

## SULFUR DIOXIDE - Continuous Pulsed Fluorescence

NYSDEC Region **1**

### Annual Averages 2002 through 2012

Annual Arithmetic Mean (ppb) - Primary Standard

(12 month average not to exceed 30 PPB \*)

| Station         | Site No. | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012   |
|-----------------|----------|------|------|------|------|------|------|------|------|------|------|--------|
| Eisenhower Park | 2950-10  | 3.92 | 4.54 | 4.29 | 4.16 | 3.86 | 3.73 | 4.72 | 3.45 | 2.09 | 1.97 | (1.15) |
| Holtsville      | 5151-10  | 5.62 | 5.84 | 7.04 | 7.26 | 3.74 | 4.54 | 4.82 | 3.81 | 3.95 | 2.22 | (1.03) |

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 2012

|                 |          | <b>One Hour Averages</b><br>average of 99 <sup>th</sup> percentile for last 3 years not to exceed 75 PPB * |         |                                  |      |      |          | <b>3-Hour Block Averages</b><br>Maximum not to exceed 500 PPB more than once per calendar year * |                     |                     | <b>24 Hour Average</b><br>Maximum not to exceed 140 PPB more than once per calendar year * |  |                 |
|-----------------|----------|--|---------|----------------------------------|------|------|----------|--|---------------------|---------------------|--|--|-----------------|
|                 |          | Observations   |         | 99 <sup>th</sup> Percentile, PPB |      |      |          | Obs.   | Highest Values, PPB |                     | Obs.   | Highest Values, PPB<br>Midnight - Midnight |                 |
| Station         | Site No. | Total Obs.   | % Avail | 2012                             | 2011 | 2010 | 3-yr avg | Total  | 1 <sup>st</sup>     | 2 <sup>nd</sup>     | Total  | 1 <sup>st</sup>                            | 2 <sup>nd</sup> |
| Eisenhower Park | 2950-10  | 7,235  | 82      | 16.4                             | 27.6 | 18.0 | 20.7     | 2,394  | 28.3<br>[02/27, 06] | 27.8<br>[02/21, 07] | 300  | 7.1<br>[02/27]                             | 5.3<br>[12/30]  |
| Holtsville      | 5151-10  | 7,526  | 86      | 13.5                             | 21.3 | 17.2 | 17.3     | 2,473  | 13.5<br>[02/14, 08] | 9.4<br>[02/14, 05]  | 310  | 6.1<br>[02/14]                             | 5.1<br>[02/10]  |

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

\*New York and Federal Ambient Air Quality Standard

[Date of Occurrence, Hour]

+ Denotes a contravention of NYS/Federal AAQS

# INHALABLE PARTICULATES (PM<sub>2.5</sub>) - Rupprecht & Patashnick Sampler

NYSDEC Region **1**

## Comparison Between NYS Ambient Air Quality and Ambient Air Quality Standards for Calendar Year 2012

(Average of last 3 years' annual means not to exceed 15 µg/m<sup>3</sup> \* ;

And average of 98<sup>th</sup> percentile for last 3 years not to exceed 35 µg/m<sup>3</sup> \* , *changed* from 65 µg/m<sup>3</sup> on 12/17/06)

| Station            | Site No. | Total Obs. | Maximum Values, µg/m <sup>3</sup> |                 |                 | 98th Percentile, µg/m <sup>3</sup> |      |        |          | Quarterly Averages, 2012 |                 |                 |                 | Annual Mean, µg/m <sup>3</sup> |      |       |          |
|--------------------|----------|------------|-----------------------------------|-----------------|-----------------|------------------------------------|------|--------|----------|--------------------------|-----------------|-----------------|-----------------|--------------------------------|------|-------|----------|
|                    |          |            | 1 <sup>st</sup>                   | 2 <sup>nd</sup> | 3 <sup>rd</sup> | 2012                               | 2011 | 2010   | 3-yr avg | 1 <sup>st</sup>          | 2 <sup>nd</sup> | 3 <sup>rd</sup> | 4 <sup>th</sup> | 2012                           | 2011 | 2010  | 3-yr avg |
| Eisenhower Park(T) | 2950-10  | 334        | 28.6<br>[06/22]                   | 28.4<br>[06/21] | 28.1<br>[06/29] | 23.1                               | 29.5 | 26.4   | 28       | 11.1                     | 7.2             | 8.6             | 9.4             | 9.1                            | 10.9 | 9.5   | 9.8      |
| Hempstead (F)      | 2950-18  | 113        | xxx                               | xxx             | xxx             | xxx                                | 23.1 | 20.2   | 23       | xxx                      | xxx             | xxx             | xxx             | xxx                            | 8.9  | 8.7   | xxx      |
| Babylon (F)        | 5150-01  | 116        | 21.5<br>[06/20]                   | 20.2<br>[12/14] | 18.7<br>[02/15] | 18.7                               | 21.7 | 26.1   | 23       | 8.1                      | 6.6             | 8.6             | 8.6             | 8.0                            | 8.8  | 8.5   | 8.4      |
| Holtsville (T)     | 5151-10  | 308        | 35.2<br>[06/29]                   | 23.0<br>[06/30] | 20.8<br>[06/21] | 19.1                               | 21.2 | (25.6) | (22.0)   | 8.8                      | 5.2             | 5.2             | 8.2             | (6.8)                          | 8.5  | (9.2) | xxx      |

Sampling at 2950-18 was terminated on 12/31/2011

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

F = Federal Reference Method

T = TEOM (Tapered Element Oscillating Microbalance) not for Standards determination

\* Federal Ambient Air Quality Standard

+ Denotes a contravention of Federal AAQS

## OZONE - Continuous UV Light Absorption

NYSDEC Region **1**

**Annual Averages 2002 through 2012**  
Annual Arithmetic Mean (ppm)

| Station    | Site No. | 2002 | 2003 | 2004   | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 |
|------------|----------|------|------|--------|------|------|------|------|------|------|------|------|
| Babylon    | 5150-02  | .024 | .025 | .024   | .024 | .024 | .026 | .026 | .027 | .029 | .029 | .027 |
| Holtsville | 5151-10  | --   | --   | --     | --   | .030 | .032 | .031 | .028 | .032 | .028 | .027 |
| Riverhead  | 5155-01  | .033 | .030 | (.029) | .035 | .039 | .034 | .034 | .035 | .035 | .035 | .035 |

**Comparison Between NYS Ambient Air Quality and Ambient Air Quality Standards for Calendar Year 2012**

|   |          | One Hour Averages |         |          |                        |                        |                        |                        | <b>4th Highest Daily Maximum 8-Hour Average-</b><br>Not to exceed an avg of 0.075 ppm during the last 3 years, <i>changed</i> from 0.08 ppm on 5/27/08* |                 |                 |        |
|---|----------|-------------------|---------|----------|------------------------|------------------------|------------------------|------------------------|---|-----------------|-----------------|--------|
|   |          | Observations      |         |          | Highest Values, PPM    |                        |                        |                        |   |                 |                 |        |
| Station                                 | Site No. | Total Obs.        | % Avail | >.12 PPM | 1st                    | 2nd                    | 3rd                    | 4th                    | 2010  | 2011            | 2012            | Avg    |
| Babylon                                 | 5150-02  | 8,007             | 91      | 1        | .127<br>[06/20,<br>14] | .121<br>[07/18,<br>12] | .119<br>[06/29,<br>14] | .099<br>[07/07,<br>12] | .085<br>[07/04]   | .089<br>[06/08] | .083<br>[07/01] | .086 + |
| Holtsville                              | 5151-10  | 7,542             | 86      | 0        | .120<br>[06/20,<br>15] | .113<br>[07/18,<br>12] | .107<br>[06/29,<br>15] | .092<br>06/21,<br>18]  | .080<br>[06/04]   | .082<br>[07/16] | .079<br>[07/18] | .080 + |
| Riverhead<br>(Operated 03/13-<br>11/13) | 5155-01  | 5,463             | 93      | 0        | .115<br>[07/18,<br>12] | .108<br>[06/29,<br>16] | .105<br>06/20,<br>17]  | .095<br>07/01,<br>12]  | .075<br>[06/05]   | .080<br>[07/07] | .083<br>[06/21] | .079 + |

Due to EPA Waiver for SLAMS (Non-NAMS), % Availability may be based on operational year of less than 12 months (Holtsville, Riverhead)

(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

## NITROGEN DIOXIDE - Continuous Chemiluminescence

NYSDEC Region **1**

### Annual Averages 2002 through 2012

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

| Station         | Site No. | 2002  | 2003  | 2004    | 2005  | 2006  | 2007  | 2008  | 2009  | 2010  | 2011 | 2012 |
|-----------------|----------|-------|-------|---------|-------|-------|-------|-------|-------|-------|------|------|
| Eisenhower Park | 2950-10  | 22.44 | 20.99 | (19.48) | 19.56 | 18.34 | 18.28 | 17.30 | 15.56 | 14.57 | xxx  | xxx  |
| Holtsville      | 5151-10  | 17.13 | 14.37 | 12.52   | 13.41 | 13.13 | 10.45 | 10.53 | 9.82  | 8.78  | xxx  | xxx  |

Sampling at 5051-10 was conducted by Suffolk County Health Dept.  
Sampling at 2950-10 and 5151-10 was terminated on 12/31/2010

### Comparison Between NYS Ambient Air Quality and Ambient Air Quality Standards for Calendar Year 2012

|                 |          | One-Hour Averages - average of 98 <sup>th</sup> percentile for last 3 years not to exceed 75 PPB * |         |                                  |      |      |          |                     |     |     |
|-----------------|----------|--|---------|----------------------------------|------|------|----------|---------------------|-----|-----|
|                 |          | Observations   |         | 98 <sup>th</sup> Percentile, PPB |      |      |          | Highest Values, PPB |     |     |
| Station         | Site No. | Total  | % Avail | 2010                             | 2011 | 2012 | 3-yr avg | 1st                 | 2nd | 3rd |
| Eisenhower Park | 2950-10  | xxx  | xx      | 57.0                             | xxx  | xxx  | xx       | xxx                 | xxx | xxx |

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

\*New York and Federal Ambient Air Quality Standard

[Date of Occurrence, Hour]

+ Denotes a contravention of NYS/Federal AAQS

## SULFUR DIOXIDE - Continuous Pulsed Fluorescence

NYSDEC Region **2**

### Annual Averages 2002 through 2012

Annual Arithmetic Mean (ppb) - Primary Standard  
(12 month average not to exceed 30 PPB \*)

| Station                                      | Site No.             | 2002  | 2003    | 2004    | 2005  | 2006 | 2007 | 2008    | 2009 | 2010   | 2011 | 2012   |
|--|----------------------|-------|---------|---------|-------|------|------|---------|------|--------|------|--------|
| PS 59  | 7093-10              | 12.36 | (13.89) | (10.19) | 11.18 | 9.65 | 9.75 | (10.81) | xxx  | xxx    | xxx  | xxx    |
| Botanical Garden<br>(Harding Lab/Pfizer Lab) | 7094-06 /<br>7094-10 | 8.53  | 8.64    | 8.70    | 9.33  | 6.65 | 6.67 | 5.96    | 5.32 | 4.83   | 4.65 | 3.28   |
| IS 52  | 7094-07              | 10.01 | 10.62   | 10.27   | 10.91 | 8.83 | 7.86 | 6.58    | 6.33 | (6.22) | xxx  | (2.10) |
| Queens College 2                             | 7096-15              | 6.40  | 6.94    | 5.48    | 6.48  | 5.24 | 4.89 | 4.02    | 3.41 | 2.83   | 2.65 | 1.79   |

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 2012

|  |                      | One Hour Averages<br>average of 99 <sup>th</sup> percentile for last 3 years not to exceed 75 PPB * |         |                                  |      |        |          | 3-Hour Block Averages<br>Maximum not to exceed 500<br>PPB more than once per<br>calendar year * |                        |                        | 24 Hour Average<br>Maximum not to exceed 140 PPB<br>more than once per calendar year * |  |                 |
|--|----------------------|---|---------|----------------------------------|------|--------|----------|---|------------------------|------------------------|--|--|-----------------|
|  |                      | Observations  |         | 99 <sup>th</sup> Percentile, PPB |      |        |          | Obs.  | Highest Values, PPB    |                        | Obs.   | Highest Values, PPB<br>Midnight - Midnight |                 |
| Station                                      | Site No.             | Total Obs.  | % Avail | 2012                             | 2011 | 2010   | 3-yr avg | Total   | 1 <sup>st</sup>        | 2 <sup>nd</sup>        | Total  | 1 <sup>st</sup>                            | 2 <sup>nd</sup> |
| Botanical Garden<br>(Harding Lab/Pfizer Lab) | 7094-06 /<br>7094-10 | 8,755   | 100     | 29.7                             | 41.3 | 50.2   | 40.4     | 2,908   | 30.5<br>[01/07,<br>08] | 25.7<br>[01/11,<br>08] | 366  | 12.8<br>[01/06]                            | 12.4<br>[01/07] |
| IS 52  | 7094-07              | 3,256   | 94      | 22.5                             | xx   | (39.0) | xx       | 1,067   | 21.1<br>[12/13,<br>08] | 17.8<br>[11/30,<br>08] | 364  | 7.4<br>[12/14]                             | 6.7<br>[11/21]  |
| Queens College 2                             | 7096-15              | 8,546   | 97      | 19.0                             | 29.6 | 25.4   | 24.7     | 2,701   | 17.1<br>[02/10,<br>08] | 16.1<br>[11/30,<br>08] | 362  | 8.6<br>[02/10]                             | 7.2<br>[01/07]  |

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

\*New York and Federal Ambient Air Quality Standard

[Date of Occurrence, Hour]

+ Denotes a contravention of NYS/Federal AAQS

# INHALABLE PARTICULATES (PM<sub>10</sub>) - Wedding Sampler or R&P Model 2025 Sampler

NYSDEC Region **2**

## Annual Averages 2002 through 2012 Annual Arithmetic Mean (µg/m<sup>3</sup>)

| Station               | Site No. | 2002            | 2003            | 2004            | 2005 | 2006 | 2007                  | 2008                  | 2009                  | 2010                    | 2011 | 2012 | 3 Yr Exp Val |
|-----------------------|----------|-----------------|-----------------|-----------------|------|------|-----------------------|-----------------------|-----------------------|-------------------------|------|------|--------------|
| PS 59 (R&P)           | 7093-10  | --              | --              | --              | --   | 23   | 25                    | (26)                  | xx                    | xx                      | xx   | xx   | xx           |
| Madison Ave (R&P)     | 7093-12  | --              | --              | --              | --   | --   | --                    | 35                    | 33                    | 30                      | xx   | xx   | xx           |
| PS 19 (R&P)           | 7093-21  | --              | --              | --              | --   | --   | --                    | --                    | 20                    | 20                      | 20   | (19) | --           |
| Division Street (R&P) | 7093-24  | --              | --              | --              | --   | --   | 25                    | 24                    | 21                    | 21                      | 22   | 20   | 21           |
| Canal Street (R&P)    | 8100-02  | 26              | 26              | 24              | 26   | 23   | (27)                  | xx                    | xx                    | xx                      | xx   | xx   | xx           |
| IS 52 (W, R&P)        | 7094-07  | 21 <sup>W</sup> | 22 <sup>W</sup> | 18 <sup>W</sup> | xx   | xx   | 22 <sup>R&amp;P</sup> | 21 <sup>R&amp;P</sup> | 19 <sup>R&amp;P</sup> | (19) <sup>R&amp;P</sup> | .xx  | (19) | --           |
| Morrisania (R&P)      | 7094-05  | --              | --              | --              | --   | --   | --                    | --                    | --                    | (18)                    | 19   | (18) | --           |
| JHS 126 (W)           | 7095-43  | 21              | 20              | 17              | xx   | xx   | xx                    | xx                    | xx                    | xx                      | xx   | xx   | xx           |
| Queens College 2(R&P) | 7096-15  | --              | --              | --              | --   | (20) | 20                    | 20                    | 17                    | 17                      | 16   | xx   | xx           |
| Susan Wagner (W)      | 7097-01  | 17              | 16              | 13              | xx   | xx   | xx                    | xx                    | xx                    | xx                      | xx   | xx   | xx           |

Lab results not received for Wedding samplers for 2005. Sampling terminated at Wedding Samplers on 12/31/2005. Sampling at 7093-10 commenced on 01/01/06 and at 7096-15 on 07/01/06. Sampling at 8100-02 terminated on 03/31/07 and at 7093-10 on 6/30/08. Sampling was suspended at 7094-07 on 06/24/10 due to building construction and moved to 7094-05; moved back and resumed 7/8/12. Sampling terminated at 7093-12 on 12/31/10.

