



Water Quality Laboratory

Inorganics Analyses

Period of 01/01/2017 TO 12/31/2017

Distribution Site Representing Griffith Treatment Plant

Date Report Generated: 6/09/2017

| Parameter                           | MCL <sup>1</sup> | Units <sup>2</sup> | Jan-17 | Feb-17 | Mar-17 | Apr-17 | May-17 | Jun-17 | Jul-17 | Aug-17 | Sep-17 | Oct-17 | Nov-17 | Dec-17 | Quant Limit <sup>3</sup> |
|-------------------------------------|------------------|--------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------------------------|
| Aggressive Index Number             |                  | Units              | 11     | 11     | 11     | 11     | 11     | -      | -      | -      | -      | -      | -      | -      | N/A                      |
| Alkalinity, Bicarbonate             |                  | mg/L               | 71     | 56     | 56     | 46     | 59     | -      | -      | -      | -      | -      | -      | -      | 0                        |
| Alkalinity, Carbonate               |                  | mg/L               | 0      | 0      | 0      | 0      | 0      | -      | -      | -      | -      | -      | -      | -      | 0                        |
| Alkalinity, Hydroxyl                |                  | mg/L               | 0      | 0      | 0      | 0      | 0      | -      | -      | -      | -      | -      | -      | -      | 0                        |
| Alkalinity, Phenolphthalein         |                  | mg/L               | 0      | 0      | 0      | 0      | 0      | -      | -      | -      | -      | -      | -      | -      | 0                        |
| Alkalinity, Total                   |                  | mg/L               | 71     | 56     | 56     | 46     | 59     | -      | -      | -      | -      | -      | -      | -      | 0                        |
| Bromide                             |                  | mg/L               | 0.02   | 0.02   | 0.02   | 0.01   | 0.01   | -      | -      | -      | -      | -      | -      | -      | 0.01                     |
| Carbon Dioxide                      |                  | mg/L               | 4      | 6      | 4      | 1      | 4      | -      | -      | -      | -      | -      | -      | -      | N/A                      |
| Chloride                            | 250 S            | mg/L               | 66.8   | 62.2   | 62.2   | 60.4   | 59.5   | -      | -      | -      | -      | -      | -      | -      | 5.0                      |
| Chlorine, Free                      |                  | mg/L               | 0.3    | 0.2    | 0.1    | 2.9    | 2.5    | -      | -      | -      | -      | -      | -      | -      | 0.0                      |
| Chlorine, Total                     |                  | mg/L               | 3.0    | 3.1    | 2.7    | 3.1    | 2.9    | -      | -      | -      | -      | -      | -      | -      | 0.0                      |
| Color                               | 15 S             | Units              | 0      | 0      | 0      | 0      | 0      | -      | -      | -      | -      | -      | -      | -      | 0                        |
| Dissolved Oxygen                    |                  | mg/L               | 18.2   | 17.1   | 18.3   | 16.9   | 16.9   | -      | -      | -      | -      | -      | -      | -      | 0.0                      |
| Fluoride                            | 4.0 P / 2.0 S    | mg/L               | 0.6    | 0.6    | 0.6    | 0.7    | 0.7    | -      | -      | -      | -      | -      | -      | -      | 0.2                      |
| Hardness, Calcium                   |                  | mg/L               | 97     | 72     | 75     | 53     | 61     | -      | -      | -      | -      | -      | -      | -      | 10                       |
