

# 2012 Annual Report on Air Quality in New England



United States Environmental Protection Agency, Region 1  
New England Regional Laboratory  
North Chelmsford, MA 01863

September 2013

Ecosystems Assessment Unit

<http://www.epa.gov/region01/lab/reportsdocuments.html>

This Report has been prepared by the Air Monitoring Team of the ECA Unit at OEME  
and  
Jori Bonner, GIS Analyst Vistrionix, Inc.  
with

Map Data Source: USGS Earth Resources Observation Systems (EROS) Data Center, for elevation data.

The photo on the cover was taken at OEME, EPA Region 1

If you would like a printed copy of this report please Contact:

Wendy McDougall  
US EPA Region 1  
OEME  
11 Technology Drive  
North Chelmsford, MA 01863  
(617)918-8323

# Table of Contents

|  |    |
|--|----|
| Introduction .....   | 1  |
| National Air Quality Standards.....                            | 2  |
| Health Effects of Criteria Pollutants.....                     | 3  |
| Ambient Air Quality Data, with Data Charts.....                | 4  |
| Abbreviations and Symbols used in Air Quality Data Tables..... | 5  |
| Regional Data Summary.....                                     | 6  |
| Region I Non-Attainment Areas.....                             | 81 |
| State and Regional Contacts.....                               | 82 |

This page intentionally left blank



# 2012 ANNUAL REPORT ON AIR QUALITY

## IN NEW ENGLAND

This report provides a summary of 2012 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. These industrial sites supplement the state network. CASTNET sites are now also included in this report. The Clean Air Status and Trends Network (CASTNET) is a national air quality monitoring network designed to provide data to assess trends in air quality, atmospheric deposition, and ecological effects due to changes in air pollutant emissions.

This report reflects the status of the Air Quality System (AQS) database as of April 2013. The majority of data used have been evaluated and verified by EPA. However, for those monitors that appear to be violating an applicable ambient air quality standard, the data may require further evaluation by both EPA and the states. EPA has designated areas in New England as nonattainment for the 2008 8-hour ozone standard as reflected in the map of ozone nonattainment areas on page 81. Nonattainment area designations for the annual and 24-hour particulate matter less than 2.5 microns (PM<sub>2.5</sub>) standards are also shown on page 81.

A table of the National Ambient Air Quality Standards (NAAQS) follows this introduction.

There is a list of potential health effects of the criteria pollutants after the NAAQS.

A summary of New England air quality follows. The bulk of the report, beginning on page 8, lists by state, a summary of criteria pollutant data from sites in each state in New England, and from industrial sites in Massachusetts. The information presented compares the measured values to each NAAQS; it includes the number of violations, the maximum and second high values, and the annual means [arithmetic mean or average for sulfur dioxide (SO<sub>2</sub>), particulate matter less than 10 microns (PM<sub>10</sub>), and nitrogen dioxide (NO<sub>2</sub>)]. An annual mean is not valid for intermittent data unless there are four valid quarters. For PM<sub>10</sub> and PM<sub>2.5</sub>, 75% of the scheduled samples must be available for a quarter to be considered valid. However, years with at least 11 samples in each quarter shall be considered valid, notwithstanding quarters with less than complete data, if the resulting annual mean is greater than the level of the standard. (For continuous data, 75% of the year must be available to calculate a valid annual average.)

Graphs of selected air quality monitoring sites that show a multi-year span of data for PM<sub>10</sub>, carbon monoxide (CO), PM<sub>2.5</sub>, SO<sub>2</sub>, ozone (O<sub>3</sub>), and NO<sub>2</sub> are included with these data summary tables.

The state maps display the location of the monitoring sites (when measuring particulates, each state has at least one location where duplicate, or collocated, monitors run side by side for quality assurance purposes).

Additional maps are provided to show the current areas in New England designated non-attainment by EPA.

A list of AQS state and regional Air Quality Contacts, their addresses and phone numbers is provided at the end of the report.

As a final note, the primary author of this document, Wendy McDougall, will be retiring this winter. For over 30 years, her persistence and attention to detail has made this annual report a resource for us all.

# National Ambient Air Quality Standards

The [Clean Air Act](#), which was last amended in 1990, requires EPA to set [National Ambient Air Quality Standards](#) (40 CFR part 50) for pollutants considered harmful to public health and the environment. The Clean Air Act established two types of national air quality standards. *Primary standards* set limits to protect public health, including the health of "sensitive" populations such as asthmatics, children, and the elderly. *Secondary standards* set limits to protect public welfare, including protection against decreased visibility, damage to animals, crops, vegetation, and buildings.

The EPA Office of Air Quality Planning and Standards (OAQPS) has set National Ambient Air Quality Standards for six principal pollutants, which are called "criteria" pollutants. They are listed below. Units of measure for the standards are parts per million (ppm) by volume, milligrams per cubic meter of air (mg/m<sup>3</sup>), and micrograms per cubic meter of air (µg/m<sup>3</sup>).

| Pollutant<br>[final rule cite]  | Primary/<br>Secondary    | Averaging<br>Time             | Level                                 | Form  |
|---|--------------------------|-------------------------------|---------------------------------------|---|
| <a href="#">Carbon Monoxide</a><br>[76 FR 54294, Aug 31, 2011]                                | primary                  | 8-hour<br>1-hour              | 9 ppm<br>35 ppm                       | Not to be exceeded more than once per year                                    |
| <a href="#">Lead</a><br>[73 FR 66964, Nov 12, 2008]   | primary and<br>secondary | Rolling 3<br>month<br>average | 0.15 µg/m <sup>3</sup> <sup>(1)</sup> | Not to be exceeded  |
| <a href="#">Nitrogen Dioxide</a><br>[75 FR 6474, Feb 9, 2010]<br>[61 FR 52852, Oct 8, 1996]   | primary                  | 1-hour                        | 100 ppb                               | 98th percentile, averaged over 3 years  |
|   | primary and<br>secondary | Annual                        | 53 ppb <sup>(2)</sup>                 | annual mean   |
| <a href="#">Ozone</a><br>[73 FR 16436, Mar 27, 2008]  | primary and<br>secondary | 8-hour                        | 0.075 ppm <sup>(3)</sup>              | Annual fourth-highest daily maximum 8-hr concentration, averaged over 3 years |
|   | Primary                  | Annual                        | 12 µg/m <sup>3</sup>                  | annual mean, averaged over 3 years  |
| <a href="#">Particle Pollution</a><br>[78 FR 3086,<br>Jan. 15, 2013]                          | Secondary                | Annual                        | 15 µg/m <sup>3</sup>                  | annual mean, averaged over 3 years  |
|   | Primary and<br>secondary | 24-hour                       | 35 µg/m <sup>3</sup>                  | 98th percentile, averaged over 3 years  |
|   | primary and<br>secondary | 24-hour                       | 150 µg/m <sup>3</sup>                 | Not to be exceeded more than once per year on average over 3 years            |
| <a href="#">Sulfur Dioxide</a><br>[75 FR 35520, Jun 22, 2010]<br>[38 FR 25678, Sept 14, 1973] | primary                  | 1-hour                        | 75 ppb <sup>(4)</sup>                 | 99th percentile of 1-hour daily maximum concentrations, averaged over 3 years |
|   | secondary                | 3-hour                        | 0.5 ppm                               | Not to be exceeded more than once per year                                    |

(1) Final rule signed October 15, 2008. The 1978 lead standard (1.5 µg/m<sup>3</sup> as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.

(2) The official level of the annual NO<sub>2</sub> standard is 0.053 ppm, equal to 53 ppb, which is shown here for the purpose of clearer comparison to the 1-hour standard.

(3) Final rule signed March 12, 2008. The 1997 ozone standard (0.08 ppm, annual fourth-highest daily maximum 8-hour concentration, averaged over 3 years) and related implementation rules remain in place. In 1997, EPA revoked the 1-hour ozone standard (0.12 ppm, not to be exceeded more than once per year) in all areas, although some areas have continued obligations under that standard ("anti-backsliding"). The 1-hour ozone standard is attained when the expected number of days per calendar year with maximum hourly average concentrations above 0.12 ppm is less than or equal to 1.

(4) Final rule signed June 2, 2010. The 1971 annual and 24-hour SO<sub>2</sub> standards were revoked in that same rulemaking. However, these standards remain in effect until one year after an area is designated for the 2010 standard, except in areas designated nonattainment for the 1971 standards, where the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standard are approved.

# Health Effects of Criteria Pollutants

## **Lead (Pb)**

Children are particularly sensitive to the chronic effects of lead and can suffer from damage to the brain and nervous system: behavior and learning problems, such as hyperactivity: slowed growth: hearing problems: and chronic headaches. Adults can suffer from reproductive problems (in both men and women), high blood pressure and hypertension, nerve disorder, memory and concentration problems, and muscle and joint pain. The major sources of lead air pollution are lead smelters, lead-acid battery manufacturers, utilities, airports and waste incinerators.

## **Ozone (O<sub>3</sub>)**

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<sub>2</sub>)**

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 watershed and freshwater ecosystems. Sulfate aerosols are also a component of PM<sub>2.5</sub>. Major sources include power plants and industrial boilers.

## **Nitrogen Dioxide (NO<sub>2</sub>)**

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. It also combines with water in the atmosphere to form acid aerosols and contributes to the acid rain that causes watershed acidification and damage to material structures. Nitrate aerosols contribute to ozone formation and are a component of PM<sub>2.5</sub>. 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 carbon and hydrocarbon in fuels do not completely burn. Motor vehicles are the most significant source of CO to ambient air.

## **Particulate Matter (PM<sub>2.5</sub> and PM<sub>10</sub>)**

Both fine (PM<sub>2.5</sub>) and coarse (PM<sub>10</sub>) particles can accumulate in the respiratory system. When exposed to particulate matter (PM), people with existing heart or lung problems are at increased risk of admission to hospitals or emergency rooms, or premature death. Children and people with existing lung disease may not be able to breathe as deeply or vigorously as they would normally, and they may experience 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 sources, both manmade and natural, 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, agricultural 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 the Ambient Air Quality Data Section

**Site ID:** Site Identification number.

**POC:** Parameter Occurrence Code - differentiates between multiple monitors for a given pollutant at the same site.

**Max. Concentrations:** Highest concentration recorded in the year.  
Second highest concentration for the year.  
Third highest concentration for the year.  
Fourth highest concentration for the year.

**Annual arithmetic mean:** The average of all valid data for the year.

**Weighted arithmetic mean:** Similar to the Arithmetic mean, where instead of each of the data points contributing equally to the final average, some data points contribute more than others.

**Valid Days:** The valid number of days measured.

**Required Days:** The number of days required to be monitored in the ozone season.

**Obs.:** Number of Observations, typically the number hourly or daily concentrations measured.

**Percent Days:** Percent completed of number of observations made versus the number required.

**Miss Days:** Number of missing days assumed to be less than the standard based on AQS criteria.

**99<sup>th</sup> ( or 98<sup>th</sup>) percentile:** Value at which 99 (or 98) percent of the maximum values are below.

**Duration description:** Timeframe over which reported measurement occurred.

**Actual exceedances:** Number of days exceeding the NAAQS.

**Estimated exceedances:** Number of days exceeding the standard if data collection had been complete.

# 2012 Summary of New England Ambient Air Quality

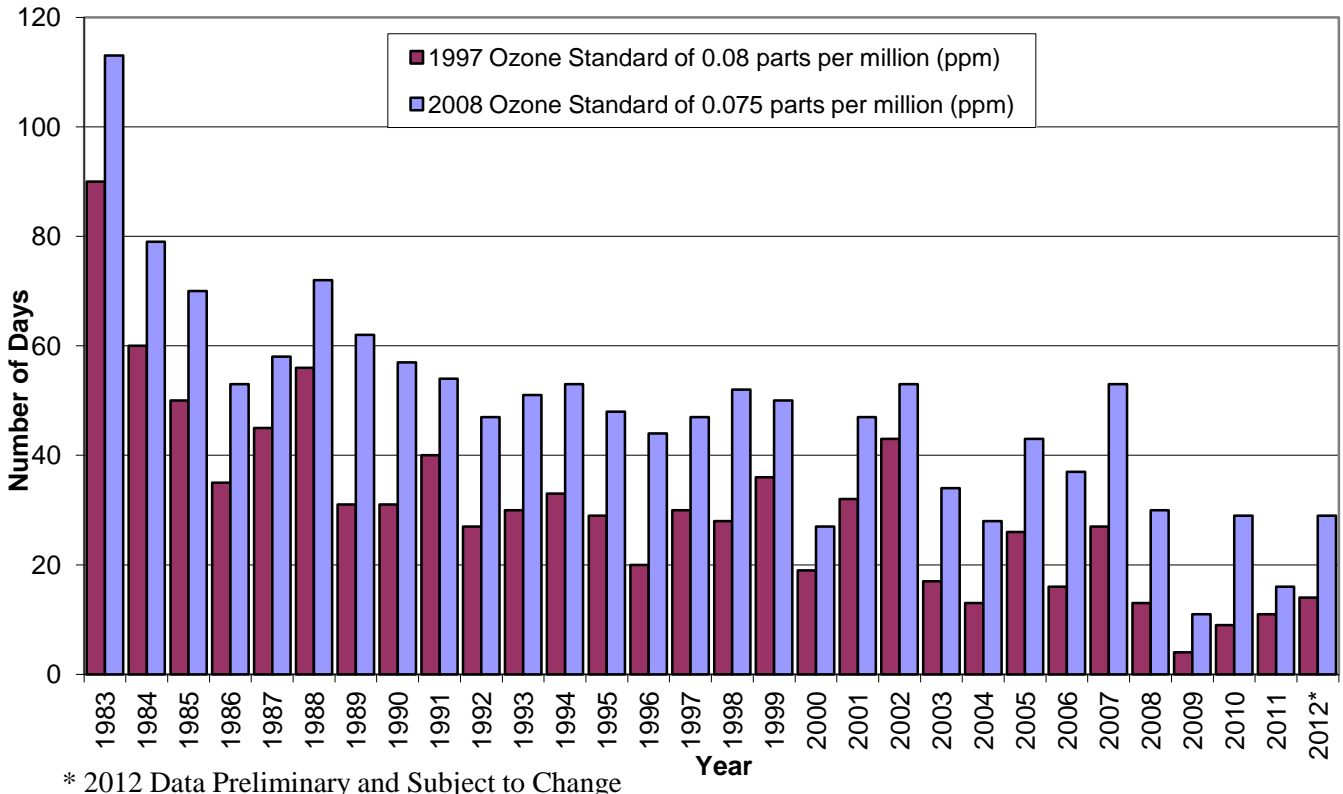
## 2012 Summary of Ambient Air Quality in New England

The New England states operate more than 110 criteria pollutant monitoring sites, with more than 250 ambient air quality monitors. These monitors measure the criteria pollutants: CO, SO<sub>2</sub>, NO<sub>2</sub>, O<sub>3</sub>, Pb, PM<sub>10</sub> and PM<sub>2.5</sub>. Levels of these pollutants are compared to the NAAQS, limits set by EPA to protect public health and welfare. In addition, more than a dozen sites measure precursor pollutants for ozone (PAMS sites) and toxic compounds.

In general, air quality measurements are strongly influenced by seasonal weather patterns. This is especially true for ozone and haze (principally composed of fine particulate matter - PM<sub>2.5</sub>) which can be influenced by photochemical and transport mechanisms. For these pollutants, higher ambient air concentrations are generally recorded during warm and dry summers and lower concentrations during cool and/or wet summers. In addition, high PM<sub>2.5</sub> concentrations can be recorded during strong temperature inversions in the winter months. Both of these pollutants are tracked real-time by the EPA AIRNow Air Quality Index (AQI) program, which maps the relative health impacts of ozone and fine particulate concentrations throughout the U.S. (<http://www.airnow.gov/>).

During 2012, weather conditions during the summer were generally warmer than normal, with 25 days above 90°F at Bradley Airport near Hartford, CT, leading to more high ozone days. Using the number of days when at least one ozone monitoring site exceeded the 2008 8-hour ozone standard (0.075 ppm), 2012 had 29 days which exceeded the NAAQS, and the cooler 2011 had 16 days which exceeded. The warmer year of 2010 had 29 days which exceeded the NAAQS. 2009 had 11 days which exceeded that NAAQS. This chart shows the trend in the number of days above both the newer 0.075 ppm standard and the previous 0.08 ppm standard.

## Days Exceeding the 8- Hour Ozone Standard in New England



More information can be found at [www.epa.gov/region1/aqi](http://www.epa.gov/region1/aqi). In 2012, the Stratford, Connecticut site recorded a fourth highest maximum 8-hour ozone concentration of 0.090 ppm, the highest in New England. The other New England states measured fourth highest maximum 8-hour concentrations ranging from 0.082 ppm (MA and RI) to 0.067 ppm (VT). Based on 2010 – 2012 data, five of the seven monitored counties in Connecticut, Washington County in Rhode Island, and Dukes County in Massachusetts were measuring air quality which which did not meet the 2008 8-hour ozone standard of 0.075 ppm, while the remaining areas in New England met the standard.

During 2012, the highest daily concentrations of fine particulate matter  $PM_{2.5}$  occurred in Keene, New Hampshire at  $36.8 \mu\text{g}/\text{m}^3$ . Other high concentrations were in the order of  $30 \mu\text{g}/\text{m}^3$  and were measured at a number of sites throughout New England. That said, however, based on 2010-2012 data, all sites in New England met the 24-hour NAAQS and the annual  $PM_{2.5}$  NAAQS. The highest annual average concentration for 2012 for fine particulate matter was measured at Pawtucket, Rhode Island at just over  $10 \mu\text{g}/\text{m}^3$ . The lowest annual average concentrations of fine particulate matter were measured at the Bar Harbor, Maine site; the Pack Monadnock, NH site; and the Underhill, VT site ( $<5.0 \mu\text{g}/\text{m}^3$ ). For particulate matter less than 10 microns ( $PM_{10}$ ), the highest daily concentration was measured at the Presque Isle, ME site ( $100 \mu\text{g}/\text{m}^3$ ). None of the  $PM_{10}$  sites in New England exceeded either the primary or the secondary NAAQS for  $PM_{10}$ . In New England,  $PM_{2.5}$  concentrations are collected using both the typical 24-hour, or daily, sampling techniques, and some monitors collect data on a continuous basis. This real time data collection is useful for AIRNow reporting purposes in all areas. It is also used for NAAQS compliance purposes in some states, even while other states evaluate the continuous monitors for NAAQS compliance purposes. In respect to  $SO_2$ , based on 2010 – 2012 data, the Pembroke, New Hampshire monitor measures sulfur dioxide concentrations which violate the NAAQS. The highest recorded value in Pembroke during 2012 was a one hour average of 79 ppb. For the remaining criteria pollutants ( $NO_2$ , CO, and Pb), concentrations measured at monitoring sites throughout New England either declined or remained at historically low levels. Ambient air concentrations of  $NO_2$ , CO, and Pb measured at sites in New England were well below the NAAQS in effect in 2012.

As a further resource, detailed information about air monitors and a variety of mapping and data plotting information for the entire United States can be found at [www.epa.gov/airdata](http://www.epa.gov/airdata).

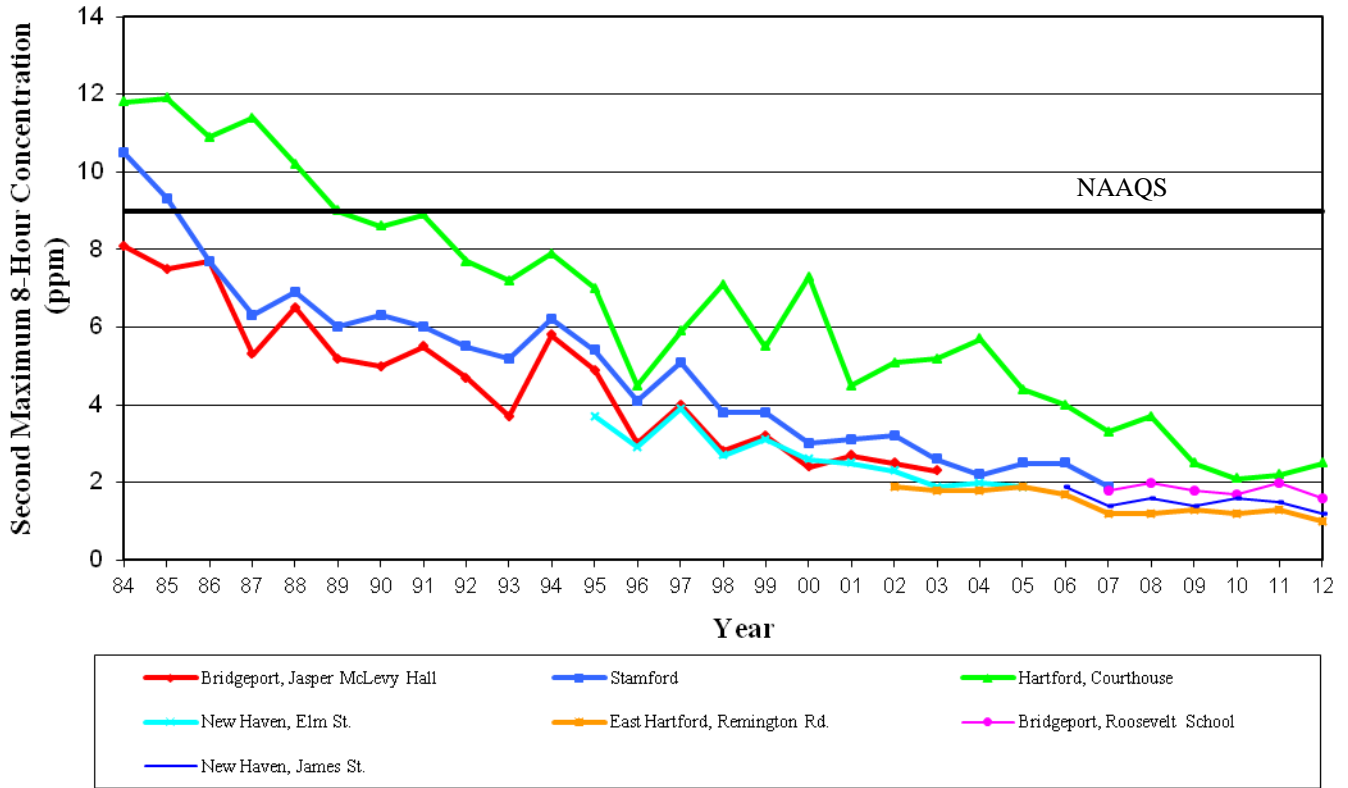


# Connecticut Sites - 2012 - Carbon Monoxide





# Connecticut Carbon Monoxide Data



## NAAQS for Carbon Monoxide:

1-hour – 35 ppm, not to be exceeded more than once per year

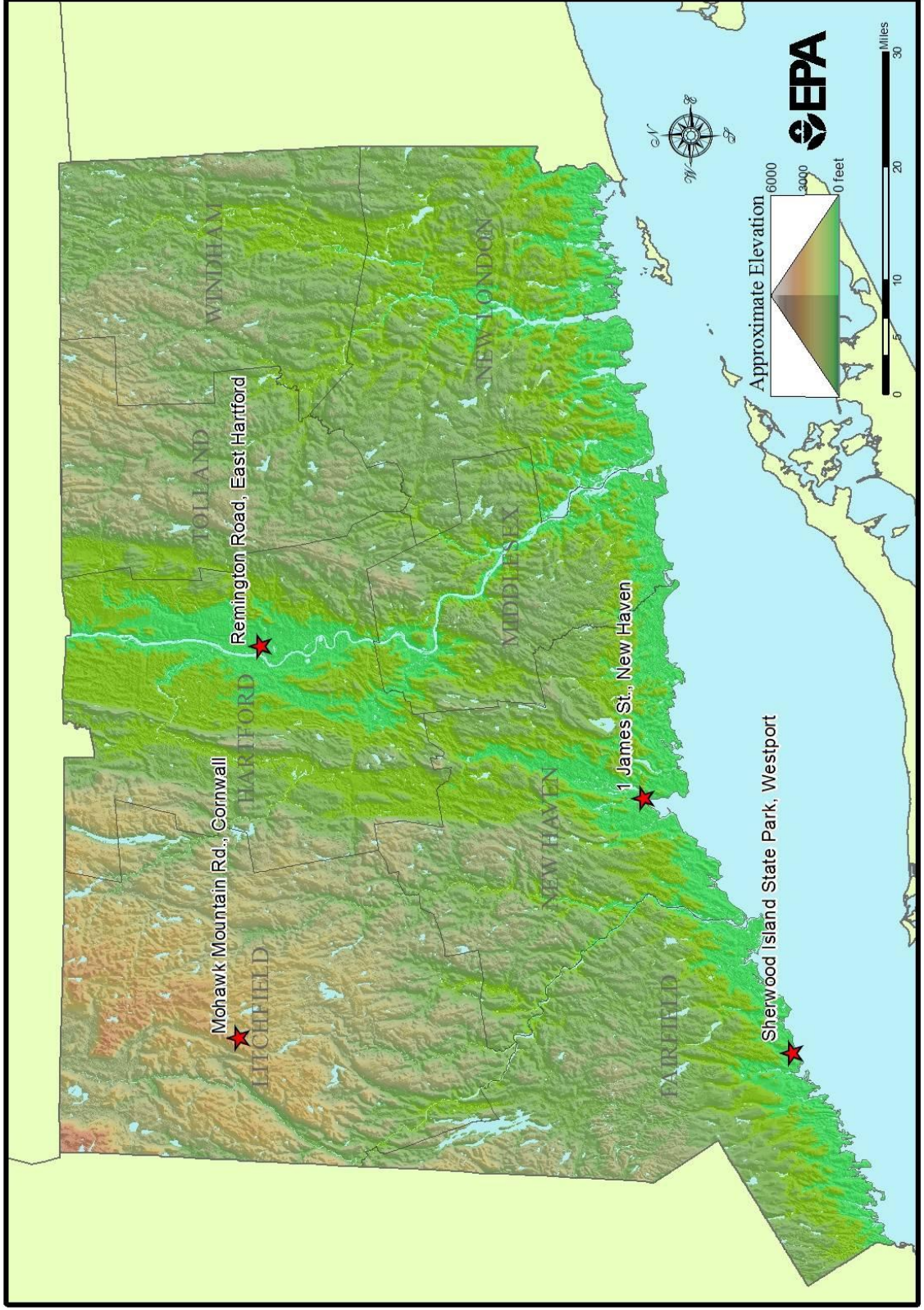
8-hour – 9 ppm, not to be exceeded more than one per year

## 2012 Connecticut Carbon Monoxide

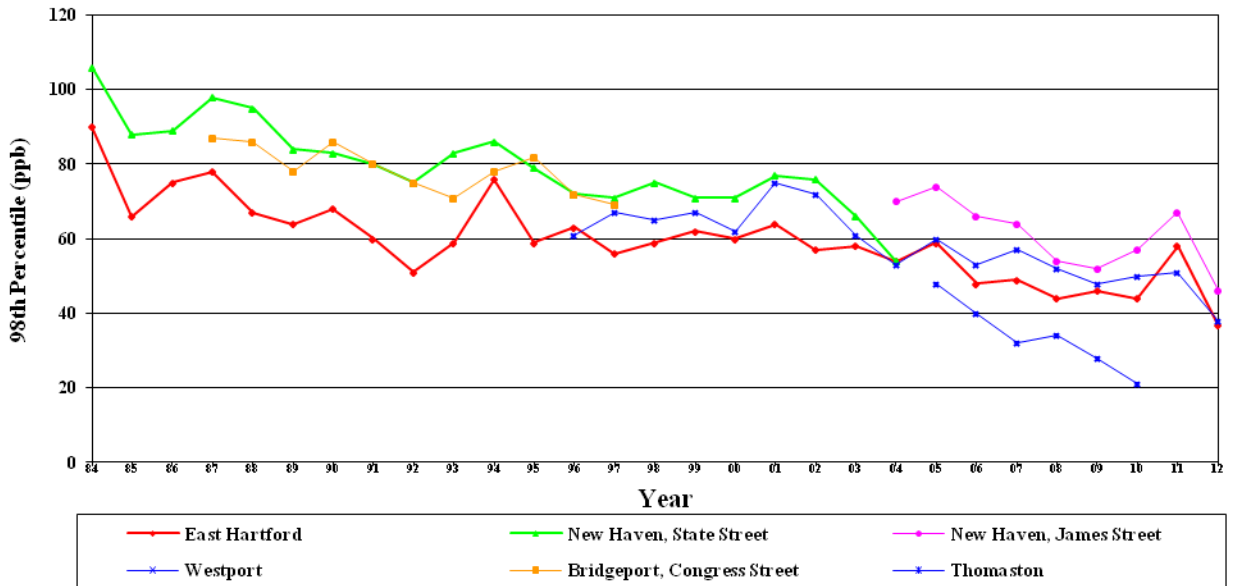
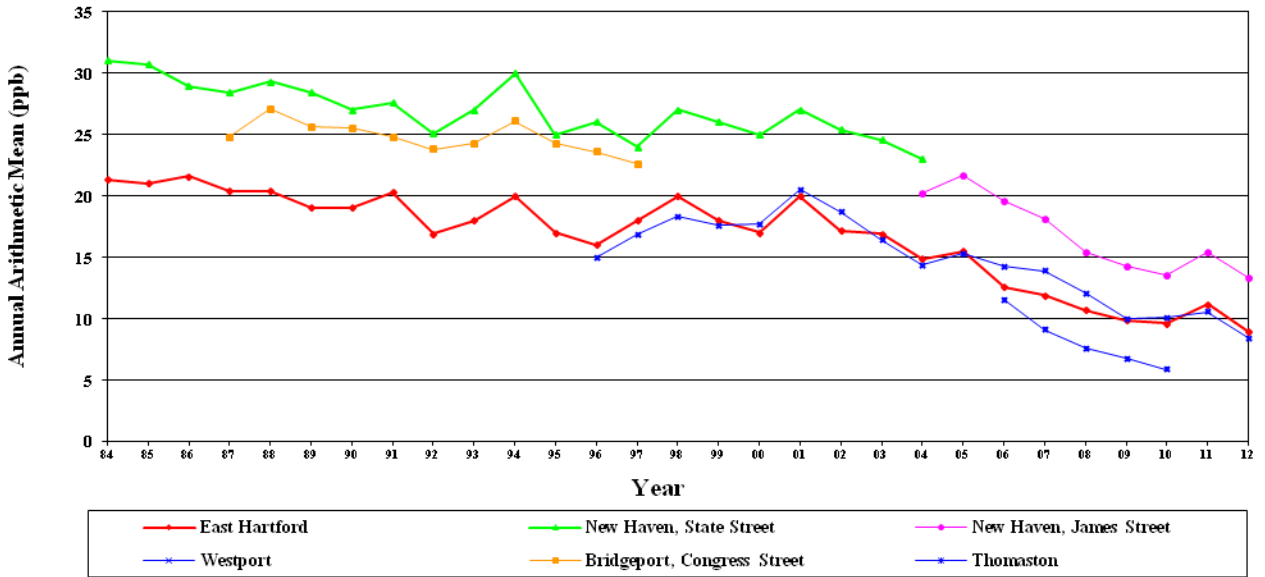
All Concentrations are in Units of Parts Per Million

| Site ID   | County     | City          | Address                       | Duration     | Obs. | First Max. | Second Max. |
|-----------|------------|---------------|-------------------------------|--------------|------|------------|-------------|
| 090010010 | Fairfield  | Bridgeport    | Roosevelt School Park Ave.    | 1 HOUR       | 8316 | 2.7        | 2.6         |
| 090019003 | Fairfield  | Westport      | Sherwood Island State Park    | 1 HOUR       | 8178 | 1.0        | 0.9         |
| 090030017 | Hartford   | Hartford      | Courthouse, 155 Morgan Street | 1 HOUR       | 8530 | 13.2       | 7.8         |
| 090031003 | Hartford   | East Hartford | Remington Road                | 1 HOUR       | 8107 | 1.4        | 1.3         |
| 090050005 | Litchfield | Cornwall      | Mohawk Mountain Road          | 1 HOUR       | 7961 | 1.7        | 1.4         |
| 090090027 | New Haven  | New Haven     | 1 James Street                | 1 HOUR       | 8321 | 1.6        | 1.5         |
| 090010010 | Fairfield  | Bridgeport    | Roosevelt School Park Ave.    | 8-HR RUN AVG | 8333 | 1.9        | 1.6         |
| 090019003 | Fairfield  | Westport      | Sherwood Island State Park    | 8-HR RUN AVG | 8419 | 0.8        | 0.8         |
| 090030017 | Hartford   | Hartford      | Courthouse, 155 Morgan Street | 8-HR RUN AVG | 8553 | 4.0        | 2.5         |
| 090031003 | Hartford   | East Hartford | Remington Road                | 8-HR RUN AVG | 8358 | 1.0        | 1.0         |
| 090050005 | Litchfield | Cornwall      | Mohawk Mountain Road          | 8-HR RUN AVG | 8464 | 0.6        | 0.4         |
| 090090027 | New Haven  | New Haven     | 1 James Street                | 8-HR RUN AVG | 8644 | 1.3        | 1.2         |

# Connecticut Sites - 2012 - Nitrogen Dioxide



# Connecticut Nitrogen Dioxide Data



## NAAQS for Nitrogen Dioxide:

Annual Arithmetic Mean- 53 ppb (100 µg/m<sup>3</sup>)

1-hour – 100 ppb (as of January 22, 2010) 98<sup>th</sup> percentile

2012 Connecticut

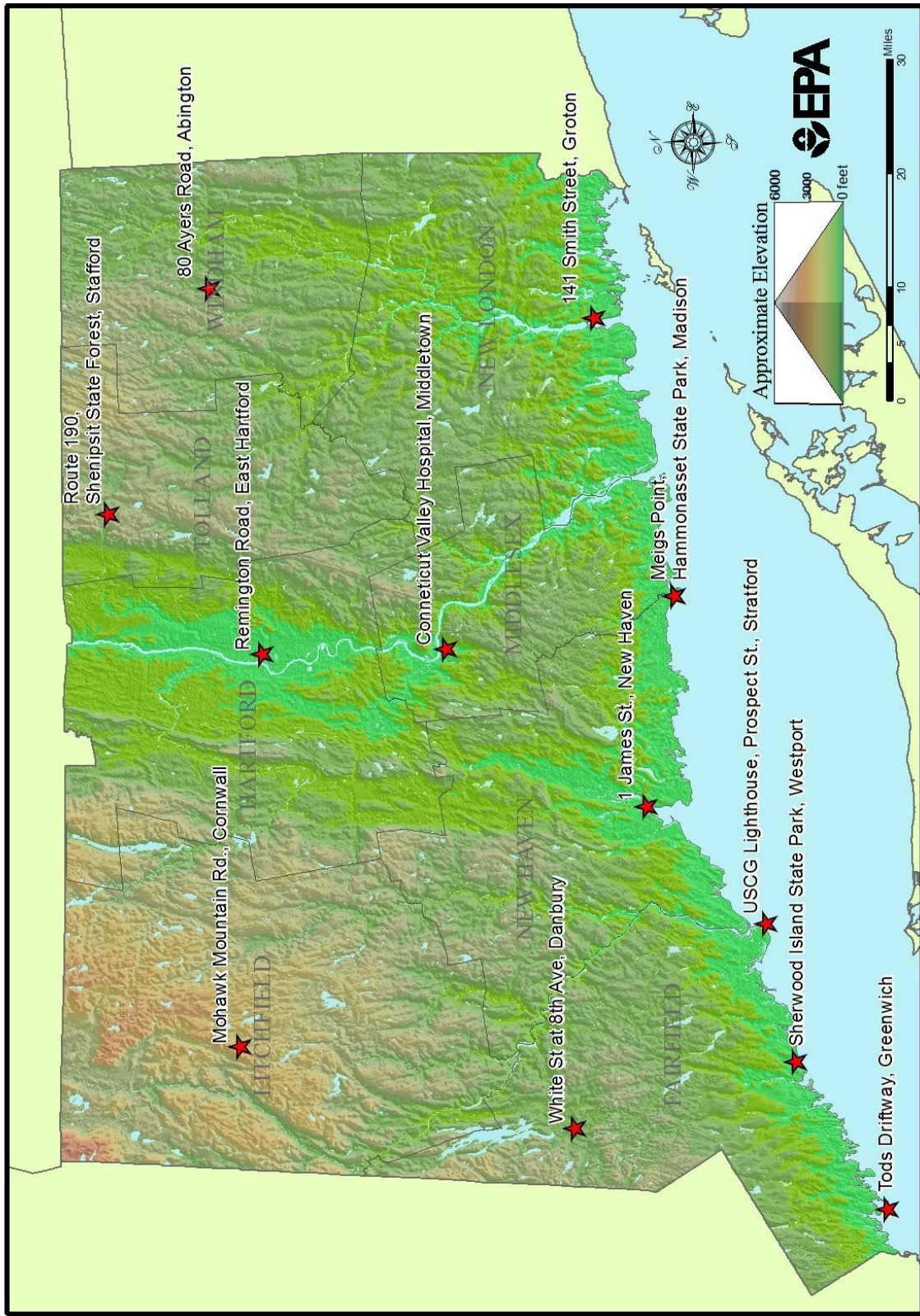
Nitrogen Dioxide

All Concentrations are in Units of Parts Per Billion

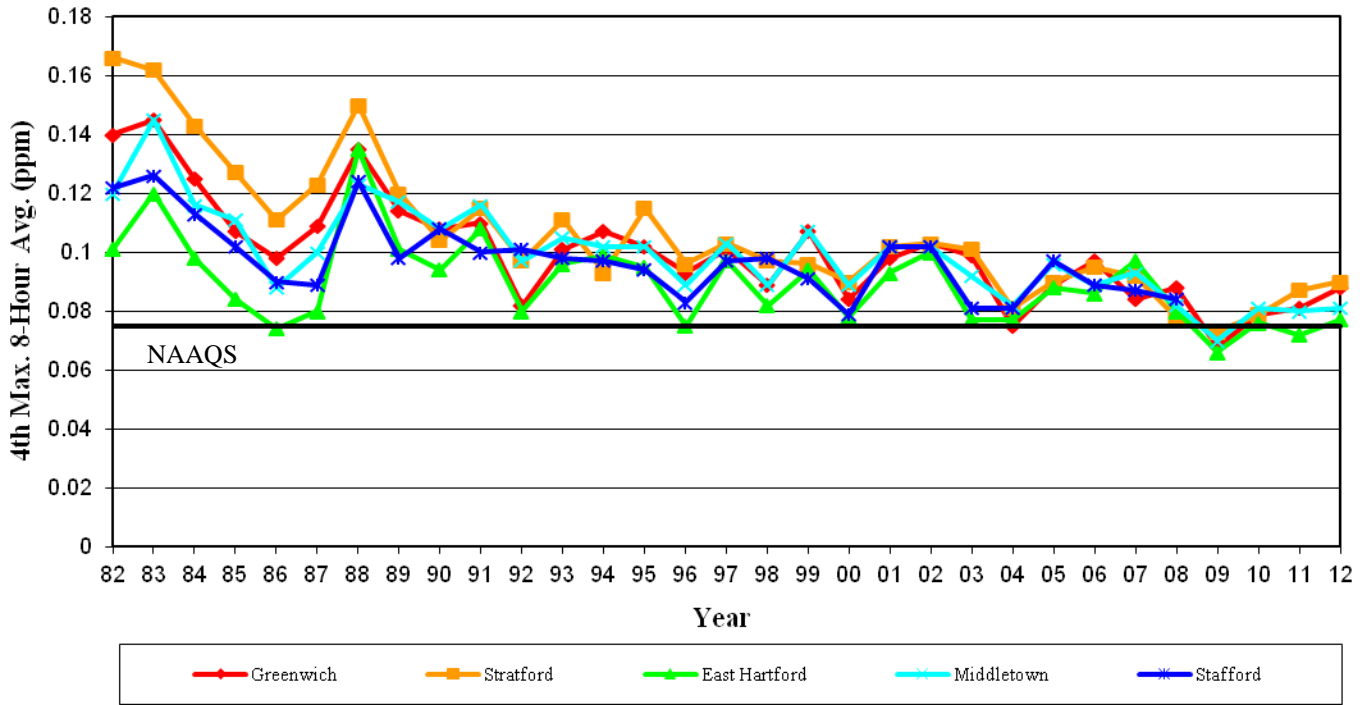
| Site ID   | County     | City          | Address                    | Duration | Obs. | First Max. | Second Max. | 98th Percentile | Annual Arith. Mean |
|-----------|------------|---------------|----------------------------|----------|------|------------|-------------|-----------------|--------------------|
| 090019003 | Fairfield  | Westport      | Sherwood Island State Park | 1 HOUR   | 8224 | 41         | 41          | 38              | 8.44               |
| 090031003 | Hartford   | East Hartford | Remington Road             | 1 HOUR   | 8178 | 39         | 38          | 37              | 8.90               |
| 090050005 | Litchfield | Cornwall      | Mohawk Mountain Road       | 1 HOUR   | 8508 | 30         | 28          | 19              | 1.67               |
| 090090027 | New Haven  | New Haven     | 1 James Street             | 1 HOUR   | 8613 | 51         | 51          | 46              | 13.36              |



# Connecticut Sites - 2012 - Ozone



# Connecticut Ozone 8-Hour Data



NAAQS for Ozone:

8-hour – 0.075 ppm (2008 std)

(To attain this 0.075 ppm standard, the 3-year average of the fourth-highest daily maximum 8-hour average ozone concentrations measured at each monitor within an area over each year must not exceed 0.075 ppm. This graph represents the 4<sup>th</sup> highest value for each year for each monitor depicted. Thus, being above or below this NAAQS line does not indicate whether or not a monitor exceeds the NAAQS.)

