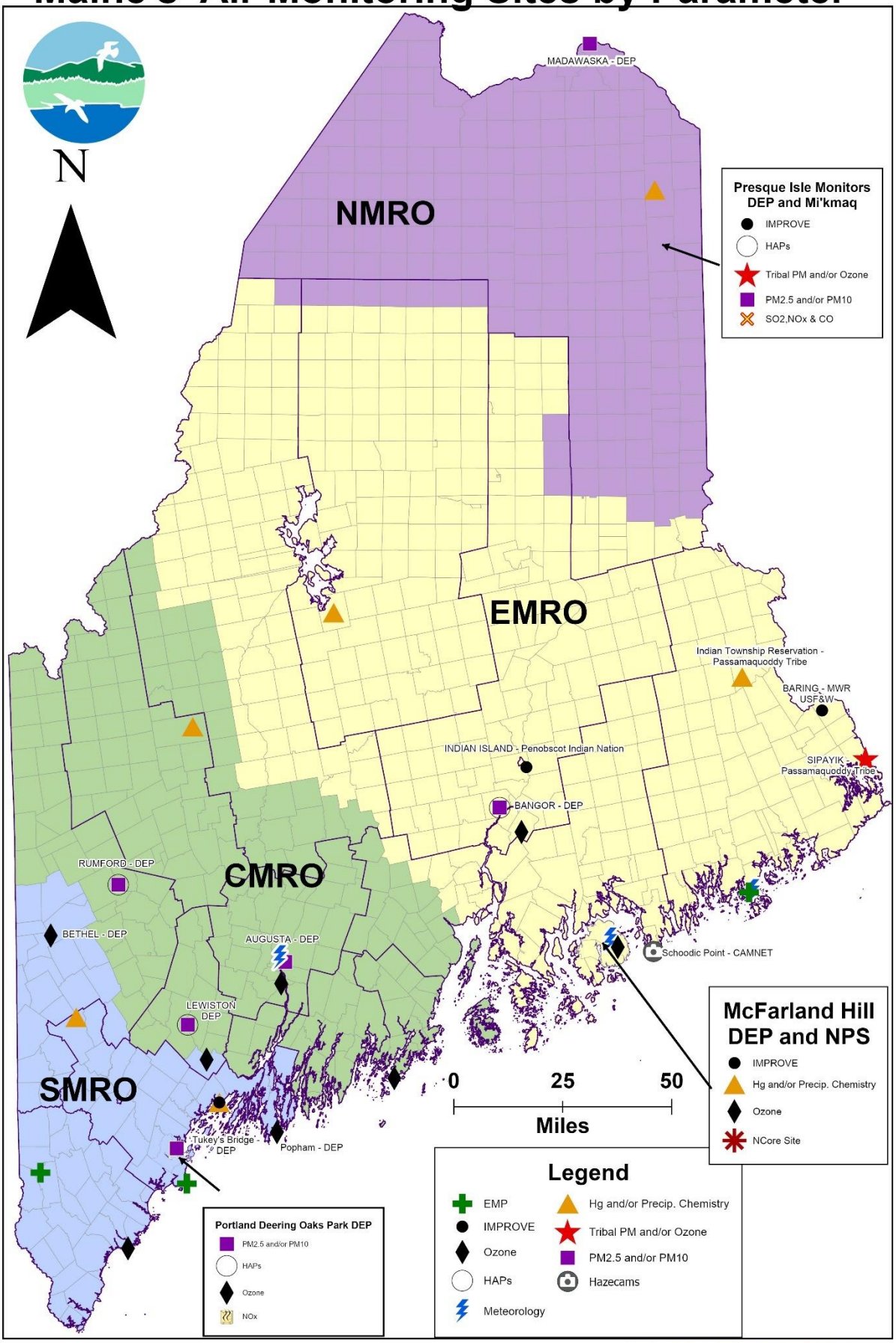
Annual Air Monitoring Plan 2025

Maine Department of Environmental Protection
Bureau of Air Quality
July 1, 2024

Maine's Air Monitoring Sites by Parameter



Data Source MEGIS and MEDEP; updated 5/15/2024

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Introduction

The Maine Department of Environmental Protection (DEP) Bureau of Air Quality (BAQ) operates and maintains a network of air samplers in the state to evaluate ambient air quality in Maine. The Code of Federal Regulations (CFR) and the Environmental Protection Agency (EPA) requires state and local agencies to conduct ambient air quality monitoring to determine whether the ambient concentrations of pollutants in the state exceed ambient air quality standards. The State of Maine remains in attainment with all ambient air quality standards. Air quality data also document trends that may be occurring in the concentrations of these pollutants, support the Maine DEP in providing background information for the licensing program and, when necessary, the development of pollution control strategies. For many of the monitored pollutants, the BAQ maintains an automated polling and reporting technology that provides continuous hourly data to the public and scientific community. These data are also used for timely forecasting of regional air quality conditions for Maine citizens and visitors to the state.

The Maine BAQ has been monitoring air quality in Maine since the DEP was formed in 1972, working in partnership with the EPA to uphold the tenets of the 1970 Clean Air Act and subsequent amendments. The BAQ is responsible for most of the ambient air quality monitors located in Maine. Additional monitoring is conducted by several federal agencies such as the EPA, the National Park Service, the U.S. Fish and Wildlife Service, the U.S. Geological Survey, as well as several of the Indian tribes in Maine. In 2007, Maine BAQ entered into a Primary Quality Assurance Organization (PQAO) agreement with the Mi'kmaq[1] Nation, the Passamaquoddy Tribe at Pleasant Point, and the Penobscot Indian Nation in Maine to conduct air monitoring with shared quality assurance plans, practices, and procedures.

The air monitoring program in Maine has evolved as air quality standards have tightened, scientific knowledge has improved, the levels of concern for different pollutants have evolved, and the technology to monitor these pollutants has developed. The DEP initially concentrated resources on neighborhood monitoring of air pollutants, primarily from local sources. As the impact on the ambient environment from local sources was reduced, the state monitoring network began to focus on establishing statewide background levels and improving air quality forecasts.

Maine is a state with many regions of varying topography. Pollutant impacts in one area of the state may be very different from pollutant impacts in another area. Mountain valleys in the western part of the state may experience higher pollution levels at times because of atmospheric inversions, which trap ground-level pollution in the valleys for extended periods, whereas the coastal locations, with higher dispersion of pollutants due to the constant onshore and offshore winds, may not. Aroostook County may record higher particulate levels because of widespread farming operations and the type of soil found in the county. Southern Maine may record higher ozone levels because of air masses originating from other areas of the U.S. Some pollutants monitored may even come from the other side of the world, such as particulates from volcanic eruptions, large forest fires, or emissions from less-controlled sources in some of the rapidly developing countries.

The DEP is also aware of heightened interest in air quality issues by Maine's citizenry. Many internet sites provide real-time or near real-time ambient air quality data. Low-cost air sensors are on the market and becoming more readily available. As a result, the citizens the DEP serves are more informed and frequently more engaged in air quality issues than ever before. That expanding knowledge is creating demand for

[1] The Mi'kmaq (MIG-mah) Nation is federal recognized as the 'Aroostook Band of Micmacs' however this document uses the term 'Mi'Kmaq Nation' which is the traditional name and is the preferred name by the nation.

broadened air quality monitoring across the state and increased interest in monitoring for non-criteria pollutants, such as Hazardous Air Pollutants (HAPs) and Aeroallergens.

In addition, the Maine Climate Council came into being with a charge "to address a number of critical and pressing issues relating to the effects of climate change on the State, its communities and its environment and natural resources, must commence work on those issues as soon as is possible….." Among the findings of this Council is the lack of active ambient air quality monitoring in many Maine counties. Though the 2024 Ambient Air Monitoring Plan does not define a plan to address the concerns of the Climate Council, it does acknowledge the need to move in the direction of establishing monitoring equipment in under-served regions of the state and to develop a plan to achieve the goal of assessing ambient air quality statewide.

The DEP must also deal with changing federal regulations. As more data are collected and more health study results are published, the impacts of various pollutants are reviewed. Pollution standards and controls may need to be updated to reflect revised recommendations. The EPA is required to review the National Ambient Air Quality Standards (NAAQS) every five years and changing standards may mean the implementation of additional monitoring requirements. A list of the current State and National Ambient Air Quality Standards (NAAQS) is presented below.

National Ambient Air Quality Standards (NAAQS)

from: https://www.epa.gov/criteria-air-pollutants/naaqs-table

The EPA has set National Ambient Air Quality Standards for six principal pollutants, which are called "criteria" air pollutants. The current standards are listed below: parts per million (ppm) by volume, parts per billion (ppb) by volume, and micrograms per cubic meter of air ($\mu g/m^3$).

Pollutant		Primary/ Secondary	Averaging Time	Level	Form
Carbon Monoxide (CO)		primary	8 hours	9 ppm	Not to be exceeded more than once per year
			1 hour	35 ppm	
Lead (Pb)		primary and secondary	Rolling 3-month average	0.15 $\mu g/m^3$ (1)	Not to be exceeded
Nitrogen Dioxide (NO_2)		primary	1 hour	100 ppb	98th percentile of 1-hour daily maximum concentrations, averaged over 3 years
		primary and secondary	1 year	53 ppb (2)	Annual Mean
Ozone (O_3)		primary and secondary	8 hours	0.070 ppm (3)	Annual fourth-highest daily maximum 8-hour concentration, averaged over 3 years
Particle Pollution (PM)	$PM_{2.5}$	primary	1 year	9.0 $\mu g/m^3$	annual mean, averaged over 3 years
		secondary	1 year	15.0 $\mu g/m^3$	annual mean, averaged over 3 years
		primary and secondary	24 hours	35 $\mu g/m^3$	98th percentile, averaged over 3 years
	PM_{10}	primary and secondary	24 hours	150 $\mu g/m^3$	Not to be exceeded more than once per year on average over 3 years
Sulfur Dioxide (SO_2)		primary	1 hour	75 ppb (4)	99th percentile of 1-hour daily maximum concentrations, averaged over 3 years
		secondary	3 hours	0.5 ppm	Not to be exceeded more than once per year

(1) In areas designated nonattainment for the Pb standards prior to the promulgation of the current (2008) standards, and for which implementation plans to attain or maintain the current (2008) standards have not been submitted and approved, the previous standards (1.5 $\mu g/m^3$ as a calendar quarter average) also remain in effect.

(2) The level of the annual NO_2 standard is 0.053 ppm. It is shown here in terms of ppb for the purposes of clearer comparison to the 1-hour standard level.

(3) Final rule signed October 1, 2015, and effective December 28, 2015. The previous (2008) O_3 standards remain in effect in some areas. Revocation of the previous (2008) O3 standards and transitioning to the current (2015) standards will be addressed in future rulemaking.

(4) The previous SO2 standards (0.14 ppm 24-hour and 0.03 ppm annual) will remain in effect in certain areas: (1) any area for which it is not yet 1 year since the effective date of designation under the current (2010) standards, and (2) any area for which an implementation plan providing for attainment of the current (2010) standard has not been submitted and approved and which is designated nonattainment under the previous SO_2 standards or is not meeting the requirements of a State Implementation Plan (SIP) call under the previous SO2 standards (40 CFR 50.4(3)). A SIP call is an EPA action requiring a state to resubmit all or part of its State Implementation Plan to demonstrate attainment of the required NAAQS.

Network Overview

By July 1st of each year, the DEP is required to submit to the EPA a proposed monitoring plan for the next calendar year. In 2006, the EPA also required states to make their proposed plan available for a 30-day comment period prior to submittal to the EPA. The DEP annual monitoring plan 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 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.

The Maine DEP BAQ monitors air quality as required by the 1970 Clean Air Act and subsequent amendments, the Code of Federal Regulations (CFR), and the Federal Environmental Protection Agency (EPA.) Much of the monitoring effort focuses on the six criteria pollutants: ground-level ozone, particulate matter, sulfur dioxide, nitrogen dioxide, carbon monoxide, and lead.

Ozone monitoring continues to be a priority for DEP. Ozone at ground level can trigger a variety of health effects, particularly in young children, the elderly, and those with existing health conditions. It is also harmful to vegetation, buildings, and infrastructure. Ground-level ozone is not usually emitted directly into the air from any source, but it is created through the presence of sunlight acting on other airborne pollutants like those found in vehicle exhaust, chemical solvents, and gasoline vapors. Since the Clean Air Act of 1970, Maine has operated ozone monitoring stations at many locations, each selected to optimize the assessment of ozone levels across the state.

Quantification of fine airborne particulate matter ($PM_{2.5}$) is another major component of the DEP ambient monitoring program. Particulate matter (PM) is the term used for any airborne mixture of solid particles and liquid droplets, such as those found in soot, dust, and smoke. The particles can be large enough, like pollen, to be seen with the unaided eye, while others are so fine that they can only be detected with electron microscopes. Of particular concern are those particles, generally 10 microns in size (PM_{10}) and less, which are inhalable, for they can become lodged in the lungs and $PM_{2.5}$ particles can be respired deeply into the lungs. Fine particulate ($PM_{2.5}$) monitoring in Maine has evolved since 1999 when the program was established. The Total Suspended Particulate (TSP) and PM_{10} program in Maine began shortly after the DEP was established in 1972. DEP efforts have focused on introducing more of the continuous $PM_{2.5}$ monitors into the network. Presently, most monitoring sites where particulate sampling takes place include a continuous $PM_{2.5}$ monitor. In addition, the DEP is intending to increase mobility with particulate monitoring in order to be more responsive to “localized” air quality issues.

Nitrogen dioxide (NO_2) is one of a group of highly reactive gasses known as “oxides of nitrogen,” or “nitrogen oxides (NO_x).” EPA’s National Ambient Air Quality Standard uses NO_2 as the term representing the larger group of nitrogen oxides that include NO, NO_2, NO_x, and NO_y. Nitrogen Oxide (NO) is created during the combustion stage of engine and boiler operations. The NO, NO_2, NO_x, and NO_y forms of nitrogen oxides react at different rates in the atmosphere in a process that is dependent on sunlight and temperature. NO_x is measured at ground level while NO_y is the reactive form measured at ten meters above ground level. In addition to contributing to the formation of ground-level ozone and fine particle pollution, the oxides of nitrogen are linked with a number of adverse effects on the respiratory system.

Sulfur dioxide (SO_2) and a group of other sulfur oxides, collectively known as SO_x, are emitted into the atmosphere from the burning of fossil fuels by power plants, industrial facilities, ships, locomotives, and heavy equipment. Short-term exposure to SO_2 and SO_x compounds can harm the respiratory system. Children, the elderly, and those with asthma or other breathing troubles are particularly sensitive to these sulfur compounds.

Carbon monoxide (CO) is another harmful gas emitted from combustion processes. Most of this colorless, odorless, yet extremely harmful gas comes from mobile sources like cars and trucks and in the United States is found primarily in and around large urban areas. CO reduces the amount of oxygen that can be absorbed by the body, particularly the heart and brain. At high concentrations, CO can lead to death.

Lead (Pb) in the atmosphere is emitted as particles – mainly from smelters, ore and metal processing facilities, waste incinerators, public utilities, and lead-acid manufactures. Piston aircraft continue to use leaded aviation fuel. Since tetraethyl lead was removed from motor vehicle fuel, the ambient levels of lead in Maine dropped significantly and concentrations are currently at or below minimum detection limits for most Pb monitors.

The DEP also tests the ambient air for many non-criteria yet hazardous air pollutants (HAPs). Based on the HAPs testing in ambient air, a priority list of hazardous pollutants was tabulated and DEP has established background concentrations for several of the pollutants on the list. The list is modified as additional data becomes available.

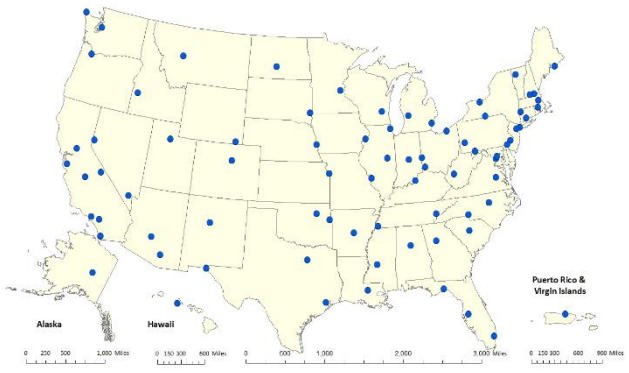
The following section details the individual networks for the various parameters monitored in Maine, any changes proposed for monitored parameters, and identifies future needs for monitoring. Though the spirit and intent of this document is to specify how the network will appear and function for calendar year 2025, the potential exists for additional short-notice changes to the network. If circumstances dictate a change to the network, proposed changes will still be made available for public review and comment prior to implementation.

Monitoring Site Types

SLAMS

Most of the sites in the Maine air monitoring network are designated as **SLAMS** – State & Local Air Monitoring Stations. The SLAMS in Maine are part of a standardized, national network administered by the EPA in accordance with the Clean Air Act and subsequent Federal Regulations. Every state must monitor for the criteria air pollutants, following strict criteria set by the EPA that govern all aspects of the monitoring and reporting process. SLAMS sites must meet all stringent monitor siting requirements and utilize specified equipment types. The pollution monitoring instruments at these sites must be approved by the EPA and be designated as either Federal Reference Method (FRM) or Federal Equivalence Method (FEM). In addition, SLAMS site operators must follow all quality assurance criteria and must submit detailed quarterly and annual monitoring results to EPA. Data from SLAMS locations are used as one of the factors to define attainment/nonattainment areas and to determine if an area is meeting the NAAQS.

NCORE



Established in 2011, the **NCore** (National Core) network is comprised of a specialized subset of SLAMS sites.

The purpose of the NCore network, in addition to aiding in the determination of nonattainment/ attainment areas, is to provide data to the scientific community from a specific suite of monitors that are used to make health and ecosystem assessments, establish long-term trends for criteria and certain precursor pollutants, and develop and evaluate pollutant transportation models. The NCore site in Maine, located at McFarland Hill in Acadia National Park, near Bar Harbor, is designated as a rural or background site. At McFarland Hill the following suite of parameters is monitored:

https://www.epa.gov/amtic/ncore-monitoring-network#:~:text=NCore%20is%20a%20multi%20pollutant,network%20on%20January%201%2C%202011.

Air Pollutant Parameters Monitored at NCore Sites

$PM_{2.5}$ speciation	Organic and elemental carbon, major ions and trace metals (24-hour average; every 3rd day); IMPROVE or CSN
$PM_{2.5}$ FRM mass	Filter-based 24 hr. average every 3rd day
Continuous $PM_{2.5}$ mass	1-hour reporting interval; FEM
$PM_{(10-2.5)}$ mass – aka PM_{Coarse}	Filter-based 24 hr. average every 3rd day or Continuous
Ozone (O_3)	Continuous, capable of trace levels (low ppm)
Carbon monoxide (CO)	Continuous, capable of trace levels (low ppm)
Sulfur dioxide (SO_2)	Continuous, capable of trace levels (low ppb)
Nitrogen oxide (NO)	Continuous, capable of trace levels (low ppb)
Total reactive nitrogen (NO_y)	Continuous, capable of trace levels (low ppb)
Surface meteorology	Continuous wind speed and direction (reported as “Resultant”), temperature, RH

Special Purpose Monitor (SPM)

The Maine DEP operates several Special Purpose Monitors around the State. These are often set at locations to monitor specific pollutants for a period, usually not exceeding two years, to investigate localized complaints or to recon a location for a possible long-term site.

The Deering Oaks Park site in Portland is a special purpose site. It is in a location, determined by the American Lung Association, as being representative of the greater Portland area. Monitoring results at the site are used to provide data useful in tracking relationships between pollutant levels and emergency department visits. Since the Deering Oaks Park location does not meet SLAMS siting requirements, the ozone and nitrogen dioxide data are not used in determining attainment or nonattainment status for criteria pollutants. However, the information is useful for other purposes such as quantifying urban air quality in Maine. Because of this, the department with the help of the City of Portland is looking for a new suitable location for our Deering Oaks station in response to multiple issues: the area surrounding the monitors has been used as a staging group for nearby construction projects for years, and the planned expansion of the walking and bike path will go through our current monitoring shelter. The hope is that a new location will be found that has a better representation of the city and will meet the SLAMS siting requirements.

Enhanced Monitoring Plan (EMP)

The State of Maine is required to maintain an Enhanced Monitoring Plan (EMP) as it is within the ozone transport region as defined in the 40 CFR, part 58, appendix d, paragraph 5(h). As part of this plan, Maine has originally continued the operation of the historical Photochemical Assessment Monitoring Station (PAMS) that was established at Cape Elizabeth – Two Lights State Park (CETL) in 1993. This site began with year-round Ozone, NOy, Meteorology, and from June 1 to August 31st, a continuous gas chromatography (GC) system measuring hourly hydrocarbon VOCs.

In 2021 a Pandora instrument was established at CETL. The Pandora Sun spectrometer is an instrument developed to measure vertical column densities (total columns) of trace gases in the atmosphere using Sun and sky radiation in the UV visible part of the spectrum. Staff from the Maine DEP will provide in-person support to keep the instrument running and the EPA and NASA will provide data analysis. A major joint objective is to support the validation and verification of more than a dozen low-earth orbit and geostationary orbit-based UV-visible sensors.

In October of 2022, after years of low values and the need to refocus limited staff availability on monitoring concerns within the state of Maine, the DEP shut down the NOy instrument and the GC system. The meteorology tower also had to be replaced as the old tower was becoming a safety concern due to wear. The replacement tower is not heavy duty, and to ensure the longevity of the tower through Maine winters, it was determined to only run the meteorology equipment during the ozone season. The ozone monitor will continue to run year-round as it provides important early spring data for forecasters and modelers. The Maine DEP would like to reinstall a HAPs sampler at the Cape Elizabeth site once resources allow.

The new EMP plan for Maine includes the operation of ozone monitors beyond those minimally required under 40 CFR, part 58, appendix d, Paragraph 4.1 and the enhanced upper air pollution concentrations produced by the Pandora spectrometer.

Maine would support the installation of a ceilometer proximate to the NCore site in Bar Harbor. The addition of a ceilometer is contingent on the availability of funds to acquire and support the instrument.

Tribal

In the 1990 Clean Air Act, Congress recognized EPA's Obligation to work with the Tribes in addressing air quality on Tribal lands. EPA's Tribal air policy emphasizes that, as sovereign governments, Tribes set their own air program goals and determine how monitoring is to be used in achieving these goals. Thus, EPA's role for Tribal air programs is to help the Tribes understand their air quality problems and to establish and meet their air quality goals, rather than to set goals or timetables for the Tribes. As part of a shared PQAO between the Maine DEP, the Penobscot Nation, the Passamaquoddy Tribe at Pleasant Point, and the Mi'kmaq Nation, the Maine DEP works directly with the tribal operators and administrators in a supporting role. This support varies among the tribes: often minimal with only shared quality assurance practices and conducting performance evaluations for criteria pollutant monitors, but occasionally extending to direct technical assistance and short/moderate-term loaning of monitoring equipment.

Other/ Special networks

CASTNET

CASTNET (Clean Air Status and Trends Network) is a nationwide monitoring operation that collects air pollutant concentrations to evaluate the effectiveness of national and regional emission control programs, to determine compliance with the National Ambient Air Quality Standards for ozone, and to determine rural trends in ozone, nitrogen, and sulfur concentrations. It was established in 1991 as a cooperative program with the EPA, the National Park Service, and state and local partners. The CASTNET site location in Maine is at McFarland Hill in Acadia National Park. The CASTNET site in Ashland was unexpectedly shut down in May 2022 due to budget constraints at this time, this site is unlikely to receive funding through the CASTNET program to resume operation, and the current future for this site is currently unknown. The data are now incorporated in several regional air quality models. https://www.epa.gov/castnet

CAMNET:

Maine DEP, along with several other state and local agencies and non-profit organizations, helps support the Northeast States for Coordinated Air Use Management (NESCAUM) operate Camnet – a network of real-time visibility cameras situated throughout the Northeast. In Maine, there is an active Camnet location at Schoodic Point with one wide-angle camera pointing west towards Acadia National Park on Mount Desert Island. Air quality sensors at the site allow users of Camnet to see the effects of air pollution on visibility. There was a Camnet location in the Moosehorn National Wildlife Refuge. That site was shut down in 2018. **https://www.hazecam.net/**

RadNet:

RadNet has 140 radiation air monitors in 50 states. The EPA has historically maintained two RadNet sites in Maine with local operators. One site is in Portland operated by DEP, and one in Orono operated by a UMaine staff member. However, due to a retirement at UMaine, that site had to be shut down, but the EPA in

conjunction with the Maine DEP are planning to move the equipment from Orono and install it at our Bangor monitoring site in 2024. The EPA's Radiation Network runs 24 hours a day, 7 days a week collecting near-real-time measurements of gamma radiation. The RadNet program monitors the nation's air, precipitation, and drinking water to track radiation in the environment. Over time, RadNet sample testing and monitoring results show the fluctuations in background levels of environmental radiation. The RadNet system will also detect higher than normal radiation levels during a radiological incident.

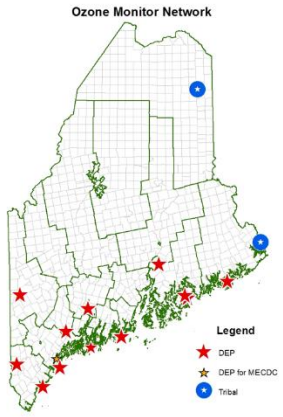
Gamma radiation comes from many different radioactive elements, both natural and man-made. Able to penetrate several feet of concrete or a few inches of lead, gamma particles can pose a serious health threat inside and outside the body and the radiation can be lethal depending on the amount received. Scientists use the properties of gamma radiation to detect the presence of radioactive elements. RadNet stationary air monitors measure gamma radiation emitted from airborne radioactive particles as they collect on the exposed filters. Tracking gamma radiation over time helps to create a picture of the background levels and allows EPA scientists to detect anomalies. https://www.epa.gov/radnet

Other:

Maine also works with the EPA and national contract labs to conduct PM chemical speciation (IMPROVE) and atmospheric deposition analysis. These networks are discussed in detail in the following section. Additionally, the EPA, National Park Service, U.S. Fish and Wildlife Service (USFWS) and the U.S. Geological Survey may operate monitoring sites in Maine as part of their respective networks.

Monitoring Networks

Ozone Network:



Maine DEP currently operates ground-level ozone monitoring sites throughout the state in accordance with SLAMS network requirements. Three of the Maine DEP sites operate year-round while the remainder are "seasonal sites." The EPA operated an ozone site in Ashland as part of the CASTNET program before it was shut down in May 2022. Funding permitted, Maine DEP may reopen this site in 2024 or 2025. The Portland Deering Oaks site is within a metropolitan area and the data collected here are used for health studies and not for regulatory purposes. The remaining year-round ozone monitoring sites operated by the Maine DEP are in Bar Harbor and Cape Elizabeth. An additional two ozone sites in Maine are operated by Maine Indian tribes year-round.

In 2020 the Gardner Pray Street School shelter was moved to accommodate a construction project on that property. The shelter was moved a short distance to the Gardiner Area High School property. The Gardiner Area High School was meant to be a temporary location, since siting is not optimal. DEP staff are reviewing options for this site for future monitoring in Gardiner after the 2024 ozone season.

Maine DEP, with the cooperation of the Department of Agriculture, Conservation and Forestry (Maine DACF) installed an ozone site at Popham Beach State Park in 2022. This installation satisfies a long-standing need for a coastal site in between Cape Elizabeth and Port Clyde.

At the end of 2022, the Maine DEP moved the monitoring equipment from the Jonesport Public Landing structure to a monitoring shelter in the parking lot of the Jonesport Coast Guard Station. This move was required due to the planned demolition of the Public Landing structure. The move was done outside of the ozone season, and the 2023 season started as planned at the new location.

During the January 18th, 2024, storm that battered much of the Maine coastline, the shelter in Kennebunkport was moved from its location and damaged. The shelter had to be removed from the site and repaired. The DEP reinstalled the shelter back into its original location for the 2024 ozone season but are actively trying to find another location for the equipment that matches the ozone exposure of Kennebunkport, but better protected from storms.

Although the federally required ozone season for Maine runs from April through September, most of the Maine sites now operate from the first of March through the first of October, weather permitting. The Maine sites are scattered throughout the state, with most of them situated along the coast and in southern Maine. The highest ozone concentrations tend to occur along the coast because plumes of contaminated air are often transported into the Gulf of Maine from metropolitan areas to the south. These air masses are subsequently blown ashore and carried inland. In addition to determining attainment/nonattainment status, the ozone sites in Maine collect data that are used by mapping and forecasting programs to provide the public and scientific community with quality data in a timely fashion and to forecast air quality alerts when necessary.

Planned changes for 2025:

- If not done in 2024, the Portland Deering Oaks site may be moved to a new location.
- The Kennebunkport shelter is planned to be moved from its current location.

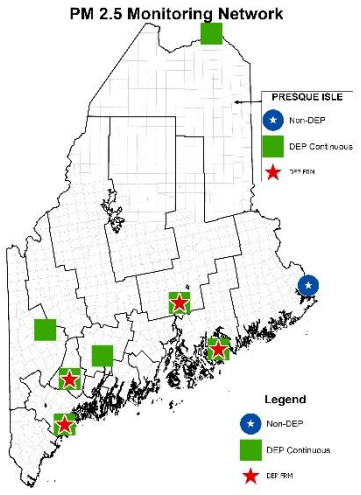
- The location of the Gardiner area ozone monitor may be moved. The current sitting is not optimal for ozone coming from the west and was meant to be temporary during the construction of a Girls and Boys Club on Pray Street. The Maine DEP is considering options for the future of this site, which include remaining at the current site or moving to another location with better siting in the Gardiner and Augusta area.