| Hardness, Total                     |                  | mg/L               | 123    | 97     | 98     | 74     | 86     | -      | -      | -      | -      | -      | -      | -      | 10                       |
| Methylene Blue Activated Substances | 0.5 S            | mg/L               | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | 0.05                     |
| N, Ammonia (Ammonia as N)           |                  | mg/L               | 0.66   | 0.71   | 0.61   | BQL    | BQL    | -      | -      | -      | -      | -      | -      | -      | 0.20                     |
| N, Nitrate (Nitrate as N)           | 10 P             | mg/L               | 1.68   | 1.13   | 1.17   | 0.87   | 0.91   | -      | -      | -      | -      | -      | -      | -      | 0.20                     |
| N, Nitrite (Nitrite as N)           | 1 P              | mg/L               | BQL    | BQL    | BQL    | BQL    | BQL    | -      | -      | -      | -      | -      | -      | -      | 0.01                     |
| pH                                  | 6.5 - 8.5 S      | Units              | 7.5    | 7.3    | 7.5    | 7.8    | 7.5    | -      | -      | -      | -      | -      | -      | -      | N/A                      |
| Phosphate as Phosphorus             |                  | mg/L               | 0.41   | 0.45   | 0.45   | 0.47   | 0.50   | -      | -      | -      | -      | -      | -      | -      | 0.10                     |
| Orthophosphate as PO <sub>4</sub>   |                  | mg/L               | 1.26   | 1.39   | 1.37   | 1.43   | 1.51   | -      | -      | -      | -      | -      | -      | -      | 0.31                     |
| Solids, Total                       |                  | mg/L               | 292    | 256    | 250    | 225    | 214    | -      | -      | -      | -      | -      | -      | -      | 1                        |
| Solids, Total Dissolved             | 500 S            | mg/L               | -      | 235    | 264    | 181    | 190    | -      | -      | -      | -      | -      | -      | -      | 1                        |
| Solids, Total Suspended             |                  | mg/L               | BQL    | BQL    | BQL    | BQL    | BQL    | -      | -      | -      | -      | -      | -      | -      | 1                        |
| Specific Conductivity               |                  | µmhos/cm           | 508    | 429    | 415    | 358    | 387    | -      | -      | -      | -      | -      | -      | -      | 0                        |
| Sulfate                             | 250 S            | mg/L               | 61.6   | 39.9   | 37.2   | 23.8   | 28.8   | -      | -      | -      | -      | -      | -      | -      | 5.0                      |
| Taste                               |                  | Units              | 2      | 2      | 2      | 2      | 2      | -      | -      | -      | -      | -      | -      | -      | 1                        |
| Temperature                         |                  | °C                 | 16.3   | 17.2   | 18.1   | 18.3   | 19.8   | -      | -      | -      | -      | -      | -      | -      | N/A                      |
| Threshold Odor Number               | 3 S              | Units              | 7      | 7      | 1      | 7      | 7      | -      | -      | -      | -      | -      | -      | -      | 0                        |
| Total Organic Carbon                |                  | mg/L               | 2.1    | 2.3    | 2.3    | 2.5    | 2.3    | -      | -      | -      | -      | -      | -      | -      | 0.5                      |
| Turbidity                           | ≤ 5 P            | NTU                | 0.05   | 0.05   | 0.35   | 0.10   | 0.05   | -      | -      | -      | -      | -      | -      | -      | 0.05                     |

