



Water Quality Laboratory

Inorganics Analyses

Period of 01/01/2019 TO 12/31/2019

Griffith Treatment Plant Finished Water

Date Report Generated: 10/15/2019

Parameter	MCL ¹	Units ²	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Quant Limit ³
Aggressive Index Number		Units	10	10	11	10	10	11	11	11	11	*	-	-	N/A
Alkalinity, Bicarbonate		mg/L	36	30	40	36	35	50	60	67	76	*	-	-	0
Alkalinity, Carbonate		mg/L	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
Alkalinity, Phenolphthalein		mg/L	0	0	0	0	0	0	0	0	0	*	-	-	0
Alkalinity, Total		mg/L	36	30	40	36	35	50	60	67	76	78	-	-	0
Bromate ⁴	10 P	µg/L	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	-	-	5
Bromide		mg/L	0.01	0.02	0.02	0.01	BQL	BQL	BQL	0.02	0.02	0.02	-	-	0.01
Carbon Dioxide		mg/L	5	5	3	4	6	6	8	5	10	*	-	-	N/A
Chloride	250 S	mg/L	25.0	54.3	55.3	36.6	30.7	30.3	35.3	39.0	44.9	48.7	-	-	5.0
Chlorine, Free ⁴		mg/L	0.1	0.2	0.1	3.1	3.1	3.3	0.3	0.3	0.3	0.3	-	-	0.0
Chlorine, Total ⁴		mg/L	3.4	3.3	3.5	3.3	3.4	3.6	3.4	3.5	3.8	3.8	-	-	0.0
Color	15 S	Units	0	0	0	0	0	0	0	0	0	0	-	-	0
Dissolved Oxygen		mg/L	21.3	21.9	16.8	19.5	19.6	14.5	16.1	14.0	14.1	16.9	-	-	0.0
Fluoride	4.0 P / 2.0 S	mg/L	0.7	0.6	0.7	0.7	0.6	0.7	0.7	0.8	0.7	0.8	-	-	0.2
Hardness, Calcium		mg/L	33	34	44	35	31	40	51	57	70	*	-	-	10
Hardness, Total		mg/L	45	48	62	50	46	57	73	79	92	*	-	-	10
Methylene Blue Activated Substances	0.5 S	mg/L	-	-	-	-	-	-	BQL	-	-	-	-	-	0.05
N, Ammonia (Ammonia as N) ⁴		mg/L	0.67	0.68	0.75	BQL	BQL	BQL	0.68	0.72	0.75	*	-	-	0.20
N, Nitrate (Nitrate as N)	10 P	mg/L	0.70	0.79	0.87	0.74	0.67	0.81	1.05	0.62	1.02	1.30	-	-	0.20
N, Nitrite (Nitrite as N)	1 P	mg/L	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	-	-	0.01
pH	6.5 - 8.5 S	Units	7.2	7.1	7.5	7.3	7.1	7.2	7.2	7.4	7.2	7.3	-	-	N/A
Phosphate as Phosphorous		mg/L	0.49	0.50	0.55	0.45	0.48	0.47	0.45	0.45	0.42	0.40	-	-	0.10
Orthophosphate as PO ₄		mg/L	1.50	1.51	1.68	1.37	1.46	1.44	1.36	1.38	1.29	1.23	-	-	0.31
Solids, Total		mg/L	116	149	181	115	105	136	162	169	196	243	-	-	1
Solids, Total Dissolved	500 S	mg/L	152	176	176	158	128	134	148	168	192	232	-	-	1
Solids, Total Suspended		mg/L	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	-	-	1
Specific Conductivity		µmhos/cm	193	282	318	236	204	243	295	322	378	413	-	-	0
Sulfate	250 S	mg/L	14.0	12.6	18.3	13.9	10.9	14.9	19.1	22.7	31.8	40.0	-	-	5.0
Taste		Units	2	2	2	2	2	2	2	2	2	2	-	-	1
Temperature		°C	12.9	12.0	13.3	15.2	19.6	19.8	22.6	24.4	23.8	24.2	-	-	N/A
Threshold Odor Number	3 S	Units	-	7	1	9	7	6	6	3	4	1	-	-	0
Total Organic Carbon		mg/L	1.6	1.4	1.5	1.4	2.1	2.1	1.9	1.8	1.8	1.8	-	-	0.5
Turbidity	≤ 5 P	NTU	0.05	0.05	0.10	0.05	0.05	0.10	0.05	0.05	0.05	0.05	-	-	0.05

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

¹Environmental 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

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

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

⁴Monthly result composed from an average of parameter results for finished water points of entry to distribution system

* Analysis pending



Water Quality Laboratory

Metal Analyses

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Griffith Treatment Plant Finished Water

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Parameter	MCL ¹	Units ²	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Quant Limit ³
Aluminum	50 - 200 S	µg/L	BQL	-	-	BQL	-	-	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	BQL	-	-	BQL	-	-	32.7	-	-	37.5	-	-	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	12.9	-	-	14.1	-	-	20.0	-	-	*	-	-	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	-	-	25.0
Iron	300 S	µg/L	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	4.1	-	-	4.3	-	-	5.4	-	-	6.9	-	-	1.0
Manganese	50 S	µg/L	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	2.3	-	-	2.2	-	-	3.4	-	-	5.5	-	-	1.0
Selenium	50 P	µg/L	BQL	-	-	BQL	-	-	BQL	-	-	BQL	-	-	5.0
Silicon		mg/L	4.4	-	-	3.6	-	-	3.9	-	-	4.0	-	-	1.0
Silver	100 S	µg/L	BQL	-	-	BQL	-	-	BQL	-	-	*	-	-	5.0
Sodium		mg/L	16.2	32.5	32.3	24.4	20.2	23.0	27.2	29.8	35.7	37.4	-	-	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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²mg/L = milligrams per liter, µg/L = micrograms per liter

³Quant Limit = Quantitation Limit : lowest level of measurement

- Not sampled

* Analysis pending