Ozone Monitoring Site Summary

Ozone Monitoring Site Address	Site Type	Monitoring Objective	Sampling Frequency
Bar Harbor – McFarland Hill	NCore & CASTNET	Background, AQI forecasting / Mapping	Continuous
Bar Harbor – Top of Cadillac Mountain	SLAMS	AQI forecasting / Mapping	Continuous – Seasonal
Bethel, Smith Farm Road	SLAMS	Max. Conc., AQI forecasting	Continuous – Seasonal
Cape Elizabeth – Two Lights State Park	SLAMS & EMP	Transport, AQI forecasting	Continuous
Durham – Fire Station – Route 9	SLAMS	Max. Concentration	Continuous – Seasonal
Gardiner – Gardner High School	SLAMS	Max. Conc., AQI forecasting	Continuous – Seasonal
Holden – Rider Bluff	SLAMS	Max. Conc., Mapping	Continuous – Seasonal
Jonesport – Coast Guard Station	SLAMS & EMP	Max. Concentration	Continuous – Seasonal
Kennebunkport – Parsons Way	SLAMS	Max. Conc., Transport, AQI Forecasting	Continuous – Seasonal
Perry – Pleasant Point/Sipayik, 176 County Road	Tribal	-	Continuous
Phippsburg – Popham Beach State Park	SLAMS	Max. Conc., AQI forecasting / Mapping	Continuous – Seasonal
Port Clyde – Marshall Point Lighthouse	SLAMS	Max. Conc., AQI forecasting / Mapping	Continuous – Seasonal
Portland – Deering Oaks	SPM	High Pop. Exposure	Continuous
Presque Isle – 8 Northern Road	Tribal	-	Continuous
Shapleigh – Ball Park, West Newfield Road	SLAMS & EMP	Max. Conc., Transport, AQI Forecasting	Continuous – Seasonal

$PM_{2.5}$ Network:

In 1999 the Maine DEP began a $PM_{2.5}$ monitoring program using filter-based samplers that met the Federal Reference Method (FRM), with 15 sites starting up during the first year of operation. Three years of data collection demonstrated compliance with the $PM_{2.5}$ standard at all the sites, after which some of the samplers were relocated or switched to collect PM_{10} samples. In 2024 the Maine DEP monitored for $PM_{2.5}$ using the filter-based FRM samplers at 7 sites and continuous Federal Equivalent Method (FEM) $PM_{2.5}$ monitoring was conducted at 10 sites. Three continuous monitors were operated by the Tribes. All the current sites continue to comply with the $PM_{2.5}$ standard remain in operation to gather trend data, document future attainment status, and forecast ambient air quality. $PM_{2.5}$ filters can also be analyzed to



determine levels of some of the hazardous air pollutants that are on the priority list.

The DEP initiated continuous monitoring of $PM_{2.5}$ in 2000 using Tapered Element Oscillating Microbalance (TEOM) samplers. The continuous monitors generate hourly average data that are available in near real-time and very useful in helping to forecast air quality. TEOM sites were set up in Bangor, Bar Harbor, Greenville, Lewiston, and Portland. The Passamaquoddy Tribe operated a TEOM monitor in Sipayik, and the Mi'kmaq Nation operates TEOM monitors in Presque Isle and Littleton.

In 2012, the TEOMs were nearing the end of their expected life cycle, so that year the Maine DEP initiated a program to procure new continuous $PM_{2.5}$ monitors known as Beta Attenuation Monitors (BAM). The BAMs are an EPA-approved FEM, so Maine DEP monitors $PM_{2.5}$ NAAQS using both the filter-based FRM and the continuous FEM monitors throughout the state. BAMs replaced the TEOMs in Lewiston, Bangor, and Bar Harbor. The TEOM in Portland remained in operation alongside the new BAM for comparison of methods until the end of June 2015. BAMs were later installed to supplement the filter based FRM sampling in Presque Isle, Madawaska, and Rumford, and replaced the Passamaquoddy Tribe TEOM in Sipayik. In 2018, the MetOne BAM in Bar Harbor was replaced with a Thermo Fisher Scientific Instruments model 5030i continuous $PM_{2.5}$ sampler. In 2020, the Maine DEP designated the continuous BAMs as the primary monitors, which allowed for the removal of the $PM_{2.5}$ filter based FRM samplers in Lewiston, Bangor, and Madawaska.

In 2020, the TEOM operated by the Mi'kmaq Nation in Littleton stopped reporting data due to a malfunction at the site. There was intention to resume monitoring at this location, however the malfunction in the TEOM was not able to be overcome and has now been shut down.

In 2022, the Maine DEP applied for an American Rescue Plan Grant, which requested funds to purchase six Teledyne T640x instruments. These instruments use scattered light spectrometry and produce continuous real-time 1 minute and hourly data for $PM_{2.5}$, along with PM_{10} and PM_{Coarse} simultaneously. The Maine DEP was awarded the grant, and the six T640x instruments arrived in December of 2022. Starting in January 2023, Maine DEP started the deployment starting at Presque Isle Riverside, (replacing a Metone BAM) and Bar Harbor (replacing the Thermo Fisher Scientific Instruments 5030i). The Maine DEP installed the remaining 4 in Augusta, Portland Tukey's Bridge, Madawaska, and the Presque Isle Background Site throughout 2023. In 2024, the Maine DEP used the remaining ARP funds to help with the purchase of a dedicated spare Teledyne T640x instrument and a semi-portable temperature-controlled telco cabinet to house air monitoring equipment.

The continuous, hourly averaged $PM_{2.5}$ records are reported in near real time to both the Maine DEP web page and the EPA AirNow web site. Access to this continuous $PM_{2.5}$ data has permitted better forecasting for particulate levels under specific weather conditions for many parts of the state. The Rumford site was chosen to meet a long-standing interest in having real-time continuous data from western mountain valley locations. Complex meteorological conditions in Maine's western mountains and the subsequent dispersion of fine particulates like wood smoke are of particular interest to the DEP as it strives to produce better air quality forecasts in a region with few monitors and sparse data.

In April of 2024, the Maine DEP installed a Teledyne T640x in Bangor, replacing an older Met One BAM 1020. This installation allows for the reorganization of the required filter based FRM methods for $PM_{2.5}$ monitoring to increase the efficiency of staff time. On July 1st, 2024, the four filter-based FRM PM_{10} monitors, two at Bangor Mary Snow school, one at Augusta Lincoln Street School, and one at the Lewiston County Kitchen Parking lot will be shut down, and two of the monitors will be reconfigured for $PM_{2.5}$ monitoring, one at Bangor Mary Snow school, one at the Lewiston County Kitchen Parking lot. On December 31st, 2024, the two filter-based FRM PM2.5 monitors on the roof of Augusta Lincoln Street School will be shut down.

After the Teledyne T640x monitor was installed at the Presque Isle Riverside station in January 2023, the Maine DEP decided to continue operating the PM_{10} BAM as part of a short co-location study between the two methods. In the Spring of 2024, there were growing concerns that Canada would have another active wildfire season in 2024 similar to 2023. Smoke plumes from wildfires contains elevated levels of $PM_{2.5}$, and it was determined that this BAM would provide the most beneficial data if used to monitor for $PM_{2.5}$, assisting forecasters in providing accurate air quality forecast and alerts. This monitor was reconfigured for this purpose in May of 2024.

In the City of Portland, due to a planned expansion of a walking and bike path, the DEP needs to move the monitoring site. The DEP has been working with the city to find a location along the busy West Commercial St. and Commercial St. area. This move is expected to occur in the later part of 2024.

The Maine DEP applied for the IRA 60105 Part A and B grant, requesting funds that would allow for the purchase of three additional Teledyne T640x monitors, intended for Lewiston, Rumford, and Portland. The installation of these monitors may occur between late 2024 and the first half of 2025. Maine DEP intends to operate the Teledyne T640x, Met One BAM 1020, and a filter-based FRM $PM_{2.5}$ monitor for a minimum of 1 year at our Lewiston site but will maintain all 3 methods as long as resources and staff time allow.

Proposed calendar year 2025 changes for the $PM_{2.5}$ network:

- If not done in 2024, the Portland Deering Oaks site will be moved.
- Replace the Met One BAM 1020 in Rumford with a Teledyne T640x instrument.
- Install a Teledyne T640x instrument in Lewiston, located with the current Met One BAM 1020 and planned filter-based sampler for a minimum of 1-year, longer if required.
- Install a T640x instrument in place of the Met One BAM 1020 at the new Portland monitoring station.
- The Mi'kmaq Nation plans to replace their TEOM in Presque Isle with a Teledyne T640x.

$PM_{2.5}$ Monitoring Site Summary

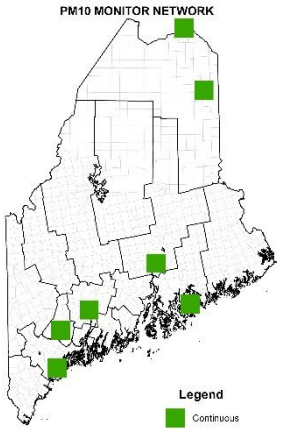
As planned for July 1, 2024

$PM_{2.5}$ Monitoring Site Address	**Site Type**	**Monitoring Objective**	**Sampling Method and Frequency**
Augusta – Lincoln Street School	SLAMS	200K Pop. Coverage[1]	FRM[2], every 6 days*
Augusta – Lincoln Street School	SLAMS	QA-Collocation	FRM[2], every 6 days
Augusta – Lincoln Street School	SLAMS	Collocation	FEM[3], Continuous
Bangor – Mary Snow School	SLAMS	200K Pop Coverage/AQI Forecasting/Mapping[1]	FEM[4], Continuous*
Bangor – Mary Snow School	SLAMS	QA-Collocation	FRM[2], every 6 days
Bar Harbor – McFarland Hill	NCore	Transport	FRM[2], every 3 days
Bar Harbor – McFarland Hill	SLAMS	Mapping	FEM[3], Continuous*
Lewiston – Country Kitchen Lot	SLAMS	200K Pop. Coverage/ Mapping[1]	FEM[4], Continuous*
Lewiston – Country Kitchen Lot	SLAMS	QA-Collocation	FRM[2], every 6 days
Madawaska – Public Safety Bldg.	SLAMS	High Pop. Exposure/ AQI Forecasting/Mapping	FEM[3], Continuous*
Perry – Pleasant Point/Sipayik, 176 County Road	Tribal	Mapping	FEM[4], Continuous
Portland – Deering Oaks	SLAMS	MSA of 200-500K	FEM[4], Continuous*
Portland – Deering Oaks	SLAMS	MSA of 200-500K / QA-	FRM[2], every 6 days

		Collocation	
Portland – Tukey's Bridge	SLAMS	High Traffic	FEM[3], Continuous*
Presque Isle – 8 Northern Road	Tribal	Mapping	TEOM, Continuous
Presque Isle – Regional Office	SLAMS	Background	FEM[3], Continuous*
Presque Isle – Riverside Street	SLAMS	200K Pop Coverage/AQI Forecasting/Mapping[1]	FEM[3], Continuous*
Presque Isle – Riverside Street	SLAMS	QA-Collocation	FRM[2], every 6 days
Rumford – Rumford Avenue	SLAMS	High Pop. Exposure/ AQI Forecasting/Mapping[1]	FEM[4], Continuous*

1 – 200K Pop. – 200,000 Population; AQI – Air Quality Index; MSA – Metropolitan Statistical Area
2 – Monitor method: RFPS-1006-143: Thermo-Fisher Scientific Model 2000i
3 – Monitor method EQPM–0516 –238: Teledyne Model T640x
4 – Monitor method: EQPM – 0308-170: Met One Instruments Model 1020 BAM
* – Denotes that monitor is the primary for that site

PM_{10} Network:



Prior to the end of 2022, the Maine DEP met most of the PM_{10} sampling needs using Thermo 2000*i* FRM samplers with the $PM_{2.5}$ separator removed, collecting PM_{10} particles using Method 126. A continuous Beta Attenuated Monitor (BAM) was operated in Presque Isle as part of the control strategy for the historically high PM_{10} levels there. After a PM_{10} exceedance of the NAAQS on August 12, 2018, a second BAM for PM_{10} was installed in Madawaska at the Public Safety building in 2020 to assess the potential frequency of the exceedances more accurately, document compliance with the NAAQS, and allow for daily averages.

In 2022, the Maine DEP applied for an American Rescue Plan Grant, which requested funds to purchase six Teledyne T640x instruments capable of measuring PM_{10}, along with $PM_{2.5}$ and PM_{Coarse}. The Maine DEP was awarded the grant, and the six T640x instruments arrived in December of 2022. This instrument allows for the replacement of both the FRM method 126 and BAMs at sites where these are installed.

Over the 2023 calendar year, the Maine DEP installed all six Teledyne T640x instruments at, listed in order in which it there were completed: Presque Isle Riverside, Bar Harbor McFarland Hill, Madawaska Public Safety building, Portland Tukey's Bridge, Augusta Lincoln St. School, and the Presque Isle Background site. The Maine DEP also purchased a 7th T640x and installed it at Bangor Mary Snow School in the Spring of 2024. The Maine DEP also installed a PM_{10} BAM at our Lewiston site. The completion of these installs meant that manual FRM Method 126 was redundant, and the shutdown of four remaining Method 126 samplers will occur on 6/30/2024.

After the Teledyne T640x monitor was installed at the Presque Isle Riverside station in January 2023, the Maine DEP decided to continue operating the PM_{10} BAM as part of a short co-location study between the two methods. The BAM was expected to be removed prior to the end of August 2023; however, the DEP saw value in extending the co-location. In the Spring of 2024, there were growing concerns that Canada would have another active wildfire season in 2024 similar to 2023. Smoke plumes from wildfires contains elevated levels of PM2.5, and it was determined that this Met One BAM 1020 would provide the most beneficial data if used to monitor for $PM_{2.5}$ to assist forecasters in providing accurate air quality forecast and alerts. This monitor was reconfigured for this purpose in May of 2024.

The Maine DEP applied for the IRA 60105 Part A and B grant, requesting funds that would allow for the purchase of three additional Teledyne T640x monitors, intended for Lewiston, Rumford, and Portland. The installation of these monitors may occur between late 2024 and the first half of 2025.

Proposed Calendar Year 2025 changes to the PM_{10} Network:

- Installation of Teledyne T640x instruments at our Rumford, Lewiston, and Portland monitoring stations would allow for the collection of continuous hourly PM_{10} data at those locations.
- The Mi'kmaq Nation plans to replace their TEOM in Presque Isle with a Teledyne T640x which would allow for the collection of continuous hourly PM_{10} data at their monitoring station.

PM_{10} Monitoring Site Summary

As planned for July 1, 2024

PM_{10} Monitoring Site Address	Site Type	Monitoring Objective	Sampling Frequency
Augusta – Lincoln Street School	SLAMS	Attainment/Nonattainment	FEM[2], Continuous
Bangor – Mary Snow Elementary School	SLAMS	Attainment/Nonattainment	FEM[2], Continuous
Bar Harbor – McFarland Hill	NCore	Rural Background	FEM[2], Continuous
Lewiston – Country Kitchen Lot	SLAMS	Attainment/Nonattainment	FEM[1], Continuous
Madawaska – Public Safety Bldg.	SLAMS	Attainment/Nonattainment	FEM[2], Continuous
Portland – Tukey's Bridge	SLAMS	Attainment/Nonattainment	FEM[2], Continuous
Presque Isle – Riverside Street	SLAMS	Attainment/Nonattainment	FEM[2], Continuous
Presque Isle – Regional Office	SLAMS	Background	FEM[2], Continuous

1- Method EQPM-0798-122: Met One BAM 1020

2- Monitor method EQPM–0516 –239: Teledyne model T640x

PM_{Coarse} Network:

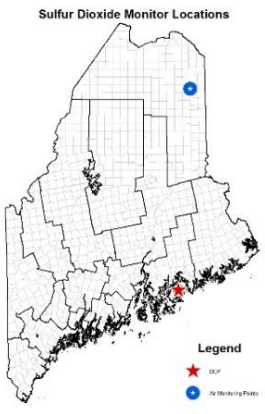
Required PM_{Coarse}, or $PM_{10-2.5}$ measurements at the NCore site in Bar Harbor are obtained from the Teledyne T640x PM monitor installed in January of 2023. In addition, $PM_{10-2.5}$ data are collected from the other Teledyne T640x instruments in the network but are not reported to AQS.

PM_{Coarse} Site Address	Site Type	Monitoring Objective	Sampling Frequency
Bar Harbor – McFarland Hill	NCore	Rural Background	FEM[1], Continuous

1- Monitor method EQPM–0516 –240: Teledyne model T640x

Sulfur Dioxide Network:

The Maine DEP currently operates one sulfur dioxide (SO_2) monitor, a trace-level monitor located at the NCore site in Bar Harbor. The Mi'kmaq Nation operates an SO_2 monitor in Presque Isle. Maine DEP had operated an SO_2 monitor in Gardiner to gather background data, this monitor was shut down at the end of 2019. The SO_2 monitor used at Portland Deering Oaks was shut down in 2021. The purpose of the Portland monitor was to provide health assessment data for the Greater



Portland Area, however after multiple years of exceedingly low data, it was assessed that an exceedance of the NAAQS to be unlikely.

Proposed calendar year 2025 changes to the Sulfur Dioxide Network:

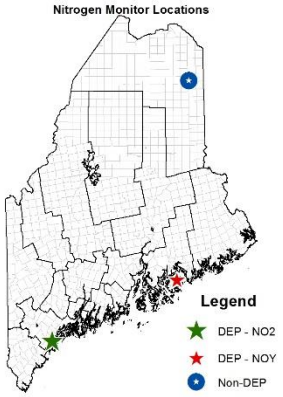
- In the City of Portland, due to a planned expansion of a walking and bike path, the DEP needs to move the monitoring site. The DEP has been working with the city to find a location along the busy West Commercial St. and Commercial St. area. This move is expected to occur in the later part of 2024. When the new monitoring station is operational, the Maine DEP plans to monitor SO_2 at the new location for at least one year, then assess if monitoring needs to continue at this location.

SO_2 Monitoring Site Summary

SO_2 Monitoring Site Address	**Site Type**	**Monitoring Objective**	**Sampling Frequency**
Bar Harbor – McFarland Hill	NCore	Background	Continuous
Presque Isle – 8 Northern Road	Tribal	-	Continuous

Nitrogen Oxides Network (NO_2, NOx, NO, NOy):

The DEP currently operates one trace-level NO_x monitor and one trace-level NO_y monitor. The NO_x monitor is located at the Deering Oaks site in Portland. The NO_x monitor at Deering Oaks is a non-regulatory monitor. The NO_y monitor is located at the NCore site in Bar Harbor. The Mi'kmaq Nation also operates a trace-level NO_2 monitor at their site in Presque Isle. The NO_y monitor at the Cape Elizabeth site was shut down in October 2022 after a review of the data determined there was no longer a need for NO and NO_Y monitoring at this location.



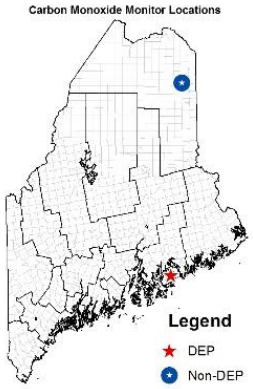
Proposed calendar year 2025 changes to the Nitrogen Oxides Network:

- In the City of Portland, due to a planned expansion of a walking and bike path, the DEP need to move the monitoring site. The DEP has been working with the city to find a location along the busy West Commercial St. and Commercial St. area. This move is expected to occur in the later part of 2024. When the new monitoring station is operational, the Maine DEP plans to operate an NO_x monitor at the new location for at least one year, then assess if monitoring needs to continue at this location.

NO_x Monitoring Network Summary

Nitrogen Oxides Network Site Address	**Site Type**	**Monitoring Objective**	**Sampling Frequency**
Portland – Deering Oaks (NO_x)	SPMS	Maximum Concentration, Urban Background	Continuous
Bar Harbor – McFarland Hill (NO_y)	NCore	Transport (trace-level)	Continuous
Presque Isle – 8 Northern Road (NO_2)	Tribal	(trace-level)	Continuous

Carbon Monoxide Network:



The DEP currently operates one trace-level carbon monoxide (CO) monitor located at the NCore site in Bar Harbor. The DEP shut down the CO monitor at the Deering Oaks site early in 2022 as data recorded from this monitor were well below the NAAQS, and resources directed at that monitor could be better used elsewhere in the network. The Mi'kmaq Nation also operates a trace-level CO monitor at their site in Presque Isle.

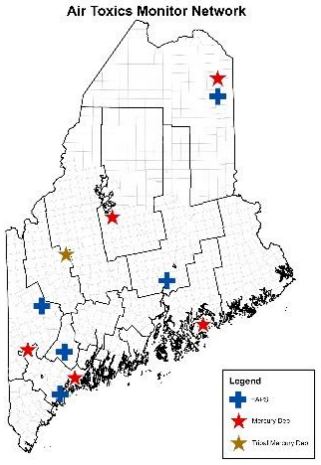
Proposed calendar year 2025 changes to the Carbon Monoxide Network:

- In the City of Portland, due to a planned expansion of a walking and bike path, the DEP need to move the monitoring site. The DEP has been working with the city to find a location along the busy West Commercial St. and Commercial St. area. This move is expected to occur in the later part of 2024. When the new monitoring station is operational, the Maine DEP plans to operate an CO monitor at the new location for at least one year, then assess if monitoring needs to continue at this location.
- The Maine DEP applied for an IRA 60105 (A and B) grant to obtain a replacement CO monitor for our NCore site, if approved, this replacement may occur in 2024 or 2025.

CO Monitoring Network Summary

Carbon Monoxide Site Address	Site Type	Monitoring Objective	Sampling Frequency
Bar Harbor – McFarland Hill	NCore	Transport	Continuous
Presque Isle – 8 Northern Road	Tribal	-	Continuous

Hazardous Air Pollutants (HAPs) Network:



Although not a required monitoring network, the DEP samples for 67 HAPs compounds at five Special Purpose Monitoring Site (SPMS) locations around the state. The monitoring objective is to document background concentrations around the state and to establish whether there are any trends in the levels of these compounds. Maine monitors for most HAPs compounds using EPA's method TO-15. As detailed in the lead section below, the DEP may use XRF spectroanalysis on randomly selected $PM_{2.5}$ and PM_{10} filters to determine concentrations of several metals designated as HAPs.

The addition of a HAPs sampler at the Background site in Presque Isle has been on the DEPs to-monitor list for an extended period to allow for a comparison to the Presque Isle Riverside site which showed high concentrations of acrolein and naphthalene. A sampler at this location will be installed as soon as resources allow. The HAPs sampler at Cape Elizabeth was shut down in June 2019 as the sampler was relocated for a special study in South Portland and Portland. The Maine DEP will reinstall a sampler to this location as resources allow.

The Maine DEP also has several Special Purpose Monitoring HAPs Samplers throughout the State. More information on this can be found below in the "Special Purpose Monitoring Projects and Studies" section.

Proposed Calendar Year 2025 changes to the HAPS monitoring Network:

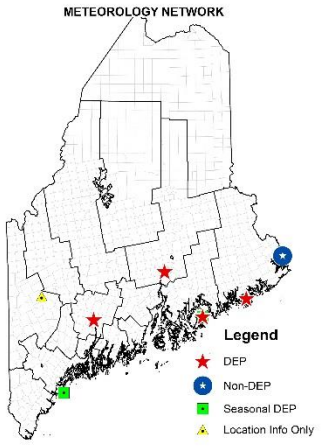
- If not already done in 2024 and as resources allow, a HAPs sampler will be reestablished at Cape Elizabeth.
- In the City of Portland, due to a planned expansion of a walking and bike path, the DEP need to move the monitoring site. The DEP has been working with the city to find a location along the busy West Commercial St. and Commercial St. area. This move is expected to occur in the later part of 2024.

HAPS Monitoring Site Summary

Site Address	Site Type	Monitoring Objective	Sampling Frequency
Bangor – Mary Snow School	SPM	Maximum Conc.& Trends	Every 6 days
Lewiston – Country Kitchen Lot	SPM	Maximum Conc.& Trends	Every 6 days
Portland Deering Oaks– 356 State Street	SPM	Maximum Conc.& Trends	Every 6 days
Presque Isle – Riverside Street	SPM	Maximum Conc.& Trends	Every 6 days
Presque Isle – Background Site	SPM	Maximum Conc & Trends	Every 6 Days
Rumford – Rumford Avenue	SPM	Maximum Conc.& Trends	Every 6 days
Portland – Deering Oaks Park	SPM	Maximum Conc.& Trends	Every 6 days

Meteorological Network:

The DEP, and the Passamaquoddy tribe fund, operate, and maintain year-round meteorological monitoring sites at five locations in the state and two seasonal sites to collect data for use in the analysis and evaluation of air pollutant data. One site contains only meteorological parameters, while the rest are collocated with air pollutant monitoring equipment. The instruments at these sites measure scalar wind speed and direction, sigma theta (an indicator of the amount of variability in the wind direction) and a few of the sites collect additional parameters such as relative humidity, barometric pressure, temperature, solar radiation and vector wind speed and direction.



State forecasters also have access to NOAA weather data from airport stations and other sites located throughout the state. The NOAA airport sites record raw values in 1-minute averages which oblige Maine DEP staff to calculate the hourly averages, making data from the DEP sites more desirable.

The meteorological instruments installed with the Cape Elizabeth, Cadillac Mtn., and Jonesport Ozone monitors augment the ozone measured at those sites. The data is important for forecasting unhealthy levels of Ozone. In 2021 the pollutant monitors at the Passamaquoddy site in Sipayik was moved to a new shelter, however the meteorological tower has not been moved yet and the collection of meteorology data cannot resume until that is done. At the end of 2022, two changes were made to the meteorological network. First, due to the deteriorating condition of the aluminum meteorological tower at Cape Elizabeth, the wind direction and speed sensors were removed. In 2023 a replacement tower was installed, but due to concerns of ice

loading causing undue ware to the tower, meteorology here became seasonal only. The second change was due to the move of the ozone site from Jonesport Public landing to the Jonesport Coast Guard station. The Jonesport Coast Guard Station has excellent sitting for meteorology, and it was requested to operate the wind direction and speed here year-round for modeling purposes.

The Mi'kmaq Nation in Presque also operates a suite of meteorological parameters for the USDA National Water and Climate Center. This is not part of the Maine DEP network, and this data is not reported to AQS.

The BAQ operates several portable meteorological sensor stations as part of the South Portland VOC study. More information on these stations can be found in the "Special Purpose Monitoring Projects and Studies" section below.

Proposed calendar year 2025 changes to the Meteorological Network:

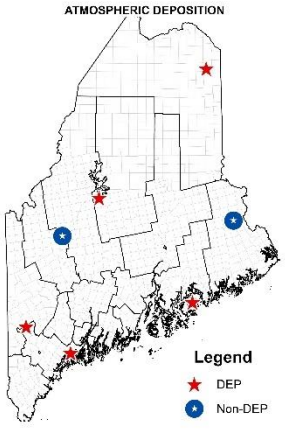
- The Maine DEP applied for an IRA 60105 (A and B) grant to obtain 3 replacement wind direction and speed sensors for our Rumford, Augusta, and Jonesport stations, if approved, this replacement may occur in late 2024 or 2025.

Meteorology Monitoring Site Summary

Site Address	Site Type	Monitoring Objective	Sampling Frequency
Augusta – State Airport	SLAMS	Data Analyses & Modeling	Continuous
Bar Harbor – Cadillac Mountain	SLAMS	Transport	Continuous – Seasonal
Bar Harbor – McFarland Hill	NCore	Transport	Continuous
Cape Elizabeth – Two Lights Park	EMP	Transport	Continuous – Seasonal
Jonesport – Coast Guard Station	SLAMS	Data Analyses & Transport	Continuous
Old Town – Global Secure Shipping	SPM	Data Analyses	Continuous
Rumford - Rumford Avenue Parking	SLAMS	Localized wind	Continuous
Sipayik – 184 County Road	Tribal	Mapping	Continuous

Atmospheric Deposition Network:

There is an extensive atmospheric deposition network in the State of Maine with several sites operated by the Maine DEP. All but two of the sites are part of the National Atmospheric Deposition Program's Mercury Deposition Network (MDN) in addition to the National Trends Network (NTN) that measures precipitation chemistry. Early in the program, several agencies and organizations participated and provided funds for the operation of these deposition network sites. As funds have diminished and budgets have been cut, the continued operation of some of these sites has been in question. The MDN and NTN data are valuable to DEP data users, policy makers, and the public, and to various users representing many scientific disciplines: wildlife biologists, water quality specialists, epidemiologists, atmospheric chemists, government regulators, and academic researchers.



In 2021, in response to the Governor's PFAS (perfluoroalkyl and polyfluoroalkyl substances) Task Force's final report released in January 2020, which recommended that the Department should "consider establishing an air deposition sampling program for a suite of PFAS," the Department communicated this interest to and had conversations with the NADP Program Office and the Wisconsin State Laboratory of Hygiene. Maine DEP received a favorable response from them being able to include a PFAS analysis whenever there is a sufficient

sample volume in the amount of precipitation collected by the NTN sampler. DEP staff began collecting samples for PFAS analysis in early 2021 from the ME96 monitoring station and will continue sample collection until funds run out, anticipated to be in the 2024 calendar year.

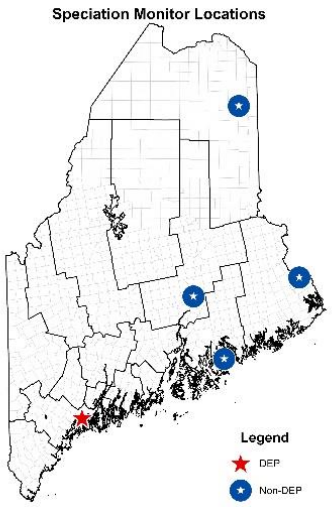
During a series of intensive storms in December 2023 and January 2024, the equipment at the Gilead deposition network site was severally damaged by river flooding. Plans were arranged to move sampling collecting to the Maine DEP site to the Bethal Ozone monitoring location, however after an unexpected budget shortfall announced in April of 2024, the USGS instead decided to permanently shut down the Gilead site.

