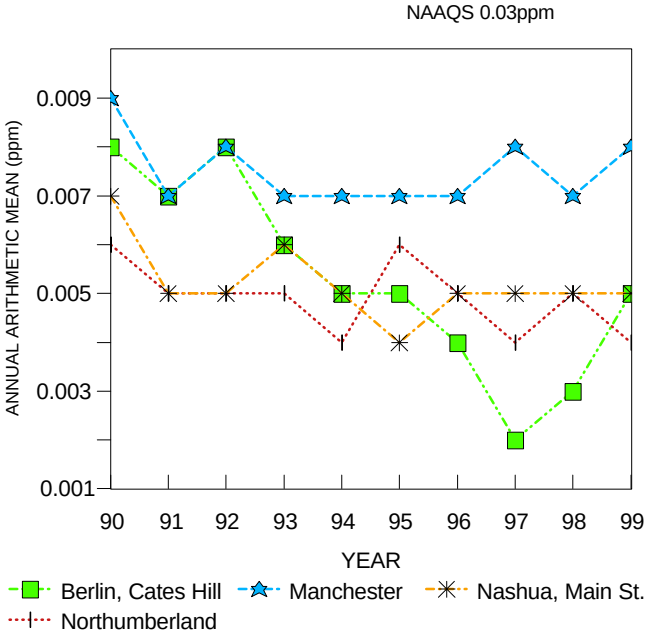
NEW HAMPSHIRE
PM10 TOTAL 0-10UM - 81102 UNITS-001 UG/CU METER(25 C)

SITE ID	POC	MT	CITY	COUNTY	ADDRESS	YR	REP ORG	NUM OBS	SCHEDULED NUM OBS	% OBS	NUM REQ	***MAXIMUM VALUES*** 1ST	2ND	3RD	4TH	VALS > 150 MEAS	EST	WTD ARITH MEAN		METH
33-005-0007	1	2	KEENE	CHESHIRE	RAILROAD STREET	99	001	54	53	84	63	58	49	46	43	0	0	22		64
33-007-0014	1	2	BERLIN	COOS	LANCASTER STREET TRAI	99	902	54	54	86	63	73	57	51	51	0	0	26	?	64
33-007-0014	2	3	BERLIN	COOS	LANCASTER STREET TRAI	99	902	53	53	84	63	73	63	62	60	0	0	29		62
33-007-0019	1	2	BERLIN	COOS	CATES HILL RD	99	902	54	54	86	63	69	59	36	30	0	0	14	?	64
33-007-1007	1	2	NORTHUMBER	COOS	ROUTES 110 AND 3, COV	99	902	55	54	86	63	49	35	31	30	0	0	18		64
33-011-0015	1	1	MANCHESTER	HILLSBOROU	351 CHESTNUT STREET,	99	001	53	52	83	63	53	38	34	32	0	0	16		64
33-011-0015	3	3	MANCHESTER	HILLSBOROU	351 CHESTNUT STREET,	99	001	54	53	84	63	62	41	37	29	0	0	15		64
33-011-1007	1	2	NASHUA	HILLSBOROU	MAIN STREET	99	001	59	58	92	63	57	38	38	29	0	0	17		64
33-011-1010	1	2	NASHUA	HILLSBOROU	SANDERS ASSOCIATES, P	99	001	58	57	90	63	70	40	37	34	0	0	16		64
33-011-2001	1	2	HOLLIS	HILLSBOROU	RTE. 122, SILVER LAKE	99	001	51	50	79	63	45	40	32	24	0	0	14	?	64
33-013-0003	1	2	CONCORD	MERRIMACK	NO. STATE HOUSE	99	001	55	54	86	63	57	39	38	33	0	0	17		64
33-013-5001	1	3		MERRIMACK	MT. SUNAPEE	99	001	53	53	84	63	52	31	30	19	0	0	8		64
33-015-0009	1	2	PORTSMOUTH	ROCKINGHAM	VAUGHAN STREET	99	001	60	59	94	63	55	34	32	32	0	0	16		64
33-017-0001	1	2	DOVER	STRAFFORD	CENTRAL AVE	99	001	54	54	86	63	55	35	33	31	0	0	15	?	64
33-019-0003	1	2	CLAREMONT	SULLIVAN	SOUTH STREET	99	001	58	57	90	63	51	45	38	34	0	0	16		64
33-019-0003	2	3	CLAREMONT	SULLIVAN	SOUTH STREET	99	001	59	58	92	63	50	46	36	36	0	0	16		64

? INDICATES THAT THE MEAN DOES NOT SATISFY SUMMARY CRITERIA

NEW HAMPSHIRE SULFUR DIOXIDE





NEW HAMPSHIRE
SULFUR DIOXIDE 42401 UNITS:007 PPM

SITE ID	POC	MT	CITY	COUNTY	ADDRESS	YR	REP ORG	#OBS	MAX 24-HR 1ST	MAX 24-HR 2ND	OBS > STD	MAX 3-HR 1ST	MAX 3-HR 2ND	OBS > STD	MAX 1-HR 1ST	MAX 1-HR 2ND	ARIT MEAN	METH
33-005-0007	1	2	KEENE	CHESHIRE	RAILROAD STREET	99	001	7792	0.022	0.022	0	0.045	0.041	0	0.054	0.050	0.005	23
33-007-0019	1	2	BERLIN	COOS	CATES HILL RD	99	902	8209	0.031	0.028	0	0.090	0.089	0	0.140	0.128	0.005	39
33-007-1007	1	2	NORTHUMBERLAND	COOS	ROUTES 110 AND 3,	99	004	7215	0.037	0.034	0	0.148	0.111	0	0.194	0.169	0.004	23
33-011-0016	1	1	MANCHESTER	HILLSBOROUGH	HARTNETT PARK, MU	99	001	3175	0.034	0.025	0	0.064	0.050	0	0.085	0.075	0.008 ?	23
33-011-0019	1	3	MANCHESTER	HILLSBOROUGH	NORTH COMMERCIAL	99	001	877	0.017	0.014	0	0.030	0.027	0	0.046	0.039	0.006 ?	23
33-011-1009	1	2	NASHUA	HILLSBOROUGH	25 MAIN STREET, M	99	001	7091	0.015	0.014	0	0.028	0.025	0	0.039	0.038	0.005	23
33-011-1010	1	2	NASHUA	HILLSBOROUGH	SANDERS ASSOCIATE	99	001	7731	0.019	0.016	0	0.032	0.031	0	0.045	0.043	0.004	23
33-013-0007	1	2	CONCORD	MERRIMACK	STORRS STREET	99	001	7521	0.013	0.012	0	0.071	0.049	0	0.153	0.082	0.003	23
33-013-1003	1	2	PEMBROKE	MERRIMACK	PEMBROKE HILL, BR	99	001	7697	0.031	0.028	0	0.117	0.113	0	0.168	0.151	0.004	23
33-015-0009	1	2	PORTSMOUTH	ROCKINGHAM	VAUGHAN STREET	99	001	7695	0.024	0.019	0	0.081	0.072	0	0.148	0.115	0.004	23
33-019-0003	1	2	CLAREMONT	SULLIVAN	SOUTH STREET	99	001	7907	0.018	0.015	0	0.033	0.033	0	0.042	0.037	0.003	23

? INDICATES THAT THE MEAN DOES NOT SATISFY SUMMARY CRITERIA

RHODE ISLAND SUMMARY

Neither of the two carbon monoxide (CO) monitors exceeded or violated the 1-hour or 8-hour NAAQS. The Dorrance Street site in Providence reported the highest 8-hour second maximum value of 3.9 ppm or 43% of the NAAQS. In 1998, this site's highest second maximum 8-hour average reported was 4.7 ppm and in 1997 this site reported an 8-hour average of 6 ppm. CO was also measured at the photochemical assessment monitoring station (PAMS) in East Providence in both 1999 and1998. In 1999 this site reported a second maximum value of 2.2 ppm or 24% of the NAAQS. The ten-year graph shows that CO levels have a slight downward trend.

