

# WATER QUALITY LABORATORY INORGANIC ANALYSES

## PERIOD OF 01/01/2011 TO 12/31/2011

## Potomac River - Corbalis Water Treatment Plant Source

|                                     |          |      |      |      |      |      |     |      |      |      |      |      |      |      |      |      | Quant   |            |
|-------------------------------------|----------|------|------|------|------|------|-----|------|------|------|------|------|------|------|------|------|---------|------------|
| Parameter                           | Units 1  | Jan  | Feb  | Mar  | Apr  | May  | Jun | Jul  | Aug  | Sep  | Oct  | Nov  | Dec  | Avg  | Max  | Min  | Limit 2 | # of Tests |
| Aggressive Index Number             | Units    | 13   | 12   | 11   | 11   | 11   |     | 12   | 12   | 13   | 12   | 12   | 11   | 12   | 13   | 11   | -       | 11         |
| Alkalinity, Bicarbonate             | mg/L     | 112  | 81   | 71   | 47   | 81   |     | 113  | 109  | 119  | 95   | 102  | 72   | 91   | 119  | 47   | -       | 11         |
| Alkalinity, Carbonate               | mg/L     | 0    | 0    | 0    | 0    | 0    |     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | -       | 11         |
| Alkalinity, Hydroxyl                | mg/L     | 0    | 0    | 0    | 0    | 0    |     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | -       | 11         |
| Alkalinity, Phenolphthalein         | mg/L     | 0    | 0    | 0    | 0    | 0    |     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | -       | 11         |
| Alkalinity, Total                   | mg/L     | 112  | 81   | 71   | 47   | 81   |     | 113  | 109  | 119  | 95   | 102  | 72   | 91   | 119  | 47   | -       | 11         |
| Bromide                             | mg/L     | 0.06 | 0.02 | 0.03 | 0.01 | 0.03 |     | 0.02 | 0.04 | 0.02 | 0.02 | 0.02 | 0.01 | 0.03 | 0.06 | 0.01 | 0.01    | 11         |
| Carbon Dioxide                      | mg/L     | 0    | 1    | 4    | 5    | 3    |     | 2    | 2    | 1    | 2    | 1    | 3    | 2    | 5    | 0    | -       | 11         |
| Chloride                            | mg/L     | 38.4 | 28.5 | 24.9 | 9.7  | 19.6 |     | 18.4 | 27.7 | 17.9 | 13.6 | 15.8 | 7.9  | 20.2 | 38.4 | 7.9  | 5.0     | 11         |
| Color                               | Units    | 13   | 21   | 21   | 148  | 30   |     | 20   | 30   | 20   | 23   | 16   | 19   | 33   | 148  | 13   | 0       | 11         |
| Dissolved Oxygen                    | mg/L     | 14.1 | 12.5 | 10.7 | 9.6  | 7.5  |     | 7.9  | 7.8  | 8.6  | 9.6  | 11.9 | 11.8 | 10.2 | 14.1 | 7.5  | 0.0     | 11         |
| Fluoride                            | mg/L     | 0.2  | BQL  | BQL  | BQL  | BQL  |     | BQL  | 0.2  | BQL  | 0.2     | 11         |