2012 Connecticut

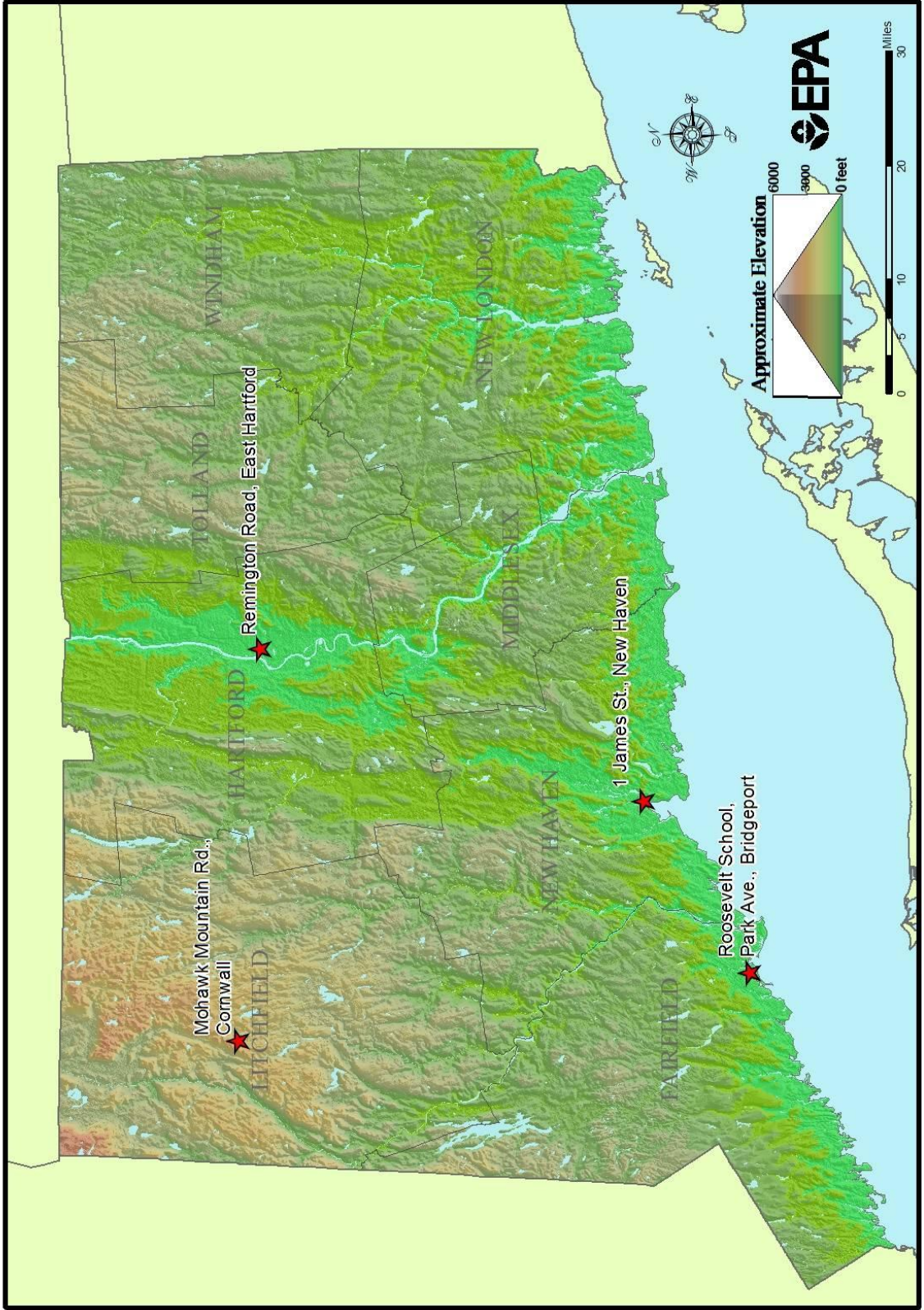
Ozone (8-Hour)

All Concentrations are in Units of Parts Per Million

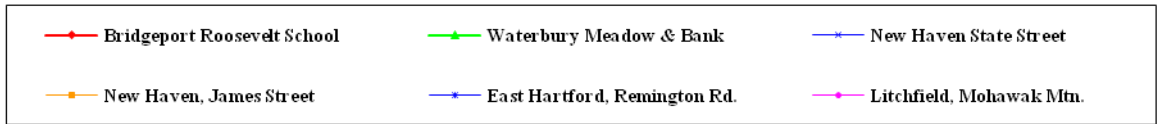
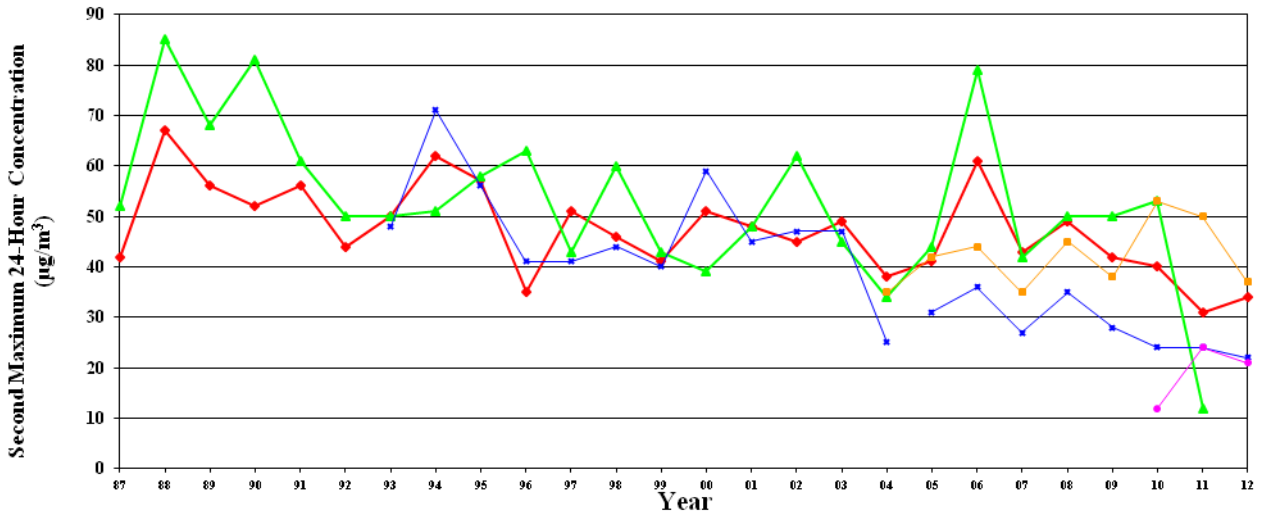
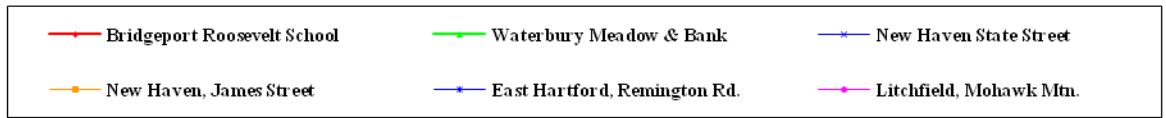
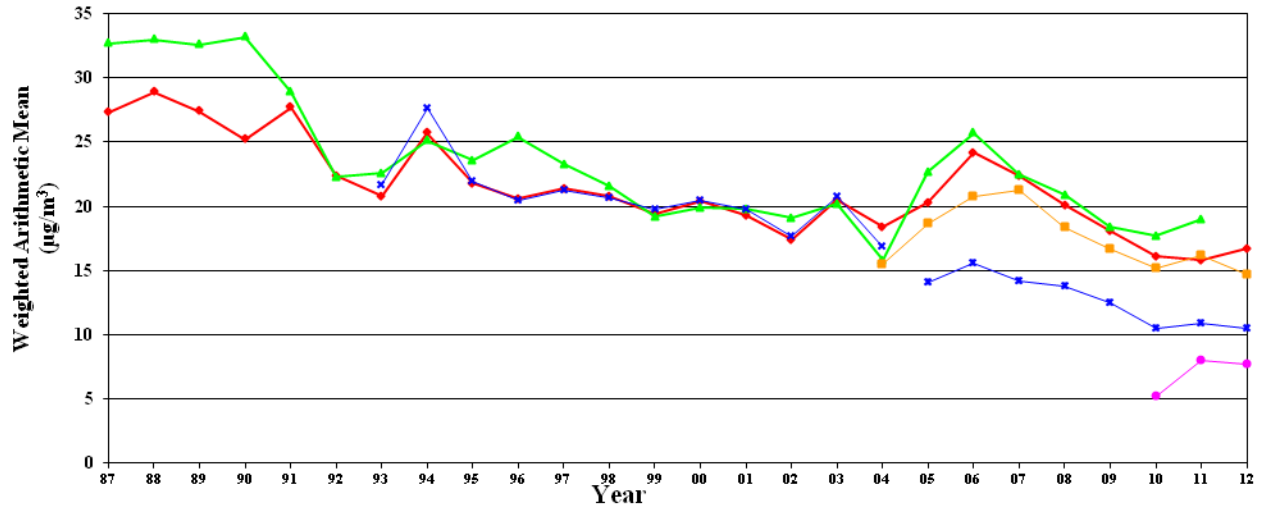
| Site ID   | County     | City          | Address                             | Duration     | First | Second | Third | Fourth | Actual | Valid | Required | Percent |      |
|-----------|------------|---------------|-------------------------------------|--------------|-------|--------|-------|--------|--------|-------|----------|---------|------|
|           |            |               |                                     |              | Obs.  | Max.   | Max.  | Max.   |        |       |          |         | Max. |
| 090010017 | Fairfield  | Greenwich     | Tods Driftway                       | 8-HR RUN AVG | 4230  | 0.10   | 0.090 | 0.09   | 0.088  | 15    | 170      | 183     | 93   |
| 090011123 | Fairfield  | Danbury       | White St At 8th Ave                 | 8-HR RUN AVG | 4168  | 0.09   | 0.087 | 0.09   | 0.084  | 8     | 166      | 183     | 91   |
| 090013007 | Fairfield  | Stratford     | USCG Lighthouse , Prospect Street   | 8-HR RUN AVG | 4194  | 0.10   | 0.095 | 0.09   | 0.090  | 15    | 171      | 183     | 93   |
| 090019003 | Fairfield  | Westport      | Sherwood Island State Park          | 8-HR RUN AVG | 4357  | 0.09   | 0.092 | 0.09   | 0.089  | 14    | 179      | 183     | 98   |
| 090031003 | Hartford   | East Hartford | Remington Road                      | 8-HR RUN AVG | 3861  | 0.09   | 0.079 | 0.08   | 0.077  | 6     | 156      | 183     | 85   |
| 090050005 | Litchfield | Cornwall      | Mohawk Mountain Road                | 8-HR RUN AVG | 8577  | 0.08   | 0.079 | 0.08   | 0.073  | 3     | 174      | 183     | 95   |
| 090070007 | Middlesex  | Middletown    | Conn. Valley Hosp., Shew Hall       | 8-HR RUN AVG | 4265  | 0.10   | 0.088 | 0.09   | 0.081  | 12    | 174      | 183     | 95   |
| 090090027 | New Haven  | New Haven     | 1 James Street                      | 8-HR RUN AVG | 8512  | 0.10   | 0.090 | 0.09   | 0.081  | 13    | 179      | 183     | 98   |
| 090093002 | New Haven  | Madison       | Hammonasset State Park              | 8-HR RUN AVG | 2889  | 0.10   | 0.093 | 0.09   | 0.087  | 10    | 116      | 183     | 63   |
| 090099002 | New Haven  | Madison       | Meigs Point, Hammonasset State Park | 8-HR RUN AVG | 729   | 0.10   | 0.068 | 0.07   | 0.062  | 1     | 29       | 183     | 16   |
| 090110124 | New London | Groton        | 141 Smith Street                    | 8-HR RUN AVG | 4062  | 0.10   | 0.092 | 0.09   | 0.087  | 8     | 165      | 183     | 90   |
| 090131001 | Tolland    | Stafford      | Route 190, Shenipsit State Forest   | 8-HR RUN AVG | 4307  | 0.10   | 0.086 | 0.09   | 0.083  | 8     | 175      | 183     | 96   |
| 090159991 | Windham    | Abington      | 80 Ayers Rd                         | 8-HR RUN AVG | 8563  | 0.08   | 0.083 | 0.08   | 0.075  | 2     | 180      | 183     | 98   |



# Connecticut Sites - 2012 - Particulate Matter < 10 Microns



# Connecticut Particulate Matter < 10 Microns (PM<sub>10</sub>) Data



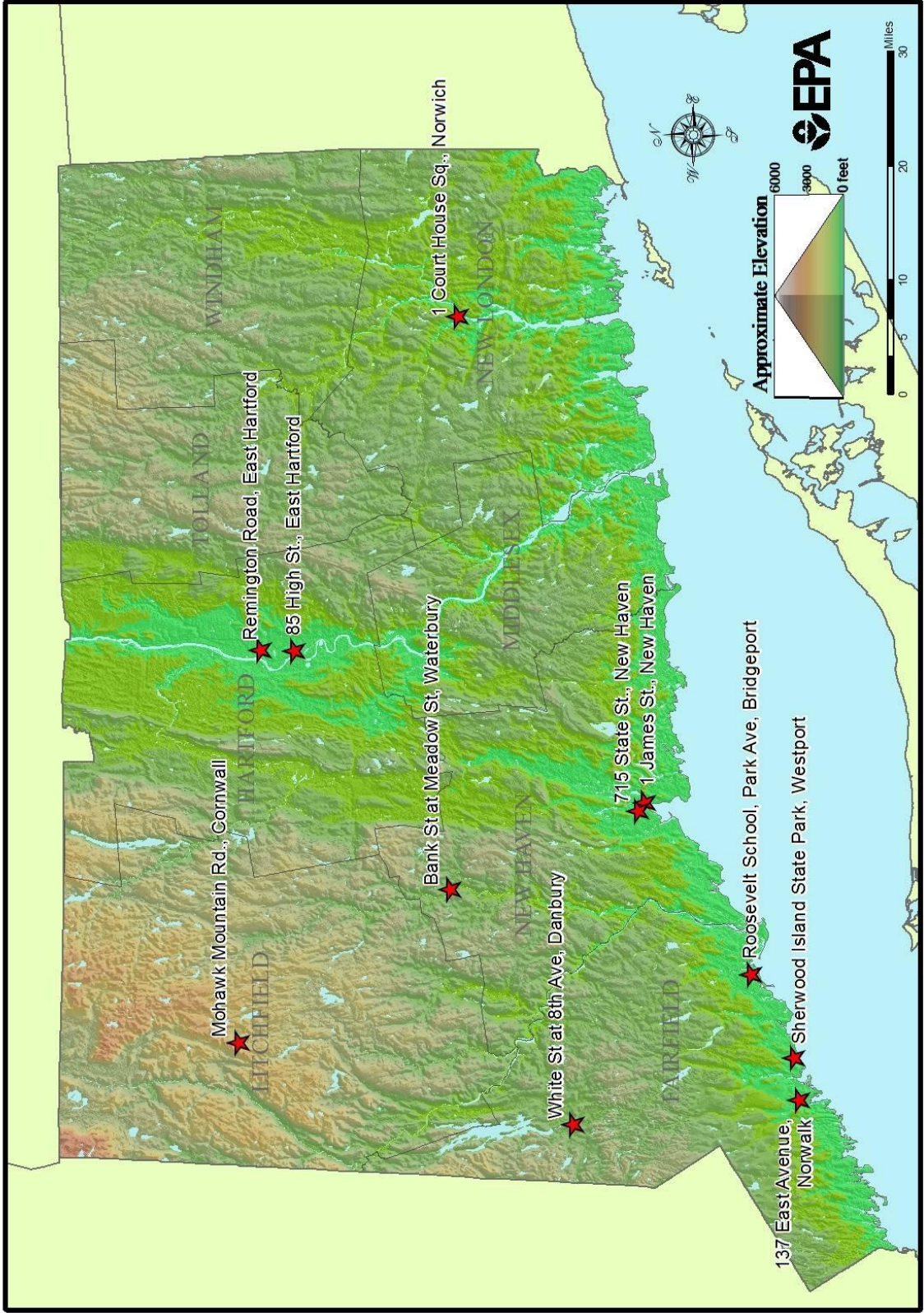
NAAQS for Particulate Matter less than 10 Microns:  
24-hour- 150 µg/m<sup>3</sup>

2012 Connecticut  
Particulate Matter < 10 Microns  
All Concentrations are in units of µg/m<sup>3</sup>

| Site ID   | POC | County     | City          | Address                    | Duration | Obs. | First Max. | Second Max. | Actual Exceedances | Weighted Arithmetic Mean |
|-----------|-----|------------|---------------|----------------------------|----------|------|------------|-------------|--------------------|--------------------------|
| 090010010 | 1   | Fairfield  | Bridgeport    | Roosevelt School Park Ave. | 24 HOUR  | 57   | 54         | 34          | 0                  | 16.7                     |
| 090031003 | 1   | Hartford   | East Hartford | Remington Road             | 24 HOUR  | 59   | 23         | 22          | 0                  | 10.5                     |
| 090050005 | 2   | Litchfield | Cornwall      | Mohawk Mountain Road       | 24 HOUR  | 116  | 24         | 21          | 0                  | 7.7                      |
| 090090027 | 1   | New Haven  | New Haven     | 1 James Street             | 24 HOUR  | 118  | 39         | 37          | 0                  | 14.7                     |
| 090090027 | 2   | New Haven  | New Haven     | 1 James Street             | 24 HOUR  | 58   | 39         | 34          | 0                  | 13.8                     |

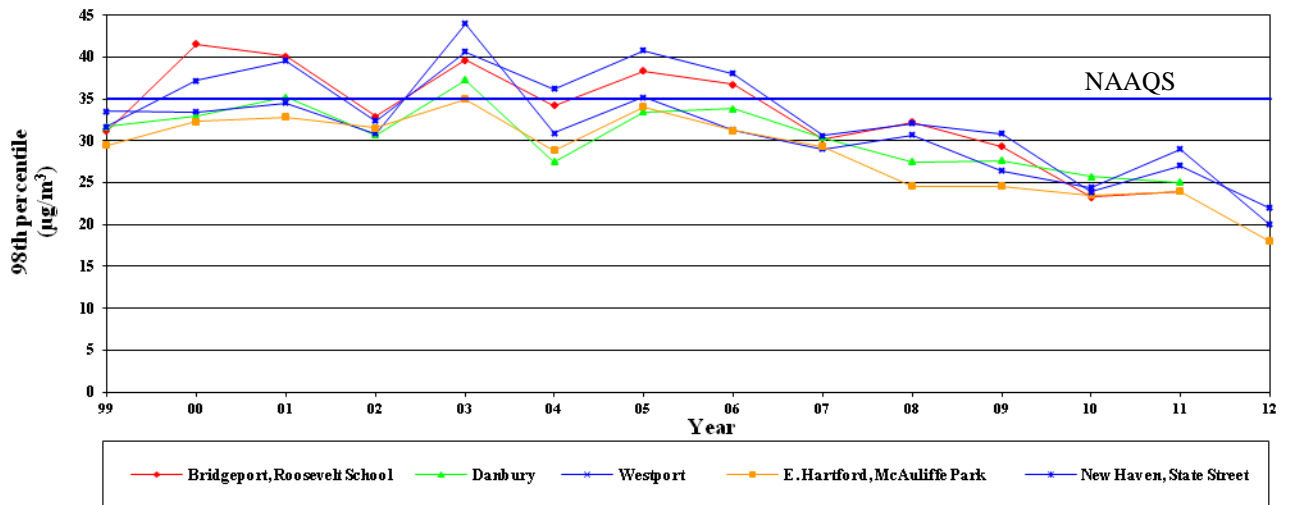
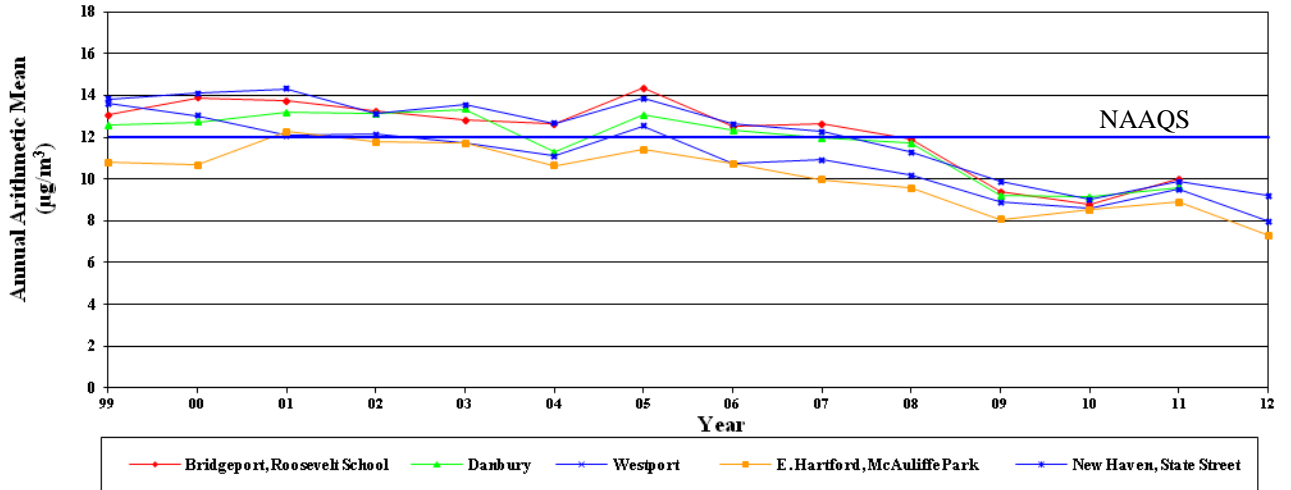


# Connecticut Sites - 2012 - Particulate Matter < 2.5 Microns





# Connecticut Particulate Matter < 2.5 Microns (PM<sub>2.5</sub>) Data



## NAAQS for Particulate Matter less than 2.5 Microns:

Annual: the 3-year average of the Annual Arithmetic Mean - 12.0 µg/m<sup>3</sup> (Effective March 18, 2013)

24-Hour: the 3-year average of the 98th percentile of 24-hour average concentrations - 35 µg/m<sup>3</sup>

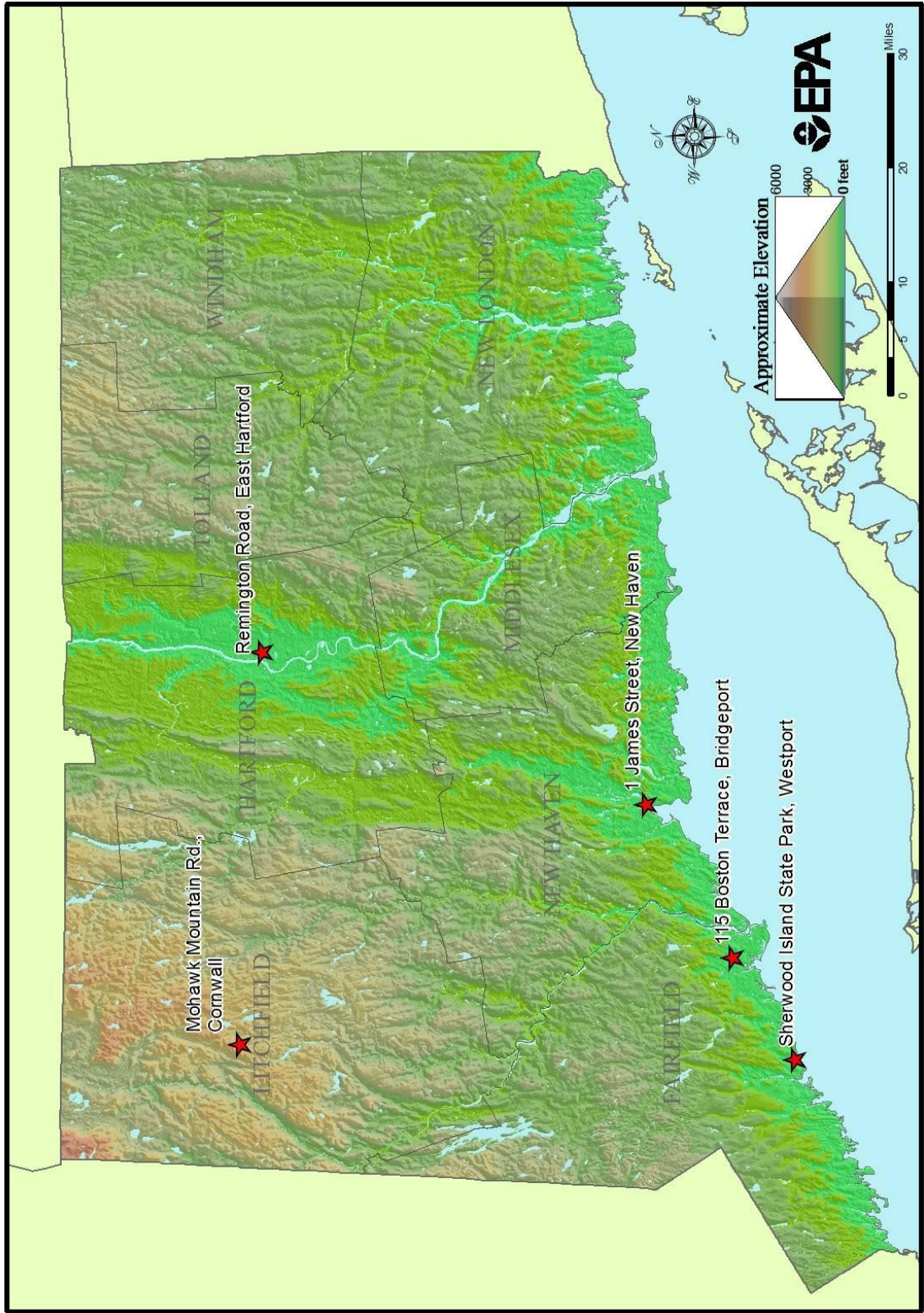
2012 Connecticut

Particulate Matter < 2.5 Microns

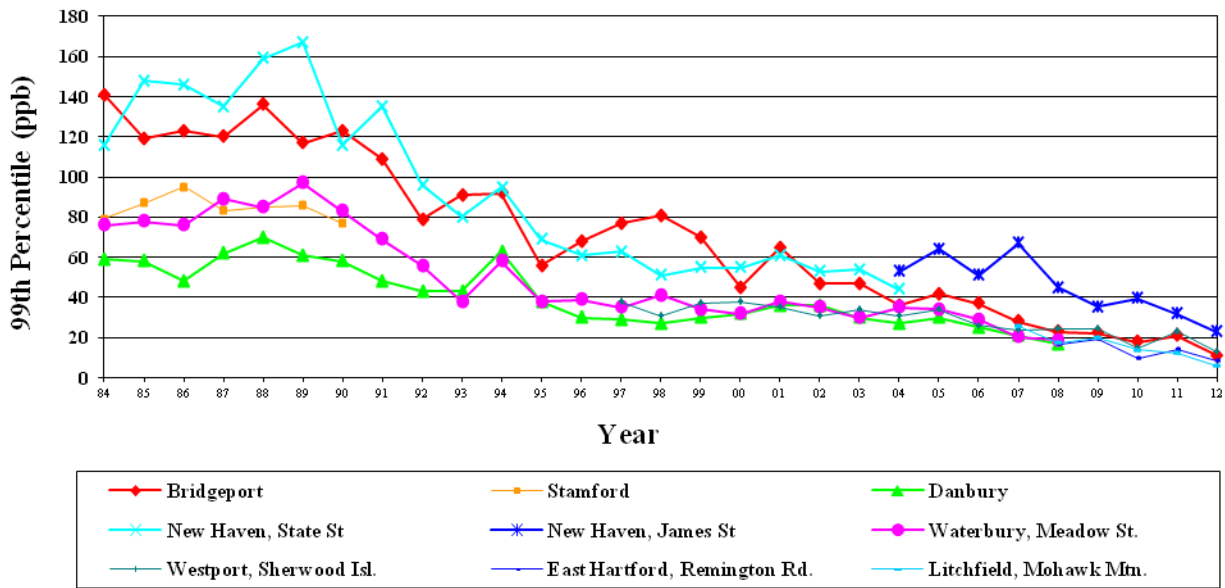
All Concentrations are in µg/m<sup>3</sup> Local Conditions

| Site ID   | POC | County     | City          | Address                    | Duration | Obs. | First Max. | Second Max. | Third Max. | Fourth Max. | 98th Percentile | Weighted Arithmetic Mean |
|-----------|-----|------------|---------------|----------------------------|----------|------|------------|-------------|------------|-------------|-----------------|--------------------------|
| 090010010 | 1   | Fairfield  | Bridgeport    | Roosevelt School Park Ave. | 24 HOUR  | 114  | 27.6       | 23.9        | 21.5       | 21.1        | 22              | 9.3                      |
| 090011123 | 1   | Fairfield  | Danbury       | White St At 8th Ave        | 24 HOUR  | 118  | 27.2       | 23.5        | 21.6       | 21.5        | 22              | 8.4                      |
| 090013005 | 1   | Fairfield  | Norwalk       | 137 East Avenue            | 24 HOUR  | 113  | 24.7       | 23.5        | 22.5       | 20.7        | 23              | 8.6                      |
| 090019003 | 1   | Fairfield  | Westport      | Sherwood Island State Park | 24 HOUR  | 113  | 20.6       | 20.5        | 19.5       | 18.7        | 20              | 8                        |
| 090031003 | 1   | Hartford   | East Hartford | Remington Road             | 24 HOUR  | 351  | 21.2       | 19.8        | 19.8       | 19.0        | 18              | 7.3                      |
| 090032006 | 1   | Hartford   | East Hartford | 85 High Street             | 24 HOUR  | 119  | 21.7       | 20.7        | 20.3       | 20.3        | 20              | 8.5                      |
| 090050005 | 1   | Litchfield | Cornwall      | Mohawk Mountain Road       | 24 HOUR  | 120  | 18.2       | 15.1        | 15.0       | 14.7        | 15              | 5.5                      |
| 090090027 | 1   | New Haven  | New Haven     | 1 James Street             | 24 HOUR  | 357  | 23.0       | 23.0        | 22.9       | 22.9        | 21              | 8.3                      |
| 090090027 | 2   | New Haven  | New Haven     | 1 James Street             | 24 HOUR  | 59   | 24.0       | 20.9        | 20.5       | 20.5        | 21              | 8.8                      |
| 090091123 | 1   | New Haven  | New Haven     | 715 State Street           | 24 HOUR  | 117  | 24.8       | 23.8        | 22.0       | 21.9        | 22              | 9.2                      |
| 090092123 | 1   | New Haven  | Waterbury     | Bank St At Meadow St       | 24 HOUR  | 116  | 21.2       | 21.0        | 20.6       | 19.6        | 21              | 8.5                      |
| 090092123 | 2   | New Haven  | Waterbury     | Bank St At Meadow St       | 24 HOUR  | 57   | 20.6       | 18.2        | 17.0       | 16.0        | 18              | 8.1                      |
| 090113002 | 1   | New London | Norwich       | 1 Court House Square       | 24 HOUR  | 117  | 20.6       | 19.8        | 19.7       | 19.0        | 20              | 7.6                      |

# Connecticut Sites - 2012 - Sulfur Dioxide



# Connecticut Sulfur Dioxide Data



## NAAQS for Sulfur Dioxide:

Primary: 1-hour - 75 ppb (0.075 ppm) 99<sup>th</sup> percentile

Secondary: 3-hour - 0.5 ppm

2012 Connecticut

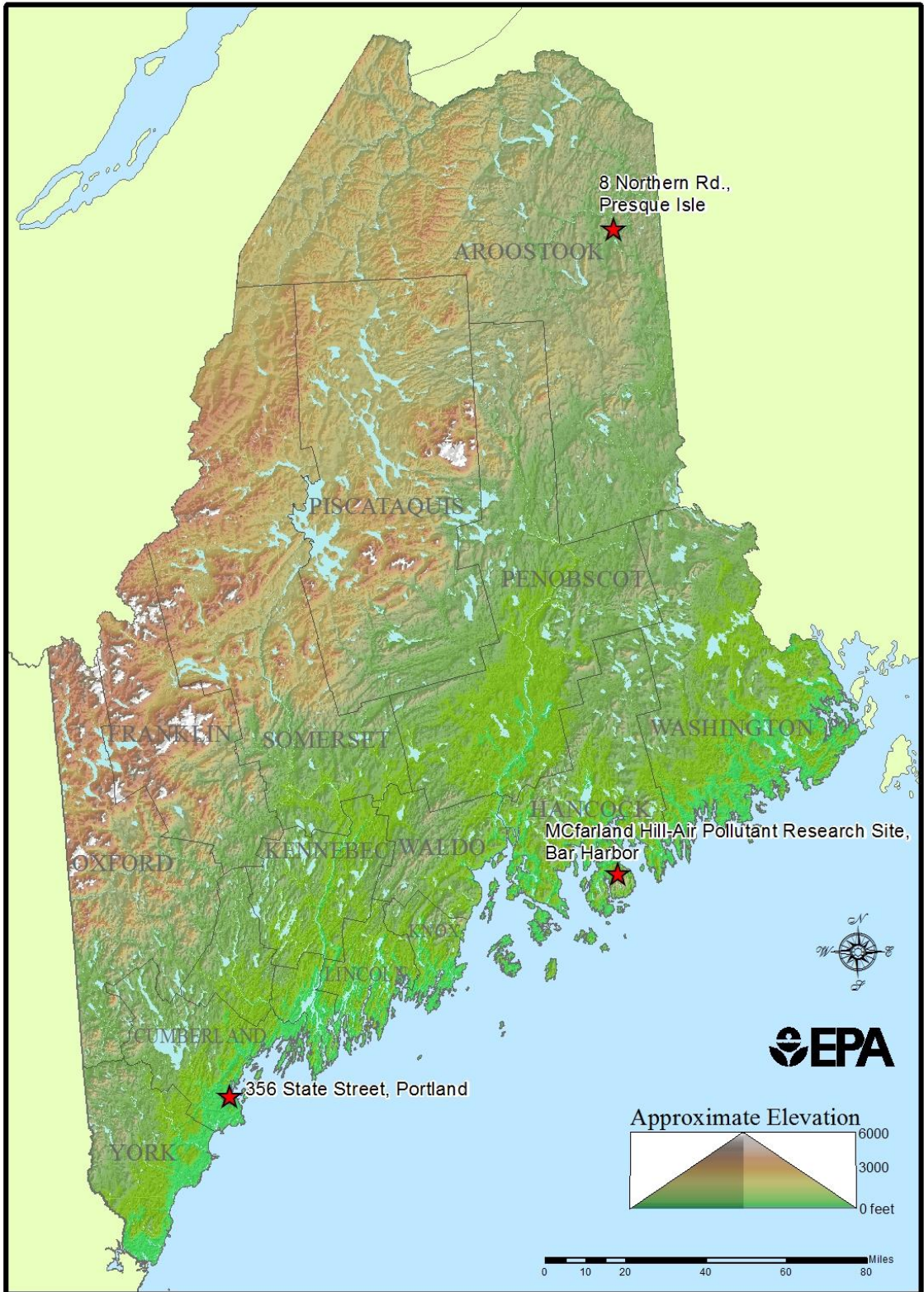
Parameter: Sulfur Dioxide

All Concentrations are in Units of Parts Per Billion (ppb)

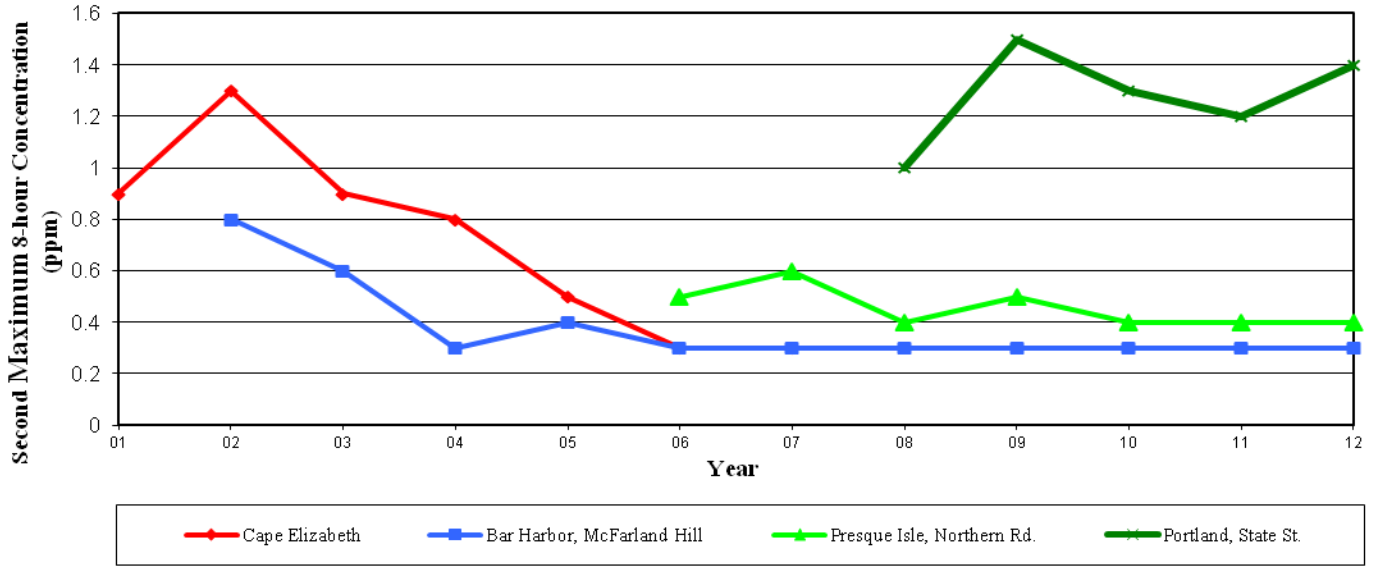
| Site ID   | County     | City          | Address                    | Duration | Obs. | First Max. | Second Max. | 99th Percentile | Actual Exceedances |
|-----------|------------|---------------|----------------------------|----------|------|------------|-------------|-----------------|--------------------|
| 090010012 | Fairfield  | Bridgeport    | 115 Boston Terrace         | 1 HOUR   | 8575 | 13         | 12          | 11              | 0                  |
| 090019003 | Fairfield  | Westport      | Sherwood Island State Park | 1 HOUR   | 8266 | 18         | 15          | 13              | 0                  |
| 090031003 | Hartford   | East Hartford | Remington Road             | 1 HOUR   | 8133 | 9          | 9           | 8               | 0                  |
| 090050005 | Litchfield | Cornwall      | Mohawk Mountain Road       | 1 HOUR   | 8570 | 8          | 7           | 6               | 0                  |
| 090090027 | New Haven  | New Haven     | 1 James Street             | 1 HOUR   | 8623 | 48         | 37          | 23              | 0                  |



