Fairfax Water

# WATER QUALITY LABORATORY
## INORGANIC ANALYSES
## PERIOD OF 01/01/2009 TO 12/31/2009
## Distribution Site Representing Griffith Treatment Plant

| 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 | 11 | -- | 11 | 12 | -- | 11 | 11 | 11 | 11 | 12 | 12 | 11 | 11 | 12 | 11 | - | 10 |
| Alkalinity, Bicarbonate | | mg/L | 67 | 49 | 55 | 61 | -- | 50 | 58 | 71 | 77 | 76 | 77 | 59 | 64 | 77 | 49 | - | 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 | 67 | 49 | 55 | 61 | -- | 50 | 58 | 71 | 77 | 76 | 77 | 59 | 64 | 77 | 49 | - | 11 |
| Bromide | | mg/L | 0.02 | 0.02 | 0.02 | 0.01 | -- | BQL | 0.01 | 0.02 | 0.02 | 0.02 | 0.03 | 0.02 | 0.02 | 0.03 | BQL | 0.01 | 11 |
| Carbon Dioxide | | mg/L | 2 | 4 | 2 | 1 | -- | 2 | 3 | 2 | 4 | 2 | 2 | 4 | 3 | 4 | 1 | - | 11 |
| Chloride | 250.0 S | mg/L | 37.5 | 39.1 | 61.3 | 81.6 | -- | 28.4 | 29.0 | 39.3 | 46.1 | 50.4 | 52.2 | 36.8 | 45.6 | 81.6 | 28.4 | 5.0 | 11 |
| Chlorine, Free | | mg/L | 0.2 | 0.2 | 0.2 | 2.8 | -- | 1.5 | 0.3 | 0.4 | 0.2 | 0.0 | 0.1 | 0.1 | 0.5 | 2.8 | 0.0 | 0.0 | 11 |
| Chlorine, Total | | mg/L | 3.1 | 2.9 | 3.0 | 2.8 | -- | 1.7 | 3.1 | 2.9 | 3.2 | 2.9 | 2.9 | 2.7 | 2.8 | 3.2 | 1.7 | 0.0 | 11 |
| Color | 15 S | Units | 4 | 0 | 0 | 1 | -- | 2 | 1 | 1 | 1 | 0 | 1 | 2 | 1 | 4 | 0 | 0 | 11 |
| Dissolved Oxygen | | mg/L | 23.3 | 25.2 | 20.7 | 18.0 | -- | 22.9 | 14.4 | 13.4 | 16.7 | 12.4 | 18.6 | 20.5 | 18.7 | 25.2 | 12.4 | 0.0 | 11 |
| Fluoride | 4.0/2.0 P/S | mg/L | 1.0 | 1.0 | 0.9 | 0.8 | -- | 0.9 | 0.9 | 1.0 | 1.0 | 1.1 | 1.0 | 1.0 | 1.0 | 1.1 | 0.8 | 0.2 | 11 |
| Hardness, Calcium | | mg/L | 72 | 54 | 70 | 80 | -- | 36 | 44 | 62 | 86 | 86 | 96 | 62 | 68 | 96 | 36 | - | 11 |
| Hardness, Total | | mg/L | 110 | 85 | 107 | 125 | -- | 60 | 68 | 95 | 116 | 116 | 131 | 81 | 99 | 131 | 60 | - | 11 |
| Methylene Blue Activated Substances | 0.5 S | mg/L | -- | -- | -- | -- | -- | -- | BQL | -- | -- | -- | -- | -- | BQL | BQL | BQL | 0.050 | 1 |
| N, Ammonia (Ammonia as N) | | mg/L | 0.73 | 0.70 | 0.74 | BQL | -- | BQL | 0.77 | 0.82 | 0.94 | 0.98 | 1.15 | -- | 0.68 | 1.15 | BQL | 0.20 | 10 |
| N, Nitrate (Nitrate as N) | 10 P | mg/L | 1.2 | 1.3 | 1.6 | 1.1 | -- | 0.6 | 0.5 | 1.2 | 2.0 | 2.4 | 2.9 | 1.5 | 1.5 | 2.9 | 0.5 | 0.2 | 11 |
