Annual Water Quality Report

July 2021 – June 2022

Watercare
An Auckland Council Organisation

Table of Contents

Introduction

This report provides an overview of the drinking water compliance monitoring data collected from the Water Treatment Plants (**WTPs**) and Distribution Network Zones managed and operated by Watercare Services Limited (**Watercare**).

This data is collected to ensure that Watercare remains compliant with the Drinking-water Standards for New Zealand 2005 (Revised 2018) (**DWSNZ**) and duties under the Health Act 1956 Part, 2A Drinking water. The Water Services Act 2021 came into effect on 15 November 2021. From this date, compliance requirements are under provisions of the Water Services Act.

A Maximum Acceptable Value (**MAV**) is the concentration of a microbial or chemical constituent below which the presence of that constituent does not pose any significant risk to the health of the consumer over a lifetime consumption of that water.

A Guideline Value (**GV**) is the concentration of specific water quality parameters which have no effect on human health but may affect the aesthetic qualities of a drinking water. Exceeding GVs may contribute to consumer complaints regarding the aesthetic qualities of a drinking water supply.

Where the MAV for a determinand was exceeded, Watercare responded in accordance with the DWSNZ, including notifying the Auckland Regional Public Health Service (**ARPHS**), Wai Comply (Ministry of Health (MOH) appointed Drinking Water Assessors (DWAs)) and Taumata Arowai of any event and conducting a full investigation. In all cases for Watercare, the investigation findings confirmed that the water supplied to consumers was compliant with DWSNZ.

The new Drinking Water Standard 2022 (DWSNZ2022) were set by the water services regulator for New Zealand, Taumata Arowai and came into effect on 14 November 2022. Watercare will operate under the new DWSNZ 2022 from 1st January 2023 .

The report consists of two parts. The first part summarises WTP data, and the second part data related to the Distribution Networks.

Water Treatment Plant Data

The MAVs for monitored determinands at Watercare's WTPs are included with the analysis data itself. These compliance data summary tables include confirmation of the WTPs compliance with the applicable MAVs. This indication is only given for those determinands that have an assigned MAV.

If a determinand was not detected in the monitoring period, 'ND' ("not detected") is noted.

The MAVs can be found in Section 2 of Drinking Water Standards for New Zealand 2005 (Revised 2018), which is available on the Ministry of Health's website.

Distribution Network Data

The GVs and MAVs for the monitored determinands in the Distribution Network are summarised below:

Drinking-water Standards for New Zealand 2005 (Revised 2018) MAVs and GVs

Determinand	GV	MAV	Unit
Chlorine Residual	0.6 - 1.0	5.0	mg/L
pH	7.0 - 8.5	-	pH unit
Turbidity	2.5	-	NTU
E. coli (Escherichia coli)	-	<1.0/100mL	MPN/100mL
Total coliforms	-	-	MPN/100mL

List of Water Treatment Plants and the Distribution Network Zones Supplied

Water Treatment Plant	Distribution Network Zones Supplied
Ardmore	Auckland Airport, Auckland, Anzac, Buckland, Central Business District, Clarks / Waiau Beach, East Tamaki / Botany, Glenbrook Beach, Glen Eden / New Lynn, Henderson, High Head, Hillsborough, Howick / Pakuranga, Hilltop, HBC / Waiwera, Kitchener, Maungawhau, Mangere, Mt Hobson, Manurewa, Otara / Papatoetoe / Manukau Central, Oratia, Otahuhu, Patumahoe, North Shore South, North Shore West, Swanson, Te Henga, Whenuapai
Bombay	Bombay
Cornwall Road	Waiuku
Helensville	Helensville / Parakai
Huia	Auckland, Central Business District, Glen Eden / New Lynn, Henderson, Hillsborough, HBC / Waiwera, Laingholm, Maungawhau, Montana, Oratia, Swanson, Te Henga, North Shore West, Whenuapai
Huia Village	Huia Village
Muriwai	Muriwai
Onehunga (Local)	Onehunga
Onehunga (Metro)	Auckland, Hillsborough
Papakura	Papakura

Water Treatment Plant	Distribution Network Zones Supplied
Pukekohe	Anzac, Buckland, Clarks / Waiau Beach, Glenbrook Beach, Hilltop, Kitchener, Patumahoe
Snells / Algies	Snells / Algies
Victoria Avenue	Waiuku
Waikato	Auckland Airport, Auckland, Anzac, Buckland, Central Business District, Clarks / Waiau Beach, East Tamaki / Botany, Glenbrook Beach, Glen Eden / New Lynn, Henderson, High Head, Hillsborough, Howick / Pakuranga, Hilltop, HBC / Waiwera, Kitchener, Maungawhau, Mangere, Mt Hobson, Manurewa, Otara / Papatoetoe / Manukau Central, Oratia, Otahuhu, Patumahoe, North Shore South, North Shore West, Swanson, Te Henga, Whenuapai
Waikato 50	Auckland Airport, Auckland, Anzac, Buckland, Central Business District, Clarks / Waiau Beach, East Tamaki / Botany, Glenbrook Beach, Glen Eden / New Lynn, Henderson, High Head, Hillsborough, Howick / Pakuranga, Hilltop, HBC / Waiwera, Kitchener, Maungawhau, Mangere, Mt Hobson, Manurewa, Otara / Papatoetoe / Manukau Central, Oratia, Otahuhu, Patumahoe, North Shore South, North Shore West, Swanson, Te Henga, Whenuapai
Waitakere	Glen Eden / New Lynn, HBC / Waiwera, Oratia, Swanson, Te Henga, Whenuapai
Waiuku Road	Waiuku
Warkworth Wells	Warkworth
Wellsford	Wellsford / Te Hana

Water Quality Compliance Data for the Water Treatment Plants

Ardmore WTP A Block Treated Water

Acid Herbicides									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
1080 (Sodium fluoroacetate)	mg/L	1	ND	ND	ND	0.0001	0.0035		√
2,4,5- trichlorophenoxyacetic acid (2,4,5-T)	mg/L	4	ND	ND	ND	0.0001	0.01		√
2,4-Dichlorophenoxyacetic acid (2,4-D)	mg/L	4	ND	ND	ND	0.0001	0.04		√
4-(2,4-dichlorophenoxyl) butanoic acid (2,4-DB)	mg/L	4	ND	ND	ND	0.0001	0.1		√
Bentazone	mg/L	4	ND	ND	ND	0.0001			
Dichlorprop	mg/L	4	ND	ND	ND	0.0001	0.1		√
MCPA	mg/L	4	ND	ND	ND	0.0001	0.002		√
Mecoprop	mg/L	4	ND	ND	ND	0.0001	0.01		√
Picloram	mg/L	4	ND	ND	ND	0.0001	0.2		√
Triclopyr	mg/L	4	ND	ND	ND	0.0001	0.1		√

Chemical and Physical									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
UV absorbance at 254nm	Abs units	52	0.017	ND	0.011	0.002			
Alkalinity (Total) as $CaCO_3$	mg/L	52	21	15	18	1			
Aluminium	mg/L	52	0.033	0.017	0.023	0.005		0.1	
Bromate	mg/L	13	ND	ND	ND	0.005	0.01		√
Bromide	mg/L	13	0.03	0.02	0.02	0.005			
Calcium	mg/L	13	9.0	6.1	7.5	0.01			
Calcium Hardness	mg/L	13	22.00	15.00	18.89	0.025			

Chemical and Physical cont.									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
Chlorate	mg/L	13	ND	ND	ND	0.01	0.8		√
Chloride	mg/L	12	14.60	13.10	13.75	0.02		250	
Chlorine Residual	mg/L	365	1.93	0.43	1.37	0.02	5	0.6-1.0	√
Chlorite	mg/L	13	ND	ND	ND	0.005	0.8		√
Colour	Hazen Units	13	ND	ND	ND	5		10	
Conductivity	mS/m	13	11.6	10.3	11.0	0.5			
Cyanide	mg/L	4	ND	ND	ND	0.005	0.6		√
Fluoride	mg/L	52	0.75	0.63	0.70	0.02	1.5		√
Iodide	mg/L	4	0.004	0.003	0.004	0.002			
Iron	mg/L	52	0.024	0.006	0.012	0.002		0.2	
Magnesium	mg/L	13	1.90	1.40	1.62	0.001			
Magnesium Hardness	mg/L	13	8.000	5.700	6.542	0.0041			
Manganese	mg/L	52	0.0067	0.0012	0.0030	0.0005	0.4	0.04	√
pH	pH Units	365	8.3	6.8	7.7	0.1		7.0-8.5	
Potassium	mg/L	4	1.2	0.9	1.1	0.1			
Silicon	mg/L	4	14.0	13.0	13.3	0.1			
Sodium	mg/L	4	9.5	8.7	9.1	0.1		200	
Sulphate	mg/L	4	9.3	8.7	8.9	0.02		250	
Suspended Solids	mg/L	13	0.3	ND	0.1	0.2			
Total Hardness	mg/L	13	26.00	18.00	23.31	0.029		200	
Total Organic Carbon TOC	mg/L	13	1.2	0.5	0.9	0.1			
Turbidity	NTU	364	1.7	0.1	0.2	0.05		2.5	

Microbiology

Component Name	Units	Number of Samples	Max	Min	Average	Detection Limits	MAV DWSNZ	GV DWSNZ	Compliance DWSNZ 2005 (Revised 2018)
Confirmed Cryptosporidium per 100L	cysts/100 L	4	ND	ND	ND	1	<1		√
Confirmed Giardia per 100L	cysts/100 L	4	ND	ND	ND	1	<1		√
E. coli	MPN/100mL	365	ND	ND	ND	1	<1		√

Nutrients

Component Name	Units	Number of Samples	Max	Min	Average	Detection Limit	MAV DWSNZ	GV DWSNZ	Compliance DWSNZ 2005 (Revised 2018)
Ammonia	mg/L	4	0.005	ND	0.003	0.005		1.5	
Dissolved Reactive Phosphorus	mg/L	4	0.005	0.002	0.004	0.005			
Nitrate (as NO_3)	mg/L	4	0.236	0.115	0.186	0.002	50		√
Nitrite (as NO_2)	mg/L	4	ND	ND	ND	0.002	0.2		√
TKN (Total Kjeldahl Nitrogen)	mg/L	4	0.112	ND	0.028	0.1			
Total Phosphorus	mg/L	4	0.006	ND	0.004	0.005			

Plasticizers

Component Name	Units	Number of Samples	Max	Min	Average	Detection Limit	MAV DWSNZ	GV DWSNZ	Compliance DWSNZ 2005 (Revised 2018)
bis (2-ethylhexyl) adipate	µg/L	4	ND	ND	ND	2			
bis (2-ethylhexyl) phthalate	µg/L	4	ND	ND	ND	2	9		√

Polycyclic Aromatic Hydrocarbons

Component Name	Units	Number of Samples	Max	Min	Average	Detection Limit	MAV DWSNZ	GV DWSNZ	Compliance DWSNZ 2005 (Revised 2018)
Benzo(a)pyrene	µg/L	4	ND	ND	ND	0.1	0.7		√

Component Name	Units	Number of Samples	Max	Min	Average	Detection Limit	MAV DWSNZ	GV DWSNZ	Compliance DWSNZ 2005 (Revised 2018)
Semi Volatile Organic Compounds									
Organochlorine Pesticides									
Aldrin + Dieldrin	µg/L	4	ND	ND	ND	0.01	0.04		√
Chlordane	µg/L	4	ND	ND	ND	0.01	0.2		√
Lindane	µg/L	4	ND	ND	ND	0.01	2		√
Heptachlor	µg/L	4	ND	ND	ND	0.01			
Heptachlor epoxide	µg/L	4	ND	ND	ND	0.01			
Hexachlorobenzene	µg/L	4	ND	ND	ND	0.1			
Methoxychlor	µg/L	4	ND	ND	ND	0.2	20		√
Permethrin (cis + trans)	µg/L	4	ND	ND	ND	0.2			
DDT + isomers	µg/L	4	ND	ND	ND	0.2	1		√
Procymidone	µg/L	4	ND	ND	ND	0.2	700		√
Organonitrogen Herbicides									
Alachlor	µg/L	4	ND	ND	ND	0.2	20		√
Atrazine	µg/L	4	ND	ND	ND	0.1	2		√
Metolachlor	µg/L	4	ND	ND	ND	0.1	10		√
Molinate	µg/L	4	ND	ND	ND	0.1	7		√
Pendimethalin	µg/L	4	ND	ND	ND	0.2	20		√
Propanil	µg/L	4	ND	ND	ND	0.1			
Simazine	µg/L	4	ND	ND	ND	0.1	2		√
Terbuthylazine	µg/L	4	ND	ND	ND	0.2	8		√
Trifluralin	µg/L	4	ND	ND	ND	0.2	30		√
Organophosphorus Pesticides									
Chlorpyriphos	µg/L	4	ND	ND	ND	0.2	40		√
Diazinon	µg/L	4	ND	ND	ND	0.1			
Pirimiphos methyl	µg/L	4	ND	ND	ND	0.2	100		√

Trace Elements									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
Antimony	mg/L	4	ND	ND	ND	0.001	0.02		√
Arsenic	mg/L	4	0.0002	0.0001	0.0002	0.0001	0.01		√
Barium	mg/L	4	0.0066	0.0048	0.0059	0.0002	0.7		√
Boron	mg/L	13	0.014	ND	0.010	0.005	1.4		√
Cadmium	mg/L	4	ND	ND	ND	0.00005	0.004		√
Chromium	mg/L	4	ND	ND	ND	0.0001	0.05		√
Copper	mg/L	4	0.0002	ND	0.0001	0.0002	2		√
Lead	mg/L	4	ND	ND	ND	0.0001	0.01		√
Lithium	mg/L	4	0.0007	0.0004	0.0006	0.0001			
Mercury	mg/L	4	ND	ND	ND	0.00005	0.007		√
Molybdenum	mg/L	4	ND	ND	ND	0.0003	0.07		√
Nickel	mg/L	4	ND	ND	ND	0.0001	0.08		√
Selenium	mg/L	4	ND	ND	ND	0.0005	0.01		√
Zinc	mg/L	4	0.002	ND	ND	0.001		1.5	

Trihalomethanes									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
Bromodichloromethane	mg/L	52	0.0081	0.0019	0.0044	0.0001	0.06		√
Bromoform	mg/L	52	0.0023	ND	0.0008	0.0001	0.1		√
Chloroform	mg/L	52	0.0068	ND	0.0037	0.0001	0.4		√
Dibromochloromethane	mg/L	52	0.0086	0.0020	0.0053	0.0001	0.15		√
THM Sum Ratio		52	0.20	0.06	0.12		1		√

Volatile Organic Compounds

Component Name	Units	Number of Samples	Max	Min	Average	Detection Limit	MAV DWSNZ	GV DWSNZ	Compliance DWSNZ 2005 (Revised 2018)
1,1,1-trichloroethane	mg/L	4	ND	ND	ND	0.0001			
1,2,3-trichlorobenzene	mg/L	4	ND	ND	ND	0.0001			
1,2,4-trichlorobenzene	mg/L	4	ND	ND	ND	0.0001			
1,2-dichlorobenzene	mg/L	4	ND	ND	ND	0.0001	1.5	0.001	√
1,2-dichloroethane	mg/L	4	ND	ND	ND	0.0001	0.03		√
1,4-dichlorobenzene	mg/L	4	ND	ND	ND	0.0001	0.4	0.0003	√
Benzene	mg/L	4	ND	ND	ND	0.0001	0.01		√
Carbon tetrachloride	mg/L	4	ND	ND	ND	0.0001	0.005		√
Ethylbenzene	mg/L	4	ND	ND	ND	0.0001	0.3	0.002	√
Xylenes (total)	mg/L	4	ND	ND	ND	0.0001	0.6	0.02	√
Styrene	mg/L	4	ND	ND	ND	0.0001	0.03	0.004	√
Tetrachloroethene	mg/L	4	ND	ND	ND	0.0001	0.05		√
Toluene	mg/L	4	ND	ND	ND	0.0001	0.8	0.03	√
1,2-dichloroethene (cis + trans)	mg/L	4	ND	ND	ND	0.0001	0.06		√
Trichloroethene	mg/L	4	ND	ND	ND	0.0001	0.02		√

Halo Acetic Acids (HAAs)

Component Name	Units	Number of Samples	Max	Min	Average	Detection Limit	MAV DWSNZ	GV DWSNZ	Compliance DWSNZ 2005 (Revised 2018)
Bromoacetic Acid	mg/L	13	ND	ND	ND	0.0005			
Bromochloroacetic Acid	mg/L	13	0.0065	0.0018	0.0035	0.0005			
Monochloroacetic Acid	mg/L	13	ND	ND	ND	0.0005	0.02		√
Dibromoacetic Acid	mg/L	13	0.0041	ND	0.0024	0.0005			
Dichloroacetic Acid	mg/L	13	0.0049	0.0013	0.0027	0.0005	0.05		√
Trichloroacetic Acid	mg/L	13	0.0027	ND	0.0011	0.0005	0.2		√
HAA Sum Ratio		13	0.110	0.026	0.060				

Ardmore WTP B1 Block Treated Water

Acid Herbicides

Component Name	Units	Number of Samples	Max	Min	Average	Detection Limit	MAV DWSNZ	GV DWSNZ	Compliance DWSNZ 2005 (Revised 2018)
1080 (Sodium fluoroacetate)	mg/L	1	ND	ND	ND	0.0001	0.0035		√
2,4,5- trichlorophenoxyacetic acid (2,4,5-T)	mg/L	4	ND	ND	ND	0.0001	0.01		√
2,4-Dichlorophenoxyacetic acid (2,4-D)	mg/L	4	ND	ND	ND	0.0001	0.04		√
4-(2,4-dichlorophenoxyl) butanoic acid (2,4-DB)	mg/L	4	ND	ND	ND	0.0001	0.1		√
Bentazone	mg/L	4	ND	ND	ND	0.0001			
Dichlorprop	mg/L	4	ND	ND	ND	0.0001	0.1		√
MCPA	mg/L	4	ND	ND	ND	0.0001	0.002		√
Mecoprop	mg/L	4	ND	ND	ND	0.0001	0.01		√
Picloram	mg/L	4	ND	ND	ND	0.0001	0.2		√
Triclopyr	mg/L	4	ND	ND	ND	0.0001	0.1		√

Chemical and Physical

Component Name	Units	Number of Samples	Max	Min	Average	Detection Limit	MAV DWSNZ	GV DWSNZ	Compliance DWSNZ 2005 (Revised 2018)
UV absorbance at 254nm	Abs units	52	0.017	0.006	0.012	0.002			
Alkalinity (Total) as $CaCO_3$	mg/L	52	20	14	17	1			
Aluminium	mg/L	52	0.030	0.018	0.023	0.005		0.1	
Bromate	mg/L	13	ND	ND	ND	0.005	0.01		√
Bromide	mg/L	13	0.03	0.02	0.02	0.005			
Calcium	mg/L	13	7.5	6.0	7.0	0.01			
Calcium Hardness	mg/L	13	19	15	17	0.025			
Chlorate	mg/L	13	ND	ND	ND	0.01	0.8		√

Chemical and Physical cont.									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
Chloride	Mg/L	12	14.40	12.10	13.58	0.02		250	
Chlorine Residual	mg/L	365	1.63	0.78	1.34	0.02	5	0.6-1.0	√
Chlorite	mg/L	13	ND	ND	ND	0.005	0.8		√
Colour	Hazen Units	13	ND	ND	ND	5		10	
Conductivity	mS/m	13	11.4	10.0	10.8	0.5			
Cyanide	mg/L	4	ND	ND	ND	0.005	0.6		√
Fluoride	mg/L	52	0.77	0.61	0.71	0.02	1.5		√
Iodide	mg/L	4	0.006	ND	0.003	0.001			
Iron	mg/L	52	0.080	0.009	0.013	0.002		0.2	
Magnesium	mg/L	13	2.00	1.40	1.60	0.001			
Magnesium Hardness	mg/L	13	8.400	5.600	6.577	0.0041			
Manganese	mg/L	52	0.0071	0.0015	0.0036	0.0005	0.4	0.04	√
pH	pH unit	364	8.1	6.7	7.5	0.1		7.0-8.5	
Potassium	mg/L	4	1.3	0.9	1.1	0.05			
Silicon	mg/L	4	13.0	12.0	12.8	0.1			
Sodium	mg/L	4	9.4	8.5	9.0	0.1		200	
Sulphate	mg/L	4	9.8	8.6	9.2	0.02		250	
Suspended Solids	mg/L	13	0.4	ND	0.1	0.2			
Total Hardness	mg/L	13	32.00	21.00	24.62	0.029		200	
Total Organic Carbon	mg/L	13	1.4	0.6	0.9	0.1			
Turbidity	NTU	364	0.8	0.1	0.2	0.05		2.5	

Microbiology									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
Confirmed Cryptosporidium per 100L	cysts/100 L	2	ND	ND	ND	1	<1		√
Confirmed Giardia per 100L	cysts/100 L	2	ND	ND	ND	1	<1		√
E. coli	MPN/100mL	365	ND	ND	ND	1	<1		√

Nutrients									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
Ammonia	mg/L	4	0.006	ND	0.002	0.005		1.5	
Dissolved Reactive Phosphorus	mg/L	4	0.016	0.003	0.008	0.005			
Nitrate (as NO_3)	mg/L	4	0.245	0.101	0.190	0.002	50		√
Nitrite (as NO_2)	mg/L	4	ND	ND	ND	0.002	0.2		√
TKN (Total Kjeldahl Nitrogen)	mg/L	4	ND	ND	ND	0.1			
Total Phosphorus	mg/L	4	0.016	ND	0.008	0.005			

Plasticizers									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
bis (2-ethylhexyl) adipate	µg/L	4	ND	ND	ND	2			
bis (2-ethylhexyl) phthalate	µg/L	4	ND	ND	ND	2	9		√

Polycyclic Aromatic Hydrocarbons									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
Benzo(a)pyrene	µg/L	4	ND	ND	ND	0.1	0.7		√

Semi Volatile Organic Compounds									
Organochlorine Pesticides									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
Aldrin + Dieldrin	µg/L	4	ND	ND	ND	0.01	0.04		√
Chlordane	µg/L	4	ND	ND	ND	0.01	0.2		√
Llindane	µg/L	4	ND	ND	ND	0.01	2		√
Heptachlor	µg/L	4	ND	ND	ND	0.01			
Heptachlor epoxide	µg/L	4	ND	ND	ND	0.01			

Organochlorine Pesticides cont.									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
Hexachlorobenzene	µg/L	4	ND	ND	ND	0.1			
Methoxychlor	µg/L	4	ND	ND	ND	0.2	20		√
Permethrin (cis + trans)	µg/L	4	ND	ND	ND	0.2			
DDT + isomers	µg/L	4	ND	ND	ND	0.2	1		√
Procymidone	µg/L	4	ND	ND	ND	0.2	700		√
Organonitrogen Herbicides									
Alachlor	µg/L	4	ND	ND	ND	0.2	20		√
Atrazine	µg/L	4	ND	ND	ND	0.1	2		√
Metolachlor	µg/L	4	ND	ND	ND	0.1	10		√
Molinate	µg/L	4	ND	ND	ND	0.1	7		√
Pendimethalin	µg/L	4	ND	ND	ND	0.2	20		√
Propanil	µg/L	4	ND	ND	ND	0.1			
Simazine	µg/L	4	ND	ND	ND	0.1	2		√
Terbuthylazine	µg/L	4	ND	ND	ND	0.2	8		√
Trifluralin	µg/L	4	ND	ND	ND	0.2	30		√
Organophosphorus Pesticides									
Chlorpyriphos	µg/L	4	ND	ND	ND	0.2	40		√
Diazinon	µg/L	4	ND	ND	ND	0.1			
Pirimiphos methyl	µg/L	4	ND	ND	ND	0.2	100		√

Trace Elements									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
Antimony	mg/L	4	ND	ND	ND	0.001	0.02		√
Arsenic	mg/L	4	0.0002	0.0001	0.0002	0.0001	0.01		√
Barium	mg/L	4	0.0071	0.0047	0.0062	0.0002	0.7		√
Boron	mg/L	13	0.014	ND	0.005	0.005	1.4		√
Cadmium	mg/L	4	ND	ND	ND	0.00005	0.004		√

Trace Elements cont.									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
Chromium	mg/L	4	ND	ND	ND	0.0001	0.05		√
Copper	mg/L	4	0.0002	ND	0.0001	0.0002	2		√
Lead	mg/L	4	ND	ND	ND	0.0001	0.01		√
Lithium	mg/L	4	0.0006	0.0005	0.0006	0.0001			
Mercury	mg/L	4	ND	ND	ND	0.00005	0.007		√
Molybdenum	mg/L	4	ND	ND	ND	0.0003	0.07		√
Nickel	mg/L	4	ND	ND	ND	0.0001	0.08		√
Selenium	mg/L	4	ND	ND	ND	0.0005	0.01		√
Zinc	mg/L	4	ND	ND	ND	0.001		1.5	

Trihalomethanes									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
Bromodichloromethane	mg/L	52	0.0069	0.0020	0.0040	0.0001	0.06		√
Bromoform	mg/L	52	0.0026	ND	0.0006	0.0001	0.1		√
Chloroform	mg/L	52	0.0077	0.0008	0.0038	0.0001	0.4		√
Dibromochloromethane	mg/L	52	0.0080	0.0028	0.0050	0.0001	0.15		√
THM Sum Ratio		52	0.20	0.07	0.12		1		√

Volatile Organic Compounds									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
1,1,1-trichloroethane	mg/L	4	ND	ND	ND	0.0001			
1,2,3-trichlorobenzene	mg/L	4	ND	ND	ND	0.0001			
1,2,4-trichlorobenzene	mg/L	4	ND	ND	ND	0.0001			
1,2-dichlorobenzene	mg/L	4	ND	ND	ND	0.0001	1.5	0.001	√
1,2-dichloroethane	mg/L	4	ND	ND	ND	0.0001	0.03		√
1,4-dichlorobenzene	mg/L	4	ND	ND	ND	0.0001	0.4	0.0003	√

Volatile Organic Compounds cont.									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
Benzene	mg/L	4	ND	ND	ND	0.0001	0.01		√
Carbon tetrachloride	mg/L	4	ND	ND	ND	0.0001	0.005		√
Ethylbenzene	mg/L	4	ND	ND	ND	0.0001	0.3	0.002	√
Xylenes (total)	mg/L	4	ND	ND	ND	0.0001	0.6	0.02	√
Styrene	mg/L	4	ND	ND	ND	0.0001	0.03	0.004	√
Tetrachloroethene	mg/L	4	ND	ND	ND	0.0001	0.05		√
Toluene	mg/L	4	ND	ND	ND	0.0001	0.8	0.03	√
1,2-dichloroethene (cis + trans)	mg/L	4	ND	ND	ND	0.0001	0.06		√
Trichloroethene	mg/L	4	ND	ND	ND	0.0001	0.02		√

Halo Acetic Acids (HAAs)									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
Bromoacetic Acid	mg/L	13	ND	ND	ND	0.0005			
Bromochloroacetic Acid	mg/L	13	0.0045	ND	0.0025	0.0005			
Monochloroacetic Acid	mg/L	13	ND	ND	ND	0.0005	0.02		√
Dibromoacetic Acid	mg/L	13	0.0031	ND	0.0014	0.0005			
Dichloroacetic Acid	mg/L	13	0.0041	0.0011	0.0024	0.0005	0.05		√
Trichloroacetic Acid	mg/L	13	0.0031	ND	0.0013	0.0005	0.2		√
HAA Sum Ratio		13	0.094	0.022	0.055				

Ardmore WTP B2 Block Treated Water

* The Ardmore WTP B2 Block was isolated for upgrades on 22 June 2020. This treated water tank remained isolated until the end of the reporting period specified in the report. Compliance monitoring sampling was not undertaken while the treated water tank was isolated.

