# Annual Air Monitoring Plan 2015

**Maine Department of Environmental Protection**
**Bureau of Air Quality**
**July 1, 2014**

## Introduction

In the interest of preventing and controlling air pollution in Maine, the Maine Department of Environmental Protection (DEP) monitors ambient air quality in the State of Maine. The Department's Bureau of Air Quality operates and maintains most of the ambient air quality monitors located in Maine. Additional monitoring is conducted by several federal agencies such as the Environmental Protection Agency, the National Park Service, the U.S. Fish and Wildlife Service as well as by several of the Indian Tribes within Maine. In 2007 Maine entered into an agreement with three of the Maine tribes conducting air monitoring to form a common Primary Quality Assurance Organization (PQAO). The members share a variety of quality assurance plans and procedures. The members of the PQAO are the State of Maine, the Aroostook Band of Micmacs, the Passamaquoddy Tribe at Pleasant Point and the Penobscot Nation. The monitoring of air quality is generally conducted to determine the attainment status of various pollutants in regions of the state, to document trends that may be occurring in the levels of various pollutants around the state and to provide data for forecasting air quality conditions for the citizens of Maine and visitors to the state. The data is also used to support the Maine DEP licensing and permit programs.

Maine has been monitoring air quality since the early 1970s. The monitoring programs have been evolving since then as standards have changed, pollutants of concern have changed and the technology to monitor these pollutants has changed. The air pollution that was monitored early on was primarily from local sources. As the local sources were controlled their impact was lessened and the monitoring began to look more at the long range transport of some of the pollutants. Pollutants monitored now may originate in the large metropolitan areas down the east coast of the US or it may be from some of the industries located in the central part of the US. Some pollutants monitored may even come from the other side of the world such as particulates from volcanic eruptions, large forest fires or less controlled sources in some of the developing countries.

Maine is also a very large state with varying topography. What impacts one area of the state may be totally different from what impacts another area. Aroostook County may see higher particulate levels because of the large farming operations and the type of soil whereas southern Maine will see higher ozone levels because of the impact of the urban areas to the southwest. Mountain valleys in the western part of the state may see higher pollution levels at times because of inversions which trap the pollution in the valleys for extended periods whereas the coastal locations may have better flushing of pollutants with the fairly constant onshore and offshore winds.

Maine must also deal with changing federal regulations. As more data is collected and more health studies are done the impact of various pollutants needs to be reviewed and standards and controls need to be updated to reflect those changes. The EPA is required to review the National Ambient Air Quality Standards (NAAQS) every five years. Some of those reviews had been delayed for various reasons for a number of years, and even the NAAQS reviews that had been completed and implemented were often challenged in court, which meant even more delays. However, in recent years EPA has made significant progress in completing timely reviews of the NAAQS, and updating them as appropriate. Currently, the air quality standard for ozone is under review and it is likely EPA will make it more stringent, which may mean additional monitoring requirements will need to be implemented. The current National Ambient Air Quality Standards are summarized in the table on page 2.

In 2011, the First Regular Session of the Maine Legislature enacted Public Law 206 Section 19 which revised 38 MRSA Section 584-A, Ambient Air Quality Standards. The amended law essentially made all State ambient air quality standards consistent with the federal ambient air quality standards. In addition, the law repealed all state ambient air quality standards that were not federal standards including toluene, perchloroethylene, hydrocarbons, and chromium.

# National Ambient Air Quality Standards (NAAQS)

(as of May 2014)

| Pollutant [final rule citation] | | Primary/ Secondary | Averaging Time | Level | Form |
|---|---|---|---|---|---|
| Carbon Monoxide [76 FR 54294, Aug 31, 2011] | | Primary | 8-hour | 9 ppm | Not to be exceeded more than once per year. |
| | | | 1-hour | 35 ppm | |
| Lead [73 FR 66964, Nov 12, 2008] | | Primary and Secondary | Rolling 3 month average | 0.15 µg/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 | 98$^{th}$ 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 Dec 14, 2012 | $PM_{2.5}$ | Primary | Annual | 12 µg/m$^3$ | Annual mean, averaged over 3 years. |
| | | Secondary | Annual | 15 µg/m$^3$ | Annual mean, averaged over 3 years. |
| | | Primary and Secondary | 24-hour | 35 µg/m$^3$ | 98$^{th}$ percentile, averaged over 3 years. |
| | $PM_{10}$ | Primary and Secondary | 24-hour | 150 µg/m$^3$ | Not to be exceeded more than once per year on average over 3 years. |
| Sulfur Dioxide [75 FR 35520, Jun 22, 2010] [38 FR 25678, Sept 14, 1973] | | Primary | 1-hour | 75 ppb (4) | 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/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 NO2 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 SO2 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.

The current air monitoring programs in Maine are primarily geared to monitoring ozone and its precursors and fine particulates. Each year Maine is required to submit by July 1 the proposed monitoring plan for the next calendar year. In 2006 EPA also required states to make their proposed plan available for a 30 day comment period prior to submittal to EPA. While an annual monitoring plan is important it is constantly subject to change as standards are revised, new pollutants of concern are identified, monitoring sites are no longer acceptable to property owners and staffing and budget cuts affect the ability to meet a program's objective. Consequently, the monitoring plan proposed in this document is our best effort to project what we will be able to do next year given our current standards, staffing and budget constraints.

**Network Review**

The most prevalent air quality issue in Maine, and the one that consumes the most resources, is ozone pollution. Over the years, Maine has operated a number of monitoring sites throughout the state in an attempt to define the extent of the problem. Currently under federal review, proposals may further lower the standard and create the need for additional monitoring. The particulate network has also been evolving since it was established in 1999 when fine particulate monitoring began. This standard was the most recently reviewed by EPA and its primary annual level was lowered from 15 ug/m$^3$ to 12 ug/m$^3$, and a secondary annual level at 15 ug/m$^3$ was established.

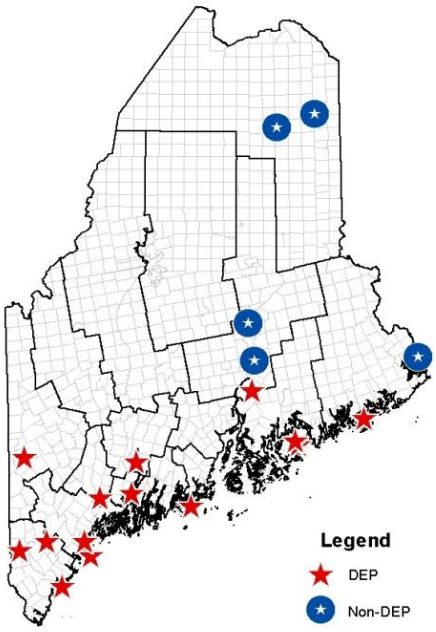
Maine also conducted a review of air toxics in the state and as a result of that review established a priority list of air toxics. As additional data has become available that priority list has been modified. As resources are available Maine has been attempting to establish background concentrations of several of the pollutants on the list.

The following sections will detail the individual networks for the various parameters that are being monitored in Maine and any changes that are proposed as well as identifying future needs for monitoring.

**Monitoring Networks**

***Ozone Network***

Maine DEP currently operates 14 ozone monitoring sites in the state. In addition, EPA operates two ozone sites (at Howland and Ashland) as part of the Clean Air Status and Trends Network (CASTNet), and Maine Indian Tribes operate three additional sites. Three of the Maine DEP sites operate year-round while the others operate during the ozone season. The current ozone season for Maine runs from April through September. With a lower anticipated standard and some historical high concentrations in late March most of the Maine sites now operate from March through September, weather permitting. Most of the Maine sites are scattered throughout the state with the heaviest concentration of sites along the coast and in southern Maine. The highest concentrations tend to occur along the coast as a result of plumes of contaminated air from metropolitan areas to the south moving along the coast and creating ozone as those pollutants interact with each other in the presence of sunlight. The other sites in Maine are operated to collect data used in the mapping and forecasting programs that provide air quality data and alerts when necessary to the people in Maine.



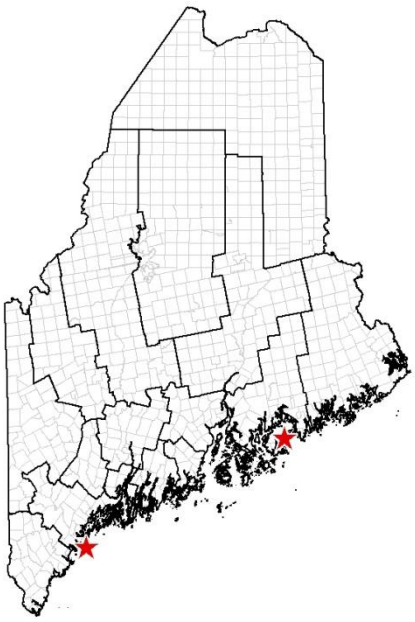
The Bowdoinham ozone monitoring site, situated on the Kennebec River about mid-way between Gardiner and Fort Popham, was intended to provide additional insight about ozone fate and transport along the Maine mid-coast and river basins. Ozone levels at Bowdoinham closely follow those obtained at Gardiner and at the Durham site to the west near the Androscoggin River. Thus it is felt that relocating the Bowdoinham monitor and shelter to a location on the coast would be more beneficial to the program. For these reasons, this is a low priority site. Attenuated results obtained from ozone sampling in the woods not far from the beach at the discontinued Reid State Park site emphasize the need for an open path to the ocean if any future monitoring site in the area is to be useful. Attempts to obtain permission to establish an ozone site in a suitable location near the historical location at Small Point in Phippsburg have not been successful. The community along the open coast is not enthusiastic about any prospects of seeing a long term ozone shelter situated in their front yards. The Bowdoinham Site will remain in operation until a suitable coastal site is found.

There continues to be concern about the adequacy of the current site in North Lovell because it is sited in a more sheltered location and may not see the higher levels expected in a more open and exposed location. If a new site can be located it will be operated concurrently with the North Lovell site for a season to get a comparison of ozone levels in the two locations. Until a new site can be found, the current ozone network is expected to be maintained for CY 2015.

| **Site Address** | **Site Type** | **Monitoring Objective** | **Sampling Frequency** |
|---|---|---|---|
| Ashland - Loring AFB | CASTNet | Background | Continuous |
| Bar Harbor - McFarland Hill | NCore | Transport, Background | Continuous |
| Bar Harbor - Top of Cadillac Mountain | SLAMS | Transport | Continuous - Seasonal |
| Bowdoinham - Brown's Point Road | SPMS | Max. Conc., Transport | Continuous - Seasonal |
| Cape Elizabeth - Two Lights State Park | SLAMS | Transport | Continuous - Seasonal |
| Durham - Fire Station - Route 9 | SPMS | Max. Concentration | Continuous - Seasonal |
| Gardiner - Pray Street School | SLAMS | Max. Conc., Transport | Continuous - Seasonal |
| Holden - Rider Bluff | SLAMS | Max. Conc., Transport | Continuous - Seasonal |
| Howland - Seed Orchard Site | CASTNet | Background | Continuous |
| Indian Island - Penobscot Nation | Tribal | - | Continuous |
| Jonesport - Public Landing | SPMS | Max. Concentration | Continuous - Seasonal |
| Kennebunkport - Parsons Way | SLAMS | Max. Conc., Transport | Continuous - Seasonal |
| North Lovell - DOT Garage | SPMS | Transport | Continuous - Seasonal |
| Perry - Pleasant Point/Sipayik, 184 County Road | Tribal | - | Continuous |
| Port Clyde - Marshall Point Lighthouse | SLAMS | Max. Conc., Transport | Continuous - Seasonal |
| Portland - Deering Oaks Park, 356 State St. | SPMS | High Pop. Exposure | Continuous |
| Presque Isle - 8 Northern Road | Tribal | - | Continuous |
| Shapleigh - Ball Park, West Newfield Road | SPMS | Max. Conc., Transport | Continuous - Seasonal |
| West Buxton - Plains Road Fire Dept. | SPMS | Transport | Continuous |

NCore - National Core; SLAMS - State & Local Air Monitoring Station; SPMS - Special Purpose Monitoring Station

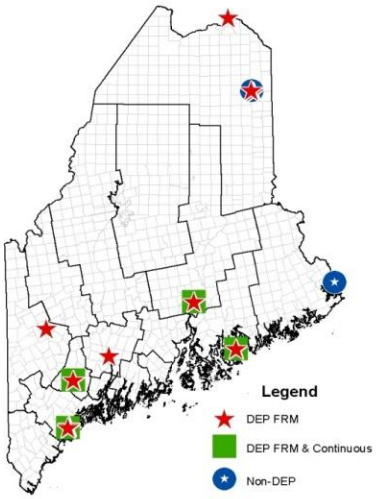
***PAMS Network***



The Photochemical Assessment Monitoring Stations (PAMS) network was originally established in 1993. The monitoring regulations for PAMS provide for the collection of an "enhanced" ambient air quality database which can be used to better characterize the nature and extent of the ozone problem, aid in tracking Volatile Organic Compounds (VOC) and Nitrogen Oxides(NOx) emission inventory reductions, assess air quality trends, make attainment/non-attainment decisions, and evaluate photochemical grid-model performance. The ME DEP operates two PAMS in Maine. These sites are required to be operational for the June – August period but generally operate for May and September also. PAMS are designed to measure the precursors responsible for the development of ozone and were initially required for serious or greater non-attainment areas. Both of the sites in Maine were required as a result of serious non-attainment areas in other states. The site in Cape Elizabeth is considered an extreme downwind site for the Greater Connecticut non-attainment area and the Cadillac Mountain site in Acadia National Park is considered an extreme downwind site for the Boston non-attainment area. As additional controls have been implemented and air quality has improved the serious non-attainment areas have been reduced or eliminated. With the anticipated lowering of the ozone standard the status of some of these areas may change and continued monitoring of the precursors remains important. Personnel changes and a reassessment of resources necessitate the closure of the PAMS operation (i.e. VOC and $NO_y$) at Cadillac Mountain at the end of the CY 2014 season. The equipment at Cadillac will be useful in the development of automated methods to measure carbonyls like formaldehyde which will enhance our existing Air Toxics, Wood Smoke and future Reformulated Gasoline studies.

| **Site Address** | **Site Type** | **Monitoring Objective** | **Sampling Frequency** |
|---|---|---|---|
| Bar Harbor - Top of Cadillac Mountain | PAMS | Transport | Continuous – Seasonal - Ending 9/14 |
| Cape Elizabeth - Two Lights State Park | PAMS | Transport | Continuous - Seasonal |

***PM 2.5 Network***




Maine began a $PM_{2.5}$ monitoring program using filter based monitors that met the Federal Reference Method (FRM) in 1999 with 15 sites started up during the first year of operation. After three years of data were collected, which demonstrated compliance with the standard at all of the sites, some of the sites were relocated or the monitors were modified to collect $PM_{10}$ data. Currently Maine is monitoring for $PM_{2.5}$ using the filter based FRM samplers at ten sites. All of the current sites are in compliance with the standard and are maintained to gather additional trend data, to document future attainment status and the filters can be used in additional analyses to determine levels of some of the air toxics that are on the priority list. No changes are being proposed for CY 2015.

Maine also initiated continuous monitoring of $PM_{2.5}$ in 2000 using the Tapered Element Oscillating Microbalance (TEOM) method. Sites were initially located in Bangor, Lewiston and Portland. Since that time an additional permanent monitor has been located in Bar Harbor and a temporary one (no longer operating) was in Greenville as part of a special wood smoke study. The Passamaquoddy Tribe operates a monitor in Perry and the Micmac Tribe operates a monitor in Presque Isle. The TEOMs generate hourly average data that is also very useful in helping to forecast air quality. While these particular TEOMs were not an EPA approved Federal Equivalent Method (FEM), Maine did not pursue doing a required analysis to exclude the use of their data for comparison with the $PM_{2.5}$ standards.

The TEOMs were nearing the end of their expected life cycle, so in 2012 new continuous monitors known as Beta Attenuation Monitors (BAMs) were purchased to replace the TEOMs in Portland, Lewiston and Bangor in late 2012 and early 2103. Two more BAMs were purchased in 2013, one which replaced the TEOM in Bar Harbor and the other was added to supplement the filter-based FRM sampler in Madawaska. The BAMs are an EPA approved FEM, so Maine DEP will be demonstrating compliance with the $PM_{2.5}$ NAAQS using both the filter-based FRM and the continuous BAM FEM monitors. Changes to the network anticipated to be in place for CY 2015 are to install three additional BAMs at: 1) the Rumford site to meet a long standing interest of having a western mountain valley area site collecting continuous data for use in better forecasting of particulate levels under specific weather conditions, and to continue our pursuit of studying wood smoke emissions, primarily from residential heating sources using wood-based fuels; 2) the Riverside site in Presque Isle, also to provide data for use in better forecasting of particulate levels under specific weather conditions for that part of the State; and 3) the third BAM will be used in a second wood smoke study (follow-up to the Greenville study) at a likely western Maine location yet to be determined. Plans are to run a BAM prior to initiating a full-fledged multi-pollutant effort at a wood smoke prone municipality.

Lastly, we are continuing to collaborate with the Penobscot Nation to setup and operate a TEOM at their Carrabassett Valley site.