### Comparison Between NYS Ambient Air Quality and Ambient Air Quality Standards for Calendar Year 2012

|                       |          | 24-Hour Concentrations - µg/m <sup>3</sup> |       |          |       |          |       |       | # of Days > 150 µg/m <sup>3</sup> -<br>Not to exceed an expected avg of one per year during the last 3 years * |      |     |      |     |     |         |
|-----------------------|----------|--|-------|----------|-------|----------|-------|-------|--|------|-----|------|-----|-----|---------|
|                       |          | Maximum                                    |       | 2nd Max. |       | 3rd Max. |       | 2010  |  | 2011 |     | 2012 |     |     |         |
| Station               | Site No. | Total Obs.                                 | Value | Date     | Value | Date     | Value | Date  | Mea  | Est  | Mea | Est  | Mea | Est | Exp Avg |
| PS 19                 | 7093-21  | 97   | 49    | 12/02    | 37    | 06/29    | 36    | 03/16 | 0  | 0.0  | 0   | 0.0  | 0   | 0.0 | 0.0     |
| Division Street (R&P) | 7093-24  | 105  | 51    | 12/02    | 39    | 06/29    | 37    | 07/17 | 0  | 0.0  | 0   | 0.0  | 0   | 0.0 | 0.0     |
| Morrisania (R&P)      | 7094-05  | 28   | 32    | 06/20    | 31    | 02/15    | 31    | 03/16 | --   | ---  | 0   | 0.0  | 0   | 0.0 | 0.0     |
| IS 52 (R&P)           | 7094-07  | 29   | 34    | 11/11    | 31    | 11/23    | 30    | 11/25 | --   | ---  | 0   | 0.0  | 0   | 0.0 | 0.0     |
| Queens College 2(R&P) | 7096-15  | 56   | 33    | 11/23    | 32    | 06/20    | 31    | 11/11 | 0  | 0.0  | 0   | 0.0  | 0   | 0.0 | 0.0     |

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

\* Federal Ambient Air Quality Standard

W=Wedding Sampler

R&P=R&P Model 2025 Sampler

Mea=Measured

Est=Estimated

+ Denotes a contravention of Federal AAQS

## INHALABLE PARTICULATES (PM<sub>2.5</sub>) - Rupprecht & Patashnick Sampler

NYSDEC Region **2**  
(Manhattan Sites)

### Comparison Between NYS Ambient Air Quality and Ambient Air Quality Standards for Calendar Year 2012

(Average of last 3 years' annual means not to exceed 15 µg/m<sup>3</sup> \*;  
and average of 98th percentile for last 3 years not to exceed 35 µg/m<sup>3</sup> \*, *changed from 65 µg/m<sup>3</sup> on 12/17/06*)

| Station               | Site No. | Total Obs. | Maximum Values, µg/m <sup>3</sup> |                 |                 | 98th Percentile, µg/m <sup>3</sup> |        |      |          | Quarterly Averages, 2012 |                 |                 |                 | Annual Mean, µg/m <sup>3</sup> |        |      |          |
|-----------------------|----------|------------|-----------------------------------|-----------------|-----------------|------------------------------------|--------|------|----------|--------------------------|-----------------|-----------------|-----------------|--------------------------------|--------|------|----------|
|                       |          |            | 1 <sup>st</sup>                   | 2 <sup>nd</sup> | 3 <sup>rd</sup> | 2012                               | 2011   | 2010 | 3-yr avg | 1 <sup>st</sup>          | 2 <sup>nd</sup> | 3 <sup>rd</sup> | 4 <sup>th</sup> | 2012                           | 2011   | 2010 | 3-yr avg |
| JHS 45 (F)            | 7093-08  | 114        | 23.7<br>[06/29]                   | 23.5<br>[12/02] | 21.3<br>[12/08] | 21.3                               | 25.2   | 25.2 | 24       | 9.2                      | 8.2             | 9.3             | 10.1            | 9.3                            | 10.7   | 9.7  | 9.9      |
| IS 143 (T)            | 7093-15  | xx         | xx                                | xx              | xx              | xx                                 | (34.5) | 28.6 | xx       | xx                       | xx              | xx              | xx              | xx                             | (15.4) | 12.5 | xx       |
| Manhattanville PO (T) | 7093-17  | xx         | xx                                | xx              | xx              | xx                                 | (24.3) | 25.3 | xx       | xx                       | xx              | xx              | xx              | xx                             | (10.0) | 9.8  | xx       |
| Park Row (T) (WTC)    | 7093-18  | xx         | xx                                | xx              | xx              | xx                                 | xx     | 25.7 | xx       | xx                       | xx              | xx              | xx              | xx                             | xx     | 10.0 | xx       |
| PS 19 (F)             | 7093-21  | 110        | 27.0<br>[12/02]                   | 25.5<br>[12/08] | 24.9<br>[03/16] | 24.9                               | 26.4   | 25.4 | 26       | 12.5                     | 9.3             | 10.9            | 14.2            | 11.7                           | 12.1   | 11.5 | 11.8     |
| PS 19 (T)             | 7093-21  | 337        | 25.5<br>[06/29]                   | 24.7<br>[06/22] | 24.7<br>[06/22] | 23.1                               | 29.6   | 25.3 | 26       | 10.6                     | 7.7             | 9.0             | 12.7            | 10.0                           | 11.9   | 10.9 | 10.9     |
| Division St (F)       | 7093-24  | 118        | 27.4<br>[12/02]                   | 25.7<br>[12/08] | 24.0<br>[06/29] | 24.0                               | 26.8   | 27.0 | 26       | 11.6                     | 9.7             | 11.0            | 12.1            | 11.0                           | 12.0   | 11.5 | 11.5     |
| Division St (T)       | 7093-24  | 327        | 27.9<br>[02/15]                   | 23.8<br>[06/29] | 21.0<br>[10/03] | 19.7                               | 23.8   | 26.9 | 23       | 11.2                     | 7.7             | 8.8             | 10.6            | 9.6                            | 10.8   | 10.3 | 10.2     |
| CCNY (T)              | 7093-25  | 331        | 22.0<br>[04/16]                   | 20.3<br>[02/15] | 18.8<br>[01/07] | 17.3                               | 24.1   | 26.4 | 23       | 11.3                     | 7.2             | 6.3             | 10.3            | 8.8                            | 10.4   | 10.2 | 9.8      |

TEOM sampling at 7093-15 was terminated on 05/04/11, at 7093-17 on 05/24/11, and at 7093-18 on 01/13/11.

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

F = Federal Reference Method

T = TEOM (Tapered Element Oscillating Microbalance) not for Standards determination

\* Federal Ambient Air Quality Standard

+ Denotes a contravention of Federal AAQS

## INHALABLE PARTICULATES (PM<sub>2.5</sub>) - Rupprecht & Patashnick Sampler

NYSDEC Region **2**  
(Bronx & Brooklyn Sites)

### Comparison Between NYS Ambient Air Quality and Ambient Air Quality Standards for Calendar Year 2012

(Average of last 3 years' annual means not to exceed 15 µg/m<sup>3</sup> \*;  
and average of 98th percentile for last 3 years not to exceed 35 µg/m<sup>3</sup> \*, changed from 65 µg/m<sup>3</sup> on 12/17/06)

| Station                    | Site No. | Total Obs. | Maximum Values, µg/m <sup>3</sup> |                 |                 | 98th Percentile, µg/m <sup>3</sup> |      |        |          | Quarterly Averages, 2012 |                 |                 |                 | Annual Mean, µg/m <sup>3</sup> |      |        |          |
|----------------------------|----------|------------|-----------------------------------|-----------------|-----------------|------------------------------------|------|--------|----------|--------------------------|-----------------|-----------------|-----------------|--------------------------------|------|--------|----------|
|                            |          |            | 1 <sup>st</sup>                   | 2 <sup>nd</sup> | 3 <sup>rd</sup> | 2012                               | 2011 | 2010   | 3-yr avg | 1 <sup>st</sup>          | 2 <sup>nd</sup> | 3 <sup>rd</sup> | 4 <sup>th</sup> | 2012                           | 2011 | 2010   | 3-yr avg |
| Morrisania (F)             | 7094-05  | 50         | 26.1<br>[02/15]                   | 20.5<br>[03/16] | 18.3<br>04/15]  | (26.1)                             | 27.0 | 27.0   | --       | 12.5                     | (9.7)           | xxx             | xxx             | xxx                            | 11.6 | 11.4   | --       |
| IS 52 (F)                  | 7094-07  | 59         | 25.0<br>[12/02]                   | 23.7<br>[11/11] | 22.9<br>[12/08] | (23.7)                             | xxx  | (25.4) | --       | xxx                      | xxx             | 9.5             | 10.5            | xxx                            | xxx  | (10.2) | --       |
| IS 52 (T)                  | 7094-07  | 110        | 28.7<br>[11/10]                   | 28.1<br>[11/11] | 26.0<br>[10/04] | (26.0)                             | xxx  | (24.4) | --       | xxx                      | xxx             | (8.0)           | 11.0            | xxx                            | xxx  | (10.4) | --       |
| IS 74 (T)                  | 7094-08  | 335        | 28.5<br>[01/06]                   | 28.3<br>[04/16] | 28.1<br>[06/29] | 25.1                               | 28.3 | 26.3   | 27       | 13.0                     | 8.2             | 9.8             | 10.2            | 10.3                           | 12.0 | 10.6   | 11.0     |
| PS 154 (T)                 | 7094-09  | 351        | 24.3<br>[06/29]                   | 23.7<br>[06/22] | 23.1<br>04/16]  | 23.7                               | 26.5 | 27.0   | 26       | 10.9                     | 7.5             | 8.2             | 9.5             | 9.0                            | 11.2 | 10.7   | 10.3     |
| Botanical Gdn - Pfizer (F) | 7094-10  | 120        | 31.9<br>[06/29]                   | 26.1<br>[11/11] | 25.1<br>[12/02] | 25.1                               | 23.0 | 24.8   | 24       | 10.1                     | 8.6             | 9.1             | 10.5            | 9.6                            | 10.2 | 10.0   | 9.9      |
| PS 314 (T)                 | 7095-07  | 351        | 25.6<br>[06/29]                   | 24.0<br>[06/22] | 24.0<br>[12/03] | 21.3                               | 22.7 | 24.9   | 23       | 10.7                     | 7.8             | 8.5             | 10.1            | 9.3                            | 9.7  | 9.5    | 9.5      |
| JHS 126 (F)                | 7095-43  | 111        | 27.5<br>[12/14]                   | 22.2<br>[12/08] | 22.1<br>[06/29] | 22.1                               | 24.3 | 24.8   | 24       | 10.3                     | 8.4             | 9.2             | 10.7            | 9.7                            | 10.3 | 9.9    | 10.0     |
| IS 293 (T)                 | 7095-44  | 290        | 25.2<br>[06/29]                   | 24.5<br>[12/03] | 22.3<br>[06/21] | 21.5                               | 23.8 | 25.8   | 23       | 10.6                     | 7.4             | 8.7             | 10.0            | 9.2                            | 10.2 | 9.8    | 9.7      |
| PS 274 (T)                 | 7095-98  | 344        | 23.5<br>[06/29]                   | 23.1<br>[12/03] | 23.0<br>[06/22] | 21.3                               | 21.9 | 25.2   | 23       | 10.5                     | 7.2             | 8.5             | 9.3             | 8.9                            | 10.0 | 9.6    | 9.5      |

Sampling was suspended at 7094-07 from 06/24/10 to 08/30/12 due to building construction

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

F = Federal Reference Method

T = TEOM (Tapered Element Oscillating Microbalance) not for Standards determination

\* Federal Ambient Air Quality Standard

+ Denotes a contravention of Federal AAQS

## INHALABLE PARTICULATES (PM<sub>2.5</sub>) - Rupprecht & Patashnick Sampler

NYSDEC Region **2**

( Queens, and Staten Island Sites)

### Comparison Between NYS Ambient Air Quality and Ambient Air Quality Standards for Calendar Year 2012

(Average of last 3 years' annual means not to exceed 15 µg/m<sup>3</sup> \*;

and average of 98th percentile for last 3 years not to exceed 35 µg/m<sup>3</sup> \*, *changed from 65 µg/m<sup>3</sup> on 12/17/06*)

| Station              | Site No. | Total Obs. | Maximum Values, µg/m <sup>3</sup> |                 |                 | 98th Percentile, µg/m <sup>3</sup> |        |      |          | Quarterly Averages, 2012 |                 |                 |                 | Annual Mean, µg/m <sup>3</sup> |        |      |          |
|----------------------|----------|------------|-----------------------------------|-----------------|-----------------|------------------------------------|--------|------|----------|--------------------------|-----------------|-----------------|-----------------|--------------------------------|--------|------|----------|
|                      |          |            | 1 <sup>st</sup>                   | 2 <sup>nd</sup> | 3 <sup>rd</sup> | 2012                               | 2011   | 2010 | 3-yr avg | 1 <sup>st</sup>          | 2 <sup>nd</sup> | 3 <sup>rd</sup> | 4 <sup>th</sup> | 2012                           | 2011   | 2010 | 3-yr avg |
| Maspeth Library (T)  | 7096-13  | 343        | 24.1<br>[06/29]                   | 23.6<br>[12/03] | 22.6<br>[06/22] | 20.1                               | 23.6   | 26.3 | 23       | 10.8                     | 7.2             | 8.0             | 8.8             | 8.7                            | 10.3   | 10.5 | 9.8      |
| Queens College 2 (F) | 7096-15  | 331        | 29.8<br>[06/21]                   | 28.4<br>[04/15] | 25.7<br>[11/10] | 20.5                               | 24.7   | 25.5 | 24       | 8.6                      | 8.3             | 8.6             | 8.4             | 8.5                            | 9.4    | 9.4  | 9.1      |
| Queens College 2 (T) | 7096-15  | 156        | 29.2<br>[11/10]                   | 27.6<br>[12/03] | 25.9<br>[06/22] | (20.8)                             | 26.0   | 29.8 | --       | xxx                      | (9.9)           | 12.6            | 9.2             | (10.6)                         | (9.5)  | 11.2 | --       |
| Susan Wagner (F)     | 7097-01  | xxx        | xxx                               | xxx             | xxx             | xxx                                | 23.6   | 21.5 | xx       | xxx                      | xx              | xxx             | xx              | xx                             | 8.8    | 8.3  | xx       |
| Port Richmond (F)    | 7097-03  | 108        | 23.6<br>[12/08]                   | 22.9<br>[02/15] | 22.1<br>[06/29] | 22.1                               | 23.2   | 25.5 | 24       | 9.5                      | 8.1             | 9.7             | 10.3            | 9.4                            | 9.9    | 9.7  | 9.7      |
| Port Richmond (T)    | 7097-03  | 293        | 25.1<br>[06/29]                   | 25.1<br>[12/03] | 24.2<br>[12/04] | 22.6                               | 24.9   | xx   | --       | 10.1                     | 7.8             | 9.0             | 12.5            | 9.9                            | (10.7) | --   | --       |
| Freshkills West (T)  | 7097-17  | 190        | 28.1<br>[12/03]                   | 27.0<br>[11/30] | 24.6<br>[12/01] | (22.8)                             | 21.0   | 25.3 | --       | 8.3                      | 6.3             | 9.0             | (13.5)          | --                             | 9.3    | 9.2  | --       |
| PS 44 (T)            | 7097-18  | xxx        | xxx                               | xxx             | xxx             | xxx                                | (21.6) | 25.0 | xx       | xx                       | xx              | xx              | xx              | xx                             | (10.5) | 9.1  | xx       |

PS219 FRM Sampler moved to Queens College 2 on 07/01/06; TEOM sampler moved on 08/21/09 and sampling terminated on 08/13/11. TEOM sampling commenced at 7097-03 on 04/23/11. TEOM sampling at 7097-18 was terminated on 03/28/11. FRM sampling at Susan Wagner terminated on 12/31/2011.