Bombay WTP Treated Water

Acid Herbicides									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
2,4,5- trichlorophenoxyacetic acid (2,4,5-T)	mg/L	13	ND	ND	ND	0.0001	0.01		√
2,4-Dichlorophenoxyacetic acid (2,4-D)	mg/L	13	ND	ND	ND	0.0001	0.04		√
4-(2,4-dichlorophenoxyl) butanoic acid (2,4-DB)	mg/L	13	ND	ND	ND	0.0001	0.1		√
Bentazone	mg/L	13	ND	ND	ND	0.0001			
Dichlorprop	mg/L	13	ND	ND	ND	0.0001	0.1		√
MCPA	mg/L	13	ND	ND	ND	0.0001	0.002		√
Mecoprop	mg/L	13	ND	ND	ND	0.0001	0.01		√
Picloram	mg/L	13	ND	ND	ND	0.0001	0.2		√
Triclopyr	mg/L	13	ND	ND	ND	0.0001	0.1		√

Chemical and Physical									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
UV absorbance at 254nm	Abs units	13	ND	ND	ND				
Alkalinity (Total) as $CaCO_3$	mg/L	4	68	55	60	1			
Aluminium	mg/L	4	0.005	ND	0.003	0.005		0.1	
Bromate	mg/L	4	ND	ND	ND	0.005	0.01		√
Bromide	mg/L	4	0.04	0.03	0.03	0.005			
Calcium	mg/L	4	15.0	12.0	13.3	0.01			
Calcium Hardness	mg/L	4	36.0	29.0	32.3	0.025			
Chlorate	mg/L	4	ND	ND	ND	0.01	0.8		√
Chloride	mg/L	4	95.60	80.00	85.67	0.02		250	
Chlorine Residual	mg/L	121	1.58	0.36	0.86	0.02	5	0.6-1.0	√
Chlorite	mg/L	4	ND	ND	ND	0.005	0.8		√

Chemical and Physical cont.									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
Colour	Hazen Units	1	ND	ND	ND	5		10	
Conductivity	mS/m	1	38.4	38.4	38.4	0.5			
Cyanide	mg/L	1	ND	ND	ND	0.005	0.6		√
Fluoride	mg/L	4	0.04	0.02	0.03	0.02	1.5		√
Iodide	mg/L	1	0.009	0.009	0.009	0.002			
Iron	mg/L	4	0.009	ND	0.004	0.002		0.2	
Magnesium	mg/L	4	14.00	12.00	13.00	0.001			
Magnesium Hardness	mg/L	4	57.000	49.000	53.250	0.0041			
Manganese	mg/L	4	ND	ND	ND	0.0005	0.4	0.04	√
pH	pH Units	121	8.0	6.7	7.5	0.1		7.0-8.5	
Potassium	mg/L	1	1.4	1.4	1.4	0.1			
Silicon	mg/L	1	38.0	38.0	38.0	0.1			
Sodium	mg/L	1	36.0	36.0	36.0	0.1		200	
Sulphate	mg/L	1	ND	ND	ND	0.02		250	
Suspended Solids	mg/L	1	ND	ND	ND	0.2			
Total Dissolved Solids	mg/L	1	230	230	230	15		1000	
Total Hardness	mg/L	4	92.00	78.00	85.25	0.029		200	
Total Organic Carbon TOC	mg/L	13	0.5	ND	0.2	0.1			
Turbidity	NTU	121	0.4	ND	0.1	0.05		2.5	

Microbiology									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
E. coli	MPN/100mL	121	ND	ND	ND	1	<1		√

Nutrients

Component Name	Units	Number of Samples	Max	Min	Average	Detection Limit	MAV DWSNZ	GV DWSNZ	Compliance DWSNZ 2005 (Revised 2018)
Ammonia	mg/L	4	ND	ND	ND	0.005		1.5	
Dissolved Reactive Phosphorus	mg/L	1	0.004	0.004	0.004	0.005			
Nitrate (as NO_3)	mg/L	51	7.971	2.688	4.039	0.002	50		√
Nitrite (as NO_2)	mg/L	1	ND	ND	ND	0.002	0.2		√
TKN (Total Kjeldahl Nitrogen)	mg/L	1	ND	ND	ND	0.1			
Total Phosphorus	mg/L	1	0.011	0.011	0.011	0.005			

Plasticizers

Component Name	Units	Number of Samples	Max	Min	Average	Detection Limit	MAV DWSNZ	GV DWSNZ	Compliance DWSNZ 2005 (Revised 2018)
bis (2-ethylhexyl) adipate	µg/L	4	ND	ND	ND	2			
bis (2-ethylhexyl) phthalate	µg/L	4	ND	ND	ND	2	9		√

Polycyclic Aromatic Hydrocarbons

Component Name	Units	Number of Samples	Max	Min	Average	Detection Limit	MAV DWSNZ	GV DWSNZ	Compliance DWSNZ 2005 (Revised 2018)
Benzo(a)pyrene	µg/L	4	ND	ND	ND	0.1	0.7		√

Semi Volatile Organic Compounds

Organochlorine Pesticides

Component Name	Units	Number of Samples	Max	Min	Average	Detection Limit	MAV DWSNZ	GV DWSNZ	Compliance DWSNZ 2005 (Revised 2018)
Aldrin + Dieldrin	µg/L	4	ND	ND	ND	0.01	0.04		√
Chlordane	µg/L	4	ND	ND	ND	0.01	0.2		√
Lindane	µg/L	4	ND	ND	ND	0.01	2		√
Heptachlor	µg/L	4	ND	ND	ND	0.01			
Heptachlor epoxide	µg/L	4	ND	ND	ND	0.01			

Organochlorine Pesticides cont.									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
Hexachlorobenzene	µg/L	4	ND	ND	ND	0.1			
Methoxychlor	µg/L	4	ND	ND	ND	0.2	20		√
Permethrin (cis + trans)	µg/L	4	ND	ND	ND	0.2			
DDT + isomers	µg/L	4	ND	ND	ND	0.2	1		√
Procymidone	µg/L	4	ND	ND	ND	0.2	700		√
Organonitrogen Herbicides									
Alachlor	µg/L	4	ND	ND	ND	0.2	20		√
Atrazine	µg/L	4	ND	ND	ND	0.1	2		√
Metolachlor	µg/L	4	ND	ND	ND	0.1	10		√
Molinate	µg/L	4	ND	ND	ND	0.1	7		√
Pendimethalin	µg/L	4	ND	ND	ND	0.2	20		√
Propanil	µg/L	4	ND	ND	ND	0.1			
Simazine	µg/L	4	ND	ND	ND	0.1	2		√
Terbuthylazine	µg/L	4	ND	ND	ND	0.2	8		√
Trifluralin	µg/L	4	ND	ND	ND	0.2	30		√
Organophosphorus Pesticides									
Chlorpyriphos	µg/L	4	ND	ND	ND	0.2	40		√
Diazinon	µg/L	4	ND	ND	ND	0.1			
Pirimiphos methyl	µg/L	4	ND	ND	ND	0.2	100		√

Trace Elements									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
Antimony	mg/L	1	ND	ND	ND	0.001	0.02		√
Arsenic	mg/L	1	ND	ND	ND	0.0001	0.01		√
Barium	mg/L	1	0.0015	0.0015	0.0015	0.0002	0.7		√
Boron	mg/L	1	0.011	0.011	0.011	0.005	1.4		√
Cadmium	mg/L	4	ND	ND	ND	0.00005	0.004		√

Trace Elements cont.									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
Chromium	mg/L	1	ND	ND	ND	0.0001	0.05		√
Copper	mg/L	4	0.0140	0.0062	0.0220	0.0002	2		√
Lead	mg/L	1	0.0002	0.0002	0.0002	0.0001	0.01		√
Lithium	mg/L	1	0.0005	0.0005	0.0005	0.0001			
Mercury	mg/L	1	ND	ND	ND	0.00005	0.007		√
Molybdenum	mg/L	1	ND	ND	ND	0.0003	0.07		√
Nickel	mg/L	1	ND	ND	ND	0.0001	0.08		√
Selenium	mg/L	1	ND	ND	ND	0.0005	0.01		√
Zinc	mg/L	1	0.005	0.005	0.005	0.001		1.5	

Trihalomethanes									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
Bromodichloromethane	mg/L	13	0.0120	ND	0.0009	0.0001	0.06		√
Bromoform	mg/L	13	0.0130	ND	0.0010	0.0001	0.1		√
Chloroform	mg/L	13	0.0160	ND	0.0012	0.0001	0.4		√
Dibromochloromethane	mg/L	13	0.0130	ND	0.0010	0.0001	0.15		√
THM Sum Ratio		13	0.45	ND	0.03		1		√

Volatile Organic Compounds									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
1,1,1-trichloroethane	mg/L	1	ND	ND	ND	0.0001			
1,2,3-trichlorobenzene	mg/L	1	ND	ND	ND	0.0001			
1,2,4-trichlorobenzene	mg/L	1	ND	ND	ND	0.0001			
1,2-dichlorobenzene	mg/L	1	ND	ND	ND	0.0001	1.5	0.001	√
1,2-dichloroethane	mg/L	1	ND	ND	ND	0.0001	0.03		√

Volatile Organic Compounds cont.									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
1,4-dichlorobenzene	mg/L	1	ND	ND	ND	0.0001	0.4	0.0003	√
Benzene	mg/L	1	ND	ND	ND	0.0001	0.01		√
Carbon tetrachloride	mg/L	1	ND	ND	ND	0.0001	0.005		√
Ethylbenzene	mg/L	1	ND	ND	ND	0.0001	0.3	0.002	√
Xylenes (total)	mg/L	1	ND	ND	ND	0.0001	0.6	0.02	√
Styrene	mg/L	1	ND	ND	ND	0.0001	0.03	0.004	√
Tetrachloroethene	mg/L	1	ND	ND	ND	0.0001	0.05		√
Toluene	mg/L	1	ND	ND	ND	0.0001	0.8	0.03	√
Trichloroethene	mg/L	1	ND	ND	ND	0.0001	0.02		√

Halo Acetic Acids (HAAs)									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
Bromoacetic Acid	mg/L	4	0.0012	ND	0.0003	0.0005			
Bromochloroacetic Acid	mg/L	4	ND	ND	ND	0.0005			
Monochloroacetic Acid	mg/L	4	ND	ND	ND	0.0005	0.02		√
Dibromoacetic Acid	mg/L	4	0.0013	ND	0.0003	0.0005			
Dichloroacetic Acid	mg/L	4	0.0024	ND	0.0006	0.0005	0.05		√
Trichloroacetic Acid	mg/L	4	0.0013	ND	0.0003	0.0005	0.2		√
HAA Sum Ratio		4	0.048	ND	0.014				

Cornwall Road WTP Treated Water

Chemical and Physical									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
UV absorbance at 254nm	Abs units	1	ND	ND	ND				
Alkalinity (Total) as $CaCO_3$	mg/L	4	130	130	130	1			
Aluminium	mg/L	1	ND	ND	ND	0.005		0.1	
Bromate	mg/L	1	ND	ND	ND	0.005	0.01		√
Bromide	mg/L	1	0.10	0.10	0.10	0.005			
Calcium	mg/L	13	34.00	30.00	31.92	0.010			
Calcium Hardness	mg/L	13	84.0	74.0	79.9	0.025			
Chlorate	mg/L	1	ND	ND	ND	0.010	0.8		√
Chloride	mg/L	1	32.70	32.70	32.70	0.020		250	
Chlorine Residual	mg/L	122	1.48	0.69	1.15	0.020	5	0.6-1.0	√
Chlorite	mg/L	1	ND	ND	ND	0.005	0.80		√
Colour	Hazen Units	1	ND	ND	ND	5		10	
Conductivity	mS/m	1	36.7	36.7	36.7	0.500			
Cyanide	mg/L	1	ND	ND	ND	0.005	0.6		√
Fluoride	mg/L	1	0.05	0.05	0.05	0.020	1.5		√
Iodide	mg/L	1	0.005	0.005	0.005	0.002			
Iron	mg/L	13	ND	ND	ND	0.002		0.2	
Magnesium	mg/L	13	10.00	9.10	9.68	0.001			
Magnesium Hardness	mg/L	13	43.000	38.000	40.077	0.004			
Manganese	mg/L	13	ND	ND	ND	0.0005	0.4	0.04	√
pH	pH Units	122	8.3	7.9	8.0	0.100		7.0-8.5	
Potassium	mg/L	1	3.4	3.4	3.4	0.100			
Silicon	mg/L	1	50.0	50.0	50.0	0.100			
Sodium	mg/L	1	21.0	21.0	21.0	0.100		200	
Sulphate	mg/L	1	5.2	5.2	5.2	0.020		250	

Chemical and Physical cont.									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
Suspended Solids	Mg/L	1	ND	ND	ND				
Total Dissolved Solids	mg/L	1	240	240	240	15.000		1000	
Total Hardness	mg/L	13	130.00	110.00	120.00	0.029		200	
Turbidity	NTU	122	0.4	ND	0.1	0.05		2.5	

Microbiology									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
E. coli	MPN/100mL	122	2*	ND	ND	1	<1		√

*An investigation into one positive *E.coli* result from the Cornwall WTP Treated Water sample point determined that this result was not representative of the water quality supplied from this WTP.

Nutrients									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
Ammonia	mg/L	1	0.007	0.007	0.007	0.005		1.5	
Dissolved Reactive Phosphorus	mg/L	1	0.0046	0.046	0.046	0.005			
Nitrate (as NO_3)	mg/L	1	0.031	0.031	0.031	0.002	50		√
Nitrite (as NO_2)	mg/L	1	ND	ND	ND	0.002	0.2		√
TKN (Total Kjeldahl Nitrogen)	mg/L	1	ND	ND	ND	0.1			
Total Phosphorus	mg/L	1	0.060	0.060	0.060	0.005			

Plasticizers									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
bis (2-ethylhexyl) adipate	µg/L	1	ND	ND	ND	2			
bis (2-ethylhexyl) phthalate	µg/L	1	ND	ND	ND	2	9		√

Polycyclic Aromatic Hydrocarbons									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
Benzo(a)pyrene	µg/L	1	ND	ND	ND	0.1	0.7		√

Semi Volatile Organic Compounds									
Organochlorine Pesticides									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
Aldrin + Dieldrin	µg/L	1	ND	ND	ND	0.01	0.04		√
Chlordane	µg/L	1	ND	ND	ND	0.01	0.2		√
Lindane	µg/L	1	ND	ND	ND	0.01	2		√
Heptachlor	µg/L	1	ND	ND	ND	0.01			
Heptachlor epoxide	µg/L	1	ND	ND	ND	0.01			
Hexachlorobenzene	µg/L	1	ND	ND	ND	0.1			
Methoxychlor	µg/L	1	ND	ND	ND	0.2	20		√
Permethrin (cis + trans)	µg/L	1	ND	ND	ND	0.2			
pp-DDT	µg/L	1	ND	ND	ND	0.2	1		√
Procymidone	µg/L	1	ND	ND	ND	0.2	700		√
Organonitrogen Herbicides									
Alachlor	µg/L	1	ND	ND	ND	0.2	20		√
Atrazine	µg/L	1	ND	ND	ND	0.1	2		√
Metolachlor	µg/L	1	ND	ND	ND	0.1	10		√
Molinate	µg/L	1	ND	ND	ND	0.1	7		√
Pendimethalin	µg/L	1	ND	ND	ND	0.2	20		√
Propanil	µg/L	1	ND	ND	ND	0.1			
Simazine	µg/L	1	ND	ND	ND	0.1	2		√
Terbuthylazine	µg/L	1	ND	ND	ND	0.2	8		√
Trifluralin	µg/L	1	ND	ND	ND	0.2	30		√

Semi Volatile Organic Compounds cont.									
Organophosphorus pesticides									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
Chlorpyriphos	µg/L	1	ND	ND	ND	0.2	40		√
Diazinon	µg/L	1	ND	ND	ND	0.1			
Pirimiphos methyl	µg/L	1	ND	ND	ND	0.2	100		√

Trace Elements									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
Antimony	mg/L	1	ND	ND	ND	0.001	0.02		√
Arsenic	mg/L	14	0.0048	0.0046	0.0047	0.0001	0.01		√
Barium	mg/L	1	0.0006	0.0006	0.0006	0.0002	0.7		√
Boron	mg/L	1	0.021	0.021	0.021	0.005	1.4		√
Cadmium	mg/L	1	ND	ND	ND	0.00005	0.004		√
Chromium	mg/L	1	ND	ND	ND	0.0001	0.05		√
Copper	mg/L	1	0.0032	0.0032	0.0032	0.0002	2		√
Lead	mg/L	1	0.0001	0.0001	0.0001	0.0001	0.01		√
Lithium	mg/L	1	0.0095	0.0095	0.0095	0.0001			
Mercury	mg/L	1	ND	ND	ND	0.00005	0.007		√
Molybdenum	mg/L	1	ND	ND	ND	0.0003	0.07		√
Nickel	mg/L	1	ND	ND	ND	0.0001	0.08		√
Selenium	mg/L	1	ND	ND	ND	0.0005	0.01		√
Zinc	mg/L	1	0.002	0.002	0.002	0.001		1.5	

Trihalomethanes									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
Bromodichloromethane	mg/L	13	ND	ND	ND	0.0001	0.06		√
Bromoform	mg/L	13	0.0004	ND	0.0001	0.0001	0.1		√

Trihalomethanes cont.									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
Chloroform	mg/L	13	ND	ND	ND	0.0001	0.4		√
Dibromochloromethane	mg/L	13	0.0019	ND	0.0004	0.0001	0.15		√
THM Sum Ratio		13	0.01	ND	ND		1		√

Volatile Organic Compounds									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
1,1,1-trichloroethane	mg/L	1	ND	ND	ND	0.0001			
1,2,3-trichlorobenzene	mg/L	1	ND	ND	ND	0.0001			
1,2,4-trichlorobenzene	mg/L	1	ND	ND	ND	0.0001			
1,2-dichlorobenzene	mg/L	1	ND	ND	ND	0.0001	1.5	0.001	√
1,2-dichloroethane	mg/L	1	ND	ND	ND	0.0001	0.03		√
1,4-dichlorobenzene	mg/L	1	ND	ND	ND	0.0001	0.4	0.0003	√
Benzene	mg/L	1	ND	ND	ND	0.0001	0.01		√
Carbon tetrachloride	mg/L	1	ND	ND	ND	0.0001	0.005		√
Ethylbenzene	mg/L	1	ND	ND	ND	0.0001	0.3	0.002	√
m- & p-Xylene	mg/L	1	ND	ND	ND	0.0001	0.6		√
Styrene	mg/L	1	ND	ND	ND	0.0001	0.03	0.004	√
Tetrachloroethene	mg/L	1	ND	ND	ND	0.0001	0.05		√
Toluene	mg/L	1	ND	ND	ND	0.0001	0.8	0.03	√
1,2-dichloroethene (cis + trans)	mg/L	1	ND	ND	ND	0.0001	0.06		√
Trichloroethene	mg/L	1	ND	ND	ND	0.0001	0.02		√

Helensville WTP Treated Water

Acid Herbicides									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
2,4,5- trichlorophenoxyacetic acid (2,4,5-T)	mg/L	13	ND	ND	ND	0.0001	0.01		√
2,4-Dichlorophenoxyacetic acid (2,4-D)	mg/L	13	ND	ND	ND	0.0001	0.04		√
4-(2,4-dichlorophenoxyl) butanoic acid (2,4-DB)	mg/L	13	ND	ND	ND	0.0001	0.1		√
Bentazone	mg/L	13	ND	ND	ND	0.0001			
Dichlorprop	mg/L	13	ND	ND	ND	0.0001	0.1		√
MCPA	mg/L	13	ND	ND	ND	0.0001	0.002		√
Mecoprop	mg/L	13	ND	ND	ND	0.0001	0.01		√
Picloram	mg/L	13	ND	ND	ND	0.0001	0.2		√
Triclopyr	mg/L	13	ND	ND	ND	0.0001	0.1		√

Chemical and Physical									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
UV absorbance at 254nm	Abs units	53	0.160	0.012	0.023	0.002			
Alkalinity (Total) as $CaCO_3$	mg/L	52	110	43	67	1			
Aluminium	mg/L	53	0.034	0.011	0.015	0.005		0.1	
Bromate	mg/L	4	ND	ND	ND	0.005	0.01		√
Bromide	mg/L	4	0.140	0.078	0.117	0.005			
Calcium	mg/L	13	21.0	11.0	16.0	0.01			
Calcium Hardness	mg/L	13	54.00	28.00	40.38	0.025			
Chlorate	mg/L	4	ND	ND	ND	0.01	0.8		√
Chloride	mg/L	4	66.50	49.20	58.63	0.02		250	
Chlorine Residual	mg/L	122	1.86	0.84	1.37	0.02	5	0.6-1.0	√
Chlorite	mg/L	4	ND	ND	ND	0.005	0.8		√

Chemical and Physical									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
Colour	Hazen Units	4	ND	ND	ND	5		10	
Conductivity	mS/m	13	56.7	36.1	46.0	0.5			
Cyanide	mg/L	4	ND	ND	ND	0.005	0.6		√
Fluoride	mg/L	13	0.06	ND	0.04	0.02	1.5		√
Iodide	mg/L	4	0.004	ND	0.002	0.002			
Iron	mg/L	13	0.004	ND	0.001	0.002		0.2	
Magnesium	mg/L	13	20.00	9.50	13.81	0.001			
Magnesium Hardness	mg/L	13	80.000	39.000	56.5385	0.0041			
Manganese	mg/L	13	0.0140	0.0024	0.0068	0.0005	0.4	0.04	√
pH	pH Units	122	7.6	6.8	7.2	0.1		7.0-8.5	
Potassium	mg/L	4	4.2	2.6	3.3	0.1			
Silicon	mg/L	4	30.0	19.0	24.0	0.1			
Sodium	mg/L	4	53.0	40.0	46.5	0.1		200	
Sulphate	mg/L	4	62.3	45.1	52.4	0.02		250	
Suspended Solids	mg/L	13	0.8	ND	0.2	0.2			
Total Dissolved Solids	mg/L	13	360	230	274	15		1000	
Total Hardness	mg/L	13	130.00	67.00	96.31	0.029		200	
Total Organic Carbon TOC	mg/L	52	2.0	0.5	1.3	0.1			
Turbidity	NTU	122	5.5*	0.1	0.2	0.05		2.5	

*In the period 01/07/2021 – 30/06/2022, one elevated turbidity result was reported by a laboratory. An investigation identified that this result was not representative of water being supplied from the Helensville WTP.