Maine Sites 2012 - Carbon Monoxide



# Maine Carbon Monoxide Data



## NAAQS for Carbon Monoxide:

1-hour – 35 ppm, not to be exceeded more than once per year

8-hour – 9 ppm, not to be exceeded more than one per year

## 2012 Maine

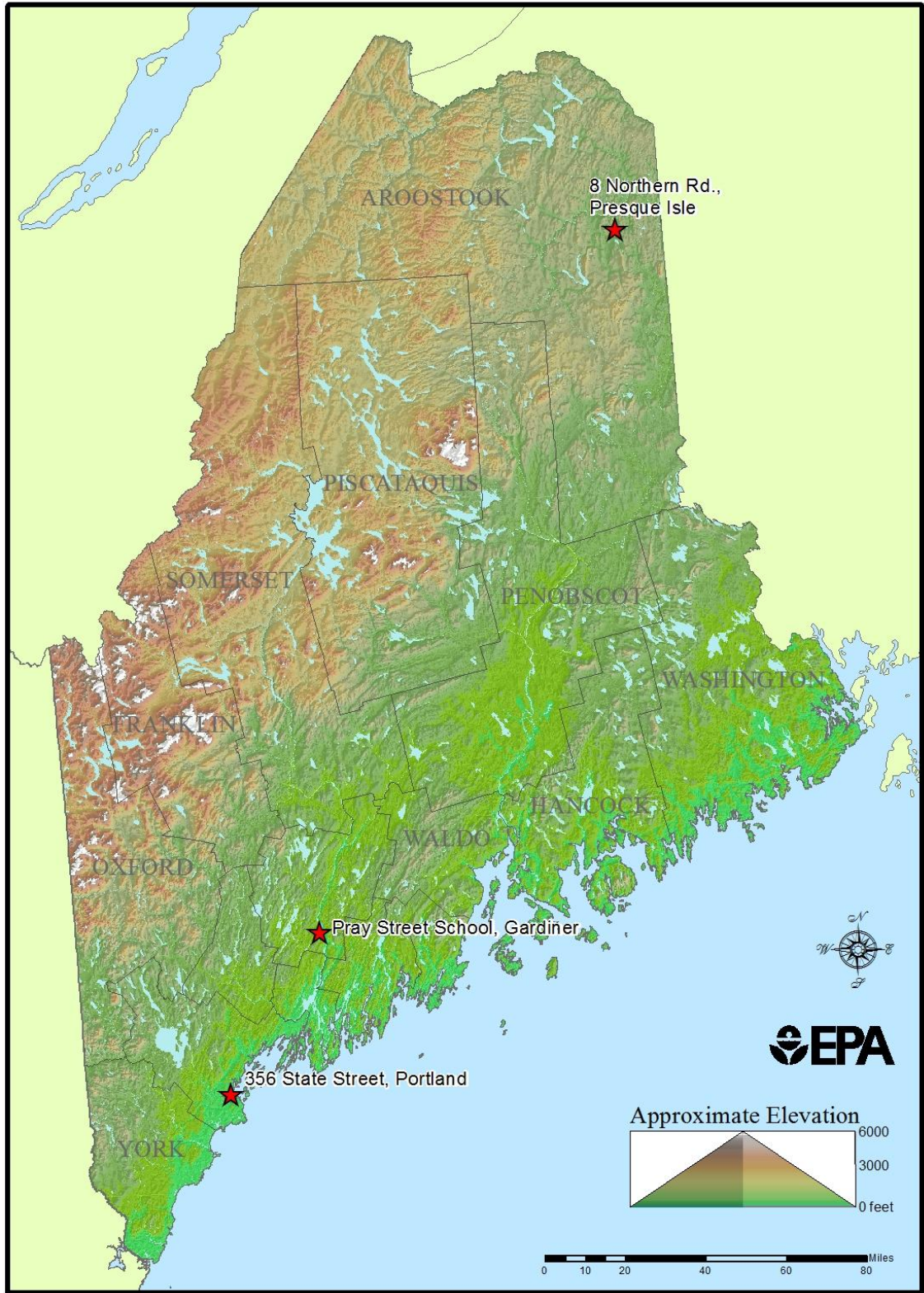
### Carbon Monoxide

All Concentrations are in Units of Parts Per Million

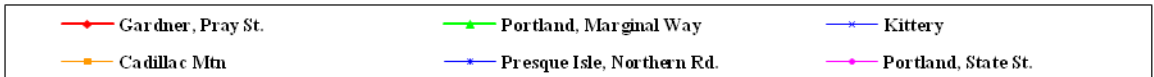
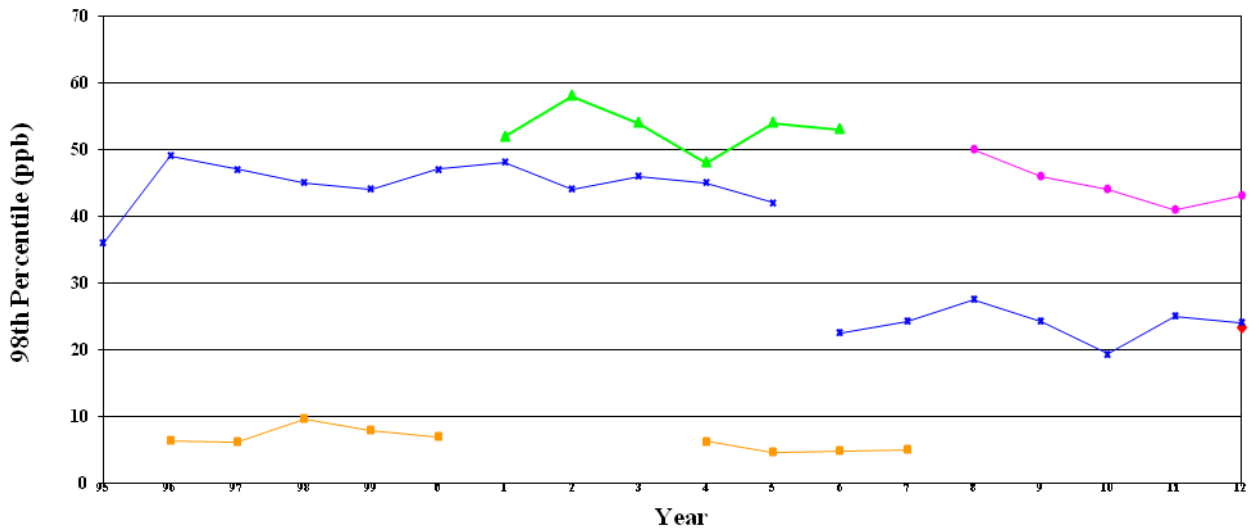
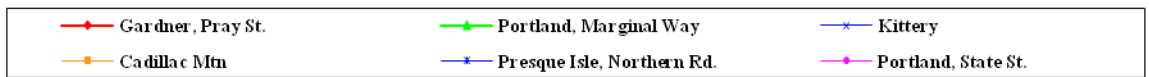
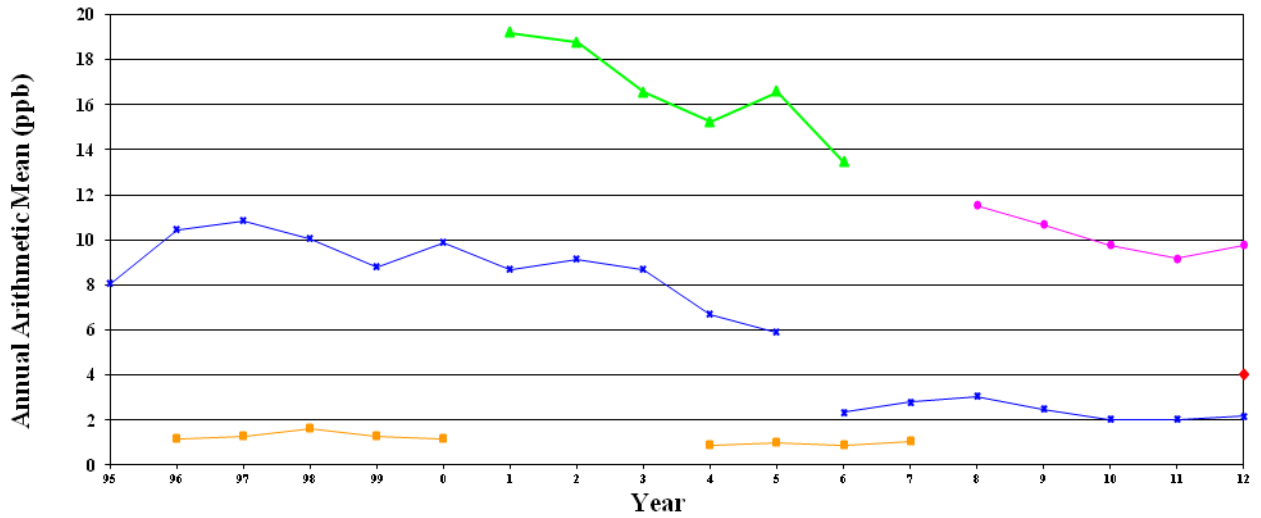
| Site ID   | County     | City         | Address                                    | Duration     | Obs. | First Max. | Second Max. |
|-----------|------------|--------------|--|--------------|------|------------|-------------|
| 230031100 | Aroostook  | Presque Isle | 8 Northern Road                            | 1 HOUR       | 7961 | 1.1        | 0.7         |
| 230050029 | Cumberland | Portland     | 356 State Street, Portland, Maine          | 1 HOUR       | 8558 | 2.2        | 1.9         |
| 230090103 | Hancock    | Bar Harbor   | Mcfarland Hill-Air Pollutant Research Site | 1 HOUR       | 8541 | 0.2        | 0.2         |
| 230031100 | Aroostook  | Presque Isle | 8 Northern Road                            | 8-HR RUN AVG | 7720 | 0.4        | 0.4         |
| 230050029 | Cumberland | Portland     | 356 State Street, Portland, Maine          | 8-HR RUN AVG | 8445 | 1.6        | 1.4         |
| 230090103 | Hancock    | Bar Harbor   | Mcfarland Hill-Air Pollutant Research Site | 8-HR RUN AVG | 8562 | 0.3        | 0.3         |



# Maine Sites 2012 - Nitrogen Dioxide



# Maine Nitrogen Dioxide Data



## NAAQS for Nitrogen Dioxide:

Annual Arithmetic Mean- 53 ppb (100 µg/m<sup>3</sup>)

1-hour – 100 ppb (as of January 22, 2010) 98<sup>th</sup> percentile

2012 Maine

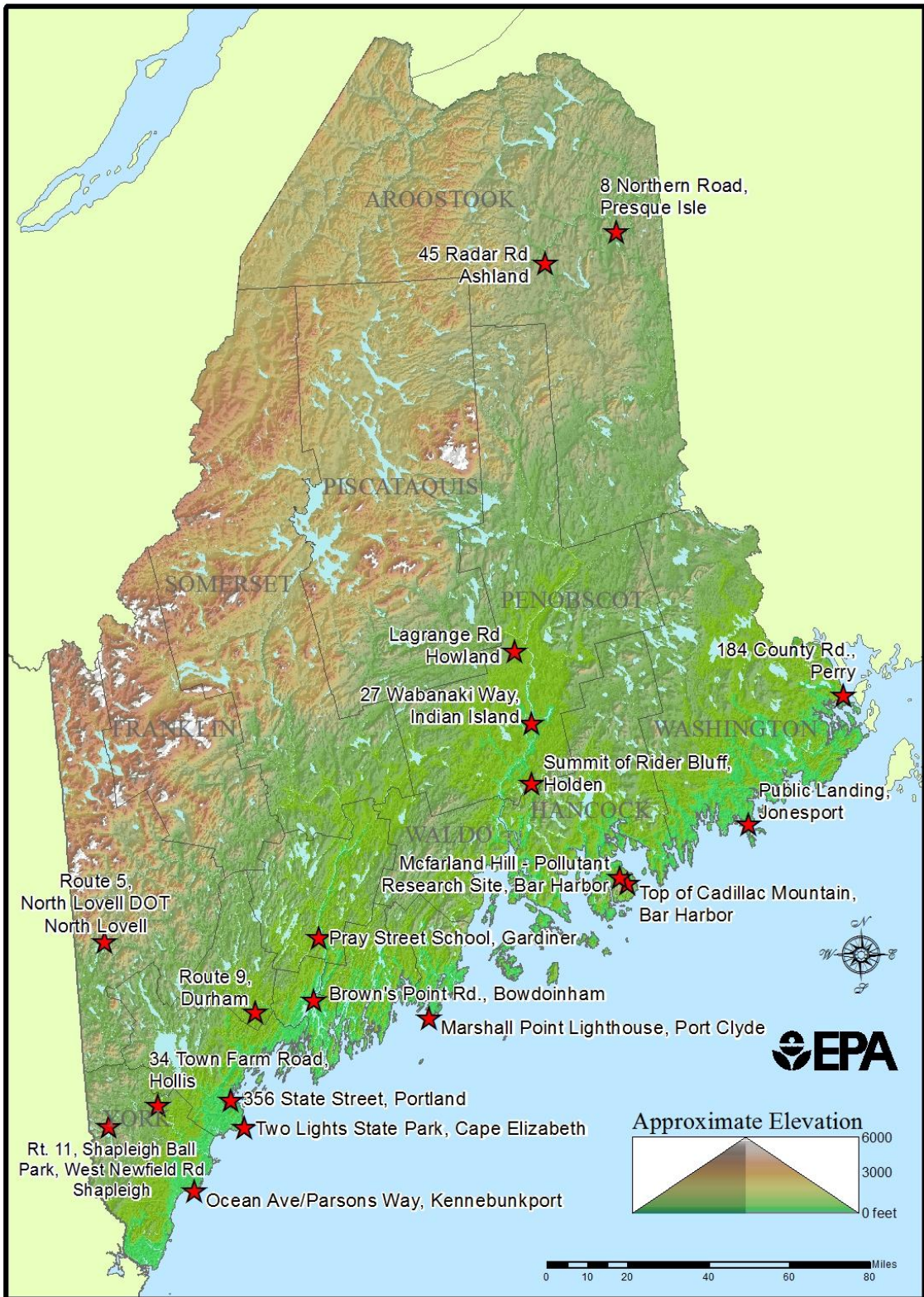
Nitrogen Dioxide

All Concentrations are in Units of Parts Per Billion

| Site ID   | County     | City         | Address            | Duration | Obs. | First Max. | Second Max. | 98th Percentile | Annual Arithmetic Mean |
|-----------|------------|--------------|--------------------|----------|------|------------|-------------|-----------------|------------------------|
| 230031100 | Aroostook  | Presque Isle | 8 Northern Road    | 1 HOUR   | 7886 | 34         | 28          | 24              | 2.16                   |
| 230050029 | Cumberland | Portland     | 356 State Street   | 1 HOUR   | 8606 | 49         | 48          | 43              | 9.77                   |
| 230112005 | Kennebec   | Gardiner     | Pray Street School | 1 HOUR   | 6586 | 28         | 27          | 23              | 3.99                   |

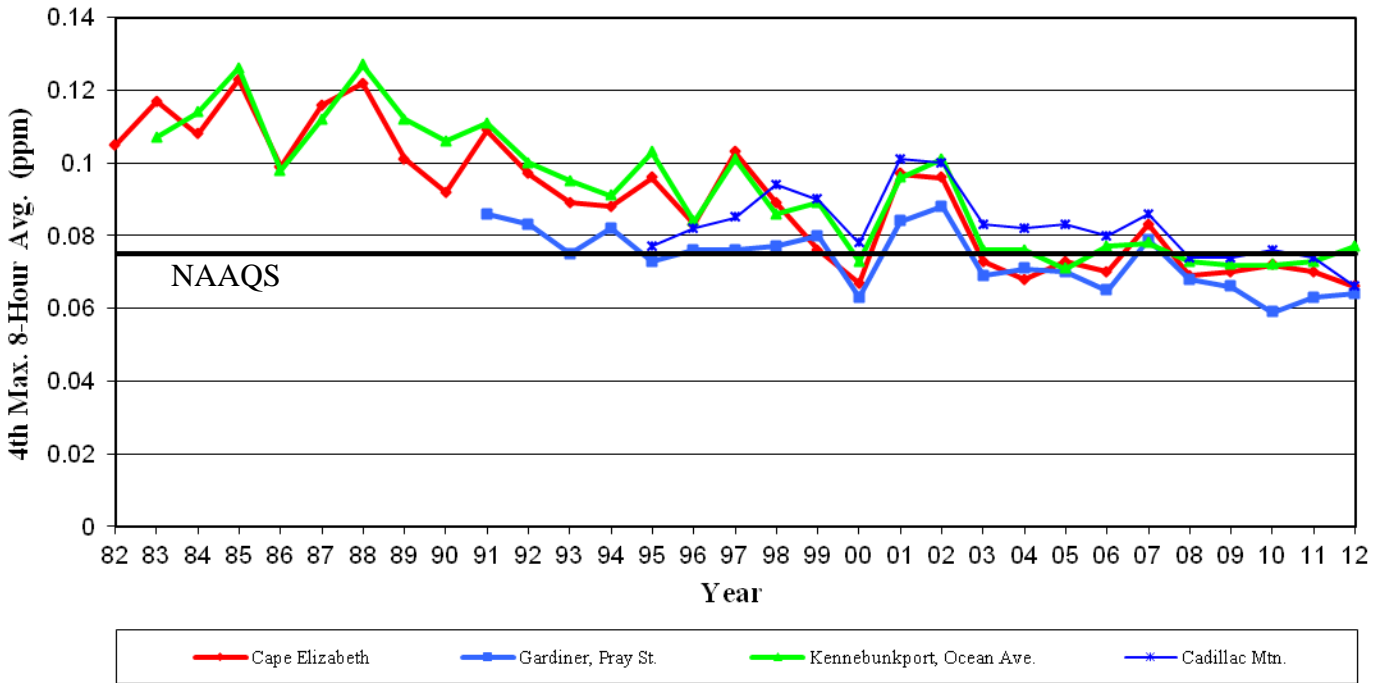


# Maine Sites 2012 - Ozone





# Maine Ozone 8-Hour Data



NAAQS for Ozone:

8-hour – 0.075 ppm (2008 std)

(To attain this 0.075 ppm standard, the 3-year average of the fourth-highest daily maximum 8-hour average ozone concentrations measured at each monitor within an area over each year must not exceed 0.075 ppm. This graph represents the 4th highest value for each year for each monitor depicted. Thus, being above or below this NAAQS line does not indicate whether or not a monitor exceeds the NAAQS.)

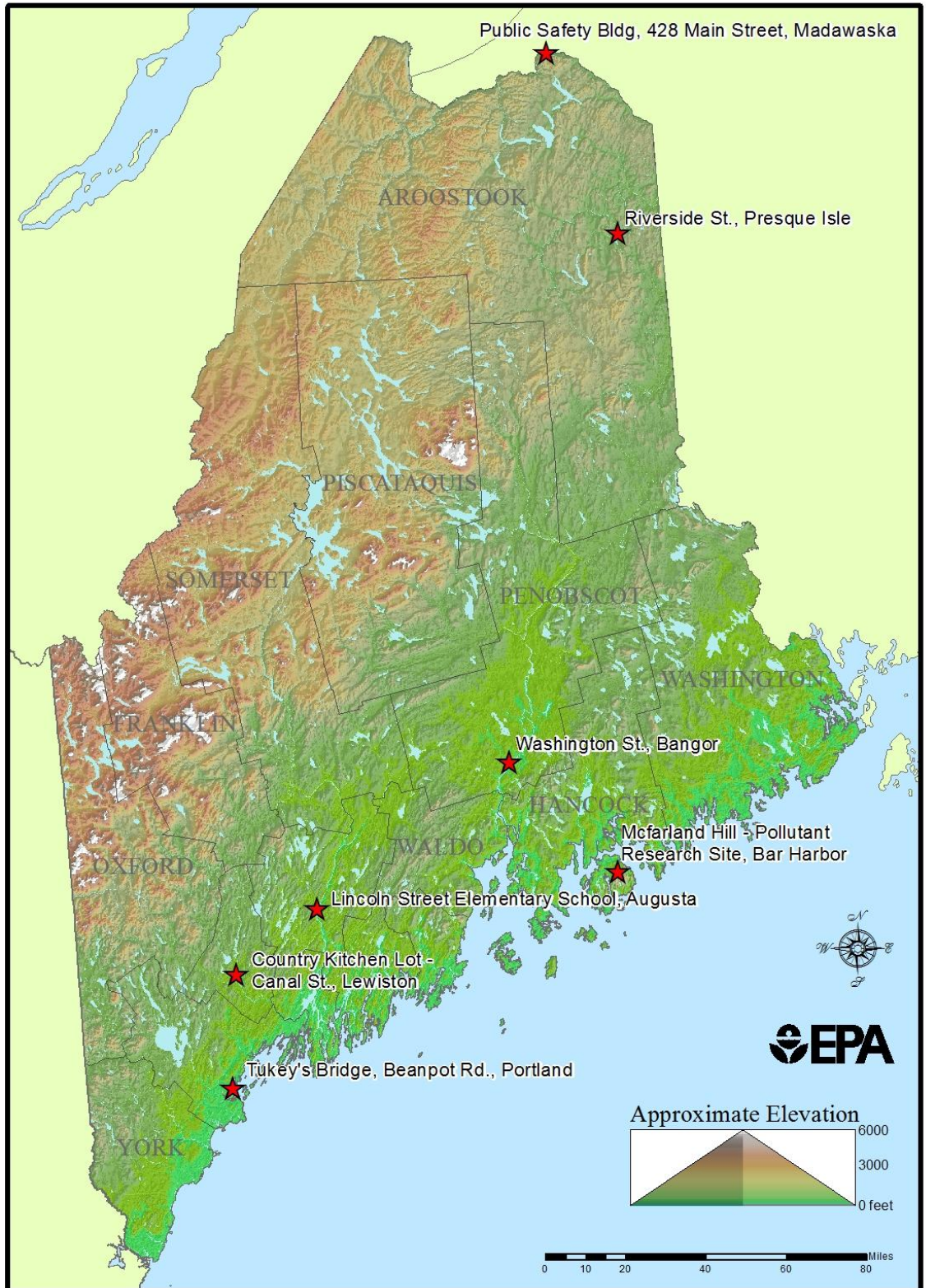
2012 Maine

Ozone (8-Hour)

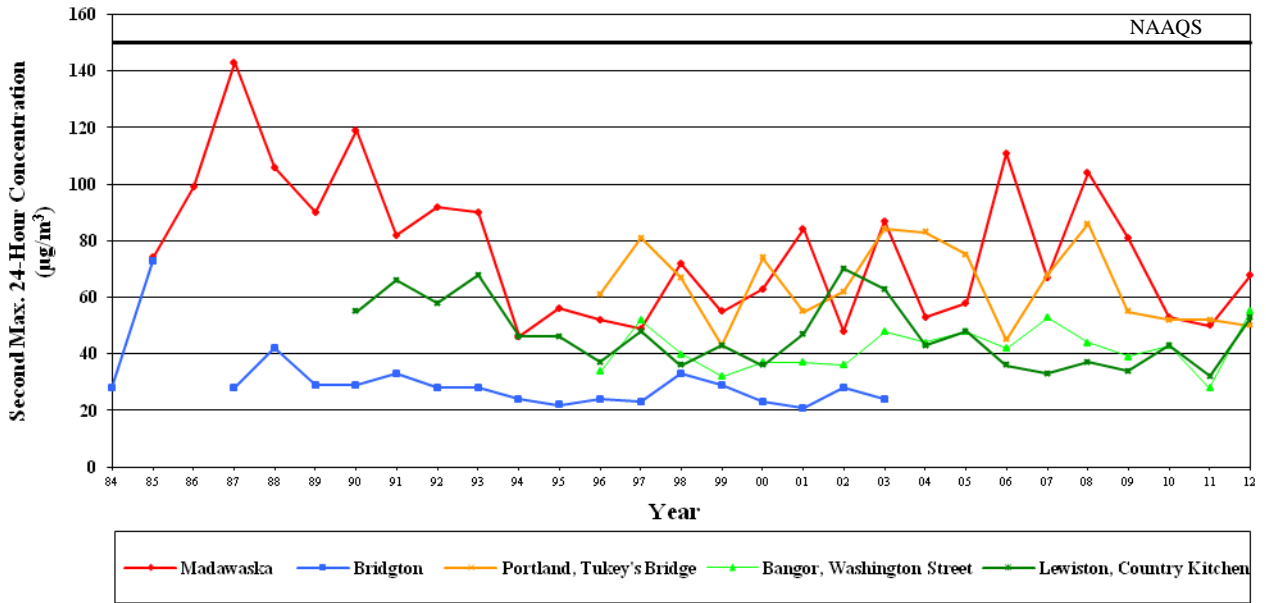
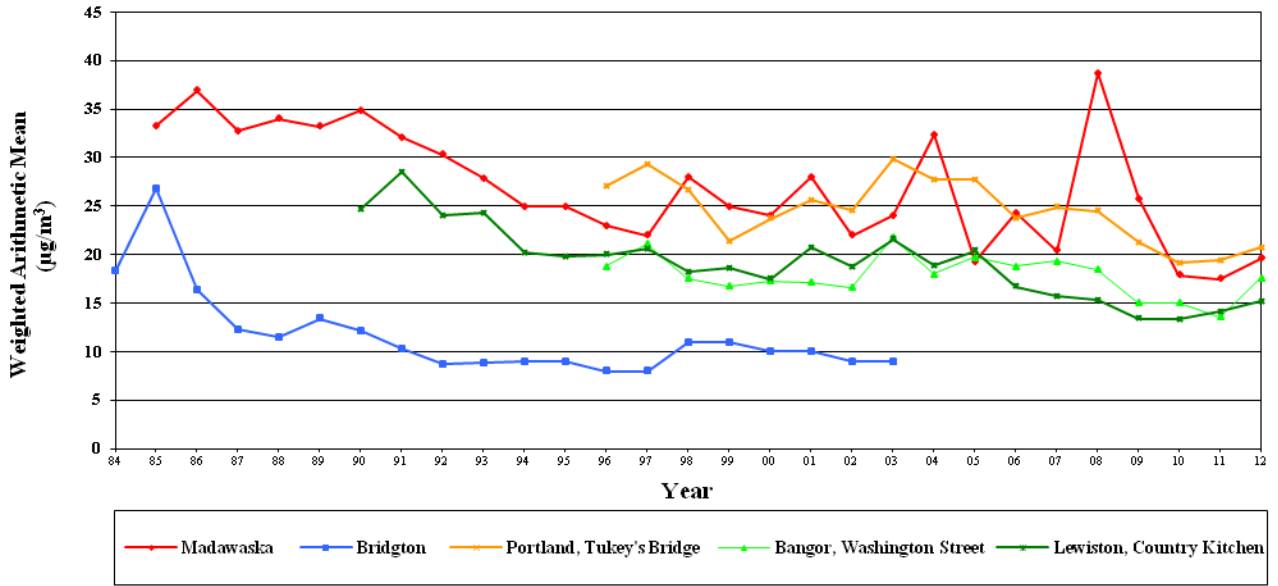
All Concentrations are in Units of Parts Per Million

| Site ID   | County       | City           | Address                     | Duration     | Obs. | First Max. | Second Max. | Third Max. | Fourth Max. | Actual Exceedances | Valid Days | Required Days | Percent Days |
|-----------|--------------|----------------|-----------------------------|--------------|------|------------|-------------|------------|-------------|--------------------|------------|---------------|--------------|
| 230010014 | Androscoggin | Durham         | Route 9                     | 8-HR RUN AVG | 4056 | 0.069      | 0.066       | 0.063      | 0.061       | 0                  | 163        | 183           | 89           |
| 230031100 | Aroostook    | Presque Isle   | 8 Northern Road             | 8-HR RUN AVG | 8691 | 0.056      | 0.054       | 0.053      | 0.051       | 0                  | 178        | 183           | 97           |
| 230039991 | Aroostook    | Ashland        | 45 Radar Rd                 | 8-HR RUN AVG | 8713 | 0.058      | 0.058       | 0.057      | 0.057       | 0                  | 182        | 183           | 99           |
| 230050029 | Cumberland   | Portland       | 356 State Street            | 8-HR RUN AVG | 8738 | 0.073      | 0.067       | 0.065      | 0.065       | 0                  | 183        | 183           | 100          |
| 230052003 | Cumberland   | Cape Elizabeth | Two Lights State Park       | 8-HR RUN AVG | 5126 | 0.078      | 0.076       | 0.074      | 0.066       | 2                  | 182        | 183           | 99           |
| 230090102 | Hancock      | Bar Harbor     | Top Of Cadillac Mountain    | 8-HR RUN AVG | 5088 | 0.071      | 0.070       | 0.069      | 0.066       | 0                  | 180        | 183           | 98           |
| 230090103 | Hancock      | Bar Harbor     | Mcfarland Hill              | 8-HR RUN AVG | 8567 | 0.067      | 0.065       | 0.065      | 0.060       | 0                  | 175        | 183           | 96           |
| 230112005 | Kennebec     | Gardiner       | Pray Street School          | 8-HR RUN AVG | 4681 | 0.067      | 0.066       | 0.064      | 0.064       | 0                  | 183        | 183           | 100          |
| 230130004 | Knox         | Port Clyde     | Marshall Point Lighthouse   | 8-HR RUN AVG | 4243 | 0.069      | 0.067       | 0.062      | 0.062       | 0                  | 175        | 183           | 96           |
| 230173001 | Oxford       | Lovell         | Route 5, North Lovell Dot   | 8-HR RUN AVG | 5110 | 0.066      | 0.062       | 0.060      | 0.056       | 0                  | 182        | 183           | 99           |
| 230191100 | Penobscot    | Indian Island  | 27 Wabanaki Way             | 8-HR RUN AVG | 5023 | 0.061      | 0.060       | 0.059      | 0.058       | 0                  | 162        | 183           | 89           |
| 230194008 | Penobscot    | Holden         | Summit Of Rider Bluff       | 8-HR RUN AVG | 5108 | 0.066      | 0.060       | 0.058      | 0.058       | 0                  | 182        | 183           | 99           |
| 230199991 | Penobscot    | Howland        | Lagrange Rd                 | 8-HR RUN AVG | 7069 | 0.064      | 0.060       | 0.059      | 0.054       | 0                  | 167        | 183           | 91           |
| 230230006 | Sagadahoc    | Bowdoinham     | Brown'S Point Road          | 8-HR RUN AVG | 5009 | 0.067      | 0.065       | 0.064      | 0.062       | 0                  | 182        | 183           | 99           |
| 230290019 | Washington   | Jonesport      | Public Landing              | 8-HR RUN AVG | 5104 | 0.060      | 0.058       | 0.057      | 0.057       | 0                  | 182        | 183           | 99           |
| 230290032 | Washington   | Perry          | 184 County Road             | 8-HR RUN AVG | 7871 | 0.054      | 0.053       | 0.052      | 0.052       | 0                  | 182        | 183           | 99           |
| 230310038 | York         | Hollis         | 34 Town Farm Road           | 8-HR RUN AVG | 5127 | 0.077      | 0.075       | 0.069      | 0.065       | 1                  | 183        | 183           | 100          |
| 230310040 | York         | Shapleigh      | Rt. 11, Shapleigh Ball Park | 8-HR RUN AVG | 5049 | 0.074      | 0.070       | 0.069      | 0.065       | 0                  | 179        | 183           | 98           |
| 230312002 | York         | Kennebunkport  | Ocean Ave / Parsons Way     | 8-HR RUN AVG | 5126 | 0.082      | 0.079       | 0.079      | 0.077       | 4                  | 182        | 183           | 99           |

**Maine Sites 2012 - Particulate Matter < 10 Microns**



# Maine Particulate Matter <10 Microns (PM<sub>10</sub>) Data



## NAAQS for Particulate Matter less than 10 Microns:

24-hour -150 µg/m<sup>3</sup>

2012 Maine

Particulate Matter < 10 Microns

All Concentrations are in units of ug/m<sup>3</sup>

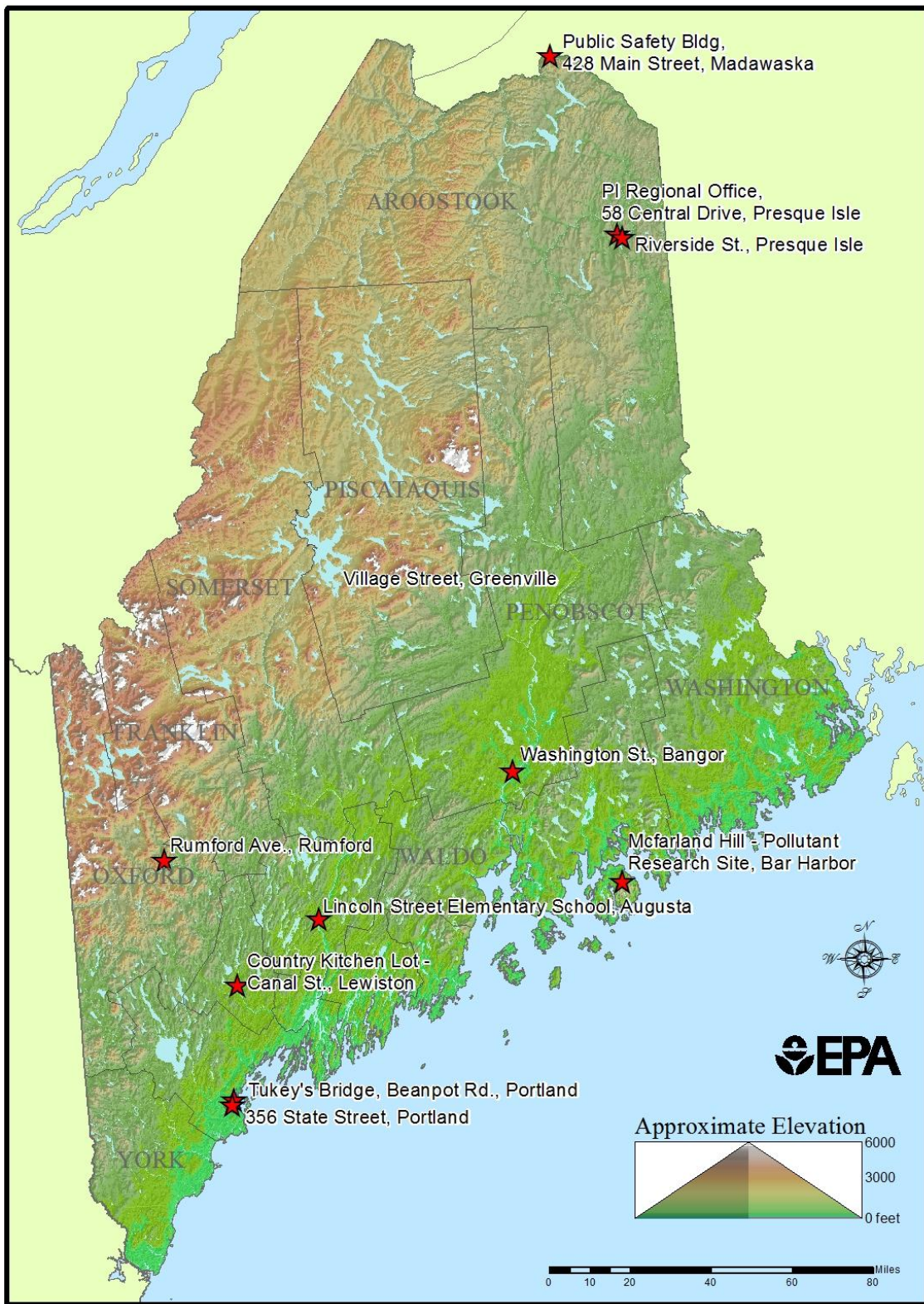
(24 HOUR indicates FRM, 24-HR BLK AVG indicates continuous FEM)

| Site ID   | POC | County       | City         | Address                               | Duration Description | Obs. | First Max. | Second Max. | Actual Exceedances | Weighted Arithmetic Mean |
|-----------|-----|--------------|--------------|---------------------------------------|----------------------|------|------------|-------------|--------------------|--------------------------|
| 230010011 | 2   | Androscoggin | Lewiston     | Country Kitchen Lot-Canal St          | 24 HOUR              | 59   | 54         | 53          | 0                  | 15.2                     |
| 230030014 | 1   | Aroostook    | Madawaska    | Public Safety Bldg, 428 Main Street   | 24 HOUR              | 112  | 80         | 68          | 0                  | 19.6 *                   |
| 230050015 | 2   | Cumberland   | Portland     | Tukey's Bridge-Bean Pot Rd.           | 24 HOUR              | 53   | 60         | 50          | 0                  | 20.7                     |
| 230050015 | 3   | Cumberland   | Portland     | Tukey's Bridge-Bean Pot Rd.           | 24 HOUR              | 28   | 62         | 47          | 0                  | 19.9 *                   |
| 230090103 | 2   | Hancock      | Bar Harbor   | Mcfarland Hill-Air Pollutant Research | 24 HOUR              | 117  | 19         | 17          | 0                  | 6.2                      |
| 230110016 | 2   | Kennebec     | Augusta      | Lincoln Street Elementary School      | 24 HOUR              | 56   | 61         | 48          | 0                  | 13.8                     |
| 230190002 | 3   | Penobscot    | Bangor       | Pump Station-Washington St.           | 24 HOUR              | 59   | 89         | 55          | 0                  | 17.6                     |
| 230031011 | 2   | Aroostook    | Presque Isle | Riverside Street Presque Isle         | 24-HR BLK AVG        | 8547 | 100        | 98          | 0                  | 16.1                     |

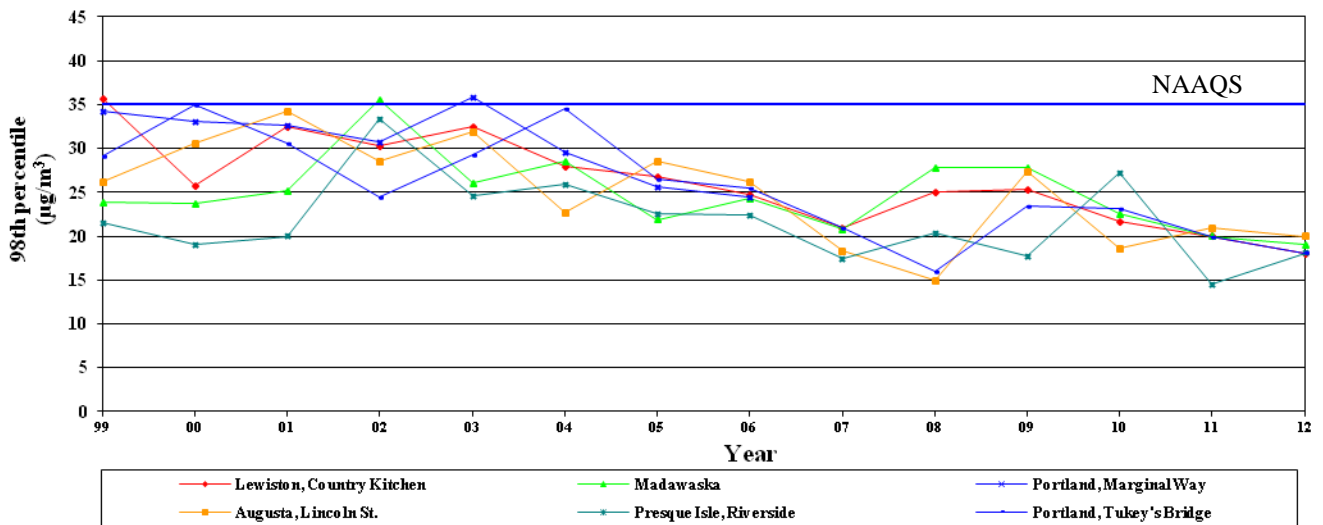
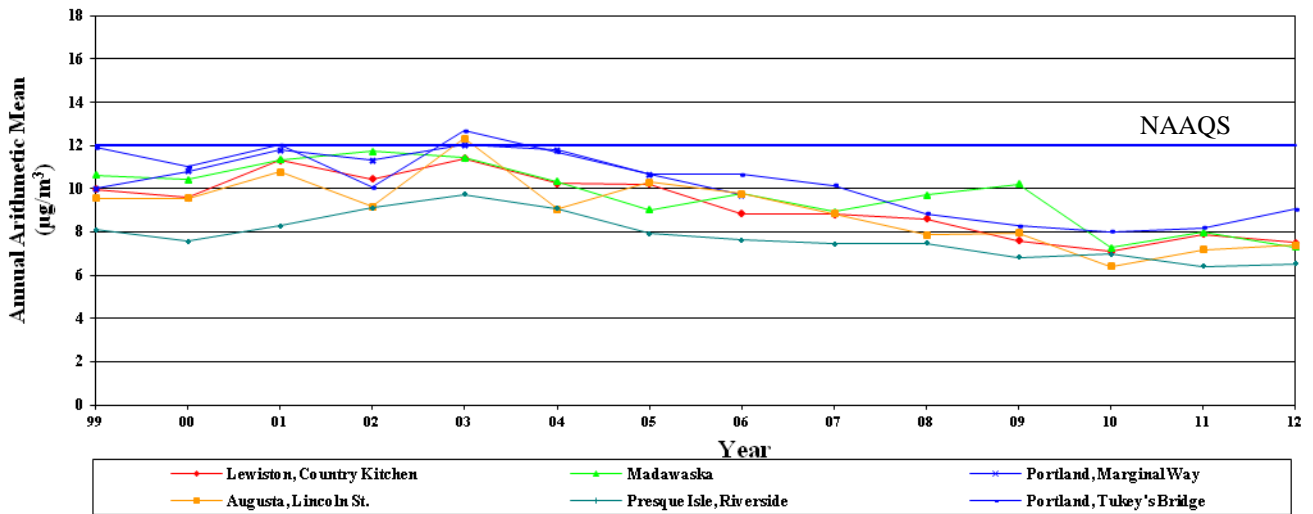
\* Indicates that the mean does not satisfy summary criteria



