# NEW YORK STATE AMBIENT AIR QUALITY REPORT FOR 2019

New York State Ambient Air Monitoring Program

**BUREAU OF AIR QUALITY SURVEILLANCE**
**DIVISION OF AIR RESOURCES**
**NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION**

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# Summary and background information

This technical document is designed to provide summary information about the ambient air quality in New York State as it relates to the EPA's National Ambient Air Quality Standards (NAAQS). The data here is provided in the same format at the EPA NAAQS, and as such may include information at air quality monitoring stations that have since been closed. In the footer of each page there is a key to assist in the interpretation of the data. Site numbers are the NYS internal site identifiers and are different than the AQS site numbers.

This document does not cover all pollutants measured, only those that have a NAAQS criteria. More information about the other programs for which the NYSDEC collects data, and more detailed information about the instrumentation currently available at individual site can be found in the Monitoring Network Plan.

For more information about the current and historic NAAQS, standards for regulatory action, health effects of individual pollutants, and more please go to the EPA's Criteria Air Pollutants webpage.

Full datasets are available for download and review from the EPA Air Data webpage using the API.

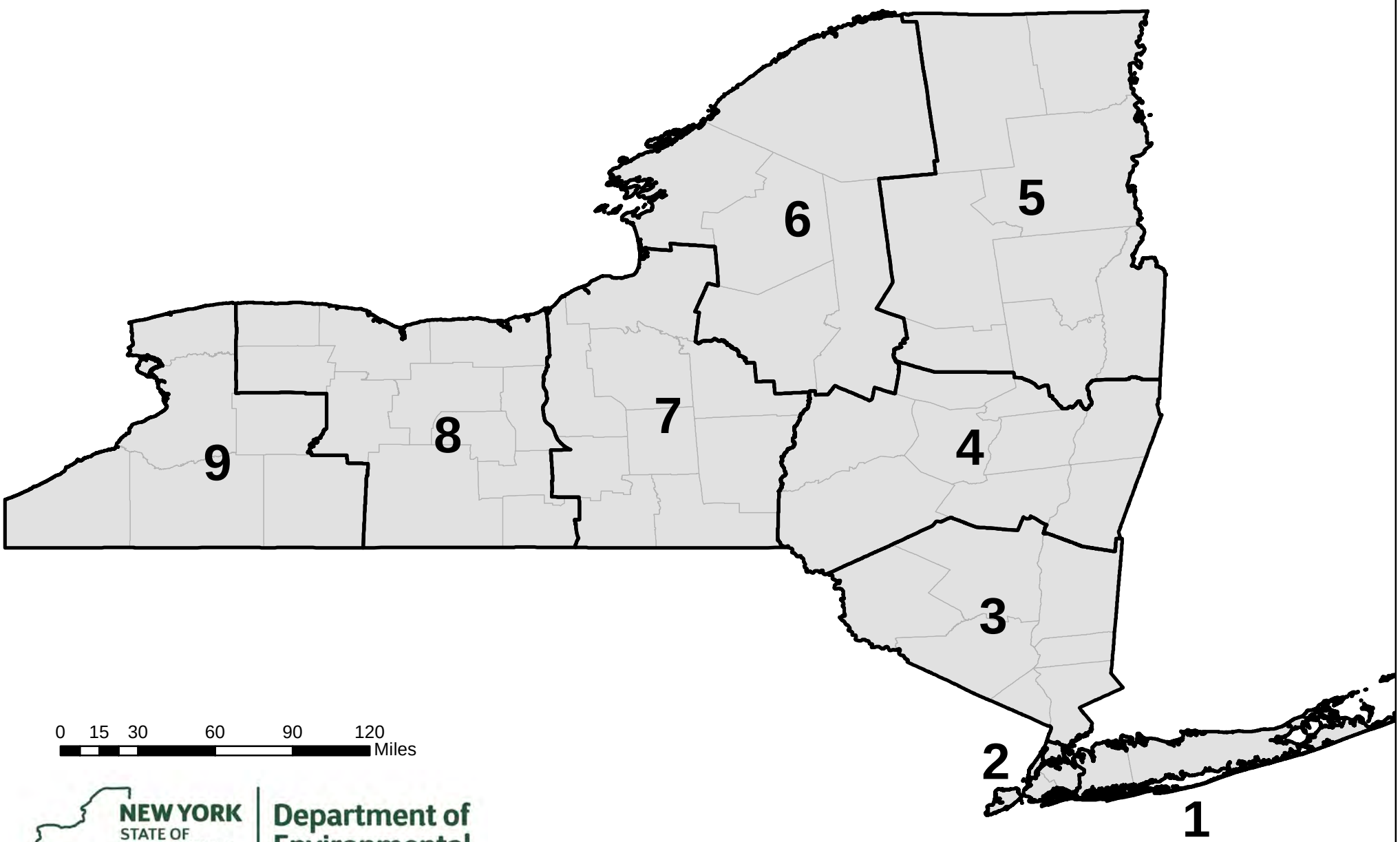
For current Air Quality Index (AQI) Forecast and Current Observations for New York State, please go to the NYSDEC's AQI webpage.

2019 Change Notes:

1. Site ID's were updated to use the AQS site ID for ease of use instead of the NYSDEC internal site ID.
2. The direction of annual data was made consistent between pollutants.
3. AQS parameter information was added for ease of use.
4. Formatting changes for ease of reading.

File version: 7/23/2020

# New York State Department of Environmental Conservation Administrative Regions




NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

# National Ambient Air Quality Standards

| Pollutant | | Primary/ Secondary | Averaging Time | Level | Form |
|---|---|---|---|---|---|
| **Carbon Monoxide** | | **primary** | 8-hour | 9 ppm | Not to be exceeded more than once per year |
| | | | 1-hour | 35 ppm | |
| **Lead** | | **primary and secondary** | Rolling 3-month average | 0.15 µg/m$^3$ (1) | Not to be exceeded |
| **Nitrogen Dioxide** | | **primary** | 1-hour | 100 ppb | 98th percentile of 1-hour daily maximum concentrations, averaged over 3 years |
| | | **primary and secondary** | Annual | 53 ppb (2) | Annual Mean |
| **Ozone** | | **primary and secondary** | 8-hour | 0.070 ppm (3) | Annual fourth-highest daily maximum 8-hr concentration, averaged over 3 years |
| **Particle Pollution** | **$PM_{2.5}$** | **primary** | Annual | 12 µg/m$^3$ | annual mean, averaged over 3 years |
| | | **secondary** | Annual | 15 µg/m$^3$ | annual mean, averaged over 3 years |
| | | **primary and secondary** | 24-hour | 35 µg/m$^3$ | 98th percentile, averaged over 3 years |
| | **$PM_{10}$** | **primary and secondary** | 24-hour | 150 µg/m$^3$ | Not to be exceeded more than once per year on average over 3 years |
| **Sulfur Dioxide** | | **primary** | 1-hour | 75 ppb (4) | 99th percentile of 1-hour daily maximum concentrations, averaged over 3 years |
| | | **secondary** | 3-hour | 0.5 ppm | Not to be exceeded more than once per year |

(Annual Means in parentheses are based on less than 75% available data)
*Federal Ambient Air Quality Standard

[Date of Occurrence, Hour]
+ Denotes a contravention of Federal AAQS

## Footnotes

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

(2) The official level of the annual $NO_2$ standard is 0.053 ppm, equal to 53 ppb, which is shown here for the purpose of clearer comparison to the 1-hour standard.

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

(4) The previous $SO_2$ standards (0.14 ppm 24-hour and 0.03 ppm annual/ 30 ppb) will additionally 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 implementation plans providing for attainment of the current (2010) standard have not been submitted and approved and which is designated nonattainment under the previous $SO_2$ standards or is not meeting the requirements of a SIP call under the previous $SO_2$ 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 require NAAQS.

(Annual Means in parentheses are based on less than 75% available data)
*Federal Ambient Air Quality Standard

[Date of Occurrence, Hour]
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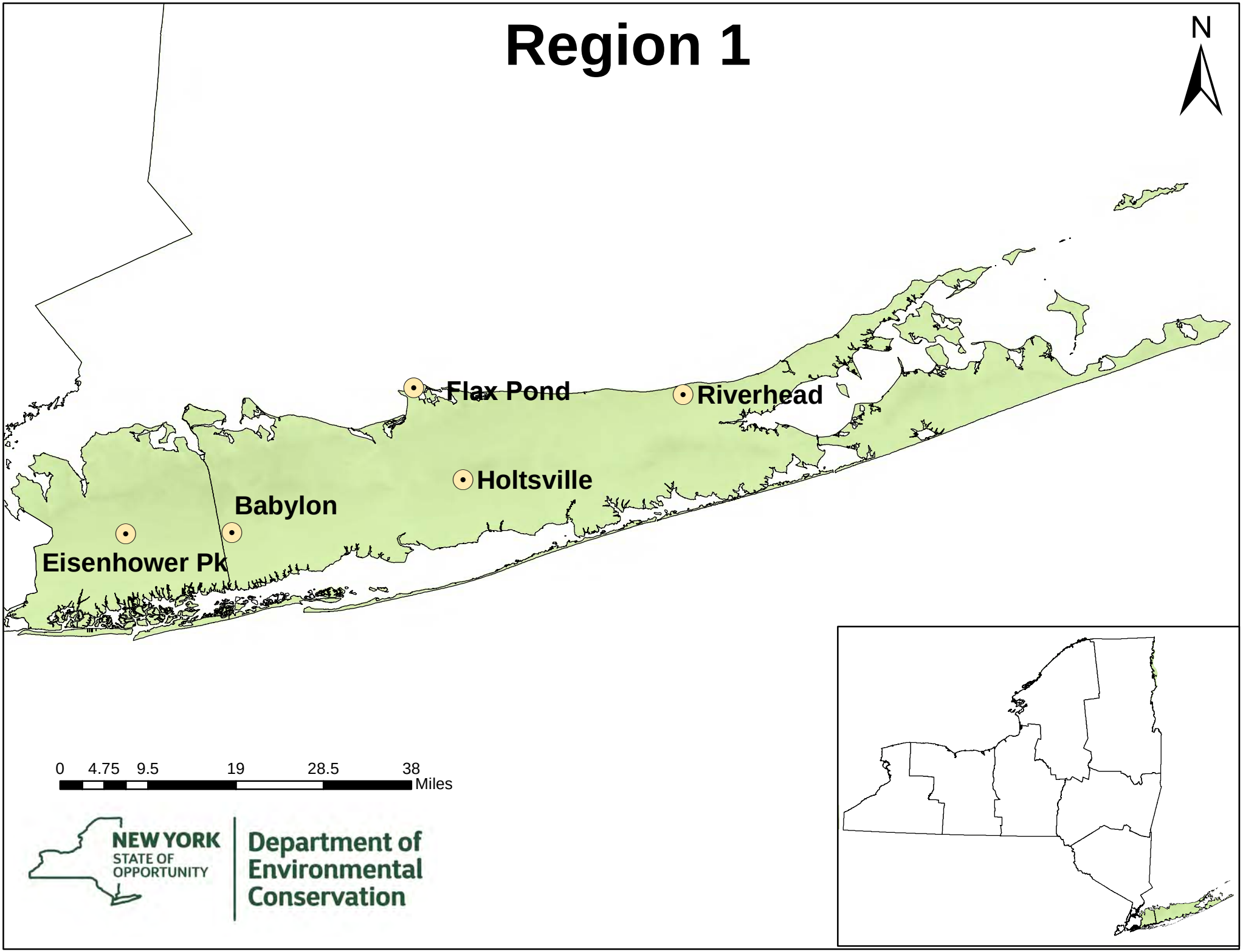
# Region 1


N
Flax Pond
Riverhead
Holtsville
Babylon
Eisenhower Pk
0 4.75 9.5 19 28.5 38
Miles
NEW YORK
STATE OF
OPPORTUNITY
Department of
Environmental
Conservation

NYSDEC Region **1**

# **SULFUR DIOXIDE** - Continuous Pulsed Fluorescence

Parameter Code: 42401

**Annual Averages 2009 through 2019**

Annual Arithmetic Mean (ppb) - Primary Standard

(12-month average not to exceed 30 PPB* [4])

| Station | Site No. | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Eisenhower Park | 36-059-0005 | 3.45 | 2.09 | 1.97 | (1.15) | (1.12) | 1.35 | 1.03 | 0.40 | 0.23 | 0.23 | 0.87 |
| Holtsville | 36-103-0009 | 3.81 | 3.95 | 2.22 | (1.03) | (1.20) | 0.84 | 0.77 | 0.39 | 0.16 | 0.12 | 0.38 |

Holtsville site (5151-10) was operated by Suffolk County Health Dept. until 9/30/10, when NYSDEC commenced monitoring.

**Comparison Between NYS Ambient Air Quality and Ambient Air Quality Standards for Calendar Year 2019**

| | | One Hour Averages<br>average of 99th percentile for last 3 years not to exceed 75 PPB * | | | | | |
|---|---|---|---|---|---|---|---|
| | | **Observations** | | **99th Percentile, PPB** | | | |
| **Station** | **Site No.** | **Total Obs.** | **% Avail** | **2017** | **2018** | **2019** | **3-yr Avg.** |
| Eisenhower Park | 36-059-0005 | 8,605 | 98 | 6.5 | 8.2 | 10.6 | 8.43 |
| Holtsville | 36-103-0009 | 8,161 | 93 | 3.7 | 2.5 | 3.2 | 3.13 |

(Annual Means in parentheses are based on less than 75% available data)
*Federal Ambient Air Quality Standard

[Date of Occurrence, Hour]
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NYSDEC Region **1**

# INHALABLE PARTICULATES ($PM_{2.5}$)

**Comparison Between NYS Ambient Air Quality and Ambient Air Quality Standards for Calendar Year 2019**

(Average of last 3 years' annual means not to exceed 12 µg/m$^3$ *;
and average of 98th percentile for last 3 years not to exceed 35 µg/m$^3$ *)

| Station | Site No. | Total Obs. | Maximum Values, µg/m$^3$ | | | 98th Percentile, µg/m$^3$ | | | | Quarterly Averages, 2019 | | | | Annual Mean, µg/m$^3$ | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 1st | 2nd | 3rd | 2017 | 2018 | 2019 | 3-yr Avg. | 1st | 2nd | 3rd | 4th | 2017 | 2018 | 2019 | 3-yr Avg. |
| Eisenhower Park (C) | 36-059-0005 | 346 | 20.2<br>4-Jul | 18.8<br>3-Feb | 18.8<br>23-Dec | 14.6 | 17.3 | 16.2 | 16.3 | 7.5 | 4.2 | 5.7 | 7.9 | 6.5 | 5.98 | 5.8 | 6.2 |
| Babylon (F) | 36-103-0002 | 112 | 23.5<br>23-Dec | 18.2<br>5-Feb | 17.0<br>20-Jul | 14.3 | 16.7 | 17 | 16.0 | 6.9 | 5.2 | 7.7 | 5.9 | 6.6 | 6.81 | 6.4 | 6.6 |
| Holtsville (C) | 36-103-0009 | 346 | 25.5<br>4-Jul | 21.2<br>3-Feb | 20.79<br>22-Dec | 14.4 | 17.8 | 13.4 | 15.2 | 7.5 | 4.3 | 5.2 | 5.6 | 6.4 | 6.55 | 5.7 | 6.2 |

(F) = Federal Reference Method or Federal Equivalent Method: Parameter Code: 88101
(C) = Continuous, used for AQI calculations. Values based on 24-hour averages of 1-hour values. Parameter Code 88502

(Annual Means in parentheses are based on less than 75% available data)
*Federal Ambient Air Quality Standard

[Date of Occurrence, Hour]
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NYSDEC Region **1**