Microbiology									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
E. coli	MPN/100mL	122	ND	ND	ND	1	<1		√

Nutrients									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
Ammonia	mg/L	4	0.022	ND	0.007	0.005		1.5	
Dissolved Reactive Phosphorus	mg/L	13	0.005	ND	0.003	0.005			
Nitrate (as NO_3)	mg/L	13	0.819	0.058	0.425	0.002	50		√
Nitrite (as NO_2)	mg/L	13	ND	ND	ND	0.002	0.2		√
TKN (Total Kjeldahl Nitrogen)	mg/L	4	0.126	ND	0.032	0.1			
Total Phosphorus	mg/L	13	0.010	ND	0.002	0.005			

Plasticizers									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
bis (2-ethylhexyl) adipate	µg/L	13	ND	ND	ND	2			
bis (2-ethylhexyl) phthalate	µg/L	13	ND	ND	ND	2	9		√

Polycyclic Aromatic Hydrocarbons									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
Benzo(a)pyrene	µg/L	13	ND	ND	ND	0.1	0.7		√

Semi Volatile Organic Compounds									
Organochlorine Pesticides									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
Aldrin + Dieldrin	µg/L	13	ND	ND	ND	0.01	0.04		√
Chlordane	µg/L	13	ND	ND	ND	0.01	0.2		√
Lindane	µg/L	13	ND	ND	ND	0.01	2		√
Heptachlor	µg/L	13	ND	ND	ND	0.01			
Heptachlor epoxide	µg/L	13	ND	ND	ND	0.01			

Organochlorine Pesticides cont.									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
Hexachlorobenzene	µg/L	13	ND	ND	ND	0.1			
Methoxychlor	µg/L	13	ND	ND	ND	0.2	20		√
Permethrin (cis + trans)	µg/L	13	ND	ND	ND	0.2			
DDT + isomers	µg/L	13	ND	ND	ND	0.2	1		√
Procymidone	µg/L	13	ND	ND	ND	0.2	700		√
Organonitrogen Herbicides									
Alachlor	µg/L	13	ND	ND	ND	0.2	20		√
Atrazine	µg/L	13	ND	ND	ND	0.1	2		√
Metolachlor	µg/L	13	ND	ND	ND	0.1	10		√
Molinate	µg/L	13	ND	ND	ND	0.1	7		√
Pendimethalin	µg/L	13	ND	ND	ND	0.2	20		√
Propanil	µg/L	13	ND	ND	ND	0.1			
Simazine	µg/L	13	ND	ND	ND	0.1	2		√
Terbuthylazine	µg/L	13	ND	ND	ND	0.2	8		√
Trifluralin	µg/L	13	ND	ND	ND	0.2	30		√
Organophosphorus Pesticides									
Chlorpyriphos	µg/L	13	ND	ND	ND	0.2	40		√
Diazinon	µg/L	13	ND	ND	ND	0.1			
Pirimiphos methyl	µg/L	13	ND	ND	ND	0.2	100		√

Trace Elements									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
Antimony	mg/L	4	ND	ND	ND	0.001	0.02		√
Arsenic	mg/L	13	0.0005	0.0001	0.0003	0.0001	0.01		√
Barium	mg/L	4	0.023	0.021	0.022	0.0002	0.7		√

Trace Elements cont.

Component Name	Units	Number of Samples	Max	Min	Average	Detection Limit	MAV DWSNZ	GV DWSNZ	Compliance DWSNZ 2005 (Revised 2018)
Boron	mg/L	4	0.034	0.019	0.028	0.005	1.4		√
Cadmium	mg/L	4	ND	ND	ND	0.00005	0.004		√
Chromium	mg/L	4	0.0009	ND	0.0004	0.0001	0.05		√
Copper	mg/L	4	0.0013	ND	0.0006	0.0002	2		√
Lead	mg/L	4	0.0002	ND	ND	0.0001	0.01		√
Lithium	mg/L	4	0.0032	0.0022	0.0028	0.0001			
Mercury	mg/L	4	ND	ND	ND	0.00005	0.007		√
Molybdenum	mg/L	4	ND	ND	ND	0.0003	0.07		√
Nickel	mg/L	4	0.0007	0.0003	0.0004	0.0001	0.08		√
Selenium	mg/L	4	ND	ND	ND	0.0005	0.01		√
Zinc	mg/L	4	0.004	0.002	0.003	0.001		1.5	

Trihalomethanes

Component Name	Units	Number of Samples	Max	Min	Average	Detection Limit	MAV DWSNZ	GV DWSNZ	Compliance DWSNZ 2005 (Revised 2018)
Bromodichloromethane	mg/L	53	0.0067	0.0008	0.0033	0.0001	0.06		√
Bromoform	mg/L	53	0.0100	0.0012	0.0049	0.0001	0.1		√
Chloroform	mg/L	53	0.0023	ND	0.0006	0.0001	0.4		√
Dibromochloromethane	mg/L	53	0.0170	ND	0.0085	0.0001	0.15		√
THM Sum Ratio		53	0.30	0.03	0.20		1		√

Volatile Organic Compounds

Component Name	Units	Number of Samples	Max	Min	Average	Detection Limit	MAV DWSNZ	GV DWSNZ	Compliance DWSNZ 2005 (Revised 2018)
1,1,1-trichloroethane	mg/L	13	ND	ND	ND	0.0001			
1,2,3-trichlorobenzene	mg/L	13	ND	ND	ND	0.0001			
1,2,4-trichlorobenzene	mg/L	13	ND	ND	ND	0.0001			
1,2-dichlorobenzene	mg/L	13	ND	ND	ND	0.0001	1.5	0.001	√

Volatile Organic Compounds cont.									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
1,2-dichloroethane	mg/L	13	ND	ND	ND	0.0001	0.03		√
1,4-dichlorobenzene	mg/L	13	ND	ND	ND	0.0001	0.4	0.0003	√
Benzene	mg/L	13	ND	ND	ND	0.0001	0.01		√
Carbon tetrachloride	mg/L	13	ND	ND	ND	0.0001	0.005		√
Ethylbenzene	mg/L	13	ND	ND	ND	0.0001	0.3	0.002	√
Xylenes (total)	mg/L	13	ND	ND	ND	0.0001	0.6	0.02	√
Styrene	mg/L	13	ND	ND	ND	0.0001	0.03	0.004	√
Tetrachloroethene	mg/L	13	ND	ND	ND	0.0001	0.05		√
Toluene	mg/L	13	ND	ND	ND	0.0001	0.8	0.03	√
1,2-dichloroethene (cis + trans)	mg/L	13	ND	ND	ND	0.0001	0.06		√
Trichloroethene	mg/L	13	ND	ND	ND	0.0001	0.02		√

Halo Acetic Acids (HAAs)									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
Bromoacetic Acid	mg/L	4	ND	ND	ND	0.0005			
Bromochloroacetic Acid	mg/L	4	0.0062	0.0021	0.0040	0.0005			
Monochloroacetic Acid	mg/L	4	ND	ND	ND	0.0005	0.02		√
Dibromoacetic Acid	mg/L	4	0.0094	0.0042	0.0072	0.0005			
Dichloroacetic Acid	mg/L	4	0.0018	ND	0.0009	0.0005	0.05		√
Trichloroacetic Acid	mg/L	4	0.0010	ND	0.0003	0.0005	0.2		√
HAA Sum Ratio		4	0.040	ND	0.019				

Huia Village WTP Treated Water

Acid Herbicides									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
2,4,5- trichlorophenoxyacetic acid (2,4,5-T)	mg/L	4	ND	ND	ND	0.0001	0.01		√
2,4-Dichlorophenoxyacetic acid (2,4-D)	mg/L	4	ND	ND	ND	0.0001	0.04		√
4-(2,4-dichlorophenoxyl) butanoic acid (2,4-DB)	mg/L	4	ND	ND	ND	0.0001	0.1		√
Bentazone	mg/L	4	ND	ND	ND	0.0001			
Dichlorprop	mg/L	4	ND	ND	ND	0.0001	0.1		√
MCPA	mg/L	4	ND	ND	ND	0.0001	0.002		√
Mecoprop (MCPP)	mg/L	4	ND	ND	ND	0.0001	0.01		√
Picloram	mg/L	4	ND	ND	ND	0.0001	0.2		√
Triclopyr	mg/L	4	ND	ND	ND	0.0001	0.1		√

Chemical and Physical									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
UV absorbance at 254nm	Abs units	52	0.026	0.010	0.015	0.002			
Alkalinity (Total) as $CaCO_3$	mg/L	52	23	14	19	1			
Aluminium	mg/L	52	0.077	ND	0.004	0.005		0.1	
Bromate	mg/L	52	ND	ND	ND	0.005	0.01		√
Bromide	mg/L	52	0.058	0.009	0.038	0.005			
Calcium	mg/L	13	5.5	3.4	4.5	0.01			
Calcium Hardness	mg/L	13	14.0	8.5	11.3	0.025			
Chlorate	mg/L	52	0.34	0.06	0.13	0.01	0.8		√
Chloride	mg/L	4	32.00	29.20	30.53	0.02		250	
Chlorine Residual	mg/L	122	1.75	0.03	1.27	0.02	5	0.6-1.0	√

Chemical and Physical cont.									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
Chlorite	mg/L	52	0.007	ND	ND	0.005	0.8		√
Colour	Hazen Units	13	ND	ND	ND	5		10	
Conductivity	mS/m	13	16.9	15.3	16.0	0.5			
Cyanide	mg/L	4	ND	ND	ND	0.005	0.6		√
Fluoride	mg/L	13	ND	ND	ND	0.02	1.5		√
Iodide	mg/L	4	0.004	0.002	0.003	0.002			
Iron	mg/L	13	0.005	ND	0.001	0.002		0.2	
Magnesium	mg/L	13	3.50	2.00	2.73	0.001			
Magnesium Hardness	mg/L	13	14.000	8.200	11.169	0.0041			
Manganese	mg/L	13	0.0009	ND	0.0002	0.0005	0.4	0.04	√
pH	pH Units	122	8.0	7.1	7.6	0.1		7.0-8.5	
Potassium	mg/L	3	1.2	1.0	1.1	0.1			
Silicon	mg/L	3	15.0	13.0	13.7	0.1			
Sodium	mg/L	3	21.0	19.0	19.7	0.1		200	
Sulphate	mg/L	4	11.1	5.5	7.1	0.02		250	
Suspended Solids	mg/L	13	ND	ND	ND	0.2			
Total Hardness	mg/L	13	28.00	17.00	22.46	0.1		200	
Total Organic Carbon TOC	mg/L	13	2.9	0.9	1.2	0.1			
Turbidity	NTU	122	0.6	ND	0.1	0.05		2.5	

Microbiology									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
E. coli	MPN/100mL	121*	ND	ND	ND	1	<1		√

*In January 2022, one *E.coli* sample was not collected due to a laboratory scheduling error.

Nutrients									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
Ammonia	mg/L	4	0.007	ND	0.003	0.005		1.5	
Dissolved Reactive Phosphorus	mg/L	4	0.004	0.002	0.003	0.005			
Nitrate (as NO_3)	mg/L	4	0.379	0.097	0.244	0.002	50		√
Nitrite (as NO_2)	mg/L	4	0.007	ND	0.002	0.002	0.2		√
TKN (Total Kjeldahl Nitrogen)	mg/L	4	ND	ND	ND	0.1			
Total Phosphorus	mg/L	4	ND	ND	ND	0.005			

Plasticizers									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
bis (2-ethylhexyl) adipate	µg/L	4	ND	ND	ND	2			
bis (2-ethylhexyl) phthalate	µg/L	4	ND	ND	ND	2	9		√

Polycyclic Aromatic Hydrocarbons									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
Benzo(a)pyrene	µg/L	4	ND	ND	ND	0.1	0.7		√

Semi Volatile Organic Compounds									
Organochlorine Pesticides									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
Aldrin + Dieldrin	µg/L	4	ND	ND	ND	0.01	0.04		√
Chlordane	µg/L	4	ND	ND	ND	0.01	0.2		√
Heptachlor	µg/L	4	ND	ND	ND	0.01			
Heptachlor epoxide	µg/L	4	ND	ND	ND	0.01			
Hexachlorobenzene	µg/L	4	ND	ND	ND	0.1			
Methoxychlor	µg/L	4	ND	ND	ND	0.2	20		√

Organochlorine Pesticides cont.									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
Permethrin (cis + trans)	µg/L	4	ND	ND	ND	0.2			
DDT + isomers	µg/L	4	ND	ND	ND	0.2	1		√
Procymidone	µg/L	4	ND	ND	ND	0.2	700		√
Organonitrogen Herbicides									
Alachlor	µg/L	4	ND	ND	ND	0.2	20		√
Atrazine	µg/L	4	ND	ND	ND	0.1	2		√
Metolachlor	µg/L	4	ND	ND	ND	0.1	10		√
Molinate	µg/L	4	ND	ND	ND	0.1	7		√
Pendimethalin	µg/L	4	ND	ND	ND	0.2	20		√
Propanil	µg/L	4	ND	ND	ND	0.1			
Simazine	µg/L	4	ND	ND	ND	0.1	2		√
Terbuthylazine	µg/L	4	ND	ND	ND	0.2	8		√
Trifluralin	µg/L	4	ND	ND	ND	0.2	30		√
Organophosphorus Pesticides									
Chlorpyriphos	µg/L	4	ND	ND	ND	0.2	40		√
Diazinon	µg/L	4	ND	ND	ND	0.1			
Pirimiphos methyl	µg/L	4	ND	ND	ND	0.2	100		√

Trace Elements									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
Antimony	mg/L	3	ND	ND	ND	0.001	0.02		√
Arsenic	mg/L	3	ND	ND	ND	0.0001	0.01		√
Barium	mg/L	3	0.0060	0.0040	0.0050	0.0002	0.7		√
Boron	mg/L	3	0.018	ND	0.008	0.005	1.4		√
Cadmium	mg/L	3	ND	ND	ND	0.00005	0.004		√
Chromium	mg/L	3	0.0006	ND	0.0002	0.0001	0.05		√

Trace Elements cont.									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
Copper	mg/L	3	0.0003	ND	0.0002	0.0002	2		√
Lead	mg/L	3	ND	ND	ND	0.0001	0.01		√
Lithium	mg/L	3	ND	ND	ND	0.0001			
Molybdenum	mg/L	3	ND	ND	ND	0.0003	0.07		√
Nickel	mg/L	3	0.0001	ND	ND	0.0001	0.08		√
Selenium	mg/L	3	ND	ND	ND	0.0005	0.01		√
Zinc	mg/L	3	0.015	0.004	0.007	0.001		1.5	

Trihalomethanes									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
Bromodichloromethane	mg/L	13	0.0060	ND	0.0040	0.0001	0.06		√
Bromoform	mg/L	13	0.0060	ND	0.0030	0.0001	0.1		√
Chloroform	mg/L	13	0.0030	ND	0.0010	0.0001	0.4		√
Dibromochloromethane	mg/L	13	0.0150	0.0050	0.0080	0.0001	0.15		√
THM Sum Ratio		13	0.20	0.09	0.14		1		√

Volatile Organic Compounds									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
1,1,1-trichloroethane	mg/L	13	ND	ND	ND	0.0001			
1,2,3-trichlorobenzene	mg/L	13	ND	ND	ND	0.0001			
1,2,4-trichlorobenzene	mg/L	13	ND	ND	ND	0.0001			
1,2-dichlorobenzene	mg/L	13	ND	ND	ND	0.0001	1.5	0.001	√
1,2-dichloroethane	mg/L	13	ND	ND	ND	0.0001	0.03		√
1,4-dichlorobenzene	mg/L	13	ND	ND	ND	0.0001	0.4	0.0003	√
Benzene	mg/L	13	ND	ND	ND	0.0001	0.01		√
Carbon tetrachloride	mg/L	13	ND	ND	ND	0.0001	0.005		√

Volatile Organic Compounds cont.									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
Ethylbenzene	mg/L	13	ND	ND	ND	0.0001	0.3	0.002	√
Xylenes (total)	mg/L	13	ND	ND	ND	0.0001	0.6	0.02	√
Styrene	mg/L	13	ND	ND	ND	0.0001	0.03	0.004	√
Tetrachloroethene	mg/L	13	ND	ND	ND	0.0001	0.05		√
Toluene	mg/L	13	ND	ND	ND	0.0001	0.8	0.03	√
1,2-dichloroethene (cis + trans)	mg/L	13	ND	ND	ND	0.0001	0.06		√
Trichloroethene	mg/L	13	ND	ND	ND	0.0001	0.02		√

Halo Acetic Acids (HAAs)									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
Bromoacetic Acid	mg/L	4	ND	ND	ND	0.0005			
Bromochloroacetic Acid	mg/L	4	0.0068	0.0018	0.0034	0.0005			
Monochloroacetic Acid	mg/L	4	ND	ND	ND	0.0005	0.02		√
Dibromoacetic Acid	mg/L	4	0.0075	0.0024	0.0039	0.0005			
Dichloroacetic Acid	mg/L	4	0.0036	ND	0.0016	0.0005	0.05		√
Trichloroacetic Acid	mg/L	4	ND	ND	ND	0.0005	0.2		√
HAA Sum Ratio		4	0.070	ND	0.030				

Huia WTP Treated Water

Acid Herbicides									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
2,4,5- trichlorophenoxyacetic acid (2,4,5-T)	mg/L	4	ND	ND	ND	0.0001	0.01		√
2,4-Dichlorophenoxyacetic acid (2,4-D)	mg/L	4	ND	ND	ND	0.0001	0.04		√
4-(2,4-dichlorophenoxyl) butanoic acid (2,4-DB)	mg/L	4	ND	ND	ND	0.0001	0.1		√
Bentazone	mg/L	4	ND	ND	ND	0.0001			
Dichlorprop	mg/L	4	ND	ND	ND	0.0001	0.1		√
MCPA	mg/L	4	ND	ND	ND	0.0001	0.002		√
Mecoprop	mg/L	4	ND	ND	ND	0.0001	0.01		√
Picloram	mg/L	4	ND	ND	ND	0.0001	0.2		√
Triclopyr	mg/L	4	ND	ND	ND	0.0001	0.1		√

Chemical and Physical									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
UV absorbance at 254nm	Abs units	52	0.210	0.012	0.021	0.002			
Alkalinity (Total) as $CaCO_3$	mg/L	52	19	13	16	1			
Aluminium	mg/L	52	0.067	0.019	0.028	0.005		0.1	
Bromate	mg/L	4	ND	ND	ND	0.005	0.01		√
Bromide	mg/L	4	0.04	0.02	0.03	0.005			
Calcium	mg/L	13	12.0	9.0	10.4	0.01			
Calcium Hardness	mg/L	13	30.0	22.0	26.4	0.025			
Chlorate	mg/L	4	ND	ND	ND	0.01	0.8		√
Chloride	mg/L	4	22.90	20.60	21.65	0.02		250	
Chlorine Residual	mg/L	365	1.56	0.47	1.08	0.02	5	0.6-1.0	√

Chemical and Physical cont.									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
Chlorite	mg/L	4	ND	ND	ND	0.005	0.8		√
Colour	Hazen Units	13	ND	ND	ND	5		10	
Conductivity	mS/m	13	16.6	14.8	16.0	0.5			
Cyanide	mg/L	4	ND	ND	ND	0.005	0.6		√
Fluoride	mg/L	52	0.77	0.53	0.70	0.02	1.5		√
Iodide	mg/L	4	0.004	0.001	0.003	0.002			
Iron	mg/L	52	0.033	0.011	0.016	0.002		0.2	
Magnesium	mg/L	130	3.10	2.00	2.52	0.001			
Magnesium Hardness	mg/L	13	13.000	8.400	10.450	0.0041			
Manganese	mg/L	52	0.017	0.002	0.006	0.0005	0.4	0.04	√
pH	pH Units	364	8.0	7.2	7.6	0.1		7.0-8.5	
Potassium	mg/L	4	1.1	0.9	0.9	0.1			
Silicon	mg/L	4	15.0	13.0	13.5	0.1			
Sodium	mg/L	4	14.0	12.0	12.8	0.1		200	
Sulphate	mg/L	4	20.1	15.4	18.1	0.02		250	
Suspended Solids	mg/L	13	0.4	ND	0.2	0.2			
Total Hardness	mg/L	13	39.00	32.00	36.46	0.029		200	
Total Organic Carbon TOC	mg/L	13	1.7	0.9	1.1	0.1			
Turbidity	NTU	364	0.4	0.1	0.2	0.05		2.5	

Microbiology									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
E. coli	MPN/100mL	365	ND	ND	ND	1	<1		√

Nutrients									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
Ammonia	mg/L	4	0.007	ND	0.003	0.005		1.5	
Dissolved Reactive Phosphorus	mg/L	4	0.003	0.003	0.003	0.005			
Nitrate (as NO_3)	mg/L	4	0.338	0.146	0.249	0.002	50		√
Nitrite (as NO_2)	mg/L	4	0.009	ND	0.002	0.002	0.2		√
TKN (Total Kjeldahl Nitrogen)	mg/L	4	0.205	ND	0.085	0.1			
Total Phosphorus	mg/L	4	0.004	ND	0.002	0.005			

Semi Volatile Organic Compounds									
Organochlorine Pesticides									
Hexachlorobenzene	µg/L	4	ND	ND	ND	0.1			

Trace Elements									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
Antimony	mg/L	4	ND	ND	ND	0.001	0.02		√
Arsenic	mg/L	4	0.0002	ND	0.0001	0.0001	0.01		√
Barium	mg/L	4	0.0053	0.0037	0.0045	0.0002	0.7		√
Boron	mg/L	4	0.020	ND	0.009	0.005	1.4		√
Cadmium	mg/L	4	ND	ND	ND	0.00005	0.004		√
Chromium	mg/L	4	0.0007	ND	0.0003	0.0001	0.05		√
Copper	mg/L	4	0.0003	0.0002	0.0003	0.0002	2		√
Lead	mg/L	4	ND	ND	ND	0.0001	0.01		√
Lithium	mg/L	4	0.0003	ND	0.0002	0.0001			
Molybdenum	mg/L	4	ND	ND	ND	0.0003	0.07		√
Nickel	mg/L	4	0.0005	0.0003	0.0004	0.0001	0.08		√
Selenium	mg/L	4	ND	ND	ND	0.0005	0.01		√
Zinc	mg/L	4	0.0017	ND	0.0004	0.001		1.5	

Trihalomethanes

Component Name	Units	Number of Samples	Max	Min	Average	Detection Limit	MAV DWSNZ	GV DWSNZ	Compliance DWSNZ 2005 (Revised 2018)
Bromodichloromethane	mg/L	52	0.0097	0.0021	0.0053	0.0001	0.06		√
Bromoform	mg/L	52	0.0036	ND	0.0014	0.0001	0.1		√
Chloroform	mg/L	52	0.0100	ND	0.0036	0.0001	0.4		√
Dibromochloromethane	mg/L	52	0.0160	0.0031	0.0074	0.0001	0.15		√
THM Sum Ratio		52	0.31	0.08	0.15		1		√