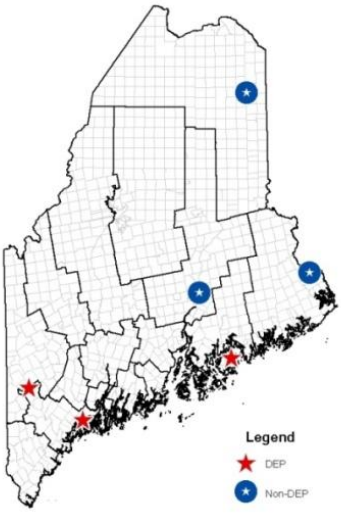
| **Site Address** | **Site Type** | **Monitoring Objective** | **Sampling Method and Frequency** |
|---|---|---|---|
| Augusta – Lincoln Street School | SPMS | 200K Pop. Coverage | FRM, every 6 days |
| Augusta – Lincoln Street School | SPMS | Collocated | FRM, every 12 days |
| Bangor – Kenduskeag Pump Sta. | SPMS | AQI Forecasting/Mapping | FEM, continuous |
| Bangor – Kenduskeag Pump Station | SLAMS | 200K Pop. Coverage | FRM, every 3 days |
| Bar Harbor – McFarland Hill | NCore | Transport | FRM, every 3 days |
| Bar Harbor – McFarland Hill | SPMS | Mapping | FEM, continuous |
| Lewiston – Country Kitchen Lot | SLAMS | 200K Pop. Coverage | FRM, every 6 days |
| Lewiston – Country Kitchen Lot | SPMS | Mapping | FEM, continuous |
| Madawaska – Public Safety Bldg. | SLAMS | High Pop. Exposure | FRM, every 3 days |
| Madawaska – Public Safety Bldg. | SPMS | AQI Forecasting/Mapping | FEM, continuous |
| Perry - Pleasant Point/Sipayik, 184 County Road | Tribal | Mapping | TEOM, continuous |
| Portland – 356 State Street | SLAMS | MSA of 200-500K | FEM, continuous |
| Portland – 356 State Street | SLAMS | Collocated | FRM, every 12 days |
| Portland – 356 State Street | SPMS | Mapping | FEM, continuous |
| Portland – Tukey's Bridge | SPMS | High Traffic | FRM, every 6 days |
| Presque Isle – 8 Northern Road | Tribal | Mapping | TEOM, continuous |
| Presque Isle – Regional Office | SPMS | Background | FRM, every 3 days |

| Site Address | Site Type | Monitoring Objective | Sampling Method and Frequency |
|---|---|---|---|
| Presque Isle – Riverside Street | SPMS | AQI Forecasting/Mapping | FEM, continuous |
| Presque Isle – Riverside Street | SLAMS | 200K Pop. Coverage | FRM, every 3 days |
| Rumford – Rumford Avenue | SPMS | AQI Forecasting/Mapping | FEM, continuous |
| Rumford – Rumford Avenue | SPMS | High Pop. Exposure | FRM, every 6 days |

200K Pop. – 200,000 Population; AQI – Air Quality Index; MSA – Metropolitan Statistical Area

***PM Speciation Network***

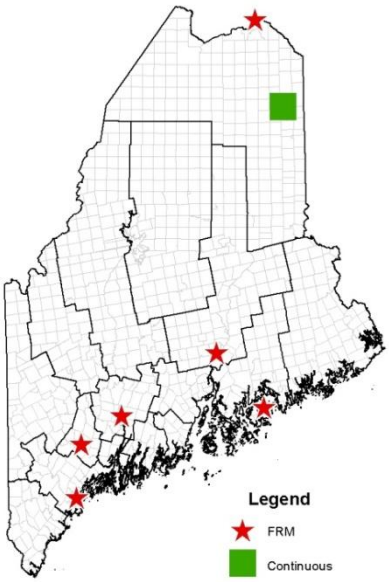
Maine operates a PM speciation network by participating in the Interagency Monitoring of Protected Visual Environments or IMPROVE program. Monitors are currently located in Bridgton Freeport. Sites are also operated by the National Park Service, Wildlife Service and the Penobscot and Micmac Tribes. No changes are proposed for CY 2015.




| Site Address | Site Type | Monitoring Objective | Sampling Frequency |
|---|---|---|---|
| Bar Harbor – McFarland Hill | NPS/NCore | Regional Haze | Every 3 days |
| Baring – Moosehorn Wildlife Ref. | USFWS | Regional Haze | Every 3 days |
| Bridgton – Upper Ridge Rad | SLAMS | Background | Every 3 days |
| Freeport – Wolfe's Neck Road | SPMS | Deposition Project | Every 3 days |
| Indian Island – Penobscots | Tribal | - | Every 3 days |
| Presque Isle – 8 Northern Road | Tribal | - | Every 3 days |

***PM10 Network***

Maine operates the current filter-based $PM_{10}$ network using the FRM samplers that have been modified to collect $PM_{10}$ particles. Data is being collected at seven sites around the state. All of the sites are currently meeting the $PM_{10}$ NAAQS with no exceedances of the standard having been recorded anywhere during the last several years. The filters collected in the $PM_{10}$ program can be used for the lead monitoring program, if needed. An additional site may be established in Aroostook County to gather additional data on $PM_{10}$ levels in the northern part of the state. No other changes are planned for CY 2015.




A continuous $PM_{10}$ monitor is operated in Presque Isle. This monitor was located in Presque Isle as part of the control strategy for high

$PM_{10}$ levels. The monitor provides hourly data which can be used to determine when high levels are occurring and whether street sweeping or other control strategies need to be implemented. No changes are planned for CY 2015. $PM_{10}$ is calculated, not directly measured, at the Kenduskeag Pump Station in Bangor using the Dichotomous sampler.

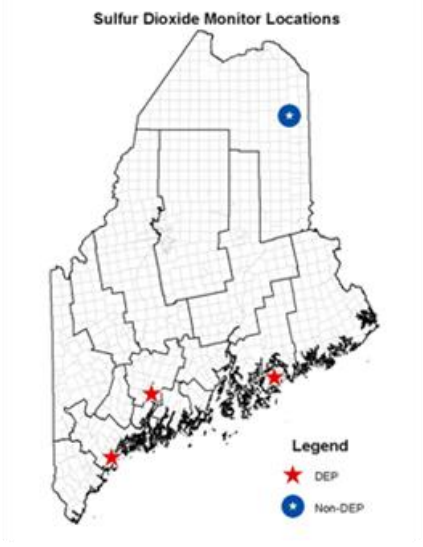
| Site Address | Site Type | Monitoring Objective | Sampling Frequency |
|---|---|---|---|
| Augusta – Lincoln Street School | SPMS | High Pop. Exposure | FRM, every 6 days |
| Bangor – Kenduskeag Pump Sta. | SPMS | High Pop. Exposure | FEM, every 6 days |
| Bar Harbor – McFarland Hill | NCore | Background | FRM, every 3 days |
| Lewiston – Country Kitchen Lot | SLAMS | High Pop. Exposure | FRM, every 6 days |
| Madawaska – Public Safety Bldg. | SLAMS | High Pop. Exposure | FRM, every 3 days |
| Portland – Tukey's Bridge | SPMS | Maximum Conc. | FRM, every 6 days |
| Portland – Tukey's Bridge | SPMS | Collocated | FRM, every 12 days |
| Presque Isle – Riverside Street | SLAMS | High Pop. Exposure | TEOM, continuous |

***PM Coarse Network***

Maine is currently required to measure PM Coarse at the NCore site in Bar Harbor. Monitoring for PM Coarse is conducted there by the difference method utilizing FRM samplers that collect $PM_{10}$ data and $PM_{2.5}$ data and reporting the difference between the two concentrations as PM Coarse or $PM_{10\text{-}2.5}$. Due to limited space available on the roof platform, a dichotomous PM sampler capable of simultaneously measuring $PM_{2.5}$ and $PM_{10\text{-}2.5}$ was installed at the Bangor, Kenduskeag Pump Station at the beginning of 2014. If needed, PM Coarse data could also be calculated utilizing the difference method from sites in Madawaska, Augusta and Portland.

| Site Address | Site Type | Monitoring Objective | Sampling Frequency |
|---|---|---|---|
| Bangor – Kenduskeag Pump Sta. | SPMS | High Pop. Exposure | FEM, every 6 days |
| Bar Harbor – McFarland Hill | NCore | Background | FEM, every 3 days |

***Sulfur Dioxide Network***

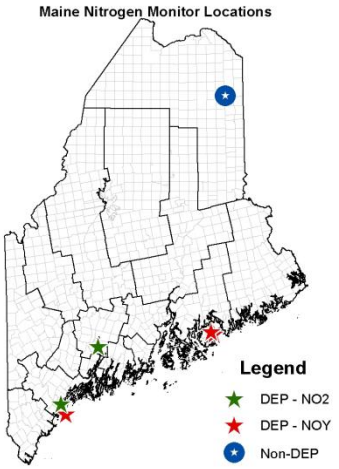



Maine currently operates three monitors for sulfur dioxide. Two are trace level monitors. A required trace level monitor is located at the NCore site in Bar Harbor and a second one was recently established (3/7/12) as a rural/background site in Gardiner. The third $SO_2$ monitor is located in Portland to track levels in the highest population area of the state as well as to provide urban background data for the air emission licensing program. Proposed changes to the sulfur dioxide standard were finalized on June 2, 2010. The final rule requires a sulfur dioxide monitor in Core Based Statistical areas (CBSA) based on a population weighted emissions index for the area. Maine does not have any CBSAs that would require a monitor. Consequently, the only required monitoring in Maine at this time is the monitor for the NCore site. On May 21, 2013 EPA released a draft Technical Assistance Documents, describing in more detail, modeling and monitoring guidance refining the agency's approach for implementing the

$SO_2$ standard. Additionally, on April 17, 2014 EPA proposed the Data Requirements Rule for the 1-hour Sulfur Dioxide Primary National Ambient Air Quality Standard (NAAQS) detailing modeling and monitoring guidance for implementing the $SO_2$ standard. One outcome of these proposals may be a greater reliance on $SO_2$ monitoring in some circumstances, where we will work with EPA to figure out if that approach has merit. Discussions are underway between the New Hampshire Department of Environmental Services and Maine DEP concerning the location and joint operation of an $SO_2$ monitor in Eliot, Maine to assess emission impacts from a power generating facility across the border in New Hampshire.

| Site Address | Site Type | Monitoring Objective | Sampling Frequency |
|---|---|---|---|
| Bar Harbor – McFarland Hill | NCore | Background | Continuous |
| Eliot – Location to be determined | SPMS | Max. Concentration | Continuous |
| Gardiner – Pray Street School | SPMS | Background | Continuous |
| Portland – 356 State Street | SPMS | High Pop. Exposure | Continuous |
| Presque Isle – 8 Northern Road | Tribal | - | Continuous |

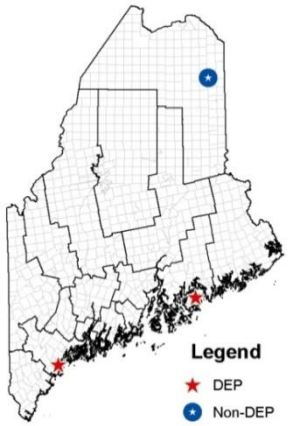
***Nitrogen Oxides Network (NO2, NOx, NO, NOy)***




Maine currently operates three trace level $NO_y$ monitors and two $NO_2$ monitors. The $NO_y$ monitors are located at the NCore site in Bar Harbor and the two seasonal PAMS locations. The $NO_2$ monitors are located at the Deering Oaks site in Portland and at the Pray Street School site in Gardiner. The $NO_2$ regulations were finalized on January 22, 2010 and revised on March 14, 2013, which included provisions for near-roadway monitoring. Currently, EPA is working toward ensuring the near-road sites with the highest probability for high $NO_2$ concentrations begin monitoring as soon as possible, with smaller areas, such as Portland, being operational by January 1, 2017. Maine DEP will be working to demonstrate to EPA that the Portland Deering Oaks site is located at the site of maximum expected $NO_2$ concentrations. However, at the present time EPA is skeptical the site meets the near-road siting criteria under the rule. If we are unable to make an affirmative demonstration, then an additional monitor will be required. The Micmac Tribe also operates a trace level $NO_2$ monitor at their site in Presque Isle. The only other monitoring that may be conducted if equipment is available will be for a rural background site in southern Maine in order to provide one hour and annual background numbers for the air emission licensing program. No other changes are planned for CY 2015.

| Site Address | Site Type | Monitoring Objective | Sampling Frequency |
|---|---|---|---|
| Portland – Deering Oaks ($NO_2$) | SPMS | Maximum Concentration, Urban Background | Continuous |
| Bar Harbor – Cadillac Mtn. ($NO_y$) | PAMS | Transport (trace-level) | Continuous |
| Bar Harbor – McFarland Hill ($NO_y$) | NCore | Transport (trace-level) | Continuous |
| Cape Elizabeth – Two Lights State Park ($NO_y$) | PAMS | Transport (trace-level) | Continuous |
| Gardiner – Pray Street School ($NO_2$) | SPMS | Background | Continuous |
| Presque Isle – 8 Northern Road ($NO_2$) | Tribal | (trace-level) | Continuous |

### *Carbon Monoxide Network*




Maine currently operates two carbon monoxide monitors. Monitors are located at the NCore site in Bar Harbor (a trace level) and the Deering Oaks site in Portland. The Micmac Tribe also operates a trace level CO monitor at their site in Presque Isle. The CO standard has been reviewed and no change was made in the level or the form of the standard. No changes are planned for CY 2015.

| Site Address | Site Type | Monitoring Objective | Sampling Frequency |
|---|---|---|---|
| Bar Harbor – McFarland Hill | NCore | Transport | Continuous |
| Portland – 356 State Street | SPMs | High Pop. Exposure | Continuous |
| Presque Isle – 8 Northern Road | Tribal | - | Continuous |

### *Lead Network*

In 2008 EPA promulgated a new lead standard and issued some minimum monitoring requirements. At that time the only requirement applicable to Maine would have meant one monitor in the Portland CBSA (Core-based statistical area). They then reconsidered the monitoring requirement and were considering requiring a monitor at the NCore site in Bar Harbor. The final rule required lead monitoring at urban NCore sites only so there is no requirement for lead monitoring in Maine. Maine DEP has begun analyzing selected filters collected since 1999 from all of the $PM_{10}$ sites in the state for lead levels and based on those results will decide whether a monitoring network for lead will be needed in the future.

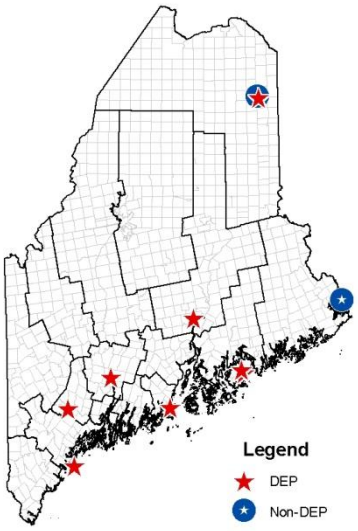
### *Air Toxics Network*

Although not a required monitoring network, Maine has been monitoring for 25 air toxic compounds at five locations around the state. The monitoring is to document background concentrations around the state and to establish whether there are any trends in the levels of these compounds. In addition, several of the metals that are listed as air toxics are also being measured at the particulate monitoring sites. Maine continues to expand its sub-ambient canister sampling equipment inventory for measuring acrolein using EOA's TO-15 method and may establish additional monitoring locations if emissions inventory data indicates the potential for a "hotspot" area for any of the priority air toxics.

| Site Address | Site Type | Monitoring Objective | Sampling Frequency |
|---|---|---|---|
| Bangor – Kenduskeag Pump Sta. | SPMS | Maximum Conc. | Every 6 days |
| Lewiston – Country Kitchen Lot | SPMS | Maximum Conc. | Every 6 days |
| Portland – 356 State Street | SPMS | Maximum Conc. | Every 6 days |
| Presque Isle – Riverside Street | SPMS | Maximum Conc. | Every 6 days |
| Rumford – Rumford Avenue | SPMS | Maximum Conc. | Every 6 days |

### *Meteorological Network*

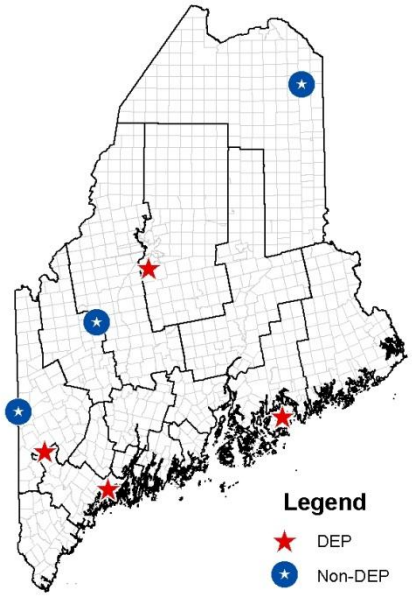
Maine DEP currently funds and operates a number of meteorological sites around the state to collect data for use in the analysis and evaluation of air pollutant data. Some of these are stand-alone sites and some are collocated with air pollutant monitoring sites. With the exception of the PAMS monitoring site on Cadillac Mountain, the monitors operate year-around. All of the sites measure scalar wind speed and direction, resultant wind speed and direction and sigma theta (an indicator of the amount of variability in the wind direction). A few of the sites collect additional parameters such as relative humidity, barometric pressure, temperature and solar radiation. Meteorological data is also collected at the Passamaquoddy site in Perry and the Micmac site in Presque Isle. No changes are proposed for CY 2015.




| Site Address | Site Type | Monitoring Objective | Sampling Frequency |
|---|---|---|---|
| Auburn – L/A Airport | SPMS | Data analyses | Continuous |
| Augusta – State Airport | SPMS | Data analyses | Continuous |
| Bangor – Air National Guard | SPMS | Data analyses | Continuous |
| Bar Harbor – Cadillac Mountain | PAMS | Transport | Continuous – Seasonal |
| Bar Harbor – McFarland Hill | NCore | Transport | Continuous |
| Cape Elizabeth – Two Lights Park | PAMS | Transport | Continuous |
| Owls Head – Municipal Airport | SPMS | Data analyses | Continuous |
| Presque Isle – Regional Office | SPMS | Data analyses | Continuous |
| Presque Isle – 8 Northern Road | Tribal | - | Continuous |
| Sipiyak – 184 County Road | Tribal | - | Continuous |

### *Atmospheric Deposition Network*

Maine continues to have a fairly extensive atmospheric deposition network with several sites operated by the Maine DEP. Several of the sites are part of the National Atmospheric Deposition Program's Mercury Deposition Network (MDN) in addition to being a part of the National Trends Network (NTN) which measures precipitation chemistry. Early in the program there were number of agencies and organizations that participated and provided funds for the operation of the sites. As funds have dried up and budgets have been cut the continued operation of some of these sites has been in question. The data from this program is used by a wide variety of researchers and the continued operation the sites is very important to maintain the continuous record of deposition occurring around the state. No other changes are proposed for CY 2015.



| Site Address | Site Type | Monitoring Objective | Sampling Frequency |
|---|---|---|---|
| Bridgton – Upper Ridge Road (NTN and MDN) | SPMS | Transport/Trends | Weekly Composite |
| Caribou – Airport (NTN and MDN) | SPMS | Transport/Trends | Weekly Composite |
| Freeport – Wolfe's Neck Farm (NTN and MDN) | SPMS | Transport/Trends | Weekly Composite |
| Greenville – Squaw Brook (NTN and MDN) | SPMS | Transport/Trends | Weekly Composite |
| Bar Harbor – McFarland Hill (NTN and MDN) | NPS-SPMS | Transport/Trends | Weekly Composite |
| Carrabassett Valley – Airport (NTN and MDN) | Tribal | Transport/Trends | Weekly Composite |
| Gilead – White Mtn. Nat'l. Forest | USGS | Transport/Trends | Weekly Composite |

***Proposed CY 2015 Network Changes***

As usual the monitoring network proposed for CY 2015 is an ambitious one and will require a significant effort from the staff of the Bureau to accomplish. The program is always subject to change as a result of staffing changes, budget cuts and the willingness of landowners to allow air monitoring sites to be located on their property. We continue to look for increased automation and improved remote access to monitors to lessen some of the impacts from budget cuts and staff retirements.