# **OZONE** - Continuous UV Light Absorption

Parameter Code: 44201

**Comparison Between NYS Ambient Air Quality and Ambient Air Quality Standards for Calendar Year 2019**

| | | 8-hr Running Average Begin Hour | | | | | | | **4th Highest Daily Maximum 8-Hour Average-** | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | **Observations** | | | **Daily Highest Values, PPM** | | | | Not to exceed an avg of 0.075 ppm during the last 3 years, *changed* to 0.070 ppm beginning 1/1/2016* | | | |
| **Station** | **Site No.** | **Total Obs.** | **% Avail** | **Days >.070 PPM** | **1st** | **2nd** | **3rd** | **4th** | **2017** | **2018** | **2019** | **Avg.** |
| Babylon | 36-103-0002 | 5,761 | 98 | 2 | 0.079<br>2-Jul | 0.077<br>10-Jul | 0.073<br>1-Jul | 0.072<br>6-Aug | 0.077<br>1-Jul | 0.074<br>6-Aug | 0.072<br>6-Aug | 0.074+ |
| Holtsville | 36-103-0009 | 5,738 | 98 | 3 | 0.071<br>26-Jun | 0.071<br>29-Jun | 0.070<br>27-Jun | 0.068<br>3-Jul | 0.071<br>2-Jul | 0.076<br>2-Jul | 0.068<br>3-Jul | 0.071+ |
| Riverhead | 36-103-0004 | 5,376 | 91 | 3 | 0.079<br>29-Jun | 0.071<br>16-Jul | 0.070<br>29-Jul | 0.070<br>31-May | 0.076<br>2-Jul | 0.072<br>2-Jul | 0.070<br>31-May | 0.072+ |

(Annual Means in parentheses are based on less than 75% available data)
*Federal Ambient Air Quality Standard

[Date of Occurrence, Hour]
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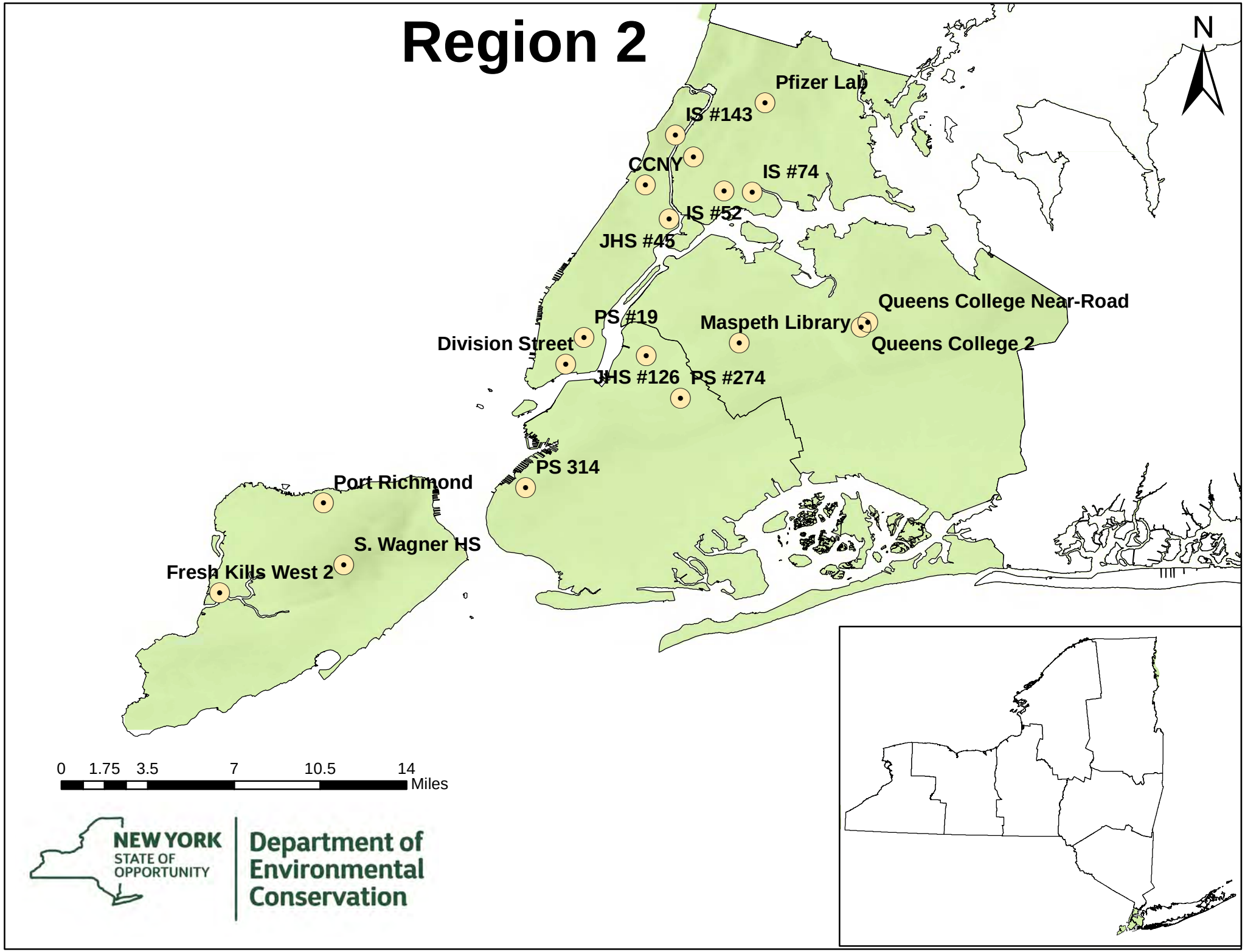
# Region 2




NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

NYSDEC Region **2**

# **SULFUR DIOXIDE** - Continuous Pulsed Fluorescence

Parameter Code: 42401

**Annual Averages 2009 through 2019**

Annual Arithmetic Mean (ppb) - Primary Standard

(12-month average not to exceed 30 PPB [(4)])

| Station | Site No. | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Botanical Garden (Harding Lab/Pfizer Lab) | 36-005-0133 | 5.32 | 4.83 | 4.65 | 3.28 | 2.44 | 1.9 | 1.29 | 0.84 | 0.59 | 0.63 | 0.56 |
| IS 52 | 36-005-0110 | 6.33 | (6.22) | xxx | (2.1) | 1.22 | 1.36 | 1.83 | 0.67 | 0.54 | 0.57 | 0.41 |
| Queens College | 36-081-0124 | 3.41 | 2.83 | 2.65 | 1.79 | 1.22 | 1.11 | 0.75 | 0.57 | 0.52 | 0.41 | 0.36 |

Sampling was suspended at 7094-07 on 06/24/10 due to building construction and resumed on 08/10/13.
Sampling was suspended at 7093-10 in 2009

**Comparison Between NYS Ambient Air Quality and Ambient Air Quality Standards for Calendar Year 2019**

| | | One Hour Averages average of 99th percentile for last 3 years not to exceed 75 PPB * | | | | | |
|---|---|---|---|---|---|---|---|
| | | **Observations** | | **99th Percentile, PPB** | | | |
| **Station** | **Site No.** | **Total Obs.** | **% Avail** | **2017** | **2018** | **2019** | **3-yr Avg.** |
| Botanical Garden (Harding Lab/Pfizer Lab) | 36-005-0133 | 8,624 | 98 | 5.2 | 6.2 | 4.3 | 5.23 |
| IS 52 | 36-005-0110 | 8,421 | 96 | 4.7 | 7.5 | 4.5 | 5.57 |
| Queens College 2 | 36-081-0124 | 8,513 | 97 | 4.6 | 5.5 | 5.4 | 5.17 |

(Annual Means in parentheses are based on less than 75% available data)
*Federal Ambient Air Quality Standard

[Date of Occurrence, Hour]
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NYSDEC Region **2**

# INHALABLE PARTICULATES ($PM_{10}$)

Parameter Code:81102

**Comparison Between NYS Ambient Air Quality and Ambient Air Quality Standards for Calendar Year 2019**

| | | 24-Hour Concentrations - µg/m³ | | | | | | | # of Days > 150 µg/m³ - Not to exceed an expected avg of one per year during the last 3 years * | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | **Maximum** | | **2nd Max.** | | **3rd Max.** | | **2017** | | **2018** | | **2019** | | |
| **Station** | **Site No.** | **Total Obs.** | **Value** | **Date** | **Value** | **Date** | **Value** | **Date** | **Mea** | **Est** | **Mea** | **Est** | **Mea** | **Est** | **Exp. Avg.** |
| Division Street | 36-061-0134 | 62 | 43 | 23-Dec | 29 | 2-Feb | 28 | 11-Nov | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| IS 52 | 36-005-0110 | 58 | 33 | 23-Dec | 30 | 11-Nov | 29 | 2-Feb | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Queens College 2 | 36-081-0124 | 59 | 28 | 2-Feb | 23 | 11-Nov | 21 | 2-Jul | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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*Federal Ambient Air Quality Standard

[Date of Occurrence, Hour]
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NYSDEC Region **2**

# INHALABLE PARTICULATES ($PM_{2.5}$)

(Manhattan Sites)

## Comparison Between NYS Ambient Air Quality and Ambient Air Quality Standards for Calendar Year 2019

(Average of last 3 years' annual means not to exceed 12 µg/m$^3$ *;
and average of 98th percentile for last 3 years not to exceed 35 µg/m$^3$ *)

| Station | Site No. | Total Obs. | Maximum Values, µg/m$^3$ | | | 98th Percentile, µg/m$^3$ | | | | Quarterly Averages, 2019 | | | | Annual Mean, µg/m$^3$ | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 1st | 2nd | 3rd | 2017 | 2018 | 2019 | 3-yr Avg. | 1st | 2nd | 3rd | 4th | 2017 | 2018 | 2019 | 3-yr Avg. |
| JHS 45 (F) | 36-061-0079 | 120 | 18.9<br>23-Dec | 18.7<br>2-Feb | 18.7<br>11-Nov | 16.5 | 19.7 | 18.7 | 18.3 | 7.7 | 6.4 | 7.8 | 6.7 | 7.4 | 8.1 | 7.2 | 7.5 |
| IS 143 (C) | 36-061-0115 | 343 | 22.2<br>4-Jul | 19.4<br>4-Feb | 19.3<br>3-Feb | 17.1 | 19.3 | 17.5 | 17.9 | 9.5 | 5.2 | 6.5 | 7.2 | 8.5 | 7.8 | 7.1 | 7.8 |
| PS 19 (C)* | 36-061-0128 | 185 | 20.0<br>4-Jul | 18.3<br>2-Jan | 17.6<br>15-Feb | 16.5 | 27 | 17.6 | 20.3 | 9.5 | 6.3 | 9.0 | xx | 9.1 | 10.4 | 8.3 | 9.2 |
| PS 19 (F)* | 36-061-0128 | 64 | 20.9<br>2-Feb | 19.6<br>18-Jan | 19.0<br>1-Mar | 20 | 21.1 | 19.6 | 20.2 | 9.4 | 7.6 | 9.5 | xx | 9.1 | 10.4 | 8.8 | 8.5 |
| Division St (F) | 36-061-0134 | 121 | 21.7<br>5-Feb | 20.2<br>2-Feb | 19.5<br>18-Jan | 17.9 | 21.6 | 19.5 | 19.6 | 9.6 | 8.1 | 9.4 | 7.3 | 8.8 | 9.6 | 8.6 | 9.0 |
| Division St (C) | 36-061-0134 | 348 | 25.1<br>4-Jul | 18.9<br>23-Dec | 18.3<br>3-Feb | 15.8 | 18.3 | 17.1 | 17.0 | 8.2 | 5.4 | 7.3 | 6.7 | 7.1 | 6.8 | 6.9 | 6.9 |
| CCNY (C) | 36-061-0135 | 342 | 17.9<br>3-Feb | 17.9<br>3-Jul | 17.2<br>4-Feb | 15.3 | 18.9 | 16.2 | 16.8 | 8.0 | 5.9 | 6.0 | 6.4 | 7.7 | 8 | 6.6 | 7.4 |

(F) = Federal Reference Method or Federal Equivalent Method: Parameter Code: 88101
(C) = Continuous, used for AQI calculations. Values based on 24-hour averages of 1-hour values. Parameter Code 88502
* Sampling stopped at PS19 due to roof work in 2019

(Annual Means in parentheses are based on less than 75% available data)
*Federal Ambient Air Quality Standard

[Date of Occurrence, Hour]
+ Denotes a contravention of Federal AAQS

NYSDEC Region **2**

# INHALABLE PARTICULATES ($PM_{2.5}$)

(Bronx & Brooklyn Sites)

**Comparison Between NYS Ambient Air Quality and Ambient Air Quality Standards for Calendar Year 2019**
(Average of last 3 years' annual means not to exceed 12 µg/m³ *;
and average of 98th percentile for last 3 years not to exceed 35 µg/m³ *)

| Station | Site No. | Total Obs. | Maximum Values, µg/m³ | | | 98th Percentile, µg/m³ | | | | Quarterly Averages, 2019 | | | | Annual Mean, µg/m³ | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 1st | 2nd | 3rd | 2017 | 2018 | 2019 | 3-yr Avg. | 1st | 2nd | 3rd | 4th | 2017 | 2018 | 2019 | 3-yr Avg. |
| Morrisania (C) | 36005-0080 | 354 | 23.9<br>4-Jul | 18.5<br>4-Feb | 17.8<br>3-Feb | 14 | 18.7 | 16.1 | 16.2 | 8.5 | 4.9 | 6.0 | 6.2 | 6.7 | 7.2 | 6.4 | 6.7 |
| IS 52 (F) | 36-005-0110 | 120 | 20.9<br>5-Feb | 19.4<br>2-Feb | 19.0<br>11-Nov | 16.3 | 18.7 | 19 | 18.0 | 8.2 | 6.7 | 8.0 | 6.6 | 7.2 | 8 | 7.4 | 7.5 |
| IS 52 (C) | 36-005-0110 | 363 | 33.1<br>22-Dec | 31.1<br>3-Feb | 27.3<br>4-Feb | 18.1 | 18.5 | 21.5 | 19.3 | 9.1 | 7.7 | 9.3 | 8.2 | 6.2 | 8.6 | 8.6 | 7.8 |
| IS 74 (C) | 36-005-0112 | 348 | 22.8<br>4-Feb | 21.8<br>4-Jul | 20.8<br>5-Feb | 14.4 | 17.4 | 16.6 | 16.1 | 8.0 | 4.8 | 6.6 | 6.6 | 6.6 | 6.9 | 6.5 | 6.6 |
| Botanical Gdn - Pfizer (F) | 36-005-0133 | 121 | 20.7<br>5-Feb | 20.2<br>23-Dec | 19.2<br>2-Feb | 18.7 | 21.5 | 19.2 | 19.8 | 8.0 | 5.9 | 7.6 | 6.5 | 8 | 8.3 | 7 | 7.7 |
| PS 314 (C) | 36-047-0052 | 345 | 18.5<br>30-Jul | 17.6<br>4-Feb | 16.9<br>3-Feb | 14.9 | 16.1 | 15.6 | 15.5 | 7.2 | 4.6 | 6.1 | 6.6 | 6.3 | 6.2 | 6.1 | 6.2 |
| JHS 126 (F) | 36-047-0122 | 118 | 23.4<br>23-Dec | 19.2<br>2-Feb | 18.4<br>14-Aug | 17.2 | 17.9 | 18.4 | 17.8 | 8.2 | 6.9 | 8.3 | 7.0 | 7.5 | 7.9 | 7.6 | 7.6 |
| PS 274 (C) | 36-047-0118 | 347 | 19.3<br>4-Jul | 17.7<br>23-Dec | 17.4<br>14-Aug | 14.5 | 17.2 | 15.3 | 15.6 | 7.2 | 4.6 | 6.1 | 6.6 | 6.5 | 6.4 | 6.1 | 6.3 |

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(C) = Continuous, used for AQI calculations. Values based on 24-hour averages of 1-hour values. Parameter Code 88502

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*Federal Ambient Air Quality Standard

[Date of Occurrence, Hour]
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NYSDEC Region **2**

# INHALABLE PARTICULATES ($PM_{2.5}$)

(Queens, and Staten Island Sites)