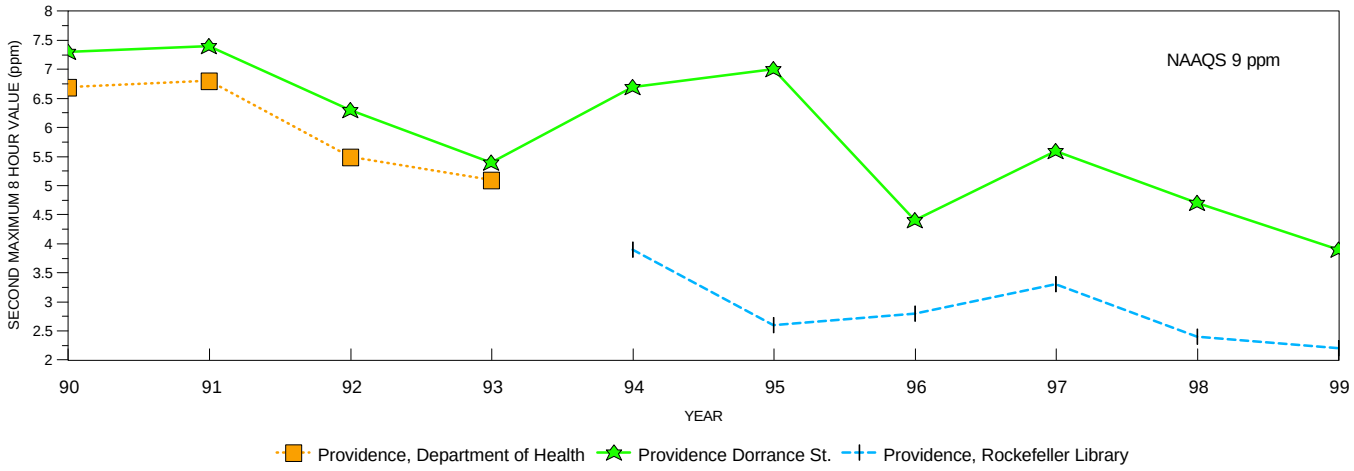
Rhode Island discontinued lead (Pb) monitoring in the state due to the extremely low lead concentrations monitored over the past few years. In 1999, three sites monitored for nitrogen dioxide (NO2). Two of these sites were photochemical assessment monitoring stations (PAMS) operated during the summer season. None of the sites experienced any exceedances or violations of the NAAQS. The Rockefeller Library site in Providence reported the highest annual arithmetic mean, which was 0.024 ppm or 48% of the NAAQS. The ten-year graph shows that NO2 levels have remained stable.

Two of the three ozone (O3) sites reported an exceedance of the 1-hour NAAQS during 1999. No site reported an exceedance in 1998, only one site in 1997, and none of these sites reported levels above the NAAQS in 1996. The Narrangansett site had the highest 1-hour second maximum value of 0.1449 ppm or 115% of the 1-hour NAAQS. For the 8-hour ozone standard, two of the three O3 sites reported a fourth high day of at least 85 ppb in 1999. The maximum 8-hour average in 1999 was at the Narrangansett site at 0.118 ppm.

None of the four particulate matter (PM10) sites in Rhode Island had any exceedances or violations of the annual or 24-hour standards in 1999, 1998 or 1997. The Allens Avenue site reported both the highest 24-hour second maximum value (61 ug/m3, or 41% of the standard) and the highest annual arithmetic mean (29 ug/m3 or 58% of the standard). The ten-year graph shows no discernable trends for PM10 . For PM2.5, Rhode Island established a network of 7 stations which began operation in 1999. In general, the Providence area reported the highest PM2.5 concentrations.

Two sites in Rhode Island monitored for sulfur dioxide (SO2) this year. There were no exceedances or violations of the annual, 24-hour, or 3-hour NAAQS. Rockefeller Library in Providence reported the highest annual arithmetic mean at 7 ppb or 23% of the NAAQS. Both Providence sites reported the same highest 24-hour second maximum of 26 ppb or 19% of the NAAQS. The Rockefeller Library reported the highest 3-hour second maximum at 66 ppb or 13% of the NAAQS. The ten-year graphs show a slight downward trend.

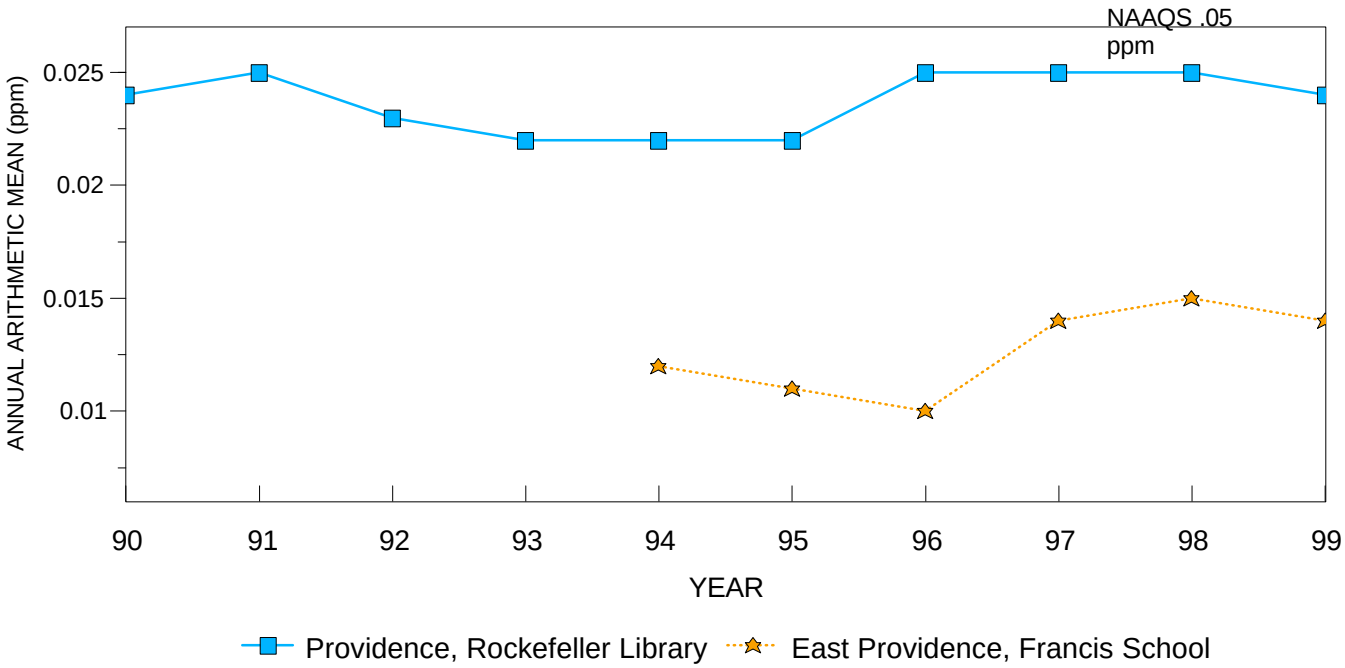
RHODE ISLAND CARBON MONOXIDE



Carbon Monoxide - Rhode Island

SITE ID	POC	MT	CITY	COUNTY	ADDRESS	YR	REP ORG	#OBS	MAX 1ST	1-HR 2ND	OBS 35	MAX 1ST	8-HR 2ND	OBS> 9	METH
44-007-1009	1	1	PROVIDENCE	PROVIDENCE	76 DORRANCE STREET.	99	001	8302	8.1	7.0	0	5.0	3.9	0	0
44-007-1010	1	1	EAST PROVIDEN	PROVIDENCE	FRANCIS SCHOOL, 64 BOURN	99	001	7776	3.8	3.7	0	2.5	2.2	0	0