Volatile Organic Compounds

Component Name	Units	Number of Samples	Max	Min	Average	Detection Limit	MAV DWSNZ	GV DWSNZ	Compliance DWSNZ 2005 (Revised 2018)
1,1,1-trichloroethane	mg/L	4	ND	ND	ND	0.0001			
1,2,3-trichlorobenzene	mg/L	4	ND	ND	ND	0.0001			
1,2,4-trichlorobenzene	mg/L	4	ND	ND	ND	0.0001			
1,2-dichlorobenzene	mg/L	4	ND	ND	ND	0.0001	1.5	0.001	√
1,2-dichloroethane	mg/L	4	ND	ND	ND	0.0001	0.03		√
1,4-dichlorobenzene	mg/L	4	ND	ND	ND	0.0001	0.4	0.0003	√
Benzene	mg/L	4	ND	ND	ND	0.0001	0.01		√
Carbon tetrachloride	mg/L	4	ND	ND	ND	0.0001	0.005		√
Ethylbenzene	mg/L	4	ND	ND	ND	0.0001	0.3	0.002	√
Xylenes (total)	mg/L	4	ND	ND	ND	0.0001	0.6	0.02	√
Styrene	mg/L	4	ND	ND	ND	0.0001	0.03	0.004	√
Tetrachloroethene	mg/	4	ND	ND	ND	0.0001	0.05		√
Toluene	mg/L	4	ND	ND	ND	0.0001	0.8	0.03	√
1,2-dichloroethene (cis + trans)	mg/L	4	ND	ND	ND	0.0001	0.06		√
Trichloroethene	mg/L	4	ND	ND	ND	0.0001	0.02		√

Halo Acetic Acids (HAAs)									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
Bromoacetic Acid	mg/L	4	ND	ND	ND	0.0005			
Bromochloroacetic Acid	mg/L	4	0.0049	0.0018	0.0033	0.0005			
Monochloroacetic Acid	mg/L	4	ND	ND	ND	0.0005	0.02		√
Dibromoacetic Acid	mg/L	4	0.0053	0.0022	0.0033	0.0005			
Dichloroacetic Acid	mg/L	4	0.0039	0.0013	0.0027	0.0005	0.05		√
Trichloroacetic Acid	mg/L	4	0.0026	ND	0.0006	0.0005	0.2		√
HAA Sum Ratio		4	0.09	0.03	0.060				

Muriwai WTP Treated Water

Acid Herbicides									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
2,4,5- trichlorophenoxyacetic acid (2,4,5-T)	mg/L	4	ND	ND	ND	0.0001	0.01		√
2,4-Dichlorophenoxyacetic acid (2,4-BD)	mg/L	4	ND	ND	ND	0.0001	0.04		√
4-(2,4-dichlorophenoxyl) butanoic acid (2,4-DB)	mg/L	4	ND	ND	ND	0.0001	0.1		√
Bentazone	mg/L	4	ND	ND	ND	0.0001			
Dichlorprop	mg/L	4	ND	ND	ND	0.0001	0.1		√
MCPA	mg/L	4	ND	ND	ND	0.0001	0.002		√
Mecoprop (MCPP)	mg/L	4	ND	ND	ND	0.0001	0.01		√
Picloram	mg/L	4	ND	ND	ND	0.0001	0.2		√
Triclopyr	mg/L	4	ND	ND	ND	0.0001	0.1		√

Chemical and Physical									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
UV absorbance at 254nm	Abs units	13	0.130	ND	0.012	0.002			
Alkalinity (Total) as $CaCO_3$	mg/L	4	88	69	77	1			
Aluminium	mg/L	1	ND	ND	ND	0.005		0.1	
Bromate	mg/L	52	ND	ND	ND	0.005	0.01		√
Bromide	mg/L	52	0.27	0.066	0.22	0.005			
Calcium	mg/L	4	8.1	7.1	7.8	0.01			
Calcium Hardness	mg/L	4	20	18	19.25	0.025			
Chlorate	mg/L	52	0.28	0.00	0.14	0.01	0.8		√
Chloride	mg/L	1	66.70	66.70	66.70	0.02		250	
Chlorine Residual	mg/L	122	1.36	0.5	1.06	0.02	5	0.6-1.0	√

Chemical and Physical cont.									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
Chlorite	mg/L	52	ND	ND	ND	0.005	0.8		√
Colour	Hazen Units	1	ND	ND	ND	5		10	
Conductivity	mS/m	1	38.5	38.5	38.5	0.5			
Cyanide	mg/L	1	ND	ND	ND	0.005	0.6		√
Fluoride	mg/L	1	0.06	0.06	0.06	0.020	1.5		√
Iodide	mg/L	1	0.008	0.008	0.008	0.002			
Iron	mg/L	4	0.010	0.002	0.006	0.002		0.2	
Magnesium	mg/L	4	6.70	6.30	6.52	0.001			
Magnesium Hardness	mg/L	4	27.000	26.000	26.750	0.0041			
Manganese	mg/L	4	ND	ND	ND	0.0005	0.4	0.04	√
pH	pH Units	122	7.9	7	7.3	0.1		7.0-8.5	
Potassium	mg/L	1	2.1	2.1	2.1	0.1			
Silicon	mg/L	1	66.0	66.0	66.0	0.1			
Sodium	mg/L	1	66.0	66.0	66.0	0.1		200	
Sulphate	mg/L	1	13.4	13.4	13.4	0.02		250	
Suspended Solids	mg/L	4	ND	ND	ND	0.2			
Total Dissolved Solids	mg/L	4	300	240	270	15		1000	
Total Hardness	mg/L	4	48.00	44.00	46.25	0.029		200	
Total Organic Carbon TOC	mg/L	13	0.5	ND	0.3	0.1			
Dissolved Organic Carbon DOC	mg/L	13	0.4	ND	0.2	0.1			
Turbidity	NTU	122	0.35	ND	0.1	0.05		2.5	

Microbiology									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
E. coli	MPN/100mL	122	ND	ND	ND	1	<1		√

Nutrients									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
Ammonia	mg/L	4	ND	ND	ND	0.005		1.5	
Dissolved Reactive Phosphorus	mg/L	4	0.046	0.0366	0.0414	0.005			
Nitrate (as NO_3)	mg/L	4	3.636	2.914	3.258	0.002	50		√
Nitrite (as NO_2)	mg/L	4	ND	ND	ND	0.002	0.2		√
TKN (Total Kjeldahl Nitrogen)	mg/L	4	ND	ND	ND	0.1			
Total Phosphorus	mg/L	4	0.062	0.035	0.047	0.005			

Plasticizers									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
bis (2-ethylhexyl) adipate	µg/L	1	ND	ND	ND	2			
bis (2-ethylhexyl) phthalate	µg/L	1	ND	ND	ND	2	9		√

Polycyclic Aromatic Hydrocarbons									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
Benzo(a)pyrene	µg/L	1	ND	ND	ND	0.1	0.7		√

Semi Volatile Organic Compounds									
Organochlorine Pesticides									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
Aldrin + Dieldrin	µg/L	1	ND	ND	ND	0.01	0.04		√
Chlordane	µg/L	1	ND	ND	ND	0.01	0.2		√
Heptachlor	µg/L	1	ND	ND	ND	0.01			
Heptachlor epoxide	µg/L	1	ND	ND	ND	0.01			
Hexachlorobenzene	µg/L	1	ND	ND	ND	0.1			

Organochlorine Pesticides cont.									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
Methoxychlor	µg/L	1	ND	ND	ND	0.2	20		√
Permethrin (cis + trans)	µg/L	1	ND	ND	ND	0.2			
DDT + isomers	µg/L	1	ND	ND	ND	0.2	1		√
Procymidone	µg/L	1	ND	ND	ND	0.2	700		√
Organonitrogen Herbicides									
Alachlor	µg/L	1	ND	ND	ND	0.2	20		√
Atrazine	µg/L	1	ND	ND	ND	0.1	2		√
Metolachlor	µg/L	1	ND	ND	ND	0.1	10		√
Molinate	µg/L	1	ND	ND	ND	0.1	7		√
Pendimethalin	µg/L	1	ND	ND	ND	0.2	20		√
Propanil	µg/L	1	ND	ND	ND	0.1			
Simazine	µg/L	1	ND	ND	ND	0.1	2		√
Terbuthylazine	µg/L	1	ND	ND	ND	0.2	8		√
Trifluralin	µg/L	1	ND	ND	ND	0.2	30		√
Organophosphorus Pesticides									
Chlorpyriphos	µg/L	1	ND	ND	ND	0.2	40		√
Diazinon	µg/L	1	ND	ND	ND	0.1			
Pirimiphos methyl	µg/L	1	ND	ND	ND	0.2	100		√

Trace Elements									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
Antimony	mg/L	1	ND	ND	ND	0.001	0.02		√
Arsenic	mg/L	4	ND	ND	ND	0.0001	0.01		√
Barium	mg/L	1	0.018	0.018	0.018	0.0002	0.7		√
Boron	mg/L	1	0.037	0.037	0.037	0.005	1.4		√
Cadmium	mg/L	4	ND	ND	ND	0.00005	0.004		√

Trace Elements cont.

Component Name	Units	Number of Samples	Max	Min	Average	Detection Limit	MAV DWSNZ	GV DWSNZ	Compliance DWSNZ 2005 (Revised 2018)
Chromium	mg/L	1	0.0009	0.0009	0.0009	0.0001	0.05		√
Copper	mg/L	4	0.0013	0.0010	0.0012	0.0002	2		√
Lead	mg/L	4	0.0001	ND	ND	0.0001	0.01		√
Lithium	mg/L	1	0.0042	0.0042	0.0042	0.0001			
Mercury	mg/L	1	ND	ND	ND	0.00005	0.007		√
Molybdenum	mg/L	1	ND	ND	ND	0.0003	0.07		√
Nickel	mg/L	4	0.0005	0.00013	0.0003	0.0001	0.08		√
Selenium	mg/L	1	ND	ND	ND	0.0005	0.01		√
Zinc	mg/L	4	0.004	0.003	0.004	0.001		1.5	

Trihalomethanes

Component Name	Units	Number of Samples	Max	Min	Average	Detection Limit	MAV DWSNZ	GV DWSNZ	Compliance DWSNZ 2005 (Revised 2018)
Bromodichloromethane	mg/L	13	ND	ND	ND	0.0001	0.06		√
Bromoform	mg/L	13	0.0027	ND	0.0008	0.0001	0.1		√
Chloroform	mg/L	13	ND	ND	ND	0.0001	0.4		√
Dibromochloromethane	mg/L	13	0.0011	ND	0.0002	0.0001	0.15		√
THM Sum Ratio		13	0.04	ND	0.01		1		√

Volatile Organic Compounds

Component Name	Units	Number of Samples	Max	Min	Average	Detection Limit	MAV DWSNZ	GV DWSNZ	Compliance DWSNZ 2005 (Revised 2018)
1,1,1-trichloroethane	mg/L	1	ND	ND	ND	0.0001			
1,2,3-trichlorobenzene	mg/L	1	ND	ND	ND	0.0001			
1,2,4-trichlorobenzene	mg/L	1	ND	ND	ND	0.0001			
1,2-dichlorobenzene	mg/L	1	ND	ND	ND	0.0001	1.5	0.001	√
1,2-dichloroethane	mg/L	1	ND	ND	ND	0.0001	0.03		√
1,4-dichlorobenzene	mg/L	1	ND	ND	ND	0.0001	0.4	0.0003	√

Volatile Organic Compounds cont.									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
Benzene	mg/L	1	ND	ND	ND	0.0001	0.01		√
Carbon tetrachloride	mg/L	1	ND	ND	ND	0.0001	0.005		√
Ethylbenzene	mg/L	1	ND	ND	ND	0.0001	0.3	0.002	√
Xylene	mg/L	1	ND	ND	ND	0.0001	0.6	0.02	√
Styrene	mg/L	1	ND	ND	ND	0.0001	0.03	0.004	√
Tetrachloroethene	mg/L	1	ND	ND	ND	0.0001	0.05		√
Toluene	mg/L	1	ND	ND	ND	0.0001	0.8	0.03	√
1,2-dichloroethene (cis + trans)	mg/L	1	ND	ND	ND	0.0001	0.06		√
Trichloroethene	mg/L	1	ND	ND	ND	0.0001	0.02		√

Halo Acetic Acids (HAAs)									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
Bromoacetic Acid	mg/L	4	ND	ND	ND	0.0005			
Bromochloroacetic Acid	mg/L	4	0.0013	ND	0.0003	0.0005			
Monochloroacetic Acid	mg/L	4	ND	ND	ND	0.0005	0.02		√
Dibromoacetic Acid	mg/L	4	0.0027	ND	0.0012	0.0005			
Dichloroacetic Acid	mg/L	4	ND	ND	ND	0.0005	0.05		√
Trichloroacetic Acid	mg/L	4	ND	ND	ND	0.0005	0.2		√
HAA Sum Ratio		4	ND	ND	ND				

Onehunga WTP Treated Water (Local and Metropolitan)

*The Onehunga WTP was shutdown from 25 - 27 April 2022. Daily compliance samples were not collected on the dates that the plant was not producing water. Samples were collected on the day the plant was shutdown and on the day the plant was restarted.

Acid Herbicides

Component Name	Units	Number of Samples	Max	Min	Average	Detection Limit	MAV DWSNZ	GV DWSNZ	Compliance DWSNZ 2005 (Revised 2018)
2,4,5- trichlorophenoxyacetic acid (2,4,5-T)	mg/L	4	ND	ND	ND	0.0001	0.01		√
2,4-Dichlorophenoxyacetic acid (2,4-D)	mg/L	4	ND	ND	ND	0.0001	0.04		√
4-(2,4-dichlorophenoxyl) butanoic acid (2,4-DB)	mg/L	4	ND	ND	ND	0.0001	0.1		√
Bentazone	mg/L	4	ND	ND	ND	0.0001			
Dichlorprop	mg/L	4	ND	ND	ND	0.0001	0.1		√
MCPA	mg/L	4	ND	ND	ND	0.0001	0.002		√
Mecoprop	mg/L	4	ND	ND	ND	0.0001	0.01		√
Picloram	mg/L	4	ND	ND	ND	0.0001	0.2		√
Triclopyr	mg/L	4	ND	ND	ND	0.0001	0.1		√

Chemical and Physical

Component Name	Units	Number of Samples	Max	Min	Average	Detection Limit	MAV DWSNZ	GV DWSNZ	Compliance DWSNZ 2005 (Revised 2018)
UV absorbance at 254nm	Abs units	13	0.010	0.007	0.009	0.002			
Alkalinity (Total) as $CaCO_3$	mg/L	4	57	30	48	1			
Aluminium	mg/L	52	0.036	0.027	0.032	0.005		0.1	
Bromate	mg/L	13	ND	ND	ND	0.005	0.01		√
Bromide	mg/L	13	0.07	0.02	0.05	0.005			
Calcium	mg/L	4	9.9	6.7	8.7	0.01			
Calcium Hardness	mg/L	4	37.00	22.00	26.75	0.025			
Chlorate	mg/L	13	0.08	0.03	0.05	0.01	0.8		√
Chloride	mg/L	13	21.10	18.40	19.50	0.02		250	
Chlorine Residual	mg/L	364*	1.85	0.46	1.22	0.02	5	0.6-1.0	√

Chemical and Physical cont.									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
Chlorite	mg/L	13	ND	ND	ND	0.005	0.8		√
Colour	Hazen Units	1	ND	ND	ND	5		10	
Conductivity	mS/m	13	25.2	21.7	23.3	0.5			
Cyanide	mg/L	4	ND	ND	ND	0.005	0.6		√
Fluoride (Onehunga zone)	mg/L	13	0.18	0.12	0.14	0.02	1.5		√
Fluoride (Metropolitan zones)	mg/L	52	0.8	0.6	0.7	0.02	1.5		√
Iodide	mg/L	1	0.007	0.007	0.007	0.002			
Iron	mg/L	52	0.029	ND	0.002	0.002		0.2	
Magnesium	mg/L	4	7.90	2.40	6.03	0.001			
Magnesium Hardness	mg/L	4	54.000	10.000	32.000	0.0041			
Manganese	mg/L	4	0.0023	ND	0.0006	0.0005	0.4	0.04	√
pH	pH Units	364*	8.2	7.5	7.9	0.1		7.0-8.5	
Potassium	mg/L	1	3.2	3.2	3.2	0.1			
Silicon	mg/L	1	33.0	33.0	33.0	0.1			
Sodium	mg/L	1	21.0	21.0	21.0	0.1		200	
Sulphate	mg/L	13	15	11.7	13.6	0.02		250	
Suspended Solids	mg/L	4	0.3	ND	0.1	0.2			
Total Dissolved Solids	mg/L	4	190	100	150	15.0		1000	
Total Hardness	mg/L	4	91.00	35.00	58.75	0.029		200	
Total Organic Carbon TOC	mg/L	52	3.0	ND	0.6	0.1			
Turbidity	NTU	363**	0.6	ND	0.1	0.05		2.5	

** In 2022, two daily turbidity samples were not collected. In January 2022, one turbidity sample was not collected due to a laboratory scheduling error. In April 2022, one turbidity sample was not collected due to the plant being shut down and not producing water on the day.

Microbiology									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
E. coli	MPN/100mL	362***	ND	ND	ND	1	<1		√

*** In 2022, three daily *E.coli* samples were not collected. In January 2022, two *E.coli* samples were not collected due to a laboratory scheduling error. In April 2022, one *E.coli* sample was not collected due to the plant being shut down and not producing water on the day. .

Nutrients									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
Ammonia	mg/L	4	0.007	ND	0.002	0.005		1.5	
Dissolved Reactive Phosphorus	mg/L	4	0.095	0.009	0.071	0.005			
Nitrate (as NO_3)	mg/L	4	12.489	0.576	9.466	0.002	50		√
Nitrite (as NO_2)	mg/L	4	0.007	ND	0.002	0.002	0.2		√
TKN (Total Kjeldahl Nitrogen)	mg/L	4	ND	ND	ND	0.1			
Total Phosphorus	mg/L	4	0.095	0.012	0.071	0.005			

Plasticizers									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
bis (2-ethylhexyl) adipate	µg/L	4	ND	ND	ND	2			
bis (2-ethylhexyl) phthalate	µg/L	4	ND	ND	ND	2	9		√

Polycyclic Aromatic Hydrocarbons									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
Benzo(a)pyrene	µg/L	4	ND	ND	ND	0.1	0.7		√

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Semi Volatile Organic Compounds									
Organochlorine Pesticides									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
Aldrin + Dieldrin	µg/L	4	ND	ND	ND	0.01	0.04		√
Chlordane	µg/L	4	ND	ND	ND	0.01	0.2		√
Lindane	µg/L	4	ND	ND	ND	0.01	2		√
Heptachlor	µg/L	4	ND	ND	ND	0.01			
Heptachlor epoxide	µg/L	4	ND	ND	ND	0.01			
Hexachlorobenzene	µg/L	4	ND	ND	ND	0.1			
Organochlorine Pesticides									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
Methoxychlor	µg/L	4	ND	ND	ND	0.2	20		√
Permethrin (cis + trans)	µg/L	4	ND	ND	ND	0.2			
DDT + isomers	µg/L	4	ND	ND	ND	0.2	1		√
Procymidone	µg/L	4	ND	ND	ND	0.2	700		√
Organonitrogen Herbicides									
Alachlor	µg/L	4	ND	ND	ND	0.2	20		√
Atrazine	µg/L	4	ND	ND	ND	0.1	2		√
Metolachlor	µg/L	4	ND	ND	ND	0.1	10		√
Molinate	µg/L	4	ND	ND	ND	0.1	7		√
Pendimethalin	µg/L	4	ND	ND	ND	0.2	20		√
Propanil	µg/L	4	ND	ND	ND	0.1			
Simazine	µg/L	4	ND	ND	ND	0.1	2		√
Terbuthylazine	µg/L	4	ND	ND	ND	0.2	8		√
Trifluralin	µg/L	4	ND	ND	ND	0.2	30		√

Organophosphorus Pesticides

Component Name	Units	Number of Samples	Max	Min	Average	Detection Limit	MAV DWSNZ	GV DWSNZ	Compliance DWSNZ 2005 (Revised 2018)
Chlorpyriphos	µg/L	4	ND	ND	ND	0.2	40		√
Diazinon	µg/L	4	ND	ND	ND	0.1			
Pirimiphos methyl	µg/L	4	ND	ND	ND	0.2	100		√

Trace Elements

Component Name	Units	Number of Samples	Max	Min	Average	Detection Limit	MAV DWSNZ	GV DWSNZ	Compliance DWSNZ 2005 (Revised 2018)
Antimony	mg/L	4	ND	ND	ND	0.001	0.02		√
Arsenic	mg/L	4	0.0007	0.0002	0.0004	0.0001	0.01		√
Barium	mg/L	1	0.0015	0.0015	0.0015	0.0002	0.7		√
Boron	mg/L	1	0.060	0.060	0.060	0.005	1.4		√
Cadmium	mg/L	4	ND	ND	ND	0.00005	0.004		√
Chromium	mg/L	4	0.001	ND	0.0007	0.0001	0.05		√
Copper	mg/L	4	0.0011	0.0003	0.0007	0.0002	2		√
Lead	mg/L	4	0.0001	ND	0.0001	0.0001	0.01		√
Lithium	mg/L	1	0.0004	0.0004	0.0004	0.0001			
Mercury	mg/L	4	ND	ND	ND	0.00005	0.007		√
Molybdenum	mg/L	1	0.0009	0.0009	0.0009	0.0003	0.07		√
Nickel	mg/L	4	0.0002	ND	0.0001	0.0001	0.08		√
Selenium	mg/L	1	ND	ND	ND	0.0005	0.01		√
Zinc	mg/L	4	0.003	ND	0.001	0.001		1.5	

Trihalomethanes

Component Name	Units	Number of Samples	Max	Min	Average	Detection Limit	MAV DWSNZ	GV DWSNZ	Compliance DWSNZ 2005 (Revised 2018)
Bromodichloromethane	mg/L	13	0.0011	ND	0.0001	0.0001	0.06		√
Bromoform	mg/L	13	0.0034	ND	0.0013	0.0001	0.1		√
Chloroform	mg/L	13	ND	ND	ND	0.0001	0.4		√
Dibromochloromethane	mg/L	13	0.0031	ND	0.0013	0.0001	0.15		√
THM Sum Ratio		13	0.05	ND	0.02		1		√

Volatile Organic Compounds

Component Name	Units	Number of Samples	Max	Min	Average	Detection Limit	MAV DWSNZ	GV DWSNZ	Compliance DWSNZ 2005 (Revised 2018)
1,1,1-trichloroethane	mg/L	4	ND	ND	ND	0.0001			
1,2,3-trichlorobenzene	mg/L	4	ND	ND	ND	0.0001			
1,2,4-trichlorobenzene	mg/L	4	ND	ND	ND	0.0001			
1,2-dichlorobenzene	mg/L	4	ND	ND	ND	0.0001	1.5	0.001	√
1,2-dichloroethane	mg/L	4	ND	ND	ND	0.0001	0.03		√
1,4-dichlorobenzene	mg/L	4	ND	ND	ND	0.0001	0.4	0.0003	√
Benzene	mg/L	4	ND	ND	ND	0.0001	0.01		√
Carbon tetrachloride	mg/L	4	ND	ND	ND	0.0001	0.005		√
Ethylbenzene	mg/L	4	ND	ND	ND	0.0001	0.3	0.002	√
Xylenes (total)	mg/L	4	ND	ND	ND	0.0001	0.6	0.02	√
Styrene	mg/L	4	ND	ND	ND	0.0001	0.03	0.004	√
Tetrachloroethene	mg/L	4	ND	ND	ND	0.0001	0.05		√
Toluene	mg/L	4	ND	ND	ND	0.0001	0.8	0.03	√
1,2-dichloroethene (cis + trans)	mg/L	4	ND	ND	ND	0.0001	0.06		√
Trichloroethene	mg/L	4	ND	ND	ND	0.0001	0.02		√

Halo Acetic Acids (HAAs)									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
Bromoacetic Acid	mg/L	4	ND	ND	ND	0.0005			
Bromochloroacetic Acid	mg/L	4	0.0055	ND	0.0014	0.0005			
Monochloroacetic Acid	mg/L	4	ND	ND	ND	0.0005	0.02		√
Dibromoacetic Acid	mg/L	4	0.0030	ND	0.0015	0.0005			
Dichloroacetic Acid	mg/L	4	0.0076	ND	0.0019	0.0005	0.05		√
Trichloroacetic Acid	mg/L	4	0.0031	ND	0.0008	0.0005	0.2		√
HAA Sum Ratio		4	0.170	ND	0.060				

Papakura WTP Treated Water

*The temporary Papakura WTP was isolated on 20/07/2021. The treatment plant remained isolated until the end of the reporting period specified in this report. Compliance monitoring sampling was not undertaken while the treatment plant was isolated. Permanent Papakura WTP is under construction and is expected to be in service by end of June 2023.