**Comparison Between NYS Ambient Air Quality and Ambient Air Quality Standards for Calendar Year 2019**

(Average of last 3 years' annual means not to exceed 12 µg/m3 *;
and average of 98th percentile for last 3 years not to exceed 35 µg/m$^3$ *, *changed* from 65 µg/m$^3$ on 12/17/06)

| Station | Site No. | Total Obs. | Maximum Values, µg/m$^3$ | | | 98th Percentile, µg/m$^3$ | | | | Quarterly Averages, 2019 | | | | Annual Mean, µg/m$^3$ | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 1st | nd | rd | 2017 | 2018 | 2019 | 3-yr Avg. | 1st | 2nd | 3rd | 4th | 2017 | 2018 | 2019 | 3-yr Avg. |
| Maspeth Library (C) | 36-081-0120 | 331 | 23.0 4-Jul | 21.8 29-Jul | 18.4 23-Dec | 14.4 | 16.7 | 16.3 | 15.8 | 7.7 | 4.4 | 6.5 | 6.3 | 6.7 | 6.6 | 6.2 | 6.5 |
| Queens College 2 (F) | 36-081-0214 | 349 | 28.8 3-Feb | 22.2 4-Feb | 20.7 5-Feb | 17.3 | 19.2 | 16.5 | 17.6 | 7.2 | 6.3 | 7.9 | 5.4 | 7.1 | 7.3 | 6.7 | 7.0 |
| Queens College 2 (C) | 36-081-0124 | 360 | 27.2 3-Feb | 26.5 22-Dec | 22.7 23-Dec | 16.2 | 18.1 | 17 | 17.1 | 6.1 | 5.4 | 7.0 | 5.4 | 6.3 | 6.2 | 6 | 6.1 |
| Queens College Near Road (C) | 36-081-0125 | 332 | 19.4 3-Feb | 17.8 28-Aug | 20.4 2-Jul | 15.8 | 18.7 | 16.7 | 17.0 | 8.8 | 6.4 | 7.0 | 6.9 | 6.7 | 7.4 | 7.3 | 7.1 |
| Queens College Near Road (F) | 36-081-0125 | 117 | 22.4 23-Dec | 22.1 5-Feb | 18.4 2-Feb | 16.3 | 19.5 | 18.4 | 18.0 | 8.8 | 7.0 | 8.2 | 7.1 | 7.8 | 8.3 | 7.8 | 7.9 |
| Port Richmond (F) | 36-085-0055 | 116 | 24.2 23-Dec | 21.7 26-Dec | 20.9 2-Feb | 17.1 | 20.1 | 20.9 | 19.3 | 8.1 | 6.9 | 8.0 | 7.3 | 7.2 | 7.7 | 7.6 | 7.5 |
| Port Richmond (C) | 36-085-0055 | 337 | 17.6 26-Dec | 17.4 23-Dec | 17.2 22-Dec | 14.5 | 17.6 | 14.9 | 15.6 | 7.7 | 4.4 | 6.3 | 6.5 | 7 | 7.4 | 6.2 | 6.8 |
| Freshkills West (C) | 36-085-0111 | 335 | 27.2 31-Mar | 18.9 30-Mar | 18.2 26-Dec | 15.8 | 21 | 15.7 | 17.5 | 8.0 | 5.5 | 6.5 | 6.1 | 7 | 8 | 6.5 | 7.1 |

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(C) = Continuous, used for AQI calculations. Values based on 24-hour averages of 1-hour values. Parameter Code 88502

(Annual Means in parentheses are based on less than 75% available data)
*Federal Ambient Air Quality Standard

[Date of Occurrence, Hour]
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NYSDEC Region **2**

# **CARBON MONOXIDE** - Continuous Gas Filter Correlation

Parameter Code: 42101

**Comparison Between NYS Ambient Air Quality and Ambient Air Quality Standards for Calendar Year 2019**

| | | **One-Hour Average** **Maximum not to exceed 35 PPM more than once per calendar year *** | | | | | | **Running 8-Hour Average (Non-Overlapping)** **Maximum not to exceed 9 PPM more than once per calendar year *** | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | **Observations** | | | **Highest Values, PPM** | | | **Observations** | | **Highest Values, PPM** | | |
| **Station** | **Site No.** | **Total Obs.** | **% Avail** | **>35 PPM** | **1st** | **2nd** | **3rd** | **Total** | **>9 PPM** | **1st** | **2nd** | **Days> 9 PPM** |
| **CCNY** | 36-061-0135 | 8,509 | 97 | 0 | 1.87 [01/29:11] | 1.68 [01/29:06] | 1.68 [12/23:09] | 8,681 | 0 | 1.3 [12/23:09] | 1.1 [03/30:03] | 0 |
| **Botanical Gardens (Pfizer Lab)** | 36-005-0133 | 8,649 | 99 | 0 | 1.94 [11/27:03] | 1.93 [11/27:02] | 1.78 [10/25:07] | 8,684 | 0 | 1.50 [11/27:06] | 1.30 [02/05:08] | 0 |
| Queens College 2 | 36-081-0124 | 8,519 | 97 | 0 | 1.51 [02/05:06] | 1.48 [02/04:09 | 1.34 [11/04:06] | 8,506 | 0 | 1.1 [02/04:11] | 1.10 [02/05:09] | 0 |
| Queens College Near Road | 36-081-0125 | 8,153 | 93 | 0 | 2.85 [04/04:14] | 1.72 [11/04:07] | 1.66 [02/05:08] | 8,005 | 0 | 1.3 [02/05:10] | 1.1 [02/04:10] | 0 |

(Annual Means in parentheses are based on less than 75% available data)
*Federal Ambient Air Quality Standard

[Date of Occurrence, Hour]
+ Denotes a contravention of Federal AAQS

NYSDEC Region **2**

# **OZONE** - Continuous UV Light Absorption

(Bronx, Brooklyn, and Staten Island Sites)

Parameter Code: 44201

**Comparison Between NYS Ambient Air Quality and Ambient Air Quality Standards for Calendar Year 2019**

| | | 8-hr Running Average Begin Hour | | | | | | | **4th Highest Daily Maximum 8-Hour Average-** | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | **Observations** | | | **Daily Highest Values, PPM** | | | | Not to exceed an avg of 0.075 ppm during the last 3 years, *changed* to 0.070 ppm beginning 1/1/2016* | | | |
| **Station** | **Site No.** | **Total Obs.** | **% Avail** | **Days >.070 PPM** | **1st** | **2nd** | **3rd** | **4th** | **2017** | **2018** | **2019** | **Avg.** |
| Botanical Garden (Pfizer Lab) | 36-005-0133 | 5,797 | 99 | 1 | 0.075<br>28-Jun | 0.070<br>16-Jul | 0.069<br>4-Jul | 0.068<br>17-Jul | 0.069<br>13-Jun | 0.077<br>6-Aug | 0.068<br>17-Jul | 0.071+ |
| IS 52 | 36-005-0110 | 5,774 | 98 | 3 | 0.075<br>28-Jun | 0.072<br>16-Jul | 0.071<br>17-Jul | 0.069<br>29-Jun | 0.069<br>18-May | 0.071<br>18-Jun | 0.069<br>29-Jun | 0.069 |
| Freshkills West | 36-085-0111 | 5,724 | 97 | 0 | 0.069<br>10-Jul | 0.069<br>16-Jun | 0.067<br>17-Jul | 0.065<br>3-Jul | xx<br>xx | 0.077<br>1-Jul | 0.065<br>3-Jul | xx |
| Susan Wagner | 36-085-0067 | 0 | 0 | | xx<br>xx | xx<br>xx | xx<br>xx | xx<br>xx | 0.072<br>13-Jun | xx<br>xx | xx<br>xx | xx |

Sampling was suspended at 7094-01 from in 2018 due to building construction

(Annual Means in parentheses are based on less than 75% available data)
*Federal Ambient Air Quality Standard

[Date of Occurrence, Hour]
+ Denotes a contravention of Federal AAQS

NYSDEC Region **2**

# **OZONE** - Continuous UV Light Absorption

(Manhattan and Queens Sites)

Parameter: 44201

**Comparison Between NYS Ambient Air Quality and Ambient Air Quality Standards for Calendar Year 2019**

| | | 8-hr Running Average Begin Hour | | | | | | | **4th Highest Daily Maximum 8-Hour Average-** | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | **Observations** | | | **Daily Highest Values, PPM** | | | | Not to exceed an avg of 0.075 ppm during the last 3 years, *changed* to 0.070 ppm beginning 1/1/2016* | | | |
| **Station** | **Site No.** | **Total Obs.** | **% Avail** | **Days >.070 PPM** | **1st** | **2nd** | **3rd** | **4th** | **2017** | **2018** | **2019** | **Avg.** |
| CCNY | 36-061-0135 | 5,768 | 98 | 2 | 0.081<br>28-Jun | 0.071<br>17-Jul | 0.067<br>16-Jul | 0.066<br>3-Jul | 0.070<br>10-Jul | 0.077<br>1-Jul | 0.066<br>3-Jul | 0.071+ |
| Queens College | 36-081-0124 | 8,612 | 98 | 4 | 0.076<br>3-Jul | 0.072<br>29-Jun | 0.072<br>16-Jul | 0.071<br>29-Jul | 0.079<br>10-Jul | 0.073<br>25-May | 0.071<br>29-Jul | 0.074+ |

(Annual Means in parentheses are based on less than 75% available data)

*New York and Federal Ambient Air Quality Standard + Denotes a contravention of NYS/Federal AAQS

NYSDEC Region **2**

# NITROGEN DIOXIDE - Continuous Chemiluminescence

Parameter:42602

**Annual Averages 2009 through 2019**

Annual Arithmetic Mean (PPB) - Primary Standard

(12-month average not to exceed 53 PPB *)

| Station | Site No. | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Botanical Garden (Harding Lab/Pfizer Lab) | 36-005-0133 /7094-06 | 21.85 | 20.1 | 20.86 | 18.6 | 18.37 | 17.2 | 17.16 | 15.59 | 14.91 | 14.44 | 12.81 |
| IS 52 | 36-005-0110 | 24.57 | -24.94 | xxx | -20.8 | 20.67 | 19.88 | 20.13 | 18.27 | 17.3 | 17.46 | 16.87 |
| Queens College | 36-081-0124 | 20.91 | 19.28 | (21.62) | 17.5 | 17.5 | 16.75 | 17.16 | 15.81 | 15.25 | 14.44 | 14.18 |
| Queens College Near-Road | 36-081-0125 | -- | | | | | | | | (16.29) | 16.44 | 16.84 |

Sampling was terminated at 7093-10 on 06/30/08. Sampling was suspended at 7094-07 on 06/24/10 due to building construction, and resumed on 08/10/13.

**Comparison Between NYS Ambient Air Quality and Ambient Air Quality Standards for Calendar Year 2019**

| | | One-Hour Averages - average of 98th percentile for last 3 years not to exceed 75 PPB * | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Observations | | **98th Percentile, PPB** | | | | **Highest Values, PPB** | | |
| **Station** | **Site No.** | **Total** | **% Avail** | **2017** | **2018** | **2019** | **3-yr avg.** | **1st** | **2nd** | **3rd** |
| Botanical Gardens - Pfizer Lab | 36-005-0133 | 7,897 | 99 | 56.0 | 53.9 | 50.4 | 53.4 | 61.4 [02/04:11] | 59.1 [02/04:07] | 54.1 [02/04:10] |
| IS 52 | 36-005-0110 | 7,673 | 91 | 59.4 | 59.3 | 57.7 | 58.8 | 67.2 [10/25:12] | 66.3 [10/25:08] | 65.5 [11/26:07] |
| Queens College | 36-081-0124 | 8,512 | 97 | 58.5 | 53.1 | 53.9 | 55.1 | 61.0 [02/04:07] | 60.4 [02/04:09] | 59.8 [03/30:00] |
| Queens College Near-Road | 36-081-0125 | 8,366 | 94 | (54.4) | 53.5 | 51.0 | -- | 59.3 [03/08:07 | 59.2 [03/08:06] | 58.9 [05/17:20] |

(Annual Means in parentheses are based on less than 75% available data)

*New York and Federal Ambient Air Quality Standard + Denotes a contravention of NYS/Federal AAQS

NYSDEC Region **2**

# **LEAD** –$PM_{10}$ Samplers

Parameter: 85128

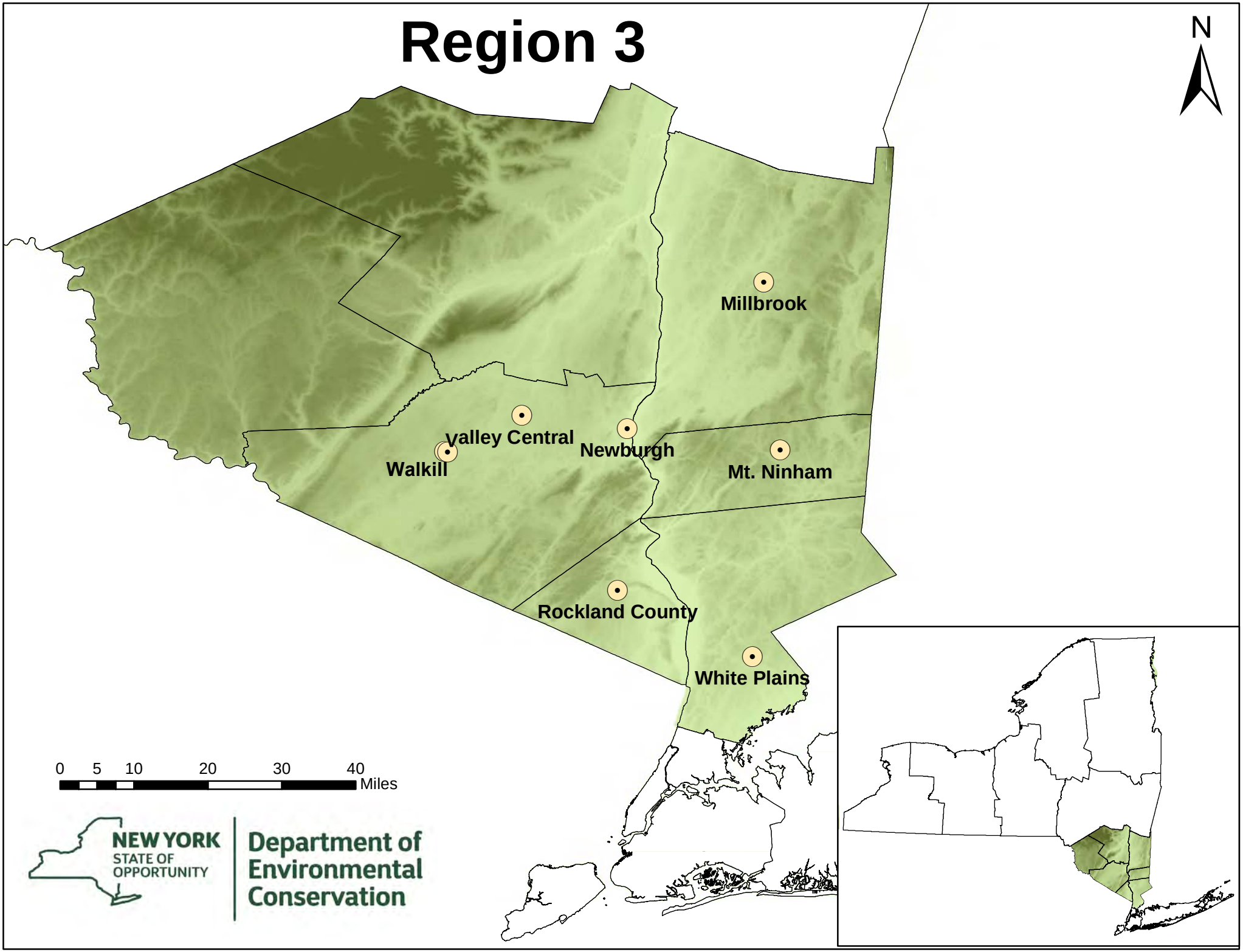
**Comparison Between NYS Ambient Air Quality and Ambient Air Quality Standards for Calendar Year 2019**

| | | 24-Hour Concentrations - µg/m³ | | | | | | | | THREE MONTH ROLLING AVERAGES<br>Maximum not to exceed 0.15 µg/m³, effective beginning 1/1/13 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Maximum | | 2nd Max. | | 3rd Max. | | Highest Values, µg/m³ | | |
| **Station** | **Site No.** | **Total Obs.** | **% Avail** | **Value** | **Date** | **Value** | **Date** | **Value** | **Date** | **2017** | **2018** | **2019** |
| IS 52 | 36-005-0110 | 56 | 92 | 0.0082 | 1-Feb | 0.006 | 14-Apr | 0.0049 | 27-Mar | 0.0041 | 0.0033 | 0.0027 |

(Annual Means in parentheses are based on less than 75% available data)

*New York and Federal Ambient Air Quality Standard + Denotes a contravention of NYS/Federal AAQS

# Region 3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NYSDEC Region **3**

# **SULFUR DIOXIDE** - Continuous Pulsed Fluorescence

Parameter: 42401

**Annual Averages 2009 through 2019**

Annual Arithmetic Mean (ppb) - Primary Standard

(12-month average not to exceed 30 PPB* [4])

| Station | Site No. | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mt. Ninham | 36-079-0005 | 1.14 | 0.8 | 0.86 | 0.73 | 0.72 | 0.63 | 0.59 | 0.23 | 0.22 | 0.11 | 0.13 |
| Millbrook | 36-027-0007 | xx | xx | -0.97 | 1.42 | 2.45 | 0.65 | 0.81 | 0.18 | 0.16 | 0.18 | 0.23 |
| Belleayre Mtn. | 5565-03 | 0.71 | 0.5 | 0.52 | 0.31 | xxx | xxx | xxx | xxx | xxx | xxx | xxx |

