2012 Annual Report on Air Quality in New England

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

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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
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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

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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 ($PM_{2.5}$) 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_2), particulate matter less than 10 microns (PM_{10}), and nitrogen dioxide (NO_2)]. An annual mean is not valid for intermittent data unless there are four valid quarters. For PM_{10} and $PM_{2.5}$, 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 that 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_{10}, carbon monoxide (CO), $PM_{2.5}$, SO_2, ozone (O_3), and NO_2. 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^3), and micrograms per cubic meter of air ($\mu g/m^3$).

Pollutant [final rule cite]	Primary/ Secondary	Averaging Time	Level	Form
Carbon Monoxide [76 FR 54294, Aug 31, 2011]	primary	8-hour 1-hour	9 ppm 35 ppm	Not to be exceeded more than once per year
Lead [73 FR 66964, Nov 12, 2008]	primary and secondary	Rolling 3 month average	0.15 $\mu g/m^3$ (1)	Not to be exceeded
Nitrogen Dioxide [75 FR 6474, Feb 9, 2010] [61 FR 52852, Oct 8, 1996]	primary	1-hour	100 ppb	98th percentile, averaged over 3 years
	primary and secondary	Annual	53 ppb (2)	annual mean
Ozone [73 FR 16436, Mar 27, 2008]	primary and secondary	8-hour	0.075 ppm (3)	Annual fourth-highest daily maximum 8-hr concentration, averaged over 3 years
Particle Pollution [78 FR 3086, Jan. 15, 2013] $PM_{2.5}$	Primary	Annual	12 $\mu g/m^3$	annual mean, averaged over 3 years
	Secondary	Annual	15 $\mu g/m^3$	annual mean, averaged over 3 years
	Primary and secondary	24-hour	35 $\mu g/m^3$	98th percentile, averaged over 3 years
PM_{10}	primary and secondary	24-hour	150 $\mu g/m^3$	Not to be exceeded more than once per year on average over 3 years
Sulfur Dioxide [75 FR 35520, Jun 22, 2010]	primary	1-hour	75 ppb (4)	99th percentile of 1-hour daily maximum concentrations, averaged over 3 years
[38 FR 25678, Sept 14, 1973]	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/m3 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_2 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_2 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_3)

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

Sulfur Dioxide (SO_2)

Children and adults with asthma who are active outdoors are most vulnerable to the health effects of sulfur dioxide. The primary effect they experience, even with brief exposure, is a narrowing of the airways, which may cause symptoms such as wheezing, chest tightness, and shortness of breath. Long-term exposure to both sulfur dioxide and fine particles can cause respiratory illness, alter the lung's defense mechanisms, and aggravate existing cardiovascular disease. It combines with water to form acid aerosols and sulfuric acid mist which falls to earth as acid rain, causing plant and structural damage, and acidifying watershed and freshwater ecosystems. Sulfate aerosols are also a component of $PM_{2.5}$. Major sources include power plants and industrial boilers.

Nitrogen Dioxide (NO_2)

In children and adults with respiratory disease, nitrogen dioxide can cause respiratory symptoms such as coughing, wheezing, and shortness of breath, and affect lung function. In children, short-term exposure can increase the risk of respiratory illness. Studies suggest that long-term exposure may cause permanent structural changes in the lungs. 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 $PM_{2.5}$. 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 ($PM_{2.5}$ and PM_{10})

Both fine ($PM_{2.5}$) and coarse (PM_{10}) 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^{th} (or 98^{th}) 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.

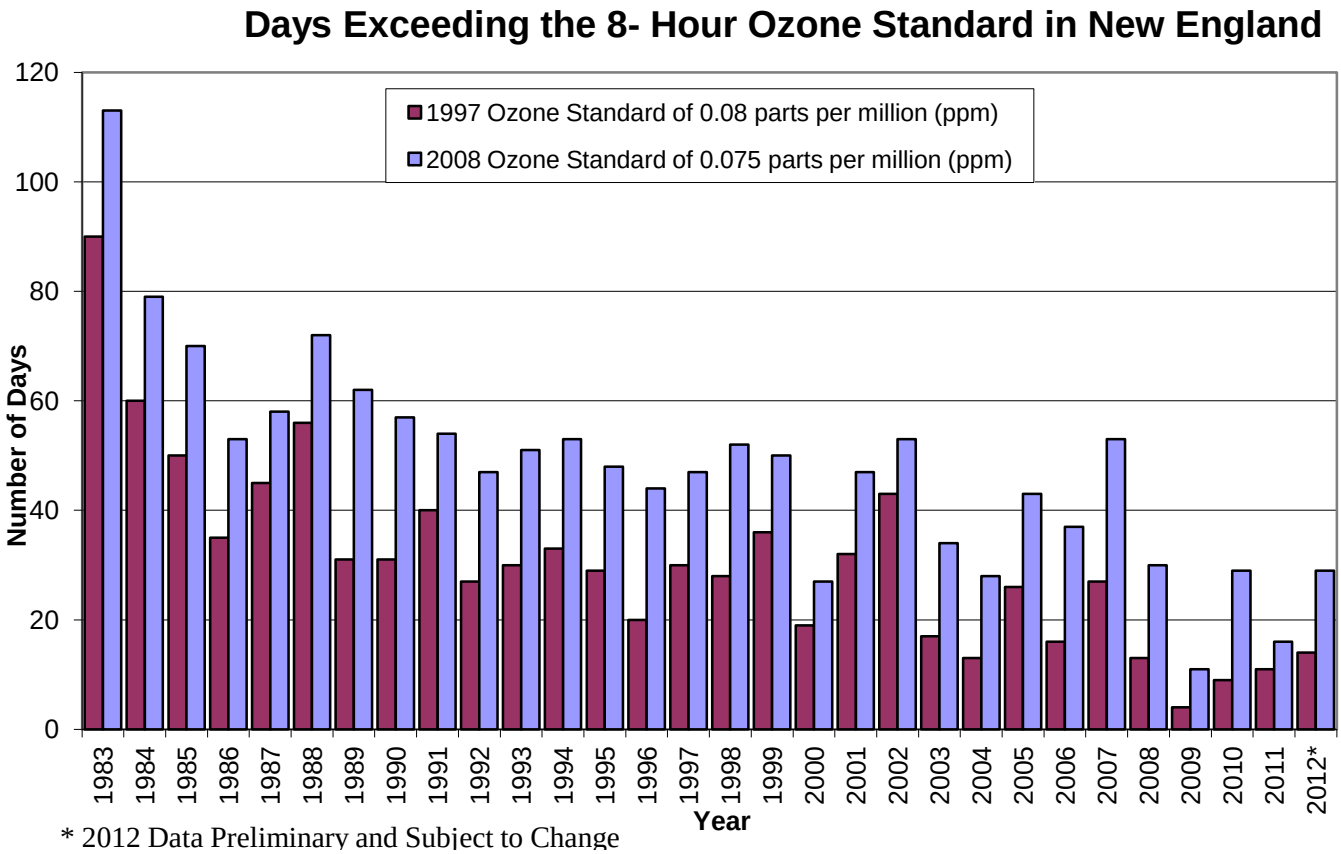
2012 Summary of New England Ambient Air Quality

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_2, NO_2, O_3, Pb, PM_{10} and $PM_{2.5}$. 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 - $PM_{2.5}$) 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 $PM_{2.5}$ 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.



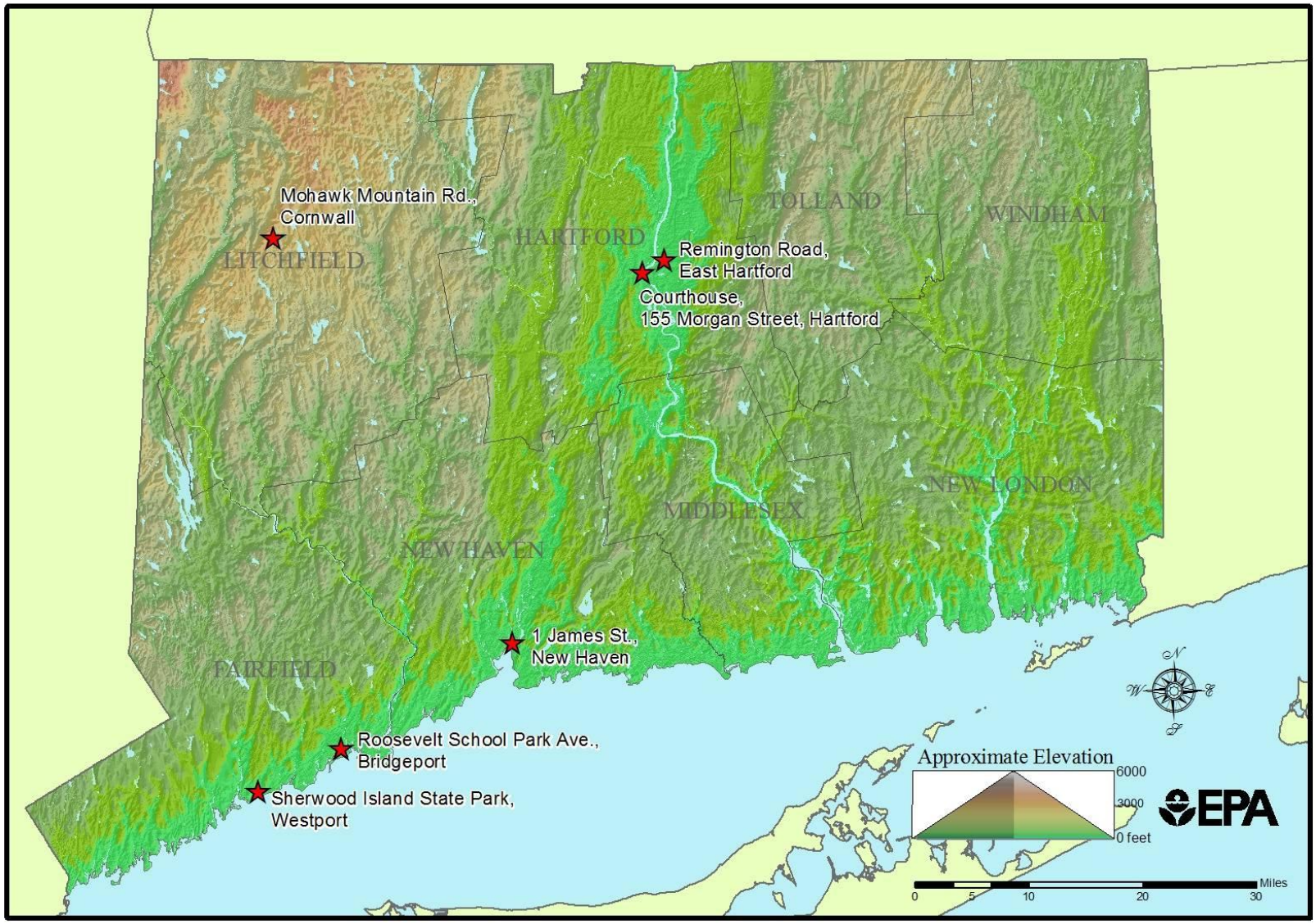
* 2012 Data Preliminary and Subject to Change

More information can be found at 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.

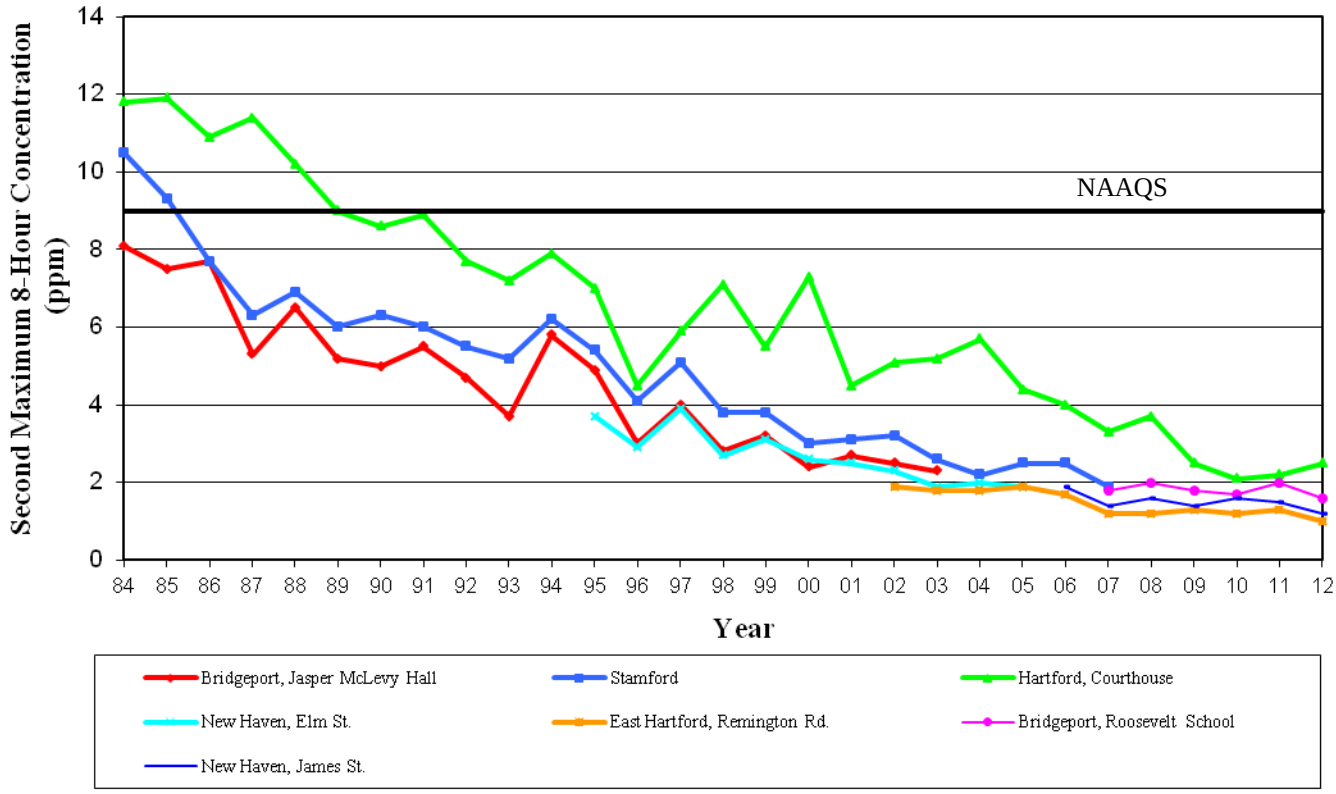
During 2012, the highest daily concentrations of fine particulate matter $PM_{2.5}$ occurred in Keene, New Hampshire at 36.8 $\mu g/m^{3.}$ Other high concentrations were in the order of 30 $\mu g/m^3$ and were measured at a number of sites throughout New England. That said, however, based on 2010-2012 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 $\mu g/m^3$. 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 $\mu g/m^3$). For particulate matter less than 10 microns (PM_{10}), the highest daily concentration was measured at the Presque Isle, ME site (100 $\mu g/m^3$). 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.

Connecticut Sites - 2012 - Carbon Monoxide



Connecticut Carbon Monoxide Data



NAAQS for Carbon Monoxide:

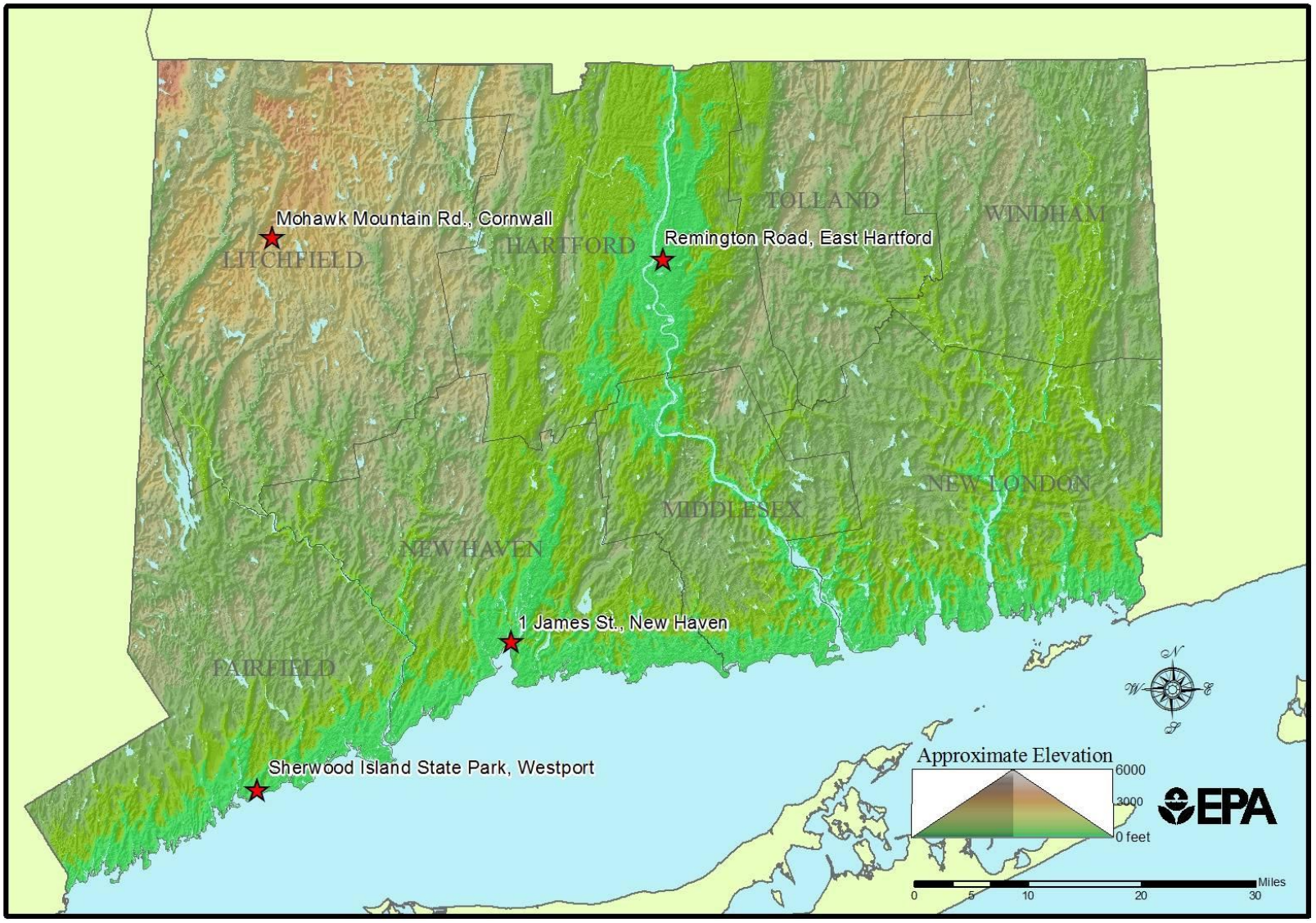
1-hour – 35 ppm, not to be exceeded more than once per year

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

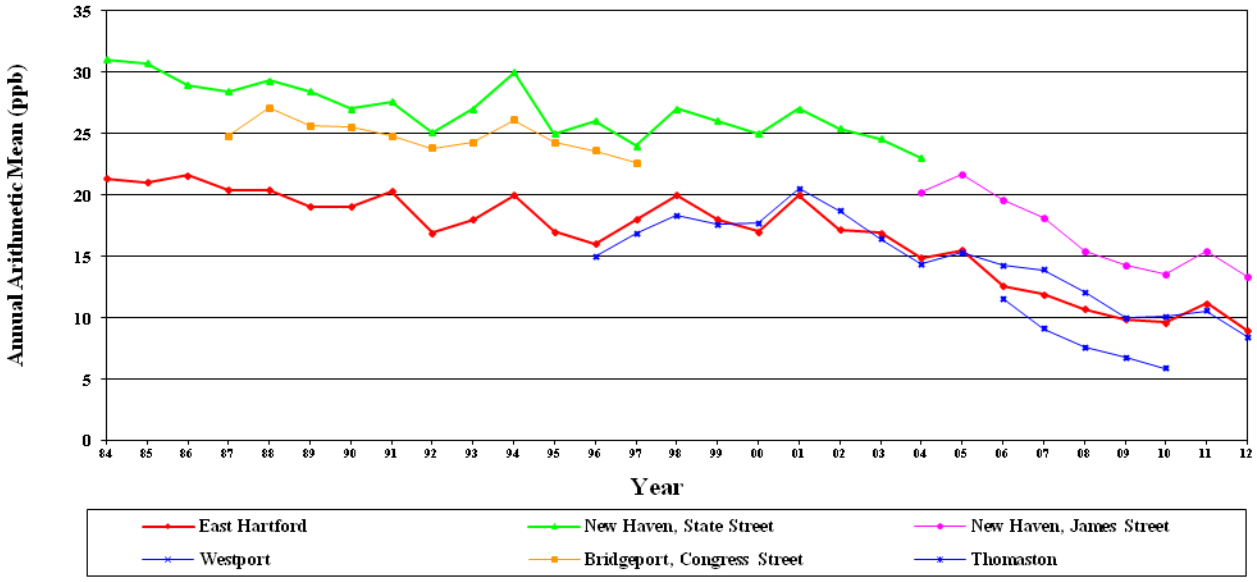
2012 Connecticut
Carbon Monoxide
All Concentrations are in Units of Parts Per Million

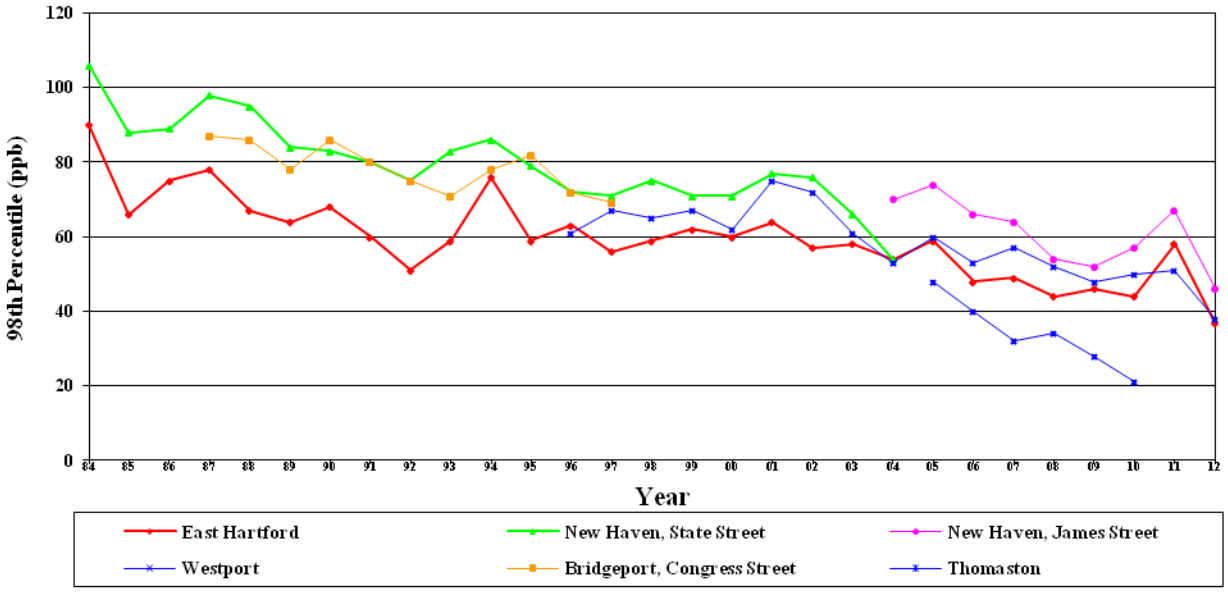
Site ID	County	City	Address	Duration	Obs.	First Max.	Second Max.
090010010	Fairfield	Bridgeport	Roosevelt School Park Ave.	1 HOUR	8316	2.7	2.6
090019003	Fairfield	Westport	Sherwood Island State Park	1 HOUR	8178	1.0	0.9
090030017	Hartford	Hartford	Courthouse, 155 Morgan Street	1 HOUR	8530	13.2	7.8
090031003	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:

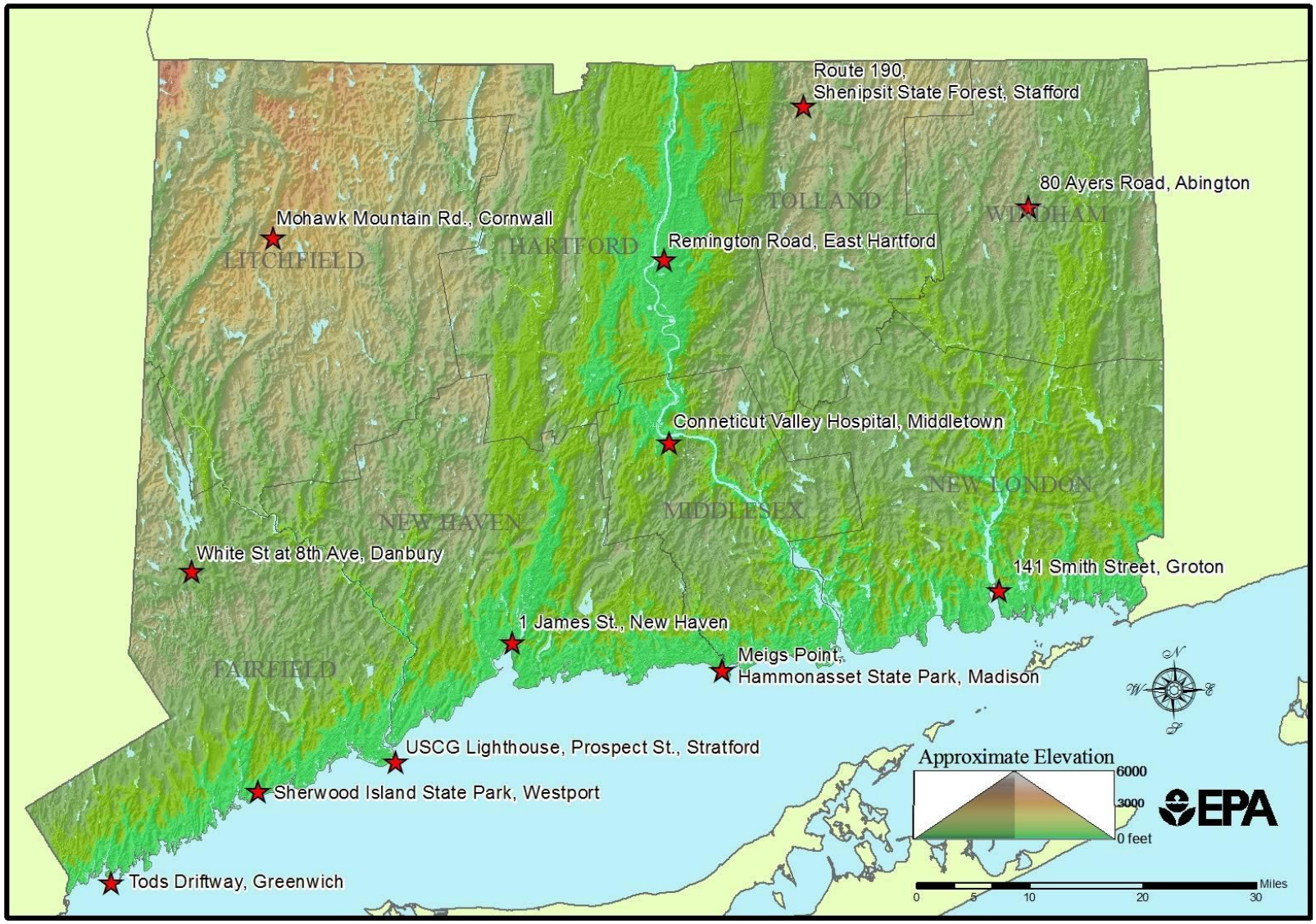
Annual Arithmetic Mean- 53 ppb (100 µg/m^3)

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

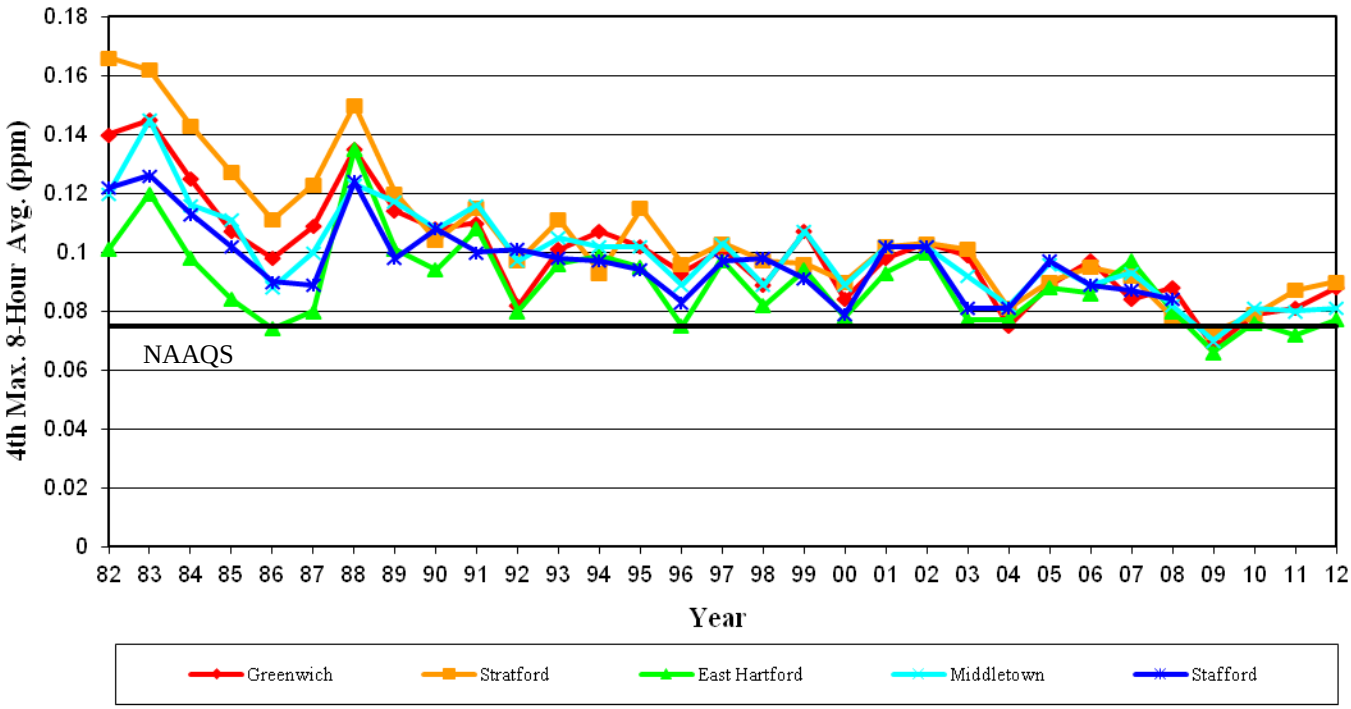
2012 Connecticut
Nitrogen Dioxide
All Concentrations are in Units of Parts Per Billion

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



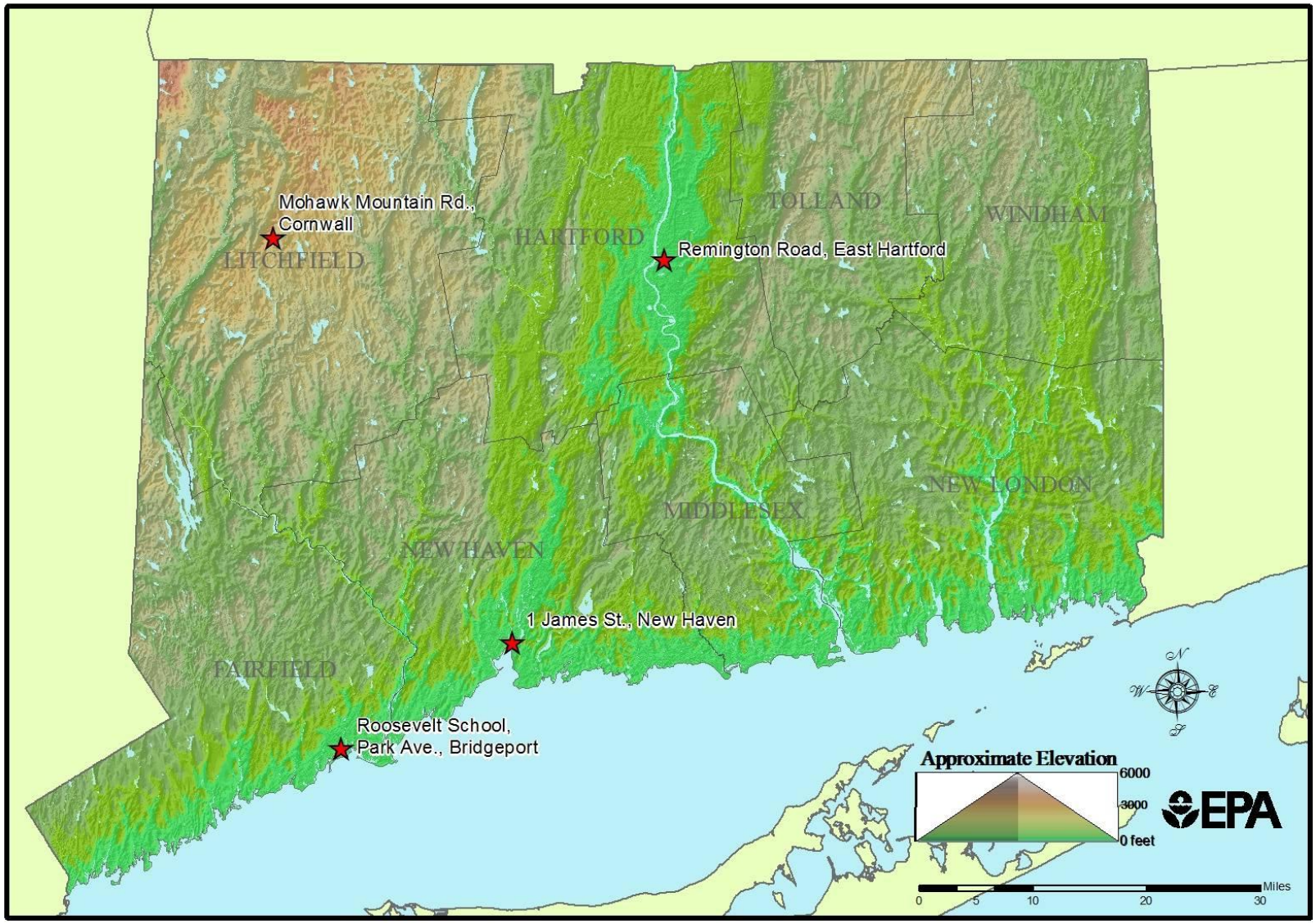
NAAQS for Ozone:
8-hour – 0.075 ppm (2008 std)

(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 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.)