**Maine Sites 2012 - Particulate Matter < 2.5 Microns**



# Maine Particulate Matter < 2.5 Microns (PM<sub>2.5</sub>) Data



## NAAQS for Particulate Matter less than 2.5 Microns:

Annual: the 3-year average of the Annual Arithmetic Mean - 12.0 µg/m<sup>3</sup> (Effective March 18, 2013)

24-Hour: the 3-year average of the 98th percentile of 24-hour average concentrations - 35 µg/m<sup>3</sup>

2012 Maine

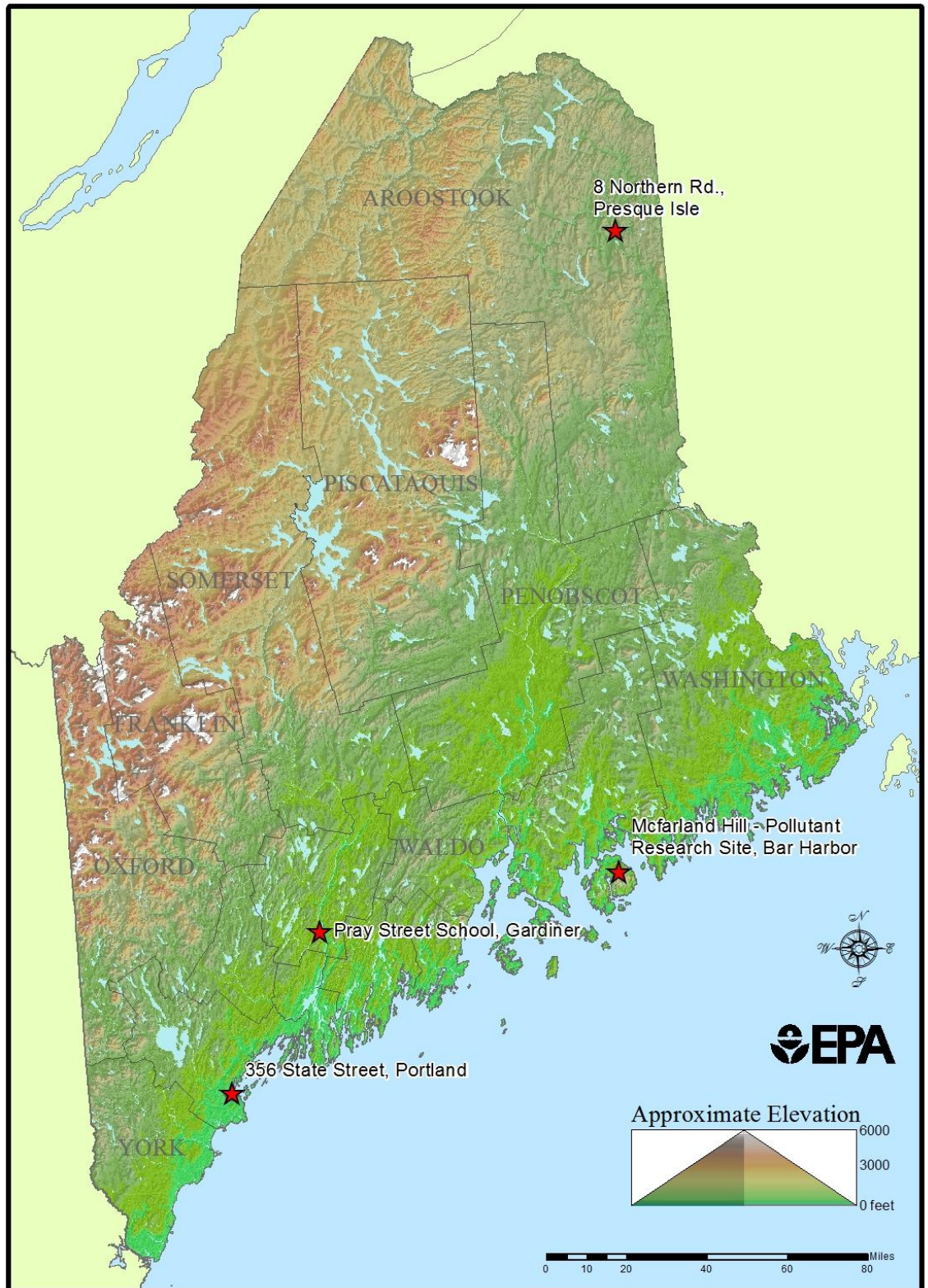
Particulate Matter < 2.5 Microns

All Concentrations are in µg/m<sup>3</sup> Local Conditions

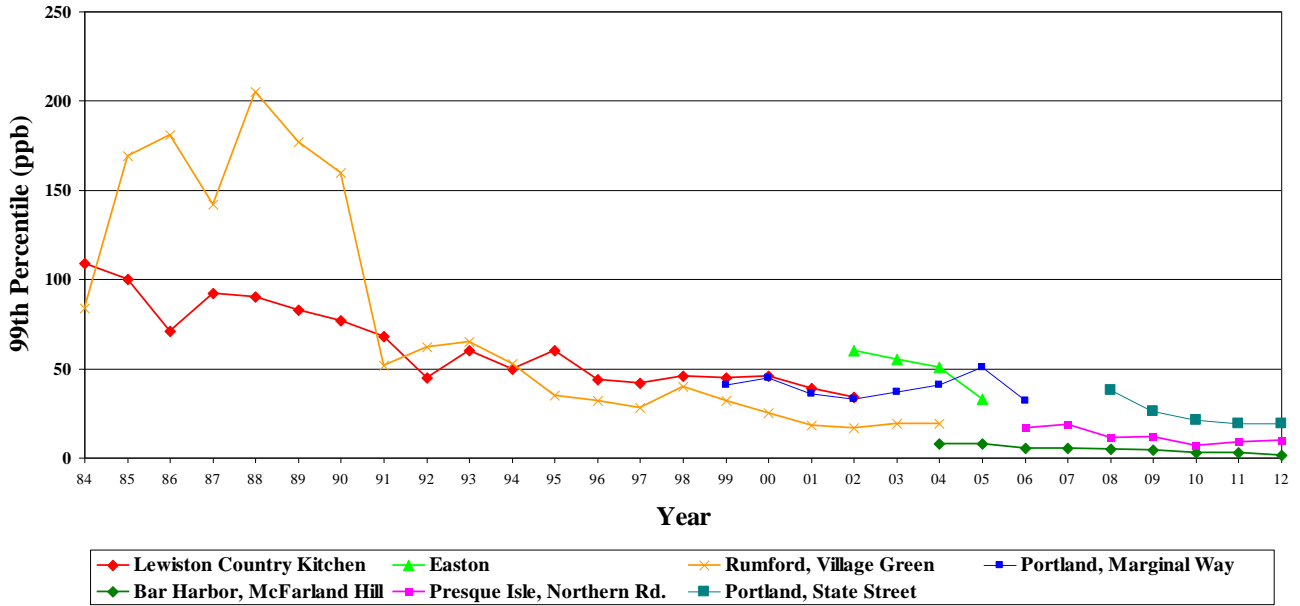
| Site ID   | POC | County       | City         | Address                               | Duration | Obs. | First Max. | Second Max. | Third Max. | Fourth Max. | 98th Percentile | Weighted Arithmetic Mean |
|-----------|-----|--------------|--------------|---------------------------------------|----------|------|------------|-------------|------------|-------------|-----------------|--------------------------|
| 230010011 | 1   | Androscoggin | Lewiston     | Country Kitchen Lot-Canal St          | 24 HOUR  | 112  | 21.5       | 20.7        | 17.8       | 17.8        | 18              | 7.5                      |
| 230030014 | 1   | Aroostook    | Madawaska    | Public Safety Bldg, 428 Main Street   | 24 HOUR  | 79   | 23.3       | 19.2        | 14.7       | 14.4        | 19              | 7.3                      |
| 230031008 | 2   | Aroostook    | Presque Isle | PI Reg Off 58 Central Dr              | 24 HOUR  | 113  | 17.3       | 17.0        | 14.6       | 12.2        | 15              | 5.2                      |
| 230031011 | 1   | Aroostook    | Presque Isle | Riverside Street                      | 24 HOUR  | 114  | 24.9       | 20.7        | 18.1       | 17.8        | 18              | 6.5                      |
| 230050015 | 1   | Cumberland   | Portland     | Tukey's Bridge-Bean Pot Rd.           | 24 HOUR  | 58   | 21.7       | 18.1        | 16.4       | 16.2        | 18              | 9.1                      |
| 230050029 | 1   | Cumberland   | Portland     | 356 State Street                      | 24 HOUR  | 119  | 28.1       | 21.5        | 18.0       | 17.9        | 18              | 8.4                      |
| 230050029 | 2   | Cumberland   | Portland     | 356 State Street                      | 24 HOUR  | 28   | 28.9       | 17.1        | 17.0       | 12.2        | 29              | 8.6                      |
| 230090103 | 1   | Hancock      | Bar Harbor   | Mcfarland Hill-Air Pollutant Research | 24 HOUR  | 118  | 16.4       | 12.7        | 11.2       | 10.3        | 11              | 4.7                      |
| 230110016 | 1   | Kennebec     | Augusta      | Lincoln Street Elementary School      | 24 HOUR  | 57   | 25.3       | 19.9        | 17.5       | 16.7        | 20              | 7.4                      |
| 230110016 | 2   | Kennebec     | Augusta      | Lincoln Street Elementary School      | 24 HOUR  | 19   | 25.3       | 17.6        | 10.2       | 9.2         | 25              | 8.6                      |
| 230172011 | 1   | Oxford       | Rumford      | Rumford Avenue                        | 24 HOUR  | 56   | 30.7       | 25.4        | 20.3       | 17.7        | 25              | 8.2                      |
| 230190002 | 1   | Penobscot    | Bangor       | Pump Station-Washington St.           | 24 HOUR  | 117  | 22.2       | 19.5        | 17.7       | 17.5        | 18              | 7.4                      |



Maine Sites 2012 - Sulfur Dioxide



# Maine Sulfur Dioxide Data



## NAAQS for Sulfur Dioxide:

Primary: 1-hour -75 ppb (0.075 ppm) 99<sup>th</sup> percentile

Secondary: 3-hour -0.5 ppm

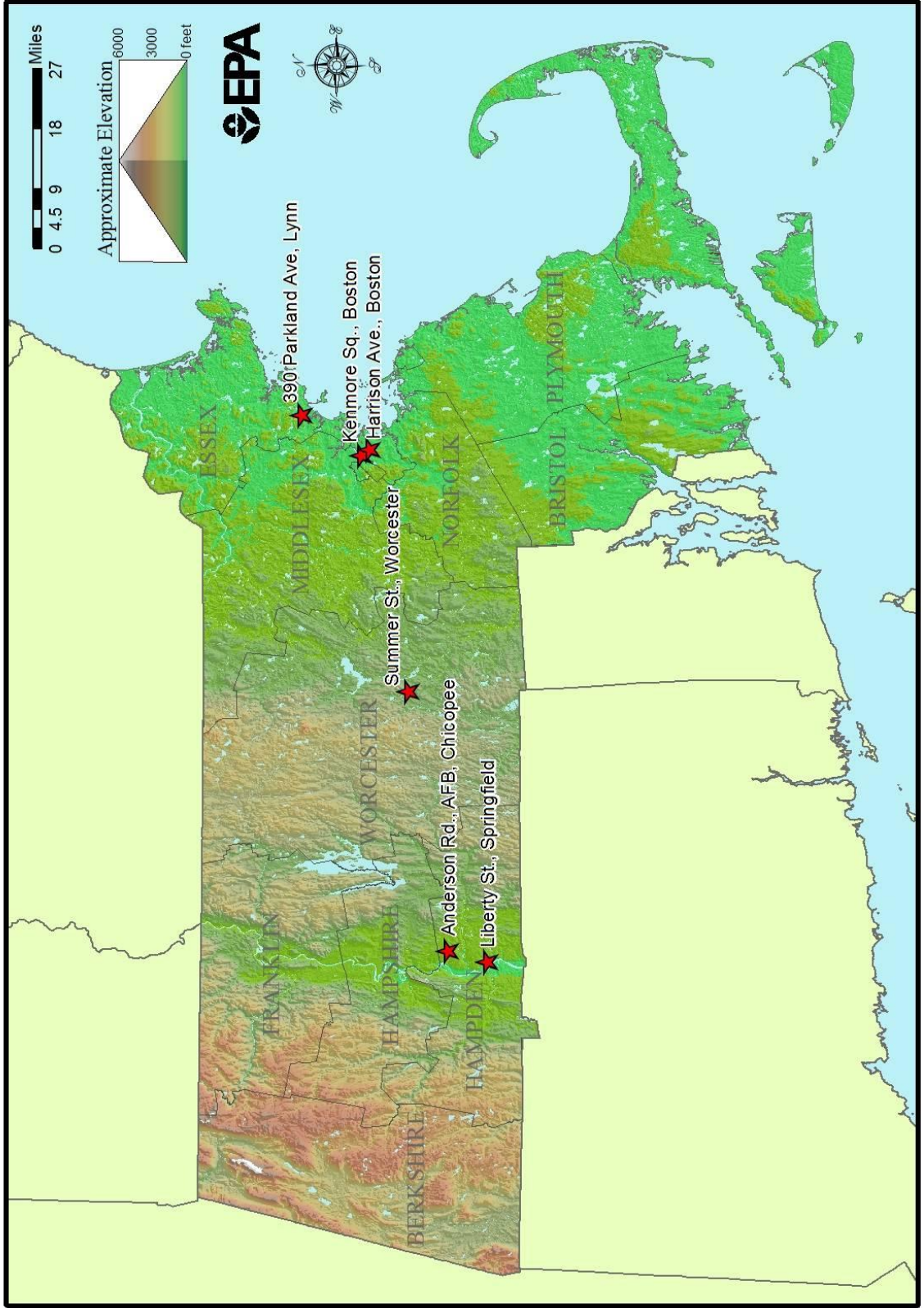
2012 Maine

Parameter: Sulfur Dioxide

All Concentrations are in Units of Parts Per Billion (ppb)

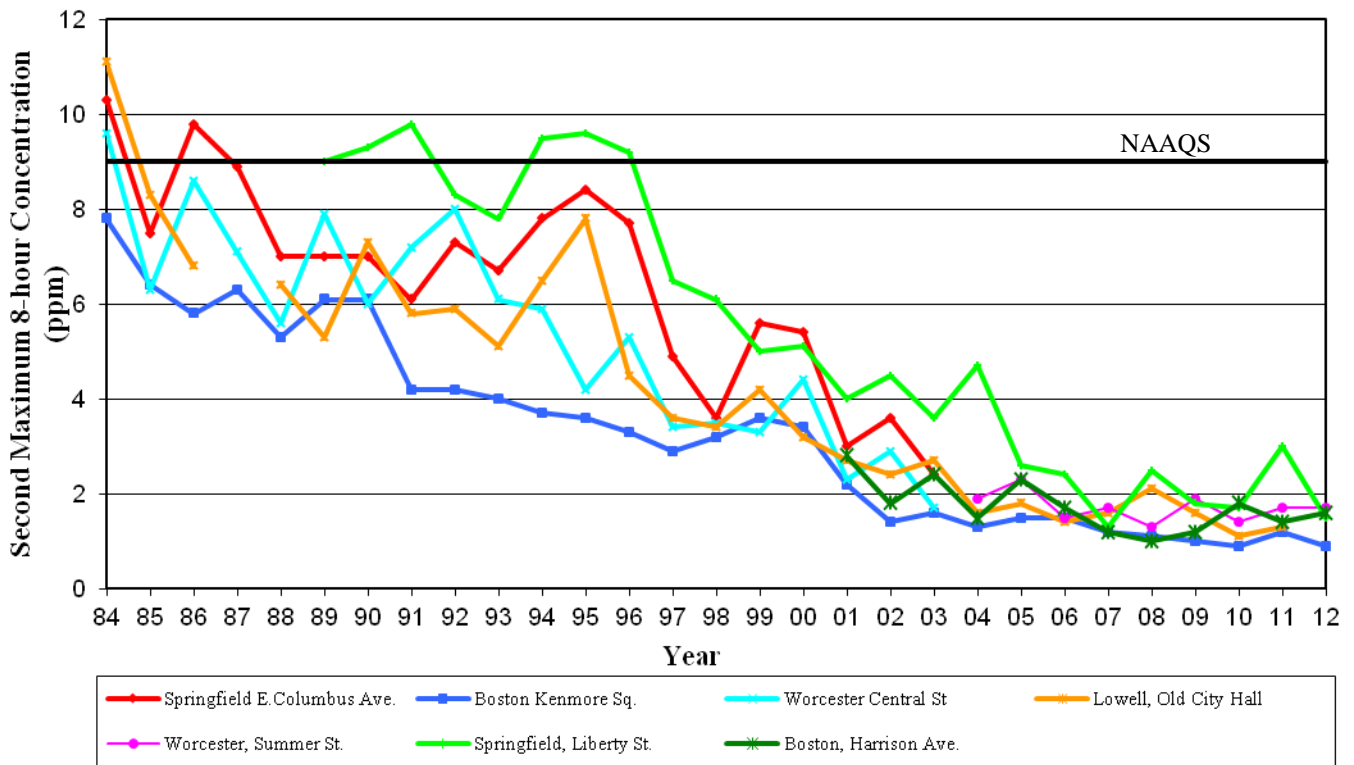
| Site ID   | County     | City         | Address            | Duration | Obs. | First Max. | Second Max. | 99th Percentile | Actual Exceedances |
|-----------|------------|--------------|--------------------|----------|------|------------|-------------|-----------------|--------------------|
| 230031100 | Aroostook  | Presque Isle | 8 Northern Road    | 1 HOUR   | 7977 | 54         | 31          | 10              | 0                  |
| 230050029 | Cumberland | Portland     | 356 State Street   | 1 HOUR   | 8612 | 24         | 24          | 19              | 0                  |
| 230090103 | Hancock    | Bar Harbor   | McFarland Hill     | 1 HOUR   | 8489 | 4          | 2           | 1               | 0                  |
| 230112005 | Kennebec   | Gardiner     | Pray Street School | 1 HOUR   | 6538 | 32         | 22          | 21              | 0                  |

# Massachusetts Sites - 2012 - Carbon Monoxide





# Massachusetts Carbon Monoxide Data



## NAAQS for Carbon Monoxide:

- 1-hour – 35 ppm, not to be exceeded more than once per year
- 8-hour – 9 ppm, not to be exceeded more than once per year

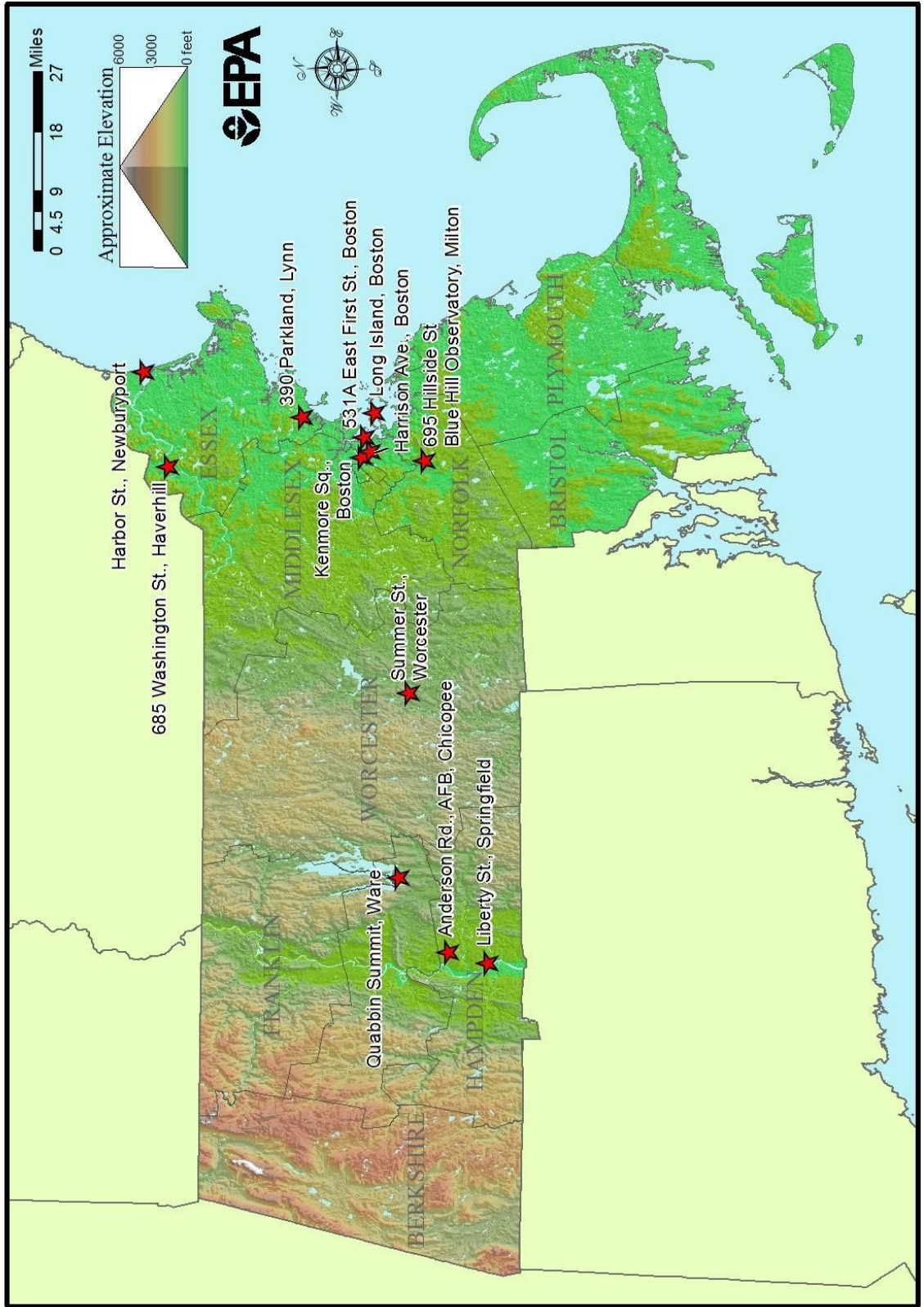
## 2012 Massachusetts

### Carbon Monoxide

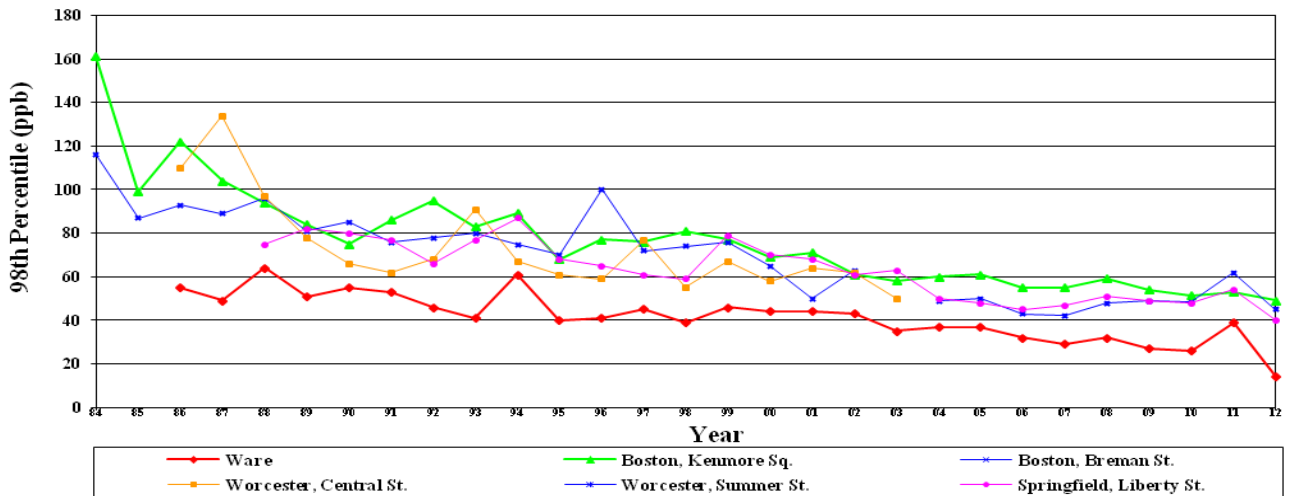
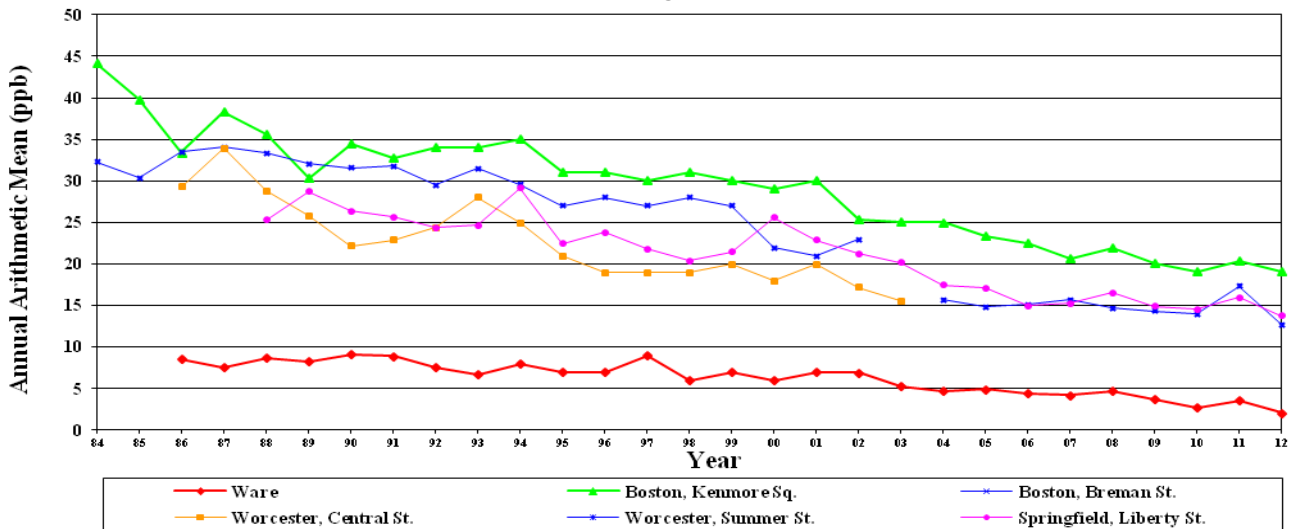
All Concentrations are in Units of Parts Per Million

| Site ID   | County    | City        | Address         | Duration     | Obs. | First Max. | Second Max. |
|-----------|-----------|-------------|-----------------|--------------|------|------------|-------------|
| 250092006 | Essex     | Lynn        | 390 Parkland    | 1 HOUR       | 7192 | 0.9        | 0.9         |
| 250130008 | Hampden   | Chicopee    | Anderson Rd AFB | 1 HOUR       | 8113 | 0.9        | 0.9         |
| 250130016 | Hampden   | Springfield | Liberty Street  | 1 HOUR       | 8118 | 2.0        | 2.0         |
| 250250002 | Suffolk   | Boston      | Kenmore Sq      | 1 HOUR       | 8211 | 1.4        | 1.3         |
| 250250042 | Suffolk   | Boston      | Harrison Ave    | 1 HOUR       | 8190 | 2.2        | 2.1         |
| 250270023 | Worcester | Worcester   | Summer St       | 1 HOUR       | 8219 | 2.3        | 2.3         |
| 250092006 | Essex     | Lynn        | 390 Parkland    | 8-HR RUN AVG | 7565 | 0.7        | 0.6         |
| 250130008 | Hampden   | Chicopee    | Anderson Rd AFB | 8-HR RUN AVG | 8021 | 0.8        | 0.7         |
| 250130016 | Hampden   | Springfield | Liberty Street  | 8-HR RUN AVG | 8616 | 1.7        | 1.5         |
| 250250002 | Suffolk   | Boston      | Kenmore Sq      | 8-HR RUN AVG | 8686 | 1.1        | 0.9         |
| 250250042 | Suffolk   | Boston      | Harrison Ave    | 8-HR RUN AVG | 8674 | 1.9        | 1.6         |
| 250270023 | Worcester | Worcester   | Summer St       | 8-HR RUN AVG | 8709 | 2.0        | 1.7         |

# Massachusetts Sites - 2012 - Nitrogen Dioxide



# Massachusetts Nitrogen Dioxide Data



## NAAQS for Nitrogen Dioxide:

Annual Arithmetic Mean- 53 ppb (100 µg/m<sup>3</sup>)

1-hour – 100 ppb (as of January 22, 2010) 98<sup>th</sup> percentile

2012 Massachusetts

Nitrogen Dioxide

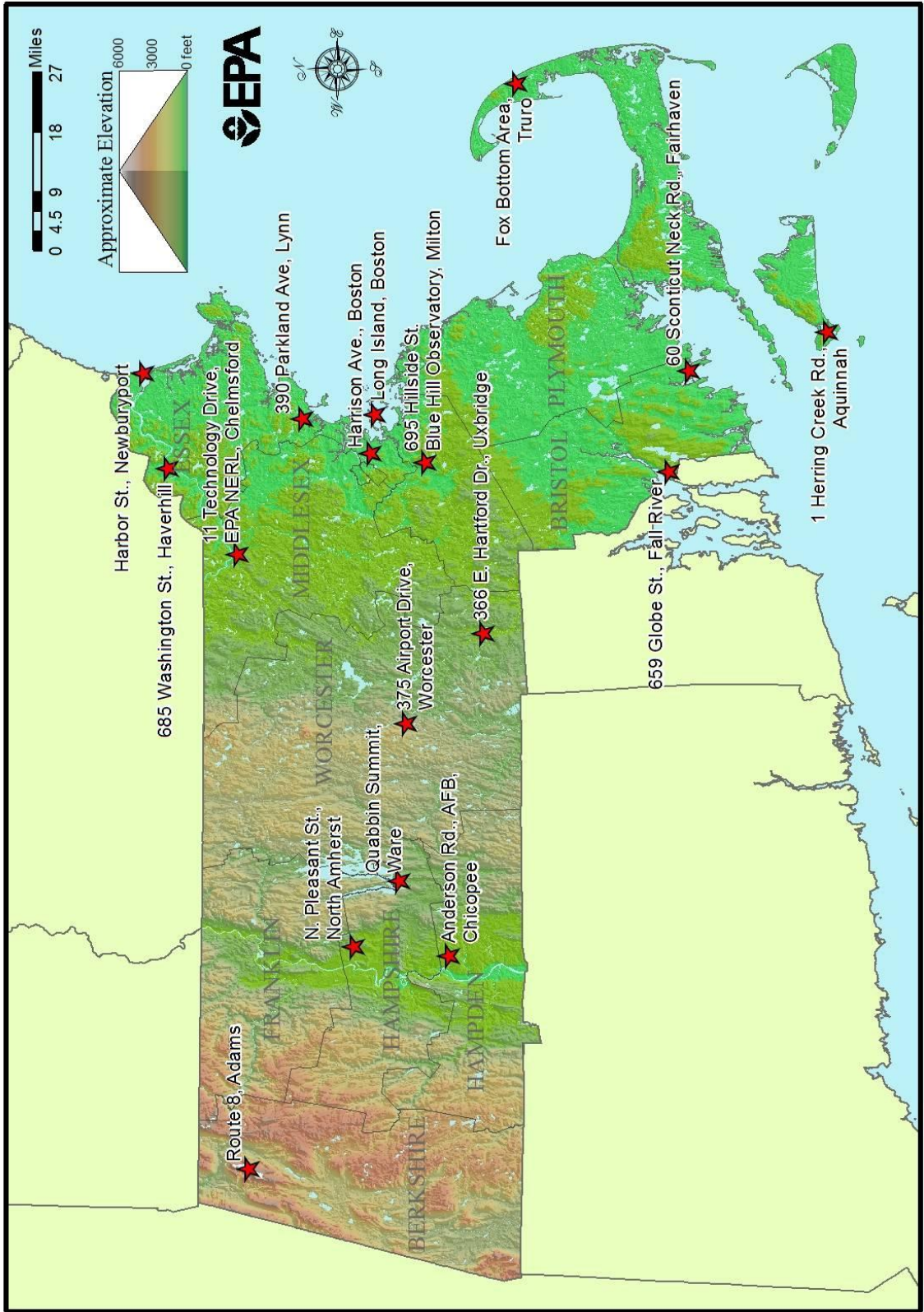
All Concentrations are in Units of Parts Per Billion

| Site ID   | County    | City        | Address                               | Duration | Obs. | First Max. | Second Max. | 98th Percentile | Annual Arithmetic Mean |
|-----------|-----------|-------------|---------------------------------------|----------|------|------------|-------------|-----------------|------------------------|
| 250092006 | Essex     | Lynn        | 390 Parkland                          | 1 HOUR   | 8280 | 51         | 48          | 42              | 8.31                   |
| 250094005 | Essex     | Newburyport | Harbor Street                         | 1 HOUR   | 6642 | 29         | 28          | 23              | 3.49                   |
| 250095005 | Essex     | Haverhill   | 685 Washington Street                 | 1 HOUR   | 8244 | 36         | 35          | 32              | 6.59                   |
| 250130008 | Hampden   | Chicopee    | Anderson Rd AFB                       | 1 HOUR   | 8220 | 38         | 38          | 36              | 6.72                   |
| 250130016 | Hampden   | Springfield | Liberty Street                        | 1 HOUR   | 8319 | 74         | 45          | 40              | 13.79                  |
| 250154002 | Hampshire | Ware        | Quabbin Summit                        | 1 HOUR   | 8371 | 19         | 19          | 14              | 2.06                   |
| 250213003 | Norfolk   | Milton      | 695 Hillside St Blue Hill Observatory | 1 HOUR   | 4963 | 30         | 25          | 23              | 3.94                   |
| 250250002 | Suffolk   | Boston      | Kenmore Sq                            | 1 HOUR   | 7928 | 61         | 54          | 49              | 19.1                   |
| 250250040 | Suffolk   | Boston      | 531a East First Street                | 1 HOUR   | 8378 | 57         | 51          | 43              | 9.73                   |
| 250250041 | Suffolk   | Boston      | Long Island                           | 1 HOUR   | 5276 | 41         | 38          | 33              | 6.65                   |
| 250250042 | Suffolk   | Boston      | Harrison Ave                          | 1 HOUR   | 7897 | 67         | 52          | 44              | 15.8                   |
| 250270023 | Worcester | Worcester   | Summer St                             | 1 HOUR   | 8266 | 52         | 51          | 45              | 12.78                  |

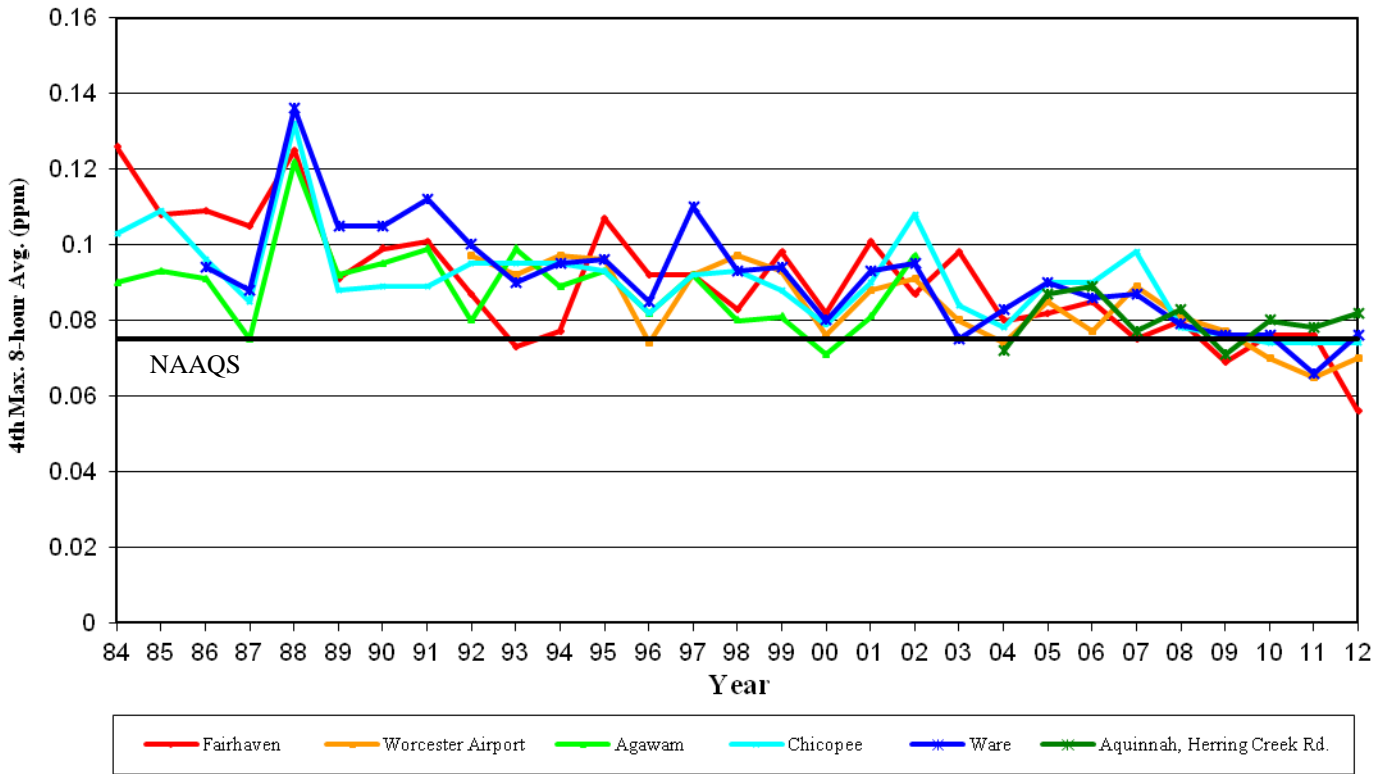
\* Indicates that the mean does not satisfy summary criteria



# Massachusetts Sites - 2012 - Ozone



# Massachusetts Ozone 8-Hour Data



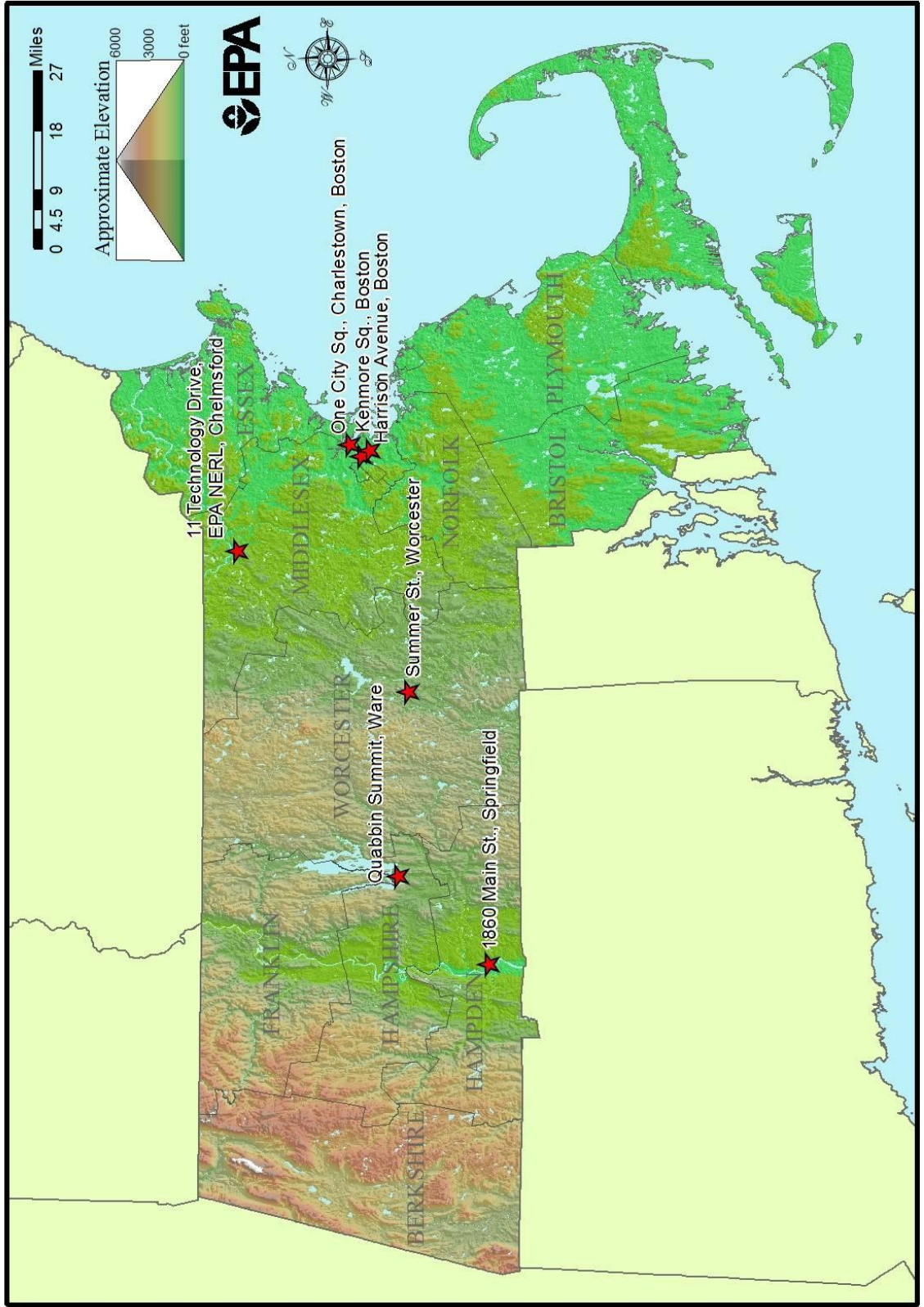
NAAQS for Ozone:  
8-hour – 0.075 ppm (2008 std)

(To attain this 0.075 ppm standard, the 3-year average of the fourth-highest daily maximum 8-hour average ozone concentrations measured at each monitor within an area over each year must not exceed 0.075 ppm. This graph represents the 4th highest value for each year for each monitor depicted. Thus, being above or below this NAAQS line does not indicate whether or not a monitor exceeds the NAAQS.)