No changes are proposed for 2025.

Deposition Monitoring Site Summary

Site Address and NADP ID	Site Type	Monitoring Objective	Sampling Frequency
Bar Harbor – McFarland Hill (MDN) ME98	NPS-SPMS	Transport/Trends	Weekly Composite
Bridgton – Upper Ridge Road (NTN and MDN) ME02	SPMS	Transport/Trends	Weekly Composite
Caribou – Airport (NTN and MDN) ME00	SPMS	Transport/Trends	Weekly Composite
Carrabassett Valley – Airport (NTN and MDN) ME04	Tribal	Transport/Trends	Weekly Composite
Freeport – Wolfe's Neck Farm (NTN and MDN) ME96	SPMS	Transport/Trends	Weekly Composite
Greenville Station (NTN and MDN) ME09	SPMS	Transport/Trends	Weekly Composite
Indian Township (NTN) ME94	Tribal	Transport/Trends	Weekly Composite

PM Speciation Network (IMPROVE)



Many stunning and breathtaking vistas at National Parks and Wilderness Areas may be lost or diminished due to the haze formed by air pollutants. These light scattering hazes cause discoloration, loss of texture, and reduced visual range. Recognizing the importance of visual air quality, Congress included legislation in the Clean Air Act to prevent and remedy visibility impairment. To aid in the implementation of this legislation, the Interagency Monitoring of Protected Visual Environments (IMPROVE) program was initiated in 1985. The Maine DEP operates one IMPROVE site in Freeport, Maine at Wolfe's Neck Farm. The National Park Service operates an IMPROVE site in Maine's designated Class 1 visibility area in Acadia National Park. The US Fish and Wildlife Service operates an IMPROVE site in Maine's designated Class 1 visibility area in the Moosehorn National Wildlife Refuge in Baring. IMPROVE sites are also operated by the Penobscot and Mi'kmaq Nation on Indian Island and in Presque Isle, respectively.

In 2015 the EPA reassessed each of the IMPROVE sites to optimize the Chemical Speciation Network. As a result of that process, the Bridgton site was discontinued on January 1, 2016.

IMPROVE Network Summary

IMPROVE Site Address	Site Type	Monitoring Objective	Sampling Frequency
Bar Harbor – McFarland Hill	NPS/NCore	Regional Haze	Every 3 days
Freeport – Wolfe's Neck Road	SLAMS	Deposition Project	Every 3 days
Indian Island – Penobscot	Tribal	Regional Haze	Every 3 days
Baring – Moosehorn NWR	USFWS	Regional Haze	Every 3 days
Presque Isle – 8 Northern Road	Tribal	Regional Haze	Every 3 days

Lead Network:

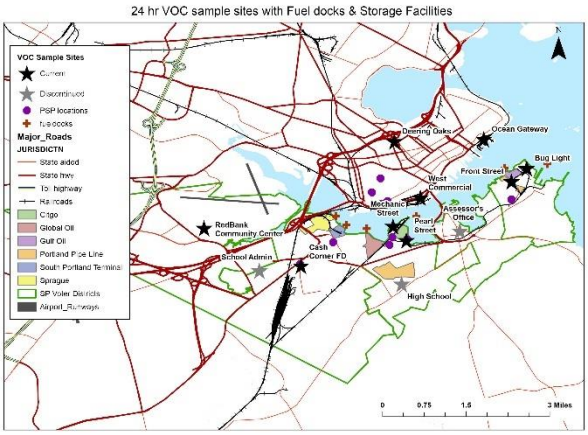
In 2008 EPA promulgated a lead (Pb) standard and issued some minimum monitoring requirements to the states. At that time, Maine was going to be required to operate one Pb monitor in the Portland CBSA (Core-based statistical area). The state purchased an X-ray fluorescence (XRF) analyzer to measure lead concentrations from PM_{10} filters. The EPA Pb requirement was subsequently revised to require Pb monitoring at urban NCore sites only. The Bar Harbor NCore site is designated as a rural site, so there is no requirement for Pb monitoring in Maine.

Maine DEP maintains the capability and capacity to analyze particulate filters for Pb and other several other metals that are listed as Hazardous Air Pollutants (HAPs) such as arsenic and chromium. As schedules permit, random selections from archived Maine $PM_{2.5}$ and PM_{10} filters may be analyzed with the XRF to determine what the state background concentrations might be for lead and the other metals.

Monitoring Projects and Air Quality Studies:

The purpose of monitoring projects and air quality studies are to assess the health risks to the public in areas with local air quality concerns, or do not fall within the scope of the criteria pollutants with a National Ambient Air Quality Standard. These projects typically involve spatial scales of neighborhood size or smaller, by may span to regional size. These projects and studies may have a wide range of pollutants associated with the project, and the Maine DEP has relied on the use of low-cost sensors to complete this monitoring. Due to their low cost and ease of operation, they are widely used by private citizens, researchers, and public entities. The Maine DEP uses several low-cost sensors to supplement our monitoring network; however, it is important to note that these sensors are not regulatory monitors and do not have a Federal Reference Method (FRM) or Federal Equivalent Method (FEM) designation. Without FRM or FEM destination, these sensors may not be used for compliance and enforcement actions, may not be used to calculate health risk, and may not be submitted to the EPA Air Quality System. These devices may be used to supplement regulatory monitoring, or as a screening tool to determine the need for regulatory monitoring or as part of an air quality study that does not require regulatory monitoring. Sensors may be collocated with regulatory monitors as a tool to provide validation to the sensors functionality and accuracy. Sensor manufacturers, the EPA, and researchers also benefit from collocated data and have developed better sensor pollutant calculation formulations and corrections over time as more data becomes available. The use of sensors by the Maine DEP are highly variable and may be removed and/or set up in new locations on a as needed basis and are subject to change with little to no notice. The brand of low-cost sensors and their measurable parameter(s) used by the Maine DEP are outlined in the projects below. The use of a certain sensor by the Maine DEP does not constituent a promotion of that sensor or the brand of sensor.

South Portland/Portland VOC Monitoring Project:



24-hour Sampling locations

At the request of South Portland City officials, DEP staff attended an April 16, 2019 City Council public workshop focused on citizen concerns about odors and air emissions coming from petroleum product storage facilities in the city. One topic that was repeatedly expressed by the residents who spoke was the very strong desire for air quality monitoring to be conducted within the City's boundaries, since none had been done since the early 2000s. DEP made a commitment at the workshop that it would work with the City to accomplish that goal. On August 28, 2019, officials from the City of Portland formally communicated identical air quality concerns of their citizens about the same VOC sources in South Portland. Since then, Air Bureau staff have collaborated with officials from both cities and other local partners to conduct an ambient air quality monitoring project, where the monitoring objective is to collect data that will help answer the question "Is the air safe to breathe?"

The focus of the monitoring project is to measure Volatile Organic Compounds (VOCs), since they constitute a large majority of the compounds associated with the types of odors being reported, as well as air emissions that come from the facilities of concern. VOCs were also chosen because making that type of measurement is

something that the Air Bureau air monitoring program is already set up to do (and is doing) and capable of supporting.

In calendar year 2019 the project consisted of two phases 1) an early "grab sampling" effort in South Portland, and 2) a network of eight fixed 24-hour sampling sites (five in South Portland and three in Portland). The grab sampling phase was launched on June 10, 2019 and concluded on September 15, 2019. As of November 1, 2019, all planned 24-hour sampling sites were established and samples were collected on a frequency of every-6-days. The sites in South Portland were placed so that each of the five voting districts had a sampler established within their boundary.

Fixed 24-hour sampling sites were established at: Bug Light Park; the South Portland City Assessors office; South Portland High School; South Portland School Administration building; Red Bank Community Center in South Portland; Ocean Gateway building in Portland; and on West Commercial Street in Portland. The two new monitoring sites in Portland augment data from the DEP's site at Deering Oaks Park. The DEP established portable meteorological monitors at some of the HAPS sampling locations in 2020 and 2021. Resource limitations prevented full deployment of meteorological monitors.

During calendar year 2020, the implementation of phase 3 began, which includes the deployment of a portable sampling platform (PSP). The process of the MET system installations are still a work in progress, with the first two sites coming online in June 2020 at the South Portland Assessors Office and the Portland Deering Oaks sites. Additional MET systems were established at Bug Light Park, Ocean Gateway, Portland-West Commercial Street, and at South Portland – Mechanics Street. The South Portland Assessors site was taken down due to operational issues. The PSP will initially have both a canister sampling system for measuring VOCs (identical to ones used at the fixed 24-hour sampling sites), and a tube sampling system for measuring Polycyclic Aromatic Hydrocarbons (PAHs). A MET monitoring system, and a continuous particulate matter monitoring sensor was added in 2021. Since the PSP can easily be moved from one location to another, it allowed 24-hour samples to be taken at a number of additional places early in the program. This PSP data helped improve the overall spatial and temporal understanding of air quality in the project area. The first deployment of the PSP took place at the end of August 2020 and continued through 2021.

After the first full year of concurrent 24-hour sampling by all of the VOC sites in the Project's monitoring network, DEP informed officials in both cities that it intended to extend its support of the Project's monitoring activities through 2021. DEP had committed to run these sites for one full year from the network completion date; that is, until November 2020. After review of the entire dataset is completed by the Maine CDC, DEP, and the Project's partners, any recommendations for adjustments to the Project's monitoring activities will be considered and implemented as resources allow.

For Phase 4 the Maine DEP agreed that, after at least a year of data had been collected in the South Portland – Portland VOC network, the location of sites would be reevaluated. South Portland proposed some changes. Maine DEP and the City remain in discussion about the immediate future of the program at this time. The site list below will be updated as new sites begin to measure VOCs and more information will be provided here when all new sites for Phase 4 have been agreed upon.

In 2022, the DEP supported continued VOC canister sampling at the locations established in 2019. In addition, DEP had applied for an EPA Community-Scale Air Toxics Monitoring grant award. The application was not successful. Had the application been successful, the grant award would have supported expanded monitoring activities for other pollutants, such as PAHs, and continuous monitoring instrumentation for VOCs and

hydrogen sulfide. Continuous monitoring instrumentation would be operated and maintained by a qualified contractor. Maine will continue supporting this program with existing grant resources.

The DEP assembled a Portable Sampling Platform (PSP) in 2020 to collect samples from a number of locations in the study area. The sampler was deployed for three to four weeks at a time with the intent to identify potential "hot spots" of pollutant impacts. In 2021 the PSP was established at the Cash Corner Fire Station and remained there through 2021 and becoming a long-term site in 2022. Further changes were made to this site in October of 2023 to improve the inlet siting and provide a more secure placement of the sampler.

In November of 2023, the Portland and South Portland Network was assessed, and it was determined that the High School sampler would be removed. This was due to a need to expand HAPs monitoring to another location in the state and to not overwhelm the limited capacity of the Maine DEP Air lab. This sampler had the lowest cumulative lifetime cancer risk for the project sites, values recorded at this station have been consistent or decreasing for the length of this monitoring site.

Proposed calendar years 2024/2025 changes to the South Portland/Portland VOC network:

- The Maine DEP and the city of South Portland are planning to move the So. Portland Bug Light Park monitoring location to So. Portland Front St. This move will provide a better representation for the neighborhood bordering nearby bulk oil storage facilities.
- Other changes are assessed on an as-needed basis. This project consumes a large volume of resources from the DEP, and changes are required to allow room for the DEP to be able to handle other monitoring needs throughout the State.

South Portland/Portland VOC Monitoring Sites

Site Address	Site Type	Monitoring Objective	Sampling Frequency
So. Portland – Bug Light Park	SPMS	Max Conc.& Population Exposure	Every 6 days
So. Portland – Redbank Community Ctr	SPMS	Max Conc.& Population Exposure	Every 6 days
So. Portland – Mechanics Street	SPMS	Max Conc.& Population Exposure	Every 6 days
So. Portland – Cash Corner Fire Station	SPMS	Max Conc.& Population Exposure	Every 6 days
Portland – Ocean Gateway	SPMS	Max Conc.& Population Exposure	Every 6 days
Portland – West Commercial Street	SPMS	Max Conc.& Population Exposure	Every 6 days
So. Portland – Pearl St.[1]	SPMS	Max Conc.& Population Exposure	Every 6 days
So. Portland – Front St. [1]	SPMS	Max Conc.& Population Exposure	Every 6 days

1: Denotes that location is serviced by persons who are not affiliated, or staffed by the DEP

Hydrogen Sulfide:

Over the last several years, the general public's awareness of how local air pollution affects their neighborhood has increased interest in expanded air quality monitoring at the community level. As part of this interest, hydrogen sulfide (H_2S) has become a top public concern in Maine, with numerous complaints coming from the Old Town and Rumford Maine communities. The State of Maine has a chronic Ambient Air Guideline (AAG) for H_2S of 1-ppb for a 1-year annual average, and an acute AAG of 30-ppb for a 30-minute average.

H_2S has very few direct measurement methods: most rely on complex thermal decomposition into SO_2 or have cross sensitivities, both may cause increased sample noise and/or error when a nearby source may have a variety of gas emissions associated with it. Due to the 1-ppb AAG, the Maine DEP thought it was imperative to obtain an instrument that had long-term stability, little to no cross sensitivities or interferents, and was a direct measurement to reduce the inefficiencies and pollutant losses with the thermal decomposition methods. In 2023, through a *Clean Air Act Grants Under the Inflation Reduction Act*, the Maine DEP was able to receive the funds to obtain one Entanglement Technologies, Inc. AROMA-TOX instrument, capable of continuously measuring down to 1ppb of H_2S.

Due to the long history of air quality complaints alleged against the Juniper Ridge Landfill (JRL) in Old Town Maine, and a landfill fire in May of 2023 there was a significant push by the community to conduct independent monitoring in the vicinity of the landfill. This resulted in the Maine DEP determining to first use the AROMA-TOX instrument in the Old Town area for 1-year prior to moving it to Rumford Maine. In addition to H_2S monitoring, the DEP also planned to install at least one HAPs sampler and one Purple Air low-cost PM sensor at this location.

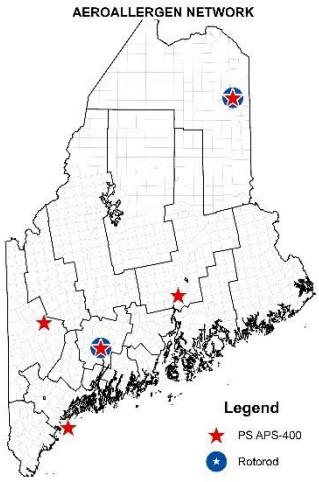
In November of 2023, the Maine DEP installed a HAPs and PM sensor on a property north of the landfill. The AROMA-TOX arrived in the spring of 2024, and is expected to be installed in the summer of 2024.

A project monitoring plan for this study is currently being drafted; once finalized, the plan and the validated data collected from this project will be publicly available [here].

Proposed calendar years 2024/2025 changes to the South Portland/Portland VOC network:

- The AROMA-TOX and a temperature-controlled shelter will be installed on a property near the landfill.
- A second HAPs and PM sensor may be installed in another location near the landfill, if the capacity limitations in the Air lab are eased and another location that meets siting requirements is available.

Aeroallergens:



In part of a Building Resilience Against Climate Effects (BRACE) grant from the US CDC, the Maine CDC received funding to initiate pollen monitoring in a state-wide network. The Maine CDC invited the Maine DEP to be partners on the project and created a Pollen Advisory Group (PAG) that included allergist, and specialist in climate sciences, and meteorology. With funding received from the BRACE grant, the state was able to purchase five continuous pollen samplers, the Pollen Sense APS-400 series, and two rotorod pollen samplers. The rotorods are considered the 'traditional method' of pollen monitoring. The primary purpose of this project is to create historic trends over time to create an observed impact due to the effects of climate change. The data from these sensors are also to be used as part of a health network to allow the State of Maine to forecast for high allergen days to the public. The State plans to deploy the four of the APS-400 samplers at four locations in Maine, with the idea to provide the best coverage to populations determined to be sensitive to allergens, provide maximum population coverage, and provide maximum geographical coverage. Both rotorods will be collocated with an APS-400 sampler to provide an additional layer of quality control over the new continuous units. The Department will use the 5th APS-400 sampler for a 2-fold purpose, first; as a dedicated spare to be used in the event that one of the other four samplers have operational issues, second; a 'floater' sampler that will be used to determine the spatial representation of the APS-400 samplers. Spatial scales are used to define the size of the region in which the collected data from one location is considered representative of another location. Scales of interest are; Micro with a scale up to 100m, Middle with a scale from 100m to 500m, and Neighborhood which scales from 500m to 4km. In addition to the State's efforts, the Mi'kmaq Nation has operated a rotorod sampler in Presque Isle Maine and has recently added a Pollen Sense APS-400.

Proposed calendar years 2024/2025 changes to the Aeroallergen network:

- The Bangor - Mary Snow School sampler has had a high volume of sand like particulate intrusion into the sample images. If this issue persists, the sampler may be moved to the Old Town – Global Secure Shipping meteorological station.

Aeroallergen Monitoring Sites

Site Address	Site Type	Monitoring Objective	Sampling Frequency
Cape Elizabeth – Two Lights Park	SPMS	BRACE Grant – Aeroallergen monitoring	Continuous
Bangor – Mary Snow School	SPMS	BRACE Grant – Aeroallergen monitoring	Continuous
Rumford – Rumford Avenue	SPMS	BRACE Grant – Aeroallergen monitoring	Continuous
Presque Isle – 8 Northern Road	SPMS	-	Continuous
Augusta – East Campus	SPMS	BRACE Grant – Aeroallergen monitoring	Continuous
Presque Isle – 8 Northern Road	SPMS	-	24hr – weekdays*
Augusta – East Campus	SPMS	BRACE Grant – Aeroallergen monitoring	24hr – weekdays*

* The rotorod requires daily sample collection media changes and cannot be completed when staff are unavailable.

Other Special Purpose Monitoring

Mobile Monitoring Trailer:

The Maine DEP would like to establish a mobile monitoring trailer. The DEP acquired a trailer for the purpose of providing a portable platform to support sampling equipment. The intention is to facilitate quick transport of air sampling equipment in response to citizen complaint regarding air quality; citizen inquiry about air quality; and as a screening tool to assess air quality in areas of the state where little or no ambient air quality data exist.

Cassidy Point:

The Maine DEP has been working with community members impacted with fugitive dust emissions that are coming from a coal dust storage pile on Cassidy Point in Portland Maine. In June of 2023, in response to a series of air quality concerns expressed by the public, the DEP Air Licensing and Compliance Division along with the Air Bureau Director requested monitoring to be conducted. The Maine DEP contacted some community members and received permission to install a Purple Air low-cost PM sensor to measure $PM_{2.5}$ on a property directly across the street from the coal pile. After 6-months, the DEP reviewed the data from this sensor; the data showed that it trended with other $PM_{2.5}$ data sources in the Portland and So. Portland area. The sensor was removed and installed at another location in the state for monitoring.

In January of 2024, a significant delivery of coal to Cassidy Point was delivered and the community members expressed a deep concern about the volume of fugitive dust that escaped the facility during the offloading process. The DEP worked with the EPA to obtain two additional $PM_{2.5}$ Purple Air sensors to install at the facility. In February of 2024, one Purple Air sensor was installed at the original monitoring location. Prior to installation of the second Purple Air sensor, the Maine DEP learned that the method used to estimate $PM_{2.5}$ is not reliable for coal dust due to the physical characteristics of the dust. In lieu of this new information, the DEP decided to install a METONE BAM 1020, which has a direct signal response to the accumulation of mass. In late March, the BAM 1020 was installed on a property across the street on a narrow band of land that meets regulatory siting requirements. The BAM was configured to sample for PM_{10} particulates, and the Purple Air sensor was moved next to the BAM.

Potential changes:

- The BAM may be reconfigured for either $PM_{2.5}$ or total suspended particulates and the DEP gains more knowledge of the area and the emission characteristics.

Rumford Intra-Valley Transport Analysis:

The town of Rumford is in a deep, complex river valley. This project was launched to understand some of the dynamics of airflow in the river valley. This could help with identifying possible contributors to the spikes in PM2.5 values that occur around the time of morning inversion breakups. Wind direction and speed sensors were installed to record meteorological data at the site. For years, the department has noticed that there are light winds shifting away from the NW at or around the time of the spikes. One portion of the valley extends to the NW and channels winds toward our monitor. When inversions break and the air starts mixing vertically, pollution from above is brought down to the surface.

The local middle school deployed a Purple Air sensor on their property, which is up the hillside from the valley floor. Additionally, Maine DEP deployed another sensor down river from the continuous BAM monitor. $PM_{2.5}$ data collected from all 'in river' monitor instruments have been collected and viewed graphically to try to

understand the airflow in the valley. One thing noted is that often the downriver Purple Air spikes most often the hour before the BAM and a collocated-Purple Air spikes. So, it is likely that the inversion breakup pauses downriver airflow. Whether the airflow reverse and flows up valley at the surface or the pause in NW wind flow allows local emissions to combine with the vertical mixing resulting in the spike is still undetermined. On a semi-regular basis, staff aggregates the data together for graphing purposes to view each event. Currently, the project is expected to continue through 2025.

Summaries

Summary of Proposed Calendar Year 2025 Network Changes:

Maine is anticipating receiving grant monies from the IRA 60105 (a, b and c) direct award grants. This will assist the ME DEP in upgrading, and replacing much of the older, and in poor condition equipment needed to maintain Maines ambient air monitoring network.

The following changes are being contemplated or are likely to occur:

- Dependent on the approval of the IRA direct award grant, the following equipment may get replaced:

Equipment	Reason
Presque Isle Riverside Shelter	The current shelter is in very poor condition.
Rumford Shelter	The current shelter is in poor condition.
Lewiston Shelter	The current shelter is in poor condition.
NCore CO monitor	Replace older equipment
NCore O_3 monitor	Replace older equipment
Jonesport O_3 monitor	Replace older equipment
Lewiston PM instrument	Replace older equipment
Rumford PM instrument	Replace older equipment
Portland Deering Oak PM instrument	Replace older equipment
NCore Multi-gas Calibrator	Replace older equipment
Jonesport MET	Replace older/outdated system
Augusta MET	Replace older/outdated system
Rumford MET	Replace older system

- Dependent of the approval of the IRA direct award grant, a ceilometer may be installed at the Presque Isle Riverside site.
- If not accomplished in 2024, the Portland Deering Oaks monitoring station may be relocated. Applicable siting criteria will be met at any new location.
- If not accomplished in 2024, the Kennebunk O_3 monitoring station may be relocated to another location on Maines Southern Coast to better protect the equipment and shelter from the effects of climate change and severe coastal storms.
- If resources allow, a mobile monitoring platform will be populated with sampling equipment and readied for use.
- Once resources allow, A HAPs sampler will be re-installed at Cape Elizabeth Site.
- South Portland/Portland VOC network: Pending assessment of sample data, one or more sites may be discontinued, and others made permanent.

The monitors operated by the Maine DEP undergo constant review to ensure that the ambient air monitoring network is appropriate to meet monitoring goals, does not contain irrelevant monitoring, and can be accomplished within the available budget. The table below presents the location of each active monitor in the

State. In the table, each monitor has been identified as meeting one or more State objectives. While there are presently no indications further changes to the network will be contemplated, budget and staffing issues may require cuts in the monitoring program. This table will help to determine the relative importance of each site and assist with the decision - making process.

Summary of Maine Ambient Air Monitoring Locations and Objectives as of 2024

AQS - ID	Site Abbreviation	Operator Agency	Parameter	Monitoring Objective(s)									Comments
				Population Exposure	Maximum Concentration	Historical Trends	Research /Special Studies	CFR Mandate	SIP Required	AQI Forecasting/ Mapping	Data Different from Nearby Monitors	Background Air Quality	
23-001-0011	LCKP	DEP	PM2.5 FRM					x					QA Collolation against FEM. Start date expected as 7/1/2024
			PM2.5 FEM Hourly	x	x	x				x		x	Lewiston-Auburn-State's 2nd largest urban area
			PM10 FRM	x	x	x						x	Shut down expected 6/30/2024.
			PM10 FEM Hourly										Lewiston-Auburn-State's 2nd largest urban area
			VOCs - Canister	x		x	x						Lewiston-Auburn - State's 2nd largest urban area
23-001-0014	DFS	DEP	O3				x	x	x	x			Max. ozone from Greater Portland precursors; Maint. Area
23-003-0014	MPSB	DEP	PM2.5 Hourly	x	x	x				x		x	
			PM10 Hourly	x	x	x		x		x			
23-003-1002	ME00-Caribou	DEP	NADP NTN/MDN			x							Northern Maine precipitation chemistry & Hg deposition
23-003-1008	PIBS	DEP	PM2.5 Hourly			x						x	FRM to be replaced with continuous PM in 2023
23-003-1011	PIRS	DEP	PM2.5 FRM	x	x	x							Northern Maine region's collocated FRM & FEM site
			PM2.5 FEM Hourly	x	x	x				x			Teledyne T640x monitor is primary reporting monitor for both parameters. ME DEP continuing operating of Metone BAM 1020 for collocation study.
			PM10 FEM Hourly	x	x	x		x	x	x			
			VOCs - Canister	x		x	x						Northern Maine region urban area
23-003-1100	PIMM	Tribal	CO	x						x		x	
			IMPROVE			x	x						Regional haze; Micmac's Presque Isle IMPROVE Protocol site
			NO2	x						x		x	
			O3	x						x			
			PM2.5 Hourly	x						x			
			SO2	x						x		x	
23-005-0002	ME02-Bridgton	LEA	NADP NTN/MDN			x							South-interior Maine precipitation chemistry & Hg deposition
23-005-0015	PTB	DEP	PM2.5 FEM Hourly		x	x					x		High traffic - near road impacts. T640x instrument to be installed 2023 to monitor both parameters continuously.
			PM10 FEM Hourly		x	x					x		
23-005-0029	PDO	DEP	NO2	x	x	x				x		x	Greater Portland - State's largest urban area
			O3	x		x	x			x			Health effects & exposure correlation study
			PM2.5 FRM	x		x					x		SMRO Collolation against Method 170. Portland MSA requires one site
			PM2.5 Hourly				x		x	x		x	Southern Maine region's collocated FRM & FEM site
			VOCs - Canister	x		x	x						Southern Maine region urban area; SoPo/Po VOC Project
			VOCs - Canister			x	x	x					Collocation for canister method
23-005-2003	CETL	DEP	O3	x	x	x		x		x			Enhanced ozone monitoring site
			VOCs - Canister			x	x						To resume when resources allow
23-005-9002	CABA1	DEP	IMPROVE			x	x						Regional Haze; Freeport - Casco Bay IMPROVE Protocol site
	(ME96-Freeport)		NADP NTN/MDN			x							South-coastal Maine precipitation chemistry & Hg deposition
23-007-2002	ME04-Carrabassett	Tribal	NADP NTN/MDN			x							Tribal land precipitation chemistry & Hg deposition
23-009-0102	BHCM	DEP	O3	x	x	x			x	x			Long range rural transport. High concentration.
23-009-0103	BHMH	DEP	CO					x		x		x	Ncore - rural
			NOY			x	x	x				x	Ncore - rural
			O3	x		x		x		x			Ncore - rural
			PM2.5 FRM			x		x				x	Ncore - rural
			PM2.5 Hourly			x		x		x		x	Ncore - rural
			PM10 Hourly			x		x				x	Ncore - rural
			$PM_{10-2.5}$ Hourly				x					x	Ncore - rural
			SO2					x				x	Ncore - rural
		NPS	IMPROVE			x	x		x				Regional haze; Class 1 area
	(ME98-Bar Harbor)	NPS/DEP	NADP NTN/MDN			x	x						Acadia NP precipitation chemistry & Hg deposition
23-011-0016	ALSS	DEP	PM2.5 FRM					x					shut down expected 12/31/2024
			PM2.5 FRM	x		x							shut down expected 12/31/2024
			PM10 FRM	x		x							shut down expect 6/30/2024
			PM10 Hourly	x									
			PM2.5 Hourly	x									

Summary of Maine Ambient Air Monitoring Locations and Objectives as of 2024 - Continued

AQS - ID	Site Abbreviation	Operator Agency	Parameter	Monitoring Objective(s)									Comments
				Population Exposure	Maximum Concentration	Historical Trends	Research /Special Studies	CFR Mandate	SIP Required	AQI Forecasting/ Mapping	Data Different from Nearby Monitors	Background Air Quality	
23-011-2001	GAHS	DEP	O3	x	x	x			x	x			Site established as part of a maintenance area requirement. May be moved in an attempt to improve siting.
23-013-0004	PCMP	DEP	O3	x	x	x			x	x			Long range rural transport
23-017-2011	RAP	DEP	PM2.5 Hourly	x		x				x		x	Western Maine mountains / river valley urban area. T640x may be purchased and installed
			VOCs - canister	x		x	x						
23-017-3002	BSFR	DEP	O3	x			x			x	x		
23-019-0017	BMSS	DEP	PM10 FRM	x	x	x						x	Collocation for method. Installation of T640x in Spring 2024 makes this method redundent. Samplers to be shut down 6/30/2024.
			PM10 FRM										
			PM10 FEM Hourly										Bangor-Brewer - State's 3rd largest urban area. PM2.5 BAM 1020 replaced with T640x measuring both PM2.5 and PM10.
			PM2.5 FEM Hourly	x	x		x			x			
			VOCs - canister	x		x	x						Bangor-Brewer - State's 3rd largest urban area
23-019-1100	INDIAN ISLAND	Tribal	IMPROVE			x	x						Regional haze; Penobscot's Indian Island IMPROVE Protocol site
23-019-4008	HRB	DEP	O3	x		x	x			x			Regional transport
23-021-0001	ME09-Greenville	DEP	NADP NTN/MDN			x							Central Maine precipitation chemistry & Hg deposition
23-023-0007	PBSP	DEP	O3	x	x	x				x	x		Long range transport
23-029-0021	JCG	DEP	O3	x		x				x			Coverage of coastal downeast area.
23-029-0033	SIPAYIK	Tribal	O3	x						x			
			PM2.5 FEM Hourly	x						x			
23-031-0040	SBP	DEP	O3	x		x	x			x	x		Highest springtime ozone levels in the network
23-031-2002	KPW	DEP	O3	x	x	x		x	x	x			Long range rural transport
N/A	ME94-Indian Twp.	Tribal	NADP NTN			x							Tribal land precipitation chemistry
N/A	Mooshehorn	USFWS	IMPROVE			x			x				Regional haze; Class 1 area

Summary of Monitoring Equipment Used by Maine DEP

PARAMETER	INSTRUMENT	DESIGNATION No. (EPA Method Code)[1]
Atmospheric Deposition	Aerochem Metrics wet/dry collector N-CON collector	
Barometric Pressure	Climatronics Met One	
Carbon Monoxide	Thermo Model 48i-TLE Teledyne Model T300U	RFCA-0981-054 (554) RFCA-1093-093 (593)[3]
Hazardous Air Pollutants	24-hour 6-liter sub-ambient canister samplers, designed and built by ME DEP	TO-15
Lead	R&P/Thermo Single Model 2000i Spectro XEPOS XRF Spectrometer	
Mercury Deposition	Aerochem Metrics N-CON Wet Deposition collector	
Nitrogen Dioxide	Thermo Model 42i-TLE Therme Model 42i/c	RFNA-1289-074 (574) RFNA-1289-074 (074)
Organic/Elemental Carbon	Sunset Semicontinuous OC/EC Carbon Aerosol Analyzer	
Other Metals such as Arsenic, Chromium, etc.	R&P Single Model 2000i Spectro XEPOS XRF Spectrometer	
Oxides of Nitrogen	Thermo Model 42i-Y	
Ozone	Thermo Models 49C, 49i; 49iQ Teledyne N400	EQOA-0880-047 (047) EQOA-0922-087 (087)
PM 10 Continuous	MET One BAM Model 1020 Teledyne API Model T640x	EQPM-0798-122 (122) EQPM-0516-239 (639)
PM 10 FRM	R&P/Thermo Single Model 2000i	RFPS-1298-126 (126)[2]
PM 2.5 Continuous	MET One BAM Model 1020 Teledyne API Model T640x	EQPM-0308-170 (170) EQPM-0516-238 (638)
PM 2.5 FRM	Thermo Single Model 2000i w/ VSCC	RFPS-1006-143 (143)
PM Coarse	Teledyne T640x	EQPM-0516-240 (640)
PM Speciation	IMPROVE Sampler	
Precipitation	ETI Instrument Systems NOAH IV	
Relative Humidity	Climatronics Met One Rotronic HygroClip HC2-S	
Solar Radiation	Climatronics Kipp & Zonen	
Sulfur Dioxide	Thermo Model 43i-TLE Teledyne Model T200U	EQSA-0486-060 (560) EQSA-0495-100 (600)[3]
Temperature	Climatronics Met One	
Wind Speed/Direction	Climatronics F460 Met One RM Young 86004	

1: Designation number and Federal Reference and Equivalent Methods as of June 27th, 2024.

