

# WATER QUALITY LABORATORY INORGANIC ANALYSES PERIOD OF 01/01/2006 TO 12/31/2006

### **Potomac River-Corbalis Water Treatment Plant Source**

| Parameter                           | MCL <sup>1</sup> | Units <sup>2</sup> | Jan  | Feb   | Mar  | Apr  | May   | Jun  | Jul   | Aug  | Sep  | Oct  | Nov  | Dec  | Avg  | Max   | Min  | Quant<br>Limit | # of<br>Tests |
|-------------------------------------|------------------|--------------------|------|-------|------|------|-------|------|-------|------|------|------|------|------|------|-------|------|----------------|---------------|
| Aggressive Index Number             |                  | Jnits              | 11   | 11    | 12   |      | 11    | 12   | 12    | 12   | 12   | 12   | 12   |      | 12   | 12    | 11   | -              | 10            |
| Alkalinity, Bicarbonate             | n                | ng/L               | 67   | 65    | 71   |      | 83    | 109  | 96    | 124  | 108  | 93   | 111  |      | 93   | 124   | 65   | -              | 10            |
| Alkalinity, Carbonate               |                  | ng/L               | 0    | 0     | 0    |      | 0     | 0    | 0     | 0    | 0    | 0    | 0    |      | 0    | 0     | 0    | -              | 10            |
| Alkalinity, Hydroxyl                | n                | mg/L               | 0    | 0     | 0    |      | 0     | 0    | 0     | 0    | 0    | 0    | 0    |      | 0    | 0     | 0    | -              | 10            |
| Alkalinity, Phenolphthalein         | n                | mg/L               | 0    | 0     | 0    |      | 0     | 0    | 0     | 0    | 0    | 0    | 0    |      | 0    | 0     | 0    | -              | 10            |
| Alkalinity, Total                   | n                | mg/L               | 67   | 65    | 71   |      | 83    | 109  | 96    | 124  | 108  | 93   | 111  |      | 93   | 124   | 65   | -              | 10            |
| Bromate                             | ŀ                | μg/L               | BQL  |       |      |      |       |      |       |      |      |      |      |      | BQL  | BQL   | BQL  | 10             | 1             |
| Bromide                             | n                | mg/L               | 0.02 | 0.02  | 0.03 | 0.04 | 0.02  | 0.03 | 0.02  | 0.03 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.04  | 0.02 | 0.01           | 12            |
| Carbon Dioxide                      | n                | mg/L               | 3    | 2     | 2    |      | 4     | 3    | 4     | 2    | 4    | 4    | 6    |      | 3    | 6     | 2    | -              | 10            |
| Chloride                            | n                | mg/L               | 18.6 | 15.6  | 24.1 |      | 15.7  | 17.6 | 17.2  | 24.9 | 16.4 | 14.6 | 17.7 |      | 18.2 | 24.9  | 14.6 | 5.0            | 10            |
| Color                               | ι                | Jnits              | 17   | 33    | 15   |      | 25    | 18   | 24    | 24   | 20   | 45   | 33   |      | 25   | 45    | 15   | 0              | 10            |
| Dissolved Oxygen                    | n                | mg/L               | 10.4 | 11.8  | 12.2 |      | 7.8   | 6.2  | 5.8   | 7.2  | 6.6  | 8.9  | 10.9 |      | 8.8  | 12.2  | 5.8  | 0.0            | 10            |
| Fluoride                            | n                | mg/L               | BQL  | BQL   | BQL  |      | BQL   | BQL  | BQL   | 0.2  | BQL  | BQL  | BQL  |      | BQL  | 0.2   | BQL  | 0.2            | 10            |
| Hardness, Calcium                   | n                | mg/L               | 70   | 68    | 66   |      | 75    | 89   | 81    | 121  | 91   | 80   | 88   |      | 83   | 121   | 66   | -              | 10            |
| Hardness, Total                     | n                | mg/L               | 97   | 93    | 100  |      | 104   | 130  | 113   | 156  | 126  | 112  | 133  |      | 116  | 156   | 93   | -              | 10            |
