Fairfax Water

# WATER QUALITY LABORATORY
## INORGANIC ANALYSES
## PERIOD OF 01/01/2010 TO 12/31/2010
## Corbalis Treatment Plant Finished Water

| Parameter | MCL[1] | Units[2] | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Average | Max | Min | Quant[3] Limit | # of Tests |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Aggressive Index Number | | Units | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 10 | 11 | 11 | 10 | - | 12 |
| Alkalinity, Bicarbonate | | mg/L | 68 | 60 | 60 | 75 | 97 | 82 | 87 | 71 | 68 | 84 | 90 | 58 | 75 | 97 | 58 | - | 12 |
| Alkalinity, Carbonate | | mg/L | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | - | 12 |
| Alkalinity, Hydroxyl | | mg/L | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | - | 12 |
| Alkalinity, Phenolphthalein | | mg/L | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | - | 12 |
| Alkalinity, Total | | mg/L | 68 | 60 | 60 | 75 | 97 | 82 | 87 | 71 | 68 | 84 | 90 | 58 | 75 | 97 | 58 | - | 12 |
| Bromate | 10 P | µg/L | BQL* | BQL* | BQL* | BQL* | BQL* | BQL* | BQL* | BQL* | BQL* | BQL* | BQL* | BQL* | BQL | 6 | BQL | 5 | 48 |
| Bromide | | mg/L | 0.02 | 0.01 | 0.01 | 0.02 | 0.02 | 0.01 | 0.02 | 0.01 | 0.02 | 0.02 | 0.03 | BQL | 0.02 | 0.03 | BQL | 0.01 | 12 |
| Carbon Dioxide | | mg/L | 5 | 12 | 6 | 8 | 10 | 10 | 14 | 14 | 14 | 13 | 14 | 12 | 11 | 14 | 5 | - | 12 |
| Chloride | 250.0 S | mg/L | 34.9 | 17.6 | 23.8 | 30.5 | 32.8 | 23.9 | 34.2 | 33.0 | 38.3 | 31.7 | 34.4 | 21.1 | 29.7 | 38.3 | 17.6 | 5.0 | 12 |
| Chlorine, Free | | mg/L | 0.2* | 0.2* | 0.2* | 3.2* | 3.2* | 3.2* | 0.4* | 0.3* | 0.3* | 0.3* | 0.2* | 0.2* | 1.0 | 3.4 | 0.1 | 0.0 | 48 |
| Chlorine, Total | | mg/L | 3.5* | 3.0* | 3.2* | 3.4* | 3.4* | 3.4* | 3.1* | 3.2* | 3.4* | 3.3* | 3.2* | 3.2* | 3.3 | 3.7 | 2.9 | 0.0 | 48 |
| Color | 15 S | Units | 0 | 0 | 0 | 1 | 2 | 2 | 1 | 1 | 0 | 1 | 0 | 0 | 1 | 2 | 0 | 0 | 12 |
| Dissolved Oxygen | | mg/L | -- | 17.4 | 15.5 | 15.5 | 12.9 | -- | 12.0 | 16.7 | 13.4 | 15.6 | 15.0 | -- | 14.9 | 17.4 | 12.0 | 0.0 | 9 |
| Fluoride | 4.0/2.0 P/S | mg/L | 0.9 | 0.9 | 0.9 | 1.0 | 1.1 | 0.9 | 1.0 | 1.0 | 1.1 | 1.1 | 0.8 | 0.8 | 1.0 | 1.1 | 0.8 | 0.2 | 12 |
| Hardness, Calcium | | mg/L | 77 | 76 | 69 | 79 | 88 | 109 | 98 | 79 | 66 | 85 | 86 | 57 | 81 | 109 | 57 | - | 12 |
| Hardness, Total | | mg/L | 109 | 118 | 111 | 124 | 131 | 146 | 151 | 113 | 131 | 124 | 136 | 91 | 124 | 151 | 91 | - | 12 |
| Methylene Blue Activated Substances | 0.5 S | mg/L | -- | -- | -- | -- | -- | -- | BQL | -- | -- | -- | -- | -- | BQL | BQL | BQL | 0.050 | 1 |
| N, Ammonia (Ammonia as N) | | mg/L | 0.71* | 0.61* | 0.67* | BQL* | BQL* | BQL* | 0.70* | 0.71* | 0.67* | 0.52* | -- | -- | 0.46 | 0.84 | BQL | 0.20 | 40 |
| N, Nitrate (Nitrate as N) | 10 P | mg/L | 1.5 | 1.6 | 1.2 | 0.7 | 1.0 | 0.9 | 0.6 | 1.5 | BQL | 0.9 | 0.4 | 1.4 | 1.0 | 1.6 | BQL | 0.2 | 12 |
| N, Nitrite (Nitrite as N) | 1 P | mg/L | 0.01 | 0.02 | BQL | BQL | BQL | BQL | BQL | BQL | BQL | BQL | BQL | BQL | BQL | 0.02 | BQL | 0.01 | 12 |
| pH | 6.5-8.5 S | Units | 7.4 | 7.0 | 7.3 | 7.3 | 7.3 | 7.2 | 7.1 | 7.0 | 7.0 | 7.1 | 7.1 | 7.0 | 7.2 | 7.4 | 7.0 | - | 12 |
| Phosphate as Phosphorous | | mg/L | 0.39 | 0.40 | 0.32 | 0.32 | 0.30 | 0.30 | 0.28 | 0.31 | 0.32 | 0.36 | 0.30 | 0.42 | 0.34 | 0.42 | 0.28 | 0.10 | 12 |
| Solids, Total | | mg/L | 186 | 159 | 163 | 188 | 227 | 243 | 261 | 226 | 240 | 220 | 256 | 156 | 210 | 261 | 156 | 1 | 12 |
| Solids, Total Dissolved | 500 S | mg/L | 210 | 150 | 135 | 232 | 214 | 214 | 250 | 211 | 230 | 214 | 256 | 156 | 206 | 256 | 135 | 1 | 12 |
| Solids, Total Suspended | | mg/L | BQL | BQL | BQL | BQL | BQL | BQL | BQL | BQL | BQL | BQL | BQL | BQL | BQL | BQL | BQL | 1 | 12 |
| Specific Conductivity | | µmhos/cm | 315 | 275 | 273 | 328 | 366 | 383 | 408 | 372 | 434 | 378 | 420 | 271 | 352 | 434 | 271 | 0 | 12 |
| Sulfate | 250.0 S | mg/L | 27.0 | 33.5 | 26.7 | 28.2 | 38.6 | 62.5 | 71.2 | 42.4 | 70.2 | 41.6 | 46.4 | 29.5 | 43.2 | 71.2 | 26.7 | 5.0 | 12 |
| Taste | | Units | 2 | 1 | 2 | 2 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 1 | 12 |
| Temperature | | °C | 5.2 | 8.4 | 13.3 | 16.7 | 19.3 | 24.1 | 27.4 | 28.0 | 24.3 | 18.9 | 16.7 | 10.6 | 17.7 | 28.0 | 5.2 | - | 12 |
| Threshold Odor Number | 3 S | Units | 3 | 7 | 6 | 4 | 5 | 8 | 6 | 7 | 4 | 7 | 8 | 4 | 6 | 8 | 3 | 0 | 12 |
| Total Organic Carbon | | mg/L | 1.6 | 1.4 | 1.3 | 1.6 | 1.6 | 1.5 | 1.8 | 2.7 | 2.2 | 2.4 | 2.1 | 2.2 | 1.9 | 2.7 | 1.3 | 0.5 | 12 |
| Turbidity | ≤ 5 P | NTU | 0.05 | 0.05 | 0.10 | 0.05 | 0.10 | 0.15 | 0.05 | 0.10 | 0.05 | 0.10 | 0.05 | 0.15 | 0.08 | 0.15 | 0.05 | 0.00 | 12 |