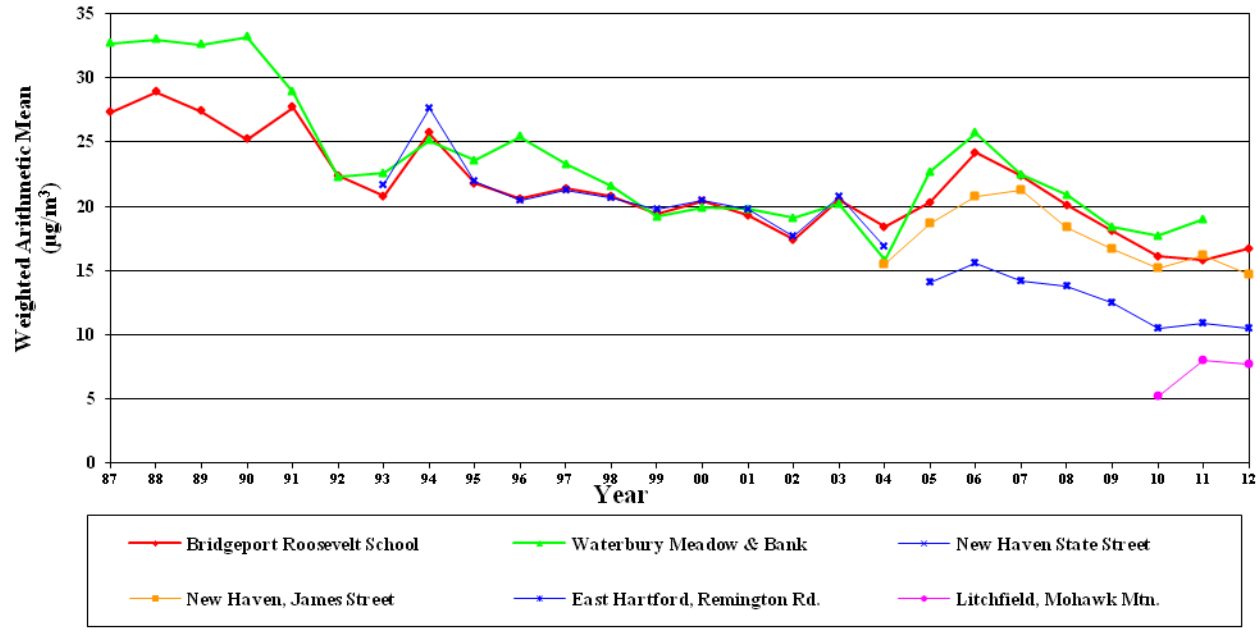
2012 Connecticut
Ozone (8-Hour)
All Concentrations are in Units of Parts Per Million

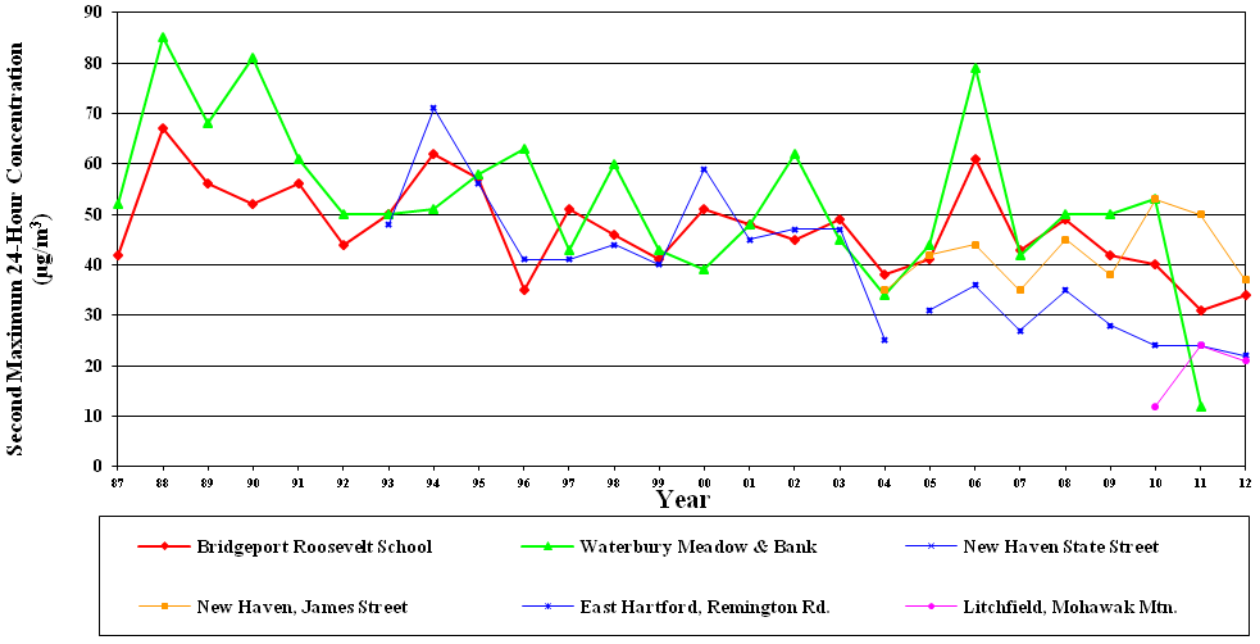
Site ID	County	City	Address	Duration	Obs.	First Max.	Second Max.	Third Max.	Fourth Max.	Actual Exceedances	Valid Days	Required Days	Percent Days
090010017	Fairfield	Greenwich	Tods Driftway	8-HR RUN AVG	4230	0.10	0.090	0.09	0.088	15	170	183	93
090011123	Fairfield	Danbury	White St At 8th Ave	8-HR RUN AVG	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_{10}) Data



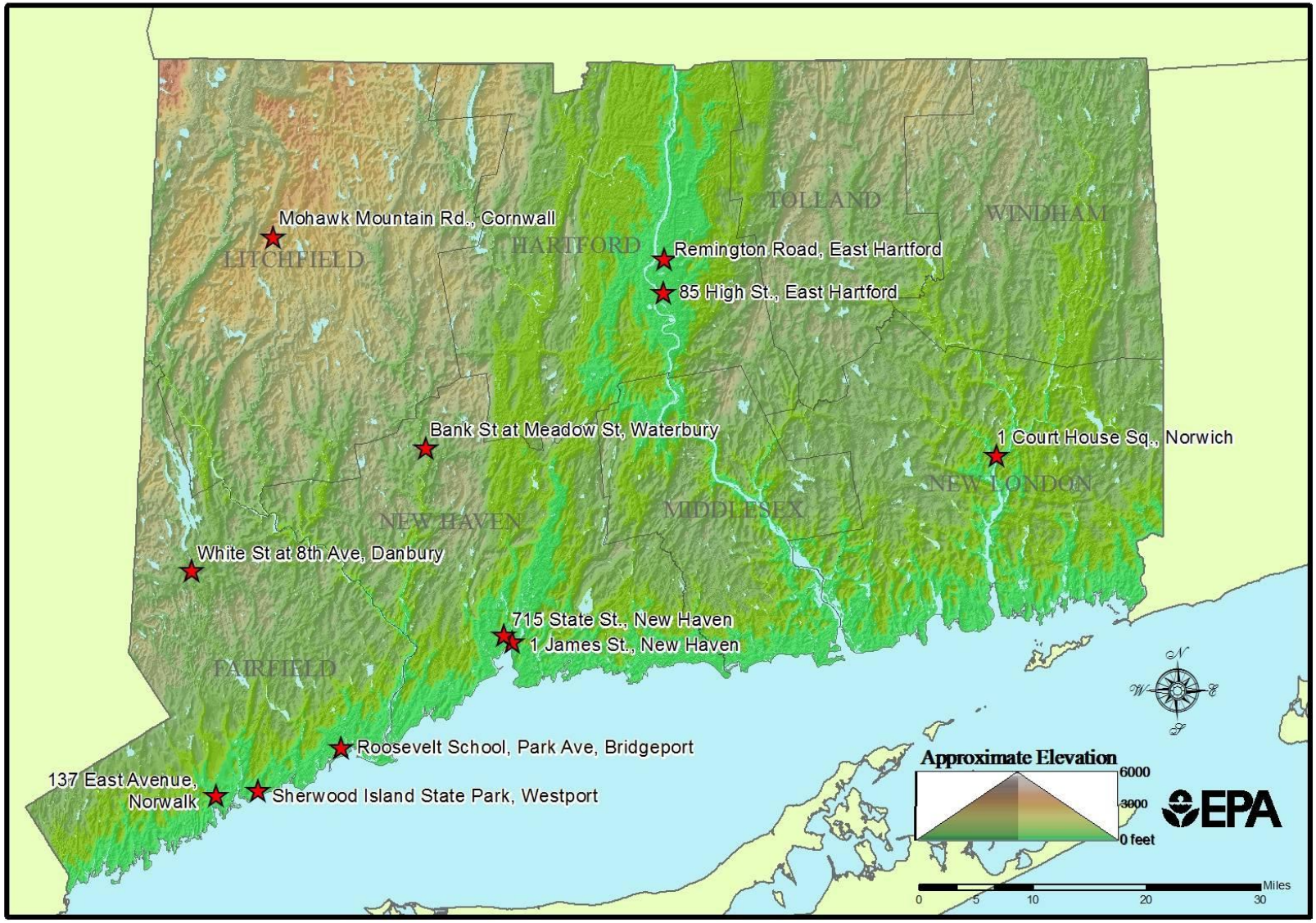


NAAQS for Particulate Matter less than 10 Microns:
24-hour- 150 µg/m^3

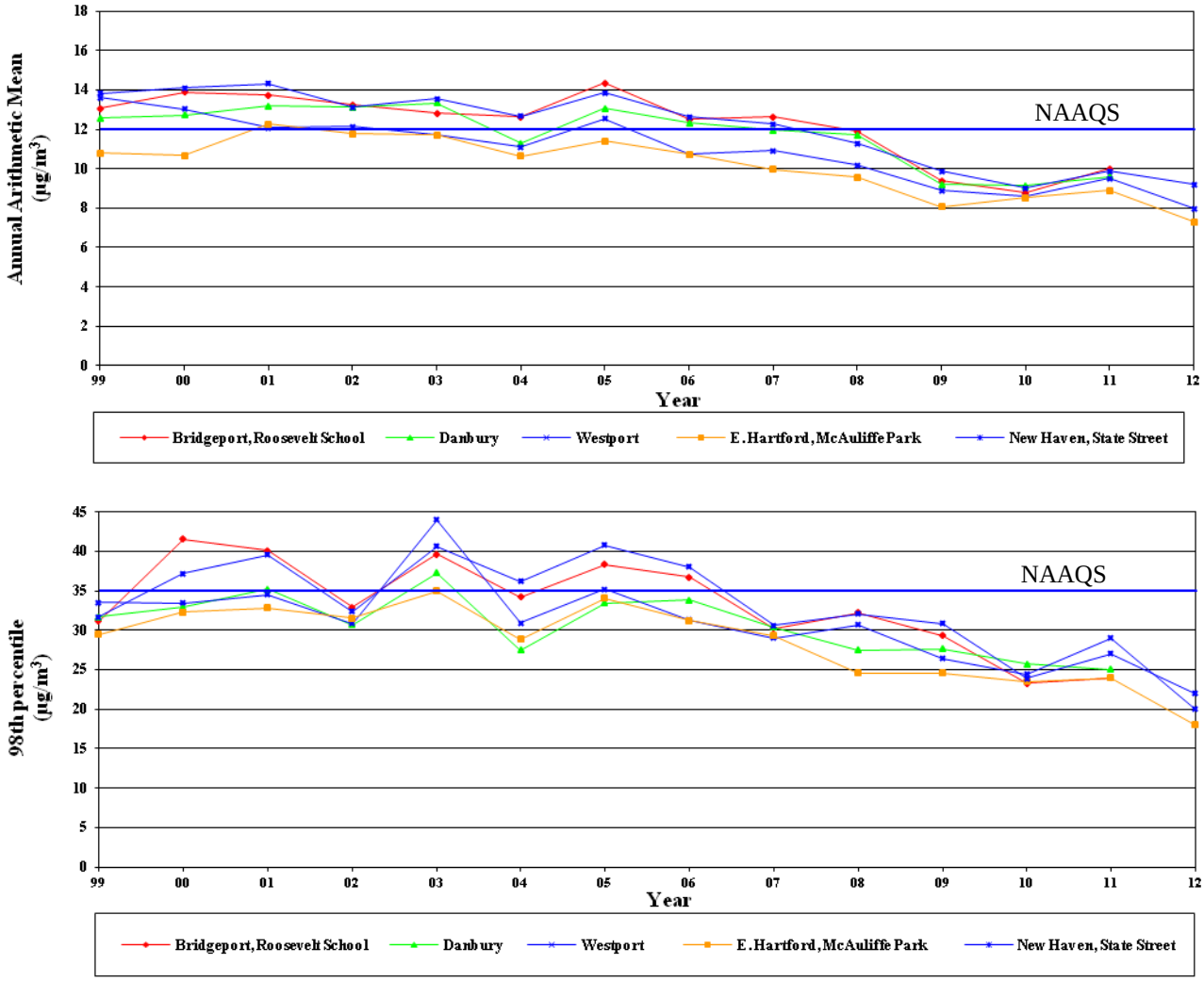
2012 Connecticut
Particulate Matter < 10 Microns
All Concentrations are in units of ug/m^3

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 ($PM_{2.5}$) Data



NAAQS for Particulate Matter less than 2.5 Microns:

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

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

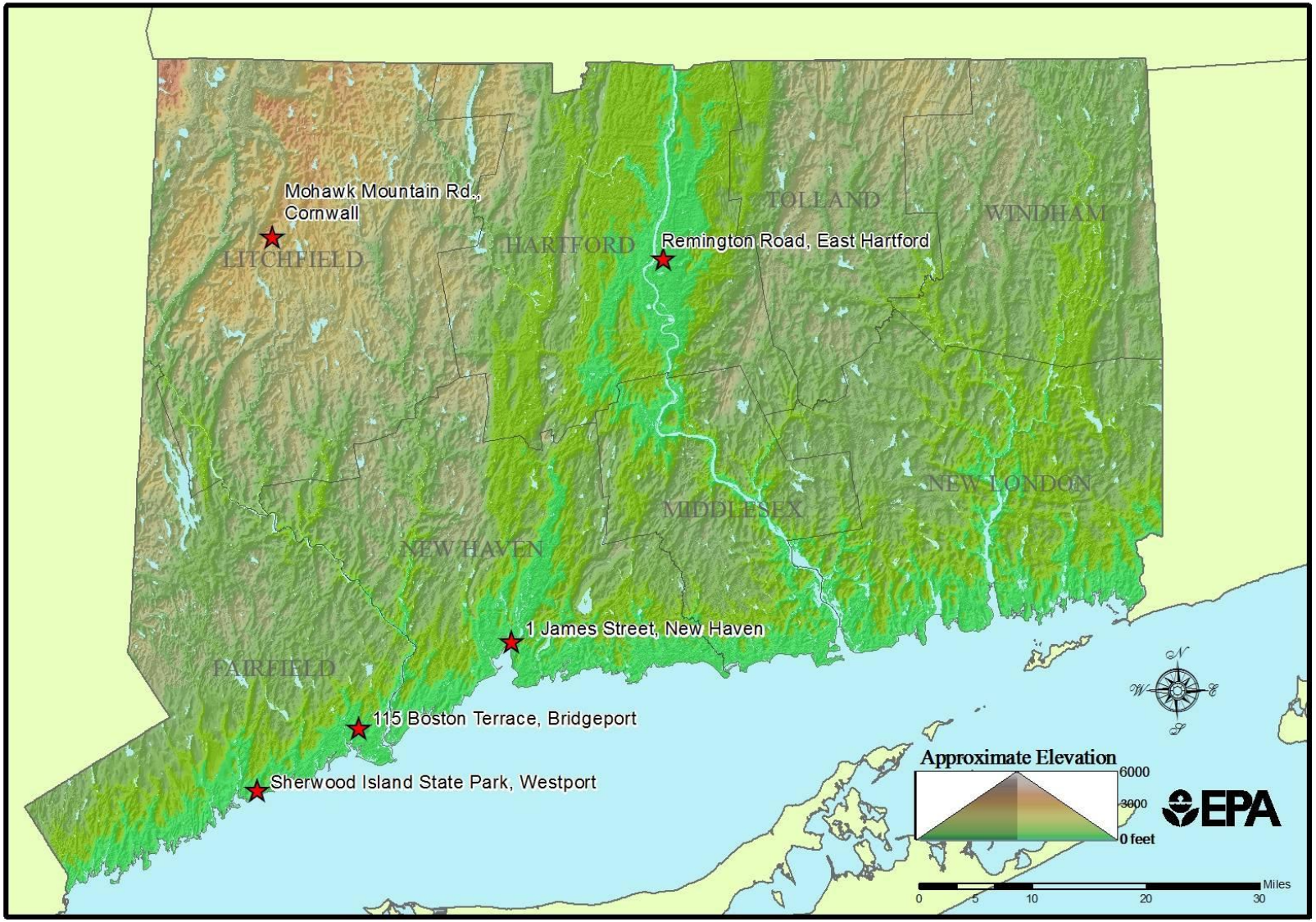
2012 Connecticut

Particulate Matter < 2.5 Microns

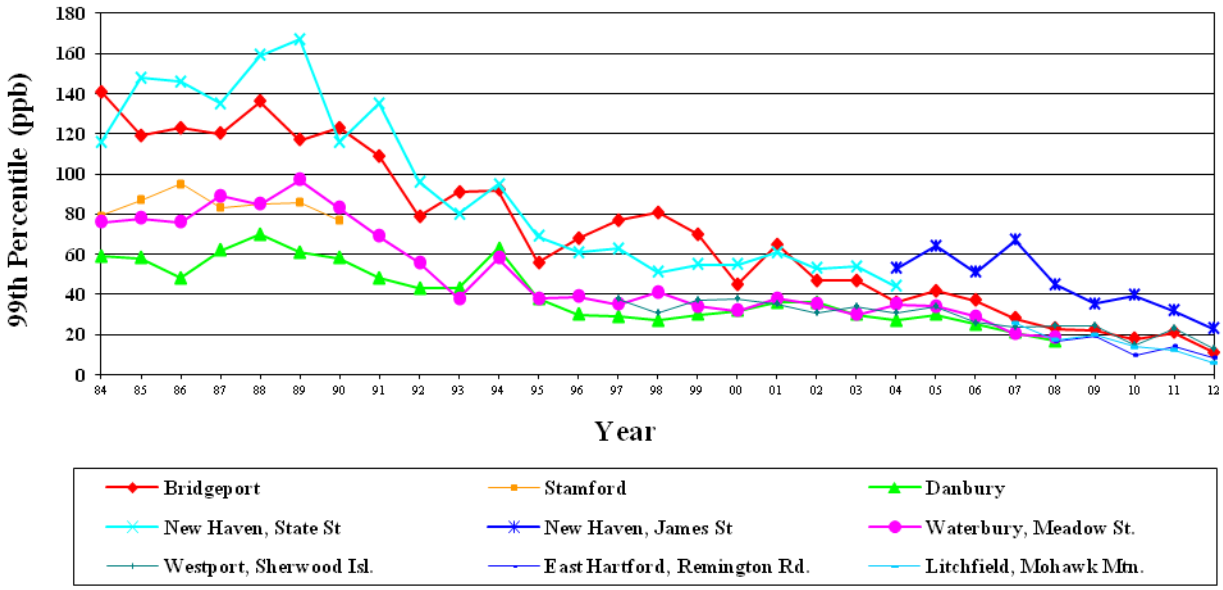
All Concentrations are in µg/m^3 Local Conditions

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) 99th percentile

Secondary: 3-hour -0.5 ppm

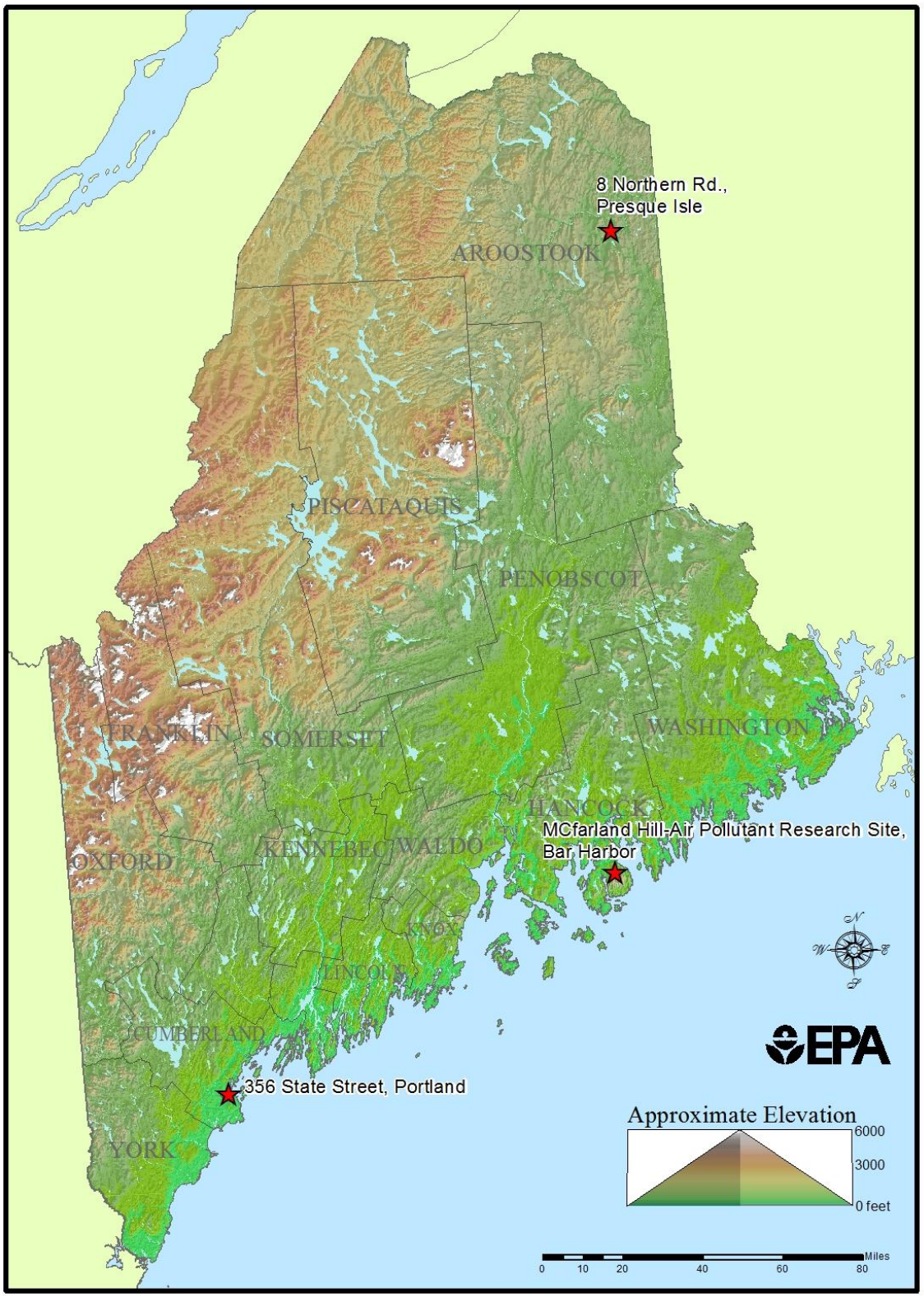
2012 Connecticut

Parameter: Sulfur Dioxide

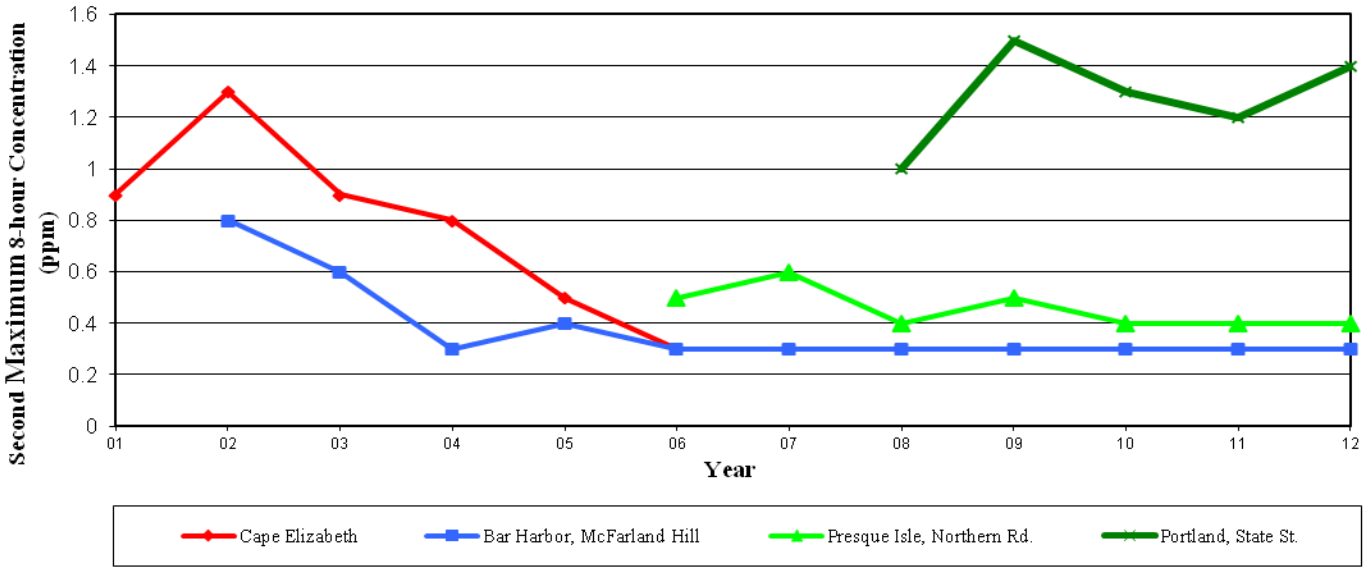
All Concentrations are in Units of Parts Per Billion (ppb)

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:

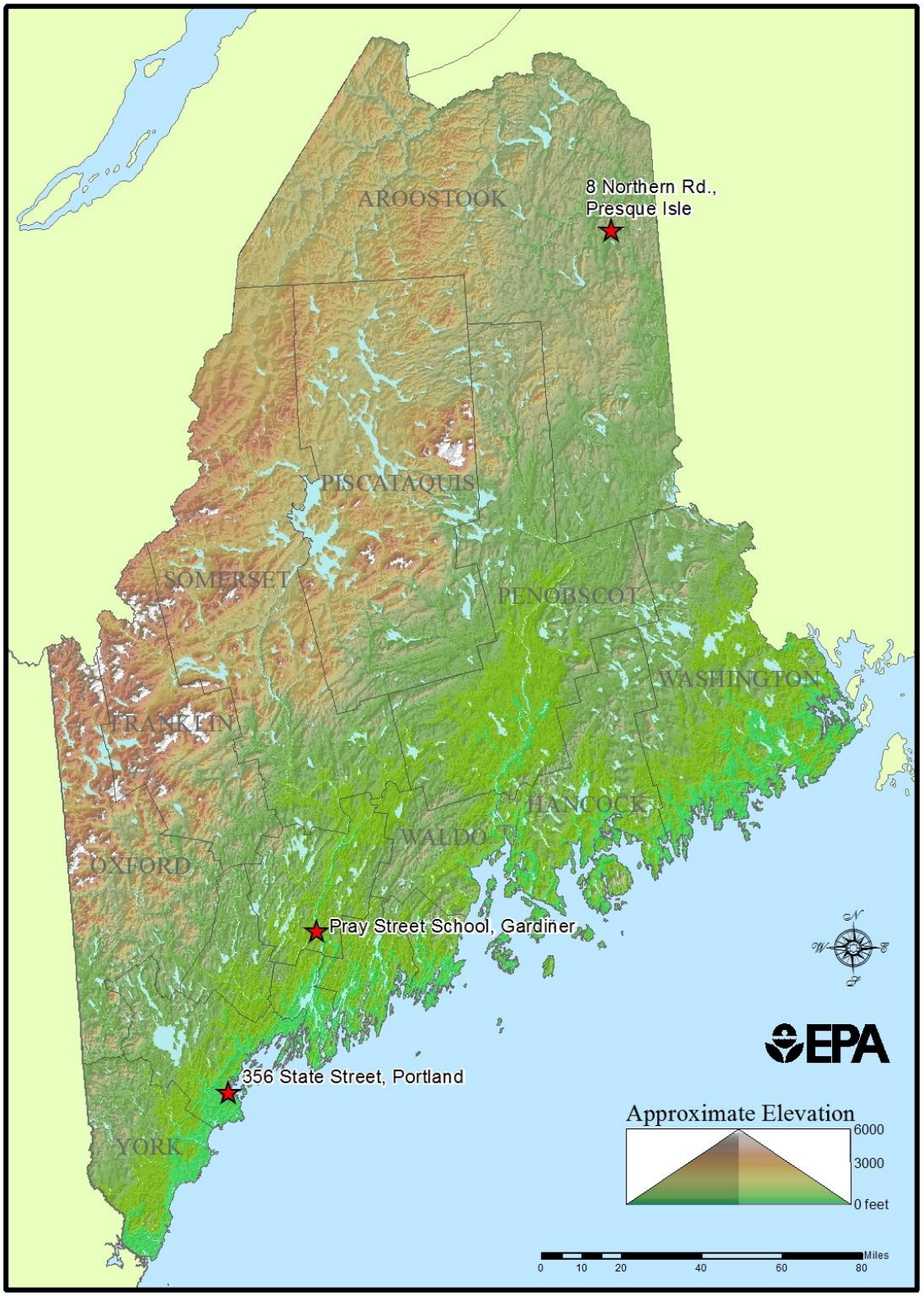
1-hour – 35 ppm, not to be exceeded more than once per year

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

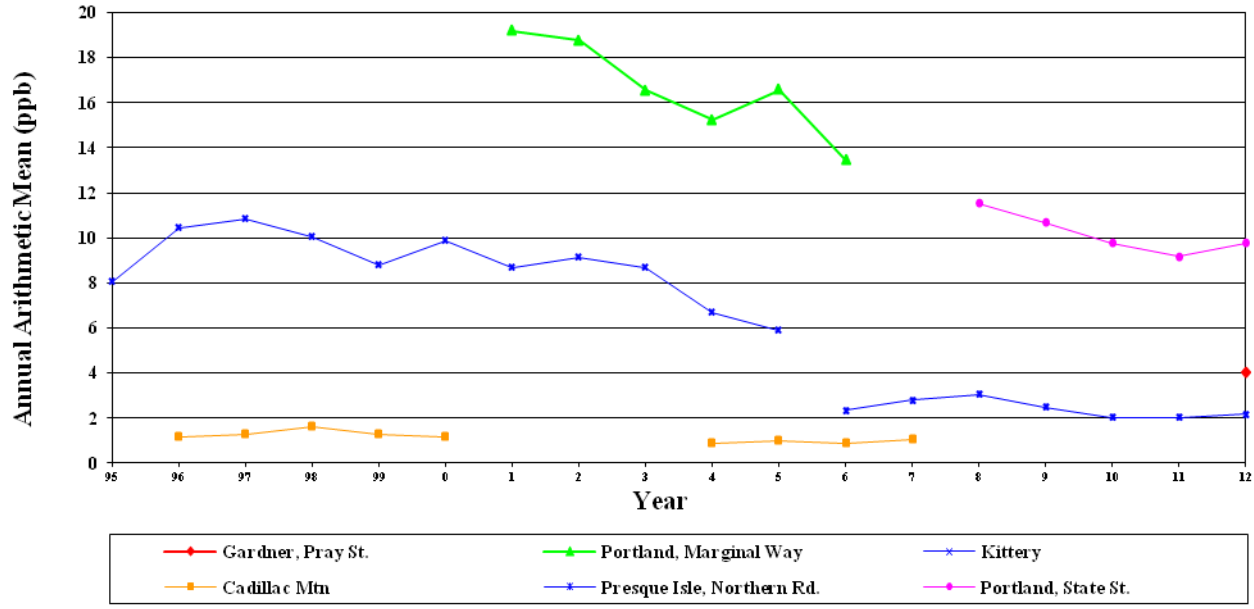
2012 Maine
Carbon Monoxide
All Concentrations are in Units of Parts Per Million

