



# Water Quality Laboratory

## Inorganics Analyses

Period of 01/01/2018 TO 12/31/2018

Distribution Site Representing Washington Aqueduct Service Area

Date Report Generated: 7/09/2019

| Parameter                           | MCL <sup>1</sup> | Units <sup>2</sup> | Jan-18 | Feb-18 | Mar-18 | Apr-18 | May-18 | Jun-18 | Jul-18 | Aug-18 | Sep-18 | Oct-18 | Nov-18 | Dec-18 | Quant Limit <sup>3</sup> |
|-------------------------------------|------------------|--------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------------------------|
| Aggressive Index Number             |                  | Units              | 12     | 12     | 11     | 11     | 11     | 11     | 12     | 11     | 11     | 11     | 11     | -      | N/A                      |
| Alkalinity, Bicarbonate             |                  | mg/L               | 92     | 68     | 64     | 52     | 62     | 62     | 80     | 72     | 76     | 66     | 88     | -      | 0                        |
| Alkalinity, Carbonate               |                  | mg/L               | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | -      | 0                        |
| Alkalinity, Hydroxyl                |                  | mg/L               | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | -      | 0                        |
| Alkalinity, Phenolphthalein         |                  | mg/L               | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | -      | 0                        |
| Alkalinity, Total                   |                  | mg/L               | 92     | 68     | 64     | 52     | 62     | 62     | 80     | 72     | 76     | 66     | 88     | -      | 0                        |
| Bromide                             |                  | mg/L               | 0.03   | 0.03   | 0.01   | BQL    | BQL    | BQL    | BQL    | BQL    | BQL    | BQL    | BQL    | -      | 0.01                     |
| Carbon Dioxide                      |                  | mg/L               | 4      | 1      | 4      | 3      | 3      | 2      | 2      | 4      | 4      | 5      | 6      | -      | N/A                      |
| Chloride                            | 250 S            | mg/L               | 46.3   | 49.3   | 33.5   | 31.3   | 29.8   | 21.9   | 27.7   | 22.4   | 30.6   | 20.7   | 31.2   | -      | 5.0                      |
| Chlorine, Free                      |                  | mg/L               | 0.2    | 0.0    | 0.1    | 2.7    | 0.1    | 0.3    | 0.4    | 0.3    | 0.3    | 0.2    | 0.1    | -      | 0.0                      |
| Chlorine, Total                     |                  | mg/L               | 3.0    | 3.0    | 3.4    | 3.2    | 3.1    | 3.7    | 3.8    | 3.8    | 3.2    | 3.2    | 3.2    | -      | 0.0                      |
| Color                               | 15 S             | Units              | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | -      | 0                        |
| Dissolved Oxygen                    |                  | mg/L               | 13.0   | 12.7   | 11.6   | 11.8   | 9.6    | 8.6    | 7.9    | 7.7    | 8.1    | 8.6    | 10.9   | -      | 0.0                      |
| Fluoride                            | 4.0 P / 2.0 S    | mg/L               | 0.5    | 0.6    | 0.8    | 0.7    | 0.8    | 0.7    | 0.8    | 0.8    | 0.7    | 0.7    | 0.7    | -      | 0.2                      |
| Hardness, Calcium                   |                  | mg/L               | 118    | 99     | 87     | 70     | 80     | 78     | 97     | 91     | 91     | 76     | 106    | -      | 10                       |
| Hardness, Total                     |                  | mg/L               | 160    | 131    | 114    | 96     | 106    | 97     | 123    | 113    | 117    | 99     | 140    | -      | 10                       |