| Hardness, Calcium                   | mg/L     | 99   | 84   | 63   | 45   | 73   |     | 107  | 99   | 113  | 96   | 111  | 77   | 88   | 113  | 45   | -       | 11         |
| Hardness, Total                     | mg/L     | 156  | 129  | 102  | 67   | 96   |     | 159  | 156  | 155  | 133  | 152  | 101  | 128  | 159  | 67   | -       | 11         |
| Methylene Blue Activated Substances | mg/L     |      |      |      |      |      |     | BQL  |      |      |      |      |      | BQL  | BQL  | BQL  | 0.05    | 1          |
| N, Ammonia (Ammonia as N)           | mg/L     | BQL  |      | BQL  | BQL  | BQL  |     | BQL  | 0.20    | 10         |
| N, Nitrate (Nitrate as N)           | mg/L     | 1.5  | 1.9  | 1.1  | 8.0  | 0.8  |     | 0.9  | 0.6  | 1.8  | 0.9  | 1.4  | 1.3  | 1.2  | 1.9  | 0.6  | 0.2     | 11         |
| N, Nitrite (Nitrite as N)           | mg/L     | 0.01 | 0.09 | 0.01 | 0.01 | 0.01 |     | 0.01 | 0.01 | 0.01 | BQL  | BQL  | BQL  | 0.01 | 0.09 | BQL  | 0.01    | 11         |
| pH                                  | Units    | 9.0  | 8.2  | 7.6  | 7.3  | 7.7  |     | 8.0  | 8.1  | 8.4  | 8.0  | 8.4  | 7.7  | 8.0  | 9.0  | 7.3  | -       | 11         |
| Phosphate as Phosphorous            | mg/L     | BQL  | BQL  | BQL  | BQL  | BQL  |     | BQL  | 0.10    | 11         |
| Solids, Total                       | mg/L     | 236  | 214  | 168  | 282  | 202  |     | 224  | 248  | 263  | 209  | 211  | 186  | 222  | 282  | 168  | 1       | 11         |
| Solids, Total Dissolved             | mg/L     | 239  | 198  | 150  | 103  | 176  |     | 207  | 235  | 196  | 186  | 225  | 173  | 190  | 239  | 103  | 1       | 11         |
| Solids, Total Suspended             | mg/L     | 1    | 2    | 5    | 169  | 21   |     | 3    | 8    | 17   | 20   | 8    | 11   | 24   | 169  | 1    | 1       | 11         |
| Specific Conductivity               | µmhos/cm | 426  | 353  | 294  | 155  | 273  |     | 364  | 418  | 364  | 297  |      | 221  | 317  | 426  | 155  | 0       | 10         |
| Sulfate                             | mg/L     | 34.5 | 36.1 | 19.6 | 13.9 | 18.0 |     | 43.9 | 46.9 | 37.2 | 34.7 | 42.8 | 22.1 | 31.8 | 46.9 | 13.9 | 5.0     | 11         |
| Temperature                         | °C       | 1.0  | 4.6  | 9.3  | 13.9 | 18.6 |     | 27.7 | 27.9 | 22.7 | 16.3 | 10.4 | 9.5  | 14.7 | 27.9 | 1.0  | -       | 11         |
| Threshold Odor Number               | Units    | 8    | 11   | 4    | 11   | 6    |     | 7    | 5    | 8    | 3    | 6    | 3    | 7    | 11   | 3    | 0       | 11         |
| Total Organic Carbon                | mg/L     | 2.2  | 2.9  | 2.4  | 5.0  | 2.4  |     | 2.4  | 3.9  | 2.5  | 3.1  | 2.5  | 2.4  | 2.9  | 5.0  | 2.2  | 0.5     | 11         |
| Turbidity                           | NTU      | 1.6  | 3.8  | 5.0  | 190  | 16   | -   | 2.3  | 7.3  | 15   | 16   | 6.2  | 11   | 25   | 190  | 1.6  | 0.00    | 11         |