* Monthly result composed from an average of parameter results for Corbalis Treatment Plant finished water points of entry to distribution system.

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

[3] Quant Limit = Quantitation Limit = Lowest level of measurement.

123010120347

Fairfax Water

**WATER QUALITY LABORATORY**
**METAL ANALYSES**
**PERIOD OF 01/01/2010 TO 12/31/2010**
**Corbalis Treatment Plant Finished Water**

| Parameter | MCL[1] | Units[2] | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Average | Max | Min | Quant[3] Limit | # of Tests |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 50-200 S | µg/L | BQL | -- | -- | BQL | -- | -- | 28.4 | -- | -- | BQL | -- | -- | BQL | 28.4 | 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 | 27.2 | -- | -- | 39.2 | -- | -- | 48.1 | -- | -- | 35.3 | -- | -- | 37.5 | 48.1 | 27.2 | 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 | 29.3 | -- | -- | 28.8 | -- | -- | 35.4 | -- | -- | 34.5 | -- | -- | 32.0 | 35.4 | 28.8 | 1.0 | 4 |
| Chromium | 100 P | µg/L | BQL | -- | -- | BQL | -- | -- | BQL | -- | -- | BQL | -- | -- | BQL | BQL | BQL | 5.0 | 4 |
| Copper | 1300 AL | µg/L | BQL | BQL | BQL | BQL | BQL | BQL | BQL | BQL | BQL | BQL | BQL | BQL | BQL | BQL | BQL | 25.0 | 12 |
| Iron | 300 S | µg/L | BQL | BQL | BQL | BQL | BQL | BQL | BQL | BQL | BQL | BQL | BQL | BQL | BQL | BQL | BQL | 25.0 | 12 |
| Lead | 15 AL | µg/L | BQL | -- | -- | BQL | -- | -- | BQL | -- | -- | BQL | -- | -- | BQL | BQL | BQL | 2.0 | 4 |
| Magnesium | | mg/L | 7.2 | -- | -- | 8.1 | -- | -- | 13.1 | -- | -- | 9.1 | -- | -- | 9.4 | 13.1 | 7.2 | 1.0 | 4 |
| Manganese | 50 S | µg/L | BQL | BQL | BQL | BQL | BQL | BQL | BQL | BQL | BQL | BQL | BQL | BQL | BQL | BQL | BQL | 25.0 | 12 |
| 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 | 2.1 | -- | -- | 2.1 | -- | -- | 3.1 | -- | -- | 3.4 | -- | -- | 2.7 | 3.4 | 2.1 | 1.0 | 4 |
| Selenium | 50 P | µg/L | BQL | -- | -- | BQL | -- | -- | BQL | -- | -- | BQL | -- | -- | BQL | BQL | BQL | 5.0 | 4 |
| Silicon | | mg/L | 4.5 | -- | -- | 2.4 | -- | -- | 3.3 | -- | -- | 2.5 | -- | -- | 3.2 | 4.5 | 2.4 | 1.0 | 4 |
| Silver | 100 S | µg/L | BQL | -- | -- | BQL | -- | -- | BQL | -- | -- | BQL | -- | -- | BQL | BQL | BQL | 5.0 | 4 |
| Sodium | | mg/L | 22.1 | 13.1 | 15.7 | 21.6 | 21.5 | 17.9 | 27.7 | 22.4 | 29.7 | 21.3 | 25.1 | 15.4 | 21.1 | 29.7 | 13.1 | 1.0 | 12 |
| 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

[3] Quant Limit = Quantitation Limit = Lowest level of measurement.

123010120347