2: Maine anticipates discontinuing using this method in 2024.

3: Maine DEP currently owns but does not operate the instruments associated with this method. Operation of these instruments may resume when the need for them arises.

Integrated Sample Schedule

2025 Integrated Sample Schedule

January						
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						
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						
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						
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						
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						
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						
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						
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						
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						
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						
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						
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			

1 in 3 sample day

1 in 3, 1 in 6, and 1 in 12 sample day

1 in 3, and 1 in 6 sample day

State Holiday

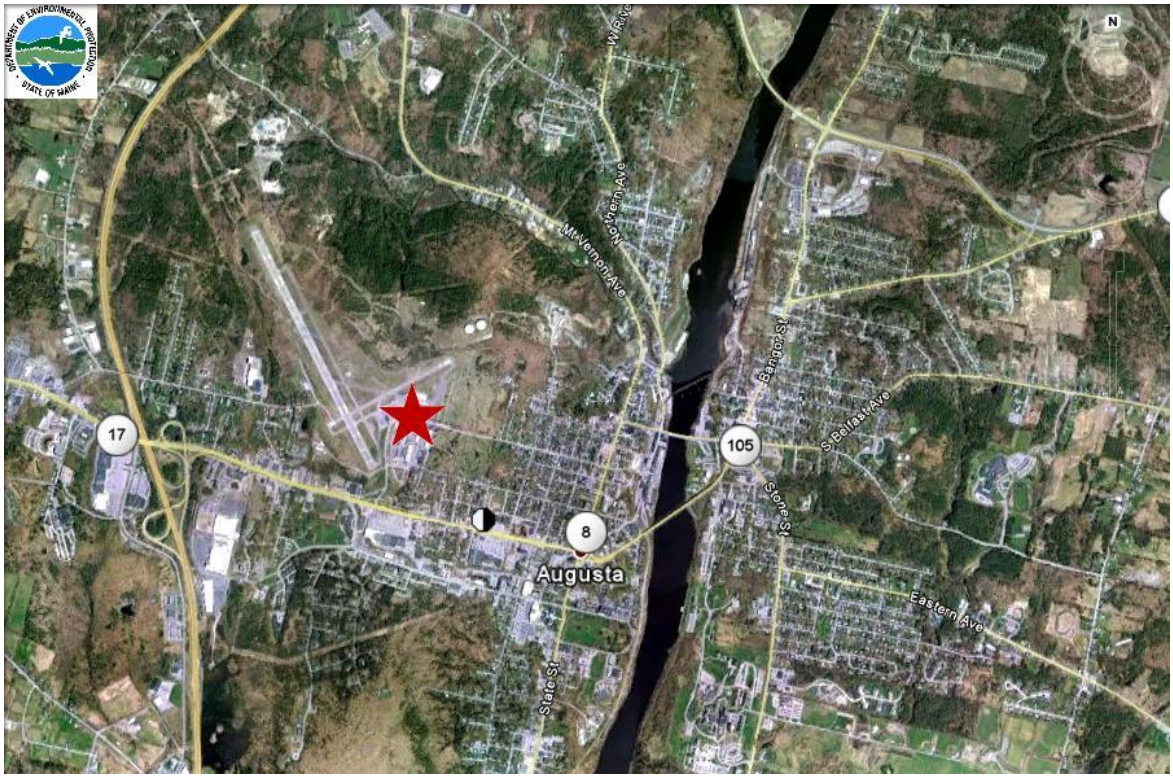
EPA version of sampling schedule can be found at: https://www.epa.gov/amtic/sampling-schedule-calendar

Appendix 1:
MONITORING SITE INFOMATION
FOR 2024/2025

The following page presents 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. Sites are arranged alphabetically by Town – Site Name; this table offers an index to the sites based on AQS Site ID.

2024 Monitoring Site Information

Town – Site:	**Augusta – Airport**		
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**		



Augusta – Airport
Pollutant and Meteorological Parameters:

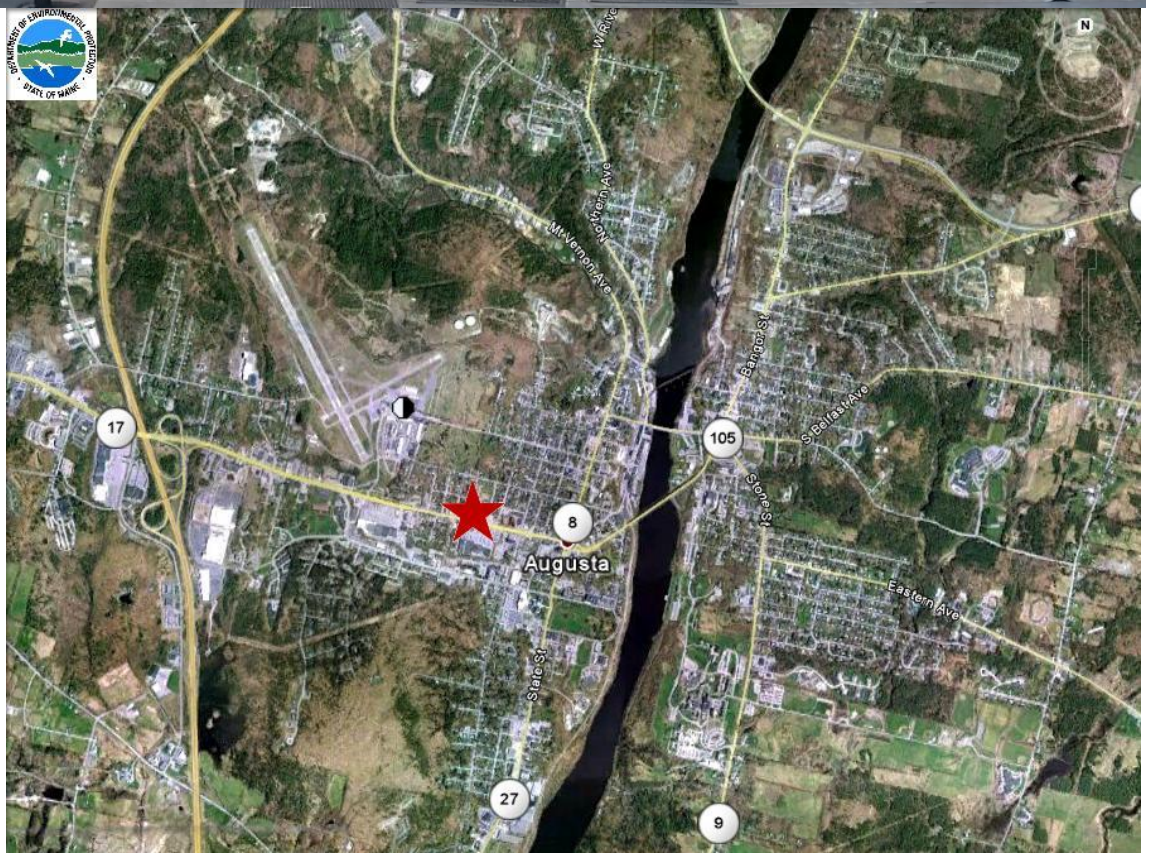
Parameter	Date Began	Date Ended	Parameter	Date Began	Date Ended
PM2.5 - 24 Hr.			SO_2		
PM2.5 - 24 Hr. Colo			Ozone		
PM2.5 Cont.			NOx		
PM10 - 24 Hr.			NOy		
PM10 - 24 Hr. Colo			HAPs		
PM10 Cont.			VOCs (PAMS)		
PM Coarse			Wet Deposition - Mercury		
IMPROVE			Wet Dep. - Precip Chem.		
Cont. OC/EC			Wind Direction/Speed	01/20/1981	
Cont. Sulfate (SO_4)			Outdoor Temperature		
Black Carbon			Bar. Pressure		
Cont. PAH			Relative Humidity		
Lead			Dew point		
CO			Precipitation Amount		
CO_2			Solar Radiation		
Gamma Radiation			UV-b Radiation		

Site Description:
A retractable tower with wind speed and direction sensors is situated on the roof of the Airport Terminal Building 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. The 10-meter tower is raised only to the height of the surrounding antennae due to the proximity of the flight line. The tower and equipment were moved to the terminal in October 2015 because the Civil Air Patrol Hanger, where the tower was originally situated, was slated for replacement.

Monitoring Objectives:
Modeling.

Planned changes for 2025: Dependent on grant approval, the wind direction and speed sensors will be replaced.

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**		



Augusta – Lincoln Street School
Pollutant and Meteorological Parameters:

Parameter	Date Began	Date Ended	Parameter	Date Began	Date Ended
PM2.5 - 24 Hr.	01/01/1999	6/30/2024 (anticipated)	SO_2		
PM2.5 - 24 Hr. Colo	01/01/1999	12/31/2024 (anticipated)	Ozone		
PM2.5 Cont.	07/12/2023		NOx		
PM10 - 24 Hr.	12/02/2002	12/31/2024 (anticipated)	NOy		
PM10 - 24 Hr. Colo			HAPs		
PM10 Cont.	07/12/2023		VOCs (PAMS)		
PM Coarse			Wet Deposition - Mercury		
IMPROVE			Wet Dep. - Precip Chem.		
Cont. OC/EC			Wind Direction/Speed		
Cont. Sulfate (SO_4)			Outdoor Temperature		
Black Carbon			Bar. Pressure		
Cont. PAH			Relative Humidity		
Lead			Dew point		
CO			Precipitation Amount		
CO_2			Solar Radiation		
Gamma Radiation			UV-b Radiation		

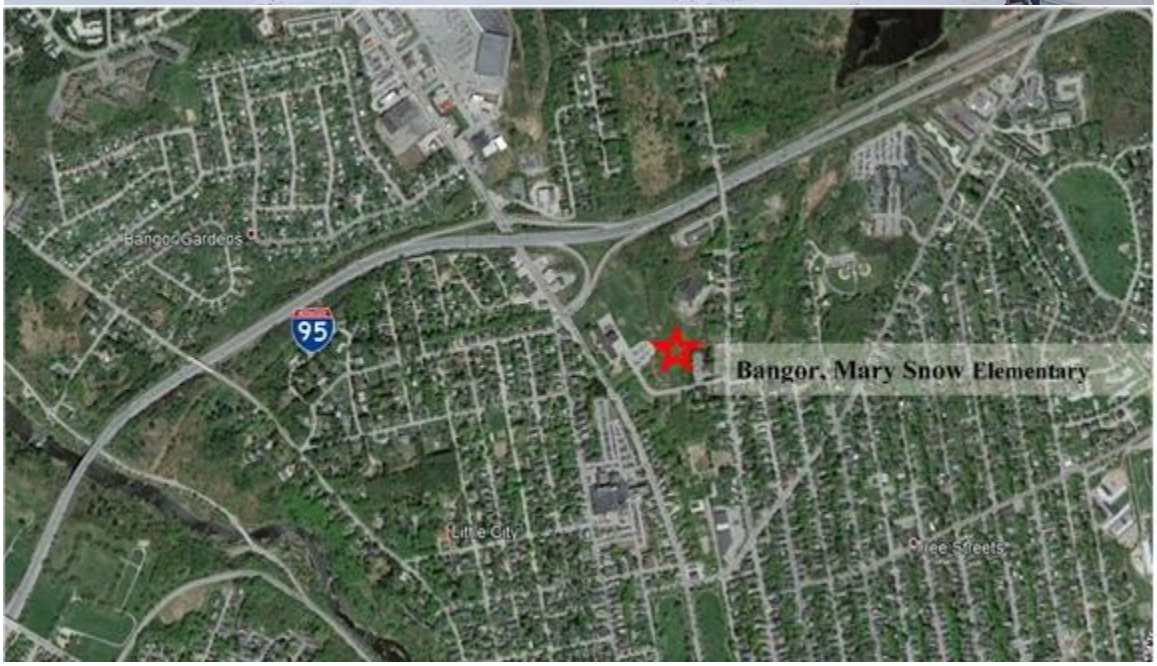
Site Description:
Lincoln Street School is located in Augusta just off Western Avenue, 0.4 miles northwest of the state capital. An aluminum platform is situated on the roof of the gymnasium where all the monitoring equipment resides. A Teledyne T640x was installed in July 2023, providing continuous PM2.5 and PM10 data.

Monitoring Objectives:
SLAMS Attainment/Non-Attainment. High Population Exposure.

Planned changes for 2024:
The manual FRM PM10 sampler will be shut down on June 30th, 2024.
The manual FRM PM2.5 samplers will be shut down on December 31st, 2024.

Planned changes for 2025:
The T640x will become the primary reporting sampler for PM2.5 on 1/1/2025.

Town – Site:	**Bangor – Mary Snow Elementary School**		
County:	**Penobscot**	Latitude:	**44.817398**
Address:	**435 Broadway St.**	Longitude:	**-68.772762**
AQS Site ID:	**23-019-0017**	Elevation:	**54.2 Meters**
Spatial Scale:	**Neighborhood**	Year Established:	**2017**
Statistical Area:	**Bangor, ME**		



Bangor – Mary Snow Elementary School
Pollutant and Meteorological Parameters:

Parameter	Date Began	Date Ended	Parameter	Date Began	Date Ended
PM2.5 - 24 Hr.	10/01/2017 7/1/2024 (anticipated)	12/31/2019	SO_2		
PM2.5 - 24 Hr. Colo			Ozone		
PM2.5 Cont.	10/01/2017		NOx		
PM10 - 24 Hr.	10/01/2017	6/30/2024 (anticipated)	NOy		
PM10 - 24 Hr. Colo	1/24/2023	6/30/2024 (anticipated)	HAPs	10/01/2017	
PM10 Cont.			VOCs (PAMS)		
PM Coarse	10/01/2017	12/31/2019	Wet Deposition - Mercury		
IMPROVE			Wet Dep. - Precip Chem.		
Cont. OC/EC			Wind Direction/Speed		
Cont. Sulfate (SO_4)			Outdoor Temperature		
Black Carbon			Bar. Pressure		
Cont. PAH			Relative Humidity		
Lead			Dew point		
CO			Precipitation Amount		
CO_2			Solar Radiation		
Gamma Radiation			UV-b Radiation		

Site Description:
Monitors are located on the roof of Mary Snow Elementary School located on Broadway just south of the I 95 interchange in Bangor. A second Thermo 2000*i* was installed came into operation for the 1/24/2023 SIPs date. This sampler became the new PM10 collocation site for method 126, replacing Portland Tukeys bridge as the collocated site.

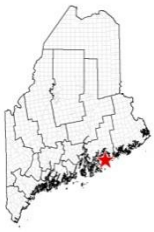
In spring of 2024, the Met One Bam 1020 measuring PM2.5 was replaced by a Teledyne T640x capable of measuring PM2.5 and PM10 simultaneously.

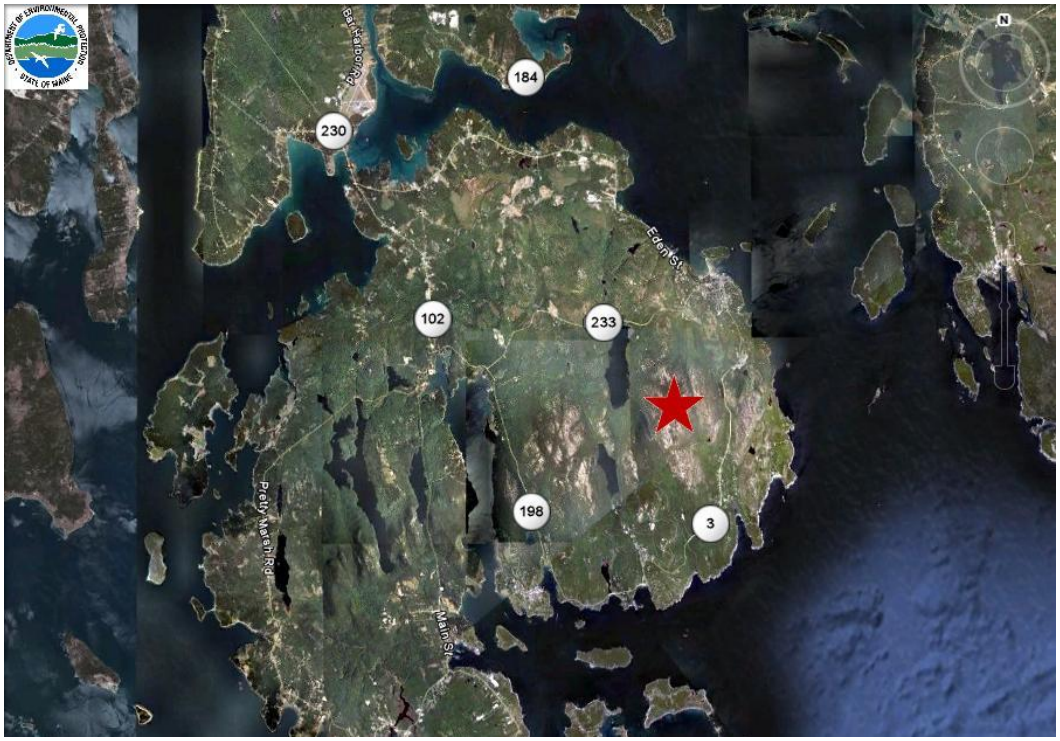
Monitoring Objectives:
Attainment/Non-Attainment/High Population Exposure site. AQI Forecasting and Mapping.

Planned changes for 2024:
The manual PM10 samplers will be shut down on June 30th, 2024. One of the manual PM10 samplers will be configured for PM2.5 for QA collocation to maintain a minimum number of QA collocated monitors as required by the CFR.

Planned changes for 2025:
None.

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**		





Bar Harbor – Cadillac Mountain, Acadia National Park
Pollutant and Meteorological Parameters:

Parameter	Date Began	Date Ended	Parameter	Date Began	Date Ended
PM2.5 - 24 Hr.			SO_2		
PM2.5 - 24 Hr. Colo			Ozone	7/25/1995	
PM2.5 Cont.			NOx	4/1/2004	9/30/2007
PM10 - 24 Hr.			NOy	1/1/2008	9/30/2014
PM10 - 24 Hr. Colo			HAPs		
PM10 Cont.			VOCs (PAMS)	5/1/1996	9/30/2014
PM Coarse			Wet Deposition - Mercury		
IMPROVE			Wet Dep. - Precip Chem.		
Cont. OC/EC			Wind Direction/Speed	5/6/1996	
Cont. Sulfate (SO_4)			Outdoor Temperature	4/19/1996	
Black Carbon			Bar. Pressure		
Cont. PAH			Relative Humidity	4/19/1996	
Lead			Dew point		
CO	4/1/2002	10/1/2003	Precipitation Amount		
CO_2			Solar Radiation		
Gamma Radiation			UV-b Radiation		

Site Description:
Located on the top of Cadillac Mountain in Acadia National Park. It is a seasonal ozone site operating during the months of April to October. Meteorological parameters are also collected seasonally. The 8 by 16 shelter was replaced with an 8 by 10 shelter in 2020 that is more energy efficient and suitable for monitoring going forward.
In fall of 2023, the wind direction and wind speed sensors were damaged by a windstorm. These sensors were far past their expected lifetime and the Maine DEP purchased new sonic met sensor for this site.
In early 2024, the ozone monitor was replaced with a newer model.

Monitoring Objectives:
Monitoring long-range transport of pollutants on a regional scale.

Planned changes for 2025:
None.

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**		

Bar Harbor – McFarland Hill, Acadia National Park
Pollutant and Meteorological Parameters:

Parameter	Date Began	Date Ended	Parameter	Date Began	Date Ended
PM2.5 - 24 Hr.	1/1/1999		SO_2	2/1/2004	
PM2.5 - 24 Hr. Colo			Ozone	2/1/1998	
PM2.5 Cont.	10/1/2003		NOx		
PM10 - 24 Hr.	1/1/2010	1/6/2023	NOy	2/1/2004	
PM10 - 24 Hr. Colo			HAPs		
PM10 Cont.	1/12/2023		VOCs (PAMS)		
PM Coarse	1/1/2010		Wet Deposition - Mercury	1998	
IMPROVE	3/2/1988		Wet Dep. - Precip Chem.	1998	
Cont. OC/EC	6/29/2004		Wind Direction/Speed	2/1/1998	
Cont. Sulfate (SO_4)	6/26/2004	6/2/2023	Outdoor Temperature	2/1/1998	
Black Carbon			Bar. Pressure		
Cont. PAH			Relative Humidity	2/1/1998	
Lead			Dew point		
CO	2/1/2004		Precipitation Amount	2/1/1998	
CO_2			Solar Radiation	2/1/1998	
Gamma Radiation			UV-b Radiation		

Site Description:
This 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 as the NCore site for Maine.
A T640x was installed in January of 2023, replacing a Thermo 5030i SHARP, and making the two 2000*i* samplers sampling for PM_{10} redundant, which were also removed.
In Summer 2023, due to operational issues, the continuous sulfate analyzer was shut down. This instrument was discontinued by the vendor and was no-longer providing parts or technical support.
In December 2023, the NPS/ARD owned 49c ozone monitor was replaced by a DEP owned 49i ozone monitor, and an older climatronics MET system was replaced by a Vaisala MET system.

Monitoring at this site is a joint effort between the NPS/ARD and the Maine DEP.

Monitoring Objectives:
Background. NCore Site. Monitoring long-range transport of pollutants on a regional scale.

Planned changes for 2024/2025:
Dependent on the approval, timely availability of, and amount of grant monies expected to be received as part of the IRA 60105 (A and B) grants, many of the older gaseous instruments are anticipated to be replaced.

Town – Site:	**Bethel – Smith Farm Road**		
County:	**Oxford**	Latitude:	**44.377794**
Address:	**Smith Farm Road**	Longitude:	**-70.854697**
AQS Site ID:	**23-017-3002**	Elevation:	**203 Meters**
Spatial Scale:	**Regional**	Year Established:	**2016**
Statistical Area:	**None**		

Bethel – Smith Farm Road
Pollutant and Meteorological Parameters:

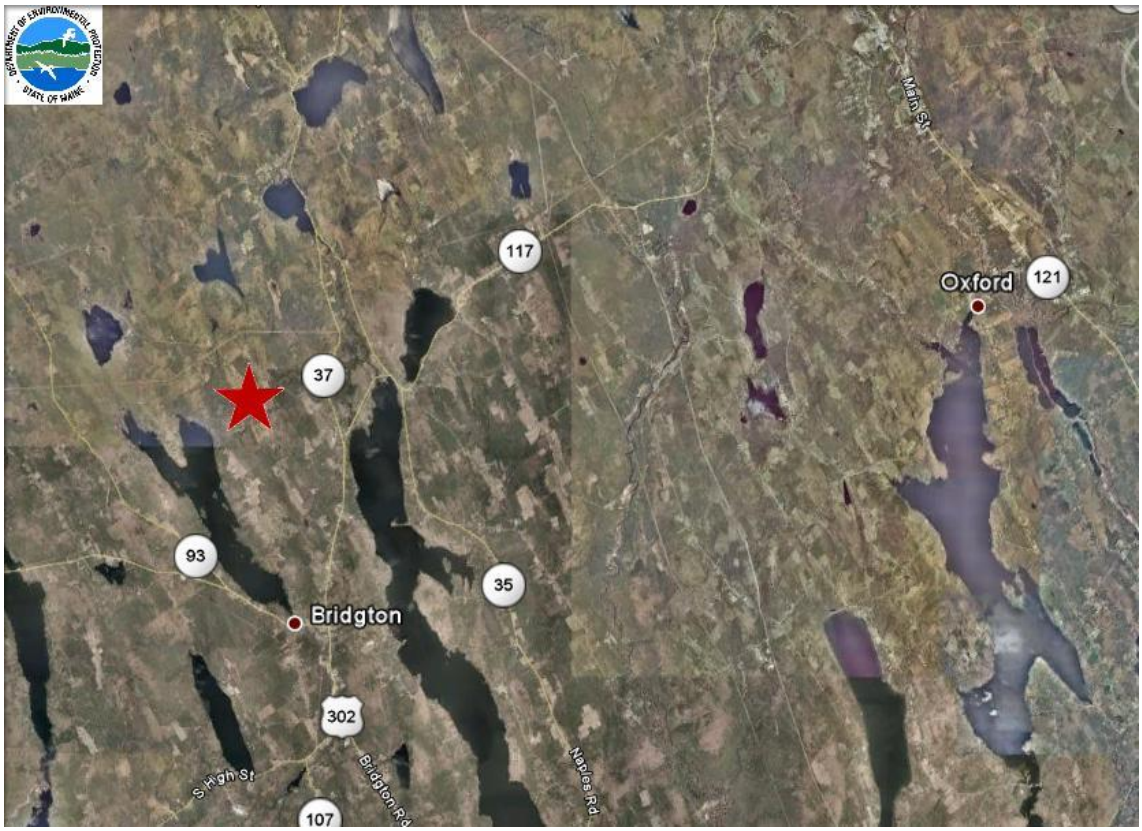
Parameter	Date Began	Date Ended	Parameter	Date Began	Date Ended
PM2.5 - 24 Hr.			SO_2		
PM2.5 - 24 Hr. Colo			Ozone	5/12/2016	
PM2.5 Cont.			NOx		
PM10 - 24 Hr.			NOy		
PM10 - 24 Hr. Colo			HAPs		
PM10 Cont.			VOCs (PAMS)		
PM Coarse			Wet Deposition - Mercury		
IMPROVE			Wet Dep. - Precip Chem.		
Cont. OC/EC			Wind Direction/Speed		
Cont. Sulfate (SO_4)			Outdoor Temperature		
Black Carbon			Bar. Pressure		
Cont. PAH			Relative Humidity		
Lead			Dew point		
CO			Precipitation Amount		
CO_2			Solar Radiation		
Gamma Radiation			UV-b Radiation		

Site Description:
The site is located approximately 3.5 miles southwest of Bethel, Maine on Smith Farm Road. The shelter is situated in a field along the power line right of way.

Monitoring Objectives:
SLAMS Attainment/Non-Attainment. Western Mountain Location

Planned changes for 2025:
The shelter may be replaced, the current shelter is underutilized in the current location, and the Maine DEP would benefit from having this shelter available for another use.

