## Water Quality 2019

### 7.1 Water Quality Objectives for EPCOR

2019

| Parameter | Approval Requirement | EPCOR Internal Limit | EPCOR Target |
|---|---|---|---|
| Turbidity (NTU) | | | |
| Individual Filters | <0.3 | <0.1 (2) | <0.08 |
| Distribution System | < 5 (3) | < 1 (1) | < 1 |
| Distribution System (Maintenance) | < 5 (3) | < 3 (1) | < 1 |
| Colour (TCU) | <15 (3) | <10 (1) | <3 |
| pH (25°C) | 6.5 - 8.5 | 7.3 - 8.3 (1) | 7.4 - 8.0 |
| Taste and Odour | Inoffensive (3) | Inoffensive (1) | Inoffensive |
| E.coli (PA/100 mL) | absent | absent (1) | absent |
| Total Coliforms (PA/100 mL) | absent | absent (1) | absent |
| Total Chlorine Residual (mg/L) | | | |
| Water Treatment Plant Effluent | >1.0 | 1.3 - 2.4 (2) | 1.9 - 2.2 |
| Reservoirs | >0.5 | 1.0 - 2.4 (1) | 1.2 - 2.2 |
| Distribution | >0.5 (4) | 1.0 - 2.4 (1) | 1.0 - 2.2 |
| Fluoride: (mg/L) | | | |
| Reservoir Effluent | 0.5 - 0.9 | 0.6 - 0.8 (1) | 0.6 - 0.8 |
| Trihalomethanes (mg/L) | | | |
| Reservoir Effluent | <0.100 | <0.050 (1) | <0.040 |
| Distribution System | <0.100 | <0.050 (1) | <0.040 |
| UV254 % Transmittance | | | |
| E.L. Smith | | >89% (2) | >90% |
| Rossdale | | >87% (2) | >88% |
| HAA (mg/L) | | | |
| Reservoir Effluent | < 0.080 | < 0.040 (1) | <0.035 |
| Distribution System | < 0.080 | < 0.040 (1) | <0.035 |
| NDMA (mg/L): | | | |
| Reservoir Effluent | < 0.000040 | < 0.000010 (1) | <0.000005 |
| Distribution System | < 0.000040 | < 0.000010 (1) | |
| Microoganism Log Removal at Water | | | |
| *Giardia* | ≥5.5 | ≥6.0 (2) | >6.5 |
| *Cryptosporidium* | ≥5.5 | ≥5.3 (2) | >6.0 |
| Virus | ≥4.0 | ≥4.5 (2) | >5.0 |

(1) Limit based on City of Edmonton Performance Based Rate (PBR) agreement
(2) Limit based on EPCOR Action Level
(3) Aesthetic Objective
(4) in 75% of samples collected in a day
All values are expressed in units of mg/L unless otherwise stated.
Based on January 2017 Summary of Epcor Edmonton Water Quality Standards.

## 7.2 SUMMARY OF MAJOR CHEMICALS, MICROBIOLOGICAL, AND PHYSICAL PARAMETERS OF EDMONTON DRINKING WATER PRODUCED AT WATER TREATMENT PLANTS

**2019**

| Parameter | Unit | Mac* | Average | Median | Min | Max | Count |
|---|---|---|---|---|---|---|---|
| Alkalinity Total | mg CaCO3/L | | 132 | 121 | 70 | 147 | 730 |
| Aluminum | mg/L | (0.1/0.2) | 0.032 | 0.037 | 0.019 | 0.090 | 24 |
| Arsenic | mg/L | 0.01 | <0.0002 | <0.0002 | <0.0002 | 0.0003 | 24 |
| Bromate Dissolved | mg/L | 0.01 | <0.01 | <0.01 | <0.01 | <0.01 | 208 |
| Bromodichloromethane | µg/L | | <0.5 | <0.5 | <0.5 | 2.7 | 738 |
| Cadmium | mg/L | 0.005 | <0.0002 | <0.0002 | <0.0002 | <0.0002 | 24 |
| Calcium Hardness | mg CaCO3/L | | 114 | 111 | 78 | 134 | 730 |
| Chlorate Dissolved | mg/L | 1 | 0.085 | 0.080 | 0.020 | 0.263 | 208 |
| Chloride Dissolved | mg/L | (250) | 5.36 | 5.59 | 2.71 | 43.10 | 208 |
| Chlorite Dissolved | mg/L | 1 | <0.01 | <0.01 | <0.01 | <0.01 | 208 |
| Chromium | mg/L | 0.05 | <0.0002 | <0.0002 | <0.0002 | <0.0002 | 24 |
| Colour | TCU | (15) | 1.0 | 1.1 | <0.5 | 2.3 | 730 |
| Conductivity | µS/cm | (<1) | 407 | 400 | 358 | 514 | 106 |
| Copper | mg/L | (1) | <0.0050 | <0.0050 | <0.0050 | <0.0050 | 24 |
| Fluoride | mg/L | 1.5 | 0.28 | 0.68 | <0.05 | 0.77 | 730 |
| Haloacetic Acids, total (HAA5) | ug/L | 80 | 13.6 | 21.1 | 10.6 | 33.2 | 24 |
| Hardness, Total | mg CaCO3/L | | 180 | 170 | 115 | 197 | 730 |
| Iron | mg/L | (0.3) | <0.0050 | <0.0050 | <0.0050 | 0.0950 | 24 |
| Lead | mg/L | 0.005 | <0.0002 | <0.0002 | <0.0002 | <0.0002 | 24 |
| Manganese | mg/L | 0.12 (0.02) | <0.0020 | <0.0020 | <0.0020 | 0.0160 | 24 |
| Mercury | mg/L | 0.001 | <0.0002 | <0.0002 | <0.0002 | <0.0002 | 24 |
| NDMA | ng/L | 40 | 1.02 | 1.04 | <0.52 | 4.14 | 24 |
| Nitrate (as N) Dissolved | mg/L | 10 | 0.069 | 0.050 | <0.010 | 0.333 | 208 |
| Nitrite (as N) Dissolved | mg/L | 1 | <0.01 | <0.01 | <0.01 | <0.01 | 208 |
| pH | N/A | (7.0 - 10.5) | 7.8 | 7.8 | 7.5 | 8.3 | 730 |
| Potassium | mg/L | | 0.90 | 0.85 | 0.50 | 6.20 | 24 |
| Sodium | mg/L | (200) | 15.83 | 13.05 | 5.60 | 35.50 | 24 |
| Sulphate Dissolved | mg/L | (500) | 67.0 | 69.6 | 50.3 | 132.0 | 208 |
| Total Chlorine | N/A | >1.0 | 2.05 | 1.97 | 1.67 | 2.28 | 154 |
| Total Dissolved Solids | mg/L | (500) | 252 | 238 | 203 | 305 | 24 |
| Total Organic Carbon | mg/L C | | 1.6 | 2.0 | 1.2 | 3.4 | 104 |
| Trihalomethanes | µg/L | 100 | 8.6 | 15.8 | 4.6 | 38.6 | 730 |
| Turbidity | NTU | | 0.05 | 0.05 | 0.02 | 0.11 | 730 |
| Uranium | mg/L | 0.02 | <0.0005 | <0.0005 | <0.0005 | 0.0006 | 24 |
| Zinc | mg/L | (5.0) | <0.0050 | <0.0050 | <0.0050 | 0.0320 | 24 |
| **Bacteriological Data** | | | | | | | |
| Coliforms, total | PA/100mL | | Absent | Absent | Absent | Absent | 730 |
| E. coli | PA/100mL | | Absent | Absent | Absent | Absent | 730 |

## 7.3 SUMMARY OF LABORATORY ANALYSIS - 2019

### Testing of the Edmonton Drinking Water

### Drinking Water Testing

| | | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | **Total** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Water Treatment Plant | # Tests | 7,917 | 7,166 | 8,221 | 8,112 | 7,935 | 7,598 | 7,855 | 7,789 | 7,550 | 7,893 | 7,615 | 7,900 | 93,551 |
| | # Samples | 289 | 260 | 366 | 345 | 295 | 272 | 275 | 283 | 264 | 278 | 281 | 285 | 3,493 |
| Field Reservoirs | # Tests | 787 | 720 | 720 | 785 | 791 | 923 | 761 | 889 | 620 | 852 | 807 | 726 | 9,381 |
| | # Samples | 62 | 48 | 48 | 49 | 61 | 49 | 49 | 65 | 43 | 57 | 48 | 48 | 627 |
| Routine Distribution System | # Tests | 1,134 | 915 | 1,059 | 1,030 | 1,056 | 1,038 | 1,125 | 988 | 892 | 1,131 | 965 | 1,043 | 12,376 |
| | # Samples | 170 | 151 | 164 | 157 | 181 | 178 | 170 | 155 | 150 | 180 | 164 | 179 | 1,999 |
| System Depressurization/Repair | # Tests | 244 | 240 | 420 | 184 | 304 | 408 | 360 | 336 | 324 | 319 | 248 | 148 | 3,535 |
| | # Samples | 61 | 60 | 105 | 46 | 76 | 101 | 90 | 84 | 80 | 79 | 62 | 37 | 881 |
| Customer Complaints | # Tests | 670 | 845 | 545 | 941 | 475 | 648 | 383 | 173 | 243 | 204 | 610 | 643 | 6,380 |
| | # Samples | 13 | 14 | 11 | 18 | 9 | 13 | 10 | 4 | 6 | 4 | 11 | 10 | 123 |
| **Total** | # Tests | 10,752 | 9,886 | 10,965 | 11,052 | 10,561 | 10,615 | 10,484 | 10,175 | 9,629 | 10,399 | 10,245 | 10,460 | 125,223 |
| | # Samples | 595 | 533 | 694 | 615 | 622 | 613 | 594 | 591 | 543 | 598 | 566 | 559 | 7,123 |

### Additional Testing

| | | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | **Total** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| New Watermain Testing | # Tests | 0 | 0 | 165 | 65 | 45 | 20 | 55 | 85 | 55 | 210 | 415 | 200 | 1,315 |
| | # Samples | 0 | 0 | 33 | 13 | 9 | 4 | 11 | 17 | 11 | 42 | 83 | 40 | 263 |
| Water Treatment Plant Waste Discharge | # Tests | 153 | 82 | 134 | 44 | 78 | 56 | 57 | 50 | 177 | 141 | 34 | 44 | 1,050 |
| | # Samples | 53 | 42 | 36 | 36 | 50 | 37 | 33 | 37 | 26 | 48 | 26 | 35 | 459 |
| Quality Control | # Tests | 3,645 | 3,240 | 3,828 | 3,445 | 3,556 | 3,497 | 4,075 | 4,098 | 3,281 | 3,259 | 3,647 | 3,209 | 42,780 |
| | # Samples | 785 | 642 | 917 | 887 | 824 | 899 | 794 | 787 | 841 | 784 | 859 | 755 | 9,774 |
| Externally Contracted Analyses | # Tests | 1,392 | 121 | 113 | 1,369 | 141 | 107 | 1,217 | 159 | 215 | 1,309 | 139 | 177 | 6,459 |
| | # Samples | 77 | 69 | 61 | 63 | 61 | 56 | 66 | 81 | 58 | 70 | 60 | 61 | 783 |
| **Total** | # Tests | 5,190 | 3,443 | 4,240 | 4,923 | 3,820 | 3,680 | 5,404 | 4,392 | 3,728 | 4,919 | 4,235 | 3,630 | 51,604 |
| | # Samples | 915 | 753 | 1,047 | 999 | 944 | 996 | 904 | 922 | 936 | 944 | 1,028 | 891 | 11,279 |

| | | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | **Total** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Total** | # Tests | 15,942 | 13,329 | 15,205 | 15,975 | 14,381 | 14,295 | 15,888 | 14,567 | 13,357 | 15,318 | 14,480 | 14,090 | 176,827 |
| | # Samples | 1,503 | 1,268 | 1,735 | 1,605 | 1,559 | 1,602 | 1,491 | 1,505 | 1,466 | 1,535 | 1,587 | 1,443 | 18,299 |

## 7.4 Bacteriological Data: Water Treatment Plants

**2019**

### Treated Water Entering the Distribution System

| | # of +VE Samples YTD | | # of Samples YTD | | Limit | | |
|---|---|---|---|---|---|---|---|
| | Rossdale | Smith | Rossdale | Smith | GCDWQ or Approval | Required Frequency - Each Plant* | Unit |
| Coliforms, total | 0 | 0 | 365 | 365 | 0/100 mL | [Daily] | PA/100mL |
| E. coli | 0 | 0 | 365 | 365 | 0/100 mL | [Daily] | PA/100mL |

### Water Entering the Plant Reservoir

| | # of +VE Samples YTD | | # of Samples YTD | | Limit | | |
|---|---|---|---|---|---|---|---|
| | Rossdale | Smith | Rossdale | Smith | GCDWQ or Approval | Required Frequency - Each Plant* | Unit |
| Coliforms, total | 0 | 0 | 364 | 365 | N/A | [Daily] | PA/100mL |
| E. coli | 0 | 0 | 364 | 365 | N/A | [Daily] | PA/100mL |

### Raw River Water Entering the Treatment Plants

| | ROSSDALE | | | E.L. SMITH | | | Rossdale | Smith | Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Mean | Min | Max | Mean | Min | Max | # of Samples | | GCDWQ or Approval | Required Frequency - Each Plant* | Unit |
| Coliforms, total | 1,878 | 82 | 34,600 | 1,788 | 261 | 22,400 | 376 | 57 | N/A | [Weekly] | MPN/100 mL |
| E. coli | 171 | 1 | 2,100 | 185 | 27 | 830 | 376 | 57 | N/A | [Weekly] | MPN/100 mL |

* Indicates EPCOR Operations Program.

## 7.5 Bacteriological Data: Distribution System

## 2019

| | Coliforms, total | | | E. coli | | |
|---|---|---|---|---|---|---|
| | Count | # +ve | % +ve | Count | # +ve | % +ve |
| **January** | | | | | | |
| FIELD DISTRIBUTION | 119 | 0 | 0.0 | 119 | 0 | 0.0 |
| FIELD DISTRIBUTION - PLPH | 57 | 0 | 0.0 | 57 | 0 | 0.0 |
| FIELD RESERVOIR | 61 | 0 | 0.0 | 61 | 0 | 0.0 |
| FIELD RESERVOIR - PLPH (duplicate-not counted) | 60 | 0 | 0.0 | 60 | 0 | 0.0 |
| Monthly | 237 | 0 | 0.0 | 237 | 0 | 0.0 |
| **February** | | | | | | |
| FIELD DISTRIBUTION | 100 | 0 | 0.0 | 100 | 0 | 0.0 |
| FIELD DISTRIBUTION - PLPH | 56 | 0 | 0.0 | 56 | 0 | 0.0 |
| FIELD RESERVOIR | 48 | 0 | 0.0 | 48 | 0 | 0.0 |
| FIELD RESERVOIR - PLPH (duplicate-not counted) | 48 | 0 | 0.0 | 48 | 0 | 0.0 |
| Monthly | 204 | 0 | 0.0 | 204 | 0 | 0.0 |
| **March** | | | | | | |
| FIELD DISTRIBUTION | 110 | 0 | 0.0 | 110 | 0 | 0.0 |
| FIELD DISTRIBUTION - PLPH | 56 | 0 | 0.0 | 56 | 0 | 0.0 |
| FIELD RESERVOIR | 48 | 0 | 0.0 | 48 | 0 | 0.0 |
| FIELD RESERVOIR - PLPH (duplicate-not counted) | 48 | 0 | 0.0 | 48 | 0 | 0.0 |
| Monthly | 214 | 0 | 0.0 | 214 | 0 | 0.0 |
| **April** | | | | | | |
| FIELD DISTRIBUTION | 106 | 0 | 0.0 | 106 | 0 | 0.0 |
| FIELD DISTRIBUTION - PLPH | 56 | 0 | 0.0 | 56 | 0 | 0.0 |
| FIELD RESERVOIR | 49 | 0 | 0.0 | 49 | 0 | 0.0 |
| FIELD RESERVOIR - PLPH (duplicate-not counted) | 48 | 0 | 0.0 | 48 | 0 | 0.0 |
| Monthly | 211 | 0 | 0.0 | 211 | 0 | 0.0 |
| **May** | | | | | | |
| FIELD DISTRIBUTION | 128 | 0 | 0.0 | 128 | 0 | 0.0 |
| FIELD DISTRIBUTION - PLPH | 58 | 0 | 0.0 | 58 | 0 | 0.0 |
| FIELD RESERVOIR | 61 | 0 | 0.0 | 61 | 0 | 0.0 |
| FIELD RESERVOIR - PLPH (duplicate-not counted) | 48 | 0 | 0.0 | 48 | 0 | 0.0 |
| Monthly | 247 | 0 | 0.0 | 247 | 0 | 0.0 |
| **June** | | | | | | |
| FIELD DISTRIBUTION | 124 | 2 | 1.6 | 124 | 0 | 0.0 |
| FIELD DISTRIBUTION - PLPH | 59 | 0 | 0.0 | 59 | 0 | 0.0 |
| FIELD RESERVOIR | 49 | 0 | 0.0 | 49 | 0 | 0.0 |
| FIELD RESERVOIR - PLPH (duplicate-not counted) | 47 | 0 | 0.0 | 47 | 0 | 0.0 |
| Monthly | 232 | 2 | 0.9 | 232 | 0 | 0.0 |
| **July** | | | | | | |
| FIELD DISTRIBUTION | 115 | 0 | 0.0 | 115 | 0 | 0.0 |
| FIELD DISTRIBUTION - PLPH | 60 | 0 | 0.0 | 60 | 0 | 0.0 |
| FIELD RESERVOIR | 49 | 0 | 0.0 | 49 | 0 | 0.0 |
| FIELD RESERVOIR - PLPH (duplicate-not counted) | 48 | 0 | 0.0 | 48 | 0 | 0.0 |
| Monthly | 224 | 0 | 0.0 | 224 | 0 | 0.0 |

## 7.5 Bacteriological Data: Distribution System

## 2019

| | Coliforms, total | | | E. coli | | |
|---|---|---|---|---|---|---|
| | Count | # +ve | % +ve | Count | # +ve | % +ve |
| **August** | | | | | | |
| FIELD DISTRIBUTION | 93 | 0 | 0.0 | 93 | 0 | 0.0 |
| FIELD DISTRIBUTION - PLPH | 63 | 0 | 0.0 | 63 | 0 | 0.0 |
| FIELD RESERVOIR | 65 | 2 | 3.1 | 65 | 0 | 0.0 |
| FIELD RESERVOIR - PLPH (duplicate-not counted) | 70 | 1 | 1.4 | 70 | 0 | 0.0 |
| Monthly | 221 | 3 | 1.4 | 221 | 0 | 0.0 |
| **September** | | | | | | |
| FIELD DISTRIBUTION | 94 | 1 | 1.1 | 94 | 0 | 0.0 |
| FIELD DISTRIBUTION - PLPH | 60 | 0 | 0.0 | 60 | 0 | 0.0 |
| FIELD RESERVOIR | 43 | 0 | 0.0 | 43 | 0 | 0.0 |
| FIELD RESERVOIR - PLPH (duplicate-not counted) | 43 | 0 | 0.0 | 43 | 0 | 0.0 |
| Monthly | 197 | 1 | 0.5 | 197 | 0 | 0.0 |
| **October** | | | | | | |
| FIELD DISTRIBUTION | 123 | 0 | 0.0 | 123 | 0 | 0.0 |
| FIELD DISTRIBUTION - PLPH | 60 | 0 | 0.0 | 60 | 0 | 0.0 |
| FIELD RESERVOIR | 57 | 0 | 0.0 | 57 | 0 | 0.0 |
| FIELD RESERVOIR - PLPH (duplicate-not counted) | 56 | 0 | 0.0 | 56 | 0 | 0.0 |
| Monthly | 240 | 0 | 0.0 | 240 | 0 | 0.0 |
| **November** | | | | | | |
| FIELD DISTRIBUTION | 109 | 0 | 0.0 | 109 | 0 | 0.0 |
| FIELD DISTRIBUTION - PLPH | 60 | 0 | 0.0 | 60 | 0 | 0.0 |
| FIELD RESERVOIR | 48 | 0 | 0.0 | 48 | 0 | 0.0 |
| FIELD RESERVOIR - PLPH (duplicate-not counted) | 47 | 0 | 0.0 | 47 | 0 | 0.0 |
| Monthly | 217 | 0 | 0.0 | 217 | 0 | 0.0 |
| **December** | | | | | | |
| FIELD DISTRIBUTION | 125 | 0 | 0.0 | 125 | 0 | 0.0 |
| FIELD DISTRIBUTION - PLPH | 60 | 0 | 0.0 | 60 | 0 | 0.0 |
| FIELD RESERVOIR | 48 | 0 | 0.0 | 48 | 0 | 0.0 |
| FIELD RESERVOIR - PLPH (duplicate-not counted) | 48 | 0 | 0.0 | 48 | 0 | 0.0 |
| Monthly | 233 | 0 | 0.0 | 233 | 0 | 0.0 |
| Year to Date | 2,677 | 6 | 0.2 | 2,677 | 0 | 0.0 |

Guidelines for Canadian Drinking Water Quality recommend 180 bacteriological samples for a city the size of Edmonton. Total Coliform and E.coli testing is required in the AEP Approval.

Testing conducted by Prov Lab are labelled with PLPH.

## 7.5 Bacteriological Data: Distribution System

## 2019

| | Coliforms, total | | | E. coli | | |
|---|---|---|---|---|---|---|
| | Count | # +ve | % +ve | Count | # +ve | % +ve |
| **Samples from Water Quality Complaints** | | | | | | |
| **January** | 13 | 0 | 0.0 | 13 | 0 | 0.0 |
| **February** | 14 | 0 | 0.0 | 14 | 0 | 0.0 |
| **March** | 11 | 0 | 0.0 | 11 | 0 | 0.0 |
| **April** | 18 | 0 | 0.0 | 18 | 0 | 0.0 |
| **May** | 9 | 0 | 0.0 | 9 | 0 | 0.0 |
| **June** | 13 | 1 | 7.7 | 13 | 0 | 0.0 |
| **July** | 10 | 0 | 0.0 | 10 | 0 | 0.0 |
| **August** | 4 | 0 | 0.0 | 4 | 0 | 0.0 |
| **September** | 6 | 1 | 16.7 | 6 | 0 | 0.0 |
| **October** | 4 | 0 | 0.0 | 4 | 0 | 0.0 |
| **November** | 11 | 0 | 0.0 | 11 | 0 | 0.0 |
| **December** | 10 | 0 | 0.0 | 10 | 0 | 0.0 |
| Year to Date | 123 | 2 | 1.6 | 123 | 0 | 0.0 |
| **Samples from Depressurizations *** | | | | | | |
| **January** | 61 | 0 | 0.0 | 61 | 0 | 0.0 |
| **February** | 60 | 0 | 0.0 | 60 | 0 | 0.0 |
| **March** | 105 | 1 | 1.0 | 105 | 0 | 0.0 |
| **April** | 46 | 0 | 0.0 | 46 | 0 | 0.0 |
| **May** | 76 | 0 | 0.0 | 76 | 0 | 0.0 |
| **June** | 102 | 0 | 0.0 | 102 | 0 | 0.0 |
| **July** | 90 | 2 | 2.2 | 90 | 0 | 0.0 |
| **August** | 84 | 0 | 0.0 | 84 | 0 | 0.0 |
| **September** | 83 | 1 | 1.2 | 83 | 0 | 0.0 |
| **October** | 79 | 0 | 0.0 | 79 | 0 | 0.0 |
| **November** | 62 | 0 | 0.0 | 62 | 0 | 0.0 |
| **December** | 37 | 0 | 0.0 | 37 | 0 | 0.0 |
| Year to Date | 885 | 4 | 0.5 | 885 | 0 | 0.0 |

* Depressurizations are short term shutdowns of a section of water distribution main to allow for planned on emergency (main break) repair.

## 7.6 Giardia and Cryptosporidium

## 2019

**Treated Water entering the distribution system**

| | Cryptosporidium oocysts/100L | | Giardia cysts/100L | |
|---|---|---|---|---|
| | E.L. Smith | Rossdale | E.L. Smith | Rossdale |
| 14 - Jan | <0.1 | | <0.1 | |
| 15 - Jan | | <0.1 | | <0.1 |
| 28 - Jan | <0.1 | | <0.1 | |
| 30 - Jan | | <0.1 | | <0.1 |
| 11 - Feb | <0.1 | | <0.1 | |
| 13 - Feb | | <0.1 | | <0.1 |
| 25 - Feb | <0.1 | <0.1 | <0.1 | <0.1 |
| 11 - Mar | <0.1 | <0.1 | <0.1 | <0.1 |
| 25 - Mar | <0.1 | | <0.1 | |
| 26 - Mar | | <0.1 | | <0.1 |
| 2 - Apr | <0.1 | <0.1 | <0.1 | <0.1 |
| 14 - May | <0.1 | | <0.1 | |
| 21 - May | | <0.1 | | <0.1 |
| 3 - Jun | <0.1 | | <0.1 | |
| 10 - Jun | | <0.1 | | <0.1 |
| 2 - Jul | | <0.1 | | <0.1 |
| 24 - Jul | <0.1 | | <0.1 | |
| 12 - Aug | <0.1 | | <0.1 | |
| 19 - Aug | | <0.1 | | <0.1 |
| 9 - Sep | | <0.1 | | <0.1 |
| 23 - Sep | <0.1 | | <0.1 | |
| 7 - Oct | <0.1 | <0.1 | <0.1 | <0.1 |
| 4 - Nov | | <0.1 | | <0.1 |
| 12 - Nov | <0.1 | | <0.1 | |
| 18 - Nov | <0.1 | | <0.1 | |
| 19 - Nov | | <0.03 | | <0.03 |
| 25 - Nov | <0.1 | | <0.1 | |
| 26 - Nov | | <0.1 | | <0.1 |
| 2 - Dec | | <0.1 | | <0.1 |
| 3 - Dec | <0.1 | | <0.1 | |

## 7.6 Giardia and Cryptosporidium

## 2019

**Water entering plant reservoir**

| | Cryptosporidium oocysts/100L | | Giardia cysts/100L | |
|---|---|---|---|---|
| | **E.L. Smith** | **Rossdale** | **E.L. Smith** | **Rossdale** |
| **14 - Jan** | <0.1 | | <0.1 | |
| **30 - Jan** | | <0.1 | | <0.1 |
| **11 - Feb** | <0.1 | | <0.1 | |
| **12 - Feb** | | <0.1 | | <0.1 |
| **11 - Mar** | <0.1 | <0.1 | <0.1 | <0.1 |
| **2 - Apr** | <0.1 | <0.1 | <0.1 | <0.1 |
| **14 - May** | <0.1 | | <0.1 | |
| **21 - May** | | <0.8 | | <0.8 |
| **3 - Jun** | <0.1 | | <0.1 | |
| **10 - Jun** | | <0.1 | | <0.1 |
| **2 - Jul** | | <0.1 | | <0.1 |
| **24 - Jul** | <0.1 | | <0.1 | |
| **12 - Aug** | <0.1 | | <0.1 | |
| **19 - Aug** | | <0.1 | | <0.1 |
| **9 - Sep** | | <0.1 | | <0.1 |
| **23 - Sep** | <0.1 | | <0.1 | |
| **7 - Oct** | <0.1 | <0.1 | <0.1 | <0.1 |
| **4 - Nov** | | <0.1 | | <0.1 |
| **12 - Nov** | <0.1 | | <0.1 | |
| **2 - Dec** | | <0.1 | | <0.1 |
| **3 - Dec** | <0.1 | | <0.1 | |
| **29 - Dec** | <0.15 | | <0.15 | |
| **30 - Dec** | | <0.09 | | <0.09 |

## 7.6 Giardia and Cryptosporidium

## 2019

**Raw Water**

| | Cryptosporidium oocysts/100L | | Giardia cysts/100L | |
|---|---|---|---|---|
| | **E.L. Smith** | **Rossdale** | **E.L. Smith** | **Rossdale** |
| **3 - Jan** | <0.8 | | 1.7 | |
| **4 - Jan** | | <1.0 | | <1.0 |
| **14 - Jan** | <0.9 | | 1.9 | |
| **15 - Jan** | | <0.8 | | <0.8 |
| **28 - Jan** | <1.0 | | <1.0 | |
| **30 - Jan** | | <0.8 | | <0.8 |
| **11 - Feb** | <0.8 | | <0.8 | |
| **12 - Feb** | | <0.7 | | <0.7 |
| **25 - Feb** | <0.7 | | <0.7 | |
| **26 - Feb** | | <0.7 | | <0.7 |
| **11 - Mar** | <0.6 | <0.6 | 1.3 | <0.6 |
| **25 - Mar** | <6.5 | | <6.5 | |
| **26 - Mar** | | <6.7 | | <6.7 |
| **2 - Apr** | <20 | | <20 | |
| **11 - Apr** | | <8.8 | | <8.8 |
| **14 - May** | <6.5 | | 6.5 | |
| **21 - May** | | <6.4 | | <6.4 |
| **3 - Jun** | <18 | | <18 | |
| **10 - Jun** | | <5.3 | | <5.3 |
| **2 - Jul** | | <33 | | <33 |
| **24 - Jul** | <5.8 | | 12 | |
| **12 - Aug** | <4.5 | | 4.5 | |
| **19 - Aug** | | 2.5 | | 15 |
| **9 - Sep** | | 3.9 | | 3.9 |
| **23 - Sep** | <13 | | <13 | |
| **7 - Oct** | <8.0 | <1.4 | 8.0 | 14 |
| **4 - Nov** | | <2.2 | | 4.5 |
| **12 - Nov** | <2.9 | | 2.9 | |
| **18 - Nov** | <5.2 | | 52 | |
| **20 - Nov** | | 4.0 | | 88 |
| **25 - Nov** | <6.5 | | 39 | |
| **26 - Nov** | | <3.0 | | 60 |
| **2 - Dec** | | <1.9 | | 3.8 |
| **9 - Dec** | <2.0 | | 5.9 | |
| **19 - Dec** | | <0.8 | | <0.8 |
| **29 - Dec** | <2.0 | | <2.0 | |
| **30 - Dec** | | <1.1 | | <1.1 |

## 7.7 Treated Water Entering the Distribution System: Physical, Inorganic, and Organic

**2019**

| | ROSSDALE | | | | E.L. SMITH | | | | Limits | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Mean | Min | Max | Count | Mean | Min | Max | Count | *Approval or GCDWQ MAC, (AO or OG) | EPCOR |
| **Physical** | | | | | | | | | | |
| Colour (TCU) | 1.1 | <0.5 | 2.3 | 365 | 1.2 | <0.5 | 2.1 | 365 | (15) | 10 |
| Conductivity (uS/cm) | 401 | 358 | 496 | 53 | 413 | 362 | 514 | 53 | (<1) | <1 |
| FPA-Intensity (N/A) | 0.85 | 0.44 | 1.62 | 74 | 0.71 | 0.31 | 1.38 | 74 | | |
| pH (N/A) | 7.9 | 7.5 | 8.3 | 365 | 7.8 | 7.5 | 8.2 | 365 | (7.0 - 10.5) | 7.3-8.3 |
| Total Dissolved Solids (mg/L) | 235 | 208 | 290 | 12 | 242 | 203 | 305 | 12 | (500) | |
| Turbidity (NTU) | 0.05 | 0.03 | 0.08 | 365 | 0.05 | 0.02 | 0.11 | 365 | | 0.3 |
| **Primary Inorganics (mg/L) **** | | | | | | | | | | |
| Antimony | <0.0002 | <0.0002 | <0.0002 | 12 | <0.0002 | <0.0002 | 0.0003 | 12 | 0.006 | |
| Arsenic | <0.0002 | <0.0002 | 0.0003 | 12 | <0.0002 | <0.0002 | 0.0003 | 12 | 0.01 | |
| Barium | 0.066 | 0.055 | 0.087 | 12 | 0.064 | 0.052 | 0.080 | 12 | 2 | |
| Boron | 0.013 | 0.008 | 0.034 | 12 | 0.013 | 0.008 | 0.038 | 12 | 5 | |
| Bromate Dissolved | <0.005 | <0.003 | <0.005 | 105 | <0.005 | <0.003 | <0.005 | 105 | 0.01 | |
| Cadmium | <0.0002 | <0.0002 | <0.0002 | 12 | <0.0002 | <0.0002 | <0.0002 | 12 | 0.005 | |
| Chlorate Dissolved | 0.128 | <0.031 | 0.263 | 105 | <0.059 | <0.020 | 0.215 | 105 | 1 | |
| Chlorite Dissolved | <0.007 | <0.005 | <0.200 | 105 | <0.007 | <0.005 | <0.200 | 105 | 1 | |
| Chromium | <0.0002 | <0.0002 | <0.0002 | 12 | <0.0002 | <0.0002 | <0.0002 | 12 | 0.05 | |
| Copper | <0.005 | <0.005 | <0.005 | 12 | <0.005 | <0.005 | <0.005 | 12 | (1) | |
| Cyanide Dissolved | <0.002 | <0.002 | <0.002 | 6 | <0.002 | <0.002 | <0.002 | 6 | 0.2 | |
| Fluoride | 0.69 | 0.62 | 0.77 | 365 | 0.49 | <0.05 | 0.75 | 365 | 1.5 | 0.6–0.8 |
| Lead | <0.0002 | <0.0002 | <0.0002 | 12 | <0.0002 | <0.0002 | <0.0002 | 12 | 0.005 | |
| Manganese | <0.003 | <0.002 | 0.012 | 12 | 0.004 | <0.002 | 0.016 | 12 | 0.12 (0.02) | |
| Mercury | <0.0002 | <0.0002 | <0.0002 | 12 | <0.0002 | <0.0002 | <0.0002 | 12 | 0.001 | |
| Nitrate (as N) Dissolved | 0.054 | <0.010 | 0.333 | 105 | 0.050 | <0.010 | 0.249 | 105 | 10 | |
| Nitrite (as N) Dissolved | <0.009 | <0.005 | <0.010 | 105 | <0.009 | <0.005 | <0.010 | 105 | 1 | |
| Selenium | <0.0002 | <0.0002 | 0.0003 | 12 | <0.0002 | <0.0002 | 0.0003 | 12 | 0.05 | |
| Total Chlorine | 2.02 | 1.59 | 2.43 | 365 | 1.97 | 1.68 | 2.40 | 366 | >1.0 | >1.0 and <2.4 |
| Uranium | <0.0005 | <0.0005 | 0.0006 | 12 | <0.0005 | <0.0005 | 0.0005 | 12 | 0.02 | |

## 7.7 Treated Water Entering the Distribution System: Physical, Inorganic, and Organic

## 2019

| | ROSSDALE | | | | E.L. SMITH | | | | Limits | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Mean | Min | Max | Count | Mean | Min | Max | Count | *Approval or GCDWQ MAC, (AO or OG) | EPCOR |
| Primary Organics (ug/L) ** | | | | | | | | | | |
| 2,4-D | <0.007 | <0.007 | <0.007 | 4 | <0.008 | <0.007 | 0.009 | 4 | 100 | |
| Atrazine | <0.002 | <0.002 | <0.002 | 4 | <0.002 | <0.002 | <0.002 | 4 | 5 | |
| Benzene | <0.5 | <0.1 | <0.5 | 369 | <0.5 | <0.1 | <0.5 | 369 | 5 | |
| Benzo(a)pyrene | <0.05 | <0.01 | <0.10 | 8 | <0.05 | <0.01 | <0.10 | 8 | 0.04 | |
| Bromoxynil | <0.030 | <0.030 | <0.030 | 4 | <0.030 | <0.030 | <0.030 | 4 | 5 | |
| Carbon Tetrachloride | <1.0 | <0.1 | <1.0 | 369 | <1.0 | <0.1 | <1.0 | 369 | 2 | |
| Chlorobenzene | <0.49 | <0.03 | <0.50 | 369 | <0.49 | <0.03 | <0.50 | 369 | 80 (30) | |
| Chlorpyrifos | <0.002 | <0.002 | <0.002 | 4 | <0.002 | <0.002 | <0.002 | 4 | 90 | |
| Cyanazine | <0.010 | <0.010 | <0.010 | 4 | <0.010 | <0.010 | <0.010 | 4 | | |
| Diazinon | <0.004 | <0.004 | <0.004 | 4 | <0.004 | <0.004 | <0.004 | 4 | 20 | |
| Dicamba | <0.002 | <0.002 | <0.002 | 4 | <0.002 | <0.002 | <0.002 | 4 | 120 | |
| Dichlorobenzene (1,2) | <0.49 | <0.03 | <0.50 | 369 | <0.49 | <0.03 | <0.50 | 369 | 200 (3) | |
| Dichlorobenzene (1,4) | <0.5 | <0.1 | <0.5 | 369 | <0.5 | <0.1 | <0.5 | 369 | 5 (1) | |
| Dichloroethane (1,2) | <0.1 | <0.1 | <0.1 | 4 | <0.1 | <0.1 | <0.1 | 4 | 5 | |
| Dichloroethylene (1,1) | <3.0 | <0.1 | <3.0 | 369 | <3.0 | <0.1 | <3.0 | 369 | 14 | |
| Dichlorophenol (2,4) | <0.05 | <0.01 | <0.10 | 8 | <0.05 | <0.01 | <0.10 | 8 | 900 (0.3) | |
| Diclofop-methyl | <0.01 | <0.01 | <0.01 | 4 | <0.01 | <0.01 | <0.01 | 4 | 9 | |
| Dimethoate | <0.005 | <0.005 | <0.005 | 4 | <0.005 | <0.005 | <0.005 | 4 | 20 | |
| Diuron | <0.2 | <0.2 | <0.2 | 4 | <0.2 | <0.2 | <0.2 | 4 | 150 | |
| Ethylbenzene | <0.49 | <0.02 | <0.50 | 369 | <0.49 | <0.02 | <0.50 | 369 | 140 (1.6) | |
| Glyphosate | <7.6 | <0.1 | <20.0 | 4 | <7.6 | <0.1 | <20.0 | 4 | 280 | |
| Haloacetic Acids, (HAA5) | 23.4 | 13.6 | 33.2 | 12 | 18.7 | 10.6 | 25.7 | 12 | 80 | 40 |
| Haloacetic Acids, total (HAA6) | 24 | 14 | 34 | 12 | 19 | 11 | 26 | 12 | | |
| Malathion | <0.030 | <0.030 | <0.030 | 4 | <0.030 | <0.030 | <0.030 | 4 | 190 | |
| MCPA | <0.010 | <0.010 | <0.010 | 4 | <0.010 | <0.010 | <0.010 | 4 | 100 | |
| Methylene Chloride | <0.5 | <0.1 | <0.5 | 369 | <0.5 | <0.1 | <0.5 | 369 | 50 | |
| Metolachlor | <0.007 | <0.007 | <0.007 | 4 | <0.007 | <0.007 | <0.007 | 4 | 50 | |
| Metribuzin | <0.002 | <0.002 | <0.002 | 4 | <0.002 | <0.002 | <0.002 | 4 | 80 | |
| Microcystin | <0.10 | <0.10 | 0.13 | 12 | <0.11 | <0.10 | 0.21 | 12 | 1.5 | |
| NDMA (ng/L) | 1.62 | <0.50 | 3.89 | 12 | 1.57 | <0.50 | 4.14 | 12 | 40 | 10 |
| NTA (mg/L) | <0.16 | <0.05 | <0.20 | 4 | <0.16 | <0.05 | <0.20 | 4 | 0.4 | |
| Pentachlorophenol | <0.6 | <0.6 | <0.6 | 4 | <0.6 | <0.6 | <0.6 | 4 | 60 (30) | |
| Perfluoro-n-Octanoic Acid (PFOA) | <0.02 | <0.02 | <0.02 | 4 | <0.02 | <0.02 | <0.02 | 4 | 0.2 | |
| Perfluorooctane Sulfonate (PFOS) | <0.02 | <0.02 | <0.02 | 4 | <0.02 | <0.02 | <0.02 | 4 | 0.6 | |
| Phorate | <0.003 | <0.003 | <0.003 | 4 | <0.003 | <0.003 | <0.003 | 4 | 2 | |
| Picloram | <0.011 | <0.010 | 0.013 | 4 | <0.010 | <0.010 | <0.010 | 4 | 190 | |
| Simazine | <0.004 | <0.004 | <0.004 | 4 | <0.004 | <0.004 | <0.004 | 4 | 10 | |
| Terbufos | <0.01 | <0.01 | <0.01 | 4 | <0.01 | <0.01 | <0.01 | 4 | 1 | |
| Tetrachloroethylene | <0.5 | <0.1 | <0.5 | 369 | <0.5 | <0.1 | <0.5 | 369 | 10 | |
| Tetrachlorophenol (2,3,4,6) | <0.4 | <0.4 | <0.4 | 4 | <0.4 | <0.4 | <0.4 | 4 | 100 (1) | |
| Toluene | <0.50 | <0.03 | <0.50 | 369 | <0.49 | <0.03 | <0.50 | 369 | 60 (24) | |
| Trichloroethylene | <0.49 | <0.03 | <0.50 | 369 | <0.49 | <0.03 | <0.50 | 369 | 5 | |
| Trichlorophenol (2,4,6) | <0.7 | <0.7 | <0.7 | 4 | <0.7 | <0.7 | <0.7 | 4 | 5 (2) | |
| Trifluralin | <0.002 | <0.002 | <0.002 | 4 | <0.002 | <0.002 | <0.002 | 4 | 45 | |
| Trihalomethanes | 19.5 | 5.6 | 38.6 | 365 | 13.8 | 4.6 | 27.0 | 365 | 100 | 50 |
| Vinyl Chloride | <0.1 | <0.1 | <0.1 | 4 | <0.1 | <0.1 | <0.1 | 4 | 2 | |