Sampling was suspended at 5565-03 in 2013

**Comparison Between NYS Ambient Air Quality and Ambient Air Quality Standards for Calendar Year 2019**

| | | One Hour Averages<br>average of 99th percentile for last 3 years not to exceed 75 PPB * | | | | | |
|---|---|---|---|---|---|---|---|
| | | **Observations** | | **99th Percentile, PPB** | | | |
| **Station** | **Site No.** | **Total Obs.** | **% Avail** | **2017** | **2018** | **2019** | **3-yr Avg.** |
| **Mt. Ninham** | 36-079-0005 | 8,622 | 98 | 5.9 | 3.4 | 1.5 | 3.60 |
| Millbrook | 36-027-0007 | 8,628 | 98 | 1.2 | 3.4 | 1.6 | 2.07 |

(Annual Means in parentheses are based on less than 75% available data)

*New York and Federal Ambient Air Quality Standard + Denotes a contravention of NYS/Federal AAQS

NYSDEC Region **3**

# INHALABLE PARTICULATES ($PM_{2.5}$)

**Comparison Between NYS Ambient Air Quality and Ambient Air Quality Standards for Calendar Year 2019**

(Average of last 3 years= annual means not to exceed 12 µg/m3 *;
and average of 98th percentile for last 3 years not to exceed 35 µg/m$^3$ *, *changed* from 65 m$^3$g/m$^3$ on 12/17/06)

| Station | Site No. | Total | Maximum Values, µg/m$^3$ | | | 98th Percentile, µg/m$^3$ | | | | Quarterly Averages, 2019 | | | | Annual Mean, µg/m$^3$ | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 1st | nd | rd | 2017 | 2018 | 2019 | 3-yr Avg. | 1st | 2nd | 3rd | 4th | 2017 | 2018 | 2019 | 3-yr Avg. |
| Newburgh (F) | 36-071-0002 | 118 | 18.8<br>5-Jul | 17.5<br>2-Feb | 14.5<br>15-Jan | 13.9 | 16.2 | 14.5 | 14.8 | 6.1 | 5.1 | 6.9 | 5.2 | 6 | 6.4 | 5.8 | 6.0 |
| Newburgh (C) | 36-071-0002 | 334 | 20.2<br>5-Jul | 17.8<br>3-Feb | 17.1<br>4-Feb | 16.4 | 19.3 | 15 | 16.9 | 7.6 | 4.3 | 6.1 | 6.0 | 6.2 | 6.3 | 5.5 | 6.0 |
| Rockland Co. (C) | 36-087-0005 | 327 | 17.2<br>5-Jul | 16.6<br>3-Feb | 16.3<br>30-Jul | 12.3 | 16.9 | 14.3 | 14.5 | 6.9 | 4.0 | 5.6 | 5.4 | 5.6 | 5.7 | 5.5 | 5.6 |
| White Plains (C) | 36-119-2004 | 329 | 17.8<br>3-Feb | 15.4<br>22-Dec | 14.9<br>4-Jul | 13 | 15.8 | 12.6 | 13.8 | 6.7 | 4.0 | 5.3 | 5.4 | 5.8 | 5.8 | 5.3 | 5.6 |

(F) = Federal Reference Method or Federal Equivalent Method: Parameter Code: 88101
(C) = Continuous, used for AQI calculations. Values based on 24-hour averages of 1-hour values. Parameter Code 88502

(Annual Means in parentheses are based on less than 75% available data)
*New York and Federal Ambient Air Quality Standard + Denotes a contravention of NYS/Federal AAQS

NYSDEC Region **3**

# **OZONE** - Continuous UV Light Absorption

Parameter: 44201

**Comparison Between NYS Ambient Air Quality and Ambient Air Quality Standards for Calendar Year 2019**

| | | 8-hr Running Average Begin Hour | | | | | | | **4th Highest Daily Maximum 8-Hour Average-** Not to exceed an avg of 0.075 ppm during the last 3 years, *changed* to 0.070 ppm beginning 1/1/2016* | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | **Observations** | | | **Daily Highest Values, PPM** | | | | | | | |
| **Station** | **Site No.** | **Total Obs.** | **% Avail** | **Days >.070 PPM** | **1st** | **2nd** | **3rd** | **4th** | **2017** | **2018** | **2019** | **Avg.** |
| Valley Central | 36-071-5001 | 5,808 | 99 | 0 | 0.062<br>4-Jul | 0.061<br>2-Aug | 0.058<br>5-Jul | 0.058<br>16-Jul | 0.059<br>17-Jul | 0.064<br>1-May | 0.058<br>16-Jul | 0.060 |
| Rockland County | 36-087-0005 | 5,810 | 99 | 1 | 0.074<br>4-Jul | 0.070<br>5-Jul | 0.066<br>16-Jul | 0.066<br>22-Sep | 0.066<br>18-May | 0.072<br>13-Jul | 0.066<br>22-Sep | 0.068 |
| White Plains | 36-119-2004 | 5,775 | 98 | 1 | 0.072<br>30-Jul | 0.070<br>16-Jun | 0.070<br>29-Jul | 0.069<br>22-Sep | 0.072<br>3-Aug | 0.078<br>28-Jul | 0.069<br>22-Sep | 0.073+ |
| Millbrook | 36-027-0007 | 5,746 | 96 | 0 | 0.067<br>11-Jul | 0.064<br>5-Jun | 0.063<br>22-Sep | 0.061<br>30-Jul | 0.063<br>10-Apr | 0.065<br>10-Jul | 0.061<br>30-Jul | 0.063 |
| Mt. Ninham | 36-079-0005 | 5,807 | 99 | 1 | 0.071<br>22-Sep | 0.064<br>16-Jul | 0.062<br>11-Jul | 0.062<br>3-Aug | 0.070<br>18-May | 0.066<br>10-Jul | 0.062<br>3-Aug | 0.066 |

(Annual Means in parentheses are based on less than 75% available data)

*New York and Federal Ambient Air Quality Standard + Denotes a contravention of NYS/Federal AAQS

NYSDEC Region **3**

# **LEAD** - Low Volume Air Samplers

Parameter: 14128

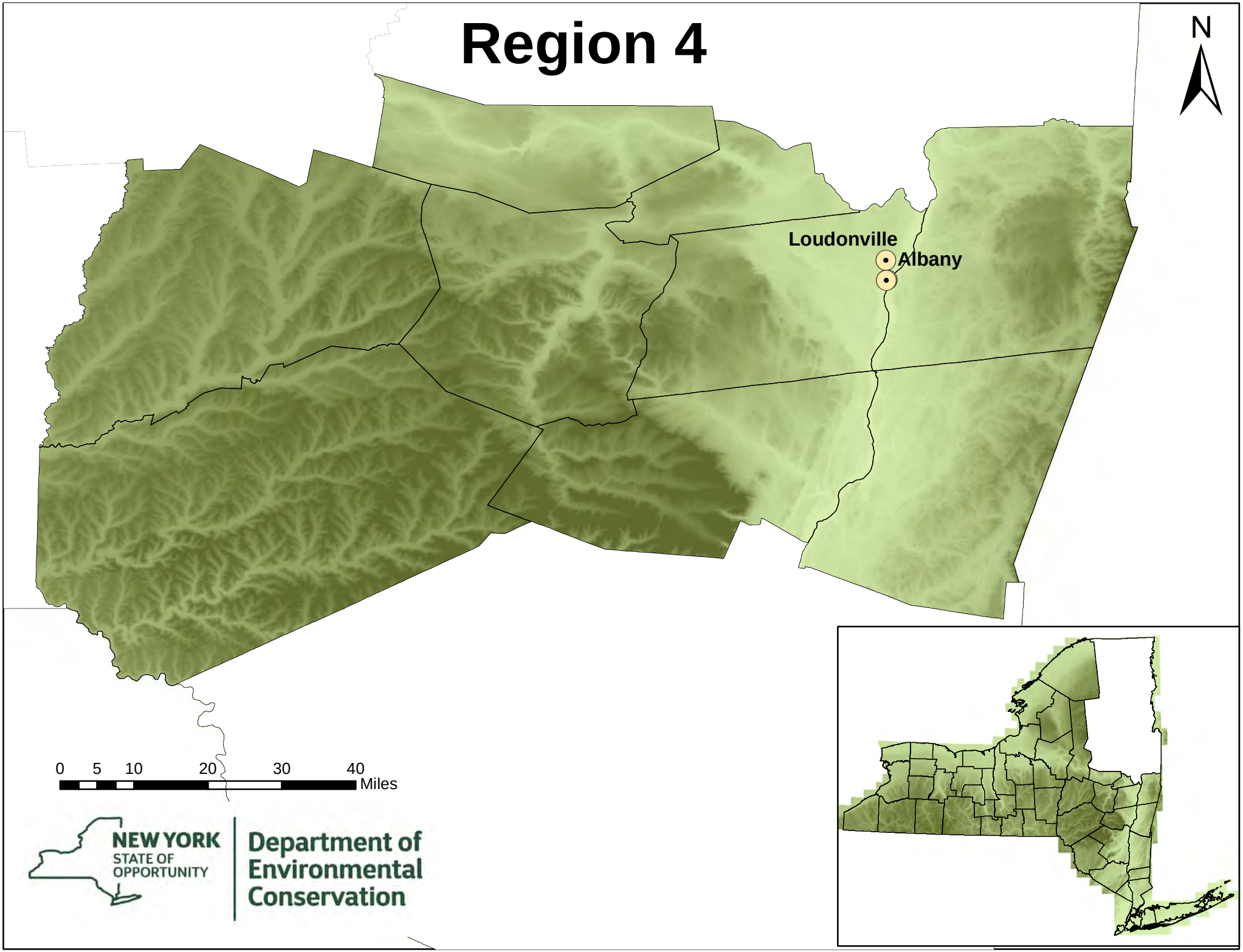
**Comparison Between NYS Ambient Air Quality and Ambient Air Quality Standards for Calendar Year 2019**

| | | | | 24-Hour Concentrations - µg/m³ | | | | | | THREE MONTH ROLLING AVERAGES<br>Maximum not to exceed 0.15 µg/m³, effective beginning 1/1/13 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Maximum | | 2nd Max. | | 3rd Max. | | Highest Values, µg/m³ | | |
| **Station** | **Site No.** | **Total Obs.** | **% Avail** | **Value** | **Date** | **Value** | **Date** | **Value** | **Date** | **2017** | **2018** | **2019** |
| Wallkill | 36-071-3002 | 122 | 97 | 0.08 | 24-Oct | 0.02 | 3-Jan | 0.01 | 27-Oct | 0.01 | 0.01 | 0.01 |

(Annual Means in parentheses are based on less than 75% available data)

*New York and Federal Ambient Air Quality Standard + Denotes a contravention of NYS/Federal AAQS

# Region 4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OPPORTUNITY
Department of
Environmental
Conservation

NYSDEC Region **4**

# **SULFUR DIOXIDE** - Continuous Pulsed Fluorescence

Parameter: 42401

**Annual Averages 2009 through 2019**

Annual Arithmetic Mean (ppb) - Primary Standard

(12-month average not to exceed 30 PPB * [4])

| Station | Site No. | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Loudonville | 36-001-0012 | 3.85 | 2.33 | 1.92 | 0.97 | 2.03 | 1.6 | 1.3 | 0.36 | 0.37 | 0.36 | 0.17 |
| Schenectady | 4601-05 | 2.63 | 1.92 | (2.18) | xxx | xxx | xxx | xxx | xxx | xxx | xxx | xxx |
| Grafton State Park | 4153-04 | 1.52 | 1.12 | 1.13 | (0.76) | xxx | xxx | xxx | xxx | xxx | xxx | xxx |

Sampling at 4601-05 and 4153-04 was terminated on 06/30/11 and 12/31/12, respectively.

**Comparison Between NYS Ambient Air Quality and Ambient Air Quality Standards for Calendar Year 2019**

| | | One Hour Averages<br>average of 99th percentile for last 3 years not to exceed 75 PPB * | | | | | |
|---|---|---|---|---|---|---|---|
| | | **Observations** | | **99th Percentile, PPB** | | | |
| **Station** | **Site No.** | **Total Obs.** | **% Avail** | **2017** | **2018** | **2019** | **3-yr Avg.** |
| Loudonville | 36-001-0012 | 8,537 | 97 | 3.7 | 2.1 | 3.4 | 3.07 |

(Annual Means in parentheses are based on less than 75% available data)

*New York and Federal Ambient Air Quality Standard + Denotes a contravention of NYS/Federal AAQS

NYSDEC Region **4**

# INHALABLE PARTICULATES ($PM_{2.5}$)

**Comparison Between NYS Ambient Air Quality and Ambient Air Quality Standards for Calendar Year 2019**

(Average of last 3 years annual means not to exceed 12 µg/m3 *
and average of 98th percentile for last 3 years not to exceed 35 µg/m$^3$ *, *changed* from 65 m$^3$g/m$^3$ on 12/17/06)

| Station | Site No. | Total | Maximum Values, µg/m$^3$ | | | 98th Percentile, µg/m$^3$ | | | | Quarterly Averages, 2019 | | | | Annual Mean, µg/m$^3$ | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 1st | nd | rd | 2017 | 2018 | 2019 | 3-yr Avg. | 1st | 2nd | 3rd | 4th | 2017 | 2018 | 2019 | 3-yr Avg. |
| Albany Co. HD (F) | 36-001-0005 | 120 | 19.6<br>23-Dec | 17.5<br>15-Jan | 17.3<br>2-Feb | 15.4 | 16.5 | 17.3 | 16.4 | 6.3 | 4.7 | 6.6 | 6.0 | 6.5 | 6 | 5.9 | 6.1 |
| Albany Co. HD (C) | 36-001-0005 | 364 | 31.5<br>3-Feb | 30.0<br>22-Dec | 28.4<br>15-Jan | 17 | 19.7 | 19.9 | 18.8 | 9.6 | 5.8 | 6.9 | 8.0 | 7.5 | 7.9 | 7.6 | 7.6 |
| Loudonville (F) | 36-001-0012 | 118 | 15.6<br>15-Jan | 15.0<br>2-Feb | 16.2<br>5-Jul | 13.6 | 16.2 | 13.4 | 14.4 | 5.3 | 4.4 | 6.1 | 4.5 | 5.8 | 5.8 | 5.1 | 5.5 |

(F) = Federal Reference Method or Federal Equivalent Method: Parameter Code: 88101
(C) = Continuous, used for AQI calculations. Values based on 24-hour averages of 1-hour values. Parameter Code 88502

**Obs.**

(Annual Means in parentheses are based on less than 75% available data)
*New York and Federal Ambient Air Quality Standard + Denotes a contravention of NYS/Federal AAQS

NYSDEC Region **4**

# **CARBON MONOXIDE** - Continuous Gas Filter Correlation

Parameter: 42101

**Comparison Between NYS Ambient Air Quality and Ambient Air Quality Standards for Calendar Year 2019**

| | | **One-Hour Average** Maximum not to exceed 35 PPM more than once per calendar year * | | | | | | **Running 8-Hour Average** (Non-Overlapping) Maximum not to exceed 9 PPM more than once per calendar year * | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | **Observations** | | | **Highest Values, PPM** | | | **Observations** | | **Highest Values, PPM** | | |
| **Station** | **Site No.** | **Total Obs.** | **% Avail** | **>35 PPM** | **1st** | **2nd** | **3rd** | **Total** | **>9 PPM** | **1st** | **2nd** | **Days> 9PPM** |
| Loudonville | 36-001-0012 | 8,125 | 93 | 0 | 1.5 [05/02:14] | 0.9 [12/22:08] | 0.9 [02/01:08] | 8,066 | 0 | 0.7 [12/22:07] | 0.6 [12/22:11] | 0 |

(Annual Means in parentheses are based on less than 75% available data)

*New York and Federal Ambient Air Quality Standard + Denotes a contravention of NYS/Federal AAQS