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

F = Federal Reference Method

T = TEOM (Tapered Element Oscillating Microbalance) not for Standards determination

\* Federal Ambient Air Quality Standard

+ Denotes a contravention of Federal AAQS

## CARBON MONOXIDE - Continuous Non-Dispersive Infrared

NYSDEC Region 2

**Annual Averages 2002 through 2012**  
Annual Arithmetic Mean (ppm)

| Station                                      | Site No.        | 2002 | 2003  | 2004 | 2005 | 2006 | 2007 | 2008  | 2009 | 2010 | 2011 | 2012 |
|--|-----------------|------|-------|------|------|------|------|-------|------|------|------|------|
| PS 59  | 7093-10         | 0.7  | (0.8) | 0.7  | 0.6  | 0.6  | 0.6  | (0.5) | xx   | xx   | xx   | xx   |
| CCNY   | 7093-25         | ---  | ---   | ---  | ---  | ---  | ---  | 0.4   | 0.6  | 0.5  | 0.4  | 0.4  |
| Botanical Garden<br>(Harding Lab/Pfizer Lab) | 7094-06/7094-10 | 0.7  | 0.8   | 0.6  | 0.6  | 0.5  | 0.6  | 0.5   | 0.5  | 0.6  | 0.4  | 0.4  |
| Queens College 2                             | 7096-15         | 0.6  | 0.6   | 0.5  | 0.5  | 0.4  | 0.4  | 0.4   | 0.5  | 0.4  | 0.3  | 0.2  |

Sampling was terminated at 7093-10 on 07/01/08; sampling commenced at 7093-25 on 07/09/08.

**Comparison Between NYS Ambient Air Quality and Ambient Air Quality Standards for Calendar Year 2012**

|                                   |          | One-Hour Average<br>Maximum not to exceed 35 PPM more than once per calendar year * |         |         |                       |                       |                       | Running 8-Hour Average (Non-Overlapping)<br>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 |
| CCNY                              | 7093-25  | 7,944   | 90      | 0       | 3.2<br>[07/25,<br>10] | 2.2<br>[04/05,<br>12] | 2.0<br>[10/18,<br>07] | 7,921  | 0      | 1.3<br>[03/20,<br>07] | 1.3<br>[10/18,<br>08] | 0          |
| Botanical Gardens<br>(Pfizer Lab) | 7094-10  | 8,750   | 100     | 0       | 2.4<br>[12/15,<br>06] | 2.1<br>[10/18,<br>07] | 1.8<br>[12/03,<br>21] | 8,746  | 0      | 1.6<br>[10/18,<br>07] | 1.5<br>[12/07,<br>18] | 0          |
| Queens College 2                  | 7096-15  | 8,492   | 97      | 0       | 1.7<br>[11/30,<br>08] | 1.7<br>[12/03,<br>20] | 1.5<br>[10/18,<br>07] | 8,342  | 0      | 1.1<br>[03/17,<br>02] | 1.1<br>[11/11,<br>07] | 0          |

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

\*New York and Federal Ambient Air Quality Standard

[Date of Occurrence, Hour]

+ Denotes a contravention of NYS/Federal AAQS (Note: 9PPM standard is not exceeded unless 8-hour avg > 9.4 PPM)

## OZONE - Continuous UV Light Absorption

NYSDEC Region **2**

Bronx, Brooklyn, and Staten Island Sites

**Annual Averages 2002 through 2012**  
Annual Arithmetic Mean (ppm)

| Station                                      | Site No.             | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010   | 2011 | 2012   |
|--|----------------------|------|------|------|------|------|------|------|------|--------|------|--------|
| Botanical Garden<br>(Harding Lab/Pfizer Lab) | 7094-06 /<br>7094-10 | .017 | .017 | .017 | .018 | .020 | .020 | .019 | .020 | .024   | .021 | .024   |
| IS 52  | 7094-07              | .017 | .016 | .016 | .016 | .017 | .019 | .019 | .018 | (.022) | xxx  | (.018) |
| Susan Wagner                                 | 7097-01              | .034 | .029 | .029 | .030 | .032 | .026 | .022 | .025 | .029   | .028 | .027   |

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 2012**

|                                |          | One Hour Averages |         |          |                        |                        |                        |                        | <b>4th Highest Daily Maximum 8-Hour Average-</b><br>Not to exceed an avg of 0.075 ppm during the last 3 years, <i>changed</i> from 0.08 ppm on 5/27/08* |                 |                   |        |
|--------------------------------|----------|-------------------|---------|----------|------------------------|------------------------|------------------------|------------------------|---|-----------------|-------------------|--------|
|                                |          | Observations      |         |          | Highest Values, PPM    |                        |                        |                        |   |                 |                   |        |
| Station                        | Site No. | Total Obs.        | % Avail | >.12 PPM | 1st                    | 2nd                    | 3rd                    | 4th                    | 2010  | 2011            | 2012              | Avg    |
| Botanical Gardens - Pfizer Lab | 7094-10  | 8,765             | 100     | 0        | .102<br>[05/28,<br>15] | .095<br>[07/18,<br>11] | .092<br>[06/10,<br>15] | .092<br>[07/06,<br>12] | .073<br>[07/06]   | .079<br>[07/07] | .076<br>[05/28]   | .076 + |
| IS 52                          | 7094-07  | 3,251             | 38      | 0        | .086<br>[08/31,<br>16] | .083<br>[08/23,<br>16] | .082<br>[08/24,<br>16] | .081<br>[08/17,<br>15] | .062<br>[06/03]   | xxx             | (.068)<br>[08/17] | ---    |
| Susan Wagner                   | 7097-01  | 8,529             | 97      | 0        | .092<br>[07/18,<br>11] | .091<br>[08/23,<br>13] | .090<br>[06/21,<br>15] | .089<br>[06/29,<br>13] | .085<br>[07/28]   | .087<br>[07/22] | .078<br>[06/28]   | .085 + |

(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

## OZONE - Continuous UV Light Absorption

NYSDEC Region **2**

Manhattan and Queens Sites

### Annual Averages 2002 through 2012 Annual Arithmetic Mean (ppm)

| Station            | Site No. | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 |
|--------------------|----------|------|------|------|------|------|------|------|------|------|------|------|
| CCNY               | 7093-25  | ---  | ---  | ---  | ---  | ---  | .019 | .018 | .017 | .023 | .021 | .023 |
| College Point P.O. | 7096-09  | .018 | .017 | .016 | .017 | xxx  |
| Queens College 2   | 7096-15  | .019 | .019 | .018 | .020 | .021 | .021 | .022 | .021 | .024 | .024 | .026 |

Sampling was terminated at 7096-09 on 01/05/06.

### Comparison Between NYS Ambient Air Quality and Ambient Air Quality Standards for Calendar Year 2012

|                  |          | One Hour Averages |         |          |                        |                        |                        |                        | 4th Highest Daily Maximum 8-Hour Average-<br>Not to exceed an avg of 0.075 ppm during the last 3<br>years, <i>changed</i> from 0.08 ppm on 5/27/08* |                 |                 |        |
|------------------|----------|-------------------|---------|----------|------------------------|------------------------|------------------------|------------------------|---|-----------------|-----------------|--------|
|                  |          | Observations      |         |          | Highest Values, PPM    |                        |                        |                        |   |                 |                 |        |
| Station          | Site No. | Total Obs.        | % Avail | >.12 PPM | 1st                    | 2nd                    | 3rd                    | 4th                    | 2010  | 2011            | 2012            | Avg    |
| CCNY             | 7093-25  | 8,333             | 95      | 0        | .097<br>[07/18,<br>11] | .096<br>[07/06,<br>14] | .090<br>[06/22,<br>11] | .090<br>[08/03,<br>13] | .074<br>[07/06]   | .080<br>[06/08] | .074<br>[07/06] | .076 + |
| Queens College 2 | 7096-15  | 8,545             | 97      | 1        | .125<br>[07/18,<br>12] | .096<br>[06/28,<br>13] | .093<br>[06/29,<br>14] | .092<br>[07/06,<br>13] | .076<br>[07/04]   | .084<br>[06/07] | .082<br>[08/31] | .081 + |

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

\*New York and Federal Ambient Air Quality Standard

[Date of Occurrence, Hour]

+ Denotes a contravention of NYS/Federal AAQS

## NITROGEN DIOXIDE - Continuous Chemiluminescence

NYSDEC Region 2

### Annual Averages 2002 through 2012

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

| Station                                      | Site No.            | 2002  | 2003    | 2004    | 2005  | 2006  | 2007  | 2008    | 2009  | 2010    | 2011    | 2012   |
|--|---------------------|-------|---------|---------|-------|-------|-------|---------|-------|---------|---------|--------|
| PS 59  | 7093-10             | 38.03 | (38.41) | (34.70) | 36.49 | 34.22 | 34.20 | (36.08) | xxx   | xxx     | xxx     | xxx    |
| Botanical Garden<br>(Harding Lab/Pfizer Lab) | 7094-06/<br>7094-10 | 27.64 | 26.68   | 24.37   | 26.59 | 24.82 | 24.55 | 22.91   | 21.85 | 20.10   | 20.86   | 18.6   |
| IS 52  | 7094-07             | 30.39 | 30.19   | 29.67   | 28.79 | 26.46 | 25.65 | 25.18   | 24.57 | (24.94) | xxx     | (20.8) |
| College Point P.O.                           | 7096-09             | 27.67 | 29.75   | 28.22   | 27.30 | xxx   | xxx   | xxx     | xxx   | xxx     | xxx     | xxx    |
| Queens College 2                             | 7096-15             | 27.83 | 26.72   | 24.74   | 24.52 | 23.46 | 22.94 | 22.51   | 20.91 | 19.28   | (21.62) | 17.5   |

Sampling was terminated at 7096-09 on 01/05/06 and 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 2012

|                                   |          | One-Hour Averages - average of 98 <sup>th</sup> percentile for last 3 years not to exceed 75 PPB * |         |                                  |      |      |          |                        |                        |                        |
|-----------------------------------|----------|--|---------|----------------------------------|------|------|----------|------------------------|------------------------|------------------------|
|                                   |          | Observations   |         | 98 <sup>th</sup> Percentile, PPB |      |      |          | Highest Values, PPB    |                        |                        |
| Station                           | Site No. | Total  | % Avail | 2010                             | 2011 | 2012 | 3-yr avg | 1st                    | 2nd                    | 3rd                    |
| Botanical Gardens -<br>Pfizer Lab | 7094-10  | 8,734  | 99      | 70.0                             | 60.7 | 59.2 | 63       | 68.3<br>[05/12,<br>21] | 67.9<br>[04/15,<br>23] | 65.1<br>[04/15,<br>22] |
| Queens College 2                  | 7096-15  | 8,496  | 97      | 69.0                             | 66.3 | 56.6 | 64       | 64.2<br>[04/15,<br>22] | 62.7<br>[10/23,<br>12] | 60.5<br>[01/11,<br>07] |

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

\*New York and Federal Ambient Air Quality Standard

[Date of Occurrence, Hour]

+ Denotes a contravention of NYS/Federal AAQS

## LEAD - TSP or PM<sub>10</sub> Samplers

NYSDEC Region 2

### Annual Geometric Means (µg/m<sup>3</sup>) 2002 through 2012

| Station                        | Site No. | 2002 | 2003 | 2004 | 2005*  | 2006 | 2007  | 2008  | 2009  | 2010    | 2011  | 2012    |
|--------------------------------|----------|------|------|------|--------|------|-------|-------|-------|---------|-------|---------|
| Morrisania (PM <sub>10</sub> ) | 7094-05  | --   | --   | --   | --     | --   | --    | --    | --    | (0.005) | 0.006 | (0.006) |
| IS 52 (PM <sub>10</sub> )      | 7094-07  | --   | --   | --   | --     | --   | 0.005 | 0.005 | 0.005 | (0.005) | xx    | (0.004) |
| JHS 126 (TSP)                  | 7095-43  | --   | 0.03 | 0.03 | (0.03) | 0.02 | 0.02  | 0.013 | 0.014 | xx      | xx    | xx      |
| Susan Wagner (TSP)             | 7097-01  | 0.01 | 0.01 | xx   | xx     | xx   | xx    | xx    | xx    | xx      | xx    | xx      |

Lab results not received for 7097-01 for 2004 and 2005. Sampling terminated at 7097-01 on 12/31/2005 and terminated at 7095-43 on 12/31/09.

\* Only 1st quarter data received from lab in 2005. Sampling was suspended at 7094-07 on 06/24/10 due to building construction and monitor moved to 7094-05.

Sampling at 7094-05 was terminated on 06/30/13 and monitor moved back to 7094-07.

### Comparison Between NYS Ambient Air Quality and Ambient Air Quality Standards for Calendar Year 2012

|                                |          | 24-Hour Concentrations - µg/m <sup>3</sup> |         |         |       |          |       |          |       | THREE MONTH ROLLING AVERAGES<br>Maximum not to exceed 0.15 µg/m <sup>3</sup> , effective beginning 1/1/13 * (the old standard of 1.5 µg/m <sup>3</sup> will remain in force until that date) |       |      |
|--------------------------------|----------|--|---------|---------|-------|----------|-------|----------|-------|--|-------|------|
|                                |          |  |         | Maximum |       | 2nd Max. |       | 3rd Max. |       | Highest Values, µg/m <sup>3</sup>  |       |      |
| Station                        | Site No. | Total Obs.                                 | % Avail | Value   | Date  | Value    | Date  | Value    | Date  | 2010   | 2011  | 2012 |
| Morrisania (PM <sub>10</sub> ) | 7094-05  | 30   | 49      | .015    | 03/28 | .013     | 01/16 | .010     | 02/27 | 0.008  | 0.008 | --   |
| IS 52 (PM <sub>10</sub> )      | 7094-07  | 26   | 43      | .009    | 11/29 | .007     | 11/23 | .007     | 10/18 | (0.006)  | xx    | --   |

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

\*Federal Ambient Air Quality Standard

+ Denotes a contravention of Federal AAQS

## SULFUR DIOXIDE - Continuous Pulsed Fluorescence

NYSDEC Region **3**

### Annual Averages 2002 through 2012

Annual Arithmetic Mean (ppb) - Primary Standard

(12 month average not to exceed 30 PPB \*)

| Station        | Site No. | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 |
|----------------|----------|------|------|------|------|------|------|------|------|------|------|------|
| Mt. Ninham     | 3951-01  | 2.16 | 2.41 | 2.22 | 2.18 | 1.67 | 1.53 | 1.33 | 1.14 | 0.80 | 0.86 | 0.73 |
| Belleayre Mtn. | 5565-03  | 1.64 | 1.68 | 1.27 | 1.38 | 1.25 | 1.19 | 0.90 | 0.71 | 0.50 | 0.52 | 0.31 |

### Comparison Between NYS Ambient Air Quality and Ambient Air Quality Standards for Calendar Year 2012

|                |          | One Hour Averages<br>average of 99 <sup>th</sup> percentile for last 3 years not to exceed 75 PPB * |         |                                  |      |      |          | 3-Hour Block Averages<br>Maximum not to exceed 500 PPB more than once per calendar year * |                        |                       | 24 Hour Average<br>Maximum not to exceed 140 PPB more than once per calendar year * |  |                 |
|----------------|----------|---|---------|----------------------------------|------|------|----------|---|------------------------|-----------------------|---|--|-----------------|
|                |          | Observations  |         | 99 <sup>th</sup> Percentile, PPB |      |      |          | Obs.  | Highest Values, PPB    |                       | Obs.  | Highest Values, PPB<br>Midnight - Midnight |                 |
| Station        | Site No. | Total Obs.  | % Avail | 2012                             | 2011 | 2010 | 3-yr avg | Total   | 1 <sup>st</sup>        | 2 <sup>nd</sup>       | Total   | 1 <sup>st</sup>                            | 2 <sup>nd</sup> |
| Mt. Ninham     | 3951-01  | 8,207   | 93      | 7.1                              | 10.6 | 10.0 | 9.2      | 2,701   | 10.4<br>[02/22,<br>14] | 6.3<br>[02/06,<br>14] | 345   | 3.0<br>[02/14]                             | 2.6<br>[02/10]  |
| Belleayre Mtn. | 5565-03  | 8,324   | 95      | 3.9                              | 7.0  | 6.2  | 5.7      | 2,736   | 6.2<br>[02/27,<br>11]  | 4.1<br>[01/05,<br>02] | 351   | 2.9<br>[01/06]                             | 2.2<br>[01/07]  |

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

\*New York and Federal Ambient Air Quality Standard

[Date of Occurrence, Hour]

