Fairfax Water

# WATER QUALITY LABORATORY
## INORGANIC ANALYSES
## PERIOD OF 01/01/2007 TO 12/31/2007
## Occoquan Reservoir – Griffith and Occoquan Water Treatment Plants Source

| Parameter | MCL[1] | Units[2] | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Avg | Max | Min | Quant Limit | # of Tests |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Aggressive Index Number | | Units | 10 | 10 | 10 | 11 | 10 | 10 | 11 | 11 | 11 | 11 | 11 | -- | 11 | 11 | 10 | - | 11 |
| Alkalinity, Bicarbonate | | mg/L | 51 | 48 | 29 | 34 | 29 | 48 | 71 | 79 | 80 | 80 | 75 | -- | 57 | 80 | 29 | - | 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 | 51 | 48 | 29 | 34 | 29 | 48 | 71 | 79 | 80 | 80 | 75 | -- | 57 | 80 | 29 | - | 11 |
| Bromate | | µg/L | BQL | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | BQL | BQL | BQL | 10 | 1 |
| Bromide | | mg/L | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.03 | 0.04 | 0.05 | 0.05 | 0.05 | 0.05 | 0.04 | 0.03 | 0.05 | 0.02 | 0.01 | 12 |
| Carbon Dioxide | | mg/L | 8 | 6 | 2 | 2 | 3 | 6 | 7 | 10 | 10 | 6 | 19 | -- | 7 | 19 | 2 | - | 11 |
| Chloride | | mg/L | 17.6 | 18.4 | 35.3 | 33.5 | 19.8 | 26.6 | 39.3 | 46.7 | 49.2 | 51.9 | 50.6 | -- | 35.4 | 51.9 | 17.6 | 5.0 | 11 |
| Color | | Units | 63 | 45 | 169 | 103 | 79 | 34 | 21 | 25 | 32 | 32 | 31 | -- | 58 | 169 | 21 | 0 | 11 |
| Dissolved Oxygen | | mg/L | 15.6 | 12.1 | -- | 8.2 | 8.2 | 4.0 | 5.3 | 3.1 | 3.2 | 4.6 | 2.4 | -- | 6.7 | 15.6 | 2.4 | 0.0 | 10 |
| Fluoride | | mg/L | BQL | BQL | BQL | BQL | BQL | 0.2 | 0.3 | 0.4 | 0.5 | 0.5 | 0.5 | -- | 0.2 | 0.5 | BQL | 0.2 | 11 |
| Hardness, Calcium | | mg/L | 54 | 50 | 31 | 39 | 32 | 46 | 119 | 73 | 108 | 109 | 102 | -- | 69 | 119 | 31 | - | 11 |
| Hardness, Total | | mg/L | 75 | 71 | 49 | 53 | 42 | 70 | 104 | 114 | 118 | 122 | 127 | -- | 86 | 127 | 42 | - | 11 |
| Methylene Blue Activated Substances | | mg/L | -- | -- | -- | -- | -- | -- | BQL | -- | -- | -- | -- | -- | BQL | BQL | BQL | 0.050 | 1 |
| N, Ammonia (Ammonia as N) | | mg/L | BQL | -- | 0.05 | 0.07 | -- | 0.21 | 0.29 | 0.39 | 0.36 | 0.28 | 0.25 | -- | 0.21 | 0.39 | BQL | 0.05 | 9 |
| N, Nitrate (Nitrate as N) | | mg/L | 1.4 | 1.3 | 0.6 | 0.7 | 0.5 | 0.5 | 0.4 | 0.2 | BQL | 0.4 | 1.4 | -- | 0.7 | 1.4 | BQL | 0.2 | 11 |
| N, Nitrite (Nitrite as N) | | mg/L | BQL | 0.01 | BQL | 0.01 | 0.01 | 0.02 | 0.03 | 0.01 | 0.10 | 0.15 | 0.08 | -- | 0.04 | 0.15 | BQL | 0.01 | 11 |
| pH | | Units | 7.1 | 7.2 | 7.4 | 7.5 | 7.3 | 7.2 | 7.3 | 7.2 | 7.2 | 7.4 | 6.9 | -- | 7.2 | 7.5 | 6.9 | - | 11 |
| Phosphate as Phosphorous | | mg/L | BQL | -- | -- | BQL | -- | BQL | BQL | -- | BQL | BQL | BQL | -- | BQL | BQL | BQL | 0.01 | 7 |
| Solids, Total | | mg/L | 168 | 141 | 220 | 170 | 111 | 133 | 250 | 244 | 276 | 283 | 282 | -- | 207 | 283 | 111 | 1 | 11 |
| Solids, Total Dissolved | | mg/L | 140 | 125 | 188 | -- | 104 | 168 | -- | 238 | 256 | 299 | 252 | -- | 197 | 299 | 104 | 1 | 9 |
| Solids, Total Suspended | | mg/L | 11 | 4 | -- | 5 | -- | 3 | -- | 6 | 5 | 8 | 4 | -- | 6 | 11 | 3 | 1 | 8 |
| Specific Conductivity | | µmhos/cm | 210 | 220 | 221 | 228 | 168 | 233 | 359 | 403 | 442 | 459 | 445 | -- | 308 | 459 | 168 | 0 | 11 |
| Sulfate | | mg/L | 23.5 | 22.9 | 13.0 | 15.3 | 12.0 | 20.9 | 39.6 | 50.9 | 56.9 | 57.9 | 66.5 | -- | 34.5 | 66.5 | 12.0 | 5.0 | 11 |
| Temperature | | °C | 6.9 | 8.3 | 10.0 | 10.9 | 11.8 | 19.3 | 24.6 | 25.9 | 23.4 | 20.7 | 15.5 | -- | 16.1 | 25.9 | 6.9 | - | 11 |
| Threshold Odor Number | | Units | 6 | 12 | 33 | 18 | 17 | 4 | 8 | 13 | 10 | 11 | 9 | -- | 13 | 33 | 4 | 0 | 11 |
| Total Organic Carbon | | mg/L | 4.6 | 4.2 | 6.6 | 5.3 | 6.3 | 4.8 | 4.4 | 4.6 | 4.6 | 4.5 | 4.3 | -- | 4.9 | 6.6 | 4.2 | 0.5 | 11 |
| Turbidity | | NTU | 19.00 | 5.10 | 65.00 | 9.30 | 13.00 | 4.50 | 3.60 | 4.30 | 4.30 | 8.30 | 6.00 | -- | 12.95 | 65.00 | 3.60 | 0.00 | 11 |