Chemical and Physical									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
UV 254absorbance at 254nm	Abs units	2	0.016	0.014	0.015	0.005			
Alkalinity (Total) as CaCO3	mg/L	2	10	10	10	1			
Aluminium	mg/L	2	0.009	0.006	0.007	0.005		0.1	
Bromate	mg/L	2	ND	ND	ND	0.005	0.01		√
Bromide	mg/L	2	0.04	0.01	0.03	0.005			
Chlorate	mg/L	2	0.10	0.08	0.09	0.01	0.8		√
Chlorine Residual	mg/L	19	1.3	1.04	1.15	0.02	5	0.6-1.0	√
Chlorite	mg/L	2	ND	ND	ND	0.005	0.8		√
Fluoride	mg/L	2	ND	ND	ND	0.02	1.5		√
Iron	mg/L	2	ND	ND	ND	0.002		0.2	
pH	pH Units	19	7.6	6.9	7.1	0.1		7.0-8.5	
Turbidity	NTU	19	0.4	0.1	0.2	0.05		2.5	

Microbiology cont.									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limits**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
E. coli	MPN/100mL	19	ND	ND	ND	1	<1		√

Trihalomethanes									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
Bromodichloromethane	mg/L	2	0.0580	0.0044	0.0051	21	0.06		√
Bromoform	mg/L	2	ND	ND	ND	21	0.1		√
Chloroform	mg/L	2	0.0041	0.0031	0.0036	21	0.4		√
Dibromochloromethane	mg/L	2	0.0056	0.0037	0.0046	21	0.15		√
THM Sum Ratio		2	0.10	0.1	0.10	21	1		√

Pukekohe WTP Treated Water

Acid Herbicides									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
2,4,5- trichlorophenoxyacetic acid (2,4,5-T)	mg/L	13	ND	ND	ND	0.0001	0.01		√
2,4-Dichlorophenoxyacetic acid (2,4-BD)	mg/L	13	ND	ND	ND	0.0001	0.04		√
4-(2,4-dichlorophenoxyl) butanoic acid (2,4-DB)	mg/L	13	ND	ND	ND	0.0001	0.1		√
Bentazone	mg/L	13	ND	ND	ND	0.0001			
Dichlorprop	mg/L	13	ND	ND	ND	0.0001	0.1		√
MCPA	mg/L	13	ND	ND	ND	0.0001	0.002		√
Mecoprop	mg/L	13	ND	ND	ND	0.0001	0.01		√
Picloram	mg/L	13	ND	ND	ND	0.0001	0.2		√
Triclopyr	mg/L	13	ND	ND	ND	0.0001	0.1		√

Chemical and Physical									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
UV absorbance at 254nm	Abs units	13	0.008	ND	0.004	0.002			
Alkalinity (Total) as CaCO3	mg/L	12	120	110	119	1			
Aluminium	mg/L	7	0.0067	ND	0.0017	0.005		0.1	
Bromate	mg/L	5	ND	ND	ND	0.005	0.01		√
Bromide	mg/L	12	0.055	0.004	0.005	0.01			
Calcium	mg/L	13	28.0	23.0	25.7	0.01			
Calcium Hardness	mg/L	13	69	59	64	0.025			
Chlorate	mg/L	13	0.92*	0.14	0.37	0.01	0.8		Exceeded MAV**
Chloride	mg/L	12	28.90	27.10	28.10	0.02		250	
Chlorine Residual	mg/L	365	1.78	0.77	1.18	0.02	5	0.6-1.0	√
Chlorite	mg/L	12	ND	ND	ND	0.005	0.8		√

*The chlorate result of 0.92 mg/L was reported to the Auckland Regional Public Health Service and Taumata Arowai. Remedial actions were immediately taken, and all follow up samples confirmed that this was a single event with no risk to Public Health. Compliance with the DWSNZ 2018 was maintained.

Chemical and Physical cont.									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
Colour	Hazen Units	13	ND	ND	ND	5		10	
Conductivity	mS/m	13	34.6	33.1	34.0	0.5			
Fluoride	mg/L	52	0.81	ND	0.65	0.02	1.5		√
Iron	mg/L	52	0.011	ND	0.001	0.002		0.2	
Magnesium	mg/L	13	7.50	6.10	6.97	0.001			
Magnesium Hardness	mg/L	13	31.0	25.0	28.8	0.0041			
Manganese	mg/L	52	ND	ND	ND	0.0005	0.4	0.04	√
pH	pH unit	365	8.30	7.60	8.01	0.1		7.0 - 8.5	
Potassium	mg/L	4	3.8	3.5	3.7	0.1			
Silicon	mg/L	13	31.0	26.0	29.38	0.1			
Sodium	mg/L	4	32.0	26.0	29.5	0.1		200	
Sulphate	mg/L	12	5.7	1.5	4.3	0.02		250	
Suspended Solids	mg/L	13	0.3	ND	0.1	0.2			
Total Dissolved Solids	mg/L	13	230	200	215	15		1000	
Total Organic Carbon TOC	mg/L	13	1.0	ND	0.35	0.1			
Total Hardness	mg/L	13	100	84	92.85	0.029		200	
Turbidity	NTU	365	0.6	ND	0.1	0.05		2.5	

Microbiology									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limits**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
E. coli	MPN/100mL	365	ND	ND	ND	1	<1		√

Nutrients									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
Ammonia	mg/L	13	0.007	ND	0.001	0.005		1.5	
Dissolved Reactive Phosphorus	mg/L	13	0.074	ND	0.065	0.005			
Nitrate (as NO_3)	mg/L	12	0.128	0.102	0.112	0.002	50		√
Nitrite (as NO_2)	mg/L	12	0.009	ND	0.001	0.002	0.2		√
TKN (Total Kjeldahl Nitrogen)	mg/L	13	0.254	ND	0.087	0.1			

Polycyclic Aromatic Hydrocarbons									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
Benzo(a)pyrene	µg/L	4	ND	ND	ND	0.1	0.7		√

Plasticizers									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
bis (2-ethylhexyl) adipate	µg/L	4	ND	ND	ND	2			
bis (2-ethylhexyl) phthalate	µg/L	4	ND	ND	ND	2	9		√

Semi Volatile Organic Compounds									
Organochlorine Pesticides									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
Aldrin + Dieldrin	µg/L	13	ND	ND	ND	0.01	0.04		√
Chlordane	µg/L	13	ND	ND	ND	0.01	0.2		√
Lindane	µg/L	13	ND	ND	ND	0.01	2		√
Heptachlor	µg/L	13	ND	ND	ND	0.01			
Heptachlor epoxide	µg/L	13	ND	ND	ND	0.01			
Methoxychlor	µg/L	13	ND	ND	ND	0.2	20		√
Permethrin (cis + trans)	µg/L	13	ND	ND	ND	0.2			

Organonitrogen Herbicides cont.									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
Atrazine	µg/L	4	ND	ND	ND	0.1	2		√
Metolachlor	µg/L	4	ND	ND	ND	0.1	10		√
Pendimethalin	µg/L	4	ND	ND	ND	0.2	20		√
Propanil	µg/L	4	ND	ND	ND	0.1			
Simazine	µg/L	4	ND	ND	ND	0.1	2		√
Terbuthylazine	µg/L	4	ND	ND	ND	0.2	8		√
Trifluralin	µg/L	4	ND	ND	ND	0.2	30		√
Organophosphorus Pesticides									
Chlorpyriphos	µg/L	4	ND	ND	ND	0.2	40		√
Diazinon	µg/L	4	ND	ND	ND	0.1			
Pirimiphos methyl	µg/L	4	ND	ND	ND	0.2	100		√

Trace Elements									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
Antimony	mg/L	4	ND	ND	ND	0.001	0.02		√
Arsenic	mg/L	4	ND	ND	ND	0.0001	0.01		√
Barium	mg/L	4	0.0016	0.0008	0.0011	0.0002	0.7		√
Boron	mg/L	4	0.026	ND	0.015	0.005	1.4		√
Cadmium	mg/L	4	ND	ND	ND	0.00005	0.004		√
Chromium	mg/L	4	0.0006	ND	0.0001	0.0001	0.05		√
Copper	mg/L	4	ND	ND	ND	0.0002	2		√
Lead	mg/L	4	ND	ND	ND	0.0001	0.01		√
Lithium	mg/L	4	0.0099	0.0082	0.0091	0.0001			
Mercury	mg/L	4	ND	ND	ND	0.00005	0.007		√
Molybdenum	mg/L	4	0.0009	0.0008	0.0008	0.0003	0.07		√
Nickel	mg/L	4	ND	ND	ND	0.0001	0.08		√

Trace Elements cont.									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
Selenium	mg/L	4	ND	ND	ND	0.0005	0.01		√
Zinc	mg/L	16	ND	ND	ND	0.001		1.5	

Trihalomethanes									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
Bromodichloromethane	mg/L	13	0.0032	ND	0.0020	0.0001	0.06		√
Bromoform	mg/L	13	0.0020	ND	0.0007	0.0001	0.1		√
Chloroform	mg/L	13	0.0019	ND	0.0009	0.0001	0.4		√
Dibromochloromethane	mg/L	13	0.0046	0.002	0.0031	0.0001	0.15		√
THM Sum Ratio		13	0.10	0.02	0.06		1		√

Volatile Organic Compounds									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
1,1,1-trichloroethane	mg/L	13	ND	ND	ND	0.0001			
1,2,3-trichlorobenzene	mg/L	13	ND	ND	ND	0.0001			
1,2,4-trichlorobenzene	mg/L	13	ND	ND	ND	0.0001			
1,2-dichlorobenzene	mg/L	13	ND	ND	ND	0.0001	1.5	0.001	√
1,2-dichloroethane	mg/L	13	ND	ND	ND	0.0001	0.03		√
1,4-dichlorobenzene	mg/L	13	ND	ND	ND	0.0001	0.4	0.0003	√
Benzene	mg/L	13	ND	ND	ND	0.0001	0.01		√
Carbon tetrachloride	mg/L	13	ND	ND	ND	0.0001	0.005		√
Ethylbenzene	mg/L	13	ND	ND	ND	0.0001	0.3	0.002	√
Xylene	mg/L	13	ND	ND	ND	0.0001	0.6	0.02	√
Styrene	mg/L	13	ND	ND	ND	0.0001	0.03	0.004	√
Tetrachloroethene	mg/L	13	ND	ND	ND	0.0001	0.05		√
Toluene	mg/L	13	ND	ND	ND	0.0001	0.8	0.03	√

Volatile Organic Compounds cont.									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
1,2-dichloroethene (cis + trans)	mg/L	13	ND	ND	ND	0.0001	0.06		√
Trichloroethene	mg/L	13	ND	ND	ND	0.0001	0.02		√

Halo Acetic Acids (HAAs)									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
Bromoacetic Acid	mg/L	4	ND	ND	ND	0.0005			
Bromochloroacetic Acid	mg/L	4	0.0012	0.0007	0.0010	0.0005			
Monochloroacetic Acid	mg/L	4	ND	ND	ND	0.0005	0.02		√
Dibromoacetic Acid	mg/L	4	0.0021	0.0008	0.0014	0.0005			
Dichloroacetic Acid	mg/L	4	0.0006	ND	0.0001	0.0005	0.05		√
Trichloroacetic Acid	mg/L	4	ND	ND	ND	0.0005	0.2		√
HAA Sum Ratio		4	0.01	ND	ND				

Snells/Algies WTP Treated Water

Chemical and Physical									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
UV absorbance at 254nm	Abs units	1	0.009	0.009	0.009	0.002			
Alkalinity (Total) as $CaCO_3$	mg/L	4	200	190	195	1			
Aluminium	mg/L	1	ND	ND	ND	0.005		0.1	
Bromate	mg/L	4	ND	ND	ND	0.005	0.01		√
Bromide	mg/L	4	0.14	0.13	0.13	0.005			
Calcium	mg/L	4	4.0	3.5	3.7	0.01			
Calcium Hardness	mg/L	4	9.9	8.7	9.3	0.025			
Chlorate	mg/L	4	ND	ND	ND	0.01	0.8		√
Chloride	mg/L	1	47.00	47.00	47.00	0.02		250	
Chlorine Residual	mg/L	122	1.94	0.54	1.45	0.02	5	0.6-1.0	√
Chlorite	mg/L	4	ND	ND	ND	0.005	0.8		√
Colour	Hazen Units	1	ND	ND	ND	5		10	
Conductivity	mS/m	1	53.4	53.4	53.4	0.5			
Cyanide	mg/L	1	ND	ND	ND	0.005	0.6		√
Fluoride	mg/L	1	0.14	0.14	0.14	0.02	1.5		√
Iodide	mg/L	1	0.019	0.019	0.019	0.002			
Iron	mg/L	14	0.011	0.005	0.008	0.002		0.2	
Magnesium	mg/L	4	0.34	0.30	0.32	0.001			
Magnesium Hardness	mg/L	4	1.400	1.200	1.300	0.0041			
Manganese	mg/L	14	0.0050	0.0042	0.0046	0.0005	0.4	0.04	√
pH	pH Units	121	8.4	7.4	8.3	0.1		7.0-8.5	
Potassium	mg/L	1	0.3	0.3	0.3	0.1			
Silicon	mg/L	1	41.0	41.0	41.0	0.1			
Sodium	mg/L	1	110.0	110.0	110.0	0.1		200	
Sulphate	mg/L	1	7.1	7.1	7.1	0.02		250	
Suspended Solids	mg/L	1	ND	ND	ND	0.2			

Chemical and Physical cont.									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
Total Dissolved Solids	mg/L	1	330	330	330	15			
Total Hardness	mg/L	4	11.00	9.90	10.47	0.029		200	
Total Organic Carbon TOC	mg/L	1	0.4	0.4	0.4	0.1			
Turbidity	NTU	121	0.4	ND	0.1	0.05		2.5	

Microbiology									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
E. coli	MPN/100mL	122	ND	ND	ND	1	<1		√

Nutrients									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
Ammonia	mg/L	1	ND	ND	ND	0.005		1.5	
Dissolved Reactive Phosphorus	mg/L	1	0.090	0.090	0.090	0.005			
Nitrate (as NO_3)	mg/L	1	0.049	0.049	0.049	0.002	50		√
Nitrite (as NO_2)	mg/L	1	ND	ND	ND	0.002	0.2		√
TKN (Total Kjeldahl Nitrogen)	mg/L	1	ND	ND	ND	0.1			
Total Phosphorus	mg/L	1	0.092	0.092	0.092	0.005			

Plasticizers									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
bis (2-ethylhexyl) adipate	µg/L	1	ND	ND	ND	2			
bis (2-ethylhexyl) phthalate	µg/L	1	ND	ND	ND	2	9		√

Polycyclic Aromatic Hydrocarbons									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
Benzo(a)pyrene	µg/L	1	ND	ND	ND	0.1	0.7		√

Semi Volatile Organic Compounds									
Organochlorine Pesticides									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
Aldrin + Dieldrin	µg/L	1	ND	ND	ND	0.01	0.04		√
gamma-Chlordane	µg/L	1	ND	ND	ND	0.01			
Lindane	µg/L	1	ND	ND	ND	0.01	2		√
Heptachlor	µg/L	1	ND	ND	ND	0.01			
Heptachlor epoxide	µg/L	1	ND	ND	ND	0.01			
Hexachlorobenzene	µg/L	1	ND	ND	ND	0.1			
Methoxychlor	µg/L	1	ND	ND	ND	0.2	20		√
Permethrin (cis + trans)	µg/L	1	ND	ND	ND	0.2			
DDT + isomers	µg/L	1	ND	ND	ND	0.2	1		√
Procymidone	µg/L	1	ND	ND	ND	0.2	700		√
Organonitrogen Herbicides									
Alachlor	µg/L	1	ND	ND	ND	0.2	20		√
Atrazine	µg/L	1	ND	ND	ND	0.1	2		√
Metolachlor	µg/L	1	ND	ND	ND	0.1	10		√
Molinate	µg/L	1	ND	ND	ND	0.1	7		√
Pendimethalin	µg/L	1	ND	ND	ND	0.2	20		√
Propanil	µg/L	1	ND	ND	ND	0.1			
Simazine	µg/L	1	ND	ND	ND	0.1	2		√
Terbuthylazine	µg/L	1	ND	ND	ND	0.2	8		√
Trifluralin	µg/L	1	ND	ND	ND	0.2	30		√

Organophosphorus Pesticides									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
Chlorpyriphos	µg/L	1	ND	ND	ND	0.2	40		√
Diazinon	µg/L	1	ND	ND	ND	0.1			
Pirimiphos methyl	µg/L	1	ND	ND	ND	0.2	100		√

Trace Elements									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
Antimony	mg/L	1	ND	ND	ND	0.001	0.02		√
Arsenic	mg/L	14	ND	ND	ND	0.0001	0.01		√
Barium	mg/L	1	ND	ND	ND	0.0002	0.7		√
Boron	mg/L	1	0.170	0.170	0.170	0.005	1.4		√
Cadmium	mg/L	1	ND	ND	ND	0.00005	0.004		√
Chromium	mg/L	1	ND	ND	ND	0.0001	0.05		√
Copper	mg/L	1	0.0016	0.0016	0.0016	0.0002	2		√
Lead	mg/L	1	ND	ND	ND	0.0001	0.01		√
Lithium	mg/L	1	0.0250	0.0250	0.0250	0.0001			
Mercury	mg/L	1	ND	ND	ND	0.00005	0.007		√
Molybdenum	mg/L	1	ND	ND	ND	0.0003	0.07		√
Nickel	mg/L	1	ND	ND	ND	0.0001	0.08		√
Selenium	mg/L	1	ND	ND	ND	0.0005	0.01		√
Zinc	mg/L	1	0.0023	0.0023	0.0023	0.001		1.5	

Trihalomethanes									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
Bromodichloromethane	mg/L	14	0.0006	ND	0.0001	0.0001	0.06		√
Bromoform	mg/L	14	0.0003	ND	0.0005	0.0001	0.1		√

Trihalomethanes cont.									
Component Name	**Units**		**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
Chloroform	mg/L	14	0.0004	ND	0.0001	0.0001	0.4		√
Dibromochloromethane	mg/L	14	0.0015	ND	0.0003	0.0001	0.15		√
THM Ratio		14	0.02	ND	ND		1		√

Volatile Organic Compounds									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
1,1,1-trichloroethane	mg/L	1	ND	ND	ND	0.0001			
1,2,3-trichlorobenzene	mg/L	1	ND	ND	ND	0.0001			
1,2,4-trichlorobenzene	mg/L	1	ND	ND	ND	0.0001			
1,2-dichlorobenzene	mg/L	1	ND	ND	ND	0.0001	1.5	0.001	√
1,2-dichloroethane	mg/L	1	ND	ND	ND	0.0001	0.03		√
1,4-dichlorobenzene	mg/L	1	ND	ND	ND	0.0001	0.4	0.0003	√
Benzene	mg/L	1	ND	ND	ND	0.0001	0.01		√
Carbon tetrachloride	mg/L	1	ND	ND	ND	0.0001	0.005		√
Ethylbenzene	mg/L	1	ND	ND	ND	0.0001	0.3	0.002	√
Xylene	mg/L	1	ND	ND	ND	0.0001	0.6	0.02	√
Styrene	mg/L	1	ND	ND	ND	0.0001	0.03	0.004	√
Tetrachloroethene	mg/L	1	ND	ND	ND	0.0001	0.05		√
Toluene	mg/L	1	ND	ND	ND	0.0001	0.8	0.03	√
1,2-dichloroethene (cis + trans)	mg/L	1	ND	ND	ND	0.0001	0.06		√
Trichloroethene	mg/L	1	ND	ND	ND	0.0001	0.02		√

Victoria Avenue WTP Treated Water

Chemical and Physical									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
Alkalinity (Total) as $CaCO_3$	mg/L	4	120	120	120	1			
Aluminium	mg/L	1	ND	ND	ND	0.005		0.1	
Bromate	mg/L	1	ND	ND	ND	0.005	0.01		√
Bromide	mg/L	1	0.089	0.089	0.089	0.005			
Calcium	mg/L	13	34.0	28.0	31.2	0.01			
Calcium Hardness	mg/L	14	84.00	70.00	77.14	0.025			
Chlorate	mg/L	1	ND	ND	ND	0.01	0.8		√
Chloride	mg/L	1	32.60	32.60	32.60	0.02		250	
Chlorine Residual	mg/L	122	1.44	0.38	1.00	0.02	5	0.6-1.0	√
Chlorite	mg/L	1	ND	ND	ND	0.005	0.8		√
Colour	Hazen Units	1	ND	ND	ND	5		10	
Conductivity	mS/m	1	36.1	36.1	36.1	0.5			
Cyanide	mg/L	1	ND	ND	ND	0.005	0.6		√
Fluoride	mg/L	1	0.04	0.04	0.04	0.02	1.5		√
Iodide	mg/L	1	0.004	0.004	0.004	0.002			
Iron	mg/L	13	0.012	ND	0.002	0.002		0.2	
Magnesium	mg/L	13	10.00	7.80	9.29	0.001			
Magnesium Hardness	mg/L	14	43.000	32.000	38.385	0.0041			
Manganese	mg/L	14	0.039	ND	0.0035	0.0005	0.4	0.04	√
pH	pH Units	122	8.3	7.7	7.9	0.1		7.0-8.5	
Potassium	mg/L	1	4.0	4.0	4.0	0.1			
Silicon	mg/L	1	50.0	50.0	50.0	0.1			
Sodium	mg/L	1	24.0	24.0	24.0	0.1		200	
Sulphate	mg/L	1	5.2	5.2	5.2	0.02		250	
Suspended Solids	mg/L	1	ND	ND	ND	0.2			

Chemical and Physical cont.									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
Total Dissolved Solids	mg/L	1	210	210	210	15		1000	
Total Hardness	mg/L	14	120.00	100.00	114.62	0.029		200	
Turbidity	NTU	122	0.9	ND	0.1	0.05		2.5	

Microbiology									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
E. coli	MPN/100mL	122	ND	ND	ND	1	<1		√

Nutrients									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
Ammonia	mg/L	1	ND	ND	ND	0.005		1.5	
Dissolved Reactive Phosphorus	mg/L	1	0.049	0.049	0.049	0.005			
Nitrate (as NO_3)	mg/L	1	0.128	0.128	0.128	0.002	50		√
Nitrite (as NO_2)	mg/L	1	ND	ND	ND	0.002	0.2		√
TKN (Total Kjeldahl Nitrogen)	mg/L	1	ND	ND	ND	0.1			
Total Phosphorus	mg/L	1	0.065	0.065	0.065	0.005			

Plasticizers									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
bis (2-ethylhexyl) adipate	µg/L	1	ND	ND	ND	2			
bis (2-ethylhexyl) phthalate	µg/L	1	ND	ND	ND	2	9		√

Polycyclic Aromatic Hydrocarbons									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
Benzo(a)pyrene	µg/L	1	ND	ND	ND	0.1	0.7		√

Semi Volatile Organic Compounds									
Organochlorine Pesticides									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
Aldrin + Dieldrin	µg/L	1	ND	ND	ND	0.01	0.04		√
gamma-Chlordan	µg/L	1	ND	ND	ND	0.01			
Lindane	µg/L	1	ND	ND	ND	0.01	2		√
Heptachlor	µg/L	1	ND	ND	ND	0.01			
Heptachlor epoxide	µg/L	1	ND	ND	ND	0.01			
Hexachlorobenzene	µg/L	1	ND	ND	ND	0.1			
Methoxychlor	µg/L	1	ND	ND	ND	0.2	20		√
Permethrin (cis + trans)	µg/L	1	ND	ND	ND	0.2			
DDT + isomers	µg/L	1	ND	ND	ND	0.2	1		√
Procymidone	µg/L	1	ND	ND	ND	0.2	700		√
Organonitrogen Herbicides									
Alachlor	µg/L	1	ND	ND	ND	0.2	20		√
Atrazine	µg/L	1	ND	ND	ND	0.1	2		√
Metolachlor	µg/L	1	ND	ND	ND	0.1	10		√
Molinate	µg/L	1	ND	ND	ND	0.1	7		√
Pendimethalin	µg/L	1	ND	ND	ND	0.2	20		√
Propanil	µg/L	1	ND	ND	ND	0.1			
Simazine	µg/L	1	ND	ND	ND	0.1	2		√
Terbuthylazine	µg/L	1	ND	ND	ND	0.2	8		√
Trifluralin	µg/L	1	ND	ND	ND	0.2	30		√

Organophosphorus Pesticides									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
Chlorpyriphos	µg/L	1	ND	ND	ND	0.2	40		√
Diazinon	µg/L	1	ND	ND	ND	0.1			
Pirimiphos methyl	µg/L	1	ND	ND	ND	0.2	100		√

Trace Elements									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
Antimony	mg/L	1	ND	ND	ND	0.001	0.02		√
Arsenic	mg/L	13	0.0053	0.0042	0.0048	0.0001	0.01		√
Barium	mg/L	1	0.0011	0.0011	0.0011	0.0002	0.7		√
Boron	mg/L	1	0.029	0.029	0.029	0.005	1.4		√
Cadmium	mg/L	1	ND	ND	ND	0.00005	0.004		√
Chromium	mg/L	1	ND	ND	ND	0.0001	0.05		√
Copper	mg/L	1	0.0004	0.0004	0.0004	0.0002	2		√
Lead	mg/L	1	ND	ND	ND	0.0001	0.01		√
Lithium	mg/L	1	0.0097	0.0097	0.0097	0.0001			
Mercury	mg/L	1	ND	ND	ND	0.00005	0.007		√
Molybdenum	mg/L	1	0.0003	0.0003	0.0003	0.0003	0.07		√
Nickel	mg/L	1	ND	ND	ND	0.0001	0.08		√
Selenium	mg/L	1	ND	ND	ND	0.0005	0.01		√
Zinc	mg/L	1	0.002	0.002	0.002	0.001		1.5	

Trihalomethanes									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
Bromodichloromethane	mg/L	13	0.0031	ND	0.0007	0.0001	0.06		√
Bromoform	mg/L	13	0.0041	ND	0.0014	0.0001	0.1		√
Chloroform	mg/L	13	0.0003	ND	ND	0.0001	0.4		√
Dibromochloromethane	mg/L	13	0.0063	ND	0.0024	0.0001	0.15		√
THM Ratio		13	0.10	ND	0.04		1		√

Volatile Organic Compounds									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
1,1,1-trichloroethane	mg/L	1	ND	ND	ND	0.0001			
1,2,3-trichlorobenzene	mg/L	1	ND	ND	ND	0.0001			
1,2,4-trichlorobenzene	mg/L	1	ND	ND	ND	0.0001			
1,2-dichlorobenzene	mg/L	1	ND	ND	ND	0.0001	1.5	0.001	√
1,2-dichloroethane	mg/L	1	ND	ND	ND	0.0001	0.03		√
1,4-dichlorobenzene	mg/L	1	ND	ND	ND	0.0001	0.4	0.0003	√
Benzene	mg/L	1	ND	ND	ND	0.0001	0.01		√
Carbon tetrachloride	mg/L	1	ND	ND	ND	0.0001	0.005		√
Ethylbenzene	mg/L	1	ND	ND	ND	0.0001	0.3	0.002	√
Xylene	mg/L	1	ND	ND	ND	0.0001	0.6	0.02	√
Styrene	mg/L	1	ND	ND	ND	0.0001	0.03	0.004	√
Tetrachloroethene	mg/L	1	ND	ND	ND	0.0001	0.05		√
Toluene	mg/L	1	ND	ND	ND	0.0001	0.8	0.03	√
1,2-dichloroethene (cis + trans)	mg/L	1	ND	ND	ND	0.0001	0.06		√
Trichloroethene	mg/L	1	ND	ND	ND	0.0001	0.02		√

Waikato 175 WTP Treated Water

*The Waikato WTP was shut down from the 11th - 13th July 2021. Compliance sampling was not undertaken on the dates that the plant was not producing water. Samples were collected on the day the plant was shutdown and on the day the plant was restarted.