+ Denotes a contravention of NYS/Federal AAQS

# INHALABLE PARTICULATES (PM<sub>2.5</sub>) - Rupprecht & Patashnick Sampler

NYSDEC Region **3**

## Comparison Between NYS Ambient Air Quality and Ambient Air Quality Standards for Calendar Year 2012

(Average of last 3 years' annual means not to exceed 15  $\mu\text{g}/\text{m}^3$  \*;  
and average of 98<sup>th</sup> percentile for last 3 years not to exceed 35  $\mu\text{g}/\text{m}^3$  \*, *changed* from 65  $\mu\text{g}/\text{m}^3$  on 12/17/06)

| Station          | Site No. | Total Obs. | Maximum Values, $\mu\text{g}/\text{m}^3$ |                 |                 | 98th Percentile, $\mu\text{g}/\text{m}^3$ |      |      |          | Quarterly Averages, 2012 |                 |                 |                 | Annual Mean, $\mu\text{g}/\text{m}^3$ |      |      |          |
|------------------|----------|------------|--|-----------------|-----------------|---|------|------|----------|--------------------------|-----------------|-----------------|-----------------|---------------------------------------|------|------|----------|
|                  |          |            | 1 <sup>st</sup>                          | 2 <sup>nd</sup> | 3 <sup>rd</sup> | 2012                                      | 2011 | 2010 | 3-yr avg | 1 <sup>st</sup>          | 2 <sup>nd</sup> | 3 <sup>rd</sup> | 4 <sup>th</sup> | 2012                                  | 2011 | 2010 | 3-yr avg |
| Newburgh (F)     | 3502-04  | 111        | 23.2<br>[12/02]                          | 22.4<br>[11/11] | 20.2<br>[02/15] | 20.2                                      | 20.8 | 26.5 | 23       | 7.9                      | 7.2             | 7.6             | 8.4             | 7.8                                   | 8.6  | 8.1  | 8.2      |
| Newburgh (T)     | 3502-04  | 336        | 23.6<br>[06/29]                          | 23.5<br>[07/18] | 23.1<br>[08/03] | 19.3                                      | 20.9 | 22.1 | 21       | 8.6                      | 5.6             | 7.0             | 8.6             | 7.5                                   | 8.4  | 7.9  | 7.9      |
| Rockland Co. (T) | 4352-02  | 325        | 25.8<br>[07/17]                          | 23.7<br>[04/16] | 23.1<br>[06/22] | 18.7                                      | 22.3 | 24.6 | 22       | 8.4                      | 6.2             | 7.2             | 7.7             | 7.4                                   | 8.1  | 7.1  | 7.5      |
| Mamaroneck (F)   | 5956-01  | xxx        | xxx                                      | xxx             | xxx             | xxx                                       | 22.7 | 26.7 | xx       | xx                       | xx              | xx              | xx              | xx                                    | 9.3  | 8.9  | xx       |
| White Plains (T) | 5902-04  | 325        | 30.5<br>[06/29]                          | 20.5<br>[06/30] | 19.7<br>04/16]  | 18.8                                      | 24.5 | 22.4 | 22       | 10.2                     | 5.1             | 5.2             | 8.2             | 7.2                                   | 9.0  | 7.4  | 7.9      |

Sampling was terminated at 5956-01 on 12/31/11.

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

F = Federal Reference Method

T = TEOM (Tapered Element Oscillating Microbalance) not for Standards determination

\* Federal Ambient Air Quality Standard

+ Denotes a contravention of Federal AAQS

## OZONE - Continuous UV Light Absorption

NYSDEC Region **3**

**Annual Averages 2002 through 2012**  
Annual Arithmetic Mean (ppm)

| Station         | Site No. | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 |
|-----------------|----------|------|------|------|------|------|------|------|------|------|------|------|
| Valley Central  | 3527-01  | .029 | .029 | .028 | .031 | .029 | .030 | .026 | .025 | .029 | .025 | .023 |
| Rockland County | 4353-02  | ---  | ---  | ---  | ---  | ---  | ---  | ---  | .025 | .032 | .029 | .029 |
| White Plains    | 5902-04  | .024 | .024 | .019 | .025 | .025 | .027 | .024 | .024 | .025 | .023 | .026 |

Sampling at 4353-02 commenced on 06/04/09

**Comparison Between NYS Ambient Air Quality and Ambient Air Quality Standards for Calendar Year 2012**

|                 |          | One Hour Averages |         |          |                        |                        |                        |                        | <b>4th Highest Daily Maximum 8-Hour Average-</b><br>Not to exceed an avg of 0.075 ppm during the last 3 years, <i>changed</i> from 0.08 ppm on 5/27/08* |                 |                 |        |
|-----------------|----------|-------------------|---------|----------|------------------------|------------------------|------------------------|------------------------|---|-----------------|-----------------|--------|
|                 |          | Observations      |         |          | Highest Values, PPM    |                        |                        |                        |   |                 |                 |        |
| Station         | Site No. | Total Obs.        | % Avail | >.12 PPM | 1st                    | 2nd                    | 3rd                    | 4th                    | 2010  | 2011            | 2012            | Avg    |
| Valley Central  | 3527-01  | 8,527             | 97      | 0        | .090<br>[07/11,<br>17] | .082<br>[07/17,<br>14] | .080<br>[08/04,<br>15] | .072<br>[06/10,<br>19] | .075<br>[07/28]   | .067<br>[05/26] | .065<br>[08/04] | .069   |
| Rockland County | 4353-02  | 8,405             | 96      | 0        | .108<br>[08/08,<br>15] | .100<br>[08/09,<br>14] | .092<br>[07/13,<br>14] | .092<br>[07/17,<br>14] | .076<br>[07/12]   | .074<br>[06/28] | .079<br>[08/09] | .076 + |
| White Plains    | 5902-04  | 8,758             | 100     | 0        | .095<br>[08/03,<br>14] | .091<br>[07/26,<br>16] | .091<br>[08/08,<br>13] | .089<br>[05/28,<br>16] | .075<br>[07/07]   | .076<br>[07/11] | .079<br>[08/31] | .077 + |

(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

## OZONE - Continuous UV Light Absorption

NYSDEC Region **3**

**Annual Averages 2002 through 2012**  
Annual Arithmetic Mean (ppm)

| Station        | Site No. | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 |
|----------------|----------|------|------|------|------|------|------|------|------|------|------|------|
| Millbrook      | 1328-01  | .029 | .028 | .025 | .025 | .024 | .027 | .027 | .027 | .029 | .027 | .027 |
| Mt. Ninham     | 3951-01  | 0.35 | .031 | .028 | .029 | .028 | .029 | .027 | .027 | .031 | .027 | .024 |
| Belleayre Mtn. | 5565-03  | .036 | .036 | .034 | .035 | .034 | .034 | .030 | .032 | .035 | .033 | .033 |

**Comparison Between NYS Ambient Air Quality and Ambient Air Quality Standards for Calendar Year 2012**

|                |          | One Hour Averages |         |          |                     |                     |                     |                     | <b>4th Highest Daily Maximum 8-Hour Average-</b><br>Not to exceed an avg of 0.075 ppm during the last 3 years, <i>changed</i> from 0.08 ppm on 5/27/08* |                 |                 |      |
|----------------|----------|-------------------|---------|----------|---------------------|---------------------|---------------------|---------------------|---|-----------------|-----------------|------|
|                |          | Observations      |         |          | Highest Values, PPM |                     |                     |                     |   |                 |                 |      |
| Station        | Site No. | Total Obs.        | % Avail | >.12 PPM | 1st                 | 2nd                 | 3rd                 | 4th                 | 2010  | 2011            | 2012            | Avg  |
| Millbrook      | 1328-01  | 8,230             | 94      | 0        | .092<br>[07/17, 17] | .086<br>[08/09, 15] | .083<br>[08/03, 15] | .081<br>[04/16, 18] | .076<br>[08/04]   | .072<br>[06/07] | .075<br>[08/09] | .074 |
| Mt. Ninham     | 3951-01  | 8,085             | 92      | 0        | .091<br>[08/22, 15] | .090<br>[08/09, 14] | .086<br>[08/23, 14] | .082<br>[05/29, 14] | .077<br>[06/19]   | .068<br>[06/28] | .069<br>[08/25] | .071 |
| Belleayre Mtn. | 5565-03  | 8,449             | 96      | 0        | .076<br>[07/17, 15] | .074<br>[06/21, 10] | .072<br>[05/16, 16] | .071<br>[04/16, 22] | .070<br>[04/02]   | .071<br>[06/07] | .067<br>[07/13] | .069 |

(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

## LEAD - High Volume Air Samplers (Glass Fiber Filters)

NYSDEC Region 3

### Annual Geometric Means ( $\mu\text{g}/\text{m}^3$ ) 2002 through 2012

| Station    | Site No. | 2002 | 2003 | 2004   | 2005* | 2006 | 2007 | 2008  | 2009  | 2010  | 2011  | 2012  |
|------------|----------|------|------|--------|-------|------|------|-------|-------|-------|-------|-------|
| Wallkill   | 3566-02  | 0.05 | 0.04 | (0.05) | 0.03  | 0.02 | 0.02 | 0.018 | 0.016 | 0.011 | 0.015 | 0.011 |
| Wallkill   | 3566-09  | 0.07 | 0.07 | (0.05) | 0.05  | 0.02 | 0.02 | 0.038 | 0.027 | 0.026 | 0.027 | 0.032 |
| Scotchtown | 3566-11  | 0.03 | 0.03 | (0.04) | 0.01  | 0.01 | 0.01 | 0.005 | 0.006 | 0.003 | 0.004 | 0.005 |

\* Only 1st quarter data received from lab in 2005.

### Comparison Between NYS Ambient Air Quality and Ambient Air Quality Standards for Calendar Year 2012

|            |          | 24-Hour Concentrations - $\mu\text{g}/\text{m}^3$ |         |         |       |          |       |          |       | THREE MONTH ROLLING AVERAGES<br>Maximum not to exceed $0.15 \mu\text{g}/\text{m}^3$ , effective beginning 1/1/13 * (the old standard of $1.5 \mu\text{g}/\text{m}^3$ will remain in force until that date) |      |      |
|------------|----------|---|---------|---------|-------|----------|-------|----------|-------|--|------|------|
|            |          |   |         | Maximum |       | 2nd Max. |       | 3rd Max. |       | Highest Values, $\mu\text{g}/\text{m}^3$   |      |      |
| Station    | Site No. | Total Obs.  | % Avail | Value   | Date  | Value    | Date  | Value    | Date  | 2010   | 2011 | 2012 |
| Wallkill   | 3566-02  | 56  | 92      | .062    | 10/18 | .052     | 08/25 | .037     | 10/06 | 0.04   | 0.10 | 0.02 |
| Wallkill   | 3566-09  | 60  | 98      | .162    | 04/27 | .145     | 12/05 | .119     | 04/03 | 0.08   | 1.03 | 0.06 |
| Scotchtown | 3566-11  | 58  | 95      | .037    | 07/14 | .016     | 08/25 | .013     | 02/21 | 0.01   | 0.01 | 0.01 |

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

\* Federal Ambient Air Quality Standard

+ Denotes a contravention of Federal AAQS

## SULFUR DIOXIDE - Continuous Pulsed Fluorescence

NYSDEC Region **4**

### Annual Averages 2002 through 2012

Annual Arithmetic Mean (ppb) - Primary Standard  
(12 month average not to exceed 30 PPB \*)

| Station            | Site No. | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011   | 2012   |
|--------------------|----------|------|------|------|------|------|------|------|------|------|--------|--------|
| Loudonville        | 0101-33  | 3.96 | 4.06 | 4.36 | 5.15 | 5.07 | 2.97 | 3.61 | 3.85 | 2.33 | 1.92   | 0.97   |
| Schenectady        | 4601-05  | 3.51 | 3.30 | 3.82 | 5.16 | 5.35 | 2.33 | 3.42 | 2.63 | 1.92 | (2.18) | xx     |
| Grafton State Park | 4153-04  | 2.21 | 1.98 | 1.57 | 1.85 | 1.37 | 1.58 | 1.77 | 1.52 | 1.12 | 1.13   | (0.76) |

Sampling at 4601-05 was terminated on 06/30/11.

### Comparison Between NYS Ambient Air Quality and Ambient Air Quality Standards for Calendar Year 2012

|                    |          | One Hour Averages<br>average of 99 <sup>th</sup> percentile for last 3 years not to exceed 75 PPB * |         |                                  |      |      |          | 3-Hour Block Averages<br>Maximum not to exceed 500 PPB more than once per calendar year * |                     |                    | 24 Hour Average<br>Maximum not to exceed 140 PPB more than once per calendar year * |  |                 |
|--------------------|----------|---|---------|----------------------------------|------|------|----------|---|---------------------|--------------------|---|--|-----------------|
|                    |          | Observations  |         | 99 <sup>th</sup> Percentile, PPB |      |      |          | Obs.  | Highest Values, PPB |                    | Obs.  | Highest Values, PPB<br>Midnight - Midnight |                 |
| Station            | Site No. | Total Obs.  | % Avail | 2012                             | 2011 | 2010 | 3-yr avg | Total   | 1 <sup>st</sup>     | 2 <sup>nd</sup>    | Total   | 1 <sup>st</sup>                            | 2 <sup>nd</sup> |
| Loudonville        | 0101-33  | 8,633   | 98      | 8.8                              | 15.3 | 14.0 | 12.7     | 2,852   | 9.6<br>[02/23, 05]  | 8.9<br>[04/01, 11] | 364   | 3.5<br>[01/07]                             | 3.4<br>[01/06]  |
| Grafton State Park | 4153-04  | 6,270   | 71      | 4.7                              | 11.3 | 7.5  | 7.8      | 2,070   | 5.0<br>[01/05, 05]  | 4.4<br>[01/05, 08] | 261   | 3.2<br>[03/12]                             | 3.0<br>[01/07]  |

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

\*New York and Federal Ambient Air Quality Standard

[Date of Occurrence, Hour]

+ Denotes a contravention of NYS/Federal AAQS

# INHALABLE PARTICULATES (PM<sub>2.5</sub>) - Rupprecht & Patashnick Sampler

NYSDEC Region 4

## Comparison Between NYS Ambient Air Quality and Ambient Air Quality Standards for Calendar Year 2012

(Average of last 3 years' annual means not to exceed 15 µg/m<sup>3</sup> \*;  
and average of 98th percentile for last 3 years not to exceed 35 µg/m<sup>3</sup> \*, *changed* from 65 µg/m<sup>3</sup> on 12/17/06)

| Station           | Site No. | Total Obs. | Maximum Values, µg/m <sup>3</sup> |                 |                 | 98th Percentile, µg/m <sup>3</sup> |      |      |          | Quarterly Averages, 2012 |                 |                 |                 | Annual Mean, µg/m <sup>3</sup> |      |      |          |
|-------------------|----------|------------|-----------------------------------|-----------------|-----------------|------------------------------------|------|------|----------|--------------------------|-----------------|-----------------|-----------------|--------------------------------|------|------|----------|
|                   |          |            | 1 <sup>st</sup>                   | 2 <sup>nd</sup> | 3 <sup>rd</sup> | 2012                               | 2011 | 2010 | 3-yr avg | 1 <sup>st</sup>          | 2 <sup>nd</sup> | 3 <sup>rd</sup> | 4 <sup>th</sup> | 2012                           | 2011 | 2010 | 3-yr avg |
| Albany Co. HD (F) | 0101-13  | 111        | 20.6<br>[11/20]                   | 19.4<br>[08/04] | 17.7<br>[02/15] | 17.7                               | 23.5 | 23.5 | 22       | 8.1                      | 6.8             | 7.7             | 8.3             | 7.7                            | 8.7  | 7.9  | 8.1      |
| Albany Co. HD (T) | 0101-13  | 316        | 21.0<br>[11/21]                   | 20.7<br>[01/07] | 19.3<br>[06/21] | 17.3                               | 20.2 | 24.3 | 20       | 8.5                      | 5.2             | 6.1             | 7.4             | 6.8                            | 8.2  | 8.1  | 7.7      |
| Loudonville (F)   | 0101-33  | 105        | 20.3<br>[08/04]                   | 20.0<br>[10/03] | 17.8<br>[11/20] | 17.8                               | 18.1 | 27.5 | 21       | 6.2                      | 7.0             | 7.4             | 7.3             | 7.0                            | 7.1  | 7.9  | 7.3      |

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

F = Federal Reference Method

T = TEOM (Tapered Element Oscillating Microbalance) not for Standards determination

\* Federal Ambient Air Quality Standard

+ Denotes a contravention of Federal AAQS

## CARBON MONOXIDE - Continuous Non-Dispersive Infrared

NYSDEC Region **4**

### Annual Averages 2002 through 2012 Annual Arithmetic Mean (ppm)

| Station     | Site No. | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 |
|-------------|----------|------|------|------|------|------|------|------|------|------|------|------|
| Loudonville | 0101-33  | 0.4  | 0.5  | 0.4  | 0.4  | 0.4  | 0.4  | 0.3  | 0.3  | 0.3  | 0.3  | 0.3  |
| Schenectady | 4601-05  | 0.5  | 0.5  | 0.4  | 0.4  | 0.5  | 0.5  | 0.3  | 0.3  | 0.4  | xxx  | xxx  |

Sampling at 4601-05 was terminated on 12/31/2010.