RHODE ISLAND NITROGEN DIOXIDE

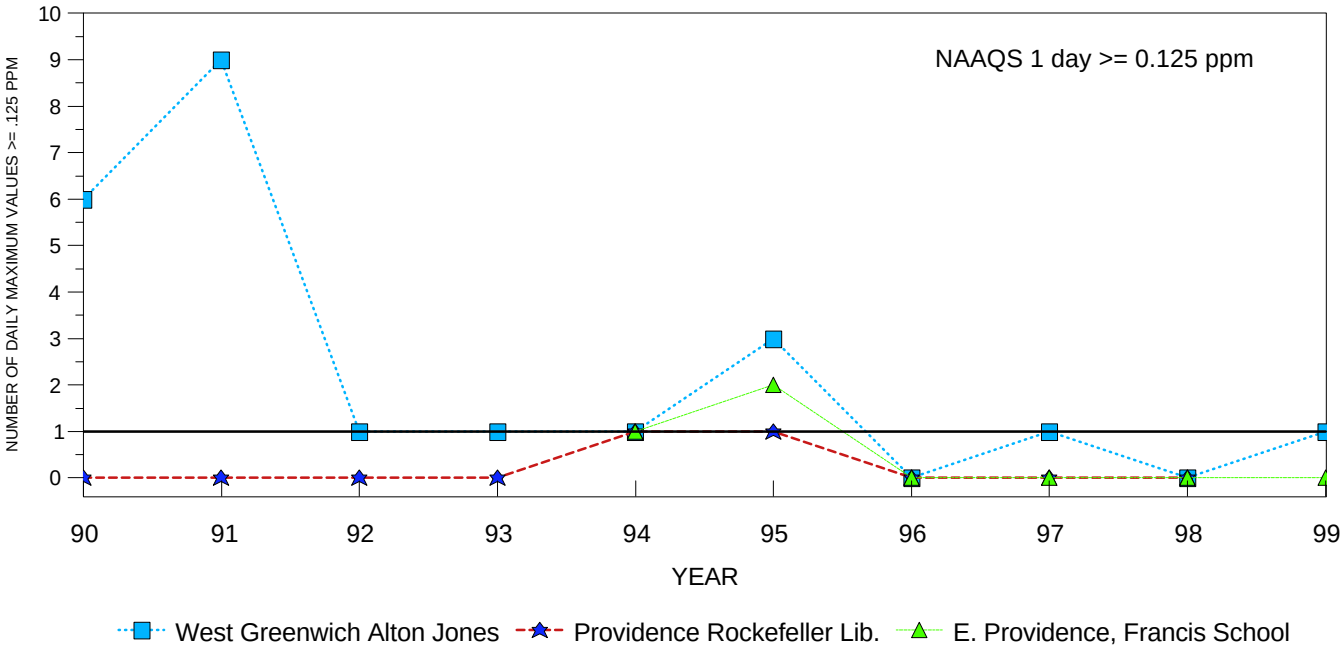


RHODE ISLAND
NITROGEN DIOXIDE (NO2) UNITS: 007 PPM

SITE ID	POC	MT	CITY	COUNTY	ADDRESS	YR	REP ORG	#OBS	MAX 1ST	1-HR 2ND	MAX 1ST	24-HR 2ND	ARIT MEAN		METH
44-003-0002	1	3		KENT	W. ALTON JONES CAMPUS URI	99	001	1689	0.017	0.015			0.003	?	0
44-007-0012	2	2	PROVIDENCE	PROVIDENCE	ROCKEFELLER LIBRARY, PROSP	99	001	8104	0.080	0.080			0.024		0
44-007-1010	1	8	EAST PROVIDENC	PROVIDENCE	FRANCIS SCHOOL, 64 BOURNE	99	001	5262	0.059	0.057			0.014	?	0

? INDICATES THAT THE MEAN DOES NOT SATISFY SUMMARY CRITERIA

RHODE ISLAND OZONE



RHODE ISLAND
OZONE - 44201 UNITS:007 PPM
OZONE SEASON: APR01 TO SEP 30

SITE ID	POC	MT	CITY	COUNTY	ADDRESS	YR	REP ORG	NUM MEAS	NUM REQ	VALID DAILY 1-HR MAXIMUM ********MAXIMA********* 1ST	2ND	3RD	4TH	VALS>0.125 MEAS	VALS>0.125 EST	MISS DAYS ASSUMED < STANDARD	METH
44-003-0002	1	2		KENT	W. ALTON JONES C	99	001	155	183	0.131	0.124	0.121	0.116	1	1.1	9	0
44-007-1010	1	7	EAST PROVIDEN	PROVIDENCE	FRANCIS SCHOOL,	99	001	154	183	0.110	0.108	0.097	0.096	0	0	9	0
44-009-0007	1	2	NARRAGANSETT	WASHINGTON	TARWELL ROAD, NA	99	001	165	183	0.144	0.133	0.124	0.109	2	2.2	4	0

RHODE ISLAND
OZONE - 44201 UNITS:007 PPM
OZONE SEASON: APR01 TO SEP 30

SITE ID	POC	MT	CITY	COUNTY	ADDRESS	YR	REP ORG	NUM MEAS	NUM REQ	ANN SUM EXCEED PRI ST	8 HOUR AVERAGE ********MAXIMA********* 1ST	2ND	3RD	4TH	METH
44-003-0002	1	2		KENT	W. ALTON JONES C	99	001	155	183	7	0.113	0.104	0.095	0.091	0
44-007-1010	1	7	EAST PROVIDEN	PROVIDENCE	FRANCIS SCHOOL,	99	001	154	183	2	0.096	0.088	0.084	0.080	0
44-009-0007	1	2	NARRAGANSETT	WASHINGTON	TARWELL ROAD, NA	99	001	165	183	11	0.118	0.106	0.098	0.090	0

PM 2.5 Rhode Island

PM2.5 LOCAL CONDITIONS (88101) RHODE ISLAND

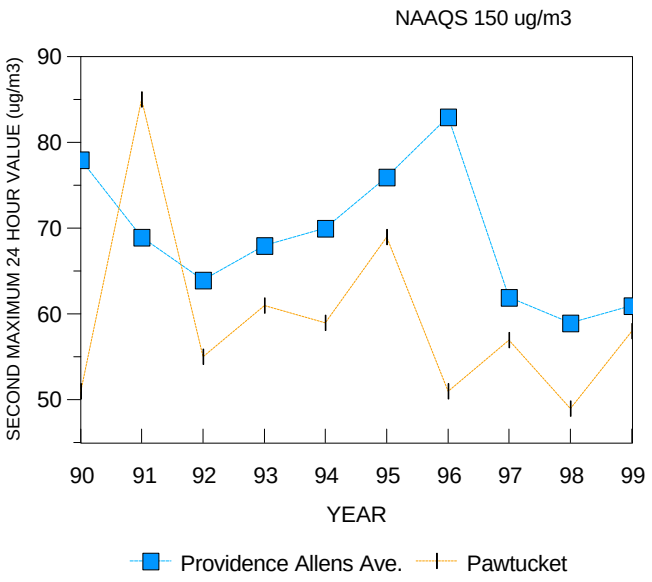
SITE	POC	MT	CITY	COUNTY	ADDRESS	YR	REP ORG	#OBS	MAXIMUM VALUES 1ST	2ND	3RD	4TH	ARITH MEAN		METH	UNITS	INT
44-003-0002	1	3		KENT	W. ALTON JONES CAMP	99	001	91	38.5	38.5	24.8	24.7	9.34	?	120	105	7
44-007-0020	1	3	PROVIDENCE	PROVIDENCE	ALLENS AVE, PROVIDE	99	001	39	48.5	32.7	27.9	24.4	15.23	?	0	105	7
44-007-0022	1	3	PROVIDENCE	PROVIDENCE	212 PRAIRIE AVE, PR	99	001	244	43.7	40.6	34.8	34.1	11.38	?	120	105	7
44-007-0022	2	3	PROVIDENCE	PROVIDENCE	212 PRAIRIE AVE, PR	99	001	35	42.6	26.6	22.8	21.0	12.75	?	120	105	7
44-007-0023	1	3	PROVIDENCE	PROVIDENCE	CHEPACHET FIRE STAT	99	001	6	12.0	9.4	9.2	7.4	7.88	?	120	105	7
44-007-1005	1	3	PAWTUCKET	PROVIDENCE	SUMMIT STREET SAMPL	99	001	81	47.0	32.1	31.9	28.4	12.72	?	120	105	7
44-007-1010	1	3	EAST PROVIDENC	PROVIDENCE	FRANCIS SCHOOL, 64	99	001	263	44.4	40.4	39.6	39.3	11.13	?	120	105	7
44-007-1010	2	3	EAST PROVIDENC	PROVIDENCE	FRANCIS SCHOOL, 64	99	001	43	41.4	25.0	22.7	22.6	11.88	?	120	105	7
44-009-0007	1	3	NARRAGANSETT	WASHINGTON	TARWELL ROAD, NARRA	99	001	83	32.9	31.8	25.3	24.2	9.66	?	120	105	7