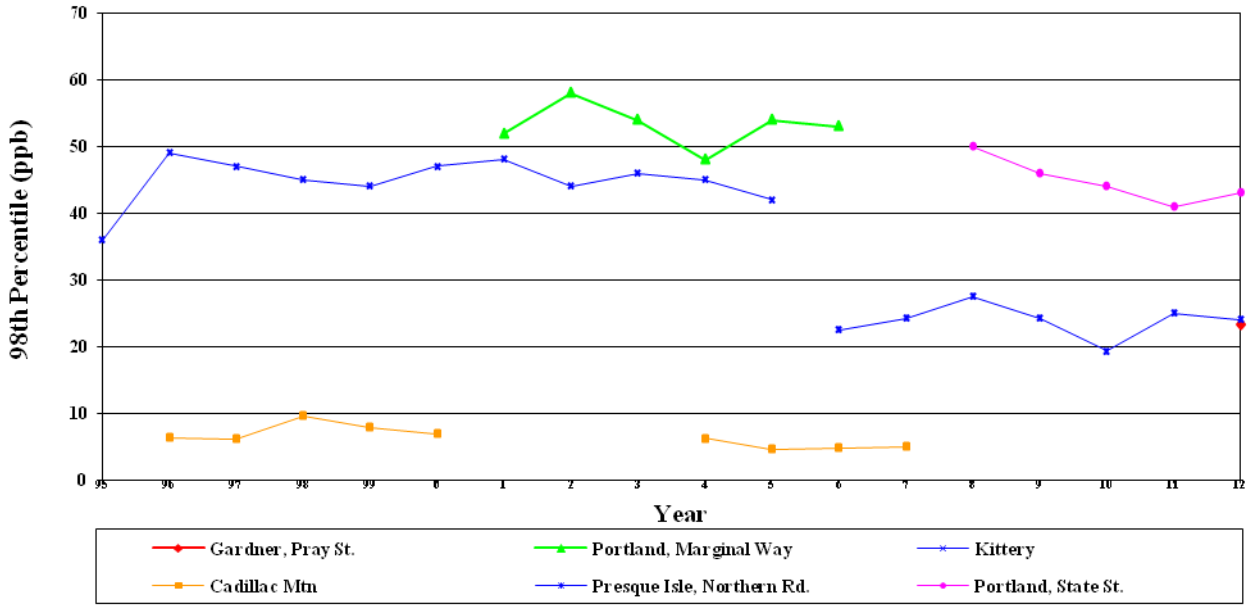
Site ID	County	City	Address	Duration	Obs.	First Max.	Second Max.
230031100	Aroostook	Presque Isle	8 Northern Road	1 HOUR	7961	1.1	0.7
230050029	Cumberland	Portland	356 State Street, Portland, Maine	1 HOUR	8558	2.2	1.9
230090103	Hancock	Bar Harbor	Mcfarland Hill-Air Pollutant Research Site	1 HOUR	8541	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^3)

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

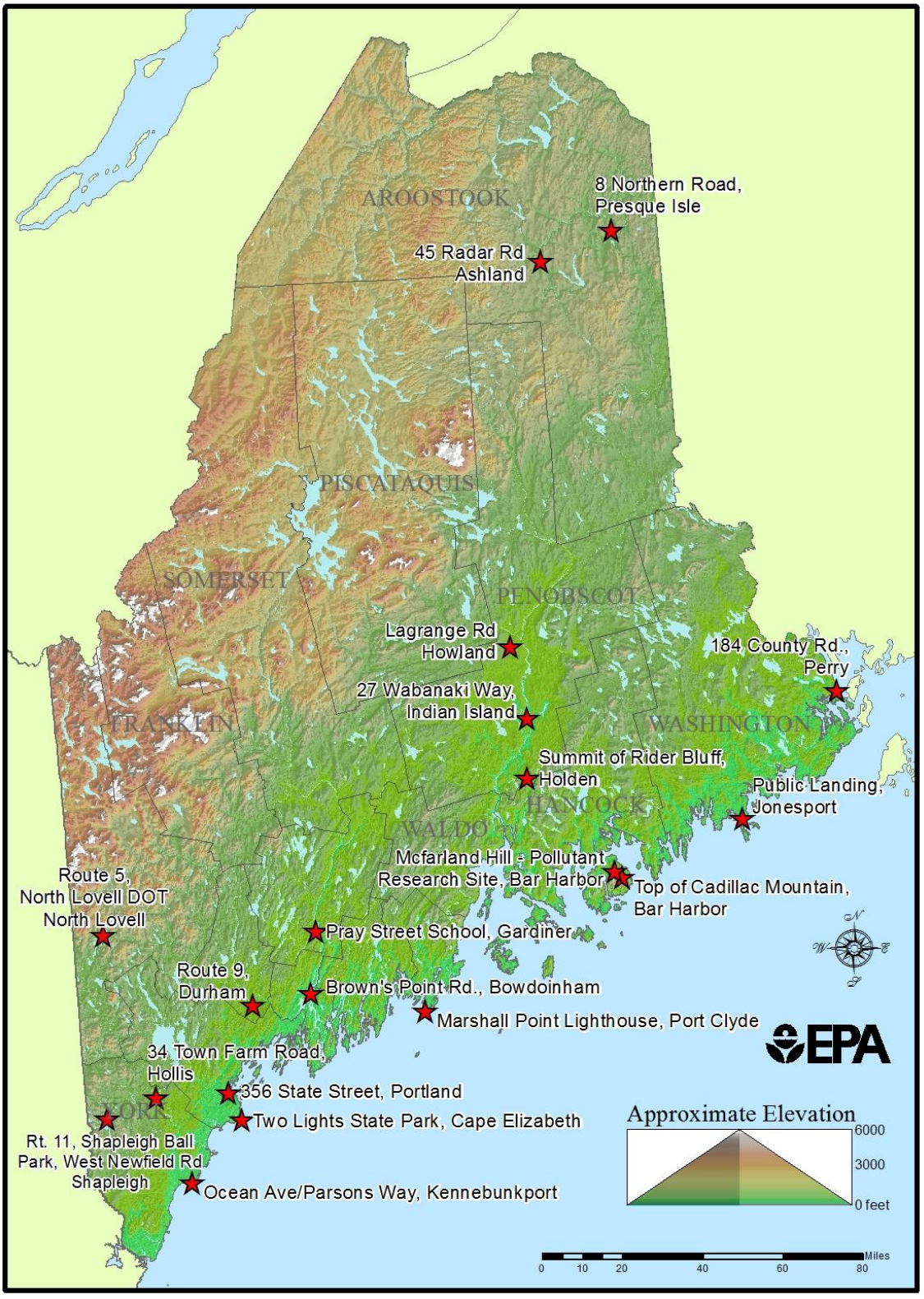
2012 Maine

Nitrogen Dioxide

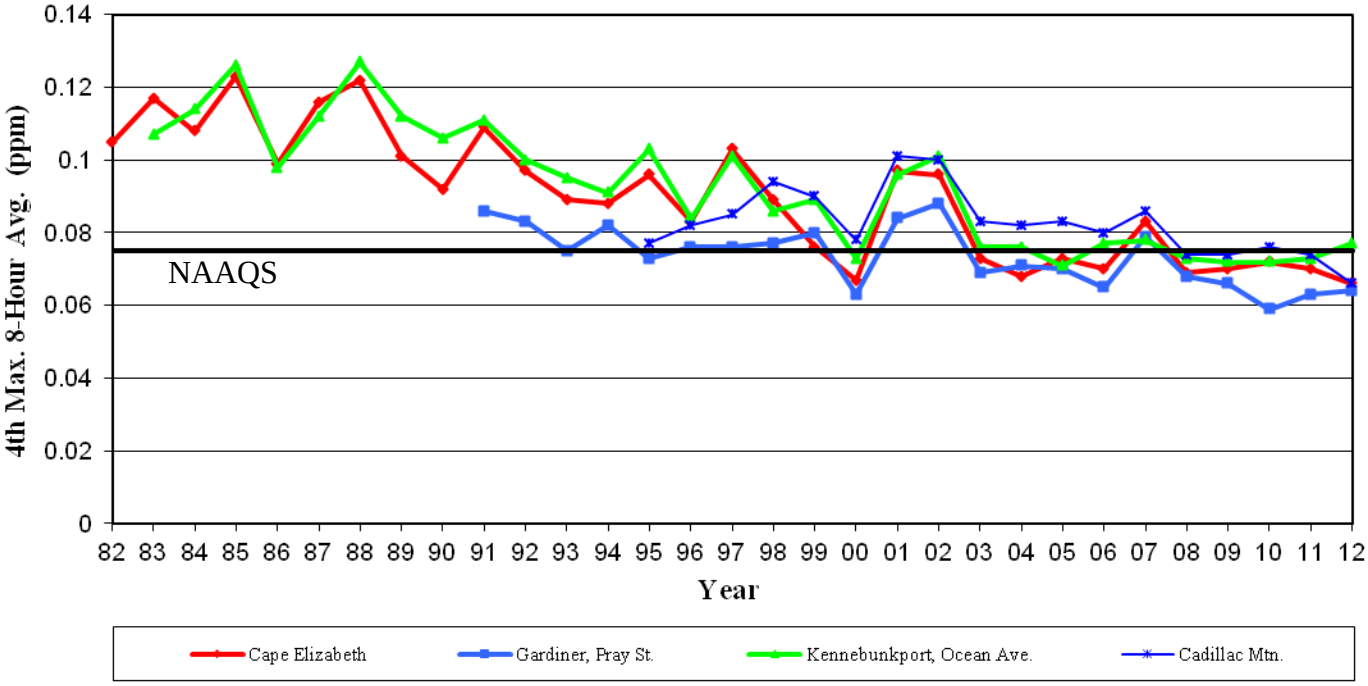
All Concentrations are in Units of Parts Per Billion

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:

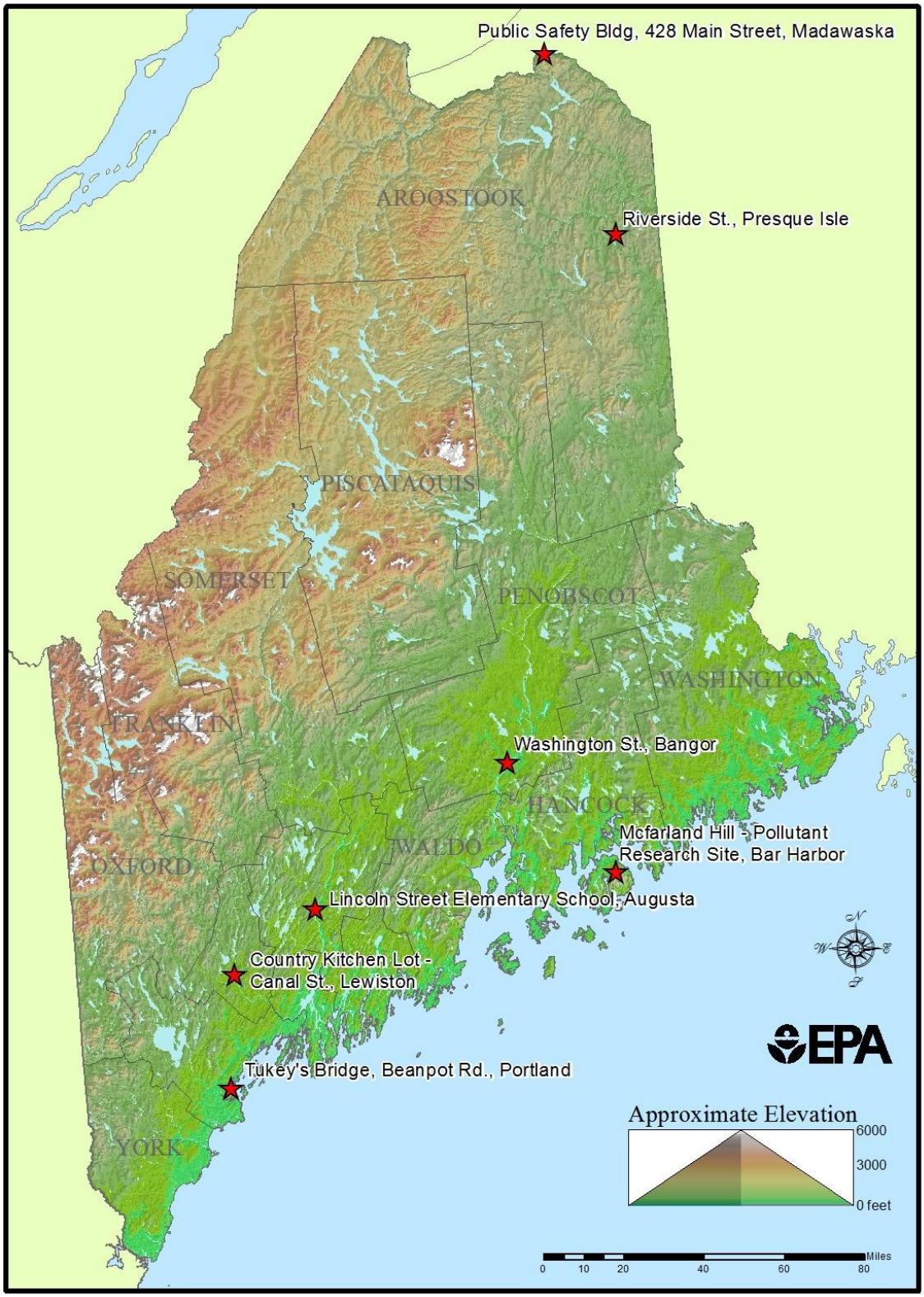
8-hour – 0.075 ppm (2008 std)

(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.)

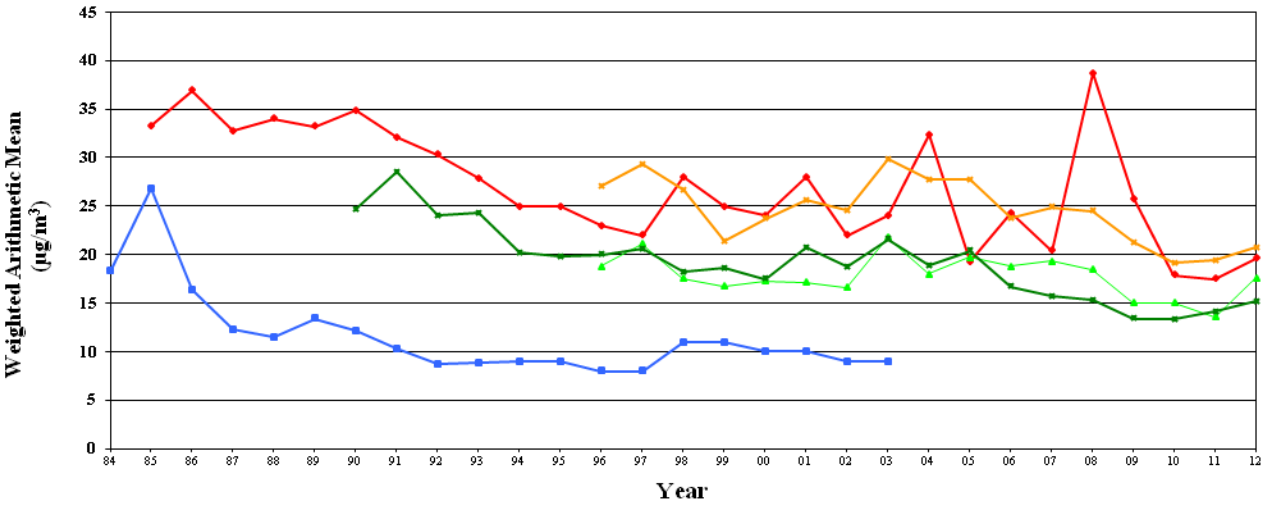
2012 Maine
Ozone (8-Hour)
All Concentrations are in Units of Parts Per Million

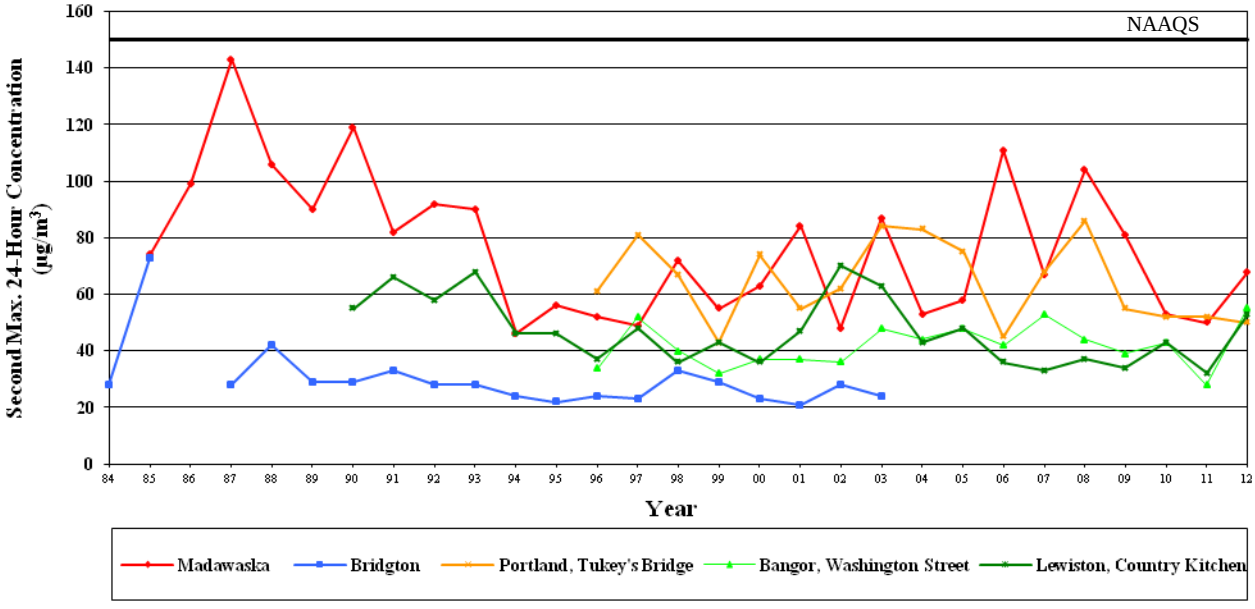
Site ID	County	City	Address	Duration	Obs.	First Max.	Second Max.	Third Max.	Fourth Max.	Actual Exceedances	Valid Days	Required Days	Percent Days
230010014	Androscoggin	Durham	Route 9	8-HR RUN AVG	4056	0.069	0.066	0.063	0.061	0	163	183	89
230031100	Aroostook	Presque Isle	8 Northern Road	8-HR RUN AVG	8691	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_{10}) Data





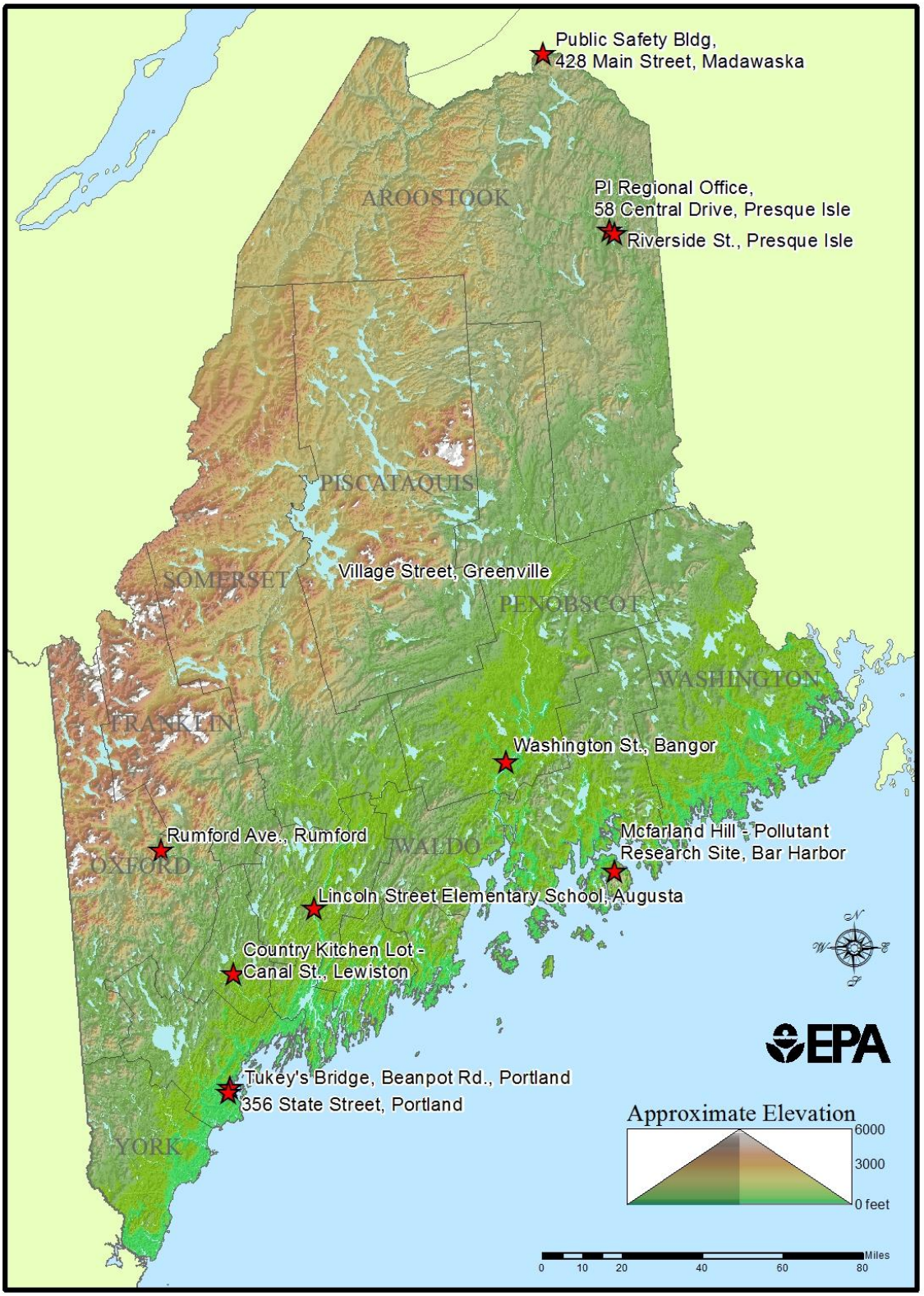
NAAQS for Particulate Matter less than 10 Microns:
24-hour -150 µg/m^3

2012 Maine
Particulate Matter < 10 Microns
All Concentrations are in units of ug/m^3
(24 HOUR indicates FRM, 24-HR BLK AVG indicates continuous FEM)

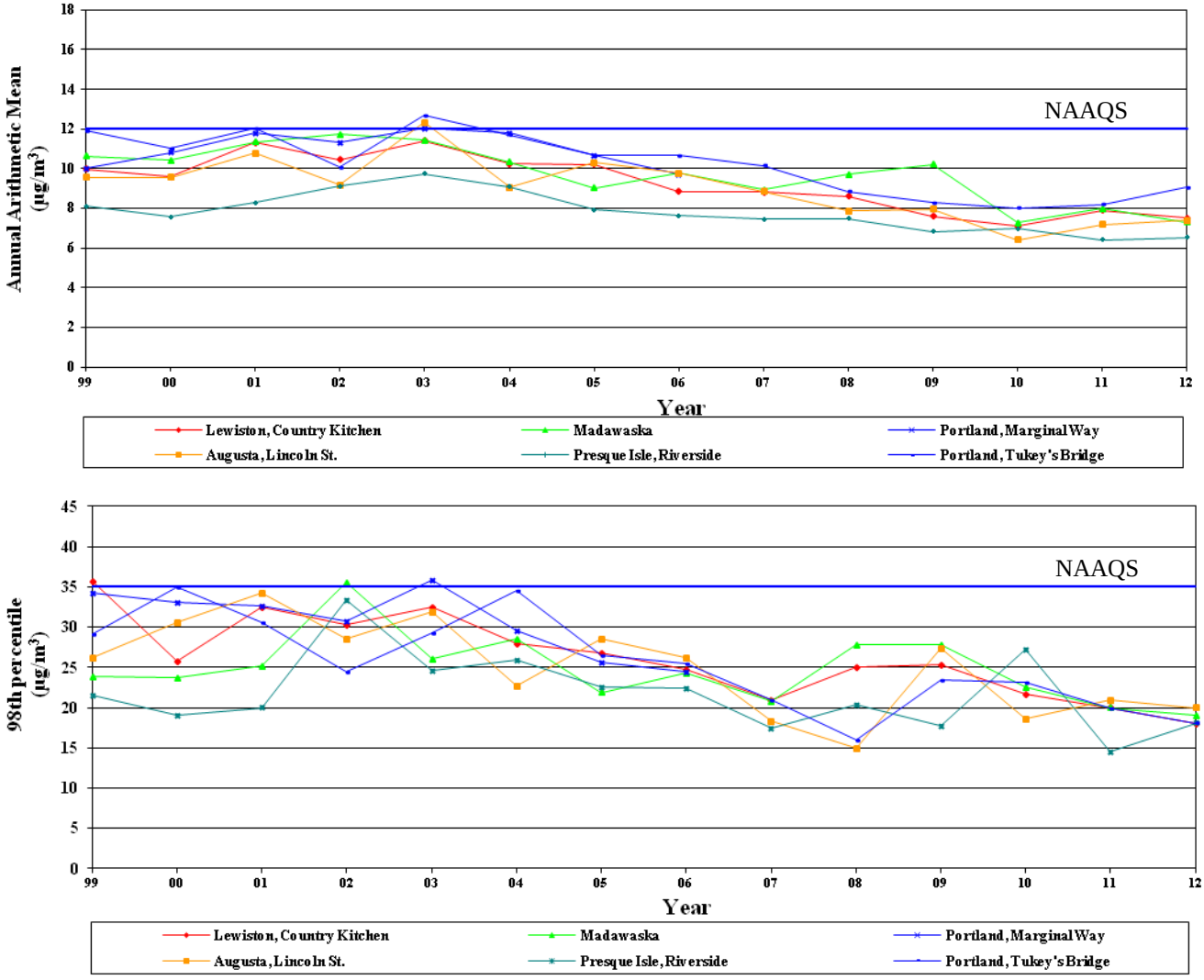
Site ID	POC	County	City	Address	Duration Description	Obs.	First Max.	Second Max.	Actual Exceedances	Weighted Arithmetic Mean	
230010011	2	Androscoggin	Lewiston	Country Kitchen Lot-Canal St	24 HOUR	59	54	53	0	15.2	
230030014	1	Aroostook	Madawaska	Public Safety Bldg, 428 Main Street	24 HOUR	112	80	68	0	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 critiera

Maine Sites 2012 - Particulate Matter < 2.5 Microns



Maine Particulate Matter < 2.5 Microns ($PM_{2.5}$) Data



NAAQS for Particulate Matter less than 2.5 Microns:

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

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

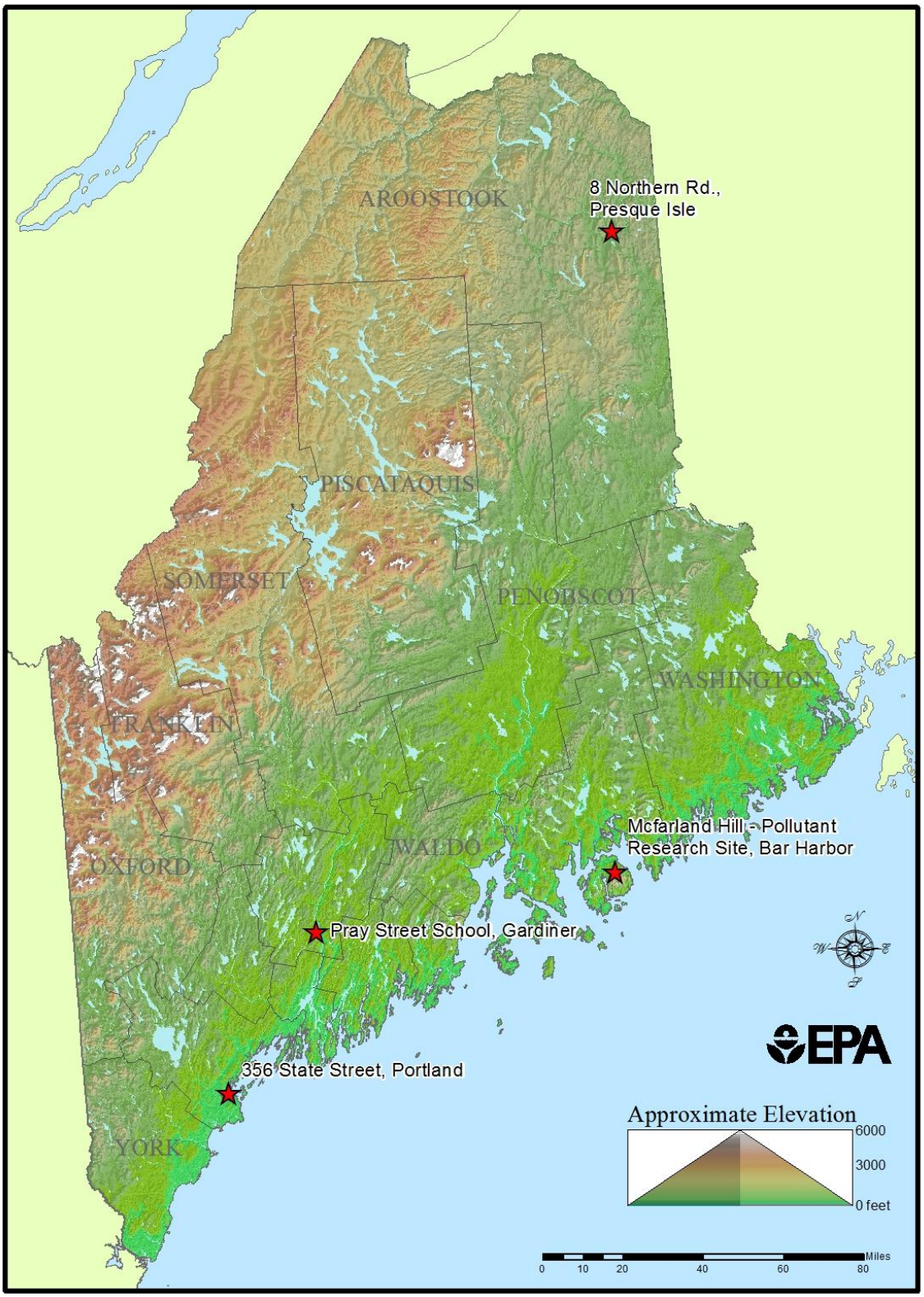
2012 Maine

Particulate Matter < 2.5 Microns

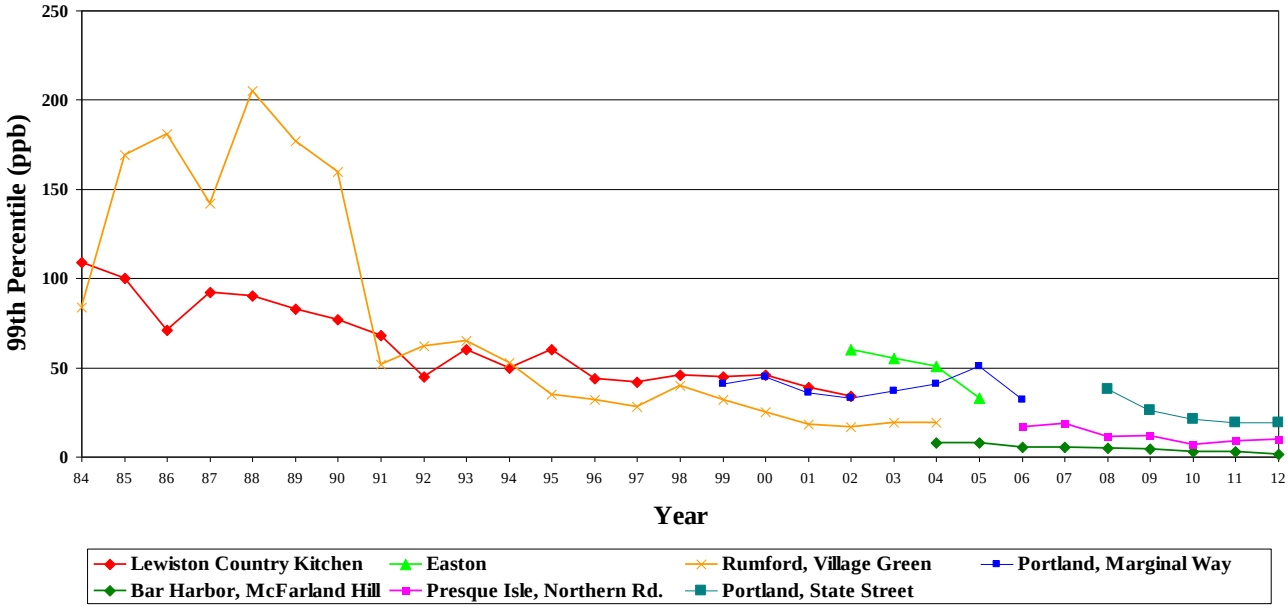
All Concentrations are in µg/m^3 Local Conditions