### Comparison Between NYS Ambient Air Quality and Ambient Air Quality Standards for Calendar Year 2012

|                |                 | <b>One-Hour Average</b><br>Maximum not to exceed 35 PPM more than once per calendar year * |                |                   |                            |                       |                       | <b>Running 8-Hour Average (Non-Overlapping)</b><br>Maximum not to exceed 9 PPM more than once per calendar year * |                  |                            |                      |                      |
|----------------|-----------------|--|----------------|-------------------|----------------------------|-----------------------|-----------------------|---|------------------|----------------------------|----------------------|----------------------|
|                |                 | <b>Observations</b>  |                |                   | <b>Highest Values, PPM</b> |                       |                       | <b>Observations</b>   |                  | <b>Highest Values, PPM</b> |                      |                      |
| <b>Station</b> | <b>Site No.</b> | <b>Total Obs.</b>  | <b>% Avail</b> | <b>&gt;35 PPM</b> | <b>1st</b>                 | <b>2nd</b>            | <b>3rd</b>            | <b>Total</b>  | <b>&gt;9 PPM</b> | <b>1st</b>                 | <b>2nd</b>           | <b>Days&gt; 9PPM</b> |
| Loudonville    | 0101-33         | 8,650  | 98             | 0                 | 1.4<br>[05/30,<br>10]      | 1.1<br>[05/12,<br>23] | 1.1<br>[12/13,<br>09] | 8,625   | 0                | .8<br>[12/13,<br>09]       | .7<br>[11/22,<br>03] | 0                    |

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

\*New York and Federal Ambient Air Quality Standard

[Date of Occurrence, Hour]

+ Denotes a contravention of NYS/Federal AAQS (Note: 9PPM standard is not exceeded unless 8-hour avg > 9.4 PPM)

## OZONE - Continuous UV Light Absorption

NYSDEC Region 4

**Annual Averages 2002 through 2012**  
Annual Arithmetic Mean (ppm)

| Station                 | Site No. | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008  | 2009  | 2010  | 2011    | 2012  |
|-------------------------|----------|------|------|------|------|------|------|-------|-------|-------|---------|-------|
| Loudonville             | 0101-33  | .027 | .025 | .025 | .027 | .026 | .028 | 0.026 | 0.027 | 0.030 | 0.027   | 0.029 |
| Schenectady             | 4601-05  | .024 | .023 | .021 | .023 | .020 | .022 | 0.021 | 0.023 | 0.025 | (0.027) | xxx   |
| Grafton Lake State Park | 4153-04  | .037 | .037 | .035 | .037 | .033 | .034 | 0.034 | 0.033 | 0.036 | 0.032   | 0.034 |

Sampling at 4601-05 was terminated on 06/30/11.

**Comparison Between NYS Ambient Air Quality and Ambient Air Quality Standards for Calendar Year 2012**

|              |          | One Hour Averages |         |          |                        |                        |                        |                        | 4th Highest Daily Maximum 8-Hour Average-<br>Not to exceed an avg of 0.075 ppm during the last 3<br>years, <i>changed</i> from 0.08 ppm on 5/27/08* |                 |                 |      |
|--------------|----------|-------------------|---------|----------|------------------------|------------------------|------------------------|------------------------|---|-----------------|-----------------|------|
|              |          | Observations      |         |          | Highest Values, PPM    |                        |                        |                        |   |                 |                 |      |
| Station      | Site No. | Total Obs.        | % Avail | >.12 PPM | 1st                    | 2nd                    | 3rd                    | 4th                    | 2010  | 2011            | 2012            | Avg  |
| Loudonville  | 0101-33  | 8,464             | 96      | 0        | .095<br>[07/13,<br>13] | .089<br>[07/12,<br>15] | .085<br>[08/04,<br>18] | .084<br>[04/16,<br>19] | .073<br>[09/01]   | .065<br>[06/08] | .073<br>[04/16] | .070 |
| Schenectady  | 4601-05  | xx                | xx      | xx       | xx                     | xx                     | xx                     | xx                     | .073<br>[09/01]   | .059<br>[06/01] | xx              | xx   |
| Grafton Lake | 4153-04  | 8,307             | 95      | 0        | .086<br>[07/13,<br>15] | .080<br>[04/16,<br>19] | .078<br>[07/14,<br>15] | .076<br>[06/29,<br>10] | .073<br>[07/04]   | .061<br>[07/23] | .069<br>[04/16] | .068 |

(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

## SULFUR DIOXIDE - Continuous Pulsed Fluorescence

NYSDEC Region **5**

### Annual Averages 2002 through 2012

Annual Arithmetic Mean (ppb) - Primary Standard  
(12 month average not to exceed 30 PPB \*)

| Station                | Site No. | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 |
|------------------------|----------|------|------|------|------|------|------|------|------|------|------|------|
| Whiteface Mtn. - Lodge | 1567-04  | 1.30 | 0.98 | 0.83 | 1.05 | 0.98 | 0.91 | 0.82 | 0.64 | 0.72 | 0.73 | 0.61 |
| Paul Smiths College    | 1655-01  | -    | -    | 0.92 | 1.21 | 0.89 | 0.96 | 0.75 | 0.60 | 0.57 | 0.67 | 0.50 |
| Piseco Lake            | 2050-01  | 1.09 | 1.06 | 0.83 | 0.66 | 0.62 | 0.65 | 0.56 | 0.44 | 0.34 | 0.32 | 0.14 |

### Comparison Between NYS Ambient Air Quality and Ambient Air Quality Standards for Calendar Year 2012

|                        |          | One Hour Averages<br>average of 99 <sup>th</sup> percentile for last 3 years not to exceed 75 PPB * |         |                                  |      |      |          | 3-Hour Block Averages<br>Maximum not to exceed 500 PPB more than once per calendar year * |                     |                    | 24 Hour Average<br>Maximum not to exceed 140 PPB more than once per calendar year * |  |                 |
|------------------------|----------|---|---------|----------------------------------|------|------|----------|---|---------------------|--------------------|---|--|-----------------|
|                        |          | Observations  |         | 99 <sup>th</sup> Percentile, PPB |      |      |          | Obs.  | Highest Values, PPB |                    | Obs.  | Highest Values, PPB<br>Midnight - Midnight |                 |
| Station                | Site No. | Total Obs.  | % Avail | 2012                             | 2011 | 2010 | 3-yr avg | Total   | 1 <sup>st</sup>     | 2 <sup>nd</sup>    | Total   | 1 <sup>st</sup>                            | 2 <sup>nd</sup> |
| Whiteface Mtn. - Lodge | 1567-04  | 8,663   | 99      | 3.2                              | 5.4  | 4.7  | 4        | 2,850   | 11.0<br>[10/12, 08] | 4.7<br>[11/09, 14] | 364   | 2.0<br>[10/12]                             | 1.9<br>[01/07]  |
| Paul Smiths College    | 1655-01  | 8,363   | 95      | 3.8                              | 4.5  | 3.2  | 4        | 2,753   | 13.0<br>[01/26, 14] | 5.6<br>[11/09, 14] | 352   | 2.2<br>[01/26]                             | 2.0<br>[03/11]  |
| Piseco Lake            | 2050-01  | 8,337   | 95      | 2.8                              | 5.3  | 4.1  | 4        | 2,738   | 3.9<br>[10/22, 14]  | 2.8<br>[01/07, 14] | 350   | 1.2<br>[03/11]                             | 1.2<br>[08/31]  |

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

\*New York and Federal Ambient Air Quality Standard

[Date of Occurrence, Hour]

+ Denotes a contravention of NYS/Federal AAQS

## INHALABLE PARTICULATES (PM<sub>2.5</sub>) - Rupprecht & Patashnick Sampler

NYSDEC Region **5**  
(Manhattan Sites)

### Comparison Between NYS Ambient Air Quality and Ambient Air Quality Standards for Calendar Year 2012

(Average of last 3 years' annual means not to exceed 15 µg/m<sup>3</sup> \*;  
and average of 98<sup>th</sup> percentile for last 3 years not to exceed 35 µg/m<sup>3</sup> \*, *changed* from 65 µg/m<sup>3</sup> on 12/17/06)

| Station            | Site No. | Total Obs. | Maximum Values, µg/m <sup>3</sup> |                 |                 | 98th Percentile, µg/m <sup>3</sup> |      |      |          | Quarterly Averages, 2012 |                 |                 |                 | Annual Mean, µg/m <sup>3</sup> |      |      |          |
|--------------------|----------|------------|-----------------------------------|-----------------|-----------------|------------------------------------|------|------|----------|--------------------------|-----------------|-----------------|-----------------|--------------------------------|------|------|----------|
|                    |          |            | 1 <sup>st</sup>                   | 2 <sup>nd</sup> | 3 <sup>rd</sup> | 2012                               | 2011 | 2010 | 3-yr avg | 1 <sup>st</sup>          | 2 <sup>nd</sup> | 3 <sup>rd</sup> | 4 <sup>th</sup> | 2012                           | 2011 | 2010 | 3-yr avg |
| Whiteface Base (F) | 1567-04  | 51         | 16.5<br>[07/14]                   | 15.3<br>[06/20] | 11.3<br>[08/25] | 15.3                               | 14.4 | 15.7 | 15       | 3.6                      | 5.2             | 5.8             | 3.1             | 4.4                            | 4.2  | 4.3  | 4.3      |
| Whiteface Base (T) | 1567-04  | 335        | 22.7<br>[06/20]                   | 17.3<br>[07/14] | 16.5<br>[05/29] | 13.4                               | 14.0 | 17.4 | 15       | 5.7                      | 3.7             | 4.5             | 4.4             | 4.6                            | 4.8  | 4.9  | 4.8      |

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

F = Federal Reference Method

T = TEOM (Tapered Element Oscillating Microbalance) not for Standards determination

\* Federal Ambient Air Quality Standard

+ Denotes a contravention of Federal AAQS

## OZONE - Continuous UV Light Absorption

NYSDEC Region **5**

**Annual Averages 2002 through 2012**  
Annual Arithmetic Mean (ppm)

| Station               | Site No. | 2002   | 2003 | 2004   | 2005   | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 |
|-----------------------|----------|--------|------|--------|--------|------|------|------|------|------|------|------|
| Stillwater            | 4567-01  | .032   | .035 | .032   | .033   | .029 | .032 | .030 | .030 | .032 | .029 | .029 |
| Whiteface Mtn. Summit | 1567-03  | (.041) | .046 | (.046) | (.041) | .040 | .043 | .038 | .038 | .039 | .034 | .035 |
| Whiteface Mtn. Base   | 1567-04  | .039   | .038 | .036   | .036   | .035 | .035 | .034 | .033 | .036 | .034 | .036 |
| Piseco Lake           | 2050-01  | .031   | .031 | .031   | .029   | .030 | .030 | .029 | .029 | .031 | .028 | .029 |

**Comparison Between NYS Ambient Air Quality and Ambient Air Quality Standards for Calendar Year 2012**

| Station               | Site No. | One Hour Averages |         |                     |                     |                     |                     |                     | 4th Highest Daily Maximum 8-Hour Average-<br>Not to exceed an avg of 0.075 ppm during the last 3 years, changed from 0.08 ppm on 5/27/08* |                 |                 |      |
|-----------------------|----------|-------------------|---------|---------------------|---------------------|---------------------|---------------------|---------------------|---|-----------------|-----------------|------|
|                       |          | Observations      |         | Highest Values, PPM |                     |                     |                     |                     |   |                 |                 |      |
|                       |          | Total Obs.        | % Avail | >.12 PPM            | 1st                 | 2nd                 | 3rd                 | 4th                 | 2010  | 2011            | 2012            | Avg  |
| Stillwater            | 4567-01  | 8,665             | 99      | 0                   | .082<br>[08/09, 14] | .081<br>[07/13, 17] | .080<br>[08/04, 14] | .076<br>[04/16, 21] | .071<br>[06/19]   | .066<br>[06/07] | .068<br>[07/12] | .068 |
| Whiteface Mtn. Summit | 1567-03  | 8,451             | 96      | 0                   | .090<br>[06/29, 01] | .089<br>[07/14, 06] | .083<br>[06/20, 00] | .079<br>[06/28, 23] | .073<br>[07/06]   | .064<br>[10/10] | .082<br>[07/13] | .073 |
| Whiteface Mtn. Base   | 1567-04  | 8,559             | 98      | 0                   | .086<br>[06/20, 00] | .078<br>[06/29, 04] | .078<br>[07/14, 05] | .077<br>[08/31, 19] | .072<br>[04/02]   | .064<br>[07/21] | .071<br>[05/12] | .069 |
| Piseco Lake           | 2050-01  | 8,418             | 96      | 0                   | .095<br>[08/31, 21] | .081<br>[06/21, 17] | .078<br>[06/20, 10] | .075<br>[06/22, 00] | .068<br>[07/04]   | .064<br>[06/01] | .070<br>[07/17] | .067 |

(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

## SULFUR DIOXIDE - Continuous Pulsed Fluorescence

NYSDEC Region **6**

**Annual Averages 2002 through 2012**  
Annual Arithmetic Mean (ppb) - Primary Standard  
(12 month average not to exceed 30 PPB \*)

| Station     | Site No. | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 |
|-------------|----------|------|------|------|------|------|------|------|------|------|------|------|
| Nick's Lake | 2167-03  | 1.01 | 0.96 | 0.89 | 0.90 | 0.89 | 0.90 | 0.63 | 0.52 | 0.54 | 0.48 | 0.65 |

**Comparison Between NYS Ambient Air Quality and Ambient Air Quality Standards for Calendar Year 2012**

|             |          | <b>One Hour Averages</b><br>average of 99 <sup>th</sup> percentile for last 3 years not to exceed 75 PPB * |                |  |             |             |                 | <b>3-Hour Block Averages</b><br>Maximum not to exceed 500 PPB more than once per calendar year * |                            |                       | <b>24 Hour Average</b><br>Maximum not to exceed 140 PPB more than once per calendar year * |  |                       |
|-------------|----------|--|----------------|--|-------------|-------------|-----------------|--|----------------------------|-----------------------|--|--|-----------------------|
|             |          | <b>Observations</b>  |                | <b>99<sup>th</sup> Percentile, PPB</b> |             |             |                 | <b>Obs.</b>  | <b>Highest Values, PPB</b> |                       | <b>Obs.</b>  | <b>Highest Values, PPB Midnight - Midnight</b> |                       |
| Station     | Site No. | <b>Total Obs.</b>  | <b>% Avail</b> | <b>2012</b>                            | <b>2011</b> | <b>2010</b> | <b>3-yr avg</b> | <b>Total</b>   | <b>1<sup>st</sup></b>      | <b>2<sup>nd</sup></b> | <b>Total</b>   | <b>1<sup>st</sup></b>                          | <b>2<sup>nd</sup></b> |
| Nick's Lake | 2167-03  | 8,653  | 99             | 3.2                                    | 5.3         | 4.2         | 4               | 2,854  | 6.2<br>[10/22,<br>11]      | 3.7<br>[01/05,<br>02] | 363  | 2.0<br>[10/22]                                 | 1.9<br>[01/05]        |

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

\*New York and Federal Ambient Air Quality Standard

[Date of Occurrence, Hour]