| Methylene Blue Activated Substances | n                | mg/L               |      |       |      |      |       |      | BQL   |      |      |      |      |      | BQL  | BQL   | BQL  | 0.050          | 1             |
| N, Ammonia (Ammonia as N)           | n                | mg/L               | BQL  | BQL   | BQL  |      | 0.05  | 0.16 |       |      |      | BQL  | BQL  |      | BQL  | 0.16  | BQL  | 0.05           | 7             |
| N, Nitrate (Nitrate as N)           | n                | mg/L               | 1.4  | 1.4   | 1.0  |      | 8.0   | BQL  | 0.7   | 8.0  | 1.1  | 1.0  | 0.9  |      | 0.9  | 1.4   | BQL  | 0.2            | 10            |
| N, Nitrite (Nitrite as N)           | n                | mg/L               | BQL  | 0.01  | 0.01 |      | 0.02  |      | 0.01  | 0.03 |      | BQL  | BQL  |      | 0.01 | 0.03  | BQL  | 0.01           | 8             |
| pH                                  | U                | Jnits              | 7.6  | 7.8   | 7.9  |      | 7.6   | 7.9  | 7.7   | 8.1  | 7.7  | 7.7  | 7.6  |      | 7.8  | 8.1   | 7.6  | -              | 10            |
| Phosphate as Phosphorous            | n                | mg/L               | BQL  | BQL   | BQL  |      | 0.04  |      | 0.03  |      | 0.04 | 0.03 | 0.01 |      | 0.02 | 0.04  | BQL  | 0.01           | 8             |
| Solids, Fixed                       | n                | mg/L               | 120  | 68    | 125  |      | 114   | 182  | 140   | 217  | 142  |      | 137  |      | 138  | 217   | 68   | 1              | 9             |
| Solids, Total                       | n                | mg/L               | 221  | 146   | 152  |      | 203   | 278  | 208   | 332  | 175  |      | 272  |      | 221  | 332   | 146  | 1              | 9             |
| Solids, Total Dissolved             | n                | mg/L               | 147  | 136   | 146  |      | 141   | 187  | 189   | 228  | 192  | 142  | 172  |      | 168  | 228   | 136  | 1              | 10            |
| Solids, Total Suspended             |                  | mg/L               | 4    | 11    | 1    |      | 26    | 5    | 10    | 10   | 3    | 3    | BQL  |      | 7    | 26    | BQL  | 1              | 10            |
| Solids, Volatile                    | n                | mg/L               | 101  | 78    | 27   |      | 89    | 96   | 68    | 115  | 33   |      | 135  |      | 82   | 135   | 27   | 1              | 9             |
| Specific Conductivity               | μml              | hos/cm             | 242  | 216   | 226  |      | 242   | 269  |       | 370  | 286  | 268  | 274  |      | 266  | 370   | 216  | 0              | 9             |
| Sulfate                             | n                | mg/L               | 20.2 | 20.9  | 18.2 |      | 17.8  | 23.7 | 16.5  | 35.2 | 21.4 | 17.9 | 17.6 |      | 20.9 | 35.2  | 16.5 | 5.0            | 10            |
| Temperature                         |                  | °C                 | 6.3  | 6.7   | 7.0  |      | 15.0  | 25.8 | 27.3  | 26.5 | 22.3 | 13.9 | 10.4 |      | 16.1 | 27.3  | 6.3  | -              | 10            |
| Threshold Odor Number               | U                | Jnits              | 5    | 3     | 3    |      | 3     | 6    | 4     | 1    | 1    | 2    | 4    |      | 3    | 6     | 1    | 1              | 10            |
| Total Organic Carbon                | n                | mg/L               | 2.1  | 2.7   | 2.0  |      | 2.9   | 3.1  | 3.5   | 3.2  | 3.4  | 2.9  | 3.5  |      | 2.9  | 3.5   | 2.0  | 0.5            | 10            |
| Turbidity                           |                  | NTU                | 4.60 | 16.00 | 3.70 |      | 16.00 | 5.90 | 11.00 | 7.90 | 3.90 | 4.10 | 1.90 |      | 7.50 | 16.00 | 1.90 | 0.00           | 10            |

