Fairfax Water

# WATER QUALITY LABORATORY
## INORGANIC ANALYSES
## PERIOD OF 01/01/2005 TO 12/31/2005
## Distribution Site Representing Corbalis 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 | 11 | 11 | 11 | -- | 12 | 12 | 11 | -- | 11 | 11 | 12 | 11 | - | 9 |
| Alkalinity, Bicarbonate | | mg/L | -- | 62 | 84 | 73 | 56 | 100 | -- | 105 | 113 | 76 | -- | 56 | 81 | 113 | 56 | - | 9 |
| Alkalinity, Carbonate | | mg/L | -- | 0 | 0 | 0 | 0 | 0 | -- | 0 | 0 | 0 | -- | 0 | 0 | 0 | 0 | - | 9 |
| Alkalinity, Hydroxyl | | mg/L | -- | 0 | 0 | 0 | 0 | 0 | -- | 0 | 0 | 0 | -- | 0 | 0 | 0 | 0 | - | 9 |
| Alkalinity, Phenolphthalein | | mg/L | -- | 0 | 0 | 0 | 0 | 0 | -- | 0 | 0 | 0 | -- | 0 | 0 | 0 | 0 | - | 9 |
| Alkalinity, Total | | mg/L | -- | 62 | 84 | 73 | 56 | 100 | -- | 105 | 113 | 76 | -- | 56 | 81 | 113 | 56 | - | 9 |
| Bromate | 10 P | µg/L | -- | -- | -- | -- | -- | -- | -- | -- | -- | BQL | -- | -- | BQL | BQL | BQL | 10 | 1 |
| Bromide | | mg/L | -- | 0.02 | 0.01 | BQL | BQL | -- | -- | BQL | 0.02 | BQL | -- | BQL | BQL | 0.02 | BQL | 0.01 | 8 |
| Carbon Dioxide | | mg/L | -- | 5 | 7 | 6 | 6 | 10 | -- | 5 | 7 | 15 | -- | 4 | 7 | 15 | 4 | - | 9 |
| Chloride | 250.0 S | mg/L | -- | 99.7 | 25.1 | 26.5 | 41.9 | 25.7 | -- | 25.8 | 30.7 | 36.9 | -- | 23.0 | 37.3 | 99.7 | 23.0 | 5.0 | 9 |
| Chlorine, Free | | mg/L | -- | 0.0 | 0.0 | 3.4 | 2.3 | 3.2 | -- | 0.5 | 0.4 | 0.1 | -- | 0.4 | 1.1 | 3.4 | 0.0 | 0.0 | 9 |
| Chlorine, Total | | mg/L | -- | 3.4 | 3.4 | 3.4 | 2.3 | 3.2 | -- | 3.8 | 2.9 | 4.0 | -- | 3.7 | 3.3 | 4.0 | 2.3 | 0.0 | 9 |
| Color | 15 S | Units | -- | 2 | 1 | 0 | 2 | 2 | -- | 2 | 3 | 0 | -- | 1 | 1 | 3 | 0 | 0 | 9 |
| Dissolved Oxygen | | mg/L | -- | 16.2 | 15.6 | 11.9 | 9.8 | 11.8 | -- | 9.2 | 9.7 | 14.3 | -- | 15.5 | 12.7 | 16.2 | 9.2 | 0.0 | 9 |
| Fluoride | 4.0/2.0 P/S | mg/L | -- | 0.8 | 0.8 | 0.7 | 0.8 | 0.9 | 0.8 | 0.8 | 0.8 | 0.7 | 0.9 | 0.8 | 0.8 | 0.9 | 0.7 | 0.2 | 11 |
| Hardness, Calcium | | mg/L | -- | 84 | 104 | 66 | 56 | 82 | -- | 85 | 103 | 72 | -- | 55 | 79 | 104 | 55 | - | 9 |
| Hardness, Total | | mg/L | -- | 118 | 133 | 104 | 76 | 130 | -- | 136 | 160 | 109 | -- | 78 | 116 | 160 | 76 | - | 9 |
| Methylene Blue Activated Substances | 0.5 S | mg/L | -- | -- | -- | -- | BQL | -- | -- | -- | -- | -- | -- | -- | BQL | BQL | BQL | 0.050 | 1 |
| N, Ammonia (Ammonia as N) | | mg/L | -- | 1.46 | 1.19 | BQL | BQL | BQL | -- | 0.90 | 0.81 | -- | -- | 1.01 | 0.67 | 1.46 | BQL | 0.05 | 8 |