2012 Massachusetts  
Ozone (8-Hour)  
All Concentrations are in Units of Parts Per Million

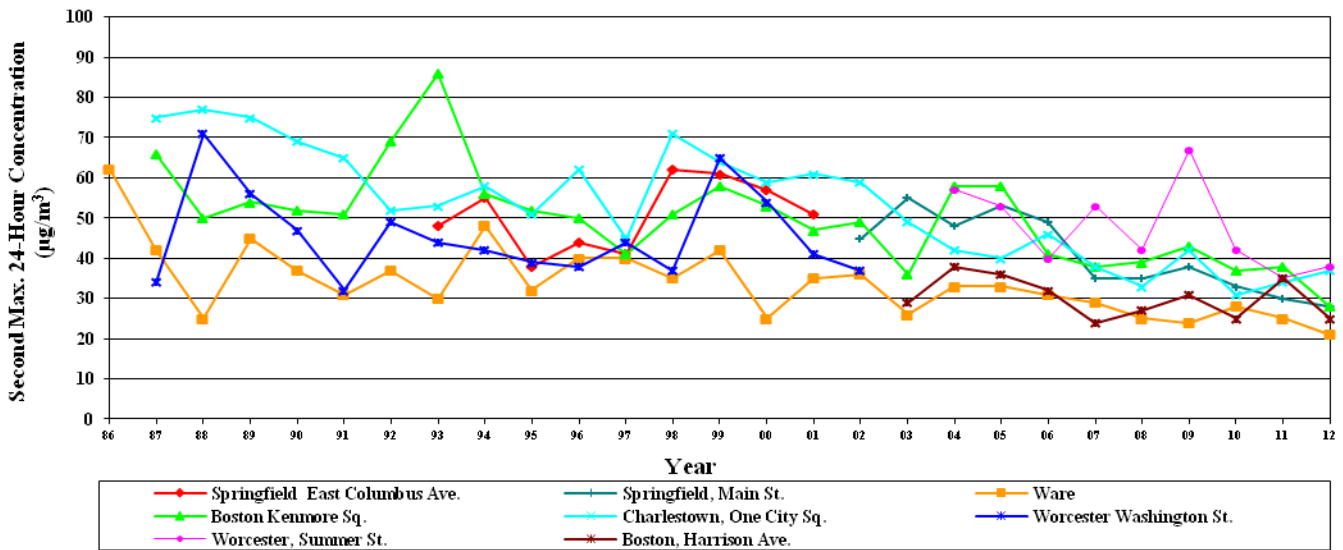
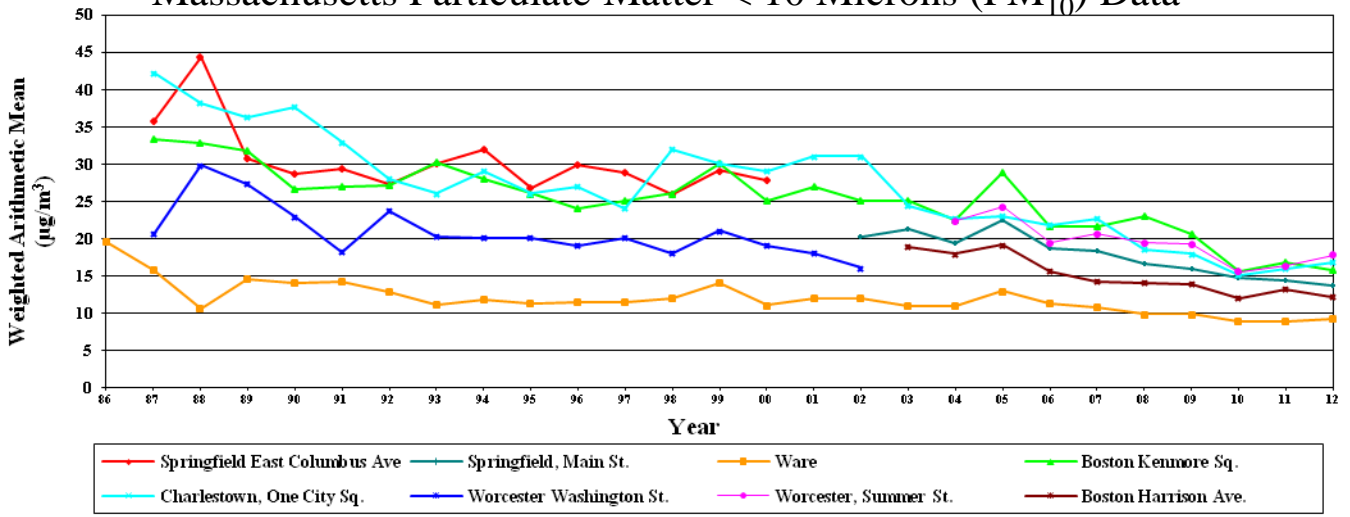
| Site ID   | County     | City          | Address               | Duration     | Obs. | First Max. | Second Max. | Third Max. | Fourth Max. | Actual Exceedances | Valid Days | Required Days | Percent Days |
|-----------|------------|---------------|-----------------------|--------------|------|------------|-------------|------------|-------------|--------------------|------------|---------------|--------------|
| 250010002 | Barnstable | Truro         | Fox Bottom Area       | 8-HR RUN AVG | 5034 | 0.088      | 0.085       | 0.080      | 0.079       | 6                  | 177        | 183           | 97           |
| 250034002 | Berkshire  | Adams         | Route 8 Adams         | 8-HR RUN AVG | 4679 | 0.074      | 0.074       | 0.073      | 0.073       | 0                  | 181        | 183           | 99           |
| 250051002 | Bristol    | Fairhaven     | 60 Scoticut Neck Rd   | 8-HR RUN AVG | 1445 | 0.059      | 0.058       | 0.056      | 0.056       | 0                  | 29         | 183           | 16           |
| 250051004 | Bristol    | Fall River    | 659 Globe St          | 8-HR RUN AVG | 5091 | 0.090      | 0.082       | 0.080      | 0.078       | 6                  | 181        | 183           | 99           |
| 250070001 | Dukes      | Aquinnah      | 1 Herring Creek Rd.   | 8-HR RUN AVG | 4903 | 0.100      | 0.094       | 0.083      | 0.082       | 8                  | 178        | 183           | 97           |
| 250092006 | Essex      | Lynn          | 390 Parkland          | 8-HR RUN AVG | 8598 | 0.091      | 0.076       | 0.074      | 0.072       | 2                  | 180        | 183           | 98           |
| 250094005 | Essex      | Newburyport   | Harbor Street         | 8-HR RUN AVG | 4912 | 0.082      | 0.080       | 0.075      | 0.074       | 2                  | 179        | 183           | 98           |
| 250095005 | Essex      | Haverhill     | 685 Washington Street | 8-HR RUN AVG | 5061 | 0.089      | 0.079       | 0.079      | 0.074       | 3                  | 183        | 183           | 100          |
| 250130008 | Hampden    | Chicopee      | Anderson Rd AFB       | 8-HR RUN AVG | 8706 | 0.084      | 0.076       | 0.075      | 0.074       | 2                  | 182        | 183           | 99           |
| 250150103 | Hampshire  | North Amherst | N Pleasant St         | 8-HR RUN AVG | 4946 | 0.082      | 0.073       | 0.068      | 0.068       | 1                  | 181        | 183           | 99           |
| 250154002 | Hampshire  | Ware          | Quabbin Summit        | 8-HR RUN AVG | 8591 | 0.079      | 0.077       | 0.076      | 0.076       | 4                  | 178        | 183           | 97           |
| 250170009 | Middlesex  | Chelmsford    | 11 Technology Drive   | 8-HR RUN AVG | 8651 | 0.089      | 0.075       | 0.073      | 0.072       | 1                  | 183        | 183           | 100          |
| 250213003 | Norfolk    | Milton        | 695 Hillside St.      | 8-HR RUN AVG | 5086 | 0.080      | 0.078       | 0.075      | 0.074       | 2                  | 181        | 183           | 99           |
| 250250041 | Suffolk    | Boston        | Long Island           | 8-HR RUN AVG | 5019 | 0.085      | 0.070       | 0.069      | 0.067       | 1                  | 178        | 183           | 97           |
| 250250042 | Suffolk    | Boston        | Harrison Ave          | 8-HR RUN AVG | 8679 | 0.080      | 0.064       | 0.062      | 0.062       | 1                  | 181        | 183           | 99           |
| 250270015 | Worcester  | Worcester     | 375 Airport Drive     | 8-HR RUN AVG | 5040 | 0.092      | 0.074       | 0.072      | 0.070       | 1                  | 180        | 183           | 98           |
| 250270024 | Worcester  | Uxbridge      | 366 E Hartford Dr     | 8-HR RUN AVG | 5017 | 0.086      | 0.071       | 0.070      | 0.070       | 1                  | 178        | 183           | 97           |

# Massachusetts Sites - 2012 - Particulate Matter < 10 Microns





# Massachusetts Particulate Matter < 10 Microns (PM<sub>10</sub>) Data



NAAQS for Particulate Matter less than 10 Microns:  
24-hour -150 µg/m<sup>3</sup>

2012 Massachusetts

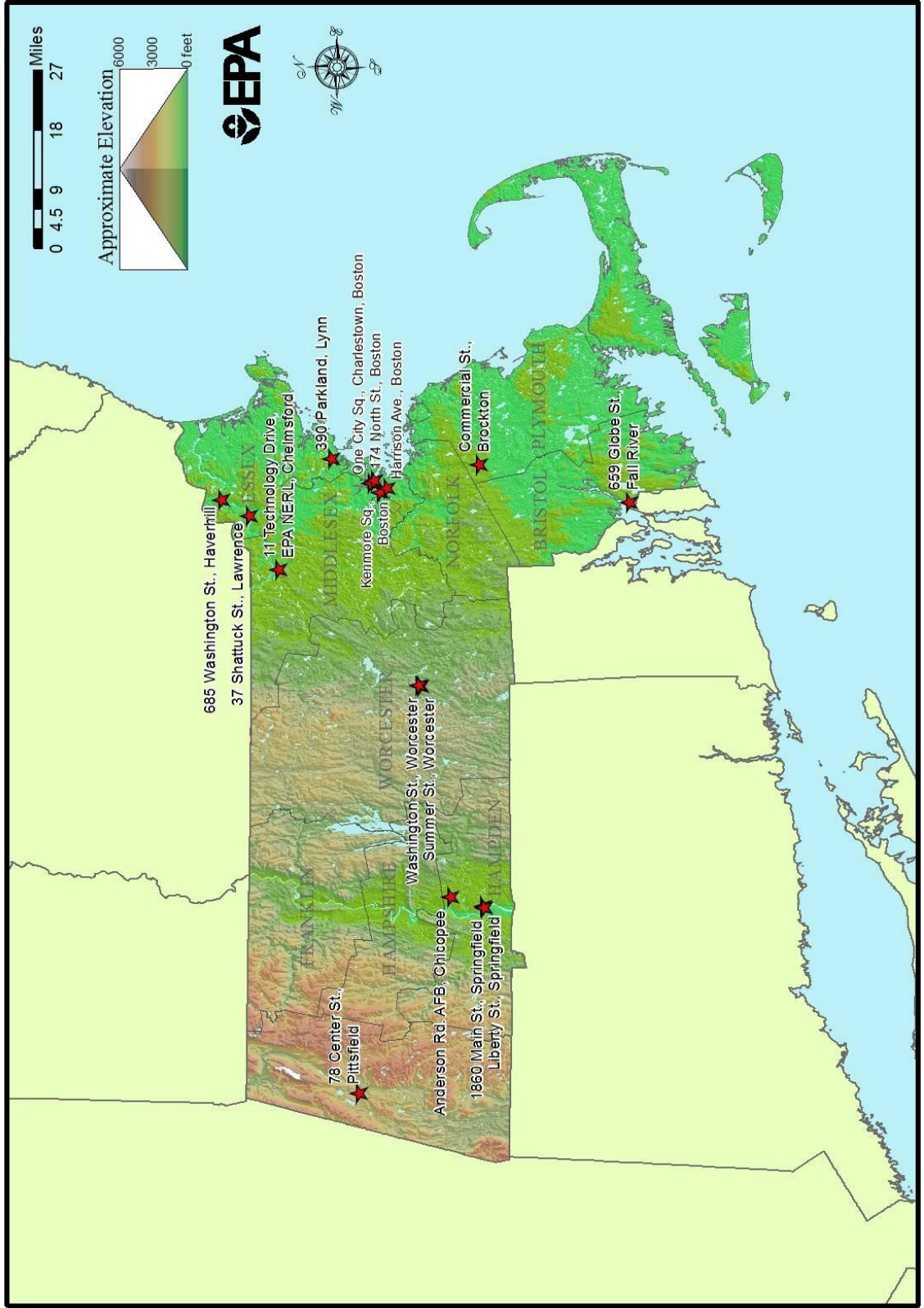
Particulate Matter < 10 Microns

All Concentrations are in units of µg/m<sup>3</sup>

| Site ID   | POC | County    | City        | Address                       | Duration | First Obs. | Second Max. | Actual Max. | Exceedances | Weighted Arithmetic Mean |
|-----------|-----|-----------|-------------|-------------------------------|----------|------------|-------------|-------------|-------------|--------------------------|
| 250132009 | 4   | Hampden   | Springfield | 1860 Main St                  | 24 HOUR  | 59         | 28          | 28          | 0           | 13.7                     |
| 250154002 | 4   | Hampshire | Ware        | Quabbin Summit                | 24 HOUR  | 60         | 24          | 21          | 0           | 9.2                      |
| 250170009 | 1   | Middlesex | Chelmsford  | 11 Technology Drive, EPA NERL | 24 HOUR  | 26         | 25          | 25          | 0           | 12.3                     |
| 250250002 | 4   | Suffolk   | Boston      | Kenmore Sq                    | 24 HOUR  | 60         | 37          | 28          | 0           | 15.7                     |
| 250250027 | 4   | Suffolk   | Boston      | One City Sq                   | 24 HOUR  | 60         | 41          | 37          | 0           | 16.8                     |
| 250250042 | 1   | Suffolk   | Boston      | Harrison Ave                  | 24 HOUR  | 59         | 25          | 25          | 0           | 12.1                     |
| 250250042 | 2   | Suffolk   | Boston      | Harrison Ave                  | 24 HOUR  | 57         | 72          | 25          | 0           | 13.1                     |
| 250250042 | 4   | Suffolk   | Boston      | Harrison Ave                  | 24 HOUR  | 120        | 37          | 32          | 0           | 14.1                     |
| 250250042 | 5   | Suffolk   | Boston      | Harrison Ave                  | 24 HOUR  | 117        | 37          | 31          | 0           | 13.7                     |
| 250270023 | 4   | Worcester | Worcester   | Summer St                     | 24 HOUR  | 61         | 42          | 38          | 0           | 17.8                     |

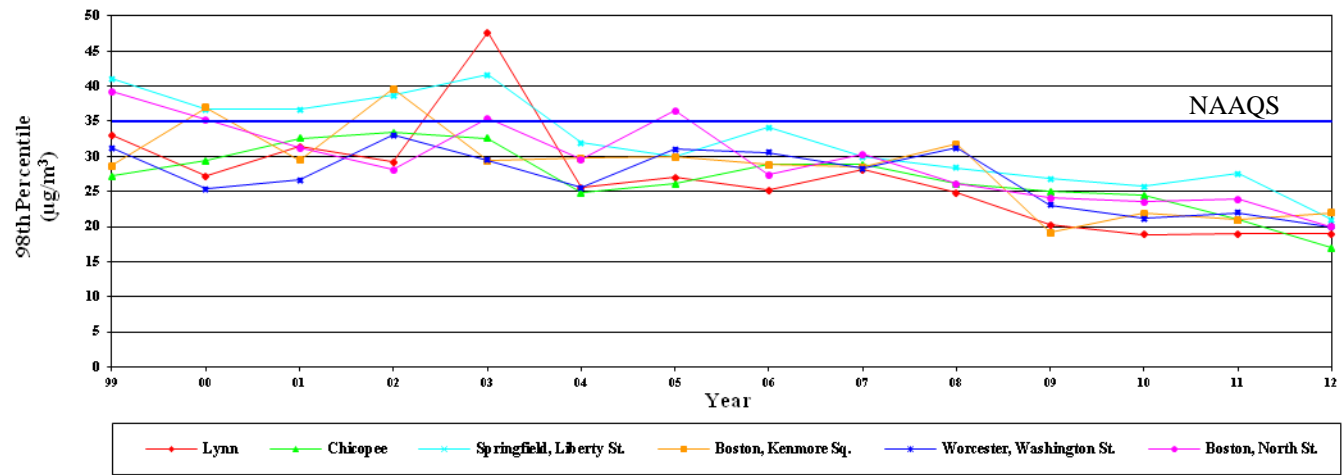
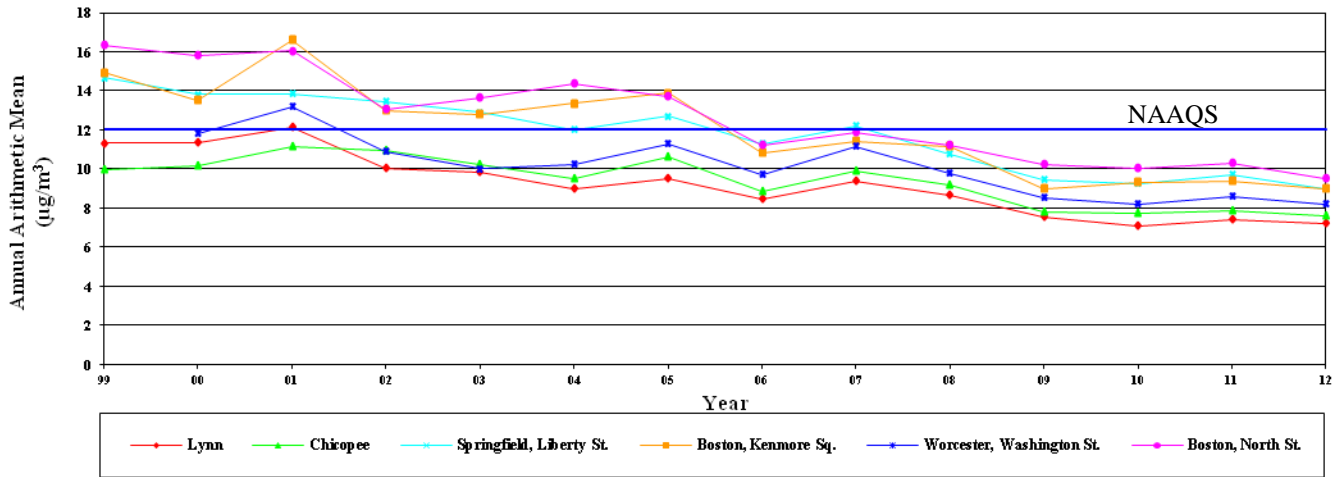
\* Indicates that the mean does not satisfy summary criteria

# Massachusetts Sites - 2012 - Particulate Matter < 2.5 Microns





# Massachusetts Particulate Matter < 2.5 Microns (PM<sub>2.5</sub>) Data



## NAAQS for Particulate Matter less than 2.5 Microns:

Annual: the 3-year average of the Annual Arithmetic Mean - 12.0 µg/m<sup>3</sup> (Effective March 18, 2013)

24-Hour: the 3-year average of the 98th percentile of 24-hour average concentrations - 35 µg/m<sup>3</sup>

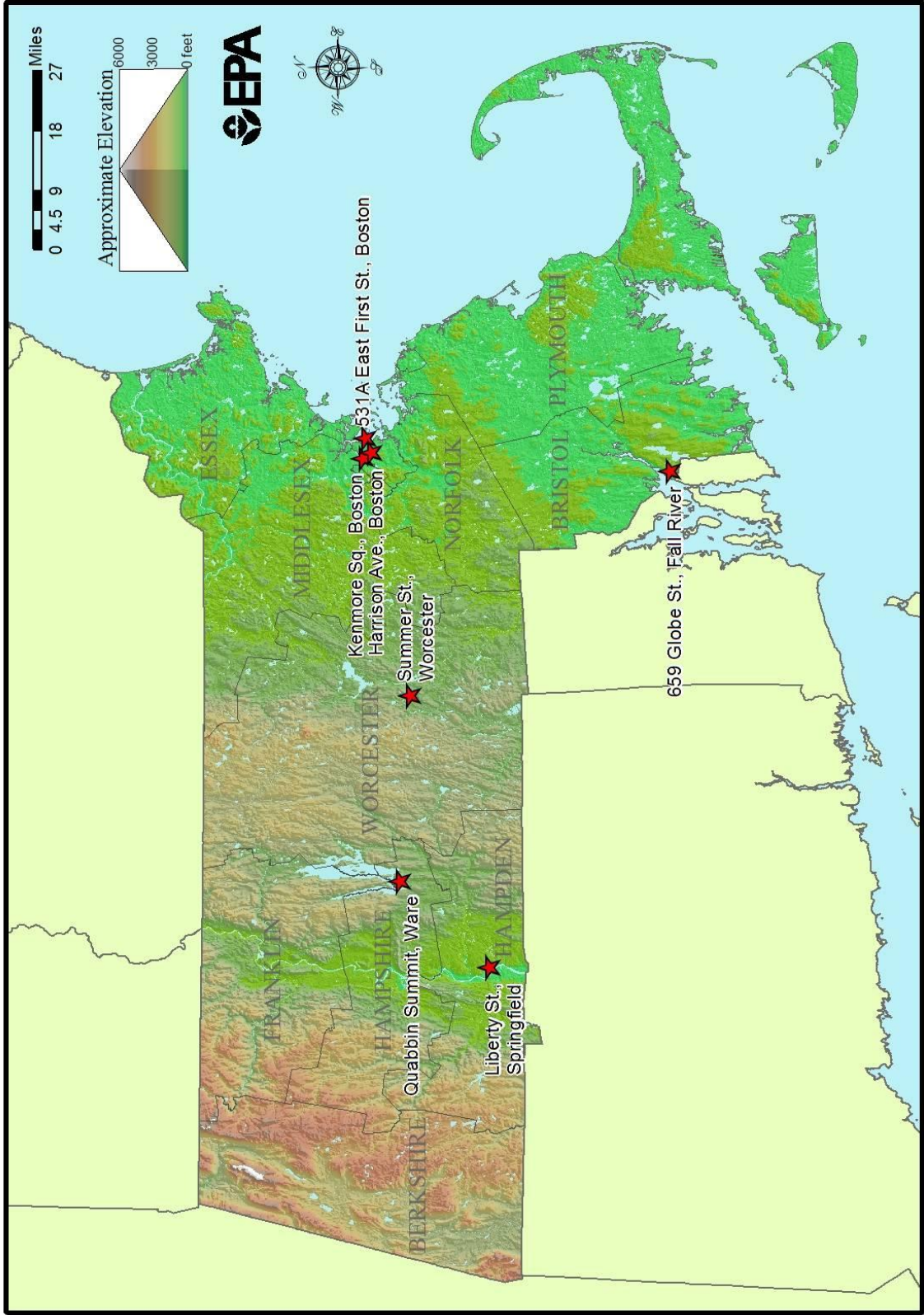
2012 Massachusetts

Particulate Matter < 2.5 Microns

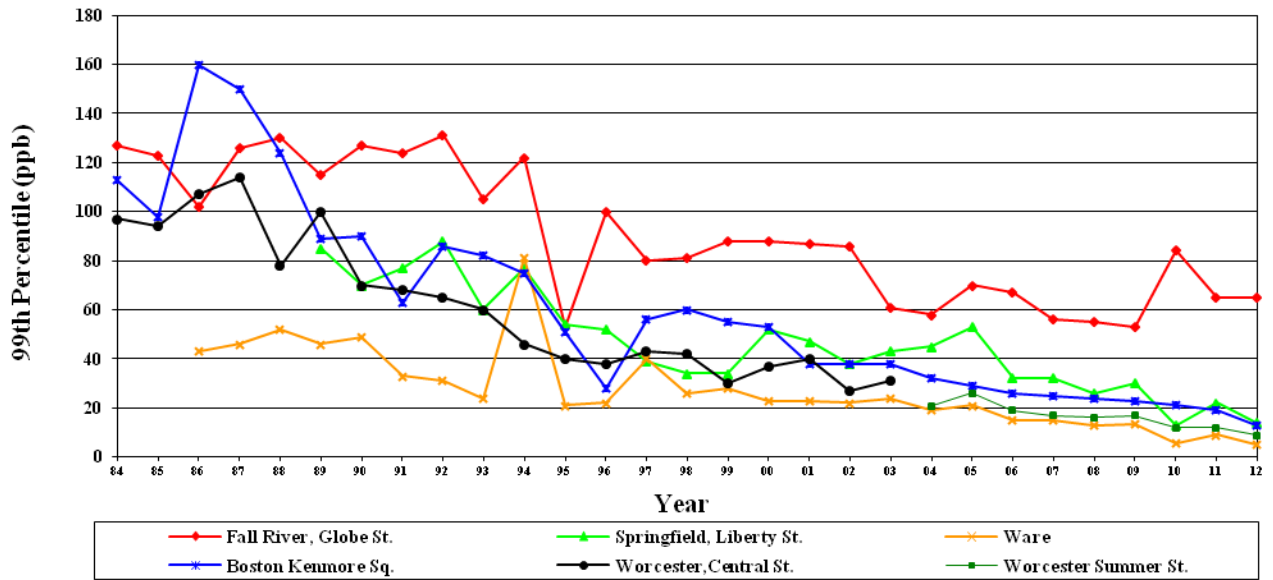
All Concentrations are in µg/m<sup>3</sup> Local Conditions

| Site ID   | POC | County    | City        | Address               | Duration | Obs. | First Max. | Second Max. | Third Max. | Fourth Max. | 98th Percentile | Weighted Arithmetic Mean |
|-----------|-----|-----------|-------------|-----------------------|----------|------|------------|-------------|------------|-------------|-----------------|--------------------------|
| 250035001 | 1   | Berkshire | Pittsfield  | 78 Center St          | 24 HOUR  | 121  | 22.2       | 21.7        | 19.8       | 19.6        | 20              | 8.5                      |
| 250051004 | 1   | Bristol   | Fall River  | 659 Globe St          | 24 HOUR  | 117  | 20.8       | 19.6        | 17.1       | 16.7        | 17              | 7.1                      |
| 250092006 | 1   | Essex     | Lynn        | 390 Parkland          | 24 HOUR  | 122  | 26.0       | 19.4        | 19.2       | 17.2        | 19              | 7.2                      |
| 250095005 | 1   | Essex     | Haverhill   | 685 Washington Street | 24 HOUR  | 120  | 22.4       | 19.8        | 18.4       | 17.9        | 18              | 7.3                      |
| 250096001 | 1   | Essex     | Lawrence    | 37 Shattuck St        | 24 HOUR  | 119  | 23.1       | 19.1        | 18.1       | 17.8        | 18              | 7.8                      |
| 250130008 | 1   | Hampden   | Chicopee    | Anderson Rd Afb       | 24 HOUR  | 121  | 18.8       | 17.3        | 17.1       | 16.0        | 17              | 7.6                      |
| 250130008 | 2   | Hampden   | Chicopee    | Anderson Rd Afb       | 24 HOUR  | 106  | 19.3       | 17.6        | 17.2       | 16.0        | 17              | 7.9                      |
| 250130016 | 1   | Hampden   | Springfield | Liberty Street        | 24 HOUR  | 115  | 22.4       | 21.8        | 21.0       | 20.0        | 21              | 9                        |
| 250132009 | 1   | Hampden   | Springfield | 1860 Main St          | 24 HOUR  | 119  | 20.5       | 19.7        | 19.2       | 19.0        | 19              | 8.5                      |
| 250170009 | 1   | Middlesex | Chelmsford  | 11 Technology Drive   | 24 HOUR  | 28   | 19.9       | 12.6        | 10.9       | 9.7         | 20              | 7.2                      |
| 250230004 | 1   | Plymouth  | Brockton    | Commercial St         | 24 HOUR  | 121  | 22.5       | 22.2        | 17.3       | 17.1        | 17              | 7.7                      |
| 250230004 | 2   | Plymouth  | Brockton    | Commercial St         | 24 HOUR  | 114  | 23.7       | 22.8        | 21.5       | 17.2        | 22              | 7.9                      |
| 250250002 | 1   | Suffolk   | Boston      | Kenmore Sq            | 24 HOUR  | 120  | 23.0       | 22.6        | 22.1       | 18.2        | 22              | 9                        |
| 250250027 | 1   | Suffolk   | Boston      | One City Sq           | 24 HOUR  | 118  | 24.7       | 24.7        | 22.6       | 20.4        | 23              | 8.8                      |
| 250250042 | 1   | Suffolk   | Boston      | Harrison Ave          | 24 HOUR  | 116  | 23.2       | 22.5        | 20.6       | 19.7        | 21              | 8.3                      |
| 250250043 | 1   | Suffolk   | Boston      | 174 North St          | 24 HOUR  | 363  | 27.9       | 26.7        | 23.1       | 23.0        | 20              | 9.5                      |
| 250250043 | 2   | Suffolk   | Boston      | 174 North St          | 24 HOUR  | 343  | 27.2       | 26.1        | 25.8       | 22.4        | 21              | 9.2                      |
| 250270016 | 1   | Worcester | Worcester   | Washington St         | 24 HOUR  | 120  | 20.6       | 20.2        | 19.9       | 18.1        | 20              | 8.2                      |
| 250270023 | 1   | Worcester | Worcester   | Summer St             | 24 HOUR  | 117  | 26.5       | 21.0        | 20.4       | 19.1        | 20              | 8.8                      |

# Massachusetts Sites - 2012 - Sulfur Dioxide



# Massachusetts Sulfur Dioxide Data



## NAAQS for Sulfur Dioxide:

Primary: 1-hour -75 ppb (0.075 ppm) 99<sup>th</sup> percentile  
 Secondary: 3-hour -0.5 ppm

2012 Massachusetts

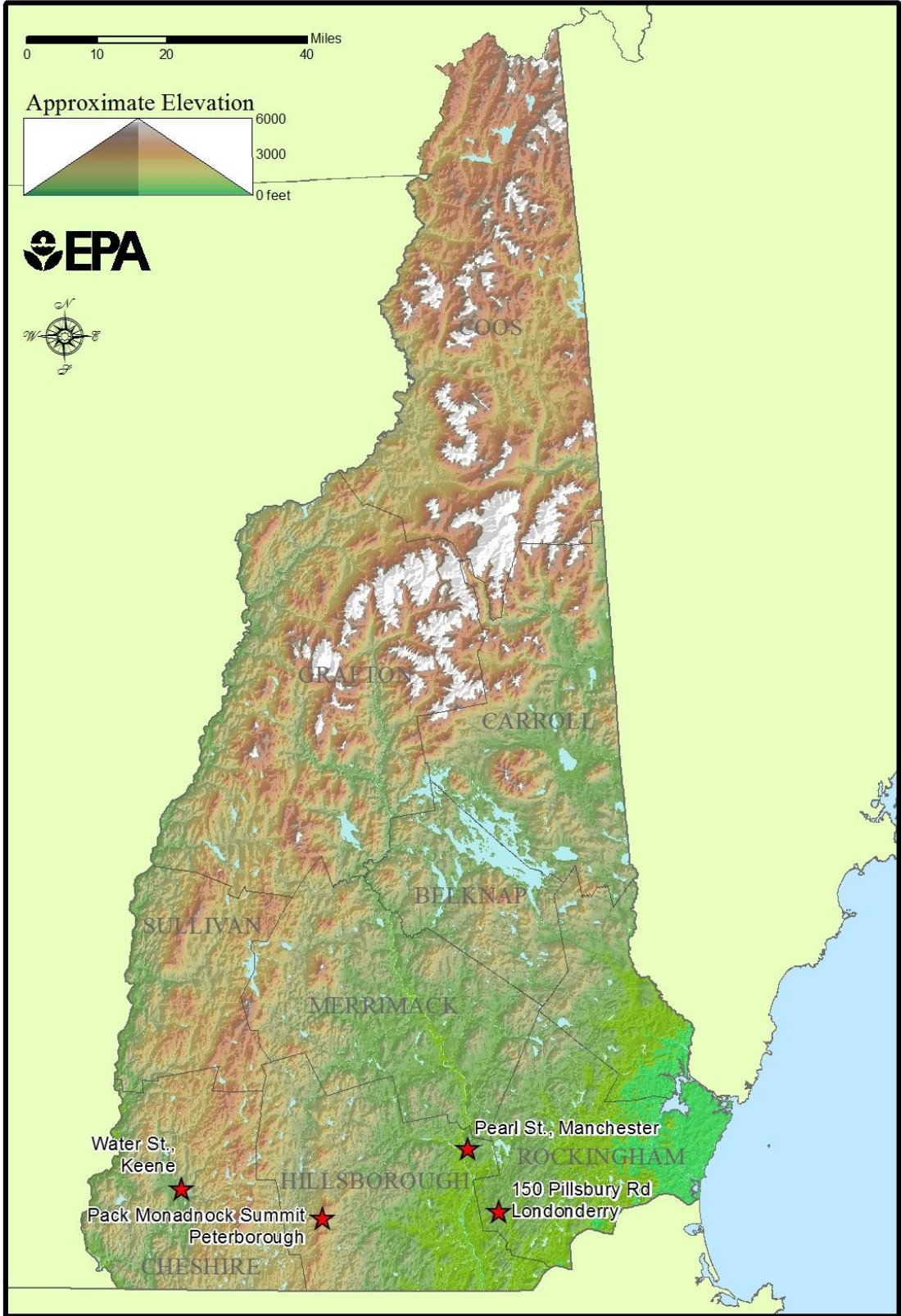
Parameter: Sulfur Dioxide

All Concentrations are in Units of Parts Per Billion (ppb)

| Site ID   | County    | City        | Address                | Duration | Obs. | First Max. | Second Max. | 99th Percentile | Actual Exceedances |
|-----------|-----------|-------------|------------------------|----------|------|------------|-------------|-----------------|--------------------|
| 250051004 | Bristol   | Fall River  | 659 Globe St           | 1 HOUR   | 8538 | 86         | 78          | 65              | 2                  |
| 250130016 | Hampden   | Springfield | Liberty Street         | 1 HOUR   | 8559 | 30         | 22          | 14              | 0                  |
| 250154002 | Hampshire | Ware        | Quabbin Summit         | 1 HOUR   | 8541 | 7          | 6           | 5               | 0                  |
| 250250002 | Suffolk   | Boston      | Kenmore Sq             | 1 HOUR   | 8222 | 16         | 14          | 13              | 0                  |
| 250250040 | Suffolk   | Boston      | 531a East First Street | 1 HOUR   | 8319 | 17         | 14          | 12              | 0                  |
| 250250042 | Suffolk   | Boston      | Harrison Ave           | 1 HOUR   | 8347 | 21         | 13          | 12              | 0                  |
| 250270023 | Worcester | Worcester   | Summer St              | 1 HOUR   | 8464 | 10         | 9           | 9               | 0                  |