NYSDEC Region **4**

# **OZONE** - Continuous UV Light Absorption

Parameter: 44201

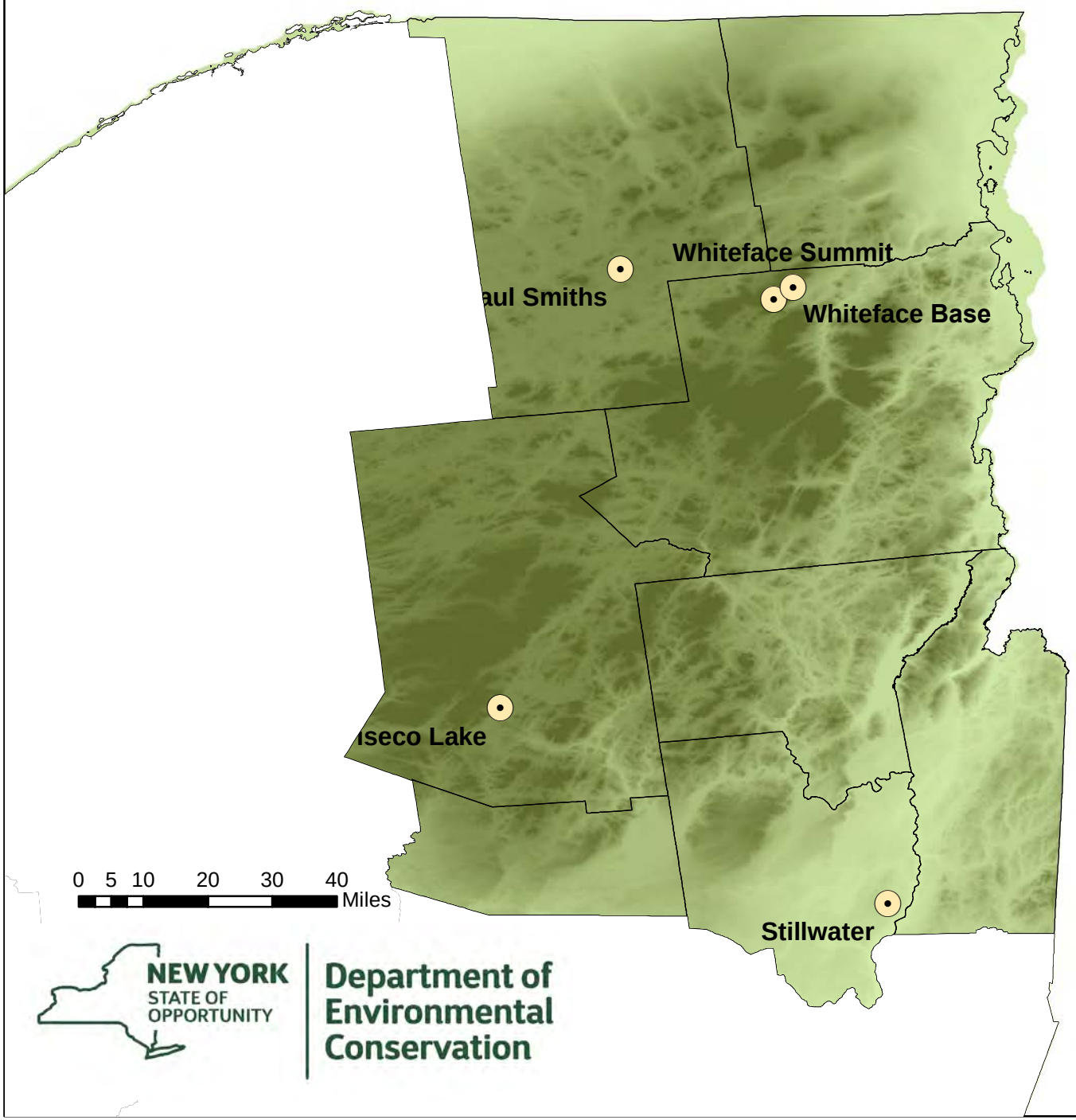
**Comparison Between NYS Ambient Air Quality and Ambient Air Quality Standards for Calendar Year 2019**

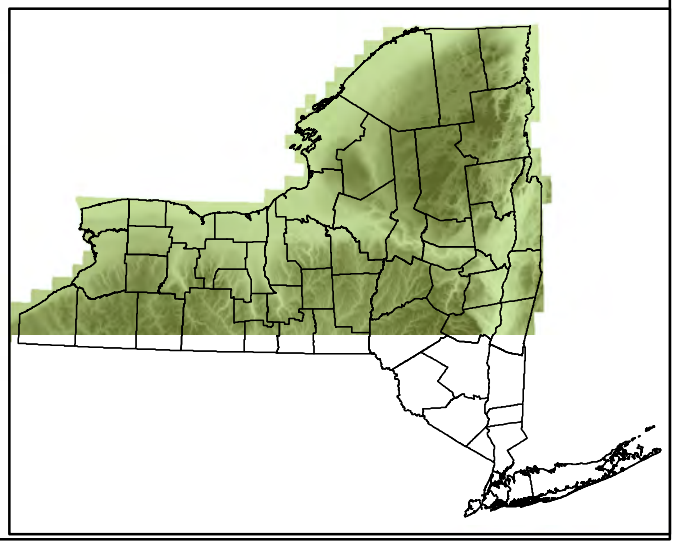
| | | 8-hr Running Average Begin Hour | | | | | | | **4th Highest Daily Maximum 8-Hour Average-** | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | **Observations** | | | **Daily Highest Values, PPM** | | | | Not to exceed an avg of 0.075 ppm during the last 3 years, *changed* to 0.070 ppm beginning 1/1/2016* | | | |
| **Station** | **Site No.** | **Total Obs.** | **% Avail** | **Days >.070 PPM** | **1st** | **2nd** | **3rd** | **4th** | **2017** | **2018** | **2019** | **Avg.** |
| Loudonville | 36-001-0012 | 5,778 | 98 | 0 | 0.062<br>5-Jul | 0.059<br>5-Jun | 0.059<br>28-Jun | 0.056<br>19-May | 0.061<br>17-May | 0.064<br>2-May | 0.056<br>19-May | 0.060 |

(Annual Means in parentheses are based on less than 75% available data)

*New York and Federal Ambient Air Quality Standard + Denotes a contravention of NYS/Federal AAQS

# Region 5



NEW YORK
STATE OF
OPPORTUNITY

Department of
Environmental
Conservation

NYSDEC Region **5**

# **SULFUR DIOXIDE** - Continuous Pulsed Fluorescence

Parameter: 42401

**Annual Averages 2009 through 2019**

Annual Arithmetic Mean (ppb) - Primary Standard

(12-month average not to exceed 30 PPB * [4])

| Station | Site No. | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Whiteface Mtn. - Lodge | 36-031-0003 | 0.64 | 0.72 | 0.73 | 0.61 | 0.36 | 0.38 | 0.47 | 0.26 | 0.18 | 0.18 | 0.13 |
| Paul Smiths College | 36-033-0004 | 0.6 | 0.57 | 0.67 | 0.5 | -0.52 | 0.6 | 0.32 | 0.2 | 0.28 | 0.11 | 0.17 |
| Piseco Lake | 36-041-0005 | 0.44 | 0.34 | 0.32 | 0.14 | 0.17 | 0.21 | 0.16 | 0.05 | 0.03 | 0.03 | 0.05 |

**Comparison Between NYS Ambient Air Quality and Ambient Air Quality Standards for Calendar Year 2019**

| | | One Hour Averages<br>average of 99th percentile for last 3 years not to exceed 75 PPB * | | | | | |
|---|---|---|---|---|---|---|---|
| | | **Observations** | | **99th Percentile, PPB** | | | |
| **Station** | **Site No.** | **Total Obs.** | **% Avail** | **2017** | **2018** | **2019** | **3-yr Avg.** |
| Whiteface Mtn. - Lodge | 36-031-0003 | 8,425 | 96 | 1.5 | 1 | 0.9 | 1.13 |
| Paul Smiths College | 36-033-0004 | 8,463 | 97 | 1.2 | 1.1 | 1.1 | 1.13 |
| Piseco Lake | 36-041-0005 | 8,493 | 97 | 1 | 1 | 0.6 | 0.87 |

(Annual Means in parentheses are based on less than 75% available data)

*New York and Federal Ambient Air Quality Standard + Denotes a contravention of NYS/Federal AAQS

NYSDEC Region **5**

# INHALABLE PARTICULATES ($PM_{2.5}$)

**Comparison Between NYS Ambient Air Quality and Ambient Air Quality Standards for Calendar Year 2019**

(Average of last 3 years= annual means not to exceed 12 µg/m3 *;
and average of 98th percentile for last 3 years not to exceed 35 µg/m³ *, *changed* from 65 µg/m³ on 12/17/06)

| Station | Site No. | Total | Maximum Values, µg/m³ | | | 98th Percentile, µg/m³ | | | | Quarterly Averages, 2019 | | | | Annual Mean, µg/m³ | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 1st | nd | rd | 2017 | 2018 | 2019 | 3-yr Avg. | 1st | 2nd | 3rd | 4th | 2017 | 2018 | 2019 | 3-yr Avg. |
| Whiteface Base (F) | 36-031-0002 | 50 | 8.7 **2**<br>20-Jul | 7.2 **3**<br>2-Jun | 6.9<br>13-Aug | 11.7 | 12.5 | 8.7 | 10.9 | 2.7 | 2.8 | 3.8 | 1.8 | 3.7 | 3.4 | 2.8 | 3.3 |
| Whiteface Base (C) | 36-031-0002 | 306 | 12.1<br>3-Jul | 10.7<br>4-Jul | 10.3<br>28-Jul | 9.9 | 10.3 | 8.7 | 9.6 | 3.1 | 2.8 | 4.3 | 2.5 | 3.6 | 3.6 | 3.2 | 3.4 |

(F) = Federal Reference Method or Federal Equivalent Method: Parameter Code: 88101
(C) = Continuous, used for AQI calculations. Values based on 24-hour averages of 1-hour values. Parameter Code 88502

**Obs.**

(Annual Means in parentheses are based on less than 75% available data)
*New York and Federal Ambient Air Quality Standard + Denotes a contravention of NYS/Federal AAQS

NYSDEC Region **5**

# **OZONE** - Continuous UV Light Absorption

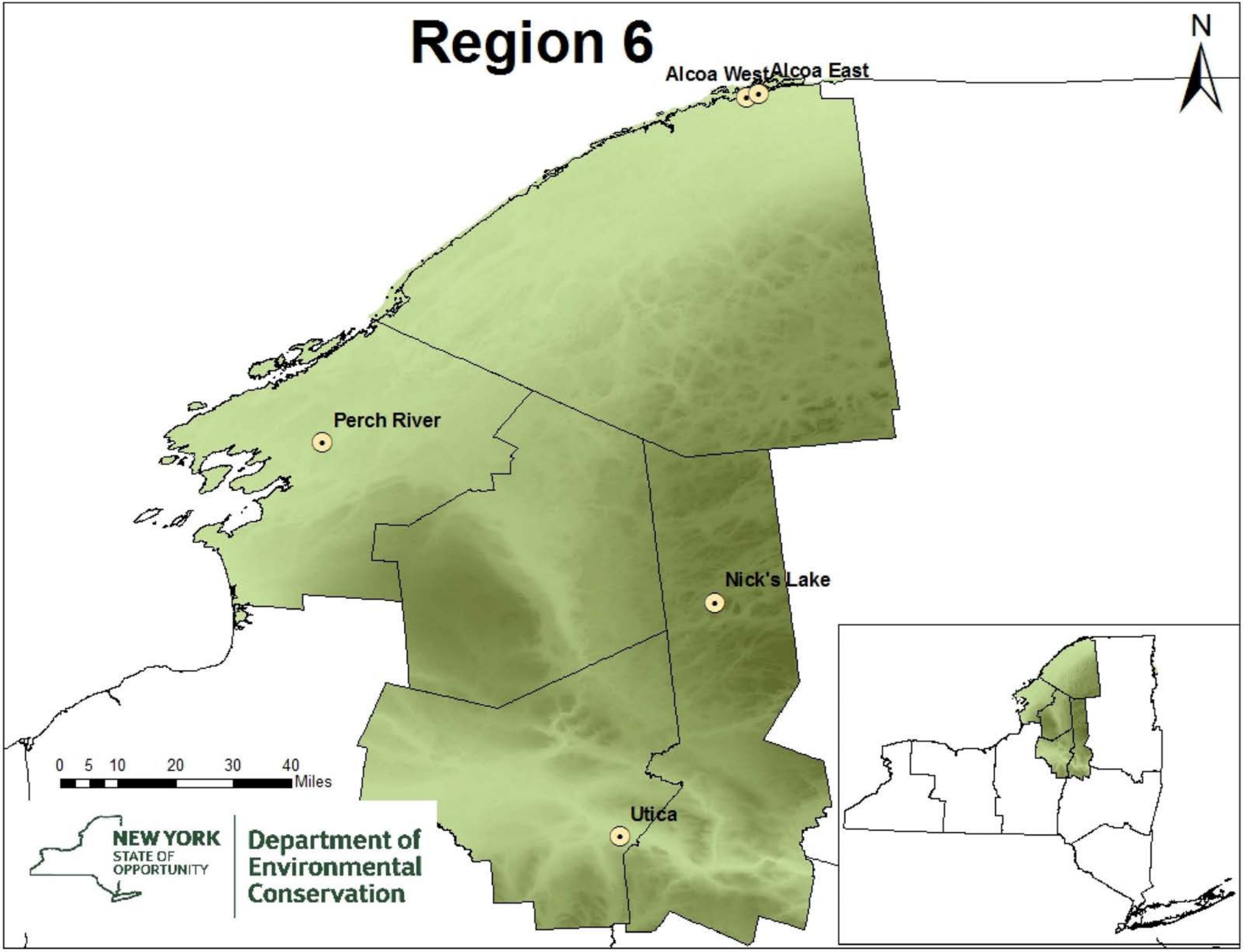
Parameter: 44201

**Comparison Between NYS Ambient Air Quality and Ambient Air Quality Standards for Calendar Year 2019**

| | | 8-hr Running Average Begin Hour | | | | | | | **4th Highest Daily Maximum 8-Hour Average-** | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | **Observations** | | | **Daily Highest Values, PPM** | | | | Not to exceed an avg of 0.075 ppm during the last 3 years, *changed* to 0.070 ppm beginning 1/1/2016* | | | |
| **Station** | **Site No.** | **Total Obs.** | **% Avail** | **Days >.070 PPM** | **1st** | **2nd** | **3rd** | **4th** | **2016** | **2017** | **2019** | **Avg.** |
| Stillwater | 36-091-0004 | 5,736 | 98 | 0 | 0.057<br>5-Jul | 0.056<br>25-May | 0.054<br>5-Jun | 0.054<br>26-Jun | 0.060<br>17-May | 0.067<br>26-May | 0.054<br>26-Jun | 0.060 |
| Whiteface Mtn. Summit | 36-031-0002 | 5,815 | 99 | 0 | 0.064<br>5-Jun | 0.063<br>30-Mar | 0.062<br>19-Oct | 0.061<br>28-Jun | 0.066<br>12-Jun | 0.066<br>1-May | 0.061<br>28-Jun | (0.064) |
| Whiteface Mtn. Base | 36-031-0003 | 5,648 | 96 | 0 | 0.061<br>30-Mar | 0.057<br>28-Mar | 0.057<br>6-May | 0.056<br>28-Jun | 0.060<br>15-Apr | 0.066<br>2-May | 0.056<br>28-Jun | 0.060 |
| Piseco Lake | 36-041-0005 | 5,759 | 98 | 0 | 0.056<br>28-Jun | 0.055<br>29-Jun | 0.054<br>1-Jun | 0.054<br>28-Jul | 0.064<br>17-May | 0.063<br>24-Apr | 0.054<br>28-Jul | 0.060 |
| Mt. Ninham | 36-079-0005 | 5,807 | 99 | 1 | 0.071<br>22-Sep | 0.064<br>16-Jul | 0.062<br>11-Ju1 | 0.062<br>3-Aug | 0.070<br>18-May | 0.066<br>10-Jul | 0.062<br>3-Aug | 0.066 |

(Annual Means in parentheses are based on less than 75% available data)

*New York and Federal Ambient Air Quality Standard + Denotes a contravention of NYS/Federal AAQS


Region 6
N
Alcoa West
Alcoa East
Perch River
Nick's Lake
Utica
0 5 10 20 30 40
Miles
NEW YORK
STATE OF
OPPORTUNITY
Department of
Environmental
Conservation

NYSDEC Region **6**

# **SULFUR DIOXIDE** - Continuous Pulsed Fluorescence

Parameter: 42401

**Annual Averages 2009 through 2019**

Annual Arithmetic Mean (ppb) - Primary Standard

(12-month average not to exceed 30 PPB * [4])

| Station | Site No. | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Alcoa West | 36-089-0004 | xxx | xxx | xxx | xxx | xxx | xxx | xxx | xxx | 5.16 | 4.00 | 4.01 |
| Alcoa East | 36-089-0005 | xxx | xxx | xxx | xxx | xxx | xxx | xxx | xxx | 1.62 | 1.30 | 1.36 |
| Nick's Lake | 36-043-0005 | 0.52 | 0.54 | 0.48 | 0.65 | 0.6 | 0.67 | 0.52 | 0.2 | (0.16) | 0.12 | (0.28) |

**Comparison Between NYS Ambient Air Quality and Ambient Air Quality Standards for Calendar Year 2019**

| | | One Hour Averages<br>average of 99th percentile for last 3 years not to exceed 75 PPB * | | | | | |
|---|---|---|---|---|---|---|---|
| | | **Observations** | | **99th Percentile, PPB** | | | |
| **Station** | **Site No.** | **Total Obs.** | **% Avail** | **2017** | **2018** | **2019** | **3-yr Avg.** |
| Alcoa West | 36-089-0004 | 8,706 | 98 | 90.5 | 86.5 | 82 | 86.3+ |
| Alcoa East | 36-089-0005 | 8,742 | 100 | 45.2 | 40.6 | 42 | 42.6 |
| Nick's Lake | 36-043-0005 | 52.63 | 96 | 1.1 | 1.1 | 2.5 | 1.57 |

*Alcoa East and Alcoa West are source oriented monitors established in 2017 to comply with the Data Requirements Rule for the 2010 1-Hour Sulfur Dioxide Primary National Ambient Air Quality Standard (80 FR 51052) that requires that NYSDEC provide data to characterize the 1-hour ambient air concentration of SO2 in areas near the Alcoa Massena West Aluminum Plant.