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) 99th percentile

Secondary: 3-hour -0.5 ppm

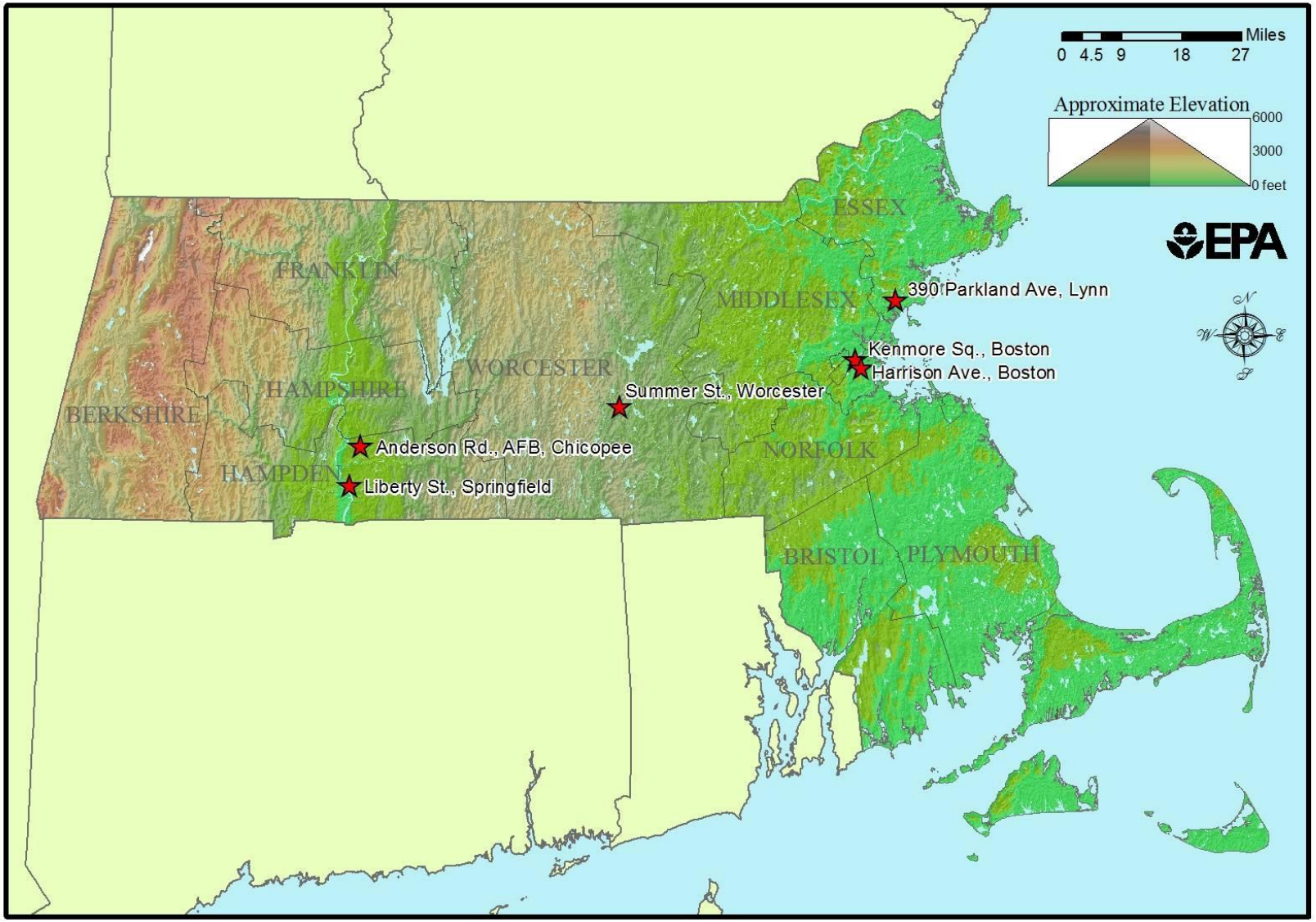
2012 Maine

Parameter: Sulfur Dioxide

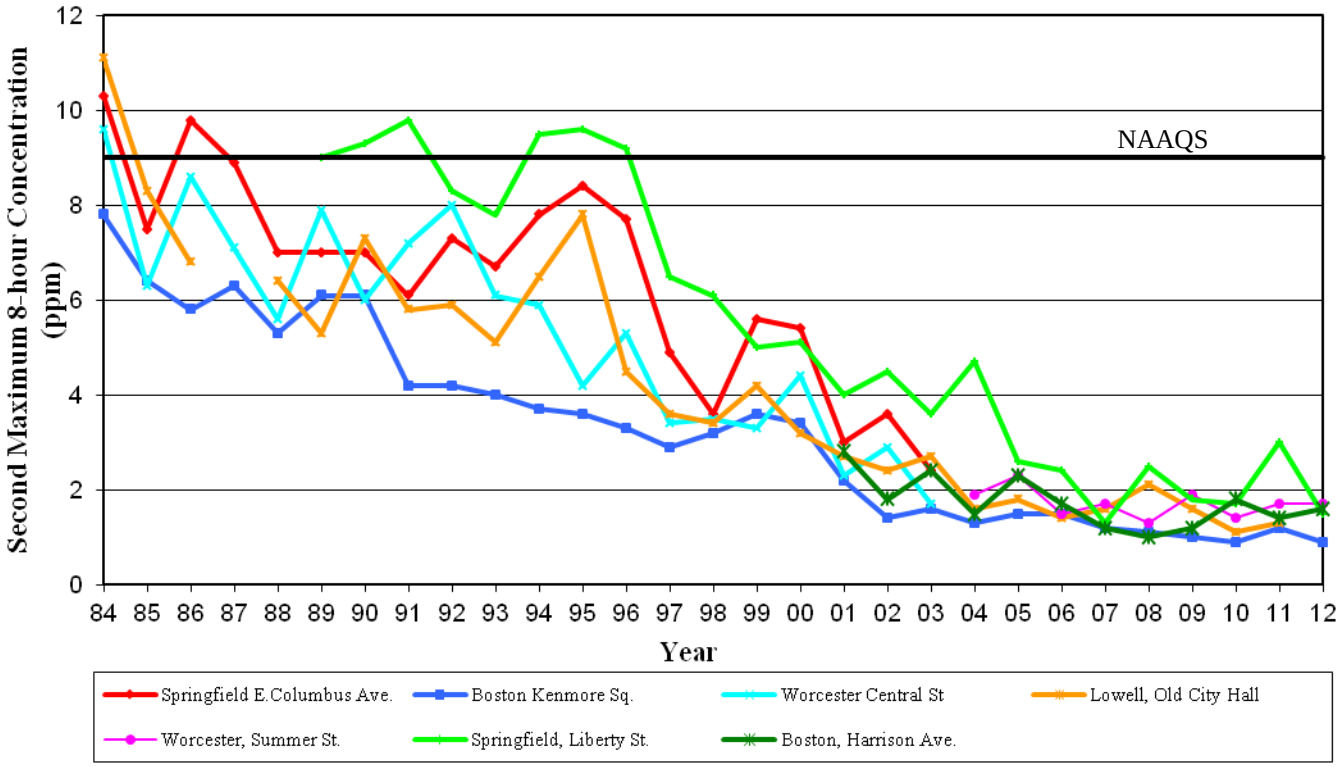
All Concentrations are in Units of Parts Per Billion (ppb)

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:

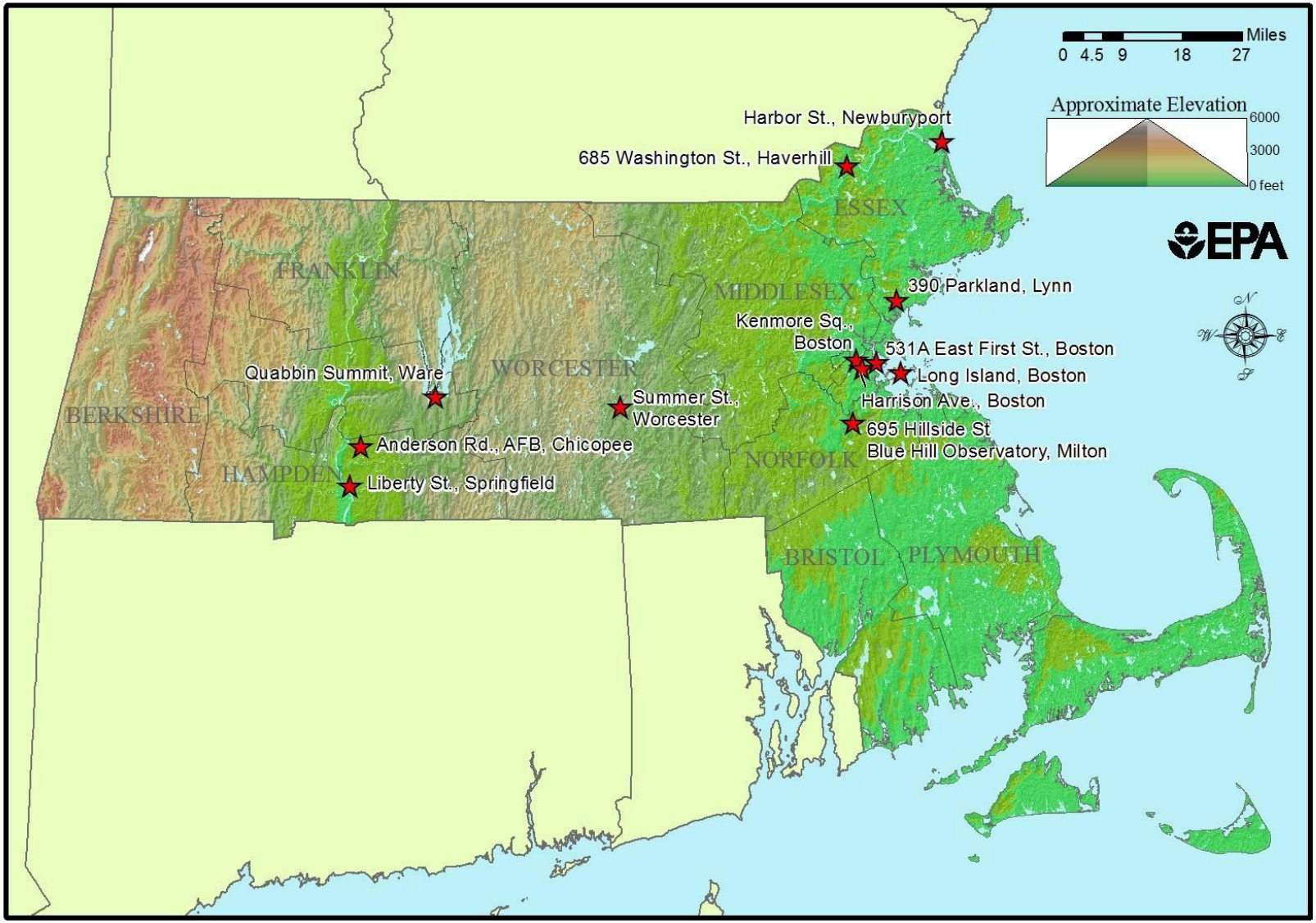
1-hour – 35 ppm, not to be exceeded more than once per year

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

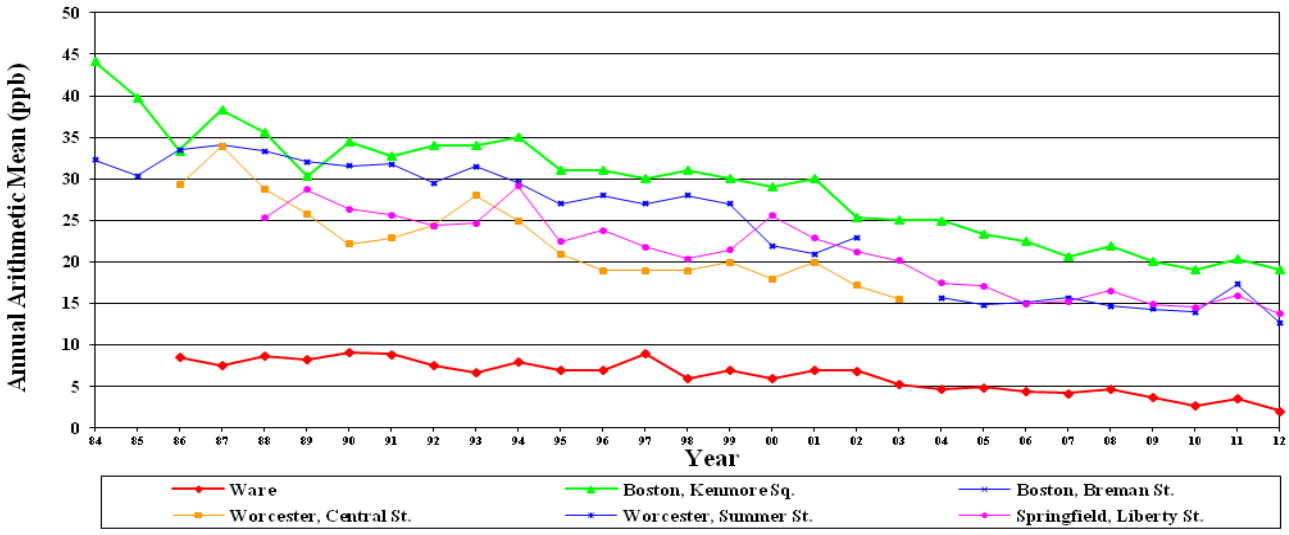
2012 Massachusetts
Carbon Monoxide
All Concentrations are in Units of Parts Per Million

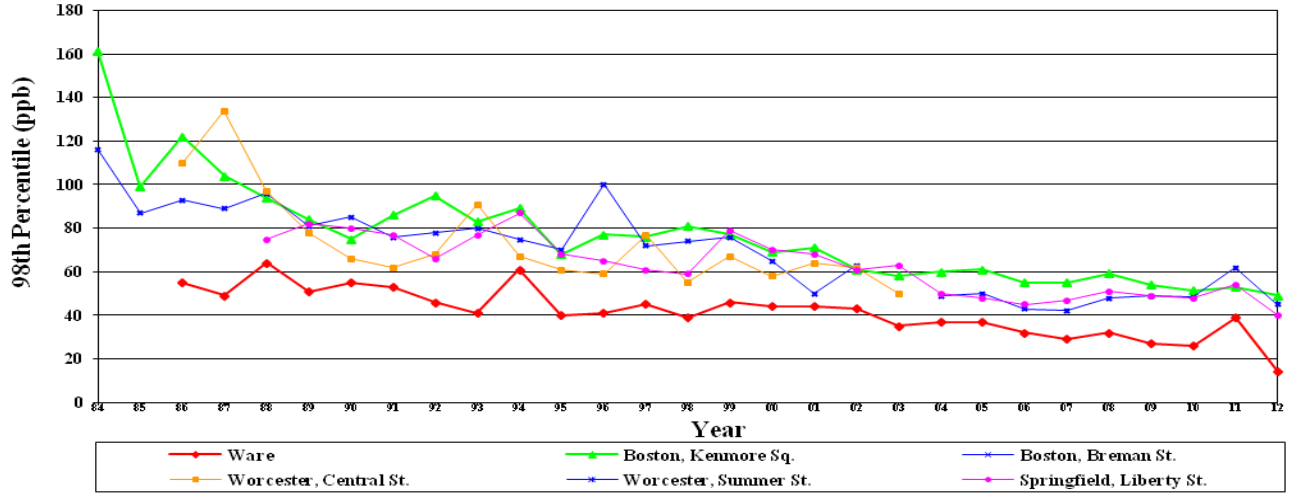
Site ID	County	City	Address	Duration	Obs.	First Max.	Second Max.
250092006	Essex	Lynn	390 Parkland	1 HOUR	7192	0.9	0.9
250130008	Hampden	Chicopee	Anderson Rd AFB	1 HOUR	8113	0.9	0.9
250130016	Hampden	Springfield	Liberty Street	1 HOUR	8118	2.0	2.0
250250002	Suffolk	Boston	Kenmore Sq	1 HOUR	8211	1.4	1.3
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^3)

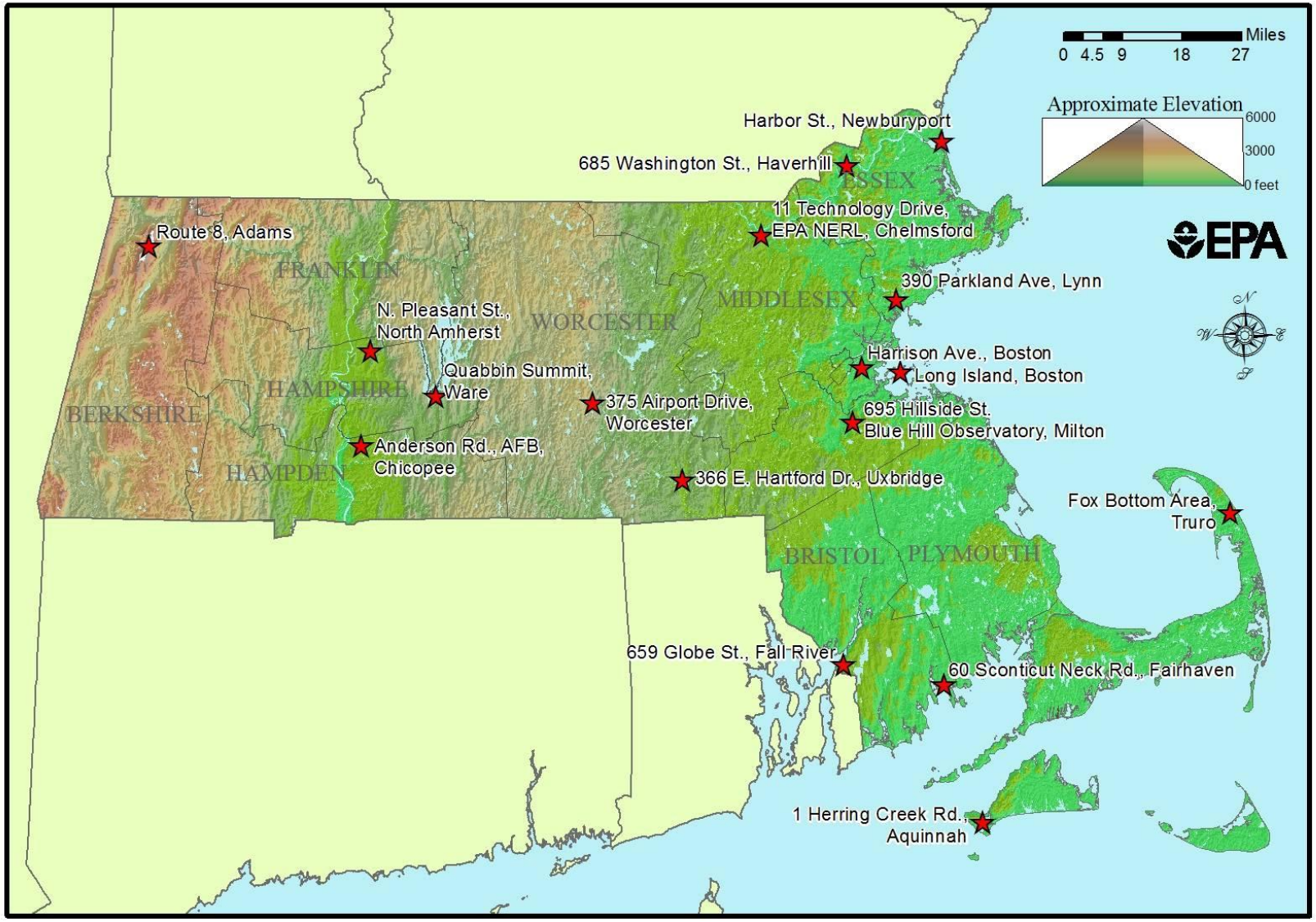
1-hour – 100 ppb (as of January 22, 2010) 98th percentile

2012 Massachusetts
Nitrogen Dioxide
All Concentrations are in Units of Parts Per Billion

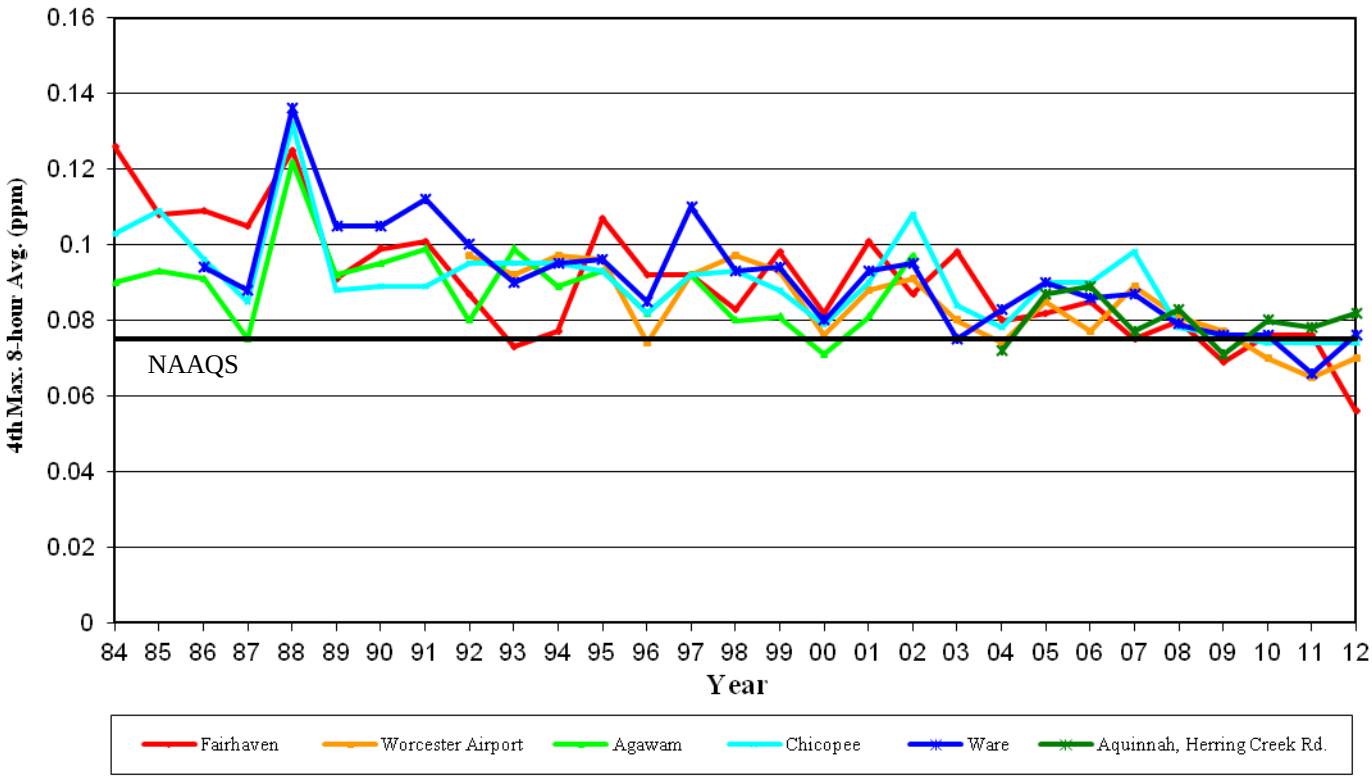
Site ID	County	City	Address	Duration	Obs.	First Max.	Second Max.	98th Percentile	Annual Arithmetic Mean	
250092006	Essex	Lynn	390 Parkland	1 HOUR	8280	51	48	42	8.31	
250094005	Essex	Newburyport	Harbor Street	1 HOUR	6642	29	28	23	3.49	
250095005	Essex	Haverhill	685 Washington Street	1 HOUR	8244	36	35	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 critiera

Massachusetts Sites - 2012 - Ozone



Massachusetts Ozone 8-Hour Data



NAAQS for Ozone:

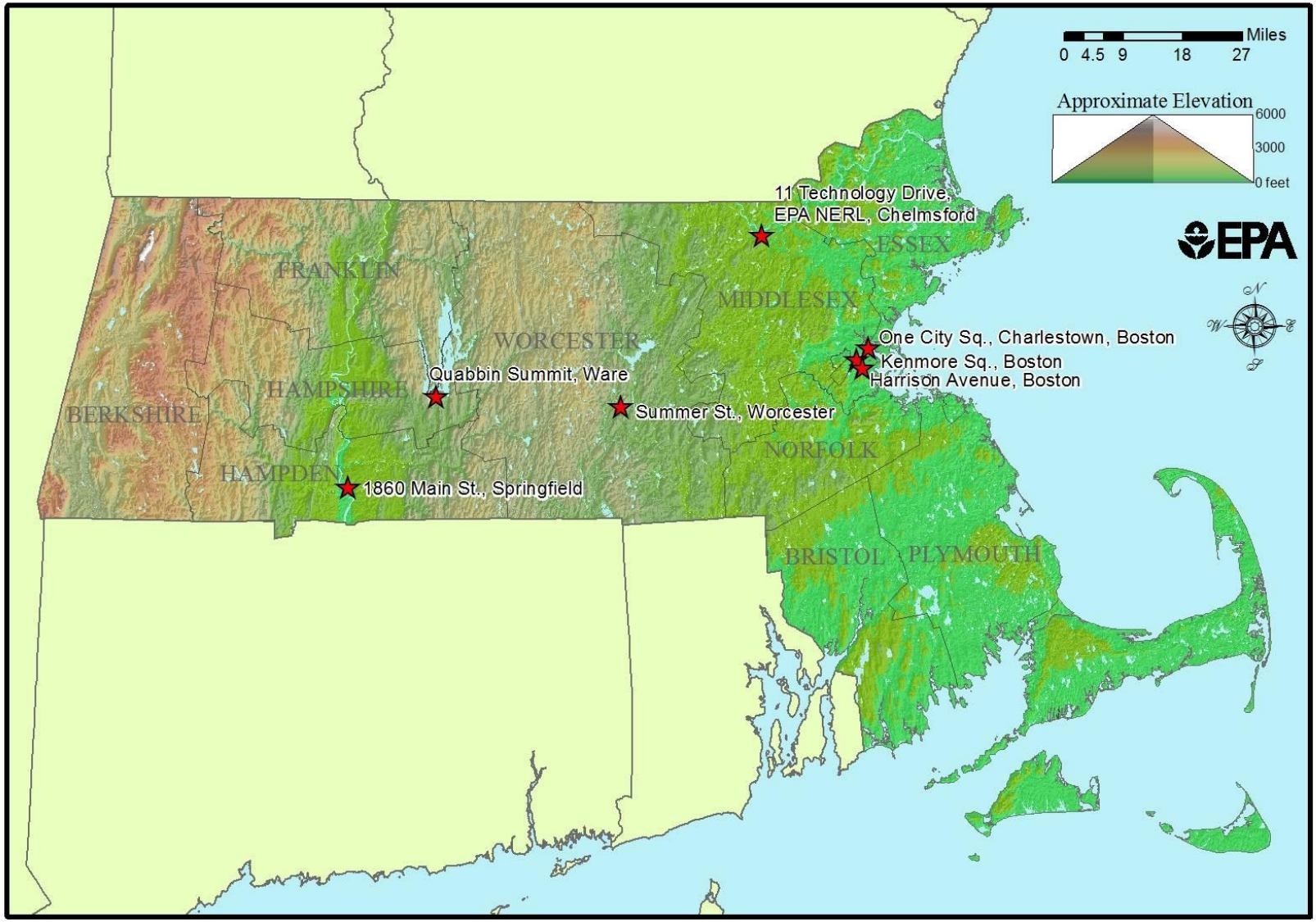
8-hour – 0.075 ppm (2008 std)

(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.)

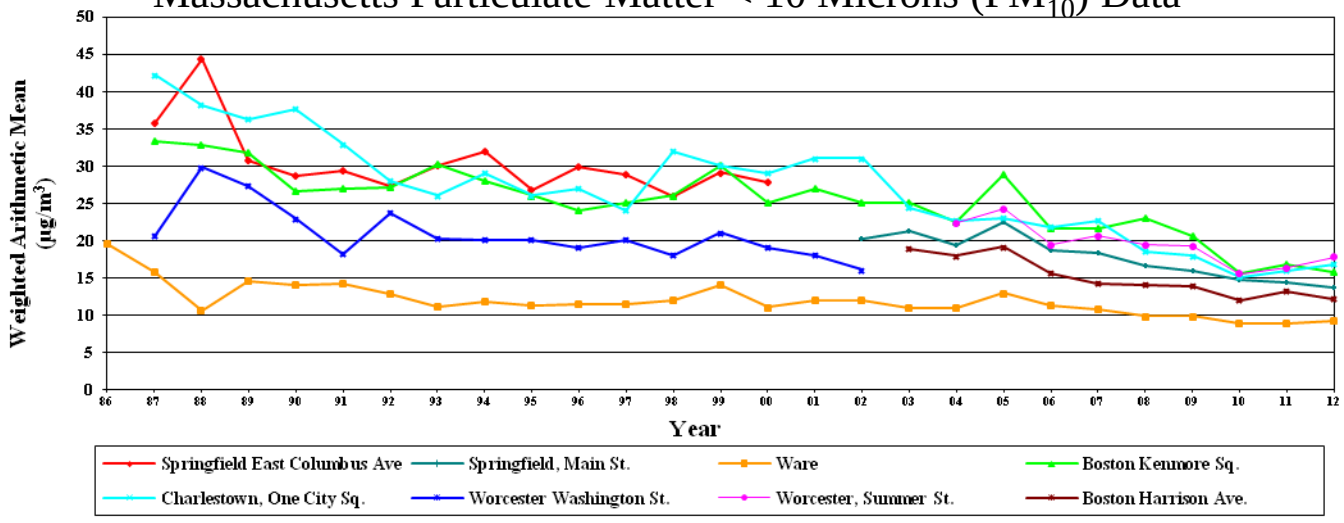
2012 Massachusetts
Ozone (8-Hour)
All Concentrations are in Units of Parts Per Million

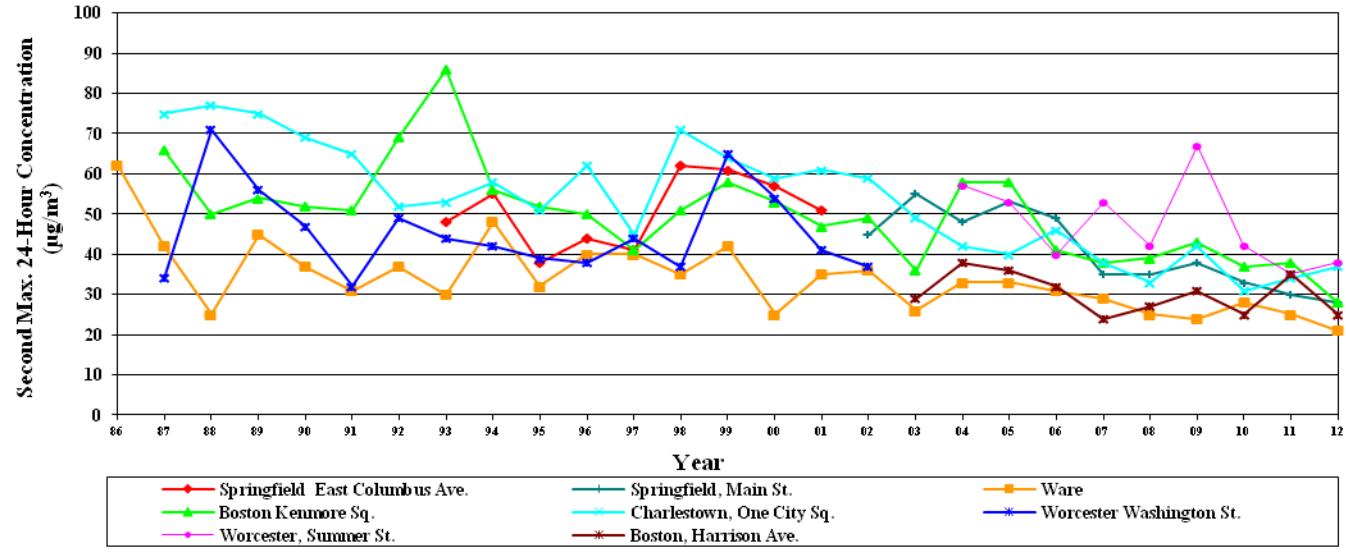
Site ID	County	City	Address	Duration	Obs.	First Max.	Second Max.	Third Max.	Fourth Max.	Actual Exceedances	Valid Days	Required Days	Percent Days
250010002	Barnstable	Truro	Fox Bottom Area	8-HR RUN AVG	5034	0.088	0.085	0.080	0.079	6	177	183	97
250034002	Berkshire	Adams	Route 8 Adams	8-HR RUN AVG	4679	0.074	0.074	0.073	0.073	0	181	183	99
250051002	Bristol	Fairhaven	60 Sconticut 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_{10}) Data