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**		



Bridgton

Pollutant and Meteorological Parameters:

Parameter	Date Began	Date Ended	Parameter	Date Began	Date Ended
PM2.5 - 24 Hr.			SO_2		
PM2.5 - 24 Hr. Colo			Ozone		
PM2.5 Cont.			NOx		
PM10 - 24 Hr.			NOy		
PM10 - 24 Hr. Colo			HAPs		
PM10 Cont.			VOCs (PAMS)		
PM Coarse			Wet Deposition - Mercury	6/3/1997	
IMPROVE	3/14/2001	1/1/2016	Wet Dep. - Precip Chem.	1/1/1980	
Cont. OC/EC			Wind Direction/Speed		
Cont. Sulfate (SO_4)			Outdoor Temperature		
Black Carbon			Bar. Pressure		
Cont. PAH			Relative Humidity		
Lead			Dew point		
CO			Precipitation Amount		
CO_2			Solar Radiation		
Gamma Radiation			UV-b Radiation		

Site Description:

Site is located on a ridge in an open field area just off the Upper Ridge Road. While this site is a Maine DEP location, the weekly workload is contracted out to the Maine Lakes Environmental Association (LEA).

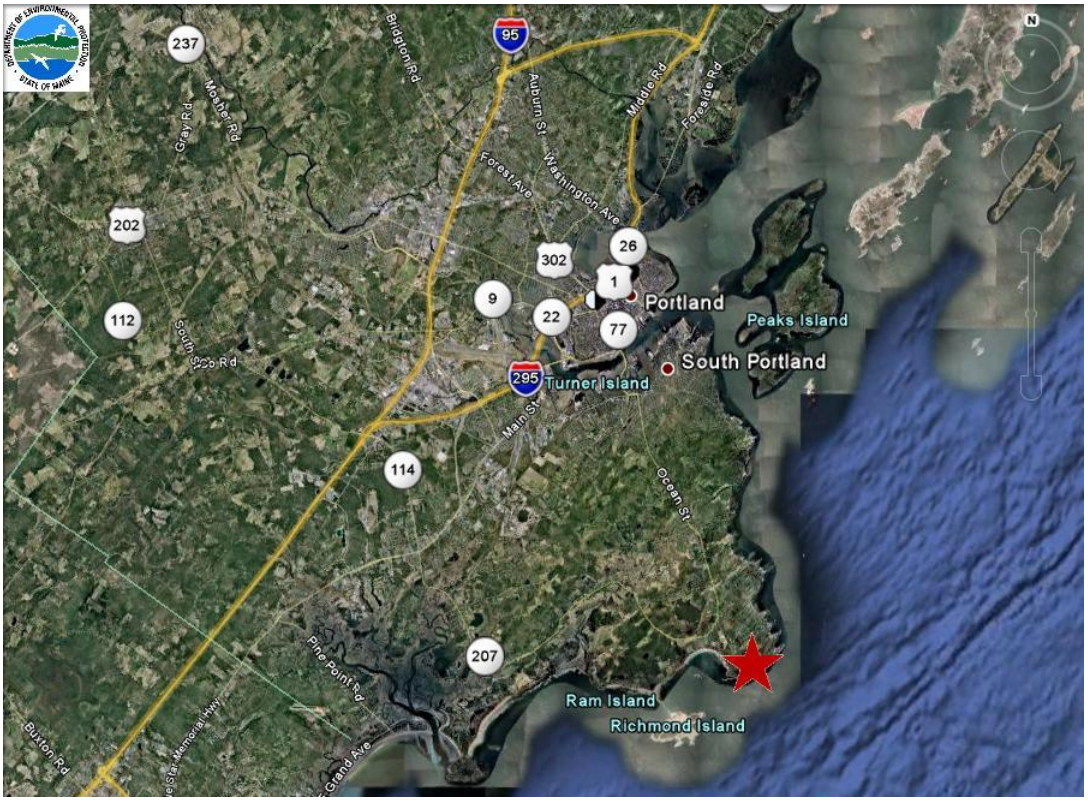
Monitoring Objectives:

Long-term tracking of deposition. Western Mountain Location

Planned changes for 2025:

None.

Town – Site:	**Cape Elizabeth, Two Lights State Park**		
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**		



Cape Elizabeth, Two Lights State Park
Pollutant and Meteorological Parameters:

Parameter	Date Began	Date Ended	Parameter	Date Began	Date Ended
PM2.5 - 24 Hr.	1/1/1999	12/17/2002	SO_2		
PM2.5 - 24 Hr. Colo			Ozone	1/1/1981	
PM2.5 Cont.			NOx	6/9/1993	10/31/1995
PM10 - 24 Hr.			NOy	6/26/1995	10/25/2022
PM10 - 24 Hr. Colo			HAPs	12/6/2013	5/30/2019
PM10 Cont.			VOCs (PAMS)	6/1/1993 6/1/2020	8/31/2019 8/31/22
PM Coarse			Wet Deposition - Mercury		
IMPROVE			Wet Dep. - Precip Chem.		
Cont. OC/EC			Wind Direction/Speed	6/25/1985	
Cont. Sulfate (SO_4)			Outdoor Temperature	6/7/1994	
Black Carbon			Bar. Pressure	6/7/1994	
Cont. PAH			Relative Humidity	6/7/1994	
Lead			Dew point		
CO	5/1/2001	10/1/2007	Precipitation Amount		
CO_2			Solar Radiation	6/7/1994	
Gamma Radiation			UV-b Radiation	6/1/1995	
			Pandora	June 2021	

Site Description:
The Cape Elizabeth site is located in an open elevated area in the Two Lights State Park in Cape Elizabeth. Ozone is monitored year around, and meteorological parameters are monitored seasonal from April to September, The GC was shut down at the end of the 2022 PAMs season to allow staff to focus on other Air Quality issues more pressing in Maine.

Monitoring Objectives:
Monitoring long-range transport of pollutants on a regional scale.

Planned changes for 2025:
If resources allow, a HAPS sampler will be re-established at Cape Elizabeth**.**
This shelter is currently under-utilized. The Maine DEP would benefit from replacing this shelter will a smaller shelter and allow this shelter to be available for other uses.

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**		

Caribou – Caribou Airport
Pollutant and Meteorological Parameters:

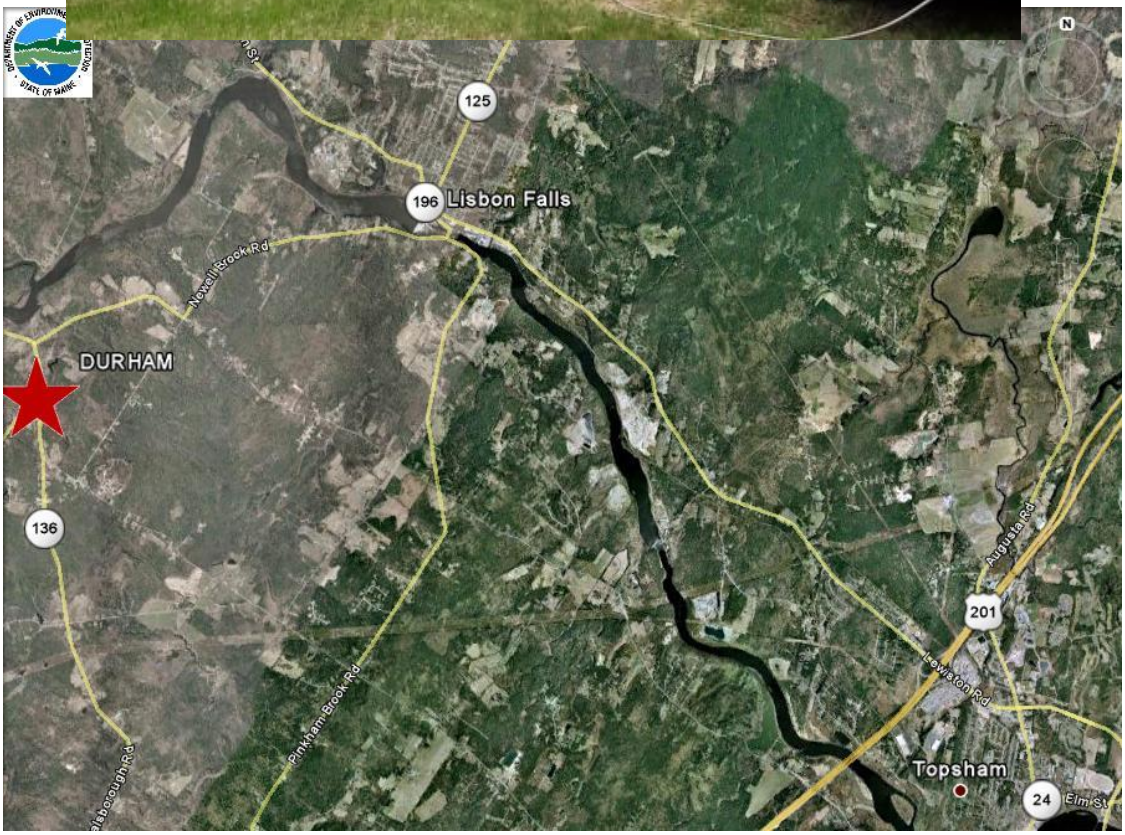
Parameter	Date Began	Date Ended	Parameter	Date Began	Date Ended
PM2.5 - 24 Hr.			SO_2		
PM2.5 - 24 Hr. Colo			Ozone		
PM2.5 Cont.			NOx		
PM10 - 24 Hr.			NOy		
PM10 - 24 Hr. Colo			HAPs		
PM10 Cont.			VOCs (PAMS)		
PM Coarse			Wet Deposition - Mercury	5/9/2007	
IMPROVE			Wet Dep. - Precip Chem.	1/1/1982	
Cont. OC/EC			Wind Direction/Speed		
Cont. Sulfate (SO_4)			Outdoor Temperature		
Black Carbon			Bar. Pressure		
Cont. PAH			Relative Humidity		
Lead			Dew point		
CO			Precipitation Amount	1/1/1982	
CO_2			Solar Radiation		
Gamma Radiation			UV-b Radiation		

Site Description:
The site is in a grassy area inside the fence and off the south end of the runway at Caribou Airport.

Monitoring Objectives:
Long-term monitoring of wet deposition chemistry and precipitation amount in northern Maine.

Planned changes for 2025:
None.

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**		



Durham – Fire Station
Pollutant and Meteorological Parameters:

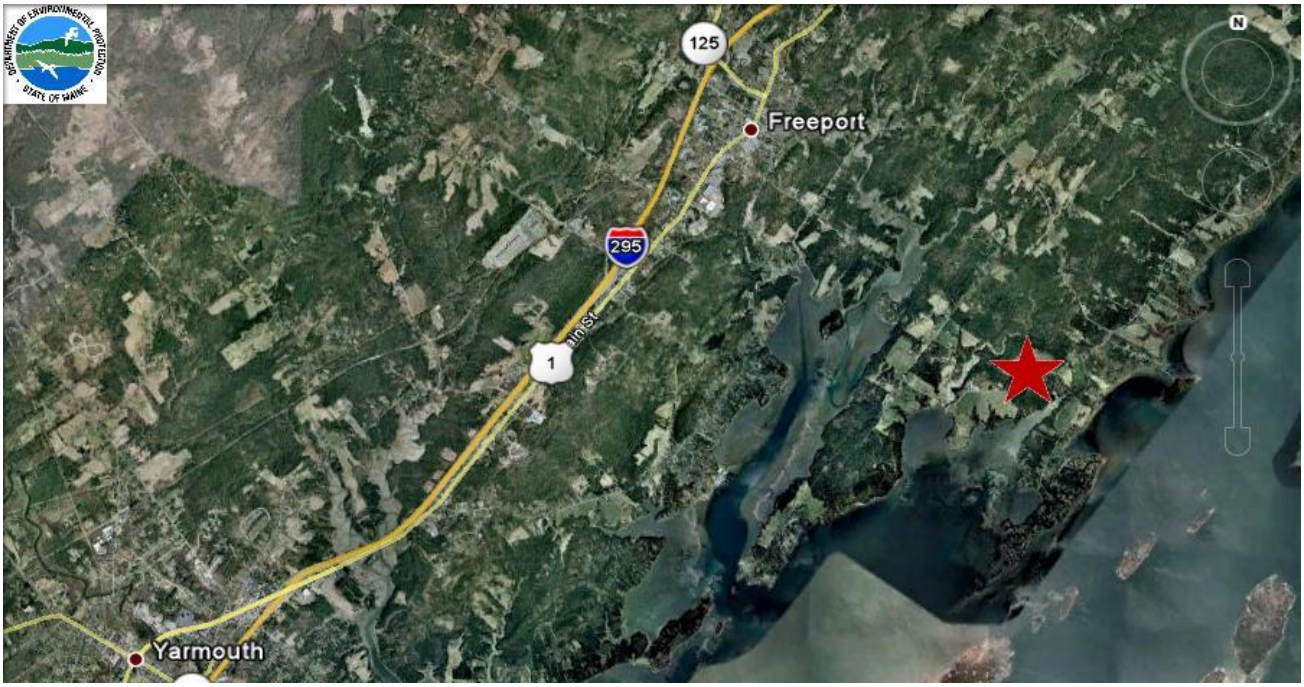
Parameter	Date Began	Date Ended	Parameter	Date Began	Date Ended
PM2.5 - 24 Hr.			SO_2		
PM2.5 - 24 Hr. Colo			Ozone	04/01/2004	
PM2.5 Cont.			NOx		
PM10 - 24 Hr.			NOy		
PM10 - 24 Hr. Colo			HAPs		
PM10 Cont.			VOCs (PAMS)		
PM Coarse			Wet Deposition - Mercury		
IMPROVE			Wet Dep. - Precip Chem.		
Cont. OC/EC			Wind Direction/Speed		
Cont. Sulfate (SO_4)			Outdoor Temperature		
Black Carbon			Bar. Pressure		
Cont. PAH			Relative Humidity		
Lead			Dew point		
CO			Precipitation Amount		
CO_2			Solar Radiation		
Gamma Radiation			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 and in the summer of 2022, a new sloped roof was installed onto the shelter.

Monitoring Objectives:
SLAMS Attainment/Non-Attainment.

Planned changes for 2025:
None.

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**		



Freeport – Wolfes Neck Farm
Pollutant and Meteorological Parameters:

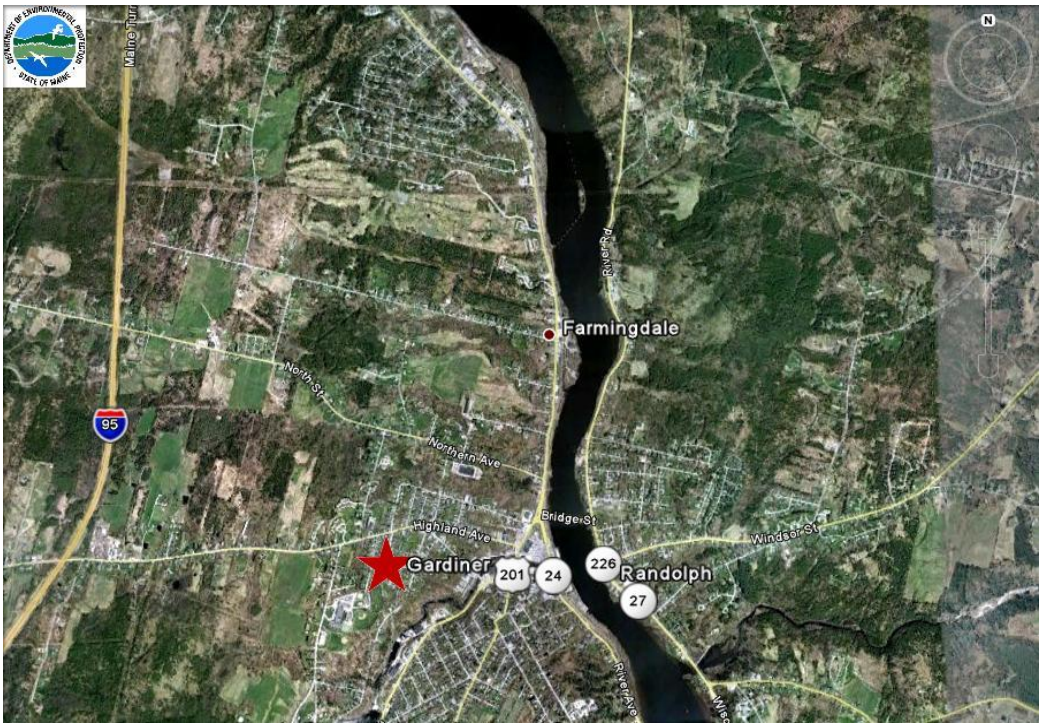
Parameter	Date Began	Date Ended	Parameter	Date Began	Date Ended
PM2.5 - 24 Hr.			SO_2		
PM2.5 - 24 Hr. Colo			Ozone		
PM2.5 Cont.			NOx		
PM10 - 24 Hr.			NOy		
PM10 - 24 Hr. Colo			HAPs		
PM10 Cont.			VOCs (PAMS)		
PM Coarse			Wet Deposition - Mercury	1/7/1998	
IMPROVE	3/14/2001		Wet Dep. - Precip Chem.	1/7/1998	
Cont. OC/EC			Wind Direction/Speed		
Cont. Sulfate (SO_4)			Outdoor Temperature		
Black Carbon			Bar. Pressure		
Cont. PAH			Relative Humidity		
Lead			Dew point		
CO			Precipitation Amount	1/7/1998	
CO_2			Solar Radiation		
Gamma Radiation			UV-b Radiation		
			Wet Deposition - PFAS	10/13/2020	

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. Construction activity near site may force relocation of the samplers.

Monitoring Objectives:
Long-term monitoring of wet deposition chemistry and precipitation amount in Maine**.** IMPROVE Site. PFAS sampling started in 2020, funds for this are anticipated to end in 2024, but is subject to change.

Planned changes for 2025:
None.

Town – Site:	**Gardiner – High School**		
County:	**Kennebec**	Latitude:	**44.226566**
Address:	**West Street**	Longitude:	**-69.788624**
AQS Site ID:	**23-011-2001**	Elevation:	**63.6 Meters**
Spatial Scale:	**Regional**	Year Established:	**2020**
Statistical Area:	**Augusta-Waterville, ME**		



Gardiner – High School
Pollutant and Meteorological Parameters

Parameter	Date Began	Date Ended	Parameter	Date Began	Date Ended
PM2.5 - 24 Hr.			SO_2		
PM2.5 - 24 Hr. Colo			Ozone	01/01/2020	
PM2.5 Cont.			NOx		
PM10 - 24 Hr.			NOy		
PM10 - 24 Hr. Colo			HAPs		
PM10 Cont.			VOCs (PAMS)		
PM Coarse			Wet Deposition - Mercury		
IMPROVE			Wet Dep. - Precip Chem.		
Cont. OC/EC			Wind Direction/Speed		
Cont. Sulfate (SO_4)			Outdoor Temperature		
Black Carbon			Bar. Pressure		
Cont. PAH			Relative Humidity		
Lead			Dew point		
CO			Precipitation Amount		
CO_2			Solar Radiation		
Gamma Radiation			UV-b Radiation		

Site Description:
The shelter is located near the southeast corner of the building.

Monitoring Objectives:
SLAMS Attainment/Non-Attainment. Monitoring long-range transport of pollutants on a regional scale.

Planned changes for 2025:
This site is unfavorable compared to the old location at Pray Street school. Return to the old location, now a Girls and Boys Club is unlikely. Staff are looking into other locations for monitoring in the Gardiner and Augusta areas.

Town – Site:	**Greenville**		
County:	**Piscataquis**	Latitude:	**45.463**
Address:	**Greenville Municipal Airport**	Longitude:	**-69.55579**
AQS Site ID:	**23-021-0001**	Elevation:	**424 Meters**
Spatial Scale:	**Regional**	Year Established:	**2021**
Statistical Area:	**None**		

Greenville

Pollutant and Meteorological Parameters:

Parameter	Date Began	Date Ended	Parameter	Date Began	Date Ended
PM2.5 - 24 Hr.			SO_2		
PM2.5 - 24 Hr. Colo			Ozone		
PM2.5 Cont.			NOx		
PM10 - 24 Hr.			NOy		
PM10 - 24 Hr. Colo			HAPs		
PM10 Cont.			VOCs (PAMS)		
PM Coarse			Wet Deposition - Mercury	7/2021	
IMPROVE			Wet Dep. - Precip Chem.	7/2021	
Cont. OC/EC			Wind Direction/Speed		
Cont. Sulfate (SO_4)			Outdoor Temperature		
Black Carbon			Bar. Pressure		
Cont. PAH			Relative Humidity		
Lead			Dew point		
CO			Precipitation Amount	7/2021	
CO_2			Solar Radiation		
Gamma Radiation			UV-b Radiation		

Site Description:

This site was moved from the private property northwest of Greenville Junction to the Greenville Municipal Airport property. This was done to improve siting for the samplers. This location has much better exposure to regional air flow.

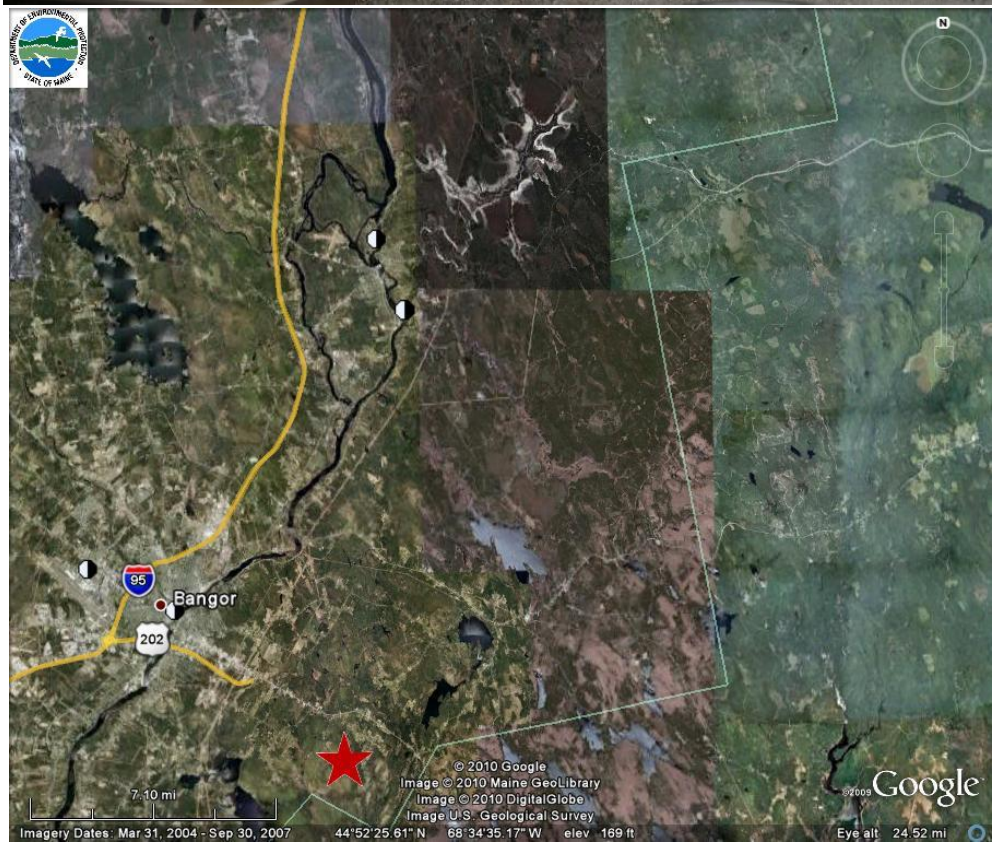
Monitoring Objectives:

Long-term monitoring of wet deposition chemistry and precipitation amount in western Maine

Planned changes for 2025:

None.

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**		



Holden

Pollutant and Meteorological Parameters:

Parameter	Date Began	Date Ended	Parameter	Date Began	Date Ended
PM2.5 - 24 Hr.			SO_2		
PM2.5 - 24 Hr. Colo			Ozone	5/19/1993	
PM2.5 Cont.			NOx		
PM10 - 24 Hr.			NOy		
PM10 - 24 Hr. Colo			HAPs		
PM10 Cont.			VOCs (PAMS)		
PM Coarse			Wet Deposition - Mercury		
IMPROVE			Wet Dep. - Precip Chem.		
Cont. OC/EC			Wind Direction/Speed		
Cont. Sulfate (SO_4)			Outdoor Temperature		
Black Carbon			Bar. Pressure		
Cont. PAH			Relative Humidity		
Lead			Dew point		
CO			Precipitation Amount		
CO_2			Solar Radiation		
Gamma Radiation			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:

SLAMS Attainment/Non-Attainment. Monitoring long-range transport of pollutants on a regional scale.

Planned changes for 2025:

None.

Town – Site:	**Jonesport – Coast Guard Station**		
County:	**Washington**	Latitude:	**44.5276553**
Address:	**9 Bridge St.**	Longitude:	**-67.615495**
AQS Site ID:	**23-029-0021**	Elevation:	**2.0 Meters**
Spatial Scale:	**Regional**	Year Established:	**2022**
Statistical Area:	**None**		

Jonesport – Coast Guard Station
Pollutant and Meteorological Parameters:

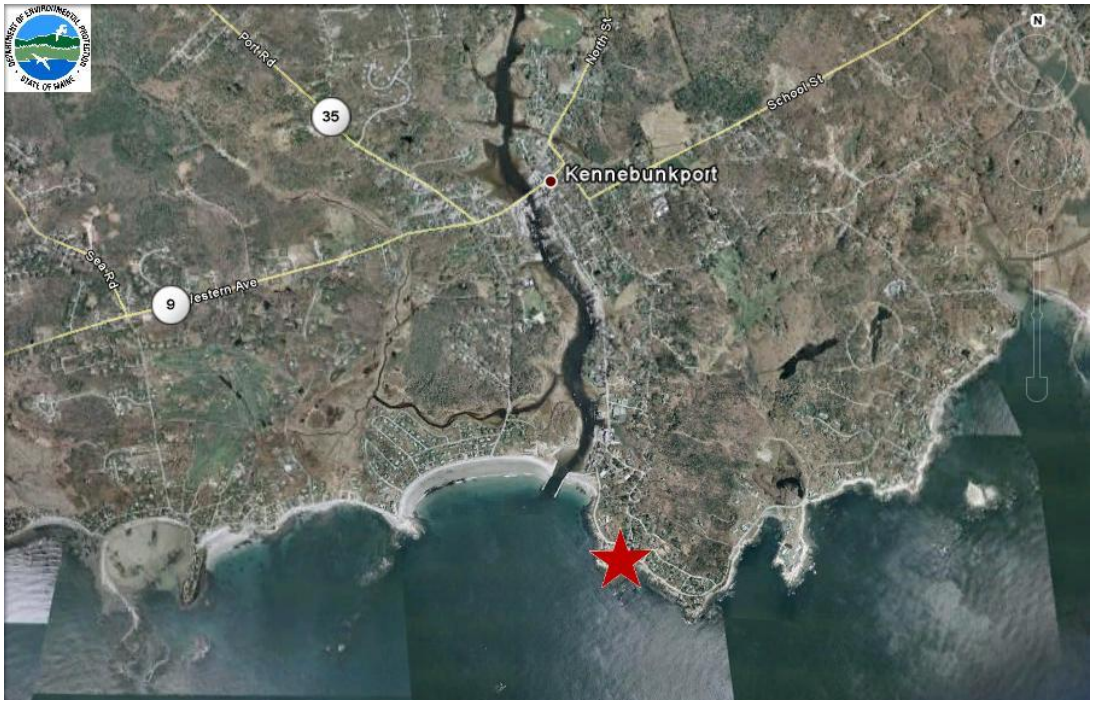
Parameter	Date Began	Date Ended	Parameter	Date Began	Date Ended
PM2.5 - 24 Hr.			SO_2		
PM2.5 - 24 Hr. Colo			Ozone	2/24/2023	
PM2.5 Cont.			NOx		
PM10 - 24 Hr.			NOy		
PM10 - 24 Hr. Colo			HAPs		
PM10 Cont.			VOCs (PAMS)		
PM Coarse			Wet Deposition - Mercury		
IMPROVE			Wet Dep. - Precip Chem.		
Cont. OC/EC			Wind Direction/Speed	11/16/2022	
Cont. Sulfate (SO_4)			Outdoor Temperature	11/16/2022	
Black Carbon			Bar. Pressure		
Cont. PAH			Relative Humidity	11/16/2022	
Lead			Dew point		
CO			Precipitation Amount		
CO_2			Solar Radiation		
Gamma Radiation			UV-b Radiation		

Site Description:
Monitor located in a shelter at the US Coast Guard Station parking lot. This site replaces the Jonesport Public Landing site which was discontinued due to the planned demolition of the Public Landing structure that housed the monitoring equipment.

Monitoring Objectives:
SLAMS Attainment/Non-Attainment. EMP.

Planned changes for 2024/2025:
Dependent on the approval, timely availability of, and amount of grant monies expected to be received as part of the IRA 60105 (A and B) grants, the ozone monitor and wind speed/direction sensor maybe updated to newer models.