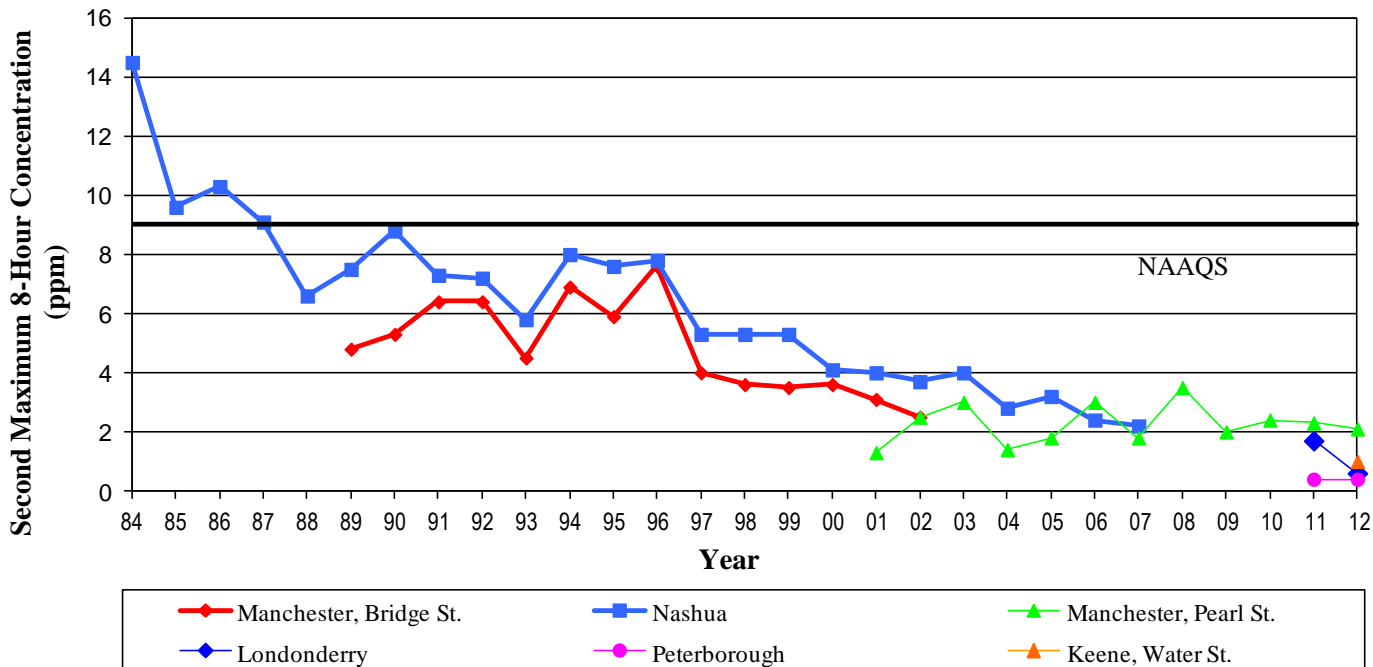


# New Hampshire Sites 2012 - Carbon Monoxide





# New Hampshire Carbon Monoxide Data



## NAAQS for Carbon Monoxide:

1-hour – 35 ppm, not to be exceeded more than once per year

8-hour – 9 ppm, not to be exceeded more than one per year

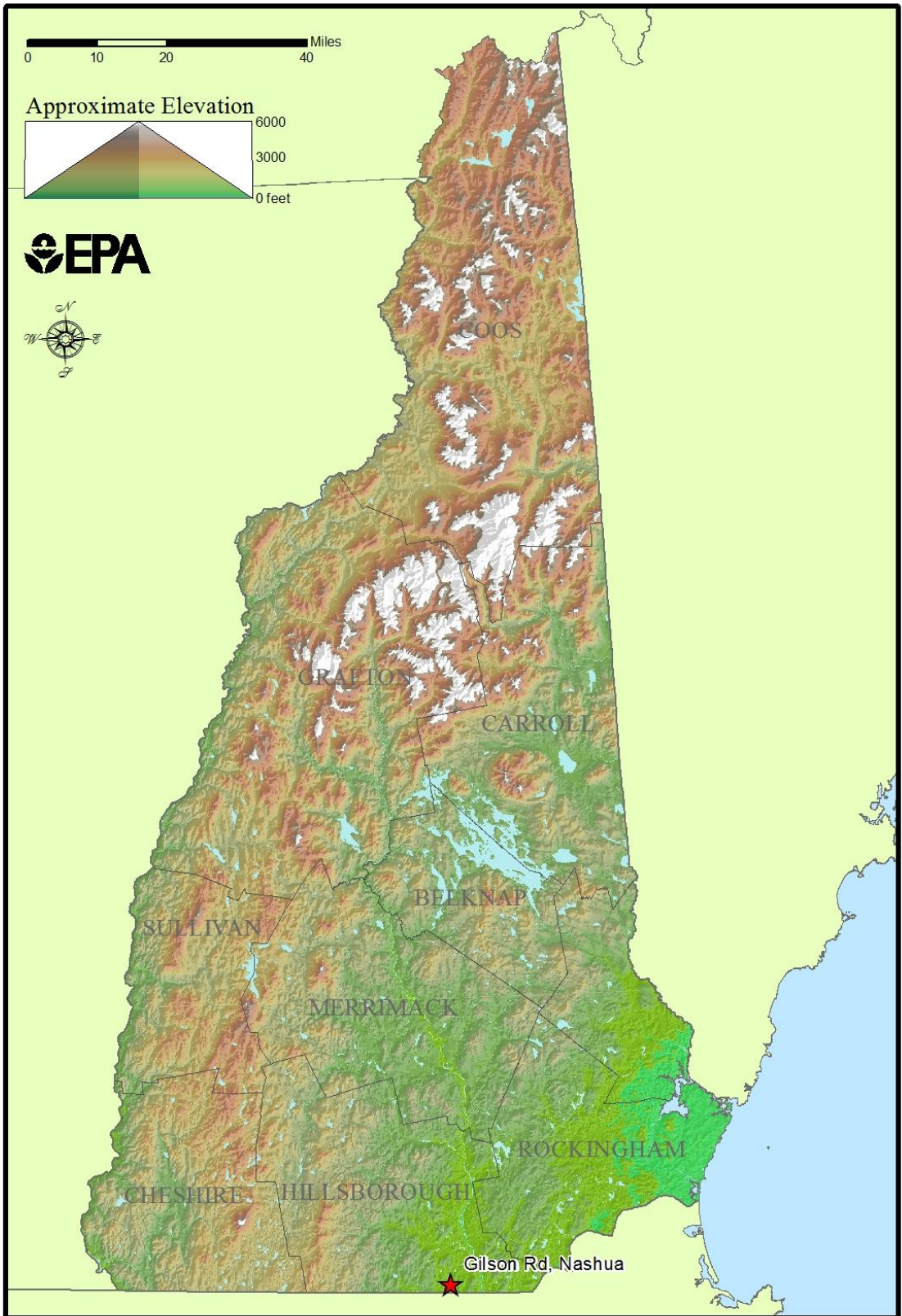
## 2012 New Hampshire

### Carbon Monoxide

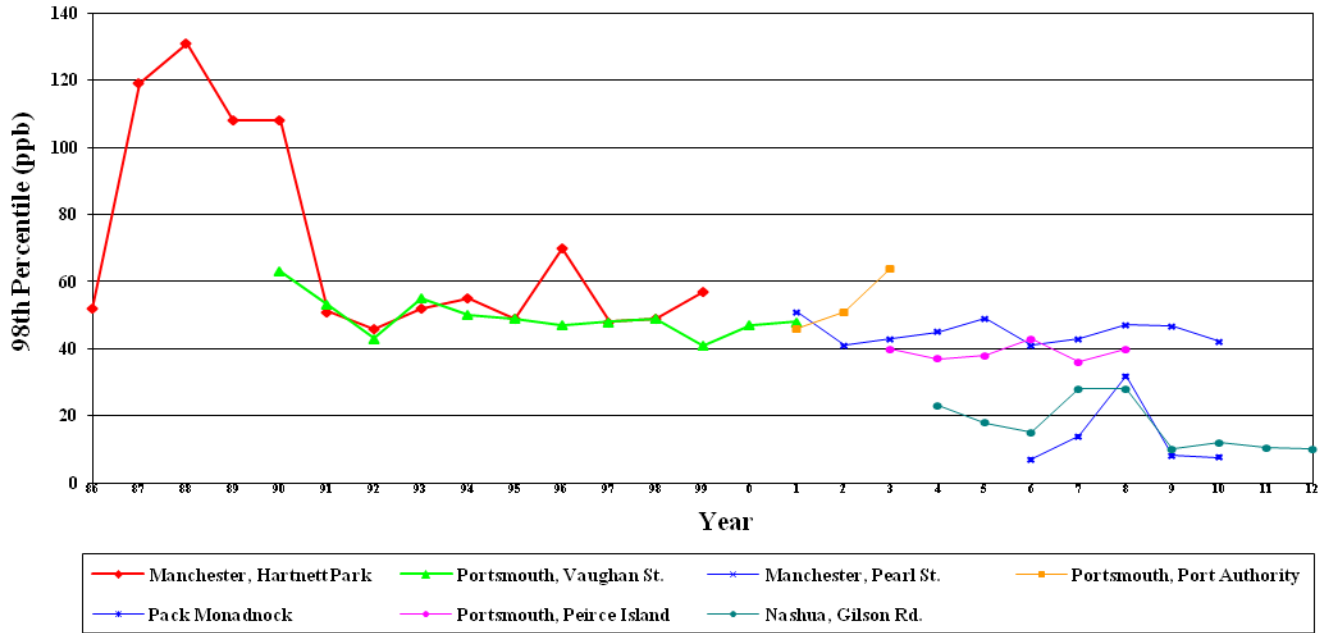
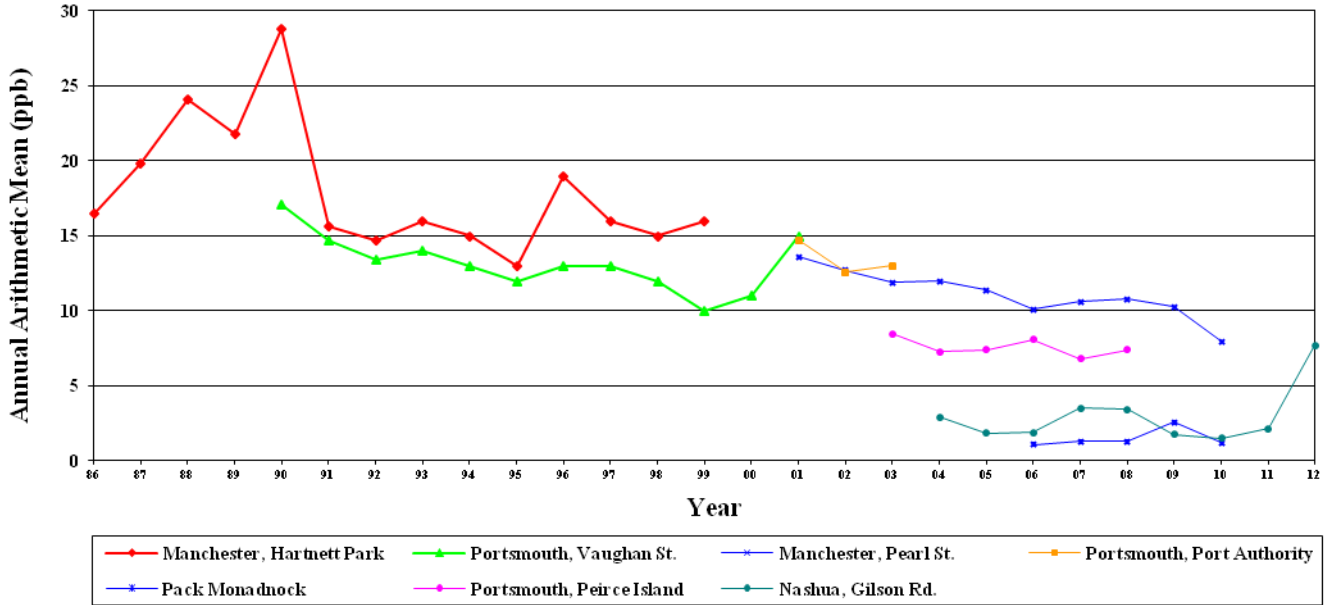
All Concentrations are in Units of Parts Per Million

| Site ID   | County       | City         | Address               | Duration     | Obs. | First Max. | Second Max. |
|-----------|--------------|--------------|-----------------------|--------------|------|------------|-------------|
| 330050007 | Cheshire     | Keene        | Water Street          | 1 HOUR       | 1927 | 3.4        | 2.1         |
| 330110020 | Hillsborough | Manchester   | Pearl St              | 1 HOUR       | 2117 | 2.4        | 2.1         |
| 330115001 | Hillsborough | Peterborough | Pack Monadnock Summit | 1 HOUR       | 8267 | 0.4        | 0.4         |
| 330150018 | Rockingham   | Londonderry  | 150 Pillsbury Rd      | 1 HOUR       | 8648 | 0.6        | 0.6         |
| 330050007 | Cheshire     | Keene        | Water Street          | 8-HR RUN AVG | 1942 | 1.0        | 1.0         |
| 330110020 | Hillsborough | Manchester   | Pearl St              | 8-HR RUN AVG | 2118 | 1.7        | 1.3         |
| 330115001 | Hillsborough | Peterborough | Pack Monadnock Summit | 8-HR RUN AVG | 8353 | 0.4        | 0.4         |
| 330150018 | Rockingham   | Londonderry  | 150 Pillsbury Rd      | 8-HR RUN AVG | 8711 | 0.6        | 0.6         |

New Hampshire Sites 2012 - Nitrogen Dioxide



# New Hampshire Nitrogen Dioxide Data



## NAAQS for Nitrogen Dioxide:

Annual Arithmetic Mean- 53 ppb (100 µg/m<sup>3</sup>)

1-hour – 100 ppb (as of January 22, 2010) 98<sup>th</sup> percentile

2012 New Hampshire

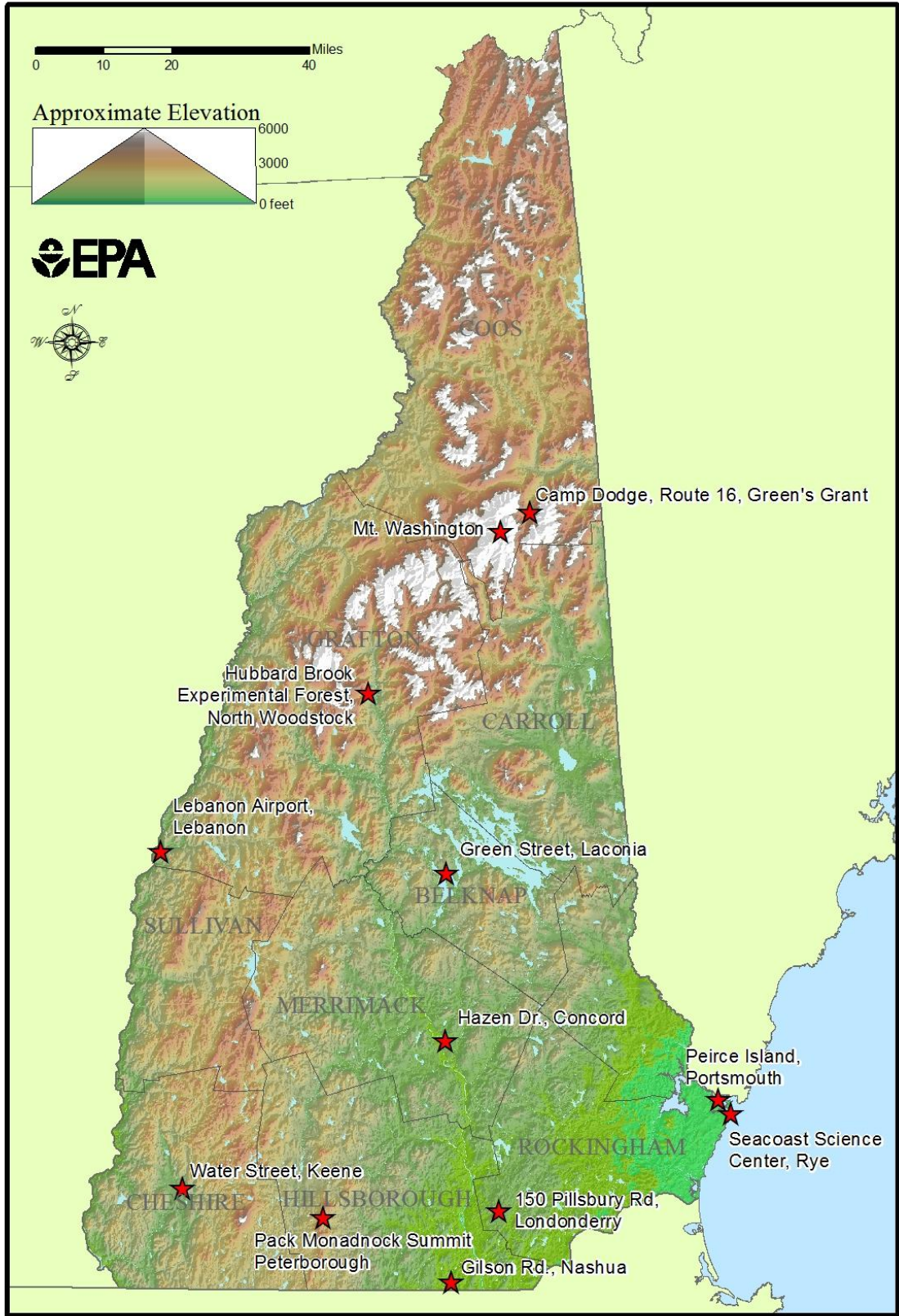
Nitrogen Dioxide

All Concentrations are in Units of Parts Per Billion

| Site ID   | County       | City   | Address     | Duration | Obs. | First Max. | Second Max. | 98th Percentile | Annual Arithmetic Mean |   |
|-----------|--------------|--------|-------------|----------|------|------------|-------------|-----------------|------------------------|---|
| 330111011 | Hillsborough | Nashua | Gilson Road | 1 HOUR   | 2511 | 11         | 11          | 10              | 7.73                   | * |

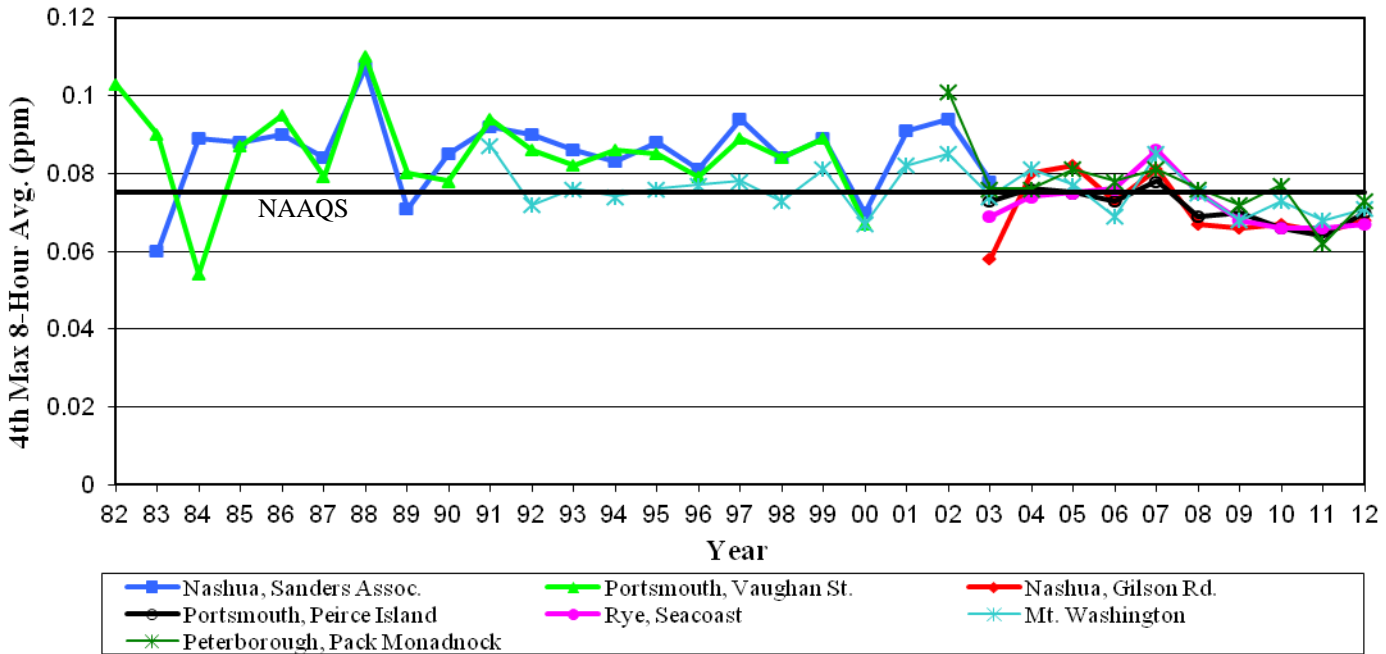
\* Indicates that the mean does not satisfy summary criteria

New Hampshire Sites 2012 - Ozone





# New Hampshire Ozone 8-Hour Data



NAAQS for Ozone:

8-hour – 0.075 ppm (2008 std)

(To attain this 0.075 ppm standard, the 3-year average of the fourth-highest daily maximum 8-hour average ozone concentrations measured at each monitor within an area over each year must not exceed 0.075 ppm. This graph represents the 4th highest value for each year for each monitor depicted. Thus, being above or below this NAAQS line does not indicate whether or not a monitor exceeds the NAAQS.)

2012 New Hampshire

Ozone (8-Hour)

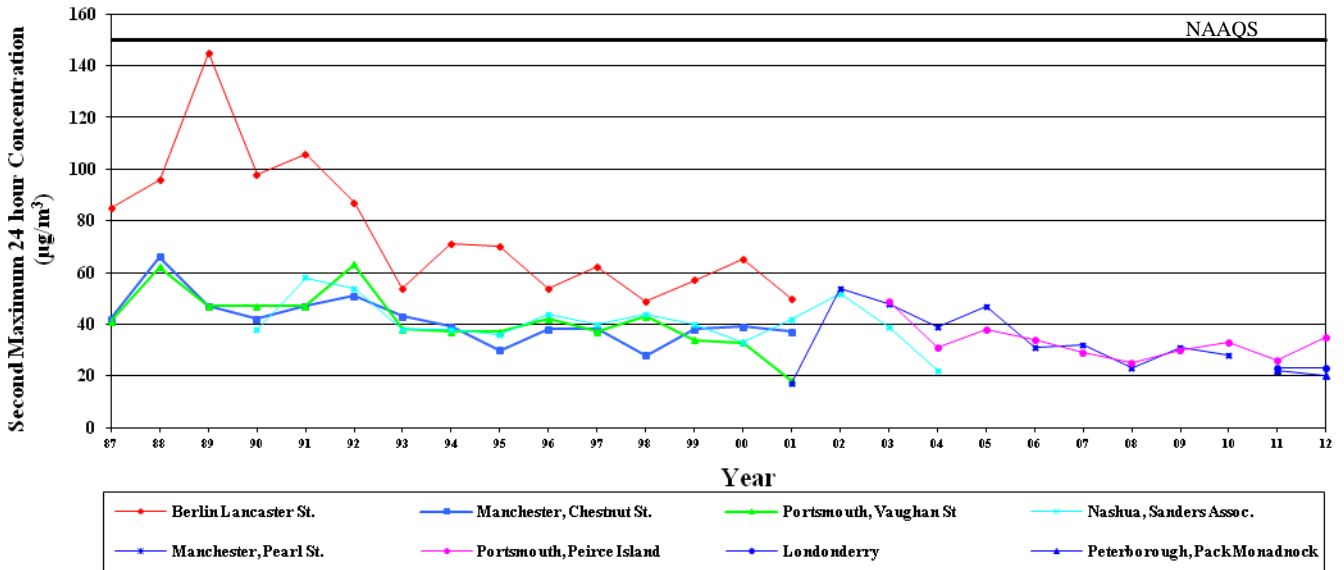
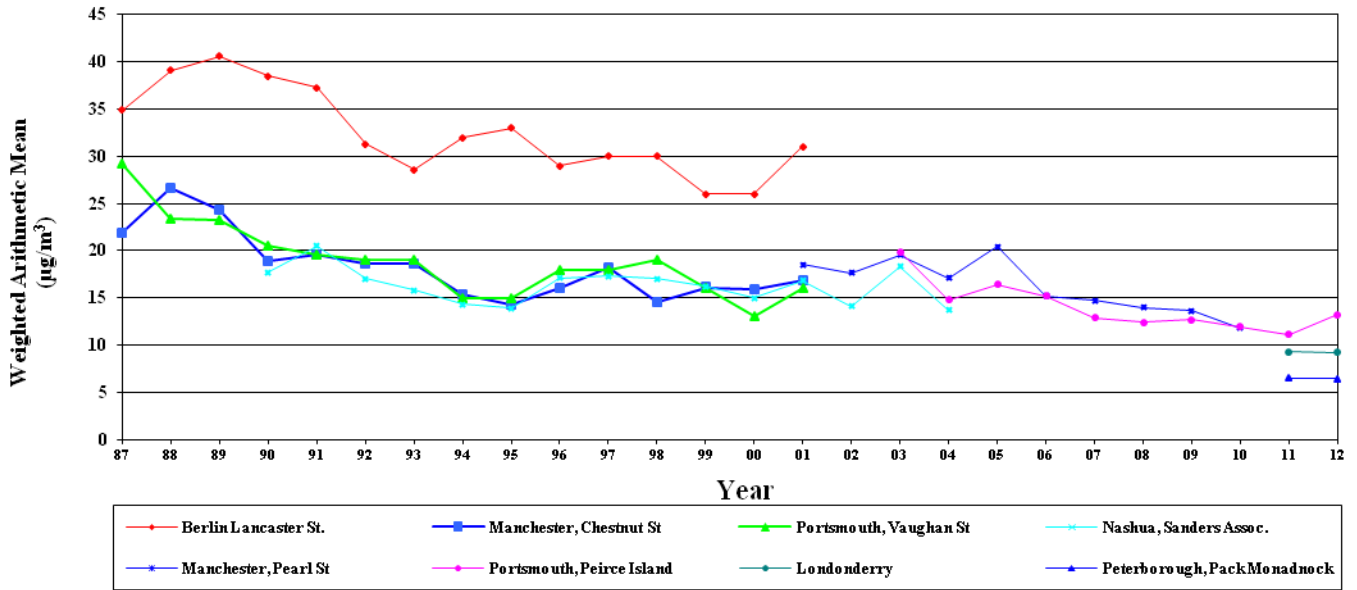
All Concentrations are in Units of Parts Per Million

| Site ID   | County       | City            | Address                   | Duration     | Obs. | First Max. | Second Max. | Third Max. | Fourth Max. | Actual Exceedances | Valid Days | Required Days | Percent Days |
|-----------|--------------|-----------------|---------------------------|--------------|------|------------|-------------|------------|-------------|--------------------|------------|---------------|--------------|
| 330012004 | Belknap      | Laconia         | Green Street, Laconia     | 8-HR RUN AVG | 4376 | 0.069      | 0.066       | 0.066      | 0.065       | 0                  | 182        | 183           | 99           |
| 330050007 | Cheshire     | Keene           | Water Street              | 8-HR RUN AVG | 8696 | 0.074      | 0.065       | 0.063      | 0.063       | 0                  | 180        | 183           | 98           |
| 330074001 | Coos         | Not in a city   | Mt. Washington            | 8-HR RUN AVG | 8737 | 0.073      | 0.072       | 0.072      | 0.071       | 0                  | 183        | 183           | 100          |
| 330074002 | Coos         | Greens Grant    | Camp Dodge, Route 16      | 8-HR RUN AVG | 4381 | 0.065      | 0.065       | 0.064      | 0.064       | 0                  | 183        | 183           | 100          |
| 330090010 | Grafton      | Lebanon         | Lebanon Airport           | 8-HR RUN AVG | 8704 | 0.069      | 0.068       | 0.068      | 0.062       | 0                  | 182        | 183           | 99           |
| 330099991 | Grafton      | North Woodstock | Hubbard Brook Forest      | 8-HR RUN AVG | 8575 | 0.064      | 0.064       | 0.061      | 0.058       | 0                  | 176        | 183           | 96           |
| 330111011 | Hillsborough | Nashua          | Gilson Road               | 8-HR RUN AVG | 4352 | 0.085      | 0.078       | 0.069      | 0.068       | 2                  | 180        | 183           | 98           |
| 330115001 | Hillsborough | Peterborough    | Pack Monadnock Summit     | 8-HR RUN AVG | 8651 | 0.078      | 0.078       | 0.074      | 0.073       | 2                  | 182        | 183           | 99           |
| 330131007 | Merrimack    | Concord         | Hazen Drive               | 8-HR RUN AVG | 4280 | 0.071      | 0.070       | 0.067      | 0.064       | 0                  | 175        | 183           | 96           |
| 330150014 | Rockingham   | Portsmouth      | Portsmouth, Peirce Island | 8-HR RUN AVG | 8731 | 0.083      | 0.073       | 0.070      | 0.070       | 1                  | 181        | 183           | 99           |
| 330150016 | Rockingham   | Rye             | Seacoast Science Center   | 8-HR RUN AVG | 4284 | 0.077      | 0.075       | 0.070      | 0.067       | 1                  | 179        | 183           | 98           |
| 330150018 | Rockingham   | Londonderry     | 150 Pillsbury Rd          | 8-HR RUN AVG | 8748 | 0.081      | 0.077       | 0.072      | 0.069       | 2                  | 183        | 183           | 100          |

# New Hampshire Sites 2012 - Particulate Matter < 10 Microns



# New Hampshire Particulate Matter < 10 Microns (PM<sub>10</sub>) Data



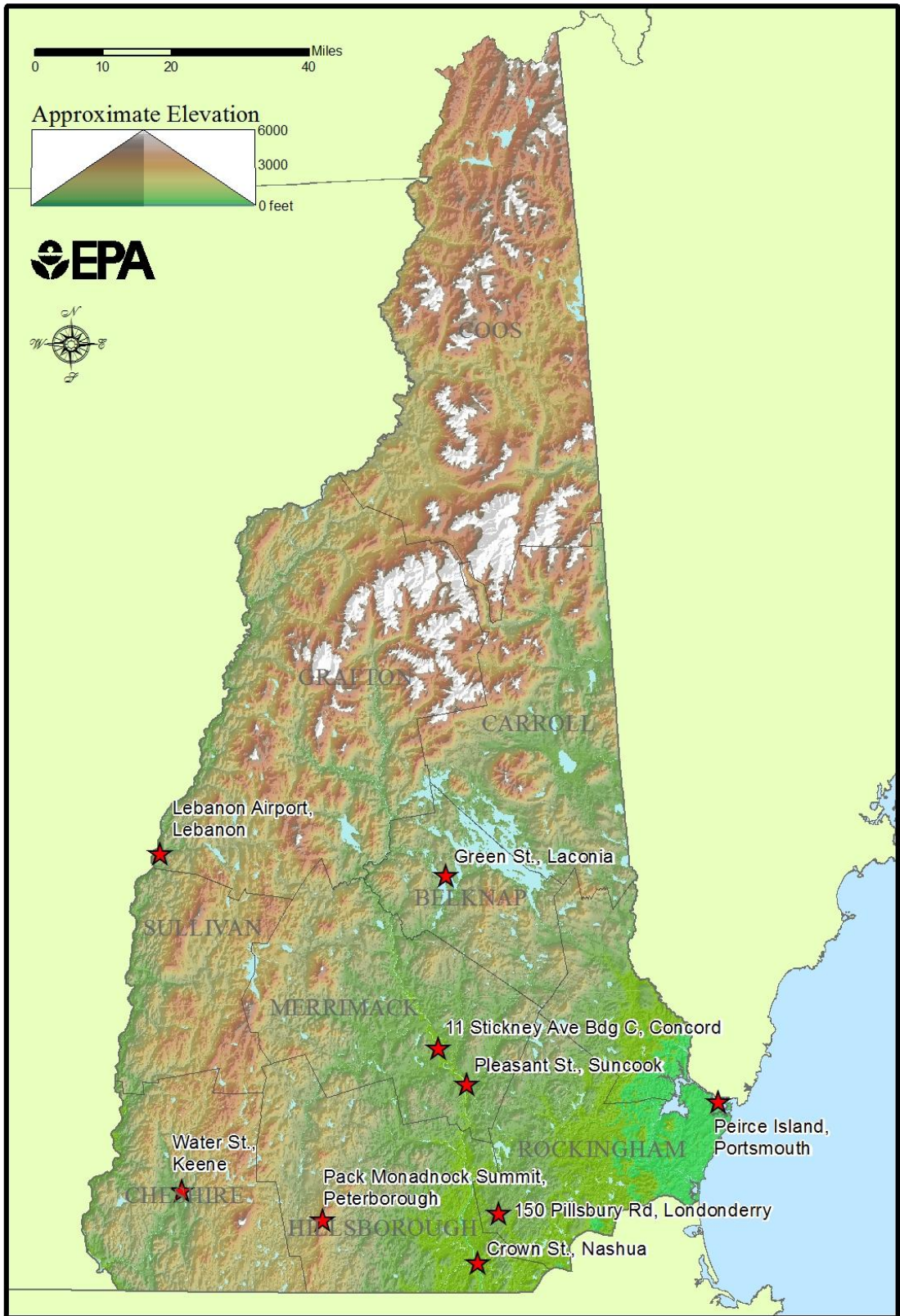
NAAQS for Particulate Matter less than 10 Microns:  
24-hour -150 µg/m<sup>3</sup>

2012 New Hampshire  
Particulate Matter < 10 Microns  
All Concentrations are in units of µg/m<sup>3</sup>

| Site ID   | POC | County       | City         | Address                   | Duration | Obs. | First Max. | Second Max. | Actual Exceedances | Weighted Arithmetic Mean |
|-----------|-----|--------------|--------------|---------------------------|----------|------|------------|-------------|--------------------|--------------------------|
| 330115001 | 1   | Hillsborough | Peterborough | Pack Monadnock Summit     | 24 HOUR  | 112  | 21         | 20          | 0                  | 6.4                      |
| 330150014 | 1   | Rockingham   | Portsmouth   | Portsmouth, Peirce Island | 24 HOUR  | 59   | 36         | 35          | 0                  | 13.2                     |
| 330150014 | 2   | Rockingham   | Portsmouth   | Portsmouth, Peirce Island | 24 HOUR  | 59   | 36         | 35          | 0                  | 13.7                     |
| 330150018 | 1   | Rockingham   | Londonderry  | 150 Pillsbury Rd          | 24 HOUR  | 120  | 23         | 23          | 0                  | 9.2                      |

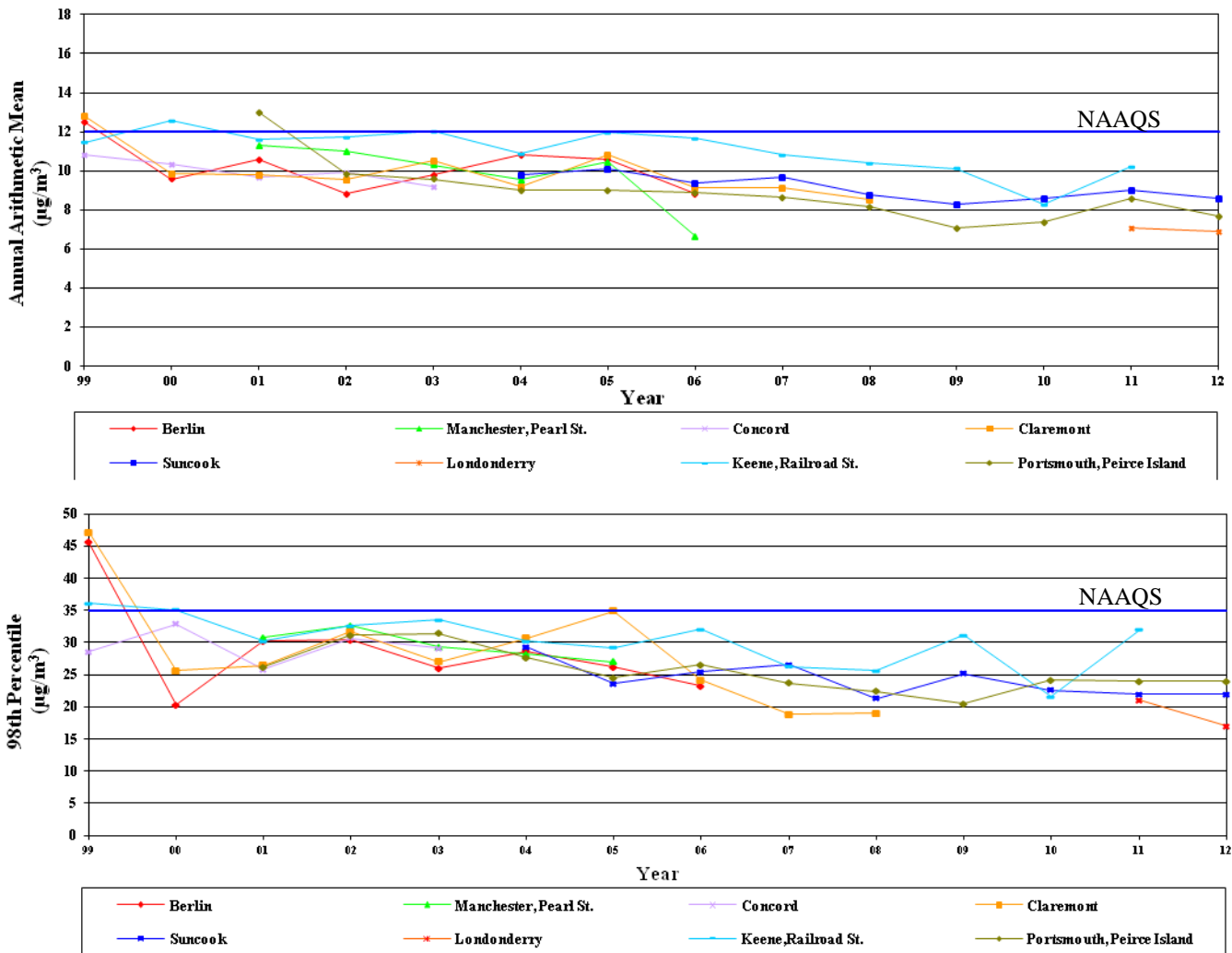


# New Hampshire Sites 2012 - Particulate Matter < 2.5 Microns





# New Hampshire Particulate Matter < 2.5 Microns (PM<sub>2.5</sub>) Data



## NAAQS for Particulate Matter less than 2.5 Microns:

Annual: the 3-year average of the Annual Arithmetic Mean - 12.0 µg/m³ (Effective March 18, 2013)

24-Hour: the 3-year average of the 98th percentile of 24-hour average concentrations - 35 µg/m³