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

[1] 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.

[2] mg/L=milligrams per liter, µg/L=micrograms per liter

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Fairfax Water

# WATER QUALITY LABORATORY
## METAL ANALYSES
## PERIOD OF 01/01/2007 TO 12/31/2007
## Occoquan Reservoir – Griffith and Occoquan Water Treatment Plants Source

| Parameter | MCL[1] | Units[2] | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Avg | Max | Min | Quant Limit | # of Tests |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Aluminum | | µg/L | 378.0 | -- | -- | 376.0 | -- | -- | 143.0 | -- | -- | 125.0 | -- | -- | 255.5 | 378.0 | 125.0 | 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 | 29.9 | -- | -- | 30.4 | -- | -- | 42.1 | -- | -- | 64.7 | -- | -- | 41.8 | 64.7 | 29.9 | 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 | -- | -- | -- | 14.2 | -- | -- | 32.8 | -- | -- | 37.1 | -- | -- | 28.0 | 37.1 | 14.2 | 0.5 | 3 |
| Chromium | | µg/L | BQL | -- | -- | BQL | -- | -- | BQL | -- | -- | BQL | -- | -- | BQL | BQL | BQL | 5.0 | 4 |
| Copper | | µg/L | BQL | BQL | BQL | BQL | 76.0 | BQL | 73.8 | BQL | BQL | BQL | BQL | -- | BQL | 76.0 | BQL | 25.0 | 11 |
| Iron | | µg/L | 672 | 361 | 2,388 | 535 | 841 | 246 | 190 | 204 | 192 | 165 | 143 | -- | 540 | 2388 | 143 | 60 | 11 |
| Lead | | µg/L | BQL | -- | -- | BQL | -- | -- | 3.6 | -- | -- | BQL | -- | -- | BQL | 3.6 | BQL | 2.0 | 4 |
| Magnesium | | mg/L | 5.5 | -- | -- | 4.4 | -- | -- | 7.0 | -- | -- | 7.1 | -- | -- | 6.0 | 7.1 | 4.4 | 0.5 | 4 |
| Manganese | | µg/L | 78.7 | 74.8 | 160.0 | 84.4 | 83.6 | 318.0 | 443.0 | 449.0 | 485.0 | 259.0 | 272.0 | -- | 246.1 | 485.0 | 74.8 | 25.0 | 11 |
| Mercury | | µg/L | -- | -- | -- | -- | -- | -- | BQL | -- | -- | -- | BQL | -- | BQL | BQL | BQL | 0.50 | 2 |
| Nickel | | µg/L | BQL | -- | -- | BQL | -- | -- | 30.3 | -- | -- | BQL | -- | -- | 7.6 | 30.3 | BQL | 5.0 | 4 |
| Potassium | | mg/L | 3.4 | -- | -- | 2.7 | -- | -- | 6.0 | -- | -- | 9.5 | -- | -- | 5.4 | 9.5 | 2.7 | 0.5 | 4 |
| Selenium | | µg/L | BQL | -- | -- | BQL | -- | -- | BQL | -- | -- | BQL | -- | -- | BQL | BQL | BQL | 5.0 | 4 |
| Silicon | | mg/L | 5 | -- | -- | 4 | -- | -- | BQL | -- | -- | BQL | -- | -- | BQL | 5 | BQL | 4 | 4 |
| Silver | | µg/L | BQL | -- | -- | BQL | -- | -- | BQL | -- | -- | BQL | -- | -- | BQL | BQL | BQL | 5.0 | 4 |
| Sodium | | mg/L | 12.0 | 9.9 | 19.5 | 18.1 | 11.8 | 17.5 | 25.6 | 32.8 | 37.5 | 38.5 | 41.0 | -- | 24.0 | 41.0 | 9.9 | 5.0 | 11 |
| Thallium | | µg/L | BQL | -- | -- | BQL | -- | -- | BQL | -- | -- | BQL | -- | -- | BQL | BQL | BQL | 2.0 | 4 |
| Zinc | | µg/L | BQL | -- | -- | BQL | -- | -- | 57.0 | -- | -- | BQL | -- | -- | BQL | 57.0 | BQL | 25.0 | 4 |

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