(Annual Means in parentheses are based on less than 75% available data)

*New York and Federal Ambient Air Quality Standard + Denotes a contravention of NYS/Federal AAQS

NYSDEC Region **6**

# INHALABLE PARTICULATES ($PM_{2.5}$)

**Comparison Between NYS Ambient Air Quality and Ambient Air Quality Standards for Calendar Year 2019**

(Average of last 3 years= annual means not to exceed 12 µg/m3 *;
and average of 98th percentile for last 3 years not to exceed 35 µg/m³ *, *changed* from 65 µg/m³ on 12/17/06)

| Station | Site No. | Total | Maximum Values, µg/m³ | | | 98th Percentile, µg/m³ | | | | Quarterly Averages, 2019 | | | | Annual Mean, µg/m³ | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 1st | nd | rd | 2017 | 2018 | 2019 | 3-yr Avg. | 1st | 2nd | 3rd | 4th | 2017 | 2018 | 2019 | 3-yr Avg. |
| Utica (C) | 36-065-2001 | 326 | 16.3<br>22-Dec | 15.0<br>23-Dec | 13.9<br>15-Jan | 14.1 | 14.2 | 12.8 | 13.7 | 7.1 | 3.4 | 4.3 | 4.8 | 5.4 | 5.4 | 4.9 | 5.2 |

(F) = Federal Reference Method or Federal Equivalent Method: Parameter Code: 88101
(C) = Continuous, used for AQI calculations. Values based on 24-hour averages of 1-hour values. Parameter Code 88502

**Obs.**

(Annual Means in parentheses are based on less than 75% available data)
*New York and Federal Ambient Air Quality Standard + Denotes a contravention of NYS/Federal AAQS

NYSDEC Region **6**

# **OZONE** - Continuous UV Light Absorption

Parameter: 44201

**Comparison Between NYS Ambient Air Quality and Ambient Air Quality Standards for Calendar Year 2019**

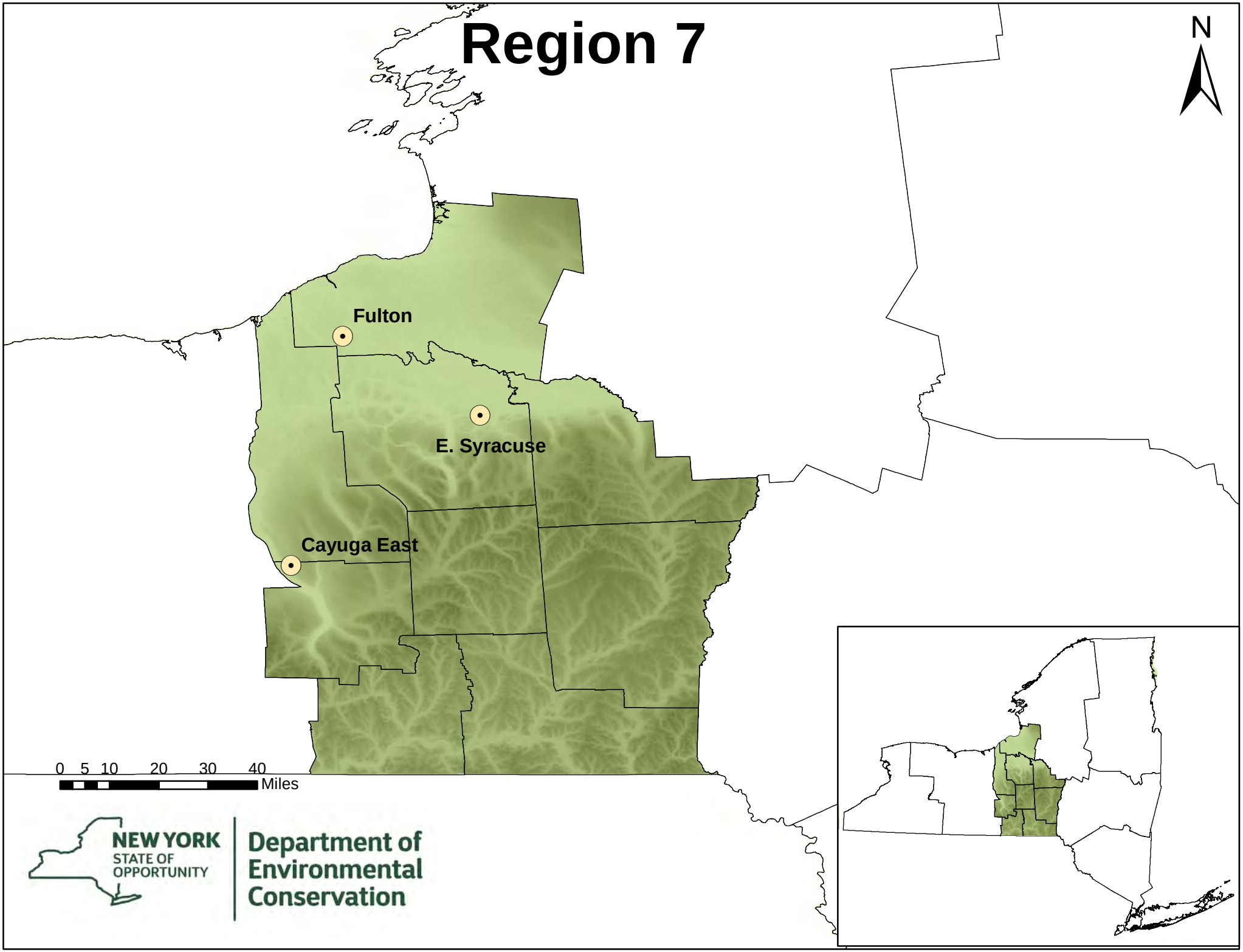
| | | 8-hr Running Average Begin Hour | | | | | | | **4th Highest Daily Maximum 8-Hour Average-** Not to exceed an avg of 0.075 ppm during the last 3 years, *changed* to 0.070 ppm beginning 1/1/2016* | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | **Observations** | | | **Daily Highest Values, PPM** | | | | | | | |
| **Station** | **Site No.** | **Total Obs.** | **% Avail** | **Days >.070 PPM** | **1st** | **2nd** | **3rd** | **4th** | **2017** | **2018** | **2019** | **Avg.** |
| Nick's Lake | 36-043-0005 | 4,871 | 83 | 0 | 0.049<br>25-Jun | 0.049<br>3-Aug | 0.048<br>1-Jun | 0.048<br>26-Jun | 0.057<br>10-Jun | 0.064<br>1-May | 0.048<br>26-Jun | (0.056) |
| Perch River | 36-045-0002 | 3,721 | 93 | 2 | 0.059<br>26-Jun | 0.059<br>27-Jun | 0.056<br>27-Jul | 0.056<br>29-Jul | 0.066<br>12-Jun | 0.068<br>2-May | 0.056<br>29-Jul | 0.063 |

Sampling stopped at 2167-03 in December 31st 2019 due to no power being available at the site

(Annual Means in parentheses are based on less than 75% available data)

*New York and Federal Ambient Air Quality Standard + Denotes a contravention of NYS/Federal AAQS

# Region 7




NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

NYSDEC Region **7**

# **SULFUR DIOXIDE** - Continuous Pulsed Fluorescence

Parameter: 42401

**Annual Averages 2009 through 2019**

Annual Arithmetic Mean (ppb) - Primary Standard

(12-month average not to exceed 30 PPB * [4])

| Station | Site No. | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Camp Georgetown | 2655-01 | 1.17 | 1.09 | 0.52 | xxx | xxx | xxx | xxx | xxx | xxx | xxx | xxx |
| Cayuga East* | 36-109-0002 | xxx | xxx | xxx | xxx | xxx | xxx | xxx | xxx | 0.34 | 0.09 | -0.03 |
| East Syracuse | 36-067-1015 | 1.23 | 0.92 | 0.88 | 0.88 | 0.61 | 0.7 | 0.6 | 0.4 | 0.35 | 0.26 | 0.12 |

Sampling at 2655-01 was suspended on 04/02/2012

*Cayuga East is a source-oriented monitor established in 2017 to comply with the Data Requirements Rule for the 2010 1-Hour Sulfur Dioxide Primary National Ambient Air Quality Standard (80 FR 51052) that requires that NYSDEC provide data to characterize the 1-hour ambient air concentration of SO2 in areas near the Cayuga Operating Company Power Plant.

**Comparison Between NYS Ambient Air Quality and Ambient Air Quality Standards for Calendar Year 2019**

| | | One Hour Averages<br>average of 99th percentile for last 3 years not to exceed 75 PPB * | | | | | |
|---|---|---|---|---|---|---|---|
| | | **Observations** | | **99th Percentile, PPB** | | | |
| **Station** | **Site No.** | **Total Obs.** | **% Avail** | **2017** | **2018** | **2019** | **3-yr Avg.** |
| Cayuga East | 36-109-0002 | 8,595 | 98 | 24.9 | 51.8 | 20.8 | 32.5 |
| East Syracuse | 36-067-1015 | 8,574 | 98 | 1.9 | 2.2 | 0.9 | 1.67 |

(Annual Means in parentheses are based on less than 75% available data)

*New York and Federal Ambient Air Quality Standard + Denotes a contravention of NYS/Federal AAQS

NYSDEC Region **7**

# INHALABLE PARTICULATES ($PM_{2.5}$)

**Comparison Between NYS Ambient Air Quality and Ambient Air Quality Standards for Calendar Year 2019**

(Average of last 3 years= annual means not to exceed 15 µg/m$^3$*;
and average of 98$^{th}$ percentile for last 3 years not to exceed 35 µg/m$^3$*, *changed* from 65 µg/m$^3$ on 12/17/06)

| Station | Site No. | Total | Maximum Values, µg/m$^3$ | | | 98th Percentile, µg/m$^3$ | | | | Quarterly Averages, 2019 | | | | Annual Mean, µg/m$^3$ | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 1st | nd | rd | 2017 | 2018 | 2019 | 3-yr Avg. | 1st | 2nd | 3rd | 4th | 2017 | 2018 | 2019 | 3-yr Avg. |
| East Syracuse (C) | 36-067-1015 | 355 | 19.2<br>7-Feb | 17.6<br>3-Feb | 16.9<br>22-Dec | 12.2 | 16.2 | 14.9 | 14.4 | 6.5 | 5.8 | 6.6 | 6.9 | 5.2 | 4.8 | 6.4 | 5.4 |
| East Syracuse (F) | 36-067-1015 | 120 | 15.8<br>15-Jan | 12.7<br>12-Dec | 12.6<br>2-Feb | 13 | 16.8 | 12.6 | 14.1 | 5.8 | 4.6 | 6.1 | 4.7 | 5.5 | 5.9 | 5.3 | 5.6 |

(F) = Federal Reference Method or Federal Equivalent Method: Parameter Code: 88101
(C) = Continuous, used for AQI calculations. Values based on 24-hour averages of 1-hour values. Parameter Code 88502

**Obs.**

(Annual Means in parentheses are based on less than 75% available data)
*New York and Federal Ambient Air Quality Standard + Denotes a contravention of NYS/Federal AAQS

NYSDEC Region **7**

# **OZONE** - Continuous UV Light Absorption

Parameter:44201

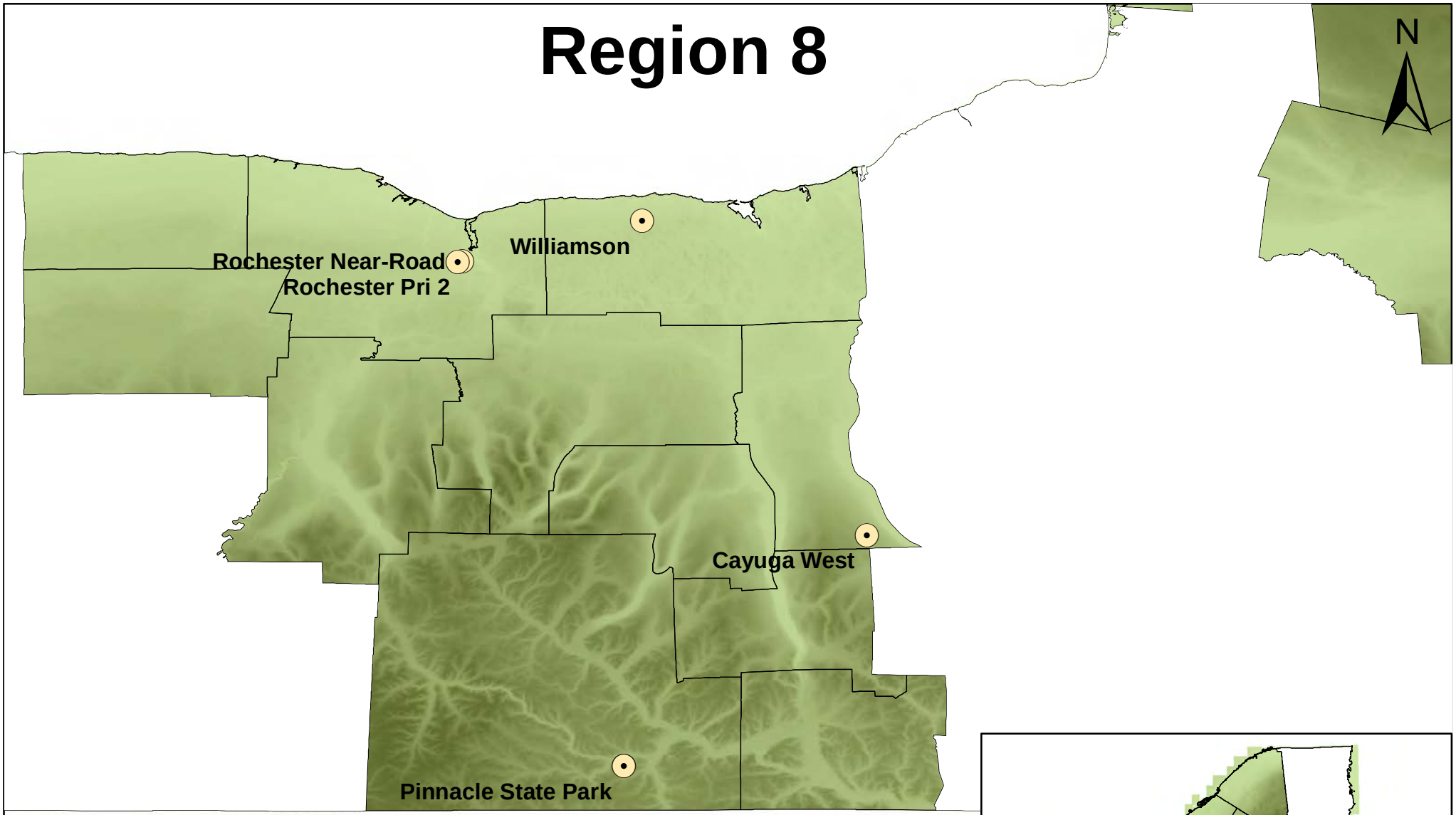
**Comparison Between NYS Ambient Air Quality and Ambient Air Quality Standards for Calendar Year 2019**

| | | 8-hr Running Average Begin Hour | | | | | | | **4th Highest Daily Maximum 8-Hour Average-** Not to exceed an avg of 0.075 ppm during the last 3 years, *changed* to 0.070 ppm beginning 1/1/2016* | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | **Observations** | | | **Daily Highest Values, PPM** | | | | | | | |
| **Station** | **Site No.** | **Total Obs.** | **% Avail** | **Days >.070 PPM** | **1st** | **2nd** | **3rd** | **4th** | **2017** | **2018** | **2019** | **Avg.** |
| East Syracuse | 36-067-1015 | 5,752 | 99 | 0 | 0.063<br>68-Jun | 0.059<br>9-Mar | 0.059<br>30-Mar | 0.058<br>14-Mar | 0.064<br>19-Jul | 0.066<br>2-May | 0.058<br>14-Mar | 0.062 |
| Fulton/Granby | 36-075-0003 | 5,537 | 94 | 0 | 0.060<br>6-Mar | 0.058<br>28-Jun | 0.057<br>26-Jun | 0.056<br>29-Jun | 0.063<br>12-Jun | 0.067<br>14-Jul | 0.056<br>29-Jun | 0.062 |