Depending on the final outcome of a few remaining revisions proposed for a couple of air quality standards, the need for updated background air quality data, additional review of emissions inventory data and looking for additional opportunities to optimize the operational aspects of our program, the following changes are either planned or are likely to occur:

- Existing continuous $PM_{2.5}$ TEOM monitors will be replaced by continuous $PM_{2.5}$ BAM monitors
- Additional ozone monitoring in the western mountain region (Lovell replacement site, see Ozone Network section)
- Replacement ozone site for Bowdoinham (located in same area)
- Continuous particulate monitoring at a western mountain valley location for forecasting support and a wood smoke emissions study
- Additional PM monitoring in Aroostook County

The monitoring program operated by the Maine DEP undergoes constant review to ensure that the monitoring is appropriate to meet monitoring goals, does not contain extraneous monitoring and can be accomplished within the available budget. While there are presently no indications the following actions would be necessary, should budget and staffing issues require cuts in the monitoring program, some potential initial cuts could include the following monitors and/or sites:

- Bowdoinham ozone monitoring site
- Portland carbon monoxide monitoring

Discussions will be held with EPA staff prior to any monitors or sites being discontinued.

*Monitoring Site Information*

## Monitoring Equipment Used by Maine DEP

| PARAMETER | INSTRUMENT | METHOD* |
|---|---|---|
| PM 2.5 FRM | R&P/Thermo Sequential Model 2025<br>R&P/Thermo Single Model 2000<br>Thermo Dichot Model 2025D | RFPS-0498-118 RFPS-1006-145<br>RFPS-0498-117 RFPS-1006-143<br>EQPS-0509-179 |
| PM 2.5 Continuous | R&P/Thermo TEOM Model 1400AB<br>MET One BAM Model 1020 | -<br>EQPM-0308-170 |
| PM 10 FRM | R&P/Thermo Sequential Model 2025<br>R&P/Thermo Single Model 2000<br>Thermo Dichot Model 2025 D | RFPS-1298-127<br>RFPS-1298-126<br>None 785 |
| PM Coarse | Thermo Dichot Model 2025D<br>Difference Method PM10-PM2.5 | EQPS-0509-180<br>RFPS-0509-176 |
| PM 10 Continuous | R&P TEOM Model 1400AB | EQPM-1090-079 |
| Organic/Elemental Carbon | Sunset Semicontinuous OC/EC Carbon Aerosol Analyzer | |
| Total PAH | Ecochem PAS 2000 | |
| PM Speciation | IMPROVE Sampler | |
| Lead | R&P Sequential Model 2025<br>R&P Single Model 2000<br>Thermo Dichot Model 2025D<br>Spectro XEPOS XRF Spectrometer | |
| Metals | R&P Sequential Model 2025<br>R&P Single Model 2000<br>Thermo Dichot Model 2025D<br>Spectro XEPOS XRF Spectrometer | |
| Ozone | Thermo Models 49C, 49i | EQOA-0880-047 |
| Sulfur Dioxide | Thermo Model 43C, 43C-TLE, 43i, 43i-TLE | EQSA-0486-060 |
| Carbon Monoxide | Thermo Model 48C, 48i, 48iTLE | RFCA-0981-054 |
| Nitrogen Dioxides | Thermo Model 42C, 42i | RFNA-1289-074 |
| Oxides of Nitrogen | Thermo Model 42iY | |
| VOC's (PAMS) | Perkin Elmer Clarus 580 | |
| Sulfate Continuous | Thermo Model 5020 | |
| Air Toxics | Xontech 910A | |
| Wind Speed/Direction | Climatronics F460<br>Met One | |
| Temperature | Climatronics<br>Met One | |
| Relative Humidity | Climatronics<br>Met One | |
| Barometric Pressure | Climatronics<br>Met One | |
| Solar Radiation | Climatronics<br>Met One | |
| Atmospheric Deposition | Aerochem Metrics wet/dry collector | |
| Mercury Deposition | Aerochem Metrics<br>N-CON Wet Deposition collector | |
| Precipitation | ETI Instrument Systems NOAH IV | |
| | | |

* Designated Reference and Equivalent Methods as of July 1, 2014.

# Integrated Sampler Schedule

# 2015

## January '15

| Su | M | Tu | W | Th | F | Sa |
|---|---|---|---|---|---|---|
| | | | | 1 | 2 | 3 |
| 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 11 | 12 | 13 | 14 | 15 | 16 | 17 |
| 18 | 19 | 20 | 21 | 22 | 23 | 24 |
| 25 | 26 | 27 | 28 | 29 | 30 | 31 |

## February '15

| Su | M | Tu | W | Th | F | Sa |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| 15 | 16 | 17 | 18 | 19 | 20 | 21 |
| 22 | 23 | 24 | 25 | 26 | 27 | 28 |

## March '15

| Su | M | Tu | W | Th | F | Sa |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| 15 | 16 | 17 | 18 | 19 | 20 | 21 |
| 22 | 23 | 24 | 25 | 26 | 27 | 28 |
| 29 | 30 | 31 | | | | |

## April '15

| Su | M | Tu | W | Th | F | Sa |
|---|---|---|---|---|---|---|
| | | | 1 | 2 | 3 | 4 |
| 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| 12 | 13 | 14 | 15 | 16 | 17 | 18 |
| 19 | 20 | 21 | 22 | 23 | 24 | 25 |
| 26 | 27 | 28 | 29 | 30 | | |

## May '15

| Su | M | Tu | W | Th | F | Sa |
|---|---|---|---|---|---|---|
| | | | | | 1 | 2 |
| 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| 17 | 18 | 19 | 20 | 21 | 22 | 23 |
| 24 | 25 | 26 | 27 | 28 | 29 | 30 |
| 31 | | | | | | |

## June '15

| Su | M | Tu | W | Th | F | Sa |
|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 |
| 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| 21 | 22 | 23 | 24 | 25 | 26 | 27 |
| 28 | 29 | 30 | | | | |

## July '15

| Su | M | Tu | W | Th | F | Sa |
|---|---|---|---|---|---|---|
| | | | 1 | 2 | 3 | 4 |
| 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| 12 | 13 | 14 | 15 | 16 | 17 | 18 |
| 19 | 20 | 21 | 22 | 23 | 24 | 25 |
| 26 | 27 | 28 | 29 | 30 | 31 | |

## August '15

| Su | M | Tu | W | Th | F | Sa |
|---|---|---|---|---|---|---|
| | | | | | | 1 |
| 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| 9 | 10 | 11 | 12 | 13 | 14 | 15 |
| 16 | 17 | 18 | 19 | 20 | 21 | 22 |
| 23 | 24 | 25 | 26 | 27 | 28 | 29 |
| 30 | 31 | | | | | |

## September '15

| Su | M | Tu | W | Th | F | Sa |
|---|---|---|---|---|---|---|
| | | 1 | 2 | 3 | 4 | 5 |
| 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 13 | 14 | 15 | 16 | 17 | 18 | 19 |
| 20 | 21 | 22 | 23 | 24 | 25 | 26 |
| 27 | 28 | 29 | 30 | | | |

## October '15

| Su | M | Tu | W | Th | F | Sa |
|---|---|---|---|---|---|---|
| | | | | 1 | 2 | 3 |
| 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 11 | 12 | 13 | 14 | 15 | 16 | 17 |
| 18 | 19 | 20 | 21 | 22 | 23 | 24 |
| 25 | 26 | 27 | 28 | 29 | 30 | 31 |

## November '15

| Su | M | Tu | W | Th | F | Sa |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| 15 | 16 | 17 | 18 | 19 | 20 | 21 |
| 22 | 23 | 24 | 25 | 26 | 27 | 28 |
| 29 | 30 | | | | | |

## December '15

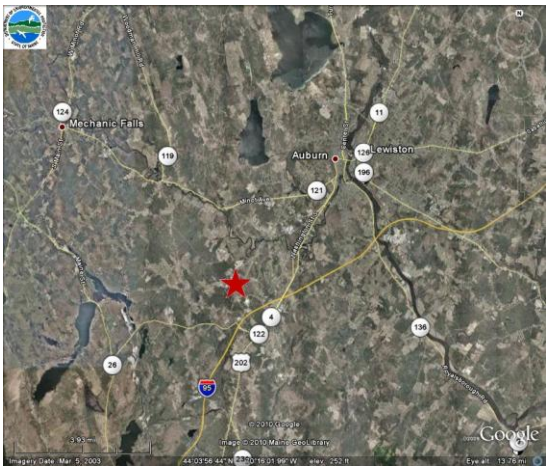
| Su | M | Tu | W | Th | F | Sa |
|---|---|---|---|---|---|---|
| | | 1 | 2 | 3 | 4 | 5 |
| 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 13 | 14 | 15 | 16 | 17 | 18 | 19 |
| 20 | 21 | 22 | 23 | 24 | 25 | 26 |
| 27 | 28 | 29 | 30 | 31 | | |

Third Day Sample | 1/6 Schedule | Holiday | 1/12 Schedule All Samples

The following pages present descriptions of the ambient air monitoring sites maintained and operated by both the Maine Department of Environmental Protection Bureau of Air Quality and the Tribal Nations. These pages are sorted by EPA AQS Site Id's. This table offers an index to the site descriptions based on town and site name.

| Town - Site | County | AQS Site ID | 2015 Page # |
|---|---|---|---|
| Auburn – Lewiston-Auburn Airport | Androscoggin | 23-001-0005 | 16 |
| Augusta – Civil Air Patrol Hanger | Kennebec | 23-011-0008 | 30 |
| Augusta – Lincoln Street School | Kennebec | 23-011-0016 | 31 |
| Bangor – Airport | Penobscot | 23-019-0010 | 38 |
| Bangor – Kenduskeag Pump Station | Penobscot | 23-019-0002 | 37 |
| Bar Harbor – Cadillac Mountain, Acadia National Park | Hancock | 23-009-0102 | 28 |
| Bar Harbor – McFarland Hill, Acadia National Park | Hancock | 23-009-0103 | 29 |
| Bowdoinham – Merrymeeting Bay | Sagadahoc | 23-023-0006 | 41 |
| Bridgton | Cumberland | 23-005-0002 | 23 |
| Cape Elizabeth – Two Lights Park | Cumberland | 23-005-2003 | 26 |
| Caribou – Caribou Airport | Aroostook | 23-003-1002 | 20 |
| Durham – Fire Station | Androscoggin | 23-001-0014 | 18 |
| Freeport – Wolfes Neck Farm | Cumberland | 23-005-9002 | 27 |
| Gardiner – Pray Street School | Kennebec | 23-011-2005 | 32 |
| Greenville | Piscataquis | 23-021-0001 | 40 |
| Holden – Rider's Bluff | Penobscot | 23-019-4008 | 39 |
| Hollis/West Buxton – Fire Department | York | 23-031-0038 | 43 |
| Penobscot Nation - Indian Island | Penobscot | 23-019-1100 | 49 |
| Jonesport – Public Landing | Washington | 23-029-0019 | 42 |
| Kennebunkport – Parson's Way | York | 23-031-2002 | 45 |
| Lewiston – Country Kitchen Parking Lot | Androscoggin | 23-001-0011 | 17 |
| Madawaska – Public Safety Bldg | Aroostook | 23-003-0014 | 19 |
| North Lovell – DOT Garage | Oxford | 23-017-3001 | 36 |
| Owls Head – Municipal Airport | Knox | 23-013-0014 | 34 |
| Port Clyde – Marshall Point Lighthouse | Knox | 23-013-0004 | 33 |
| Portland – Deering Oaks Park | Cumberland | 23-005-0029 | 25 |
| Portland – Tukey's Bridge | Cumberland | 23-005-0015 | 24 |
| Micmac – Presque Isle Shelter | Aroostook | 23-003-1100 | 47 |
| Presque Isle – DEP Regional Office | Aroostook | 23-003-1008 | 21 |
| Presque Isle – Riverside St. | Aroostook | 23-003-1011 | 22 |
| Rumford – Rumford Ave. Parking Lot | Oxford | 23-017-2011 | 35 |
| Shapleigh – Shapleigh Ball Park | York | 23-031-0040 | 44 |
| Passamaquoddy – Perry, Pleasant Point/Sipiyak | Washington | 23-029-0032 | 48 |
| Passamaquoddy – Indian Township | Washington | None | 50 |

| | | | |
|---|---|---|---|
| Town – Site: | **Auburn – Lewiston-Auburn Airport** | | |
| County: | **Androscoggin** | Latitude: | **44.0457** |
| Address: | **Lewiston Junction Rd.** | Longitude: | **-70.2902** |
| AQS Site ID: | **23-001-0005** | Elevation: | **79 meters** |
| Spatial Scale: | **Regional** | Year Established: | **1978** |
| Statistical Area: | **Lewiston-Auburn, ME** | | |




**Pollutant and Meteorological Parameters:**

| Parameter | Date Began | Date Ended | Parameter | Date Began | Date Ended |
|---|---|---|---|---|---|
| PM2.5 FRM | | | $SO_2$ | | |
| PM2.5 Colo | | | Ozone | | |
| PM2.5 TEOM | | | NOx | | |
| PM2.5 BAM | | | NOy | | |
| PM10 FRM | | | VOCs (PAMS) | | |
| PM10 Colo | | | HAPs | | |
| PM10 TEOM | | | Wet Deposition - Mercury | | |
| PM10 BAM | | | Wet Dep. - Precip Chem. | | |
| PM Coarse | | | Wind Direction/Speed | 10/18/1978 | |
| IMPROVE | | | Outdoor Temperature | | |
| Cont. OC/EC | | | Bar. Pressure | | |
| Cont. Sulfate | | | Relative Humidity | | |
| Black Carbon | | | Dewpoint | | |
| Cont. PAH | | | Precipitation Amount | | |
| Lead | | | Solar Radiation | | |
| CO | | | UV-b Radiation | | |

**Site Description:**
The site is located in a light industrial park located 4 ½ miles SW of downtown Auburn. Wind Speed and Direction sensors are mounted on a 10 meter retractable tower located on the roof of maintenance equipment shed at the Auburn-Lewiston Municipal Airport. A data acquisition system and modem are located in a storage room within the equipment shed.

**Monitoring Objectives:**
Hourly averaged wind speed and wind direction, combined with other climatological data obtained from the NOAA National Weather Service, are useful in modeling trajectories of air masses.