## 7.7 Treated Water Entering the Distribution System: Physical, Inorganic, and Organic

## 2019

| | ROSSDALE | | | | E.L. SMITH | | | | Limits | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Mean | Min | Max | Count | Mean | Min | Max | Count | *Approval or GCDWQ MAC, (AO or OG) | EPCOR |
| **Radionuclides (Bq/L)** | | | | | | | | | | |
| Cesium-137 | <0.09 | <0.08 | <0.10 | 2 | <0.15 | <0.10 | <0.20 | 2 | 10 | |
| Gross Alpha | <0.16 | <0.15 | <0.17 | 2 | <0.17 | <0.16 | <0.18 | 2 | (0.5) | |
| Gross Beta | <0.07 | <0.06 | <0.08 | 2 | <0.09 | <0.07 | 0.10 | 2 | (1.0) | |
| Iodine-131 | <0.25 | <0.20 | <0.30 | 2 | <0.20 | <0.20 | <0.20 | 2 | 6 | |
| Lead-210 | <0.02 | <0.02 | <0.02 | 2 | <0.02 | <0.02 | <0.02 | 2 | 0.2 | |
| Radium-226 | <0.01 | <0.01 | <0.01 | 2 | <0.01 | <0.01 | 0.01 | 2 | 0.5 | |
| Strontium-90 | <0.3 | <0.1 | <0.5 | 2 | <0.1 | <0.1 | <0.1 | 2 | 5 | |
| Tritium | <15 | <15 | <15 | 2 | <15 | <15 | <15 | 2 | 7000 | |
| **Secondary Inorganics (mg/L) ***** | | | | | | | | | | |
| Alkalinity Total (mg CaCO3/L) | 119 | 70 | 145 | 365 | 122 | 83 | 147 | 365 | | |
| Aluminum | 0.049 | 0.019 | 0.086 | 12 | 0.044 | 0.019 | 0.090 | 12 | (0.1/0.2) | 0.1/0.2 |
| Ammonia as N | 0.10 | 0.10 | 0.10 | 1 | 0.11 | 0.11 | 0.11 | 1 | | |
| Ammonia as NH3 | 0.13 | 0.07 | 0.33 | 76 | 0.15 | 0.09 | 0.41 | 75 | | |
| Beryllium | <0.0002 | <0.0002 | <0.0002 | 12 | <0.0002 | <0.0002 | <0.0002 | 12 | | |
| Bromide Dissolved | <0.010 | <0.005 | <0.050 | 105 | <0.010 | <0.005 | <0.050 | 105 | | |
| Calcium | 46.5 | 31.7 | 54.8 | 12 | 46.1 | 33.4 | 52.8 | 12 | | |
| Chloride Dissolved | 7 | 3 | 43 | 105 | 5 | 3 | 13 | 105 | (250) | |
| Chlorine Free | <0.030 | <0.030 | <0.030 | 84 | <0.030 | <0.030 | <0.030 | 84 | | |
| Cobalt | <0.0002 | <0.0002 | 0.0002 | 12 | <0.0002 | <0.0002 | <0.0002 | 12 | | |
| Hardness, Ca (mg CaCO3/L) | 111 | 78 | 132 | 365 | 109 | 79 | 134 | 365 | | |
| Hardness, Total (mg CaCO3/L) | 170 | 115 | 197 | 365 | 169 | 115 | 195 | 365 | | |
| Iron | 0.013 | <0.005 | 0.095 | 12 | <0.005 | <0.005 | <0.005 | 12 | (0.3) | 0.3 |
| Lanthanum | <0.001 | <0.001 | <0.001 | 8 | <0.001 | <0.001 | <0.001 | 8 | | |
| Lithium | 0.0033 | 0.0016 | 0.0038 | 12 | 0.0031 | 0.0020 | 0.0039 | 12 | | |
| Magnesium | 13.2 | 8.4 | 15.6 | 12 | 13.3 | 8.8 | 15.8 | 12 | | |
| Molybdenum | 0.0007 | 0.0005 | 0.0009 | 12 | 0.0007 | 0.0005 | 0.0009 | 12 | | |
| Nickel | 0.0007 | <0.0005 | 0.0013 | 12 | 0.0007 | <0.0005 | 0.0015 | 12 | | |
| Phosphate,Ortho (as P) | <0.02 | <0.01 | <0.02 | 13 | <0.02 | <0.01 | 0.02 | 13 | | |
| Phosphorus | 0.03 | <0.02 | 0.05 | 12 | 0.03 | <0.02 | 0.05 | 12 | | |
| Potassium | 1.30 | 0.50 | 6.20 | 12 | 1.23 | 0.60 | 5.20 | 12 | | |
| Silicon | 2.07 | 1.74 | 2.63 | 12 | 2.04 | 1.68 | 2.63 | 12 | | |
| Silver | <0.0002 | <0.0002 | <0.0002 | 12 | <0.0002 | <0.0002 | <0.0002 | 12 | | |
| Sodium | 14.1 | 6.4 | 30.0 | 12 | 17.2 | 5.6 | 35.5 | 12 | (200) | |
| Strontium | 0.390 | 0.286 | 0.449 | 12 | 0.389 | 0.283 | 0.451 | 12 | | |
| Sulphate Dissolved | 71 | 50 | 122 | 105 | 77 | 53 | 132 | 105 | (500) | |
| Sulphide | <0.002 | <0.002 | <0.002 | 12 | <0.002 | <0.002 | <0.002 | 12 | (0.05) | |
| Thallium | <0.0005 | <0.0005 | <0.0005 | 12 | <0.0005 | <0.0005 | <0.0005 | 12 | | |
| Tin | <0.0005 | <0.0005 | <0.0005 | 12 | <0.0005 | <0.0005 | <0.0005 | 12 | | |
| Titanium | <0.0005 | <0.0005 | <0.0005 | 12 | <0.0005 | <0.0005 | <0.0005 | 12 | | |
| Vanadium | <0.0005 | <0.0005 | 0.0006 | 12 | <0.0005 | <0.0005 | 0.0006 | 12 | | |
| Zinc | 0.007 | <0.005 | 0.032 | 12 | <0.005 | <0.005 | <0.005 | 12 | (5.0) | |
| Zirconium | <0.0010 | <0.0005 | <0.0010 | 12 | <0.0010 | <0.0005 | <0.0010 | 12 | | |

## 7.7 Treated Water Entering the Distribution System: Physical, Inorganic, and Organic

**2019**

| | ROSSDALE | | | | E.L. SMITH | | | | Limits | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Mean | Min | Max | Count | Mean | Min | Max | Count | *Approval or GCDWQ MAC, (AO or OG) | EPCOR |
| Secondary Organics (ug/L) *** | | | | | | | | | | |
| 2,4-DB | <0.009 | <0.009 | <0.009 | 4 | <0.009 | <0.009 | <0.009 | 4 | | |
| 2,4-DP | <0.003 | <0.003 | <0.003 | 4 | <0.003 | <0.003 | <0.003 | 4 | | |
| Acenaphthene | <0.10 | <0.01 | <0.20 | 8 | <0.10 | <0.01 | <0.20 | 8 | | |
| Acenaphthylene | <0.06 | <0.01 | <0.10 | 8 | <0.06 | <0.01 | <0.10 | 8 | | |
| Acetaminophen | <0.050 | <0.050 | <0.050 | 4 | <0.050 | <0.050 | <0.050 | 4 | | |
| Acetylsalicylic acid | <0.01 | <0.01 | <0.01 | 3 | <0.01 | <0.01 | <0.01 | 3 | | |
| Acridine | <0.01 | <0.01 | <0.01 | 4 | <0.01 | <0.01 | <0.01 | 4 | | |
| Aldicarb | <0.1 | <0.1 | <0.1 | 4 | <0.1 | <0.1 | <0.1 | 4 | | |
| Aldicarb sulfone | <0.20 | <0.20 | <0.20 | 4 | <0.20 | <0.20 | <0.20 | 4 | | |
| Aldicarb sulfoxide | <0.10 | <0.10 | <0.10 | 4 | <0.10 | <0.10 | <0.10 | 4 | | |
| Aldrin | <0.004 | <0.004 | <0.004 | 4 | <0.004 | <0.004 | <0.004 | 4 | | |
| alpha-Endosulfan | <0.003 | <0.003 | <0.003 | 4 | <0.003 | <0.003 | <0.003 | 4 | | |
| Aminocarb | <0.020 | <0.020 | <0.020 | 4 | <0.020 | <0.020 | <0.020 | 4 | | |
| Aminomethyl Phosphonic Acid | <0.3 | <0.3 | <0.3 | 1 | <0.3 | <0.3 | <0.3 | 1 | | |
| Aminopyralid | <0.05 | <0.05 | <0.05 | 4 | <0.05 | <0.05 | <0.05 | 4 | | |
| Anthracene | <0.10 | <0.01 | <0.20 | 8 | <0.10 | <0.01 | <0.20 | 8 | | |
| Azinphos-methyl | <0.1 | <0.1 | <0.1 | 4 | <0.1 | <0.1 | <0.1 | 4 | | |
| Azoxystrobin | <0.005 | <0.005 | <0.005 | 4 | <0.005 | <0.005 | <0.005 | 4 | | |
| Benomyl | <0.010 | <0.010 | <0.010 | 4 | <0.010 | <0.010 | <0.010 | 4 | | |
| Bentazon | <0.005 | <0.005 | <0.005 | 4 | <0.005 | <0.005 | <0.005 | 4 | | |
| Benzidine | <0.2 | <0.2 | <0.2 | 4 | <0.2 | <0.2 | <0.2 | 4 | | |
| Benzo(a)anthracene | <0.05 | <0.01 | <0.10 | 8 | <0.05 | <0.01 | <0.10 | 8 | | |
| Benzo(b)fluoranthene | <0.1 | <0.1 | <0.1 | 4 | <0.1 | <0.1 | <0.1 | 4 | | |
| Benzo(b,j,k)fluoranthene | <0.02 | <0.02 | <0.02 | 4 | <0.02 | <0.02 | <0.02 | 4 | | |
| Benzo(c)phenanthrene | <0.01 | <0.01 | <0.01 | 4 | <0.01 | <0.01 | <0.01 | 4 | | |
| Benzo(e)pyrene | <0.01 | <0.01 | <0.01 | 4 | <0.01 | <0.01 | <0.01 | 4 | | |
| Benzo(ghi)perylene | <0.05 | <0.01 | <0.10 | 8 | <0.05 | <0.01 | <0.10 | 8 | | |
| Benzo(k)fluoranthene | <0.1 | <0.1 | <0.1 | 4 | <0.1 | <0.1 | <0.1 | 4 | | |
| Benzoylecgonine | <0.01 | <0.01 | <0.01 | 4 | <0.01 | <0.01 | <0.01 | 4 | | |
| Bezafibrate | <0.1 | <0.1 | <0.1 | 3 | <0.1 | <0.1 | <0.1 | 3 | | |
| Bis(2-chloroethoxy)methane | <0.3 | <0.3 | <0.3 | 4 | <0.3 | <0.3 | <0.3 | 4 | | |
| Bis(2-chloroethyl)ether | <0.2 | <0.2 | <0.2 | 4 | <0.2 | <0.2 | <0.2 | 4 | | |
| Bis(2-chloroisopropyl)ether | <0.3 | <0.3 | <0.3 | 4 | <0.3 | <0.3 | <0.3 | 4 | | |
| Bis(2-ethylhexyl)phthalate | 0.4 | <0.3 | 0.5 | 4 | 0.5 | <0.3 | 0.8 | 4 | | |
| Bromacil | <0.060 | <0.060 | <0.060 | 4 | <0.060 | <0.060 | <0.060 | 4 | | |
| Bromobenzene | <0.03 | <0.03 | <0.03 | 4 | <0.03 | <0.03 | <0.03 | 4 | | |
| Bromochloroacetic acid | <1 | <1 | <1 | 12 | <1 | <1 | <1 | 12 | | |
| Bromodichloromethane | <0.5 | <0.5 | 2.7 | 369 | <0.5 | <0.5 | 1.2 | 369 | | 16 |
| Bromoform | <1.0 | <0.1 | <1.0 | 369 | <1.0 | <0.1 | <1.0 | 369 | | |
| Bromomethane | <0.1 | <0.1 | <0.1 | 4 | <0.1 | <0.1 | <0.1 | 4 | | |
| Bromophenyl phenyl ether (4) | <0.2 | <0.2 | <0.2 | 4 | <0.2 | <0.2 | <0.2 | 4 | | |
| Butylbenzylphthalate | 0.2 | <0.1 | 0.4 | 4 | 0.2 | 0.1 | 0.4 | 4 | | |
| Caffeine | <0.02 | <0.02 | <0.02 | 3 | <0.02 | <0.02 | <0.02 | 3 | | |
| Carbamazepine | <0.010 | <0.010 | <0.010 | 3 | <0.010 | <0.010 | <0.010 | 3 | | |
| Carbaryl | <0.005 | <0.005 | <0.005 | 4 | <0.005 | <0.005 | <0.005 | 4 | 90 | |
| Carbathiin | <0.200 | <0.200 | <0.200 | 4 | <0.200 | <0.200 | <0.200 | 4 | | |

## 7.7 Treated Water Entering the Distribution System: Physical, Inorganic, and Organic

**2019**

| | ROSSDALE | | | | E.L. SMITH | | | | Limits | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Mean | Min | Max | Count | Mean | Min | Max | Count | *Approval or GCDWQ MAC, (AO or OG) | EPCOR |
| Secondary Organics (ug/L) *** | | | | | | | | | | |
| Carbofuran | <0.005 | <0.005 | <0.005 | 4 | <0.005 | <0.005 | <0.005 | 4 | 90 | |
| Chloramphenicol | <0.01 | <0.01 | <0.01 | 4 | <0.01 | <0.01 | <0.01 | 4 | | |
| Chloro-2-MethylPhenol (4) | <0.002 | <0.002 | <0.002 | 4 | <0.002 | <0.002 | <0.002 | 4 | | |
| Chloro-3-methylphenol (4) | <0.8 | <0.8 | <0.8 | 4 | <0.8 | <0.8 | <0.8 | 4 | | |
| Chloroethane | <0.1 | <0.1 | <0.1 | 4 | <0.1 | <0.1 | <0.1 | 4 | | |
| Chloroethoxyethylene (2) | <0.05 | <0.05 | <0.05 | 4 | <0.05 | <0.05 | <0.05 | 4 | | |
| Chloroform | 19.5 | 5.6 | 38.1 | 369 | 13.9 | 4.6 | 27.0 | 369 | | |
| Chloromethane | <0.1 | <0.1 | <0.1 | 4 | <0.1 | <0.1 | <0.1 | 4 | | |
| Chloronaphthalene (2) | <0.2 | <0.2 | <0.2 | 4 | <0.2 | <0.2 | <0.2 | 4 | | |
| Chlorophenol (2) | <0.2 | <0.2 | <0.2 | 4 | <0.2 | <0.2 | <0.2 | 4 | | |
| Chlorophenyl phenyl ether (4) | <0.2 | <0.2 | <0.2 | 4 | <0.2 | <0.2 | <0.2 | 4 | | |
| Chlorothalonil | <0.030 | <0.030 | <0.030 | 4 | <0.030 | <0.030 | <0.030 | 4 | | |
| Chlorotoluene (2) | <0.05 | <0.05 | <0.05 | 4 | <0.05 | <0.05 | <0.05 | 4 | | |
| Chlorotoluene (4) | <0.05 | <0.05 | <0.05 | 4 | <0.05 | <0.05 | <0.05 | 4 | | |
| Chrysene | <0.102 | <0.004 | <0.200 | 8 | <0.102 | <0.004 | <0.200 | 8 | | |
| Ciprofloxacin | <0.02 | <0.02 | <0.02 | 4 | <0.02 | <0.02 | <0.02 | 4 | | |
| Clindamycin | <0.010 | <0.010 | <0.010 | 4 | <0.010 | <0.010 | <0.010 | 4 | | |
| Clodinafop acid metabolite | <0.010 | <0.010 | <0.010 | 4 | <0.010 | <0.010 | <0.010 | 4 | | |
| Clodinafop-propargyl | <0.010 | <0.010 | <0.010 | 4 | <0.010 | <0.010 | <0.010 | 4 | | |
| Clofibric Acid | <0.01 | <0.01 | <0.01 | 3 | <0.01 | <0.01 | <0.01 | 3 | | |
| Clopyralid | <0.060 | <0.060 | <0.060 | 4 | <0.060 | <0.060 | <0.060 | 4 | | |
| Clothianidin | <0.005 | <0.005 | <0.005 | 4 | <0.005 | <0.005 | <0.005 | 4 | | |
| Cocaine | <0.01 | <0.01 | <0.01 | 4 | <0.01 | <0.01 | <0.01 | 4 | | |
| Codeine | <0.05 | <0.05 | <0.05 | 4 | <0.05 | <0.05 | <0.05 | 4 | | |
| Cotinine | <0.01 | <0.01 | <0.01 | 4 | <0.01 | <0.01 | <0.01 | 4 | | |
| Deltamethrin | <0.007 | <0.007 | <0.007 | 4 | <0.007 | <0.007 | <0.007 | 4 | | |
| Desethyl Atrazine | <0.020 | <0.020 | <0.020 | 4 | <0.020 | <0.020 | <0.020 | 4 | | |
| Desisopropyl Atrazine | <0.020 | <0.020 | <0.020 | 4 | <0.020 | <0.020 | <0.020 | 4 | | |
| Dibenzo(a,h)pyrene | <0.01 | <0.01 | <0.01 | 4 | <0.01 | <0.01 | <0.01 | 4 | | |
| Dibenzo(a,i)pyrene | <0.01 | <0.01 | <0.01 | 4 | <0.01 | <0.01 | <0.01 | 4 | | |
| Dibenzo(a,l)pyrene | <0.01 | <0.01 | <0.01 | 4 | <0.01 | <0.01 | <0.01 | 4 | | |
| Dibenzo(ah)anthracene | <0.05 | <0.01 | <0.10 | 8 | <0.05 | <0.01 | <0.10 | 8 | | |
| Dibromo-3-chloropropane (1,2) | <2.1 | <2.1 | <2.1 | 4 | <2.1 | <2.1 | <2.1 | 4 | | |
| Dibromoacetic acid | <1 | <1 | <1 | 12 | <1 | <1 | <1 | 12 | | |
| Dibromochloromethane | <0.50 | <0.04 | <0.50 | 369 | <0.50 | <0.04 | <0.50 | 369 | | |
| Dibromoethane (1,2) | <0.07 | <0.07 | <0.07 | 4 | <0.07 | <0.07 | <0.07 | 4 | | |
| Dibromomethane | <0.03 | <0.03 | <0.03 | 4 | <0.03 | <0.03 | <0.03 | 4 | | |
| Dichloroacetic acid | 10 | 6 | 15 | 12 | 9 | 5 | 12 | 12 | | |
| Dichlorobenzene (1,3) | <0.49 | <0.03 | <0.50 | 369 | <0.49 | <0.03 | <0.50 | 369 | | |
| Dichloroethane (1,1) | <0.02 | <0.02 | <0.02 | 4 | <0.02 | <0.02 | <0.02 | 4 | | |
| Dichloroethylene, cis (1,2) | <0.50 | <0.04 | <0.50 | 369 | <0.50 | <0.04 | <0.50 | 369 | | |
| Dichloroethylene, trans (1,2) | <0.50 | <0.04 | <0.50 | 369 | <0.50 | <0.04 | <0.50 | 369 | | |
| Dichloropropane (1,2) | <0.5 | <0.1 | <0.5 | 369 | <0.5 | <0.1 | <0.5 | 369 | | |
| Dichloropropane (1,3) | <0.04 | <0.04 | <0.04 | 4 | <0.04 | <0.04 | <0.04 | 4 | | |
| Dichloropropane (2,2) | <0.1 | <0.1 | <0.1 | 4 | <0.1 | <0.1 | <0.1 | 4 | | |
| Dichloropropylene (1,1) | <0.06 | <0.06 | <0.06 | 4 | <0.06 | <0.06 | <0.06 | 4 | | |

## 7.7 Treated Water Entering the Distribution System: Physical, Inorganic, and Organic

## 2019

| | ROSSDALE | | | | E.L. SMITH | | | | Limits | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Mean | Min | Max | Count | Mean | Min | Max | Count | *Approval or GCDWQ MAC, (AO or OG) | EPCOR |
| Secondary Organics (ug/L) *** | | | | | | | | | | |
| Dichloropropylene cis (1,3) | <0.03 | <0.03 | <0.03 | 4 | <0.03 | <0.03 | <0.03 | 4 | | |
| Dichloropropylene trans (1,3) | <0.05 | <0.05 | <0.05 | 4 | <0.05 | <0.05 | <0.05 | 4 | | |
| Diclofenac | <0.010 | <0.010 | <0.010 | 3 | <0.010 | <0.010 | <0.010 | 3 | | |
| Dieldrin | <0.008 | <0.008 | <0.008 | 4 | <0.008 | <0.008 | <0.008 | 4 | | |
| Diethyl phthalate | <0.1 | <0.1 | <0.1 | 4 | <0.1 | <0.1 | <0.1 | 4 | | |
| Difenoconazol | <0.004 | <0.004 | <0.004 | 4 | <0.004 | <0.004 | <0.004 | 4 | | |
| Dimethyl phthalate | <0.1 | <0.1 | <0.1 | 4 | <0.1 | <0.1 | <0.1 | 4 | | |
| Dimethylbenz(a)anthracene (7,12) | <0.008 | <0.008 | <0.008 | 4 | <0.008 | <0.008 | <0.008 | 4 | | |
| Dimethylphenol (2,4) | <0.3 | <0.3 | <0.3 | 4 | <0.3 | <0.3 | <0.3 | 4 | | |
| Di-n-butylphthalate | <0.3 | <0.3 | 0.3 | 4 | <0.4 | <0.3 | 0.5 | 4 | | |
| Dinitrophenol (2,4) | <0.7 | <0.7 | <0.7 | 4 | <0.7 | <0.7 | <0.7 | 4 | | |
| Dinitrotoluene (2,4) | <0.3 | <0.3 | <0.3 | 4 | <0.3 | <0.3 | <0.3 | 4 | | |
| Dinitrotoluene (2,6) | <0.2 | <0.2 | <0.2 | 4 | <0.2 | <0.2 | <0.2 | 4 | | |
| Di-n-octyl phthalate | <0.2 | <0.2 | <0.2 | 4 | <0.2 | <0.2 | <0.2 | 4 | | |
| Diphenylhydrazine (1,2) | <0.1 | <0.1 | <0.1 | 4 | <0.1 | <0.1 | <0.1 | 4 | | |
| Disulfoton | <0.100 | <0.100 | <0.100 | 4 | <0.100 | <0.100 | <0.100 | 4 | | |
| Enrofloxacin | 0.03 | <0.02 | 0.04 | 4 | <0.02 | <0.02 | <0.02 | 4 | | |
| EPTC | <0.006 | <0.006 | <0.006 | 4 | <0.006 | <0.006 | <0.006 | 4 | | |
| Erythromycin | <0.010 | <0.010 | <0.010 | 4 | <0.010 | <0.010 | <0.010 | 4 | | |
| Ethalfluralin | <0.030 | <0.030 | <0.030 | 4 | <0.030 | <0.030 | <0.030 | 4 | | |
| Ethion | <0.09 | <0.09 | <0.09 | 4 | <0.09 | <0.09 | <0.09 | 4 | | |
| Ethofumesate | <0.002 | <0.002 | <0.002 | 4 | <0.002 | <0.002 | <0.002 | 4 | | |
| Fenoprofen | <0.005 | <0.005 | <0.005 | 3 | <0.005 | <0.005 | <0.005 | 3 | | |
| Fenoxaprop-p-ethyl | <0.010 | <0.010 | <0.010 | 4 | <0.010 | <0.010 | <0.010 | 4 | | |
| Fluazifop | <0.004 | <0.004 | <0.004 | 4 | <0.004 | <0.004 | <0.004 | 4 | | |
| Fluoranthene | <0.05 | <0.01 | <0.10 | 8 | <0.05 | <0.01 | <0.10 | 8 | | |
| Fluorene | <0.05 | <0.01 | <0.10 | 8 | <0.05 | <0.01 | <0.10 | 8 | | |
| Fluoxetine | <0.01 | <0.01 | <0.01 | 4 | <0.01 | <0.01 | <0.01 | 4 | | |
| Fluroxypyr | <0.002 | <0.002 | 0.003 | 4 | <0.003 | <0.002 | 0.004 | 4 | | |
| Gemfibrozil | <0.005 | <0.005 | <0.005 | 3 | <0.005 | <0.005 | <0.005 | 3 | | |
| Glufosinate | <0.4 | <0.4 | <0.4 | 1 | <0.4 | <0.4 | <0.4 | 1 | | |
| Hexachlorobenzene | <0.1 | <0.1 | <0.1 | 4 | <0.1 | <0.1 | <0.1 | 4 | | |
| Hexachlorobutadiene | <0.2 | <0.1 | <0.2 | 8 | <0.2 | <0.1 | <0.2 | 8 | | |
| Hexachlorocyclopentadiene | <0.1 | <0.1 | 0.2 | 4 | <0.1 | <0.1 | 0.1 | 4 | | |
| Hexachloroethane | <0.3 | <0.3 | <0.3 | 4 | <0.3 | <0.3 | <0.3 | 4 | | |
| Hexaconazole | <0.010 | <0.010 | <0.010 | 4 | <0.010 | <0.010 | <0.010 | 4 | | |
| Hydroxy Carbofuran (3) | <0.020 | <0.020 | <0.020 | 4 | <0.020 | <0.020 | <0.020 | 4 | | |
| Ibuprofen | <0.005 | <0.005 | <0.005 | 3 | <0.005 | <0.005 | <0.005 | 3 | | |
| Imazamethabenz-methyl | <0.050 | <0.050 | <0.050 | 4 | <0.050 | <0.050 | <0.050 | 4 | | |
| Imazamox | <0.007 | <0.007 | <0.007 | 4 | <0.007 | <0.007 | <0.007 | 4 | | |
| Imazethapyr | <0.010 | <0.010 | <0.010 | 4 | <0.010 | <0.010 | <0.010 | 4 | | |
| Imidacloprid | <0.005 | <0.005 | <0.005 | 4 | <0.005 | <0.005 | <0.005 | 4 | | |
| Indeno(1,2,3-cd)pyrene | <0.10 | <0.01 | <0.20 | 8 | <0.10 | <0.01 | <0.20 | 8 | | |
| Indomethacin | <0.05 | <0.05 | <0.05 | 3 | <0.05 | <0.05 | <0.05 | 3 | | |
| Iprodione | <0.010 | <0.010 | <0.010 | 4 | <0.010 | <0.010 | <0.010 | 4 | | |
| Isophorone | <0.2 | <0.2 | <0.2 | 4 | <0.2 | <0.2 | <0.2 | 4 | | |

## 7.7 Treated Water Entering the Distribution System: Physical, Inorganic, and Organic

## 2019

| | ROSSDALE | | | | E.L. SMITH | | | | Limits | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Mean | Min | Max | Count | Mean | Min | Max | Count | *Approval or GCDWQ MAC, (AO or OG) | EPCOR |
| Secondary Organics (ug/L) *** | | | | | | | | | | |
| Isopropylbenzene | <0.03 | <0.03 | <0.03 | 4 | <0.03 | <0.03 | <0.03 | 4 | | |
| Ketoprofen | <0.01 | <0.01 | <0.01 | 3 | <0.01 | <0.01 | <0.01 | 3 | | |
| Lambda-Cyhalothrin | <0.020 | <0.020 | <0.020 | 4 | <0.020 | <0.020 | <0.020 | 4 | | |
| Lincomycin | <0.05 | <0.05 | <0.05 | 4 | <0.05 | <0.05 | <0.05 | 4 | | |
| Lindane (alpha-BHC) | <0.002 | <0.002 | <0.002 | 4 | <0.002 | <0.002 | <0.002 | 4 | | |
| Lindane (gamma-BHC) | <0.002 | <0.002 | <0.002 | 4 | <0.002 | <0.002 | <0.002 | 4 | | |
| Linuron | <0.020 | <0.020 | <0.020 | 4 | <0.020 | <0.020 | <0.020 | 4 | | |
| MCPB | <0.040 | <0.040 | <0.040 | 4 | <0.040 | <0.040 | <0.040 | 4 | | |
| MCPP | <0.009 | <0.009 | <0.009 | 4 | <0.009 | <0.009 | <0.009 | 4 | | |
| Meclofenamic acid | <0.01 | <0.01 | <0.01 | 3 | <0.01 | <0.01 | <0.01 | 3 | | |
| Metalaxyl-M | <0.004 | <0.004 | <0.004 | 4 | <0.004 | <0.004 | <0.004 | 4 | | |
| Metconazol | <0.005 | <0.005 | <0.005 | 4 | <0.005 | <0.005 | <0.005 | 4 | | |
| Methamphetamine | <0.020 | <0.020 | <0.020 | 4 | <0.020 | <0.020 | <0.020 | 4 | | |
| Methomyl | <0.2 | <0.2 | <0.2 | 4 | <0.2 | <0.2 | <0.2 | 4 | | |
| Methyl t-Butyl Ether (MTBE) | <0.5 | <0.1 | <0.5 | 369 | <0.5 | <0.1 | <0.5 | 369 | (15) | |
| Methyl Triclosan | <0.010 | <0.010 | <0.010 | 3 | <0.010 | <0.010 | <0.010 | 3 | | |
| Methyl-4,6-dinitrophenol (2) | <0.7 | <0.7 | <0.7 | 4 | <0.7 | <0.7 | <0.7 | 4 | | |
| Methylcholanthrene (3) | <0.007 | <0.007 | <0.007 | 4 | <0.007 | <0.007 | <0.007 | 4 | | |
| Methylnaphthalene (1) | <0.006 | <0.006 | <0.006 | 4 | <0.006 | <0.006 | <0.006 | 4 | | |
| Methylnaphthalene (2) | <0.006 | <0.006 | <0.006 | 4 | <0.006 | <0.006 | <0.006 | 4 | | |
| MIBK | <1.0 | <1.0 | <1.0 | 365 | <1.0 | <1.0 | <1.0 | 365 | | |
| Monobromoacetic acid | <1 | <1 | <1 | 12 | <1 | <1 | <1 | 12 | | |
| Monochloroacetic acid | <5 | <5 | <5 | 12 | <5 | <5 | <5 | 12 | | |
| Monuron | <0.004 | <0.004 | <0.004 | 4 | <0.004 | <0.004 | <0.004 | 4 | | |
| N,N-diethyl-m-toluamide | <0.005 | <0.005 | <0.005 | 3 | <0.005 | <0.005 | <0.005 | 3 | | |
| Naphthalene | <0.09 | <0.01 | <0.20 | 12 | <0.09 | <0.01 | <0.20 | 12 | | |
| Napropamide | <0.01 | <0.01 | <0.01 | 4 | <0.01 | <0.01 | <0.01 | 4 | | |
| Naproxen | <0.005 | <0.005 | <0.005 | 3 | <0.005 | <0.005 | <0.005 | 3 | | |
| n-Butylbenzene | <0.1 | <0.1 | <0.1 | 4 | <0.1 | <0.1 | <0.1 | 4 | | |
| Nitrobenzene | <0.2 | <0.2 | <0.2 | 4 | <0.2 | <0.2 | <0.2 | 4 | | |
| Nitrophenol (2) | <0.3 | <0.3 | <0.3 | 4 | <0.3 | <0.3 | <0.3 | 4 | | |
| Nitrophenol (4) | <0.1 | <0.1 | <0.1 | 4 | <0.1 | <0.1 | <0.1 | 4 | | |
| N-Nitroso-di-n-propylamine | <0.2 | <0.2 | <0.2 | 4 | <0.2 | <0.2 | <0.2 | 4 | | |
| N-Nitrosodiphenylamine | <0.1 | <0.1 | <0.1 | 4 | <0.1 | <0.1 | <0.1 | 4 | | |
| Norfloxacin | <0.020 | <0.020 | <0.020 | 4 | <0.020 | <0.020 | <0.020 | 4 | | |
| Norfluoxetine | <0.020 | <0.020 | <0.020 | 4 | <0.020 | <0.020 | <0.020 | 4 | | |
| n-Propylbenzene | <0.02 | <0.02 | <0.02 | 4 | <0.02 | <0.02 | <0.02 | 4 | | |
| Ofloxacin | 0.03 | <0.02 | 0.05 | 4 | <0.02 | <0.02 | 0.02 | 4 | | |
| Oxolinic acid | <0.01 | <0.01 | <0.01 | 4 | <0.01 | <0.01 | <0.01 | 4 | | |
| Oxycarboxin | <0.01 | <0.01 | <0.01 | 4 | <0.01 | <0.01 | <0.01 | 4 | | |
| p, p' - Methoxychlor | <0.01 | <0.01 | <0.01 | 4 | <0.01 | <0.01 | <0.01 | 4 | | |
| Parathion | <0.005 | <0.005 | <0.005 | 4 | <0.005 | <0.005 | <0.005 | 4 | | |
| Pentoxifylline | <0.500 | <0.500 | <0.500 | 4 | <0.500 | <0.500 | <0.500 | 4 | | |
| Perfluorobutane Sulfonate (PFBS) | <0.02 | <0.02 | <0.02 | 4 | <0.02 | <0.02 | <0.02 | 4 | | |
| Perfluorobutanoic acid | <0.02 | <0.02 | <0.02 | 4 | <0.02 | <0.02 | <0.02 | 4 | | |
| Perfluorodecane Sulfonate | <0.02 | <0.02 | <0.02 | 4 | <0.02 | <0.02 | <0.02 | 4 | | |

## 7.7 Treated Water Entering the Distribution System: Physical, Inorganic, and Organic

**2019**

| | ROSSDALE | | | | E.L. SMITH | | | | Limits | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Mean | Min | Max | Count | Mean | Min | Max | Count | *Approval or GCDWQ MAC, (AO or OG) | EPCOR |
| Secondary Organics (ug/L) *** | | | | | | | | | | |
| Perfluorodecanoic Acid (PFDA) | <0.02 | <0.02 | <0.02 | 4 | <0.02 | <0.02 | <0.02 | 4 | | |
| Perfluorododecanoic Acid (PFDoA) | <0.02 | <0.02 | <0.02 | 4 | <0.02 | <0.02 | <0.02 | 4 | | |
| Perfluoroheptane sulfonate | <0.02 | <0.02 | <0.02 | 4 | <0.02 | <0.02 | <0.02 | 4 | | |
| Perfluoroheptanoic Acid (PFHpA) | <0.02 | <0.02 | <0.02 | 4 | <0.02 | <0.02 | <0.02 | 4 | | |
| Perfluorohexane Sulfonate (PFHxS) | <0.02 | <0.02 | <0.02 | 4 | <0.02 | <0.02 | <0.02 | 4 | | |
| Perfluorohexanoic Acid (PFHxA) | <0.02 | <0.02 | <0.02 | 4 | <0.02 | <0.02 | <0.02 | 4 | | |
| Perfluorononanoic Acid (PFNA) | <0.02 | <0.02 | <0.02 | 4 | <0.02 | <0.02 | <0.02 | 4 | | |
| Perfluorooctane Sulfonamide | <0.02 | <0.02 | <0.02 | 4 | <0.02 | <0.02 | <0.02 | 4 | | |
| Perfluoropentanoic Acid (PFPeA) | <0.02 | <0.02 | <0.02 | 4 | <0.02 | <0.02 | <0.02 | 4 | | |
| Perfluorotetradecanoic Acid | <0.02 | <0.02 | <0.02 | 4 | <0.02 | <0.02 | <0.02 | 4 | | |
| Perfluorotridecanoic Acid | <0.02 | <0.02 | <0.02 | 4 | <0.02 | <0.02 | <0.02 | 4 | | |
| Perfluoroundecanoic Acid (PFUnA) | <0.02 | <0.02 | <0.02 | 4 | <0.02 | <0.02 | <0.02 | 4 | | |
| Permethrin | <0.004 | <0.004 | <0.004 | 4 | <0.004 | <0.004 | <0.004 | 4 | | |
| Perylene | <0.01 | <0.01 | <0.01 | 4 | <0.01 | <0.01 | <0.01 | 4 | | |
| Phenanthrene | <0.10 | <0.01 | <0.20 | 8 | <0.10 | <0.01 | <0.20 | 8 | | |
| Phenol | <0.1 | <0.1 | <0.1 | 4 | <0.1 | <0.1 | <0.1 | 4 | | |
| Picoxystrobin | <0.005 | <0.005 | <0.005 | 4 | <0.005 | <0.005 | <0.005 | 4 | | |
| Pipemidic acid | <0.5 | <0.5 | <0.5 | 4 | <0.5 | <0.5 | <0.5 | 4 | | |
| p-Isopropyltoluene | <0.04 | <0.04 | <0.04 | 4 | <0.04 | <0.04 | <0.04 | 4 | | |
| Propiconazole | <0.010 | <0.010 | <0.010 | 4 | <0.010 | <0.010 | <0.010 | 4 | | |
| Prothioconazole | <0.007 | <0.007 | <0.007 | 4 | <0.007 | <0.007 | <0.007 | 4 | | |
| Pyraclostrobin | <0.004 | <0.004 | <0.004 | 4 | <0.004 | <0.004 | <0.004 | 4 | | |
| Pyrene | <0.05 | <0.01 | <0.10 | 8 | <0.05 | <0.01 | <0.10 | 8 | | |
| Pyridaben | <0.010 | <0.010 | <0.010 | 4 | <0.010 | <0.010 | <0.010 | 4 | | |
| Quinclorac | <0.003 | <0.003 | <0.003 | 4 | <0.003 | <0.003 | <0.003 | 4 | | |
| Quizalofop | <0.020 | <0.020 | <0.020 | 4 | <0.020 | <0.020 | <0.020 | 4 | | |
| Retene | <0.01 | <0.01 | <0.01 | 4 | <0.01 | <0.01 | <0.01 | 4 | | |
| Salicylic acid | <0.025 | <0.025 | <0.025 | 3 | <0.025 | <0.025 | <0.025 | 3 | | |
| sec-Butylbenzene | <0.1 | <0.1 | <0.1 | 4 | <0.1 | <0.1 | <0.1 | 4 | | |
| Styrene | <0.49 | <0.02 | <0.50 | 369 | <0.49 | <0.02 | <0.50 | 369 | | |
| Sulfabenzamide | <0.05 | <0.05 | <0.05 | 4 | <0.05 | <0.05 | <0.05 | 4 | | |
| Sulfadimethoxine | <0.05 | <0.05 | <0.05 | 4 | <0.05 | <0.05 | <0.05 | 4 | | |
| Sulfadoxine | <0.05 | <0.05 | <0.05 | 4 | <0.05 | <0.05 | <0.05 | 4 | | |
| Sulfamerazine | <0.05 | <0.05 | <0.05 | 4 | <0.05 | <0.05 | <0.05 | 4 | | |
| Sulfamethazine | <0.05 | <0.05 | <0.05 | 4 | <0.05 | <0.05 | <0.05 | 4 | | |
| Sulfamethoxazole | <0.05 | <0.05 | <0.05 | 4 | <0.05 | <0.05 | <0.05 | 4 | | |
| Sulfapyridine | <0.05 | <0.05 | <0.05 | 4 | <0.05 | <0.05 | <0.05 | 4 | | |
| Sulfaquinoxaline | <0.05 | <0.05 | <0.05 | 4 | <0.05 | <0.05 | <0.05 | 4 | | |
| Sulfathiazole | <0.05 | <0.05 | <0.05 | 4 | <0.05 | <0.05 | <0.05 | 4 | | |
| Tebuconazole | <0.003 | <0.003 | <0.003 | 4 | <0.003 | <0.003 | <0.003 | 4 | | |
| tert-Butylbenzene | <0.1 | <0.1 | <0.1 | 4 | <0.1 | <0.1 | <0.1 | 4 | | |
| Tetrachloroethane (1,1,1,2) | <0.05 | <0.05 | <0.05 | 4 | <0.05 | <0.05 | <0.05 | 4 | | |
| Tetrachloroethane (1,1,2,2) | <1.0 | <0.1 | <1.0 | 369 | <1.0 | <0.1 | <1.0 | 369 | | |
| Thiamethoxam | <0.02 | <0.02 | <0.02 | 4 | <0.02 | <0.02 | <0.02 | 4 | | |
| Tolfenamic acid | <0.005 | <0.005 | <0.005 | 3 | <0.005 | <0.005 | <0.005 | 3 | | |
| Total Organic Carbon | 2.1 | 1.3 | 3.4 | 52 | 1.9 | 1.2 | 3.1 | 52 | | |

