

# New York State Department of Environmental Conservation

## Bureau of Air Quality Surveillance

### 2005 Acid Deposition Annual Report

Station: Grafton Lakes Primary  
 County: Rensselaer  
 Town: Grafton  
 Location: Grafton Lakes State Park  
 Long Pond Road  
 telem#518-279-9591  
 Elevation: 477 meters

Site #: 415304  
 AIRS #: 360830004  
 Locality: Rural, Recreational  
 Zoning:

#### Primary Sampler

Total Precipitation (Inches of Rain): 55.99  
 Valid Sample Precipitation: 55.99  
 Number of Visits: 52  
 Number of Valid Visits: 52  
 Number of Samples: 39  
 Number of Valid Samples: 39  
 Number of Visits With Precipitation Events: 50  
 Number of Valid Visits With Precipitation Events: 50  
 Number of Anion Analyses: 36  
 Number of Cation Analyses: 35  
 Number of Conductivity Analyses: 38  
 Number of pH Analyses: 38

|                | Precipitation<br>(Inches of Rain) | Lab<br>pH | SO4<br>IPPM | NO3<br>IPPM | CL<br>IPPM | F<br>IPPM | NO2<br>IPPM | Br<br>IPPM | HPO4<br>IPPM | Na<br>IPPM | NH4<br>IPPM | K<br>IPPM | Ca<br>IPPM | Mg<br>IPPM | Lab Conductivity<br>Micro s/cm |
|----------------|-----------------------------------|-----------|-------------|-------------|------------|-----------|-------------|------------|--------------|------------|-------------|-----------|------------|------------|--------------------------------|
| <b>Maximum</b> | 6.18                              | 4.035     | 5.308       | 0.457       | 0.087      | 0.185     | 0.130       | 0.710      | 0.334        | 1.954      | 0.083       | 0.979     | 0.094      | 41.50      |                                |
| <b>Minimum</b> | 4.02                              | 0.000     | 0.123       | 0.000       | 0.000      | 0.000     | 0.000       | 0.000      | 0.003        | 0.037      | 0.000       | 0.000     | 0.000      | 1.84       |                                |

#### Precipitation Weighted Mean

|                    |       |      |       |       |       |       |       |       |       |       |       |       |       |       |       |
|--------------------|-------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| <b>1st Quarter</b> | 12.21 | 4.65 | 0.463 | 1.120 | 0.094 | 0.014 | 0.033 | 0.008 | 0.147 | 0.054 | 0.218 | 0.008 | 0.053 | 0.009 | 10.90 |
| <b>2nd Quarter</b> | 7.92  | 4.77 | 1.657 | 1.307 | 0.083 | 0.007 | 0.000 | 0.009 | 0.004 | 0.031 | 0.739 | 0.033 | 0.140 | 0.026 | 14.44 |
| <b>3rd Quarter</b> | 11.83 | 4.50 | 1.336 | 2.387 | 0.099 | 0.004 | 0.001 | 0.000 | 0.000 | 0.037 | 0.752 | 0.011 | 0.102 | 0.037 | 20.16 |
| <b>4th Quarter</b> | 24.03 | 5.14 | 0.405 | 0.458 | 0.071 | 0.005 | 0.002 | 0.001 | 0.006 | 0.061 | 0.143 | 0.013 | 0.030 | 0.009 | 4.60  |
| <b>Annual</b>      | 55.99 | 4.77 | 0.833 | 1.199 | 0.085 | 0.007 | 0.009 | 0.004 | 0.039 | 0.048 | 0.422 | 0.014 | 0.074 | 0.019 | 10.67 |

#### Total Deposition

|                    | H+     | SO4       | NO3       | CL      | F      | NO2    | Br    | HPO4   | Na     | NH4     | K      | Ca     | Mg     |
|--------------------|--------|-----------|-----------|---------|--------|--------|-------|--------|--------|---------|--------|--------|--------|
|                    | mg/m2  | mg/m2     | mg/m2     | mg/m2   | mg/m2  | mg/m2  | mg/m2 | mg/m2  | mg/m2  | mg/m2   | mg/m2  | mg/m2  | mg/m2  |
| <b>1st Quarter</b> | 6.945  | 143.468   | 347.272   | 29.024  | 4.333  | 10.389 | 2.570 | 45.446 | 16.846 | 67.486  | 2.389  | 16.452 | 2.639  |
| <b>2nd Quarter</b> | 3.463  | 333.239   | 262.946   | 16.731  | 1.444  | 0.000  | 1.716 | 0.847  | 6.188  | 148.658 | 6.669  | 28.109 | 5.151  |
| <b>3rd Quarter</b> | 9.551  | 401.553   | 717.279   | 29.620  | 1.295  | 0.260  | 0.000 | 0.000  | 11.003 | 225.861 | 3.175  | 30.645 | 11.148 |
| <b>4th Quarter</b> | 4.441  | 247.112   | 279.401   | 43.630  | 3.125  | 1.207  | 0.814 | 3.493  |        |         |        |        |        |
| <b>Annual</b>      | 24.400 | 1,125.372 | 1,606.898 | 119.005 | 10.197 | 11.855 | 5.100 | 49.786 | 71.235 | 529.469 | 19.922 | 93.631 | 24.590 |

NOTE: DEPOSITION SHOWN MEETS 1) FOR QUARTERS, A MINIMUM OF 75% DATA CAPTURE AND  
 2) FOR ANNUAL, A MINIMUM OF 75% DATA CAPTURE WITH EACH QUARTER >50% DATA CAPTURE  
 DATA CAPTURE = VALID SAMPLES WITH VALID PRECIPITATION FOR THE PERIOD / TOTAL PRECIPITATION FOR PERIOD