2012 New Hampshire

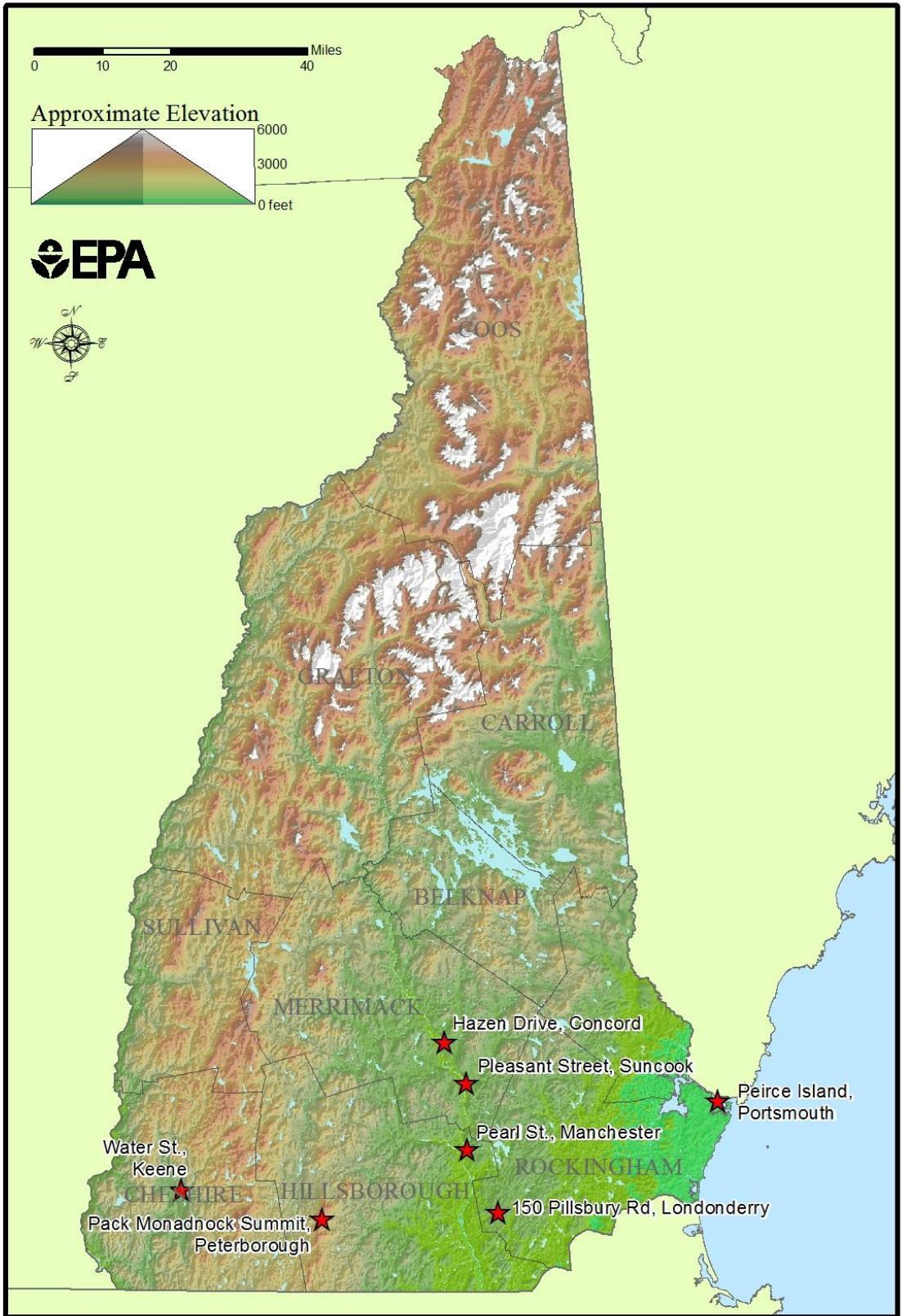
Particulate Matter < 2.5 Microns

All Concentrations are in µg/m³ Local Conditions

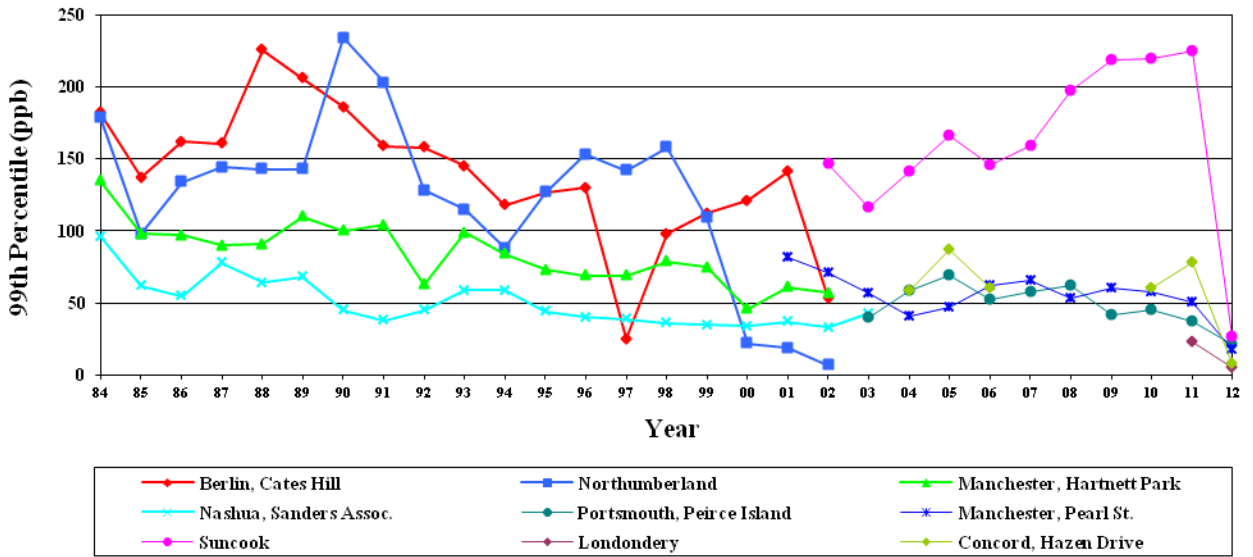
(24 HOUR indicates FRM, 24-HR BLK AVG indicates continuous FEM)

| Site ID   | POC | County       | City         | Address               | Duration      | Obs. | First Max. | Second Max. | Third Max. | Fourth Max. | 98th Percentile | Weighted Arithmetic Mean |
|-----------|-----|--------------|--------------|-----------------------|---------------|------|------------|-------------|------------|-------------|-----------------|--------------------------|
| 330012004 | 1   | Belknap      | Laconia      | Green Street, Laconia | 24 HOUR       | 57   | 19.3       | 16.4        | 15.6       | 15.2        | 16              | 6.6                      |
| 330050007 | 1   | Cheshire     | Keene        | Water Street          | 24 HOUR       | 39   | 27.2       | 25.8        | 24.4       | 21.3        | 27              | 9.5                      |
| 330050007 | 3   | Cheshire     | Keene        | Water Street          | 24-HR BLK AVG | 315  | 36.8       | 31.8        | 28.7       | 26.8        | 26              | 8.9                      |
| 330090010 | 1   | Grafton      | Lebanon      | Lebanon Airport       | 24 HOUR       | 30   | 14.4       | 14.0        | 13.8       | 11.3        | 14              | 6.8                      |
| 330090010 | 3   | Grafton      | Lebanon      | Lebanon Airport       | 24-HR BLK AVG | 333  | 19.5       | 19.0        | 17.4       | 16.5        | 16              | 6.3                      |
| 330111015 | 1   | Hillsborough | Nashua       | Crown St              | 24 HOUR       | 59   | 24.0       | 22.5        | 21.3       | 19.5        | 23              | 8.2                      |
| 330115001 | 1   | Hillsborough | Peterborough | Pack Monadnock Summit | 24 HOUR       | 124  | 17.9       | 17.6        | 16.6       | 14.9        | 17              | 4.9                      |
| 330115001 | 3   | Hillsborough | Peterborough | Pack Monadnock Summit | 24-HR BLK AVG | 361  | 15.9       | 15.6        | 14.8       | 13.7        | 12              | 4.2                      |
| 330131006 | 1   | Merrimack    | Suncook      | Pleasant Street       | 24 HOUR       | 120  | 27.1       | 22.4        | 22.0       | 21.4        | 22              | 8.6                      |
| 330131006 | 2   | Merrimack    | Suncook      | Pleasant Street       | 24 HOUR       | 56   | 25.9       | 22.8        | 22.5       | 21.4        | 23              | 9.4                      |
| 330132007 | 3   | Merrimack    | Concord      | 11 Stickney Ave Bdg C | 24-HR BLK AVG | 46   | 18.8       | 18.4        | 18.0       | 16.4        | 19              | 8.2                      |
| 330150014 | 1   | Rockingham   | Portsmouth   | Peirce Island         | 24 HOUR       | 38   | 24.3       | 18.4        | 17.7       | 15.3        | 24              | 7.7                      |
| 330150014 | 3   | Rockingham   | Portsmouth   | Peirce Island         | 24-HR BLK AVG | 303  | 25.3       | 25.0        | 21.0       | 19.7        | 19              | 7.5                      |
| 330150018 | 1   | Rockingham   | Londonderry  | 150 Pillsbury Rd      | 24 HOUR       | 117  | 23.3       | 19.4        | 16.6       | 15.5        | 17              | 6.9                      |
| 330150018 | 3   | Rockingham   | Londonderry  | 150 Pillsbury Rd      | 24-HR BLK AVG | 333  | 20.1       | 19.5        | 18.3       | 17.5        | 17              | 6.3                      |

# New Hampshire Sites 2012 - Sulfur Dioxide



# New Hampshire Sulfur Dioxide Data



## NAAQS for Sulfur Dioxide:

Primary: 1-hour -75 ppb (0.075 ppm) 99<sup>th</sup> percentile

Secondary: 3-hour -0.5 ppm

2012 New Hampshire

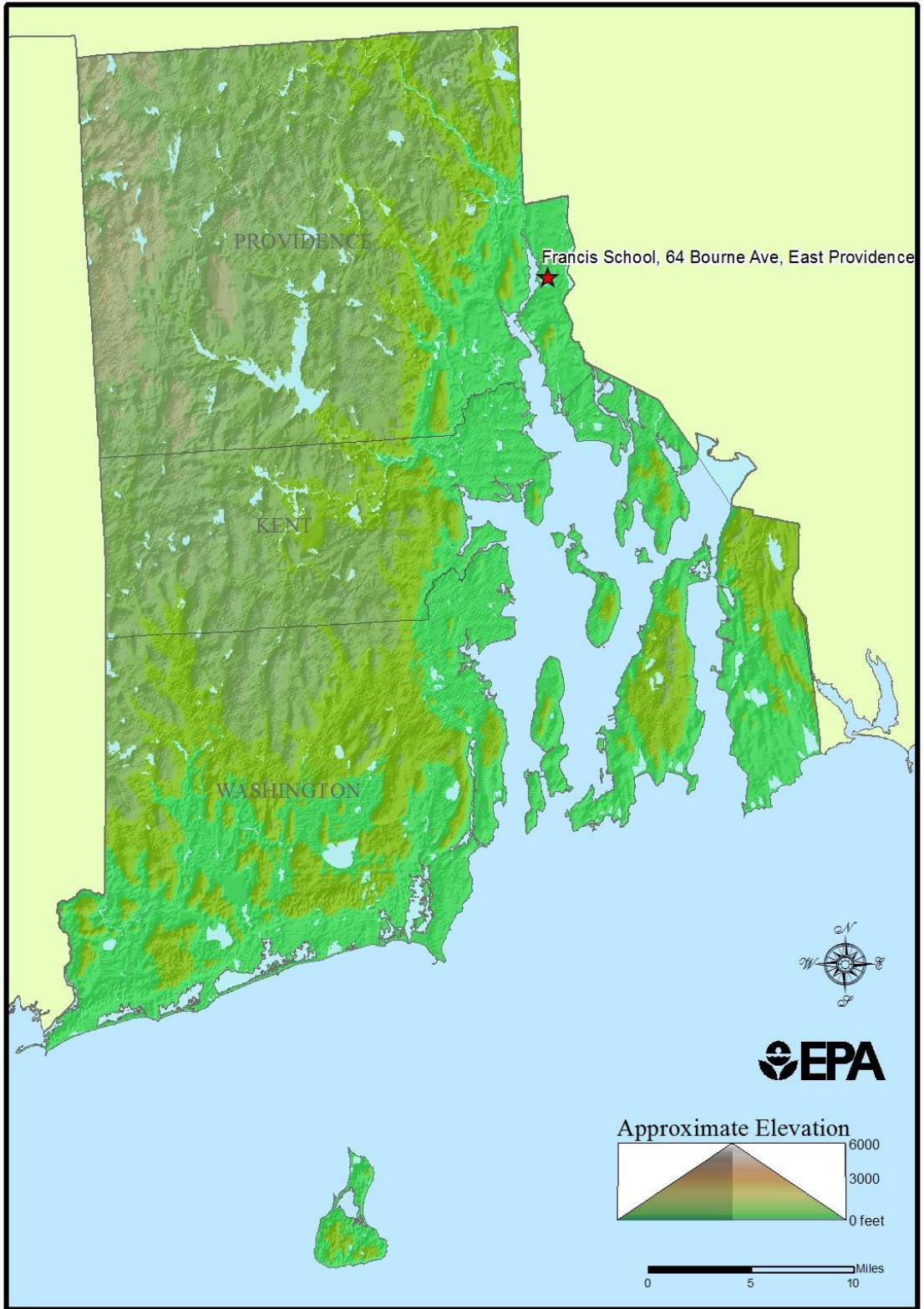
Parameter: Sulfur Dioxide

All Concentrations are in Units of Parts Per Billion (ppb)

| Site ID   | County       | City         | Address                   | Duration | Obs. | First Max. | Second Max. | 99th Percentile | Actual Exceedances |
|-----------|--------------|--------------|---------------------------|----------|------|------------|-------------|-----------------|--------------------|
| 330050007 | Cheshire     | Keene        | Water Street              | 1 HOUR   | 1698 | 22         | 19          | 22              | 0                  |
| 330110020 | Hillsborough | Manchester   | Pearl St                  | 1 HOUR   | 2152 | 18         | 17          | 18              | 0                  |
| 330115001 | Hillsborough | Peterborough | Pack Monadnock Summit     | 1 HOUR   | 8401 | 5          | 4           | 4               | 0                  |
| 330131006 | Merrimack    | Suncook      | Pleasant Street           | 1 HOUR   | 8538 | 79         | 36          | 27              | 1                  |
| 330131007 | Merrimack    | Concord      | Hazen Drive               | 1 HOUR   | 8542 | 36         | 34          | 8               | 0                  |
| 330150014 | Rockingham   | Portsmouth   | Portsmouth, Peirce Island | 1 HOUR   | 8643 | 34         | 29          | 21              | 0                  |
| 330150018 | Rockingham   | Londonderry  | 150 Pillsbury Rd          | 1 HOUR   | 8377 | 8          | 6           | 5               | 0                  |

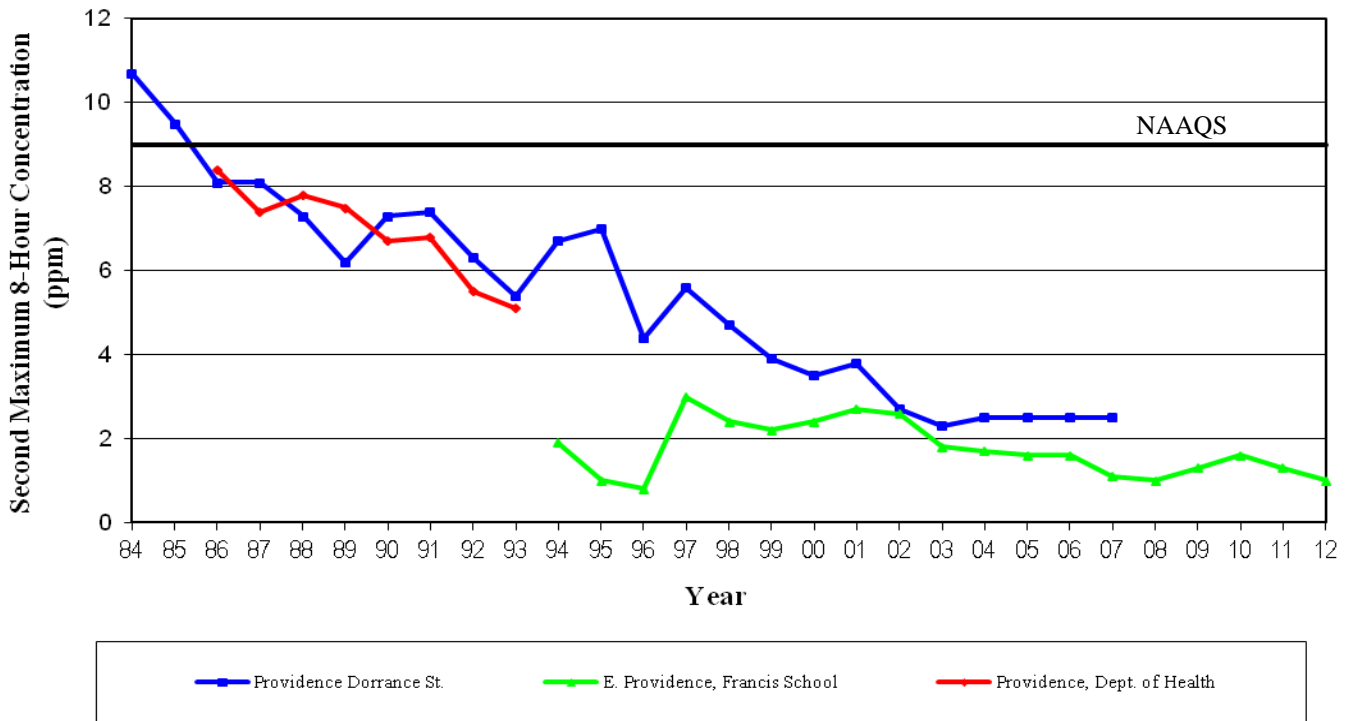


# Rhode Island Sites - 2012 - Carbon Monoxide





# Rhode Island Carbon Monoxide Data



## NAAQS for Carbon Monoxide:

- 1-hour – 35 ppm, not to be exceeded more than once per year
- 8-hour – 9 ppm, not to be exceeded more than one per year

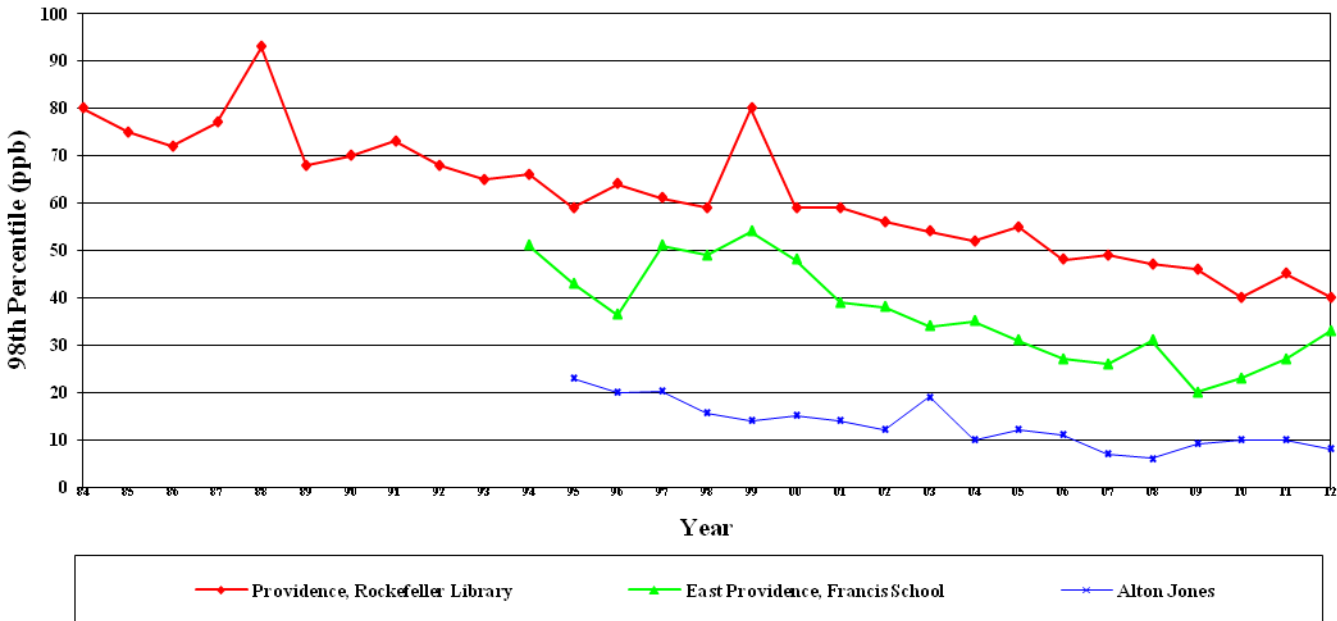
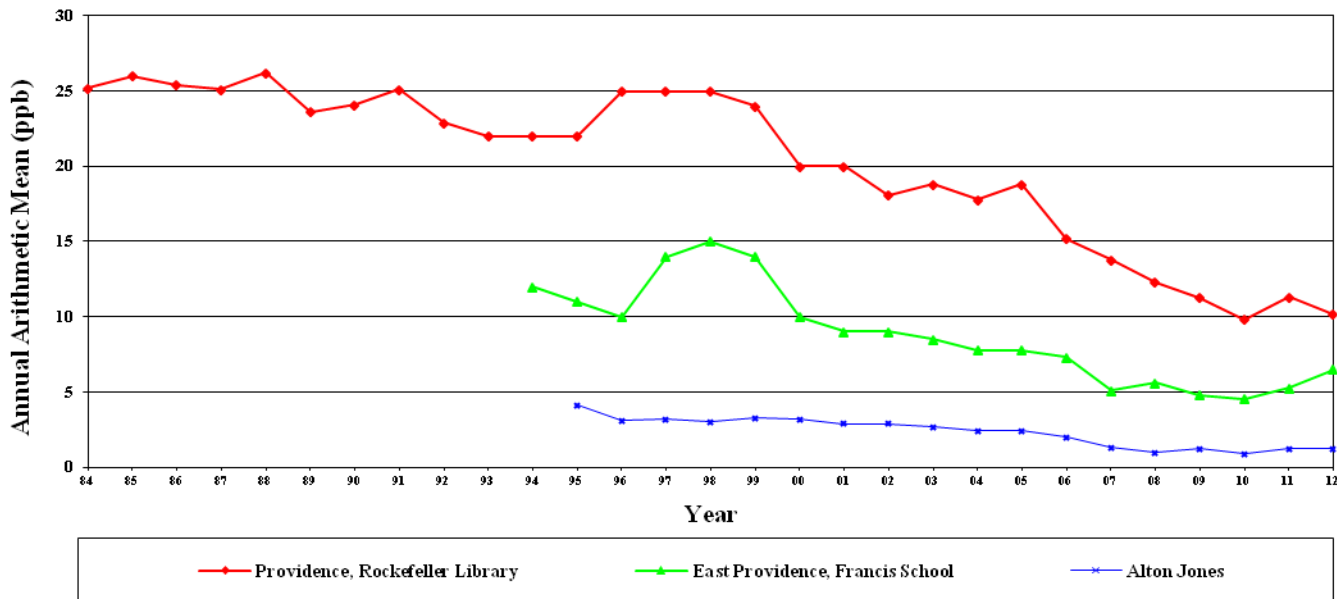
2012 Rhode Island  
Carbon Monoxide  
All Concentrations are in Units of Parts Per Million

| Site ID   | County     | City            | Address                       | Duration     | Obs. | First Max. | Second Max. |
|-----------|------------|-----------------|-------------------------------|--------------|------|------------|-------------|
| 440071010 | Providence | East Providence | Francis School, 64 Bourne Ave | 1 HOUR       | 7796 | 1.6        | 1.5         |
| 440071010 | Providence | East Providence | Francis School, 64 Bourne Ave | 8-HR RUN AVG | 7664 | 1.3        | 1.0         |

# Rhode Island Sites - 2012 - Nitrogen Dioxide



# Rhode Island Nitrogen Dioxide Data



## NAAQS for Nitrogen Dioxide:

Annual Arithmetic Mean- 53 ppb (100 µg/m<sup>3</sup>)

1-hour – 100 ppb (as of January 22, 2010) 98<sup>th</sup> percentile

2012 Rhode Island

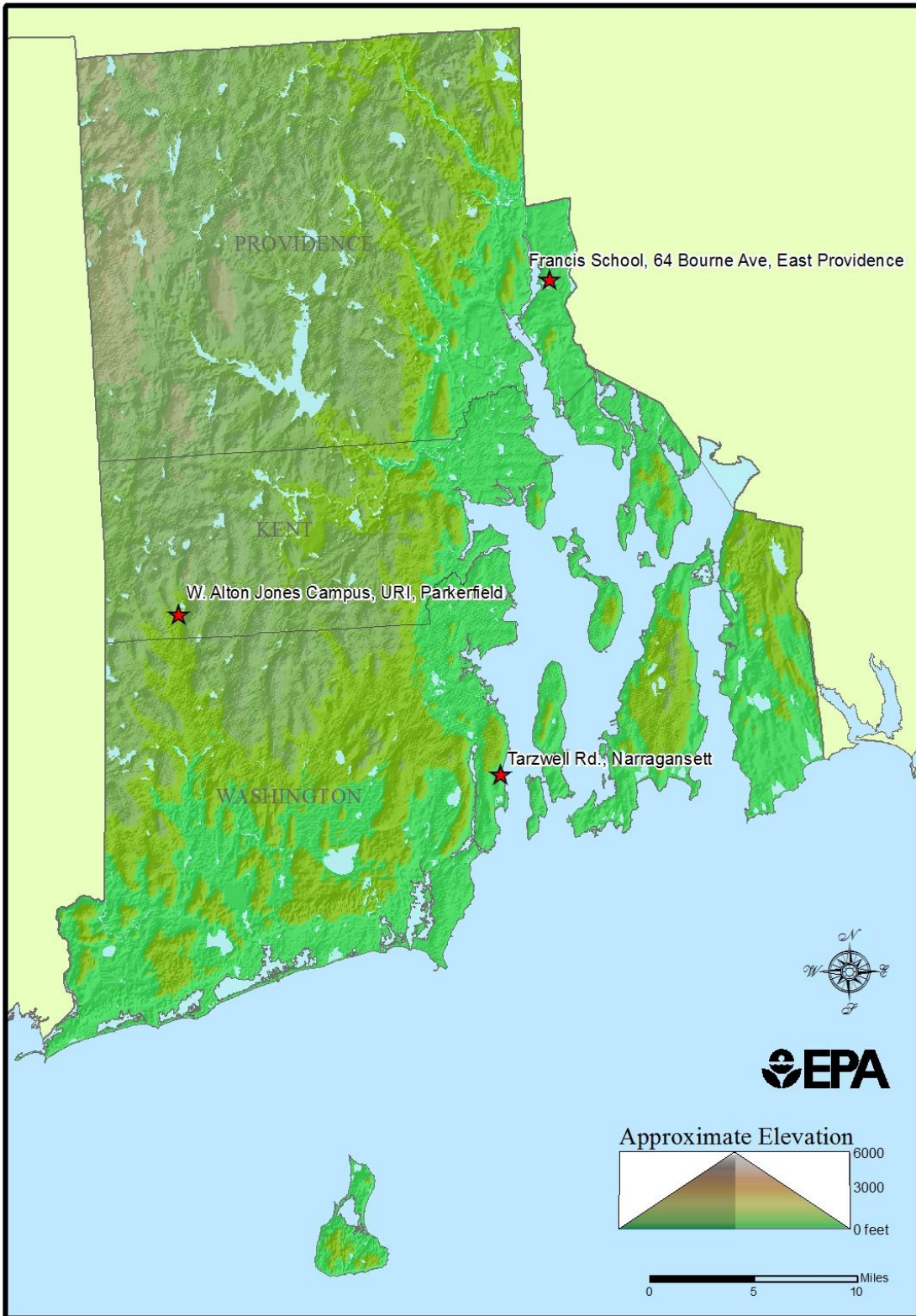
Nitrogen Dioxide

All Concentrations are in Units of Parts Per Billion

| Site ID   | County     | City            | Address                               | Duration | Obs. | First Max. | Second Max. | 98th Percentile | Annual Arithmetic Mean |   |
|-----------|------------|-----------------|---------------------------------------|----------|------|------------|-------------|-----------------|------------------------|---|
| 440030002 | Kent       | Parkerfield     | W. Alton Jones Campus URI             | 1 HOUR   | 4109 | 10         | 8           | 8               | 1.27                   | * |
| 440070012 | Providence | Providence      | Rockefeller Library, Prospect Street. | 1 HOUR   | 8069 | 48         | 44          | 40              | 10.15                  |   |
| 440071010 | Providence | East Providence | Francis School, 64 Bourne Ave         | 1 HOUR   | 6585 | 40         | 34          | 33              | 6.49                   |   |

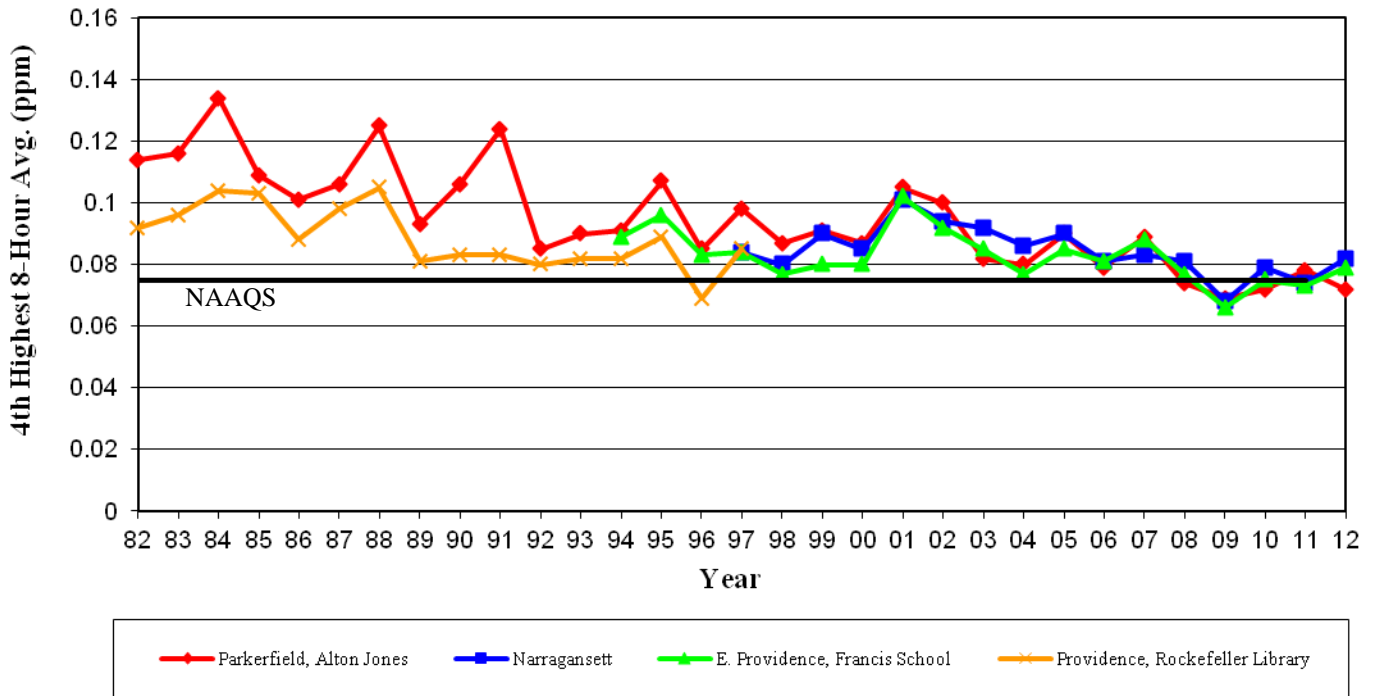
\* Indicates that the mean does not satisfy summary criteria

Rhode Island Sites - 2012 - Ozone





# Rhode Island 8-Hour Ozone Data



## NAAQS for Ozone:

8-hour – 0.075 ppm (2008 std)

(To attain this 0.075 ppm standard, the 3-year average of the fourth-highest daily maximum 8-hour average ozone concentrations measured at each monitor within an area over each year must not exceed 0.075 ppm. This graph represents the 4th highest value for each year for each monitor depicted. Thus, being above or below this NAAQS line does not indicate whether or not a monitor exceeds the NAAQS.)

2012 Rhode Island

Ozone (8-Hour)

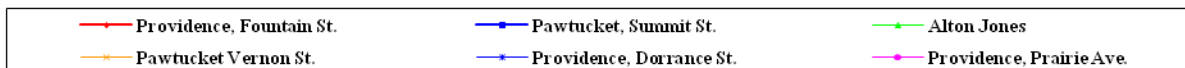
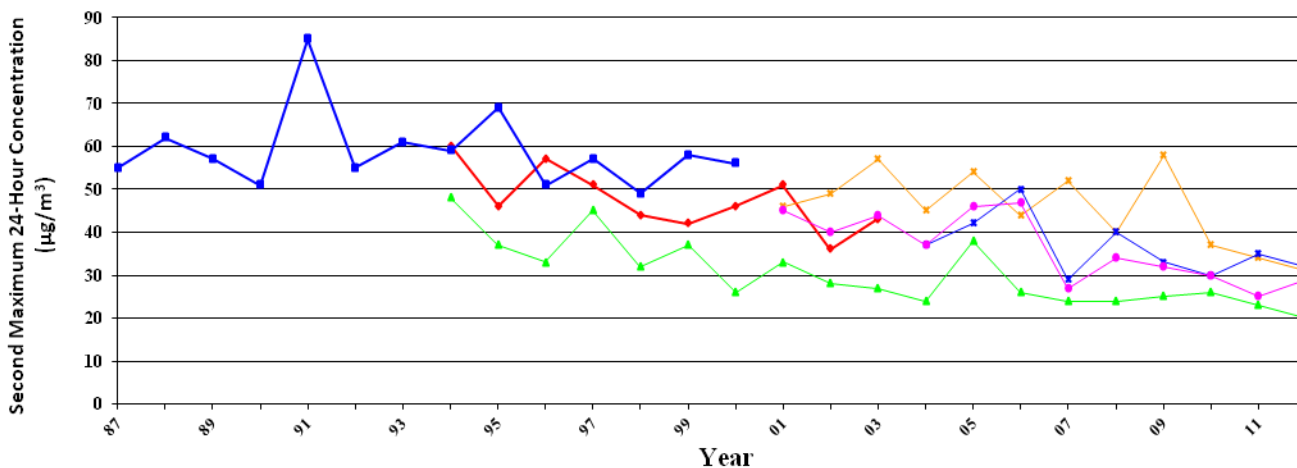
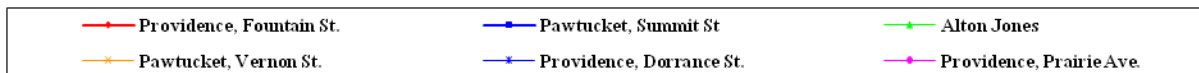
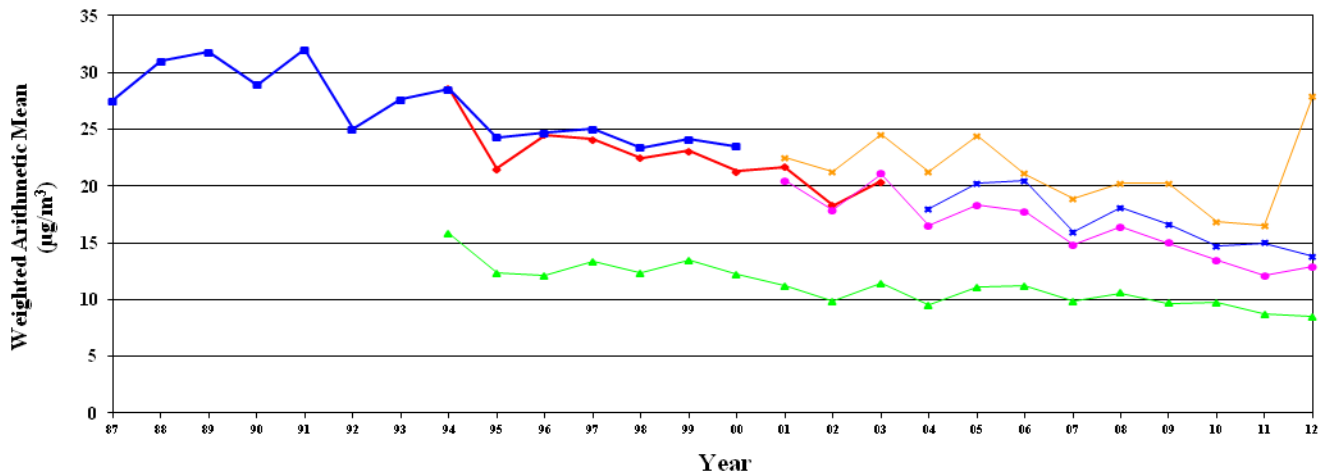
All Concentrations are in Units of Parts Per Million

| Site ID   | County     | City            | Address                       | Duration     | Obs. | First Max. | Second Max. | Third Max. | Fourth Max. | Actual Exceedances | Valid Days | Required Days | Percent Days |
|-----------|------------|-----------------|-------------------------------|--------------|------|------------|-------------|------------|-------------|--------------------|------------|---------------|--------------|
| 440030002 | Kent       | Parkerfield     | W. Alton Jones Campus URI     | 8-HR RUN AVG | 5701 | 0.08       | 0.078       | 0.075      | 0.072       | 2                  | 181        | 183           | 99           |
| 440071010 | Providence | East Providence | Francis School, 64 Bourne Ave | 8-HR RUN AVG | 8386 | 0.09       | 0.084       | 0.08       | 0.079       | 8                  | 175        | 183           | 96           |
| 440090007 | Washington | Narragansett    | Tarzwell Road                 | 8-HR RUN AVG | 5713 | 0.1        | 0.086       | 0.084      | 0.082       | 7                  | 177        | 183           | 97           |

**Rhode Island Sites - 2012 - Particulate Matter < 10 Microns**



# Rhode Island Particulate Matter < 10 Microns (PM<sub>10</sub>) Data



NAAQS for Particulate Matter less than 10 Microns:  
24-hour- 150 µg/m<sup>3</sup>

2012 Rhode Island  
Particulate Matter < 10 Microns  
All Concentrations are in units of ug/m<sup>3</sup>

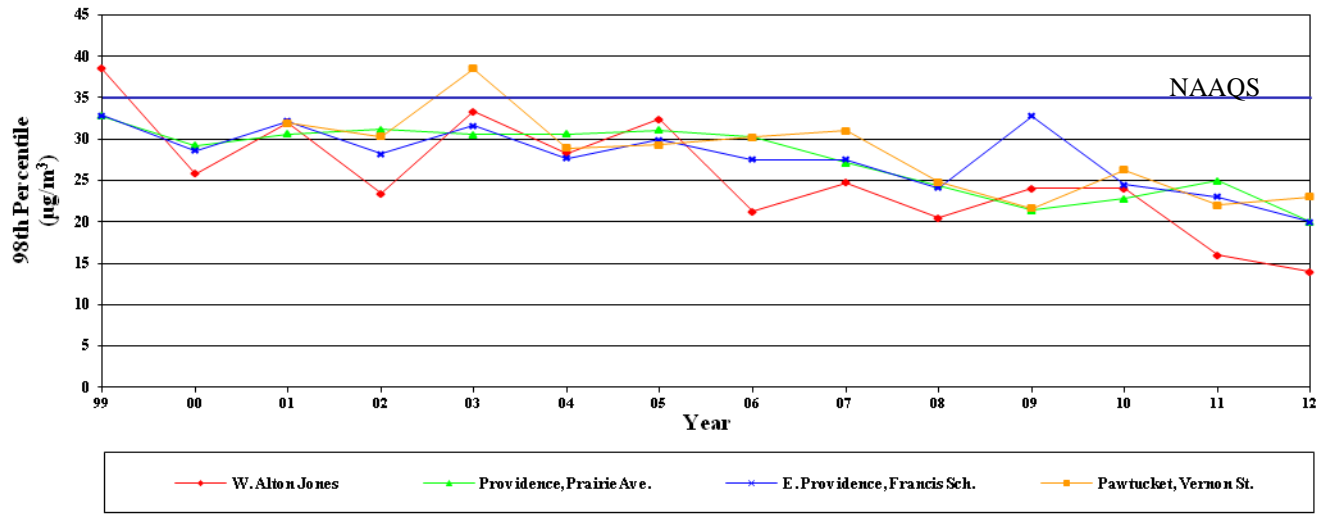
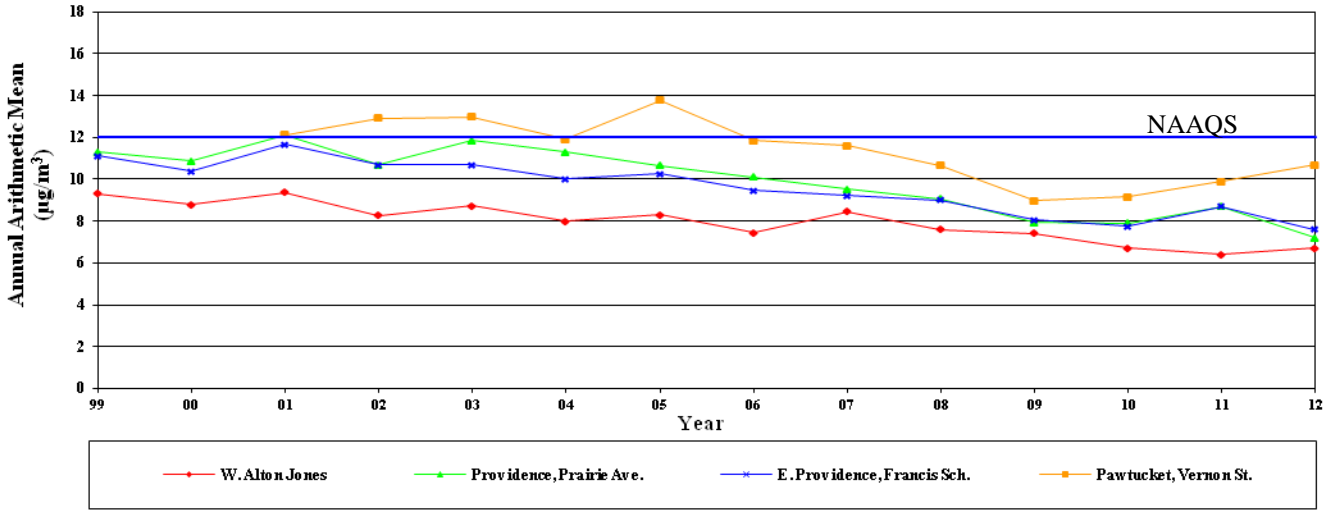
| Site ID   | POC | County     | City        | Address                   | Duration | Obs. | First Max. | Second Max. | Actual Exceedances | Weighted Arithmetic Mean |
|-----------|-----|------------|-------------|---------------------------|----------|------|------------|-------------|--------------------|--------------------------|
| 440030002 | 1   | Kent       | Parkerfield | W. Alton Jones Campus URI | 24 HOUR  | 60   | 22         | 20          | 0                  | 8.5                      |
| 440070022 | 1   | Providence | Providence  | 212 Prairie Ave           | 24 HOUR  | 56   | 30         | 29          | 0                  | 12.9                     |
| 440070022 | 2   | Providence | Providence  | 212 Prairie Ave           | 24 HOUR  | 56   | 29         | 29          | 0                  | 12.7                     |
| 440070026 | 1   | Providence | Pawtucket   | Vernon Street             | 24 HOUR  | 28   | 51         | 31          | 0                  | 27.9                     |
| 440070027 | 1   | Providence | Providence  | 111 Dorrance Street       | 24 HOUR  | 55   | 32         | 32          | 0                  | 13.8                     |