## 7.7 Treated Water Entering the Distribution System: Physical, Inorganic, and Organic

## 2019

| | ROSSDALE | | | | E.L. SMITH | | | | Limits | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Mean | Min | Max | Count | Mean | Min | Max | Count | *Approval or GCDWQ MAC, (AO or OG) | EPCOR |
| Secondary Organics (ug/L) *** | | | | | | | | | | |
| Total Volatile Organics (NonTHM) | <1.0 | <1.0 | <1.0 | 365 | <1.0 | <1.0 | <1.0 | 365 | | |
| Total Volatile Organics (Unknown) | <1.0 | <1.0 | <1.0 | 365 | <1.0 | <1.0 | <1.0 | 365 | | |
| Triallate | <0.002 | <0.002 | <0.002 | 4 | <0.002 | <0.002 | <0.002 | 4 | | |
| Trichloroacetic acid | 12 | 7 | 17 | 12 | 9 | 5 | 12 | 12 | | |
| Trichlorobenzene (1,2,3) | <0.05 | <0.05 | <0.05 | 4 | <0.05 | <0.05 | <0.05 | 4 | | |
| Trichlorobenzene (1,2,4) | <0.5 | <0.1 | <0.5 | 373 | <0.5 | <0.1 | <0.5 | 373 | | |
| Trichlorocarbanilide (3,4,4) | <0.025 | <0.025 | <0.025 | 3 | <0.025 | <0.025 | <0.025 | 3 | | |
| Trichloroethane (1,1,1) | <0.5 | <0.1 | <0.5 | 369 | <0.5 | <0.1 | <0.5 | 369 | | |
| Trichloroethane (1,1,2) | <0.06 | <0.06 | <0.06 | 4 | <0.06 | <0.06 | <0.06 | 4 | | |
| Trichlorofluoromethane | <0.09 | <0.09 | <0.09 | 4 | <0.09 | <0.09 | <0.09 | 4 | | |
| Trichloropropane (1,2,3) | <0.04 | <0.04 | <0.04 | 4 | <0.04 | <0.04 | <0.04 | 4 | | |
| Triclopyr | <0.002 | <0.002 | <0.002 | 4 | <0.002 | <0.002 | <0.002 | 4 | | |
| Triclosan | <0.025 | <0.025 | <0.025 | 3 | <0.025 | <0.025 | <0.025 | 3 | | |
| Trifloxystrobin | <0.004 | <0.004 | <0.004 | 4 | <0.004 | <0.004 | <0.004 | 4 | | |
| Trimethoprim | <0.020 | <0.020 | <0.020 | 4 | <0.020 | <0.020 | <0.020 | 4 | | |
| Trimethylbenzene (1,2,4) | <0.04 | <0.04 | <0.04 | 4 | <0.04 | <0.04 | <0.04 | 4 | | |
| Trimethylbenzene (1,3,5) | <0.04 | <0.04 | <0.04 | 4 | <0.04 | <0.04 | <0.04 | 4 | | |
| Triticonazole | <0.020 | <0.020 | <0.020 | 4 | <0.020 | <0.020 | <0.020 | 4 | | |
| Vinclozolin | <0.003 | <0.003 | <0.003 | 4 | <0.003 | <0.003 | <0.003 | 4 | | |
| Xylene (1,2) | <0.5 | <0.5 | <0.5 | 365 | <0.5 | <0.5 | <0.5 | 365 | | |
| Xylene (1,4) | <0.5 | <0.5 | <0.5 | 365 | <0.5 | <0.5 | <0.5 | 365 | | |
| Xylene (m,p) | <0.1 | <0.1 | <0.1 | 4 | <0.1 | <0.1 | <0.1 | 4 | | |
| Xylene (o) | <0.06 | <0.06 | <0.06 | 4 | <0.06 | <0.06 | <0.06 | 4 | | |

## 7.8 ROSSDALE AND E.L. SMITH TREATED WATER ENTERING PLANT RESERVOIR

### 2019

| | ROSSDALE | | | | E.L. SMITH | | | | Limits | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Mean | Min | Max | Count | Mean | Min | Max | Count | *Approval or GCDWQ MAC, (AO or OG) | EPCOR |
| **Physical** | | | | | | | | | | |
| Turbidity (NTU) | 0.05 | 0.03 | 0.11 | 364 | 0.05 | 0.03 | 0.16 | 365 | | 0.3 |
| UV 254 %T | <93.1 | <88.7 | <97.0 | 365 | <93.7 | <89.6 | <96.7 | 365 | | |
| **Primary Inorganics (mg/L) **** | | | | | | | | | | |
| Bromate Dissolved | <0.005 | <0.003 | <0.005 | 105 | <0.005 | <0.003 | <0.005 | 105 | 0.01 | |
| Chlorate Dissolved | 0.114 | <0.030 | 0.254 | 105 | <0.057 | <0.020 | 0.189 | 105 | 1 | |
| Chlorite Dissolved | <0.007 | <0.005 | <0.200 | 105 | <0.007 | <0.005 | <0.200 | 105 | 1 | |
| Nitrate (as N) Dissolved | 0.053 | <0.010 | 0.295 | 105 | 0.049 | <0.010 | 0.236 | 105 | 10 | |
| Nitrite (as N) Dissolved | <0.009 | <0.005 | <0.010 | 105 | <0.009 | <0.005 | <0.010 | 105 | 1 | |
| **Primary Organics (ug/L) **** | | | | | | | | | | |
| Benzene | <0.5 | <0.5 | <0.5 | 364 | <0.5 | <0.5 | <0.5 | 365 | 5 | |
| Carbon Tetrachloride | <1.0 | <1.0 | <1.0 | 364 | <1.0 | <1.0 | <1.0 | 365 | 2 | |
| Chlorobenzene | <0.50 | <0.50 | <0.50 | 364 | <0.50 | <0.50 | <0.50 | 365 | 80 (30) | |
| Dichlorobenzene (1,2) | <0.50 | <0.50 | <0.50 | 364 | <0.50 | <0.50 | <0.50 | 365 | 200 (3) | |
| Dichlorobenzene (1,4) | <0.5 | <0.5 | <0.5 | 364 | <0.5 | <0.5 | <0.5 | 365 | 5 (1) | |
| Dichloroethylene (1,1) | <3.0 | <3.0 | <3.0 | 364 | <3.0 | <3.0 | <3.0 | 365 | 14 | |
| Ethylbenzene | <0.50 | <0.50 | <0.50 | 364 | <0.50 | <0.50 | <0.50 | 365 | 140 (1.6) | |
| Methylene Chloride | <0.5 | <0.5 | <0.5 | 364 | <0.5 | <0.5 | <0.5 | 365 | 50 | |
| Tetrachloroethylene | <0.5 | <0.5 | <0.5 | 364 | <0.5 | <0.5 | <0.5 | 365 | 10 | |
| Toluene | <0.50 | <0.50 | <0.50 | 364 | <0.50 | <0.50 | <0.50 | 365 | 60 (24) | |
| Trichloroethylene | <0.50 | <0.50 | <0.50 | 364 | <0.50 | <0.50 | <0.50 | 365 | 5 | |
| Trihalomethanes | 15.7 | 4.7 | 35.0 | 364 | 10.6 | 3.7 | 22.4 | 365 | 100 | 50 |
| **Secondary Inorganics (mg/L) ***** | | | | | | | | | | |
| Ammonia as N | 0.11 | 0.11 | 0.11 | 1 | 0.15 | 0.15 | 0.15 | 1 | | |
| Ammonia as NH3 | 0.12 | 0.06 | 0.27 | 75 | 0.15 | 0.06 | 0.29 | 74 | | |
| Bromide Dissolved | <0.010 | <0.005 | <0.050 | 105 | <0.010 | <0.005 | <0.050 | 105 | | |
| Chloride Dissolved | 7 | 3 | 52 | 105 | 5 | 3 | 13 | 105 | (250) | |
| Sulphate Dissolved | 71 | 51 | 114 | 105 | 77 | 54 | 128 | 105 | (500) | |

## 7.8 ROSSDALE AND E.L. SMITH TREATED WATER ENTERING PLANT RESERVOIR

**2019**

| | ROSSDALE | | | | E.L. SMITH | | | | Limits | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Mean | Min | Max | Count | Mean | Min | Max | Count | *Approval or GCDWQ MAC, (AO or OG) | EPCOR |
| Secondary Organics (ug/L) *** | | | | | | | | | | |
| Bromodichloromethane | <0.5 | <0.5 | 2.0 | 364 | <0.5 | <0.5 | <0.5 | 365 | | 16 |
| Bromoform | <1.0 | <1.0 | <1.0 | 364 | <1.0 | <1.0 | <1.0 | 365 | | |
| Chloroform | 15.7 | 4.7 | 33.4 | 364 | 10.6 | 3.7 | 22.4 | 365 | | |
| Dibromochloromethane | <0.50 | <0.50 | <0.50 | 364 | <0.50 | <0.50 | <0.50 | 365 | | |
| Dichlorobenzene (1,3) | <0.50 | <0.50 | <0.50 | 364 | <0.50 | <0.50 | <0.50 | 365 | | |
| Dichloroethylene, cis (1,2) | <0.50 | <0.50 | <0.50 | 364 | <0.50 | <0.50 | <0.50 | 365 | | |
| Dichloroethylene, trans (1,2) | <0.50 | <0.50 | <0.50 | 364 | <0.50 | <0.50 | <0.50 | 365 | | |
| Dichloropropane (1,2) | <0.5 | <0.5 | <0.5 | 364 | <0.5 | <0.5 | <0.5 | 365 | | |
| Methyl t-Butyl Ether (MTBE) | <0.5 | <0.5 | <0.5 | 364 | <0.5 | <0.5 | <0.5 | 365 | (15) | |
| MIBK | <1.0 | <1.0 | <1.0 | 364 | <1.0 | <1.0 | <1.0 | 365 | | |
| Styrene | <0.50 | <0.50 | <0.50 | 364 | <0.50 | <0.50 | <0.50 | 365 | | |
| Tetrachloroethane (1,1,2,2) | <1.0 | <1.0 | <1.0 | 364 | <1.0 | <1.0 | <1.0 | 365 | | |
| Total Volatile Organics (NonTHM) | <1.0 | <1.0 | <1.0 | 364 | <1.0 | <1.0 | <1.0 | 365 | | |
| Total Volatile Organics (Unknown) | <1.0 | <1.0 | <1.0 | 364 | <1.0 | <1.0 | <1.0 | 365 | | |
| Trichlorobenzene (1,2,4) | <0.5 | <0.5 | <0.5 | 364 | <0.5 | <0.5 | <0.5 | 365 | | |
| Trichloroethane (1,1,1) | <0.5 | <0.5 | <0.5 | 364 | <0.5 | <0.5 | <0.5 | 365 | | |
| Xylene (1,2) | <0.5 | <0.5 | <0.5 | 364 | <0.5 | <0.5 | <0.5 | 365 | | |
| Xylene (1,4) | <0.5 | <0.5 | <0.5 | 364 | <0.5 | <0.5 | <0.5 | 365 | | |

## 7.9 Routine Distribution System

2019

| | YTD | | | | Limits | |
|---|---|---|---|---|---|---|
| | Mean | Min | Max | Count | *Approval or GCDWQ MAC, (AO or OG) | EPCOR |
| **Physical** | | | | | | |
| Colour (TCU) | 1.1 | 0.8 | 1.4 | 4 | (15) | 10 |
| pH (N/A) | 7.9 | 7.7 | 8.1 | 106 | (7.0 - 10.5) | 7.3 - 8.3 |
| Total Dissolved Solids (mg/L) | 244 | 207 | 282 | 4 | (500) | |
| Turbidity (NTU) | 0.14 | 0.03 | 5.05 | 1999 | | 1.0 |
| UV 254 %T | <92.3 | <90.6 | <94.3 | 4 | | |
| **Primary Inorganics (mg/L) **** | | | | | | |
| Antimony | <0.0002 | <0.0002 | <0.0002 | 4 | 0.006 | |
| Arsenic | <0.0002 | <0.0002 | <0.0002 | 4 | 0.01 | |
| Barium | 0.067 | 0.057 | 0.079 | 4 | 2 | |
| Boron | 0.025 | 0.008 | 0.069 | 4 | 5 | |
| Bromate Dissolved | <0.005 | <0.005 | <0.005 | 212 | 0.01 | |
| Cadmium | <0.0002 | <0.0002 | <0.0002 | 4 | 0.005 | |
| Chlorate Dissolved | 0.072 | <0.005 | 0.163 | 212 | 1 | |
| Chlorine, total | 1.70 | 0.60 | 2.30 | 1999 | >0.5 and <3.0 | >1.0 and <2.4 |
| Chlorite Dissolved | <0.005 | <0.005 | <0.005 | 212 | 1 | |
| Chromium | <0.0002 | <0.0002 | <0.0002 | 4 | 0.05 | |
| Copper | 0.007 | <0.005 | 0.011 | 4 | (1) | |
| Cyanide Dissolved | <0.002 | <0.002 | <0.002 | 4 | 0.2 | |
| Fluoride | 0.65 | 0.63 | 0.66 | 4 | 1.5 | 0.6 - 0.8 |
| Lead | <0.0002 | <0.0002 | <0.0002 | 4 | 0.005 | |
| Mercury | <0.0001 | <Inoff | <0.0002 | 8 | 0.001 | |
| Nitrate (as N) Dissolved | 0.065 | <0.005 | 0.314 | 212 | 10 | |
| Nitrite (as N) Dissolved | <0.010 | <0.005 | 0.022 | 212 | 1 | |
| Selenium | 0.0002 | <0.0002 | 0.0003 | 4 | 0.05 | |
| Uranium | <0.0005 | <0.0005 | <0.0005 | 4 | 0.02 | |

## 7.9 Routine Distribution System

2019

| | YTD | | | | Limits | |
|---|---|---|---|---|---|---|
| | Mean | Min | Max | Count | *Approval or GCDWQ MAC, (AO or OG) | EPCOR |
| **Primary Organics (ug/L) **** | | | | | | |
| 2,4-D | 0.008 | <0.007 | 0.012 | 4 | 100 | |
| Atrazine | <0.002 | <0.002 | <0.002 | 4 | 5 | |
| Benzene | <0.48 | <0.05 | <0.50 | 110 | 5 | |
| Benzo(a)pyrene | <0.005 | <0.005 | <0.005 | 4 | 0.04 | |
| Bromoxynil | <0.026 | <0.026 | <0.026 | 4 | 5 | |
| Carbon Tetrachloride | <0.97 | <0.07 | <1.00 | 110 | 2 | |
| Chlorobenzene | <0.48 | <0.03 | <0.50 | 110 | 80 (30) | |
| Chlorpyrifos | <0.002 | <0.002 | <0.002 | 4 | 90 | |
| Cyanazine | <0.012 | <0.012 | <0.012 | 4 | | |
| Diazinon | <0.004 | <0.004 | <0.004 | 4 | 20 | |
| Dicamba | <0.002 | <0.002 | <0.002 | 4 | 120 | |
| Dichlorobenzene (1,2) | <0.48 | <0.03 | <0.50 | 110 | 200 (3) | |
| Dichlorobenzene (1,4) | <0.48 | <0.05 | <0.50 | 110 | 5 (1) | |
| Dichloroethane (1,2) | <0.05 | <0.05 | <0.05 | 4 | 5 | |
| Dichloroethylene (1,1) | <3.0 | <3.0 | <3.0 | 106 | 14 | |
| Dichlorophenol (2,4) | <0.10 | <0.10 | <0.10 | 4 | 900 (0.3) | |
| Diclofop-methyl | <0.01 | <0.01 | <0.01 | 4 | 9 | |
| Dimethoate | <0.005 | <0.005 | <0.005 | 4 | 20 | |
| Diuron | <0.2 | <0.2 | <0.2 | 4 | 150 | |
| Ethylbenzene | <0.48 | <0.02 | <0.50 | 110 | 140 (1.6) | |
| Glyphosate | <7.6 | <0.1 | <20.0 | 4 | 280 | |
| Malathion | <0.030 | <0.030 | <0.030 | 4 | 190 | |
| MCPA | <0.010 | <0.010 | <0.010 | 4 | 100 | |
| Methylene Chloride | <0.5 | <0.1 | <0.5 | 110 | 50 | |
| Metolachlor | <0.007 | <0.007 | <0.007 | 4 | 50 | |
| Metribuzin | <0.002 | <0.002 | <0.002 | 4 | 80 | |
| Microcystin | 0.11 | <0.10 | 0.13 | 7 | 1.5 | |
| Nitrilotriacetic acid | <0.15 | <0.05 | <0.20 | 3 | 0.4 | |
| Pentachlorophenol | <0.6 | <0.6 | <0.6 | 4 | 60 (30) | |
| Perfluoro-n-Octanoic Acid (PFOA) | <0.02 | <0.02 | <0.02 | 4 | 0.2 | |
| Perfluorooctane Sulfonate (PFOS) | <0.02 | <0.02 | <0.02 | 4 | 0.6 | |
| Picloram | <0.012 | <0.012 | <0.012 | 4 | 190 | |
| Simazine | <0.004 | <0.004 | <0.004 | 4 | 10 | |
| Terbufos | <0.01 | <0.01 | <0.01 | 4 | 1 | |
| Tetrachloroethylene | <0.48 | <0.06 | <0.50 | 110 | 10 | |
| Tetrachlorophenol (2,3,4,6) | <0.4 | <0.4 | <0.4 | 4 | 100 (1) | |
| Toluene | <0.48 | <0.03 | <0.50 | 110 | 60 (24) | |
| Trichloroethylene | <0.48 | <0.03 | <0.50 | 110 | 5 | |
| Trichlorophenol (2,4,6) | <0.7 | <0.7 | <0.7 | 4 | 5 (2) | |
| Trifluralin | <0.002 | <0.002 | <0.002 | 4 | 45 | |
| Vinyl Chloride | <0.06 | <0.06 | <0.06 | 4 | 2 | |
| Xylenes | <0.06 | <0.06 | <0.06 | 4 | 90 (20) | |

## 7.9 Routine Distribution System

2019

| | YTD | | | | Limits | |
|---|---|---|---|---|---|---|
| | Mean | Min | Max | Count | *Approval or GCDWQ MAC, (AO or OG) | EPCOR |
| **Secondary Inorganics (mg/L) *** ** | | | | | | |
| Alkalinity Total | 113 | 88 | 129 | 4 | | |
| Alkalinity, PHP (mg CaCO3/L) | <1 | <1 | <1 | 4 | | |
| Aluminum | 0.045 | 0.028 | 0.076 | 4 | (0.1/0.2) | 0.1/0.2 |
| Ammonia as N | 0.15 | 0.10 | 0.30 | 105 | | |
| Beryllium | <0.0002 | <0.0002 | <0.0002 | 4 | | |
| Bromide Dissolved | <0.010 | <0.005 | <0.010 | 212 | | |
| Calcium | 43.8 | 35.6 | 47.1 | 4 | | |
| Chloride Dissolved | 5.9 | 0.1 | 15.3 | 212 | (250) | |
| Chlorine Free | <0.030 | <0.030 | <0.030 | 4 | | |
| Cobalt | <0.0002 | <0.0002 | <0.0002 | 4 | | |
| Hardness, Total (mg CaCO3/L) | 160 | 126 | 175 | 4 | | |
| Iron | <0.005 | <0.005 | <0.005 | 4 | (0.3) | 0.3 |
| Lanthanum | <0.001 | <0.001 | <0.001 | 2 | | |
| Lithium | 0.0030 | 0.0025 | 0.0037 | 4 | | |
| Magnesium | 12.5 | 9.6 | 14.5 | 4 | | |
| Manganese | 0.005 | <0.002 | 0.009 | 4 | 0.12 (0.02) | |
| Molybdenum | 0.0007 | 0.0006 | 0.0008 | 4 | | |
| Nickel | 0.0006 | <0.0005 | 0.0008 | 4 | | |
| Phosphorus | 0.03 | <0.02 | 0.05 | 4 | | |
| Potassium | 2.13 | 0.70 | 6.10 | 4 | | |
| Silicon | 2.15 | 1.86 | 2.59 | 4 | | |
| Silver | <0.0002 | <0.0002 | <0.0002 | 4 | | |
| Sodium | 19.1 | 5.6 | 32.1 | 4 | (200) | |
| Strontium | 0.363 | 0.289 | 0.429 | 4 | 7 | |
| Sulphate Dissolved | 73 | 3 | 117 | 212 | (500) | |
| Sulphide | <0.002 | <0.002 | <0.002 | 4 | (0.05) | |
| Thallium | <0.0005 | <0.0005 | <0.0005 | 4 | | |
| Tin | <0.0005 | <0.0005 | <0.0005 | 4 | | |
| Titanium | <0.0005 | <0.0005 | <0.0005 | 4 | | |
| Total Kjeldahl Nitrogen | 0.56 | 0.49 | 0.63 | 4 | | |
| Vanadium | <0.0005 | <0.0005 | <0.0005 | 4 | | |
| Zinc | <0.005 | <0.005 | <0.005 | 4 | (5.0) | |
| Zirconium | <0.0009 | <0.0005 | <0.0010 | 4 | | |

## 7.9 Routine Distribution System

2019

| | YTD | | | | Limits | |
|---|---|---|---|---|---|---|
| | Mean | Min | Max | Count | *Approval or GCDWQ MAC, (AO or OG) | EPCOR |
| **Secondary Organics (ug/L) *** ** | | | | | | |
| Bromochloroacetic acid | <1 | <1 | <1 | 4 | | |
| Bromodichloromethane | <0.5 | <0.5 | <0.5 | 106 | | 16 |
| Bromoform | <1.0 | <1.0 | <1.0 | 106 | | |
| Chloroform | 18.3 | 7.8 | 38.4 | 106 | | |
| Desethyl Atrazine | <0.019 | <0.019 | <0.019 | 4 | | |
| Desisopropyl Atrazine | <0.018 | <0.018 | <0.018 | 4 | | |
| Dibromoacetic acid | <1 | <1 | <1 | 4 | | |
| Dibromochloromethane | <0.50 | <0.50 | <0.50 | 106 | | |
| Dichloroacetic acid | 11 | 8 | 14 | 4 | | |
| Dichlorobenzene (1,3) | <0.50 | <0.50 | <0.50 | 106 | | |
| Dichloroethylene, cis (1,2) | <0.50 | <0.50 | <0.50 | 106 | | |
| Dichloroethylene, trans (1,2) | <0.50 | <0.50 | <0.50 | 106 | | |
| Dichloropropane (1,2) | <0.5 | <0.5 | <0.5 | 106 | | |
| Methyl t-Butyl Ether (MTBE) | <0.5 | <0.5 | <0.5 | 106 | (15) | |
| MIBK | <1.0 | <1.0 | <1.0 | 106 | | |
| Monobromoacetic acid | <1 | <1 | <1 | 4 | | |
| Monochloroacetic acid | <5 | <5 | <5 | 4 | | |
| p, p' - Methoxychlor | <0.01 | <0.01 | <0.01 | 4 | | |
| Perfluorobutane Sulfonate (PFBS) | <0.02 | <0.02 | <0.02 | 4 | | |
| Perfluorobutanoic acid | 0.02 | <0.02 | 0.02 | 4 | | |
| Perfluorodecane Sulfonate | <0.02 | <0.02 | <0.02 | 4 | | |
| Perfluorodecanoic Acid (PFDA) | <0.02 | <0.02 | <0.02 | 4 | | |
| Perfluorododecanoic Acid (PFDoA) | <0.02 | <0.02 | <0.02 | 4 | | |
| Perfluoroheptane sulfonate | <0.02 | <0.02 | <0.02 | 4 | | |
| Perfluoroheptanoic Acid (PFHpA) | <0.02 | <0.02 | <0.02 | 4 | | |
| Perfluorohexane Sulfonate (PFHxS) | <0.02 | <0.02 | <0.02 | 4 | | |
| Perfluorohexanoic Acid (PFHxA) | <0.02 | <0.02 | <0.02 | 4 | | |
| Perfluorononanoic Acid (PFNA) | <0.02 | <0.02 | <0.02 | 4 | | |
| Perfluorooctane Sulfonamide | <0.02 | <0.02 | <0.02 | 4 | | |
| Perfluoropentanoic Acid (PFPeA) | <0.02 | <0.02 | <0.02 | 4 | | |
| Perfluorotetradecanoic Acid | <0.02 | <0.02 | <0.02 | 4 | | |
| Perfluorotridecanoic Acid | <0.02 | <0.02 | <0.02 | 4 | | |
| Perfluoroundecanoic Acid (PFUnA) | <0.02 | <0.02 | <0.02 | 4 | | |
| Styrene | <0.50 | <0.50 | <0.50 | 106 | | |
| Tetrachloroethane (1,1,2,2) | <1.0 | <1.0 | <1.0 | 106 | | |
| Total Organic Carbon | 1.9 | 1.1 | 2.6 | 4 | | |
| Total Volatile Organics (NonTHM) | <1.0 | <1.0 | <1.0 | 106 | | |
| Total Volatile Organics (Unknown) | <1.0 | <1.0 | <1.0 | 106 | | |
| Triallate | <0.002 | <0.002 | <0.002 | 4 | | |
| Trichloroacetic acid | 9 | 8 | 10 | 4 | | |
| Trichlorobenzene (1,2,4) | <0.5 | <0.5 | <0.5 | 106 | | |
| Trichloroethane (1,1,1) | <0.5 | <0.5 | <0.5 | 106 | | |
| Xylene (1,2) | <0.5 | <0.5 | <0.5 | 106 | | |

## 7.9 Routine Distribution System

2019

| | YTD | | | | Limits | |
|---|---|---|---|---|---|---|
| | Mean | Min | Max | Count | *Approval or GCDWQ MAC, (AO or OG) | EPCOR |
| **Secondary Organics (ug/L) *** ** | | | | | | |
| Xylene (1,4) | <0.5 | <0.5 | <0.5 | 106 | | |
| Xylene (m,p) | <0.07 | <0.07 | <0.07 | 4 | | |
| Xylene (o) | <0.06 | <0.06 | <0.06 | 4 | | |

Approval:

Schedule 4 - 2 grab samples - Dec to Feb (Winter) - Sampled Jan 7
- June to Aug (Summer) - Sampled July 8
- extra samples Apr 1, Oct 7

Microcystin - 1 sample Aug 1 to Aug 16 - Sampled Aug 12
- 1 sample Sept 1 to Sept 16 - Sampled Sept 9
- extra samples Jan 7, Apr 4, July 8, Aug 26, Oct 7

All other samples collected at various times during the year.

* Health Canada Guidelines for Canadian Drinking Water Quality Maximum Acceptable Concentration and Alberta Environment and Parks (AEP) Approval Limit. Limits in brackets indicate aesthetic objective or operational guidelines.

** Primary Parameters are those that have Maximum Acceptable Concentration (MAC) in Health Canada's Guidelines for Canadian Drinking Water Quality (GCDWQ).

*** Secondary Parameters do not have health based limits in Health Canada's Guidelines for Canadian Drinking Water Quality (GCDWQ).

## 7.10 Castledowns, Clareview and Kaskitayo Reservoirs
## 2019

| Parameter | Castledowns | | | | Clareview | | | | Kaskitayo | | | | Limits | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Mean | Min | Max | Count | Mean | Min | Max | Count | Mean | Min | Max | Count | *Approval or GCDWQ MAC, (AO or OG) | EPCOR |
| **Physical** | | | | | | | | | | | | | | |
| Colour (TCU) | 1.1 | 0.9 | 1.3 | 6 | 1.1 | 0.6 | 1.8 | 7 | 1.1 | 0.8 | 1.7 | 7 | (15) | 10 |
| Conductivity (uS/cm) | 418 | 378 | 499 | 6 | 393 | 373 | 449 | 7 | 403 | 377 | 482 | 7 | | |
| Odour | Inoff | Inoff | Inoff | 6 | Inoff | Inoff | Inoff | 7 | Inoff | Inoff | Inoff | 7 | | |
| pH (N/A) | 7.9 | 7.8 | 8.0 | 6 | 7.9 | 7.8 | 7.9 | 7 | 7.9 | 7.8 | 7.9 | 7 | (7.0 - 10.5) | 7.3 - 8.3 |
| Turbidity (NTU) | 0.06 | 0.04 | 0.14 | 52 | 0.12 | 0.04 | 0.20 | 53 | 0.09 | 0.03 | 1.65 | 53 | | 1 |
| **Primary Inorganics (mg/L) **** | | | | | | | | | | | | | | |
| Antimony | <0.0002 | <0.0002 | <0.0002 | 6 | <0.0007 | <0.0002 | <0.0040 | 8 | <0.0006 | <0.0002 | <0.0040 | 8 | 0.006 | |
| Arsenic | <0.0002 | <0.0002 | 0.0003 | 6 | <0.0008 | <0.0002 | <0.0050 | 8 | <0.0008 | <0.0002 | <0.0050 | 8 | 0.01 | |
| Barium | 0.068 | 0.057 | 0.083 | 6 | 0.065 | 0.054 | 0.081 | 8 | 0.065 | 0.052 | 0.082 | 8 | 2 | |
| Boron | 0.020 | 0.008 | 0.056 | 6 | 0.011 | 0.008 | 0.013 | 8 | 0.014 | 0.008 | 0.043 | 8 | 5 | |
| Bromate Dissolved | <0.005 | <0.005 | <0.005 | 12 | <0.005 | <0.005 | <0.005 | 14 | <0.005 | <0.005 | <0.005 | 14 | 0.01 | |
| Cadmium | <0.0002 | <0.0002 | <0.0002 | 6 | <0.0003 | <0.0002 | 0.0010 | 8 | <0.0003 | <0.0002 | 0.0010 | 8 | 0.005 | |
| Chlorate Dissolved | 0.057 | 0.050 | 0.062 | 12 | 0.104 | 0.056 | 0.130 | 14 | 0.059 | 0.040 | 0.088 | 14 | 1 | |
| Chlorine, total | 1.77 | 1.40 | 2.08 | 52 | 1.72 | 1.24 | 2.14 | 53 | 1.81 | 0.60 | 2.04 | 53 | >0.5 and <3.0 | >1.0 and <2.4 |
| Chlorite Dissolved | <0.005 | <0.005 | <0.005 | 12 | <0.005 | <0.005 | <0.005 | 14 | <0.005 | <0.005 | <0.005 | 14 | 1 | |
| Chromium | <0.0002 | <0.0002 | <0.0002 | 6 | <0.0003 | <0.0002 | <0.0010 | 8 | <0.0003 | <0.0002 | <0.0010 | 8 | 0.05 | |
| Copper | <0.005 | <0.005 | <0.005 | 6 | <0.005 | <0.005 | <0.005 | 8 | <0.005 | <0.005 | <0.005 | 8 | (1) | |
| Fluoride | 0.48 | 0.08 | 0.72 | 6 | 0.59 | 0.08 | 0.70 | 7 | 0.61 | 0.09 | 0.78 | 7 | 1.5 | 0.6 - 0.8 |
| Lead | <0.0002 | <0.0002 | <0.0002 | 6 | <0.0006 | <0.0002 | <0.0030 | 8 | <0.0005 | <0.0002 | <0.0030 | 8 | 0.005 | |
| Manganese | 0.005 | <0.002 | 0.011 | 6 | <0.002 | <0.002 | 0.003 | 8 | <0.006 | <0.002 | 0.015 | 8 | 0.12 (0.02) | |
| Mercury | <0.0002 | <0.0002 | <0.0002 | 6 | <0.0002 | <0.0002 | <0.0002 | 7 | <0.0002 | <0.0002 | <0.0002 | 7 | 0.001 | |
| Nitrate (as N) Dissolved | 0.083 | 0.010 | 0.280 | 12 | 0.041 | 0.010 | 0.088 | 14 | 0.073 | 0.010 | 0.263 | 14 | 10 | |
| Nitrite (as N) Dissolved | <0.010 | <0.010 | <0.010 | 12 | <0.009 | <0.005 | <0.010 | 14 | <0.009 | <0.005 | <0.010 | 14 | 1 | |
| Selenium | <0.0002 | <0.0002 | 0.0002 | 6 | <0.0011 | <0.0002 | <0.0070 | 8 | <0.0010 | <0.0002 | <0.0070 | 8 | 0.05 | |
| Uranium | <0.0005 | <0.0005 | <0.0005 | 6 | <0.0019 | <0.0005 | 0.0120 | 8 | <0.0016 | <0.0005 | 0.0100 | 8 | 0.02 | |
| **Primary Organics (ug/L) **** | | | | | | | | | | | | | | |
| Benzene | <0.5 | <0.5 | <0.5 | 7 | <0.5 | <0.5 | <0.5 | 7 | <0.5 | <0.5 | <0.5 | 7 | 5 | |
| Carbon Tetrachloride | <1.0 | <1.0 | <1.0 | 7 | <1.0 | <1.0 | <1.0 | 7 | <1.0 | <1.0 | <1.0 | 7 | 2 | |
| Chlorobenzene | <0.50 | <0.50 | <0.50 | 7 | <0.50 | <0.50 | <0.50 | 7 | <0.50 | <0.50 | <0.50 | 7 | 80 (30) | |
| Dichlorobenzene (1,2) | <0.50 | <0.50 | <0.50 | 7 | <0.50 | <0.50 | <0.50 | 7 | <0.50 | <0.50 | <0.50 | 7 | 200 (3) | |
| Dichlorobenzene (1,4) | <0.5 | <0.5 | <0.5 | 7 | <0.5 | <0.5 | <0.5 | 7 | <0.5 | <0.5 | <0.5 | 7 | 5 (1) | |
| Dichloroethylene (1,1) | <3.0 | <3.0 | <3.0 | 7 | <3.0 | <3.0 | <3.0 | 7 | <3.0 | <3.0 | <3.0 | 7 | 14 | |
| Ethylbenzene | <0.50 | <0.50 | <0.50 | 7 | <0.50 | <0.50 | <0.50 | 7 | <0.50 | <0.50 | <0.50 | 7 | 140 (1.6) | |
| Methylene Chloride | <0.5 | <0.5 | <0.5 | 7 | <0.5 | <0.5 | <0.5 | 7 | <0.5 | <0.5 | <0.5 | 7 | 50 | |
| Tetrachloroethylene | <0.5 | <0.5 | <0.5 | 7 | <0.5 | <0.5 | <0.5 | 7 | <0.5 | <0.5 | <0.5 | 7 | 10 | |
| Toluene | <0.50 | <0.50 | <0.50 | 7 | <0.50 | <0.50 | <0.50 | 7 | <0.50 | <0.50 | <0.50 | 7 | 60 (24) | |
| Trichloroethylene | <0.50 | <0.50 | <0.50 | 7 | <0.50 | <0.50 | <0.50 | 7 | <0.50 | <0.50 | <0.50 | 7 | 5 | |

## 7.10 Castledowns, Clareview and Kaskitayo Reservoirs
## 2019

| Parameter | Castledowns | | | | Clareview | | | | Kaskitayo | | | | Limits | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Mean | Min | Max | Count | Mean | Min | Max | Count | Mean | Min | Max | Count | *Approval or GCDWQ MAC, (AO or OG) | EPCOR |
| **Secondary Inorganics (mg/L) ***** | | | | | | | | | | | | | | |
| Alkalinity Total | 118 | 88 | 137 | 6 | 121 | 106 | 138 | 7 | 118 | 88 | 138 | 7 | | |
| Aluminum | 0.041 | 0.025 | 0.083 | 6 | 0.037 | 0.026 | 0.057 | 8 | 0.031 | 0.014 | 0.070 | 8 | (0.1/0.2) | 0.1/0.2 |
| Beryllium | <0.0002 | <0.0002 | <0.0002 | 6 | <0.0003 | <0.0002 | <0.0010 | 8 | <0.0003 | <0.0002 | <0.0010 | 8 | | |
| Bromide Dissolved | <0.010 | <0.010 | <0.010 | 12 | <0.009 | <0.005 | <0.010 | 14 | <0.009 | <0.005 | <0.010 | 14 | | |
| Calcium | 45.1 | 34.0 | 52.7 | 6 | 47.1 | 44.5 | 50.1 | 8 | 45.3 | 32.8 | 48.9 | 8 | | |
| Calcium Hardness | 109 | 84 | 118 | 6 | 115 | 109 | 125 | 7 | 111 | 84 | 125 | 7 | | |
| Chloride Dissolved | 6.4 | 4.8 | 10.8 | 12 | 5.5 | 4.2 | 6.5 | 14 | 5.6 | 3.5 | 10.2 | 14 | (250) | |
| Cobalt | <0.0002 | <0.0002 | <0.0002 | 6 | <0.0003 | <0.0002 | <0.0010 | 8 | <0.0003 | <0.0002 | <0.0010 | 8 | | |
| Hardness, Total (mg CaCO3/L) | 166 | 123 | 188 | 6 | 172 | 165 | 187 | 7 | 166 | 122 | 189 | 7 | | |
| Iron | <0.005 | <0.005 | <0.005 | 6 | 0.017 | 0.013 | 0.025 | 8 | 0.005 | 0.005 | 0.005 | 8 | (0.3) | 0.3 |
| Lanthanum | <Inoff | <Inoff | <Inoff | 4 | <Inoff | <Inoff | <Inoff | 5 | <0 | <0 | <0 | 5 | | |
| Lithium | 0.0031 | 0.0024 | 0.0038 | 6 | <0.0033 | <0.0023 | <0.0040 | 8 | <0.0031 | <0.0022 | <0.0040 | 8 | | |
| Magnesium | 12.9 | 9.0 | 15.7 | 6 | 13.3 | 11.7 | 14.9 | 8 | 12.7 | 9.0 | 14.7 | 8 | | |
| Molybdenum | 0.0007 | 0.0006 | 0.0008 | 6 | <0.0008 | <0.0006 | 0.0010 | 8 | <0.0007 | <0.0006 | 0.0010 | 8 | | |
| Nickel | <0.0006 | <0.0005 | 0.0009 | 6 | <0.0007 | <0.0005 | 0.0020 | 8 | <0.0008 | <0.0005 | 0.0020 | 8 | | |
| Phosphorus | 0.03 | <0.02 | 0.04 | 6 | 0.03 | <0.02 | 0.05 | 8 | 0.03 | <0.02 | 0.05 | 8 | | |
| Potassium | 1.70 | 0.70 | 5.70 | 6 | 0.88 | 0.60 | 1.10 | 8 | 1.29 | 0.50 | 5.40 | 8 | | |
| Silicon | 2.10 | 1.75 | 2.75 | 6 | 2.06 | 1.55 | 2.52 | 8 | 2.03 | 1.53 | 2.54 | 8 | | |
| Silver | <0.0002 | <0.0002 | <0.0002 | 6 | <0.0003 | <0.0002 | <0.0010 | 8 | <0.0003 | <0.0002 | <0.0010 | 8 | | |
| Sodium | 20.7 | 6.7 | 39.9 | 6 | 13.7 | 7.2 | 24.5 | 8 | 18.9 | 6.8 | 33.2 | 8 | (200) | |
| Strontium | 0.389 | 0.314 | 0.450 | 6 | 0.383 | 0.313 | 0.442 | 8 | 0.372 | 0.298 | 0.445 | 8 | 7 | |
| Sulphate Dissolved | 83 | 57 | 124 | 12 | 69 | 59 | 105 | 14 | 75 | 59 | 116 | 14 | (500) | |
| Thallium | <0.0005 | <0.0005 | <0.0005 | 6 | <0.0009 | <0.0005 | <0.0040 | 8 | <0.0009 | <0.0005 | <0.0040 | 8 | | |
| Tin | <0.0005 | <0.0005 | <0.0005 | 6 | <0.0009 | <0.0005 | <0.0040 | 8 | <0.0009 | <0.0005 | <0.0040 | 8 | | |
| Titanium | <0.0005 | <0.0005 | <0.0005 | 6 | <0.0006 | <0.0005 | <0.0010 | 8 | <0.0006 | <0.0005 | <0.0010 | 8 | | |
| Vanadium | <0.0005 | <0.0005 | 0.0006 | 6 | <0.0011 | <0.0005 | <0.0050 | 8 | <0.0010 | <0.0005 | <0.0050 | 8 | | |
| Zinc | <0.005 | <0.005 | <0.005 | 6 | <0.005 | <0.005 | 0.008 | 8 | <0.010 | <0.005 | 0.048 | 8 | (5.0) | |
| Zirconium | <0.0011 | <0.0010 | <0.0011 | 6 | <0.0014 | <0.0005 | <0.0040 | 8 | <0.0013 | <0.0005 | <0.0040 | 8 | | |
| **Secondary Organics (ug/L) ***** | | | | | | | | | | | | | | |
| Bromodichloromethane | <0.5 | <0.5 | <0.5 | 7 | <0.5 | <0.5 | <0.5 | 7 | <0.5 | <0.5 | <0.5 | 7 | | 16 |
| Bromoform | <1.0 | <1.0 | <1.0 | 7 | <1.0 | <1.0 | <1.0 | 7 | <1.0 | <1.0 | <1.0 | 7 | | |
| Chloroform | 16.2 | 9.0 | 28.6 | 7 | 21.7 | 11.6 | 31.3 | 7 | 14.2 | 7.2 | 26.4 | 7 | | |
| Dibromochloromethane | <0.50 | <0.50 | <0.50 | 7 | <0.50 | <0.50 | <0.50 | 7 | <0.50 | <0.50 | <0.50 | 7 | | |
| Dichlorobenzene (1,3) | <0.50 | <0.50 | <0.50 | 7 | <0.50 | <0.50 | <0.50 | 7 | <0.50 | <0.50 | <0.50 | 7 | | |
| Dichloroethylene, cis (1,2) | <0.50 | <0.50 | <0.50 | 7 | <0.50 | <0.50 | <0.50 | 7 | <0.50 | <0.50 | <0.50 | 7 | | |
| Dichloroethylene, trans (1,2) | <0.50 | <0.50 | <0.50 | 7 | <0.50 | <0.50 | <0.50 | 7 | <0.50 | <0.50 | <0.50 | 7 | | |
| Dichloropropane (1,2) | <0.5 | <0.5 | <0.5 | 7 | <0.5 | <0.5 | <0.5 | 7 | <0.5 | <0.5 | <0.5 | 7 | | |
| Methyl t-Butyl Ether (MTBE) | <0.5 | <0.5 | <0.5 | 7 | <0.5 | <0.5 | <0.5 | 7 | <0.5 | <0.5 | <0.5 | 7 | (15) | |

## 7.10 Castledowns, Clareview and Kaskitayo Reservoirs
## 2019

| Parameter | Castledowns | | | | Clareview | | | | Kaskitayo | | | | Limits | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Mean | Min | Max | Count | Mean | Min | Max | Count | Mean | Min | Max | Count | *Approval or GCDWQ MAC, (AO or OG) | EPCOR |
| MIBK | <1.0 | <1.0 | <1.0 | 7 | <1.0 | <1.0 | <1.0 | 7 | <1.0 | <1.0 | <1.0 | 7 | | |
| Styrene | <0.50 | <0.50 | <0.50 | 7 | <0.50 | <0.50 | <0.50 | 7 | <0.50 | <0.50 | <0.50 | 7 | | |
| Tetrachloroethane (1,1,2,2) | <1.0 | <1.0 | <1.0 | 7 | <1.0 | <1.0 | <1.0 | 7 | <1.0 | <1.0 | <1.0 | 7 | | |
| Total Organic Carbon | 2.0 | 1.6 | 2.8 | 6 | 1.9 | 1.5 | 2.9 | 7 | 1.8 | 1.2 | 2.9 | 7 | | |
| Total Volatile Organics (NonTHM) | <1.0 | <1.0 | <1.0 | 7 | <1.0 | <1.0 | <1.0 | 7 | <1.0 | <1.0 | <1.0 | 7 | | |
| Total Volatile Organics (Unknown) | <1.0 | <1.0 | <1.0 | 7 | <1.0 | <1.0 | <1.0 | 7 | <1.0 | <1.0 | <1.0 | 7 | | |
| Trichlorobenzene (1,2,4) | <0.5 | <0.5 | <0.5 | 7 | <0.5 | <0.5 | <0.5 | 7 | <0.5 | <0.5 | <0.5 | 7 | | |
| Trichloroethane (1,1,1) | <0.5 | <0.5 | <0.5 | 7 | <0.5 | <0.5 | <0.5 | 7 | <0.5 | <0.5 | <0.5 | 7 | | |
| Xylene (1,2) | <0.5 | <0.5 | <0.5 | 7 | <0.5 | <0.5 | <0.5 | 7 | <0.5 | <0.5 | <0.5 | 7 | | |
| Xylene (1,4) | <0.5 | <0.5 | <0.5 | 7 | <0.5 | <0.5 | <0.5 | 7 | <0.5 | <0.5 | <0.5 | 7 | | |

* Health Canada Guidelines for Canadian Drinking Water Quality Maximum Acceptable Concentration and Alberta Environment and Parks (AEP) Approval Limit. Limits in brackets indicate aesthetic objective or operational guidelines.