**Planned changes for 2015**: None planned**.**

| | | | |
|---|---|---|---|
| Town – Site: | **Lewiston – Country Kitchen Parking Lot** | | |
| County: | **Androscoggin** | Latitude: | **44.0894** |
| Address: | **Canal Street** | Longitude: | **-70.2141** |
| AQS Site ID: | **23-001-0011** | Elevation: | **50 meters** |
| Spatial Scale: | **Neighborhood** | Year Established: | **1981** |
| Statistical Area: | **Lewiston-Auburn ME** | | |

**Pollutant and Meteorological Parameters:**

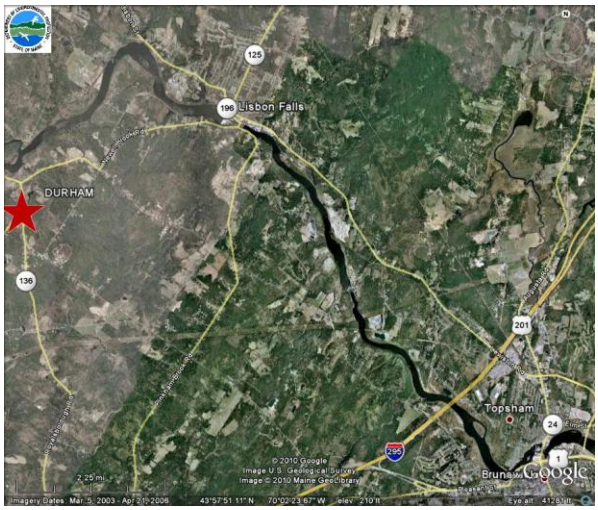
| Parameter | Date Began | Date Ended | Parameter | Date Began | Date Ended |
|---|---|---|---|---|---|
| PM2.5 FRM | 01/01/1999 | | $SO_2$ | 07/13/1998 | 12/30/2002 |
| PM2.5 Colo | | | Ozone | | |
| PM2.5 TEOM | 01/01/2000 | 09/12/2013 | NOx | | |
| PM2.5 BAM | 09/12/2013 | | NOy | | |
| PM10 FRM | 04/01/2004 | | VOCs (PAMS) | | |
| PM10 Colo | | | HAPs | 06/14/2004 | |
| PM10 TEOM | | | Mercury Deposition | | |
| PM10 BAM | | | Wet Dep. - Precip Chem. | | |
| PM Coarse | | | Wind Direction/Speed | | |
| IMPROVE | | | Outdoor Temperature | | |
| Cont. OC/EC | | | Bar. Pressure | | |
| Cont. Sulfate | | | Relative Humidity | | |
| Black Carbon | | | Dewpoint | | |
| Cont. PAH | | | Precipitation Amount | | |
| Lead | 06/01/1989 | 12/31/1993 | Solar Radiation | | |
| CO | | | UV-b Radiation | | |

**Site Description:**
The site is located in downtown Lewiston in the parking lot of the Country Kitchen Bakery. An 8'x8'x8' shelter houses electronic monitoring equipment, data acquisition system and modem, in a climate controlled environment, with PM monitors and intakes situated on the roof. The current location of the monitoring shelter is about 125 feet further SE than the original 1989 site. The shelter move occurred during 12/30/1998 and 1/25/1999.

**Monitoring Objectives:**
Population Exposure.

**Planned changes for 2015:**
None planned

| | | | |
|---|---|---|---|
| Town – Site: | **Durham – Fire Station** | | |
| County: | **Androscoggin** | Latitude: | **43.9745** |
| Address: | **Route 9** | Longitude: | **-70.1249** |
| AQS Site ID: | **23-001-0014** | Elevation: | **50 meters** |
| Spatial Scale: | **Regional** | Year Established: | **2004** |
| Statistical Area: | **Lewiston-Auburn, ME** | | |




**Pollutant and Meteorological Parameters:**

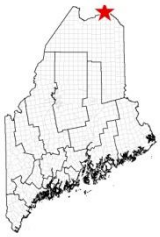
| Parameter | Date Began | Date Ended | Parameter | Date Began | Date Ended |
|---|---|---|---|---|---|
| PM2.5 FRM | | | $SO_2$ | | |
| PM2.5 Colo | | | Ozone | 04/01/2004 | |
| PM2.5 TEOM | | | NOx | | |
| PM2.5 BAM | | | NOy | | |
| PM10 FRM | | | VOCs (PAMS) | | |
| PM10 Colo | | | HAPs | | |
| PM10 TEOM | | | Wet Deposition - Mercury | | |
| PM10 BAM | | | Wet Dep. - Precip Chem. | | |
| PM Coarse | | | Wind Direction/Speed | | |
| IMPROVE | | | Outdoor Temperature | | |
| Cont. OC/EC | | | Bar. Pressure | | |
| Cont. Sulfate | | | Relative Humidity | | |
| Black Carbon | | | Dewpoint | | |
| Cont. PAH | | | Precipitation Amount | | |
| Lead | | | Solar Radiation | | |
| CO | | | UV-b Radiation | | |

**Site Description:**
The site is located on the grounds of the Durham Fire Station, 9 ½ miles SE of Lewiston. An ozone monitor is located within an 8'x8'x8' environmentally controlled shelter. The shelter was installed in 2006. During the summers of 2004 and 2005 an ozone monitor was set up temporarily, in a corner of the fire station with a probe attached to the roof edge, to determine if the location warranted continued monitoring.

**Monitoring Objectives:**
Regional Transport.

**Planned changes for 2015:**
None planned.

| | | | |
|---|---|---|---|
| Town – Site: | **Madawaska – Public Safety Bldg** | | |
| County: | **Aroostook** | Latitude: | **47.3553** |
| Address: | **East Maine St.** | Longitude: | **-68.3211** |
| AQS Site ID: | **23-003-0014** | Elevation: | **177 meters** |
| Spatial Scale: | **Neighborhood** | Year Established: | **2009** |
| Statistical Area: | **None** | | |



**Pollutant and Meteorological Parameters:**

| Parameter | Date Began | Date Ended | Parameter | Date Began | Date Ended |
|---|---|---|---|---|---|
| PM2.5 FRM | 8-1-2009 | | $SO_2$ | | |
| PM2.5 Colo | | | Ozone | | |
| PM2.5 TEOM | | | NOx | | |
| PM2.5 BAM | 1/17/2014 | | NOy | | |
| PM10 FRM | 8-1-2009 | | VOCs (PAMS) | | |
| PM10 Colo | | | HAPs | | |
| PM10 TEOM | | | Mercury Deposition | | |
| PM10 BAM | | | Wet Dep. - Precip Chem. | | |
| PM Coarse | | | Wind Direction/Speed | | |
| IMPROVE | | | Outdoor Temperature | | |
| Cont. OC/EC | | | Bar. Pressure | | |
| Cont. Sulfate | | | Relative Humidity | | |
| Black Carbon | | | Dewpoint | | |
| Cont. PAH | | | Precipitation Amount | | |
| Lead | | | Solar Radiation | | |
| CO | | | UV-b Radiation | | |

**Site Description:**
New site established in 2009 to replace the Tang's Palace site which was no longer available for use after June, 2009.

**Monitoring Objectives:**
High population exposure and maximum concentrations for the Madawaska area.

**Planned changes for 2015:**
None planned.

| | | | |
|---|---|---|---|
| Town – Site: | **Caribou – Caribou Airport** | | |
| County: | **Aroostook** | Latitude: | **46.8683** |
| Address: | **Caribou Airport** | Longitude: | **-67.9931** |
| AQS Site ID: | **23-003-1002** | Elevation: | **191 meters** |
| Spatial Scale: | **Regional** | Year Established: | **1982** |
| Statistical Area: | **None** | | |

**Pollutant and Meteorological Parameters:**

| Parameter | Date Began | Date Ended | Parameter | Date Began | Date Ended |
|---|---|---|---|---|---|
| PM2.5 FRM | | | $SO_2$ | | |
| PM2.5 Colo | | | Ozone | | |
| PM2.5 TEOM | | | NOx | | |
| PM2.5 BAM | | | NOy | | |
| PM10 FRM | | | VOCs (PAMS) | | |
| PM10 Colo | | | HAPs | | |
| PM10 TEOM | | | Wet Deposition - Mercury | | |
| PM10 BAM | | | Wet Dep. - Precip Chem. | 1-1-1982 | |
| PM Coarse | | | Wind Direction/Speed | | |
| IMPROVE | | | Outdoor Temperature | | |
| Cont. OC/EC | | | Bar. Pressure | | |
| Cont. Sulfate | | | Relative Humidity | | |
| Black Carbon | | | Dewpoint | | |
| Cont. PAH | | | Precipitation Amount | 1-1-1982 | |
| Lead | | | Solar Radiation | | |
| CO | | | UV-b Radiation | | |

**Site Description:**
Site was moved to its present location in a grassy area inside the fence and off the south end of the runway.

**Monitoring Objectives:**
Long term monitoring of deposition in northern Maine

**Planned changes for 2015:**
None planned.

| | | | |
|---|---|---|---|
| Town – Site: | **Presque Isle – DEP Regional Office** | | |
| County: | **Aroostook** | Latitude: | **46.6984** |
| Address: | **528 Central Drive** | Longitude: | **-68.0389** |
| AQS Site ID: | **23-003-1008** | Elevation: | **158 meters** |
| Spatial Scale: | **Neighborhood** | Year Established: | **1983** |
| Statistical Area: | **None** | | |

**Pollutant and Meteorological Parameters:**

| Parameter | Date Began | Date Ended | Parameter | Date Began | Date Ended |
|---|---|---|---|---|---|
| PM2.5 FRM | 9-27-2007 | | $SO_2$ | 8-1-1988 | 9-21-1989 |
| PM2.5 Colo | | | Ozone | 8-1-1988 | 9-21-1989 |
| PM2.5 TEOM | | | NOx | | |
| PM2.5 BAM | | | NOy | | |
| PM10 FRM | 7-1-1989 | 9-27-2007 | VOCs (PAMS) | | |
| PM10 Colo | | | HAPs | | |
| PM10 TEOM | | | Wet Deposition - Mercury | | |
| PM10 BAM | | | Wet Dep. - Precip Chem. | | |
| PM Coarse | | | Wind Direction/Speed | 2-13-1983 | |
| IMPROVE | | | Outdoor Temperature | | |
| Cont. OC/EC | | | Bar. Pressure | | |
| Cont. Sulfate | | | Relative Humidity | | |
| Black Carbon | | | Dewpoint | | |
| Cont. PAH | | | Precipitation Amount | | |
| Lead | | | Solar Radiation | | |
| CO | | | UV-b Radiation | | |

**Site Description:**
Suburban background site for monitoring PM and wind. Monitors are located in a field next to the regional office in Presque Isle.

**Monitoring Objectives:**
Background concentrations of PM for Presque Isle area and meteorological data for analysis of pollutant data.

**Planned changes for 2015:**
None planned.

| | | | |
|---|---|---|---|
| Town – Site: | **Presque Isle – Riverside Shelter** | | |
| County: | **Aroostook** | Latitude: | **46.6823** |
| Address: | **Riverside Street** | Longitude: | **-68.0156** |
| AQS Site ID: | **23-003-1011** | Elevation: | **131 meters** |
| Spatial Scale: | **Neighborhood** | Year Established: | **1993** |
| Statistical Area: | **None** | | |

**Pollutant and Meteorological Parameters:**

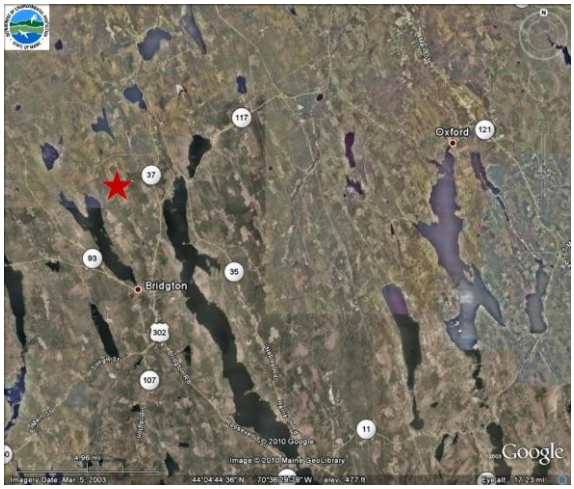
| Parameter | Date Began | Date Ended | Parameter | Date Began | Date Ended |
|---|---|---|---|---|---|
| PM2.5 FRM | 10-1-1997 | | $SO_2$ | 9-19-1994 | 7-2-1996 |
| PM2.5 Colo | | | Ozone | | |
| PM2.5 TEOM | | | NOx | | |
| PM2.5 BAM | Summer 2014 | | NOy | | |
| PM10 FRM | 9-10-1993 | 11-2-1998 | VOCs (PAMS) | | |
| PM10 Colo | | | HAPs | 12-14-03 | |
| PM10 TEOM | 9-15-1995 | | Wet Deposition - Mercury | | |
| PM10 BAM | | | Wet Dep. - Precip Chem. | | |
| PM Coarse | | | Wind Direction/Speed | | |
| IMPROVE | | | Outdoor Temperature | | |
| Cont. OC/EC | | | Bar. Pressure | | |
| Cont. Sulfate | | | Relative Humidity | | |
| Black Carbon | | | Dewpoint | | |
| Cont. PAH | | | Precipitation Amount | | |
| Lead | | | Solar Radiation | | |
| CO | | | UV-b Radiation | | |

**Site Description:**
Monitors are located in a parking lot off Main Street in the downtown area of Presque Isle. The site is relatively open, next to the railroad tracks and the Presque Isle Stream**.**

**Monitoring Objectives:**
Neighborhood scale monitor. The primary purpose was to locate the continuous $PM_{10}$ monitor in the non-attainment area to provide data for determining whether control activity was needed to keep $PM_{10}$ concentrations from exceeding the 24 hour standard. The continuous $PM_{2.5}$ BAM will provide information critical to AQI forecasting.

**Planned changes for 2015:**
Installation of a Met One $PM_{2.5}$ BAM 1020 began in June 2014 and will become operational during the Summer of 2014. No other changes are expected for 2015.

| | | | |
|---|---|---|---|
| Town – Site: | **Bridgton** | | |
| County: | **Cumberland** | Latitude: | **44.1074** |
| Address: | **Upper Ridge Road** | Longitude: | **-70.7290** |
| AQS Site ID: | **23-005-0002** | Elevation: | **223 meters** |
| Spatial Scale: | **Regional** | Year Established: | **1980** |
| Statistical Area: | **Portland-South Portland-Biddeford, ME** | | |




**Pollutant and Meteorological Parameters:**

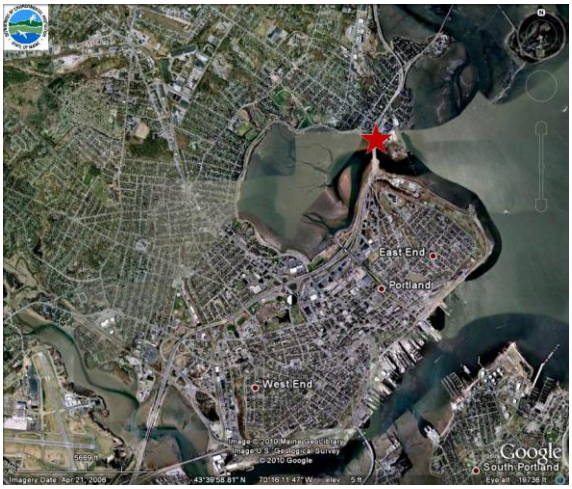
| Parameter | Date Began | Date Ended | Parameter | Date Began | Date Ended |
|---|---|---|---|---|---|
| PM2.5 FRM | | | $SO_2$ | | |
| PM2.5 Colo | | | Ozone | | |
| PM2.5 TEOM | | | NOx | | |
| PM2.5 BAM | | | NOy | | |
| PM10 FRM | | | VOCs (PAMS) | | |
| PM10 Colo | | | HAPs | | |
| PM10 TEOM | | | Wet Deposition - Mercury | 6-3-1997 | |
| PM10 BAM | | | Wet Dep. - Precip Chem. | 1-1-1980 | |
| PM Coarse | | | Wind Direction/Speed | | |
| IMPROVE | 3-14-2001 | | Outdoor Temperature | | |
| Cont. OC/EC | | | Bar. Pressure | | |
| Cont. Sulfate | | | Relative Humidity | | |
| Black Carbon | | | Dewpoint | | |
| Cont. PAH | | | Precipitation Amount | | |
| Lead | | | Solar Radiation | | |
| CO | | | UV-b Radiation | | |

**Site Description:**
Site is located on a ridge in an open field area just off the Upper Ridge Road.

**Monitoring Objectives:**
Long term tracking of deposition in the western mountain area of the state.

**Planned changes for 2015:**
None planned.

| | | | |
|---|---|---|---|
| Town – Site: | **Portland – Tukey's Bridge** | | |
| County: | **Cumberland** | Latitude: | **43.6780** |
| Address: | **Tukey's Bridge (Route 295)** | Longitude: | **-70.2562** |
| AQS Site ID: | **23-005-0015** | Elevation: | **6 meters** |
| Spatial Scale: | **Middle/Micro** | Year Established: | **1981** |
| Statistical Area: | **Portland-South Portland-Biddeford, ME** | | |




**Pollutant and Meteorological Parameters:**

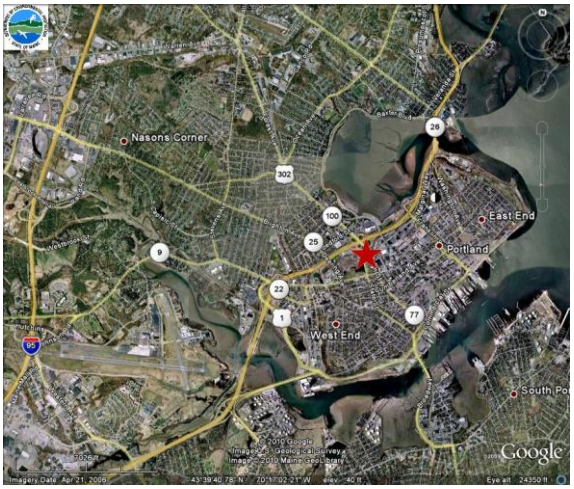
| Parameter | Date Began | Date Ended | Parameter | Date Began | Date Ended |
|---|---|---|---|---|---|
| PM2.5 FRM | 1-1-1999 | | $SO_2$ | | |
| PM2.5 Colo | | | Ozone | | |
| PM2.5 TEOM | | | NOx | | |
| PM2.5 BAM | | | NOy | | |
| PM10 FRM | 2-8-1991 | | VOCs (PAMS) | | |
| PM10 Colo | 1-9-2003 | | HAPs | | |
| PM10 TEOM | | | Wet Deposition - Mercury | | |
| PM10 BAM | | | Wet Dep. - Precip Chem. | | |
| PM Coarse | | | Wind Direction/Speed | | |
| IMPROVE | | | Outdoor Temperature | | |
| Cont. OC/EC | | | Bar. Pressure | | |
| Cont. Sulfate | | | Relative Humidity | | |
| Black Carbon | | | Dewpoint | | |
| Cont. PAH | | | Precipitation Amount | | |
| Lead | | | Solar Radiation | | |
| CO | | | UV-b Radiation | | |

**Site Description:**
Monitors are located on a platform next to I-295/Washington Street. This section of road has some of the highest annual average daily traffic volume in the state.