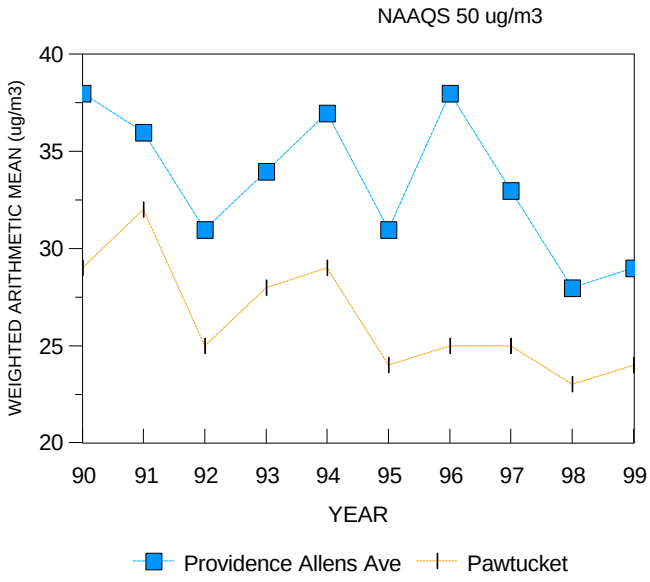
? INDICATES THAT THE MEAN DOES NOT SATISFY SUMMARY CRITERIA

EXCEPTIONAL EVENT DATA EXISTS IN AT LEAST ONE OF THE ABOVE SITES BUT IS NOT INCLUDED IN THE SUMMARY CALCULATIONS

Please Note: in the calculation of PM2.5 summary statistics 24 data points with data qualifiers were used. A list and discussion of data qualifiers for PM2.5 darta is presented on Page 8.

RHODE ISLAND PM10



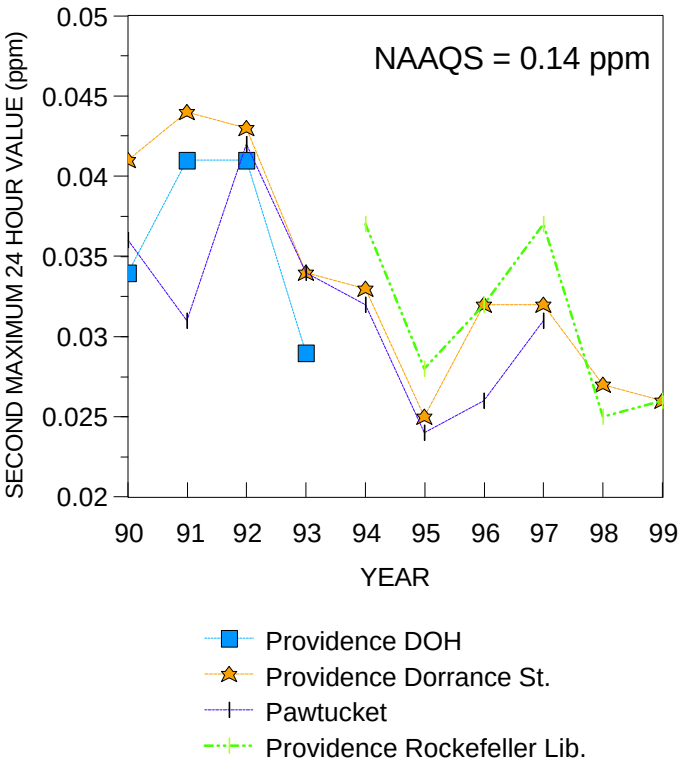


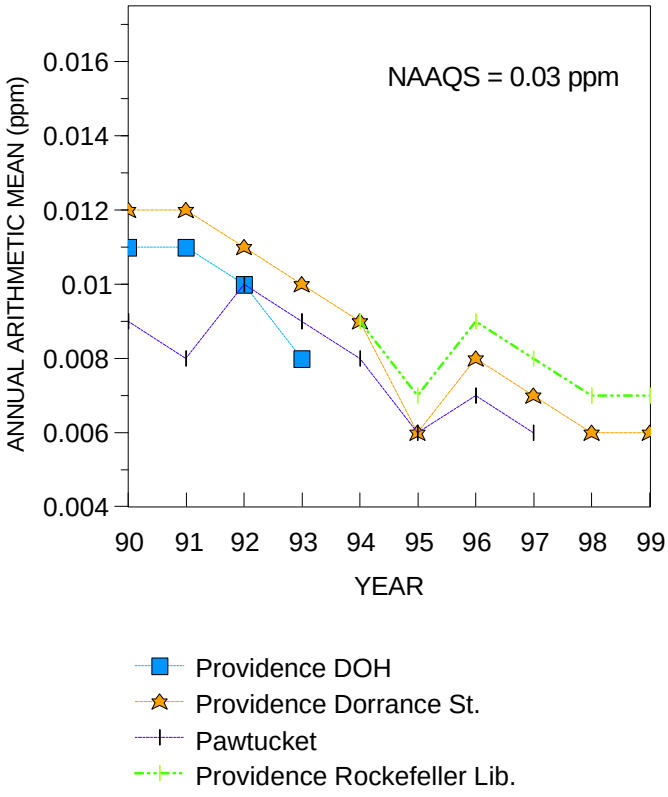
RHODE ISLAND
PM10 TOTAL 0-10UM - 81102 UNITS-001 UG/CU METER(25 C)

SITE ID	POC	MT	CITY	COUNTY	ADDRESS	YR	REP ORG	NUM OBS	SCHEDULED NUM OBS	% OBS	NUM REQ	***MAXIMUM VALUES*** 1ST	2ND	3RD	4TH	VALS > 150 MEAS	EST	WTD ARITH MEAN		METH
44-003-0002	1	2		KENT	W. ALTON JONES CAMPUS	99	001	60	60	95	63	50	37	30	29	0	0	14		64
44-007-0020	1	1	PROVIDENCE	PROVIDENCE	ALLENS AVE, PROVIDENC	99	001	60	60	95	63	65	61	58	55	0	0	29		64
44-007-0020	2	3	PROVIDENCE	PROVIDENCE	ALLENS AVE, PROVIDENC	99	001	27	27	84	16	64	44	43	42	0	0	28	?	64
44-007-0021	1	2	PROVIDENCE	PROVIDENCE	111 FOUNTAIN ST	99	001	59	59	94	63	56	42	41	39	0	0	23		64
44-007-0021	2	2	PROVIDENCE	PROVIDENCE	111 FOUNTAIN ST	99	001	26	26	81	32	57	41	38	37	0	0	23	?	64
44-007-1005	1	1	PAWTUCKET	PROVIDENCE	SUMMIT STREET SAMPLIN	99	001	60	60	95	63	59	58	43	39	0	0	24		64