| N, Nitrate (Nitrate as N) | 10 P | mg/L | -- | 1.6 | 1.2 | 1.0 | 0.7 | 0.9 | -- | 0.7 | 0.7 | 1.2 | -- | 1.4 | 1.0 | 1.6 | 0.7 | 0.2 | 9 |
| N, Nitrite (Nitrite as N) | 1 P | mg/L | -- | BQL | 0.01 | -- | BQL | BQL | -- | BQL | -- | BQL | -- | 0.02 | BQL | 0.02 | BQL | 0.01 | 7 |
| pH | 6.5-8.5 S | Units | -- | 7.4 | 7.4 | 7.4 | 7.3 | 7.3 | -- | 7.6 | 7.5 | 7.0 | -- | 7.4 | 7.4 | 7.6 | 7.0 | - | 9 |
| Phosphate as Phosphorous | | mg/L | -- | 0.71 | 0.61 | 0.61 | 0.56 | -- | -- | 0.45 | 0.38 | 0.44 | -- | 0.57 | 0.54 | 0.71 | 0.38 | 0.20 | 8 |
| Solids, Fixed | | mg/L | -- | 225 | -- | 176 | 136 | 165 | -- | 184 | 223 | 199 | -- | -- | 187 | 225 | 136 | 1 | 7 |
| Solids, Total | | mg/L | -- | 326 | 276 | 316 | 195 | 292 | -- | 196 | 324 | 270 | -- | -- | 274 | 326 | 195 | 1 | 8 |
| Solids, Total Dissolved | 500 S | mg/L | -- | 280 | 167 | 182 | 115 | 201 | -- | 214 | 239 | 164 | -- | 140 | 189 | 280 | 115 | 1 | 9 |
| Solids, Total Suspended | | mg/L | -- | BQL | BQL | BQL | BQL | BQL | -- | BQL | -- | BQL | -- | BQL | BQL | BQL | BQL | 1 | 8 |
| Solids, Volatile | | mg/L | -- | 101 | 180 | 140 | 59 | 127 | -- | -- | 101 | 71 | -- | -- | 111 | 180 | 59 | 1 | 7 |
| Specific Conductivity | | µmhos/cm | -- | 506 | 340 | 274 | 283 | 310 | -- | 338 | 396 | 320 | -- | 226 | 333 | 506 | 226 | 0 | 9 |
| Sulfate | 250.0 S | mg/L | -- | 18.3 | 34.5 | 16.7 | 14.0 | 22.4 | -- | 22.7 | 39.9 | 21.5 | -- | 15.4 | 22.8 | 39.9 | 14.0 | 5.0 | 9 |
| Taste | | Units | -- | 2 | 2 | 3 | 3 | 2 | -- | 2 | 2 | 3 | -- | 2 | 2 | 3 | 2 | 1 | 9 |
| Temperature | | °C | -- | 4.4 | 7.9 | 17.0 | 17.4 | 23.3 | -- | 28.1 | 25.8 | 16.3 | -- | 9.8 | 16.7 | 28.1 | 4.4 | - | 9 |
| Threshold Odor Number | 3 S | Units | -- | 3 | 2 | 9 | 7 | 1 | -- | 3 | 4 | 3 | -- | 1 | 4 | 9 | 1 | 1 | 9 |
| Total Organic Carbon | | mg/L | -- | 9.1 | 1.5 | 1.5 | 2.6 | 2.1 | -- | 2.1 | 2.2 | 3.0 | -- | 1.8 | 2.9 | 9.1 | 1.5 | 0.5 | 9 |
| Turbidity | ≤5 P | NTU | -- | 0.10 | 0.25 | 0.20 | 0.15 | 0.15 | -- | 0.30 | 0.30 | 0.10 | -- | 0.05 | 0.18 | 0.30 | 0.05 | 0.00 | 9 |

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 01/01/2005 TO 12/31/2005
## Distribution Site Representing Corbalis 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 | -- | -- | 42 | -- | -- | 257 | -- | -- | -- | -- | 100 | 257 | BQL | 20 | 3 |
| Antimony | 6 P | µg/L | -- | BQL | -- | -- | BQL | -- | -- | BQL | -- | -- | -- | -- | BQL | BQL | BQL | 4 | 3 |