| N, Nitrite (Nitrite as N) | 1 P | mg/L | -- | 0.02 | -- | BQL | -- | BQL | BQL | -- | BQL | BQL | 0.01 | 0.01 | BQL | 0.02 | BQL | 0.01 | 8 |
| pH | 6.5-8.5 S | Units | 7.8 | 7.4 | 7.7 | 8.0 | -- | 7.7 | 7.6 | 7.8 | 7.6 | 7.9 | 7.8 | 7.5 | 7.7 | 8.0 | 7.4 | - | 11 |
| Phosphate as Phosphorous | | mg/L | 0.56 | 0.59 | 0.59 | -- | -- | 0.46 | -- | 0.46 | 0.47 | 0.63 | 0.60 | 0.59 | 0.55 | 0.63 | 0.46 | 0.10 | 9 |
| Solids, Total | | mg/L | 214 | 189 | 259 | 267 | -- | 148 | 155 | 204 | 238 | 257 | 260 | 209 | 218 | 267 | 148 | 1 | 11 |
| Solids, Total Dissolved | 500 S | mg/L | 210 | 179 | 232 | 243 | -- | 136 | 155 | 203 | 253 | 249 | 268 | 199 | 212 | 268 | 136 | 1 | 11 |
| Solids, Total Suspended | | mg/L | BQL | BQL | BQL | BQL | -- | BQL | BQL | BQL | BQL | BQL | BQL | BQL | BQL | BQL | BQL | 1 | 11 |
| Specific Conductivity | | µmhos/cm | 353 | 303 | 399 | 476 | -- | 219 | 252 | 337 | 408 | 443 | 450 | 312 | 359 | 476 | 219 | 0 | 11 |
| Sulfate | 250.0 S | mg/L | 37.9 | 26.8 | 32.3 | 34.2 | -- | 14.4 | 15.2 | 30.2 | 37.6 | 43.5 | 51.6 | 29.1 | 32.1 | 51.6 | 14.4 | 10.0 | 11 |
| Taste | | Units | 3 | 2 | 2 | 3 | -- | 2 | 2 | 3 | 2 | 4 | 1 | 2 | 2 | 4 | 1 | 1 | 11 |
| Temperature | | °C | 17.0 | 15.0 | 16.5 | 16.7 | -- | 23.0 | 23.8 | 25.9 | 23.7 | 19.7 | 18.8 | 16.0 | 19.6 | 25.9 | 15.0 | - | 11 |
| Threshold Odor Number | 3 S | Units | 1 | 3 | 6 | 7 | -- | 6 | 4 | 4 | 7 | 3 | 4 | 7 | 5 | 7 | 1 | 0 | 11 |
| Total Organic Carbon | | mg/L | 2.6 | 2.7 | 2.4 | 2.4 | -- | 2.8 | 2.6 | 2.4 | 2.4 | 2.6 | 2.3 | 2.6 | 2.5 | 2.8 | 2.3 | 0.5 | 11 |
| Turbidity | ≤ 5 P | NTU | 0.10 | 0.15 | 0.40 | 0.10 | -- | 0.15 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.14 | 0.40 | 0.10 | 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 01/01/2009 TO 12/31/2009
## Distribution Site Representing Griffith Treatment Plant

| 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 | 50-200 S | µg/L | BQL | -- | -- | BQL | -- | -- | 32.4 | -- | -- | 28.2 | -- | -- | BQL | 32.4 | BQL | 25.0 | 4 |
| Antimony | 6 P | µg/L | BQL | -- | -- | BQL | -- | -- | BQL | -- | -- | BQL | -- | -- | BQL | BQL | BQL | 2.0 | 4 |
| Arsenic | 10 P | µg/L | BQL | -- | -- | BQL | -- | -- | BQL | -- | -- | BQL | -- | -- | BQL | BQL | BQL | 2.0 | 4 |
| Barium | 2000 P | µg/L | 26.4 | -- | -- | 36.1 | -- | -- | 27.5 | -- | -- | 32.1 | -- | -- | 30.5 | 36.1 | 26.4 | 25.0 | 4 |