? INDICATES THAT THE MEAN DOES NOT SATISFY SUMMARY CRITERIA

RHODE ISLAND SULFUR DIOXIDE





RHODE ISLAND
SULFUR DIOXIDE 42401 UNITS:007 PPM

SITE ID	POC	MT	CITY	COUNTY	ADDRESS	YR	REP ORG	#OBS	MAX 24-HR 1ST	MAX 24-HR 2ND	OBS > STD	MAX 3-HR 1ST	MAX 3-HR 2ND	OBS > STD	MAX 1-HR 1ST	MAX 1-HR 2ND	ARIT MEAN	METH
44-007-0012	2	1	PROVIDENCE	PROVIDENCE	ROCKEFELLER LIBRA	99	001	8107	0.028	0.026	0	0.068	0.066	0	0.090	0.082	0.007	0
44-007-1009	1	1	PROVIDENCE	PROVIDENCE	76 DORRANCE STREE	99	001	8315	0.029	0.026	0	0.069	0.065	0	0.085	0.079	0.006	0

VERMONT SUMMARY

During 1999 Vermont operated carbon monoxide (CO) sites in Rutland and Burlington. No exceedance of the NAAQS for CO was recorded at either site. The highest 1st and 2nd maximum 8-hour concentrations of CO were recorded at Rutland (2.5 ppm CO and 2.2 ppm CO, respectively). The ten-year trend lines shows a continuing decline of CO levels.

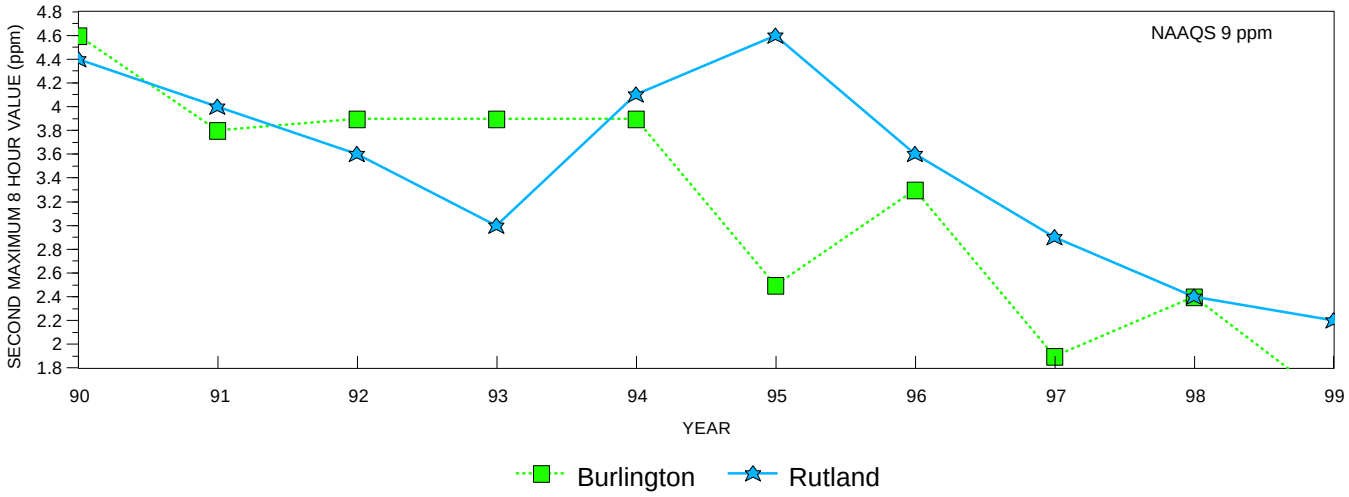
During 1999, Vermont was not required to measure the concentration of lead in ambient air and therefore, no data are available. Vermont operated two nitrogen dioxide (NO2) monitoring sites, one in Rutland and the other in Burlington. No exceedance of the NAAQS for NO2 was recorded at either site. Historical data for the most recent ten years (1990-1999) indicate that the annual average concentrations of NO2 have remained relatively stable. The Rutland site ranged from 0.012 ppm NO2 to 0.015 ppm NO2, and the Burlington site ranged from 0.016 ppm to 0.018 ppm NO2. The maximum one-hour concentration of 0.071 ppm NO2 was recorded at the Rutland monitoring site.

Neither of the two ozone monitoring sites in Vermont recorded 1-hour concentrations of ozone in excess of the NAAQS. The highest 1-hour concentration of ozone, 0.108 ppm, was recorded at the Bennington site. The highest recorded 1-hour concentration of ozone at the Proctor Maple Research site was 0.097 ppm. Vermont has recorded only one exceedance of the 1-hour ozone standard since 1988. For the 8-hour ozone standard in 1999, neither of the two O3 sites reported a fourth high day of at least 85 ppb. The maximum 8-hour average in 1999 was in Bennington at 0.093 ppm.

Vermont maintained five monitoring sites that measure particulate matter (PM10). The highest 24-hour concentration was recorded at the Bennington site (58 ug/m3). The Rutland site recorded the highest annual average (weighted) concentration of all Vermont sites, 20 ug/m3. This concentration is well below the annual average NAAQS for PM10 that is 50 ug/m3. The lowest recorded measurements for PM10 were recorded at the Proctor Maple Research facility monitoring site. Second maximum 24-hour concentrations were 31 ug/m3, and the annual weighted arithmetic mean was 12 ug/m3. Over the past ten years all five PM10 monitoring sites have recorded particulate matter concentrations well below the annual and the 24-hour NAAQS with a slight downward trend. Yearly variability in the data is common. This variability is due to to changes in meteorology, transport of particulate matter from distant sources, and changes in the emissions of local sources. For PM2.5 Vermont established a network of 5 stations which began operation in 1999. In general the Rutland area reported the highest PM2.5 concentrations.

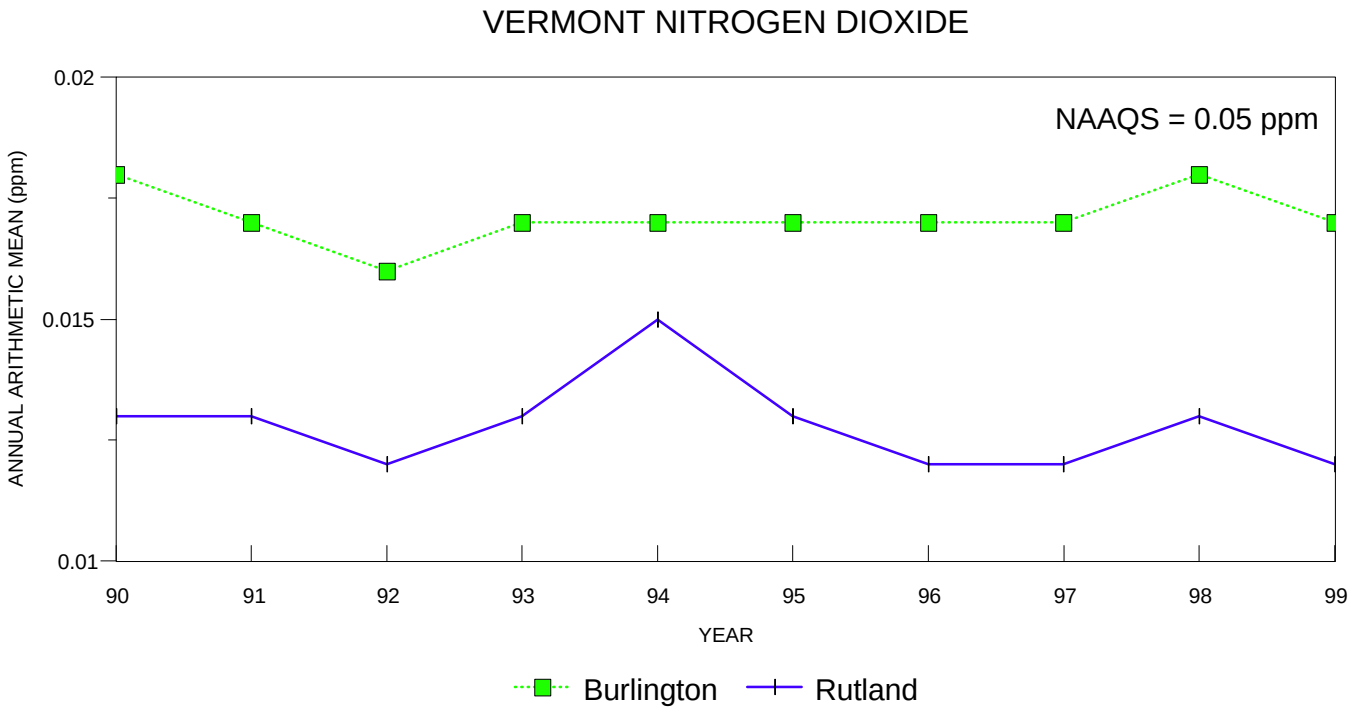
The monitoring sites at Burlington and Rutland also measure sulfur dioxide (SO2). No exceedance or violation of the NAAQS for sulfur dioxide was recorded at either site. The highest 24-hour average concentration of SO2 (27 ppb) was recorded at the Rutland site. This site also recorded the highest 3-hour SO2 concentration, 44 ppb. In contrast, the Burlington site recorded a maximum 24-hour average concentration of 9 ppb and a 3-hour maximum concentration of 17 ppb SO2. Ten years (1990-1999) of historical SO2 data indicate a general decline in SO2 concentrations in Burlington, but show a one year (1994) spike in SO2 concentrations in Rutland.

