

	WATERS	WATERS	WATERS	WATERS	WATERS	WATERS	WATERS	WATERS	WATERS	WATERS	WATERS	
Lab Sample ID:	181015-174-1	181015-174-2	181015-174-3	181015-174-4	181015-174-5					180917-127-1	180917-127-2	180917-127-3
Client Sample ID:		Plant, sink	125 Havekock Street	9 Voilet street	no 76							
Sample Date/Time:	18/10/2018 12:10	18/10/2018 10:50	18/10/2018 11:03	18/10/2018 11:30	18/10/2018 11:44					14/09/2018 14:40	14/09/2018 14:40	14/09/2018 14:40
Description:	ex NF Plant	Water to Town	Riverton town side	Rocks side	Orepuiki Riveton HWY	Average Value	5th Percentile	95th Percentile		ex Sandfilter	ex NF Plant	Water to Town

Chemistry Detailed

Anions by Ion Chromatography (0.45 µm Filtered)

Chloride	mg/L	15	19	19	20	19	18	16	20	32	9.7	19.0
Nitrate (as N)	mg/L	0.0029	0.0057	0.005	0.0057	0.0048	0.0048	0.0033	0.0057	0.0083	0.0062	0.0110
Sulphate	mg/L	0.11	2.4	2.4	3.2	2.6	2.1	0.6	3.1	12	0.2	2.3

Ion Balance (Anions/Cations) by Calculation

Anion Total	meq/L	1.5	2.2	2.1	2.4	2.2	2	2	2	3.7	0.92	1.9
Cation Total	meq/L	1.4	2.1	2	2.1	1.9	1.9	1.5000	2.1000	3.6	0.93	1.9
meq/L Difference	meq/L	0.14	0.058	0.11	0.33	0.29	0	0.1	0.3	0.13	0.0098	0.025
Percent Difference %		4.6	1.4	2.7	7.4	7	4.62	1.6600	7.3200	1.8	0.53	0.67
Sum of Anions + Cations	meq/L	3	4.2	4.2	4.4	4.1	4	3.2	4.4	7.3	1.9	3.7

General Testing

Ammoniacal Nitrogen (as N)	mg/L	0.005	0.005	0.005	0.005	0.005	0	0	0	0.005	0.011	0.014
Bicarbonate Alkalinity (as HCO3)	mg/L	69	96	95	110	100	94.0	74.2	108.0	160	39	79
Carbonate Alkalinity (as CO3)	mg/L	1	1	1	1	1	1	1.0	1.0	0.6	0.6	0.6
Conductivity (at 25 °C)	mS/m	15.9	21.5	21.6	23.9	22.5	21.1	17.0	23.6	38.6	10.2	20.1
Hydroxide Alkalinity (as CaCO3)	mg/L	1	1	1	1	1	1	1	1	1	1.000	1.000
Langelier Index (at 20 °C)		-1	-0.5	-0.4	-0.2	-0.4	-0.5	-0.90	-0.24	0.2	-0.9	-0.2
Molybdate Reactive Silica (as SiO2)	mg/L	15	17	17	18	17	17	15.4	17.8			
pH (at room temp c. 20 °C)	pH unit	7.4	7.6	7.7	7.8	7.7	7.6	7.44	7.78	7.7	7.8	8
Total Alkalinity (as CaCO3)	mg/L	56	78	78	88	82	76	60.4	86.8	130	33	66
Total Dissolved Solids	mg/L	100	140	140	160	130	134	106	156	190.0	97.0	120.0

Metals

Dissolved Metals by ICP-MS—Trace

Calcium (Dissolved)	mg/L	14	24	23	24	22	21	16	24	40	9.6	19.0
Iron (Dissolved)	mg/L	0.002	0.002	0.002	0.002	0.002	0.0	0.0020	0.0020	0.002	0.002	<0.002
Magnesium (Dissolved)	mg/L	1.5	2.7	2.6	2.7	2.4	2	1.7	2.7	7.9	1.1	2.9
Potassium (Dissolved)	mg/L	0.48	0.62	0.57	0.55	0.58	0.6	0.4940	0.6120	0.8	0.3	0.5
Sodium (Dissolved)	mg/L	13	15	15	15	14	14	13.2	15.0	21	8.1	14.0

Total Metals by ICP-MS—Trace (Default Digest)

Calcium (Total)	mg/L	15	23	23	27	24	22	17	26	63	14	22
Calcium Hardness (as CaCO3) (Total)	mg/L	38	57	58	68	61	56.4	41.8	66.6	160	35	56
Iron (Total)	mg/L	0.002	0.0032	0.0031	0.0059	0.44	0	0.0	0.4	0.017	0.002	0.044
Magnesium Hardness (as CaCO3) (Total)	mg/L	6.7	11	11	12	11	10.3	7.56	11.80	33.00	6.80	12.00
Sodium (Total)	mg/L	13	15	15	16	15	15	13.4	15.8	22.0	13.0	16.0

Sample Details

Results marked with * are not accredited to International Accreditation New Zealand
 Where samples have been supplied by the client they are tested as received. A dash indicates no test performed.

Reference Methods

The sample(s) referred to in this report were analysed by the following method(s)

Bevan McKenzie

From: Bevan McKenzie
Sent: Tuesday, 13 November 2018 11:51 a.m.
To: 'Mellish, Charles'
Cc: Rodger Oakley
Subject: Riverton Water supply
Attachments: 181015-174-291381-0.pdf; SDC08PVPS_WWSecureOut_0622_001.pdf

Hi Charles

Please find attached the latest test form the reticulation and ex the plant.

Please analyse as per the previous results and recommend what the dosing levels will need to be at.

I will call you tomorrow or Thursday (I am not at work this Friday or Monday next week, back Tuesday.

Thanks

Bevan

From: Watercare Labs [mailto:ServiceSMTP@water.co.nz]
Sent: Friday, 2 November 2018 8:05 a.m.
To: Bevan McKenzie
Subject: Certificate of Analysis for project 181015-174

Your report is attached Sampled by Tim Duechraas

Sample Details

Sample	Description	Sample Date
181015-174-1	ex NF Plant	18/10/2018
181015-174-2	Water to Town	18/10/2018
181015-174-3	Riverton town side	18/10/2018
181015-174-4	Rocks side	18/10/2018
181015-174-5	Orepuiki Riveton HWY	18/10/2018

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