**Monitoring Objectives:**
Monitors were located at this site for maximum concentrations and high traffic volume.

**Planned changes for 2015:**
The wooden equipment platform is due for replacement/refurbishment soon.

| | | | |
|---|---|---|---|
| Town – Site: | **Portland – Deering Oaks Park** | | |
| County: | **Cumberland** | Latitude: | **43.6602** |
| Address: | **356 State St.** | Longitude: | **-70.2690** |
| AQS Site ID: | **23-005-0029** | Elevation: | **4 meters** |
| Spatial Scale: | **Neighborhood** | Year Established: | **2008** |
| Statistical Area: | **Portland-South Portland-Biddeford, ME** | | |




**Pollutant and Meteorological Parameters:**

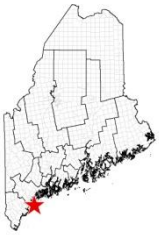
| Parameter | Date Began | Date Ended | Parameter | Date Began | Date Ended |
|---|---|---|---|---|---|
| PM2.5 FRM | 1-22-2008 | | $SO_2$ | 1-24-2008 | |
| PM2.5 Colo | 1-31-2008 | | Ozone | 1-18-2008 | |
| PM2.5 TEOM | 1-18-2008 | | NOx | 2-5-2008 | |
| PM2.5 BAM | 5-7-2013 | | NOy | | |
| PM10 FRM | | | VOCs (PAMS) | | |
| PM10 Colo | | | HAPs | 3-14-2009 | |
| PM10 TEOM | | | Wet Deposition - Mercury | | |
| PM10 BAM | | | Wet Dep. - Precip Chem. | | |
| PM Coarse | | | Wind Direction/Speed | | |
| IMPROVE | | | Outdoor Temperature | | |
| Cont. OC/EC | | | Bar. Pressure | | |
| Cont. Sulfate | | | Relative Humidity | | |
| Black Carbon | | | Dewpoint | | |
| Cont. PAH | | | Precipitation Amount | | |
| Lead | | | Solar Radiation | | |
| CO | 5-1-2008 | | UV-b Radiation | | |

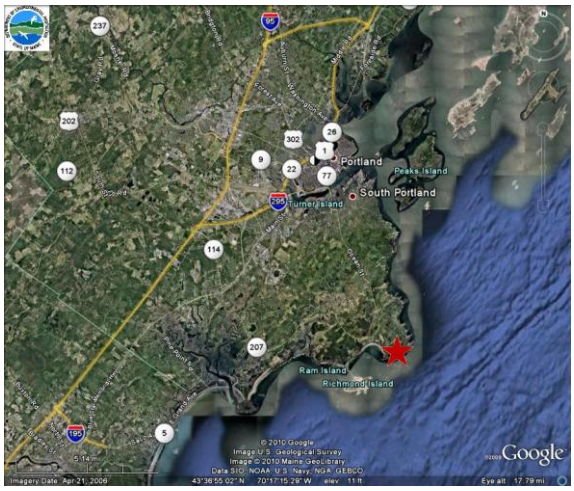
**Site Description:**
The Deering Oaks site was established in 2008 to replace the Marginal Way site which had to be removed to make way for development activity. The site is located in a grassy area of the Park near the intersection of Forest Avenue and State Street and close to an off ramp from I-295. To the west of the site is a wooded area of the park as well as numerous athletic fields. Annual Average Daily Traffic volume on Forest Avenue is around 46,000. EPA also uses the site for a monitor in their radiation network - RadNet.

**Monitoring Objectives:**
The site was located on the Portland Peninsula to monitor for maximum impacts in a neighborhood area. The ozone monitor is a special purpose monitor installed for the Bureau of Health and is considered a non-regulatory monitor. The nitrogen dioxide monitor has also been considered a non-regulatory monitor because it does not meet the distance from a roadway requirement for a standard monitor. This monitor and location will be reviewed to determine if it will meet the requirements for a near roadway monitor required in the new regulations.

**Planned changes for 2015:**
None planned.

| | | | |
|---|---|---|---|
| Town – Site: | **Cape Elizabeth** | | |
| County: | **Cumberland** | Latitude: | **43.5610** |
| Address: | **Two Lights State Park** | Longitude: | **-70.2073** |
| AQS Site ID: | **23-005-2003** | Elevation: | **24 meters** |
| Spatial Scale: | **Regional** | Year Established: | **1981** |
| Statistical Area: | **Portland-South Portland-Biddeford, ME** | | |






**Pollutant and Meteorological Parameters:**

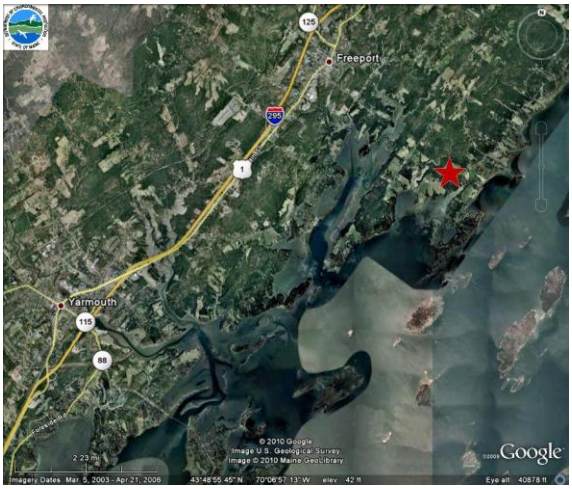
| Parameter | Date Began | Date Ended | Parameter | Date Began | Date Ended |
|---|---|---|---|---|---|
| PM2.5 FRM | 1-1-1999 | 12-17-2002 | $SO_2$ | | |
| PM2.5 Colo | | | Ozone | 1-1-1981 | |
| PM2.5 TEOM | | | NOx | 6-9-1993 | 10-31-1995 |
| PM2.5 BAM | | | NOy | 6-26-1995 | |
| PM10 FRM | | | VOCs (PAMS) | 6-1-1993 | |
| PM10 Colo | | | HAPs | | |
| PM10 TEOM | | | Wet Deposition - Mercury | | |
| PM10 BAM | | | Wet Dep. - Precip Chem. | | |
| PM Coarse | | | Wind Direction/Speed | 6-25-1985 | |
| IMPROVE | | | Outdoor Temperature | 6-7-1994 | |
| Cont. OC/EC | | | Bar. Pressure | 6-7-1994 | |
| Cont. Sulfate | | | Relative Humidity | 6-7-1994 | |
| Black Carbon | | | Dewpoint | | |
| Cont. PAH | | | Precipitation Amount | | |
| Lead | | | Solar Radiation | 6-7-1994 | |
| CO | 5-1-2001 | 10-1-2007 | UV-b Radiation | 6-1-1995 | |

**Site Description:**
Site is located in an open elevated area in the Two Lights State Park in Cape Elizabeth. A single large new shelter was installed in 2009, replacing two smaller shelters. The site was located to pick up the plumes entering Maine from the urban areas to the southwest. With the exception of the meteorological parameters this site is normally operated during the ozone season only.

**Monitoring Objectives:**
The site is located to pick up long range transport of pollutants into the state.

**Planned changes for 2015:**
None planned.

| | | | |
|---|---|---|---|
| Town – Site: | **Freeport – Wolfes Neck Farm** | | |
| County: | **Cumberland** | Latitude: | **43.8325** |
| Address: | **Wolfe's Neck Road** | Longitude: | **-70.0644** |
| AQS Site ID: | **23-005-9002** | Elevation: | **27 Meters** |
| Spatial Scale: | **Regional/Neighborhood** | Year Established: | **1998** |
| Statistical Area: | **Portland-South Portland-Biddeford, ME** | | |




**Pollutant and Meteorological Parameters:**

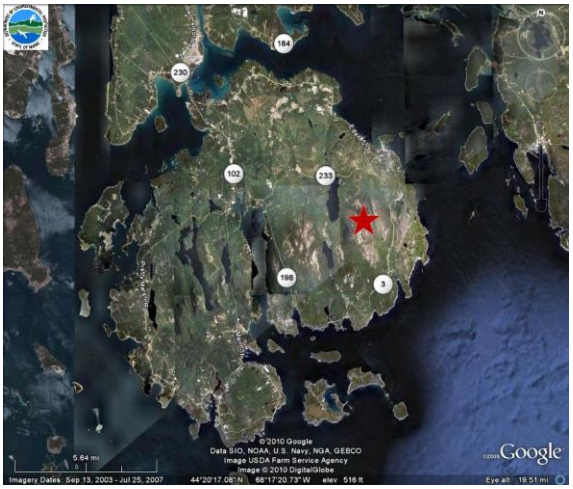
| Parameter | Date Began | Date Ended | Parameter | Date Began | Date Ended |
|---|---|---|---|---|---|
| PM2.5 FRM | | | $SO_2$ | | |
| PM2.5 Colo | | | Ozone | | |
| PM2.5 TEOM | | | NOx | | |
| PM2.5 BAM | | | NOy | | |
| PM10 FRM | | | VOCs (PAMS) | | |
| PM10 Colo | | | HAPs | | |
| PM10 TEOM | | | Wet Deposition - Mercury | 1-7-1998 | |
| PM10 BAM | | | Wet Dep. - Precip Chem. | 1-7-1998 | |
| PM Coarse | | | Wind Direction/Speed | | |
| IMPROVE | 3/14/2001 | | Outdoor Temperature | | |
| Cont. OC/EC | | | Bar. Pressure | | |
| Cont. Sulfate | | | Relative Humidity | | |
| Black Carbon | | | Dewpoint | | |
| Cont. PAH | | | Precipitation Amount | 1-7-1998 | |
| Lead | | | Solar Radiation | | |
| CO | | | UV-b Radiation | | |

**Site Description:**
Site is located within a fenced in area in the middle of a large open field used as a pasture by the Wolfe's Neck farm.

**Monitoring Objectives:**
Site designed to monitor the long range transport of pollutants on a regional scale.

**Planned changes for 2015:**
None planned.

| | | | |
|---|---|---|---|
| Town – Site: | **Bar Harbor – Cadillac Mountain, Acadia National Park** | | |
| County: | **Hancock** | Latitude: | **44.3517** |
| Address: | **Top of Cadillac Mountain** | Longitude: | **-68.2272** |
| AQS Site ID: | **23-009-0102** | Elevation: | **463 M (1519 ft)** |
| Spatial Scale: | **Regional** | Year Established: | **1995** |
| Statistical Area: | **None** | | |




**Pollutant and Meteorological Parameters:**

| Parameter | Date Began | Date Ended | Parameter | Date Began | Date Ended |
|---|---|---|---|---|---|
| PM2.5 FRM | | | $SO_2$ | | |
| PM2.5 Colo | | | Ozone | 7-25-1995 | |
| PM2.5 TEOM | | | NOx | 4-1-2004 | 9-30-2007 |
| PM10 FRM | | | NOy | 1-1-2008 | |
| PM2.5 BAM | | | VOCs (PAMS) | 5-1-1996 | |
| PM10 Colo | | | HAPs | | |
| PM10 TEOM | | | Wet Deposition - Mercury | | |
| PM10 BAM | | | Wet Dep. - Precip Chem. | | |
| PM Coarse | | | Wind Direction/Speed | 5-6-1996 | |
| IMPROVE | | | Outdoor Temperature | 4-19-1996 | |
| Cont. OC/EC | | | Bar. Pressure | | |
| Cont. Sulfate | | | Relative Humidity | 4-19-1996 | |
| Black Carbon | | | Dewpoint | | |
| Cont. PAH | | | Precipitation Amount | | |
| Lead | | | Solar Radiation | | |
| CO | 4-1-2002 | 10-1-2003 | UV-b Radiation | | |

**Site Description:**
Site established as a PAMS site in 1995. Located on the top of Cadillac Mountain in Acadia National Park. This is a seasonal site operating during the ozone season only.

**Monitoring Objectives:**
Site was established to monitor long range transport of ozone precursors from urban areas to the southwest.

**Planned changes for 2015:**
Due to personnel changes and a reassessment of DEP resources, the PAMS equipment will be removed from this site after the end of the ozone monitoring season in the fall of 2014. Monitoring of all other parameters will continue.

| | | | |
|---|---|---|---|
| Town – Site: | **Bar Harbor – McFarland Hill, Acadia National Park** | | |
| County: | **Hancock** | Latitude: | **44.3771** |
| Address: | **Route 233** | Longitude: | **-68.2609** |
| AQS Site ID: | **23-009-0103** | Elevation: | **156 Meters** |
| Spatial Scale: | **Regional** | Year Established: | **1998** |
| Statistical Area: | **None** | | |

**Pollutant and Meteorological Parameters:**

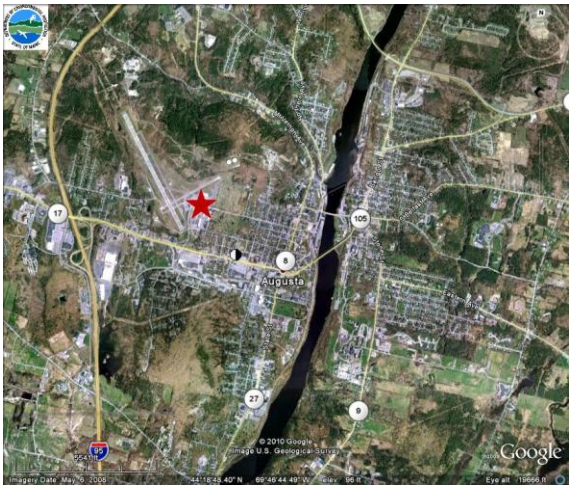
| Parameter | Date Began | Date Ended | Parameter | Date Began | Date Ended |
|---|---|---|---|---|---|
| PM2.5 FRM | 1-1-1999 | | $SO_2$ | 2-1-2004 | |
| PM2.5 Colo | | | Ozone | 2-1-1998 | |
| PM2.5 TEOM | 10-1-2003 | | NOx | | |
| PM2.5 BAM | | | NOy | 2-1-2004 | |
| PM10 FRM | 1-1-2010 | | VOCs (PAMS) | | |
| PM10 Colo | | | HAPs | | |
| PM10 TEOM | | | Wet Deposition - Mercury | 1998 | |
| PM10 BAM | | | Wet Dep. - Precip Chem. | 1998 | |
| PM Coarse | 1-1-2010 | | Wind Direction/Speed | 2-1-1998 | |
| IMPROVE | 3-2-1988 | | Outdoor Temperature | 2-1-1998 | |
| Cont. OC/EC | 6-29-2004 | | Bar. Pressure | | |
| Cont. Sulfate | 6-26-2004 | | Relative Humidity | 2-1-1998 | |
| Black Carbon | 2004 | | Dewpoint | | |
| Cont. PAH | | | Precipitation Amount | 2-1-1998 | |
| Lead | | | Solar Radiation | 2-1-1998 | |
| CO | 2-1-2004 | | UV-b Radiation | | |

**Site Description:**
Site is located in a field on the side of McFarland Hill in Bar Harbor. Site slopes to the south/southeast with the hill rising to the north. The site was established by the National Park Service but has since grown to include a variety of monitors for EPA programs, special studies such as the Rural Aerosol Intensive Network and most recently has received approval as the NCore site for Maine. Monitoring at this site is a joint effort between the NPS and the Maine DEP.

**Monitoring Objectives:**
This is a regional scale site operated to determine background levels, transport and for use in the mapping programs to forecast the air quality index.