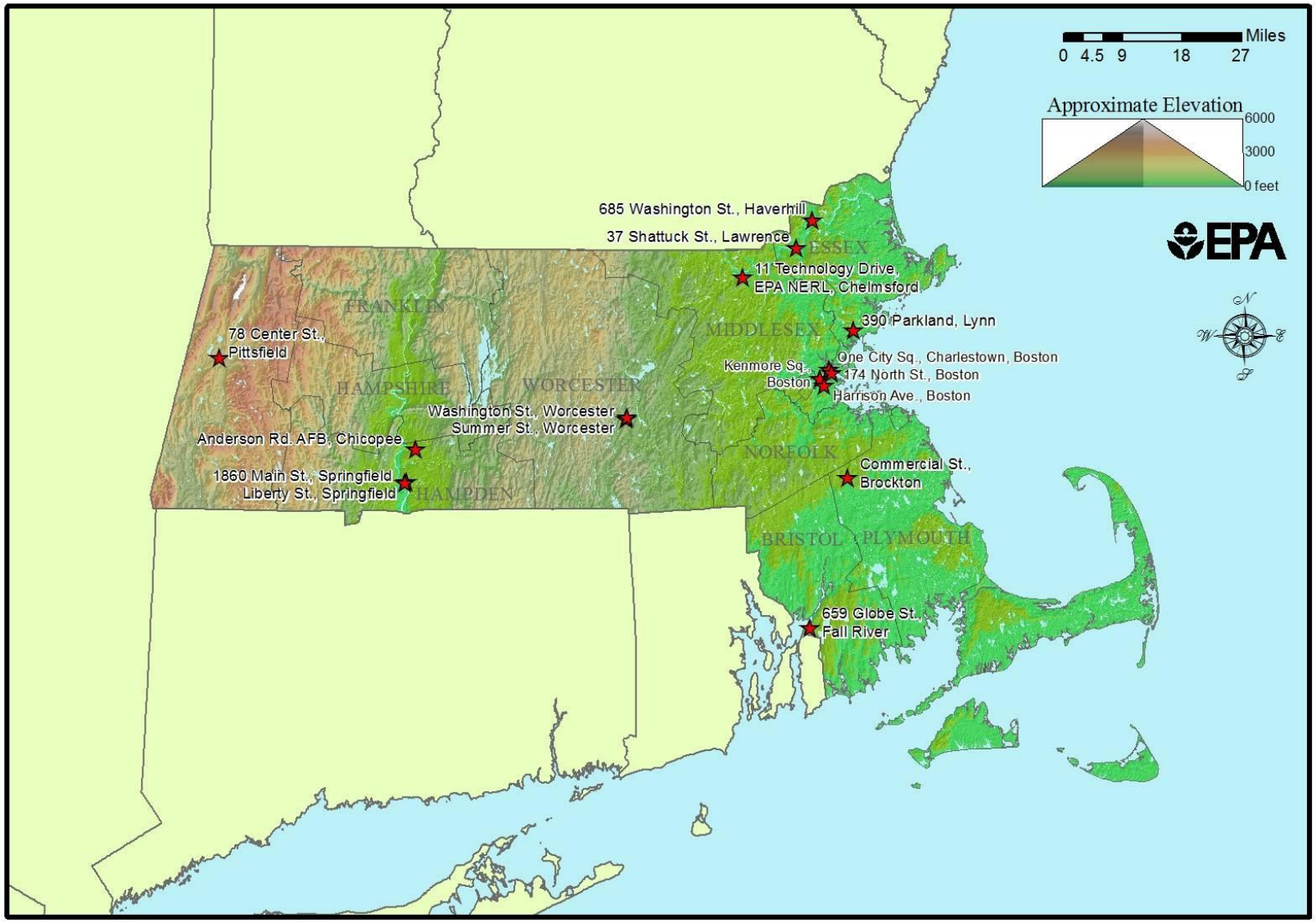
NAAQS for Particulate Matter less than 10 Microns:
24-hour -150 µg/m^3

2012 Massachusetts
Particulate Matter < 10 Microns
All Concentrations are in units of ug/m^3

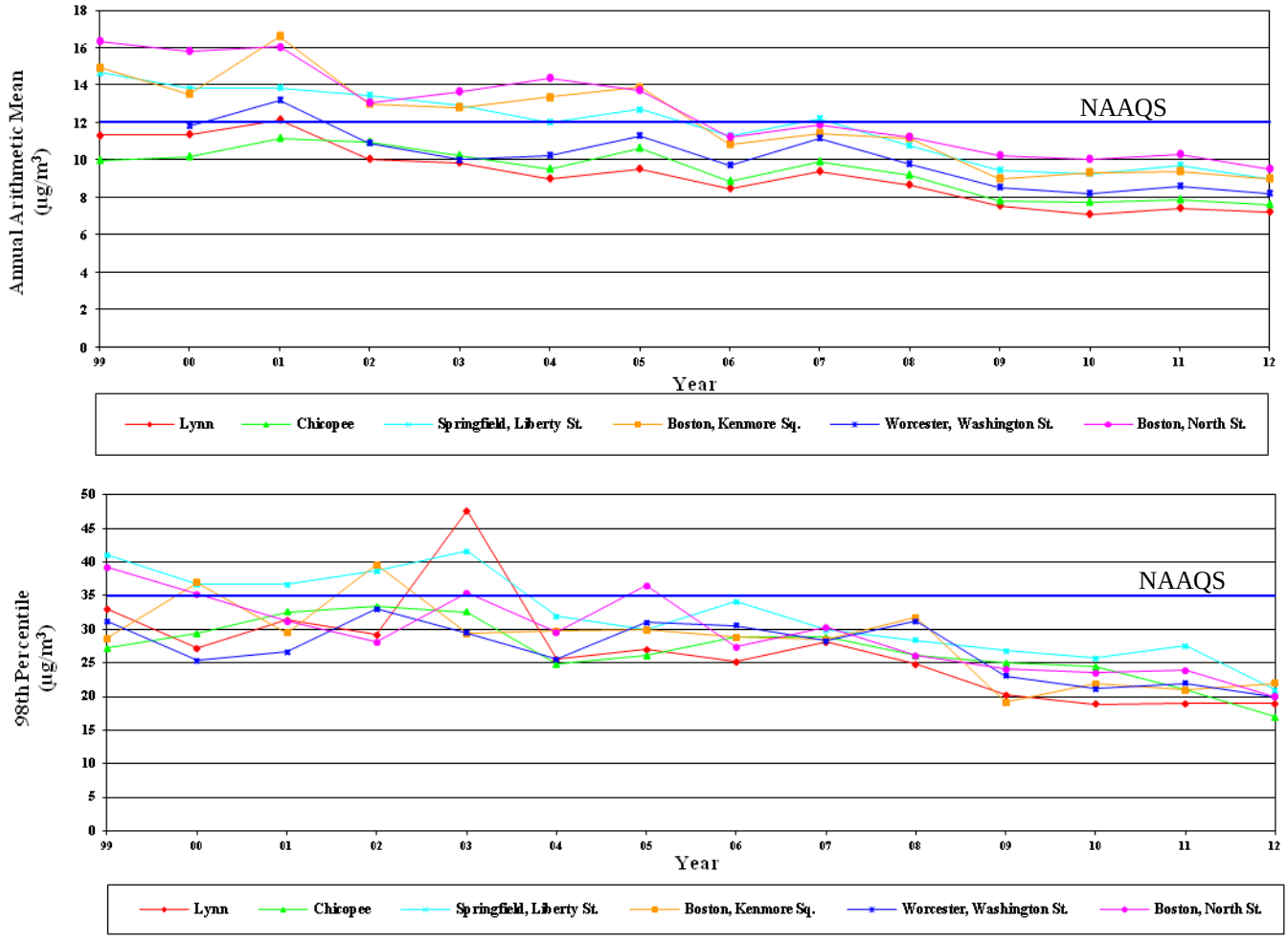
Site ID	POC	County	City	Address	Duration	Obs.	First Max.	Second Max.	Actual Exceedances	Weighted Arithmetic Mean	
250132009	4	Hampden	Springfield	1860 Main St	24 HOUR	59	28	28	0	13.7	
250154002	4	Hampshire	Ware	Quabbin Summit	24 HOUR	60	24	21	0	9.2	
250170009	1	Middlesex	Chelmsford	11 Technology Drive, 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 critiera

Massachusetts Sites - 2012 - Particulate Matter < 2.5 Microns



Massachusetts Particulate Matter < 2.5 Microns ($PM_{2.5}$) Data



NAAQS for Particulate Matter less than 2.5 Microns:

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

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

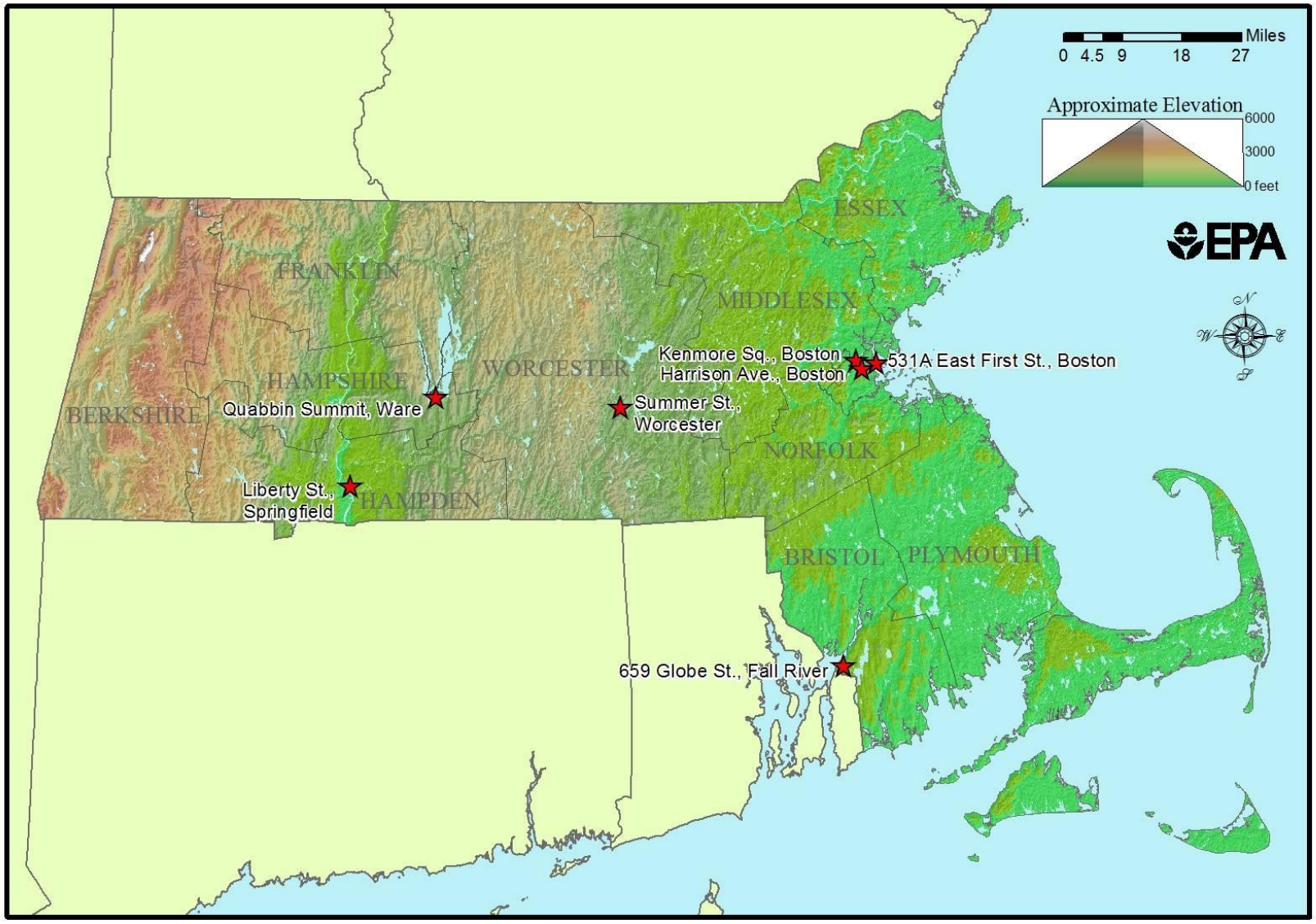
2012 Massachusetts

Particulate Matter < 2.5 Microns

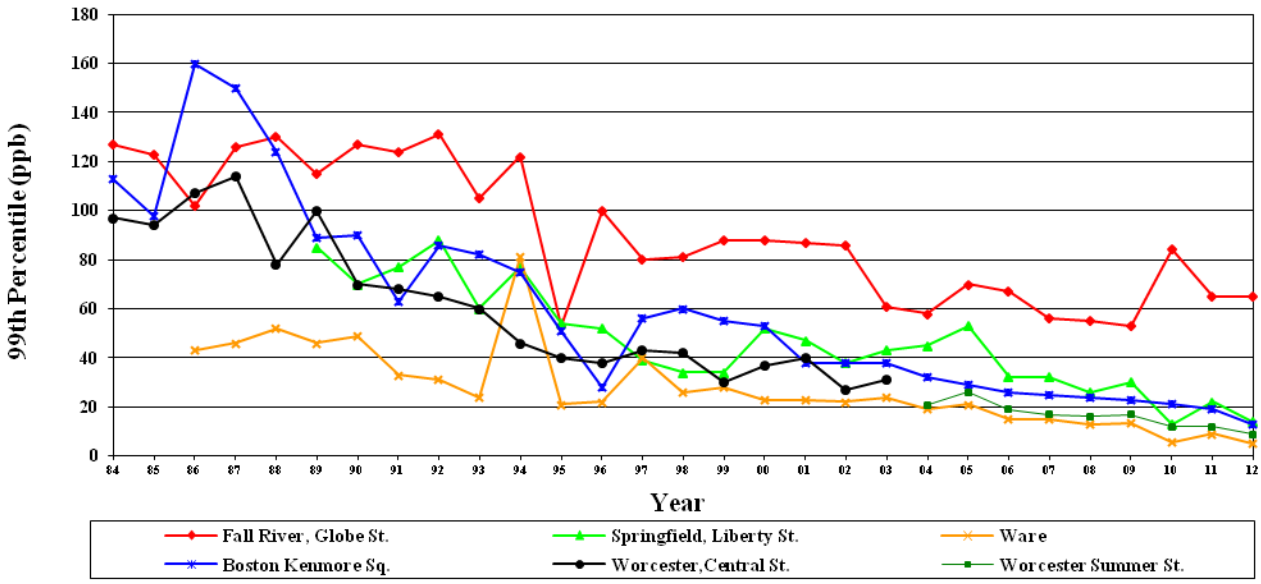
All Concentrations are in µg/m^3 Local Conditions

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:

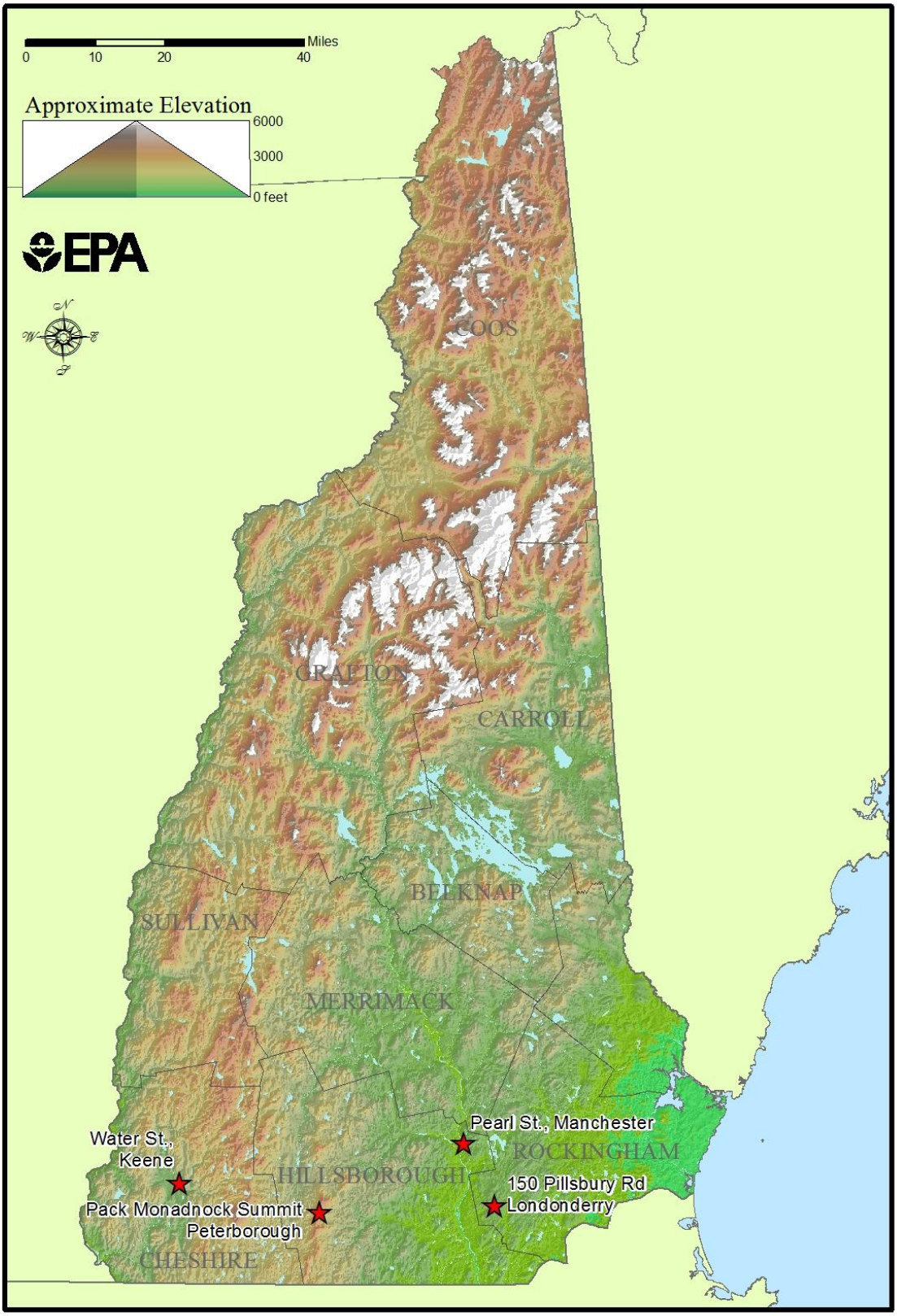
Primary: 1-hour -75 ppb (0.075 ppm) 99th percentile

Secondary: 3-hour -0.5 ppm

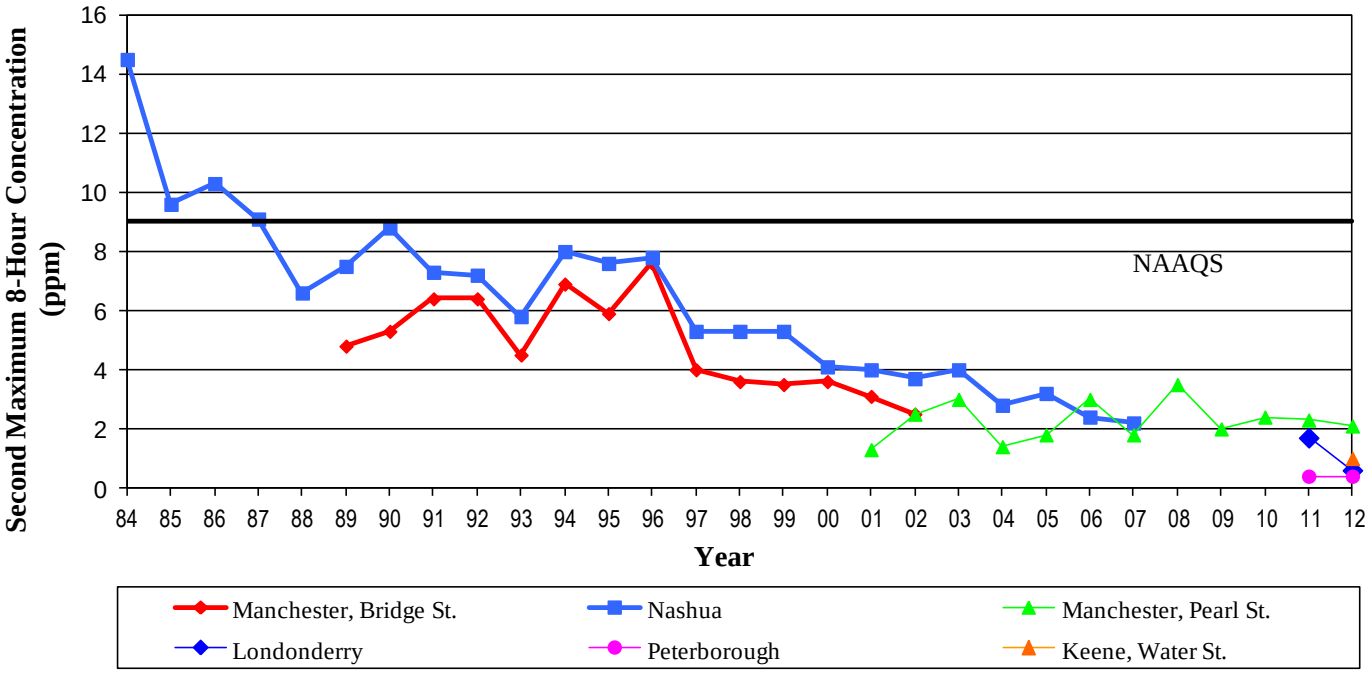
2012 Massachusetts
Parameter: Sulfur Dioxide
All Concentrations are in Units of Parts Per Billion (ppb)

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:

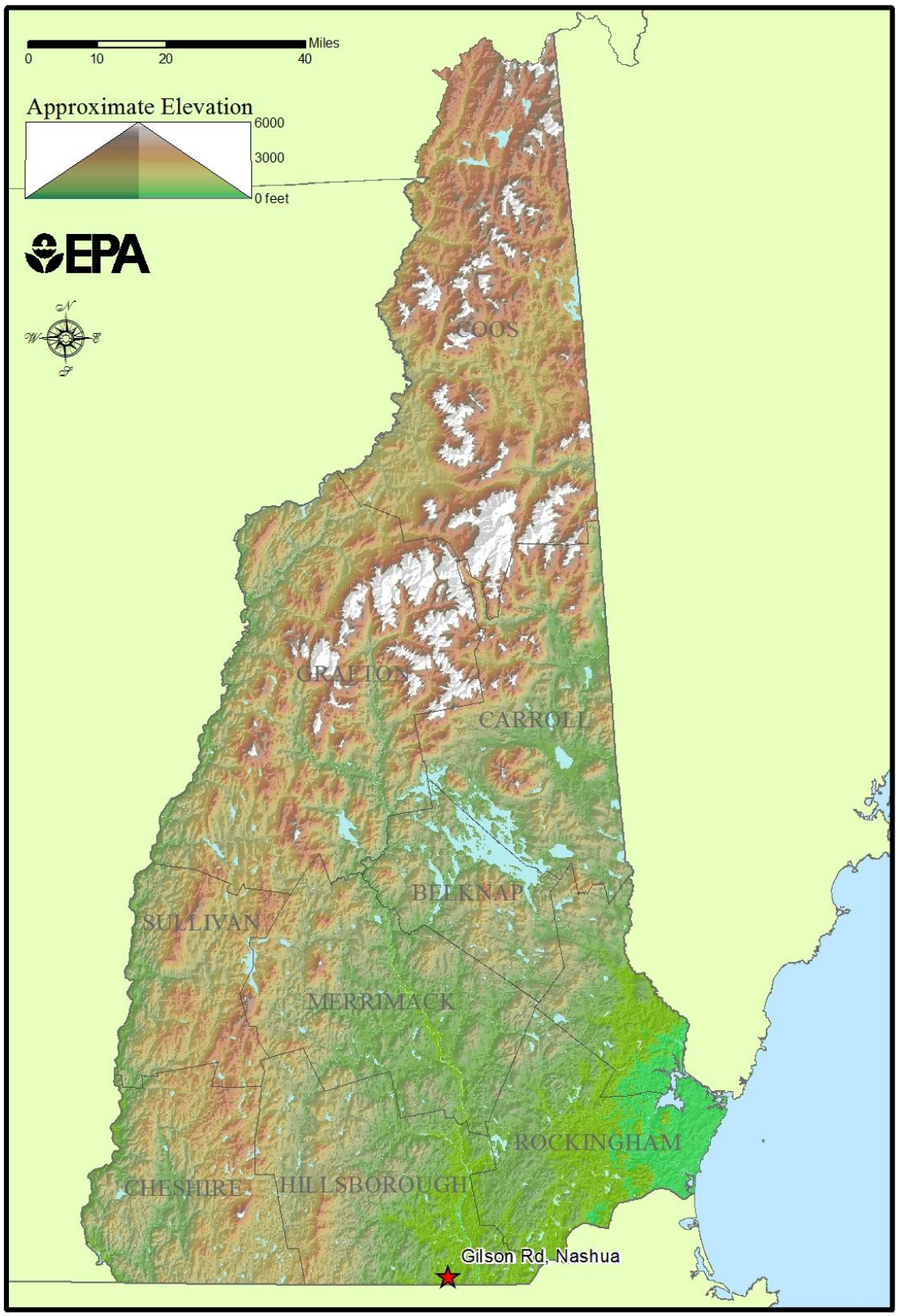
1-hour – 35 ppm, not to be exceeded more than once per year

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

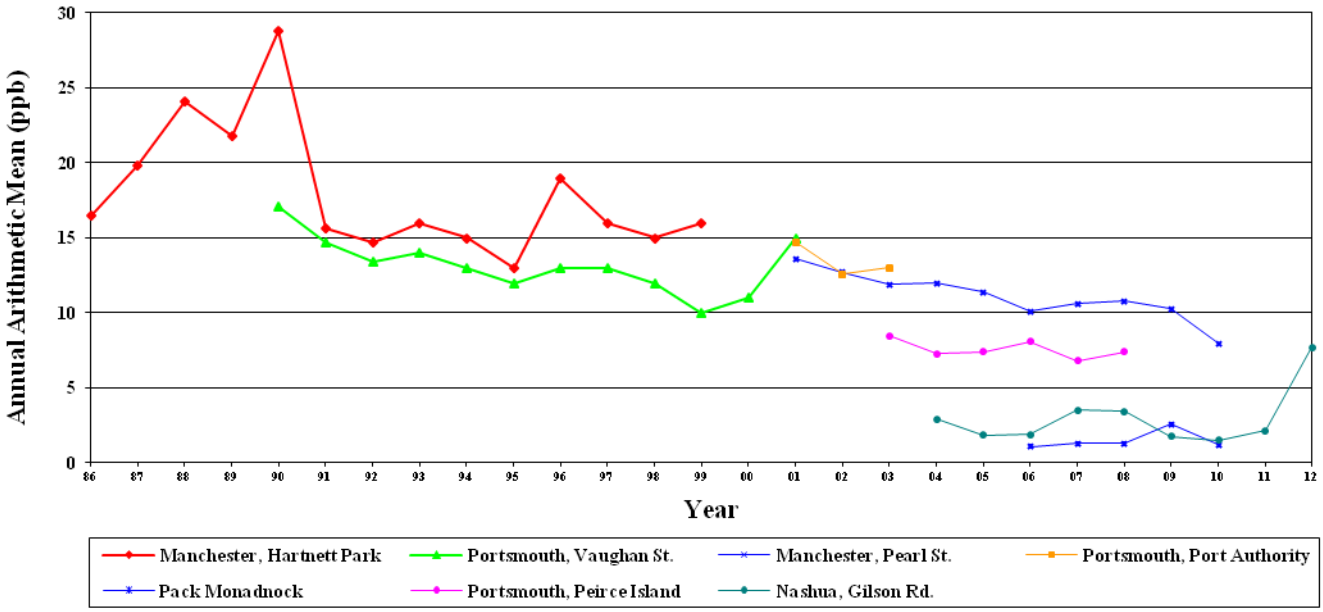
2012 New Hampshire
Carbon Monoxide
All Concentrations are in Units of Parts Per Million

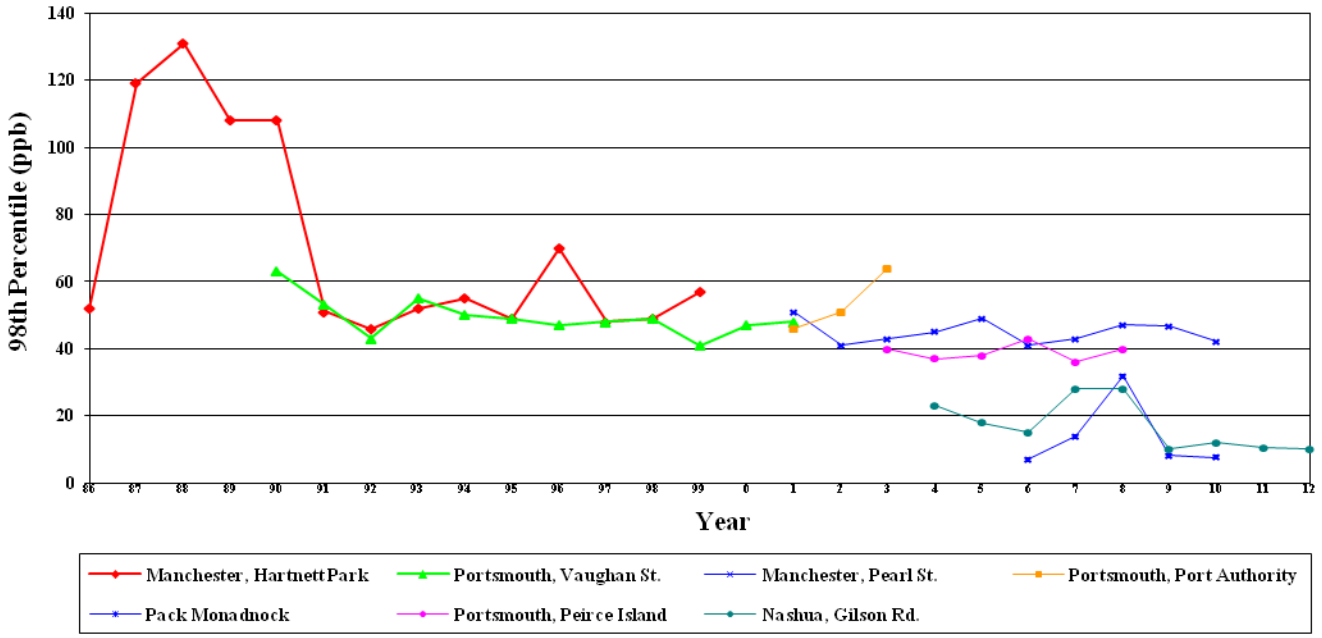
Site ID	County	City	Address	Duration	Obs.	First Max.	Second Max.
330050007	Cheshire	Keene	Water Street	1 HOUR	1927	3.4	2.1
330110020	Hillsborough	Manchester	Pearl St	1 HOUR	2117	2.4	2.1
330115001	Hillsborough	Peterborough	Pack Monadnock Summit	1 HOUR	8267	0.4	0.4
330150018	Rockingham	Londonderry	150 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^3)

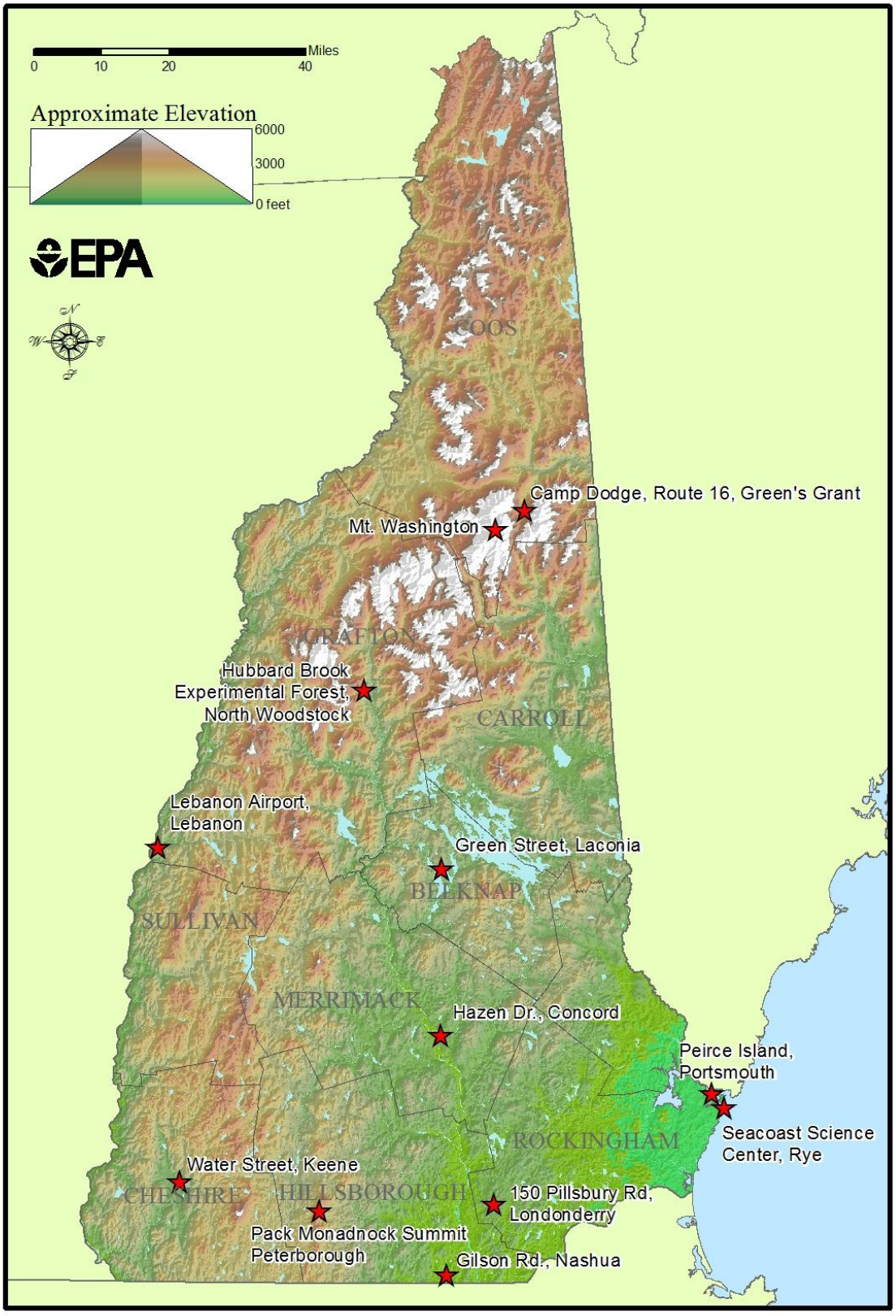
1-hour – 100 ppb (as of January 22, 2010) 98th percentile