Acid Herbicides

Component Name	Units	Number of Samples	Max	Min	Average	Detection Limit	MAV DWSNZ	GV DWSNZ	Compliance DWSNZ 2005 (Revised 2018)
1080 (Sodium fluoroacetate)	mg/L	2	ND	ND	ND	0.0001	0.0035		√
2,4,5- trichlorophenoxyacetic acid (2,4,5-T)	mg/L	13	ND	ND	ND	0.0001	0.01		√
2,4-Dichlorophenoxyacetic acid (2,4-BD)	mg/L	13	ND	ND	ND	0.0001	0.04		√
4-(2,4-dichlorophenoxyl) butanoic acid (2,4-DB)	mg/L	13	ND	ND	ND	0.0001	0.1		√
Bentazone	mg/L	13	ND	ND	ND	0.0001			
Dichlorprop	mg/L	13	ND	ND	ND	0.0001	0.1		√
MCPA	mg/L	13	ND	ND	ND	0.0001	0.002		√
Mecoprop	mg/L	13	ND	ND	ND	0.0001	0.01		√
Picloram	mg/L	13	ND	ND	ND	0.0001	0.2		√
Triclopyr	mg/L	13	ND	ND	ND	0.0001	0.1		√

Chemical and Physical

Component Name	Units	Number of Samples	Max	Min	Average	Detection Limit	MAV DWSNZ	GV DWSNZ	Compliance DWSNZ 2005 (Revised 2018)
UV absorbance at 254nm	Abs units	52	0.046	0.010	0.022	0.002			
Alkalinity (Total) as $CaCO_3$	mg/L	52	58	32	46	1			
Aluminium	mg/L	52	0.058	0.027	0.039	0.005		0.1	
Bromate	mg/L	52	ND	ND	ND	0.005	0.01		√
Bromide	mg/L	52	0.03	0.01	0.02	0.005			
Calcium	mg/L	13	21.0	14.0	16.4	0.01			
Calcium Hardness	mg/L	13	52.0	35.0	40.6	0.025			
Chlorate	mg/L	52	0.29	ND	0.09	0.01	0.8		√
Chloride	mg/L	13	18.20	15.00	16.9	0.02		250	

Chemical and Physical cont.									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
Chlorine Residual	mg/L	364*	1.64	0.28	1.30	0.02	5	0.6-1.0	√
Chlorite	mg/L	52	0.008	ND	0.001	0.005	0.8		√
Colour	Hazen Units	4	ND	ND	ND	5		10	
Conductivity	mS/m	13	23.9	19.9	21.4	0.5			
Cyanide	mg/L	4	ND	ND	ND	0.005	0.6		√
Fluoride	mg/L	52	0.80	0.61	0.72	0.02	1.5		√
Iodide	mg/L	4	0.003	0.0015	0.002	0.002			
Iron	mg/L	52	0.100	0.020	0.034	0.002		0.2	
Magnesium	mg/L	13	0.10	0.02	0.03	0.001			
Magnesium Hardness	mg/L	13	13.000	9.899	11.610	0.0041			
Manganese	mg/L	52	0.011	0.001	0.004	0.0005	0.4	0.04	√
pH	pH Units	364*	8.6	7.0	7.60	0.1		7.0-8.5	
Potassium	mg/L	13	3.4	2.8	3.1	0.1			
Silicon	mg/L	4	30.0	28.0	29	0.1			
Sodium	mg/L	4	20.0	17.0	18.8	0.1		200	
Sulphate	mg/L	13	30.1	18.5	23.5	0.02		250	
Suspended Solids	mg/L	13	0.85	ND	0.4	0.2			
Total Dissolved Solids	mg/L	13	180	130	157			1000	
Total Hardness	mg/L	13	64.00	46.00	52.60	0.029		200	
Total Organic Carbon TOC	mg/L	13	2.1	0.5	1.2	0.1			
Turbidity	NTU	364*	4.4	0.1	0.4	0.05		2.5	

Microbiology									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
Confirmed Cryptosporidium per 100L	cysts/100 L	5	ND	ND	ND	1	<1		√
Confirmed Giardia per 100L	cysts/100 L	5	ND	ND	ND	1	<1		√

Microbiology cont.									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
E. coli	MPN/100mL	364*	ND	ND	ND	1	<1		√

Nutrients									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
Ammonia	mg/L N	4	ND	ND	ND	0.005		1.5	
Dissolved Reactive Phosphorus	mg/L	13	0.011	0.004	0.007	0.005			
Nitrate	mg/L NO3	13	4.220	0.159	2.427	0.002	50		√
Nitrite	mg/L NO2	13	0.002	ND	ND	0.002	0.20		√
TKN (Total Kjeldahl Nitrogen)	mg/L N	4	0.146	ND	0.063	0.1			
Total Phosphorus	mg/L	13	0.014	0.006	0.009	0.005			

Plasticizers									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
bis (2-ethylhexyl) adipate	µg/L	13	ND	ND	ND	2			
bis (2-ethylhexyl) phthalate	µg/L	13	ND	ND	ND	2	9		√

Polycyclic Aromatic Hydrocarbons									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
Benzo(a)pyrene	µg/L	13	ND	ND	ND	0.1	0.7		√

Component Name	Units	Number of Samples	Max	Min	Average	Detection Limit	MAV DWSNZ	GV DWSNZ	Compliance DWSNZ 2005 (Revised 2018)
Semi Volatile Organic Compounds									
Organochlorine Pesticides									
Aldrin + Dieldrin	µg/L	13	ND	ND	ND	0.01	0.04		√
Chlordane	µg/L	13	ND	ND	ND	0.01	0.2		√
Lindane	µg/L	13	ND	ND	ND	0.01	2		√
Heptachlor	µg/L	13	ND	ND	ND	0.01			
Heptachlor epoxide	µg/L	13	ND	ND	ND	0.01			
Hexachlorobenzene	µg/L	13	ND	ND	ND	0.1			
Methoxychlor	µg/L	13	ND	ND	ND	0.2	20		√
Permethrin (cis + trans)	µg/L	13	ND	ND	ND	0.2			
DDT + isomers	µg/L	13	ND	ND	ND	0.2	1		√
Procymidone	µg/L	13	ND	ND	ND	0.2	700		√
Organonitrogen Herbicides									
Alachlor	µg/L	13	ND	ND	ND	0.2	20		√
Atrazine	µg/L	13	ND	ND	ND	0.1	2		√
Metolachlor	µg/L	13	ND	ND	ND	0.1	10		√
Molinate	µg/L	13	ND	ND	ND	0.1	7		√
Pendimethalin	µg/L	13	ND	ND	ND	0.2	20		√
Propanil	µg/L	13	ND	ND	ND	0.1			
Simazine	µg/L	13	ND	ND	ND	0.1	2		√
Terbuthylazine	µg/L	13	ND	ND	ND	0.2	8		√
Trifluralin	µg/L	13	ND	ND	ND	0.2	30		√
Organophosphorus Pesticides									
Chlorpyriphos	µg/L	13	ND	ND	ND	0.2	40		√
Diazinon	µg/L	13	ND	ND	ND	0.1			
Pirimiphos methyl	µg/L	13	ND	ND	ND	0.2	100		√

Trace Elements									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
Antimony	mg/L	4	ND	ND	ND	0.001	0.02		√
Arsenic	mg/L	13	0.0011	0.0023	0.0004	0.0001	0.01		√
Barium	mg/L	13	0.025	0.014	0.019	0.0002	0.7		√
Boron	mg/L	13	0.240	0.12	0.180	0.005	1.4		√
Cadmium	mg/L	13	ND	ND	ND	0.00005	0.004		√
Chromium	mg/L	13	0.0009	ND	0.0002	0.0001	0.05		√
Copper	mg/L	13	0.047	0.008	0.017	0.0002	2		√
Lead	mg/L	4	0.0003	0.0001	0.0002	0.0001	0.01		√
Lithium	mg/L	4	0.0700	0.0450	0.0597	0.0001			
Mercury	mg/L	13	ND	ND	ND	0.00005	0.007		√
Molybdenum	mg/L	4	0.0004	ND	0.0003	0.0003	0.07		√
Nickel	mg/L	4	0.0002	ND	0.0001	0.0001	0.08		√
Selenium	mg/L	4	ND	ND	ND	0.0005	0.01		√
Zinc	mg/L	4	0.004	0.002	0.003	0.001		1.5	

Trihalomethanes									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
Bromodichloromethane	mg/L	51	0.0130	ND	0.0040	0.0001	0.06		√
Bromoform	mg/L	51	0.0019	ND	0.0001	0.0001	0.1		√
Chloroform	mg/L	51	0.0200	ND	0.0043	0.0001	0.4		√
Dibromochloromethane	mg/L	51	0.0062	ND	0.0030	0.0001	0.15		√
THM Sum Ratio		51	0.30	ND	0.09		1		√

Volatile Organic Compounds									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
1,1,1-trichloroethane	mg/L	13	ND	ND	ND	0.0001			
1,2,3-trichlorobenzene	mg/L	13	ND	ND	ND	0.0001			
1,2,4-trichlorobenzene	mg/L	13	ND	ND	ND	0.0001			
1,2-dichlorobenzene	mg/L	13	ND	ND	ND	0.0001	1.5	0.001	√
1,2-dichloroethane	mg/L	13	ND	ND	ND	0.0001	0.03		√
1,4-dichlorobenzene	mg/L	13	ND	ND	ND	0.0001	0.4	0.0003	√
Benzene	mg/L	13	ND	ND	ND	0.0001	0.01		√
Carbon tetrachloride	mg/L	13	ND	ND	ND	0.0001	0.005		√
Ethylbenzene	mg/L	13	ND	ND	ND	0.0001	0.3	0.002	√
Xylenes (total)	mg/L	13	ND	ND	ND	0.0001	0.6	0.02	√
Styrene	mg/L	13	ND	ND	ND	0.0001	0.03	0.004	√
Tetrachloroethene	mg/L	13	ND	ND	ND	0.0001	0.05		√
Toluene	mg/L	13	ND	ND	ND	0.0001	0.8	0.03	√
1,2-dichloroethene (cis + trans)	mg/L	13	ND	ND	ND	0.0001	0.06		√

Halo Acetic Acids (HAAs)									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
Bromoacetic Acid	mg/L	4	ND	ND	ND	0.0005			
Bromochloroacetic Acid	mg/L	4	0.0045	0.0017	0.0031	0.0005			
Monochloroacetic Acid	mg/L	4	ND	ND	ND	0.0005	0.02		√
Dibromoacetic Acid	mg/L	4	0.0026	0.0013	0.0018	0.0005			
Dichloroacetic Acid	mg/L	4	0.0050	0.0011	0.0031	0.0005	0.05		√
Trichloroacetic Acid	mg/L	4	0.0029	ND	0.0014	0.0005	0.2		√
HAA Sum Ratio		4	0.11	0.02	0.08				

Waikato 50 WTP Treated Water

*The Waikato 50 WTP started operating on 14/07/2021.

Acid Herbicides									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
1080 (Sodium fluoroacetate)	mg/L	2	ND	ND	ND	0.0001	0.0035		√
2,4,5- trichlorophenoxyacetic acid (2,4,5-T)	mg/L	25	ND	ND	ND	0.0001	0.01		√
2,4-Dichlorophenoxyacetic acid (2,4-BD)	mg/L	25	ND	ND	ND	0.0001	0.04		√
4-(2,4-dichlorophenoxyl) butanoic acid (2,4-DB)	mg/L	25	ND	ND	ND	0.0001	0.1		√
Bentazone	mg/L	25	ND	ND	ND	0.0001			
Dichlorprop	mg/L	25	ND	ND	ND	0.0001	0.1		√
MCPA	mg/L	25	ND	ND	ND	0.0001	0.002		√
Mecoprop	mg/L	25	ND	ND	ND	0.0001	0.01		√
Picloram	mg/L	25	ND	ND	ND	0.0001	0.2		√
Triclopyr	mg/L	25	ND	ND	ND	0.0001	0.1		√

Chemical and Physical									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
UV absorbance at 254nm	Abs units	101	0.043	0.008	0.021	0.002			
Alkalinity (Total) as $CaCO_3$	mg/L	101	56	36	47	1			
Aluminium	mg/L	78	0.033	0.010	0.015	0.005		0.1	
Bromate	mg/L	25	ND	ND	ND	0.005	0.01		√
Bromide	mg/L	25	0.027	0.012	0.022	0.005			
Calcium	mg/L	25	10.0	6.3	7.9	0.01			
Calcium Hardness	mg/L	25	26.00	16.00	19.88	0.025			
Chlorate	mg/L	25	0.24	0.03	0.08	0.01	0.8		√
Chloride	mg/L	25	29.10	22.80	25.70	0.02		250	

Chemical and Physical cont.									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
Chlorine Residual	mg/L	352	1.84	0.74	1.33	0.02	5	0.6-1.0	√
Chlorite	mg/L	25	ND	ND	ND	0.005	0.8		√
Colour	Hazen Units	6	ND	ND	ND	5		10	
Conductivity	mS/m	25	23.50	16.10	21.59	0.5			
Cyanide	mg/L	6	ND	ND	ND	0.005	0.6		√
Fluoride	mg/L	50**	0.79	0.43	0.57	0.02	1.5		√
Iodide	mg/L	6	0.002	ND	0.001	0.002			
Iron	mg/L	78	0.04	ND	0.002	0.002		0.2	
Magnesium	mg/L	25	3.10	2.40	2.76	0.001			
Magnesium Hardness	mg/L	25	14.000	9.900	11.396	0.0041			
Manganese	mg/L	78	0.039	0.012	0.001	0.0005	0.4	0.04	√
pH	pH Units	352	8.10	7.20	7.55	0.1		7.0-8.5	
Potassium	mg/L	25	3.80	2.70	3.06	0.1			
Silicon	mg/L	6	29.00	25.00	26.80	0.1			
Sodium	mg/L	6	30.00	25.00	28.00	0.1		200	
Sulphate	mg/L	25	19.00	10.00	132.28	0.02		250	
Suspended Solids	mg/L	25	1.80	MND	0.50	0.2			
Total Dissolved Solids	mg/L	25	170.00	110.00	140.40			1000	
Total Hardness	mg/L	25	40.00	25.00	31.36	0.029		200	
Total Organic Carbon TOC	mg/L	25	2.20	0.50	1.20	0.1			
Turbidity	NTU	351	4.40	ND	0.10	0.05		2.5	

**Fluoride was sampled from the blended flow of naturally occurring fluoride levels from the Waikato 50 WTP and fluoridated flow stream from the Waikato 175 WTP.

Microbiology

Component Name	Units	Number of Samples	Max	Min	Average	Detection Limit	MAV DWSNZ	GV DWSNZ	Compliance DWSNZ 2005 (Revised 2018)
Confirmed Cryptosporidium per 100L	cysts/100 L	1	ND	ND	ND	1	<1		√
Confirmed Giardia per 100L	cysts/100 L	1	ND	ND	ND	1	<1		√
E. coli	MPN/100mL	352	ND	ND	ND	1	<1		√

Nutrients

Component Name	Units	Number of Samples	Max	Min	Average	Detection Limit	MAV DWSNZ	GV DWSNZ	Compliance DWSNZ 2005 (Revised 2018)
Ammonia	mg/L N	6	0.005	ND	0.002	0.005		1.5	
Dissolved Reactive Phosphorus	mg/L	25	0.005	ND	0.003	0.005			
Nitrate	mg/L NO3	25	7.529	0.430	2.182	0.002	50		√
Nitrite	mg/L NO2	25	0.009	ND	0.001	0.002	0.20		√
TKN (Total Kjeldahl Nitrogen)	mg/L N	6	0.349	ND	0.104	0.1			
Total Phosphorus	mg/L	25	0.033	ND	0.003	0.005			

Plasticizers

Component Name	Units	Number of Samples	Max	Min	Average	Detection Limit	MAV DWSNZ	GV DWSNZ	Compliance DWSNZ 2005 (Revised 2018)
bis (2-ethylhexyl) adipate	µg/L	25	ND	ND	ND	2			
bis (2-ethylhexyl) phthalate	µg/L	25	ND	ND	ND	2	9		√

Polycyclic Aromatic Hydrocarbons

Component Name	Units	Number of Samples	Max	Min	Average	Detection Limit	MAV DWSNZ	GV DWSNZ	Compliance DWSNZ 2005 (Revised 2018)
Benzo(a)pyrene	µg/L	25	ND	ND	ND	0.1	0.7		√

Component Name	Units	Number of Samples	Max	Min	Average	Detection Limit	MAV DWSNZ	GV DWSNZ	Compliance DWSNZ 2005 (Revised 2018)
Semi Volatile Organic Compounds									
Organochlorine Pesticides									
Aldrin + Dieldrin	µg/L	25	ND	ND	ND	0.01	0.04		√
Chlordane	µg/L	25	ND	ND	ND	0.01	0.2		√
Lindane	µg/L	25	ND	ND	ND	0.01	2		√
Heptachlor	µg/L	25	ND	ND	ND	0.01			
Heptachlor epoxide	µg/L	25	ND	ND	ND	0.01			
Hexachlorobenzene	µg/L	25	ND	ND	ND	0.1			
Methoxychlor	µg/L	25	ND	ND	ND	0.2	20		√
Permethrin (cis + trans)	µg/L	25	ND	ND	ND	0.2			
DDT + isomers	µg/L	25	ND	ND	ND	0.2	1		√
Procymidone	µg/L	25	ND	ND	ND	0.2	700		√
Organonitrogen Herbicides									
Alachlor	µg/L	25	ND	ND	ND	0.2	20		√
Atrazine	µg/L	25	ND	ND	ND	0.1	2		√
Metolachlor	µg/L	25	ND	ND	ND	0.1	10		√
Molinate	µg/L	25	ND	ND	ND	0.1	7		√
Pendimethalin	µg/L	25	ND	ND	ND	0.2	20		√
Propanil	µg/L	25	ND	ND	ND	0.1			
Simazine	µg/L	25	ND	ND	ND	0.1	2		√
Terbuthylazine	µg/L	25	ND	ND	ND	0.2	8		√
Trifluralin	µg/L	25	ND	ND	ND	0.2	30		√
Organophosphorus Pesticides									
Chlorpyriphos	µg/L	25	ND	ND	ND	0.2	40		√
Diazinon	µg/L	25	ND	ND	ND	0.1			
Pirimiphos methyl	µg/L	25	ND	ND	ND	0.2	100		√

Trace Elements									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
Antimony	mg/L	6	0.001	ND	ND	0.001	0.02		√
Arsenic	mg/L	25	0.0018	0.0003	0.0009	0.0001	0.01		√
Barium	mg/L	25	0.027	0.012	0.018	0.0002	0.7		√
Boron	mg/L	25	0.230	0.110	0.170	0.005	1.4		√
Cadmium	mg/L	25	0.00006	ND	ND	0.00005	0.004		√
Chromium	mg/L	25	ND	ND	ND	0.0001	0.05		√
Copper	mg/L	25	0.0078	0.0016	0.0032	0.0002	2		√
Lead	mg/L	6	0.0002	0.0001	0.0002	0.0001	0.01		√
Lithium	mg/L	6	0.0670	0.0370	0.0485	0.0001			
Mercury	mg/L	25	0.0001	ND	ND	0.00005	0.007		√
Molybdenum	mg/L	6	0.0003	ND	0.0001	0.0003	0.07		√
Nickel	mg/L	6	0.0004	ND	0.0002	0.0001	0.08		√
Selenium	mg/L	6	ND	ND	ND	0.0005	0.01		√
Zinc	mg/L	6	0.009	0.002	0.004	0.001		1.5	

Trihalomethanes									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
Bromodichloromethane	mg/L	100	0.010	ND	0.004	0.0001	0.06		√
Bromoform	mg/L	100	0.004	ND	ND	0.0001	0.1		√
Chloroform	mg/L	100	0.048	ND	0.006	0.0001	0.4		√
Dibromochloromethane	mg/L	100	0.008	ND	0.003	0.0001	0.15		√
THM Sum Ratio		100	0.30	ND	0.09		1		√

Volatile Organic Compounds									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
1,1,1-trichloroethane	mg/L	25	ND	ND	ND	0.0001			
1,2,3-trichlorobenzene	mg/L	25	ND	ND	ND	0.0001			
1,2,4-trichlorobenzene	mg/L	25	ND	ND	ND	0.0001			
1,2-dichlorobenzene	mg/L	25	ND	ND	ND	0.0001	1.5	0.001	√
1,2-dichloroethane	mg/L	25	ND	ND	ND	0.0001	0.03		√
1,4-dichlorobenzene	mg/L	25	ND	ND	ND	0.0001	0.4	0.0003	√
Benzene	mg/L	25	ND	ND	ND	0.0001	0.01		√
Carbon tetrachloride	mg/L	25	ND	ND	ND	0.0001	0.005		√
Ethylbenzene	mg/L	25	ND	ND	ND	0.0001	0.3	0.002	√
Xylenes (total)	mg/L	25	ND	ND	ND	0.0001	0.6	0.02	√
Styrene	mg/L	25	ND	ND	ND	0.0001	0.03	0.004	√
Tetrachloroethene	mg/L	25	ND	ND	ND	0.0001	0.05		√
Toluene	mg/L	25	ND	ND	ND	0.0001	0.8	0.03	√
1,2-dichloroethene (cis + trans)	mg/L	25	ND	ND	ND	0.0001	0.06		√

Halo Acetic Acids (HAAs)									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
Bromoacetic Acid	mg/L	6	ND	ND	ND	0.0005			
Bromochloroacetic Acid	mg/L	6	0.0059	0.0026	0.0035	0.0005			
Monochloroacetic Acid	mg/L	6	ND	ND	ND	0.0005	0.02		√
Dibromoacetic Acid	mg/L	6	0.0037	0.0009	0.0019	0.0005			
Dichloroacetic Acid	mg/L	6	0.0061	0.0026	0.0042	0.0005	0.05		√
Trichloroacetic Acid	mg/L	6	0.0036	0.0020	0.0027	0.0005	0.2		√
HAA Sum Ratio		6	0.14	0.06	10.0				

Waitakere WTP Treated Water

*The Waitakere WTP was shut down from the 25th January - 23rd February 2022. Compliance sampling was not undertaken on the dates that the plant was not producing water. Samples were collected on the day the plant was shutdown and on the day the plant was restarted.