**Planned changes for 2015:**
None planned.

| | | | |
|---|---|---|---|
| Town – Site: | **Augusta – Civil Air Patrol Hanger** | | |
| County: | **Kennebec** | Latitude: | **44.3179** |
| Address: | **Augusta State Airport** | Longitude: | **-69.7919** |
| AQS Site ID: | **23-011-0008** | Elevation: | **107 Meters** |
| Spatial Scale: | **Regional** | Year Established: | **1981** |
| Statistical Area: | **Augusta-Waterville, ME** | | |




**Pollutant and Meteorological Parameters:**

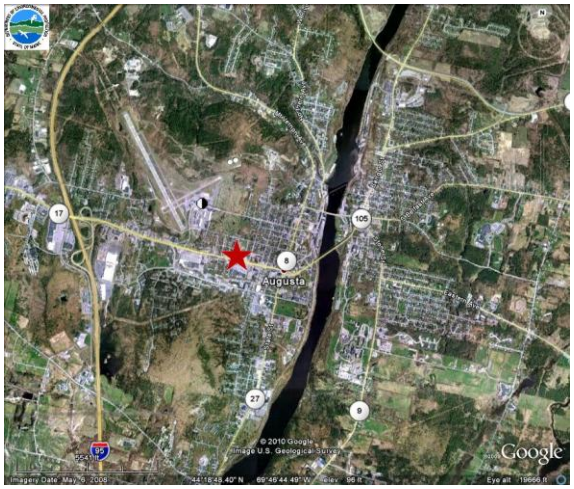
| Parameter | Date Began | Date Ended | Parameter | Date Began | Date Ended |
|---|---|---|---|---|---|
| PM2.5 FRM | | | $SO_2$ | | |
| PM2.5 Colo | | | Ozone | | |
| PM2.5 TEOM | | | NOx | | |
| PM2.5 BAM | | | NOy | | |
| PM10 FRM | | | VOCs (PAMS) | | |
| PM10 Colo | | | HAPs | | |
| PM10 TEOM | | | Wet Deposition - Mercury | | |
| PM10 BAM | | | Wet Dep. - Precip Chem. | | |
| PM Coarse | | | Wind Direction/Speed | 01/20/1981 | |
| IMPROVE | | | Outdoor Temperature | | |
| Cont. OC/EC | | | Bar. Pressure | | |
| Cont. Sulfate | | | Relative Humidity | | |
| Black Carbon | | | Dewpoint | | |
| Cont. PAH | | | Precipitation Amount | | |
| Lead | | | Solar Radiation | | |
| CO | | | UV-b Radiation | | |

**Site Description:**
A 10 meter retractable tower with wind speed direction sensors is situated on the roof of the Civil Air Patrol hanger at the Augusta State Airport, 0.8 miles NW of the state capitol. The data acquisition equipment and modem are located in the adjacent equipment shed to the west.

**Monitoring Objectives:**
Hourly averaged wind speed and wind direction, combined with other climatological data obtained from the NOAA National Weather Service, are useful in modeling trajectories of air masses.

**Planned changes for 2015:**
None planned.

| | | | |
|---|---|---|---|
| Town – Site: | **Augusta – Lincoln Street School** | | |
| County: | **Kennebec** | Latitude: | **44.3123** |
| Address: | **30 Lincoln Street** | Longitude: | **-69.7867** |
| AQS Site ID: | **23-011-0016** | Elevation: | **71 Meters** |
| Spatial Scale: | **Neighborhood** | Year Established: | **1999** |
| Statistical Area: | **Augusta-Waterville, ME** | | |




**Pollutant and Meteorological Parameters:**

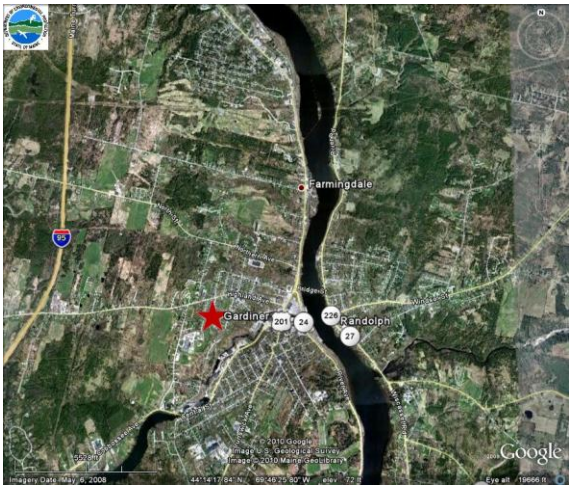
| Parameter | Date Began | Date Ended | Parameter | Date Began | Date Ended |
|---|---|---|---|---|---|
| PM2.5 FRM | 01/01/1999 | | $SO_2$ | | |
| PM2.5 Colo | 01/01/1999 | | Ozone | | |
| PM2.5 TEOM | | | NOx | | |
| PM2.5 BAM | | | NOy | | |
| PM10 FRM | 12/02/2002 | | VOCs (PAMS) | | |
| PM10 Colo | | | HAPs | | |
| PM10 TEOM | | | Wet Deposition - Mercury | | |
| PM10 BAM | | | Wet Dep. - Precip Chem. | | |
| PM Coarse | | | Wind Direction/Speed | | |
| IMPROVE | | | Outdoor Temperature | | |
| Cont. OC/EC | | | Bar. Pressure | | |
| Cont. Sulfate | | | Relative Humidity | | |
| Black Carbon | | | Dewpoint | | |
| Cont. PAH | | | Precipitation Amount | | |
| Lead | | | Solar Radiation | | |
| CO | | | UV-b Radiation | | |

**Site Description:**
Lincoln Street School is located in Augusta just off Western Avenue, 0.4 miles NW of the state capitol. A wooden platform is situated on the roof of the gymnasium. Particulate monitors are attached to the platform.

**Monitoring Objectives:**
SLAMS – State and Local Air Monitoring Station.

**Planned changes for 2015:**
None planned.

| | | | |
|---|---|---|---|
| Town – Site: | **Gardiner – Pray Street School** | | |
| County: | **Kennebec** | Latitude: | **44.2306** |
| Address: | **Pray Street** | Longitude: | **-69.7850** |
| AQS Site ID: | **23-011-2005** | Elevation: | **55 Meters** |
| Spatial Scale: | **Regional** | Year Established: | **1991** |
| Statistical Area: | **Augusta-Waterville, ME** | | |




**Pollutant and Meteorological Parameters:**

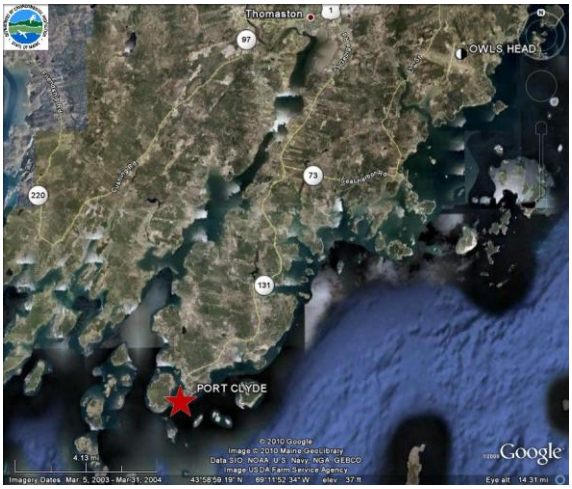
| Parameter | Date Began | Date Ended | Parameter | Date Began | Date Ended |
|---|---|---|---|---|---|
| PM2.5 FRM | | | $SO_2$ | 03/07/2012 | |
| PM2.5 Colo | | | Ozone | 04/01/1991 | |
| PM2.5 TEOM | | | NOx | 03/07/2012 | |
| PM2.5 BAM | | | NOy | | |
| PM10 FRM | | | VOCs (PAMS) | | |
| PM10 Colo | | | HAPs | | |
| PM10 TEOM | | | Wet Deposition - Mercury | | |
| PM10 BAM | | | Wet Dep. - Precip Chem. | | |
| PM Coarse | | | Wind Direction/Speed | | |
| IMPROVE | | | Outdoor Temperature | | |
| Cont. OC/EC | | | Bar. Pressure | | |
| Cont. Sulfate | | | Relative Humidity | | |
| Black Carbon | | | Dewpoint | | |
| Cont. PAH | | | Precipitation Amount | | |
| Lead | | | Solar Radiation | | |
| CO | | | UV-b Radiation | | |

**Site Description:**
The site is located on the north edge of the Gardiner Area High School grounds. The Pray Street Elementary School next door at 14 Pray Street has closed and is now housing a Boys and Girls Club. Monitors are housed in an 8'x8'x8' environmentally controlled shelter, situated outside the fence line of the playing fields. The shelter was installed in 2006.

**Monitoring Objectives:**
Regional Transport

**Planned changes for 2015:**
None planned.

| | | | |
|---|---|---|---|
| Town – Site: | **Port Clyde – Marshall Point Lighthouse** | | |
| County: | **Knox** | Latitude: | **43.9180** |
| Address: | **Marshall Point Road** | Longitude: | **-69.2608** |
| AQS Site ID: | **23-013-0004** | Elevation: | **9 Meters** |
| Spatial Scale: | **Regional** | Year Established: | **1987** |
| Statistical Area: | **Rockland, ME** | | |




**Pollutant and Meteorological Parameters:**

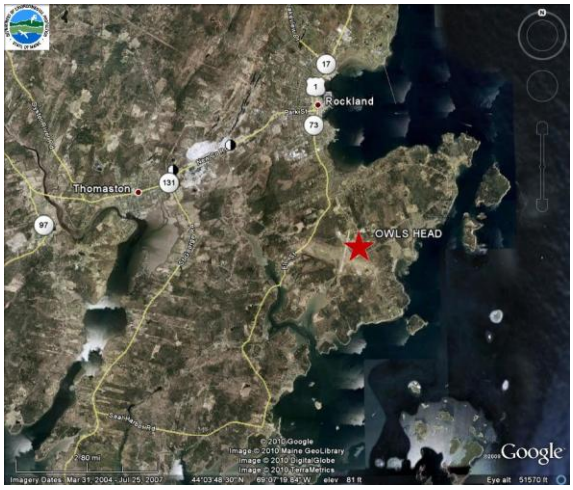
| Parameter | Date Began | Date Ended | Parameter | Date Began | Date Ended |
|---|---|---|---|---|---|
| PM2.5 FRM | | | $SO_2$ | | |
| PM2.5 Colo | | | Ozone | 05/01/1987 | |
| PM2.5 TEOM | | | NOx | | |
| PM2.5 BAM | | | NOy | | |
| PM10 FRM | | | VOCs (PAMS) | | |
| PM10 Colo | | | HAPs | | |
| PM10 TEOM | | | Wet Deposition - Mercury | | |
| PM10 BAM | | | Wet Dep. - Precip Chem. | | |
| PM Coarse | | | Wind Direction/Speed | | |
| IMPROVE | | | Outdoor Temperature | | |
| Cont. OC/EC | | | Bar. Pressure | | |
| Cont. Sulfate | | | Relative Humidity | | |
| Black Carbon | | | Dewpoint | | |
| Cont. PAH | | | Precipitation Amount | | |
| Lead | | | Solar Radiation | | |
| CO | | | UV-b Radiation | | |

**Site Description:**
The site is located at Marshall Point on the grounds of the Marshall Point Lighthouse Museum about 14.8 miles southwest of downtown Rockland. An 8'x8'x'8 environmentally controlled shelter houses the monitor, data acquisition equipment and modem.

**Monitoring Objectives:**
SLAMS – State and Local Air Monitoring Site

**Planned changes for 2015:**
None planned.

| | | | |
|---|---|---|---|
| Town – Site: | **Owls Head – Municipal Airport** | | |
| County: | **Knox** | Latitude: | **44.0627** |
| Address: | **1 Airport Rd.** | Longitude: | **-69.0934** |
| AQS Site ID: | **23-013-0014** | Elevation: | **15 Meters** |
| Spatial Scale: | **Regional** | Year Established: | **2002** |
| Statistical Area: | **Rockland, ME** | | |




**Pollutant and Meteorological Parameters:**

| Parameter | Date Began | Date Ended | Parameter | Date Began | Date Ended |
|---|---|---|---|---|---|
| PM2.5 FRM | | | $SO_2$ | | |
| PM2.5 Colo | | | Ozone | | |
| PM2.5 TEOM | | | NOx | | |
| PM2.5 BAM | | | NOy | | |
| PM10 FRM | | | VOCs (PAMS) | | |
| PM10 Colo | | | HAPs | | |
| PM10 TEOM | | | Wet Deposition - Mercury | | |
| PM10 BAM | | | Wet Dep. - Precip Chem. | | |
| PM Coarse | | | Wind Direction/Speed | 03/01/2002 | |
| IMPROVE | | | Outdoor Temperature | 03/01/2002 | |
| Cont. OC/EC | | | Bar. Pressure | | |
| Cont. Sulfate | | | Relative Humidity | | |
| Black Carbon | | | Dewpoint | | |
| Cont. PAH | | | Precipitation Amount | | |
| Lead | | | Solar Radiation | | |
| CO | | | UV-b Radiation | | |

**Site Description:**
The site is located on the grounds of the Knox County Regional Airport, 2.9 miles south southeast of downtown Rockland. Wind Speed and Direction sensors are mounted on a 10 meter retractable tower located on the roof of a maintenance equipment shed. A data acquisition system and modem are located in an 8'x8'x8' monitoring shelter between the shed and an office trailer to the east. An outdoor temperature sensor is mounted at the roof line of the monitoring shelter.

**Monitoring Objectives:**
Hourly averaged wind speed and wind direction, combined with other climatological data obtained from the NOAA National Weather Service, are useful in modeling trajectories of air masses.

**Planned changes for 2015:**
None planned for 2015, but airport management is planning on demolishing the maintenance shed within the next few years and replacing it with a building without a flat roof. This will necessitate relocating the tower to some other site within the airport property.

| | | | |
|---|---|---|---|
| Town – Site: | **Rumford – Rumford Ave. Parking Lot** | | |
| County: | **Oxford** | Latitude: | **44.5514** |
| Address: | **Rumford Ave. Parking Lot** | Longitude: | **-70.5463** |
| AQS Site ID: | **23-017-2011** | Elevation: | **135 Meters** |
| Spatial Scale: | **Neighborhood** | Year Established: | **1998** |
| Statistical Area: | **None** | | |

**Pollutant and Meteorological Parameters:**

| Parameter | Date Began | Date Ended | Parameter | Date Began | Date Ended |
|---|---|---|---|---|---|
| PM2.5 FRM | 12/01/1998 | | $SO_2$ | | |
| PM2.5 Colo | | | Ozone | | |
| PM2.5 TEOM | | | NOx | | |
| PM2.5 BAM | Summer 2014 | | NOy | | |
| PM10 FRM | | | VOCs (PAMS) | | |
| PM10 Colo | | | HAPs | 07/01/1998 | |
| PM10 TEOM | | | Wet Deposition - Mercury | | |
| PM10 BAM | | | Wet Dep. - Precip Chem. | | |
| PM Coarse | | | Wind Direction/Speed | | |
| IMPROVE | | | Outdoor Temperature | | |
| Cont. OC/EC | | | Bar. Pressure | | |
| Cont. Sulfate | | | Relative Humidity | | |
| Black Carbon | | | Dewpoint | | |
| Cont. PAH | | | Precipitation Amount | | |
| Lead | | | Solar Radiation | | |
| CO | | | UV-b Radiation | | |

**Site Description:**
The site is located in a paper mill employee parking lot off of Rumford Avenue in Rumford, Maine across the street from the Eagles Club and Bingo Parlor. An 8'x8'x8' environmentally controlled shelter houses HAPs sampling equipment, data acquisition system, and a BAM 1020 for continuous $PM_{2.5}$ sampling. A Thermo 2025 PM $_{2.5}$ sampler is located on the roof of the shelter.

**Monitoring Objectives:**
Population exposure and AQI forecasting. The Thermo 2025 PM2.5 monitor is set for a 1 day in 3 sampling schedule during the Fall and Winter seasons to better capture air-mass inversions in the valley. For the remainder of the year the sampler runs on a 1 day in 6 schedule.

**Planned changes for 2015:**
A Met One $PM_{2.5}$ BAM 1020 was installed in June 2014 and will become operational during the Summer of 2014. No other changes are expected for 2015.

| | | | |
|---|---|---|---|
| Town – Site: | **North Lovell – DOT Garage** | | |
| County: | **Oxford** | Latitude: | **44.2509** |
| Address: | **Route 5** | Longitude: | **-70.8606** |
| AQS Site ID: | **23-017-3001** | Elevation: | **213 Meters** |
| Spatial Scale: | **Regional** | Year Established: | **1998** |
| Statistical Area: | **None** | | |

**Pollutant and Meteorological Parameters:**

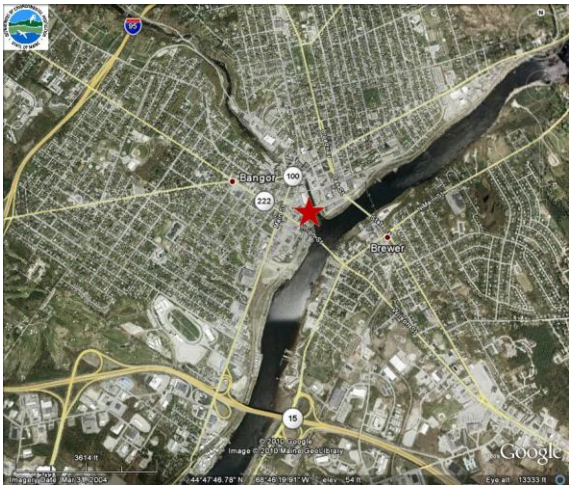
| Parameter | Date Began | Date Ended | Parameter | Date Began | Date Ended |
|---|---|---|---|---|---|
| PM2.5 FRM | | | $SO_2$ | | |
| PM2.5 Colo | | | Ozone | 5-6-1992 | |
| PM2.5 TEOM | | | NOx | | |
| PM2.5 BAM | | | NOy | | |
| PM10 FRM | | | VOCs (PAMS) | | |
| PM10 Colo | | | HAPs | | |
| PM10 TEOM | | | Wet Deposition - Mercury | | |
| PM10 BAM | | | Wet Dep. - Precip Chem. | | |
| PM Coarse | | | Wind Direction/Speed | | |
| IMPROVE | | | Outdoor Temperature | | |
| Cont. OC/EC | | | Bar. Pressure | | |
| Cont. Sulfate | | | Relative Humidity | | |
| Black Carbon | | | Dewpoint | | |
| Cont. PAH | | | Precipitation Amount | | |
| Lead | | | Solar Radiation | | |
| CO | | | UV-b Radiation | | |

**Site Description:**
Monitor is located in an office section of a garage belonging to the Department of Transportation. Building is in a small cleared area surrounded by woods.