(Annual Means in parentheses are based on less than 75% available data)

*New York and Federal Ambient Air Quality Standard + Denotes a contravention of NYS/Federal AAQS

# Region 8

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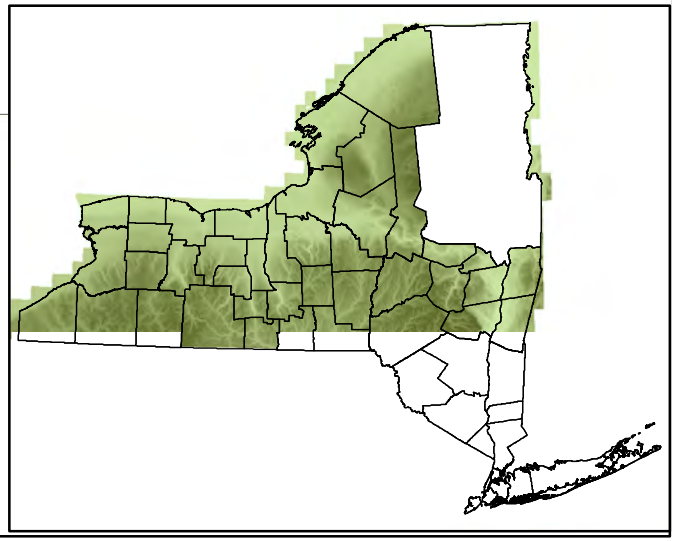
NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation



NYSDEC Region **8**

# **SULFUR DIOXIDE** - Continuous Pulsed Fluorescence

Parameter: 42401

**Annual Averages 2009 through 2019**

Annual Arithmetic Mean (ppb) - Primary Standard

(12-month average not to exceed 30 PPB * [4])

| Station | Site No. | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Elmira | 0701-05 | 2.01 | 2.08 | 1.65 | 1.48 | xx | xx | xx | xx | xx | xx | xx |
| Rochester | 36-055-1007 | 2.54 | 2.19 | (1.15) | 0.99 | 0.91 | 0.96 | 0.79 | 0.68 | 0.49 | 0.23 | 0.17 |
| Cayuga West* | 36-099-0002 | xxx | xxx | xxx | xxx | xxx | xxx | xxx | xxx | 0.11 | 0.09 | 0.23 |
| Pinnacle | 36-101-0003 | 1.04 | 0.63 | 0.71 | 0.39 | 0.39 | 0.45 | 0.33 | 0.21 | 0.13 | 0.13 | 0.07 |

Sampling was suspended at 0701-05 in 2013

*Cayuga West is a source-oriented monitor established in 2017 to comply with the Data Requirements Rule for the 2010 1-Hour Sulfur Dioxide Primary National Ambient Air Quality Standard (80 FR 51052) that requires that NYSDEC provide data to characterize the 1-hour ambient air concentration of SO2 in areas near the Cayuga Operating Company Power Plant.

**Comparison Between NYS Ambient Air Quality and Ambient Air Quality Standards for Calendar Year 2019**

| | | One Hour Averages<br>average of 99th percentile for last 3 years not to exceed 75 PPB * | | | | | |
|---|---|---|---|---|---|---|---|
| | | **Observations** | | **99th Percentile, PPB** | | | |
| **Station** | **Site No.** | **Total Obs.** | **% Avail** | **2017** | **2018** | **2019** | **3-yr Avg.** |
| Rochester | 36-055-1007 | 8,561 | 98 | 19.7 | 7.5 | 2.6 | 9.73 |
| Cayuga West* | 36-099-0002 | 8,673 | 99 | 2.5 | 2.4 | 1.9 | 2.27 |
| Pinnacle | 36-101-0003 | 8,562 | 98 | 1.9 | 2 | 1.8 | 1.90 |

(Annual Means in parentheses are based on less than 75% available data)

*New York and Federal Ambient Air Quality Standard + Denotes a contravention of NYS/Federal AAQS

NYSDEC Region **8**

# INHALABLE PARTICULATES ($PM_{10}$)

Parameter Code:81102

**Comparison Between NYS Ambient Air Quality and Ambient Air Quality Standards for Calendar Year 2019**

| | | 24-Hour Concentrations - µg/m³ | | | | | | | # of Days > 150 µg/m³ - Not to exceed an expected avg of one per year during the last 3 years * | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | **Maximum** | | **2nd Max.** | | **3rd Max.** | | **2017** | | **2018** | | **2019** | | |
| **Station** | **Site No.** | **Total Obs.** | **Value** | **Date** | **Value** | **Date** | **Value** | **Date** | **Mea** | **Est** | **Mea** | **Est** | **Mea** | **Est** | **Exp. Avg.** |
| Rochester | 36-055-1007 | 60 | 24 | 2-Feb | 24 | 26-Jul | 22 | 28-Mar | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

(Annual Means in parentheses are based on less than 75% available data)

*New York and Federal Ambient Air Quality Standard + Denotes a contravention of NYS/Federal AAQS

NYSDEC Region **8**

# INHALABLE PARTICULATES ($PM_{2.5}$)

**Comparison Between NYS Ambient Air Quality and Ambient Air Quality Standards for Calendar Year 2019**

(Average of last 3 years= annual means not to exceed 12 µg/m3 *;
and average of 98th percentile for last 3 years not to exceed 35 µg/m$^3$ *, *changed* from 65 µg/m$^3$ on 12/17/06)

| Station | Site No. | Total | Maximum Values, µg/m$^3$ | | | 98th Percentile, µg/m$^3$ | | | | Quarterly Averages, 2019 | | | | Annual Mean, µg/m$^3$ | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 1st | nd | rd | 2017 | 2018 | 2019 | 3-yr Avg. | 1st | 2nd | 3rd | 4th | 2017 | 2018 | 2019 | 3-yr Avg. |
| Rochester Near Road (F) | 36-055-0015 | 108 | 18.5 20-Nov | 17.7 29-Dec | 15.7 2-Feb | 13.8 | 19.3 | 15.7 | 16.2 | 8.2 | 5.6 | 6.4 | 6.2 | 6.5 | 7.3 | 6.6 | 6.8 |
| Rochester Near Road (T) | 36-055-0015 | 342 | 19.1 30-Jul | 16.3 29-Jul | 15.8 26-Dec | 13.8 | 16.9 | 14.3 | 15.0 | 7.9 | 5.1 | 6.8 | 7.4 | 6.2 | 7.3 | 6.8 | 6.7 |
| Rochester 2 (T) | 36-055-1007 | 352 | 18.6 29-Dec | 17.6 26-Dec | 17.5 25-Nov | 13.9 | 17.4 | 16.1 | 15.8 | 6.0 | 5.8 | 6.2 | 7.0 | 7.2 | 6.2 | 6.3 | 6.5 |
| Rochester 2 (F) | 36-055-1007 | 113 | 18.6 29-Jul | 17.9 26-Jul | 17.7 20-Nov | 14.7 | 18.8 | 17.7 | 17.0 | 6.1 | 6.2 | 7.6 | 6.2 | 6.7 | 6.9 | 6.5 | 6.7 |
| Pinnacle (C) | 36-101-0003 | 363 | 18.9 26-Dec | 17.7 27-Dec | 17.1 11-Dec | 11.1 | 13.1 | 13.3 | 12.5 | 6.7 | 5.5 | 6.2 | 6.1 | 4.6 | 4.8 | 6.1 | 5.1 |
| Pinnacle (F) | 36-101-0003 | 109 | 14.3 26-Dec | 12.7 20-Nov | 11.0 18-Jan | 11.1 | 15.0 | 11.0 | 12.3 | 4.8 | 3.9 | 4.9 | 4.2 | 4.6 | 5.4 | 4.4 | 4.8 |

(F) = Federal Reference Method or Federal Equivalent Method: Parameter Code: 88101
(C) = Continuous, used for AQI calculations. Values based on 24-hour averages of 1-hour values. Parameter Code 88502

(Annual Means in parentheses are based on less than 75% available data)
*New York and Federal Ambient Air Quality Standard + Denotes a contravention of NYS/Federal AAQS

NYSDEC Region **8**

# **CARBON MONOXIDE** - Continuous Gas Filter Correlation

Parameter: 42101

**Comparison Between NYS Ambient Air Quality and Ambient Air Quality Standards for Calendar Year 2019**

| | | **One-Hour Average** Maximum not to exceed 35 PPM more than once per calendar year * | | | | | | **Running 8-Hour Average** (Non-Overlapping) Maximum not to exceed 9 PPM more than once per calendar year * | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | **Observations** | | | **Highest Values, PPM** | | | **Observations** | | **Highest Values, PPM** | | |
| **Station** | **Site No.** | **Total Obs.** | **% Avail** | **>35 PPM** | **1st** | **2nd** | **3rd** | **Total** | **>9 PPM** | **1st** | **2nd** | **Days> 9PPM** |
| Rochester 2 | 36-055-1007 | 8,302 | 95 | 0 | 1.06 [03/01:06] | 0.95 [11/25:21] | 0.89 [12/07:20] | 7,929 | 0 | 0.7 [11/25:23] | 0.7 [12/08:00] | 0 |
| Rochester Near-Road | 36-055-0015 | 8,280 | 98 | 0 | 0.88 [10/28:19] | 0.86 [11/25:21] | 0.81 [10/21:07] | 8,236 | 0 | 0.6 [02/14:23] | 0.6 [12/19:20] | 0 |
| Pinnacle | 36-101-0003 | 8,492 | 95 | 0 | 0.37 [05/31:12] | 0.32 [03/01:14] | 0.30 [07/25:13] | 8,462 | 0 | 0.30 [02/07:00] | 0.30 [02/07:08] | 0 |

(Annual Means in parentheses are based on less than 75% available data)

*New York and Federal Ambient Air Quality Standard + Denotes a contravention of NYS/Federal AAQS

NYSDEC Region **8**

# **OZONE** - Continuous UV Light Absorption

**Comparison Between NYS Ambient Air Quality and Ambient Air Quality Standards for Calendar Year 2019**

| | | 8-hr Running Average Begin Hour | | | | | | | **4th Highest Daily Maximum 8-Hour Average-** Not to exceed an avg of 0.075 ppm during the last 3 years, *changed* to 0.070 ppm beginning 1/1/2016* | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | **Observations** | | | **Daily Highest Values, PPM** | | | | | | | |
| **Station** | **Site No.** | **Total Obs.** | **% Avail** | **Days >.070 PPM** | **1st** | **2nd** | **3rd** | **4th** | **2017** | **2018** | **2019** | **Avg.** |
| Rochester 2 | 36-055-1007 | 8,430 | 96 | 0 | 0.067<br>28-Jun | 0.062<br>13-Jul | 0.059<br>6-May | 0.059<br>27-Jun | 0.067<br>12-Jun | 0.071<br>9-Jul | 0.059<br>27-Jun | 0.065 |
| Pinnacle | 36-101-0003 | 8,558 | 98 | 0 | 0.055<br>20-Apr | 0.055<br>6-May | 0.055<br>23-May | 0.054<br>9-Mar | 0.058<br>10-Jun | 0.064<br>1-May | 0.054<br>9-Mar | 0.058 |
| Williamson | 36-117-3001 | 5,597 | 95 | 0 | 0.067<br>28-Jun | 0.061<br>27-Jul | 0.060<br>13-Apr | 0.060<br>27-Jun | 0.065<br>10-Jun | 0.071<br>14-Jul | 0.060<br>27-Jun | 0.065 |

(Annual Means in parentheses are based on less than 75% available data)
*New York and Federal Ambient Air Quality Standard + Denotes a contravention of NYS/Federal AAQS

NYSDEC Region **8**

# **NITROGEN DIOXIDE** - Continuous Chemiluminescence

Parameter: 42602

**Annual Averages 2009 through 2019**

Annual Arithmetic Mean (PPB) - Primary Standard (12-month average not to exceed 53 PPB *)

| Station | Site No. | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Rochester Near-Road | 36-055-0015 | xx | xx | xx | xx | xx | (9.95) | 10.09 | 9.72 | 9.08 | 8.73 | 7.75 |

**Comparison Between NYS Ambient Air Quality and Ambient Air Quality Standards for Calendar Year 2019**

| | | One-Hour Averages - average of 98th percentile for last 3 years not to exceed 75 PPB * | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Observations | | 98th Percentile, PPB | | | | Highest Values, PPB | | |
| **Station** | **Site No.** | **Total** | **% Avail** | **2017** | **2018** | **2019** | **3-yr avg.** | **1st** | **2nd** | **3rd** |
| Rochester Near-Road | 36-055-0015 | 8,313 | 95 | 35.8 | 36.8 | 38.9 | 37.1 | 58.7 [07/22:12] | 45.0 [02/20:05] | 43.5 [02/20:03] |

(Annual Means in parentheses are based on less than 75% available data)

*New York and Federal Ambient Air Quality Standard + Denotes a contravention of NYS/Federal AAQS