Acid Herbicides

Component Name	Units	Number of Samples	Max	Min	Average	Detection Limit	MAV DWSNZ	GV DWSNZ	Compliance DWSNZ 2005 (Revised 2018)
2,4,5- trichlorophenoxyacetic acid (2,4,5-T)	mg/L	4	ND	ND	ND	0.0001	0.01		√
2,4-Dichlorophenoxyacetic acid (2,4-BD)	mg/L	4	ND	ND	ND	0.0001	0.04		√
4-(2,4-dichlorophenoxyl) butanoic acid (2,4-DB)	mg/L	4	ND	ND	ND	0.0001	0.1		√
Bentazone	mg/L	4	ND	ND	ND	0.0001			
Dichlorprop	mg/L	4	ND	ND	ND	0.0001	0.1		√
MCPA	mg/L	4	ND	ND	ND	0.0001	0.002		√
Mecoprop	mg/L	4	ND	ND	ND	0.0001	0.01		√
Picloram	mg/L	4	ND	ND	ND	0.0001	0.2		√
Triclopyr	mg/L	4	ND	ND	ND	0.0001	0.1		√

Chemical and Physical

Component Name	Units	Number of Samples	Max	Min	Average	Detection Limit	MAV DWSNZ	GV DWSNZ	Compliance DWSNZ 2005 (Revised 2018)
UV absorbance at 254nm	Abs units	48	0.028	0.009	0.017	0.002			
Alkalinity (Total) as $CaCO_3$	mg/L	48	33.0	9.4	19.9	1			
Aluminium	mg/L	48	0.062	0.022	0.028	0.005		0.1	
Bromate	mg/L	4	ND	ND	ND	0.005	0.01		√
Bromide	mg/L	4	0.041	0.012	0.026	0.005			
Calcium	mg/L	12	11.0	9.9	12	0.01			
Calcium Hardness	mg/L	12	34.00	24.00	28.92	0.025			
Chlorate	mg/L	4	0.051	ND	0.013	0.01	0.8		√

Chemical and Physical cont.									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
Chloride	mg/L	4	25.4	15.9	21.7	0.02		250	
Chlorine Residual	mg/L	337*	1.47	0.45	0.98	0.02	5	0.6-1.0	√
Chlorite	mg/L	4	ND	ND	ND	0.005	0.8		√
Colour	Hazen Units	12	ND	ND	ND	5		10	
Conductivity	mS/m	12	17.9	15.3	16.7	0.5			
Cyanide	mg/L	4	ND	ND	ND	0.005	0.6		√
Fluoride	mg/L	48	0.77	0.59	0.68	0.02	1.5		√
Iodide	mg/L	4	0.004	0.002	0	0.002			
Iron	mg/L	48	0.022	0.009	0.014	0.002		0.2	
Magnesium	mg/L	12	3.10	1.80	2.57	0.001			
Magnesium Hardness	mg/L	12	13.000	7.300	10.625	0.0041			
Manganese	mg/L	48	0.011	0.001	0.005	0.0005	0.4	0.04	√
pH	pH Units	337*	8.1	7.1	7.6	0.1		7.0-8.5	
Potassium	mg/L	4	1.6	0.9	1.1	0.1			
Silicon	mg/L	4	16.0	13.0	14.8	0.1			
Sodium	mg/L	4	15.00	12.00	14.3	0.1		200	
Sulphate	mg/L	4	20.10	12.00	15.55	0.02		250	
Suspended Solids	mg/L	12	0.30	ND	0.19	0.2			
Total Hardness	mg/L	12	47.00	33.00	39.42	0.029		200	
Total Organic Carbon TOC	mg/L	12	1.3	0.5	1.0	0.1			
Turbidity	NTU	337*	1.8	0.1	0.2	0.05		2.5	

Microbiology									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
E. coli	MPN/100mL	337*	ND	ND	ND	1	<1		√

Nutrients

Component Name	Units	Number of Samples	Max	Min	Average	Detection Limit	MAV DWSNZ	GV DWSNZ	Compliance DWSNZ 2005 (Revised 2018)
Ammonia	mg/L	4	0.005	ND	0.001	0.005		1.5	
Dissolved Reactive Phosphorus	mg/L	4	0.009	0.003	0.005	0.005			
Nitrate (as NO_3)	mg/L	4	1.395	0.049	0.411	0.002	50		√
Nitrite (as NO_2)	mg/L	4	0.009	ND	0.002	0.002	0.2		√
TKN (Total Kjeldahl Nitrogen)	mg/L	4	0.123	ND	0.031	0.1			
Total Phosphorus	mg/L	4	0.048	ND	0.014	0.005			

Plasticizers

Component Name	Units	Number of Samples	Max	Min	Average	Detection Limit	MAV DWSNZ	GV DWSNZ	Compliance DWSNZ 2005 (Revised 2018)
bis (2-ethylhexyl) adipate	µg/L	4	ND	ND	ND	2			
bis (2-ethylhexyl) phthalate	µg/L	4	ND	ND	ND	2	9		√

Polycyclic Aromatic Hydrocarbons

Component Name	Units	Number of Samples	Max	Min	Average	Detection Limit	MAV DWSNZ	GV DWSNZ	Compliance DWSNZ 2005 (Revised 2018)
Benzo(a)pyrene	µg/L	4	ND	ND	ND	0	0.7		√

Semi Volatile Organic Compounds

Organochlorine Pesticides

Component Name	Units	Number of Samples	Max	Min	Average	Detection Limit	MAV DWSNZ	GV DWSNZ	Compliance DWSNZ 2005 (Revised 2018)
Aldrin + Dieldrin	µg/L	4	ND	ND	ND	0.01	0.04		√
Chlordane	µg/L	4	ND	ND	ND	0.01	0.2		√
Lindane	µg/L	4	ND	ND	ND	0.01	2		√
Heptachlor	µg/L	4	ND	ND	ND	0.01			
Heptachlor epoxide	µg/L	4	ND	ND	ND	0.01			

Organochlorine Pesticides cont.									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
Hexachlorobenzene	µg/L	4	ND	ND	ND	0.1			
Methoxychlor	µg/L	4	ND	ND	ND	0.2	20		√
Permethrin (cis + trans)	µg/L	4	ND	ND	ND	0.2			
DDT + isomers	µg/L	4	ND	ND	ND	0.2	1		√
Procymidone	µg/L	4	ND	ND	ND	0.2	700		√
Organonitrogen Herbicides									
Alachlor	µg/L	4	ND	ND	ND	0.2	20		√
Atrazine	µg/L	4	ND	ND	ND	0.1	2		√
Metolachlor	µg/L	4	ND	ND	ND	0.1	10		√
Molinate	µg/L	4	ND	ND	ND	0.1	7		√
Pendimethalin	µg/L	4	ND	ND	ND	0.2	20		√
Propanil	µg/L	4	ND	ND	ND	0.1			
Simazine	µg/L	4	ND	ND	ND	0.1	2		√
Terbuthylazine	µg/L	4	ND	ND	ND	0.2	8		√
Trifluralin	µg/L	4	ND	ND	ND	0.2	30		√
Organophosphorus Pesticides									
Chlorpyriphos	µg/L	4	ND	ND	ND	0.2	40		√
Diazinon	µg/L	4	ND	ND	ND	0.1			
Pirimiphos methyl	µg/L	4	ND	ND	ND	0.2	100		√

Trace Elements									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
Antimony	mg/L	4	ND	ND	ND	0.001	0.02		√
Arsenic	mg/L	4	0.0007	0.0001	0.0003	0.0001	0.01		√
Barium	mg/L	4	0.0086	0.0042	0.0065	0.0002	0.7		√
Boron	mg/L	4	0.048	0.006	0.022	0.005	1.4		√
Cadmium	mg/L	4	ND	ND	ND	0.00005	0.004		√

Trace Elements cont.									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
Chromium	mg/L	4	ND	ND	ND	0.0001	0.05		√
Copper	mg/L	4	0.0003	ND	0.0002	0.0002	2		√
Lead	mg/L	4	ND	ND	ND	0.0001	0.01		√
Lithium	mg/L	4	0.0130	0.0005	0.0037	0.0001			
Molybdenum	mg/L	4	ND	ND	ND	0.0003	0.07		√
Nickel	mg/L	4	0.0001	ND	ND	0.0001	0.08		√
Selenium	mg/L	4	ND	ND	ND	0.0005	0.01		√
Zinc	mg/L	4	0.003	ND	0.001	0.001		1.5	

Trihalomethanes									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
Bromodichloromethane	mg/L	48	0.014	0.003	0.008	0.0001	0.06		√
Bromoform	mg/L	48	0.005	ND	0.002	0.0001	0.1		√
Chloroform	mg/L	48	0.016	ND	0.006	0.0001	0.4		√
Dibromochloromethane	mg/L	48	0.019	0.003	0.011	0.0001	0.15		√
THM Sum Ratio		48	0.41	0.10	0.25		1		√

Volatile Organic Compounds									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
1,1,1-trichloroethane	mg/L	4	ND	ND	ND	0.0001			
1,2,3-trichlorobenzene	mg/L	4	ND	ND	ND	0.0001			
1,2,4-trichlorobenzene	mg/L	4	ND	ND	ND	0.0001			
1,2-dichlorobenzene	mg/L	4	ND	ND	ND	0.0001	1.5	0.001	√
1,2-dichloroethane	mg/L	4	ND	ND	ND	0.0001	0.03		√
1,4-dichlorobenzene	mg/L	4	ND	ND	ND	0.0001	0.4	0.0003	√

Volatile Organic Compounds cont.									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
Benzene	mg/L	4	ND	ND	ND	0.0001	0.01		√
Carbon tetrachloride	mg/L	4	ND	ND	ND	0.0001	0.005		√
Ethylbenzene	mg/L	4	ND	ND	ND	0.0001	0.3	0.002	√
Xylenes (total)	mg/L	4	ND	ND	ND	0.0001	0.6	0.02	√
Styrene	mg/L	4	ND	ND	ND	0.0001	0.03	0.004	√
Tetrachloroethene	mg/L	4	ND	ND	ND	0.0001	0.05		√
Toluene	mg/L	4	ND	ND	ND	0.0001	0.8	0.03	√
1,2-dichloroethene (cis + trans)	mg/L	4	ND	ND	ND	0.0001	0.06		√
Trichloroethene	mg/L	4	ND	ND	ND	0.0001	0.02		√

Halo Acetic Acids (HAAs)									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
Bromoacetic Acid	mg/L	4	ND	ND	ND	0.0005			
Bromochloroacetic Acid	mg/L	4	0.0062	0.0023	0.0047	0.0005			
Monochloroacetic Acid	mg/L	4	ND	ND	ND	0.0005	0.02		√
Dibromoacetic Acid	mg/L	4	0.0059	0.0024	0.0042	0.0005			
Dichloroacetic Acid	mg/L	4	0.0066	0.0017	0.0043	0.0005	0.05		√
Trichloroacetic Acid	mg/L	4	0.0042	ND	0.0024	0.0005	0.2		√
HAA Sum Ratio		4	0.15	0.05	0.10				

Waiuku Road WTP Treated Water

Chemical and Physical									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
Alkalinity (Total) as $CaCO_3$	mg/L	4	130	110	120	1			
Aluminium	mg/L	1	ND	ND	ND	0.005		0.1	
Bromate	mg/L	1	ND	ND	ND	0.005	0.01		√
Bromide	mg/L	1	0.08	0.08	0.08	0.005			
Calcium	mg/L	13	29.0	25.0	28.0	0.01			
Calcium Hardness	mg/L	13	73.00	63.00	69.54	0.025			
Chlorate	mg/L	1	0.01	0.01	0.01	0.01	0.8		√
Chloride	mg/L	1	32.40	32.40	32.40	0.02		250	
Chlorine Residual	mg/L	122	1.81	0.65	1.08	0.02	5	0.6-1.0	√
Chlorite	mg/L	1	ND	ND	ND	0.005	0.8		√
Colour	Hazen Units	1	ND	ND	ND	5		10	
Conductivity	mS/m	1	34.7	34.7	34.7	0.5			
Cyanide	mg/L	1	ND	ND	ND	0.005	0.6		√
Fluoride	mg/L	1	0.04	0.04	0.04	0.02	1.5		√
Iodide	mg/L	1	0.003	0.003	0.003	0.002			
Iron	mg/L	13	ND	ND	ND	0.002		0.2	
Magnesium	mg/L	13	7.80	6.60	7.12	0.001			
Magnesium Hardness	mg/L	13	32.000	27.000	29.462	0.0041			
Manganese	mg/L	13	0.0011	ND	0.0007	0.0005	0.4	0.04	√
pH	pH Units	122	8.3	7.8	8.0	0.1		7.0-8.5	
Potassium	mg/L	1	4.7	4.7	4.7	0.1			
Silicon	mg/L	1	32.0	32.0	32.0	0.1			
Sodium	mg/L	1	25.0	25.0	25.0	0.1		200	
Sulphate	mg/L	1	5.0	5.0	5.0	0.02		250	

Chemical and Physical cont.									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
Suspended Solids	mg/L	1	ND	ND	ND	0.2			
Total Dissolved Solids	mg/L	1	220	220	220	15		1000	
Total Hardness	mg/L	13	100.00	91.00	97.77	0.029		200	
Turbidity	NTU	122	0.3	ND	0.1	0.05		2.5	

Microbiology									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
E. coli	MPN/100mL	122	ND	ND	ND	1	<1		√

Nutrients									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
Ammonia	mg/L	1	ND	ND	ND	0.005		1.5	
Dissolved Reactive Phosphorus	mg/L	1	0.057	0.057	0.057	0.005			
Nitrate (as NO_3)	mg/L	1	0.066	0.066	0.066	0.002	50		√
Nitrite (as NO_2)	mg/L	1	ND	ND	ND	0.002	0.2		√
TKN (Total Kjeldahl Nitrogen)	mg/L	1	ND	ND	ND	0.1			
Total Phosphorus	mg/L	1	0.066	0.066	0.066	0.005			

Plasticizers									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
bis (2-ethylhexyl) adipate	µg/L	1	ND	ND	ND	2			
bis (2-ethylhexyl) phthalate	µg/L	1	ND	ND	ND	2	9		√

Polycyclic Aromatic Hydrocarbons									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
Benzo(a)pyrene	µg/L	1	ND	ND	ND	0.1	0.7		√

Semi Volatile Organic Compounds									
Organochlorine Pesticides									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
Aldrin + Dieldrin	µg/L	1	ND	ND	ND	0.01	0.04		√
Chlordane	µg/L	1	ND	ND	ND	0.01	0.2		√
Lindane	µg/L	1	ND	ND	ND	0.01	2		√
Heptachlor	µg/L	1	ND	ND	ND	0.01			
Heptachlor epoxide	µg/L	1	ND	ND	ND	0.01			
Hexachlorobenzene	µg/L	1	ND	ND	ND	0.1			
Methoxychlor	µg/L	1	ND	ND	ND	0.2	20		√
Permethrin (cis + trans)	µg/L	1	ND	ND	ND	0.2			
DDT + isomers	µg/L	1	ND	ND	ND	0.2	1		√
Procymidone	µg/L	1	ND	ND	ND	0.2	700		√
Organonitrogen Herbicides									
Alachlor	µg/L	1	ND	ND	ND	0.2	20		√
Atrazine	µg/L	1	ND	ND	ND	0.1	2		√
Metolachlor	µg/L	1	ND	ND	ND	0.1	10		√
Molinate	µg/L	1	ND	ND	ND	0.1	7		√
Pendimethalin	µg/L	1	ND	ND	ND	0.2	20		√
Propanil	µg/L	1	ND	ND	ND	0.1			
Simazine	µg/L	1	ND	ND	ND	0.1	2		√
Terbuthylazine	µg/L	1	ND	ND	ND	0.2	8		√
Trifluralin	µg/L	1	ND	ND	ND	0.2	30		√

Organophosphorus Pesticides									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
Chlorpyriphos	µg/L	1	ND	ND	ND	0.2	40		√
Diazinon	µg/L	1	ND	ND	ND	0.1			
Pirimiphos methyl	µg/L	1	ND	ND	ND	0.2	100		√

Trace Elements									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
Antimony	mg/L	1	ND	ND	ND	0.001	0.02		√
Arsenic	mg/L	13	0.0048	0.0034	0.0037	0.0001	0.01		√
Barium	mg/L	1	ND	ND	ND	0.0002	0.7		√
Boron	mg/L	1	0.024	0.024	0.024	0.005	1.4		√
Cadmium	mg/L	1	ND	ND	ND	0.00005	0.004		√
Chromium	mg/L	1	ND	ND	ND	0.0001	0.05		√
Copper	mg/L	1	0.0007	0.0007	0.0007	0.0002	2		√
Lead	mg/L	1	ND	ND	ND	0.0001	0.01		√
Lithium	mg/L	1	0.0140	0.0140	0.0140	0.0001			
Mercury	mg/L	1	ND	ND	ND	0.00005	0.007		√
Molybdenum	mg/L	1	ND	ND	ND	0.0003	0.07		√
Nickel	mg/L	1	ND	ND	ND	0.0001	0.08		√
Selenium	mg/L	1	ND	ND	ND	0.0005	0.01		√
Zinc	mg/L	1	0.003	0.003	0.003	0.001		1.5	

Trihalomethanes									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
Bromodichloromethane	mg/L	12	0.0026	0.0015	0.0019	0.0001	0.06		√
Bromoform	mg/L	12	0.0034	ND	0.0020	0.0001	0.1		√

Trihalomethanes cont.									
Component Name	**Units**		**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
Chloroform	mg/L	12	0.0011	ND	0.0002	0.0001	0.4		√
Dibromochloromethane	mg/L	12	0.0047	0.0029	0.0036	0.0001	0.15		√
THM Sum Ratio		12	0.09	0.06	0.08		1		√

Volatile Organic Compounds									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
1,1,1-trichloroethane	mg/L	1	ND	ND	ND	0.0001			
1,2,3-trichlorobenzene	mg/L	1	ND	ND	ND	0.0001			
1,2,4-trichlorobenzene	mg/L	1	ND	ND	ND	0.0001			
1,2-dichlorobenzene	mg/L	1	ND	ND	ND	0.0001	1.5	0.001	√
1,2-dichloroethane	mg/L	1	ND	ND	ND	0.0001	0.03		√
1,4-dichlorobenzene	mg/L	1	ND	ND	ND	0.0001	0.4	0.0003	√
Benzene	mg/L	1	ND	ND	ND	0.0001	0.01		√
Carbon tetrachloride	mg/L	1	ND	ND	ND	0.0001	0.005		√
Ethylbenzene	mg/L	1	ND	ND	ND	0.0001	0.3	0.002	√
Xylenes (total)	mg/L	1	ND	ND	ND	0.0001	0.6	0.02	√
Styrene	mg/L	1	ND	ND	ND	0.0001	0.03	0.004	√
Tetrachloroethene	mg/L	1	ND	ND	ND	0.0001	0.05		√
Toluene	mg/L	1	ND	ND	ND	0.0001	0.8	0.03	√
1,2-dichloroethene (cis + trans)	mg/L	1	ND	ND	ND	0.0001	0.06		√
Trichloroethene	mg/L	1	ND	ND	ND	0.0001	0.02		√

Warkworth Wells WTP Treated Water

Chemical and Physical									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
Alkalinity (Total) as $CaCO_3$	mg/L	4	190	180	188	1			
Bromate	mg/L	4	ND	ND	ND	0.005	0.01		√
Bromide	mg/L	4	0.05	0.03	0.04	0.005			
Calcium	mg/L	4	24.0	20.0	21.3	0.01			
Calcium Hardness	mg/L	4	61	51	54	0.01			
Chlorate	mg/L	4	ND	ND	ND	0.025	0.8		√
Chloride	mg/L	1	26.10	26.10	26.10	0.01		250	
Chlorine Residual	mg/L	122	1.25	0.24	0.86	0.02	5	0.6-1.0	√
Chlorite	mg/L	4	ND	ND	ND	0.02	0.8		√
Colour	Hazen Units	1	ND	ND	ND	5		10	
Conductivity	mS/m	1	44.7	44.7	44.7	0.5			
Cyanide	mg/L	1	ND	ND	ND	0.005	0.6		√
Fluoride	mg/L	1	0.1	0.1	0.1	0.02	1.5		√
Iodide	mg/L	1	0.013	0.013	0.013	0.001			
Iron	mg/L	53	0.014	ND	0.001	0.002		0.2	
Magnesium	mg/L	4	7.30	5.90	6.45	0.001			
Magnesium Hardness	mg/L	4	30.000	24.000	26.500	0.0041			
Manganese	mg/L	53	0.0023	ND	0.0001	0.0005	0.4	0.04	√
pH	pH unit	122	8.0	7.3	7.7	0.1		7.0-8.5	
Potassium	mg/L	1	0.41	0.41	0.41	0.05			
Silicon	mg/L	1	60.0	60.0	60.0	0.1			
Sodium	mg/L	1	71.0	71.0	71.0	0.1		200	
Sulphate	mg/L	1	8.71	8.71	8.71	0.02		250	
Suspended Solids	mg/L	1	ND	ND	ND	0.2			
Total Dissolved Solids	mg/L	1	320	320	320	15		1000	

Chemical and Physical cont.									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
Total Hardness	mg/L	4	91.00	75.00	80.50	0.029		200	
Total Organic Carbon TOC	mg/L	13	1.4	0.2	0.9	0.1			
Turbidity	NTU	122	0.4	ND	0.1	0.05		2.5	

Microbiology									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
E. coli	MPN/100mL	122	ND	ND	ND	1	<1		√

Nutrients									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
Ammonia	mg/L	1	0.005	0.005	0.005	0.005		1.5	
Dissolved Reactive Phosphorus	mg/L	1	0.076	0.076	0.076	0.005			
Nitrate (as NO_3)	mg/L	1	0.019	0.019	0.019	0.002	50		√
Nitrite (as NO_2)	mg/L	1	ND	ND	ND	0.002	0.2		√
TKN (Total Kjeldahl Nitrogen)	mg/L	1	0.112	0.112	0.112	0.1			
Total Phosphorus	mg/L	1	0.084	0.084	0.084	0.005			

Plasticizers									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
bis (2-ethylhexyl) adipate	µg/L	1	ND	ND	ND	2			
bis (2-ethylhexyl) phthalate	µg/L	1	ND	ND	ND	2	9		√

Polycyclic Aromatic Hydrocarbons									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
Benzo(a)pyrene	µg/L	1	ND	ND	ND	0.1	0.7		√

Semi Volatile Organic Compounds									
Organochlorine Pesticides									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
Aldrin + Dieldrin	µg/L	1	ND	ND	ND	0.01	0.04		√
Chlordane	µg/L	1	ND	ND	ND	0.01	0.2		√
Lindane	µg/L	1	ND	ND	ND	0.01	2		√
Heptachlor	µg/L	1	ND	ND	ND	0.01			
Heptachlor epoxide	µg/L	1	ND	ND	ND	0.01			
Hexachlorobenzene	µg/L	1	ND	ND	ND	0.1			
Methoxychlor	µg/L	1	ND	ND	ND	0.2	20		√
Permethrin (cis + trans)	µg/L	1	ND	ND	ND	0.2			
DDT + isomers	µg/L	1	ND	ND	ND	0.2	1		√
Procymidone	µg/L	1	ND	ND	ND	0.2	700		√
Organonitrogen Herbicides									
Alachlor	µg/L	1	ND	ND	ND	0.2	20		√
Atrazine	µg/L	1	ND	ND	ND	0.1	2		√
Metolachlor	µg/L	1	ND	ND	ND	0.1	10		√
Molinate	µg/L	1	ND	ND	ND	0.1	7		√
Pendimethalin	µg/L	1	ND	ND	ND	0.2	20		√
Propanil	µg/L	1	ND	ND	ND	0.1			
Simazine	µg/L	1	ND	ND	ND	0.1	2		√
Terbuthylazine	µg/L	1	ND	ND	ND	0.2	8		√
Trifluralin	µg/L	1	ND	ND	ND	0.2	30		√