** Primary Parameters are those that have Maximum Acceptable Concentration (MAC) in Health Canada's Guidelines for Canadian Drinking Water Quality (GCDWQ).

*** Secondary Parameters do not have health based limits in Health Canada's Guidelines for Canadian Drinking Water Quality (GCDWQ).

## 7.11 Londonderry, Millwoods and North Jasper Place Reservoirs
## 2019

| Parameter | Londonderry | | | | Millwoods | | | | North Jasper Place | | | | Limits | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Mean | Min | Max | Count | Mean | Min | Max | Count | Mean | Min | Max | Count | *Approval or GCDWQ MAC, (AO or OG) | EPCOR |
| **Physical** | | | | | | | | | | | | | | |
| Colour (TCU) | 1.0 | 0.9 | 1.2 | 7 | 1.1 | 0.8 | 1.3 | 6 | 1.0 | 0.7 | 1.2 | 6 | (15) | 10 |
| Conductivity (uS/cm) | 406 | 379 | 456 | 7 | 419 | 376 | 477 | 6 | 404 | 382 | 442 | 6 | | |
| Odour | Inoff | Inoff | Inoff | 7 | Inoff | Inoff | Inoff | 6 | Inoff | Inoff | Inoff | 6 | | |
| pH (N/A) | 7.8 | 7.7 | 8.0 | 7 | 7.8 | 7.7 | 8.0 | 6 | 7.9 | 7.9 | 8.0 | 6 | (7.0 - 10.5) | 7.3 - 8.3 |
| Turbidity (NTU) | 0.08 | 0.04 | 0.21 | 54 | 0.06 | 0.04 | 0.11 | 54 | 0.07 | 0.04 | 0.13 | 54 | | 1 |
| **Primary Inorganics (mg/L) **** | | | | | | | | | | | | | | |
| Antimony | <0.0002 | <0.0002 | <0.0002 | 7 | <0.0002 | <0.0002 | <0.0002 | 6 | <0.0007 | <0.0002 | <0.0040 | 6 | 0.006 | |
| Arsenic | <0.0002 | <0.0002 | 0.0003 | 7 | <0.0002 | <0.0002 | 0.0003 | 6 | <0.0009 | <0.0002 | 0.0050 | 6 | 0.01 | |
| Barium | 0.070 | 0.058 | 0.089 | 7 | 0.066 | 0.058 | 0.078 | 6 | 0.063 | 0.052 | 0.073 | 6 | 2 | |
| Boron | 0.019 | 0.008 | 0.047 | 7 | 0.012 | 0.008 | 0.017 | 6 | 0.011 | 0.008 | 0.014 | 6 | 5 | |
| Bromate Dissolved | <0.005 | <0.005 | <0.005 | 14 | <0.005 | <0.005 | <0.005 | 12 | <0.005 | <0.005 | <0.005 | 12 | 0.01 | |
| Cadmium | <0.0002 | <0.0002 | <0.0002 | 7 | <0.0002 | <0.0002 | <0.0002 | 6 | <0.0003 | <0.0002 | <0.0010 | 6 | 0.005 | |
| Chlorate Dissolved | 0.117 | 0.056 | 0.142 | 14 | 0.061 | 0.050 | 0.070 | 12 | 0.064 | 0.050 | 0.093 | 12 | 1 | |
| Chlorine, total | 1.75 | 1.23 | 2.08 | 54 | 1.83 | 1.52 | 2.04 | 54 | 1.54 | 1.12 | 2.07 | 54 | >0.5 and <3.0 | >1.0 and <2.4 |
| Chlorite Dissolved | <0.005 | <0.005 | <0.005 | 14 | <0.005 | <0.005 | <0.005 | 12 | <0.005 | <0.005 | <0.005 | 12 | 1 | |
| Chromium | <0.0002 | <0.0002 | <0.0002 | 7 | <0.0002 | <0.0002 | <0.0002 | 6 | <0.0003 | <0.0002 | <0.0010 | 6 | 0.05 | |
| Copper | 0.007 | <0.005 | 0.022 | 7 | <0.005 | <0.005 | <0.005 | 6 | <0.005 | <0.005 | <0.005 | 6 | (1) | |
| Fluoride | 0.60 | 0.06 | 0.74 | 7 | 0.49 | 0.08 | 0.72 | 6 | 0.58 | 0.08 | 0.71 | 6 | 1.5 | 0.6 - 0.8 |
| Lead | <0.0002 | <0.0002 | <0.0002 | 7 | <0.0002 | <0.0002 | <0.0002 | 6 | <0.0006 | <0.0002 | <0.0030 | 6 | 0.005 | |
| Manganese | 0.003 | <0.002 | 0.008 | 7 | <0.003 | <0.002 | 0.006 | 6 | <0.003 | <0.002 | 0.006 | 6 | 0.12 (0.02) | |
| Mercury | <0.0002 | <0.0002 | <0.0002 | 7 | <0.0002 | <0.0002 | <0.0002 | 6 | <0.0002 | <0.0002 | <0.0002 | 6 | 0.001 | |
| Nitrate (as N) Dissolved | 0.079 | 0.010 | 0.285 | 14 | 0.049 | 0.020 | 0.070 | 12 | 0.054 | 0.020 | 0.085 | 12 | 10 | |
| Nitrite (as N) Dissolved | <0.010 | <0.010 | <0.010 | 14 | <0.010 | <0.010 | <0.010 | 12 | <0.009 | <0.005 | <0.010 | 12 | 1 | |
| Selenium | 0.0002 | <0.0002 | 0.0003 | 7 | <0.0002 | <0.0002 | 0.0003 | 6 | <0.0012 | <0.0002 | 0.0070 | 6 | 0.05 | |
| Uranium | <0.0005 | <0.0005 | 0.0006 | 7 | <0.0005 | <0.0005 | 0.0005 | 6 | <0.0023 | <0.0005 | 0.0130 | 6 | 0.02 | |
| **Primary Organics (ug/L) **** | | | | | | | | | | | | | | |
| Benzene | <0.5 | <0.5 | <0.5 | 7 | <0.5 | <0.5 | <0.5 | 6 | <0.5 | <0.5 | <0.5 | 6 | 5 | |
| Carbon Tetrachloride | <1.0 | <1.0 | <1.0 | 7 | <1.0 | <1.0 | <1.0 | 6 | <1.0 | <1.0 | <1.0 | 6 | 2 | |
| Chlorobenzene | <0.50 | <0.50 | <0.50 | 7 | <0.50 | <0.50 | <0.50 | 6 | <0.50 | <0.50 | <0.50 | 6 | 80 (30) | |
| Dichlorobenzene (1,2) | <0.50 | <0.50 | <0.50 | 7 | <0.50 | <0.50 | <0.50 | 6 | <0.50 | <0.50 | <0.50 | 6 | 200 (3) | |
| Dichlorobenzene (1,4) | <0.5 | <0.5 | <0.5 | 7 | <0.5 | <0.5 | <0.5 | 6 | <0.5 | <0.5 | <0.5 | 6 | 5 (1) | |
| Dichloroethylene (1,1) | <3.0 | <3.0 | <3.0 | 7 | <3.0 | <3.0 | <3.0 | 6 | <3.0 | <3.0 | <3.0 | 6 | 14 | |
| Ethylbenzene | <0.50 | <0.50 | <0.50 | 7 | <0.50 | <0.50 | <0.50 | 6 | <0.50 | <0.50 | <0.50 | 6 | 140 (1.6) | |
| Methylene Chloride | <0.5 | <0.5 | <0.5 | 7 | <0.5 | <0.5 | <0.5 | 6 | <0.5 | <0.5 | <0.5 | 6 | 50 | |
| Tetrachloroethylene | <0.5 | <0.5 | <0.5 | 7 | <0.5 | <0.5 | <0.5 | 6 | <0.5 | <0.5 | <0.5 | 6 | 10 | |
| Toluene | <0.50 | <0.50 | <0.50 | 7 | <0.50 | <0.50 | <0.50 | 6 | <0.50 | <0.50 | <0.50 | 6 | 60 (24) | |
| Trichloroethylene | <0.50 | <0.50 | <0.50 | 7 | <0.50 | <0.50 | <0.50 | 6 | <0.50 | <0.50 | <0.50 | 6 | 5 | |

## 7.11 Londonderry, Millwoods and North Jasper Place Reservoirs
## 2019

| Parameter | Londonderry | | | | Millwoods | | | | North Jasper Place | | | | Limits | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Mean | Min | Max | Count | Mean | Min | Max | Count | Mean | Min | Max | Count | *Approval or GCDWQ MAC, (AO or OG) | EPCOR |
| **Secondary Inorganics (mg/L) ***** | | | | | | | | | | | | | | |
| Alkalinity Total | 114 | 81 | 135 | 7 | 125 | 117 | 137 | 6 | 124 | 113 | 139 | 6 | | |
| Aluminum | 0.048 | 0.028 | 0.098 | 7 | 0.039 | 0.025 | 0.087 | 6 | 0.034 | 0.021 | 0.071 | 6 | (0.1/0.2) | 0.1/0.2 |
| Beryllium | <0.0002 | <0.0002 | <0.0002 | 7 | <0.0002 | <0.0002 | <0.0002 | 6 | <0.0003 | <0.0002 | <0.0010 | 6 | | |
| Bromide Dissolved | <0.010 | <0.010 | <0.010 | 14 | <0.010 | <0.010 | <0.010 | 12 | <0.009 | <0.005 | <0.010 | 12 | | |
| Calcium | 45.3 | 34.3 | 50.8 | 7 | 47.4 | 43.8 | 50.5 | 6 | 45.9 | 42.1 | 49.6 | 6 | | |
| Calcium Hardness | 111 | 85 | 120 | 7 | 114 | 99 | 121 | 6 | 114 | 106 | 123 | 6 | | |
| Chloride Dissolved | 7.3 | 5.4 | 14.7 | 14 | 5.4 | 4.6 | 6.7 | 12 | 5.4 | 4.5 | 6.2 | 12 | (250) | |
| Cobalt | <0.0002 | <0.0002 | <0.0002 | 7 | <0.0002 | <0.0002 | <0.0002 | 6 | <0.0003 | <0.0002 | <0.0010 | 6 | | |
| Hardness, Total (mg CaCO3/L) | 165 | 127 | 184 | 7 | 176 | 167 | 185 | 6 | 172 | 157 | 191 | 6 | | |
| Iron | 0.010 | <0.005 | 0.027 | 7 | <0.005 | <0.005 | 0.006 | 6 | <0.005 | <0.005 | 0.006 | 6 | (0.3) | 0.3 |
| Lanthanum | <Inoff | <Inoff | <Inoff | 5 | <Inoff | <Inoff | <Inoff | 5 | <0 | <0 | <0 | 5 | | |
| Lithium | 0.0034 | 0.0024 | 0.0040 | 7 | 0.0034 | 0.0029 | 0.0038 | 6 | 0.0033 | 0.0030 | 0.0040 | 6 | | |
| Magnesium | 13.0 | 9.4 | 15.1 | 7 | 13.9 | 12.9 | 15.0 | 6 | 13.3 | 12.3 | 14.4 | 6 | | |
| Molybdenum | 0.0008 | 0.0006 | 0.0009 | 7 | 0.0007 | 0.0006 | 0.0008 | 6 | 0.0007 | 0.0006 | 0.0010 | 6 | | |
| Nickel | 0.0019 | <0.0005 | 0.0101 | 7 | <0.0006 | <0.0005 | 0.0008 | 6 | <0.0008 | <0.0005 | 0.0020 | 6 | | |
| Phosphorus | 0.03 | <0.02 | 0.04 | 7 | 0.04 | <0.02 | 0.05 | 6 | 0.03 | <0.02 | 0.05 | 6 | | |
| Potassium | 1.66 | 0.70 | 5.90 | 7 | 0.85 | 0.70 | 1.20 | 6 | 0.86 | 0.50 | 1.40 | 6 | | |
| Silicon | 2.15 | 1.79 | 2.81 | 7 | 2.09 | 1.78 | 2.58 | 6 | 1.98 | 1.61 | 2.25 | 6 | | |
| Silver | <0.0002 | <0.0002 | <0.0002 | 7 | <0.0002 | <0.0002 | <0.0002 | 6 | <0.0003 | <0.0002 | <0.0010 | 6 | | |
| Sodium | 16.3 | 7.5 | 29.5 | 7 | 17.0 | 7.1 | 33.5 | 6 | 16.8 | 6.9 | 25.0 | 6 | (200) | |
| Strontium | 0.392 | 0.313 | 0.455 | 7 | 0.408 | 0.336 | 0.447 | 6 | 0.388 | 0.355 | 0.441 | 6 | 7 | |
| Sulphate Dissolved | 78 | 58 | 113 | 14 | 80 | 57 | 110 | 12 | 73 | 58 | 94 | 12 | (500) | |
| Thallium | <0.0005 | <0.0005 | <0.0005 | 7 | <0.0005 | <0.0005 | <0.0005 | 6 | <0.0010 | <0.0005 | <0.0040 | 6 | | |
| Tin | <0.0005 | <0.0005 | <0.0005 | 7 | <0.0005 | <0.0005 | <0.0005 | 6 | <0.0010 | <0.0005 | <0.0040 | 6 | | |
| Titanium | <0.0005 | <0.0005 | <0.0005 | 7 | <0.0005 | <0.0005 | <0.0005 | 6 | <0.0006 | <0.0005 | <0.0010 | 6 | | |
| Vanadium | <0.0005 | <0.0005 | <0.0005 | 7 | <0.0005 | <0.0005 | <0.0005 | 6 | <0.0012 | <0.0005 | <0.0050 | 6 | | |
| Zinc | 0.007 | <0.005 | 0.017 | 7 | <0.005 | <0.005 | <0.005 | 6 | <0.005 | <0.005 | <0.005 | 6 | (5.0) | |
| Zirconium | <0.0011 | <0.0010 | <0.0011 | 7 | <0.0011 | <0.0010 | <0.0011 | 6 | <0.0014 | <0.0005 | <0.0040 | 6 | | |
| **Secondary Organics (ug/L) ***** | | | | | | | | | | | | | | |
| Bromodichloromethane | <0.5 | <0.5 | <0.5 | 7 | <0.5 | <0.5 | <0.5 | 6 | <0.5 | <0.5 | <0.5 | 6 | | 16 |
| Bromoform | <1.0 | <1.0 | <1.0 | 7 | <1.0 | <1.0 | <1.0 | 6 | <1.0 | <1.0 | <1.0 | 6 | | |
| Chloroform | 23.2 | 11.7 | 37.8 | 7 | 18.6 | 9.6 | 27.2 | 6 | 18.4 | 9.5 | 28.6 | 6 | | |
| Dibromochloromethane | <0.50 | <0.50 | <0.50 | 7 | <0.50 | <0.50 | <0.50 | 6 | <0.50 | <0.50 | <0.50 | 6 | | |
| Dichlorobenzene (1,3) | <0.50 | <0.50 | <0.50 | 7 | <0.50 | <0.50 | <0.50 | 6 | <0.50 | <0.50 | <0.50 | 6 | | |
| Dichloroethylene, cis (1,2) | <0.50 | <0.50 | <0.50 | 7 | <0.50 | <0.50 | <0.50 | 6 | <0.50 | <0.50 | <0.50 | 6 | | |
| Dichloroethylene, trans (1,2) | <0.50 | <0.50 | <0.50 | 7 | <0.50 | <0.50 | <0.50 | 6 | <0.50 | <0.50 | <0.50 | 6 | | |
| Dichloropropane (1,2) | <0.5 | <0.5 | <0.5 | 7 | <0.5 | <0.5 | <0.5 | 6 | <0.5 | <0.5 | <0.5 | 6 | | |
| Methyl t-Butyl Ether (MTBE) | <0.5 | <0.5 | <0.5 | 7 | <0.5 | <0.5 | <0.5 | 6 | <0.5 | <0.5 | <0.5 | 6 | (15) | |

## 7.11 Londonderry, Millwoods and North Jasper Place Reservoirs
## 2019

| Parameter | Londonderry | | | | Millwoods | | | | North Jasper Place | | | | Limits | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Mean | Min | Max | Count | Mean | Min | Max | Count | Mean | Min | Max | Count | *Approval or GCDWQ MAC, (AO or OG) | EPCOR |
| MIBK | <1.0 | <1.0 | <1.0 | 7 | <1.0 | <1.0 | <1.0 | 6 | <1.0 | <1.0 | <1.0 | 6 | | |
| Styrene | <0.50 | <0.50 | <0.50 | 7 | <0.50 | <0.50 | <0.50 | 6 | <0.50 | <0.50 | <0.50 | 6 | | |
| Tetrachloroethane (1,1,2,2) | <1.0 | <1.0 | <1.0 | 7 | <1.0 | <1.0 | <1.0 | 6 | <1.0 | <1.0 | <1.0 | 6 | | |
| Total Organic Carbon | 2.2 | 1.8 | 3.1 | 7 | 1.9 | 1.4 | 2.6 | 6 | 1.7 | 1.3 | 2.4 | 6 | | |
| Total Volatile Organics (NonTHM) | <1.0 | <1.0 | <1.0 | 7 | <1.0 | <1.0 | <1.0 | 6 | <1.0 | <1.0 | <1.0 | 6 | | |
| Total Volatile Organics (Unknown) | <1.0 | <1.0 | <1.0 | 7 | <1.0 | <1.0 | <1.0 | 6 | <1.0 | <1.0 | <1.0 | 6 | | |
| Trichlorobenzene (1,2,4) | <0.5 | <0.5 | <0.5 | 7 | <0.5 | <0.5 | <0.5 | 6 | <0.5 | <0.5 | <0.5 | 6 | | |
| Trichloroethane (1,1,1) | <0.5 | <0.5 | <0.5 | 7 | <0.5 | <0.5 | <0.5 | 6 | <0.5 | <0.5 | <0.5 | 6 | | |
| Xylene (1,2) | <0.5 | <0.5 | <0.5 | 7 | <0.5 | <0.5 | <0.5 | 6 | <0.5 | <0.5 | <0.5 | 6 | | |
| Xylene (1,4) | <0.5 | <0.5 | <0.5 | 7 | <0.5 | <0.5 | <0.5 | 6 | <0.5 | <0.5 | <0.5 | 6 | | |

* Health Canada Guidelines for Canadian Drinking Water Quality Maximum Acceptable Concentration and Alberta Environment and Parks (AEP) Approval Limit. Limits in brackets indicate aesthetic objective or operational guidelines.

** Primary Parameters are those that have Maximum Acceptable Concentration (MAC) in Health Canada's Guidelines for Canadian Drinking Water Quality (GCDWQ).

*** Secondary Parameters do not have health based limits in Health Canada's Guidelines for Canadian Drinking Water Quality (GCDWQ).

## 7.12 Ormsby, Papaschase 1 and Papaschase 2 Reservoirs
## 2019

| Parameter | Ormsby | | | | Papaschase 1 | | | | Papaschase 2 | | | | Limits | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Mean | Min | Max | Count | Mean | Min | Max | Count | Mean | Min | Max | Count | *Approval or GCDWQ MAC, (AO or OG) | EPCOR |
| **Physical** | | | | | | | | | | | | | | |
| Colour (TCU) | 1.1 | 0.8 | 1.7 | 6 | 1.2 | 0.6 | 2.3 | 8 | 1.0 | 0.5 | 1.2 | 8 | (15) | 10 |
| Conductivity (uS/cm) | 417 | 375 | 484 | 6 | 413 | 377 | 470 | 8 | 402 | 377 | 479 | 8 | | |
| Odour | Inoff | Inoff | Inoff | 6 | Inoff | Inoff | Inoff | 8 | Inoff | Inoff | Inoff | 8 | | |
| pH (N/A) | 7.9 | 7.7 | 8.1 | 6 | 7.8 | 7.7 | 7.9 | 8 | 7.9 | 7.8 | 8.0 | 8 | (7.0 - 10.5) | 7.3 - 8.3 |
| Turbidity (NTU) | 0.07 | 0.04 | 0.16 | 52 | 0.12 | 0.04 | 0.48 | 54 | 0.07 | 0.04 | 0.35 | 54 | | 1 |
| **Primary Inorganics (mg/L) **** | | | | | | | | | | | | | | |
| Antimony | <0.0002 | <0.0002 | <0.0002 | 6 | <0.0002 | <0.0002 | <0.0002 | 8 | <0.0007 | <0.0002 | <0.0040 | 8 | 0.006 | |
| Arsenic | <0.0002 | <0.0002 | 0.0003 | 6 | <0.0002 | <0.0002 | 0.0003 | 8 | <0.0009 | <0.0002 | 0.0050 | 8 | 0.01 | |
| Barium | 0.067 | 0.056 | 0.083 | 6 | 0.068 | 0.056 | 0.090 | 8 | 0.068 | 0.053 | 0.082 | 8 | 2 | |
| Boron | 0.019 | 0.008 | 0.045 | 6 | 0.014 | 0.008 | 0.023 | 8 | 0.016 | 0.008 | 0.044 | 8 | 5 | |
| Bromate Dissolved | <0.005 | <0.005 | <0.005 | 12 | <0.005 | <0.005 | <0.005 | 16 | <0.005 | <0.005 | <0.005 | 16 | 0.01 | |
| Cadmium | <0.0002 | <0.0002 | <0.0002 | 6 | <0.0002 | <0.0002 | <0.0002 | 8 | <0.0003 | <0.0002 | <0.0010 | 8 | 0.005 | |
| Chlorate Dissolved | 0.057 | 0.040 | 0.070 | 12 | 0.100 | 0.061 | 0.113 | 16 | 0.072 | 0.060 | 0.105 | 16 | 1 | |
| Chlorine, total | 1.78 | 1.32 | 2.04 | 52 | 1.55 | 1.08 | 2.00 | 54 | 1.80 | 1.47 | 2.06 | 54 | >0.5 and <3.0 | >1.0 and <2.4 |
| Chlorite Dissolved | <0.005 | <0.005 | <0.005 | 12 | <0.005 | <0.005 | <0.005 | 16 | <0.005 | <0.005 | <0.005 | 16 | 1 | |
| Chromium | <0.0002 | <0.0002 | <0.0002 | 6 | <0.0002 | <0.0002 | <0.0002 | 8 | <0.0003 | <0.0002 | <0.0010 | 8 | 0.05 | |
| Copper | <0.005 | <0.005 | <0.005 | 6 | <0.005 | <0.005 | <0.005 | 8 | <0.005 | <0.005 | <0.005 | 8 | (1) | |
| Fluoride | 0.59 | 0.06 | 0.72 | 6 | 0.61 | 0.42 | 0.72 | 8 | 0.60 | 0.22 | 0.71 | 8 | 1.5 | 0.6 - 0.8 |
| Lead | 0.0006 | <0.0002 | 0.0025 | 6 | <0.0002 | <0.0002 | <0.0002 | 8 | <0.0006 | <0.0002 | <0.0030 | 8 | 0.005 | |
| Manganese | 0.005 | <0.002 | 0.011 | 6 | 0.003 | <0.002 | 0.006 | 8 | 0.006 | <0.002 | 0.013 | 8 | 0.12 (0.02) | |
| Mercury | <0.0002 | <0.0002 | <0.0002 | 6 | <0.0002 | <0.0002 | <0.0002 | 8 | <0.0002 | <0.0002 | <0.0002 | 8 | 0.001 | |
| Nitrate (as N) Dissolved | 0.081 | 0.020 | 0.252 | 12 | 0.045 | 0.020 | 0.090 | 16 | 0.079 | 0.010 | 0.279 | 16 | 10 | |
| Nitrite (as N) Dissolved | <0.010 | <0.010 | <0.010 | 12 | <0.009 | <0.005 | <0.010 | 16 | <0.010 | <0.010 | <0.010 | 16 | 1 | |
| Selenium | 0.0002 | <0.0002 | 0.0003 | 6 | <0.0002 | <0.0002 | 0.0003 | 8 | <0.0012 | <0.0002 | 0.0070 | 8 | 0.05 | |
| Uranium | <0.0005 | <0.0005 | <0.0005 | 6 | <0.0005 | <0.0005 | 0.0006 | 8 | <0.0026 | <0.0005 | 0.0150 | 8 | 0.02 | |
| **Primary Organics (ug/L) **** | | | | | | | | | | | | | | |
| Benzene | <0.5 | <0.5 | <0.5 | 7 | <0.5 | <0.5 | <0.5 | 9 | <0.5 | <0.5 | <0.5 | 9 | 5 | |
| Carbon Tetrachloride | <1.0 | <1.0 | <1.0 | 7 | <1.0 | <1.0 | <1.0 | 9 | <1.0 | <1.0 | <1.0 | 9 | 2 | |
| Chlorobenzene | <0.50 | <0.50 | <0.50 | 7 | <0.50 | <0.50 | <0.50 | 9 | <0.50 | <0.50 | <0.50 | 9 | 80 (30) | |
| Dichlorobenzene (1,2) | <0.50 | <0.50 | <0.50 | 7 | <0.50 | <0.50 | <0.50 | 9 | <0.50 | <0.50 | <0.50 | 9 | 200 (3) | |
| Dichlorobenzene (1,4) | <0.5 | <0.5 | <0.5 | 7 | <0.5 | <0.5 | <0.5 | 9 | <0.5 | <0.5 | <0.5 | 9 | 5 (1) | |
| Dichloroethylene (1,1) | <3.0 | <3.0 | <3.0 | 7 | <3.0 | <3.0 | <3.0 | 9 | <3.0 | <3.0 | <3.0 | 9 | 14 | |
| Ethylbenzene | <0.50 | <0.50 | <0.50 | 7 | <0.50 | <0.50 | <0.50 | 9 | <0.50 | <0.50 | <0.50 | 9 | 140 (1.6) | |
| Methylene Chloride | <0.5 | <0.5 | <0.5 | 7 | <0.5 | <0.5 | <0.5 | 9 | <0.5 | <0.5 | <0.5 | 9 | 50 | |
| Tetrachloroethylene | <0.5 | <0.5 | <0.5 | 7 | <0.5 | <0.5 | <0.5 | 9 | <0.5 | <0.5 | <0.5 | 9 | 10 | |
| Toluene | <0.50 | <0.50 | <0.50 | 7 | <0.50 | <0.50 | <0.50 | 9 | <0.50 | <0.50 | <0.50 | 9 | 60 (24) | |
| Trichloroethylene | <0.50 | <0.50 | <0.50 | 7 | <0.50 | <0.50 | <0.50 | 9 | <0.50 | <0.50 | <0.50 | 9 | 5 | |

## 7.12 Ormsby, Papaschase 1 and Papaschase 2 Reservoirs
## 2019

| Parameter | Ormsby | | | | Papaschase 1 | | | | Papaschase 2 | | | | Limits | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Mean | Min | Max | Count | Mean | Min | Max | Count | Mean | Min | Max | Count | *Approval or GCDWQ MAC, (AO or OG) | EPCOR |
| **Secondary Inorganics (mg/L) *** ** | | | | | | | | | | | | | | |
| Alkalinity Total | 119 | 89 | 136 | 6 | 121 | 104 | 140 | 8 | 115 | 85 | 131 | 8 | | |
| Aluminum | 0.043 | 0.025 | 0.089 | 6 | 0.037 | 0.025 | 0.068 | 8 | 0.039 | 0.014 | 0.085 | 8 | (0.1/0.2) | 0.1/0.2 |
| Beryllium | <0.0002 | <0.0002 | <0.0002 | 6 | <0.0002 | <0.0002 | <0.0002 | 8 | <0.0003 | <0.0002 | <0.0010 | 8 | | |
| Bromide Dissolved | <0.010 | <0.010 | <0.010 | 12 | <0.009 | <0.005 | <0.010 | 16 | <0.010 | <0.010 | <0.010 | 16 | | |
| Calcium | 45.4 | 34.4 | 51.0 | 6 | 46.9 | 44.3 | 50.0 | 8 | 45.2 | 34.2 | 49.4 | 8 | | |
| Calcium Hardness | 110 | 86 | 121 | 6 | 112 | 98 | 125 | 8 | 109 | 84 | 120 | 8 | | |
| Chloride Dissolved | 6.3 | 4.7 | 10.2 | 12 | 5.8 | 4.0 | 7.3 | 16 | 6.3 | 4.7 | 11.2 | 16 | (250) | |
| Cobalt | <0.0002 | <0.0002 | <0.0002 | 6 | <0.0002 | <0.0002 | <0.0002 | 8 | <0.0003 | <0.0002 | <0.0010 | 8 | | |
| Hardness, Total (mg CaCO3/L) | 166 | 125 | 185 | 6 | 173 | 162 | 190 | 8 | 162 | 123 | 178 | 8 | | |
| Iron | <0.005 | <0.005 | <0.005 | 6 | 0.015 | 0.006 | 0.018 | 8 | 0.005 | 0.005 | 0.006 | 8 | (0.3) | 0.3 |
| Lanthanum | <Inoff | <Inoff | <Inoff | 4 | <Inoff | <Inoff | <Inoff | 6 | <0 | <0 | <0 | 6 | | |
| Lithium | 0.0031 | 0.0022 | 0.0038 | 6 | 0.0033 | 0.0026 | 0.0038 | 8 | 0.0032 | 0.0025 | 0.0040 | 8 | | |
| Magnesium | 13.1 | 9.2 | 15.3 | 6 | 13.6 | 11.8 | 14.8 | 8 | 12.3 | 9.0 | 14.0 | 8 | | |
| Molybdenum | 0.0007 | 0.0006 | 0.0008 | 6 | 0.0007 | 0.0006 | 0.0008 | 8 | 0.0009 | 0.0006 | 0.0020 | 8 | | |
| Nickel | <0.0006 | <0.0005 | 0.0010 | 6 | <0.0006 | <0.0005 | 0.0010 | 8 | <0.0008 | <0.0005 | 0.0020 | 8 | | |
| Phosphorus | 0.03 | <0.02 | 0.04 | 6 | 0.03 | <0.02 | 0.04 | 8 | 0.03 | <0.02 | 0.04 | 8 | | |
| Potassium | 1.65 | 0.70 | 5.30 | 6 | 0.98 | 0.70 | 1.50 | 8 | 1.56 | 0.60 | 5.80 | 8 | | |
| Silicon | 2.12 | 1.79 | 2.72 | 6 | 2.18 | 1.85 | 2.80 | 8 | 2.07 | 1.55 | 2.53 | 8 | | |
| Silver | <0.0002 | <0.0002 | <0.0002 | 6 | <0.0002 | <0.0002 | <0.0002 | 8 | <0.0003 | <0.0002 | <0.0010 | 8 | | |
| Sodium | 20.0 | 7.1 | 35.8 | 6 | 16.5 | 7.2 | 32.0 | 8 | 19.5 | 6.6 | 31.9 | 8 | (200) | |
| Strontium | 0.383 | 0.310 | 0.444 | 6 | 0.386 | 0.310 | 0.453 | 8 | 0.367 | 0.302 | 0.452 | 8 | 7 | |
| Sulphate Dissolved | 81 | 57 | 114 | 12 | 79 | 59 | 115 | 16 | 77 | 57 | 115 | 16 | (500) | |
| Thallium | <0.0005 | <0.0005 | <0.0005 | 6 | <0.0005 | <0.0005 | <0.0005 | 8 | <0.0010 | <0.0005 | <0.0040 | 8 | | |
| Tin | <0.0005 | <0.0005 | <0.0005 | 6 | <0.0005 | <0.0005 | <0.0005 | 8 | <0.0010 | <0.0005 | <0.0040 | 8 | | |
| Titanium | <0.0005 | <0.0005 | <0.0005 | 6 | <0.0005 | <0.0005 | <0.0005 | 8 | <0.0006 | <0.0005 | <0.0010 | 8 | | |
| Vanadium | <0.0005 | <0.0005 | 0.0005 | 6 | <0.0005 | <0.0005 | <0.0005 | 8 | <0.0011 | <0.0005 | <0.0050 | 8 | | |
| Zinc | <0.005 | <0.005 | <0.005 | 6 | <0.005 | <0.005 | <0.005 | 8 | <0.005 | <0.005 | <0.007 | 8 | (5.0) | |
| Zirconium | <0.0011 | <0.0010 | <0.0011 | 6 | <0.0010 | <0.0005 | <0.0011 | 8 | <0.0015 | <0.0010 | <0.0040 | 8 | | |
| **Secondary Organics (ug/L) *** ** | | | | | | | | | | | | | | |
| Bromodichloromethane | <0.5 | <0.5 | <0.5 | 7 | <0.5 | <0.5 | <0.5 | 9 | <0.5 | <0.5 | <0.5 | 9 | | 16 |
| Bromoform | <1.0 | <1.0 | <1.0 | 7 | <1.0 | <1.0 | <1.0 | 9 | <1.0 | <1.0 | <1.0 | 9 | | |
| Chloroform | 16.2 | 9.2 | 29.2 | 7 | 25.2 | 8.3 | 35.1 | 9 | 17.9 | 10.3 | 29.7 | 9 | | |
| Dibromochloromethane | <0.50 | <0.50 | <0.50 | 7 | <0.50 | <0.50 | <0.50 | 9 | <0.50 | <0.50 | <0.50 | 9 | | |
| Dichlorobenzene (1,3) | <0.50 | <0.50 | <0.50 | 7 | <0.50 | <0.50 | <0.50 | 9 | <0.50 | <0.50 | <0.50 | 9 | | |
| Dichloroethylene, cis (1,2) | <0.50 | <0.50 | <0.50 | 7 | <0.50 | <0.50 | <0.50 | 9 | <0.50 | <0.50 | <0.50 | 9 | | |
| Dichloroethylene, trans (1,2) | <0.50 | <0.50 | <0.50 | 7 | <0.50 | <0.50 | <0.50 | 9 | <0.50 | <0.50 | <0.50 | 9 | | |
| Dichloropropane (1,2) | <0.5 | <0.5 | <0.5 | 7 | <0.5 | <0.5 | <0.5 | 9 | <0.5 | <0.5 | <0.5 | 9 | | |
| Methyl t-Butyl Ether (MTBE) | <0.5 | <0.5 | <0.5 | 7 | <0.5 | <0.5 | <0.5 | 9 | <0.5 | <0.5 | <0.5 | 9 | (15) | |

## 7.12 Ormsby, Papaschase 1 and Papaschase 2 Reservoirs
## 2019

| Parameter | Ormsby | | | | Papaschase 1 | | | | Papaschase 2 | | | | Limits | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Mean | Min | Max | Count | Mean | Min | Max | Count | Mean | Min | Max | Count | *Approval or GCDWQ MAC, (AO or OG) | EPCOR |
| MIBK | <1.0 | <1.0 | <1.0 | 7 | <1.0 | <1.0 | <1.0 | 9 | <1.0 | <1.0 | <1.0 | 9 | | |
| Styrene | <0.50 | <0.50 | <0.50 | 7 | <0.50 | <0.50 | <0.50 | 9 | <0.50 | <0.50 | <0.50 | 9 | | |
| Tetrachloroethane (1,1,2,2) | <1.0 | <1.0 | <1.0 | 7 | <1.0 | <1.0 | <1.0 | 9 | <1.0 | <1.0 | <1.0 | 9 | | |
| Total Organic Carbon | 2.0 | 1.4 | 2.7 | 6 | 2.2 | 1.3 | 2.9 | 8 | 1.9 | 1.4 | 2.8 | 8 | | |
| Total Volatile Organics (NonTHM) | <1.0 | <1.0 | <1.0 | 7 | <1.0 | <1.0 | <1.0 | 9 | <1.0 | <1.0 | <1.0 | 9 | | |
| Total Volatile Organics (Unknown) | <1.0 | <1.0 | <1.0 | 7 | <1.0 | <1.0 | <1.0 | 9 | <1.0 | <1.0 | <1.0 | 9 | | |
| Trichlorobenzene (1,2,4) | <0.5 | <0.5 | <0.5 | 7 | <0.5 | <0.5 | <0.5 | 9 | <0.5 | <0.5 | <0.5 | 9 | | |
| Trichloroethane (1,1,1) | <0.5 | <0.5 | <0.5 | 7 | <0.5 | <0.5 | <0.5 | 9 | <0.5 | <0.5 | <0.5 | 9 | | |
| Xylene (1,2) | <0.5 | <0.5 | <0.5 | 7 | <0.5 | <0.5 | <0.5 | 9 | <0.5 | <0.5 | <0.5 | 9 | | |
| Xylene (1,4) | <0.5 | <0.5 | <0.5 | 7 | <0.5 | <0.5 | <0.5 | 9 | <0.5 | <0.5 | <0.5 | 9 | | |

* Health Canada Guidelines for Canadian Drinking Water Quality Maximum Acceptable Concentration and Alberta Environment and Parks (AEP) Approval Limit. Limits in brackets indicate aesthetic objective or operational guidelines.

** Primary Parameters are those that have Maximum Acceptable Concentration (MAC) in Health Canada's Guidelines for Canadian Drinking Water Quality (GCDWQ).

*** Secondary Parameters do not have health based limits in Health Canada's Guidelines for Canadian Drinking Water Quality (GCDWQ).