| Arsenic | 50 P | µg/L | -- | BQL | -- | -- | BQL | -- | -- | BQL | -- | -- | -- | -- | BQL | BQL | BQL | 2 | 3 |
| Barium | 2000 P | µg/L | -- | 134 | -- | -- | 35 | -- | -- | 41 | -- | -- | -- | -- | 70 | 134 | 35 | 2 | 3 |
| Beryllium | 4 P | µg/L | -- | BQL | -- | -- | BQL | -- | -- | BQL | -- | -- | -- | -- | BQL | BQL | BQL | 1 | 3 |
| Cadmium | 5 P | µg/L | -- | BQL | -- | -- | BQL | -- | -- | BQL | -- | -- | -- | -- | BQL | BQL | BQL | 1 | 3 |
| Calcium | | mg/L | -- | 33.1 | -- | -- | 19.8 | -- | -- | 34.6 | -- | -- | -- | -- | 29.2 | 34.6 | 19.8 | 0.5 | 3 |
| Chromium | 100 P | µg/L | -- | BQL | -- | -- | BQL | -- | -- | BQL | -- | -- | -- | -- | BQL | BQL | BQL | 1 | 3 |
| Copper | 1300 AL | µg/L | -- | BQL | BQL | BQL | BQL | BQL | -- | 2 | BQL | BQL | -- | BQL | BQL | 2 | BQL | 2 | 9 |
| Iron | 300 S | µg/L | -- | BQL | BQL | BQL | BQL | BQL | -- | BQL | BQL | BQL | -- | BQL | BQL | BQL | BQL | 20 | 9 |
| Lead | 15 AL | µg/L | -- | BQL | -- | -- | BQL | -- | -- | BQL | -- | -- | -- | -- | BQL | BQL | BQL | 0.37 | 3 |
| Magnesium | | mg/L | -- | 9.3 | -- | -- | 6.0 | -- | -- | 10.7 | -- | -- | -- | -- | 8.7 | 10.7 | 6.0 | 0.5 | 3 |
| Manganese | 50 S | µg/L | -- | BQL | BQL | BQL | BQL | BQL | -- | BQL | BQL | 8 | -- | 4 | BQL | 8 | BQL | 2 | 9 |
| Mercury | 2 P | µg/L | -- | -- | BQL | -- | BQL | -- | -- | -- | -- | -- | -- | -- | BQL | BQL | BQL | 0.5 | 2 |
| Nickel | 100 P | µg/L | -- | BQL | -- | -- | BQL | -- | -- | BQL | -- | -- | -- | -- | BQL | BQL | BQL | 5 | 3 |
| Potassium | | mg/L | -- | 3.5 | -- | -- | 3.3 | -- | -- | 3.0 | -- | -- | -- | -- | 3.3 | 3.5 | 3.0 | 0.5 | 3 |
| Selenium | 50 P | µg/L | -- | BQL | -- | -- | BQL | -- | -- | BQL | -- | -- | -- | -- | BQL | BQL | BQL | 4 | 3 |
| Silicon | | mg/L | -- | 5 | -- | -- | BQL | -- | -- | 4 | -- | -- | -- | -- | 3 | 5 | BQL | 1 | 3 |
| Silver | 100 S | µg/L | -- | BQL | -- | -- | BQL | -- | -- | BQL | -- | -- | -- | -- | BQL | BQL | BQL | 0.5 | 3 |
| Sodium | | mg/L | -- | 49.8 | 12.3 | 14.6 | 24.5 | 16.6 | -- | 17.7 | 20.0 | 21.2 | -- | 14.0 | 21.2 | 49.8 | 12.3 | 1.0 | 9 |
| Thallium | 2 P | µg/L | -- | BQL | -- | -- | BQL | -- | -- | BQL | -- | -- | -- | -- | BQL | BQL | BQL | 2 | 3 |
| Zinc | 5000 S | µg/L | -- | 276 | -- | -- | 186 | -- | -- | 146 | -- | -- | -- | -- | 203 | 276 | 146 | 25 | 3 |

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