VERMONT CARBON MONOXIDE



Carbon Monoxide - Vermont

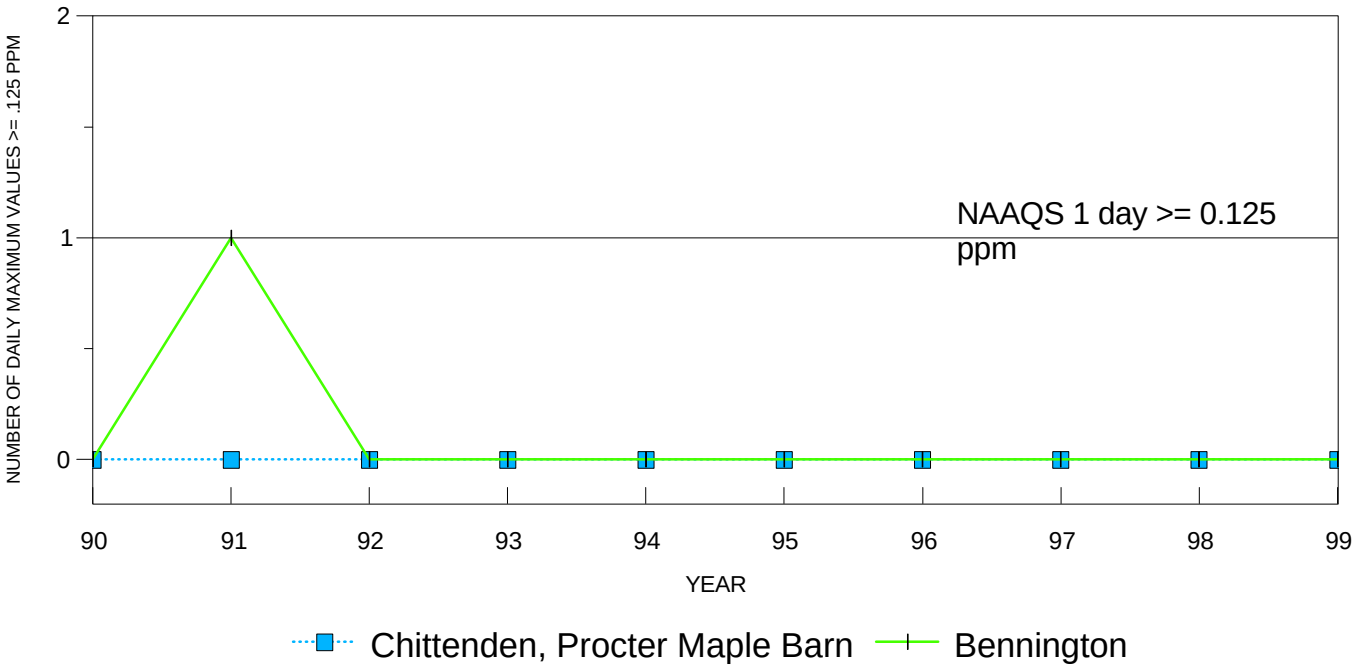
SITE ID	POC	MT	CITY	COUNTY	ADDRESS	YR	REP ORG	#OBS	MAX 1ST	1-HR 2ND	OBS 35	MAX 1ST	8-HR 2ND	OBS> 9	METH
50-007-0003	1	2	BURLINGTON	CHITTENDEN	ADJ. TO 82 S. WINOOSKI A	99	001	7796	2.9	2.8	0	1.9	1.5	0	67
50-021-0002	1	2	RUTLAND	RUTLAND	PARKING LOT ADJ. TO 9 ME	99	001	7761	3.8	3.7	0	2.4	2.2	0	67



VERMONT
NITROGEN DIOXIDE (NO2) UNITS: 007 PPM

SITE ID	POC	MT	CITY	COUNTY	ADDRESS	YR	REP ORG	#OBS	MAX 1ST	1-HR 2ND	MAX 1ST	24-HR 2ND	ARIT MEAN	METH
50-007-0003	1	2	BURLINGTON	CHITTENDEN	ADJ. TO 82 S. WINOOSKI AVE	99	001	7909	0.066	0.064			0.017	74
50-021-0002	1	2	RUTLAND	RUTLAND	PARKING LOT ADJ. TO 9 MERC	99	001	7723	0.071	0.061			0.012	74

VERMONT OZONE



VERMONT
OZONE - 44201 UNITS:007 PPM
OZONE SEASON: APR01 TO SEP 30

SITE ID	POC	MT	CITY	COUNTY	ADDRESS	YR	REP ORG	NUM MEAS	NUM REQ	VALID DAILY 1-HR MAXIMUM ********MAXIMA********* 1ST	2ND	3RD	4TH	MISS DAYS VALS>0.125 MEAS	EST	ASSUMED < STANDARD	METH
50-003-0004	1	2	BENNINGTON	BENNINGTON	AIRPORT RD, BENN	99	001	178	183	0.108	0.107	0.106	0.104	0	0	0	87
50-007-0007	1	2		CHITTENDEN	PROCTOR MAPLE RE	99	001	177	183	0.097	0.093	0.093	0.091	0	0	0	87

VERMONT
OZONE - 44201 UNITS:007 PPM
OZONE SEASON: APR01 TO SEP 30

SITE ID	POC	MT	CITY	COUNTY	ADDRESS	YR	REP ORG	NUM MEAS	NUM REQ	ANN SUM EXCEED PRI ST	8 - HOUR AVERAGE ********MAXIMA********* 1ST	2ND	3RD	4TH	METH
50-003-0004	1	2	BENNINGTON	BENNINGTON	AIRPORT RD, BENN	99	001	178	183	3	0.094	0.092	0.086	0.083	87
50-007-0007	1	2		CHITTENDEN	PROCTOR MAPLE RE	99	001	177	183	1	0.088	0.080	0.079	0.079	87