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

<sup>1</sup>Environmental Protection Agency/Virginia Department of Health established levels for drinking water at points of entry to the water distribution system

P = Primary - enforceable, S = Secondary - non-enforceable, AL = Action Level on specific taps, MCL = Maximum Contaminant Level

<sup>2</sup>mg/L = milligrams per liter, µg/L = micrograms per liter, µmhos/cm = micromhos per centimeter, NTU = Nephelometric Turbidity Units

<sup>3</sup>Quant Limit = Quantitation Limit : lowest level of measurement, N/A = not applicable

- Not sampled

\* Analysis pending



Water Quality Laboratory

Metal Analyses

Period of 01/01/2017 TO 12/31/2017

Distribution Site Representing Griffith Treatment Plant

Date Report Generated: 6/09/2017

| Parameter | MCL <sup>1</sup> | Units <sup>2</sup> | Jan-17 | Feb-17 | Mar-17 | Apr-17 | May-17 | Jun-17 | Jul-17 | Aug-17 | Sep-17 | Oct-17 | Nov-17 | Dec-17 | Quant Limit <sup>3</sup> |
|-----------|------------------|--------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------------------------|
| Aluminum  | 50 - 200 S       | µg/L               | BQL    | -      | -      | BQL    | -      | -      | -      | -      | -      | -      | -      | -      | 25.0                     |
| Antimony  | 6 P              | µg/L               | BQL    | -      | -      | BQL    | -      | -      | -      | -      | -      | -      | -      | -      | 2.0                      |
| Arsenic   | 10 P             | µg/L               | BQL    | -      | -      | BQL    | -      | -      | -      | -      | -      | -      | -      | -      | 2.0                      |
| Barium    | 2000 P           | µg/L               | 36.3   | -      | -      | BQL    | -      | -      | -      | -      | -      | -      | -      | -      | 25.0                     |
| Beryllium | 4 P              | µg/L               | BQL    | -      | -      | BQL    | -      | -      | -      | -      | -      | -      | -      | -      | 2.0                      |
| Cadmium   | 5 P              | µg/L               | BQL    | -      | -      | BQL    | -      | -      | -      | -      | -      | -      | -      | -      | 2.0                      |
| Calcium   |                  | mg/L               | 38.8   | -      | -      | 21.4   | -      | -      | -      | -      | -      | -      | -      | -      | 1.0                      |
| Chromium  | 100 P            | µg/L               | BQL    | -      | -      | BQL    | -      | -      | -      | -      | -      | -      | -      | -      | 5.0                      |
| Copper    | 1300 AL          | µg/L               | BQL    | BQL    | 28.0   | BQL    | BQL    | -      | -      | -      | -      | -      | -      | -      | 25.0                     |
| Iron      | 300 S            | µg/L               | BQL    | BQL    | 50.3   | BQL    | BQL    | -      | -      | -      | -      | -      | -      | -      | 25.0                     |
| Lead      | 15 AL            | µg/L               | BQL    | -      | -      | BQL    | -      | -      | -      | -      | -      | -      | -      | -      | 2.0                      |
| Magnesium |                  | mg/L               | 8.6    | -      | -      | 5.6    | -      | -      | -      | -      | -      | -      | -      | -      | 1.0                      |
| Manganese | 50 S             | µg/L               | BQL    | BQL    | BQL    | BQL    | BQL    | -      | -      | -      | -      | -      | -      | -      | 25.0                     |
| Mercury   | 2 P              | µg/L               | BQL    | -      | -      | BQL    | -      | -      | -      | -      | -      | -      | -      | -      | 0.50                     |
| Nickel    | 100 P            | µg/L               | BQL    | -      | -      | BQL    | -      | -      | -      | -      | -      | -      | -      | -      | 5.0                      |
| Potassium |                  | mg/L               | 5.9    | -      | -      | 3.4    | -      | -      | -      | -      | -      | -      | -      | -      | 1.0                      |
| Selenium  | 50 P             | µg/L               | BQL    | -      | -      | BQL    | -      | -      | -      | -      | -      | -      | -      | -      | 5.0                      |
| Silicon   |                  | mg/L               | 2.9    | -      | -      | 3.3    | -      | -      | -      | -      | -      | -      | -      | -      | 1.0                      |
| Silver    | 100 S            | µg/L               | BQL    | -      | -      | BQL    | -      | -      | -      | -      | -      | -      | -      | -      | 5.0                      |
| Sodium    |                  | mg/L               | 40.4   | 35.9   | 34.6   | 38.1   | 37.0   | -      | -      | -      | -      | -      | -      | -      | 1.0                      |
| Thallium  | 2 P              | µg/L               | BQL    | -      | -      | BQL    | -      | -      | -      | -      | -      | -      | -      | -      | 2.0                      |
| Zinc      | 5000 S           | µg/L               | BQL    | -      | -      | BQL    | -      | -      | -      | -      | -      | -      | -      | -      | 25.0                     |

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