| Methylene Blue Activated Substances | 0.5 S            | mg/L               | -      | -      | -      | -      | -      | -      | BQL    | -      | -      | -      | -      | -      | 0.05                     |
| N, Ammonia (Ammonia as N)           |                  | mg/L               | 0.85   | 0.88   | 0.83   | BQL    | 0.70   | -      | 0.80   | 0.95   | 0.74   | 0.78   | 0.76   | -      | 0.20                     |
| N, Nitrate (Nitrate as N)           | 10 P             | mg/L               | 1.74   | 1.94   | 1.94   | 1.21   | 1.11   | 1.36   | 1.18   | 1.67   | 1.73   | 1.76   | 2.15   | -      | 0.20                     |
| N, Nitrite (Nitrite as N)           | 1 P              | mg/L               | 0.01   | 0.01   | BQL    | BQL    | BQL    | BQL    | BQL    | BQL    | BQL    | -      | BQL    | -      | 0.01                     |
| pH                                  | 6.5 - 8.5 S      | Units              | 7.7    | 8.0    | 7.5    | 7.6    | 7.6    | 7.8    | 7.9    | 7.6    | 7.6    | 7.4    | 7.5    | -      | N/A                      |
| Phosphate as Phosphorous            |                  | mg/L               | 0.70   | 0.75   | 0.75   | 0.81   | 0.80   | 0.81   | 0.79   | 0.76   | -      | 0.76   | 0.76   | -      | 0.10                     |
| Orthophosphate as PO <sub>4</sub>   |                  | mg/L               | 2.15   | 2.28   | 2.28   | 2.46   | 2.45   | 2.48   | 2.40   | 2.31   | -      | 2.32   | 2.32   | -      | 0.31                     |
| Solids, Total                       |                  | mg/L               | 272    | 242    | 230    | 175    | 194    | 178    | 233    | 202    | 227    | 201    | 233    | -      | 1                        |
| Solids, Total Dissolved             | 500 S            | mg/L               | 272    | 294    | 190    | 166    | 178    | 146    | 266    | 146    | 202    | 248    | 250    | -      | 1                        |
| Solids, Total Suspended             |                  | mg/L               | BQL    | BQL    | BQL    | BQL    | BQL    | BQL    | BQL    | BQL    | BQL    | BQL    | BQL    | -      | 1                        |
| Specific Conductivity               |                  | µmhos/cm           | 496    | 433    | 335    | 308    | 334    | 304    | 369    | 327    | 362    | 311    | 392    | -      | 0                        |
| Sulfate                             | 250 S            | mg/L               | 57.7   | 42.9   | 38.7   | 35.1   | 39.1   | 40.4   | 44.1   | 40.2   | 42.2   | 41.2   | 45.7   | -      | 5.0                      |
| Taste                               |                  | Units              | 2      | 3      | 2      | 2      | 2      | 2      | 2      | 3      | 2      | 3      | 2      | -      | 1                        |
| Temperature                         |                  | °C                 | 6.8    | 7.9    | 9.2    | 12.3   | 20.1   | 24.8   | 27.5   | 26.0   | 27.8   | 23.2   | 15.3   | -      | N/A                      |
| Threshold Odor Number               | 3 S              | Units              | 8      | 5      | 5      | 7      | 1      | 9      | 6      | 8      | 8      | 7      | 6      | -      | 0                        |
| Total Organic Carbon                |                  | mg/L               | 1.9    | 1.6    | 1.4    | 1.6    | 1.6    | 1.9    | 1.8    | 2.4    | 1.9    | 1.7    | 1.4    | -      | 0.5                      |
| Turbidity                           | ≤ 5 P            | NTU                | 0.10   | 0.15   | 0.10   | 0.10   | 0.05   | 0.10   | 0.10   | 0.15   | 0.10   | 0.10   | 0.10   | -      | 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 01/01/2018 TO 12/31/2018