## 7.13 Rosslyn 1, Rosslyn 2 and Thorncliff Reservoirs
## 2019

| Parameter | Rosslyn 1 | | | | Rosslyn 2 | | | | Thorncliff | | | | Limits | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Mean | Min | Max | Count | Mean | Min | Max | Count | Mean | Min | Max | Count | *Approval or GCDWQ MAC, (AO or OG) | EPCOR |
| **Physical** | | | | | | | | | | | | | | |
| Colour (TCU) | 1.0 | 0.8 | 1.2 | 4 | 1.0 | 0.6 | 1.3 | 7 | 1.3 | 0.8 | 2.5 | 7 | (15) | 10 |
| Conductivity (uS/cm) | 421 | 401 | 463 | 4 | 403 | 376 | 460 | 7 | 411 | 398 | 453 | 7 | | |
| Odour | Inoff | Inoff | Inoff | 4 | Inoff | Inoff | Inoff | 7 | Inoff | Inoff | Inoff | 7 | | |
| pH (N/A) | 7.9 | 7.8 | 7.9 | 4 | 7.9 | 7.8 | 8.0 | 7 | 7.9 | 7.9 | 8.0 | 7 | (7.0 - 10.5) | 7.3 - 8.3 |
| Turbidity (NTU) | 0.09 | 0.06 | 0.15 | 45 | 0.08 | 0.03 | 0.14 | 53 | 0.07 | 0.04 | 0.18 | 53 | | 1 |
| **Primary Inorganics (mg/L) **** | | | | | | | | | | | | | | |
| Antimony | <0.0002 | <0.0002 | <0.0002 | 4 | <0.0007 | <0.0002 | <0.0040 | 8 | <0.0008 | <0.0002 | <0.0040 | 8 | 0.006 | |
| Arsenic | <0.0002 | <0.0002 | 0.0002 | 4 | <0.0008 | <0.0002 | <0.0050 | 8 | <0.0010 | <0.0002 | <0.0050 | 8 | 0.01 | |
| Barium | 0.070 | 0.056 | 0.089 | 4 | 0.066 | 0.056 | 0.083 | 8 | 0.065 | 0.054 | 0.078 | 8 | 2 | |
| Boron | 0.014 | 0.008 | 0.024 | 4 | 0.011 | 0.008 | 0.014 | 8 | 0.010 | 0.008 | 0.013 | 8 | 5 | |
| Bromate Dissolved | <0.005 | <0.005 | <0.005 | 8 | <0.005 | <0.005 | <0.005 | 14 | <0.005 | <0.005 | <0.005 | 14 | 0.01 | |
| Cadmium | <0.0002 | <0.0002 | <0.0002 | 4 | <0.0003 | <0.0002 | <0.0010 | 8 | <0.0003 | <0.0002 | <0.0010 | 8 | 0.005 | |
| Chlorate Dissolved | 0.098 | 0.080 | 0.111 | 8 | 0.088 | 0.044 | 0.118 | 14 | 0.063 | 0.040 | 0.098 | 14 | 1 | |
| Chlorine, total | 1.55 | 1.13 | 1.90 | 45 | 1.64 | 1.03 | 2.02 | 53 | 1.62 | 1.06 | 1.94 | 53 | >0.5 and <3.0 | >1.0 and <2.4 |
| Chlorite Dissolved | <0.005 | <0.005 | <0.005 | 8 | <0.005 | <0.005 | <0.005 | 14 | <0.005 | <0.005 | <0.005 | 14 | 1 | |
| Chromium | <0.0002 | <0.0002 | <0.0002 | 4 | <0.0003 | <0.0002 | <0.0010 | 8 | <0.0003 | <0.0002 | <0.0010 | 8 | 0.05 | |
| Copper | <0.005 | <0.005 | <0.005 | 4 | <0.005 | <0.005 | <0.005 | 8 | <0.005 | <0.005 | <0.005 | 8 | (1) | |
| Fluoride | 0.60 | 0.34 | 0.71 | 4 | 0.67 | 0.57 | 0.73 | 7 | 0.53 | 0.06 | 0.69 | 7 | 1.5 | 0.6 - 0.8 |
| Lead | <0.0002 | <0.0002 | <0.0002 | 4 | <0.0006 | <0.0002 | <0.0030 | 8 | <0.0007 | <0.0002 | <0.0030 | 8 | 0.005 | |
| Manganese | 0.003 | <0.002 | 0.006 | 4 | <0.002 | <0.002 | 0.002 | 8 | <0.005 | <0.002 | 0.011 | 8 | 0.12 (0.02) | |
| Mercury | <0.0002 | <0.0002 | <0.0002 | 4 | <0.0002 | <0.0002 | <0.0002 | 7 | <0.0002 | <0.0002 | <0.0002 | 7 | 0.001 | |
| Nitrate (as N) Dissolved | 0.055 | 0.030 | 0.089 | 8 | 0.061 | 0.020 | 0.134 | 14 | 0.060 | 0.030 | 0.089 | 14 | 10 | |
| Nitrite (as N) Dissolved | <0.010 | <0.010 | <0.010 | 8 | <0.009 | <0.005 | <0.010 | 14 | <0.009 | <0.005 | <0.010 | 14 | 1 | |
| Selenium | 0.0003 | <0.0002 | 0.0003 | 4 | <0.0011 | <0.0002 | <0.0070 | 8 | <0.0014 | <0.0002 | <0.0070 | 8 | 0.05 | |
| Uranium | <0.0005 | <0.0005 | 0.0006 | 4 | <0.0019 | <0.0005 | 0.0120 | 8 | <0.0026 | <0.0005 | 0.0130 | 8 | 0.02 | |
| **Primary Organics (ug/L) **** | | | | | | | | | | | | | | |
| Benzene | <0.5 | <0.5 | <0.5 | 4 | <0.5 | <0.5 | <0.5 | 7 | <0.5 | <0.5 | <0.5 | 7 | 5 | |
| Carbon Tetrachloride | <1.0 | <1.0 | <1.0 | 4 | <1.0 | <1.0 | <1.0 | 7 | <1.0 | <1.0 | <1.0 | 7 | 2 | |
| Chlorobenzene | <0.50 | <0.50 | <0.50 | 4 | <0.50 | <0.50 | <0.50 | 7 | <0.50 | <0.50 | <0.50 | 7 | 80 (30) | |
| Dichlorobenzene (1,2) | <0.50 | <0.50 | <0.50 | 4 | <0.50 | <0.50 | <0.50 | 7 | <0.50 | <0.50 | <0.50 | 7 | 200 (3) | |
| Dichlorobenzene (1,4) | <0.5 | <0.5 | <0.5 | 4 | <0.5 | <0.5 | <0.5 | 7 | <0.5 | <0.5 | <0.5 | 7 | 5 (1) | |
| Dichloroethylene (1,1) | <3.0 | <3.0 | <3.0 | 4 | <3.0 | <3.0 | <3.0 | 7 | <3.0 | <3.0 | <3.0 | 7 | 14 | |
| Ethylbenzene | <0.50 | <0.50 | <0.50 | 4 | <0.50 | <0.50 | <0.50 | 7 | <0.50 | <0.50 | <0.50 | 7 | 140 (1.6) | |
| Methylene Chloride | <0.5 | <0.5 | <0.5 | 4 | <0.5 | <0.5 | <0.5 | 7 | <0.5 | <0.5 | <0.5 | 7 | 50 | |
| Tetrachloroethylene | <0.5 | <0.5 | <0.5 | 4 | <0.5 | <0.5 | <0.5 | 7 | <0.5 | <0.5 | <0.5 | 7 | 10 | |
| Toluene | <0.50 | <0.50 | <0.50 | 4 | <0.50 | <0.50 | <0.50 | 7 | <0.50 | <0.50 | <0.50 | 7 | 60 (24) | |
| Trichloroethylene | <0.50 | <0.50 | <0.50 | 4 | <0.50 | <0.50 | <0.50 | 7 | <0.50 | <0.50 | <0.50 | 7 | 5 | |

## 7.13 Rosslyn 1, Rosslyn 2 and Thorncliff Reservoirs
## 2019

| Parameter | Rosslyn 1 | | | | Rosslyn 2 | | | | Thorncliff | | | | Limits | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Mean | Min | Max | Count | Mean | Min | Max | Count | Mean | Min | Max | Count | *Approval or GCDWQ MAC, (AO or OG) | EPCOR |
| **Secondary Inorganics (mg/L) *** ** | | | | | | | | | | | | | | |
| Alkalinity Total | 122 | 104 | 139 | 4 | 119 | 105 | 130 | 7 | 123 | 111 | 140 | 7 | | |
| Aluminum | 0.042 | 0.031 | 0.068 | 4 | 0.039 | 0.022 | 0.072 | 8 | 0.033 | 0.019 | 0.078 | 8 | (0.1/0.2) | 0.1/0.2 |
| Beryllium | <0.0002 | <0.0002 | <0.0002 | 4 | <0.0003 | <0.0002 | <0.0010 | 8 | <0.0003 | <0.0002 | <0.0010 | 8 | | |
| Bromide Dissolved | <0.010 | <0.010 | <0.010 | 8 | <0.009 | <0.005 | <0.010 | 14 | <0.009 | <0.005 | <0.010 | 14 | | |
| Calcium | 48.6 | 46.2 | 50.5 | 4 | 47.6 | 43.2 | 52.0 | 8 | 45.5 | 43.4 | 47.3 | 8 | | |
| Calcium Hardness | 113 | 102 | 121 | 4 | 115 | 107 | 128 | 7 | 114 | 107 | 125 | 7 | | |
| Chloride Dissolved | 6.0 | 4.9 | 7.4 | 8 | 7.5 | 4.3 | 17.0 | 14 | 5.3 | 4.5 | 6.2 | 14 | (250) | |
| Cobalt | <0.0002 | <0.0002 | <0.0002 | 4 | <0.0003 | <0.0002 | <0.0010 | 8 | <0.0003 | <0.0002 | <0.0010 | 8 | | |
| Hardness, Total (mg CaCO3/L) | 175 | 163 | 186 | 4 | 172 | 157 | 178 | 7 | 173 | 161 | 191 | 7 | | |
| Iron | 0.011 | 0.008 | 0.014 | 4 | 0.009 | <0.005 | 0.019 | 8 | 0.005 | <0.005 | 0.005 | 8 | (0.3) | 0.3 |
| Lanthanum | <Inoff | <Inoff | <Inoff | 3 | <Inoff | <Inoff | <Inoff | 4 | <0 | <0 | <0 | 4 | | |
| Lithium | 0.0033 | 0.0024 | 0.0038 | 4 | <0.0033 | <0.0020 | <0.0040 | 8 | <0.0033 | <0.0030 | <0.0040 | 8 | | |
| Magnesium | 13.8 | 11.6 | 14.9 | 4 | 13.1 | 11.5 | 14.3 | 8 | 13.2 | 12.2 | 14.9 | 8 | | |
| Molybdenum | 0.0008 | 0.0006 | 0.0009 | 4 | <0.0007 | <0.0006 | 0.0010 | 8 | <0.0007 | <0.0006 | 0.0010 | 8 | | |
| Nickel | 0.0006 | <0.0005 | 0.0009 | 4 | <0.0007 | <0.0005 | <0.0020 | 8 | <0.0008 | <0.0005 | <0.0020 | 8 | | |
| Phosphorus | 0.03 | <0.02 | 0.04 | 4 | 0.03 | <0.02 | 0.05 | 8 | 0.03 | <0.02 | 0.04 | 8 | | |
| Potassium | 0.98 | 0.70 | 1.40 | 4 | 0.98 | 0.60 | 1.40 | 8 | 0.93 | 0.70 | 1.20 | 8 | | |
| Silicon | 2.27 | 2.05 | 2.88 | 4 | 2.07 | 1.67 | 2.59 | 8 | 2.00 | 1.56 | 2.33 | 8 | | |
| Silver | <0.0002 | <0.0002 | <0.0002 | 4 | <0.0003 | <0.0002 | <0.0010 | 8 | <0.0003 | <0.0002 | <0.0010 | 8 | | |
| Sodium | 17.2 | 7.2 | 31.2 | 4 | 15.5 | 8.2 | 24.9 | 8 | 18.0 | 6.8 | 28.0 | 8 | (200) | |
| Strontium | 0.392 | 0.309 | 0.441 | 4 | 0.381 | 0.296 | 0.449 | 8 | 0.392 | 0.345 | 0.445 | 8 | 7 | |
| Sulphate Dissolved | 81 | 59 | 113 | 8 | 72 | 58 | 111 | 14 | 76 | 58 | 101 | 14 | (500) | |
| Thallium | <0.0005 | <0.0005 | <0.0005 | 4 | <0.0009 | <0.0005 | <0.0040 | 8 | <0.0011 | <0.0005 | <0.0040 | 8 | | |
| Tin | <0.0005 | <0.0005 | <0.0005 | 4 | <0.0009 | <0.0005 | <0.0040 | 8 | <0.0011 | <0.0005 | <0.0040 | 8 | | |
| Titanium | <0.0005 | <0.0005 | <0.0005 | 4 | <0.0006 | <0.0005 | <0.0010 | 8 | <0.0006 | <0.0005 | <0.0010 | 8 | | |
| Vanadium | <0.0005 | <0.0005 | <0.0005 | 4 | <0.0011 | <0.0005 | <0.0050 | 8 | <0.0013 | <0.0005 | <0.0050 | 8 | | |
| Zinc | <0.005 | <0.005 | <0.005 | 4 | <0.005 | <0.005 | 0.006 | 8 | <0.005 | <0.005 | 0.005 | 8 | (5.0) | |
| Zirconium | <0.0011 | <0.0010 | <0.0011 | 4 | <0.0014 | <0.0005 | <0.0040 | 8 | <0.0015 | <0.0005 | <0.0040 | 8 | | |
| **Secondary Organics (ug/L) *** ** | | | | | | | | | | | | | | |
| Bromodichloromethane | <0.5 | <0.5 | <0.5 | 4 | <0.5 | <0.5 | <0.5 | 7 | <0.5 | <0.5 | <0.5 | 7 | | 16 |
| Bromoform | <1.0 | <1.0 | <1.0 | 4 | <1.0 | <1.0 | <1.0 | 7 | <1.0 | <1.0 | <1.0 | 7 | | |
| Chloroform | 24.6 | 14.3 | 34.5 | 4 | 19.9 | 11.1 | 33.5 | 7 | 16.4 | 8.9 | 26.2 | 7 | | |
| Dibromochloromethane | <0.50 | <0.50 | <0.50 | 4 | <0.50 | <0.50 | <0.50 | 7 | <0.50 | <0.50 | <0.50 | 7 | | |
| Dichlorobenzene (1,3) | <0.50 | <0.50 | <0.50 | 4 | <0.50 | <0.50 | <0.50 | 7 | <0.50 | <0.50 | <0.50 | 7 | | |
| Dichloroethylene, cis (1,2) | <0.50 | <0.50 | <0.50 | 4 | <0.50 | <0.50 | <0.50 | 7 | <0.50 | <0.50 | <0.50 | 7 | | |
| Dichloroethylene, trans (1,2) | <0.50 | <0.50 | <0.50 | 4 | <0.50 | <0.50 | <0.50 | 7 | <0.50 | <0.50 | <0.50 | 7 | | |
| Dichloropropane (1,2) | <0.5 | <0.5 | <0.5 | 4 | <0.5 | <0.5 | <0.5 | 7 | <0.5 | <0.5 | <0.5 | 7 | | |
| Methyl t-Butyl Ether (MTBE) | <0.5 | <0.5 | <0.5 | 4 | <0.5 | <0.5 | <0.5 | 7 | <0.5 | <0.5 | <0.5 | 7 | (15) | |

## 7.13 Rosslyn 1, Rosslyn 2 and Thorncliff Reservoirs
## 2019

| Parameter | Rosslyn 1 | | | | Rosslyn 2 | | | | Thorncliff | | | | Limits | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Mean | Min | Max | Count | Mean | Min | Max | Count | Mean | Min | Max | Count | *Approval or GCDWQ MAC, (AO or OG) | EPCOR |
| MIBK | <1.0 | <1.0 | <1.0 | 4 | <1.0 | <1.0 | <1.0 | 7 | <1.0 | <1.0 | <1.0 | 7 | | |
| Styrene | <0.50 | <0.50 | <0.50 | 4 | <0.50 | <0.50 | <0.50 | 7 | <0.50 | <0.50 | <0.50 | 7 | | |
| Tetrachloroethane (1,1,2,2) | <1.0 | <1.0 | <1.0 | 4 | <1.0 | <1.0 | <1.0 | 7 | <1.0 | <1.0 | <1.0 | 7 | | |
| Total Organic Carbon | 2.2 | 1.7 | 3.0 | 4 | 1.9 | 1.4 | 2.8 | 7 | 1.8 | 1.2 | 2.6 | 7 | | |
| Total Volatile Organics (NonTHM) | <1.0 | <1.0 | <1.0 | 4 | <1.0 | <1.0 | <1.0 | 7 | <1.0 | <1.0 | <1.0 | 7 | | |
| Total Volatile Organics (Unknown) | <1.0 | <1.0 | <1.0 | 4 | <1.0 | <1.0 | <1.0 | 7 | <1.0 | <1.0 | <1.0 | 7 | | |
| Trichlorobenzene (1,2,4) | <0.5 | <0.5 | <0.5 | 4 | <0.5 | <0.5 | <0.5 | 7 | <0.5 | <0.5 | <0.5 | 7 | | |
| Trichloroethane (1,1,1) | <0.5 | <0.5 | <0.5 | 4 | <0.5 | <0.5 | <0.5 | 7 | <0.5 | <0.5 | <0.5 | 7 | | |
| Xylene (1,2) | <0.5 | <0.5 | <0.5 | 4 | <0.5 | <0.5 | <0.5 | 7 | <0.5 | <0.5 | <0.5 | 7 | | |
| Xylene (1,4) | <0.5 | <0.5 | <0.5 | 4 | <0.5 | <0.5 | <0.5 | 7 | <0.5 | <0.5 | <0.5 | 7 | | |

* Health Canada Guidelines for Canadian Drinking Water Quality Maximum Acceptable Concentration and Alberta Environment and Parks (AEP) Approval Limit. Limits in brackets indicate aesthetic objective or operational guidelines.

** Primary Parameters are those that have Maximum Acceptable Concentration (MAC) in Health Canada's Guidelines for Canadian Drinking Water Quality (GCDWQ).

*** Secondary Parameters do not have health based limits in Health Canada's Guidelines for Canadian Drinking Water Quality (GCDWQ).

## 7.14 Disinfection Byproducts

**2019**

| Parameter | Mean | Min | Max | Count | Limits: GCDWQ or Approval or MAC* or (AO or OG) | Limits: EPCOR single result |
|---|---|---|---|---|---|---|
| **HAA (ug/L)** | | | | | 80 | 40 |
| **Far End** | | | | | | |
| **Water Transfer to Regional Customers** | 22.4 | 11.4 | 33.8 | 22 | | |
| **Middle** | | | | | | |
| **Other Facilities** | 13.1 | 10.1 | 14.8 | 3 | | |
| **Staff Residence** | 20.8 | 9.9 | 37.5 | 47 | | |
| | 21.0 | 9.9 | 37.5 | 72 | | |
| **NDMA (ng/L)** | | | | | 40 | 10 |
| **Far End** | | | | | | |
| **Water Transfer to Regional Customers** | 3.3 | 1.2 | 6.7 | 11 | | |
| **Middle** | | | | | | |
| **Other Facilities** | 4.2 | 4.2 | 4.2 | 1 | | |
| **Staff Residence** | 3.2 | 0.6 | 8.2 | 24 | | |
| | 3.2 | 0.6 | 8.2 | 36 | | |
| **Trihalomethanes (ug/L)** | | | | | 100 | 50 |
| **Far End** | | | | | | |
| **Dead End** | 17.2 | 7.8 | 32.6 | 62 | | |
| **Water Transfer to Regional Customers** | 19.9 | 8.3 | 38.4 | 58 | | |
| **Middle** | | | | | | |
| **Field Reservoirs** | 19.4 | 7.2 | 37.8 | 80 | | |
| **Other Facilities** | 12.0 | 9.2 | 14.7 | 3 | | |
| **Staff Residence** | 18.5 | 8.2 | 39.4 | 47 | | |
| | 18.7 | 7.2 | 39.4 | 250 | | |

Location Code: City is divided into 28 zones by population. Location is coded by zone and site type.

## 7.15 Raw River Water: Physical, Inorganic, Organic and Pesticide Parameters

**2019**

| | ROSSDALE | | | | E.L. SMITH | | | |
|---|---|---|---|---|---|---|---|---|
| | **Mean** | **Min** | **Max** | **Count** | **Mean** | **Min** | **Max** | **Count** |
| Physical | | | | | | | | |
| Colour (TCU) | 19.2 | 4.3 | 123.0 | 365 | 18.9 | 2.0 | 121.0 | 365 |
| Conductivity (uS/cm) | 346 | 275 | 505 | 53 | 341 | 265 | 388 | 53 |
| FPA-Intensity (N/A) | 0.71 | 0.25 | 1.94 | 74 | 0.65 | 0.31 | 1.81 | 74 |
| pH (N/A) | 8.2 | 7.9 | 8.4 | 12 | 8.2 | 8.0 | 8.5 | 12 |
| Total Dissolved Solids (mg/L) | 208 | 159 | 242 | 12 | 207 | 181 | 243 | 12 |
| Total Suspended Solids | 24 | <5 | 127 | 12 | 43 | <5 | 205 | 12 |
| Turbidity (NTU) | 30.8 | 1.0 | 1,080.0 | 365 | 28.9 | 1.1 | 650.0 | 365 |
| Primary Inorganics (mg/L) ** | | | | | | | | |
| Antimony Dissolved | <0.0002 | <0.0002 | 0.0003 | 24 | <0.0002 | <0.0002 | <0.0002 | 24 |
| Arsenic Dissolved | 0.0005 | <0.0002 | 0.0021 | 24 | 0.0006 | <0.0002 | 0.0027 | 24 |
| Barium Dissolved | 0.072 | 0.057 | 0.130 | 24 | 0.076 | 0.057 | 0.152 | 24 |
| Boron Dissolved | 0.013 | 0.008 | 0.018 | 24 | 0.013 | 0.008 | 0.019 | 24 |
| Bromate Dissolved | <0.005 | <0.003 | <0.005 | 105 | <0.005 | <0.003 | <0.005 | 105 |
| Cadmium Dissolved | <0.0002 | <0.0002 | <0.0002 | 24 | <0.0002 | <0.0002 | <0.0002 | 24 |
| Chlorate Dissolved | <0.011 | <0.005 | <0.100 | 105 | <0.010 | <0.005 | <0.100 | 105 |
| Chlorite Dissolved | <0.007 | <0.005 | <0.200 | 105 | <0.007 | <0.005 | <0.200 | 105 |
| Chromium Dissolved | 0.0011 | <0.0002 | 0.0073 | 24 | 0.0016 | <0.0002 | 0.0212 | 24 |
| Cyanide Dissolved | <0.002 | <0.002 | <0.002 | 6 | <0.002 | <0.002 | <0.002 | 6 |
| Fluoride Dissolved | 0.12 | 0.10 | 0.15 | 53 | 0.12 | 0.10 | 0.14 | 53 |
| Lead Dissolved | 0.0004 | <0.0002 | 0.0021 | 24 | 0.0005 | <0.0002 | 0.0027 | 24 |
| Mercury Dissolved | <0.0002 | <0.0002 | <0.0002 | 24 | <0.0002 | <0.0002 | <0.0002 | 24 |
| Nitrate (as N) Dissolved | 0.053 | <0.010 | 0.294 | 105 | 0.047 | <0.010 | 0.245 | 105 |
| Nitrite (as N) Dissolved | <0.011 | <0.005 | 0.021 | 105 | <0.011 | <0.005 | 0.019 | 105 |
| Selenium Dissolved | 0.0003 | <0.0002 | 0.0004 | 24 | 0.0003 | <0.0002 | 0.0005 | 24 |
| Total Chlorine | <0.03 | <0.03 | <0.03 | 12 | <0.03 | <0.03 | <0.03 | 12 |
| Uranium Dissolved | <0.0006 | <0.0005 | 0.0006 | 24 | <0.0005 | <0.0005 | 0.0006 | 24 |

## 7.15 Raw River Water: Physical, Inorganic, Organic and Pesticide Parameters

**2019**

| | ROSSDALE | | | | E.L. SMITH | | | |
|---|---|---|---|---|---|---|---|---|
| | Mean | Min | Max | Count | Mean | Min | Max | Count |
| Primary Organics (ug/L) ** | | | | | | | | |
| 2,4-D | <0.007 | <0.007 | 0.008 | 4 | <0.007 | <0.007 | <0.007 | 4 |
| Atrazine | <0.002 | <0.002 | <0.002 | 4 | <0.002 | <0.002 | <0.002 | 4 |
| Benzene | <0.5 | <0.1 | <0.5 | 368 | <0.5 | <0.1 | <0.5 | 369 |
| Benzo(a)pyrene | <0.05 | <0.01 | <0.10 | 8 | <0.05 | <0.01 | <0.10 | 8 |
| Bromoxynil | <0.030 | <0.030 | <0.030 | 4 | <0.030 | <0.030 | <0.030 | 4 |
| Carbon Tetrachloride | <1.0 | <0.1 | <1.0 | 368 | <1.0 | <0.1 | <1.0 | 369 |
| Chlorobenzene | <0.49 | <0.03 | <0.50 | 368 | <0.49 | <0.03 | <0.50 | 369 |
| Chlorpyrifos | <0.002 | <0.002 | <0.002 | 4 | <0.002 | <0.002 | <0.002 | 4 |
| Cyanazine | <0.010 | <0.010 | <0.010 | 4 | <0.010 | <0.010 | <0.010 | 4 |
| Diazinon | <0.004 | <0.004 | <0.004 | 4 | <0.004 | <0.004 | <0.004 | 4 |
| Dicamba | <0.002 | <0.002 | <0.002 | 4 | <0.002 | <0.002 | <0.002 | 4 |
| Dichlorobenzene (1,2) | <0.49 | <0.03 | <0.50 | 368 | <0.49 | <0.03 | <0.50 | 369 |
| Dichlorobenzene (1,4) | <0.5 | <0.1 | <0.5 | 368 | <0.5 | <0.1 | <0.5 | 369 |
| Dichloroethane (1,2) | <0.1 | <0.1 | <0.1 | 4 | <0.1 | <0.1 | <0.1 | 4 |
| Dichloroethylene (1,1) | <2.97 | <0.05 | <3.00 | 368 | <2.97 | <0.05 | <3.00 | 369 |
| Dichlorophenol (2,4) | <0.05 | <0.01 | <0.10 | 8 | <0.05 | <0.01 | <0.10 | 8 |
| Diclofop-methyl | <0.01 | <0.01 | <0.01 | 4 | <0.01 | <0.01 | <0.01 | 4 |
| Dimethoate | <0.005 | <0.005 | <0.005 | 4 | <0.005 | <0.005 | <0.005 | 4 |
| Diuron | <0.2 | <0.2 | <0.2 | 4 | <0.2 | <0.2 | <0.2 | 4 |
| Ethylbenzene | <0.49 | <0.02 | <0.50 | 368 | <0.49 | <0.02 | <0.50 | 369 |
| Glyphosate | <7.6 | <0.1 | <20.0 | 4 | <7.6 | <0.1 | <20.0 | 4 |
| Malathion | <0.030 | <0.030 | <0.030 | 4 | <0.030 | <0.030 | <0.030 | 4 |
| MCPA | <0.010 | <0.010 | <0.010 | 4 | <0.010 | <0.010 | <0.010 | 4 |
| Methylene Chloride | <0.5 | <0.1 | <0.5 | 368 | <0.5 | <0.1 | <0.5 | 369 |
| Metolachlor | <0.007 | <0.007 | <0.007 | 4 | <0.007 | <0.007 | <0.007 | 4 |
| Metribuzin | <0.002 | <0.002 | <0.002 | 4 | <0.002 | <0.002 | <0.002 | 4 |
| Microcystin | <0.12 | <0.10 | 0.27 | 12 | <0.11 | <0.10 | 0.18 | 12 |
| NTA (mg/L) | <0.16 | <0.05 | <0.20 | 4 | <0.16 | <0.05 | <0.20 | 4 |
| Pentachlorophenol | <0.6 | <0.6 | <0.6 | 4 | <0.6 | <0.6 | <0.6 | 4 |
| Perfluoro-n-Octanoic Acid (PFOA) | <0.02 | <0.02 | <0.02 | 4 | <0.02 | <0.02 | <0.02 | 4 |
| Perfluorooctane Sulfonate (PFOS) | <0.02 | <0.02 | <0.02 | 4 | <0.02 | <0.02 | <0.02 | 4 |
| Phorate | <0.003 | <0.003 | <0.003 | 4 | <0.003 | <0.003 | <0.003 | 4 |
| Picloram | <0.011 | <0.010 | 0.012 | 4 | <0.011 | <0.010 | 0.012 | 4 |
| Simazine | <0.004 | <0.004 | <0.004 | 4 | <0.004 | <0.004 | <0.004 | 4 |
| Terbufos | <0.01 | <0.01 | <0.01 | 4 | <0.01 | <0.01 | <0.01 | 4 |
| Tetrachloroethylene | <0.5 | <0.1 | <0.5 | 368 | <0.5 | <0.1 | <0.5 | 369 |
| Tetrachlorophenol (2,3,4,6) | <0.4 | <0.4 | <0.4 | 4 | <0.4 | <0.4 | <0.4 | 4 |
| Toluene | <0.49 | <0.03 | <0.50 | 368 | <0.49 | <0.03 | <0.50 | 369 |
| Trichloroethylene | <0.49 | <0.03 | <0.50 | 368 | <0.49 | <0.03 | <0.50 | 369 |
| Trichlorophenol (2,4,6) | <0.7 | <0.7 | <0.7 | 4 | <0.7 | <0.7 | <0.7 | 4 |
| Trifluralin | <0.002 | <0.002 | <0.002 | 4 | <0.002 | <0.002 | <0.002 | 4 |
| Trihalomethanes | <1.0 | <1.0 | <1.0 | 364 | <1.0 | <1.0 | 1.1 | 365 |
| Vinyl Chloride | <0.1 | <0.1 | <0.1 | 4 | <0.1 | <0.1 | <0.1 | 4 |
| Radionuclides (Bq/L) | | | | | | | | |
| Cesium-137 | <0.15 | <0.10 | <0.20 | 2 | <0.20 | <0.20 | <0.20 | 2 |
| Gross Alpha | <0.24 | <0.17 | <0.30 | 2 | <0.19 | <0.18 | <0.19 | 2 |
| Gross Beta | 0.31 | 0.15 | 0.47 | 2 | <0.09 | <0.09 | <0.09 | 2 |
| Iodine-131 | <0.30 | <0.20 | <0.40 | 2 | <0.35 | <0.30 | <0.40 | 2 |
| Lead-210 | <0.02 | <0.02 | <0.02 | 2 | <0.02 | <0.02 | <0.02 | 2 |
| Radium-226 | 0.01 | <0.01 | 0.01 | 2 | <0.01 | <0.01 | 0.01 | 2 |
| Strontium-90 | <0.1 | <0.1 | <0.1 | 2 | <0.1 | <0.1 | <0.1 | 2 |
| Tritium | <15 | <15 | <15 | 2 | <15 | <15 | <15 | 2 |

## 7.15 Raw River Water: Physical, Inorganic, Organic and Pesticide Parameters

**2019**

| | ROSSDALE | | | | E.L. SMITH | | | |
|---|---|---|---|---|---|---|---|---|
| | Mean | Min | Max | Count | Mean | Min | Max | Count |
| Secondary Inorganics (mg/L) *** | | | | | | | | |
| Alkalinity Total (mg CaCO3/L) | 133 | 95 | 150 | 53 | 134 | 96 | 152 | 53 |
| Alkalinity, PHP (mg CaCO3/L) | <1 | <1 | <1 | 12 | <1 | <1 | <1 | 12 |
| Aluminum Dissolved | 0.552 | 0.007 | 4.460 | 24 | 0.659 | <0.005 | 4.940 | 24 |
| Ammonia as N | 0.16 | 0.16 | 0.16 | 1 | 0.11 | 0.11 | 0.11 | 1 |
| Ammonia as NH3 | 0.07 | <0.04 | 0.32 | 76 | <0.07 | <0.03 | 0.40 | 76 |
| Beryllium Dissolved | <0.0002 | <0.0002 | <0.0002 | 24 | <0.0002 | <0.0002 | 0.0002 | 24 |
| Bromide Dissolved | <0.010 | <0.005 | <0.050 | 105 | <0.010 | <0.005 | <0.050 | 105 |
| Calcium Dissolved | 45.4 | 31.9 | 52.3 | 12 | 45.6 | 31.6 | 53.3 | 12 |
| Chloride Dissolved | 2.58 | 0.70 | 41.00 | 105 | 0.99 | 0.50 | 5.08 | 105 |
| Chlorine Free | <0.03 | <0.03 | <0.03 | 12 | <0.03 | <0.03 | <0.03 | 12 |
| Cobalt Dissolved | 0.0003 | <0.0002 | 0.0016 | 24 | 0.0004 | <0.0002 | 0.0023 | 24 |
| Copper Dissolved | <0.006 | <0.005 | 0.010 | 12 | <0.005 | <0.005 | 0.007 | 12 |
| Hardness, Ca (mg CaCO3/L) | 110 | 78 | 129 | 53 | 109 | 78 | 129 | 53 |
| Hardness, Total (mg CaCO3/L) | 168 | 113 | 195 | 53 | 168 | 116 | 193 | 53 |
| Iron Dissolved | 0.482 | <0.005 | 4.430 | 24 | 0.697 | <0.005 | 6.080 | 24 |
| Lanthanum Dissolved | <0.001 | <0.001 | 0.002 | 16 | <0.001 | <0.001 | 0.003 | 16 |
| Lithium Dissolved | 0.0040 | 0.0032 | 0.0069 | 24 | 0.0040 | 0.0030 | 0.0076 | 24 |
| Magnesium Dissolved | 13.6 | 8.7 | 15.8 | 24 | 13.8 | 9.0 | 16.4 | 24 |
| Manganese Dissolved | 0.013 | <0.002 | 0.088 | 24 | 0.018 | <0.002 | 0.137 | 24 |
| Molybdenum Dissolved | 0.0008 | 0.0006 | 0.0011 | 24 | 0.0009 | 0.0006 | 0.0027 | 24 |
| Nickel Dissolved | 0.0013 | <0.0005 | 0.0067 | 24 | 0.0016 | <0.0005 | 0.0115 | 24 |
| Phosphate,Ortho (as P) | <0.02 | <0.01 | <0.02 | 13 | <0.02 | <0.01 | <0.02 | 13 |
| Phosphorus Dissolved | 0.04 | <0.02 | 0.15 | 24 | 0.05 | <0.02 | 0.17 | 24 |
| Potassium Dissolved | 1.41 | 0.60 | 6.10 | 24 | 1.34 | 0.50 | 5.20 | 24 |
| Silicon Dissolved | 3.08 | 1.68 | 10.40 | 24 | 3.33 | 1.72 | 11.50 | 24 |
| Silver Dissolved | <0.0002 | <0.0002 | <0.0002 | 24 | <0.0002 | <0.0002 | <0.0002 | 24 |
| Sodium Dissolved | 4.9 | 3.9 | 7.4 | 24 | 4.5 | 3.5 | 6.5 | 24 |
| Strontium Dissolved | 0.393 | 0.260 | 0.464 | 24 | 0.399 | 0.271 | 0.473 | 24 |
| Sulphate Dissolved | 44.9 | 29.9 | 62.4 | 105 | 44.3 | 29.6 | 59.4 | 105 |
| Sulphide | <0.002 | <0.002 | 0.002 | 12 | <0.002 | <0.002 | 0.003 | 12 |
| Thallium Dissolved | <0.0005 | <0.0005 | <0.0005 | 24 | <0.0005 | <0.0005 | <0.0005 | 24 |
| Tin Dissolved | <0.0005 | <0.0005 | <0.0005 | 24 | <0.0005 | <0.0005 | <0.0005 | 24 |
| Titanium Dissolved | 0.0087 | <0.0005 | 0.0495 | 24 | 0.0121 | <0.0005 | 0.0588 | 24 |
| Total Kjeldahl Nitrogen (TKN) | 0.28 | <0.03 | 1.02 | 12 | 0.26 | <0.03 | 0.80 | 12 |
| Vanadium Dissolved | 0.0017 | <0.0005 | 0.0122 | 24 | 0.0021 | <0.0005 | 0.0134 | 24 |
| Zinc Dissolved | <0.007 | <0.005 | 0.023 | 24 | <0.007 | <0.005 | 0.022 | 24 |
| Zirconium Dissolved | <0.0011 | <0.0005 | 0.0020 | 12 | <0.0012 | <0.0005 | 0.0020 | 12 |

## 7.15 Raw River Water: Physical, Inorganic, Organic and Pesticide Parameters

**2019**

| | ROSSDALE | | | | E.L. SMITH | | | |
|---|---|---|---|---|---|---|---|---|
| | Mean | Min | Max | Count | Mean | Min | Max | Count |
| Secondary Organics (ug/L) *** | | | | | | | | |
| 2,4-DB | <0.009 | <0.009 | <0.009 | 4 | <0.009 | <0.009 | <0.009 | 4 |
| 2,4-DP | <0.003 | <0.003 | <0.003 | 4 | <0.003 | <0.003 | 0.003 | 4 |
| Acenaphthene | <0.10 | <0.01 | <0.20 | 8 | <0.10 | <0.01 | <0.20 | 8 |
| Acenaphthylene | <0.06 | <0.01 | <0.10 | 8 | <0.06 | <0.01 | <0.10 | 8 |
| Acetaminophen | <0.050 | <0.050 | <0.050 | 4 | <0.050 | <0.050 | <0.050 | 4 |
| Acetylsalicylic acid | <0.01 | <0.01 | <0.01 | 3 | <0.01 | <0.01 | <0.01 | 3 |
| Acridine | <0.01 | <0.01 | <0.01 | 4 | <0.01 | <0.01 | <0.01 | 4 |
| Aldicarb | <0.1 | <0.1 | <0.1 | 4 | <0.1 | <0.1 | <0.1 | 4 |
| Aldicarb sulfone | <0.20 | <0.20 | <0.20 | 4 | <0.20 | <0.20 | <0.20 | 4 |
| Aldicarb sulfoxide | <0.10 | <0.10 | <0.10 | 4 | <0.10 | <0.10 | <0.10 | 4 |
| Aldrin | <0.004 | <0.004 | <0.004 | 4 | <0.004 | <0.004 | <0.004 | 4 |
| alpha-Endosulfan | <0.003 | <0.003 | <0.003 | 4 | <0.003 | <0.003 | <0.003 | 4 |
| Aminocarb | <0.020 | <0.020 | <0.020 | 4 | <0.020 | <0.020 | <0.020 | 4 |
| Aminomethyl Phosphonic Acid | <0.3 | <0.3 | <0.3 | 1 | <0.3 | <0.3 | <0.3 | 1 |
| Aminopyralid | <0.05 | <0.05 | <0.05 | 4 | <0.05 | <0.05 | <0.05 | 4 |
| Anthracene | <0.10 | <0.01 | <0.20 | 8 | <0.10 | <0.01 | <0.20 | 8 |
| Azinphos-methyl | <0.1 | <0.1 | <0.1 | 4 | <0.1 | <0.1 | <0.1 | 4 |
| Azoxystrobin | <0.005 | <0.005 | <0.005 | 4 | <0.005 | <0.005 | <0.005 | 4 |
| Benomyl | <0.010 | <0.010 | <0.010 | 4 | <0.010 | <0.010 | <0.010 | 4 |
| Bentazon | <0.005 | <0.005 | <0.005 | 4 | <0.005 | <0.005 | <0.005 | 4 |
| Benzidine | <0.2 | <0.2 | <0.2 | 4 | <0.2 | <0.2 | <0.2 | 4 |
| Benzo(a)anthracene | <0.05 | <0.01 | <0.10 | 8 | <0.06 | <0.01 | <0.10 | 8 |
| Benzo(b)fluoranthene | <0.1 | <0.1 | <0.1 | 4 | <0.1 | <0.1 | <0.1 | 4 |
| Benzo(b,j,k)fluoranthene | <0.02 | <0.02 | <0.02 | 4 | 0.03 | <0.02 | 0.05 | 4 |
| Benzo(c)phenanthrene | <0.01 | <0.01 | <0.01 | 4 | <0.01 | <0.01 | <0.01 | 4 |
| Benzo(e)pyrene | <0.01 | <0.01 | <0.01 | 4 | <0.01 | <0.01 | 0.02 | 4 |
| Benzo(ghi)perylene | <0.05 | <0.01 | <0.10 | 8 | <0.05 | <0.01 | <0.10 | 8 |
| Benzo(k)fluoranthene | <0.1 | <0.1 | <0.1 | 4 | <0.1 | <0.1 | <0.1 | 4 |
| Benzoylecgonine | <0.01 | <0.01 | <0.01 | 4 | <0.01 | <0.01 | <0.01 | 4 |
| Bezafibrate | <0.1 | <0.1 | <0.1 | 3 | <0.1 | <0.1 | <0.1 | 3 |
| Bis(2-chloroethoxy)methane | <0.3 | <0.3 | <0.3 | 4 | <0.3 | <0.3 | <0.3 | 4 |
| Bis(2-chloroethyl)ether | <0.2 | <0.2 | <0.2 | 4 | <0.2 | <0.2 | <0.2 | 4 |
| Bis(2-chloroisopropyl)ether | <0.3 | <0.3 | <0.3 | 4 | <0.3 | <0.3 | <0.3 | 4 |
| Bis(2-ethylhexyl)phthalate | 0.4 | <0.3 | 0.4 | 4 | 0.4 | <0.3 | 0.6 | 4 |
| Bromacil | <0.060 | <0.060 | <0.060 | 4 | <0.060 | <0.060 | <0.060 | 4 |
| Bromobenzene | <0.03 | <0.03 | <0.03 | 4 | <0.03 | <0.03 | <0.03 | 4 |
| Bromodichloromethane | <0.5 | <0.0 | <0.5 | 368 | <0.5 | <0.0 | <0.5 | 369 |
| Bromoform | <1.0 | <0.1 | <1.0 | 368 | <1.0 | <0.1 | <1.0 | 369 |
| Bromomethane | <0.1 | <0.1 | <0.1 | 4 | <0.1 | <0.1 | <0.1 | 4 |
| Bromophenyl phenyl ether (4) | <0.2 | <0.2 | <0.2 | 4 | <0.2 | <0.2 | <0.2 | 4 |
| Butylbenzylphthalate | 0.2 | <0.1 | 0.4 | 4 | 0.3 | <0.1 | 0.4 | 4 |
| Caffeine | <0.02 | <0.02 | <0.02 | 3 | <0.02 | <0.02 | <0.02 | 3 |
| Carbamazepine | <0.010 | <0.010 | <0.010 | 3 | <0.010 | <0.010 | <0.010 | 3 |
| Carbaryl | <0.005 | <0.005 | <0.005 | 4 | <0.005 | <0.005 | <0.005 | 4 |
| Carbathiin | <0.200 | <0.200 | <0.200 | 4 | <0.200 | <0.200 | <0.200 | 4 |
| Carbofuran | <0.005 | <0.005 | <0.005 | 4 | <0.005 | <0.005 | <0.005 | 4 |
| Chloramphenicol | <0.01 | <0.01 | <0.01 | 4 | <0.01 | <0.01 | <0.01 | 4 |
| Chloro-2-MethylPhenol (4) | <0.002 | <0.002 | <0.002 | 4 | <0.002 | <0.002 | <0.002 | 4 |
| Chloro-3-methylphenol (4) | <0.8 | <0.8 | <0.8 | 4 | <0.8 | <0.8 | <0.8 | 4 |
| Chloroethane | <0.1 | <0.1 | <0.1 | 4 | <0.1 | <0.1 | <0.1 | 4 |
| Chloroethoxyethylene (2) | <0.05 | <0.05 | <0.05 | 4 | <0.05 | <0.05 | <0.05 | 4 |
| Chloroform | <0.5 | <0.2 | 0.9 | 368 | <0.5 | <0.2 | 1.1 | 369 |
| Chloromethane | <0.1 | <0.1 | <0.1 | 4 | <0.1 | <0.1 | <0.1 | 4 |