**Rhode Island Sites - 2012 - Particulate Matter < 2.5 Microns**





# Rhode Island Particulate Matter < 2.5 Microns (PM<sub>2.5</sub>) Data



## NAAQS for Particulate Matter less than 2.5 Microns:

Annual: the 3-year average of the Annual Arithmetic Mean - 12.0 µg/m<sup>3</sup> (Effective March 18, 2013)

24-Hour: the 3-year average of the 98th percentile of 24-hour average concentrations - 35 µg/m<sup>3</sup>

2012 Rhode Island

Particulate Matter < 2.5 Microns

All Concentrations are in µg/m<sup>3</sup> Local Conditions

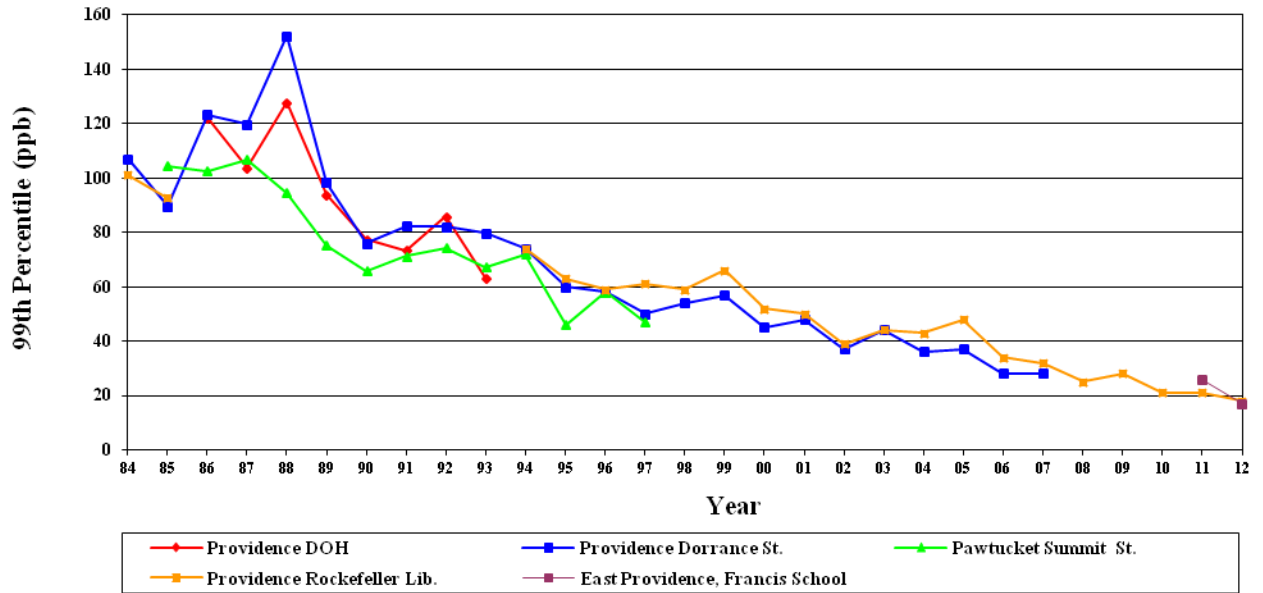
(24 HOUR indicates FRM, 24-HR BLK AVG indicates continuous FEM)

| Site ID   | POC | County     | City            | Address                       | Duration      | Obs. | First Max. | Second Max. | Third Max. | Fourth Max. | 98th Percentile | Weighted Arithmetic Mean |
|-----------|-----|------------|-----------------|-------------------------------|---------------|------|------------|-------------|------------|-------------|-----------------|--------------------------|
| 440030002 | 2   | Kent       | Parkerfield     | W. Alton Jones Campus URI     | 24 HOUR       | 60   | 16.3       | 13.5        | 13.3       | 12.1        | 14              | 6.7                      |
| 440030002 | 3   | Kent       | Parkerfield     | W. Alton Jones Campus URI     | 24-HR BLK AVG | 351  | 17.1       | 16.6        | 16.4       | 16.2        | 14              | 6                        |
| 440070022 | 1   | Providence | Providence      | 212 Prairie Ave               | 24 HOUR       | 345  | 23.2       | 22.9        | 22.5       | 21.8        | 20              | 7.2                      |
| 440070022 | 2   | Providence | Providence      | 212 Prairie Ave               | 24 HOUR       | 43   | 20.9       | 16.3        | 15.9       | 13.6        | 21              | 8.5                      |
| 440070022 | 3   | Providence | Providence      | 212 Prairie Ave               | 24-HR BLK AVG | 119  | 24.1       | 22.5        | 20.7       | 18.8        | 21              | 8.8                      |
| 440070026 | 1   | Providence | Pawtucket       | Vernon Street                 | 24 HOUR       | 53   | 27.2       | 23.2        | 21.2       | 21.0        | 23              | 10.7                     |
| 440070028 | 1   | Providence | Providence      | 695 Eddy Street               | 24 HOUR       | 116  | 22.3       | 21.3        | 20.0       | 18.3        | 20              | 7.8                      |
| 440071010 | 1   | Providence | East Providence | Francis School, 64 Bourne Ave | 24 HOUR       | 350  | 25.4       | 23.2        | 22.2       | 21.6        | 20              | 7.6                      |
| 440071010 | 3   | Providence | East Providence | Francis School, 64 Bourne Ave | 24-HR BLK AVG | 315  | 25.0       | 24.4        | 23.7       | 23.3        | 20              | 7.8                      |
| 440090007 | 1   | Washington | Narragansett    | Tarzwell Road                 | 24-HR BLK AVG | 114  | 15.2       | 15.2        | 14.5       | 14.0        | 15              | 5.3                      |

# Rhode Island Sites - 2012 - Sulfur Dioxide



# Rhode Island Sulfur Dioxide Data



## NAAQS for Sulfur Dioxide:

Primary: 1-hour -75 ppb (0.075 ppm) 99<sup>th</sup> percentile

Secondary: 3-hour -0.5 ppm

| Site ID   | County    | City             | Address                    | Duration | Obs  | First Max | Second Max | 99th Percentile | Actual Exceedances |
|-----------|-----------|------------------|----------------------------|----------|------|-----------|------------|-----------------|--------------------|
| 250051004 | Bristol   | Fall River       | 659 Globe St               | 1 HOUR   | 8492 | 93        | 92         | 65              | 10                 |
| 250130016 | Hampden   | Springfield      | Liberty P-Lot              | 1 HOUR   | 8442 | 53        | 41         | 22              | 0                  |
| 250154002 | Hampshire | Ware (census nar | Quabbin Summit             | 1 HOUR   | 8525 | 13        | 13         | 9               | 0                  |
| 250250002 | Suffolk   | Boston           | Kenmore Sq                 | 1 HOUR   | 8524 | 49        | 25         | 19              | 0                  |
| 250250019 | Suffolk   | Boston           | Long Island, Boston Harbor | 1 HOUR   | 3604 | 18        | 12         | 12              | 0                  |

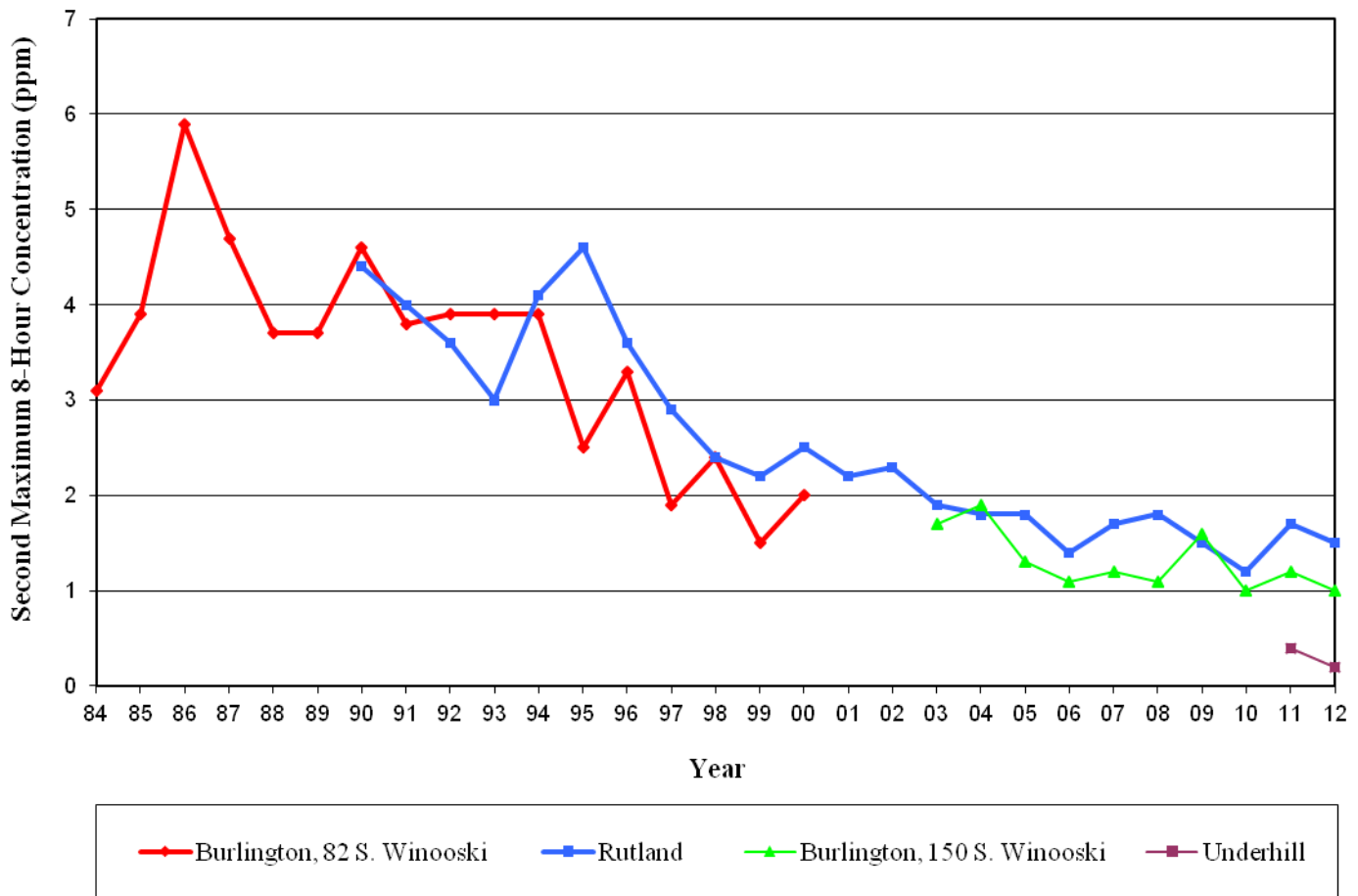


# Vermont Sites 2012 - Carbon Monoxide





# Vermont Carbon Monoxide Data



## NAAQS for Carbon Monoxide:

1-hour – 35 ppm, not to be exceeded more than once per year

8-hour – 9 ppm, not to be exceeded more than one per year

2012 Vermont

Carbon Monoxide

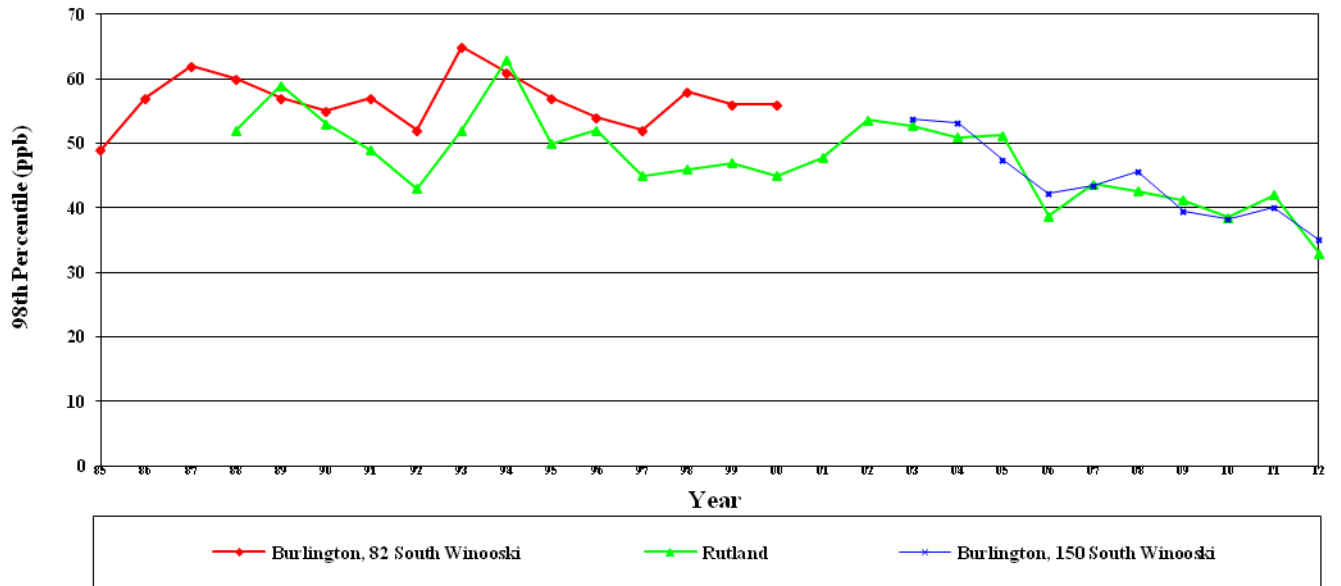
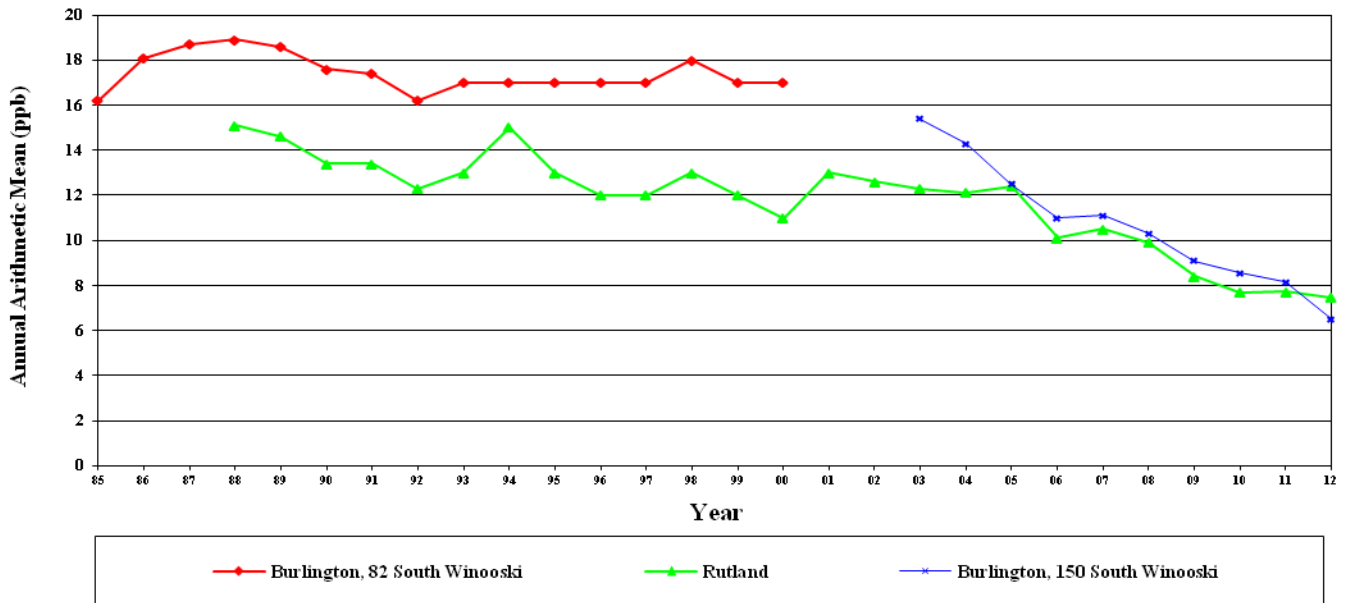
All Concentrations are in Units of Parts Per Million

| Site ID   | County     | City       | Address                   | Duration     | Obs. | First Max. | Second Max. |
|-----------|------------|------------|---------------------------|--------------|------|------------|-------------|
| 500070007 | Chittenden | Underhill  | 58 Harvey Road            | 1 HOUR       | 7574 | 0.5        | 0.5         |
| 500070014 | Chittenden | Burlington | 150 South Winooski Avenue | 1 HOUR       | 7907 | 1.6        | 1.3         |
| 500210002 | Rutland    | Rutland    | 96 State Street           | 1 HOUR       | 8349 | 2.7        | 2.6         |
| 500070007 | Chittenden | Underhill  | 58 Harvey Road            | 8-HR RUN AVG | 7815 | 0.3        | 0.2         |
| 500070014 | Chittenden | Burlington | 150 South Winooski Avenue | 8-HR RUN AVG | 8262 | 1.1        | 1.0         |
| 500210002 | Rutland    | Rutland    | 96 State Street           | 8-HR RUN AVG | 8747 | 1.8        | 1.5         |

Vermont Sites 2012 - Nitrogen Dioxide



# Vermont Nitrogen Dioxide Data



## NAAQS for Nitrogen Dioxide:

Annual Arithmetic Mean- 53 ppb (100 µg/m<sup>3</sup>)

1-hour – 100 ppb (as of January 22, 2010) 98<sup>th</sup> percentile

2012 Vermont  
Nitrogen Dioxide

All Concentrations are in Units of Parts Per Billion

| Site ID   | County     | City       | Address                   | Duration | Obs. | First Max. | Second Max. | 98th Percentile | Annual Arithmetic Mean |
|-----------|------------|------------|---------------------------|----------|------|------------|-------------|-----------------|------------------------|
| 500070014 | Chittenden | Burlington | 150 South Winooski Avenue | 1 HOUR   | 7435 | 40         | 39          | 35              | 6.5                    |
| 500210002 | Rutland    | Rutland    | 96 State Street           | 1 HOUR   | 8279 | 41         | 40          | 33              | 7.45                   |

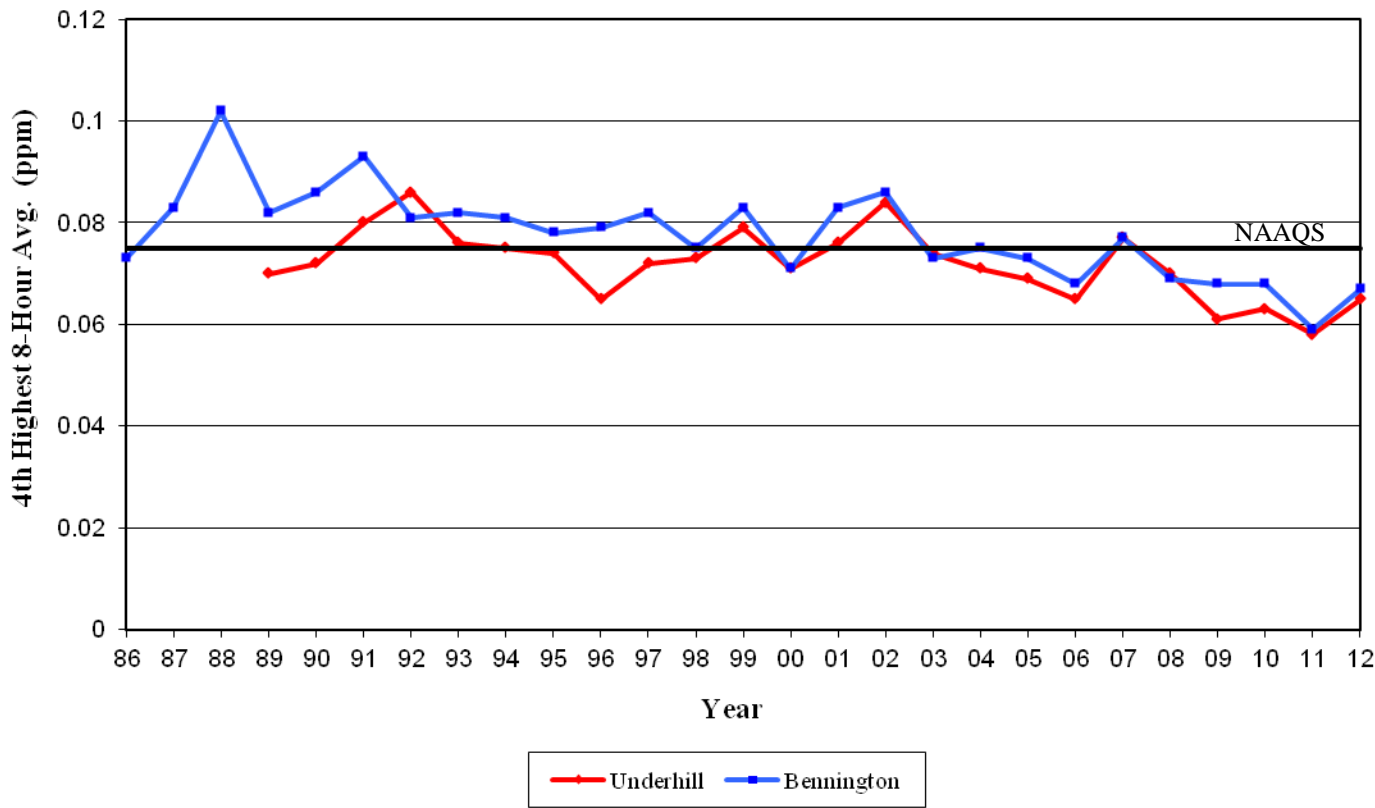


Vermont Sites 2012 - Ozone





# Vermont 8-Hour Ozone Data



## NAAQS for Ozone:

8-hour – 0.075 ppm (2008 std)

(To attain this 0.075 ppm standard, the 3-year average of the fourth-highest daily maximum 8-hour average ozone concentrations measured at each monitor within an area over each year must not exceed 0.075 ppm. This graph represents the 4th highest value for each year for each monitor depicted. Thus, being above or below this NAAQS line does not indicate whether or not a monitor exceeds the NAAQS.)

2012 Vermont

Ozone (8-Hour)

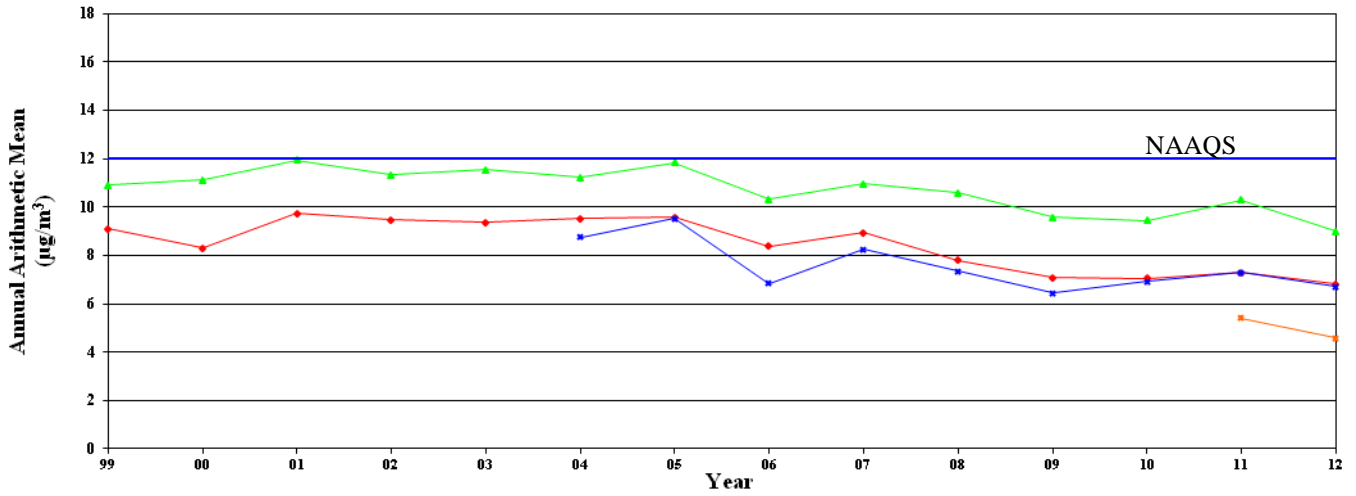
All Concentrations are in Units of Parts Per Million

| Site ID   | County     | City       | Address        | Duration     | Obs. | First Max. | Second Max. | Third Max. | Fourth Max. | Actual Exceedances | Valid Days | Required Days | Percent Days |
|-----------|------------|------------|----------------|--------------|------|------------|-------------|------------|-------------|--------------------|------------|---------------|--------------|
| 500030004 | Bennington | Bennington | 120 Airport Rd | 8-HR RUN AVG | 8448 | 0.073      | 0.070       | 0.069      | 0.067       | 0                  | 179        | 183           | 98           |
| 500070007 | Chittenden | Underhill  | 58 Harvey Road | 8-HR RUN AVG | 8495 | 0.070      | 0.066       | 0.066      | 0.065       | 0                  | 180        | 183           | 98           |

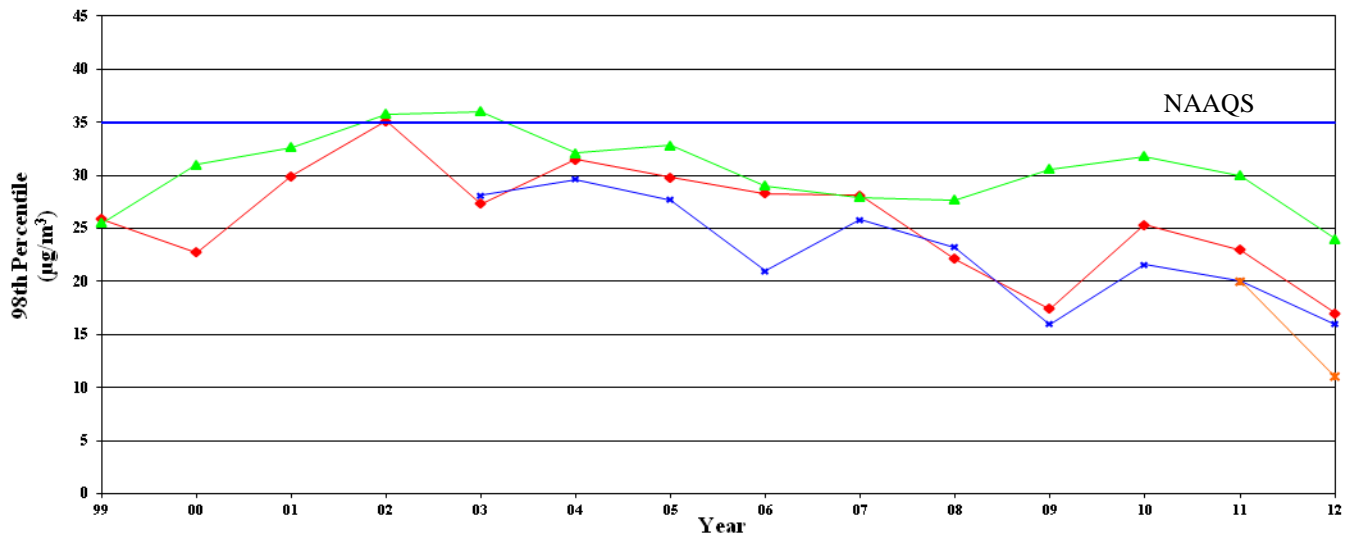
Vermont Sites 2012 - Particulate Matter < 2.5 Microns



# Vermont Particulate Matter < 2.5 Microns (PM<sub>2.5</sub>) Data



Legend for Annual Arithmetic Mean: Burlington, Cherry St. (red line with diamonds); Rutland, State St. (green line with triangles); Bennington, Airport Rd. (blue line with asterisks); Underhill, 58 Harvey Road (orange line with squares).



Legend for 98th Percentile: Burlington, Cherry St. (red line with diamonds); Rutland, State St. (green line with triangles); Bennington, Airport Rd. (blue line with asterisks); Underhill, 58 Harvey Road (orange line with squares).

## NAAQS for Particulate Matter less than 2.5 Microns:

Annual: the 3-year average of the Annual Arithmetic Mean - 12.0 µg/m<sup>3</sup> (Effective March 18, 2013)

24-Hour: the 3-year average of the 98th percentile of 24-hour average concentrations - 35 µg/m<sup>3</sup>

2012 Vermont

Particulate Matter < 2.5 Microns

All Concentrations are in units of µg/m<sup>3</sup>

| Site ID   | POC | County     | City       | Address           | Duration | Obs. | First Max. | Second Max. | Third Max. | Fourth Max. | 98th Percentile | Weighted Arithmetic Mean |
|-----------|-----|------------|------------|-------------------|----------|------|------------|-------------|------------|-------------|-----------------|--------------------------|
| 500030004 | 1   | Bennington | Bennington | 120 Airport Rd    | 24 HOUR  | 107  | 16.7       | 16.0        | 15.8       | 15.0        | 16              | 6.7                      |
| 500070007 | 1   | Chittenden | Underhill  | 58 Harvey Road    | 24 HOUR  | 113  | 18.1       | 12.7        | 11.4       | 11.2        | 11              | 4.6                      |
| 500070012 | 1   | Chittenden | Burlington | 108 Cherry Street | 24 HOUR  | 112  | 19.9       | 18.0        | 16.9       | 15.8        | 17              | 6.8                      |
| 500070012 | 2   | Chittenden | Burlington | 108 Cherry Street | 24 HOUR  | 110  | 17.7       | 17.4        | 16.9       | 16.7        | 17              | 6.9                      |
| 500210002 | 1   | Rutland    | Rutland    | 96 State Street   | 24 HOUR  | 115  | 33.0       | 27.8        | 23.7       | 21.0        | 24              | 9                        |

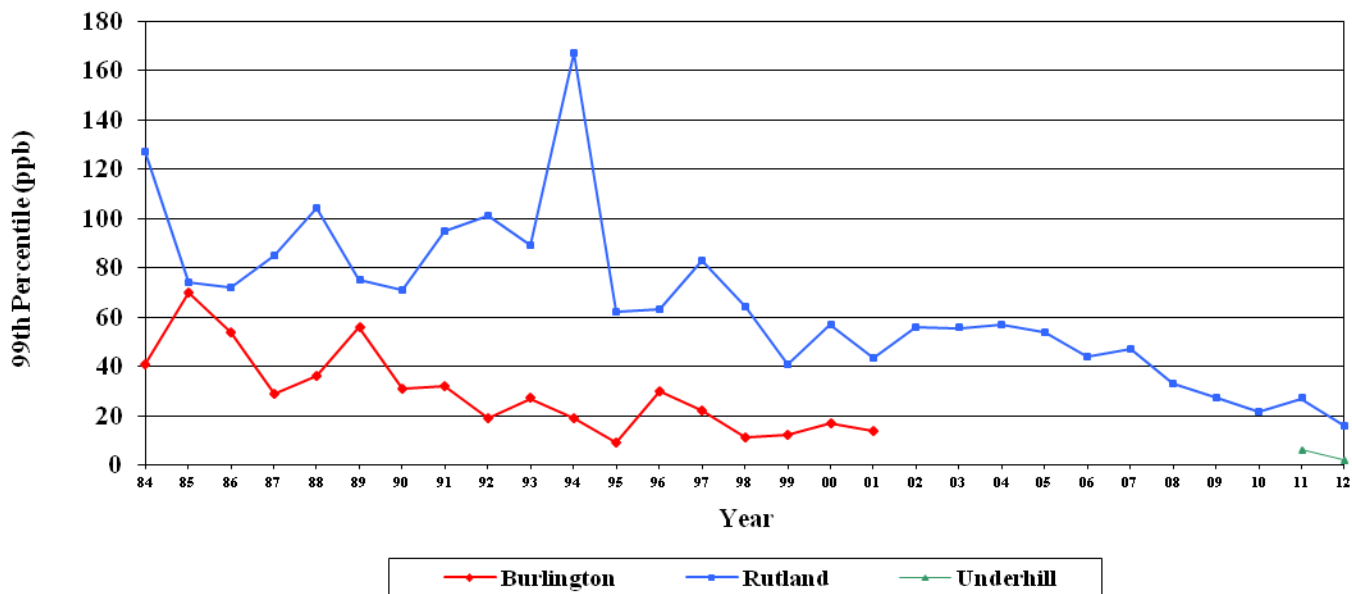


# Vermont Sites 2012 - Sulfur Dioxide





# Vermont Sulfur Dioxide Data



## NAAQS for Sulfur Dioxide:

Primary: 1-hour - 75 ppb (0.075 ppm) 99<sup>th</sup> percentile  
 Secondary: 3-hour - 0.5 ppm

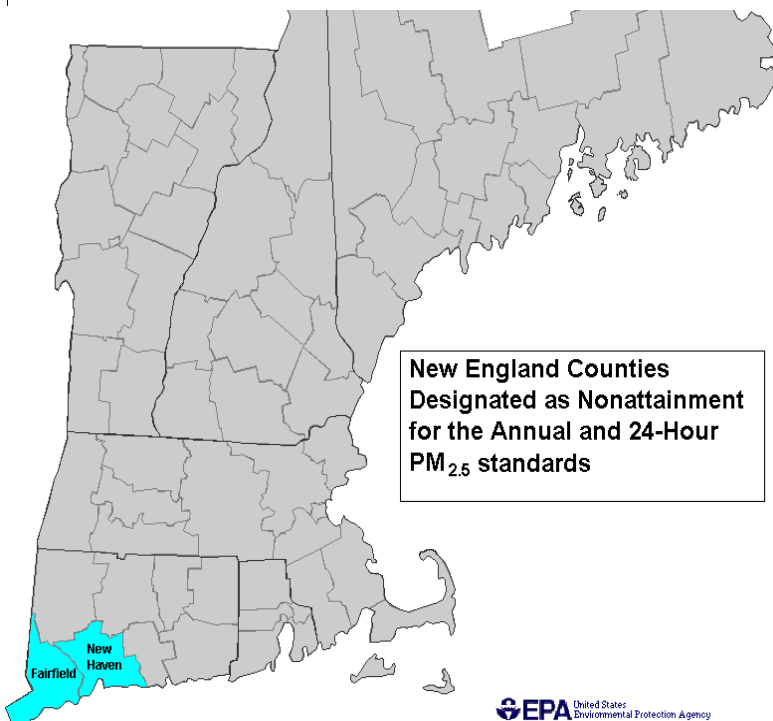
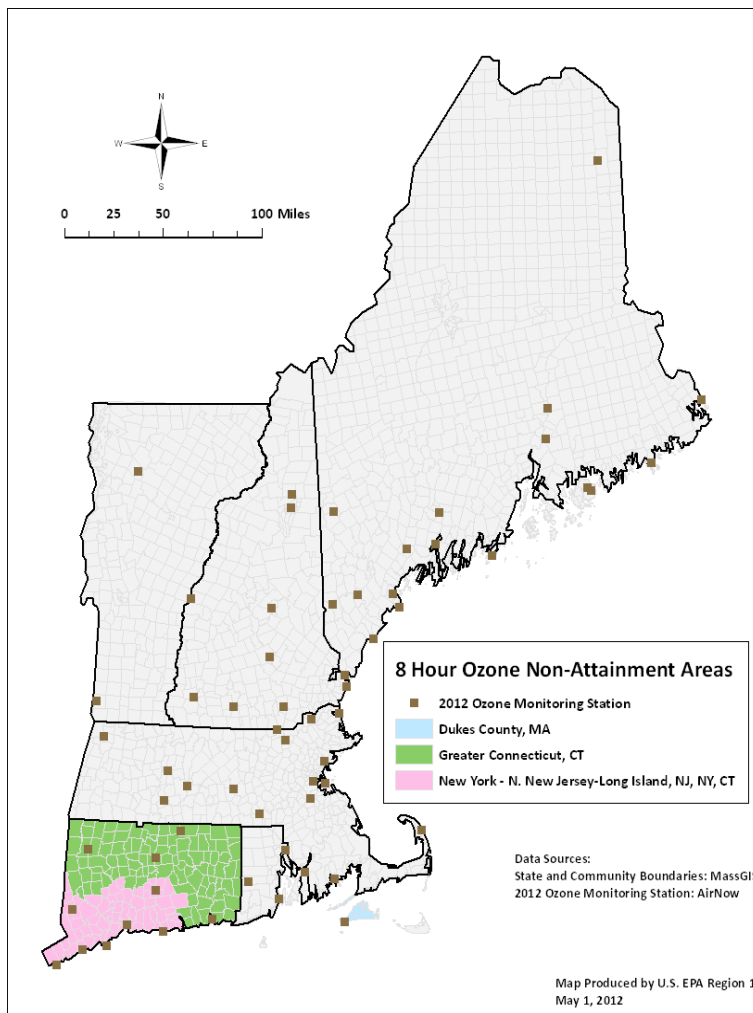
2012 Vermont

Parameter: Sulfur Dioxide

All Concentrations are in Units of Parts Per Billion (ppb)

| Site ID   | County     | City      | Address         | Duration | Obs. | First Max. | Second Max. | 99th Percentile | Actual Exceedances |
|-----------|------------|-----------|-----------------|----------|------|------------|-------------|-----------------|--------------------|
| 500070007 | Chittenden | Underhill | 58 Harvey Road  | 1 HOUR   | 5724 | 3          | 3           | 2               | 0                  |
| 500210002 | Rutland    | Rutland   | 96 State Street | 1 HOUR   | 7499 | 31         | 19          | 16              | 0                  |

This Page Intentionally left blank



\*Effective October 24, 2013, the Connecticut counties designated above as nonattainment for PM<sub>2.5</sub> will be redesignated to attainment.



# Airs AQS Regional Contacts

- Region I: Ms. Wendy McDougall  
EPA, Region I  
11 Technology Drive  
N. Chelmsford, MA 01863  
(617) 918-8323  
[McDougall.Wendy@epa.gov](mailto:McDougall.Wendy@epa.gov)
- Connecticut: Mr. Randall Semagin  
Department of Energy and Environmental Protection  
79 Elm Street  
Hartford, CT 06106  
(860) 424-3255  
[Randall.Semagin@ct.gov](mailto:Randall.Semagin@ct.gov)
- Maine: Mr. Donald Darling  
Department of Environmental Protection  
State House Station 17  
Augusta, ME 04333  
(207) 941-4579  
[Don.Darling@maine.gov](mailto:Don.Darling@maine.gov)
- Massachusetts: Ms. Ann Sorensen  
Department of Environmental Protection  
Division of Air Quality Control  
Lawrence Experiment Station  
37 Shattuck Street  
Lawrence, MA 01843  
(978) 242-1335  
[Ann.Sorensen@state.ma.us](mailto:Ann.Sorensen@state.ma.us)
- New Hampshire: Mr. Michael Little  
Department of Environmental Services  
Air Resources Division  
6 Hazen Drive, P.O. Box 95  
Concord, NH 03302-0095  
(603) 271-7503  
[mittle@des.state.nh.us](mailto:mittle@des.state.nh.us)
- Rhode Island: Mr. Lenny Giuliano  
Rhode Island Department of Environmental Management  
235 Promenade Street  
Providence, RI 02908  
(401) 222-5550  
[Lenny.Giuliano@dem.ri.gov](mailto:Lenny.Giuliano@dem.ri.gov)
- Vermont: Mr. Ben Whitney  
Air Pollution Control Division  
Agency of Environmental Conservation  
103 S. Main St., Bldg. 3 South  
Waterbury, VT 05676  
(802) 272-4439  
[Benjamin.Whitney@state.vt.us](mailto:Benjamin.Whitney@state.vt.us)