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

<sup>&</sup>lt;sup>1</sup> mg/L = milligrams per liter, µg/L = micrograms per liter, µmhos/cm = micromhos per centimeter, NTU = Nephelometric Turbidity Units

<sup>&</sup>lt;sup>2</sup> Quant Limit = Quantitation Limit = lowest level of measurement



## WATER QUALITY LABORATORY METAL ANALYSES

## PERIOD OF 01/01/2011 TO 12/31/2011

## Potomac River - Corbalis Water Treatment Plant Source

|           |         |      |      |      |      |      |     |      |      |      |      |      |      |      |      |      | Quant              |            |
|-----------|---------|------|------|------|------|------|-----|------|------|------|------|------|------|------|------|------|--------------------|------------|
| Parameter | Units 1 | Jan  | Feb  | Mar  | Apr  | May  | Jun | Jul  | Aug  | Sep  | Oct  | Nov  | Dec  | Avg  | Max  | Min  | Limit <sup>2</sup> | # of Tests |
| Aluminum  | μg/L    | 25.7 |      |      | 7380 |      |     | 25.0 |      |      | 500  |      |      | 1981 | 7380 | 25.0 | 25.0               | 4          |
| Antimony  | μg/L    | BQL  |      |      | BQL  |      |     | BQL  | -    |      | BQL  |      |      | BQL  | BQL  | BQL  | 2.0                | 4          |
| Arsenic   | μg/L    | BQL  |      |      | BQL  |      |     | BQL  |      |      | BQL  |      |      | BQL  | BQL  | BQL  | 2.0                | 4          |
| Barium    | μg/L    | 46.1 |      |      | 77.0 |      |     | 50.6 |      |      | 46.1 |      |      | 55.0 | 77.0 | 46.1 | 25.0               | 4          |
| Beryllium | μg/L    | BQL  |      |      | BQL  |      |     | BQL  |      |      | BQL  |      |      | BQL  | BQL  | BQL  | 2.0                | 4          |
| Cadmium   | μg/L    | BQL  |      |      | BQL  |      |     | BQL  |      |      | BQL  |      |      | BQL  | BQL  | BQL  | 2.0                | 4          |
| Calcium   | mg/L    | 43.9 |      |      | 21.0 |      |     | 42.5 |      |      | 38.4 |      |      | 36.5 | 43.9 | 21.0 | 1.0                | 4          |
| Chromium  | μg/L    | BQL  |      |      | BQL  |      |     | BQL  |      |      | BQL  |      |      | BQL  | BQL  | BQL  | 5.0                | 4          |
| Copper    | μg/L    | BQL  | BQL  | BQL  | BQL  | BQL  |     | BQL  | BQL  | BQL  | BQL  | 40.1 | BQL  | BQL  | 40.1 | BQL  | 25.0               | 11         |
| Iron      | μg/L    | 185  | 158  | 308  | 8660 | 1180 |     | 38.4 | 105  | 494  | 770  | 332  | 312  | 1140 | 8660 | 38.4 | 25.0               | 11         |
| Lead      | μg/L    | BQL  |      |      | BQL  |      |     | BQL  |      |      | BQL  |      |      | BQL  | BQL  | BQL  | 2.0                | 4          |
| Magnesium | mg/L    | 12.2 |      |      | 5.2  |      |     | 12.4 |      |      | 9.4  |      |      | 9.8  | 12.4 | 5.2  | 1.0                | 4          |
| Manganese | μg/L    | 25.4 | BQL  | 43.8 | 256  | 135  |     | BQL  | 60.0 | 239  | 45.2 | BQL  | 27.0 | 75.6 | 256  | BQL  | 25.0               | 11         |
| Mercury   | μg/L    | BQL  |      |      |      |      |     | BQL  |      |      |      |      |      | BQL  | BQL  | BQL  | 0.50               | 2          |
| Nickel    | μg/L    | BQL  |      |      | BQL  |      |     | BQL  |      |      | BQL  |      |      | BQL  | BQL  | BQL  | 5.0                | 4          |
| Potassium | mg/L    | 3.7  |      |      | 4.8  |      |     | 3.0  |      |      | 2.7  |      |      | 3.6  | 4.8  | 2.7  | 1.0                | 4          |
| Selenium  | μg/L    | BQL  |      |      | BQL  |      |     | BQL  |      |      | BQL  |      |      | BQL  | BQL  | BQL  | 5.0                | 4          |
| Silicon   | mg/L    | 2.0  |      |      |      |      |     | 2.6  |      |      | 3.6  |      |      | 2.7  | 3.6  | 2.0  | 1.0                | 3          |
| Silver    | μg/L    | BQL  |      |      | BQL  |      |     | BQL  |      |      | BQL  |      |      | BQL  | BQL  | BQL  | 5.0                | 4          |
| Sodium    | mg/L    | 22.5 | 15.4 | 12.6 | 6.3  | 11.0 |     | 12.4 | 17.1 | 11.5 | 10.2 | 11.2 | 5.5  | 12.3 | 22.5 | 5.5  | 1.0                | 11         |
| Thallium  | μg/L    | BQL  |      |      | BQL  |      |     | BQL  |      |      | BQL  |      |      | BQL  | BQL  | BQL  | 2.0                | 4          |
| Zinc      | μg/L    | BQL  |      |      | BQL  |      |     | BQL  |      |      | BQL  |      |      | BQL  | BQL  | BQL  | 25.0               | 4          |

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

 $<sup>^{1}</sup>$  mg/L = milligrams per liter,  $\mu$ g/L = micrograms per liter

<sup>&</sup>lt;sup>2</sup> Quant Limit = Quantitation Limit = lowest level of measurement