

New York State Department of Environmental Conservation

Bureau of Air Quality Surveillance

2005 Acid Deposition Annual Report

Station: Elmira
 County: Chemung
 Town: Elmira
 Location: WaterTreatment Plant
 Sullivan Street

Site #: 070105
 AIRS #: 360150003
 Locality: Urban, City
 Zoning: Commercial

Total Precipitation (Inches of Rain): 35.75
 Valid Sample Precipitation: 35.58
 Number of Visits: 46
 Number of Valid Visits: 46
 Number of Samples: 33
 Number of Valid Samples: 33
Official Sampler
 Number of Visits With Precipitation Events: 45
 Number of Valid Visits With Precipitation Events: 45
 Number of Anion Analyses: 32
 Number of Cation Analyses: 32
 Number of Conductivity Analyses: 33
 Number of pH Analyses: 33

Elevation: 262 meters

| | Precipitation (Inches of Rain) | Lab pH | SO4 IPPM | NO3 IPPM | CL IPPM | F IPPM | NO2 IPPM | Br IPPM | HPO4 IPPM | Na IPPM | NH4 IPPM | K IPPM | Ca IPPM | Mg IPPM | Lab Conductivity Micro s/cm |
|----------------|-----------------------------------|-----------|-------------|-------------|------------|-----------|-------------|------------|--------------|------------|-------------|-----------|------------|------------|--------------------------------|
| Maximum | 6.42 | 7.753 | 10.436 | 5.606 | 0.056 | 0.182 | 0.151 | 1.034 | 2.153 | 3.198 | 4.018 | 1.938 | 0.433 | 76.00 | |
| Minimum | 3.87 | 0.411 | 0.480 | 0.021 | 0.000 | 0.000 | 0.000 | 0.000 | 0.005 | 0.089 | 0.000 | 0.028 | 0.003 | 4.57 | |

Precipitation Weighted Mean

| | | | | | | | | | | | | | | | |
|--------------------|-------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1st Quarter | 8.75 | 4.48 | 1.067 | 1.920 | 0.258 | 0.027 | 0.035 | 0.011 | 0.000 | 0.154 | 0.310 | 0.013 | 0.106 | 0.012 | 18.26 |
| 2nd Quarter | 7.30 | 4.41 | 2.607 | 2.085 | 0.487 | 0.010 | 0.009 | 0.002 | 0.072 | 0.233 | 0.797 | 0.381 | 0.432 | 0.082 | 24.36 |
| 3rd Quarter | 7.93 | 4.21 | 2.940 | 4.016 | 0.134 | 0.015 | 0.000 | 0.000 | 0.000 | 0.039 | 0.833 | 0.025 | 0.340 | 0.054 | 35.01 |
| 4th Quarter | 11.77 | 4.81 | 1.071 | 1.088 | 0.140 | 0.001 | 0.007 | 0.011 | 0.000 | 0.076 | 0.229 | 0.026 | 0.173 | 0.026 | 10.56 |
| Annual | 35.75 | 4.46 | 1.746 | 2.059 | 0.243 | 0.012 | 0.013 | 0.007 | 0.015 | 0.118 | 0.469 | 0.085 | 0.234 | 0.038 | 20.62 |

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 |
| 1st Quarter | 7.337 | 237.249 | 426.690 | 57.378 | 5.980 | 7.864 | 2.344 | 0.000 | 34.233 | 68.857 | 2.914 | 23.610 | 2.744 |
| 2nd Quarter | 7.278 | 483.436 | 386.545 | 90.207 | 1.874 | 1.737 | 0.345 | 13.262 | 43.242 | 147.826 | 70.688 | 80.171 | 15.230 |
| 3rd Quarter | 12.634 | 592.132 | 808.950 | 27.032 | 2.943 | 0.000 | 0.000 | 0.000 | 7.935 | 167.700 | 5.102 | 68.524 | 10.776 |
| 4th Quarter | 4.652 | 320.142 | 325.148 | 41.833 | 0.263 | 2.111 | 3.390 | 0.000 | 22.725 | 68.555 | 7.748 | 51.610 | 7.839 |
| Annual | 31.901 | 1,632.959 | 1,947.334 | 216.451 | 11.060 | 11.712 | 6.079 | 13.262 | 108.135 | 452.937 | 86.453 | 223.915 | 36.590 |

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