Distribution Site Representing Washington Aqueduct Service Area

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| Parameter | MCL <sup>1</sup> | Units <sup>2</sup> | Jan-18 | Feb-18 | Mar-18 | Apr-18 | May-18 | Jun-18 | Jul-18 | Aug-18 | Sep-18 | Oct-18 | Nov-18 | Dec-18 | Quant Limit <sup>3</sup> |
|-----------|------------------|--------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------------------------|
| Aluminum  | 50 - 200 S       | µg/L               | BQL    | -      | -      | BQL    | -      | -      | 42.0   | -      | -      | BQL    | -      | -      | 25.0                     |
| Antimony  | 6 P              | µg/L               | BQL    | -      | -      | BQL    | -      | -      | BQL    | -      | -      | BQL    | -      | -      | 2.0                      |
| Arsenic   | 10 P             | µg/L               | BQL    | -      | -      | BQL    | -      | -      | BQL    | -      | -      | BQL    | -      | -      | 2.0                      |
| Barium    | 2000 P           | µg/L               | 37.2   | -      | -      | 30.8   | -      | -      | 45.6   | -      | -      | 39.4   | -      | -      | 25.0                     |
| Beryllium | 4 P              | µg/L               | BQL    | -      | -      | BQL    | -      | -      | BQL    | -      | -      | BQL    | -      | -      | 2.0                      |
| Cadmium   | 5 P              | µg/L               | BQL    | -      | -      | BQL    | -      | -      | BQL    | -      | -      | BQL    | -      | -      | 2.0                      |
| Calcium   |                  | mg/L               | 44.4   | -      | -      | 28.8   | -      | -      | 36.0   | -      | -      | 29.2   | -      | -      | 1.0                      |
| Chromium  | 100 P            | µg/L               | BQL    | -      | -      | BQL    | -      | -      | BQL    | -      | -      | BQL    | -      | -      | 5.0                      |
| Copper    | 1300 AL          | µg/L               | BQL    | BQL    | BQL    | BQL    | BQL    | BQL    | BQL    | BQL    | BQL    | BQL    | BQL    | -      | 25.0                     |
| Iron      | 300 S            | µg/L               | BQL    | BQL    | BQL    | BQL    | BQL    | BQL    | BQL    | BQL    | BQL    | BQL    | BQL    | -      | 25.0                     |
| Lead      | 15 AL            | µg/L               | BQL    | -      | -      | BQL    | -      | -      | BQL    | -      | -      | BQL    | -      | -      | 2.0                      |
| Magnesium |                  | mg/L               | 10.3   | -      | -      | 6.7    | -      | -      | 7.7    | -      | -      | 6.4    | -      | -      | 1.0                      |
| Manganese | 50 S             | µg/L               | BQL    | BQL    | BQL    | BQL    | BQL    | BQL    | BQL    | BQL    | BQL    | BQL    | BQL    | -      | 25.0                     |
| Mercury   | 2 P              | µg/L               | BQL    | -      | -      | BQL    | -      | -      | BQL    | -      | -      | BQL    | -      | -      | 0.50                     |
| Nickel    | 100 P            | µg/L               | BQL    | -      | -      | BQL    | -      | -      | BQL    | -      | -      | BQL    | -      | -      | 5.0                      |
| Potassium |                  | mg/L               | 3.4    | -      | -      | 2.2    | -      | -      | 2.6    | -      | -      | 2.5    | -      | -      | 1.0                      |
| Selenium  | 50 P             | µg/L               | BQL    | -      | -      | BQL    | -      | -      | BQL    | -      | -      | BQL    | -      | -      | 5.0                      |
| Silicon   |                  | mg/L               | 1.2    | -      | -      | 1.9    | -      | -      | 2.3    | -      | -      | 4.4    | -      | -      | 1.0                      |
| Silver    | 100 S            | µg/L               | BQL    | -      | -      | BQL    | -      | -      | BQL    | -      | -      | BQL    | -      | -      | 5.0                      |
| Sodium    |                  | mg/L               | 28.3   | 26.3   | 18.3   | 20.2   | 19.3   | 17.8   | 17.2   | 14.5   | 19.7   | 16.5   | 18.5   | -      | 1.0                      |
| Thallium  | 2 P              | µg/L               | BQL    | -      | -      | BQL    | -      | -      | BQL    | -      | -      | BQL    | -      | -      | 2.0                      |
| Zinc      | 5000 S           | µg/L               | BQL    | -      | -      | BQL    | -      | -      | BQL    | -      | -      | BQL    | -      | -      | 25.0                     |

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