**Monitoring Objectives:**
The site is located to get maximum concentrations in the western mountain area of Maine.

**Planned changes for 2015:**
None planned.

| | | | |
|---|---|---|---|
| Town – Site: | **Bangor – Kenduskeag Pump Station** | | |
| County: | **Penobscot** | Latitude: | **44.7989** |
| Address: | **Washington Street** | Longitude: | **-68.7697** |
| AQS Site ID: | **23-019-0002** | Elevation: | **10 Meters** |
| Spatial Scale: | **Neighborhood** | Year Established: | **1977** |
| Statistical Area: | **Bangor, ME** | | |




**Pollutant and Meteorological Parameters:**

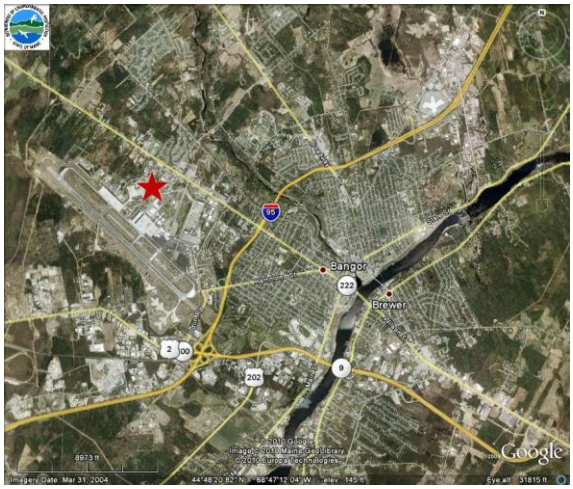
| Parameter | Date Began | Date Ended | Parameter | Date Began | Date Ended |
|---|---|---|---|---|---|
| PM2.5 FRM | 1-1-1999 | | $SO_2$ | 1-1-1986 | 7-1-1987 |
| PM2.5 Colo | 12-1-1999 | 12-29-2003 | Ozone | | |
| PM2.5 TEOM | 1-1-2007 | 12-30-2013 | NOx | | |
| PM2.5 BAM | 2-7-2014 | | NOy | | |
| PM10 FRM | 1-1-2003 | | VOCs (PAMS) | | |
| PM10 Colo | | | HAPs | 2-12-2004 | |
| PM10 TEOM | | | Wet Deposition - Mercury | | |
| PM10 BAM | | | Wet Dep. - Precip Chem. | | |
| PM Coarse | 2-7-2014 | | Wind Direction/Speed | | |
| IMPROVE | | | Outdoor Temperature | | |
| Cont. OC/EC | | | Bar. Pressure | | |
| Cont. Sulfate | | | Relative Humidity | | |
| Black Carbon | | | Dewpoint | | |
| Cont. PAH | | | Precipitation Amount | | |
| Lead | 1-1-1978 | 10-1-1992 | Solar Radiation | | |
| CO | | | UV-b Radiation | | |

**Site Description:**
Monitors are located on the roof of a pumping station building for the Bangor treatment plant. It is located on the shore of the Kenduskeag stream near the Penobscot River and sits in the bowl of downtown Bangor. Site was originally established to help define the extent of the particulate problems in Bangor. The pump station roof was replaced and a new sampler platform was installed in December 2013.

**Monitoring Objectives:**
Site was located to pick up maximum concentrations in the downtown area of Bangor.

**Planned changes for 2015:**
None planned.

| | | | |
|---|---|---|---|
| Town – Site: | **Bangor -- Airport** | | |
| County: | **Penobscot** | Latitude: | **44.8166** |
| Address: | **BIA Bldg 489, Bangor Airport** | Longitude: | **-68.8204** |
| AQS Site ID: | **23-019-0010** | Elevation: | **50 Meters** |
| Spatial Scale: | **Urban/Regional** | Year Established: | **1987** |
| Statistical Area: | **Bangor, ME** | | |




**Pollutant and Meteorological Parameters:**

| Parameter | Date Began | Date Ended | Parameter | Date Began | Date Ended |
|---|---|---|---|---|---|
| PM2.5 FRM | | | $SO_2$ | | |
| PM2.5 Colo | | | Ozone | | |
| PM2.5 TEOM | | | NOx | | |
| PM2.5 BAM | | | NOy | | |
| PM10 FRM | | | VOCs (PAMS) | | |
| PM10 Colo | | | HAPs | | |
| PM10 TEOM | | | Wet Deposition - Mercury | | |
| PM10 BAM | | | Wet Dep. - Precip Chem. | | |
| PM Coarse | | | Wind Direction/Speed | 6-1-1987 | |
| IMPROVE | | | Outdoor Temperature | | |
| Cont. OC/EC | | | Bar. Pressure | | |
| Cont. Sulfate | | | Relative Humidity | | |
| Black Carbon | | | Dewpoint | | |
| Cont. PAH | | | Precipitation Amount | | |
| Lead | | | Solar Radiation | | |
| CO | | | UV-b Radiation | | |

**Site Description:**
Tower and sensors are located on the roof of building 489 on the Air National Guard Base at Bangor International Airport. Area is very open with some large aircraft hangars to the northwest of the tower at sufficient distance so as to not cause any interference. This is an urban to regionally representative site for meteorology.

**Monitoring Objectives:**
Wind data is collected to use in analysis of air pollutant data in the Bangor area.

**Planned changes for 2015:**
None planned.

| | | | |
|---|---|---|---|
| Town – Site: | **Holden** | | |
| County: | **Penobscot** | Latitude: | **44.7365** |
| Address: | **Summit of Rider's Bluff** | Longitude: | **-68.6711** |
| AQS Site ID: | **23-019-4008** | Elevation: | **250 Meters** |
| Spatial Scale: | **Regional** | Year Established: | **1993** |
| Statistical Area: | **Bangor, ME** | | |

**Pollutant and Meteorological Parameters:**

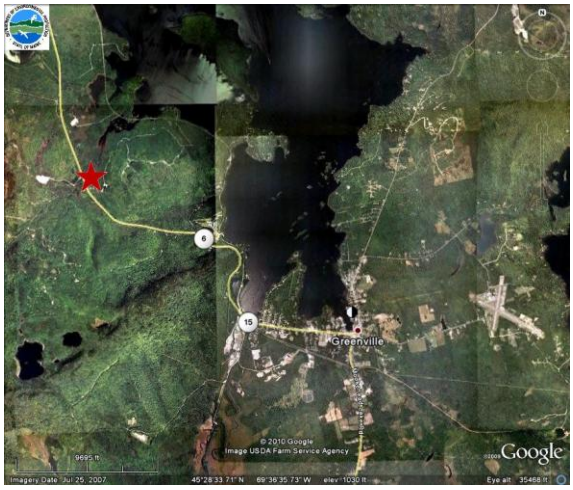
| Parameter | Date Began | Date Ended | Parameter | Date Began | Date Ended |
|---|---|---|---|---|---|
| PM2.5 FRM | | | $SO_2$ | | |
| PM2.5 Colo | | | Ozone | 5-19-1993 | |
| PM2.5 TEOM | | | NOx | | |
| PM2.5 BAM | | | NOy | | |
| PM10 FRM | | | VOCs (PAMS) | | |
| PM10 Colo | | | HAPs | | |
| PM10 TEOM | | | Wet Deposition - Mercury | | |
| PM10 BAM | | | Wet Dep. - Precip Chem. | | |
| PM Coarse | | | Wind Direction/Speed | | |
| IMPROVE | | | Outdoor Temperature | | |
| Cont. OC/EC | | | Bar. Pressure | | |
| Cont. Sulfate | | | Relative Humidity | | |
| Black Carbon | | | Dewpoint | | |
| Cont. PAH | | | Precipitation Amount | | |
| Lead | | | Solar Radiation | | |
| CO | | | UV-b Radiation | | |

**Site Description:**
Site is a transmission tower location for a local TV station at the top of a hill in Holden with good exposure in all directions.

**Monitoring Objectives:**
Monitor was located to pick up transport of ozone into the Penobscot County area and to measure maximum impacts in this area.

**Planned changes for 2015:**
None planned.

| | | | |
|---|---|---|---|
| Town – Site: | **Greenville** | | |
| County: | **Piscataquis** | Latitude: | **45.4893** |
| Address: | **Squaw Brook** | Longitude: | **-69.6637** |
| AQS Site ID: | **23-021-0001** | Elevation: | **339 Meters** |
| Spatial Scale: | **Regional** | Year Established: | **1980** |
| Statistical Area: | **None** | | |




**Pollutant and Meteorological Parameters:**

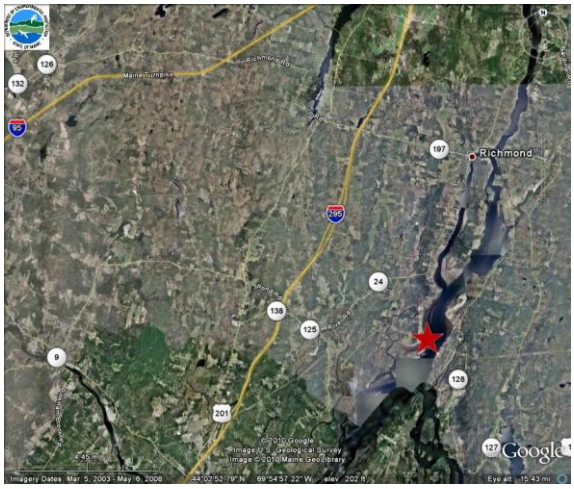
| Parameter | Date Began | Date Ended | Parameter | Date Began | Date Ended |
|---|---|---|---|---|---|
| PM2.5 FRM | | | $SO_2$ | | |
| PM2.5 Colo | | | Ozone | | |
| PM2.5 TEOM | | | NOx | | |
| PM2.5 BAM | | | NOy | | |
| PM10 FRM | | | VOCs (PAMS) | | |
| PM10 Colo | | | HAPs | | |
| PM10 TEOM | | | Wet Deposition - Mercury | 1997 | |
| PM10 BAM | | | Wet Dep. - Precip Chem. | 1980 | |
| PM Coarse | | | Wind Direction/Speed | | |
| IMPROVE | | | Outdoor Temperature | | |
| Cont. OC/EC | | | Bar. Pressure | | |
| Cont. Sulfate | | | Relative Humidity | | |
| Black Carbon | | | Dewpoint | | |
| Cont. PAH | | | Precipitation Amount | 1980 | |
| Lead | | | Solar Radiation | | |
| CO | | | UV-b Radiation | | |

**Site Description:**
Site is located in a small clearing on private property to the northwest of Greenville Junction. This is one of the oldest deposition monitoring sites in the country.

**Monitoring Objectives:**
Measure the chemistry of the rain and snowfall in this area of the state.

**Planned changes for 2015:**
None planned.

| | | | |
|---|---|---|---|
| Town – Site: | **Bowdoinham – Merrymeeting Bay** | | |
| County: | **Sagadahoc** | Latitude: | **44.0050** |
| Address: | **Brown's Point** | Longitude: | **-69.8278** |
| AQS Site ID: | **23-023-0006** | Elevation: | **3 meters** |
| Spatial Scale: | **Regional** | Year Established: | **2008** |
| Statistical Area: | **Portland-Lewiston-South Portland** | | |




**Pollutant and Meteorological Parameters:**

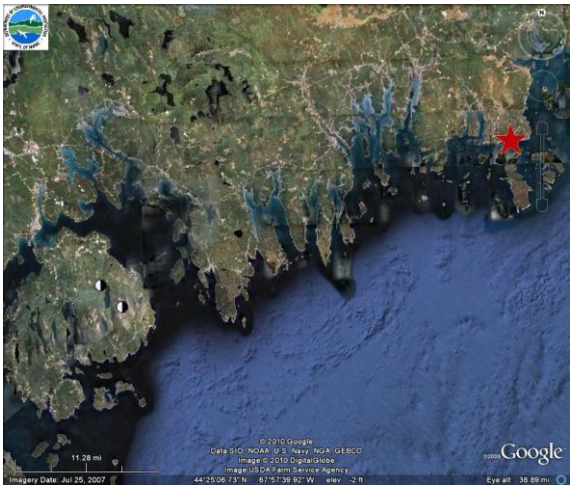
| Parameter | Date Began | Date Ended | Parameter | Date Began | Date Ended |
|---|---|---|---|---|---|
| PM2.5 FRM | | | $SO_2$ | | |
| PM2.5 Colo | | | Ozone | 05/08/2008 | |
| PM2.5 TEOM | | | NOx | | |
| PM2.5 BAM | | | NOy | | |
| PM10 FRM | | | VOCs (PAMS) | | |
| PM10 Colo | | | HAPs | | |
| PM10 TEOM | | | Wet Deposition - Mercury | | |
| PM10 BAM | | | Wet Dep. - Precip Chem. | | |
| PM Coarse | | | Wind Direction/Speed | | |
| IMPROVE | | | Outdoor Temperature | | |
| Cont. OC/EC | | | Bar. Pressure | | |
| Cont. Sulfate | | | Relative Humidity | | |
| Black Carbon | | | Dewpoint | | |
| Cont. PAH | | | Precipitation Amount | | |
| Lead | | | Solar Radiation | | |
| CO | | | UV-b Radiation | | |

**Site Description:**
The site is located on the unimproved property of Mrs. Erla Kelley, adjacent to 598 Brown's Point Road in Bowdoinham, approximately 32 miles NE of Portland. An ozone sampler, data acquisition system and modem are located inside an environmentally controlled 8'x8'x8' shelter.

**Monitoring Objectives:**
Maximum Ozone Concentration

**Planned changes for 2015:**
Relocation of this monitor is possible if an acceptable site can be found closer to the coast, south of Phippsburg.

| | | | |
|---|---|---|---|
| Town – Site: | **Jonesport – Public Landing** | | |
| County: | **Washington** | Latitude: | **44.5319** |
| Address: | **Public Landing** | Longitude: | **-67.5959** |
| AQS Site ID: | **23-029-0019** | Elevation: | **16 Meters** |
| Spatial Scale: | **Regional** | Year Established: | **1989** |
| Statistical Area: | **None** | | |




**Pollutant and Meteorological Parameters:**

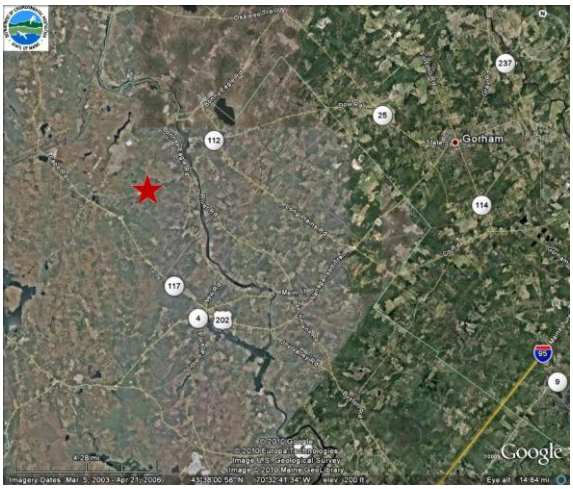
| Parameter | Date Began | Date Ended | Parameter | Date Began | Date Ended |
|---|---|---|---|---|---|
| PM2.5 FRM | | | $SO_2$ | | |
| PM2.5 Colo | | | Ozone | 5-19-1989 | |
| PM2.5 TEOM | | | NOx | | |
| PM2.5 BAM | | | NOy | | |
| PM10 FRM | | | VOCs (PAMS) | | |
| PM10 Colo | | | HAPs | | |
| PM10 TEOM | | | Wet Deposition - Mercury | | |
| PM10 BAM | | | Wet Dep. - Precip Chem. | | |
| PM Coarse | | | Wind Direction/Speed | | |
| IMPROVE | | | Outdoor Temperature | | |
| Cont. OC/EC | | | Bar. Pressure | | |
| Cont. Sulfate | | | Relative Humidity | | |
| Black Carbon | | | Dewpoint | | |
| Cont. PAH | | | Precipitation Amount | | |
| Lead | | | Solar Radiation | | |
| CO | | | UV-b Radiation | | |

**Site Description:**
Monitor is located in a town building at the Public Landing in Jonesport.

**Monitoring Objectives:**
Monitor sited to obtain maximum concentrations in the coastal area of Washington County.

**Planned changes for 2015:**
None planned.

| | | | |
|---|---|---|---|
| Town – Site: | **Hollis/West Buxton – Fire Department** | | |
| County: | **York** | Latitude: | **43.6568** |
| Address: | **Plains Road** | Longitude: | **-70.6291** |
| AQS Site ID: | **23-031-0038** | Elevation: | **84 Meters** |
| Spatial Scale: | **Regional** | Year Established: | **1999** |
| Statistical Area: | **Portland-South Portland-Biddeford, ME** | | |




**Pollutant and Meteorological Parameters:**

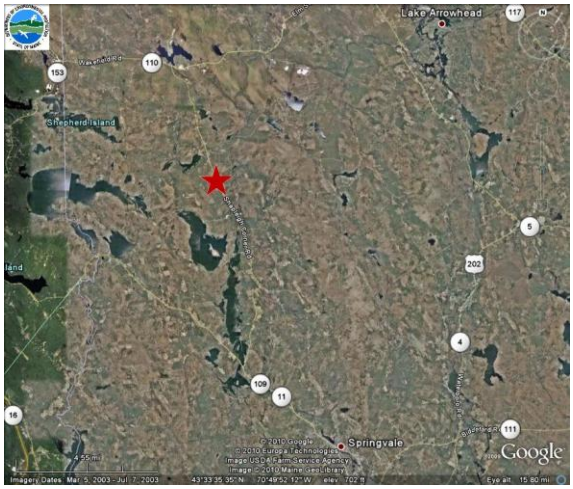
| Parameter | Date Began | Date Ended | Parameter | Date Began | Date Ended |
|---|---|---|---|---|---|
| PM2.5 FRM | | | $SO_2$ | | |
| PM2.5 Colo | | | Ozone | 4-1-1999 | |
| PM2.5 TEOM | | | NOx | | |
| PM2.5 BAM | | | NOy | | |
| PM10 FRM | | | VOCs (PAMS) | | |
| PM10 Colo | | | HAPs | | |
| PM10 TEOM | | | Wet Deposition - Mercury | | |
| PM10 BAM | | | Wet Dep. - Precip Chem. | | |
| PM Coarse | | | Wind Direction/Speed | | |
| IMPROVE | | | Outdoor Temperature | | |
| Cont. OC/EC | | | Bar. Pressure | | |
| Cont. Sulfate | | | Relative Humidity | | |
| Black Carbon | | | Dewpoint | | |
| Cont. PAH | | | Precipitation Amount | | |
| Lead | | | Solar Radiation | | |
| CO | | | UV-b Radiation | | |

**Site Description:**
Monitor is located in an 8x8x8 shelter in an open area around the West Buxton Fire Department building.