## 7.15 Raw River Water: Physical, Inorganic, Organic and Pesticide Parameters

**2019**

| | ROSSDALE | | | | E.L. SMITH | | | |
|---|---|---|---|---|---|---|---|---|
| | Mean | Min | Max | Count | Mean | Min | Max | Count |
| Secondary Organics (ug/L) *** | | | | | | | | |
| Chloronaphthalene (2) | <0.2 | <0.2 | <0.2 | 4 | <0.2 | <0.2 | <0.2 | 4 |
| Chlorophenol (2) | <0.2 | <0.2 | <0.2 | 4 | <0.2 | <0.2 | <0.2 | 4 |
| Chlorophenyl phenyl ether (4) | <0.2 | <0.2 | <0.2 | 4 | <0.2 | <0.2 | <0.2 | 4 |
| Chlorothalonil | <0.030 | <0.030 | <0.030 | 4 | <0.030 | <0.030 | <0.030 | 4 |
| Chlorotoluene (2) | <0.05 | <0.05 | <0.05 | 4 | <0.05 | <0.05 | <0.05 | 4 |
| Chlorotoluene (4) | <0.05 | <0.05 | <0.05 | 4 | <0.05 | <0.05 | <0.05 | 4 |
| Chrysene | <0.102 | <0.004 | <0.200 | 8 | <0.107 | <0.004 | <0.200 | 8 |
| Ciprofloxacin | 0.03 | <0.02 | 0.06 | 4 | <0.02 | <0.02 | 0.03 | 4 |
| Clindamycin | <0.010 | <0.010 | <0.010 | 4 | <0.010 | <0.010 | <0.010 | 4 |
| Clodinafop acid metabolite | <0.010 | <0.010 | <0.010 | 4 | <0.010 | <0.010 | <0.010 | 4 |
| Clodinafop-propargyl | <0.010 | <0.010 | <0.010 | 4 | <0.010 | <0.010 | <0.010 | 4 |
| Clofibric Acid | <0.01 | <0.01 | <0.01 | 3 | <0.01 | <0.01 | <0.01 | 3 |
| Clopyralid | <0.060 | <0.060 | <0.060 | 4 | <0.060 | <0.060 | <0.060 | 4 |
| Clothianidin | <0.005 | <0.005 | <0.005 | 4 | <0.005 | <0.005 | <0.005 | 4 |
| Cocaine | <0.01 | <0.01 | <0.01 | 4 | <0.01 | <0.01 | <0.01 | 4 |
| Codeine | <0.05 | <0.05 | <0.05 | 4 | <0.05 | <0.05 | <0.05 | 4 |
| Cotinine | <0.01 | <0.01 | <0.01 | 4 | <0.01 | <0.01 | <0.01 | 4 |
| Deltamethrin | <0.007 | <0.007 | <0.007 | 4 | <0.007 | <0.007 | <0.007 | 4 |
| Desethyl Atrazine | <0.020 | <0.020 | <0.020 | 4 | <0.020 | <0.020 | <0.020 | 4 |
| Desisopropyl Atrazine | <0.020 | <0.020 | <0.020 | 4 | <0.020 | <0.020 | <0.020 | 4 |
| Dibenzo(a,h)pyrene | <0.01 | <0.01 | <0.01 | 4 | <0.01 | <0.01 | <0.01 | 4 |
| Dibenzo(a,i)pyrene | <0.01 | <0.01 | <0.01 | 4 | <0.01 | <0.01 | <0.01 | 4 |
| Dibenzo(a,l)pyrene | <0.01 | <0.01 | <0.01 | 4 | <0.01 | <0.01 | <0.01 | 4 |
| Dibenzo(ah)anthracene | <0.05 | <0.01 | <0.10 | 8 | <0.05 | <0.01 | <0.10 | 8 |
| Dibromo-3-chloropropane (1,2) | <2.1 | <2.1 | <2.1 | 4 | <2.1 | <2.1 | <2.1 | 4 |
| Dibromochloromethane | <0.50 | <0.04 | <0.50 | 368 | <0.50 | <0.04 | <0.50 | 369 |
| Dibromoethane (1,2) | <0.07 | <0.07 | <0.07 | 4 | <0.07 | <0.07 | <0.07 | 4 |
| Dibromomethane | <0.03 | <0.03 | <0.03 | 4 | <0.03 | <0.03 | <0.03 | 4 |
| Dichlorobenzene (1,3) | <0.49 | <0.03 | <0.50 | 368 | <0.49 | <0.03 | <0.50 | 369 |
| Dichloroethane (1,1) | <0.02 | <0.02 | <0.02 | 4 | <0.02 | <0.02 | <0.02 | 4 |
| Dichloroethylene, cis (1,2) | <0.50 | <0.04 | <0.50 | 368 | <0.50 | <0.04 | <0.50 | 369 |
| Dichloroethylene, trans (1,2) | <0.50 | <0.04 | <0.50 | 368 | <0.50 | <0.04 | <0.50 | 369 |
| Dichloropropane (1,2) | <0.5 | <0.1 | <0.5 | 368 | <0.5 | <0.1 | <0.5 | 369 |
| Dichloropropane (1,3) | <0.04 | <0.04 | <0.04 | 4 | <0.04 | <0.04 | <0.04 | 4 |
| Dichloropropane (2,2) | <0.1 | <0.1 | <0.1 | 4 | <0.1 | <0.1 | <0.1 | 4 |
| Dichloropropylene (1,1) | <0.06 | <0.06 | <0.06 | 4 | <0.06 | <0.06 | <0.06 | 4 |
| Dichloropropylene cis (1,3) | <0.03 | <0.03 | <0.03 | 4 | <0.03 | <0.03 | <0.03 | 4 |
| Dichloropropylene trans (1,3) | <0.05 | <0.05 | <0.05 | 4 | <0.05 | <0.05 | <0.05 | 4 |
| Diclofenac | <0.010 | <0.010 | <0.010 | 3 | <0.010 | <0.010 | <0.010 | 3 |
| Dieldrin | <0.008 | <0.008 | <0.008 | 4 | <0.008 | <0.008 | <0.008 | 4 |
| Diethyl phthalate | <0.1 | <0.1 | <0.1 | 4 | <0.1 | <0.1 | <0.1 | 4 |
| Difenoconazol | <0.004 | <0.004 | <0.004 | 4 | <0.004 | <0.004 | <0.004 | 4 |
| Dimethyl phthalate | <0.1 | <0.1 | <0.1 | 4 | <0.1 | <0.1 | <0.1 | 4 |
| Dimethylbenz(a)anthracene (7,12) | <0.008 | <0.008 | <0.008 | 4 | <0.008 | <0.008 | <0.008 | 4 |
| Dimethylphenol (2,4) | <0.3 | <0.3 | <0.3 | 4 | <0.3 | <0.3 | <0.3 | 4 |
| Di-n-butylphthalate | <0.3 | <0.3 | <0.3 | 4 | <0.3 | <0.3 | 0.3 | 4 |
| Dinitrophenol (2,4) | <0.7 | <0.7 | <0.7 | 4 | <0.7 | <0.7 | <0.7 | 4 |
| Dinitrotoluene (2,4) | <0.3 | <0.3 | <0.3 | 4 | <0.3 | <0.3 | <0.3 | 4 |
| Dinitrotoluene (2,6) | <0.2 | <0.2 | <0.2 | 4 | <0.2 | <0.2 | <0.2 | 4 |
| Di-n-octyl phthalate | <0.2 | <0.2 | <0.2 | 4 | <0.2 | <0.2 | 0.2 | 4 |
| Diphenylhydrazine (1,2) | <0.1 | <0.1 | <0.1 | 4 | <0.1 | <0.1 | <0.1 | 4 |
| Disulfoton | <0.100 | <0.100 | <0.100 | 4 | <0.100 | <0.100 | <0.100 | 4 |
| Enrofloxacin | <0.02 | <0.02 | 0.02 | 4 | <0.02 | <0.02 | <0.02 | 4 |

## 7.15 Raw River Water: Physical, Inorganic, Organic and Pesticide Parameters

**2019**

| | ROSSDALE | | | | E.L. SMITH | | | |
|---|---|---|---|---|---|---|---|---|
| | Mean | Min | Max | Count | Mean | Min | Max | Count |
| Secondary Organics (ug/L) *** | | | | | | | | |
| EPTC | <0.006 | <0.006 | <0.006 | 4 | <0.006 | <0.006 | <0.006 | 4 |
| Erythromycin | <0.010 | <0.010 | <0.010 | 4 | <0.010 | <0.010 | <0.010 | 4 |
| Ethalfluralin | <0.030 | <0.030 | <0.030 | 4 | <0.030 | <0.030 | <0.030 | 4 |
| Ethion | <0.09 | <0.09 | <0.09 | 4 | <0.09 | <0.09 | <0.09 | 4 |
| Ethofumesate | <0.002 | <0.002 | <0.002 | 4 | <0.002 | <0.002 | <0.002 | 4 |
| Fenoprofen | <0.005 | <0.005 | <0.005 | 3 | <0.005 | <0.005 | <0.005 | 3 |
| Fenoxaprop-p-ethyl | <0.010 | <0.010 | <0.010 | 4 | <0.010 | <0.010 | <0.010 | 4 |
| Fluazifop | <0.004 | <0.004 | <0.004 | 4 | <0.004 | <0.004 | <0.004 | 4 |
| Fluoranthene | <0.05 | <0.01 | <0.10 | 8 | <0.08 | <0.01 | 0.20 | 8 |
| Fluorene | <0.05 | <0.01 | <0.10 | 8 | <0.05 | <0.01 | <0.10 | 8 |
| Fluoxetine | <0.01 | <0.01 | <0.01 | 4 | <0.01 | <0.01 | <0.01 | 4 |
| Fluroxypyr | <0.002 | <0.002 | 0.003 | 4 | <0.002 | <0.002 | <0.002 | 4 |
| Gemfibrozil | <0.005 | <0.005 | <0.005 | 3 | <0.005 | <0.005 | <0.005 | 3 |
| Glufosinate | <0.4 | <0.4 | <0.4 | 1 | <0.4 | <0.4 | <0.4 | 1 |
| Hexachlorobenzene | <0.1 | <0.1 | <0.1 | 4 | <0.1 | <0.1 | <0.1 | 4 |
| Hexachlorobutadiene | <0.2 | <0.1 | <0.2 | 8 | <0.2 | <0.1 | <0.2 | 8 |
| Hexachlorocyclopentadiene | <0.1 | <0.1 | <0.1 | 4 | <0.1 | <0.1 | <0.1 | 4 |
| Hexachloroethane | <0.3 | <0.3 | <0.3 | 4 | <0.3 | <0.3 | <0.3 | 4 |
| Hexaconazole | <0.010 | <0.010 | <0.010 | 4 | <0.010 | <0.010 | <0.010 | 4 |
| Hydroxy Carbofuran (3) | <0.020 | <0.020 | <0.020 | 4 | <0.020 | <0.020 | <0.020 | 4 |
| Ibuprofen | <0.005 | <0.005 | <0.005 | 3 | <0.005 | <0.005 | <0.005 | 3 |
| Imazamethabenz-methyl | <0.050 | <0.050 | <0.050 | 4 | <0.050 | <0.050 | <0.050 | 4 |
| Imazamox | <0.010 | <0.007 | 0.017 | 4 | <0.007 | <0.007 | <0.007 | 4 |
| Imazethapyr | 0.020 | <0.010 | 0.050 | 4 | <0.010 | <0.010 | <0.010 | 4 |
| Imidacloprid | <0.005 | <0.005 | <0.005 | 4 | <0.005 | <0.005 | <0.005 | 4 |
| Indeno(1,2,3-cd)pyrene | <0.10 | <0.01 | <0.20 | 8 | <0.10 | <0.01 | <0.20 | 8 |
| Indomethacin | <0.05 | <0.05 | <0.05 | 3 | <0.05 | <0.05 | <0.05 | 3 |
| Iprodione | <0.010 | <0.010 | <0.010 | 4 | <0.010 | <0.010 | <0.010 | 4 |
| Isophorone | <0.2 | <0.2 | <0.2 | 4 | <0.2 | <0.2 | <0.2 | 4 |
| Isopropylbenzene | <0.03 | <0.03 | <0.03 | 4 | <0.03 | <0.03 | <0.03 | 4 |
| Ketoprofen | <0.01 | <0.01 | <0.01 | 3 | <0.01 | <0.01 | <0.01 | 3 |
| Lambda-Cyhalothrin | <0.020 | <0.020 | <0.020 | 4 | <0.020 | <0.020 | <0.020 | 4 |
| Lincomycin | <0.05 | <0.05 | <0.05 | 4 | <0.05 | <0.05 | <0.05 | 4 |
| Lindane (alpha-BHC) | <0.002 | <0.002 | <0.002 | 4 | <0.002 | <0.002 | <0.002 | 4 |
| Lindane (gamma-BHC) | <0.002 | <0.002 | <0.002 | 4 | <0.002 | <0.002 | <0.002 | 4 |
| Linuron | <0.020 | <0.020 | <0.020 | 4 | <0.020 | <0.020 | <0.020 | 4 |
| MCPB | <0.040 | <0.040 | <0.040 | 4 | <0.040 | <0.040 | <0.040 | 4 |
| MCPP | <0.009 | <0.009 | <0.009 | 4 | <0.009 | <0.009 | <0.009 | 4 |
| Meclofenamic acid | <0.01 | <0.01 | <0.01 | 3 | <0.01 | <0.01 | <0.01 | 3 |
| Metalaxyl-M | <0.004 | <0.004 | <0.004 | 4 | <0.004 | <0.004 | <0.004 | 4 |
| Metconazol | <0.005 | <0.005 | 0.006 | 4 | <0.005 | <0.005 | <0.005 | 4 |
| Methamphetamine | <0.020 | <0.020 | <0.020 | 4 | <0.020 | <0.020 | <0.020 | 4 |
| Methomyl | <0.2 | <0.2 | <0.2 | 4 | <0.2 | <0.2 | <0.2 | 4 |
| Methyl t-Butyl Ether (MTBE) | <0.5 | <0.1 | <0.5 | 368 | <0.5 | <0.1 | <0.5 | 369 |
| Methyl Triclosan | <0.010 | <0.010 | <0.010 | 3 | <0.010 | <0.010 | <0.010 | 3 |
| Methyl-4,6-dinitrophenol (2) | <0.7 | <0.7 | <0.7 | 4 | <0.7 | <0.7 | <0.7 | 4 |
| Methylcholanthrene (3) | <0.007 | <0.007 | <0.007 | 4 | <0.007 | <0.007 | <0.007 | 4 |
| Methylnaphthalene (1) | <0.006 | <0.006 | <0.006 | 4 | <0.006 | <0.006 | <0.006 | 4 |
| Methylnaphthalene (2) | <0.006 | <0.006 | <0.006 | 4 | <0.006 | <0.006 | 0.007 | 4 |
| MIBK | <1.0 | <1.0 | <1.0 | 364 | <1.0 | <1.0 | <1.0 | 365 |
| Monuron | <0.004 | <0.004 | <0.004 | 4 | <0.004 | <0.004 | <0.004 | 4 |
| N,N-diethyl-m-toluamide | <0.005 | <0.005 | <0.005 | 3 | <0.005 | <0.005 | <0.005 | 3 |
| Naphthalene | <0.09 | <0.01 | <0.20 | 12 | <0.09 | <0.01 | <0.20 | 12 |

## 7.15 Raw River Water: Physical, Inorganic, Organic and Pesticide Parameters

**2019**

| | ROSSDALE | | | | E.L. SMITH | | | |
|---|---|---|---|---|---|---|---|---|
| | Mean | Min | Max | Count | Mean | Min | Max | Count |
| Secondary Organics (ug/L) *** | | | | | | | | |
| Napropamide | <0.01 | <0.01 | <0.01 | 4 | <0.01 | <0.01 | <0.01 | 4 |
| Naproxen | <0.005 | <0.005 | <0.005 | 3 | <0.005 | <0.005 | <0.005 | 3 |
| n-Butylbenzene | <0.1 | <0.1 | <0.1 | 4 | <0.1 | <0.1 | <0.1 | 4 |
| Nitrobenzene | <0.2 | <0.2 | <0.2 | 4 | <0.2 | <0.2 | <0.2 | 4 |
| Nitrophenol (2) | <0.3 | <0.3 | <0.3 | 4 | <0.3 | <0.3 | <0.3 | 4 |
| Nitrophenol (4) | <0.1 | <0.1 | <0.1 | 4 | <0.1 | <0.1 | <0.1 | 4 |
| N-Nitroso-di-n-propylamine | <0.2 | <0.2 | <0.2 | 4 | <0.2 | <0.2 | <0.2 | 4 |
| N-Nitrosodiphenylamine | <0.1 | <0.1 | <0.1 | 4 | <0.1 | <0.1 | <0.1 | 4 |
| Norfloxacin | 0.033 | <0.020 | 0.070 | 4 | 0.033 | <0.020 | 0.070 | 4 |
| Norfluoxetine | <0.020 | <0.020 | <0.020 | 4 | <0.020 | <0.020 | <0.020 | 4 |
| n-Propylbenzene | <0.02 | <0.02 | <0.02 | 4 | <0.02 | <0.02 | <0.02 | 4 |
| Ofloxacin | <0.02 | <0.02 | <0.02 | 4 | <0.02 | <0.02 | <0.02 | 4 |
| Oxolinic acid | <0.01 | <0.01 | <0.01 | 4 | <0.01 | <0.01 | <0.01 | 4 |
| Oxycarboxin | <0.01 | <0.01 | <0.01 | 4 | <0.01 | <0.01 | <0.01 | 4 |
| p, p' - Methoxychlor | <0.01 | <0.01 | <0.01 | 4 | <0.01 | <0.01 | <0.01 | 4 |
| Parathion | <0.005 | <0.005 | <0.005 | 4 | <0.005 | <0.005 | <0.005 | 4 |
| Pentoxifylline | <0.500 | <0.500 | <0.500 | 4 | <0.500 | <0.500 | <0.500 | 4 |
| Perfluorobutane Sulfonate (PFBS) | <0.02 | <0.02 | <0.02 | 4 | <0.02 | <0.02 | <0.02 | 4 |
| Perfluorobutanoic acid | <0.02 | <0.02 | <0.02 | 4 | <0.02 | <0.02 | <0.02 | 4 |
| Perfluorodecane Sulfonate | <0.02 | <0.02 | <0.02 | 4 | <0.02 | <0.02 | <0.02 | 4 |
| Perfluorodecanoic Acid (PFDA) | <0.02 | <0.02 | <0.02 | 4 | <0.02 | <0.02 | <0.02 | 4 |
| Perfluorododecanoic Acid (PFDoA) | <0.02 | <0.02 | <0.02 | 4 | <0.02 | <0.02 | <0.02 | 4 |
| Perfluoroheptane sulfonate | <0.02 | <0.02 | <0.02 | 4 | <0.02 | <0.02 | <0.02 | 4 |
| Perfluoroheptanoic Acid (PFHpA) | <0.02 | <0.02 | <0.02 | 4 | <0.02 | <0.02 | <0.02 | 4 |
| Perfluorohexane Sulfonate (PFHxS) | <0.02 | <0.02 | <0.02 | 4 | <0.02 | <0.02 | <0.02 | 4 |
| Perfluorohexanoic Acid (PFHxA) | <0.02 | <0.02 | <0.02 | 4 | <0.02 | <0.02 | <0.02 | 4 |
| Perfluorononanoic Acid (PFNA) | <0.02 | <0.02 | <0.02 | 4 | <0.02 | <0.02 | <0.02 | 4 |
| Perfluorooctane Sulfonamide | <0.02 | <0.02 | <0.02 | 4 | <0.02 | <0.02 | <0.02 | 4 |
| Perfluoropentanoic Acid (PFPeA) | <0.02 | <0.02 | <0.02 | 4 | <0.02 | <0.02 | <0.02 | 4 |
| Perfluorotetradecanoic Acid | <0.02 | <0.02 | <0.02 | 4 | <0.02 | <0.02 | <0.02 | 4 |
| Perfluorotridecanoic Acid | <0.02 | <0.02 | <0.02 | 4 | <0.02 | <0.02 | <0.02 | 4 |
| Perfluoroundecanoic Acid (PFUnA) | <0.02 | <0.02 | <0.02 | 4 | <0.02 | <0.02 | <0.02 | 4 |
| Permethrin | <0.004 | <0.004 | <0.004 | 4 | <0.004 | <0.004 | <0.004 | 4 |
| Perylene | <0.01 | <0.01 | <0.01 | 4 | <0.01 | <0.01 | 0.01 | 4 |
| Phenanthrene | <0.10 | <0.01 | <0.20 | 8 | <0.11 | <0.01 | <0.20 | 8 |
| Phenol | <0.1 | <0.1 | <0.1 | 4 | <0.1 | <0.1 | <0.1 | 4 |
| Picoxystrobin | <0.005 | <0.005 | <0.005 | 4 | <0.005 | <0.005 | <0.005 | 4 |
| Pipemidic acid | <0.5 | <0.5 | <0.5 | 4 | <0.5 | <0.5 | <0.5 | 4 |
| p-Isopropyltoluene | <0.04 | <0.04 | <0.04 | 4 | <0.04 | <0.04 | <0.04 | 4 |
| Propiconazole | <0.010 | <0.010 | <0.010 | 4 | <0.010 | <0.010 | <0.010 | 4 |
| Prothioconazole | <0.007 | <0.007 | <0.007 | 4 | <0.007 | <0.007 | <0.007 | 4 |
| Pyraclostrobin | <0.004 | <0.004 | <0.004 | 4 | <0.004 | <0.004 | <0.004 | 4 |
| Pyrene | <0.05 | <0.01 | <0.10 | 8 | <0.07 | <0.01 | 0.15 | 8 |
| Pyridaben | <0.010 | <0.010 | <0.010 | 4 | <0.010 | <0.010 | <0.010 | 4 |
| Quinclorac | <0.003 | <0.003 | <0.003 | 4 | <0.003 | <0.003 | <0.003 | 4 |
| Quizalofop | <0.020 | <0.020 | <0.020 | 4 | <0.020 | <0.020 | <0.020 | 4 |
| Retene | <0.01 | <0.01 | <0.01 | 4 | <0.01 | <0.01 | <0.01 | 4 |
| Salicylic acid | <0.025 | <0.025 | <0.025 | 3 | <0.025 | <0.025 | <0.025 | 3 |
| sec-Butylbenzene | <0.1 | <0.1 | <0.1 | 4 | <0.1 | <0.1 | <0.1 | 4 |
| Styrene | <0.49 | <0.02 | <0.50 | 368 | <0.49 | <0.02 | <0.50 | 369 |
| Sulfabenzamide | <0.05 | <0.05 | <0.05 | 4 | <0.05 | <0.05 | <0.05 | 4 |
| Sulfadimethoxine | <0.05 | <0.05 | <0.05 | 4 | <0.05 | <0.05 | <0.05 | 4 |
| Sulfadoxine | <0.05 | <0.05 | <0.05 | 4 | <0.05 | <0.05 | <0.05 | 4 |

## 7.15 Raw River Water: Physical, Inorganic, Organic and Pesticide Parameters

**2019**

| | ROSSDALE | | | | E.L. SMITH | | | |
|---|---|---|---|---|---|---|---|---|
| | Mean | Min | Max | Count | Mean | Min | Max | Count |
| Secondary Organics (ug/L) *** | | | | | | | | |
| Sulfamerazine | <0.05 | <0.05 | <0.05 | 4 | <0.05 | <0.05 | <0.05 | 4 |
| Sulfamethazine | <0.05 | <0.05 | <0.05 | 4 | <0.05 | <0.05 | <0.05 | 4 |
| Sulfamethoxazole | <0.05 | <0.05 | <0.05 | 4 | <0.05 | <0.05 | <0.05 | 4 |
| Sulfapyridine | <0.05 | <0.05 | <0.05 | 4 | <0.05 | <0.05 | <0.05 | 4 |
| Sulfaquinoxaline | <0.05 | <0.05 | <0.05 | 4 | <0.05 | <0.05 | <0.05 | 4 |
| Sulfathiazole | <0.05 | <0.05 | <0.05 | 4 | <0.05 | <0.05 | <0.05 | 4 |
| Tebuconazole | <0.003 | <0.003 | <0.003 | 4 | <0.003 | <0.003 | <0.003 | 4 |
| tert-Butylbenzene | <0.1 | <0.1 | <0.1 | 4 | <0.1 | <0.1 | <0.1 | 4 |
| Tetrachloroethane (1,1,1,2) | <0.05 | <0.05 | <0.05 | 4 | <0.05 | <0.05 | <0.05 | 4 |
| Tetrachloroethane (1,1,2,2) | <1.0 | <0.1 | <1.0 | 368 | <1.0 | <0.1 | <1.0 | 369 |
| Thiamethoxam | 0.03 | <0.02 | 0.05 | 4 | <0.02 | <0.02 | <0.02 | 4 |
| Tolfenamic acid | <0.005 | <0.005 | <0.005 | 3 | <0.005 | <0.005 | <0.005 | 3 |
| Total Organic Carbon | 4.1 | 1.6 | 9.9 | 52 | 4.0 | 1.5 | 10.3 | 52 |
| Total Volatile Organics (NonTHM) | <1.0 | <1.0 | <1.0 | 364 | <1.0 | <1.0 | <1.0 | 365 |
| Total Volatile Organics (Unknown) | <1.0 | <1.0 | <1.0 | 364 | <1.2 | <1.0 | 58.2 | 365 |
| Triallate | <0.002 | <0.002 | <0.002 | 4 | <0.002 | <0.002 | <0.002 | 4 |
| Trichlorobenzene (1,2,3) | <0.05 | <0.05 | <0.05 | 4 | <0.05 | <0.05 | <0.05 | 4 |
| Trichlorobenzene (1,2,4) | <0.5 | <0.1 | <0.5 | 372 | <0.5 | <0.1 | <0.5 | 373 |
| Trichlorocarbanilide (3,4,4) | <0.025 | <0.025 | <0.025 | 3 | <0.025 | <0.025 | <0.025 | 3 |
| Trichloroethane (1,1,1) | <0.5 | <0.1 | <0.5 | 368 | <0.5 | <0.1 | <0.5 | 369 |
| Trichloroethane (1,1,2) | <0.06 | <0.06 | <0.06 | 4 | <0.06 | <0.06 | <0.06 | 4 |
| Trichlorofluoromethane | <0.09 | <0.09 | <0.09 | 4 | <0.09 | <0.09 | <0.09 | 4 |
| Trichloropropane (1,2,3) | <0.04 | <0.04 | <0.04 | 4 | <0.04 | <0.04 | <0.04 | 4 |
| Triclopyr | <0.002 | <0.002 | <0.002 | 4 | <0.002 | <0.002 | <0.002 | 4 |
| Triclosan | <0.025 | <0.025 | <0.025 | 3 | <0.025 | <0.025 | <0.025 | 3 |
| Trifloxystrobin | <0.004 | <0.004 | <0.004 | 4 | <0.004 | <0.004 | <0.004 | 4 |
| Trimethoprim | <0.020 | <0.020 | <0.020 | 4 | <0.020 | <0.020 | <0.020 | 4 |
| Trimethylbenzene (1,2,4) | <0.04 | <0.04 | <0.04 | 4 | <0.04 | <0.04 | <0.04 | 4 |
| Trimethylbenzene (1,3,5) | <0.04 | <0.04 | <0.04 | 4 | <0.04 | <0.04 | <0.04 | 4 |
| Triticonazole | <0.020 | <0.020 | <0.020 | 4 | <0.020 | <0.020 | <0.020 | 4 |
| Vinclozolin | <0.003 | <0.003 | <0.003 | 4 | <0.003 | <0.003 | <0.003 | 4 |
| Xylene (1,2) | <0.5 | <0.5 | <0.5 | 364 | <0.5 | <0.5 | <0.5 | 365 |
| Xylene (1,4) | <0.5 | <0.5 | <0.5 | 364 | <0.5 | <0.5 | <0.5 | 365 |
| Xylene (m,p) | <0.1 | <0.1 | <0.1 | 4 | <0.1 | <0.1 | <0.1 | 4 |
| Xylene (o) | <0.06 | <0.06 | <0.06 | 4 | <0.06 | <0.06 | <0.06 | 4 |

** Primary Parameters are those that have Maximum Acceptable Concentration (MAC) in Health Canada's Guidelines for Canadian Drinking Water Quality (GCDWQ).

*** Secondary Parameters do not have health based limits in Health Canada's Guidelines for Canadian Drinking Water Quality (GCDWQ).

## 7.16 Statistics on Water Quality Complaint Samples Submitted for Laboratory Testing 2019

| | INCIDENT REATED STATISTICS | | | | | | | | | | | | | SAMPLE RELATED STATISTICS | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MONTH | TOTAL | # | VIOLATION | AESTHETIC | # | PERCENT | COMPLAINT TYPES (1) | | | | | | | # | PBR | VIOLATING | TOTAL |
| | INCIDENTS | VALID (3) | INCIDENTS (2) | OBJECTIVE | SATISFIED | SATISFIED | H | C | T | S | TO | TO-PL | O | SAMPLES | VARIANCES | TESTS | TESTS |
| JAN | 13 | 0 | 0 | 0 | 13 | 100% | 0 | 3 | 3 | 2 | 4 | 0 | 1 | 13 | 2 | 0 | 697 |
| FEB | 6 | 0 | 0 | 0 | 6 | 100% | 0 | 3 | 1 | 1 | 0 | 0 | 1 | 6 | 1 | 0 | 314 |
| MAR | 9 | 0 | 0 | 0 | 9 | 100% | 0 | 0 | 1 | 2 | 5 | 0 | 1 | 9 | 1 | 0 | 559 |
| APR | 18 | 0 | 0 | 1 | 18 | 100% | 0 | 2 | 8 | 4 | 3 | 0 | 1 | 18 | 6 | 0 | 973 |
| MAY | 9 | 0 | 0 | 0 | 9 | 100% | 0 | 1 | 3 | 0 | 2 | 0 | 3 | 9 | 0 | 0 | 493 |
| JUN | 9 | 0 | 0 | 0 | 9 | 100% | 0 | 2 | 1 | 0 | 5 | 0 | 1 | 9 | 3 | 0 | 674 |
| JUL | 10 | 0 | 0 | 0 | 10 | 100% | 0 | 5 | 3 | 0 | 0 | 0 | 2 | 10 | 2 | 0 | 403 |
| AUG | 4 | 0 | 0 | 0 | 4 | 100% | 0 | 1 | 1 | 0 | 1 | 0 | 1 | 4 | 1 | 0 | 181 |
| SEP | 5 | 1 | 0 | 0 | 5 | 100% | 0 | 4 | 0 | 1 | 0 | 0 | 0 | 5 | 5 | 0 | 256 |
| OCT | 4 | 0 | 0 | 0 | 4 | 100% | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 4 | 2 | 0 | 212 |
| NOV | 11 | 1 | 0 | 0 | 11 | 100% | 0 | 1 | 2 | 1 | 6 | 0 | 1 | 11 | 2 | 0 | 630 |
| DEC | 9 | 1 | 0 | 0 | 9 | 100% | 0 | 1 | 0 | 1 | 6 | 0 | 1 | 9 | 2 | 0 | 663 |
| YTD | 107 | 3 | 0 | 1 | 107 | 100% | 0 | 24 | 24 | 13 | 33 | 0 | 13 | 107 | 27 | 0 | 6055 |

(1) Complaint toes: H - Hardness, C - Color, T - Turbidity, S - Sickness, TO - Taste & Odor, TO-PL - Pipe lubricant implicated, O - Other

(2) Number of Violations: Incidents where approval levels were exceeded.

(3) Number Valid: Incidents where a test result was found to exceed specified objectives (EPCOR) and required action.

## 7. 17 EPCOR Lead Management Program (2019)

We take pride in providing safe and clean drinking water to Edmonton and surrounding areas. As highlighted in this annual report on water quality, our extensive water testing during the water treatment process monitors a range of parameters to ensure the water we deliver is safe for you and your family to drink.

Lead is unique compared with other chemical parameters in drinking water because most of the lead present in drinking water arises from water service connections that contain lead as well as from plumbing materials and fixtures inside buildings that contain lead or leaded-brass.

A water service line is the pipe that connects a home's plumbing to the water main in the street. In Edmonton there are approximately 270,000 total service connections to homes. The water service line is divided between the utility and the property owner. The utility's portion of the service line runs from the water main under the street or alley to the property line. The homeowner's portion of the service line runs from the property line to the water meter in the home or building. This type of split ownership is common to most cities in North America. In Edmonton, about 1.6% of water service connections contain lead.

In 2008, we started our Lead Management Program to ensure our Edmonton customers with lead service lines on the utility side were receiving consistently good water quality. We communicate annually with customers when our records show the EPCOR portion of their water service line is lead. Additionally, EPCOR provides point-of-use filters to these homes, which are certified to NSF/ANSI Standard 53 for the removal of lead, if used properly.

As part of our Lead Management Program, EPCOR monitors lead in homes in three ways. First, for homes with lead service lines, we offer water sampling by appointment. Secondly, when more convenient, we have provided home sampling kits for customers to sample their tap water on their own. Finally we have a random daytime sampling program that collects samples from across the city, regardless of the type of service connection. This program seeks to better understand the impacts from lead resulting primarily from plumbing materials and fixtures in buildings that contain lead or leaded-brass. Samples from all three programs are brought back to our accredited laboratory and analyzed.

In 2019 as part of our homes with lead service lines sampling program (by appointment), we collected 392 samples at the tap. Of these samples 270 (68.9 %) tested over the new Health Canada maximum acceptable concentration (MAC) for lead in drinking water of 0.005 mg/L (milligrams per Litre), which is equivalent to 5 µg/L (micrograms per Litre). Concentrations of lead ranged from below our detection limit of 0.0002 mg/L to 0.0882 mg/L. To mitigate lead at the tap, EPCOR reaches out to these customers annually to sample, communicate how to reduce lead at the tap and also to coordinate lead service line replacements. Historically, we prioritized lead replacement with homeowners who chose to replace their portion of the line, as replacing only one section of a lead service line has been shown not to be as effective in reducing lead levels in the home and may result in temporarily increased lead levels. As a result of the new Health Canada Guideline, EPCOR will be working with homeowners who have higher lead results at the tap to remove full lead service lines. The success of this program will continue to depend on the cooperation of homeowners to facilitate lead line removal on the private side of the property. In the past, homeowners in some cases have decided not to replace their lead service lines for various reasons including cost, inconvenience, concern the replacement will interfere with their private property in some way. Now that higher lead level residences will have the cost of their lead service line replacement covered in our City of Edmonton approved enhanced lead mitigation strategy,

we expect this will change and will allow us to replace more of the remaining 1.6% of lead service lines in Edmonton.

Residents' collected 71 samples at the tap as part of our home sampling program (samples collected by homeowner) for homes with lead service lines. Of these samples 55 (77.5 %) tested over the new Health Canada maximum acceptable concentration (MAC) of 0.005 mg/L. Concentrations of lead ranged from below our detection limit of 0.0002 mg/L to 0.0474 mg/L. Although EPCOR provides instructions on how to properly collect these samples, homeowner sampling results must be validated given small changes in methodology can have a significant impact on results.

In our city-wide random daytime sampling program, 286 home samples were collected at the tap. These homes may or may not have had a lead service line associated with the property. Of the random day time samples that were collected, only 3 (1.0 %) tested over the new Health Canada maximum acceptable concentration (MAC) of 0.005 mg/L. Concentrations of lead ranged from below our detection limit of 0.0002 mg/L to 0.0261 mg/L. EPCOR has communicated with households with test results exceeding the limit, are providing information to these residents on how to mitigate lead levels at the tap and will be working with higher lead result households on lead service line replacements.

A complete compilation of sample results related to our three lead testing programs can be found below. Information on service line materials, was current at the time of sampling but may have changed since this point in time given EPCOR's work to replace lead service lines, changes in internal plumbing systems and other factors.

## 7.18 Lead Service Line Program- by Appointment

| | | Service Line Material | | | |
|---|---|---|---|---|---|
| Unique Identifier | Collection Date | ECPOR Side | Home Owner Side | Concentration (mg/L) | Result |
| RS-19-05211 | 5/10/2019 | Copper | Suspect Copper/Kytec | <0.0002 | Below MAC |
| RS-19-06066 | 6/3/2019 | Copper | Suspect Copper/Kytec | <0.0002 | Below MAC |
| RS-19-06269 | 6/6/2019 | Copper | Suspect Copper/Kytec | <0.0002 | Below MAC |
| RS-19-06273 | 6/6/2019 | Copper | Suspect Copper/Kytec | <0.0002 | Below MAC |
| RS-19-06325 | 6/7/2019 | Copper | Suspect Copper/Kytec | <0.0002 | Below MAC |
| RS-19-06332 | 6/7/2019 | Copper | Suspect Copper/Kytec | <0.0002 | Below MAC |
| RS-19-06399 | 6/10/2019 | Copper | Suspect Copper/Kytec | <0.0002 | Below MAC |
| RS-19-06555 | 6/11/2019 | Copper | Suspect Copper/Kytec | <0.0002 | Below MAC |
| RS-19-06709 | 6/13/2019 | Copper | Suspect Copper/Kytec | <0.0002 | Below MAC |
| RS-19-06715 | 6/13/2019 | Copper | Suspect Copper/Kytec | <0.0002 | Below MAC |
| RS-19-06716 | 6/13/2019 | Copper | Suspect Copper/Kytec | <0.0002 | Below MAC |
| RS-19-06762 | 6/14/2019 | Copper | Suspect Copper/Kytec | <0.0002 | Below MAC |
| RS-19-06837 | 6/17/2019 | Copper | Suspect Copper/Kytec | <0.0002 | Below MAC |
| RS-19-06893 | 6/18/2019 | Copper | Suspect Copper/Kytec | <0.0002 | Below MAC |
| RS-19-06897 | 6/18/2019 | Copper | Suspect Copper/Kytec | <0.0002 | Below MAC |
| RS-19-06899 | 6/18/2019 | Copper | Suspect Copper/Kytec | <0.0002 | Below MAC |
| RS-19-06963 | 6/19/2019 | Copper | Suspect Copper/Kytec | <0.0002 | Below MAC |
| RS-19-07058 | 6/21/2019 | Copper | Suspect Copper/Kytec | <0.0002 | Below MAC |
| RS-19-07276 | 6/25/2019 | Copper | Suspect Copper/Kytec | <0.0002 | Below MAC |
| RS-19-07277 | 6/26/2019 | Copper | Suspect Copper/Kytec | <0.0002 | Below MAC |
| RS-19-07294 | 6/27/2019 | Copper | Suspect Copper/Kytec | <0.0002 | Below MAC |
| RS-19-07299 | 6/27/2019 | Copper | Suspect Copper/Kytec | <0.0002 | Below MAC |
| RS-19-07405 | 6/28/2019 | Copper | Suspect Copper/Kytec | <0.0002 | Below MAC |
| RS-19-07713 | 7/4/2019 | Copper | Suspect Copper/Kytec | <0.0002 | Below MAC |
| RS-19-07762 | 7/5/2019 | Copper | Suspect Copper/Kytec | <0.0002 | Below MAC |
| RS-19-07764 | 7/5/2019 | Copper | Suspect Copper/Kytec | <0.0002 | Below MAC |
| RS-19-07769 | 7/5/2019 | Copper | Suspect Copper/Kytec | <0.0002 | Below MAC |
| RS-19-07879 | 7/9/2019 | Copper | Suspect Copper/Kytec | <0.0002 | Below MAC |
| RS-19-08052 | 7/11/2019 | Copper | Suspect Copper/Kytec | <0.0002 | Below MAC |
| RS-19-08115 | 7/12/2019 | Copper | Suspect Copper/Kytec | <0.0002 | Below MAC |
| RS-19-08185 | 7/15/2019 | Copper | Suspect Copper/Kytec | <0.0002 | Below MAC |
| RS-19-08389 | 7/19/2019 | Copper | Suspect Copper/Kytec | <0.0002 | Below MAC |
| RS-19-08569 | 7/24/2019 | Copper | Suspect Copper/Kytec | <0.0002 | Below MAC |
| RS-19-08600 | 7/25/2019 | Copper | Suspect Copper/Kytec | <0.0002 | Below MAC |
| RS-19-08601 | 7/25/2019 | Copper | Suspect Copper/Kytec | <0.0002 | Below MAC |
| RS-19-08909 | 8/2/2019 | Copper | Suspect Copper/Kytec | <0.0002 | Below MAC |
| RS-19-08910 | 8/2/2019 | Copper | Suspect Copper/Kytec | <0.0002 | Below MAC |
| RS-19-09840 | 8/21/2019 | Copper | Suspect Copper/Kytec | <0.0002 | Below MAC |
| RS-19-09938 | 8/23/2019 | Copper | Suspect Copper/Kytec | <0.0002 | Below MAC |
| RS-19-10291 | 9/3/2019 | Copper | Suspect Copper/Kytec | <0.0002 | Below MAC |
| RS-19-10332 | 9/4/2019 | Copper | Suspect Copper/Kytec | <0.0002 | Below MAC |