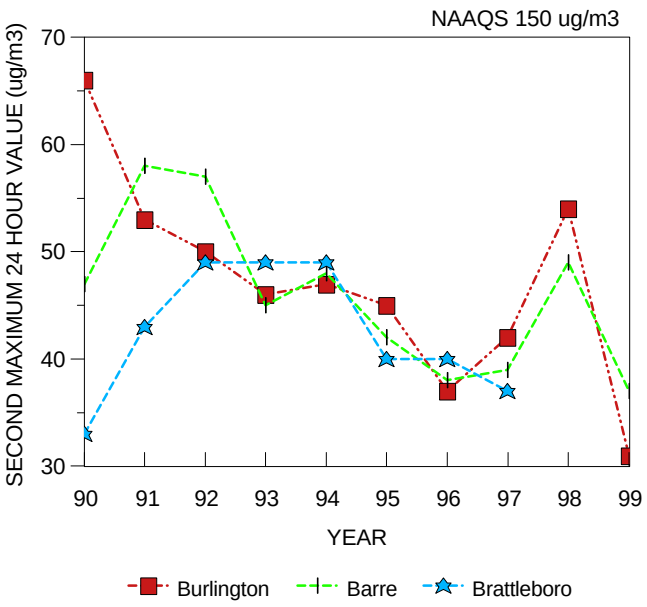
PM 2.5 Vermont

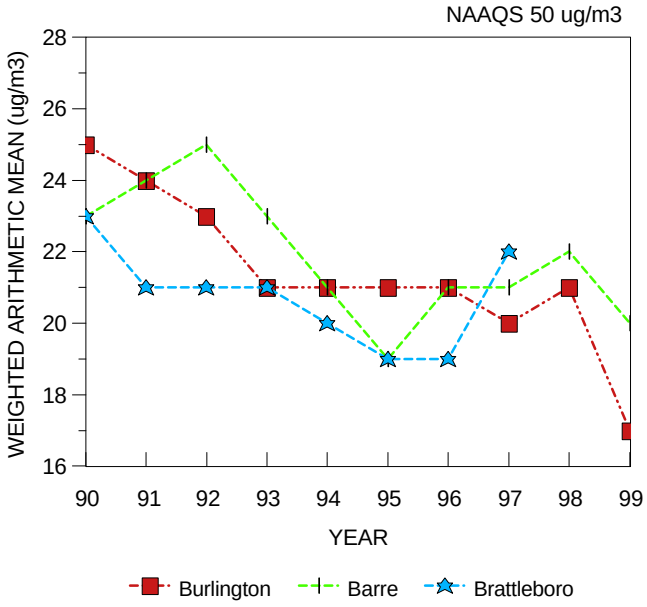
PM2.5 LOCAL CONDITIONS (88101) VERMONT

SITE	POC	PQM	CITY	COUNTY	ADDRESS	YR	REP ORG	#OBS	MAXIMUM VALUES 1ST	2ND	3RD	4TH	ARITH MEAN		MET	UNITS	INT
50-003-0005	1	2	BENNINGTON	BENNINGTON	BRADFORD STREET BEN	99	001	112	49.9	32.0	25.5	25.0	9.87		118	105	7
50-007-0007	1	2		CHITTENDEN	PROCTOR MAPLE RESEA	99	001	104	35.0	22.6	20.5	19.5	6.91		118	105	7
50-007-0012	1	3	BURLINGTON	CHITTENDEN	108 CHERRY STREET,	99	001	49	25.9	21.3	19.9	19.4	9.02	?	118	105	7
50-021-0002	1	2	RUTLAND	RUTLAND	PARKING LOT ADJ. TO	99	001	105	43.0	28.2	25.5	25.4	10.8		118	105	7
50-023-0005	1	3	BARRE	WASHINGTON	MERCHANTS ROW, BARR	99	001	113	37.4	25.5	25.2	25.0	10.79		118	105	7
50-023-0005	2	3	BARRE	WASHINGTON	MERCHANTS ROW, BARR	99	001	95	38.2	24.5	23.8	23.7	10.42		118	105	7

? INDICATES THAT THE MEAN DOES NOT SATISFY SUMMARY CRITERIA

VERMONT PM10



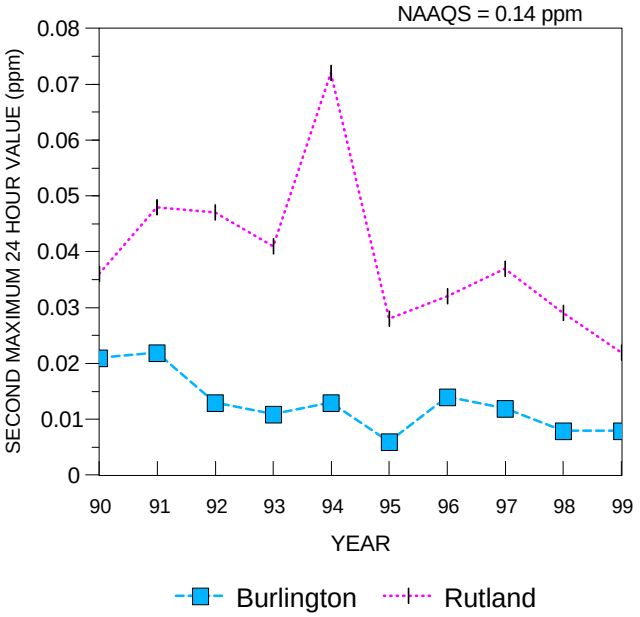


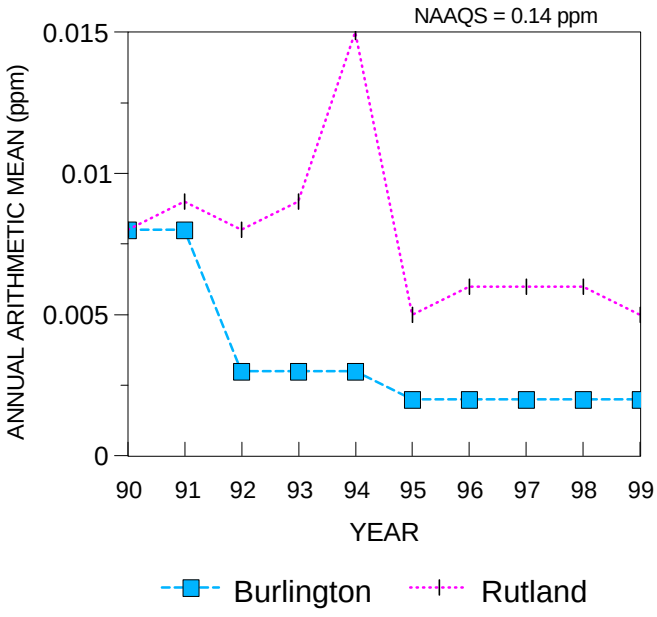
VERMONT
PM10 TOTAL 0-10UM - 81102 UNITS-001 UG/CU METER(25 C)

SITE ID	POC	MT	CITY	COUNTY	ADDRESS	YR	REP ORG	NUM OBS	SCHEDULED NUM OBS	% OBS	NUM REQ	***MAXIMUM VALUES*** 1ST	2ND	3RD	4TH	VALS > 150 MEAS	EST	WTD ARITH MEAN		METH
50-003-0005	1	2	BENNINGTON	BENNINGTON	BRADFORD STREET BENNI	99	001	56	56	89	63	58	42	41	30	0	0	16		62
50-007-0003	1	1	BURLINGTON	CHITTENDEN	ADJ. TO 82 S. WINOOSK	99	001	53	53	84	63	34	31	28	27	0	0	17		62
50-007-0003	2	3	BURLINGTON	CHITTENDEN	ADJ. TO 82 S. WINOOSK	99	001	53	53	84	63	35	33	30	27	0	0	17		62
50-007-0007	1	2		CHITTENDEN	PROCTOR MAPLE RESEARC	99	001	59	59	94	63	41	31	26	24	0	0	12		62
50-007-0012	1	2	BURLINGTON	CHITTENDEN	108 CHERRY STREET, BU	99	001	24	24	92	26	34	34	22	22	0	0	15	?	62
50-021-0002	1	2	RUTLAND	RUTLAND	PARKING LOT ADJ. TO 9	99	001	56	56	89	63	57	47	37	35	0	0	20		62
50-023-0005	1	2	BARRE	WASHINGTON	MERCHANTS ROW, BARRE	99	001	55	55	93	59	49	37	37	34	0	0	20		62