**Monitoring Objectives:**
Monitoring location was selected to define the inland extent of the non-attainment area in the southern coastal area of Maine.

**Planned changes for 2015:**
None planned.

| | | | |
|---|---|---|---|
| Town – Site: | **Shapleigh -- Shapleigh Ball Park** | | |
| County: | **York** | Latitude: | **43.5889** |
| Address: | **Route 11** | Longitude: | **-70.8773** |
| AQS Site ID: | **23-031-0040** | Elevation: | **171 Meters** |
| Spatial Scale: | **Regional** | Year Established: | **2008** |
| Statistical Area: | **Portland-South Portland-Biddeford, ME** | | |




**Pollutant and Meteorological Parameters:**

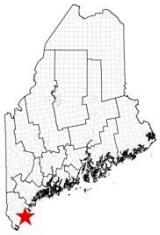
| Parameter | Date Began | Date Ended | Parameter | Date Began | Date Ended |
|---|---|---|---|---|---|
| PM2.5 FRM | | | $SO_2$ | | |
| PM2.5 Colo | | | Ozone | 6-13-2008 | |
| PM2.5 TEOM | | | NOx | | |
| PM2.5 BAM | | | NOy | | |
| PM10 FRM | | | VOCs (PAMS) | | |
| PM10 Colo | | | HAPs | | |
| PM10 TEOM | | | Wet Deposition - Mercury | | |
| PM10 BAM | | | Wet Dep. - Precip Chem. | | |
| PM Coarse | | | Wind Direction/Speed | | |
| IMPROVE | | | Outdoor Temperature | | |
| Cont. OC/EC | | | Bar. Pressure | | |
| Cont. Sulfate | | | Relative Humidity | | |
| Black Carbon | | | Dewpoint | | |
| Cont. PAH | | | Precipitation Amount | | |
| Lead | | | Solar Radiation | | |
| CO | | | UV-b Radiation | | |

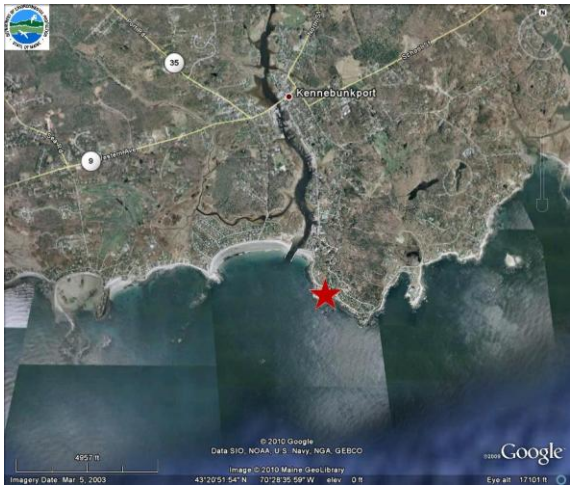
**Site Description:**
Site is located in an open field area surrounding a baseball field just off Route 11.

**Monitoring Objectives:**
Maximum impact area from transport and the precursors generated in southern New Hampshire.

**Planned changes for 2015:**
None planned.

| | | | |
|---|---|---|---|
| Town – Site: | **Kennebunkport – Parson's Way** | | |
| County: | **York** | Latitude: | **43.3431** |
| Address: | **Ocean Avenue** | Longitude: | **-70.4714** |
| AQS Site ID: | **23-031-2002** | Elevation: | **6 Meters** |
| Spatial Scale: | **Regional** | Year Established: | **1983** |
| Statistical Area: | **Portland-South Portland-Biddeford, ME** | | |






**Pollutant and Meteorological Parameters:**

| Parameter | Date Began | Date Ended | Parameter | Date Began | Date Ended |
|---|---|---|---|---|---|
| PM2.5 FRM | | | $SO_2$ | | |
| PM2.5 Colo | | | Ozone | 1-1-1983 | |
| PM2.5 TEOM | | | NOx | 6-1-1990 | 9-1-1990 |
| PM2.5 BAM | | | NOy | | |
| PM10 FRM | | | VOCs (PAMS) | | |
| PM10 Colo | | | HAPs | | |
| PM10 TEOM | | | Wet Deposition - Mercury | | |
| PM10 BAM | | | Wet Dep. - Precip Chem. | | |
| PM Coarse | | | Wind Direction/Speed | | |
| IMPROVE | | | Outdoor Temperature | | |
| Cont. OC/EC | | | Bar. Pressure | | |
| Cont. Sulfate | | | Relative Humidity | | |
| Black Carbon | | | Dewpoint | | |
| Cont. PAH | | | Precipitation Amount | | |
| Lead | | | Solar Radiation | | |
| CO | | | UV-b Radiation | | |

**Site Description:**
Site is located on a rocky beach area just off Ocean Avenue. Site has good exposure and has recorded some of the highest ozone concentrations in the state. The shelter has to be removed each fall and re-installed each spring to avoid winter storm damage.

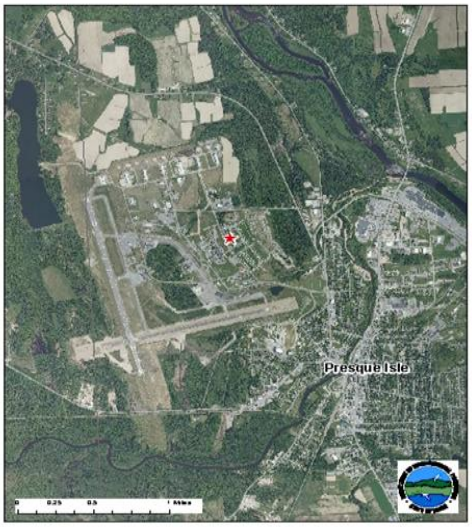
**Monitoring Objectives:**
Monitor was located to measure maximum impacts in the southern coastal area.

**Planned changes for 2015:**
None planned.

**TRIBAL MONITORING SITES**

**FOR 2015**

| | | | |
|---|---|---|---|
| Tribe – Site Name: | **Micmac -- Presque Isle Shelter** | | |
| County: | **Aroostook** | Latitude: | **46.6964** |
| Address: | **8 Northern Road** | Longitude: | **-68.0330** |
| AQS Site ID: | **23-003-1100** | Elevation: | **165 meters** |
| Spatial Scale: | **Neighborhood** | Year Established: | **2004** |
| Statistical Area: | **None** | | |




**Pollutant and Meteorological Parameters:**

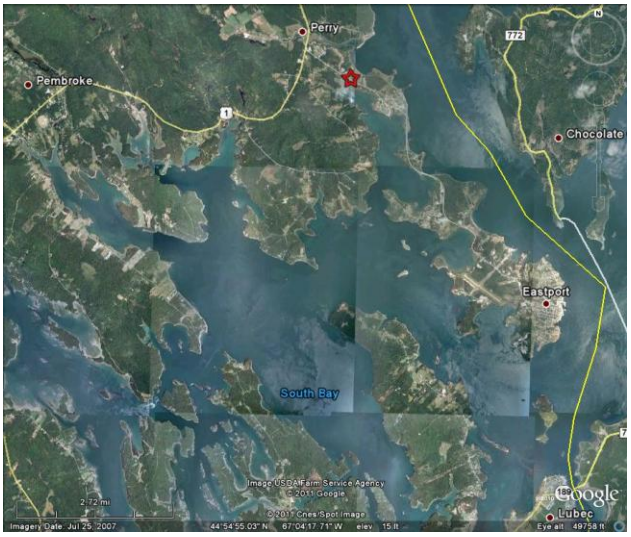
| Parameter | Date Began | Date Ended | Parameter | Date Began | Date Ended |
|---|---|---|---|---|---|
| PM2.5 FRM | | | $SO_2$ | 1-1-2006 | |
| PM2.5 Colo | | | Ozone | 1-1-2006 | |
| PM2.5 TEOM | 1-1-2006 | | NOx | 1-1-2006 | |
| PM2.5 BAM | | | NOy | | |
| PM10 FRM | | | VOCs (PAMS) | | |
| PM10 Colo | | | HAPs | | |
| PM10 TEOM | | | Wet Deposition - Mercury | 3-1-2014 | |
| PM10 BAM | | | Wet Dep. - Precip Chem. | | |
| PM Coarse | | | Wind Direction/Speed | 1-1-2006 | |
| IMPROVE | 1-1-2004 | | Outdoor Temperature | | |
| Cont. OC/EC | | | Bar. Pressure | | |
| Cont. Sulfate | | | Relative Humidity | | |
| Black Carbon | | | Dewpoint | | |
| Cont. PAH | | | Precipitation Amount | | |
| Lead | | | Solar Radiation | | |
| CO | 1-1-2006 | | UV-b Radiation | | |

**Site Description:**
The Aroostook Band of Micmacs ambient air monitor site continuously monitors Ozone, PM2.5, Carbon Monoxide, Sulfur Dioxide, Nitrogen Dioxide, Carbon Dioxide, and Meteorological parameters in Presque Isle, ME

**Monitoring Objectives:**

**Planned changes for 2015:**

| | | | |
|---|---|---|---|
| Tribe – Site Name: | **Passamaquoddy – Perry, Pleasant Point/Sipiyak** | | |
| County: | **Washington** | Latitude: | **44.9630** |
| Address: | **184 County Road** | Longitude: | **-67.0592** |
| AQS Site ID: | **23-029-0032** | Elevation: | **4 meters** |
| Spatial Scale: | **Regional** | Year Established: | **2006** |
| Statistical Area: | **None** | | |

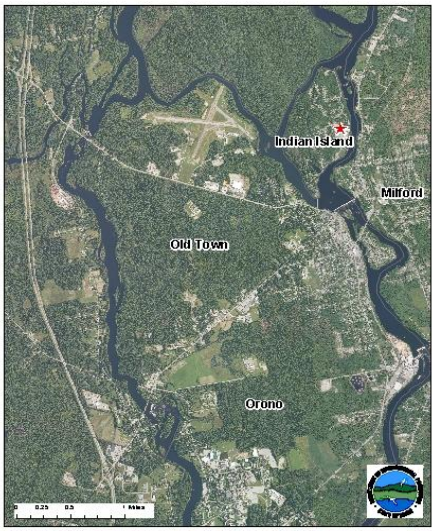



**Pollutant and Meteorological Parameters:**

| Parameter | Date Began | Date Ended | Parameter | Date Began | Date Ended |
|---|---|---|---|---|---|
| PM2.5 FRM | | | $SO_2$ | | |
| PM2.5 Colo | | | Ozone | 3-31-2006 | |
| PM2.5 TEOM | | | NOx | | |
| PM2.5 BAM | | | NOy | | |
| PM10 FRM | | | VOCs (PAMS) | | |
| PM10 Colo | | | HAPs | | |
| PM10 TEOM | | | Wet Deposition - Mercury | | |
| PM10 BAM | | | Wet Dep. - Precip Chem. | | |
| PM Coarse | | | Wind Direction/Speed | | |
| IMPROVE | | | Outdoor Temperature | | |
| Cont. OC/EC | | | Bar. Pressure | | |
| Cont. Sulfate | | | Relative Humidity | | |
| Black Carbon | | | Dewpoint | | |
| Cont. PAH | | | Precipitation Amount | | |
| Lead | | | Solar Radiation | | |
| CO | | | UV-b Radiation | | |

| |
|---|
| **Site Description:** |
| **Monitoring Objectives:** |
| **Planned changes for 2015:** |

| | | | |
|---|---|---|---|
| Tribe – Site Name: | **Penobscot Nation -- Indian Island** | | |
| County: | **Penobscot** | Latitude: | **44.95204** |
| Address: | **27 Wabanaki Way** | Longitude: | **-68.64768** |
| AQS Site ID: | **23-019-1100** | Elevation: | **41 meters** |
| Spatial Scale: | **Regional** | Year Established: | **2006** |
| Statistical Area: | **None** | | |




**Pollutant and Meteorological Parameters:**

| Parameter | Date Began | Date Ended | Parameter | Date Began | Date Ended |
|---|---|---|---|---|---|
| PM2.5 FRM | | | $SO_2$ | | |
| PM2.5 Colo | | | Ozone | 1-1-2006 | |
| PM2.5 TEOM | | | NOx | | |
| PM2.5 BAM | | | NOy | | |
| PM10 FRM | | | VOCs (PAMS) | | |
| PM10 Colo | | | HAPs | | |
| PM10 TEOM | | | Wet Deposition - Mercury | | |
| PM10 BAM | | | Wet Dep. - Precip Chem. | | |
| PM Coarse | | | Wind Direction/Speed | 7-2002 | |
| IMPROVE | 1-14-2006 | | Outdoor Temperature | 7-2002 | |
| Cont. OC/EC | | | Bar. Pressure | 7-2002 | |
| Cont. Sulfate | | | Relative Humidity | 7-2002 | |
| Black Carbon | | | Dewpoint | | |
| Cont. PAH | | | Precipitation Amount | 7-2002 | |
| Lead | | | Solar Radiation | 7-2002 | |
| CO | | | UV-b Radiation | | |

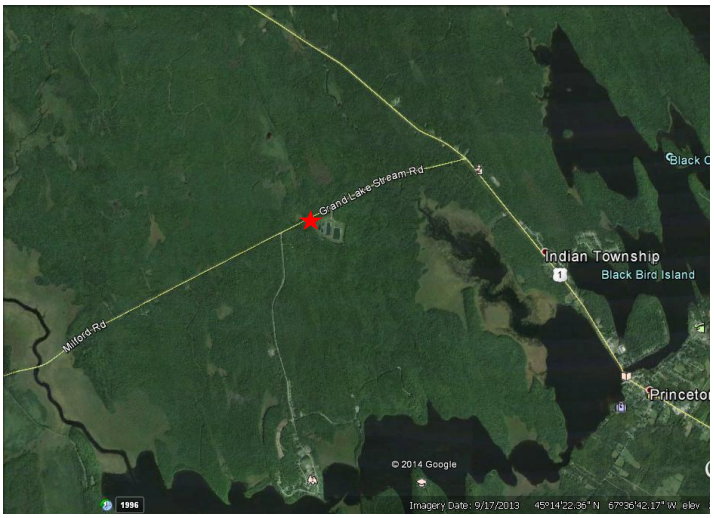
**Site Description:** The original IMPROVE Site location, established on 6/27/2001, was located near the Marsh Island Apartments. That location was shut down on 5/29/2006 having been made redundant after 1/14/2006 when the current IMPROVE site was established.

**Monitoring Objectives:**

**Planned changes for 2015:**

| | | | |
|---|---|---|---|
| Tribe – Site Name: | **Passamaquoddy Tribe -- Indian Township** | | |
| County: | **Washington** | Latitude: | **45.2436** |
| Address: | **Indian Township** | Longitude: | **-67.6308** |
| AQS Site ID: | **None** | Elevation: | **101 meters** |
| Spatial Scale: | **N/A** | Year Established: | **2013** |
| Statistical Area: | **None** | | |

No Photo Available




**Pollutant and Meteorological Parameters:**

| Parameter | Date Began | Date Ended | Parameter | Date Began | Date Ended |
|---|---|---|---|---|---|
| PM2.5 FRM | | | $SO_2$ | | |
| PM2.5 Colo | | | Ozone | | |
| PM2.5 TEOM | | | NOx | | |
| PM2.5 BAM | | | NOy | | |
| PM10 FRM | | | VOCs (PAMS) | | |
| PM10 Colo | | | HAPs | | |
| PM10 TEOM | | | Wet Deposition - Mercury | | |
| PM10 BAM | | | Wet Dep. - Precip Chem. | 10-3-2013 | |
| PM Coarse | | | Wind Direction/Speed | | |
| IMPROVE | | | Outdoor Temperature | | |
| Cont. OC/EC | | | Bar. Pressure | | |
| Cont. Sulfate | | | Relative Humidity | | |
| Black Carbon | | | Dewpoint | | |
| Cont. PAH | | | Precipitation Amount | 10-3-2013 | |
| Lead | | | Solar Radiation | | |
| CO | | | UV-b Radiation | | |

**Site Description:**

**Monitoring Objectives:**

**Planned changes for 2015:**
This is a newly established NADP site in Maine and as information about it becomes available this page will be updated.