+ Denotes a contravention of NYS/Federal AAQS

# INHALABLE PARTICULATES (PM<sub>2.5</sub>) - Rupprecht & Patashnick Sampler

NYSDEC Region **6**

## Comparison Between NYS Ambient Air Quality and Ambient Air Quality Standards for Calendar Year 2012

(Average of last 3 years' annual means not to exceed 15 µg/m<sup>3</sup> \*;  
and average of 98<sup>th</sup> percentile for last 3 years not to exceed 35 µg/m<sup>3</sup> \*, *changed* from 65 µg/m<sup>3</sup> on 12/17/06)

| Station   | Site No. | Total Obs. | Maximum Values, µg/m <sup>3</sup> |                 |                 | 98th Percentile, µg/m <sup>3</sup> |      |      |          | Quarterly Averages, 2012 |                 |                 |                 | Annual Mean, µg/m <sup>3</sup> |      |      |          |
|-----------|----------|------------|-----------------------------------|-----------------|-----------------|------------------------------------|------|------|----------|--------------------------|-----------------|-----------------|-----------------|--------------------------------|------|------|----------|
|           |          |            | 1 <sup>st</sup>                   | 2 <sup>nd</sup> | 3 <sup>rd</sup> | 2012                               | 2011 | 2010 | 3-yr avg | 1 <sup>st</sup>          | 2 <sup>nd</sup> | 3 <sup>rd</sup> | 4 <sup>th</sup> | 2012                           | 2011 | 2010 | 3-yr avg |
| Utica (T) | 3202-01  | 351        | 22.0<br>[01/17]                   | 19.2<br>[01/06] | 19.1<br>06/21]  | 17.4                               | 22.2 | 23.8 | 21       | 9.6                      | 5.3             | 6.0             | 8.0             | 7.2                            | 7.8  | 8.1  | 7.7      |

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

F = Federal Reference Method

T = TEOM (Tapered Element Oscillating Microbalance) not for Standards determination

\* Federal Ambient Air Quality Standard

+ Denotes a contravention of Federal AAQS

## OZONE - Continuous UV Light Absorption

NYSDEC Region **6**

**Annual Averages 2002 through 2012**  
Annual Arithmetic Mean (ppm)

| Station     | Site No. | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 |
|-------------|----------|------|------|------|------|------|------|------|------|------|------|------|
| Nick's Lake | 2167-03  | .029 | .029 | .028 | .029 | .027 | .029 | .028 | .029 | .030 | .028 | .027 |
| Perch River | 2223-01  | .040 | .036 | .032 | .034 | .030 | .032 | .030 | .030 | .032 | .029 | .030 |
| Camden      | 3255-01  | .029 | .027 | .025 | .024 | .024 | .026 | .025 | .021 | .023 | .022 | .024 |

**Comparison Between NYS Ambient Air Quality and Ambient Air Quality Standards for Calendar Year 2012**

|                                 |          | One Hour Averages |         |          |                     |                     |                     |                     | 4th Highest Daily Maximum 8-Hour Average-<br>Not to exceed an avg of 0.075 ppm during the last 3 years, <i>changed</i> from 0.08 ppm on 5/27/08* |                 |                 |      |
|---------------------------------|----------|-------------------|---------|----------|---------------------|---------------------|---------------------|---------------------|--|-----------------|-----------------|------|
|                                 |          | Observations      |         |          | Highest Values, PPM |                     |                     |                     |  |                 |                 |      |
| Station                         | Site No. | Total Obs.        | % Avail | >.12 PPM | 1st                 | 2nd                 | 3rd                 | 4th                 | 2010   | 2011            | 2012            | Avg  |
| Nick's Lake                     | 2167-03  | 8,640             | 98      | 0        | .082<br>[08/31, 18] | .072<br>[06/21, 10] | .071<br>[05/12, 16] | .070<br>[07/14, 13] | .065<br>[07/07]  | .058<br>[04/12] | .065<br>[07/14] | .063 |
| Perch River                     | 2223-01  | 8,541             | 97      | 0        | .091<br>[06/20, 18] | .090<br>[07/17, 14] | .084<br>[08/31, 18] | .083<br>[06/21, 14] | .077<br>[08/31]  | .069<br>[06/08] | .077<br>[06/21] | .074 |
| Camden (Operated 02/03 – 12/04) | 3255-01  | 7,129             | 97      | 0        | .079<br>[08/31, 16] | .076<br>[07/14, 14] | .076<br>[09/13, 13] | .075<br>[07/04, 19] | .063<br>[07/06]  | .060<br>[07/21] | .069<br>[07/13] | .064 |

(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

## SULFUR DIOXIDE - Continuous Pulsed Fluorescence

NYSDEC Region 7

**Annual Averages 2002 through 2012**  
Annual Arithmetic Mean (ppb) - Primary Standard  
(12 month average not to exceed 30 PPB \*)

| Station         | Site No. | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 |
|-----------------|----------|------|------|------|------|------|------|------|------|------|------|------|
| Camp Georgetown | 2655-01  | 2.18 | 248  | 2.30 | 2.39 | 2.06 | 1.85 | 1.79 | 1.17 | 1.09 | 0.52 | xxx  |
| East Syracuse   | 3353-09  | 2.82 | 3.32 | 2.62 | 2.35 | 2.23 | 2.11 | 2.06 | 1.23 | 0.92 | 0.88 | 0.88 |

Sampling at 2655-01 was suspended on 04/02 when the correctional facility was shuttered leaving the site without power.

### Comparison Between NYS Ambient Air Quality and Ambient Air Quality Standards for Calendar Year 2012

|                 |          | <b>One Hour Averages</b><br>average of 99 <sup>th</sup> percentile for last 3 years not to exceed 75 PPB * |         |                                  |      |      |          | <b>3-Hour Block Averages</b><br>Maximum not to exceed 500 PPB more than once per calendar year * |                       |                       | <b>24 Hour Average</b><br>Maximum not to exceed 140 PPB more than once per calendar year * |  |                 |
|-----------------|----------|--|---------|----------------------------------|------|------|----------|--|-----------------------|-----------------------|--|--|-----------------|
|                 |          | Observations   |         | 99 <sup>th</sup> Percentile, PPB |      |      |          | Obs.   | Highest Values, PPB   |                       | Obs.   | Highest Values, PPB<br>Midnight - Midnight |                 |
| Station         | Site No. | Total Obs.   | % Avail | 2012                             | 2011 | 2010 | 3-yr avg | Total  | 1 <sup>st</sup>       | 2 <sup>nd</sup>       | Total  | 1 <sup>st</sup>                            | 2 <sup>nd</sup> |
| Camp Georgetown | 2655-01  | xxx  | xx      | xx                               | 8.1  | 7.0  | --       | xxx  | xx                    | xx                    | xxx  | xx   | xx              |
| East Syracuse   | 3353-09  | 8,295  | 94      | 7.1                              | 8.6  | 10.0 | 9        | 2,733  | 5.8<br>[11/21,<br>14] | 5.3<br>[10/22,<br>11] | 349  | 2.3<br>[01/06]                             | 2.0<br>[11/11]  |

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

\*New York and Federal Ambient Air Quality Standard

[Date of Occurrence, Hour]

+ Denotes a contravention of NYS/Federal AAQS

# INHALABLE PARTICULATES (PM<sub>2.5</sub>) - Rupprecht & Patashnick Sampler

NYSDEC Region **7**

## Comparison Between NYS Ambient Air Quality and Ambient Air Quality Standards for Calendar Year 2012

(Average of last 3 years' annual means not to exceed 15  $\mu\text{g}/\text{m}^3$  \*;  
and average of 98<sup>th</sup> percentile for last 3 years not to exceed 35  $\mu\text{g}/\text{m}^3$  \*, *changed* from 65  $\mu\text{g}/\text{m}^3$  on 12/17/06)

| Station           | Site No. | Total Obs. | Maximum Values, $\mu\text{g}/\text{m}^3$ |                 |                 | 98th Percentile, $\mu\text{g}/\text{m}^3$ |      |      |          | Quarterly Averages, 2012 |                 |                 |                 | Annual Mean, $\mu\text{g}/\text{m}^3$ |      |      |          |
|-------------------|----------|------------|--|-----------------|-----------------|---|------|------|----------|--------------------------|-----------------|-----------------|-----------------|---------------------------------------|------|------|----------|
|                   |          |            | 1 <sup>st</sup>                          | 2 <sup>nd</sup> | 3 <sup>rd</sup> | 2012                                      | 2011 | 2010 | 3-yr avg | 1 <sup>st</sup>          | 2 <sup>nd</sup> | 3 <sup>rd</sup> | 4 <sup>th</sup> | 2012                                  | 2011 | 2010 | 3-yr avg |
| East Syracuse (F) | 3353-09  | 115        | 19.5<br>[06/11]                          | 16.6<br>[07/14] | 16.0<br>[07/23] | 16.0                                      | 24.1 | 22.5 | 21       | 7.2                      | 7.4             | 7.8             | 6.9             | 7.3                                   | 8.1  | 7.6  | 7.7      |

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

F = Federal Reference Method

T = TEOM (Tapered Element Oscillating Microbalance) not for Standards determination

\* Federal Ambient Air Quality Standard

+ Denotes a contravention of Federal AAQS

## CARBON MONOXIDE - Continuous Non-Dispersive Infrared

NYSDEC Region **7**

**Annual Averages 2002 through 2012**  
Annual Arithmetic Mean (ppm)

| Station  | Site No. | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 |
|----------|----------|------|------|------|------|------|------|------|------|------|------|------|
| Syracuse | 3301-22  | 0.5  | 0.6  | 0.5  | 0.5  | 0.5  | 0.5  | 0.4  | 0.4  | 0.5  | 0.3  | 0.3  |

**Comparison Between NYS Ambient Air Quality and Ambient Air Quality Standards for Calendar Year 2012**

|                |                 | <b>One-Hour Average</b><br>Maximum not to exceed 35 PPM more than once per calendar year * |                |                   |                            |                       |                       | <b>Running 8-Hour Average (Non-Overlapping)</b><br>Maximum not to exceed 9 PPM more than once per calendar year * |                  |                            |                       |                       |
|----------------|-----------------|--|----------------|-------------------|----------------------------|-----------------------|-----------------------|---|------------------|----------------------------|-----------------------|-----------------------|
|                |                 | <b>Observations</b>  |                |                   | <b>Highest Values, PPM</b> |                       |                       | <b>Observations</b>   |                  | <b>Highest Values, PPM</b> |                       |                       |
| <b>Station</b> | <b>Site No.</b> | <b>Total Obs.</b>  | <b>% Avail</b> | <b>&gt;35 PPM</b> | <b>1st</b>                 | <b>2nd</b>            | <b>3rd</b>            | <b>Total</b>  | <b>&gt;9 PPM</b> | <b>1st</b>                 | <b>2nd</b>            | <b>Days &gt; 9PPM</b> |
| Syracuse       | 3301-22         | 7,608  | 87             | 0                 | 1.9<br>[01/04,<br>07]      | 1.7<br>[11/21,<br>08] | 1.4<br>[11/20,<br>19] | 7,618   | 0                | 1.1<br>[11/20,<br>21]      | 1.0<br>[11/19,<br>23] | 0                     |

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

\*New York and Federal Ambient Air Quality Standard

[Date of Occurrence, Hour]

+ Denotes a contravention of NYS/Federal AAQS (Note: 9PPM standard is not exceeded unless 8-hour avg > 9.4 PPM)

## OZONE - Continuous UV Light Absorption

NYSDEC Region 7

**Annual Averages 2002 through 2012**  
Annual Arithmetic Mean (ppm)

| Station         | Site No. | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 |
|-----------------|----------|------|------|------|------|------|------|------|------|------|------|------|
| Camp Georgetown | 2655-01  | .034 | .033 | .030 | .033 | .031 | .033 | .030 | .030 | .032 | .030 | xxx  |
| East Syracuse   | 3353-09  | .028 | .025 | .023 | .028 | .026 | .028 | .027 | .025 | .027 | .026 | .028 |
| Fulton/Granby   | 3754-01  | ---  | .035 | .031 | .034 | .031 | .031 | .029 | .029 | .031 | .028 | .029 |

Sampling at 2655-01 was suspended on 04/02 when the correctional facility was shuttered leaving the site without power.

**Comparison Between NYS Ambient Air Quality and Ambient Air Quality Standards for Calendar Year 2012**

|                 |          | One Hour Averages |         |          |                        |                        |                        |                        | 4th Highest Daily Maximum 8-Hour Average-<br>Not to exceed an avg of 0.075 ppm during the last 3 years, <i>changed</i> from 0.08 ppm on 5/27/08* |                 |                 |      |
|-----------------|----------|-------------------|---------|----------|------------------------|------------------------|------------------------|------------------------|--|-----------------|-----------------|------|
|                 |          | Observations      |         |          | Highest Values, PPM    |                        |                        |                        |  |                 |                 |      |
| Station         | Site No. | Total Obs.        | % Avail | >.12 PPM | 1st                    | 2nd                    | 3rd                    | 4th                    | 2010   | 2011            | 2012            | Avg  |
| Camp Georgetown | 2655-01  | xxx               | xx      | --       | xxx                    | xxx                    | xxx                    | xxx                    | .071<br>[07/04]  | .064<br>[07/23] | xxx             | xxx  |
| East Syracuse   | 3353-09  | 8,278             | 94      | 0        | .084<br>[06/10,<br>14] | .083<br>[07/06,<br>18] | .083<br>[07/14,<br>13] | .080<br>[06/21,<br>17] | .073<br>[07/04]  | .069<br>[07/23] | .074<br>[06/21] | .072 |
| Fulton/Granby   | 3754-01  | 8,164             | 93      | 0        | .081<br>[08/31,<br>17] | .080<br>[07/04,<br>19] | .079<br>[06/20,<br>16] | .078<br>[06/21,<br>15] | .071<br>[04/03]  | .067<br>[07/21] | .073<br>[07/04] | .070 |

(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

## SULFUR DIOXIDE - Continuous Pulsed Fluorescence

NYSDEC Region **8**

### Annual Averages 2002 through 2012

Annual Arithmetic Mean (ppb) - Primary Standard  
(12 month average not to exceed 30 PPB \*)

| Station   | Site No. | 2002 | 2003 | 2004   | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011   | 2012 |
|-----------|----------|------|------|--------|------|------|------|------|------|------|--------|------|
| Elmira    | 0701-05  | 3.66 | 4.06 | 3.31   | 3.18 | 3.12 | 3.29 | 2.80 | 2.01 | 2.08 | 1.65   | 1.48 |
| Rochester | 2701-08  | 5.22 | 5.43 | (6.47) | xx     | xx   |
| Rochester | 2701-01  | 5.16 | 5.42 | (6.17) | xx     | xx   |
| Rochester | 2701-22  | --   | --   | (4.50) | 4.20 | 4.18 | 4.06 | 2.91 | 2.54 | 2.19 | (1.15) | 0.99 |
| Pinnacle  | 5001-04  | --   | --   | --     | --   | --   | 1.73 | 1.67 | 1.04 | 0.63 | 0.71   | 0.39 |

### Comparison Between NYS Ambient Air Quality and Ambient Air Quality Standards for Calendar Year 2012

|                |                 | <b>One Hour Averages</b><br>average of 99 <sup>th</sup> percentile for last 3 years not to exceed 75 PPB * |                |  |             |             |                 | <b>3-Hour Block Averages</b><br>Maximum not to exceed 500 PPB more than once per calendar year * |                            |                       | <b>24 Hour Average</b><br>Maximum not to exceed 140 PPB more than once per calendar year * |  |                       |
|----------------|-----------------|--|----------------|--|-------------|-------------|-----------------|--|----------------------------|-----------------------|--|--|-----------------------|
|                |                 | <b>Observations</b>  |                | <b>99<sup>th</sup> Percentile, PPB</b> |             |             |                 | <b>Obs.</b>  | <b>Highest Values, PPB</b> |                       | <b>Obs.</b>  | <b>Highest Values, PPB Midnight - Midnight</b> |                       |
| <b>Station</b> | <b>Site No.</b> | <b>Total Obs.</b>  | <b>% Avail</b> | <b>2012</b>                            | <b>2011</b> | <b>2010</b> | <b>3-yr avg</b> | <b>Total</b>   | <b>1<sup>st</sup></b>      | <b>2<sup>nd</sup></b> | <b>Total</b>   | <b>1<sup>st</sup></b>                          | <b>2<sup>nd</sup></b> |
| Elmira         | 0701-05         | 8,536  | 97             | 6.7                                    | 11.0        | 11.0        | 10              | 2,589  | 34.1<br>[06/10, 17]        | 20.3<br>[06/20, 14]   | 358  | 5.4<br>[01/04]                                 | 5.1<br>[01/06]        |
| Rochester      | 2701-22         | 8,577  | 98             | 21.2                                   | 22.0        | 25.0        | 23              | 2,814  | 16.2<br>[05/16, 23]        | 15.2<br>[11/03, 05]   | 363  | 8.0<br>[11/03]                                 | 5.3<br>[12/30]        |
| Pinnacle       | 5001-04         | 8,486  | 97             | 8.1                                    | 14.8        | 13.7        | 12              | 2,701  | 12.0<br>[01/04, 20]        | 10.9<br>[03/11, 05]   | 359  | 4.1<br>[03/11]                                 | 4.0<br>[01/04]        |