## 7.18 Lead Service Line Program- by Appointment

| | | Service Line Material | | | |
|---|---|---|---|---|---|
| Unique Identifier | Collection Date | ECPOR Side | Home Owner Side | Concentration (mg/L) | Result |
| RS-19-10735 | 9/11/2019 | Copper | Suspect Copper/Kytec | <0.0002 | Below MAC |
| RS-19-10784 | 9/12/2019 | Copper | Suspect Copper/Kytec | <0.0002 | Below MAC |
| RS-19-10786 | 9/12/2019 | Copper | Suspect Copper/Kytec | <0.0002 | Below MAC |
| RS-19-13436 | 11/13/2019 | Copper | Suspect Copper/Kytec | <0.0002 | Below MAC |
| RS-19-13460 | 11/13/2019 | Copper | Suspect Copper/Kytec | <0.0002 | Below MAC |
| RS-19-13461 | 11/14/2019 | Copper | Suspect Copper/Kytec | <0.0002 | Below MAC |
| RS-19-13462 | 11/14/2019 | Copper | Suspect Copper/Kytec | <0.0002 | Below MAC |
| RS-19-13482 | 11/14/2019 | Copper | Suspect Copper/Kytec | <0.0002 | Below MAC |
| RS-19-13483 | 11/14/2019 | Copper | Suspect Copper/Kytec | <0.0002 | Below MAC |
| RS-19-13488 | 11/14/2019 | Copper | Suspect Copper/Kytec | <0.0002 | Below MAC |
| RS-19-13542 | 11/15/2019 | Copper | Suspect Copper/Kytec | <0.0002 | Below MAC |
| RS-19-13605 | 11/18/2019 | Copper | Suspect Copper/Kytec | <0.0002 | Below MAC |
| RS-19-13663 | 11/18/2019 | Copper | Suspect Copper/Kytec | <0.0002 | Below MAC |
| RS-19-13671 | 11/19/2019 | Copper | Suspect Copper/Kytec | <0.0002 | Below MAC |
| RS-19-13732 | 11/20/2019 | Copper | Suspect Copper/Kytec | <0.0002 | Below MAC |
| RS-19-13785 | 11/20/2019 | Copper | Suspect Copper/Kytec | <0.0002 | Below MAC |
| RS-19-13790 | 11/21/2019 | Copper | Suspect Copper/Kytec | <0.0002 | Below MAC |
| RS-19-13840 | 11/21/2019 | Copper | Suspect Copper/Kytec | <0.0002 | Below MAC |
| RS-19-13841 | 11/21/2019 | Copper | Suspect Copper/Kytec | <0.0002 | Below MAC |
| RS-19-13846 | 11/21/2019 | Copper | Suspect Copper/Kytec | <0.0002 | Below MAC |
| RS-19-13848 | 11/21/2019 | Copper | Suspect Copper/Kytec | <0.0002 | Below MAC |
| RS-19-13849 | 11/22/2019 | Copper | Suspect Copper/Kytec | <0.0002 | Below MAC |
| RS-19-13851 | 11/22/2019 | Copper | Suspect Copper/Kytec | <0.0002 | Below MAC |
| RS-19-13899 | 11/22/2019 | Copper | Suspect Copper/Kytec | <0.0002 | Below MAC |
| RS-19-13900 | 11/21/2019 | Copper | Suspect Copper/Kytec | <0.0002 | Below MAC |
| RS-19-13904 | 11/25/2019 | Copper | Suspect Copper/Kytec | <0.0002 | Below MAC |
| RS-19-13947 | 11/26/2019 | Copper | Suspect Copper/Kytec | <0.0002 | Below MAC |
| RS-19-10086 | 8/26/2019 | Copper | Suspect Copper/Kytec | <0.0002 | Below MAC |
| RS-19-14073 | 11/28/2019 | Copper | Suspect Copper/Kytec | <0.0002 | Below MAC |
| RS-19-04578 | 4/23/2019 | Copper | Suspect Copper/Kytec | <0.0002 | Below MAC |
| RS-19-05931 | 5/28/2019 | Copper | Suspect Copper/Kytec | <0.0002 | Below MAC |
| RS-19-14206 | 12/3/2019 | Copper | Suspect Copper/Kytec | <0.0002 | Below MAC |
| RS-19-14261 | 12/4/2019 | Copper | Suspect Copper/Kytec | <0.0002 | Below MAC |
| RS-19-05212 | 5/13/2019 | Lead | Suspect Copper/Kytec | <0.0002 | Below MAC |
| RS-19-06272 | 6/6/2019 | Lead | Suspect Copper/Kytec | <0.0002 | Below MAC |
| RS-19-07712 | 7/4/2019 | Lead | Suspect Copper/Kytec | <0.0002 | Below MAC |
| RS-19-09939 | 8/23/2019 | Lead | Suspect Copper/Kytec | <0.0002 | Below MAC |
| RS-19-13487 | 11/14/2019 | Lead | Suspect Copper/Kytec | <0.0002 | Below MAC |
| RS-19-13600 | 11/15/2019 | Lead | Suspect Copper/Kytec | <0.0002 | Below MAC |
| RS-19-13898 | 11/22/2019 | Lead | Suspect Copper/Kytec | <0.0002 | Below MAC |
| RS-19-06638 | 6/12/2019 | Copper | Suspect Lead | <0.0002 | Below MAC |

## 7.18 Lead Service Line Program- by Appointment

| | | Service Line Material | | | |
|---|---|---|---|---|---|
| Unique Identifier | Collection Date | ECPOR Side | Home Owner Side | Concentration (mg/L) | Result |
| RS-19-06640 | 6/12/2019 | Copper | Suspect Lead | <0.0002 | Below MAC |
| RS-19-06644 | 6/12/2019 | Copper | Suspect Lead | <0.0002 | Below MAC |
| RS-19-06645 | 6/12/2019 | Copper | Suspect Lead | <0.0002 | Below MAC |
| RS-19-06841 | 6/17/2019 | Copper | Suspect Lead | <0.0002 | Below MAC |
| RS-19-06894 | 6/18/2019 | Copper | Suspect Lead | <0.0002 | Below MAC |
| RS-19-07157 | 6/24/2019 | Copper | Suspect Lead | <0.0002 | Below MAC |
| RS-19-07295 | 6/27/2019 | Copper | Suspect Lead | <0.0002 | Below MAC |
| RS-19-07660 | 7/3/2019 | Copper | Suspect Lead | <0.0002 | Below MAC |
| RS-19-07761 | 7/5/2019 | Copper | Suspect Lead | <0.0002 | Below MAC |
| RS-19-07979 | 7/10/2019 | Copper | Suspect Lead | <0.0002 | Below MAC |
| RS-19-08839 | 7/31/2019 | Copper | Suspect Lead | <0.0002 | Below MAC |
| RS-19-09143 | 8/8/2019 | Copper | Suspect Lead | <0.0002 | Below MAC |
| RS-19-10496 | 9/6/2019 | Copper | Suspect Lead | <0.0002 | Below MAC |
| RS-19-13788 | 11/21/2019 | Copper | Suspect Lead | <0.0002 | Below MAC |
| RS-19-13844 | 11/21/2019 | Copper | Suspect Lead | <0.0002 | Below MAC |
| RS-19-10089 | 8/27/2019 | Copper | Suspect Lead | <0.0002 | Below MAC |
| RS-19-08051 | 7/11/2019 | Lead | Suspect Lead | <0.0002 | Below MAC |
| RS-19-08394 | 7/19/2019 | Lead | Suspect Lead | <0.0002 | Below MAC |
| RS-19-08511 | 7/23/2019 | Lead | Suspect Lead | <0.0002 | Below MAC |
| RS-19-09896 | 8/22/2019 | Lead | Suspect Lead | <0.0002 | Below MAC |
| RS-19-13541 | 11/15/2019 | Lead | Suspect Lead | <0.0002 | Below MAC |
| RS-19-08186 | 7/15/2019 | Copper | Suspect Copper/Kytec | 0.0002 | Below MAC |
| RS-19-13664 | 11/18/2019 | Copper | Suspect Copper/Kytec | 0.0002 | Below MAC |
| RS-19-13901 | 11/21/2019 | Copper | Suspect Copper/Kytec | 0.0002 | Below MAC |
| RS-19-01113 | 1/29/2019 | Copper | Suspect Copper/Kytec | 0.0002 | Below MAC |
| RS-19-13489 | 11/14/2019 | Copper | Suspect Lead | 0.0002 | Below MAC |
| RS-19-07054 | 6/21/2019 | Lead | Suspect Lead | 0.0002 | Below MAC |
| RS-19-08395 | 7/19/2019 | Lead | Suspect Lead | 0.0002 | Below MAC |
| RS-19-06067 | 6/3/2019 | Copper | Suspect Copper/Kytec | 0.0003 | Below MAC |
| RS-19-06402 | 6/10/2019 | Copper | Suspect Copper/Kytec | 0.0003 | Below MAC |
| RS-19-06639 | 6/12/2019 | Copper | Suspect Copper/Kytec | 0.0003 | Below MAC |
| RS-19-06896 | 6/18/2019 | Copper | Suspect Copper/Kytec | 0.0003 | Below MAC |
| RS-19-06959 | 6/19/2019 | Copper | Suspect Copper/Kytec | 0.0003 | Below MAC |
| RS-19-07156 | 6/24/2019 | Copper | Suspect Copper/Kytec | 0.0003 | Below MAC |
| RS-19-07767 | 7/5/2019 | Copper | Suspect Copper/Kytec | 0.0003 | Below MAC |
| RS-19-13438 | 11/13/2019 | Copper | Suspect Copper/Kytec | 0.0003 | Below MAC |
| RS-19-13484 | 11/14/2019 | Copper | Suspect Copper/Kytec | 0.0003 | Below MAC |
| RS-19-13598 | 11/15/2019 | Copper | Suspect Copper/Kytec | 0.0003 | Below MAC |
| RS-19-13599 | 11/15/2019 | Copper | Suspect Copper/Kytec | 0.0003 | Below MAC |
| RS-19-13668 | 11/19/2019 | Copper | Suspect Copper/Kytec | 0.0003 | Below MAC |
| RS-19-13948 | 11/26/2019 | Copper | Suspect Copper/Kytec | 0.0003 | Below MAC |

## 7.18 Lead Service Line Program- by Appointment

| | | Service Line Material | | | |
|---|---|---|---|---|---|
| Unique Identifier | Collection Date | ECPOR Side | Home Owner Side | Concentration (mg/L) | Result |
| RS-19-06960 | 6/19/2019 | Lead | Suspect Copper/Kytec | 0.0003 | Below MAC |
| RS-19-14071 | 11/28/2019 | Lead | Suspect Copper/Kytec | 0.0003 | Below MAC |
| RS-19-06642 | 6/12/2019 | Copper | Suspect Lead | 0.0003 | Below MAC |
| RS-19-06643 | 6/12/2019 | Copper | Suspect Lead | 0.0003 | Below MAC |
| RS-19-06842 | 6/17/2019 | Copper | Suspect Lead | 0.0003 | Below MAC |
| RS-19-07274 | 6/25/2019 | Copper | Suspect Lead | 0.0003 | Below MAC |
| RS-19-10090 | 8/27/2019 | Copper | Suspect Lead | 0.0003 | Below MAC |
| RS-19-06276 | 6/6/2019 | Lead | Suspect Lead | 0.0003 | Below MAC |
| RS-19-06838 | 6/17/2019 | Lead | Suspect Lead | 0.0003 | Below MAC |
| RS-19-08396 | 7/19/2019 | Lead | Suspect Lead | 0.0003 | Below MAC |
| RS-19-08397 | 7/19/2019 | Lead | Suspect Lead | 0.0003 | Below MAC |
| RS-19-09838 | 8/21/2019 | Lead | Suspect Lead | 0.0003 | Below MAC |
| RS-19-06641 | 6/12/2019 | Copper | Suspect Copper/Kytec | 0.0004 | Below MAC |
| RS-19-07404 | 6/28/2019 | Copper | Suspect Copper/Kytec | 0.0004 | Below MAC |
| RS-19-10781 | 9/12/2019 | Copper | Suspect Copper/Kytec | 0.0004 | Below MAC |
| RS-19-13669 | 11/19/2019 | Copper | Suspect Copper/Kytec | 0.0004 | Below MAC |
| RS-19-13946 | 11/26/2019 | Copper | Suspect Copper/Kytec | 0.0004 | Below MAC |
| RS-19-04870 | 5/2/2019 | Lead | Suspect Copper/Kytec | 0.0004 | Below MAC |
| RS-19-06553 | 6/11/2019 | Lead | Suspect Copper/Kytec | 0.0004 | Below MAC |
| RS-19-06840 | 6/17/2019 | Copper | Suspect Lead | 0.0004 | Below MAC |
| RS-19-07982 | 7/10/2019 | Copper | Suspect Lead | 0.0004 | Below MAC |
| RS-19-06889 | 6/18/2019 | Copper | Suspect Lead | 0.0004 | Below MAC |
| RS-19-06890 | 6/18/2019 | Copper | Suspect Lead | 0.0004 | Below MAC |
| RS-19-06891 | 6/18/2019 | Copper | Suspect Lead | 0.0004 | Below MAC |
| RS-19-07020 | 6/20/2019 | Lead | Suspect Lead | 0.0004 | Below MAC |
| RS-19-05213 | 5/13/2019 | Copper | Suspect Copper/Kytec | 0.0005 | Below MAC |
| RS-19-06712 | 6/13/2019 | Copper | Suspect Copper/Kytec | 0.0005 | Below MAC |
| RS-19-08117 | 7/12/2019 | Copper | Suspect Copper/Kytec | 0.0005 | Below MAC |
| RS-19-10785 | 9/12/2019 | Copper | Suspect Copper/Kytec | 0.0005 | Below MAC |
| RS-19-13546 | 11/15/2019 | Copper | Suspect Copper/Kytec | 0.0005 | Below MAC |
| RS-19-13602 | 11/15/2019 | Copper | Suspect Copper/Kytec | 0.0005 | Below MAC |
| RS-19-13786 | 11/20/2019 | Copper | Suspect Copper/Kytec | 0.0005 | Below MAC |
| RS-19-13845 | 11/21/2019 | Copper | Suspect Copper/Kytec | 0.0005 | Below MAC |
| RS-19-13945 | 11/26/2019 | Copper | Suspect Copper/Kytec | 0.0005 | Below MAC |
| RS-19-13950 | 11/26/2019 | Copper | Suspect Copper/Kytec | 0.0005 | Below MAC |
| RS-19-07158 | 6/24/2019 | Copper | Suspect Lead | 0.0005 | Below MAC |
| RS-19-14013 | 11/27/2019 | Copper | Suspect Lead | 0.0005 | Below MAC |
| RS-19-07161 | 6/24/2019 | Lead | Suspect Lead | 0.0005 | Below MAC |
| RS-19-06176 | 6/4/2019 | Copper | Suspect Copper/Kytec | 0.0006 | Below MAC |
| RS-19-07765 | 7/5/2019 | Copper | Suspect Copper/Kytec | 0.0006 | Below MAC |
| RS-19-13440 | 11/13/2019 | Copper | Suspect Copper/Kytec | 0.0006 | Below MAC |

## 7.18 Lead Service Line Program- by Appointment

| | | Service Line Material | | | |
|---|---|---|---|---|---|
| Unique Identifier | Collection Date | ECPOR Side | Home Owner Side | Concentration (mg/L) | Result |
| RS-19-07883 | 7/9/2019 | Copper | Suspect Copper/Kytec | 0.0006 | Below MAC |
| RS-19-00073 | 1/2/2019 | Lead | Suspect Copper/Kytec | 0.0006 | Below MAC |
| RS-19-06839 | 6/17/2019 | Copper | Suspect Lead | 0.0006 | Below MAC |
| RS-19-07980 | 7/10/2019 | Copper | Suspect Lead | 0.0006 | Below MAC |
| RS-19-06326 | 6/7/2019 | Copper | Suspect Copper/Kytec | 0.0007 | Below MAC |
| RS-19-07981 | 7/10/2019 | Copper | Suspect Copper/Kytec | 0.0007 | Below MAC |
| RS-19-08053 | 7/11/2019 | Copper | Suspect Copper/Kytec | 0.0007 | Below MAC |
| RS-19-08510 | 7/23/2019 | Copper | Suspect Copper/Kytec | 0.0007 | Below MAC |
| RS-19-13601 | 11/15/2019 | Copper | Suspect Copper/Kytec | 0.0007 | Below MAC |
| RS-19-13604 | 11/18/2019 | Copper | Suspect Copper/Kytec | 0.0007 | Below MAC |
| RS-19-06208 | 6/5/2019 | Copper | Suspect Lead | 0.0007 | Below MAC |
| RS-19-08480 | 7/22/2019 | Copper | Suspect Lead | 0.0007 | Below MAC |
| RS-19-08912 | 8/2/2019 | Copper | Suspect Lead | 0.0007 | Below MAC |
| RS-19-06271 | 6/6/2019 | Lead | Suspect Copper/Kytec | 0.0008 | Below MAC |
| RS-19-06556 | 6/11/2019 | Copper | Suspect Lead | 0.0008 | Below MAC |
| RS-19-06710 | 6/13/2019 | Copper | Suspect Lead | 0.0008 | Below MAC |
| RS-19-07017 | 6/20/2019 | Copper | Suspect Lead | 0.0009 | Below MAC |
| RS-19-09273 | 8/8/2019 | Copper | Suspect Copper/Kytec | 0.0010 | Below MAC |
| RS-19-01111 | 1/17/2019 | Copper | Suspect Lead | 0.0010 | Below MAC |
| RS-19-06759 | 6/14/2019 | Copper | Suspect Lead | 0.0010 | Below MAC |
| RS-19-06898 | 6/18/2019 | Copper | Suspect Lead | 0.0010 | Below MAC |
| RS-19-07053 | 6/21/2019 | Lead | Suspect Lead | 0.0010 | Below MAC |
| RS-19-13545 | 11/15/2019 | Lead | Suspect Lead | 0.0010 | Below MAC |
| RS-19-13435 | 11/13/2019 | Copper | Suspect Copper/Kytec | 0.0011 | Below MAC |
| RS-19-08478 | 7/22/2019 | Copper | Suspect Lead | 0.0011 | Below MAC |
| RS-19-10132 | 8/29/2019 | Copper | Suspect Copper/Kytec | 0.0012 | Below MAC |
| RS-19-07057 | 6/21/2019 | Copper | Suspect Lead | 0.0012 | Below MAC |
| RS-19-07159 | 6/24/2019 | Copper | Suspect Lead | 0.0012 | Below MAC |
| RS-19-07826 | 7/8/2019 | Copper | Suspect Lead | 0.0012 | Below MAC |
| RS-19-10288 | 8/30/2019 | Copper | Suspect Lead | 0.0012 | Below MAC |
| RS-19-13842 | 11/21/2019 | Copper | Suspect Lead | 0.0012 | Below MAC |
| RS-19-07163 | 6/24/2019 | Copper | Suspect Copper/Kytec | 0.0013 | Below MAC |
| RS-19-09841 | 8/21/2019 | Copper | Suspect Copper/Kytec | 0.0013 | Below MAC |
| RS-19-07877 | 7/9/2019 | Copper | Suspect Lead | 0.0013 | Below MAC |
| RS-19-07663 | 7/3/2019 | Copper | Suspect Copper/Kytec | 0.0015 | Below MAC |
| RS-19-08118 | 7/12/2019 | Copper | Suspect Copper/Kytec | 0.0015 | Below MAC |
| RS-19-12747 | 10/29/2019 | Copper | Suspect Copper/Kytec | 0.0015 | Below MAC |
| RS-19-07716 | 7/4/2019 | Lead | Suspect Copper/Kytec | 0.0015 | Below MAC |
| RS-19-07160 | 6/24/2019 | Copper | Suspect Lead | 0.0015 | Below MAC |
| RS-19-07984 | 7/10/2019 | Copper | Suspect Lead | 0.0015 | Below MAC |
| RS-19-08392 | 7/19/2019 | Copper | Suspect Copper/Kytec | 0.0016 | Below MAC |

## 7.18 Lead Service Line Program- by Appointment

| | | Service Line Material | | | |
|---|---|---|---|---|---|
| Unique Identifier | Collection Date | ECPOR Side | Home Owner Side | Concentration (mg/L) | Result |
| RS-19-06327 | 6/7/2019 | Copper | Suspect Lead | 0.0016 | Below MAC |
| RS-19-07515 | 7/2/2019 | Copper | Suspect Copper/Kytec | 0.0017 | Below MAC |
| RS-19-08484 | 7/22/2019 | Copper | Suspect Copper/Kytec | 0.0017 | Below MAC |
| RS-19-10783 | 9/12/2019 | Copper | Suspect Copper/Kytec | 0.0017 | Below MAC |
| RS-19-06177 | 6/4/2019 | Lead | Suspect Copper/Kytec | 0.0017 | Below MAC |
| RS-19-13789 | 11/21/2019 | Copper | Suspect Copper/Kytec | 0.0018 | Below MAC |
| RS-19-06330 | 6/7/2019 | Copper | Suspect Lead | 0.0018 | Below MAC |
| RS-19-08884 | 8/1/2019 | Copper | Suspect Lead | 0.0018 | Below MAC |
| RS-19-13843 | 11/21/2019 | Copper | Suspect Copper/Kytec | 0.0019 | Below MAC |
| RS-19-06328 | 6/7/2019 | Lead | Suspect Copper/Kytec | 0.0019 | Below MAC |
| RS-19-13540 | 11/14/2019 | Lead | Suspect Copper/Kytec | 0.0019 | Below MAC |
| RS-19-06895 | 6/18/2019 | Copper | Suspect Lead | 0.0019 | Below MAC |
| RS-19-10782 | 9/12/2019 | Copper | Suspect Lead | 0.0019 | Below MAC |
| RS-19-06274 | 6/6/2019 | Lead | Suspect Copper/Kytec | 0.002 | Below MAC |
| RS-19-09785 | 8/20/2019 | Lead | Suspect Copper/Kytec | 0.0020 | Below MAC |
| RS-19-07882 | 7/9/2019 | Copper | Suspect Lead | 0.0020 | Below MAC |
| RS-19-11604 | 10/3/2019 | Copper | Suspect Lead | 0.0020 | Below MAC |
| RS-19-14207 | 12/3/2019 | Copper | Suspect Copper/Kytec | 0.0021 | Below MAC |
| RS-19-07878 | 7/9/2019 | Copper | Suspect Lead | 0.0021 | Below MAC |
| RS-19-10091 | 8/28/2019 | Copper | Suspect Lead | 0.0021 | Below MAC |
| RS-19-11177 | 9/25/2019 | Copper | Suspect Lead | 0.0021 | Below MAC |
| RS-19-06763 | 6/12/2019 | Copper | Suspect Lead | 0.0022 | Below MAC |
| RS-19-06764 | 6/14/2019 | Copper | Suspect Lead | 0.0022 | Below MAC |
| RS-19-10131 | 8/29/2019 | Copper | Suspect Lead | 0.0022 | Below MAC |
| RS-19-01765 | 2/13/2019 | Lead | Suspect Lead | 0.0023 | Below MAC |
| RS-19-06211 | 6/5/2019 | Lead | Suspect Copper/Kytec | 0.0025 | Below MAC |
| RS-19-06761 | 6/14/2019 | Lead | Suspect Copper/Kytec | 0.0025 | Below MAC |
| RS-19-06835 | 6/17/2019 | Copper | Suspect Lead | 0.0025 | Below MAC |
| RS-19-09787 | 8/20/2019 | Copper | Suspect Lead | 0.0025 | Below MAC |
| RS-19-11017 | 9/19/2019 | Copper | Suspect Copper/Kytec | 0.0026 | Below MAC |
| RS-19-10329 | 9/4/2019 | Copper | Suspect Lead | 0.0026 | Below MAC |
| RS-19-08509 | 7/23/2019 | Copper | Suspect Copper/Kytec | 0.0027 | Below MAC |
| RS-19-07768 | 7/5/2019 | Copper | Suspect Lead | 0.0027 | Below MAC |
| RS-19-10170 | 8/30/2019 | Copper | Suspect Copper/Kytec | 0.0029 | Below MAC |
| RS-19-13665 | 11/18/2019 | Lead | Suspect Copper/Kytec | 0.0029 | Below MAC |
| RS-19-10134 | 8/29/2019 | Lead | Suspect Copper/Kytec | 0.0030 | Below MAC |
| RS-19-07662 | 7/3/2019 | Lead | Suspect Lead | 0.0030 | Below MAC |
| RS-19-08054 | 7/11/2019 | Copper | Suspect Lead | 0.0032 | Below MAC |
| RS-19-08513 | 7/23/2019 | Copper | Suspect Lead | 0.0032 | Below MAC |
| RS-19-09144 | 8/8/2019 | Copper | Suspect Lead | 0.0032 | Below MAC |
| RS-19-13852 | 11/22/2019 | Lead | Suspect Copper/Kytec | 0.0033 | Below MAC |

## 7.18 Lead Service Line Program- by Appointment

| | | Service Line Material | | | |
|---|---|---|---|---|---|
| Unique Identifier | Collection Date | ECPOR Side | Home Owner Side | Concentration (mg/L) | Result |
| RS-19-06210 | 6/5/2019 | Copper | Suspect Lead | 0.0033 | Below MAC |
| RS-19-07275 | 6/25/2019 | Lead | Suspect Lead | 0.0033 | Below MAC |
| RS-19-14188 | 12/2/2019 | Lead | Suspect Copper/Kytec | 0.0034 | Below MAC |
| RS-19-07661 | 7/3/2019 | Copper | Suspect Lead | 0.0035 | Below MAC |
| RS-19-08479 | 7/22/2019 | Copper | Suspect Lead | 0.0035 | Below MAC |
| RS-19-09048 | 8/7/2019 | Copper | Suspect Lead | 0.0035 | Below MAC |
| RS-19-07880 | 7/9/2019 | Copper | Suspect Copper/Kytec | 0.0037 | Below MAC |
| RS-19-11951 | 10/11/2019 | Copper | Suspect Lead | 0.0038 | Below MAC |
| RS-19-01110 | 1/18/2019 | Lead | Suspect Lead | 0.0038 | Below MAC |
| RS-19-09415 | 8/12/2019 | Lead | Suspect Lead | 0.0038 | Below MAC |
| RS-19-13439 | 11/13/2019 | Copper | Suspect Lead | 0.0039 | Below MAC |
| RS-19-06965 | 6/19/2019 | Copper | Suspect Lead | 0.0041 | Below MAC |
| RS-19-13787 | 11/20/2019 | Lead | Suspect Lead | 0.0042 | Below MAC |
| RS-19-06962 | 6/19/2019 | Copper | Suspect Lead | 0.0043 | Below MAC |
| RS-19-14014 | 11/27/2019 | Lead | Suspect Copper/Kytec | 0.0044 | Below MAC |
| RS-19-13731 | 11/19/2019 | Copper | Suspect Lead | 0.0044 | Below MAC |
| RS-19-06901 | 6/18/2019 | Lead | Suspect Copper/Kytec | 0.0045 | Below MAC |
| RS-19-09842 | 8/21/2019 | Lead | Suspect Copper/Kytec | 0.0046 | Below MAC |
| RS-19-13850 | 11/22/2019 | Lead | Suspect Copper/Kytec | 0.0046 | Below MAC |
| RS-19-09837 | 8/21/2019 | Copper | Suspect Lead | 0.0046 | Below MAC |
| RS-19-06957 | 6/19/2019 | Copper | Suspect Lead | 0.0047 | Below MAC |
| RS-19-06178 | 6/4/2019 | Lead | Suspect Copper/Kytec | 0.0048 | Below MAC |
| RS-19-11952 | 10/11/2019 | Copper | Suspect Lead | 0.0048 | Below MAC |
| RS-19-09275 | 8/9/2019 | Lead | Suspect Copper/Kytec | 0.0049 | Below MAC |
| RS-19-10092 | 8/28/2019 | Lead | Suspect Lead | 0.0050 | Above MAC |
| RS-19-07164 | 6/24/2019 | Lead | Suspect Copper/Kytec | 0.0051 | Above MAC |
| RS-19-09145 | 8/8/2019 | Lead | Suspect Copper/Kytec | 0.0051 | Above MAC |
| RS-19-05930 | 5/28/2019 | Lead | Suspect Lead | 0.0052 | Above MAC |
| RS-19-08481 | 7/22/2019 | Lead | Suspect Lead | 0.0052 | Above MAC |
| RS-19-05592 | 5/22/2019 | Lead | Suspect Copper/Kytec | 0.0053 | Above MAC |
| RS-19-07298 | 6/27/2019 | Lead | Suspect Copper/Kytec | 0.0053 | Above MAC |
| RS-19-10736 | 9/10/2019 | Copper | Suspect Copper/Kytec | 0.0054 | Above MAC |
| RS-19-09786 | 8/20/2019 | Copper | Suspect Lead | 0.0054 | Above MAC |
| RS-19-13734 | 11/20/2019 | Lead | Suspect Lead | 0.0054 | Above MAC |
| RS-19-07021 | 6/20/2019 | Copper | Suspect Lead | 0.0055 | Above MAC |
| RS-19-14012 | 11/27/2019 | Lead | Suspect Copper/Kytec | 0.0056 | Above MAC |
| RS-19-11948 | 10/11/2019 | Copper | Suspect Copper/Kytec | 0.0058 | Above MAC |
| RS-19-07403 | 6/28/2019 | Copper | Suspect Lead | 0.0059 | Above MAC |
| RS-19-07881 | 7/9/2019 | Copper | Suspect Lead | 0.0059 | Above MAC |
| RS-19-07279 | 6/26/2019 | Lead | Suspect Lead | 0.0059 | Above MAC |
| RS-19-09448 | 8/13/2019 | Lead | Suspect Copper/Kytec | 0.0061 | Above MAC |

## 7.18 Lead Service Line Program- by Appointment

| | | Service Line Material | | | |
|---|---|---|---|---|---|
| Unique Identifier | Collection Date | ECPOR Side | Home Owner Side | Concentration (mg/L) | Result |
| RS-19-08514 | 7/23/2019 | Lead | Suspect Lead | 0.0061 | Above MAC |
| RS-19-07019 | 6/20/2019 | Lead | Suspect Lead | 0.0062 | Above MAC |
| RS-19-07406 | 6/28/2019 | Copper | Suspect Lead | 0.0063 | Above MAC |
| RS-19-13434 | 11/13/2019 | Copper | Suspect Copper/Kytec | 0.0064 | Above MAC |
| RS-19-07659 | 7/3/2019 | Lead | Suspect Copper/Kytec | 0.0065 | Above MAC |
| RS-19-08483 | 7/22/2019 | Copper | Suspect Lead | 0.0065 | Above MAC |
| RS-19-07297 | 6/27/2019 | Lead | Suspect Copper/Kytec | 0.0066 | Above MAC |
| RS-19-13854 | 11/22/2019 | Copper | Suspect Lead | 0.0067 | Above MAC |
| RS-19-06400 | 6/10/2019 | Copper | Suspect Lead | 0.0068 | Above MAC |
| RS-19-07766 | 7/5/2019 | Lead | Suspect Lead | 0.0068 | Above MAC |
| RS-19-06967 | 6/19/2019 | Copper | Suspect Copper/Kytec | 0.0069 | Above MAC |
| RS-19-13547 | 11/15/2019 | Copper | Suspect Copper/Kytec | 0.0071 | Above MAC |
| RS-19-07296 | 6/27/2019 | Lead | Suspect Lead | 0.0074 | Above MAC |
| RS-19-04112 | 4/10/2019 | Copper | Suspect Copper/Kytec | 0.0075 | Above MAC |
| RS-19-06713 | 6/13/2019 | Lead | Suspect Lead | 0.0075 | Above MAC |
| RS-19-06646 | 6/12/2019 | Lead | Suspect Lead | 0.0076 | Above MAC |
| RS-19-06404 | 6/10/2019 | Lead | Suspect Lead | 0.0078 | Above MAC |
| RS-19-06900 | 6/18/2019 | Copper | Suspect Lead | 0.0079 | Above MAC |
| RS-19-07402 | 6/27/2019 | Copper | Suspect Copper/Kytec | 0.008 | Above MAC |
| RS-19-11769 | 10/8/2019 | Lead | Suspect Copper/Kytec | 0.0080 | Above MAC |
| RS-19-08391 | 7/19/2019 | Copper | Suspect Lead | 0.0080 | Above MAC |
| RS-19-09784 | 8/20/2019 | Lead | Suspect Lead | 0.0081 | Above MAC |
| RS-19-06717 | 6/13/2019 | Copper | Suspect Lead | 0.0082 | Above MAC |
| RS-19-07884 | 7/9/2019 | Lead | Suspect Lead | 0.0083 | Above MAC |
| RS-19-05040 | 5/3/2019 | Copper | Suspect Lead | 0.0085 | Above MAC |
| RS-19-07052 | 6/21/2019 | Lead | Suspect Lead | 0.0085 | Above MAC |
| RS-19-13666 | 11/19/2019 | Lead | Suspect Lead | 0.0087 | Above MAC |
| RS-19-14538 | 12/9/2019 | Lead | Suspect Lead | 0.0087 | Above MAC |
| RS-19-13670 | 11/19/2019 | Copper | Suspect Copper/Kytec | 0.0088 | Above MAC |
| RS-19-05228 | 5/13/2019 | Lead | Suspect Copper/Kytec | 0.0088 | Above MAC |
| RS-19-06241 | 6/5/2019 | Lead | Suspect Copper/Kytec | 0.0090 | Above MAC |
| RS-19-07056 | 6/21/2019 | Lead | Suspect Lead | 0.0092 | Above MAC |
| RS-19-07983 | 7/10/2019 | Lead | Suspect Lead | 0.0093 | Above MAC |
| RS-19-07022 | 6/20/2019 | Copper | Suspect Copper/Kytec | 0.0099 | Above MAC |
| RS-19-06711 | 6/13/2019 | Lead | Suspect Lead | 0.0101 | Above MAC |
| RS-19-07059 | 6/21/2019 | Lead | Suspect Lead | 0.0101 | Above MAC |
| RS-19-06207 | 6/5/2019 | Copper | Suspect Lead | 0.0103 | Above MAC |
| RS-19-06956 | 6/19/2019 | Copper | Suspect Lead | 0.0104 | Above MAC |
| RS-19-13128 | 11/5/2019 | Lead | Suspect Lead | 0.0104 | Above MAC |
| RS-19-10088 | 8/27/2019 | Copper | Suspect Copper/Kytec | 0.0109 | Above MAC |
| RS-19-13784 | 11/20/2019 | Copper | Suspect Lead | 0.0110 | Above MAC |

## 7.18 Lead Service Line Program- by Appointment

| | | Service Line Material | | | |
|---|---|---|---|---|---|
| Unique Identifier | Collection Date | ECPOR Side | Home Owner Side | Concentration (mg/L) | Result |
| RS-19-06270 | 6/6/2019 | Lead | Suspect Copper/Kytec | 0.0118 | Above MAC |
| RS-19-06966 | 6/19/2019 | Copper | Suspect Lead | 0.0118 | Above MAC |
| RS-19-07278 | 6/26/2019 | Copper | Suspect Copper/Kytec | 0.0119 | Above MAC |
| RS-19-07714 | 7/4/2019 | Lead | Suspect Lead | 0.0122 | Above MAC |
| RS-19-10497 | 9/6/2019 | Copper | Suspect Copper/Kytec | 0.0124 | Above MAC |
| RS-19-08482 | 7/22/2019 | Lead | Suspect Lead | 0.0127 | Above MAC |
| RS-19-06558 | 6/11/2019 | Copper | Suspect Lead | 0.013 | Above MAC |
| RS-19-06209 | 6/5/2019 | Lead | Suspect Lead | 0.0130 | Above MAC |
| RS-19-07760 | 7/5/2019 | Lead | Suspect Lead | 0.0130 | Above MAC |
| RS-19-10171 | 8/30/2019 | Copper | Suspect Copper/Kytec | 0.0133 | Above MAC |
| RS-19-06958 | 6/19/2019 | Copper | Suspect Lead | 0.0133 | Above MAC |
| RS-19-01112 | 1/28/2019 | Copper | Suspect Copper/Kytec | 0.0139 | Above MAC |
| RS-19-09272 | 8/9/2019 | Copper | Suspect Lead | 0.0141 | Above MAC |
| RS-19-06329 | 6/7/2019 | Lead | Suspect Lead | 0.0141 | Above MAC |
| RS-19-13543 | 11/15/2019 | Lead | Suspect Copper/Kytec | 0.0144 | Above MAC |
| RS-19-09897 | 8/22/2019 | Copper | Suspect Copper/Kytec | 0.0146 | Above MAC |
| RS-19-06758 | 6/14/2019 | Lead | Suspect Lead | 0.0148 | Above MAC |
| RS-19-07763 | 7/5/2019 | Lead | Suspect Lead | 0.0155 | Above MAC |
| RS-19-09726 | 8/19/2019 | Copper | Suspect Copper/Kytec | 0.0156 | Above MAC |
| RS-19-08390 | 7/19/2019 | Lead | Suspect Copper/Kytec | 0.0157 | Above MAC |
| RS-19-10137 | 8/29/2019 | Copper | Suspect Copper/Kytec | 0.0159 | Above MAC |
| RS-19-10135 | 8/29/2019 | Lead | Suspect Lead | 0.0165 | Above MAC |
| RS-19-07162 | 6/24/2019 | Lead | Suspect Copper/Kytec | 0.0166 | Above MAC |
| RS-19-06324 | 6/6/2019 | Lead | Suspect Copper/Kytec | 0.0169 | Above MAC |
| RS-19-07055 | 6/21/2019 | Lead | Suspect Lead | 0.0171 | Above MAC |
| RS-19-06760 | 6/14/2019 | Lead | Suspect Lead | 0.0177 | Above MAC |
| RS-19-14072 | 11/28/2019 | Lead | Suspect Copper/Kytec | 0.0179 | Above MAC |
| RS-19-08911 | 8/2/2019 | Lead | Suspect Copper/Kytec | 0.0183 | Above MAC |
| RS-19-10289 | 9/3/2019 | Lead | Suspect Lead | 0.0189 | Above MAC |
| RS-19-14189 | 12/2/2019 | Lead | Suspect Lead | 0.0189 | Above MAC |
| RS-19-06403 | 6/10/2019 | Copper | Suspect Lead | 0.0197 | Above MAC |
| RS-19-08393 | 7/19/2019 | Copper | Suspect Lead | 0.0199 | Above MAC |
| RS-19-09274 | 8/9/2019 | Copper | Suspect Lead | 0.0200 | Above MAC |
| RS-19-10287 | 8/30/2019 | Copper | Suspect Lead | 0.0202 | Above MAC |
| RS-19-10290 | 9/3/2019 | Lead | Suspect Lead | 0.0205 | Above MAC |
| RS-19-14238 | 12/3/2019 | Lead | Suspect Lead | 0.0206 | Above MAC |
| RS-19-07715 | 7/4/2019 | Lead | Suspect Copper/Kytec | 0.0214 | Above MAC |
| RS-19-13459 | 11/13/2019 | Lead | Suspect Lead | 0.0218 | Above MAC |
| RS-19-12004 | 10/15/2019 | Copper | Suspect Lead | 0.0225 | Above MAC |
| RS-19-13458 | 11/13/2019 | Copper | Suspect Lead | 0.0225 | Above MAC |
| RS-19-09839 | 8/21/2019 | Lead | Suspect Copper/Kytec | 0.0226 | Above MAC |

## 7.18 Lead Service Line Program- by Appointment

| | | Service Line Material | | | |
|---|---|---|---|---|---|
| Unique Identifier | Collection Date | ECPOR Side | Home Owner Side | Concentration (mg/L) | Result |
| RS-19-06964 | 6/19/2019 | Copper | Suspect Lead | 0.0239 | Above MAC |
| RS-19-10136 | 8/29/2019 | Lead | Suspect Lead | 0.0239 | Above MAC |
| RS-19-06836 | 6/17/2019 | Copper | Suspect Lead | 0.0244 | Above MAC |
| RS-19-08326 | 7/18/2019 | Copper | Suspect Lead | 0.0245 | Above MAC |
| RS-19-13127 | 11/5/2019 | Lead | Suspect Lead | 0.0251 | Above MAC |
| RS-19-09049 | 8/7/2019 | Lead | Suspect Copper/Kytec | 0.0253 | Above MAC |
| RS-19-12672 | 10/28/2019 | Lead | Suspect Lead | 0.0253 | Above MAC |
| RS-19-06554 | 6/11/2019 | Copper | Suspect Lead | 0.0256 | Above MAC |
| RS-19-13607 | 11/18/2019 | Lead | Suspect Lead | 0.0267 | Above MAC |
| RS-19-08116 | 7/12/2019 | Lead | Suspect Copper/Kytec | 0.0270 | Above MAC |
| RS-19-10331 | 9/4/2019 | Lead | Suspect Lead | 0.0287 | Above MAC |
| RS-19-01109 | 1/17/2019 | Copper | Suspect Lead | 0.0301 | Above MAC |
| RS-19-13949 | 11/26/2019 | Lead | Suspect Lead | 0.0316 | Above MAC |
| RS-19-01114 | 1/29/2019 | Lead | Suspect Lead | 0.0324 | Above MAC |
| RS-19-13853 | 11/22/2019 | Copper | Suspect Lead | 0.0347 | Above MAC |
| RS-19-06714 | 6/13/2019 | Lead | Suspect Lead | 0.0353 | Above MAC |
| RS-19-07018 | 6/20/2019 | Lead | Suspect Copper/Kytec | 0.0356 | Above MAC |
| RS-19-06275 | 6/6/2019 | Lead | Suspect Lead | 0.0373 | Above MAC |
| RS-19-09416 | 8/12/2019 | Lead | Suspect Lead | 0.0392 | Above MAC |
| RS-19-13544 | 11/15/2019 | Lead | Suspect Copper/Kytec | 0.0403 | Above MAC |
| RS-19-10330 | 9/4/2019 | Copper | Suspect Lead | 0.0426 | Above MAC |
| RS-19-11949 | 10/11/2019 | Lead | Suspect Lead | 0.0457 | Above MAC |
| RS-19-13847 | 11/21/2019 | Lead | Suspect Copper/Kytec | 0.0882 | Above MAC |