2012 New Hampshire
Nitrogen Dioxide
All Concentrations are in Units of Parts Per Billion

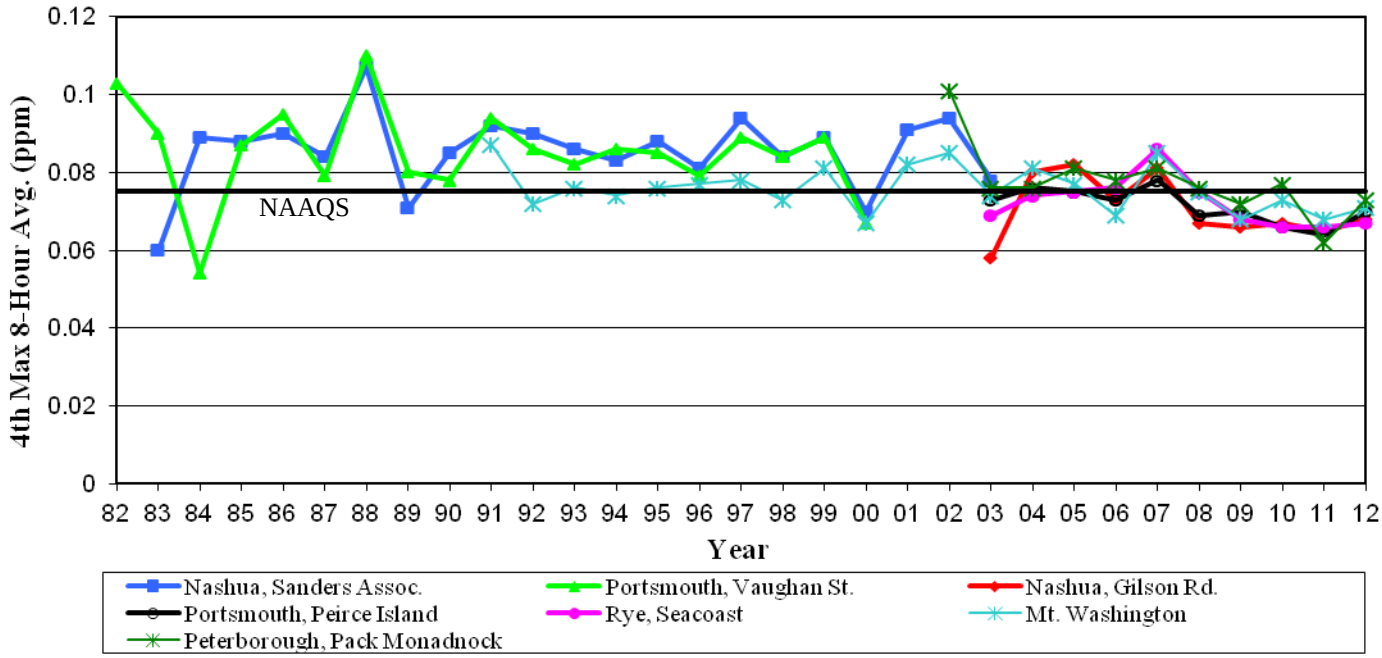
Site ID	County	City	Address	Duration	Obs.	First Max.	Second Max.	98th Percentile	Annual Arithmetic Mean	
330111011	Hillsborough	Nashua	Gilson Road	1 HOUR	2511	11	11	10	7.73	*

* Indicates that the mean does not satisfy summary critiera

New Hampshire Sites 2012 - Ozone



New Hampshire Ozone 8-Hour Data



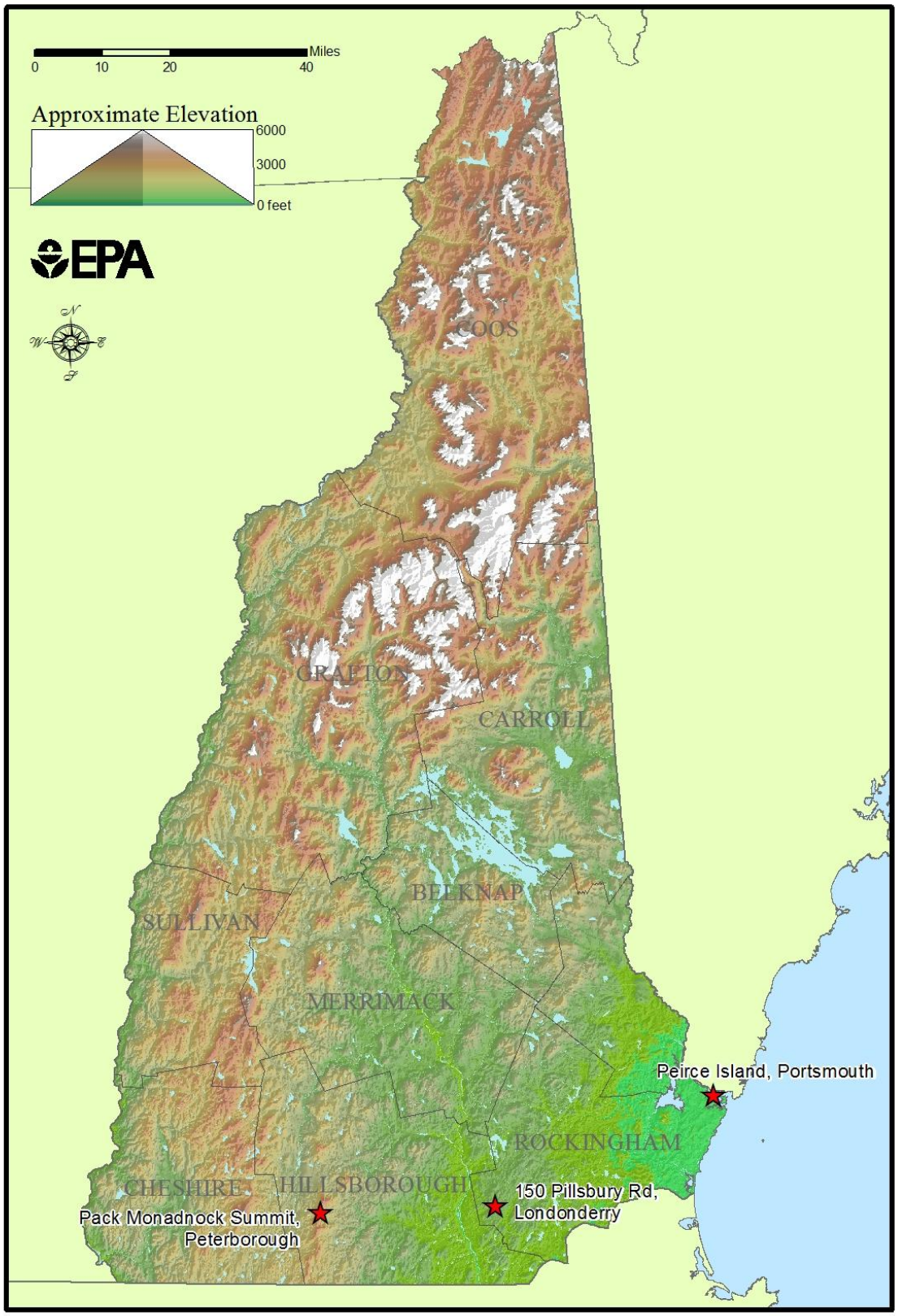
NAAQS for Ozone:
8-hour – 0.075 ppm (2008 std)

(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.)

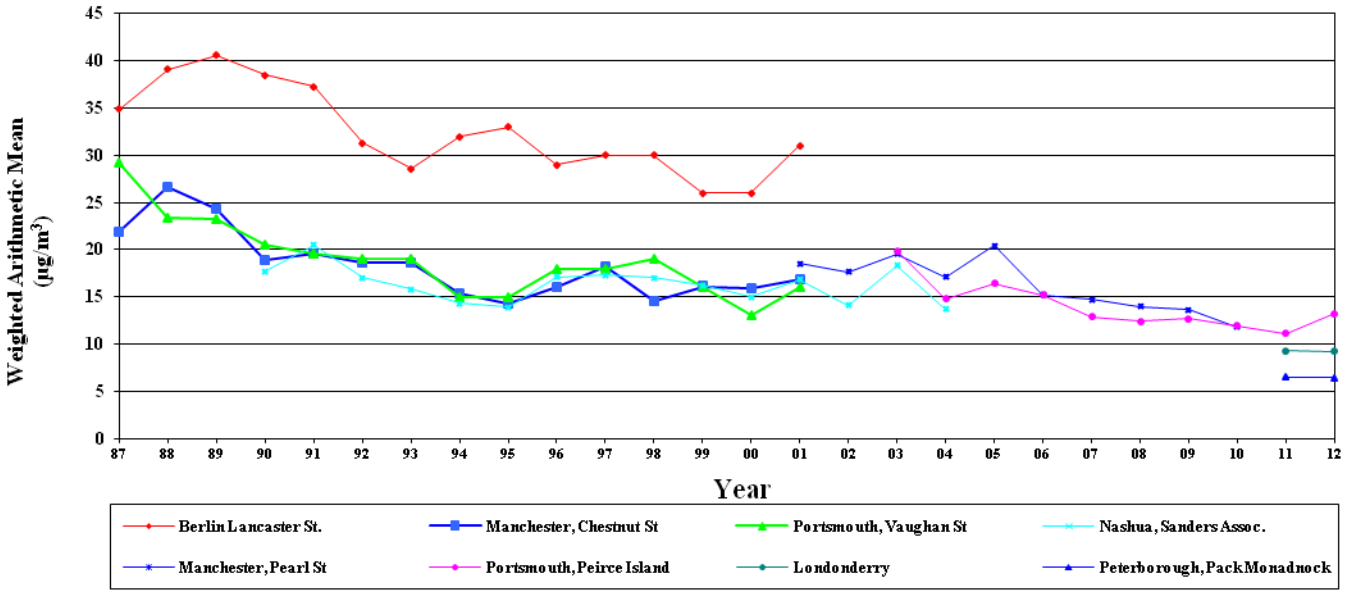
2012 New Hampshire
Ozone (8-Hour)
AllConcentrations are in Units of Parts Per Million

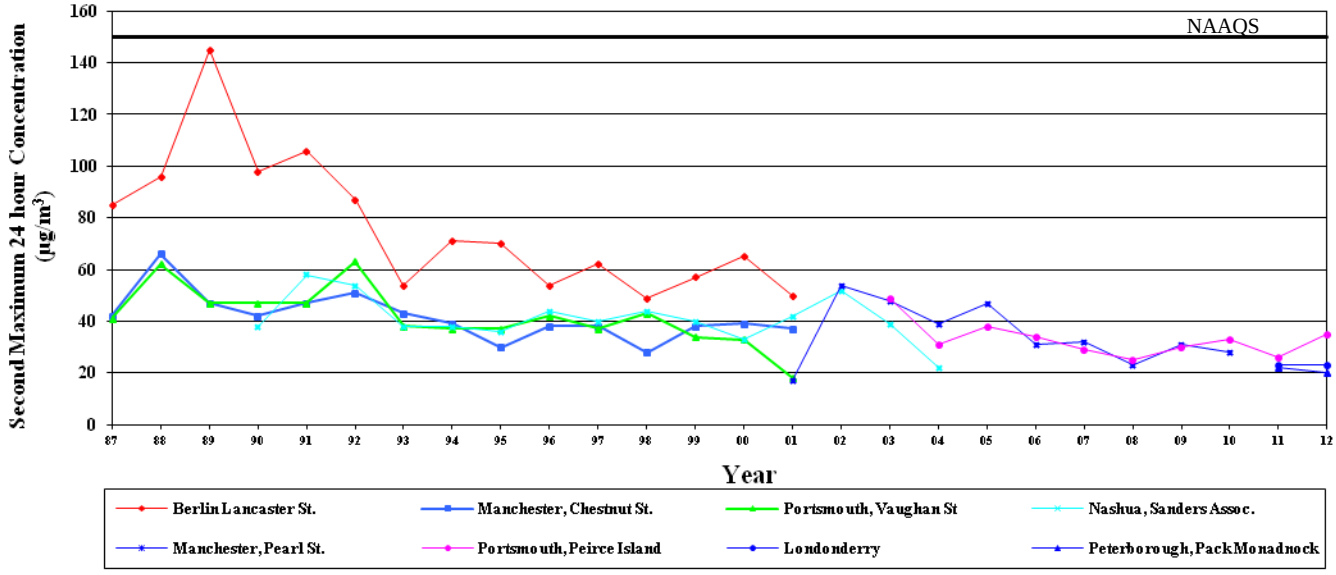
Site ID	County	City	Address	Duration	Obs.	First Max.	Second Max.	Third Max.	Fourth Max.	Actual Exceedances	Valid Days	Required Days	Percent Days
330012004	Belknap	Laconia	Green Street, Laconia	8-HR RUN AVG	4376	0.069	0.066	0.066	0.065	0	182	183	99
330050007	Cheshire	Keene	Water Street	8-HR RUN AVG	8696	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_{10}) Data



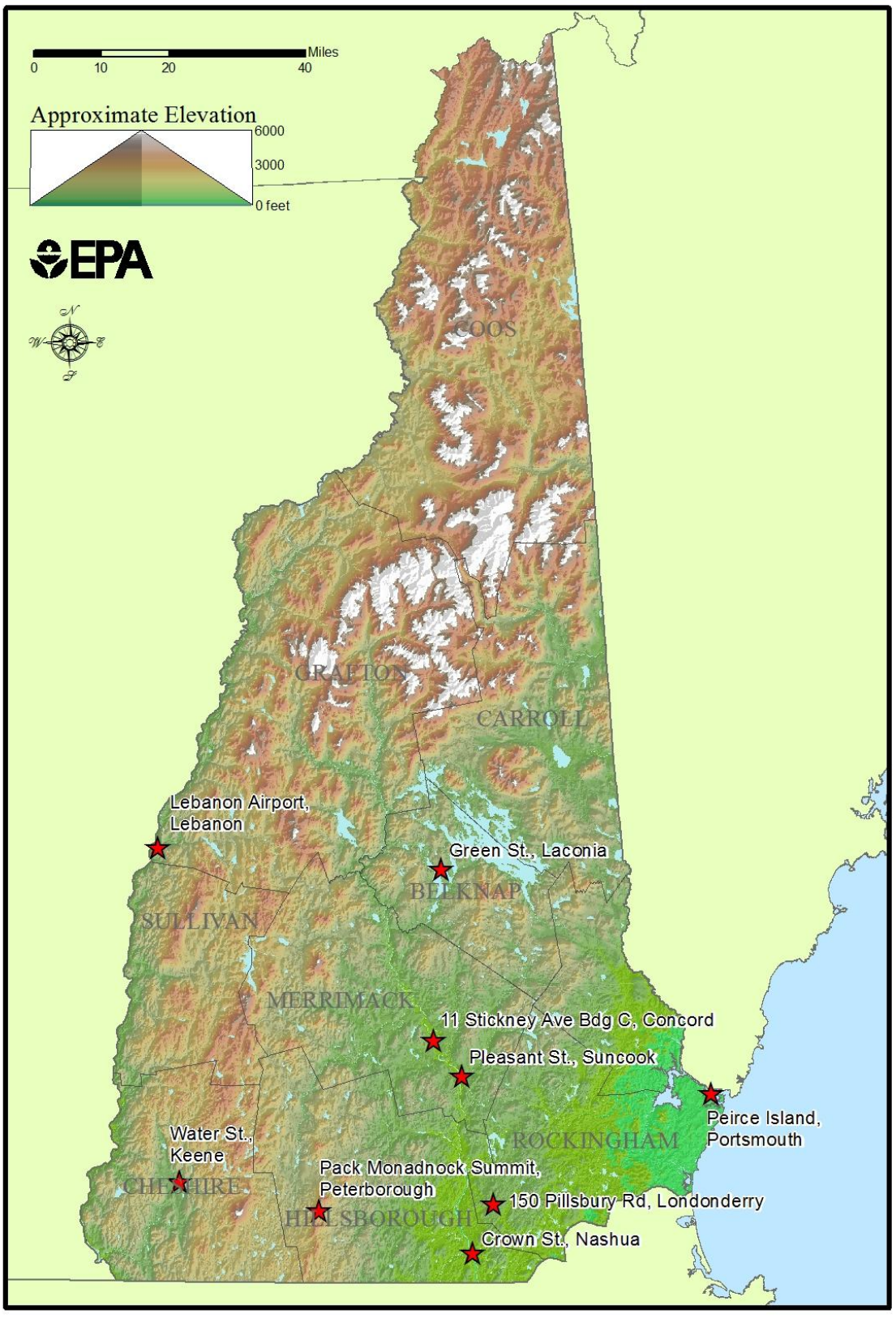


NAAQS for Particulate Matter less than 10 Microns:
24-hour -150 µg/m^3

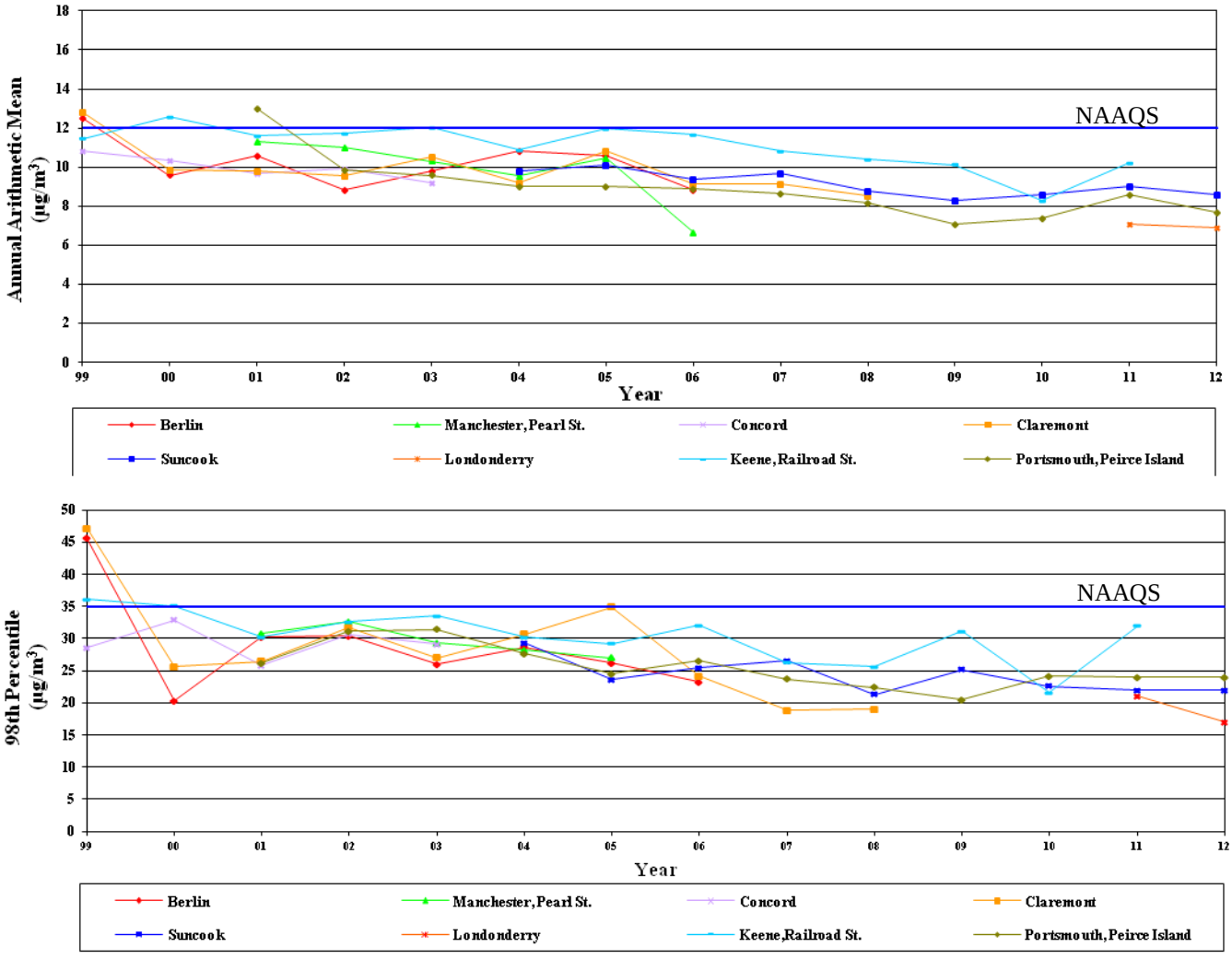
2012 New Hampshire
Particulate Matter < 10 Microns
All Concentrations are in units of ug/m^3

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 ($PM_{2.5}$) Data



NAAQS for Particulate Matter less than 2.5 Microns:

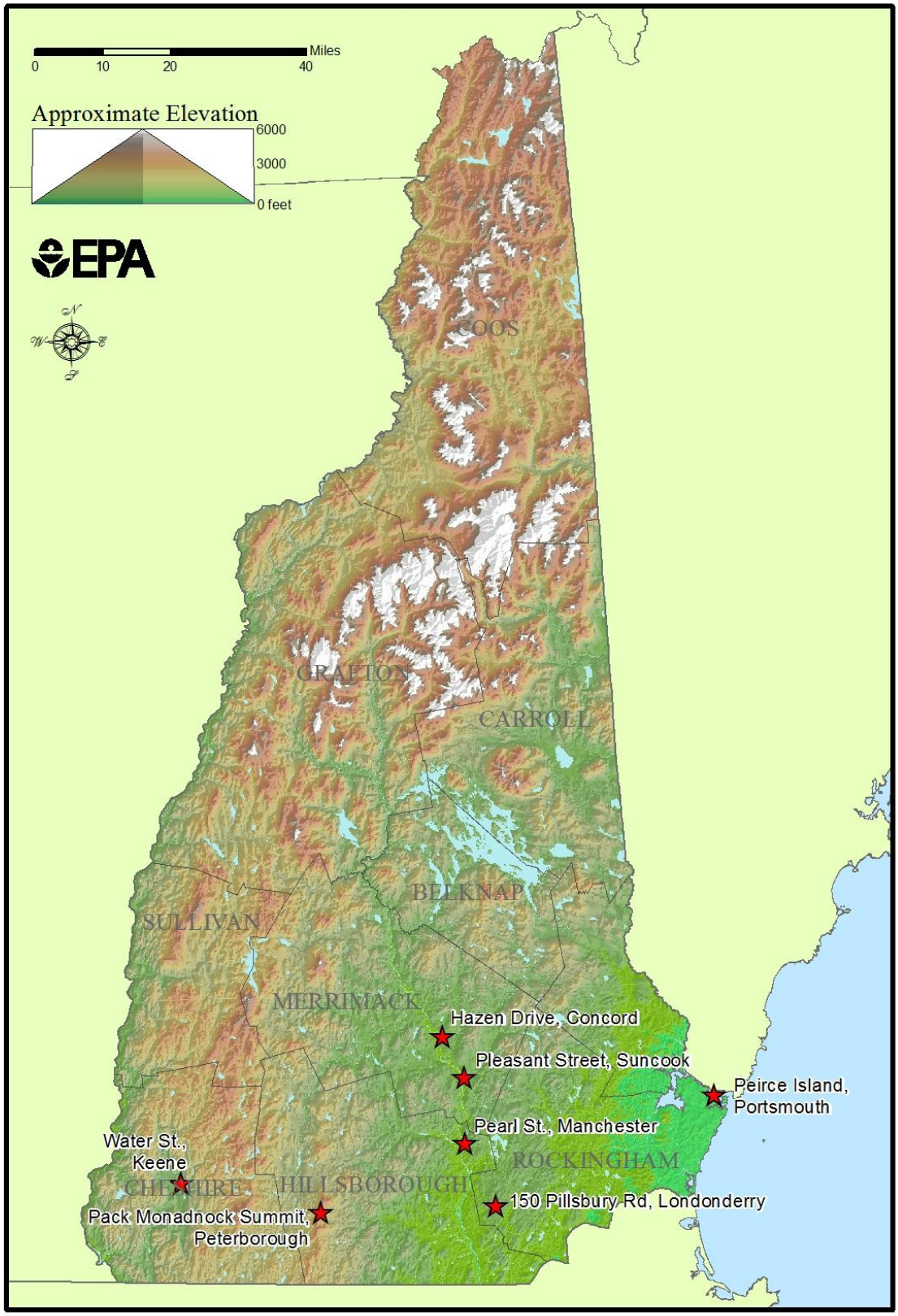
Annual: the 3-year average of the Annual Arithmetic Mean - 12.0 µg/m^3 (Effective March 18, 2013)

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

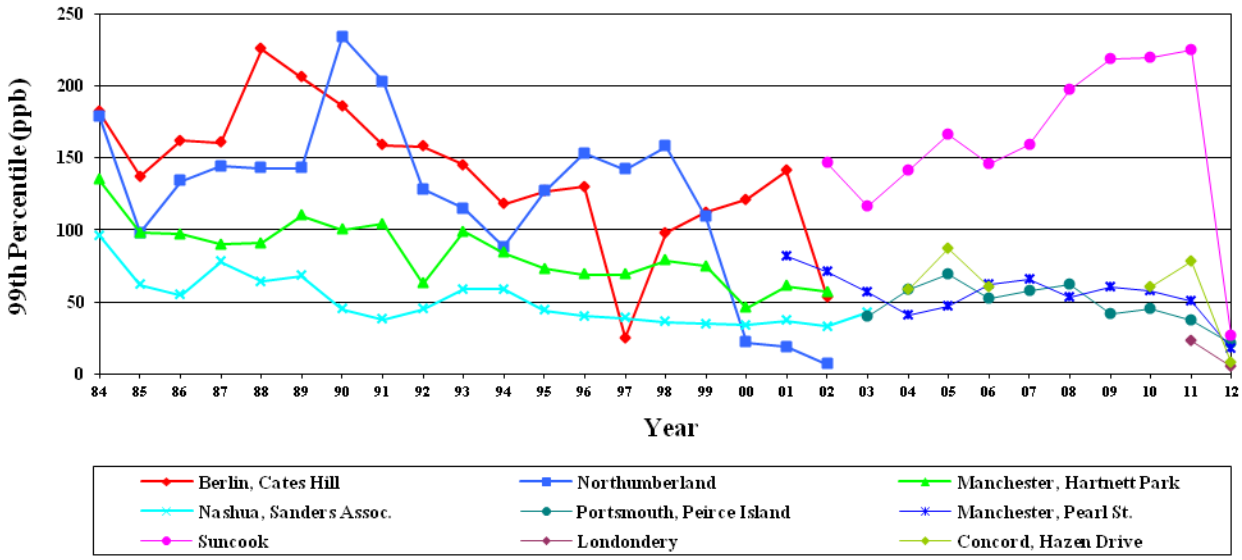
2012 New Hampshire
Particulate Matter < 2.5 Microns
All Concentrations are in µg/m^3 Local Conditions
(24 HOUR indicates FRM, 24-HR BLK AVG indicates continuous FEM)

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:

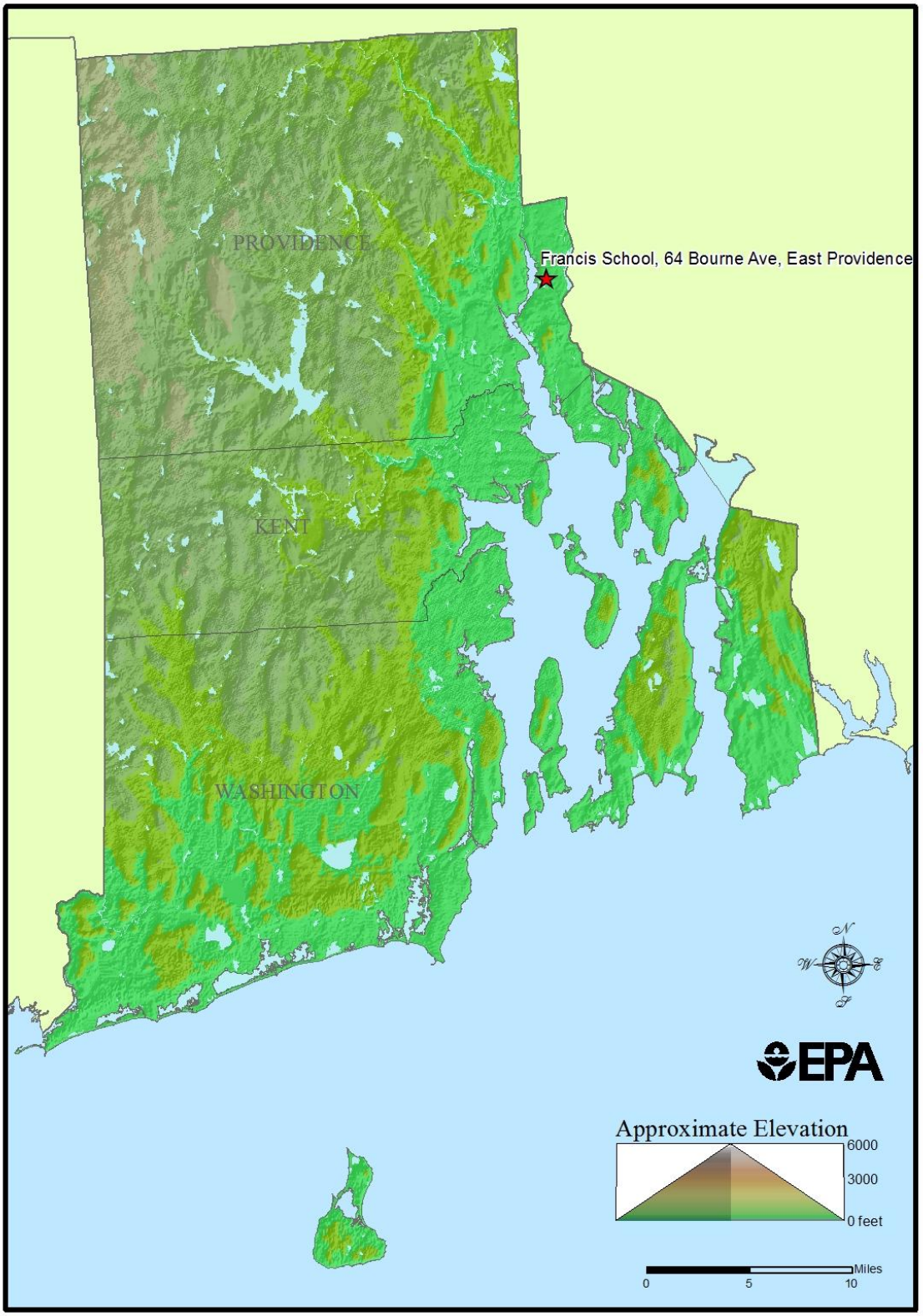
Primary: 1-hour -75 ppb (0.075 ppm) 99th percentile

Secondary: 3-hour -0.5 ppm

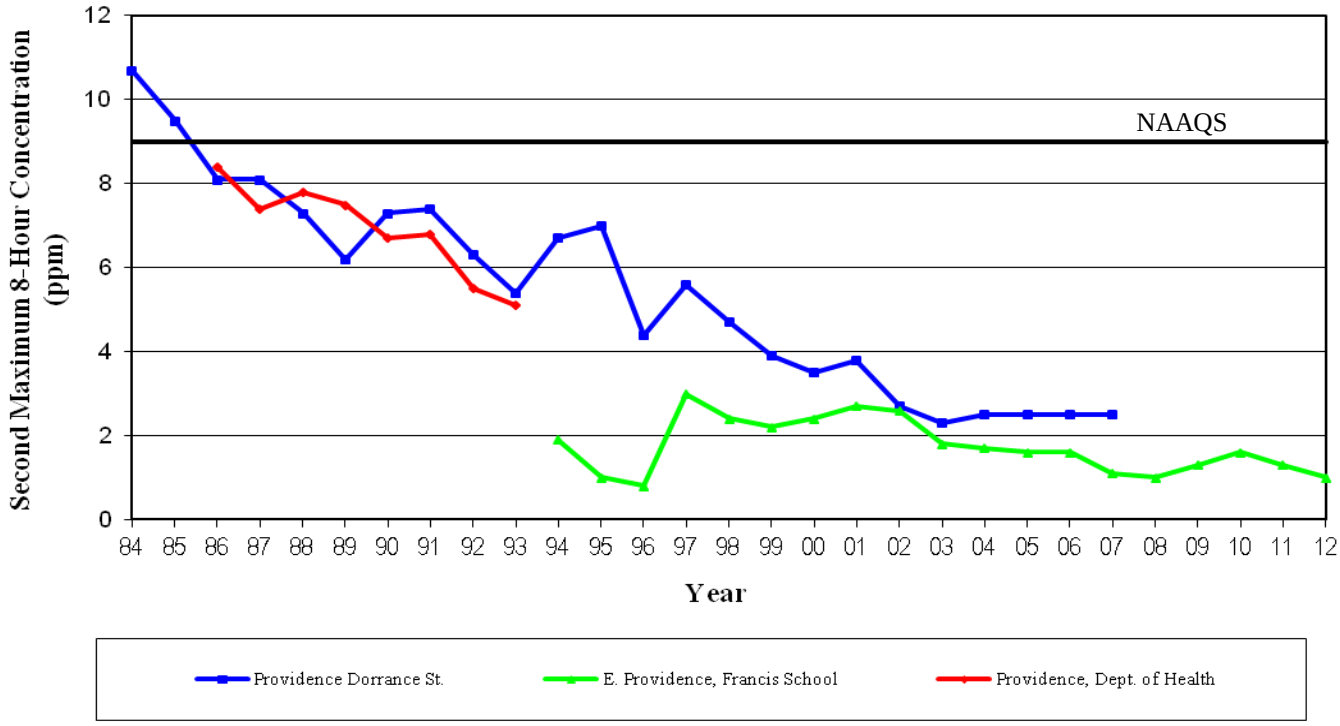
2012 New Hampshire
Parameter: Sulfur Dioxide
All Concentrations are in Units of Parts Per Billion (ppb)