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

\*New York and Federal Ambient Air Quality Standard

[Date of Occurrence, Hour]

+ Denotes a contravention of NYS/Federal AAQS

## INHALABLE PARTICULATES (PM<sub>10</sub>) - Wedding Sampler or R&P Model 2025 Sampler

NYSDEC Region **8**

### Annual Averages 2002 through 2012 Annual Arithmetic Mean (µg/m<sup>3</sup>)

| Station         | Site No. | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 3 Yr<br>Exp Val |
|-----------------|----------|------|------|------|------|------|------|------|------|------|------|------|-----------------|
| Rochester (R&P) | 2701-22  | --   | --   | --   | --   | --   | 15   | 13   | 13   | 13   | 11   | 13   | 12              |

### Comparison Between NYS Ambient Air Quality and Ambient Air Quality Standards for Calendar Year 2012

|                 |          | 24-Hour Concentrations - µg/m <sup>3</sup> |       |          |       |          |       |       | # of Days > 150 µg/m <sup>3</sup> -<br>Not to exceed an expected avg of one per year<br>during the last 3 years * |      |     |      |     |     |            |
|-----------------|----------|--|-------|----------|-------|----------|-------|-------|---|------|-----|------|-----|-----|------------|
|                 |          | Maximum                                    |       | 2nd Max. |       | 3rd Max. |       | 2010  |   | 2011 |     | 2012 |     |     |            |
| Station         | Site No. | Total<br>Obs.                              | Value | Date     | Value | Date     | Value | Date  | Mea   | Est  | Mea | Est  | Mea | Est | Exp<br>Avg |
| Rochester (R&P) | 2701-22  | 49   | 27    | 06/20    | 26    | 08/25    | 25    | 02/15 | 0   | 0.0  | 0   | 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

[Date of Occurrence, Hour]

+ Denotes a contravention of NYS/Federal AAQS

## INHALABLE PARTICULATES (PM<sub>2.5</sub>) - Rupprecht & Patashnick Sampler

NYSDEC Region **8**

### Comparison Between NYS Ambient Air Quality and Ambient Air Quality Standards for Calendar Year 2012

(Average of last 3 years' annual means not to exceed 15  $\mu\text{g}/\text{m}^3$  \*;  
and average of 98<sup>th</sup> percentile for last 3 years not to exceed 35  $\mu\text{g}/\text{m}^3$  \*, *changed* from 65  $\mu\text{g}/\text{m}^3$  on 12/17/06)

| Station         | Site No. | Total Obs. | Maximum Values, $\mu\text{g}/\text{m}^3$ |                 |                 | 98th Percentile, $\mu\text{g}/\text{m}^3$ |      |      |          | Quarterly Averages, 2012 |                 |                 |                 | Annual Mean, $\mu\text{g}/\text{m}^3$ |      |      |          |
|-----------------|----------|------------|--|-----------------|-----------------|---|------|------|----------|--------------------------|-----------------|-----------------|-----------------|---------------------------------------|------|------|----------|
|                 |          |            | 1 <sup>st</sup>                          | 2 <sup>nd</sup> | 3 <sup>rd</sup> | 2012                                      | 2011 | 2010 | 3-yr avg | 1 <sup>st</sup>          | 2 <sup>nd</sup> | 3 <sup>rd</sup> | 4 <sup>th</sup> | 2012                                  | 2011 | 2010 | 3-yr avg |
| Rochester 2 (F) | 2701-22  | 103        | 28.6<br>[06/11]                          | 24.4<br>[11/20] | 20.5<br>[11/17] | 20.5                                      | 25.3 | 23.4 | 23       | 8.4                      | 8.2             | 9.5             | (8.5)           | 8.6                                   | 9.2  | 8.4  | 8.7      |
| Rochester 2 (T) | 2701-22  | 344        | 19.9<br>[05/28]                          | 19.0<br>[06/10] | 18.0<br>[11/10] | 16.6                                      | 17.1 | 23.2 | 19       | 8.3                      | 6.3             | 6.0             | 6.7             | 6.8                                   | 6.8  | 7.3  | 7.0      |
| Pinnacle (F)    | 5001-04  | 112        | 20.5<br>[12/02]                          | 19.0<br>[06/11] | 18.9<br>[04/15] | 18.9                                      | 20.4 | 21.4 | 20       | 5.4                      | 7.0             | 8.0             | 6.7             | 6.8                                   | 7.0  | 7.3  | 7.0      |

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

F = Federal Reference Method

T = TEOM (Tapered Element Oscillating Microbalance) not for Standards determination

\* Federal Ambient Air Quality Standard

+ Denotes a contravention of Federal AAQS

## CARBON MONOXIDE - Continuous Non-Dispersive Infrared

NYSDEC Region **8**

**Annual Averages 2002 through 2012**  
Annual Arithmetic Mean (ppm)

| Station            | Site No. | 2002 | 2003 | 2004  | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011  | 2012 |
|--------------------|----------|------|------|-------|------|------|------|------|------|------|-------|------|
| Rochester          | 2701-08  | 0.4  | 0.5  | (0.5) | xx    | xx   |
| Rochester Downtown | 2701-01  | 0.5  | 0.5  | (0.5) | xx    | xx   |
| Rochester 2        | 2701-22  | --   | --   | (0.5) | 0.5  | 0.5  | 0.4  | 0.3  | 0.4  | 0.4  | (0.2) | 0.2  |
| Pinnacle           | 5001-04  | --   | --   | --    | --   | --   | --   | --   | --   | 0.16 | 0.16  | 0.15 |

**Comparison Between NYS Ambient Air Quality and Ambient Air Quality Standards for Calendar Year 2012**

|                |                 | <b>One-Hour Average</b><br>Maximum not to exceed 35 PPM more than once per calendar year * |                |                   |                            |                    |                    | <b>Running 8-Hour Average (Non-Overlapping)</b><br>Maximum not to exceed 9 PPM more than once per calendar year * |                  |                            |                   |                       |
|----------------|-----------------|--|----------------|-------------------|----------------------------|--------------------|--------------------|---|------------------|----------------------------|-------------------|-----------------------|
|                |                 | <b>Observations</b>  |                |                   | <b>Highest Values, PPM</b> |                    |                    | <b>Observations</b>   |                  | <b>Highest Values, PPM</b> |                   |                       |
| <b>Station</b> | <b>Site No.</b> | <b>Total Obs.</b>  | <b>% Avail</b> | <b>&gt;35 PPM</b> | <b>1st</b>                 | <b>2nd</b>         | <b>3rd</b>         | <b>Total</b>  | <b>&gt;9 PPM</b> | <b>1st</b>                 | <b>2nd</b>        | <b>Days &gt; 9PPM</b> |
| Rochester 2    | 2701-22         | 7,588  | 86             | 0                 | 1.3<br>[01/31, 08]         | 1.1<br>[11/21, 01] | 1.0<br>[11/21, 21] | 7,591   | 0                | .9<br>[11/21, 02]          | .7<br>[02/16, 02] | 0                     |
| Pinnacle       | 5001-04         | 8,357  | 95             | 0                 | .62<br>[10/17, 14]         | .50<br>[05/10, 13] | .49<br>[05/10, 12] | 8,422   | 0                | .5<br>[05/10, 18]          | .5<br>[05/11, 02] | 0                     |

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

\*New York and Federal Ambient Air Quality Standard

[Date of Occurrence, Hour]

+ Denotes a contravention of NYS/Federal AAQS (Note: 9PPM standard is not exceeded unless 8-hour avg > 9.4 PPM)

## OZONE - Continuous UV Light Absorption

NYSDEC Region **8**

**Annual Averages 2002 through 2012**  
Annual Arithmetic Mean (ppm)

| Station     | Site No. | 2002 | 2003 | 2004   | 2005 | 2006 | 2007 | 2008 | 2009 | 2010   | 2011 | 2012 |
|-------------|----------|------|------|--------|------|------|------|------|------|--------|------|------|
| Elmira      | 0701-05  | .027 | .024 | .024   | .025 | .024 | .027 | .024 | .025 | .027   | .027 | .026 |
| Rochester   | 2701-08  | .028 | .025 | (.025) | xxx  | xxx  | xxx  | xxx  | xxx  | xxx    | xxx  | xxx  |
| Rochester 2 | 2701-22  | -    | --   | (.019) | .023 | .024 | .026 | .026 | .024 | .028   | .026 | .028 |
| Pinnacle    | 5001-04  | -    | --   | -      | --   | .034 | .036 | .032 | .030 | (.035) | .034 | .031 |
| Williamson  | 5863-01  | .032 | .032 | .029   | .029 | .029 | .033 | .031 | .031 | .032   | .023 | .031 |

**Comparison Between NYS Ambient Air Quality and Ambient Air Quality Standards for Calendar Year 2012**

|                                     |          | One Hour Averages |         |          |                     |                     |                     |                     | 4th Highest Daily Maximum 8-Hour Average-<br>Not to exceed an avg of 0.075 ppm during the last 3 years, <i>changed</i> from 0.08 ppm on 5/27/08* |                 |                 |      |
|-------------------------------------|----------|-------------------|---------|----------|---------------------|---------------------|---------------------|---------------------|--|-----------------|-----------------|------|
|                                     |          | Observations      |         |          | Highest Values, PPM |                     |                     |                     |  |                 |                 |      |
| Station                             | Site No. | Total Obs.        | % Avail | >.12 PPM | 1st                 | 2nd                 | 3rd                 | 4th                 | 2010   | 2011            | 2012            | Avg  |
| Elmira                              | 0701-05  | 8,386             | 95      | 0        | .084<br>[08/25, 11] | .080<br>[06/10, 14] | .077<br>[06/11, 16] | .073<br>[07/04, 15] | .067<br>[09/24]  | .065<br>[06/09] | .071<br>[06/28] | .068 |
| Rochester 2                         | 2701-22  | 8,581             | 98      | 0        | .104<br>[06/28, 20] | .087<br>[07/06, 16] | .086<br>[08/31, 17] | .085<br>[06/29, 00] | .072<br>[04/02]  | .066<br>[06/07] | .075<br>[07/13] | .071 |
| Pinnacle                            | 5001-04  | 8,522             | 98      | 0        | .077<br>[08/25, 13] | .073<br>[06/10, 12] | .073<br>[06/28, 22] | .070<br>[05/16, 11] | .068<br>[09/02]  | .067<br>[06/01] | .066<br>[08/31] | .067 |
| Williamson (Operated 03/27 - 12/31) | 5863-01  | 6,328             | 94      | 0        | .082<br>[08/31, 17] | .081<br>[08/25, 17] | .078<br>[07/04, 19] | .077<br>[07/30, 13] | .071<br>[07/06]  | .058<br>[06/08] | .072<br>[06/10] | .067 |

(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

## LEAD -PM<sub>10</sub> Samplers

NYSDEC Region **8**

### Annual Geometric Means (µg/m<sup>3</sup>) 2002 through 2012

| Station                       | Site No. | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 |
|-------------------------------|----------|------|------|------|------|------|------|------|------|------|------|------|
| Rochester (PM <sub>10</sub> ) | 2701-22  | --   | --   | --   | --   | --   | .002 | .003 | .002 | .002 | .002 | .002 |

### Comparison Between NYS Ambient Air Quality and Ambient Air Quality Standards for Calendar Year 2012

|                               |          | 24-Hour Concentrations - µg/m <sup>3</sup> |         |         |       |          |       |          |       | THREE MONTH ROLLING AVERAGES<br>Maximum not to exceed 0.15 µg/m <sup>3</sup> , effective beginning 1/1/13 * (the old standard of 1.5 µg/m <sup>3</sup> will remain in force until that date) |       |       |
|-------------------------------|----------|--|---------|---------|-------|----------|-------|----------|-------|--|-------|-------|
|                               |          |  |         | Maximum |       | 2nd Max. |       | 3rd Max. |       | Highest Values, µg/m <sup>3</sup>  |       |       |
| Station                       | Site No. | Total Obs.                                 | % Avail | Value   | Date  | Value    | Date  | Value    | Date  | 2010   | 2011  | 2011  |
| Rochester (PM <sub>10</sub> ) | 2701-22  | 49   | 80      | .015    | 07/14 | .005     | 10/24 | .005     | 03/04 | 0.003  | 0.002 | 0.003 |

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

\*Federal Ambient Air Quality Standard

+ Denotes a contravention of Federal AAQS

## SULFUR DIOXIDE - Continuous Pulsed Fluorescence

NYSDEC Region **9**

### Annual Averages 2002 through 2012

Annual Arithmetic Mean (ppb) - Primary Standard  
(12 month average not to exceed 30 PPB \*)

| Station           | Site No. | 2002  | 2003 | 2004 | 2005 | 2006 | 2007   | 2008 | 2009 | 2010 | 2011 | 2012 |
|-------------------|----------|-------|------|------|------|------|--------|------|------|------|------|------|
| Buffalo           | 1401-18  | 5.78  | 5.47 | 3.35 | 3.73 | 2.78 | 2.70   | 2.34 | 1.74 | 1.50 | 2.01 | 2.72 |
| Tonawanda         | 1472-04  | 10.79 | 8.89 | 7.87 | 5.83 | 3.93 | 4.29   | xxx  | xxx  | xxx  | xxx  | xxx  |
| Brookside Terrace | 1472-14  | --    | --   | --   | --   | --   | (2.80) | 2.83 | 2.10 | 1.83 | 3.43 | 2.11 |
| Niagara Falls     | 3102-25  | 3.68  | 3.56 | 2.73 | 2.63 | 2.48 | 2.79   | 2.13 | 1.58 | 1.53 | 2.74 | 3.47 |

### Comparison Between NYS Ambient Air Quality and Ambient Air Quality Standards for Calendar Year 2012

|                   |          | One Hour Averages<br>average of 99 <sup>th</sup> percentile for last 3 years not to exceed 75 PPB * |         |                                  |      |      |          | 3-Hour Block Averages<br>Maximum not to exceed 500 PPB more than once per calendar year * |                     |                     | 24 Hour Average<br>Maximum not to exceed 140 PPB more than once per calendar year * |  |                 |
|-------------------|----------|---|---------|----------------------------------|------|------|----------|---|---------------------|---------------------|---|--|-----------------|
|                   |          | Observations  |         | 99 <sup>th</sup> Percentile, PPB |      |      |          | Obs.  | Highest Values, PPB |                     | Obs.  | Highest Values, PPB<br>Midnight - Midnight |                 |
| Station           | Site No. | Total Obs.  | % Avail | 2012                             | 2011 | 2010 | 3-yr avg | Total   | 1 <sup>st</sup>     | 2 <sup>nd</sup>     | Total   | 1 <sup>st</sup>                            | 2 <sup>nd</sup> |
| Buffalo           | 1401-18  | 8,640   | 98      | 13.6                             | 22.4 | 15.0 | 17       | 2,839   | 13.5<br>[03/11, 20] | 13.4<br>[06/28, 23] | 363   | 7.3<br>[06/28]                             | 5.6<br>[12/14]  |
| Brookside Terrace | 1472-14  | 7,862   | 90      | 26.2                             | 28.9 | 30.6 | 29       | 2,589   | 34.1<br>[06/10, 17] | 20.3<br>[06/20, 14] | 328   | 10.2<br>[06/10]                            | 9.0<br>[06/28]  |
| Niagara Falls     | 3102-25  | 8,643   | 98      | 12.0                             | 12.3 | 16.3 | 14       | 2,848   | 10.9<br>[09/17, 14] | 10.3<br>[01/16, 08] | 362   | 5.6<br>[01/16]                             | 5.5<br>[06/28]  |

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

\*New York and Federal Ambient Air Quality Standard

[Date of Occurrence, Hour]

+ Denotes a contravention of NYS/Federal AAQS

## SULFUR DIOXIDE - Continuous Pulsed Fluorescence

NYSDEC Region **9**

**Annual Averages 2002 through 2012**  
Annual Arithmetic Mean (ppb) - Primary Standard  
(12 month average not to exceed 30 PPB \*)

| Station   | Site No. | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 |
|-----------|----------|------|------|------|------|------|------|------|------|------|------|------|
| Westfield | 0675-01  | 4.11 | 4.26 | 3.49 | 3.49 | 2.70 | 2.74 | 2.51 | 1.73 | 1.32 | 1.22 | 0.98 |
| Dunkirk   | 0601-04  | 7.46 | 6.69 | 5.31 | 4.32 | 3.13 | 3.27 | 2.67 | 2.55 | 1.54 | 1.72 | 1.30 |