BQL = The lowest quantitation limit of all analyses for the particular parameter, Below Quantitation Limit.

Environmental Protection Agency/Virginia Department of Health established levels for drinking water

P=Primary-enforceable, S=Secondary-non-enforceable, AL=Action Level on specific taps, MCL=Maximum Contaminant Level.

mg/L=milligrams per liter, µg/L=micrograms per liter



## WATER QUALITY LABORATORY METAL ANALYSES

#### PERIOD OF 01/01/2006 TO 12/31/2006

### **Potomac River-Corbalis Water Treatment Plant Source**

| Parameter | MCL <sup>1</sup> | Units <sup>2</sup> | Jan  | Feb   | Mar  | Apr | Mav   | Jun   | Jul  | Aua   | Sep  | Oct  | Nov | Dec | Avg   | Max   | Min  | Quant<br>Limit | # of<br>Tests |
|-----------|------------------|--------------------|------|-------|------|-----|-------|-------|------|-------|------|------|-----|-----|-------|-------|------|----------------|---------------|
| Aluminum  |                  | μg/L               |      | 548.0 |      |     | 371.0 | 122.0 |      | 194.0 |      | 70.4 |     |     | 261.1 | 548.0 | 70.4 | 25.0           | 5             |
| Antimony  |                  | μg/L               |      | BQL   |      |     | BQL   | BQL   |      | BQL   |      | BQL  |     |     | BQL   | BQL   | BQL  | 2.0            | 5             |
| Arsenic   |                  | μg/L               |      | BQL   |      |     | BQL   | BQL   |      | BQL   |      | BQL  |     |     | BQL   | BQL   | BQL  | 2.0            | 5             |
| Barium    |                  | μg/L               |      | 36.6  |      |     | 38.6  | 41.6  |      | 52.6  |      | 34.1 |     |     | 40.7  | 52.6  | 34.1 | 25.0           | 5             |
| Beryllium |                  | μg/L               |      | BQL   |      |     | BQL   | BQL   |      | BQL   |      | BQL  |     |     | BQL   | BQL   | BQL  | 2.0            | 5             |
| Cadmium   |                  | μg/L               |      | BQL   |      |     | BQL   | BQL   |      | BQL   |      | BQL  |     |     | BQL   | BQL   | BQL  | 2.0            | 5             |
| Calcium   |                  | mg/L               |      | 26.2  |      |     | 29.2  | 34.4  |      | 44.0  | 37.9 | 32.7 |     |     | 34.1  | 44.0  | 26.2 | 0.5            | 6             |
| Chromium  |                  | μg/L               |      | BQL   |      |     | BQL   | BQL   |      | BQL   |      | BQL  |     |     | BQL   | BQL   | BQL  | 5.0            | 5             |
| Copper    |                  | μg/L               | BQL  | BQL   | BQL  |     | 35    | BQL   | BQL  | BQL   | BQL  | BQL  | BQL |     | BQL   | 35    | BQL  | 25.0           | 10            |
| Iron      |                  | μg/L               | 282  | 817   | 236  |     | 736   | 279   | 496  | 405   | 214  | 225  | 168 |     | 386   | 817   | 168  | 60             | 10            |
| Lead      |                  | μg/L               |      | BQL   |      |     | BQL   | BQL   |      | BQL   |      | BQL  |     |     | BQL   | BQL   | BQL  | 2.0            | 5             |
| Magnesium |                  | mg/L               |      | 6.9   |      |     | 8.3   | 10.3  |      | 13.3  | 9.0  | 8.1  |     |     | 9.3   | 13.3  | 6.9  | 0.5            | 6             |
| Manganese |                  | μg/L               | 40   | 45    | 34   |     | 70    | 52    | 51   | 38    | BQL  | BQL  | BQL |     | 33    | 70    | BQL  | 25.0           | 10            |
| Mercury   |                  | μg/L               |      | BQL   |      |     |       |       | BQL  |       |      |      |     |     | BQL   | BQL   | BQL  | 0.5            | 2             |
| Nickel    |                  | μg/L               |      | BQL   |      |     | BQL   | BQL   |      | BQL   |      | BQL  |     |     | BQL   | BQL   | BQL  | 5.0            | 5             |
| Potassium |                  | mg/L               |      | 2.1   |      |     | 2.3   | 2.9   |      | 3.3   |      | 2.6  |     |     | 2.6   | 3.3   | 2.1  | 0.5            | 5             |
| Selenium  |                  | μg/L               |      | BQL   |      |     | BQL   | BQL   |      | BQL   |      | BQL  |     |     | BQL   | BQL   | BQL  | 5.0            | 5             |
| Silicon   |                  | mg/L               |      | 4     |      |     | 5     | 4     |      | 4     |      | 4    |     |     | 4     | 5     | 4    | 4              | 5             |
| Silver    |                  | μg/L               |      | BQL   |      |     | BQL   | BQL   |      | BQL   |      | BQL  |     |     | BQL   | BQL   | BQL  | 5.0            | 5             |
| Sodium    |                  | mg/L               | 10.3 | 9.8   | 12.8 |     | 10.1  | 12.2  | 10.2 | 16.6  | 10.8 | 8.8  | 8.7 |     | 11.0  | 16.6  | 8.7  | 5.0            | 10            |
| Thallium  |                  | μg/L               |      | BQL   |      |     | BQL   | BQL   |      | BQL   |      | BQL  |     |     | BQL   | BQL   | BQL  | 2.0            | 5             |
| Zinc      |                  | μg/L               |      | BQL   |      |     | BQL   | BQL   |      | BQL   |      | BQL  |     |     | BQL   | BQL   | BQL  | 25             | 5             |

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