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:

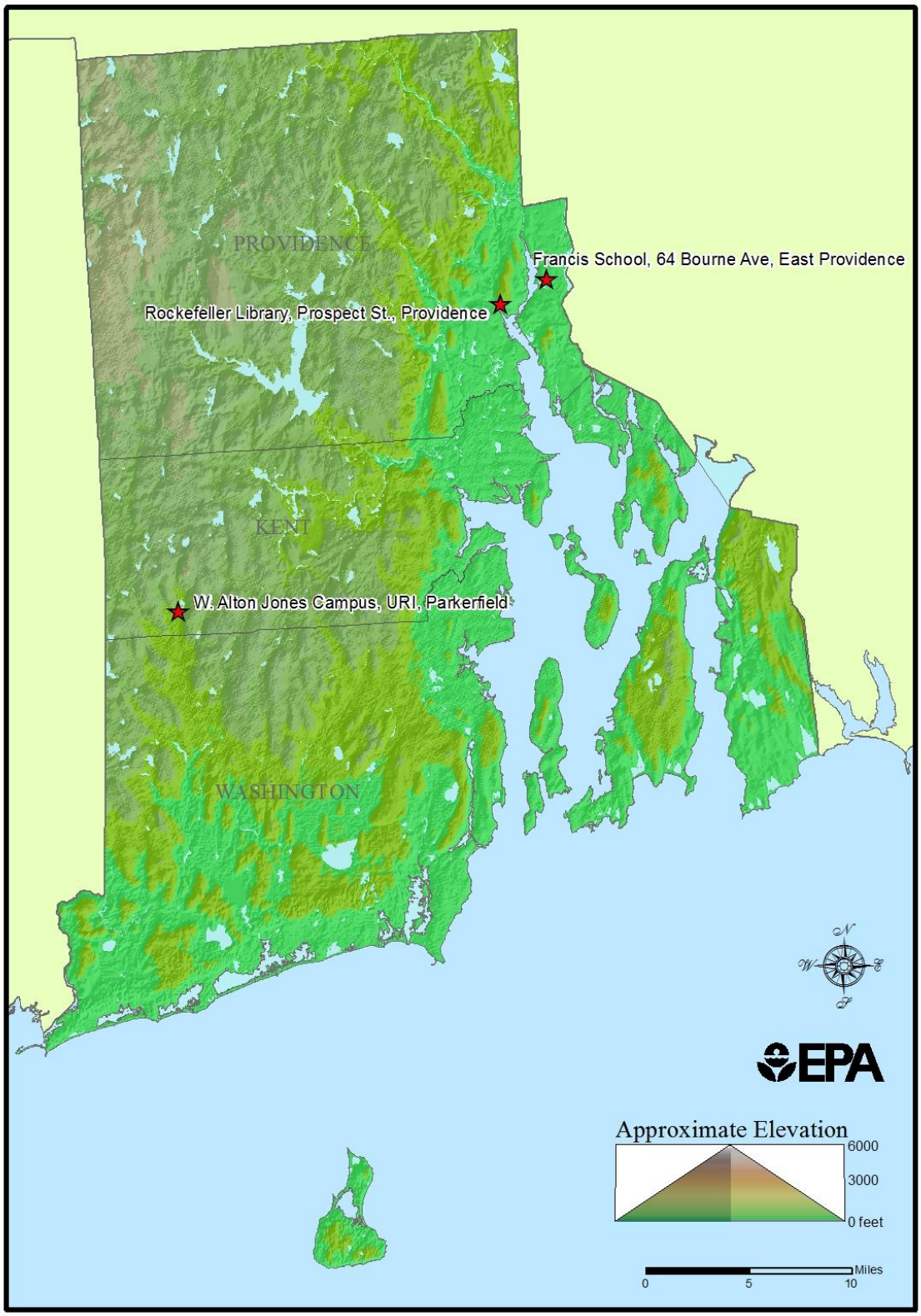
1-hour – 35 ppm, not to be exceeded more than once per year

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

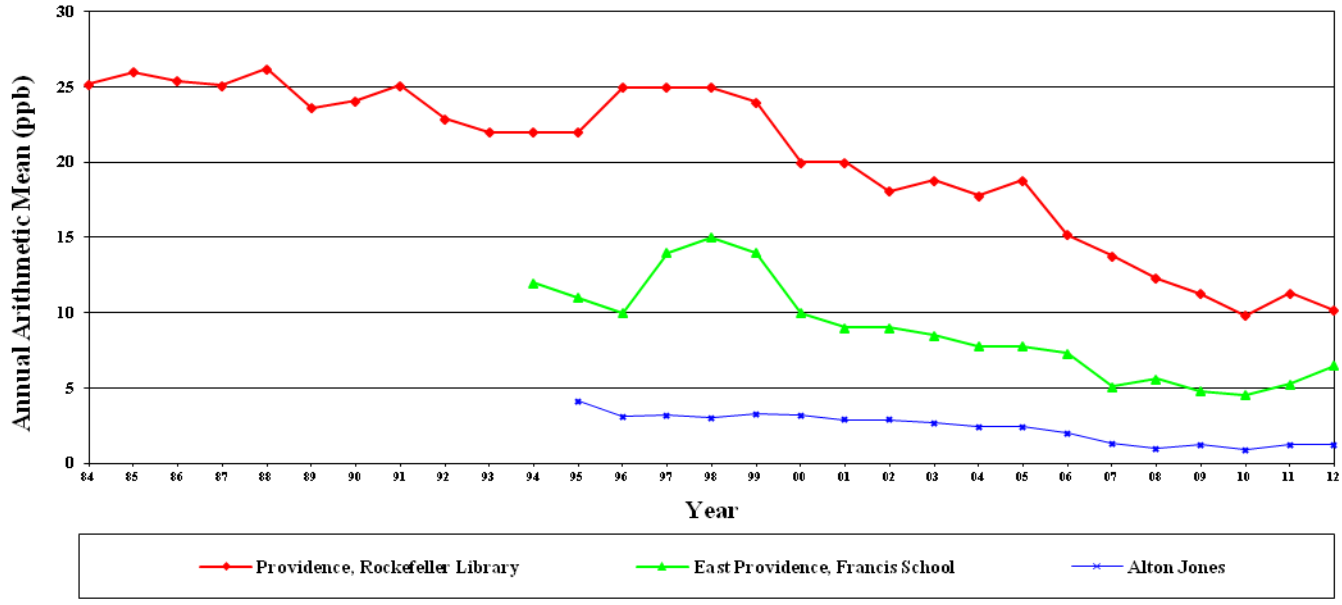
2012 Rhode Island
Carbon Monoxide
All Concentrations are in Units of Parts Per Million

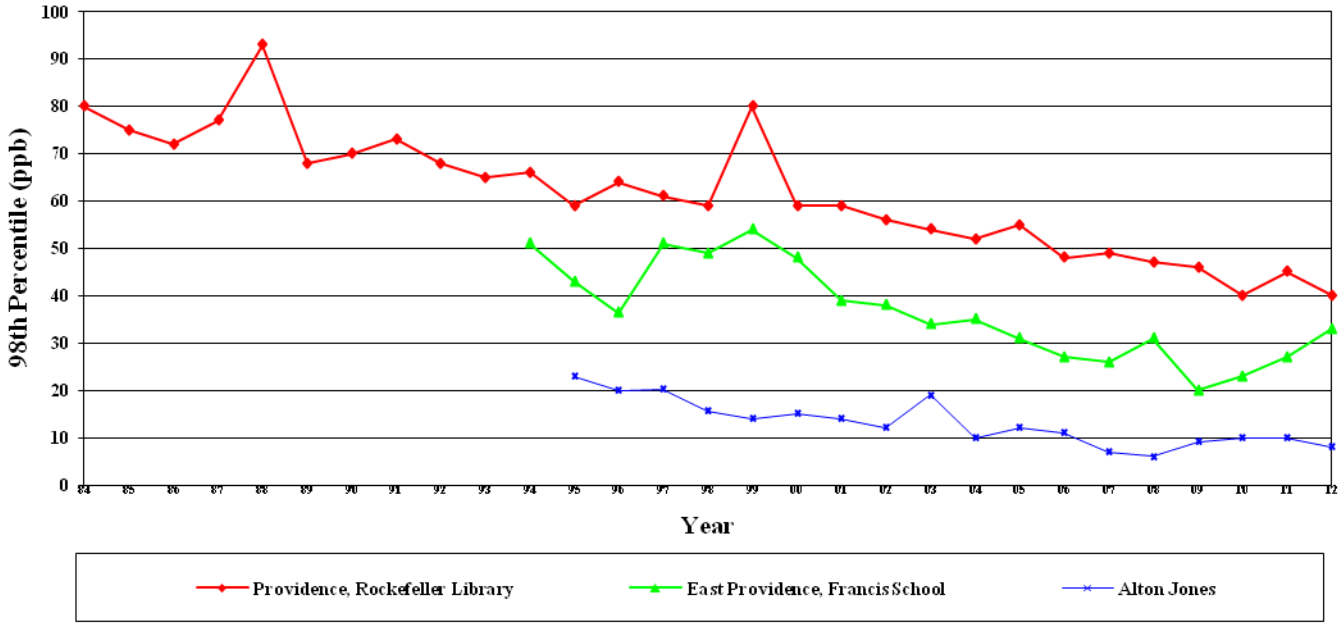
Site ID	County	City	Address	Duration	Obs.	First Max.	Second Max.
440071010	Providence	East Providence	Francis School, 64 Bourne Ave	1 HOUR	7796	1.6	1.5
440071010	Providence	East Providence	Francis School, 64 Bourne Ave	8-HR RUN AVG	7664	1.3	1.0

Rhode Island Sites - 2012 - Nitrogen Dioxide



Rhode Island Nitrogen Dioxide Data





NAAQS for Nitrogen Dioxide:

Annual Arithmetic Mean- 53 ppb (100 µg/m^3)

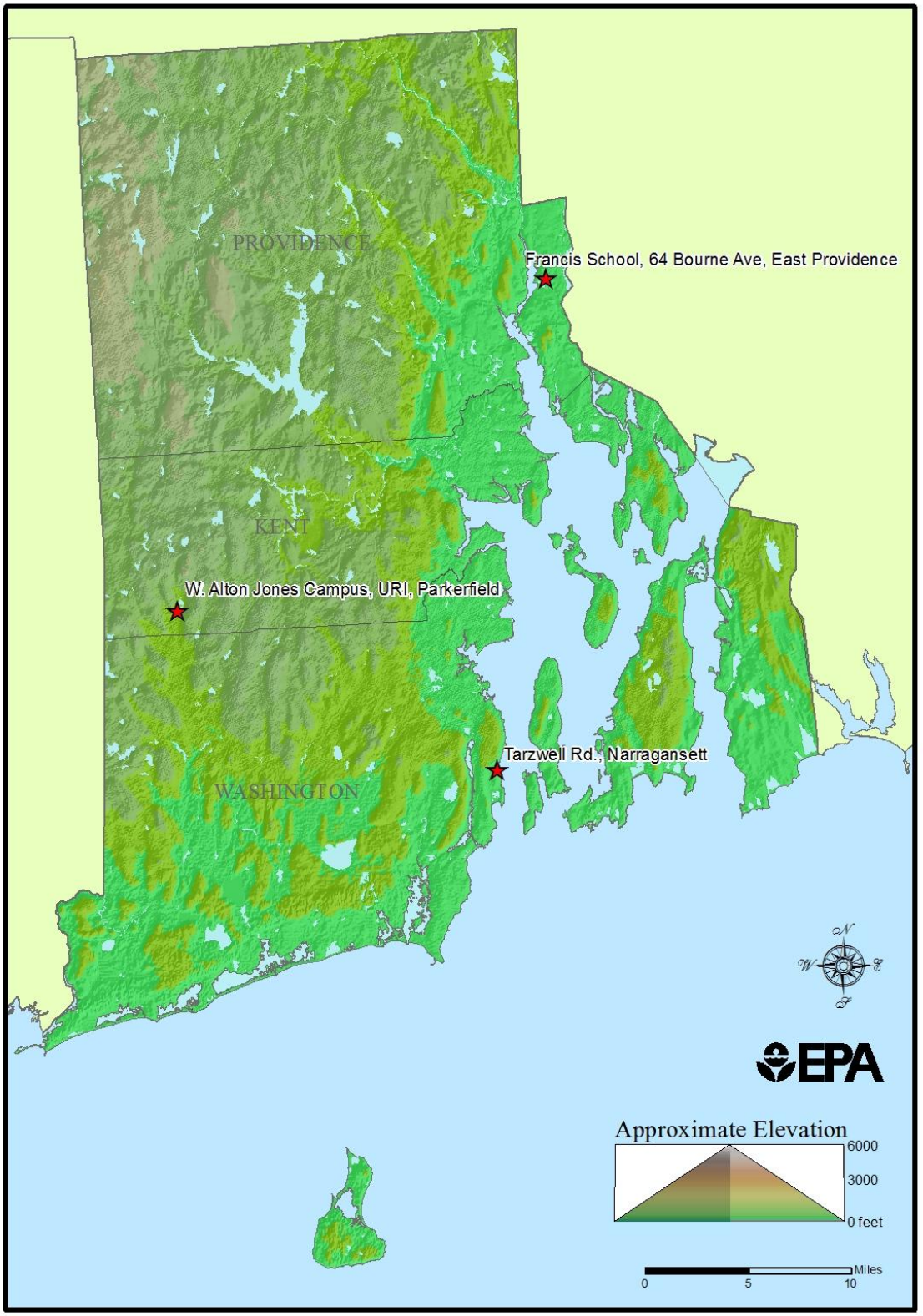
1-hour – 100 ppb (as of January 22, 2010) 98th percentile

2012 Rhode Island
Nitrogen Dioxide
All Concentrations are in Units of Parts Per Billion

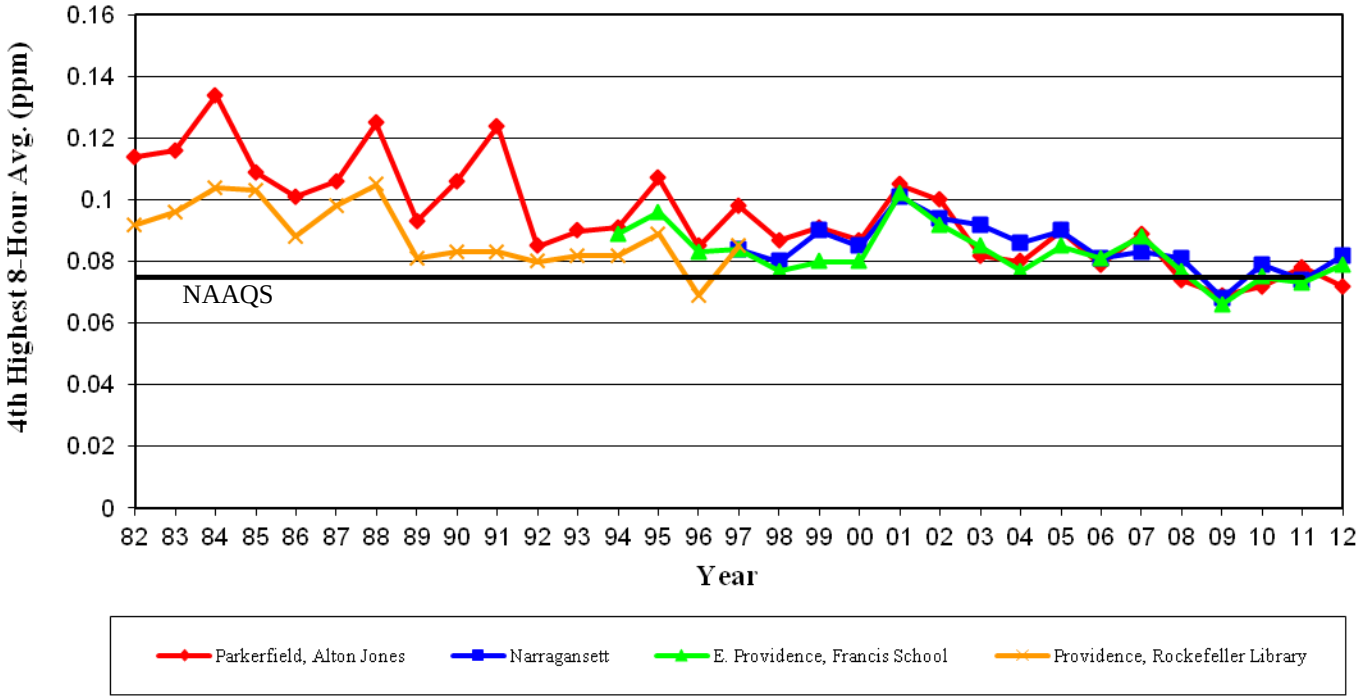
Site ID	County	City	Address	Duration	Obs.	First Max.	Second Max.	98th Percentile	Annual Arithmetic Mean	
440030002	Kent	Parkerfield	W. Alton Jones Campus URI	1 HOUR	4109	10	8	8	1.27	*
440070012	Providence	Providence	Rockefeller Library, Prospect Street.	1 HOUR	8069	48	44	40	10.15	
440071010	Providence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

* Indicates that the mean does not satisfy summary critiera

Rhode Island Sites - 2012 - Ozone



Rhode Island 8-Hour Ozone Data



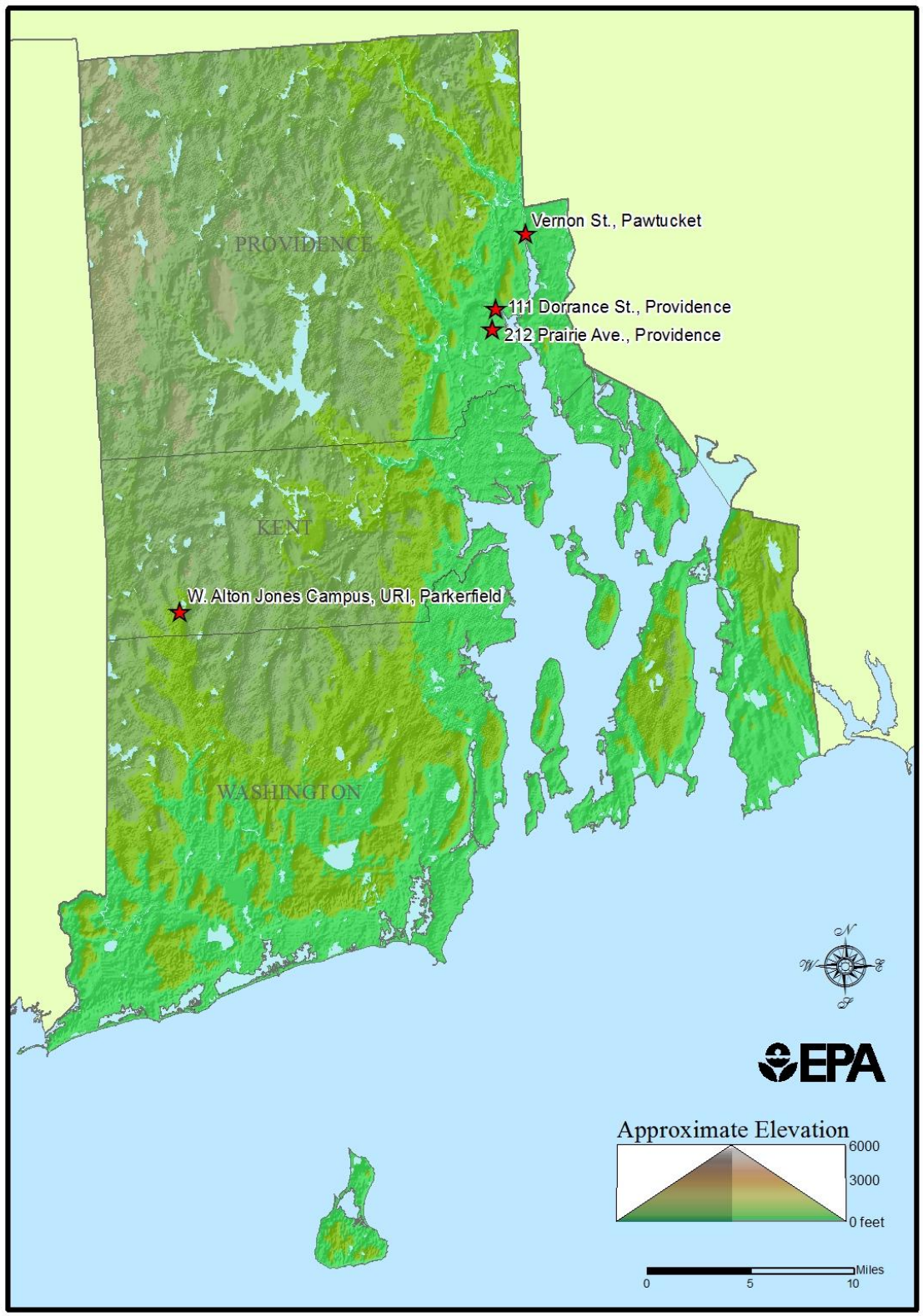
NAAQS for Ozone:
8-hour – 0.075 ppm (2008 std)

(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.)

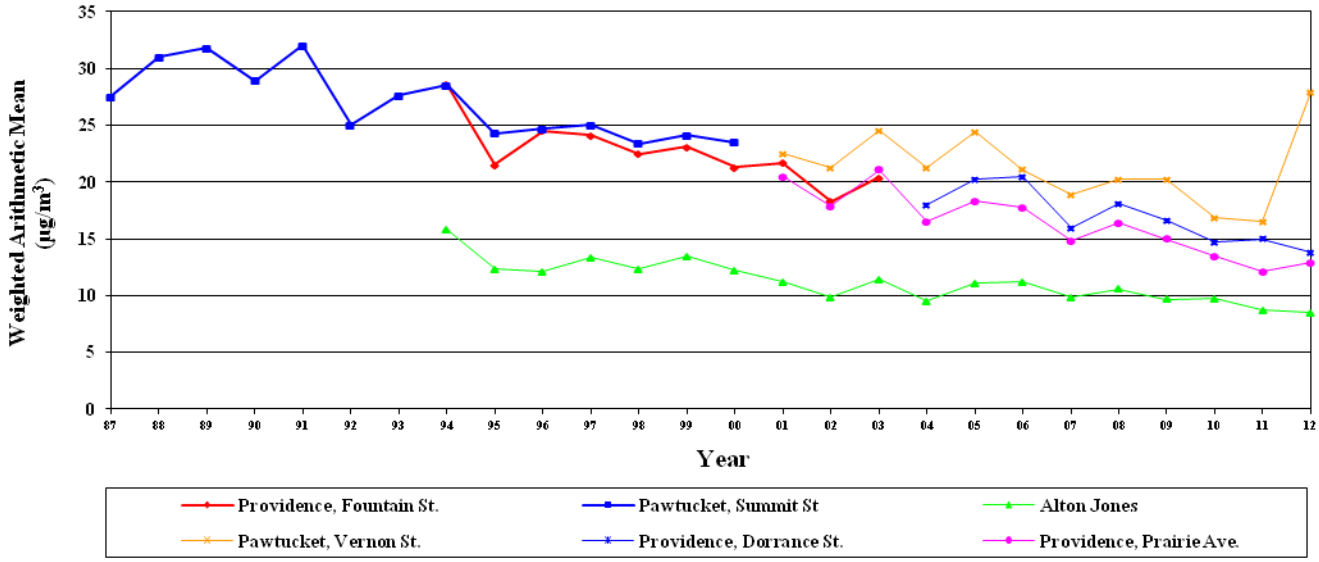
2012 Rhode Island
Ozone (8-Hour)
All Concentrations are in Units of Parts Per Million

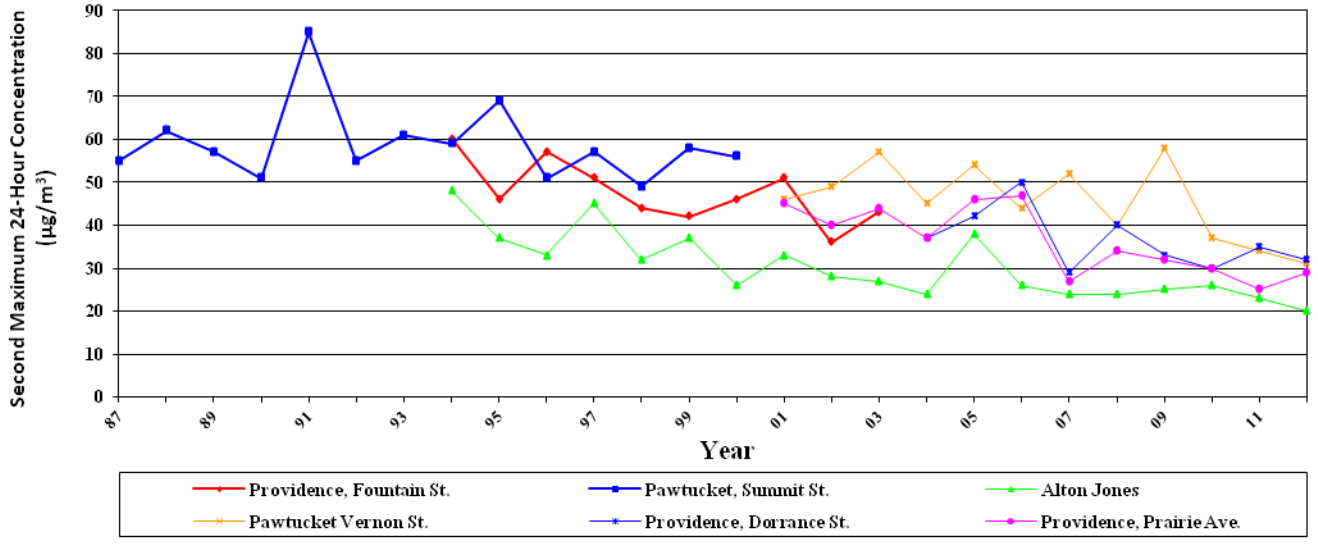
Site ID	County	City	Address	Duration	Obs.	First Max.	Second Max.	Third Max.	Fourth Max.	Actual Exceedances	Valid Days	Required Days	Percent Days
440030002	Kent	Parkerfield	W. Alton Jones Campus URI	8-HR RUN AVG	5701	0.08	0.078	0.075	0.072	2	181	183	99
440071010	Providence	East Providence	Francis School, 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_{10}) Data



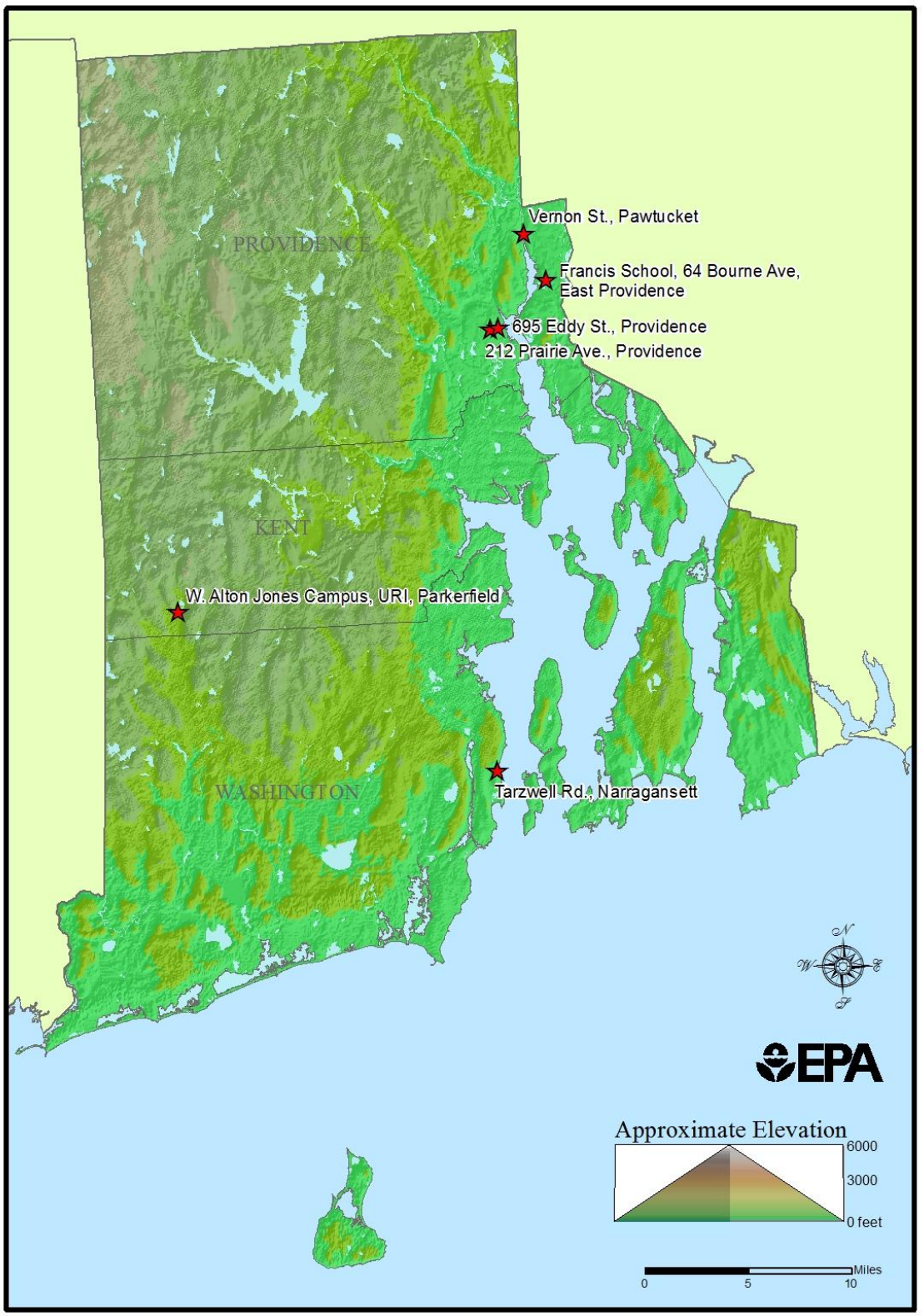


NAAQS for Particulate Matter less than 10 Microns:
24-hour- 150 µg/m^3

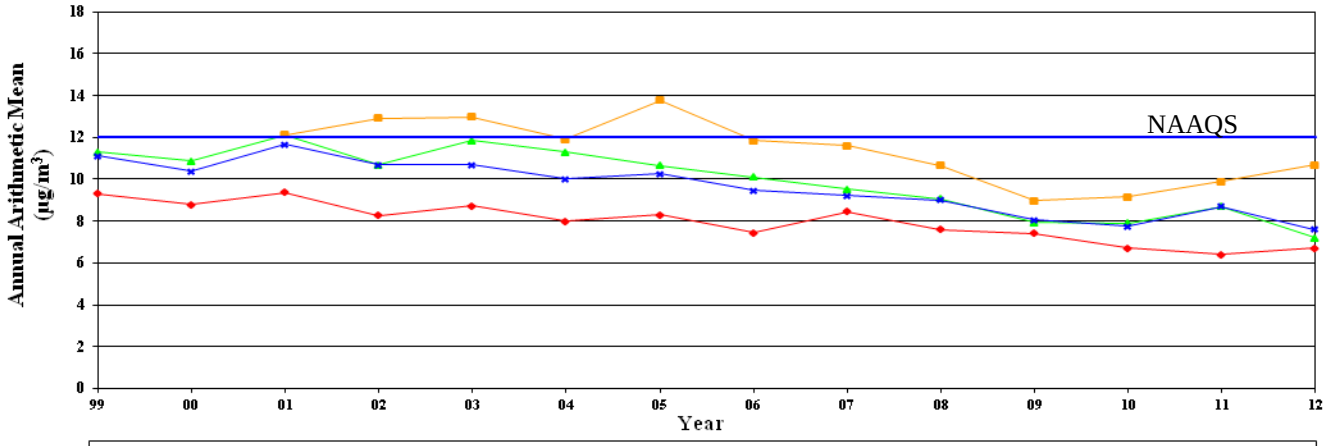
2012 Rhode Island
Particulate Matter < 10 Microns
All Concentrations are in units of ug/m^3