**Comparison Between NYS Ambient Air Quality and Ambient Air Quality Standards for Calendar Year 2012**

|           |          | <b>One Hour Averages</b><br>average of 99 <sup>th</sup> percentile for last 3 years not to exceed 75 PPB * |         |                                  |      |      |          | <b>3-Hour Block Averages</b><br>Maximum not to exceed 500 PPB more than once per calendar year * |                     |                     | <b>24 Hour Average</b><br>Maximum not to exceed 140 PPB more than once per calendar year * |  |                 |
|-----------|----------|--|---------|----------------------------------|------|------|----------|--|---------------------|---------------------|--|--|-----------------|
|           |          | Observations   |         | 99 <sup>th</sup> Percentile, PPB |      |      |          | Obs.   | Highest Values, PPB |                     | Obs.   | Highest Values, PPB<br>Midnight - Midnight |                 |
| Station   | Site No. | Total Obs.   | % Avail | 2012                             | 2011 | 2010 | 3-yr avg | Total  | 1 <sup>st</sup>     | 2 <sup>nd</sup>     | Total  | 1 <sup>st</sup>                            | 2 <sup>nd</sup> |
| Westfield | 0675-01  | 8,472  | 96      | 15.9                             | 17.1 | 15.4 | 16       | 2,786  | 14.0<br>[06/28, 20] | 13.1<br>[01/09, 17] | 357  | 7.3<br>[06/28]                             | 4.3<br>[01/09]  |
| Dunkirk   | 0601-04  | 8,614  | 98      | 26.2                             | 25.8 | 30.0 | 27       | 2,840  | 22.2<br>[01/24, 17] | 20.7<br>[06/22, 17] | 363  | 9.0<br>[01/24]                             | 6.6<br>[06/28]  |

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

\*New York and Federal Ambient Air Quality Standard

[Date of Occurrence, Hour]

+ Denotes a contravention of NYS/Federal AAQS

# INHALABLE PARTICULATES (PM<sub>10</sub>) - Wedding Sampler or R&P Model 2025 Sampler

NYSDEC Region **9**

## Annual Averages 2002 through 2012 Annual Arithmetic Mean (µg/m<sup>3</sup>)

| Station             | Site No. | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 3 Yr<br>Exp Val |
|---------------------|----------|------|------|------|------|------|------|------|------|------|------|------|-----------------|
| Niagara Falls (W)   | 3102-25  | 17   | 17   | 17   | xx              |
| Niagara Falls (R&P) | 3102-25  | --   | --   | 20   | 24   | 21   | 21   | 22   | 17   | 15   | (14) | (17) | 15              |
| Westfield (W)       | 0675-01  | 12   | 12   | 11   | xx              |

## Comparison Between NYS Ambient Air Quality and Ambient Air Quality Standards for Calendar Year 2012

|                     |          | 24-Hour Concentrations - µg/m <sup>3</sup> |       |          |       |          |       |       | # of Days > 150 µg/m <sup>3</sup> -<br>Not to exceed an expected avg of one per year<br>during the last 3 years * |      |     |      |     |     |            |
|---------------------|----------|--|-------|----------|-------|----------|-------|-------|---|------|-----|------|-----|-----|------------|
|                     |          | Maximum                                    |       | 2nd Max. |       | 3rd Max. |       | 2010  |   | 2011 |     | 2012 |     |     |            |
| Station             | Site No. | Total<br>Obs.                              | Value | Date     | Value | Date     | Value | Date  | Mea   | Est  | Mea | Est  | Mea | Est | Exp<br>Avg |
| Niagara Falls (R&P) | 3102-25  | 91   | 45    | 11/20    | 42    | 06/29    | 37    | 07/17 | 0   | 0.0  | 0   | 0.0  | 0   | 0.0 | 0.0        |

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

\* Federal Ambient Air Quality Standard

W=Wedding Sampler

R&P=R&P Model 2025 Sampler

Mea=Measured

Est=Estimated

+ Denotes a contravention of Federal AAQS

# INHALABLE PARTICULATES (PM<sub>2.5</sub>) - Rupprecht & Patashnick Sampler

NYSDEC Region **9**

## Comparison Between NYS Ambient Air Quality and Ambient Air Quality Standards for Calendar Year 2012

(Average of last 3 years' annual means not to exceed 15  $\mu\text{g}/\text{m}^3$  \*;  
and average of 98<sup>th</sup> percentile for last 3 years not to exceed 35  $\mu\text{g}/\text{m}^3$  \*, *changed from 65  $\mu\text{g}/\text{m}^3$  on 12/17/06*)

| Station               | Site No. | Total Obs. | Maximum Values, $\mu\text{g}/\text{m}^3$ |                 |                 | 98th Percentile, $\mu\text{g}/\text{m}^3$ |      |      |          | Quarterly Averages, 2012 |                 |                 |                 | Annual Mean, $\mu\text{g}/\text{m}^3$ |      |      |          |
|-----------------------|----------|------------|--|-----------------|-----------------|---|------|------|----------|--------------------------|-----------------|-----------------|-----------------|---------------------------------------|------|------|----------|
|                       |          |            | 1 <sup>st</sup>                          | 2 <sup>nd</sup> | 3 <sup>rd</sup> | 2012                                      | 2011 | 2010 | 3-yr avg | 1 <sup>st</sup>          | 2 <sup>nd</sup> | 3 <sup>rd</sup> | 4 <sup>th</sup> | 2012                                  | 2011 | 2010 | 3-yr avg |
| Buffalo (F)           | 1401-18  | 111        | 26.7<br>[11/17]                          | 21.2<br>[08/04] | 19.5<br>[11/17] | 19.5                                      | 24.6 | 27.9 | 24       | 9.0                      | 9.7             | 10.4            | 8.6             | 9.4                                   | 9.6  | 10.0 | 9.7      |
| Buffalo (T)           | 1401-18  | 331        | 24.7<br>[06/10]                          | 24.1<br>[07/04] | 23.7<br>[11/21] | 20.8                                      | 22.0 | 28.6 | 24       | 8.3                      | 9.4             | 9.8             | 10.3            | 9.5                                   | 8.9  | 10.1 | 9.5      |
| Lackawanna (F)        | 1402-14  | xx         | xx                                       | xx              | xx              | xx  | xx   | 30.2 | xx       | xx                       | xx              | xx              | xx              | xx                                    | xx   | 10.2 | xx       |
| Grand Island Blvd (T) | 1472-13  | 344        | 25.1<br>[11/20]                          | 24.7<br>[07/23] | 23.9<br>[06/21] | 22.1                                      | 24.8 | 30.9 | 26       | 10.0                     | 9.7             | 10.3            | 10.8            | 10.2                                  | 9.9  | 11.4 | 10.5     |
| Brookside Terrace (T) | 1472-14  | 348        | 21.8<br>[05/28]                          | 21.8<br>[06/29] | 21.3<br>[06/10] | 20.3                                      | 23.5 | 29.6 | 24       | 8.7                      | 8.1             | 9.0             | 9.2             | 8.8                                   | 9.2  | 9.4  | 9.1      |
| Niagara Falls (F)     | 3102-25  | 97         | 26.8<br>[11/20]                          | 25.3<br>[11/17] | 20.2<br>[08/04] | 20.2                                      | 19.9 | 24.8 | 22       | 8.2                      | (6.5)           | 9.9             | 8.5             | 8.3                                   | 8.1  | 8.3  | 8.2      |
| Niagara Falls (T)     | 3102-25  | 319        | 24.7<br>[11/20]                          | 23.5<br>[11/21] | 22.3<br>[11/29] | 21.1                                      | 26.8 | 25.5 | 24       | 10.0                     | 8.7             | 9.1             | 11.5            | 9.8                                   | 10.1 | 9.3  | 9.7      |
| Westfield (F)         | 0675-01  | 113        | 28.2<br>[07/08]                          | 21.2<br>[08/04] | 19.5<br>[11/17] | 19.5                                      | 21.6 | 23.5 | 22       | 6.8                      | 7.5             | 9.4             | 6.7             | 7.6                                   | 7.3  | 7.6  | 7.5      |

Sampling at 1402-14 was terminated on 12/31/10.

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

F = Federal Reference Method

T = TEOM (Tapered Element Oscillating Microbalance) not for Standards determination

\* Federal Ambient Air Quality Standard

+ Denotes a contravention of Federal AAQS

## CARBON MONOXIDE - Continuous Non-Dispersive Infrared

NYSDEC Region 9

Annual Averages 2002 through 2012  
Annual Arithmetic Mean (ppm)

| Station       | Site No. | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011  | 2012 |
|---------------|----------|------|------|------|------|------|------|------|------|------|-------|------|
| Niagara Falls | 3102-25  | 0.4  | 0.4  | 0.2  | 0.2  | 0.2  | 0.2  | 0.3  | 0.3  | 0.3  | (0.4) | 0.3  |
| Buffalo       | 1401-18  | 0.5  | 0.5  | 0.4  | 0.4  | 0.4  | 0.4  | 0.3  | 0.3  | 0.3  | 0.4   | 0.4  |

### Comparison Between NYS Ambient Air Quality and Ambient Air Quality Standards for Calendar Year 2012

|               |          | One-Hour Average<br>Maximum not to exceed 35 PPM more than once per calendar year * |         |         |                       |                       |                       | Running 8-Hour Average (Non-Overlapping)<br>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 |
| Niagara Falls | 3102-25  | 7,565   | 86      | 0       | 1.2<br>[02/08,<br>07] | 1.1<br>[01/21,<br>01] | 1.1<br>[01/21,<br>02] | 7,578  | 0      | 1.0<br>[01/21,<br>05] | 1.0<br>[01/21,<br>13] | 0          |
| Buffalo       | 1401-18  | 8,632   | 98      | 0       | 1.7<br>[11/08,<br>07] | 1.6<br>[11/08,<br>08] | 1.5<br>[03/12,<br>06] | 8,677  | 0      | 1.3<br>[11/08,<br>09] | 1.1<br>[03/12,<br>07] | 0          |

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

\*New York and Federal Ambient Air Quality Standard

[Date of Occurrence, Hour]

+ Denotes a contravention of NYS/Federal AAQS (Note: 9PPM standard is not exceeded unless 8-hour avg > 9.4 PPM)

## OZONE - Continuous UV Light Absorption

NYSDEC Region 9

**Annual Averages 2002 through 2012**  
Annual Arithmetic Mean (ppm)

| Station    | Site No. | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 |
|------------|----------|------|------|------|------|------|------|------|------|------|------|------|
| Westfield  | 0675-01  | .038 | .034 | .033 | .035 | .034 | .036 | .034 | .034 | .038 | .035 | .036 |
| Dunkirk    | 0604-01  | .034 | .033 | .032 | .033 | .033 | .034 | .032 | .031 | .034 | .031 | .033 |
| Amherst    | 1451-03  | .031 | .028 | .028 | .030 | .028 | .030 | .029 | .029 | .031 | .028 | .031 |
| Middleport | 3120-02  | .034 | .034 | .030 | .036 | .032 | .036 | .033 | .031 | .034 | .035 | .036 |

**Comparison Between NYS Ambient Air Quality and Ambient Air Quality Standards for Calendar Year 2012**

|   |          | One Hour Averages |         |          |                        |                        |                        |                        | 4th Highest Daily Maximum 8-Hour Average-<br>Not to exceed an avg of 0.075 ppm during the last 3 years, <i>changed</i> from 0.08 ppm on 5/27/08* |                 |                 |        |
|---|----------|-------------------|---------|----------|------------------------|------------------------|------------------------|------------------------|--|-----------------|-----------------|--------|
|   |          | Observations      |         |          | Highest Values, PPM    |                        |                        |                        |  |                 |                 |        |
| Station                                   | Site No. | Total Obs.        | % Avail | >.12 PPM | 1st                    | 2nd                    | 3rd                    | 4th                    | 2010   | 2011            | 2012            | Avg    |
| Westfield                                 | 0675-01  | 8,477             | 97      | 0        | .114<br>[06/28,<br>17] | .095<br>[08/24,<br>15] | .090<br>[07/12,<br>16] | .089<br>[06/29,<br>01] | .075<br>[04/01]  | .073<br>[07/06] | .081<br>[07/12] | .076 + |
| Dunkirk                                   | 0604-01  | 8,630             | 99      | 0        | .103<br>[06/28,<br>19] | .093<br>[06/10,<br>16] | .093<br>[08/24,<br>17] | .091<br>[08/03,<br>17] | .080<br>[07/07]  | .069<br>[05/31] | .081<br>[08/03] | .077 + |
| Amherst                                   | 1451-03  | 8,084             | 92      | 0        | .095<br>[06/28,<br>17] | .090<br>[06/10,<br>15] | .086<br>[08/03,<br>17] | .086<br>[08/31,<br>16] | .072<br>[07/07]  | .068<br>[08/13] | .079<br>[08/24] | .073   |
| Middleport<br>(Operated 03/23 -<br>10/12) | 3120-02  | 4,826             | 90      | 0        | .105<br>[06/28,<br>18] | .091<br>[06/10,<br>16] | .090<br>[07/06,<br>16] | .089<br>[07/13,<br>14] | .071<br>[04/15]  | .073<br>[07/23] | .082<br>[08/31] | .075   |

(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

## NITROGEN DIOXIDE - Continuous Chemiluminescence

NYSDEC Region **9**

### Annual Averages 2002 through 2012

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

| Station | Site No. | 2002  | 2003  | 2004  | 2005  | 2006  | 2007  | 2008   | 2009   | 2010  | 2011    | 2012  |
|---------|----------|-------|-------|-------|-------|-------|-------|--------|--------|-------|---------|-------|
| Buffalo | 1401-18  | 19.74 | 19.82 | 18.16 | 18.92 | 15.53 | 16.41 | 15.05  | 13.88  | 13.00 | (12.52) | 10.46 |
| Amherst | 1451-03  | 13.47 | 13.06 | 11.99 | 12.66 | 10.51 | 10.23 | (9.71) | (7.42) | 8.19  | 8.32    | 6.44  |

### Comparison Between NYS Ambient Air Quality and Ambient Air Quality Standards for Calendar Year 2012

|         |          | One-Hour Averages - average of 98 <sup>th</sup> percentile for last 3 years not to exceed 75 PPB * |         |                                  |      |      |          |                        |                        |                        |
|---------|----------|--|---------|----------------------------------|------|------|----------|------------------------|------------------------|------------------------|
|         |          | Observations   |         | 98 <sup>th</sup> Percentile, PPB |      |      |          | Highest Values, PPB    |                        |                        |
| Station | Site No. | Total  | % Avail | 2010                             | 2011 | 2012 | 3-yr avg | avg                    | 2nd                    | 3rd                    |
| Buffalo | 1401-18  | 7,239  | 82      | 70                               | 53.6 | 45.6 | 56       | 60.5<br>[10/25,<br>18] | 57.7<br>[10/25,<br>19] | 49.7<br>[09/13,<br>06] |
| Amherst | 1451-03  | 7,760  | 88      | 46.0                             | 49.5 | 31.9 | 42       | 41.8<br>[03/12,<br>07] | 41.7<br>[03/12,<br>06] | 37.8<br>[03/15,<br>06] |

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

\*New York and Federal Ambient Air Quality Standard

[Date of Occurrence, Hour]

+ Denotes a contravention of NYS/Federal AAQS

## LEAD - High Volume Air Samplers (Glass Fiber Filters)

NYSDEC Region **9**

### Annual Geometric Means ( µg/m<sup>3</sup>) 1999 through 2009

| Station       | Site No. | 1999 | 2000 | 2001   | 2002 | 2003 | 2004 | 2005* | 2006 | 2007 | 2008 | 2009 |
|---------------|----------|------|------|--------|------|------|------|-------|------|------|------|------|
| Buffalo       | 1401-29  | 0.03 | 0.03 | 0.03   | 0.03 | xxx  | xxx  | xxx   | xxx  | xxx  | xxx  | xx   |
| Niagara Falls | 3102-09  | 0.02 | 0.02 | (0.02) | xxx  | xxx  | xxx  | xxx   | xxx  | xxx  | xxx  | xx   |
| Niagara Falls | 3102-25  | ---  | ---  | ---    | 0.02 | 0.02 | 0.02 | 0.02  | 0.01 | 0.01 | xxx  | xxx  |

Lab results not received for 7097-01 for 2004 and 2005.

(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