| Beryllium | 4 P | µg/L | BQL | -- | -- | BQL | -- | -- | BQL | -- | -- | BQL | -- | -- | BQL | BQL | BQL | 2.0 | 4 |
| Cadmium | 5 P | µg/L | BQL | -- | -- | BQL | -- | -- | BQL | -- | -- | BQL | -- | -- | BQL | BQL | BQL | 2.0 | 4 |
| Calcium | | mg/L | 28.8 | -- | -- | 32.8 | -- | -- | 18.3 | -- | -- | 34.4 | -- | -- | 28.6 | 34.4 | 18.3 | 1.0 | 4 |
| Chromium | 100 P | µg/L | BQL | -- | -- | BQL | -- | -- | BQL | -- | -- | BQL | -- | -- | BQL | BQL | BQL | 5.0 | 4 |
| Copper | 1300 AL | µg/L | 36.5 | 37.1 | BQL | BQL | -- | 35.1 | BQL | BQL | BQL | BQL | BQL | BQL | BQL | 37.1 | BQL | 25.0 | 11 |
| Iron | 300 S | µg/L | BQL | BQL | BQL | BQL | -- | BQL | BQL | BQL | BQL | BQL | BQL | BQL | BQL | BQL | BQL | 25.0 | 11 |
| Lead | 15 AL | µg/L | BQL | -- | -- | BQL | -- | -- | BQL | -- | -- | BQL | -- | -- | BQL | BQL | BQL | 2.0 | 4 |
| Magnesium | | mg/L | 6.7 | -- | -- | 7.9 | -- | -- | 4.7 | -- | -- | 6.8 | -- | -- | 6.5 | 7.9 | 4.7 | 1.0 | 4 |
| Manganese | 50 S | µg/L | BQL | BQL | BQL | BQL | -- | BQL | BQL | BQL | BQL | BQL | BQL | BQL | BQL | BQL | BQL | 25.0 | 11 |
| Mercury | 2 P | µg/L | BQL | -- | -- | -- | -- | -- | BQL | -- | -- | -- | -- | -- | BQL | BQL | BQL | 0.50 | 2 |
| Nickel | 100 P | µg/L | BQL | -- | -- | BQL | -- | -- | BQL | -- | -- | BQL | -- | -- | BQL | BQL | BQL | 5.0 | 4 |
| Potassium | | mg/L | 5.5 | -- | -- | 4.6 | -- | -- | 3.9 | -- | -- | 6.8 | -- | -- | 5.2 | 6.8 | 3.9 | 1.0 | 4 |
| Selenium | 50 P | µg/L | BQL | -- | -- | BQL | -- | -- | BQL | -- | -- | BQL | -- | -- | BQL | BQL | BQL | 5.0 | 4 |
| Silicon | | mg/L | 3.4 | -- | -- | 2.6 | -- | -- | 4.6 | -- | -- | 3.2 | -- | -- | 3.5 | 4.6 | 2.6 | 1.0 | 4 |
| Silver | 100 S | µg/L | BQL | -- | -- | BQL | -- | -- | BQL | -- | -- | BQL | -- | -- | BQL | BQL | BQL | 5.0 | 4 |
| Sodium | | mg/L | 28.0 | 24.9 | 37.9 | 48.1 | -- | 22.7 | 25.5 | 33.1 | 38.1 | 38.4 | 41.5 | 27.2 | 33.2 | 48.1 | 22.7 | 1.0 | 11 |
| Thallium | 2 P | µg/L | BQL | -- | -- | BQL | -- | -- | BQL | -- | -- | BQL | -- | -- | BQL | BQL | BQL | 2.0 | 4 |
| Zinc | 5000 S | 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.

[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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