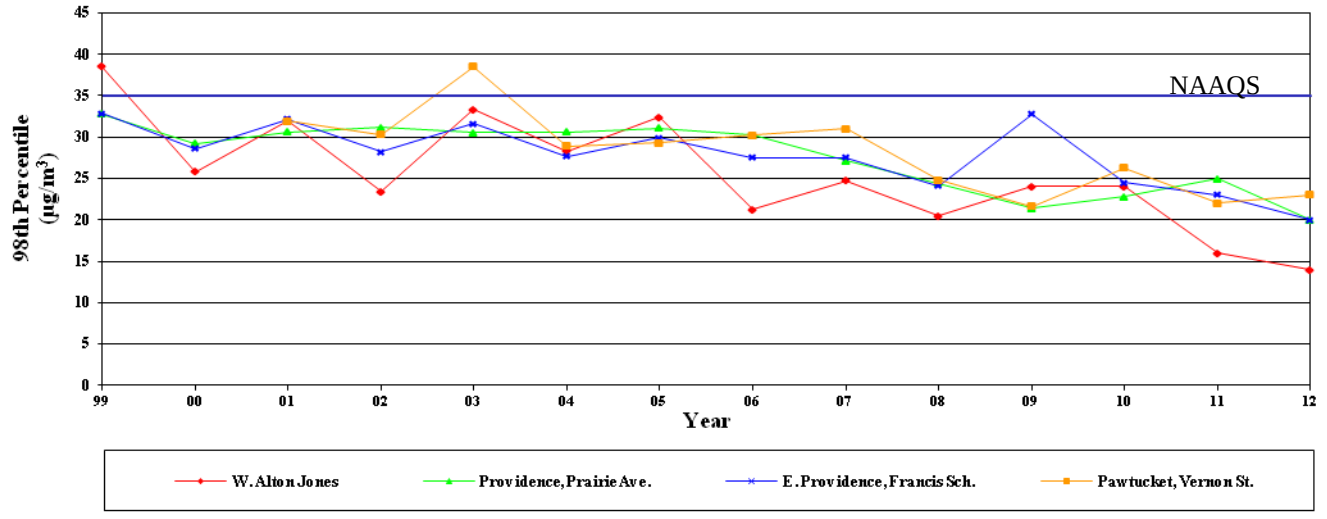
Site ID	POC	County	City	Address	Duration	Obs.	First Max.	Second Max.	Actual Exceedances	Weighted Arithmetic Mean
440030002	1	Kent	Parkerfield	W. Alton Jones Campus URI	24 HOUR	60	22	20	0	8.5
440070022	1	Providence	Providence	212 Prairie Ave	24 HOUR	56	30	29	0	12.9
440070022	2	Providence	Providence	212 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 ($PM_{2.5}$) Data





NAAQS for Particulate Matter less than 2.5 Microns:

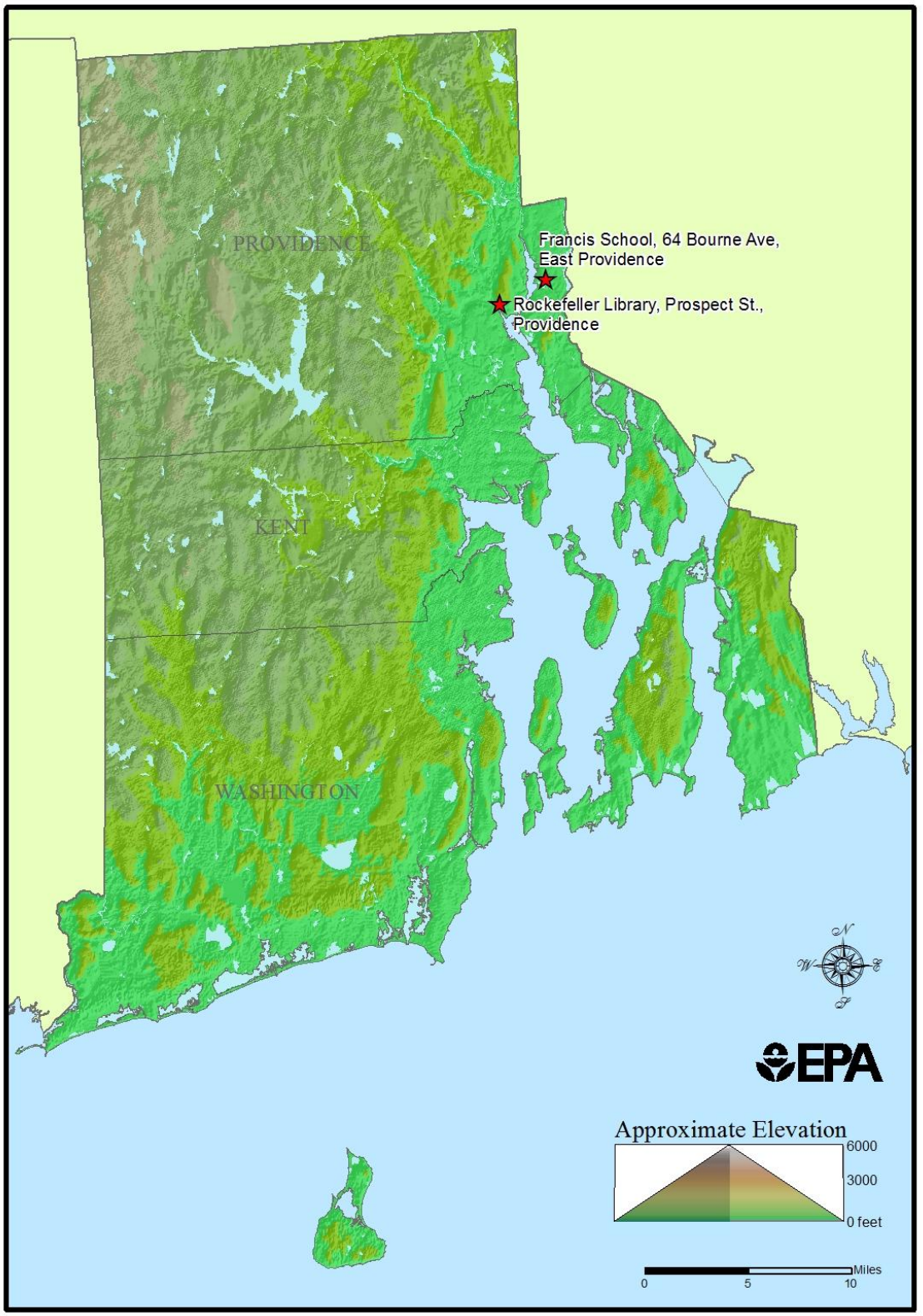
Annual: the 3-year average of the Annual Arithmetic Mean - 12.0 µg/m^3 (Effective March 18, 2013)

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

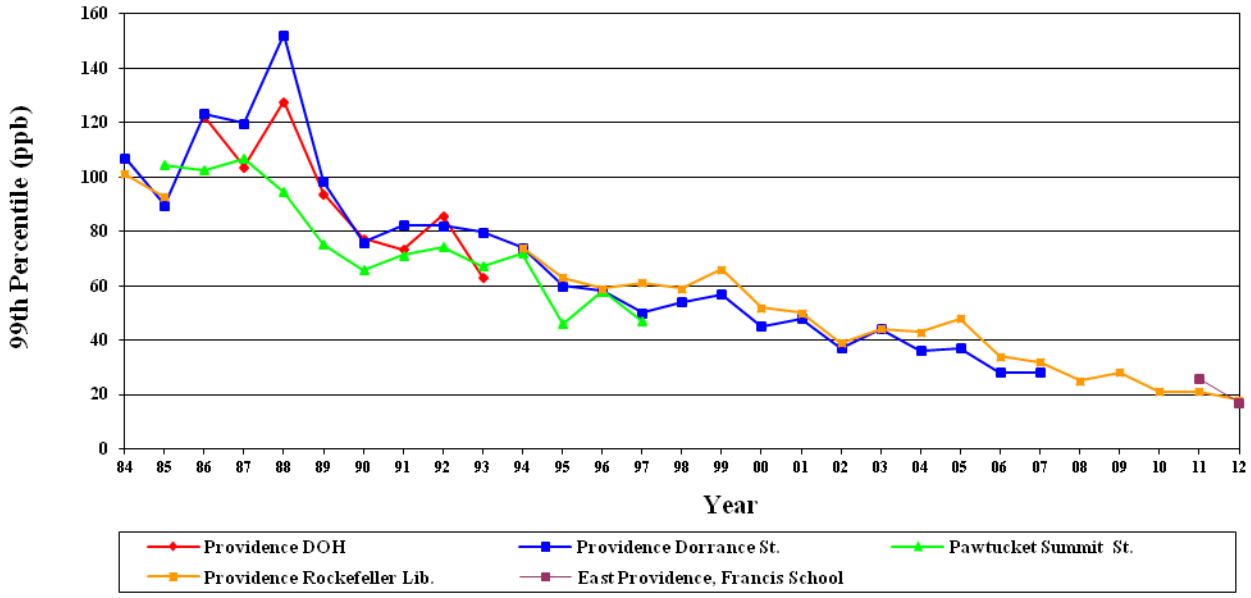
2012 Rhode Island
Particulate Matter < 2.5 Microns
All Concentrations are in µg/m^3 Local Conditions
(24 HOUR indicates FRM, 24-HR BLK AVG indicates continuous FEM)

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:

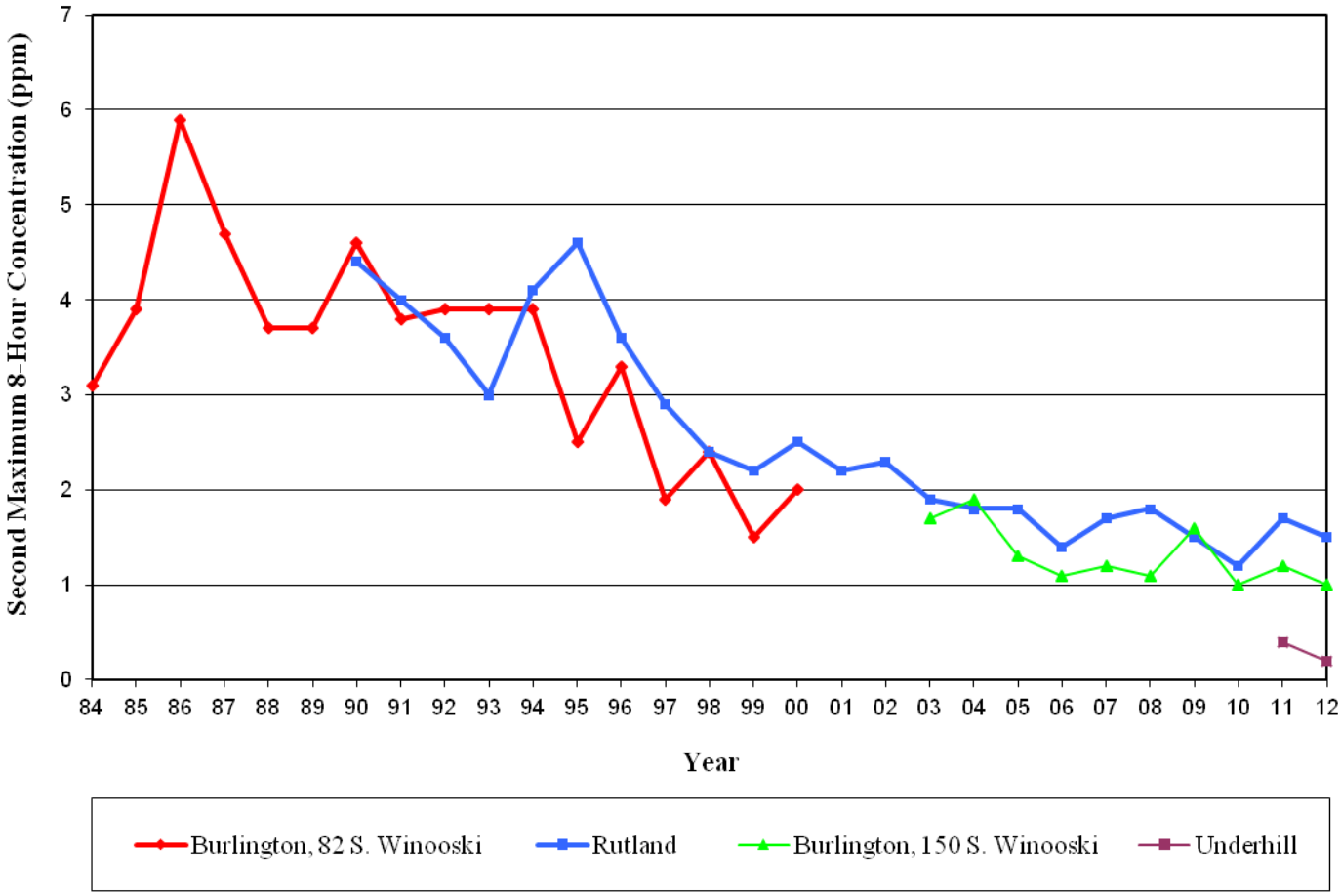
Primary: 1-hour -75 ppb (0.075 ppm) 99th percentile

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

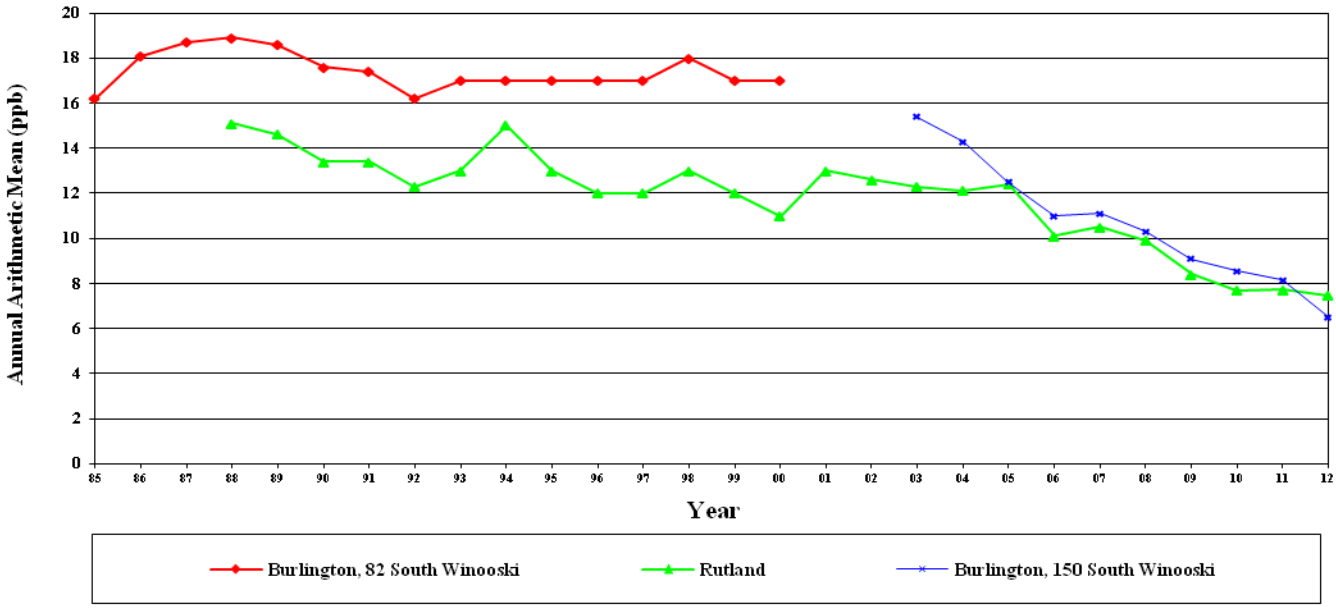
8-hour – 9 ppm, not to be exceeded more than one per year

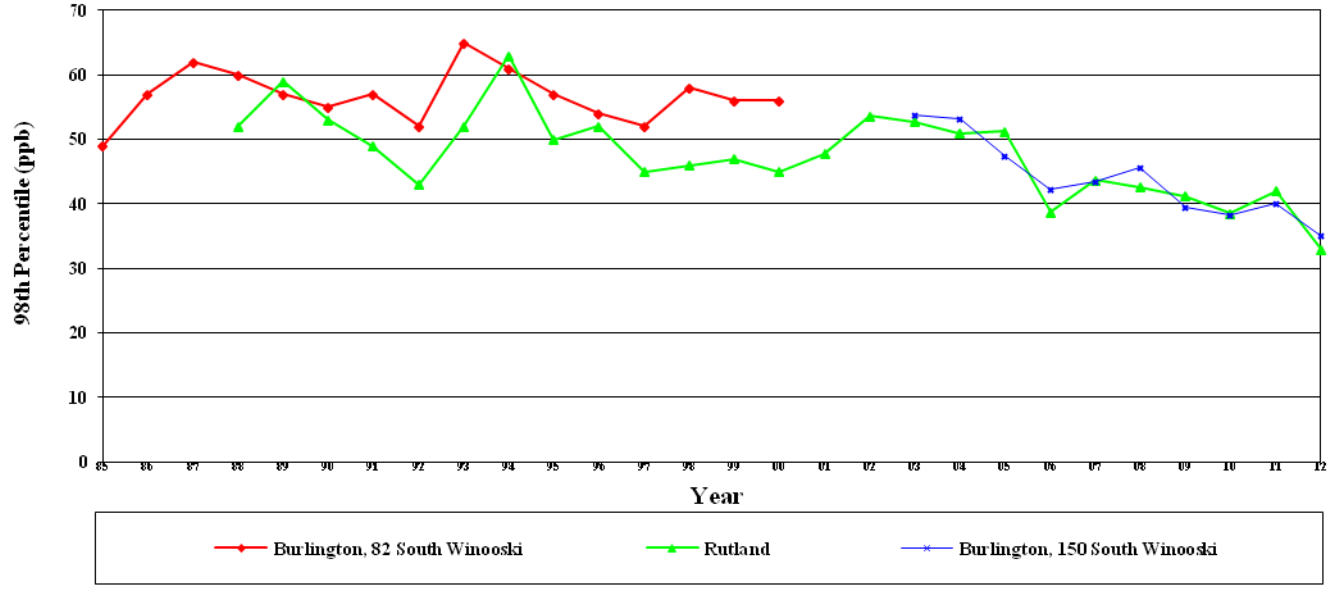
2012 Vermont
Carbon Monoxide
All Concentrations are in Units of Parts Per Million

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^3)

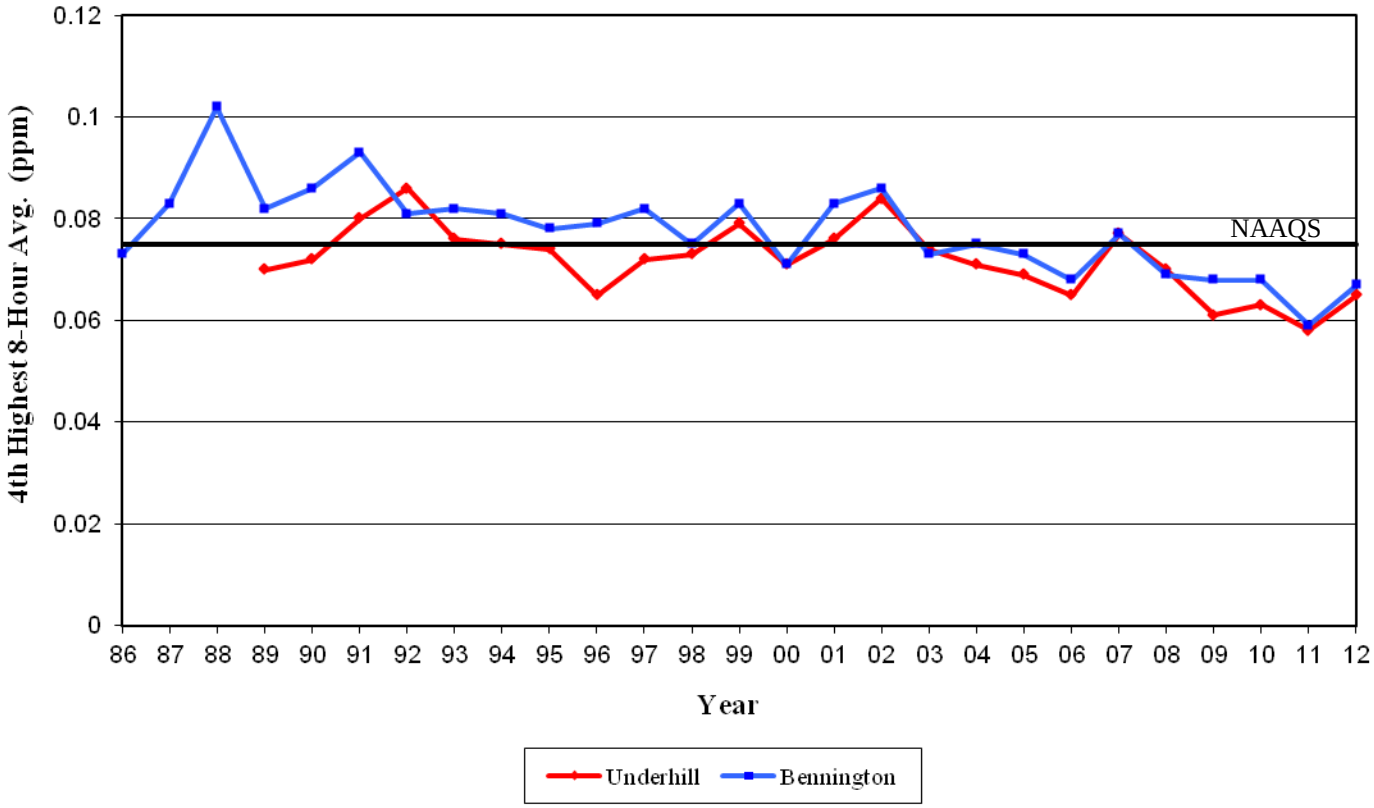
1-hour – 100 ppb (as of January 22, 2010) 98th percentile

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)

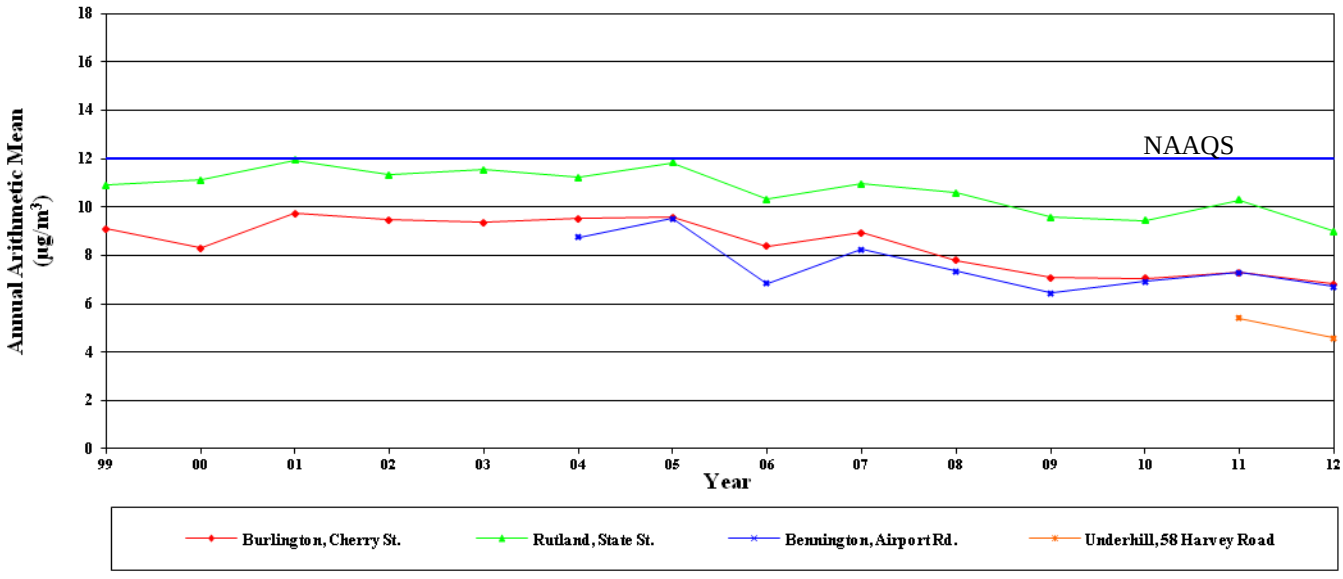
(To attain this 0.075 ppm standard, the 3-year average of the fourth-highest daily maximum 8-hour average ozone concentrations measured at each monitor within an area over each year must not exceed 0.075 ppm. This graph represents the 4th highest value for each year for each monitor depicted. Thus, being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

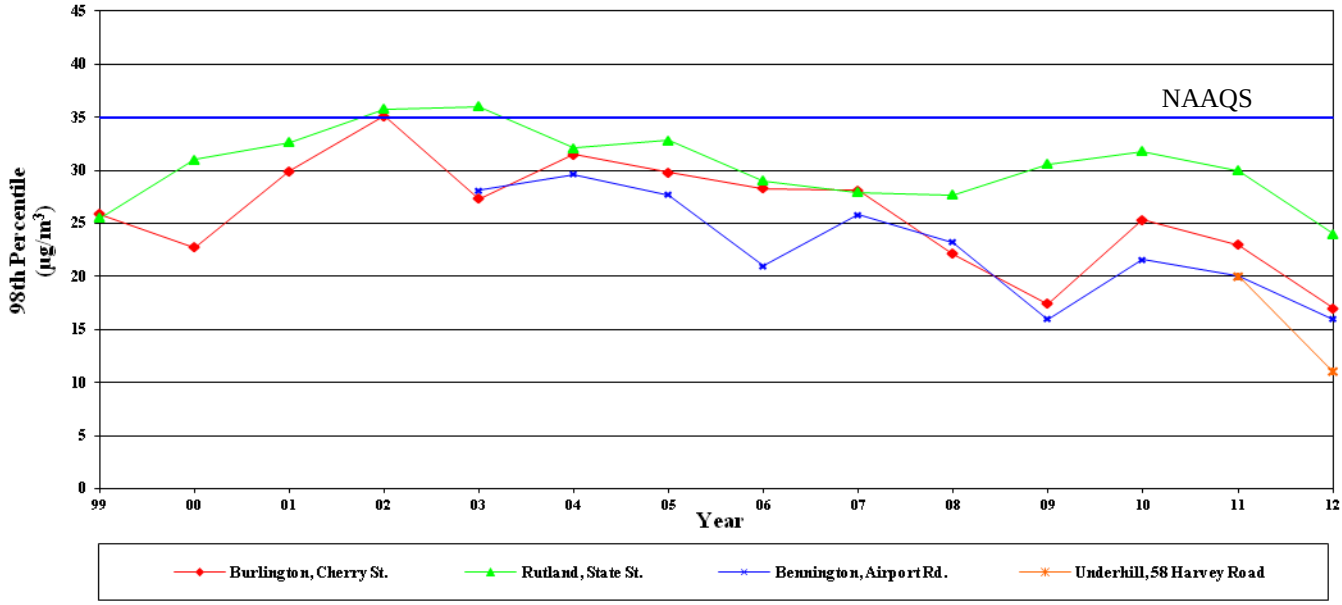
2012 Vermont
Ozone (8-Hour)
All Concentrations are in Units of Parts Per Million

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 ($PM_{2.5}$) Data





NAAQS for Particulate Matter less than 2.5 Microns:

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

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

2012 Vermont

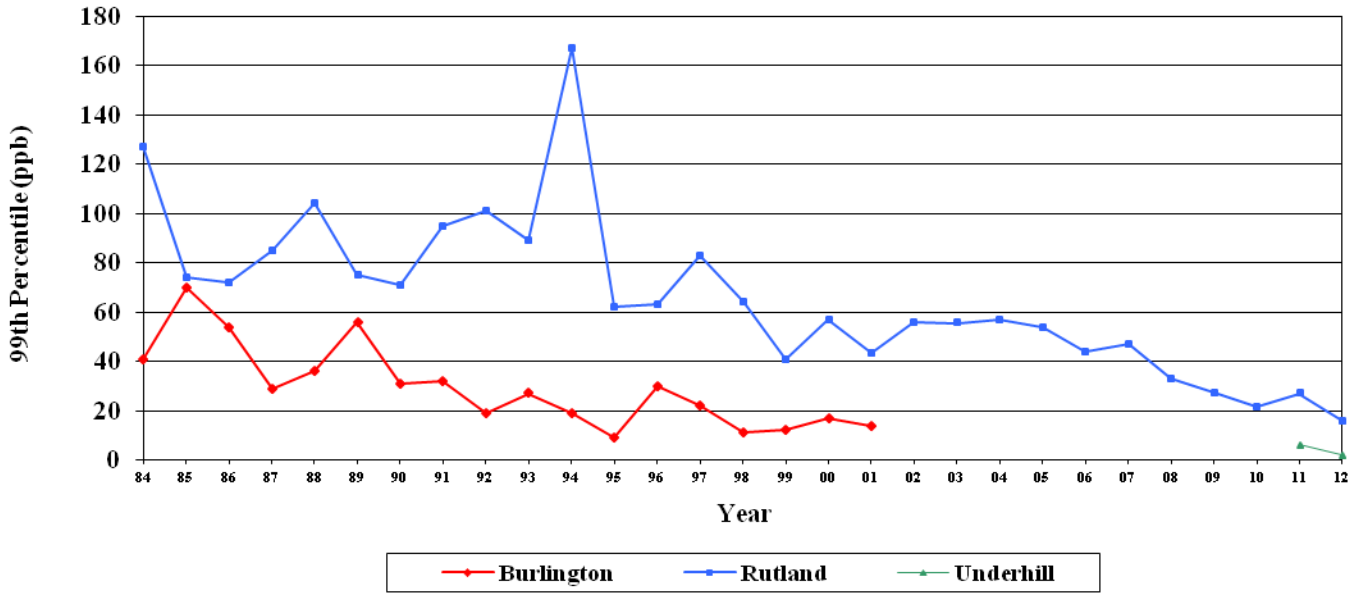
Particulate Matter < 2.5 Microns

All Concentrations are in units of ug/m^3

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) 99th 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

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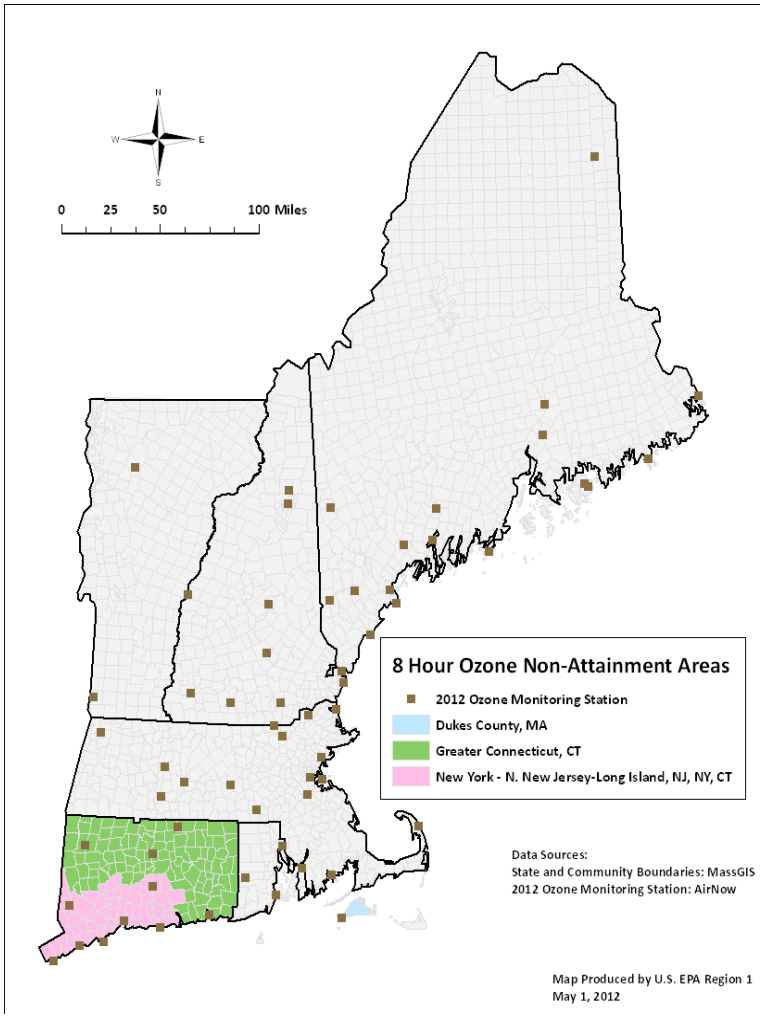

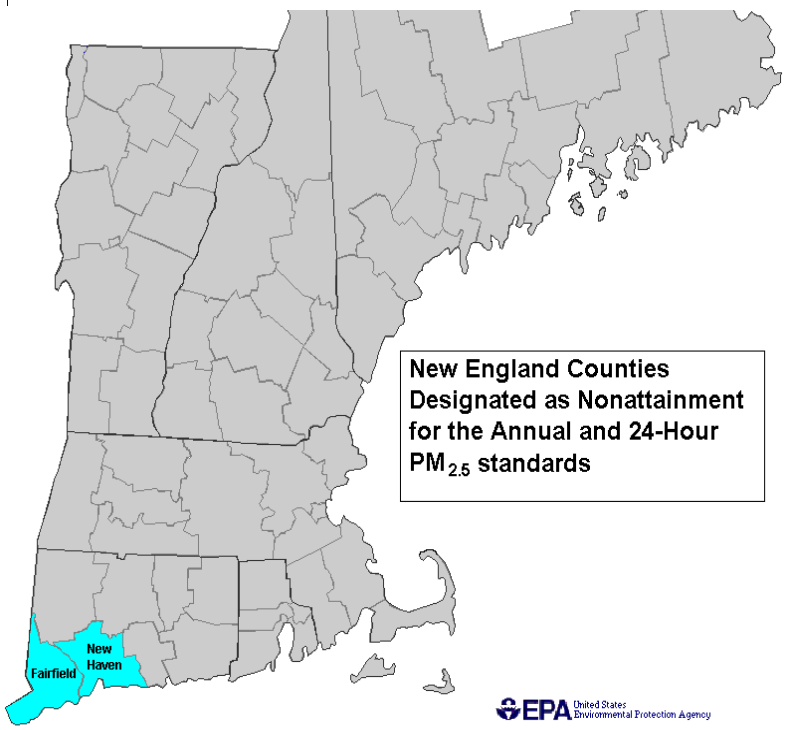

*Effective October 24, 2013, the Connecticut counties designated above as nonattainment for $PM_{2.5}$ will be redesignated to attainment.

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