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**		



Kennebunkport – Parson's Way
Pollutant and Meteorological Parameters:

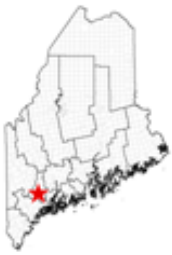
Parameter	Date Began	Date Ended	Parameter	Date Began	Date Ended
PM2.5 - 24 Hr.			SO_2		
PM2.5 - 24 Hr. Colo			Ozone	1/1/1983	
PM2.5 Cont.			NOx	6/1/1990	9/1/1990
PM10 - 24 Hr.			NOy		
PM10 - 24 Hr. Colo			HAPs		
PM10 Cont.			VOCs (PAMS)		
PM Coarse			Wet Deposition - Mercury		
IMPROVE			Wet Dep. - Precip Chem.		
Cont. OC/EC			Wind Direction/Speed		
Cont. Sulfate (SO_4)			Outdoor Temperature		
Black Carbon			Bar. Pressure		
Cont. PAH			Relative Humidity		
Lead			Dew point		
CO			Precipitation Amount		
CO_2			Solar Radiation		
Gamma Radiation			UV-b Radiation		

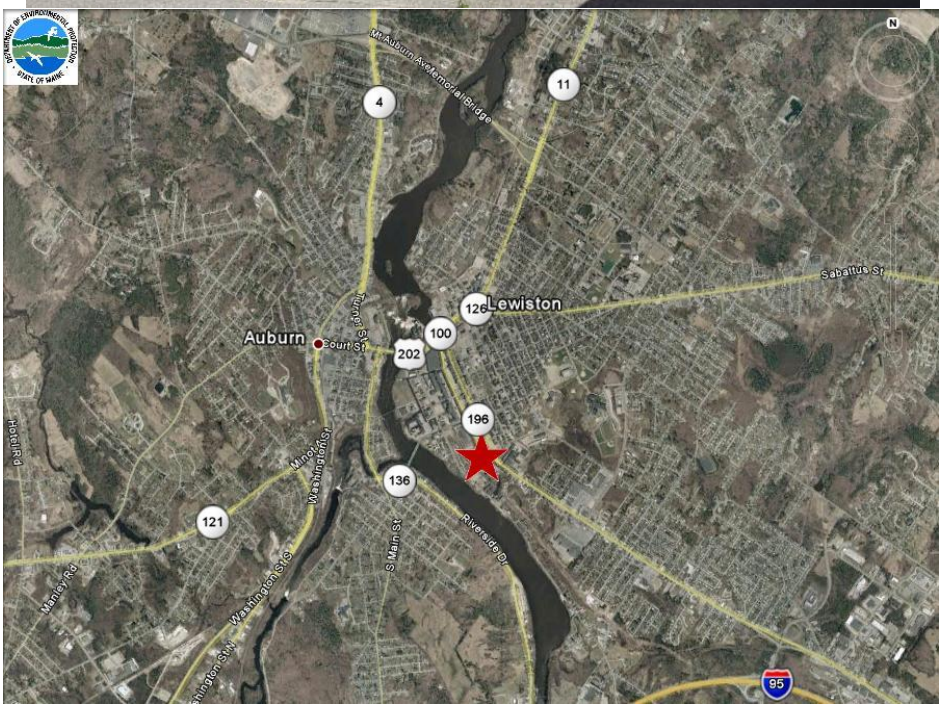
Site Description:
Site is located on a rocky beach area just off Ocean Avenue in a wooden 8'x8'x8' structure. Site has good exposure and has recorded some of the highest ozone concentrations in the state. During a January 2024 storm, the shelter was moved by coastal flooding/waves, and the bedrock anchors came loose. Fortunately the shelter had minimal damage, and the equipment was removed at the end of the previous ozone season. The shelter was removed to allow the Town of Kennebunkport access to a culvert, and the shelters damaged was repaired.

Monitoring Objectives:
SLAMS Attainment/Non-Attainment. Monitoring long-range transport of pollutants on a regional scale.

Planned changes for 2024/2025:
The Maine DEP is currently looking for a new location for the shelter and monitoring equipment. It is expected that this site be shut down in October 2024.

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**		





Lewiston – Country Kitchen Parking Lot
Pollutant and Meteorological Parameters:

Parameter	Date Began	Date Ended	Parameter	Date Began	Date Ended
PM2.5 - 24 Hr.	01/01/1999 7/1/2024 (anticipated)	12/31/2019	SO_2	07/13/1998	12/30/2002
PM2.5 - 24 Hr. Colo			Ozone		
PM2.5 Cont.	01/01/2000		NOx		
PM10 - 24 Hr.	04/01/2004	6/30/2024 (anticipated)	NOy		
PM10 - 24 Hr. Colo			HAPs	06/14/2004	
PM10 Cont.	05/03/2024		VOCs (PAMS)		
PM Coarse			Wet Deposition - Mercury		
IMPROVE			Wet Dep. - Precip Chem.		
Cont. OC/EC			Wind Direction/Speed		
Cont. Sulfate (SO_4)			Outdoor Temperature		
Black Carbon			Bar. Pressure		
Cont. PAH			Relative Humidity		
Lead	06/01/1989	12/31/1993	Dew point		
CO			Precipitation Amount		
CO_2			Solar Radiation		
Gamma Radiation			UV-b Radiation		

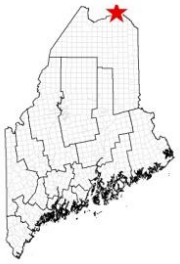
Site Description:
The site is located in downtown Lewiston in the parking lot of the Country Kitchen Bakery. An 8'x8'x8' shelter houses electronic monitoring equipment, data acquisition system in a climate-controlled environment, with a PM sampler and situated on the roof.
In May of 2024, a Metone Bam 1020 configured for continuous PM10 monitoring was installed. This will allow the manual FRM PM10 sampling to be discontinued.

Monitoring Objectives:
SLAMS Attainment/Non-Attainment. High Population Exposure

Planned changes for 2024/2025:
The manual FRM PM10 sampler will be shut down on 6/30/2024 and reconfigured for manual FRM PM2.5 sampling to start on 7/1/2024. The purpose of operating a FRM PM2.5 sampler is to ensure we maintain the minimum number of QA collocated FEM/FRM pm2.5 monitors.

Dependent on the approval, timely availability of, and amount of grant monies expected to be received as part of the IRA 60105 (A and B) grants, the Maine DEP may acquire a Teledyne T640x to replace a Met One BAM 1020 and a new monitoring shelter.

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**		



Madawaska – Public Safety Bldg.

Pollutant and Meteorological Parameters:

Parameter	Date Began	Date Ended	Parameter	Date Began	Date Ended
PM2.5 - 24 Hr.	8/1/2009	12/31/2019	SO_2		
PM2.5 - 24 Hr. Colo			Ozone		
PM2.5 Cont.	1/17/2014		NOx		
PM10 - 24 Hr.	8/1/2009	12/31/2021	NOy		
PM10 - 24 Hr. Colo			HAPs		
PM10 Cont.	9/2020		VOCs (PAMS)		
PM Coarse			Wet Deposition - Mercury		
IMPROVE			Wet Dep. - Precip Chem.		
Cont. OC/EC			Wind Direction/Speed		
Cont. Sulfate (SO_4)			Outdoor Temperature		
Black Carbon			Bar. Pressure		
Cont. PAH			Relative Humidity		
Lead			Dew point		
CO			Precipitation Amount		
CO_2			Solar Radiation		
Gamma Radiation			UV-b Radiation		

Site Description:

Monitoring platform established in 2009 on the roof of the Madawaska Public Service Building.
NOTE: The fire department has hosted big BBQ events on certain holidays and smoke from the grills are quite often detected by the ambient air monitoring equipment. Continuous PM10 sampler established September 2020 to document ambient air quality effects from this festive event. Both Met One BAMs were replaced with a T640x in May 2023.

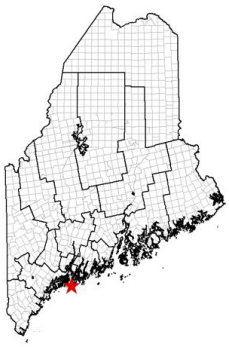
Monitoring Objectives:

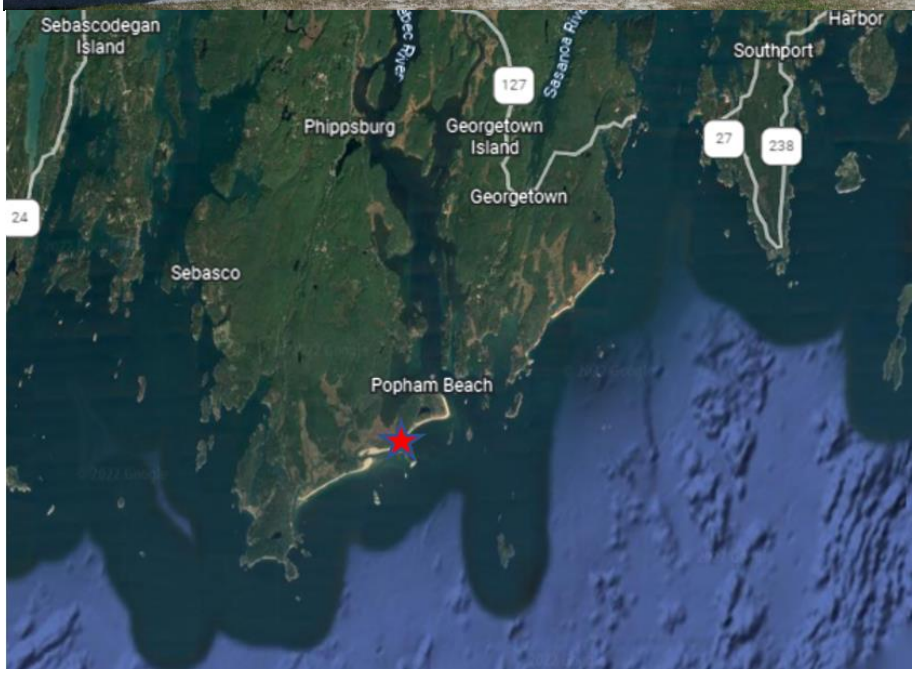
SLAMS Attainment/Non-Attainment.

Planned changes for 2025:

None.

Town – Site:	**Popham Beach State Park**		
County:	**Sagadahoc**	Latitude:	**43.736277**
Address:	**711 Popham Road.**	Longitude:	**-69.797654**
AQS Site ID:	**23-023-0007**	Elevation:	**5 meters**
Spatial Scale:	**Regional**	Year Established:	**2022**
Statistical Area:	**None**		





Popham Beach State Park
Pollutant and Meteorological Parameters:

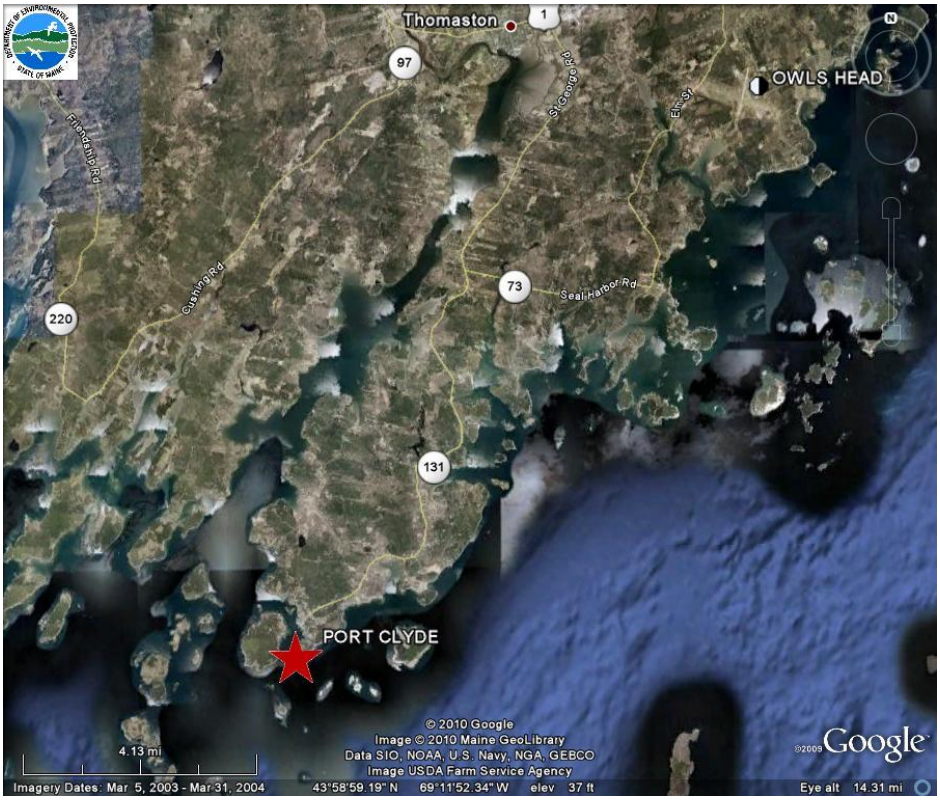
Parameter	Date Began	Date Ended	Parameter	Date Began	Date Ended
PM2.5 - 24 Hr.			SO_2		
PM2.5 - 24 Hr. Colo			Ozone	4/13/2022	
PM2.5 Cont.			NOx		
PM10 - 24 Hr.			NOy		
PM10 - 24 Hr. Colo			HAPs		
PM10 Cont.			VOCs (PAMS)		
PM Coarse			Wet Deposition - Mercury		
IMPROVE			Wet Dep. - Precip Chem.		
Cont. OC/EC			Wind Direction/Speed		
Cont. Sulfate (SO_4)			Outdoor Temperature		
Black Carbon			Bar. Pressure		
Cont. PAH			Relative Humidity		
Lead			Dew point		
CO			Precipitation Amount		
CO_2			Solar Radiation		
Gamma Radiation			UV-b Radiation		

Site Description:
Environmentally controlled cabinet installed in a utility room of the "Bath House" at the State Park.

Monitoring Objectives:
SLAMS Attainment/Non-Attainment.

Planned changes for 2025:
None.

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**		



Port Clyde – Marshall Point Lighthouse
Pollutant and Meteorological Parameters:

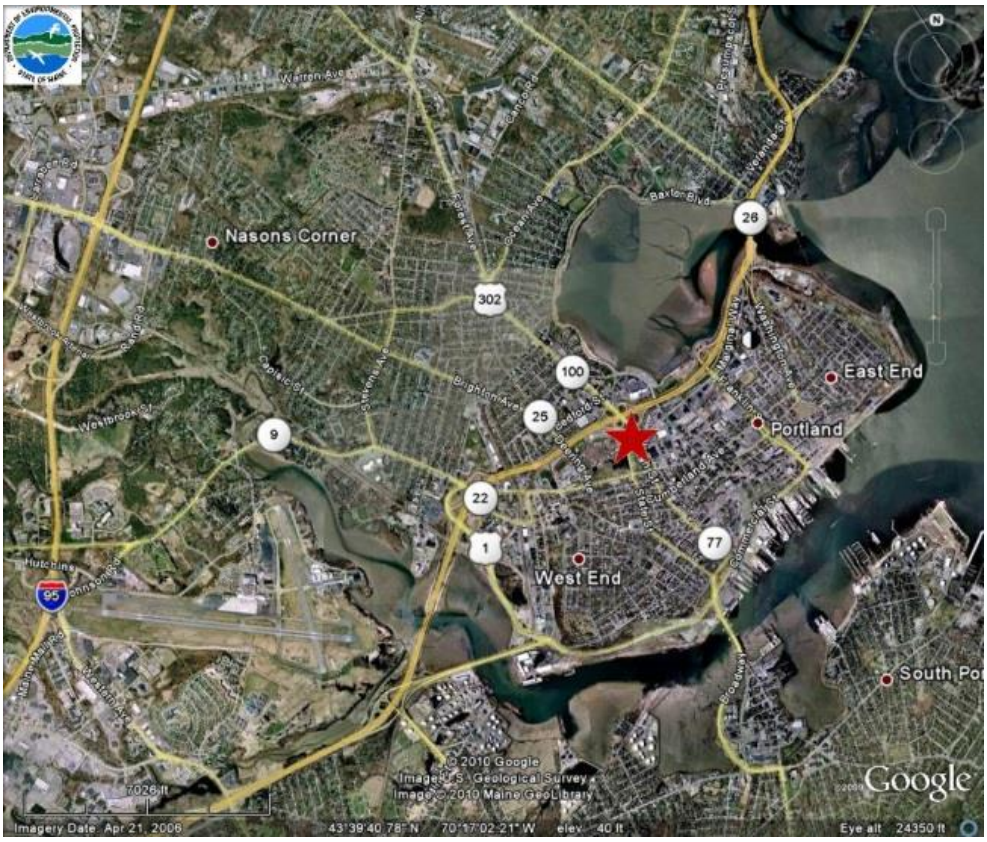
Parameter	Date Began	Date Ended	Parameter	Date Began	Date Ended
PM2.5 - 24 Hr.			SO_2		
PM2.5 - 24 Hr. Colo			Ozone	05/01/1987	
PM2.5 Cont.			NOx		
PM10 - 24 Hr.			NOy		
PM10 - 24 Hr. Colo			HAPs		
PM10 Cont.			VOCs (PAMS)		
PM Coarse			Wet Deposition - Mercury		
IMPROVE			Wet Dep. - Precip Chem.		
Cont. OC/EC			Wind Direction/Speed		
Cont. Sulfate (SO_4)			Outdoor Temperature		
Black Carbon			Bar. Pressure		
Cont. PAH			Relative Humidity		
Lead			Dew point		
CO			Precipitation Amount		
CO_2			Solar Radiation		
Gamma Radiation			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. A 6'x6'x'8 environmentally controlled shelter houses the monitor, data acquisition equipment and modem.

Monitoring Objectives:
SLAMS Attainment/Non-Attainment. Monitoring long-range transport of pollutants on a regional scale.

Planned changes for 2025:
None.

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



Portland – Deering Oaks Park
Pollutant and Meteorological Parameters:

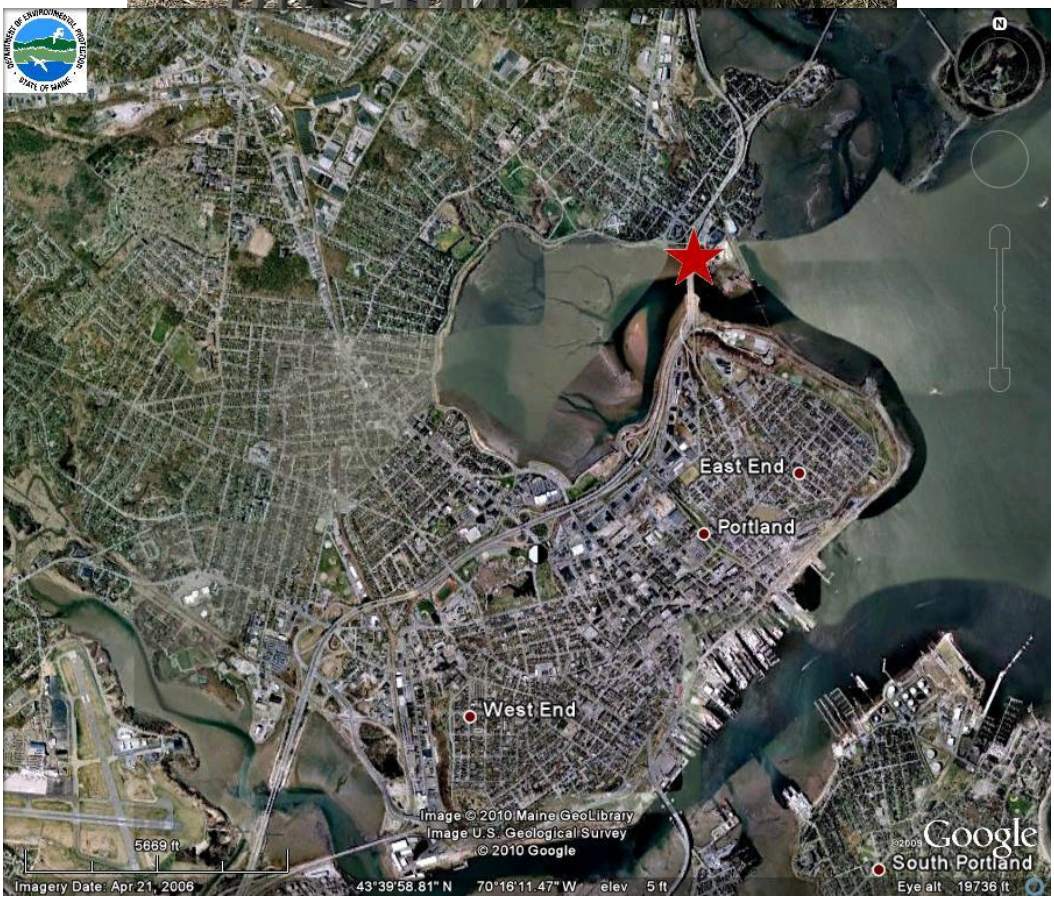
Parameter	Date Began	Date Ended	Parameter	Date Began	Date Ended
PM2.5 - 24 Hr.	1/22/2008		SO_2	1/24/2008	3/1/2021
PM2.5 - 24 Hr. Colo	1/31/2008	1/31/2020	Ozone	1/18/2008	
PM2.5 Cont.	1/18/2008		NOx	2/5/2008	
PM10 - 24 Hr.			NOy		
PM10 - 24 Hr. Colo			HAPs	3/14/2009	
PM10 Cont.			VOCs (PAMS)		
PM Coarse			Wet Deposition - Mercury		
IMPROVE			Wet Dep. - Precip Chem.		
Cont. OC/EC			Wind Direction/Speed		
Cont. Sulfate (SO_4)			Outdoor Temperature		
Black Carbon			Bar. Pressure		
Cont. PAH			Relative Humidity		
Lead			Dew point		
CO	5/1/2008	1/17/2022	Precipitation Amount		
CO_2			Solar Radiation		
Gamma Radiation	1/29/2009		UV-b Radiation		

Site Description:
The Portland Deering Oaks (PDO) 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. The site does not meet strict EPA siting criteria so sample results are not used for regulatory purposes. The location was chosen in cooperation with the Maine and American Lung Association for use in their health statistics. Annual Average Daily Traffic volume on Forest Avenue is around 46,000.
Gamma radiation measurements obtained at PDO are included in the EPA radiation network, RadNet.
At present, the City of Portland plans to extend their greenbelt bike path through the location of our shelter. The Maine DEP and the City of Portland are looking for a new location to house monitoring equipment.

Monitoring Objectives:
High Population Exposure Neighborhood scale monitoring. The ozone and nitrogen dioxide monitors are special purpose, non-regulatory monitors installed at the request of the Maine Bureau of Health.

Planned changes for 2024/2025:
The location where our shelter currently resides is planned to be the 'Union branch' of the City of Portland's bike and walking trails. This trail will connect the current Eastern Promenade and Bayside trails to the Fore River Parkway Trail. The Maine DEP is working with the City of Portland to relocate our monitoring equipment to another location within the city.

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**		



Portland – Tukey's Bridge
Pollutant and Meteorological Parameters:

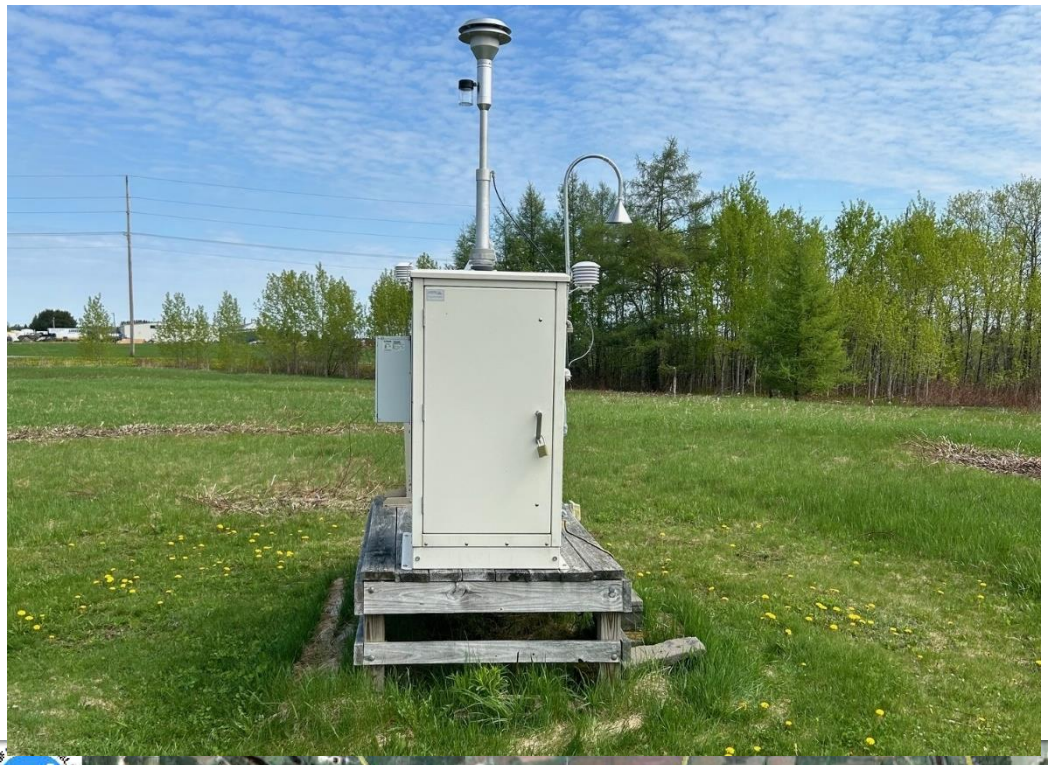
Parameter	Date Began	Date Ended	Parameter	Date Began	Date Ended
PM2.5 - 24 Hr.	1/1/1999	6/12/2023	SO_2		
PM2.5 - 24 Hr. Colo			Ozone		
PM2.5 Cont.	6/13/2023		NOx		
PM10 - 24 Hr.	2/8/1991	6/12/2023	NOy		
PM10 - 24 Hr. Colo	1/9/2003	1/24/2023	HAPs		
PM10 Cont.	6/13/2023		VOCs (PAMS)		
PM Coarse			Wet Deposition - Mercury		
IMPROVE			Wet Dep. - Precip Chem.		
Cont. OC/EC			Wind Direction/Speed		
Cont. Sulfate (SO_4)			Outdoor Temperature		
Black Carbon			Bar. Pressure		
Cont. PAH			Relative Humidity		
Lead			Dew point		
CO			Precipitation Amount		
CO_2			Solar Radiation		
Gamma Radiation			UV-b Radiation		

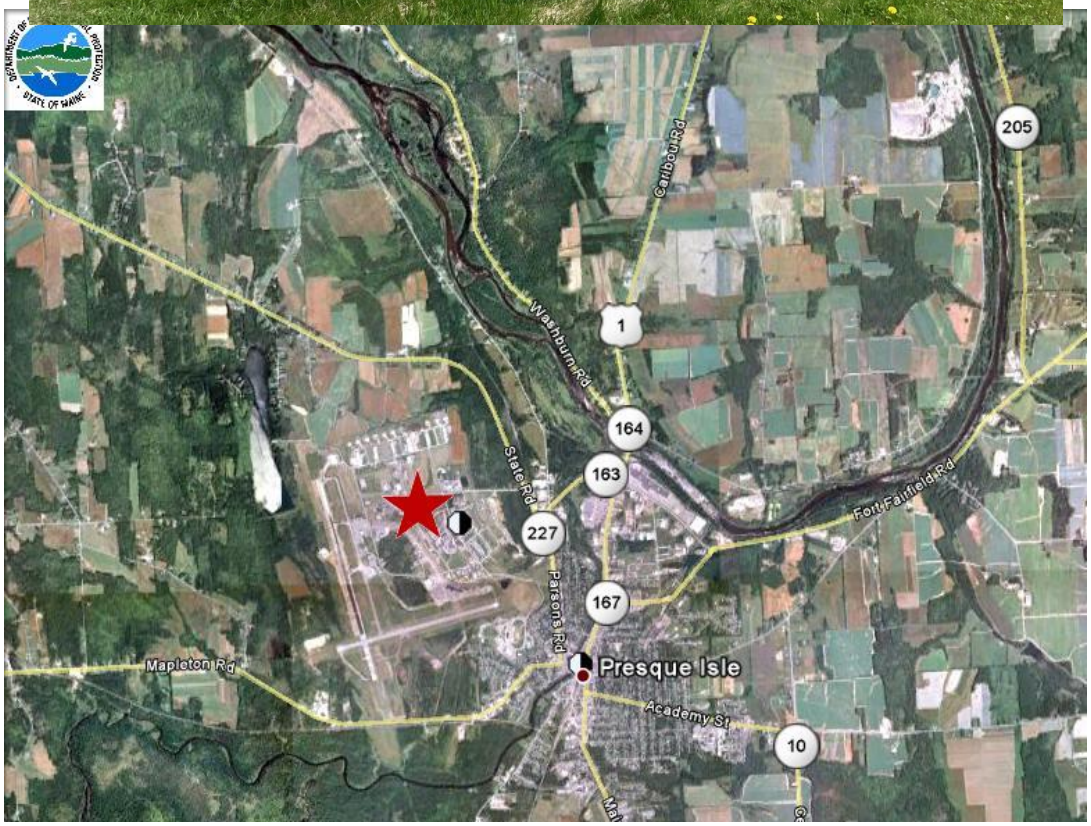
Site Description:
Monitors are located on a platform next to I-295/Washington Street. This section of road has some of the highest annual average daily traffic volume in the state. A Teledyne 640x was install in June of 2023, replacing the 3 Thermo 2000*i* samplers on the platform and allowing for continuous PM2.5 and PM10 data.

Monitoring Objectives:
SLAMS Attainment/Non-Attainment. High Traffic Volume**.**

Planned changes for 2024/2025:
A security fence will be installed around our platform.