? INDICATES THAT THE MEAN DOES NOT SATISFY SUMMARY CRITERIA

VERMONT SULFUR DIOXIDE



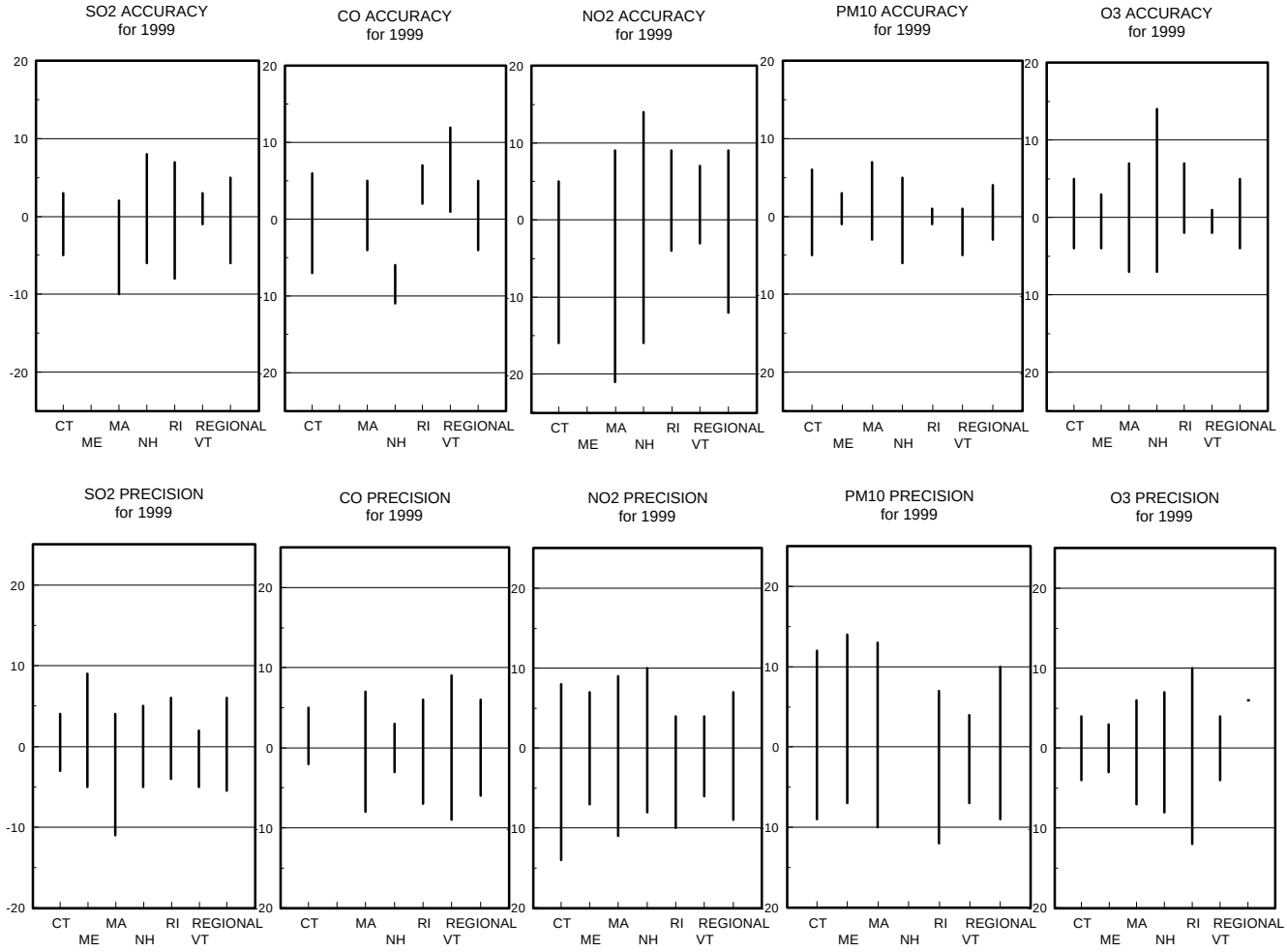


VERMONT
SULFUR DIOXIDE 42401 UNITS:007 PPM

SITE ID	POC	MT	CITY	COUNTY	ADDRESS	YR	REP ORG	#OBS	MAX 24-HR 1ST	MAX 24-HR 2ND	OBS > STD	MAX 3-HR 1ST	MAX 3-HR 2ND	OBS > STD	MAX 1-HR 1ST	MAX 1-HR 2ND	ARIT MEAN	METH
50-007-0003	1	1	BURLINGTON	CHITTENDEN	ADJ. TO 82 S. WIN	99	001	7966	0.009	0.008	0	0.017	0.014	0	0.019	0.018	0.002	60
50-021-0002	1	2	RUTLAND	RUTLAND	PARKING LOT ADJ.	99	001	7669	0.027	0.022	0	0.044	0.040	0	0.055	0.051	0.005	60

Precision and accuracy data submitted by the States

The 95% Probability limit for six criteria pollutants are given as a network average for each state

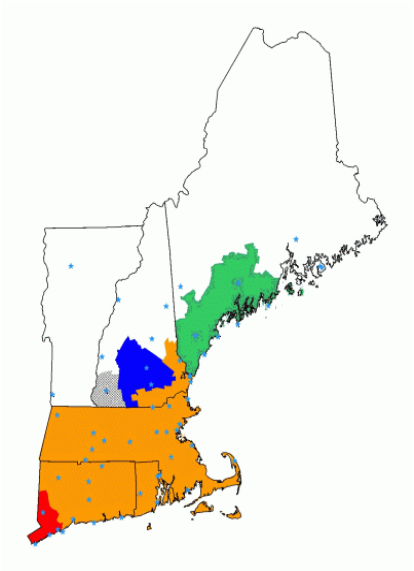


EPA Region I

Non-Attainment Designations

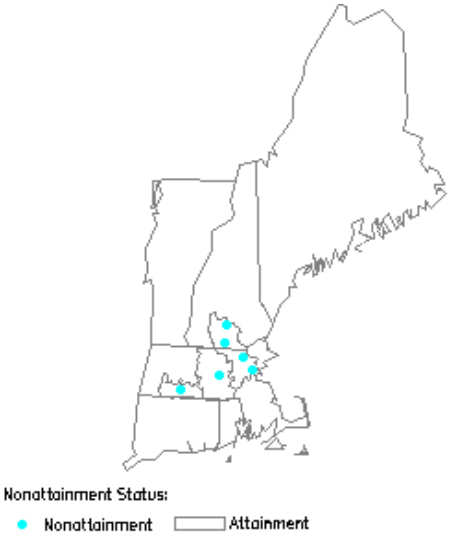
as of June 2000

Ozone

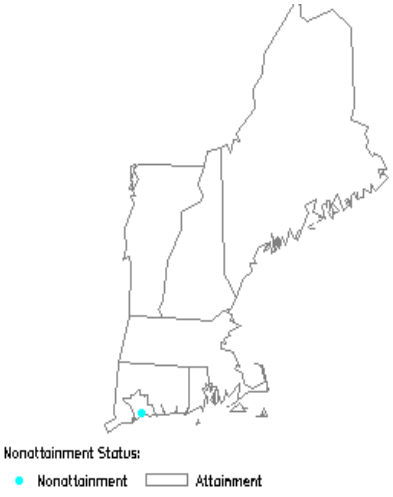


Whole Counties in Non-attainment are colored, cities in non-attainment are blue dots.

Carbon Monoxide



Particulate Matter (PM10)



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