NYSDEC Region **8**

# **LEAD** –$PM_{10}$ Samplers

Parameter: 85128

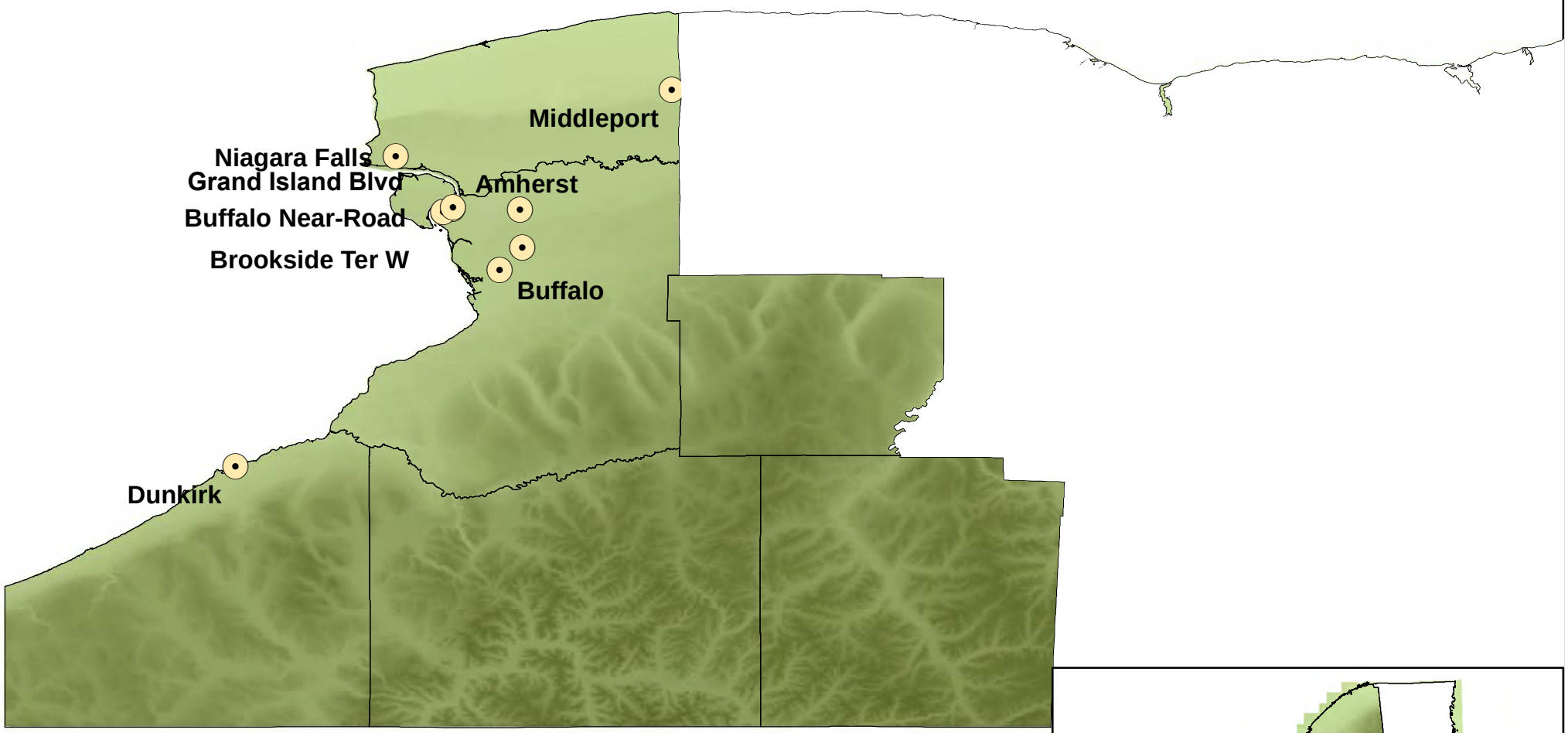
**Comparison Between NYS Ambient Air Quality and Ambient Air Quality Standards for Calendar Year 2019**

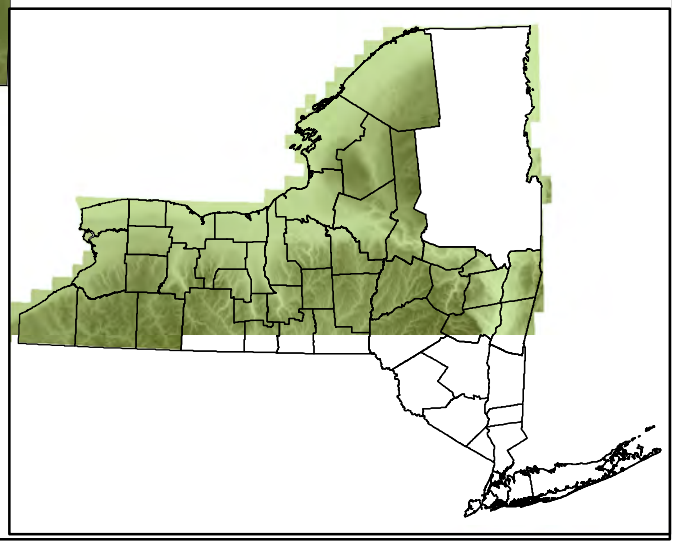
| | | 24-Hour Concentrations - µg/m³ | | | | | | | | THREE MONTH ROLLING AVERAGES<br>Maximum not to exceed 0.15 µg/m³, effective beginning 1/1/13<br>* (the old standard of 1.5 µg/m³ will remain in force until that date) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Maximum | | 2nd Max. | | 3rd Max. | | Highest Values, µg/m³ | | |
| **Station** | **Site No.** | **Total Obs.** | **% Avail** | **Value** | **Date** | **Value** | **Date** | **Value** | **Date** | **2017** | **2018** | **2019** |
| Rochester | 36-055-1007 | 61 | 99 | 0.0037 | 29-Dec | 0.0031 | 25-Aug | 0.0028 | 30-Sep | 0.0042 | 0.0022 | 0.0017 |

(Annual Means in parentheses are based on less than 75% available data)

*New York and Federal Ambient Air Quality Standard + Denotes a contravention of NYS/Federal AAQS

# Region 9



0 5 10 20 30 40 Miles

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

NYSDEC Region **9**

# **SULFUR DIOXIDE** - Continuous Pulsed Fluorescence

Parameter: 42401

**Annual Averages 2009 through 2019**

Annual Arithmetic Mean (ppb) - Primary Standard

(12-month average not to exceed 30 PPB * [4])

| Station | Site No. | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Buffalo | 36-029-0005 | 1.74 | 1.5 | 2.01 | 2.72 | (2.4) | 1.49 | 1.02 | 0.49 | 0.35 | 0.40 | 0.40 |
| Brookside Terrace | 36-029-0023 | 2.1 | 1.83 | 3.43 | 2.11 | 2.82 | (1.52) | 1.04 | 0.77 | 0.35 | 0.38 | 0.33 |
| Dunkirk | 36-013-0006 | 2.55 | 1.54 | 1.72 | 1.3 | 1.03 | 1.5 | 1.28 | 0.41 | 0.16 | 0.14 | 0.13 |
| Niagara Falls | 3102-25 | 1.58 | 1.53 | 2.74 | 3.47 | xxx | xxx | xxx | xxx | xxx | xxx | xxx |

Sampling was suspended at 1472-04 in 2007, and at 0675-01 and 3102-25 in 2013

**Comparison Between NYS Ambient Air Quality and Ambient Air Quality Standards for Calendar Year 2019**

| | | One Hour Averages<br>average of 99th percentile for last 3 years not to exceed 75 PPB * | | | | | |
|---|---|---|---|---|---|---|---|
| | | **Observations** | | **99th Percentile, PPB** | | | |
| **Station** | **Site No.** | **Total Obs.** | **% Avail** | **2017** | **2018** | **2019** | **3-yr Avg.** |
| Buffalo | 36-029-0005 | 8,608 | 98 | 8.3 | 7.1 | 13.6 | 9.66 |
| Brookside Terrace | 36-029-0023 | 8,581 | 98 | 3.2 | 5 | 2.5 | 3.56 |
| Dunkirk | 36-013-0006 | 8,307 | 95 | 2.6 | 3 | 3.2 | 2.93 |

(Annual Means in parentheses are based on less than 75% available data)

*New York and Federal Ambient Air Quality Standard + Denotes a contravention of NYS/Federal AAQS

NYSDEC Region **9**

# INHALABLE PARTICULATES ($PM_{10}$)

Parameter Code:81102

**Comparison Between NYS Ambient Air Quality and Ambient Air Quality Standards for Calendar Year 2019**

| | | | 24-Hour Concentrations - µg/m³ | | | | | | # of Days > 150 µg/m³ - Not to exceed an expected avg of one per year during the last 3 years * | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | **Maximum** | | **2nd Max.** | | **3rd Max.** | | **2017** | | **2018** | | **2019** | | |
| **Station** | **Site No.** | **Total Obs.** | **Value** | **Date** | **Value** | **Date** | **Value** | **Date** | **Mea** | **Est** | **Mea** | **Est** | **Mea** | **Est** | **Exp. Avg.** |
| Buffalo (R&P) | 36-029-0005 | 49 | 29 | 15-Jan | 24 | 20-Feb | 23 | 28-Mar | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

(Annual Means in parentheses are based on less than 75% available data)

*New York and Federal Ambient Air Quality Standard + Denotes a contravention of NYS/Federal AAQS

NYSDEC Region **9**

# INHALABLE PARTICULATES ($PM_{2.5}$)

**Comparison Between NYS Ambient Air Quality and Ambient Air Quality Standards for Calendar Year 2019**

(Average of last 3 years= annual means not to exceed 12 µg/m3 *;
and average of 98th percentile for last 3 years not to exceed 35 µg/m³ *, *changed* from 65 µg/m³ on 12/17/06)

| Station | Site No. | Total | Maximum Values, µg/m³ | | | 98th Percentile, µg/m³ | | | | Quarterly Averages, 2019 | | | | Annual Mean, µg/m³ | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 1st | nd | rd | 2017 | 2018 | 2019 | 3-yr Avg. | 1st | nd | rd | th | 2017 | 2018 | 2019 | 3-yr Avg. |
| Buffalo (F) | 36-029-0005 | 115 | 21.0 20-Nov | 20.5 15-Jan | 16.8 5-Jun | 16.7 | 19.4 | 16.8 | 17.6 | 7.5 | 6.9 | 7.3 | 6.6 | 7.2 | 7.5 | 7 | 7.2 |
| Buffalo (C) | 36-029-0005 | 361 | 19.5 4-Jul | 19.1 29-Jul | 17.1 28-Jul | 16.1 | 16.2 | 14.4 | 15.5 | 7.5 | 5.3 | 6.7 | 7.6 | 7.5 | 7.5 | 6.8 | 7.2 |
| Grand Island Blvd (C) | 36-029-1013 | 365 | 16.9 10-Jul | 15.9 28-Jul | 15.6 29-Jul | 16.3 | 19.7 | 14.2 | 16.7 | 7.3 | 4.9 | 6.6 | 7.4 | 7.8 | 9.4 | 6.5 | 7.9 |
| Brookside Terrace (C) | 36-029-1014 | 352 | 27.5 28-Jul | 23.2 27-Jul | 16.7 4-Jul | 13.6 | 17.5 | 14.1 | 15.0 | 7.0 | 5.1 | 7.3 | 7.3. | 7 | 7.3 | 6.7 | 7.0 |
| Obs. Buffalo Near Road (C) | 36-029-0023 | 364 | 16.3 29-Jul | 15.3 28-Dec | 15.0 10-Jul | 16.1 | 16.1 | 14.5 | 15.5 | 7.5 | 5.5 | 7.1 | 7.6 | 7.8 | 7.4 | 6.9 | 7.3 |
| Buffalo Near Road (F) | 36-029-0023 | 111 | 18.1 15-Jan | 16.5 5-Jun | 14.9 19-Mar | 15 | 17.8 | 14.9 | 15.9 | 8.1 | 7.0 | 7.2 | 6.2 | 7.4 | 7.6 | 7.1 | 7.3 |
| Dunkirk (F) | 36-013-0006 | 115 | 15.0 5-Jun | 14.3 15-Jan | 13.8 1-Mar | 13.7 | 17.2 | 13.8 | 14.9 | 6.2 | 6.1 | 6.4 | 5.0 | 6.2 | 6.6 | 5.9 | 6.2 |
| Amherst (F) | 36-029-0002 | 120 | 18.6 20-Nov | 17.8 15-Jan | 14.8 2-Feb | 14.7 | 17.8 | 14.8 | 15.7 | 6.9 | 5.9 | 6.7 | 6.1 | 6.6 | 6.9 | 6.4 | 6.6 |

(F) = Federal Reference Method or Federal Equivalent Method: Parameter Code: 88101
(C) = Continuous, used for AQI calculations. Values based on 24-hour averages of 1-hour values. Parameter Code 88502

TEOM sampling at 3102-25 was terminated on 12/31/12, and FRM on 4/01/13.
Sampling resumed on 4/4/13 at 0601-04.

(Annual Means in parentheses are based on less than 75% available data)
*New York and Federal Ambient Air Quality Standard + Denotes a contravention of NYS/Federal AAQS

NYSDEC Region **9**

# **CARBON MONOXIDE** - Continuous Gas Filter Correlation

Parameter:42101

**Comparison Between NYS Ambient Air Quality and Ambient Air Quality Standards for Calendar Year 2019**

| | | **One-Hour Average** Maximum not to exceed 35 PPM more than once per calendar year * | | | | | | **Running 8-Hour Average** (Non-Overlapping) Maximum not to exceed 9 PPM more than once per calendar year * | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | **Observations** | | | **Highest Values, PPM** | | | **Observations** | | **Highest Values, PPM** | | |
| **Station** | **Site No.** | **Total Obs.** | **% Avail** | **>35 PPM** | **1st** | **2nd** | **3rd** | **Total** | **>9 PPM** | **1st** | **2nd** | **Days> 9PPM** |
| Buffalo | 36-029-0005 | 8,569 | 98 | 0 | 1.1 [01/04:22] | 1.1 [10/29:06] | 1.0 [01/04:23] | 8,645 | 0 | 0.90 [01/05:04] | 0.70 [01/05:07] | 0 |
| Buffalo Near-Road | 36-029-0023 | 8,603 | 97 | 0 | 1.14 [03/20:06] | 1.07 [01/04:22] | 0.92 [12/26:19] | 8,582 | 0 | 0.80 [01/05:04] | 0.70 [10/28:23] | 0 |

(Annual Means in parentheses are based on less than 75% available data)

*New York and Federal Ambient Air Quality Standard + Denotes a contravention of NYS/Federal AAQS

NYSDEC Region **9**

# **OZONE** - Continuous UV Light Absorption

Parameter: 44201

**Comparison Between NYS Ambient Air Quality and Ambient Air Quality Standards for Calendar Year 2019**

| | | 8-hr Running Average Begin Hour | | | | | | | **4th Highest Daily Maximum 8-Hour Average-** Not to exceed an avg of 0.075 ppm during the last 3 years, *changed* to 0.070 ppm beginning 1/1/2016* | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | **Observations** | | | **Daily Highest Values, PPM** | | | | | | | |
| **Station** | **Site No.** | **Total Obs.** | **% Avail** | **Days >.070 PPM** | **1st** | **2nd** | **3rd** | **4th** | **2017** | **2018** | **2019** | **Avg.** |
| **Dunkirk** | 36-013-0006 | 5,810 | 99 | 1 | 0.072<br>13-Jul | 0.067<br>29-Jun | 0.065<br>26-Jun | 0.065<br>10-Jul | 0.066<br>27-Sep | 0.071<br>25-May | 0.065<br>10-Jul | 0.067 |
| **Amherst** | 36-029-0002 | 5,583 | 95 | 1 | 0.074<br>25-May | 0.073<br>26-May | 0.070<br>28-May | 0.063<br>24-May | 0.066<br>12-Jun | 0.069<br>25-May | 0.063<br>24-May | 0.066 |
| **Middleport** | 36-063-1006 | 5,668 | 96 | 0 | 0.064<br>13-Jul | 0.060<br>6-May | 0.060<br>29-Jun | 0.059<br>10-Jul | 0.062<br>19-Jul | 0.069<br>9-Jul | 0.059<br>10-Jul | 0.063 |

(Annual Means in parentheses are based on less than 75% available data)

*New York and Federal Ambient Air Quality Standard + Denotes a contravention of NYS/Federal AAQS

NYSDEC Region **9**

# NITROGEN DIOXIDE - Continuous Chemiluminescence

Parameter: 42602

**Annual Averages 2009 through 2019**

Annual Arithmetic Mean (PPB) - Primary Standard (12-month average not to exceed 53 PPB *)

| Station | Site No. | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Buffalo Near-Road | 36-029-0023 | -- | | -- | | | 9.9 | 12.4 | 10.78 | 9.6 | 9.54 | 9.47 |
| Buffalo | 36-029-0005 | 15.05 | 13.88 | 13 | (12.52) | 10.46 | (10.38) | (8.7) | 9.9 | 9.49 | 9.81 | 9.11 |
| Amherst | 36-029-0002 | (9.71) | (7.42) | 8.19 | 8.32 | 6.44 | -- | | -- | | | -- |

Sampling at 1451-03 was suspended 12/31/12.

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**Comparison Between NYS Ambient Air Quality and Ambient Air Quality Standards for Calendar Year 2019**

| | | One-Hour Averages - average of 98th percentile for last 3 years not to exceed 75 PPB * | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Observations | | 98th Percentile, PPB | | | | Highest Values, PPB | | |
| **Station** | **Site No.** | **Total** | **% Avail** | **2017** | **2018** | **2019** | **3-yr avg.** | **1st** | **2nd** | **3rd** |
| Buffalo Near-Road | 36-029-0023 | 8,057 | 92 | 40.4 | 41.0 | 45.0 | 42.3 | 58.6 [03/08:21] | 57.0 [03/09:00] | 56.4 [03/08:22] |
| Buffalo | 36-029-0005 | 8,231 | 94 | 45.8 | 47.2 | 51.0 | 48.0 | 62.4 [03/08:22] | 59.9 [03/08:05] | 59.9 [03/09:01] |

(Annual Means in parentheses are based on less than 75% available data)

*New York and Federal Ambient Air Quality Standard + Denotes a contravention of NYS/Federal AAQS