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**		





Presque Isle – DEP Regional Office
Pollutant and Meteorological Parameters:

Parameter	Date Began	Date Ended	Parameter	Date Began	Date Ended
PM2.5 - 24 Hr.	9/27/2007	12/31/2023	SO_2	8/1/1988	9/21/1989
PM2.5 - 24 Hr. Colo			Ozone	8/1/1988	9/21/1989
PM2.5 Cont.	11/21/2023		NOx		
PM10 - 24 Hr.	7/1/1989	9/27/2007	NOy		
PM10 - 24 Hr. Colo			HAPs		
PM10 Cont.	11/21/2023		VOCs (PAMS)		
PM Coarse			Wet Deposition - Mercury		
IMPROVE			Wet Dep. - Precip Chem.		
Cont. OC/EC			Wind Direction/Speed	2/13/1983	9/21/2016
Cont. Sulfate (SO_4)			Outdoor Temperature		
Black Carbon			Bar. Pressure		
Cont. PAH			Relative Humidity		
Lead			Dew point		
CO			Precipitation Amount		
CO_2			Solar Radiation		
Gamma Radiation			UV-b Radiation		

Site Description:
Suburban background site for monitoring $PM_{2.5}$. The sampler is in a field next to the regional office in Presque Isle. A Teledyne T640x was installed November 2023, replacing the Thermo 2000*i* that was shut down 12/31/2023.

Monitoring Objectives:
SLAMS Attainment/Non-Attainment. Background Site. Modeling

Planned changes for 2025:
None.

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**		

Presque Isle – Riverside Shelter
Pollutant and Meteorological Parameters:

Parameter	Date Began	Date Ended	Parameter	Date Began	Date Ended
PM2.5 - 24 Hr.	10/1/1997		SO_2	9/19/1994	7/2/1996
PM2.5 - 24 Hr. Colo			Ozone		
PM2.5 Cont.	7/18/2014		NOx		
PM10 - 24 Hr.	9/10/1993	11/2/1998	NOy		
PM10 - 24 Hr. Colo			HAPs	12/14/03	
PM10 Cont.	9/15/1995		VOCs (PAMS)		
PM Coarse			Wet Deposition - Mercury		
IMPROVE			Wet Dep. - Precip Chem.		
Cont. OC/EC			Wind Direction/Speed		
Cont. Sulfate (SO_4)			Outdoor Temperature		
Black Carbon			Bar. Pressure		
Cont. PAH			Relative Humidity		
Lead			Dew point		
CO			Precipitation Amount		
CO_2			Solar Radiation		
Gamma Radiation			UV-b Radiation		

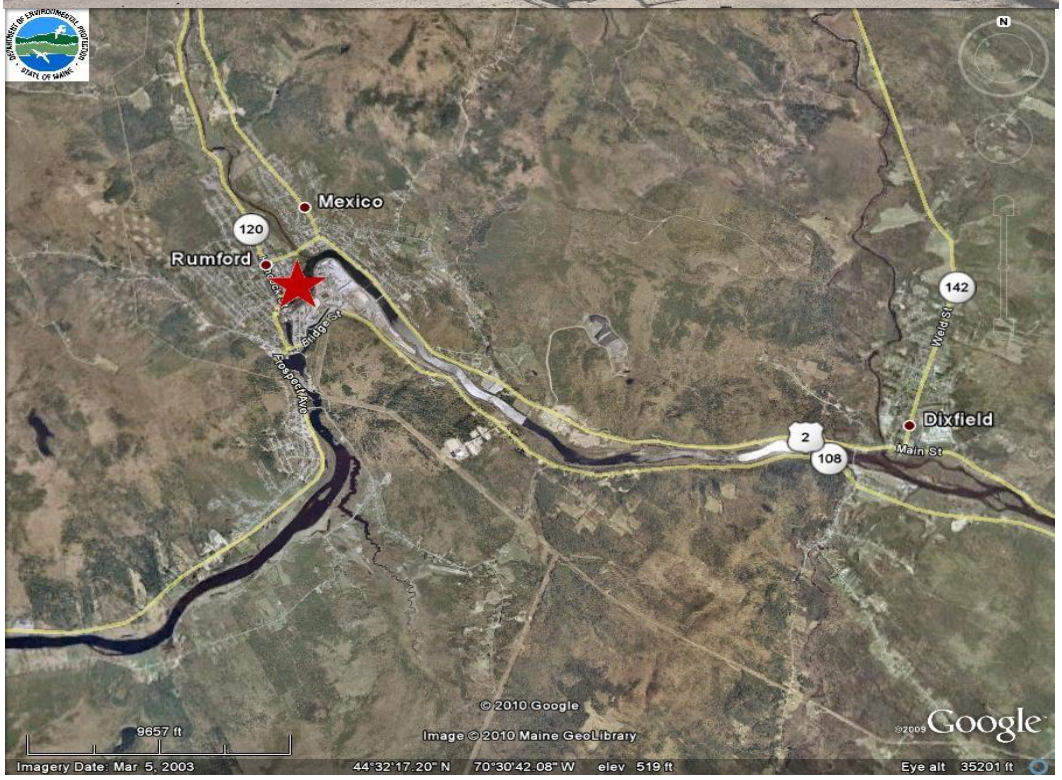
Site Description:
Monitors are located in a parking lot off Main Street in the downtown area of Presque Isle. The site is relatively open, next to the railroad tracks and the Presque Isle Stream. This site is impacted by inversion events, that trapping what is believed to be road dust close to the ground creating localized spikes inground-level PM spikes.

In January of 2023, a Teledyne T640x was installed replacing the Metone $PM_{2.5}$ BAM. The PM_{10} Metone BAM was left to do a short colocation study between the two methods. In-lieu of what is may be another summer with impacts from wildfire smoke, the ME DEP reconfigured the PM_{10} BAM to measure $PM_{2.5}$ to help assist in improved forecasting and health risk assessment.

Monitoring Objectives:
SLAMS Attainment/Non-Attainment.

Planned changes for 2024/2025:
Dependent on the approval, timely availability of, and amount of grant monies expected to be received as part of the IRA 60105 (A and B) grants, the Maine DEP plans to replace the current shelter as soon as possible. The Maine DEP also request grant monies to purchase a ceilometer for this location. The ceilometer will define mixing layer heights, that can be used to confirm that measured PM spiked are related to localized inversions but has the added benefit of being able to measure wood smoke height. This which would benefit all Northeast States and parts of Canada in tracking the height and volume of transported wildfire wood smoke into the region and creating accurate forecast.

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**		



Rumford – Rumford Ave. Parking Lot
Pollutant and Meteorological Parameters:

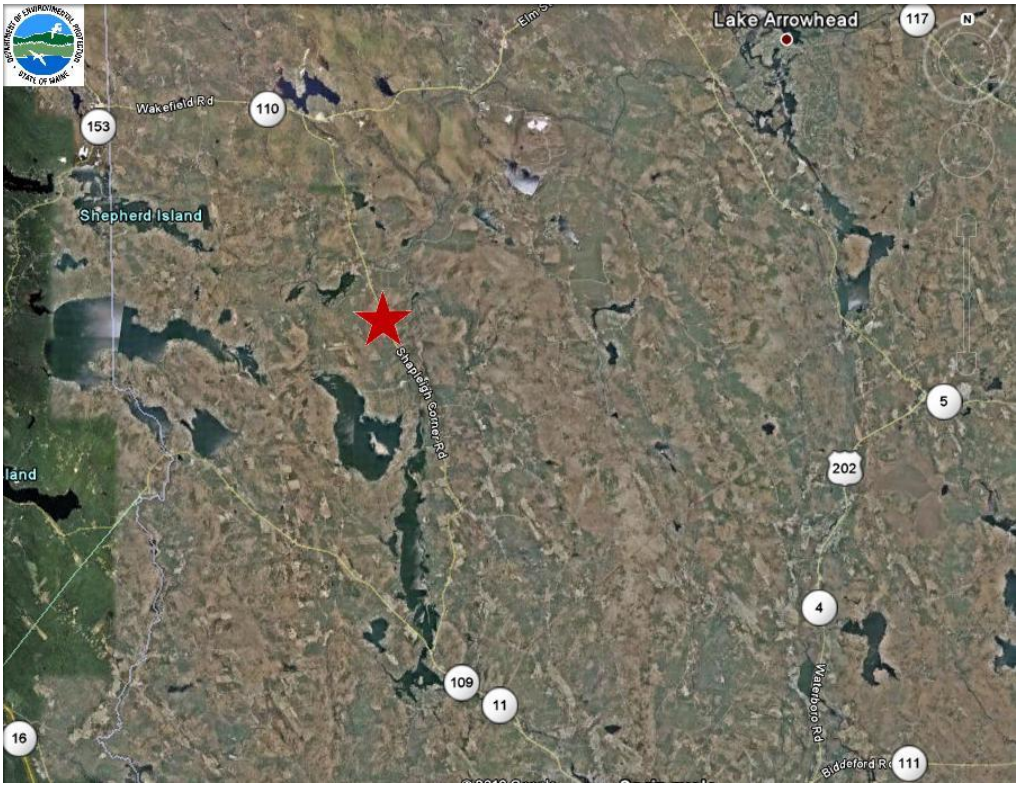
Parameter	Date Began	Date Ended	Parameter	Date Began	Date Ended
PM2.5 - 24 Hr.	12/01/1998	12/31/2021	SO_2		
PM2.5 - 24 Hr. Colo			Ozone		
PM2.5 Cont.	10/1/2014		NOx		
PM10 - 24 Hr.			NOy		
PM10 - 24 Hr. Colo			HAPs	07/01/1998	
PM10 Cont.			VOCs (PAMS)		
PM Coarse			Wet Deposition - Mercury		
IMPROVE			Wet Dep. - Precip Chem.		
Cont. OC/EC			Wind Direction/Speed	12/16/2016	
Cont. Sulfate (SO_4)			Outdoor Temperature		
Black Carbon			Bar. Pressure		
Cont. PAH			Relative Humidity		
Lead			Dew point		
CO			Precipitation Amount		
CO_2			Solar Radiation		
Gamma Radiation			UV-b Radiation		

Site Description:
The site is located in a paper mill employees' parking lot off of Rumford Avenue in Rumford, Maine across the street from the Eagles Club and Bingo Parlor. An 8'x8'x10' environmentally controlled shelter houses HAPs sampling equipment, data acquisition system, and a BAM 1020 for continuous $PM_{2.5}$ sampling.

Monitoring Objectives:
SLAMS Attainment/Non-Attainment. High Population Exposure. Western Mountain Location.

Planned changes for 2024/2025:
Dependent on the approval, timely availability of, and amount of grant monies expected to be received as part of the IRA 60105 (A and B) grants, the Maine DEP may acquire a Teledyne T640x to replace the Met One BAM 1020 and a new monitoring shelter. The T640x will allow for continuous PM10 measurements.

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**		



Shapleigh -- Shapleigh Ball Park

Pollutant and Meteorological Parameters:

Parameter	Date Began	Date Ended	Parameter	Date Began	Date Ended
PM2.5 - 24 Hr.			SO_2		
PM2.5 - 24 Hr. Colo			Ozone	6/13/2008	
PM2.5 Cont.			NOx		
PM10 - 24 Hr.			NOy		
PM10 - 24 Hr. Colo			HAPs		
PM10 Cont.			VOCs (PAMS)		
PM Coarse			Wet Deposition - Mercury		
IMPROVE			Wet Dep. - Precip Chem.		
Cont. OC/EC			Wind Direction/Speed		
Cont. Sulfate (SO_4)			Outdoor Temperature		
Black Carbon			Bar. Pressure		
Cont. PAH			Relative Humidity		
Lead			Dew point		
CO			Precipitation Amount		
CO_2			Solar Radiation		
Gamma Radiation			UV-b Radiation		

Site Description:

Site is in an open area surrounding a baseball outfield just off Route 11. In the fall on 2023, a sloped roof was installed on top of the shelter to ensure the longevity of the shelter.

Monitoring Objectives:

SLAMS Attainment/Non-Attainment. EMP. Monitoring long-range transport of pollutants on a regional scale.

Planned changes for 2025:

None.

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TRIBAL MONITORING SITES

FOR 2024/2025

Tribe – Site Name:	**Mi'kmaq Nation -- 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**		

Mi'kmaq Nation -- Presque Isle Shelter
Pollutant and Meteorological Parameters:

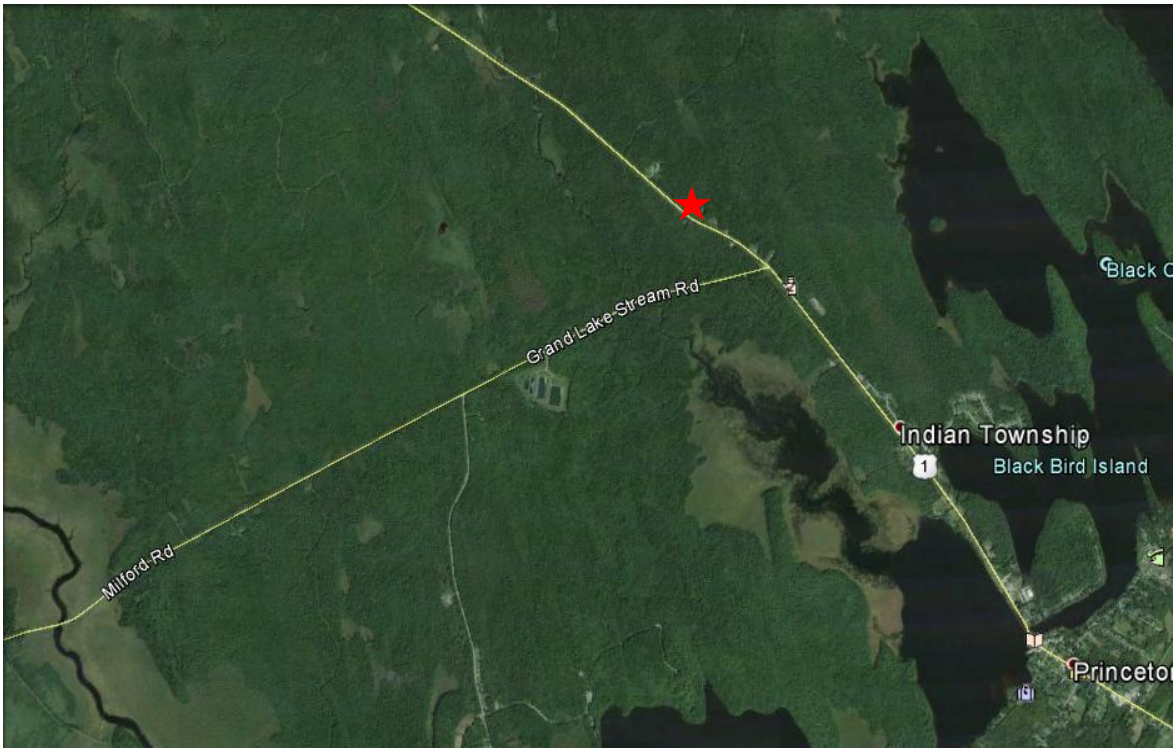
Parameter	Date Began	Date Ended	Parameter	Date Began	Date Ended
PM2.5 - 24 Hr.			SO_2	1/1/2006	
PM2.5 - 24 Hr. Colo			Ozone	1/1/2006	
PM2.5 Cont.	1/1/2006		NOx	1/1/2006	
PM10 - 24 Hr.			NOy		
PM10 - 24 Hr. Colo			HAPs		
PM10 Cont.			VOCs (PAMS)		
PM Coarse			Wet Deposition - Mercury	3/1/2014	
IMPROVE	1/1/2004		Wet Dep. - Precip Chem.		
Cont. OC/EC			Wind Direction/Speed	1/1/2006	
Cont. Sulfate (SO_4)			Outdoor Temperature	1/1/2006	
Black Carbon			Bar. Pressure	1/1/2006	
Cont. PAH			Relative Humidity	1/1/2006	
Lead			Dew point	1/1/2006	
CO	1/1/2006		Precipitation Amount		
CO_2	1/1/2006		Solar Radiation	1/1/2006	
Gamma Radiation			UV-b Radiation		

Site Description:
The Mi'kmaq Nation ambient air monitor site continuously monitors ozone, $PM_{2.5}$, carbon monoxide, sulfur dioxide, nitrogen dioxide, carbon dioxide, mercury, and meteorological parameters in Presque Isle, ME. The PM and Gaseous instrument are audited by Maine DEP.
The Meteorological parameters are part of a USDA network and are not submitted to AQS.

Monitoring Objectives:
To provide local air quality information to the Mi'kmaq Nation.

Planned changes for 2024/2025:
Dependent on the approval, timely availability of, and amount of grant monies expected to be received as part of the IRA 60105 (A and B) grants, the Mi'kmaq Nation plans to replace their monitoring shelter and acquire a Teledyne T640x to replace their TEOM, and multiple other instrument updates. The T640x will allow for continuous PM10 measurements.

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**		



Passamaquoddy Tribe -- Indian Township
Pollutant and Meteorological Parameters:

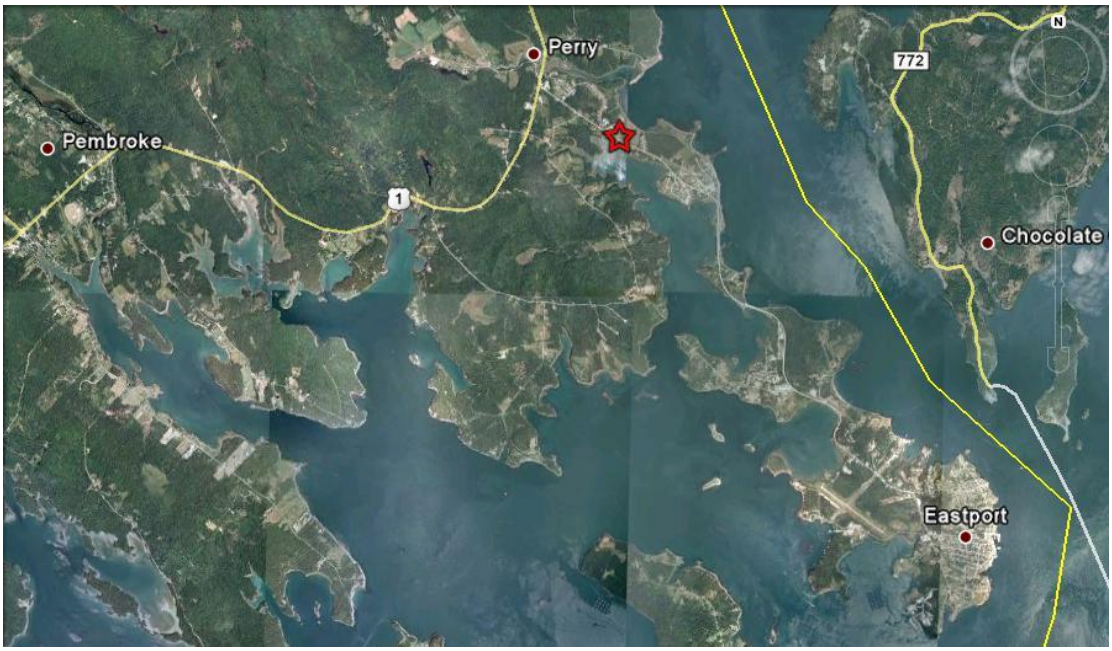
Parameter	Date Began	Date Ended	Parameter	Date Began	Date Ended
PM2.5 - 24 Hr.			SO_2		
PM2.5 - 24 Hr. Colo			Ozone		
PM2.5 Cont.			NOx		
PM10 - 24 Hr.			NOy		
PM10 - 24 Hr. Colo			HAPs		
PM10 Cont.			VOCs (PAMS)		
PM Coarse			Wet Deposition - Mercury		
IMPROVE			Wet Dep. - Precip Chem.	10/3/2013	
Cont. OC/EC			Wind Direction/Speed		
Cont. Sulfate (SO_4)			Outdoor Temperature		
Black Carbon			Bar. Pressure		
Cont. PAH			Relative Humidity		
Lead			Dew point		
CO			Precipitation Amount	10/3/2013	
CO_2			Solar Radiation		
Gamma Radiation			UV-b Radiation		

Site Description:
Not available

Monitoring Objectives:
To provide NADP/NDN data from vicinity of the Passamaquoddy Tribe -- Indian Township

Planned changes for 2025:
None.

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



Passamaquoddy Tribe– Perry, Pleasant Point/Sipayik
Pollutant and Meteorological Parameters:

Parameter	Date Began	Date Ended	Parameter	Date Began	Date Ended
PM2.5 - 24 Hr.			SO_2		
PM2.5 - 24 Hr. Colo			Ozone	3/31/2006	9/24/2021
PM2.5 Cont.	12/18/2008	9/24/2021	NOx		
PM10 - 24 Hr.			NOy		
PM10 - 24 Hr. Colo			HAPs		
PM10 Cont.			VOCs (PAMS)		
PM Coarse			Wet Deposition - Mercury		
IMPROVE			Wet Dep. - Precip Chem.		
Cont. OC/EC			Wind Direction/Speed	4/20/2005	9/24/2021
Cont. Sulfate (SO_4)			Outdoor Temperature	4/22/2005	9/24/2021
Black Carbon			Bar. Pressure	4/25/2005	9/24/2021
Cont. PAH			Relative Humidity	4/22/2005	9/24/2021
Lead			Dew point		
CO			Precipitation Amount	4/27/2008	9/24/2021
CO_2			Solar Radiation	6/16/2005	9/24/2021
Gamma Radiation			UV-b Radiation	6/16/2005	9/24/2021

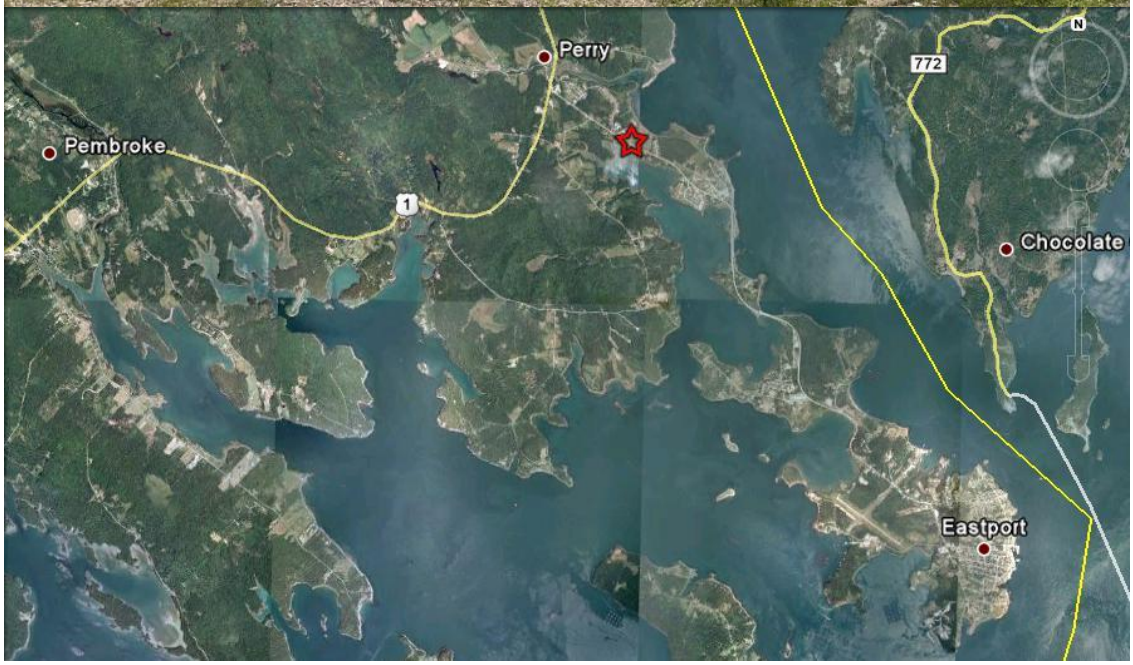
Site Description: The site was needed because area monitoring was going to be shut down in Roosevelt-Campobello International Park on Campobello Island, New Brunswick, CAN. Pleasant Point decided to handle the criteria pollutants and run a MET station. Indian Township was going to take on the acid and mercury deposition studies. The Passamaquoddy Tribe wanted to start contributing to the monitoring. The data was polled and used by Maine DEP. The ozone and $PM_{2.5}$ instruments were audited by ME DEP on a quarterly basis. Only the ozone hourly data was uploaded into AQS. The met data was shared with the TREX network and posted on their website. This site was taken out of service in the fall of 2021 and the ozone analyzer moved to another shelter (see next page), and a new continuous PM sampler installed there.

This site is inactive but will be maintained in the event monitoring will need to be restored at this location.

Monitoring Objectives: The site is to provide pollutant data for modeling and forecasting needs. The site fills a void in the region. Otherwise, there would be a data gap in the area.

Planned changes for 2025:
None.

Tribe – Site Name:	**Passamaquoddy Tribe– Perry, Pleasant Point/Sipayik**		
County:	**Washington**		
Address:	**176 County Road**	Latitude:	**44.963894**
AQS Site ID:	**23-029-0033**	Longitude:	**-67.061325**
Spatial Scale:	**Regional**	Elevation:	**4 meters**
Statistical Area:	**None**	Year Established:	**2006**



Passamaquoddy Tribe– Perry, Pleasant Point/Sipayik
Pollutant and Meteorological Parameters:

Parameter	Date Began	Date Ended	Parameter	Date Began	Date Ended
PM2.5 - 24 Hr.			SO_2		
PM2.5 - 24 Hr. Colo			Ozone	9/27/2021	
PM2.5 Cont.	10/06/2021		NOx		
PM10 - 24 Hr.			NOy		
PM10 - 24 Hr. Colo			HAPs		
PM10 Cont.			VOCs (PAMS)		
PM Coarse			Wet Deposition - Mercury		
IMPROVE			Wet Dep. - Precip Chem.		
Cont. OC/EC			Wind Direction/Speed		
Cont. Sulfate (SO_4)			Outdoor Temperature		
Black Carbon			Bar. Pressure		
Cont. PAH			Relative Humidity		
Lead			Dew point		
CO			Precipitation Amount		
CO_2			Solar Radiation		
Gamma Radiation			UV-b Radiation		

Site Description: The site was needed because area monitoring was going to be shut down in Roosevelt-Campobello International Park on Campobello Island, New Brunswick, CAN. Pleasant Point decided to handle the criteria pollutants and run a MET station. Indian Township was going to take on the acid and mercury deposition studies. The Passamaquoddy Tribe wanted to start contributing to the monitoring. The data are polled and used by ME DEP BAQ. The ozone and $PM_{2.5}$ instruments are audited by ME DEP on a quarterly basis. Only the ozone hourly data is uploaded into AQS. This site replaces 23-029-0032. The shelter at that site is smaller and in very poor condition.

In the Spring of 2024, repairs were made to this shelter.

Monitoring Objectives: The site is to provide pollutant data for modeling and forecasting needs. The site fills a void in the region. Otherwise, there would be a data gap in the area.

Planned changes for 2024/2025: The tribal air program is open to monitoring for other pollutants if resources are available.

Tribe – Site Name:	**Penobscot Nation - Carrabassett Valley – Town Office**		
County:	**Franklin**	Latitude:	**45.080200**
Address:	**1001 Carriage Rd Carrabassett Valley**	Longitude:	**-70.211817**
AQS Site ID:	**23-007-2002**	Elevation:	**264 Meters**
Spatial Scale:	**Western Mountains**	Year Established:	**2002**
Statistical Area:	**None**		

Carrabassett Valley – Town Office
Pollutant and Meteorological Parameters:

Parameter	Date Began	Date Ended	Parameter	Date Began	Date Ended
PM2.5 FRM			SO_2		
PM2.5 Colo			SO_4		
PM2.5 TEOM			Ozone		
PM2.5 BAM	11-5-2015	10-1-2017	NOx		
PM10 FRM			NOy		
PM10 Colo			VOCs (PAMS)		
PM10 TEOM			HAPs		
PM10 BAM			Wet Deposition - Mercury	2002	
PM Coarse			Wet Dep. - Precip Chem.	2002	
IMPROVE			Wind Direction/Speed		
Cont. OC/EC			Outdoor Temperature		
Cont. Sulfate			Bar. Pressure		
Black Carbon			Relative Humidity		
Cont. PAH			Dew point		
Lead			Precipitation Amount		
CO			Solar Radiation		
CO_2			UV-b Radiation		

Site Description:
An 8'x 8' shelter is located behind the Carrabassett Valley Town Office, Pool and Recreation Area in a grassy area at the south end of an airport runway, situated adjacent to samplers for the ME04 NADP site. The NADP site is operated by the Penobscot Nation. The ME DEP operated at $PM_{2.5}$ monitor at this location for 2 years to assist air quality forecasts with additional data. The $PM_{2.5}$ monitor was removed after 2 years as the data provided minimal difference to another Western Mountain site.

Monitoring Objectives:
Wet Deposition in Maine's western mountains.

Planned changes for 2025:
None.

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**		

Penobscot Nation -- Indian Island
Pollutant and Meteorological Parameters:

Parameter	Date Began	Date Ended	Parameter	Date Began	Date Ended
PM2.5 - 24 Hr.			SO_2		
PM2.5 - 24 Hr. Colo			Ozone	1/1/2006	1/1/2018
PM2.5 Cont.			NOx		
PM10 - 24 Hr.			NOy		
PM10 - 24 Hr. Colo			HAPs		
PM10 Cont.			VOCs (PAMS)		
PM Coarse			Wet Deposition - Mercury		
IMPROVE	1/14/2006		Wet Dep. - Precip Chem.		
Cont. OC/EC			Wind Direction/Speed	7-2002	1/17/2018
Cont. Sulfate (SO_4)			Outdoor Temperature	7-2002	1/17/2018
Black Carbon			Bar. Pressure	7-2002	1/17/2018
Cont. PAH			Relative Humidity	7-2002	1/17/2018
Lead			Dew point		
CO			Precipitation Amount	7-2002	1/17/2018
CO_2			Solar Radiation	7-2002	1/17/2018
Gamma Radiation			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 on Indian Island. After several seasons of contending with failing equipment, all ambient air monitoring at Indian Island, except for the IMPROVE monitoring, was officially discontinued in January 2018.

Monitoring Objectives:
IMPROVE. Environmental monitoring for Penobscot Nation

Planned changes for 2025:
None.