## 7.19 Lead Service Line Program- by Home Sample

| | | Service Line Material | | | |
|---|---|---|---|---|---|
| Unique Identifier | Collection Date | EPCOR Side | Home Owner Side | Concentration (mg/L) | Result |
| RS-19-02376 | 3/5/2019 | Copper | Suspect Copper/Kytec | <0.0002 | Below MAC |
| RS-19-06205 | 5/31/2019 | Copper | Suspect Copper/Kytec | <0.0002 | Below MAC |
| RS-19-13905 | 11/24/2019 | Copper | Suspect Copper/Kytec | <0.0002 | Below MAC |
| RS-19-02059 | 2/25/2019 | Copper | Suspect Copper/Kytec | <0.0002 | Below MAC |
| RS-19-02691 | 3/12/2019 | Copper | Suspect Copper/Kytec | <0.0002 | Below MAC |
| RS-19-13903 | 11/24/2019 | Copper | Suspect Copper/Kytec | <0.0002 | Below MAC |
| RS-19-08485 | 7/22/2019 | Copper | Suspect Lead | 0.0002 | Below MAC |
| RS-19-07281 | 6/12/2019 | Copper | Unknown | 0.0002 | Below MAC |
| RS-19-07517 | 7/1/2019 | Copper | Unknown | 0.0002 | Below MAC |
| RS-19-07664 | 7/1/2019 | Copper | Unknown | 0.0002 | Below MAC |
| RS-19-07771 | 7/4/2019 | Copper | Unknown | 0.0002 | Below MAC |
| RS-19-09026 | 8/6/2019 | Copper | Unknown | 0.0002 | Below MAC |
| RS-19-10932 | 9/3/2019 | Copper | Unknown | 0.0002 | Below MAC |
| RS-19-13902 | 11/24/2019 | Copper | Unknown | 0.0002 | Below MAC |
| RS-19-02246 | 2/28/2019 | Lead | Suspect Copper/Kytec | 0.0002 | Below MAC |
| RS-19-03063 | 3/19/2019 | Lead | Suspect Copper/Kytec | 0.0002 | Below MAC |
| RS-19-10933 | 9/17/2019 | Lead | Suspect Copper/Kytec | 0.0002 | Below MAC |
| RS-19-08841 | 7/25/2019 | Lead | Suspect Lead | 0.0002 | Below MAC |
| RS-19-08627 | 7/25/2019 | Copper | Unknown | 0.0003 | Below MAC |
| RS-19-04111 | 4/10/2019 | Copper | Suspect Copper/Kytec | 0.0004 | Below MAC |
| RS-19-13603 | 11/17/2019 | Copper | Unknown | 0.0004 | Below MAC |
| RS-19-04076 | 4/9/2019 | Lead | Suspect Copper/Kytec | 0.0004 | Below MAC |
| RS-19-06132 | 6/3/2019 | Lead | Suspect Lead | 0.0004 | Below MAC |
| RS-19-07023 | 6/18/2019 | Copper | Suspect Lead | 0.0005 | Below MAC |
| RS-19-11798 | 10/9/2019 | Copper | Suspect Copper/Kytec | 0.0006 | Below MAC |
| RS-19-07282 | 6/25/2019 | Copper | Unknown | 0.0007 | Below MAC |
| RS-19-11176 | 9/25/2019 | Copper | Suspect Copper/Kytec | 0.0009 | Below MAC |
| RS-19-07516 | 7/2/2019 | Lead | Suspect Lead | 0.0009 | Below MAC |
| RS-19-12187 | 10/15/2019 | Copper | Suspect Copper/Kytec | 0.0011 | Below MAC |
| RS-19-07280 | 6/24/2019 | Copper | Unknown | 0.0011 | Below MAC |
| RS-19-07885 | 7/4/2019 | Copper | Unknown | 0.0011 | Below MAC |
| RS-19-08629 | 7/25/2019 | Copper | Unknown | 0.0011 | Below MAC |
| RS-19-12183 | 10/16/2019 | Copper | Unknown | 0.0012 | Below MAC |
| RS-19-11265 | 9/24/2019 | Lead | Suspect Lead | 0.0012 | Below MAC |
| RS-19-11027 | 9/20/2019 | Copper | Suspect Copper/Kytec | 0.0013 | Below MAC |
| RS-19-02090 | 2/26/2019 | Copper | Suspect Lead | 0.0013 | Below MAC |
| RS-19-06647 | 6/12/2019 | Copper | Unknown | 0.0013 | Below MAC |
| RS-19-12459 | 10/23/2019 | Copper | Suspect Copper/Kytec | 0.0014 | Below MAC |
| RS-19-12727 | 10/28/2019 | Copper | Suspect Lead | 0.0014 | Below MAC |
| RS-19-04173 | 4/4/2019 | Lead | Suspect Lead | 0.0014 | Below MAC |
| RS-19-02247 | 2/28/2019 | Lead | Suspect Copper/Kytec | 0.0015 | Below MAC |

## 7.19 Lead Service Line Program- by Home Sample

| | | Service Line Material | | | |
|---|---|---|---|---|---|
| Unique Identifier | Collection Date | EPCOR Side | Home Owner Side | Concentration (mg/L) | Result |
| RS-19-10831 | 9/13/2019 | Copper | Suspect Copper/Kytec | 0.0016 | Below MAC |
| RS-19-07060 | 6/20/2019 | Lead | Suspect Copper/Kytec | 0.0018 | Below MAC |
| RS-19-12134 | 10/15/2019 | Copper | Suspect Copper/Kytec | 0.0019 | Below MAC |
| RS-19-08987 | 8/4/2019 | Copper | Unknown | 0.0019 | Below MAC |
| RS-19-07518 | 6/27/2019 | Copper | Unknown | 0.002 | Below MAC |
| RS-19-08187 | 7/15/2019 | Copper | Suspect Copper/Kytec | 0.0023 | Below MAC |
| RS-19-05934 | 5/28/2019 | Lead | Suspect Copper/Kytec | 0.0029 | Below MAC |
| RS-19-11016 | 9/16/2019 | Copper | Suspect Copper/Kytec | 0.0038 | Below MAC |
| RS-19-11102 | 9/23/2019 | Copper | Suspect Copper/Kytec | 0.0039 | Below MAC |
| RS-19-11605 | 10/3/2019 | Copper | Suspect Copper/Kytec | 0.0043 | Below MAC |
| RS-19-08840 | 7/28/2019 | Copper | Suspect Lead | 0.0046 | Below MAC |
| RS-19-02690 | 3/8/2019 | Lead | Suspect Lead | 0.0047 | Below MAC |
| RS-19-09843 | 8/21/2019 | Lead | Suspect Lead | 0.0049 | Below MAC |
| RS-19-12900 | 10/28/2019 | Lead | Suspect Lead | 0.0049 | Below MAC |
| RS-19-12859 | 11/1/2019 | Lead | Suspect Lead | 0.0054 | Above MAC |
| RS-19-04726 | 4/25/2019 | Lead | Suspect Copper/Kytec | 0.006 | Above MAC |
| RS-19-03062 | 3/13/2019 | Lead | Suspect Lead | 0.0064 | Above MAC |
| RS-19-06844 | 6/16/2019 | Lead | Suspect Copper/Kytec | 0.0067 | Above MAC |
| RS-19-07061 | 6/19/2019 | Lead | Suspect Copper/Kytec | 0.0089 | Above MAC |
| RS-19-02057 | 5/8/2018 | Lead | Suspect Lead | 0.0096 | Above MAC |
| RS-19-08628 | 7/25/2019 | Lead | Suspect Lead | 0.0106 | Above MAC |
| RS-19-06902 | 6/18/2019 | Copper | Suspect Lead | 0.0126 | Above MAC |
| RS-19-01766 | 2/19/2019 | Copper | Suspect Copper/Kytec | 0.0127 | Above MAC |
| RS-19-02058 | 2/24/2019 | Lead | Suspect Lead | 0.0140 | Above MAC |
| RS-19-07300 | 6/27/2019 | Copper | Unknown | 0.0143 | Above MAC |
| RS-19-08398 | 7/19/2019 | Copper | Unknown | 0.0160 | Above MAC |
| RS-19-06843 | 6/16/2019 | Lead | Unknown | 0.0170 | Above MAC |
| RS-19-10085 | 8/22/2019 | Lead | Suspect Copper/Kytec | 0.0198 | Above MAC |
| RS-19-08119 | 7/11/2019 | Copper | Suspect Lead | 0.0281 | Above MAC |
| RS-19-10087 | 8/27/2019 | Lead | Suspect Lead | 0.0474 | Above MAC |

## 7.20 Random Day Time Progam

| Unique Identifier | Collection Date | Concentration (mg/L) | Result |
|---|---|---|---|
| RS-19-05929 | 5/27/2019 | <0.0002 | Below MAC |
| RS-19-06173 | 6/3/2019 | <0.0002 | Below MAC |
| RS-19-08307 | 7/17/2019 | <0.0002 | Below MAC |
| RS-19-08309 | 7/17/2019 | <0.0002 | Below MAC |
| RS-19-08000 | 7/10/2019 | <0.0002 | Below MAC |
| RS-19-08002 | 7/10/2019 | <0.0002 | Below MAC |
| RS-18-03247 | 10/11/2018 | <0.0002 | Below MAC |
| RS-18-03382 | 10/15/2018 | <0.0002 | Below MAC |
| RS-18-03503 | 10/16/2018 | <0.0002 | Below MAC |
| RS-18-03767 | 10/22/2018 | <0.0002 | Below MAC |
| RS-18-03773 | 10/22/2018 | <0.0002 | Below MAC |
| RS-18-04164 | 10/31/2018 | <0.0002 | Below MAC |
| RS-18-04951 | 11/20/2018 | <0.0002 | Below MAC |
| RS-18-05008 | 11/21/2018 | <0.0002 | Below MAC |
| RS-18-06072 | 12/18/2018 | <0.0002 | Below MAC |
| RS-19-00146 | 1/3/2019 | <0.0002 | Below MAC |
| RS-19-00730 | 1/18/2019 | <0.0002 | Below MAC |
| RS-19-00802 | 1/21/2019 | <0.0002 | Below MAC |
| RS-19-00890 | 1/23/2019 | <0.0002 | Below MAC |
| RS-19-01649 | 2/13/2019 | <0.0002 | Below MAC |
| RS-19-03557 | 3/29/2019 | <0.0002 | Below MAC |
| RS-19-04361 | 4/16/2019 | <0.0002 | Below MAC |
| RS-19-05189 | 5/9/2019 | <0.0002 | Below MAC |
| RS-19-05205 | 5/9/2019 | <0.0002 | Below MAC |
| RS-19-05208 | 5/9/2019 | <0.0002 | Below MAC |
| RS-19-05301 | 5/10/2019 | <0.0002 | Below MAC |
| RS-19-05303 | 5/10/2019 | <0.0002 | Below MAC |
| RS-19-05305 | 5/10/2019 | <0.0002 | Below MAC |
| RS-19-05332 | 5/13/2019 | <0.0002 | Below MAC |
| RS-19-05340 | 5/13/2019 | <0.0002 | Below MAC |
| RS-19-05341 | 5/13/2019 | <0.0002 | Below MAC |
| RS-19-05343 | 5/13/2019 | <0.0002 | Below MAC |
| RS-19-05345 | 5/13/2019 | <0.0002 | Below MAC |
| RS-19-05346 | 5/13/2019 | <0.0002 | Below MAC |
| RS-19-05347 | 5/13/2019 | <0.0002 | Below MAC |
| RS-19-05348 | 5/13/2019 | <0.0002 | Below MAC |
| RS-19-05349 | 5/13/2019 | <0.0002 | Below MAC |
| RS-19-05355 | 5/13/2019 | <0.0002 | Below MAC |
| RS-19-05537 | 5/16/2019 | <0.0002 | Below MAC |
| RS-19-05594 | 5/21/2019 | <0.0002 | Below MAC |
| RS-19-05597 | 5/21/2019 | <0.0002 | Below MAC |
| RS-19-05709 | 5/22/2019 | <0.0002 | Below MAC |

## 7.20 Random Day Time Progam

| Unique Identifier | Collection Date | Concentration (mg/L) | Result |
|---|---|---|---|
| RS-19-05710 | 5/22/2019 | <0.0002 | Below MAC |
| RS-19-05711 | 5/22/2019 | <0.0002 | Below MAC |
| RS-19-05731 | 5/23/2019 | <0.0002 | Below MAC |
| RS-19-06027 | 5/29/2019 | <0.0002 | Below MAC |
| RS-19-06305 | 6/4/2019 | <0.0002 | Below MAC |
| RS-19-06306 | 6/5/2019 | <0.0002 | Below MAC |
| RS-19-06738 | 6/13/2019 | <0.0002 | Below MAC |
| RS-19-06739 | 6/13/2019 | <0.0002 | Below MAC |
| RS-19-06985 | 6/19/2019 | <0.0002 | Below MAC |
| RS-19-06986 | 6/19/2019 | <0.0002 | Below MAC |
| RS-19-06989 | 6/19/2019 | <0.0002 | Below MAC |
| RS-19-07179 | 6/24/2019 | <0.0002 | Below MAC |
| RS-19-07183 | 6/24/2019 | <0.0002 | Below MAC |
| RS-19-07212 | 6/25/2019 | <0.0002 | Below MAC |
| RS-19-07213 | 6/25/2019 | <0.0002 | Below MAC |
| RS-19-07320 | 6/27/2019 | <0.0002 | Below MAC |
| RS-19-07321 | 6/27/2019 | <0.0002 | Below MAC |
| RS-19-07326 | 6/27/2019 | <0.0002 | Below MAC |
| RS-19-07331 | 6/27/2019 | <0.0002 | Below MAC |
| RS-19-07332 | 6/27/2019 | <0.0002 | Below MAC |
| RS-19-07334 | 6/27/2019 | <0.0002 | Below MAC |
| RS-19-07335 | 6/27/2019 | <0.0002 | Below MAC |
| RS-19-07338 | 6/27/2019 | <0.0002 | Below MAC |
| RS-19-07342 | 6/27/2019 | <0.0002 | Below MAC |
| RS-19-07343 | 6/27/2019 | <0.0002 | Below MAC |
| RS-19-07345 | 6/27/2019 | <0.0002 | Below MAC |
| RS-19-07349 | 6/27/2019 | <0.0002 | Below MAC |
| RS-19-07353 | 6/27/2019 | <0.0002 | Below MAC |
| RS-19-07356 | 6/27/2019 | <0.0002 | Below MAC |
| RS-19-07357 | 6/27/2019 | <0.0002 | Below MAC |
| RS-19-07695 | 7/3/2019 | <0.0002 | Below MAC |
| RS-19-07754 | 7/4/2019 | <0.0002 | Below MAC |
| RS-19-07755 | 7/4/2019 | <0.0002 | Below MAC |
| RS-19-07816 | 7/5/2019 | <0.0002 | Below MAC |
| RS-19-07865 | 7/8/2019 | <0.0002 | Below MAC |
| RS-19-07872 | 7/8/2019 | <0.0002 | Below MAC |
| RS-19-07932 | 7/9/2019 | <0.0002 | Below MAC |
| RS-19-07936 | 7/9/2019 | <0.0002 | Below MAC |
| RS-19-07937 | 7/9/2019 | <0.0002 | Below MAC |
| RS-19-07938 | 7/9/2019 | <0.0002 | Below MAC |
| RS-19-07939 | 7/9/2019 | <0.0002 | Below MAC |
| RS-19-08082 | 7/11/2019 | <0.0002 | Below MAC |

## 7.20 Random Day Time Progam

| Unique Identifier | Collection Date | Concentration (mg/L) | Result |
|---|---|---|---|
| RS-19-08084 | 7/11/2019 | <0.0002 | Below MAC |
| RS-19-08085 | 7/11/2019 | <0.0002 | Below MAC |
| RS-19-08086 | 7/11/2019 | <0.0002 | Below MAC |
| RS-19-08088 | 7/11/2019 | <0.0002 | Below MAC |
| RS-19-08089 | 7/11/2019 | <0.0002 | Below MAC |
| RS-19-08217 | 7/15/2019 | <0.0002 | Below MAC |
| RS-19-08261 | 7/16/2019 | <0.0002 | Below MAC |
| RS-19-08262 | 7/16/2019 | <0.0002 | Below MAC |
| RS-19-08265 | 7/16/2019 | <0.0002 | Below MAC |
| RS-19-08266 | 7/16/2019 | <0.0002 | Below MAC |
| RS-19-08271 | 7/16/2019 | <0.0002 | Below MAC |
| RS-19-08359 | 7/18/2019 | <0.0002 | Below MAC |
| RS-19-08363 | 7/18/2019 | <0.0002 | Below MAC |
| RS-19-08429 | 7/19/2019 | <0.0002 | Below MAC |
| RS-19-08430 | 7/19/2019 | <0.0002 | Below MAC |
| RS-19-08432 | 7/19/2019 | <0.0002 | Below MAC |
| RS-19-08651 | 7/26/2019 | <0.0002 | Below MAC |
| RS-19-08692 | 7/26/2019 | <0.0002 | Below MAC |
| RS-19-08763 | 7/29/2019 | <0.0002 | Below MAC |
| RS-19-08764 | 7/29/2019 | <0.0002 | Below MAC |
| RS-19-09431 | 8/9/2019 | <0.0002 | Below MAC |
| RS-19-09580 | 8/13/2019 | <0.0002 | Below MAC |
| RS-19-09583 | 8/14/2019 | <0.0002 | Below MAC |
| RS-19-09586 | 8/14/2019 | <0.0002 | Below MAC |
| RS-19-09587 | 8/14/2019 | <0.0002 | Below MAC |
| RS-19-12048 | 10/16/2019 | <0.0002 | Below MAC |
| RS-19-12132 | 10/16/2019 | <0.0002 | Below MAC |
| RS-19-12133 | 10/17/2019 | <0.0002 | Below MAC |
| RS-19-12193 | 10/17/2019 | <0.0002 | Below MAC |
| RS-19-12195 | 10/17/2019 | <0.0002 | Below MAC |
| RS-19-12517 | 10/23/2019 | <0.0002 | Below MAC |
| RS-19-12574 | 10/24/2019 | <0.0002 | Below MAC |
| RS-19-12663 | 10/25/2019 | <0.0002 | Below MAC |
| RS-19-12665 | 10/25/2019 | <0.0002 | Below MAC |
| RS-19-12667 | 10/25/2019 | <0.0002 | Below MAC |
| RS-19-12668 | 10/25/2019 | <0.0002 | Below MAC |
| RS-19-12669 | 10/25/2019 | <0.0002 | Below MAC |
| RS-19-12918 | 11/1/2019 | <0.0002 | Below MAC |
| RS-19-05399 | 5/14/2019 | <0.0002 | Below MAC |
| RS-19-05401 | 5/14/2019 | <0.0002 | Below MAC |
| RS-19-05404 | 5/14/2019 | <0.0002 | Below MAC |
| RS-19-05405 | 5/14/2019 | <0.0002 | Below MAC |

## 7.20 Random Day Time Progam

| Unique Identifier | Collection Date | Concentration (mg/L) | Result |
|---|---|---|---|
| RS-19-05408 | 5/14/2019 | <0.0002 | Below MAC |
| RS-19-05412 | 5/14/2019 | <0.0002 | Below MAC |
| RS-19-08312 | 7/17/2019 | 0.0002 | Below MAC |
| RS-19-03686 | 4/1/2019 | 0.0002 | Below MAC |
| RS-19-07211 | 6/25/2019 | 0.0002 | Below MAC |
| RS-19-07329 | 6/27/2019 | 0.0002 | Below MAC |
| RS-19-07333 | 6/27/2019 | 0.0002 | Below MAC |
| RS-19-07347 | 6/27/2019 | 0.0002 | Below MAC |
| RS-19-07598 | 7/2/2019 | 0.0002 | Below MAC |
| RS-19-07871 | 7/8/2019 | 0.0002 | Below MAC |
| RS-19-07934 | 7/9/2019 | 0.0002 | Below MAC |
| RS-19-08081 | 7/11/2019 | 0.0002 | Below MAC |
| RS-19-08222 | 7/15/2019 | 0.0002 | Below MAC |
| RS-19-08268 | 7/16/2019 | 0.0002 | Below MAC |
| RS-19-08850 | 7/30/2019 | 0.0002 | Below MAC |
| RS-19-09581 | 8/14/2019 | 0.0002 | Below MAC |
| RS-19-12047 | 10/15/2019 | 0.0002 | Below MAC |
| RS-19-12670 | 10/25/2019 | 0.0002 | Below MAC |
| RS-19-12713 | 10/28/2019 | 0.0002 | Below MAC |
| RS-19-13995 | 11/26/2019 | 0.0002 | Below MAC |
| RS-19-05396 | 5/14/2019 | 0.0002 | Below MAC |
| RS-19-04694 | 4/26/2019 | 0.0003 | Below MAC |
| RS-19-00801 | 1/21/2019 | 0.0003 | Below MAC |
| RS-19-03130 | 3/21/2019 | 0.0003 | Below MAC |
| RS-19-03709 | 4/2/2019 | 0.0003 | Below MAC |
| RS-19-05308 | 5/10/2019 | 0.0003 | Below MAC |
| RS-19-05351 | 5/13/2019 | 0.0003 | Below MAC |
| RS-19-05352 | 5/13/2019 | 0.0003 | Below MAC |
| RS-19-05706 | 5/22/2019 | 0.0003 | Below MAC |
| RS-19-05732 | 5/23/2019 | 0.0003 | Below MAC |
| RS-19-07155 | 6/24/2019 | 0.0003 | Below MAC |
| RS-19-07181 | 6/24/2019 | 0.0003 | Below MAC |
| RS-19-07182 | 6/24/2019 | 0.0003 | Below MAC |
| RS-19-07210 | 6/25/2019 | 0.0003 | Below MAC |
| RS-19-07328 | 6/27/2019 | 0.0003 | Below MAC |
| RS-19-07339 | 6/27/2019 | 0.0003 | Below MAC |
| RS-19-07346 | 6/27/2019 | 0.0003 | Below MAC |
| RS-19-07350 | 6/27/2019 | 0.0003 | Below MAC |
| RS-19-07467 | 6/28/2019 | 0.0003 | Below MAC |
| RS-19-07873 | 7/8/2019 | 0.0003 | Below MAC |
| RS-19-08079 | 7/11/2019 | 0.0003 | Below MAC |
| RS-19-08215 | 7/15/2019 | 0.0003 | Below MAC |

## 7.20 Random Day Time Progam

| Unique Identifier | Collection Date | Concentration (mg/L) | Result |
|---|---|---|---|
| RS-19-08635 | 7/24/2019 | 0.0003 | Below MAC |
| RS-19-08849 | 7/26/2019 | 0.0003 | Below MAC |
| RS-19-09585 | 8/14/2019 | 0.0003 | Below MAC |
| RS-19-12516 | 10/23/2019 | 0.0003 | Below MAC |
| RS-19-12523 | 10/23/2019 | 0.0003 | Below MAC |
| RS-19-05402 | 5/14/2019 | 0.0003 | Below MAC |
| RS-19-08308 | 7/17/2019 | 0.0004 | Below MAC |
| RS-18-03766 | 10/22/2018 | 0.0004 | Below MAC |
| RS-18-03772 | 10/22/2018 | 0.0004 | Below MAC |
| RS-18-05009 | 11/21/2018 | 0.0004 | Below MAC |
| RS-19-03994 | 4/8/2019 | 0.0004 | Below MAC |
| RS-19-05210 | 5/9/2019 | 0.0004 | Below MAC |
| RS-19-05304 | 5/10/2019 | 0.0004 | Below MAC |
| RS-19-05306 | 5/10/2019 | 0.0004 | Below MAC |
| RS-19-05708 | 5/22/2019 | 0.0004 | Below MAC |
| RS-19-06649 | 6/10/2019 | 0.0004 | Below MAC |
| RS-19-07323 | 6/27/2019 | 0.0004 | Below MAC |
| RS-19-07348 | 6/27/2019 | 0.0004 | Below MAC |
| RS-19-07465 | 6/28/2019 | 0.0004 | Below MAC |
| RS-19-07691 | 7/3/2019 | 0.0004 | Below MAC |
| RS-19-07694 | 7/3/2019 | 0.0004 | Below MAC |
| RS-19-07940 | 7/9/2019 | 0.0004 | Below MAC |
| RS-19-08269 | 7/16/2019 | 0.0004 | Below MAC |
| RS-19-08428 | 7/19/2019 | 0.0004 | Below MAC |
| RS-19-12920 | 11/1/2019 | 0.0004 | Below MAC |
| RS-19-05397 | 5/14/2019 | 0.0004 | Below MAC |
| RS-19-05400 | 5/14/2019 | 0.0004 | Below MAC |
| RS-19-05307 | 5/10/2019 | 0.0005 | Below MAC |
| RS-19-05338 | 5/13/2019 | 0.0005 | Below MAC |
| RS-19-05342 | 5/13/2019 | 0.0005 | Below MAC |
| RS-19-05733 | 5/23/2019 | 0.0005 | Below MAC |
| RS-19-07319 | 6/27/2019 | 0.0005 | Below MAC |
| RS-19-07322 | 6/27/2019 | 0.0005 | Below MAC |
| RS-19-07463 | 6/28/2019 | 0.0005 | Below MAC |
| RS-19-08078 | 7/11/2019 | 0.0005 | Below MAC |
| RS-19-08636 | 7/24/2019 | 0.0005 | Below MAC |
| RS-19-08650 | 7/26/2019 | 0.0005 | Below MAC |
| RS-19-08690 | 7/26/2019 | 0.0005 | Below MAC |
| RS-19-12291 | 10/18/2019 | 0.0005 | Below MAC |
| RS-19-12862 | 10/31/2019 | 0.0005 | Below MAC |
| RS-19-05403 | 5/14/2019 | 0.0005 | Below MAC |
| RS-19-05409 | 5/14/2019 | 0.0005 | Below MAC |

## 7.20 Random Day Time Progam

| Unique Identifier | Collection Date | Concentration (mg/L) | Result |
|---|---|---|---|
| RS-19-08310 | 7/17/2019 | 0.0006 | Below MAC |
| RS-18-04676 | 11/13/2018 | 0.0006 | Below MAC |
| RS-18-05007 | 11/21/2018 | 0.0006 | Below MAC |
| RS-19-05188 | 5/9/2019 | 0.0006 | Below MAC |
| RS-19-06025 | 5/28/2019 | 0.0006 | Below MAC |
| RS-19-06652 | 6/11/2019 | 0.0006 | Below MAC |
| RS-19-07341 | 6/27/2019 | 0.0006 | Below MAC |
| RS-19-07867 | 7/8/2019 | 0.0006 | Below MAC |
| RS-19-07933 | 7/9/2019 | 0.0006 | Below MAC |
| RS-19-08080 | 7/11/2019 | 0.0006 | Below MAC |
| RS-19-08083 | 7/11/2019 | 0.0006 | Below MAC |
| RS-19-08090 | 7/11/2019 | 0.0006 | Below MAC |
| RS-19-08216 | 7/15/2019 | 0.0006 | Below MAC |
| RS-19-08634 | 7/24/2019 | 0.0006 | Below MAC |
| RS-19-09584 | 8/14/2019 | 0.0006 | Below MAC |
| RS-19-05406 | 5/14/2019 | 0.0006 | Below MAC |
| RS-18-05348 | 11/30/2018 | 0.0007 | Below MAC |
| RS-19-02132 | 2/27/2019 | 0.0007 | Below MAC |
| RS-19-06987 | 6/19/2019 | 0.0007 | Below MAC |
| RS-19-07464 | 6/28/2019 | 0.0007 | Below MAC |
| RS-19-08087 | 7/11/2019 | 0.0007 | Below MAC |
| RS-19-08219 | 7/15/2019 | 0.0007 | Below MAC |
| RS-19-08270 | 7/16/2019 | 0.0007 | Below MAC |
| RS-19-09582 | 8/14/2019 | 0.0007 | Below MAC |
| RS-19-12919 | 11/1/2019 | 0.0007 | Below MAC |
| RS-19-13795 | 11/21/2019 | 0.0007 | Below MAC |
| RS-19-00658 | 1/16/2019 | 0.0008 | Below MAC |
| RS-19-06988 | 6/19/2019 | 0.0008 | Below MAC |
| RS-19-07601 | 7/2/2019 | 0.0008 | Below MAC |
| RS-19-08264 | 7/16/2019 | 0.0008 | Below MAC |
| RS-19-12488 | 10/22/2019 | 0.0008 | Below MAC |
| RS-19-12489 | 10/22/2019 | 0.0008 | Below MAC |
| RS-18-03378 | 10/15/2018 | 0.0009 | Below MAC |
| RS-19-02454 | 3/6/2019 | 0.0009 | Below MAC |
| RS-19-05302 | 5/10/2019 | 0.0009 | Below MAC |
| RS-19-05344 | 5/13/2019 | 0.0009 | Below MAC |
| RS-19-07215 | 6/25/2019 | 0.0009 | Below MAC |
| RS-19-07324 | 6/27/2019 | 0.0009 | Below MAC |
| RS-19-07757 | 7/4/2019 | 0.0009 | Below MAC |
| RS-19-07935 | 7/9/2019 | 0.0009 | Below MAC |
| RS-19-06653 | 6/11/2019 | 0.0010 | Below MAC |
| RS-19-07869 | 7/8/2019 | 0.0010 | Below MAC |

## 7.20 Random Day Time Progam

| Unique Identifier | Collection Date | Concentration (mg/L) | Result |
|---|---|---|---|
| RS-19-12712 | 10/28/2019 | 0.0010 | Below MAC |
| RS-19-07870 | 7/8/2019 | 0.0011 | Below MAC |
| RS-19-08220 | 7/15/2019 | 0.0011 | Below MAC |
| RS-19-09430 | 8/8/2019 | 0.0011 | Below MAC |
| RS-19-08358 | 7/18/2019 | 0.0012 | Below MAC |
| RS-19-08431 | 7/19/2019 | 0.0012 | Below MAC |
| RS-19-06797 | 6/14/2019 | 0.0013 | Below MAC |
| RS-19-05936 | 5/28/2019 | 0.0013 | Below MAC |
| RS-19-07154 | 6/24/2019 | 0.0013 | Below MAC |
| RS-19-07214 | 6/25/2019 | 0.0013 | Below MAC |
| RS-19-07355 | 6/27/2019 | 0.0013 | Below MAC |
| RS-19-08311 | 7/17/2019 | 0.0014 | Below MAC |
| RS-19-07466 | 6/28/2019 | 0.0014 | Below MAC |
| RS-19-07866 | 7/8/2019 | 0.0014 | Below MAC |
| RS-19-07689 | 7/3/2019 | 0.0015 | Below MAC |
| RS-19-08978 | 8/1/2019 | 0.0015 | Below MAC |
| RS-19-07336 | 6/27/2019 | 0.0017 | Below MAC |
| RS-19-06122 | 5/31/2019 | 0.0019 | Below MAC |
| RS-19-12801 | 10/29/2019 | 0.0019 | Below MAC |
| RS-18-03962 | 10/25/2018 | 0.0020 | Below MAC |
| RS-19-06648 | 6/10/2019 | 0.0021 | Below MAC |
| RS-19-08637 | 7/25/2019 | 0.0025 | Below MAC |
| RS-19-12194 | 10/17/2019 | 0.0025 | Below MAC |
| RS-19-07344 | 6/27/2019 | 0.0026 | Below MAC |
| RS-19-05398 | 5/14/2019 | 0.0027 | Below MAC |
| RS-19-08218 | 7/15/2019 | 0.0028 | Below MAC |
| RS-19-08263 | 7/16/2019 | 0.0030 | Below MAC |
| RS-19-12711 | 10/28/2019 | 0.0034 | Below MAC |
| RS-19-12664 | 10/25/2019 | 0.0036 | Below MAC |
| RS-18-05939 | 12/14/2018 | 0.0037 | Below MAC |
| RS-19-09141 | 8/7/2019 | 0.0046 | Below MAC |
| RS-19-00830 | 1/22/2019 | 0.0128 | Above MAC |
| RS-19-03170 | 3/22/2019 | 0.0131 | Above MAC |
| RS-19-12487 | 10/22/2019 | 0.0261 | Above MAC |

## 7.21 REPORTABLE DETECTION LIMITS

| Analyte | RDL | Unit |
|---|---|---|
| 2,4 D | 0.7 | ug/L |
| Alkalinity phenolphthalein | 1 | mg CaCO3/L |
| Alkalinity Total | 1 | mg CaCO3/L |
| Aluminum | 0.005 | mg/L |
| Aluminum Dissolved | 0.005 | mg/L |
| Ammonia as N | 0.05 | mg/L |
| Ammonia as NH3 | 0.05 | mg/L |
| Antimony | 0.0002 | mg/L |
| Antimony Dissolved | 0.0002 | mg/L |
| Arsenic | 0.0002 | mg/L |
| Arsenic Dissolved | 0.0002 | mg/L |
| Barium | 0.002 | mg/L |
| Barium Dissolved | 0.002 | mg/L |
| Benzene | 0.5 | µg/L |
| Beryllium | 0.0002 | mg/L |
| Beryllium Dissolved | 0.0002 | mg/L |
| Boron | 0.005 | mg/L |
| Boron Dissolved | 0.005 | mg/L |
| Bromate Dissolved | 0.005 | mg/L |
| Bromide Dissolved | 0.01 | mg/L |
| Bromochloroacetic acid | 1.0 | ug/L |
| Bromodichloromethane | 0.5 | µg/L |
| Bromoform | 1.0 | µg/L |
| Cadmium | 0.0002 | mg/L |
| Cadmium Dissolved | 0.0002 | mg/L |
| Calcium | 0.1 | mg/L |
| Calcium Dissolved | 0.1 | mg/L |
| Calcium Hardness | 2 | mg CaCO3/L |
| Carbon Tetrachloride | 1.0 | µg/L |
| Chlorate Dissolved | 0.01 | mg/L |
| Chloride Dissolved | 0.1 | mg/L |
| Chlorine Free | 0.03 | mg/L |
| Chlorine, total | 0.03 | mg/L |
| Chlorite Dissolved | 0.005 | mg/L |
| Chlorobenzene | 0.5 | µg/L |
| Chloroform | 0.5 | µg/L |
| Chromium | 0.0002 | mg/L |
| Chromium Dissolved | 0.0002 | mg/L |
| Cobalt | 0.0002 | mg/L |
| Cobalt Dissolved | 0.0002 | mg/L |
| Coliforms, total | 1.0 | MPN/100 mL |
| Colour | 0.5 | TCU |
| Conductivity | 1 | µS/cm |
| Copper | 0.005 | mg/L |
| Copper Dissolved | 0.005 | mg/L |
| Cryptosporidium | 1.1 | oocysts/100L |
| Dibromoacetic acid | 1.0 | ug/L |
| Dibromochloromethane | 0.5 | µg/L |
| Dichloramine | 0 | mg/L |
| Dichloroacetic acid | 2.0 | ug/L |

## 7.21 REPORTABLE DETECTION LIMITS

| Analyte | RDL | Unit |
|---|---|---|
| Dichlorobenzene (1,2) | 0.5 | µg/L |
| Dichlorobenzene (1,3) | 0.5 | µg/L |
| Dichlorobenzene (1,4) | 0.5 | µg/L |
| Dichloroethylene (1,1) | 3.0 | µg/L |
| Dichloroethylene, cis (1,2) | 0.5 | µg/L |
| Dichloroethylene, trans (1,2) | 0.5 | µg/L |
| Dichloropropane (1,2) | 0.5 | µg/L |
| E. coli | 1.0 | MPN/100 mL |
| Ethylbenzene | 0.5 | µg/L |
| Field Turbidity | 0.02 | NTU |
| Fluoride | 0.05 | mg/L |
| Giardia | 1.1 | cysts/100L |
| Haloacetic Acids, total (HAA5) | 5.0 | ug/L |
| Haloacetic Acids, total (HAA6) | 5.0 | ug/L |
| Hardness, Total | 2 | mg CaCO3/L |
| Heterotrophic Plate Count | 10 | CFU/mL |
| Iron | 0.005 | mg/L |
| Iron Dissolved | 0.005 | mg/L |
| Lanthanum | 0.001 | mg/L |
| Lanthanum Dissolved | 0.001 | mg/L |
| Lead | 0.0002 | mg/L |
| Lead Dissolved | 0.0002 | mg/L |
| Lithium | 0.0002 | mg/L |
| Lithium Dissolved | 0.0002 | mg/L |
| Magnesium | 0.1 | mg/L |
| Magnesium Dissolved | 0.1 | mg/L |
| Manganese | 0.002 | mg/L |
| Manganese Dissolved | 0.002 | mg/L |
| Mercury | 0.0002 | mg/L |
| Mercury Dissolved | 0.0002 | mg/L |
| Methyl t-Butyl Ether (MTBE) | 0.5 | µg/L |
| Methylene Chloride | 0.5 | µg/L |
| MIBK | 1.0 | µg/L |
| Microcystin | 0.10 | µg/L |
| Molybdenum | 0.0002 | mg/L |
| Molybdenum Dissolved | 0.0002 | mg/L |
| Monobromoacetic acid | 1.0 | ug/L |
| Monochloramine | 0.03 | mg/L |
| Monochloroacetic acid | 5.0 | ug/L |
| Nickel | 0.0005 | mg/L |
| Nickel Dissolved | 0.0005 | mg/L |
| Nitrate (as N) Dissolved | 0.01 | mg/L |
| Nitrite (as N) Dissolved | 0.01 | mg/L |
| Ortho_P | 0.02 | mg/L |
| Phosphorus | 0.02 | mg/L |
| Phosphorus Dissolved | 0.02 | mg/L |
| Potassium | 0.1 | mg/L |
| Potassium Dissolved | 0.1 | mg/L |
| RLUATP1 | 19521.67 | |
| RLUATPO | 1.67 | |
| RLUcATP | 3510.33 | |
| Selenium | 0.0002 | mg/L |

## 7.21 REPORTABLE DETECTION LIMITS

| Analyte | RDL | Unit |
|---|---|---|
| Selenium Dissolved | 0.0002 | mg/L |
| Silicon | 0.05 | mg/L |
| Silicon Dissolved | 0.05 | mg/L |
| Silver | 0.0002 | mg/L |
| Silver Dissolved | 0.0002 | mg/L |
| Sodium | 0.1 | mg/L |
| Sodium Dissolved | 0.1 | mg/L |
| Strontium | 0.002 | mg/L |
| Strontium Dissolved | 0.002 | mg/L |
| Styrene | 0.5 | µg/L |
| Sulphate Dissolved | 0.1 | mg/L |
| Tetrachloroethane (1,1,2,2) | 1.0 | µg/L |
| Tetrachloroethylene | 0.5 | µg/L |
| Thallium | 0.0005 | mg/L |
| Thallium Dissolved | 0.0005 | mg/L |
| Tin | 0.0005 | mg/L |
| Tin Dissolved | 0.0005 | mg/L |
| Titanium | 0.0005 | mg/L |
| Titanium Dissolved | 0.0005 | mg/L |
| Toluene | 0.5 | µg/L |
| Total Dissolved Solids | 5 | mg/L |
| Total Kjeldahl Nitrogen | 0.03 | mg N/L |
| Total Organic Carbon | 0.6 | mg/L |
| Total Suspended Solids | 5 | mg/L |
| Total Volatile Organics (NonTHM) | 1.0 | µg/L |
| Total Volatile Organics (Unknown) | 1.0 | µg/L |
| Trichloroacetic acid | 3.0 | ug/L |
| Trichlorobenzene (1,2,4) | 0.5 | µg/L |
| Trichloroethane (1,1,1) | 0.5 | µg/L |
| Trichloroethylene | 0.5 | µg/L |
| Trihalomethanes | 1.0 | µg/L |
| Turbidity | 0.02 | NTU |
| Uranium | 0.0005 | mg/L |
| Uranium Dissolved | 0.0005 | mg/L |
| UV 254 % Transmittance | 99.8 | %T/cm |
| Vanadium | 0.0005 | mg/L |
| Vanadium Dissolved | 0.0005 | mg/L |
| Xylene (1,2) | 0.5 | µg/L |
| Xylene (1,4) | 0.5 | µg/L |
| Zinc | 0.005 | mg/L |
| Zinc Dissolved | 0.005 | mg/L |
| Zirconium | 0.001 | mg/L |
| Zirconium Dissolved | 0.001 | mg/L |

**Contract Lab Analysis**

| | | |
|---|---|---|
| Cyanide Dissolved | 0.002 | mg/L |
| NDMA | 0.50 | ng/L |
| Perfluorobutane Sulfonate (PFBS) | 0.020 | ug/L |
| Perfluorobutanoic acid | 0.020 | ug/L |
| Perfluorodecane Sulfonate | 0.020 | ug/L |
| Perfluorodecanoic Acid (PFDA) | 0.020 | ug/L |
| Perfluorododecanoic Acid (PFDoA) | 0.020 | ug/L |

## 7.21 REPORTABLE DETECTION LIMITS

| Analyte | RDL | Unit |
|---|---|---|
| Perfluoroheptane sulfonate | 0.020 | ug/L |
| Perfluoroheptanoic Acid (PFHpA) | 0.020 | ug/L |
| Perfluorohexane Sulfonate (PFHxS) | 0.020 | ug/L |
| Perfluorohexanoic Acid (PFHxA) | 0.020 | ug/L |
| Perfluoro-n-Octanoic Acid (PFOA) | 0.020 | ug/L |
| Perfluorononanoic Acid (PFNA) | 0.020 | ug/L |
| Perfluorooctane Sulfonamide | 0.020 | ug/L |
| Perfluorooctane Sulfonate (PFOS) | 0.020 | ug/L |
| Perfluoropentanoic Acid (PFPeA) | 0.020 | ug/L |
| Perfluorotetradecanoic Acid | 0.020 | ug/L |
| Perfluorotridecanoic Acid | 0.020 | ug/L |
| Perfluoroundecanoic Acid (PFUnA) | 0.020 | ug/L |
| Sulphide | 0.002 | mg/L |

## 7.22 EXPLANATION OF NOTATIONS USED

Concentrations are reported as mg/L unless otherwise indicated.
Alkalinity and Hardness (Ca and Total) are reported as mg $CaCO_3$/L

| | | |
|---|---|---|
| %T | = | % Transmission |
| - ve | = | Absent |
| + ve | = | Present |
| µg/L | = | Micrograms per litre (1 µg/L = 0.001 mg/L) |
| µS/cm | = | Microsiemens per centimeter (unit of conductivity) |
| 2/Y | = | Twice per Year |
| AO | = | Aesthetic Objective |
| Bq/L | = | Becquerel(s) per litre (unit of radionuclide concentration) |
| CCPP | = | Calcium Carbonate Precipitation Potential |
| CFU | = | Colony Forming Units |
| Comm | = | Commercial Laboratories |
| D | = | Daily |
| EWSI | = | EPCOR Water Services Inc. |
| FPA | = | Flavour Profile Analysis |
| GCDWQ | = | Guidelines for Canadian Drinking Water Quality |
| GM | = | Geometric Mean |
| HPC | = | Heterotrophic Plate Count |
| inoff | = | Inoffensive (no objectionable odour) |
| M | = | Monthly |
| MAC | = | Maximum Acceptable Concentration |
| MDL | = | Method Detection Limit |
| N/A | = | Not Available |
| ND | = | Not Detected |
| NTU | = | Nephelometric Turbidity Units |
| PA | = | Presence/Absence Testing |
| PBR | = | Performance Based Rates |
| PHP | = | phenolphthalein |
| PLPH | = | Provincial Laboratory of Public Health |
| ppb | = | Parts Per Billion |
| ppm | = | Parts Per Million |
| Q | = | Quarterly |
| QA | = | Quality Assurance |
| QC | = | Quality Control |
| RDL | = | Reportable Detection Limit |
| TCU | = | True Colour Units |
| TDS | = | Total Dissolved Solids |
| TOC | = | Total Organic Carbon |
| WL | = | Water Laboratory |
| WTP | = | Water Treatment Plant |