Appendix 2:
Wyman Station
Update Provision of US EPA'S
2015 Data Requirements Rule

Additional Data to Satisfy Update Provision of USEPA's 2015 "*Data Requirements Rule"*

On August 21, 2015, the United States Environmental Protection Agency (USEPA) finalized the "*Data Requirements Rule for the 2010 1-hour Sulfur Dioxide (SO_2) Primary National Ambient Air Quality Standard*" (DRR) which requires all states to characterize ambient SO_2 levels in areas with large sources of SO_2, specifically for the purpose of demonstrating each source's attainment of the 1-hour SO_2 National Ambient Air Quality Standard (NAAQS).

The DRR, which establishes minimum criteria for identifying sources that may be selected for further examination, states that *"…each air agency is required to submit a list to the USEPA by January 15, 2016, that identifies all sources within its jurisdiction that have SO_2 emissions that exceeded a 2000 ton per year annual threshold during the most recent year from which emissions data for that source are available".*

In a January 13, 2016 letter from the Maine Department of Environmental Protection (MEDEP) to the USEPA Region I Air Programs Branch Chief, MEDEP informed USEPA that it did not have any individual sources with actual reported SO_2 emissions exceeding 2000 tons per year (using the three-year period 2013 – 2015). The letter further stated that Maine did not anticipate that any of its currently regulated sources would likely emit in excess of 2000 tons per year of SO_2 in the foreseeable future.

In a March 17, 2016 response letter from USEPA's Regional Administrator to MEDEP, USEPA stated that they had reviewed Maine's January 13th submittal and were identifying William F Wyman Station (Wyman Station), located in Yarmouth Maine, as a source that the DRR requires to be characterized. USEPA's basis for the request cited *"Though total annual SO_2 emissions from Wyman have declined in recent years, it appears that Wyman's operation from month-to-month is highly variable, and that may continue into the future. For example, in 2015, Wyman had 22 days with SO_2 emissions greater than 40 tons per day. Therefore, the USEPA believes that it is appropriate and necessary to characterize William F Wyman under the Data Requirements Rule."*

In addition, the March 17th letter stated that each air agency must identify the approach that it will use to characterize air quality in the source's respective area by July 1, 2016. Under the DRR, each state must indicate if they will use current representative monitoring data, perform ambient dispersion modeling, or establish federally-enforceable SO_2 emissions restrictions in the source's Title V permit. If the state chose either the ambient monitoring or dispersion modeling options, the DRR required that the appropriate protocol be submitted by July 1, 2016.

On June 29, 2016, MEDEP sent a letter to inform USEPA that performing air dispersion modeling was the chosen option for Wyman Station. Attached to the June 29th letter was Wyman Station's air dispersion modeling protocol which provided in-depth discussions of methodologies and assumptions being proposed for use in the modeling demonstration. After several iterations of written correspondence to resolve questions regarding the modeling protocol, MEDEP received agreement from USEPA that the protocol was acceptable. MEDEP, in close consultation with Wyman Station, conducted an air dispersion modeling analysis using USEPA-approved models and modeling guidance/techniques in a manner consistent with the approved June 2016 modeling protocol. The DRR required that Wyman Station's final modeling analyses, results and all supporting documentation be submitted to USEPA by January 13, 2017.

On January 11, 2017, MEDEP submitted Wyman Station's dispersion modeling results and associated files to USEPA. The results, which were based on 2013-2015 hourly current-actual emissions data, demonstrated that Wyman Station was in compliance with the 1-hour SO_2 NAAQS. On March 9, 2017, MEDEP was contacted by USEPA Region I Air Quality Modeling Manager, Leiran Biton, via telephone stating that the modeling submitted by MEDEP was complete and acceptable to meet the requirements of the DRR.

Federal regulation 40 CFR Part 51 Subpart BB §51.1205(b) states, "*For any area where modeling of actual SO_2 emissions serve as the basis for designating such area as attainment for the 2010 SO_2 NAAQS, the air agency shall submit an annual report to the EPA Regional Administrator by July 1 of each year, either as a stand-alone document made available for public inspection, or as an appendix to its Annual Monitoring Network Plan (also due on July 1 each year under 40 CFR 58.10), that documents the annual SO_2 emissions of each applicable source in each such area and provides an assessment of the cause of any emissions increase from the previous year. The first report for each such area is due by July 1 of the calendar year after the effective date of the area's initial designation.*"

Since the effective date for Maine's final SO_2 designation was April 9, 2018 (as published in the January 9, 2018 Federal Register), Maine is submitting the following additional information to meet the above requirements:

As stated previously, Wyman Station's modeling demonstration utilized hourly current-actual emissions and stack flow data from the calendar years 2013 – 2015. Table 1 lists the ton per year (TPY) emissions for the three years modeled (2013 - 2015) as well as the most-recent three-year period (2021 – 2023).

Table 1: Annual Actual SO_2 Emissions Data for Wyman Station

Calendar Year	Actual SO_2 Emissions (TPY)
2013	861.16
2014	844.03
2015	1750.67
2021	63.51
2022	687.64
2023	172.42

Annual actual SO_2 emissions for the most recent three years show that Wyman Station's emissions are significantly lower than those modeled for the 2013 - 2015 period, the timeframe that served as the basis for USEPA's identification of Wyman Station as a DRR source.

There are several factors that can account for these lower TPY values: Wyman Station is primarily relied upon as a peaking power plant (i.e., generally operates only when there is a very high demand for electricity), the migration toward lower sulfur fuel oil, a more consistent supply of natural gas, etc.

The following information was contained in a December 19, 2018 letter from Wyman Station to MEDEP: "*Pursuant to 40 CFR 75.61 (a)(7), FPL Energy Wyman, LLC is hearby providing notice that Units 1 and 2 at the Wyman facility have been shut down, and placed into long-term storage as defined in §72.2. Shutdown of the unit occurred on October 1, 2018 at 0000 hours."* The letter further states that *"…the duration of the shutdown is expected to last for at least two years…*" Units 1 and 2 continue to remain in long-term storage given that Wyman Station has reported zero emissions for both units during the 2021, 2022 and 2023 calendar years.

Given that Wyman Station is primarily relied upon as a peaking power plant, Wyman Station's migration toward lower sulfur fuel oil and several of Wyman Station's units remaining in long-term storage, MEDEP does not anticipate a significant increase in future SO_2 emissions from Wyman Station.

Therefore, when all of the above factors are considered, MEDEP finds that the modeling results required by the DRR demonstrate that Wyman Station remains and will continue to remain in compliance with the 1-hour SO_2 NAAQS. Per requirements of the DRR, Maine will continue to update Wyman Station's SO_2 actual TPY emissions (as seen in Table 1) and report those values to USEPA as part of MEDEP's Annual Air Monitoring Plan each subsequent year. Should Wyman Station's actual TPY emissions increase significantly above those 2013 – 2015 values used in the analysis, Maine recognizes that an updated modeling demonstration may be required.

Appendix 3:
Public Comment and Response

There were 2 public comments received during the opportunity to comment. The comments and responses are below.

Lemery, David J

From: Lemery, David J
Sent: Wednesday, May 22, 2024 1:22 PM
To: William Kolreg III
Subject: RE: Air quality monitoring

Hi Bill,

We do have a network of sites that collect hazardous air pollutants for analysis around the State of Maine, with 2 locations starting in the mid-90s, then expanded to multiple major cities and towns in the mid-2000s. Over the course of the 3 decades of monitoring, there has **not** been any evidence that chemicals of any kind are deliberately being sprayed into the atmosphere for any reason, including weather control.

David Lemery
Air Monitoring Section Manager

Maine Dept. of Environmental Protection
Bureau of Air Quality
17 State House Station
Augusta ME, 04333
(207) 557-0353

-----Original Message-----
From: William Kolreg III <kolreg@roadrunner.com>
Sent: Wednesday, May 22, 2024 11:19 AM
To: Lemery, David J <David.J.Lemery@maine.gov>
Subject: Air quality monitoring

EXTERNAL: This email originated from outside of the State of Maine Mail System. Do not click links or open attachments unless you recognize the sender and know the content is safe.

So I was wonder why we are not monitoring the materials they are spraying in the skys to try and control the weather and if they are what levels are we showing? Please advise. Thank you

Respectfully Submitted,
Bill
Sent from my iPhone

From: Lemery, David J
Sent: Monday, July 1, 2024 1:07 PM
To: Donald Darling
Subject: RE: 2025 Annual Air Monitoring Plan - Comment

Dear Mr. Darling,

Thank you for your comment to our 2025 Air Monitoring Plan. Unfortunately, we do not have the resources to initiate air quality monitoring near the Searsport facility, both relating to limited analytical compacity and staff time to conduct site visits. I can add it to our list of potential future projects once both shortcomings are dealt with.

David Lemery
Air Monitoring Section Manager

Maine Dept. of Environmental Protection
Bureau of Air Quality
17 State House Station
Augusta ME, 04333
(207) 557-0353

From: Donald Darling <ddarl54@gmail.com>
Sent: Monday, June 24, 2024 8:30 AM
To: Lemery, David J <David.J.Lemery@maine.gov>
Subject: 2025 Annual Air Monitoring Plan - Comment

Dear Mr. Lemery,

Thank you for making the annual Air Monitoring Plan for 2025 available for public comment. I appreciate the good work done by yourself and the staff of the Air Monitoring Section maintaining the air quality surveillance network in Maine.

I reviewed the draft Annual Air Monitoring Plan for 2025 with particular interest in the HAPS network and the South Portland/Portland VOC Monitoring Project. My interest in these particular projects has to do with the potential utility to conduct a study in Searsport. Searsport has a significant petroleum product storage and transfer operation similar to South Portland involving delivery of liquid fuels via ocean going vessels. Though the scale of the operation is smaller than South Portland it is still significant. This port also has a bulk materials transfer and storage operation also involving material delivery via cargo ship.

I expect there's potential for petroleum vapor emissions during off-loading of products. I've had a recent conversation with a resident of the town who makes note of these odors from time to time. I also had conversation with former coworkers who noted strong odors in the area of Mack Pont and spent some time investigating their origin. There may be particulate emissions from the bulk materials transfer and storage activity.

The DEP continues to conduct the South Portland/Portland VOC project, now in its 5th year. I would urge the DEP to consider transferring some VOC and particulate monitoring resources to Searsport in order to assess potential air quality impacts from the petroleum product and material transfer and storage activity at Mack Point. I'm not alleging there is any threat to an ambient air quality standard or guideline, However, an assessment of ambient air quality near the operations in Searsport for VOCs may prove useful with regard to the ongoing South Portland/Portland study and provide some assurance to the residents of Searsport their ambient air quality is within appropriate standards or guidelines.

Thank you for your good work!

Regards,

Donald Darling, Jr

Appendix 4:
EPA Comments and Response

REGION 1
NEW ENGLAND REGIONAL LABORATORY
NORTH CHELMSFORD, MA 01863

June 23, 2024

Jeff Crawford, Director
Bureau of Air Quality Control
Maine Department of Environmental Protection
17 State House Station
Augusta, ME 04333-0017

Dear Mr. Crawford:

Thank you for providing EPA with a draft of the Maine Department of Environmental Protection (ME DEP) 2025 Annual Air Monitoring Plan, which was dated May 21, 2024, for public comment. EPA Region 1 has reviewed your draft plan with respect to meeting the requirements of 40 CFR Part 58. Upon final submission of this document, we will move forward regarding approval of the Annual Network Plan, if appropriate. We will work with our Headquarters offices to address the portions of the plan which require their attention, most notably monitoring associated with NCore.

The following are our comments on your draft Annual Network Plan:

1. Page 9, Last paragraph – Please change 2024 to 2025.

2. Page 11, Enhanced Monitoring Plan (EMP), Page 22, Meteorological Network and Page 96, Site Description – There are a few places were metrology and metrological are used. These should be corrected to meteorology and meteorological.

3. Page 14, Ozone Network – Please clarify the status of the CASTNET monitor in Ashland.

4. Page 14, Ozone Network – The draft plan states ME DEP staff are reviewing options for the Gardiner Area High School site for future monitoring after the 2023 ozone (O_3) season. Do you mean after the 2024 ozone season?

5. Page 14, Ozone Network – Given that the Kennebunkport site was down for a while early this season due to storm damage, and that ME DEP is actively seeking another location for the equipment, EPA recommends finding a stable location. Kennebunkport has the second highest ozone design value (DV) behind Cadillac Mountain for the 2021-2023 DV period, so it is an important location for characterizing ozone levels on the lower Maine coast and pollutant transport to the region.

6. Pages 14 - 15, Ozone Network – Planned changes for 2025 – We acknowledge the following changes and note that ME DEP should work with EPA Region 1 before making any changes:

    - *If not done in 2024, the Portland Deering Oaks site may be moved to a new location.*
    - *The Kennebunkport shelter is planned to be moved from its current location.*
    - *The location of the Gardiner area ozone monitor may be moved. The current sitting is not optimal for ozone coming from the west and was meant to be temporary during the construction of Girls and Boys Club on Pray Street. The Maine DEP is considering options for the future of this site: which includes remaining at the current site or moving to another location with better siting in the Gardiner and Augusta area.*

7. Page 15, Ozone Monitoring Site Summary Table – Please clarify and confirm if "Transport" in the Monitoring Objective column is referring to being in the Ozone Transport Region (OTR). EPA recommends including this information in the final plan, because Maine is in the unique position of being partly in and partly not in the OTR.

8. Page 15, $PM_{2.5}$ Network – Paragraph 1 of this section states that ME DEP monitored for fine particulate matter ($PM_{2.5}$) in 2023 using filter-based samplers Federal Reference Method (FRM) samplers at 7 sites. Should this be 2024?

9. Page 16, 2nd paragraph – This paragraph describes activities conducted under the American Rescue Plan (ARP) grant up until 2023. This narrative should be updated with what was done in 2024.

10. Page 16, 5th paragraph, 1st sentence – This sentence describes replacement of a Metone BAM 1020 air monitor. Please specify where this was done.

11. Page 17, Proposed calendar year 2025 changes for the $PM_{2.5}$ network – We acknowledge the following changes and note that ME DEP should work with EPA Region 1 before moving any sites:

    - *If not done in 2024, the Portland Deering Oaks site will be moved.*
    - *Replace the Metone BAM 1020 in Rumford with a Teledyne T640x instrument.*
    - *Install a Teledyne T640x instrument, located with the current Metone BAM 1020 and planned filter-based sampler for a minimum of 1-year, longer if required.*
    - *Install a T640x instrument in-place of the Metone BAM 1020 at the new Portland monitoring station.*
    - *The Mi'kmaq Nation plans to replace their TEOM in Presque Isle with a Teledyne T640x.*

12. Pages 18 - 19, PM_{10} Network – Proposed calendar year 2025 changes for the inhalable particulate matter (PM_{10}) network – We acknowledge the following changes:

    - *Installation of Teledyne T640x instruments at our Rumford, Lewiston, and Portland monitoring stations would allow for the collection of continuous hourly PM_{10} data at those locations.*

    - *The Mi'kmaq Nation plans to replace their TEOM in Presque Isle with a Teledyne T640x which would allow for the collection of continuous hourly PM_{10} data at their monitoring station.*

13. Page 19, Sulfur Dioxide (SO_2) Network – Deering Oaks is misspelled here and throughout the document.

14. Page 19, Sulfur Dioxide Network – Proposed calendar year 2025 changes to the Sulfur Dioxide Network – We acknowledge the following changes and note that ME DEP should work with EPA Region 1 before moving any sites:

    - *In the City of Portland, due to a planned expansion of a walking and bike path, the DEP need to move the monitoring site. The DEP has been working with the city to find a location along the busy West Commercial St. and Commercial St. area. This move is expected to occur in the later part of 2024. When the new monitoring station is operational, the Maine DEP plans to operate an SO_2 monitor at the new location for at least one year, then assess if monitoring needs to continue at this location.*

15. Page 20, Nitrogen Oxides Network (NO_2, NO_x, NO, NO_y) – Proposed calendar year 2025 changes to the Nitrogen Oxides Network – We acknowledge the following changes and note that ME DEP should work with EPA Region 1 before moving any sites:

    - *In the City of Portland, due to a planned expansion of a walking and bike path, the DEP need to move the monitoring site. The DEP has been working with the city to find a location along the busy West Commercial St. and Commercial St. area. This move is expected to occur in the later part of 2024. When the new monitoring station is operational, the Maine DEP plans to operate a NO_x monitor at the new location for at least one year, then assess if monitoring needs to continue at this location.*

16. Pages 20 - 21, Carbon Monoxide Network – Proposed calendar year 2025 changes to the Carbon Monoxide Network – We acknowledge the following changes and note that ME DEP should work with EPA Region 1 before moving any sites:

    - *In the City of Portland, due to a planned expansion of a walking and bike path, the DEP need to move the monitoring site. The DEP has been working with the city to find a location along the busy West Commercial St. and Commercial St. area. This move is expected to occur in the later part of 2024. When the new monitoring station is*

operational, the Maine DEP plans to operate a CO monitor at the new location for at least one year, then assess if monitoring needs to continue at this location.

- *The Maine DEP applied for an IRA 60105 (A and B) grant to obtain a replacement CO monitor for our NCore site, if approved, this replacement may occur in 2024 or 2025.*

17. Page 21, Hazardous Air Pollutants (HAPs) Network – Proposed Calendar Year 2025 changes to the HAPS monitoring Network – We acknowledge the following changes and note that ME DEP should work with EPA Region 1 before moving any sites:

    - *If not already done in 2024 and as resources allow, a HAPs sampler will be reestablished at Cape Elizabeth.*
    - *In the City of Portland, due to a planned expansion of a walking and bike path, the DEP need to move the monitoring site. The DEP has been working with the city to find a location along the busy West Commercial St. and Commercial St. area. This move is expected to occur in the later part of 2024.*

18. Page 23, Atmospheric Deposition Network, 2nd paragraph – The narrative describes collection of samples for per- and polyfluoroalkyl substances (PFAS) from precipitation at Freeport from 2021 through 2023. Did this activity continue in 2024?

19. Page 28, Proposed calendar years 2024/2025 changes to the South Portland/Portland volatile organic compounds (VOC) network:

    - *The Maine DEP and the city of South Portland are planning to move the So. Portland Bug Light Park monitoring location to So. Portland Front St. This move will provide a better representation for the neighborhood bordering nearby bulk oil storage facilities.*
    - *Other changes are assessed on an as-needed basis. This project consumes a large volume of resources from the DEP, and changes are required to allow room for the DEP to be able to handle other monitoring needs throughout the State.*

    Regarding these other changes, EPA offers conversation to identify how it can assist the state.

20. Page 29, Hydrogen Sulfide – ME DEP needs to have an approved QAPP for this project before sampling can begin.

21. Page 33, Summary of Proposed Calendar Year 2025 Network Changes – We acknowledge the following changes are being contemplated or are likely to occur:

    Maine is anticipating receiving grant monies from the IRA 60105 (a, b and c) direct award grants. This will assist the ME DEP in upgrading, and replacing much of the older, and in poor condition equipment needed to maintain Maine's ambient air monitoring network.

    The following changes are being contemplated or are likely to occur:

- *Dependent on the approval of the IRA direct award grant, the following equipment may get replaced:*

Equipment	***Reason***
Presque Isle Riverside Shelter	*The current shelter is in very poor condition.*
Rumford Shelter	*The current shelter is in poor condition.*
Lewiston Shelter	*The current shelter is in poor condition.*
NCore CO monitor	*Replace older equipment*
NCore O3 monitor	*Replace older equipment*
Jonesport O3 monitor	*Replace older equipment*
Lewiston PM instrument	*Replace older equipment*
Rumford PM instrument	*Replace older equipment*
Portland Dearing Oak PM instrument	*Replace older equipment*
NCore Multi-gas Calibrator	*Replace older equipment*
Jonesport MET	*Replace older/outdated system*
Augusta MET	*Replace older/outdated system*
Rumford MET	*Replace older system*

- *Dependent of the approval of the IRA direct award grant, a ceilometer may be installed at the Presque Isle Riverside site.*
- *If not accomplished in 2024, the Portland Deering Oaks monitoring station may be relocated. Applicable siting criteria will be met at any new location.*
- *If not accomplished in 2024, the Kennebunk O_3 monitoring station may be relocated to another location on Maines Southern Coast to better protect the equipment and shelter from the effects of climate change and severe coastal storms.*
- *If resources allow, a mobile monitoring platform will be populated with sampling equipment and readied for use.*
- *Once resources allow, A HAPs sampler will be re-installed at Cape Elizabeth Site.*
- *South Portland/Portland VOC network: Pending assessment of sample data, one or more sites may be discontinued, and others made permanent.*

22. Page 35, 23-005-0002 – The operator/agency for this site is listed as LEA. Please clarify who this operator/agency is.

23. Page 37, Footnote 1 – The footnote indicates the information in the table is current as of June 30, 2023. This should be updated to the most recent date.

24. Page 39 Appendix 1 – The appendix lists the date for 2024. This should be updated to 2025.

25. EPA acknowledges planned changes for 2025 noted for Gardiner High School (Page 64), Kennebunkport at Parson's Way (Page 72), and Portland at Deering Oaks Park (Page 82), and notes that ME DEP should work with EPA Region 1 before making any changes.

26. Page 86, $PM_{2.5}$ – Date Ended: TBD. The date for ending $PM_{2.5}$ monitoring at this site should be updated.

27. Page 89, Rumford trailer picture – EPA notes that the configuration of the ladder at this site may be a safety concern.

28. Page 94, Tribal Monitoring Sites. This section is marked 2024 but should be 2025.

29. Page 97 – Passamaquoddy Tribe – Indian Township. This site is missing an AQS Site ID. Please add an AQS Site ID, if available.

30. Other general comments:

    - Maine is in attainment for both the ozone and $PM_{2.5}$ standards, which are the two primary pollutants for the region. However, it would have been informative to see a table of the current design values for each at each location, especially given the recent standard change for $PM_{2.5}$, and the interest by the citizens in general.

EPA Region 1 appreciates your partnership in conducting ambient air monitoring, and we look forward to working with you to continuously improve the quality of ambient air in Maine. We look forward to the final submission of your Annual Network Plan this July. If you have any questions or comments regarding these comments, please contact me at (617) 918-8383.

Sincerely,

MARY JANE CUZZUPE Digitally signed by MARY JANE CUZZUPE
Date: 2024.06.24 07:30:43 -04'00'

Mary Jane Cuzzupe
State Air Monitoring Coordinator
Laboratory Services and Applied Science Division
EPA Region 1

cc: David Lemery, ME DEP
Leiran Biton, EPA Region 1
Alysha Murphy, EPA Region 1

STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION

JANET T. MILLS
GOVERNOR

MELANIE LOYZIM
COMMISSIONER

Dear Mary Jane Cuzzupe,

Thank you for providing your detailed comments and review on our 2025 Annual Monitoring Network Plan. Below, you will find responses to the comments you provided.

1. Corrected.
2. Corrected spelling in listed and various other locations in the Annual Network Monitoring Plan.
3. Replaced text mentioning the Ashland CASTNET site with the following text to better clarify the status of the site: "The CASTNET site in Ashland was unexpectedly shut down in May 2022 due to budget constraints at this time, this site is unlikely to receive funding through the CASTNET program to resume operation, and the current future for this site is currently unknown."
4. Corrected.
5. Maine DEP agrees with this assessment.
6. Response not required.
7. Updated multiple objectives to reflect current objectives, mostly AQI forecasting and mapping.
8. Corrected.
9. Added additional text to the narrative with what was completed in 2024.
10. Added specification that this was completed in Bangor.
11. Response not required.
12. Response not required.
13. Corrected spelling of Deering Oaks Park.
14. Response not required.
15. Response not required.
16. Response not required.
17. Response not required.
18. Updated to currently available information.
19. Acknowledges that the US EPA Region 1 may have resources to assist with this special purpose monitoring project.
20. The ME DEP is working on the Hydrogen Sulfide QAPP/SOP.
21. Response not required.
22. LEA is the Maine Lakes Environmental Association. Added text in the site description page for Bridgeton on pg 54.
23. Updated.
24. Acknowledged.
25. Corrected

AUGUSTA
17 STATE HOUSE STATION
AUGUSTA, MAINE 04333-0017
(207) 287-7688 FAX: (207) 287-7826

BANGOR
106 HOGAN ROAD, SUITE 6
BANGOR, MAINE 04401
(207) 941-4570 FAX: (207) 941-4584

PORTLAND
312 CANCO ROAD
PORTLAND, MAINE 04103
(207) 822-6300 FAX: (207) 822-6303

PRESQUE ISLE
1235 CENTRAL DRIVE, SKYWAY PARK
PRESQUE ISLE, MAINE 04769
(207) 764-0477 FAX: (207) 760-3143

website: www.maine.gov/dep

26. Updated.
27. We will discuss internally to determine if another setup is necessary to ensure safe ladder use.
28. Corrected.
29. There is no AQS site ID for this location.
30. ME DEP will consider the addition of the design value table for the 2026 network plan.

Sincerely,

David Lemery
Air Monitoring Section Manager

Maine Dept. of Environmental Protection
Bureau of Air Quality
17 State House Station
Augusta ME, 04333

cc: Jeff Crawford, ME DEP
Leiran Biton, EPA Region 1
Alysha Murphy, EPA Region 1

Appendix 5:
Complete Site Name and Abbreviation List

The following are tables outlining all current, and recently disconitnued air monitoring stations and air quailty study and project locations.

Maine PQAO - ME DEP Site	Maine PQAO - Contracted site
Maine PQAO - Tribal Site	Not in Maine PQAO

Long-Term Air Quality Monitoring Stations - Active		
Station Name	**AQS Site Identifier (Left Blank if not Applicable)**	**Site Abbrev. + (Alt./Common shorthand)**
Augusta - Civil Air Patrol Hangor	23-011-0008	Aug MET (Augusta MET)
Augusta Lincoln Street School	23-011-0016	ALSS
Bangor Mary Snow School	23-019-0017	BMSS
Bar Harbor Cadillac Mountain	23-009-0102	BHCM (Cadillac)
Bar Harbor McFarland Hill	23-009-0103	BHMH (McSuper, McHill, MARS)
Bethel Smith Farm Road	23-017-3002	BSFR
Bridgeton	23-005-0002	ME02
Cape Elizabeth Two Lights	23-005-2003	CETL
Caribou - Caribou Airport	23-003-1002	ME00
Carrabesset Valley - Airport		ME04
Durham Fire Station	23-001-0014	DFS
Freeport - Wolfes Neck Farm	23-005-9002	ME96
Gardiner Area High School	23-011-2001	GAHS
Greenville	23-021-0001	ME09
Holden Rider Bluff	23-019-4008	HRB
Indian Island	23-019-1100	
Indian Township		ME94
Jonesport Coast Guard	23-029-0021	JCG
Kennebunkport Parson's Way	23-031-2002	KPW
Lewiston Country Kitchen Parking Lot	23-001-0011	LCKP (CKP)
Madawaska Public Safety Building	23-003-0014	MPSB (MADPSB, MAD)
Moosehorn	23-029-1004	
Pleasant Point Sipayik, Passamaquoddy Tribe	23-029-0032	PPS
Popham Beach State Park	23-023-0007	PBSP
Port Clyde Marshal Point	23-013-0004	PCMP
Portland Deering Oaks	23-005-0029	PDO
Portland Tukey's Bridge	23-005-0015	PTB
Presque Isle Background Site	23-003-1008	PIBS
Presque Isle Micmac Tribe	23-003-1100	PIMT
Presque Isle Riverside Street	23-003-1011	PIRS
Rumford, Rumford Avenue Parking Lot	23-017-2011	RRAP (RAP)
Shapleigh Ball Park	23-003-0040	SBP

Long-Term Air Quality Monitoring Stations - Recently Discontinued		
Station Name	**AQS Site Identifier (Left Blank if not Applicable)**	**Site Abbrev. (Alt./Common shorthand)**
Ashland	23-003-9991	Ashland
Gardiner - Pray Street School	23-011-2005	GPSS
Gilead		ME08
Jonesport Public Landing	23-029-0019	JPL
West Buxton Fire Department	23-031-0038	WBFD

Air Quality Study/Project Stations - Active		
Station Name	**Related Air Quality Project**	**Site Abbrev. (Alt./Common shorthand)**
Cassidy Point Portland	Coal Dust Emissions	CPP
Juniper Ridge - Alton, Bennoch Rd. Station	Juniper Ridge Air Toxics Study	JRABS
Old Town Global Secure Shipping	Infomational (Old Town Mill + Juniper Ridge)	OTGSS
Portland Ocean Gateway	So. Portland / Portland VOC Study	POG
Portland West Commercial	So. Portland / Portland VOC Study	PWC
South Portland Bug Light	So. Portland / Portland VOC Study	SPBL
South Portland Cash Corner	So. Portland / Portland VOC Study	SPCC
South Portland Front St.	So. Portland / Portland VOC Study	SPFS
South Portland Mechanic Street	So. Portland / Portland VOC Study	SPMS
South Portland Pearl St.	So. Portland / Portland VOC Study	SPPS
South Portland Red Bank	So. Portland / Portland VOC Study	SPRB
Rumford - Maine Med	RITA	Maine MED

Air Quality Study/Project Stations - Recently Discontinued		
Station Name	**Related Air Quality Project**	**Site Abbrev. (Alt./Common shorthand)**
Augusta Mill Park	Valley low/high elevation comparison	AMP
Farmington LEAP building	Risk assessment after catatrophe	FLEAP
Jay Town Office	Risk assessment after catatrophe	JTO
South Portland Assessors Office	So. Portland / Portland VOC Study	SPAO
South Portland Central Receiving	So. Portland / Portland VOC Study	SPCR
South Portland High School	So. Portland / Portland VOC Study	SPHS
Patten	Local wood smoke emissions	Patten