Organophosphorus Pesticides									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
Chlorpyriphos	µg/L	1	ND	ND	ND	0.2	40		√
Diazinon	µg/L	1	ND	ND	ND	0.1			
Pirimiphos methyl	µg/L	1	ND	ND	ND	0.2	100		√

Trace Elements									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
Antimony	mg/L	1	ND	ND	ND	0.001	0.02		√
Arsenic	mg/L	13	ND	ND	ND	0.0001	0.01		√
Barium	mg/L	1	0.001	0.001	0.001	0.0002	0.7		√
Boron	mg/L	1	0.14	0.14	0.14	0.005	1.4		√
Cadmium	mg/L	1	ND	ND	ND	0.00005	0.004		√
Chromium	mg/L	1	ND	ND	ND	0.0001	0.05		√
Copper	mg/L	1	ND	ND	ND	0.0002	2		√
Lead	mg/L	1	ND	ND	ND	0.0001	0.01		√
Lithium	mg/L	1	0.0130	0.0130	0.0130	0.0001			
Mercury	mg/L	1	ND	ND	ND	0.00005	0.007		√
Molybdenum	mg/L	1	ND	ND	ND	0.0003	0.07		√
Nickel	mg/L	1	0.0001	0.0001	0.0001	0.0001	0.08		√
Selenium	mg/L	1	ND	ND	ND	0.0005	0.01		√
Zinc	mg/L	1	ND	ND	ND	0.001		1.5	

Trihalomethanes

Component Name	Units	Number of Samples	Max	Min	Average	Detection Limit	MAV DWSNZ	GV DWSNZ	Compliance DWSNZ 2005 (Revised 2018)
Bromodichloromethane	mg/L	53	0.0130	0.0036	0.0080	0.0001	0.06		√
Bromoform	mg/L	53	0.0044	ND	0.0019	0.0001	0.1		√
Chloroform	mg/L	53	0.0180	0.0011	0.0068	0.0001	0.4		√
Dibromochloromethane	mg/L	53	0.0160	0.0046	0.0092	0.0001	0.15		√
THM Sum Ratio		53	0.40	0.10	0.23		1		√

Volatile Organic Compounds

Component Name	Units	Number of Samples	Max	Min	Average	Detection Limit	MAV DWSNZ	GV DWSNZ	Compliance DWSNZ 2005 (Revised 2018)
1,1,1-trichloroethane	mg/L	1	ND	ND	ND	0.0001			
1,2,3-trichlorobenzene	mg/L	1	ND	ND	ND	0.0001			
1,2,4-trichlorobenzene	mg/L	1	ND	ND	ND	0.0001			
1,2-dichlorobenzene	mg/L	1	ND	ND	ND	0.0001	1.5	0.001	√
1,2-dichloroethane	mg/L	1	ND	ND	ND	0.0001	0.03		√
1,4-dichlorobenzene	mg/L	1	ND	ND	ND	0.0001	0.4	0.0003	√
Benzene	mg/L	1	ND	ND	ND	0.0001	0.01		√
Carbon tetrachloride	mg/L	1	ND	ND	ND	0.0001	0.005		√
Ethylbenzene	mg/L	1	ND	ND	ND	0.0001	0.3	0.002	√
Xylenes (total)	mg/L	1	ND	ND	ND	0.0001	0.6	0.02	√
Styrene	mg/L	1	ND	ND	ND	0.0001	0.03	0.004	√
Tetrachloroethene	mg/L	1	ND	ND	ND	0.0001	0.05		√
Toluene	mg/L	1	ND	ND	ND	0.0001	0.8	0.03	√
1,2-dichloroethene (cis + trans)	mg/L	1	ND	ND	ND	0.0001	0.06		√
Trichloroethene	mg/L	1	ND	ND	ND	0.0001	0.02		√

Wellsford WTP Treated Water

Acid Herbicides

Component Name	Units	Number of Samples	Max	Min	Average	Detection Limit	MAV DWSNZ	GV DWSNZ	Compliance DWSNZ 2005 (Revised 2018)
2-4-5-Trichlorophenoxyacetic acid (2,4-T)	mg/L	13	ND	ND	ND	0.0001	0.01		√
2-4-Dichlorophenoxyacetic acid (2,4-D)	mg/L	13	ND	ND	ND	0.0001	0.04		√
4-(2-4-Dichlorophenoxy) butanoic acid (2,4-DB)	mg/L	13	ND	ND	ND	0.0001	0.1		√
Bentazone	mg/L	13	ND	ND	ND	0.0001			
Dichlorprop	mg/L	13	ND	ND	ND	0.0001	0.1		√
MCPA	mg/L	13	ND	ND	ND	0.0001	0.002		√
Mecoprop (MCPP)	mg/L	13	ND	ND	ND	0.0001	0.01		√
Picloram	mg/L	13	ND	ND	ND	0.0001	0.2		√
Triclopyr	mg/L	13	ND	ND	ND	0.0001	0.1		√

Chemical and Physical

Component Name	Units	Number of Samples	Max	Min	Average	Detection Limit	MAV DWSNZ	GV DWSNZ	Compliance DWSNZ 2005 (Revised 2018)
UV absorbance at 254nm	Abs units	53	0.034	0.010	0.018	0.002			
Alkalinity (Total) as $CaCO_3$	mg/L	53	56	30	40	1			
Aluminium	mg/L	53	0.640	0.009	0.058	0.005		0.1	
Bromate	mg/L	4	ND	ND	ND	0.005	0.01		√
Bromide	mg/L	4	0.06	0.02	0.05	0.005			
Calcium	mg/L	13	14.0	8.9	11.8	0.01			
Calcium Hardness	mg/L	13	35.00	22.00	29.23	0.025			
Chlorate	mg/L	4	ND	ND	ND	0.01	0.8		√
Chloride	mg/L	4	29.00	19.70	25.60	0.02		250	
Chlorine Residual	mg/L	122	1.80	0.83	1.32	0.02	5	0.6-1.0	√
Chlorite	mg/L	4	ND	ND	ND	0.005	0.8		√
Colour	Hazen Units	4	ND	ND	ND	5		10	

Chemical and Physical cont.									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
Conductivity	mS/m	13	30.3	21.1	25.8	0.5			
Cyanide	mg/L	4	ND	ND	ND	0.005	0.6		√
Fluoride	mg/L	13	0.02	ND	ND	0.02	1.5		√
Iodide	mg/L	4	0.004	0.001	0.002	0.002			
Iron	mg/L	13	0.007	ND	0.003	0.002		0.2	
Magnesium	mg/L	13	5.00	2.90	3.99	0.001			
Magnesium Hardness	mg/L	13	20.000	12.000	16.462	0.0041			
Manganese	mg/L	13	0.0460	0.0059	0.0140	0.0005	0.4	0.04	√
pH	pH Units	122	7.8	7.1	7.3	0.1		7.0-8.5	
Potassium	mg/L	4	2.5	1.2	1.9	0.1			
Silicon	mg/L	4	18.0	12.0	16.5	0.1			
Sodium	mg/L	4	33.0	26.0	29.3	0.1		200	
Sulphate	mg/L	4	41.2	30.3	35.0	0.02		250	
Suspended Solids	mg/L	13	0.7	ND	0.1	0.2			
Total Dissolved Solids	mg/L	13	180	140	165	15		1000	
Total Hardness	mg/L	13	53.00	34.00	45.77	0.029		200	
Total Organic Carbon TOC	mg/L	53	2.2	0.6	1.3	0.1			
Turbidity	NTU	122	0.9	ND	0.1	0.05		2.5	

Microbiology									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
E. coli	MPN/100mL	122	ND	ND	ND	1	<1		√

Nutrients									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
Ammonia	mg/L	4	0.011	ND	0.005	0.005		1.5	

Nutrients cont.									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
Dissolved Reactive Phosphorus	mg/L	13	0.005	0.002	0.003	0.005			
Nitrate (as NO_3)	mg/L	13	3.454	0.018	1.404	0.002	50		√
Nitrite (as NO_2)	mg/L	13	ND	ND	ND	0.002	0.2		√
TKN (Total Kjeldahl Nitrogen)	mg/L	4	ND	ND	ND	0.1			
Total Phosphorus	mg/L	13	0.007	ND	0.002	0.005			

Plasticizers									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
bis (2-ethylhexyl) adipate	µg/L	13	ND	ND	ND	2			
bis (2-ethylhexyl) phthalate	µg/L	13	ND	ND	ND	2	9		√

Polycyclic Aromatic Hydrocarbons									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
Benzo(a)pyrene	µg/L	13	ND	ND	ND	0.1	0.7		√

Semi Volatile Organic Compounds									
Organochlorine Pesticides									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
Aldrin + Dieldrin	µg/L	13	ND	ND	ND	0.01	0.04		√
Chlordane	µg/L	13	ND	ND	ND	0.01	0.2		√
Lindane	µg/L	13	ND	ND	ND	0.01	2		√
Heptachlor	µg/L	13	ND	ND	ND	0.01			
Heptachlor epoxide	µg/L	13	ND	ND	ND	0.01			
Hexachlorobenzene	µg/L	13	ND	ND	ND	0.1			
Methoxychlor	µg/L	13	ND	ND	ND	0.2	20		√

Organochlorine Pesticides cont.									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
Permethrin (cis + trans)	µg/L	13	ND	ND	ND	0.2			
DDT + isomers	µg/L	13	ND	ND	ND	0.2	1		√
Procymidone	µg/L	13	ND	ND	ND	0.2	700		√
Organonitrogen Herbicides									
Alachlor	µg/L	13	ND	ND	ND	0.2	20		√
Atrazine	µg/L	13	ND	ND	ND	0.1	2		√
Metolachlor	µg/L	13	ND	ND	ND	0.1	10		√
Molinate	µg/L	13	ND	ND	ND	0.1	7		√
Pendimethalin	µg/L	13	ND	ND	ND	0.2	20		√
Propanil	µg/L	13	ND	ND	ND	0.1			
Simazine	µg/L	13	ND	ND	ND	0.1	2		√
Terbuthylazine	µg/L	13	ND	ND	ND	0.2	8		√
Trifluralin	µg/L	13	ND	ND	ND	0.2	30		√
Organophosphorus Pesticides									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
Chlorpyriphos	µg/L	13	ND	ND	ND	0.2	40		√
Diazinon	µg/L	13	ND	ND	ND	0.1			
Pirimiphos methyl	µg/L	13	ND	ND	ND	0.2	100		√

Trace Elements									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
Antimony	mg/L	4	ND	ND	ND	0.001	0.02		√
Arsenic	mg/L	4	0.0002	ND	0.0001	0.0001	0.01		√
Barium	mg/L	4	0.031	0.014	0.022	0.0002	0.7		√
Boron	mg/L	4	0.022	ND	0.011	0.005	1.4		√
Cadmium	mg/L	4	ND	ND	ND	0.00005	0.004		√

Trace Elements cont.									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
Chromium	mg/L	4	ND	ND	ND	0.0001	0.05		√
Copper	mg/L	4	0.0051	0.0024	0.0033	0.0002	2		√
Lead	mg/L	4	ND	ND	ND	0.0001	0.01		√
Lithium	mg/L	4	0.0020	0.0013	0.0016	0.0001			
Mercury	mg/L	4	ND	ND	ND	0.00005	0.007		√
Molybdenum	mg/L	4	ND	ND	ND	0.0003	0.07		√
Nickel	mg/L	4	0.0011	0.0004	0.0007	0.0001	0.08		√
Selenium	mg/L	4	ND	ND	ND				
Zinc	mg/L	4	0.016	0.009	0.012	0.001		1.5	

Trihalomethanes									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
Bromodichloromethane	mg/L	53	0.0120	0.0013	0.0052	0.0001	0.06		√
Bromoform	mg/L	53	0.0034	ND	0.0012	0.0001	0.1		√
Chloroform	mg/L	53	0.0170	ND	0.0039	0.0001	0.4		√
Dibromochloromethane	mg/L	53	0.0170	ND	0.0069	0.0001	0.15		√
THM Sum Ratio		53	0.30	0.03	0.15		1		√

Volatile Organic Compounds									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
1,1,1-trichloroethane	mg/L	13	ND	ND	ND	0.0001			
1,2,3-trichlorobenzene	mg/L	13	ND	ND	ND	0.0001			
1,2,4-trichlorobenzene	mg/L	13	ND	ND	ND	0.0001			
1,2-dichlorobenzene	mg/L	13	ND	ND	ND	0.0001	1.5	0.001	√
1,2-dichloroethane	mg/L	13	ND	ND	ND	0.0001	0.03		√
1,4-dichlorobenzene	mg/L	13	ND	ND	ND	0.0001	0.4	0.0003	√

Volatile Organic Compounds cont.									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
Benzene	mg/L	13	ND	ND	ND	0.0001	0.01		√
Carbon tetrachloride	mg/L	13	ND	ND	ND	0.0001	0.005		√
Ethylbenzene	mg/L	13	ND	ND	ND	0.0001	0.3	0.002	√
Xylenes (total)	mg/L	13	ND	ND	ND	0.0001	0.6	0.02	√
Styrene	mg/L	13	ND	ND	ND	0.0001	0.03	0.004	√
Tetrachloroethene	mg/L	13	ND	ND	ND	0.0001	0.05		√
Toluene	mg/L	13	ND	ND	ND	0.0001	0.8	0.03	√
1,2-dichloroethene (cis + trans)	mg/L	13	ND	ND	ND	0.0001	0.06		√
Trichloroethene	mg/L	13	ND	ND	ND	0.0001	0.02		√

Halo Acetic Acids (HAAs)									
Component Name	**Units**	**Number of Samples**	**Max**	**Min**	**Average**	**Detection Limit**	**MAV DWSNZ**	**GV DWSNZ**	**Compliance DWSNZ 2005 (Revised 2018)**
Bromoacetic Acid	mg/L	4	ND	ND	ND	0.0005			
Bromochloroacetic Acid	mg/L	4	0.0047	0.0017	0.0036	0.0005			
Monochloroacetic Acid	mg/L	4	ND	ND	ND	0.0005	0.02		√
Dibromoacetic Acid	mg/L	4	0.0041	0.0021	0.0035	0.0005			
Dichloroacetic Acid	mg/L	4	0.0070	ND	0.0034	0.0005	0.05		√
Trichloroacetic Acid	mg/L	4	0.0040	ND	0.0017	0.0005	0.2		√
HAA Sum Ratio		4	0.16	0.06	0.10				

Water Quality Compliance Data for the Distribution Network Zones

Anzac Distribution Network Zone

Supplied by: Ardmore and Waikato WTPs

	Turbidity	*E. coli*	Chlorine Residual	pH	Total coliforms
	NTU	MPN/100 mL	mg/L	pH unit	MPN/100 mL
Minimum	0.10	0.00	0.31	7.50	0.00
Median	0.20	0.00	0.89	7.80	0.00
Average	0.23	0.00	0.89	7.84	0.01
Maximum	0.40	0.00	1.40	8.20	1.00
Count of Results	99	99	99	99	99

Auckland Distribution Network Zone

Supplied by: Ardmore, Huia, Onehunga, and Waikato WTPs

	Turbidity	*E. coli*	Chlorine Residual	pH	Total coliforms
	NTU	MPN/100 mL	mg/L	pH unit	MPN/100 mL
Minimum	0.05	0.00	0.24	7.20	0.00
Median	0.20	0.00	0.85	7.70	0.00
Average	0.25	0.00	0.83	7.70	0.01
Maximum	18.00	0.00	1.56	8.20	6.40
Count of Results	756	756	756	756	756

Auckland Airport Distribution Network Zone

Supplied by: Ardmore and Waikato WTPs

	Turbidity	*E. coli*	Chlorine Residual	pH	Total coliforms
	NTU	MPN/100 mL	mg/L	pH unit	MPN/100 mL
Minimum	0.10	0.00	0.16	7.60	0.00
Median	0.15	0.00	0.89	7.70	0.00
Average	0.18	0.00	0.87	7.72	0.00
Maximum	0.40	0.00	1.30	8.10	0.00
Count of Results	111	111	111	111	111

Bombay Distribution Network Zone

Supplied by: Bombay WTP

	Turbidity	*E. coli*	Chlorine Residual	pH	Total coliforms
	NTU	MPN/100 mL	mg/L	pH unit	MPN/100 mL
Minimum	0.05	0.00	0.21	7.20	0.00
Median	0.10	0.00	0.83	7.60	0.00
Average	0.23	0.00	0.86	7.63	0.02
Maximum	6.60	0.00	1.56	8.00	2.00
Count of Results	85	85	85	85	85

Buckland Distribution Network Zone

Supplied by: Ardmore and Waikato WTPs

	Turbidity	*E. coli*	Chlorine Residual	pH	Total coliforms
	NTU	MPN/100 mL	mg/L	pH unit	MPN/100 mL
Minimum	0.00	0.00	0.49	7.40	0.00
Median	0.10	0.00	0.98	8.00	0.00
Average	0.14	0.00	0.96	7.95	0.00
Maximum	0.35	0.00	1.67	8.30	0.00
Count of Results	86	86	86	86	86

Central Business District Distribution Network Zone

Supplied by: Ardmore, Huia, and Waikato WTPs

	Turbidity	*E. coli*	Chlorine Residual	pH	Total coliforms
	NTU	MPN/100 mL	mg/L	pH unit	MPN/100 mL
Minimum	0.10	0.00	0.13	7.50	0.00
Median	0.20	0.00	0.66	7.80	0.00
Average	0.22	0.00	0.64	7.81	0.00
Maximum	1.30	0.00	0.98	8.90	0.00
Count of Results	183	183	183	183	183

Clarks / Waiau Beach Distribution Network Zone

Supplied by: Ardmore and Waikato WTPs

	Turbidity	*E. coli*	Chlorine Residual	pH	Total coliforms
	NTU	MPN/100 mL	mg/L	pH unit	MPN/100 mL
Minimum	0.10	0.00	0.33	7.60	0.00
Median	0.25	0.00	0.75	7.80	0.00
Average	0.26	0.00	0.81	7.82	0.00
Maximum	1.20	0.00	1.64	8.00	0.00
Count of Results	86	86	86	86	86

East Tamaki / Botany Distribution Network Zone

Supplied by: Ardmore and Waikato WTPs

	Turbidity	*E. coli*	Chlorine Residual	pH	Total coliforms
	NTU	MPN/100 mL	mg/L	pH unit	MPN/100 mL
Minimum	0.10	0.00	0.46	7.40	0.00
Median	0.20	0.00	0.98	7.70	0.00
Average	0.19	0.00	0.96	7.67	0.00
Maximum	0.80	0.00	1.54	7.90	0.00
Count of Results	245	245	245	245	245

Glenbrook Beach Distribution Network Zone

Supplied by: Ardmore and Waikato WTPs

	Turbidity	*E. coli*	Chlorine Residual	pH	Total coliforms
	NTU	MPN/100 mL	mg/L	pH unit	MPN/100 mL
Minimum	0.10	0.00	0.12	7.60	0.00
Median	0.23	0.00	0.69	7.80	0.00
Average	0.24	0.00	0.69	7.82	0.05
Maximum	0.65	0.00	1.45	8.10	4.20
Count of Results	86	86	86	86	86

Glen Eden / New Lynn Distribution Network Zone

Supplied by: Ardmore, Huia, Waikato, and Waitakere WTPs

	Turbidity	*E. coli*	Chlorine Residual	pH	Total coliforms
	NTU	MPN/100 mL	mg/L	pH unit	MPN/100 mL
Minimum	0.10	0.00	0.34	7.10	0.00
Median	0.15	0.00	0.89	7.70	0.00
Average	0.25	0.00	0.88	7.71	0.00
Maximum	5.00	0.00	1.47	8.10	0.00
Count of Results	246	246	246	246	246

HBC / Waiwera Distribution Network Zone

Supplied by: Ardmore, Huia, Waikato, and Waitakere WTPs

	Turbidity	*E. coli*	Chlorine Residual	pH	Total coliforms
	NTU	MPN/100 mL	mg/L	pH unit	MPN/100 mL
Minimum	0.10	0.00	0.03	7.40	0.00
Median	0.20	0.00	0.66	8.00	0.00
Average	0.26	0.00	0.67	8.16	0.01
Maximum	3.40	0.00	1.38	9.20	1.00
Count of Results	302	302	302	302	302

Helensville / Parakai Distribution Network Zone

Supplied by: Helensville WTP

	Turbidity	*E. coli*	Chlorine Residual	pH	Total coliforms
	NTU	MPN/100 mL	mg/L	pH unit	MPN/100 mL
Minimum	0.00	0.00	0.25	7.10	0.00
Median	0.10	0.00	0.75	7.30	0.00
Average	0.22	0.00	0.77	7.30	0.00
Maximum	3.30	0.00	2.00	7.70	0.00
Count of Results	98	98	98	98	98

Henderson Distribution Network Zone

Supplied by: Ardmore, Huia, and Waikato WTPs

	Turbidity	*E. coli*	Chlorine Residual	pH	Total coliforms
	NTU	MPN/100 mL	mg/L	pH unit	MPN/100 mL
Minimum	0.10	0.00	0.27	7.40	0.00
Median	0.20	0.00	0.87	7.70	0.00
Average	0.22	0.00	0.85	7.71	0.48
Maximum	1.20	2.00*	1.70	8.20	200.00
Count of Results	439	439	439	439	439

* The *E. coli* result of 2.0 MPN/100mL was reported to the Auckland Regional Public Health Service and Taumata Arowai. Investigations confirmed this result was not representative of the water in supply. Compliance with the DWSNZ was maintained.

High Head Distribution Network Zone

Supplied by: Ardmore and Waikato WTPs

	Turbidity	*E. coli*	Chlorine Residual	pH	Total coliforms
	NTU	MPN/100 mL	mg/L	pH unit	MPN/100 mL
Minimum	0.10	0.00	0.23	7.40	0.00
Median	0.20	0.00	0.93	7.60	0.00
Average	0.21	0.00	0.87	7.63	0.00
Maximum	1.50	0.00	1.60	8.10	1.00
Count of Results	233	233	233	233	233

Hillsborough Distribution Network Zone

Supplied by: Ardmore, Huia, Onehunga, and Waikato WTPs

	Turbidity	*E. coli*	Chlorine Residual	pH	Total coliforms
	NTU	MPN/100 mL	mg/L	pH unit	MPN/100 mL
Minimum	0.05	0.00	0.12	7.10	0.00
Median	0.20	0.00	0.90	7.70	0.00
Average	0.20	0.00	0.84	7.74	0.80
Maximum	0.70	0.00	1.45	8.30	200.00
Count of Results	283	283	283	283	283

Hilltop Distribution Network Zone

Supplied by: Ardmore and Waikato WTPs

	Turbidity	*E. coli*	Chlorine Residual	pH	Total coliforms
	NTU	MPN/100 mL	mg/L	pH unit	MPN/100 mL
Minimum	0.10	0.00	0.04	7.70	0.00
Median	0.20	0.00	0.44	7.90	0.00
Average	0.21	0.00	0.47	7.86	0.01
Maximum	0.55	0.00	1.30	8.00	1.00
Count of Results	98	98	98	98	98

Howick / Pakuranga Distribution Network Zone

Supplied by: Ardmore and Waikato WTPs

	Turbidity	*E. coli*	Chlorine Residual	pH	Total coliforms
	NTU	MPN/100 mL	mg/L	pH unit	MPN/100 mL
Minimum	0.00	0.00	0.26	7.40	0.00
Median	0.15	0.00	0.78	7.70	0.00
Average	0.22	0.00	0.77	7.72	0.00
Maximum	2.70	0.00	1.59	8.10	1.00
Count of Results	368	368	368	368	368

Huia Village Distribution Network Zone

Supplied by: Huia Village WTP

	Turbidity	*E. coli*	Chlorine Residual	pH	Total coliforms
	NTU	MPN/100 mL	mg/L	pH unit	MPN/100 mL
Minimum	0.00	0.00	0.23	7.40	0.00
Median	0.15	0.00	0.86	7.90	0.00
Average	0.20	0.00	0.88	8.00	0.39
Maximum	2.10	0.00	1.63	9.00	48.00
Count of Results	124	124	124	124	124

Kitchener Distribution Network Zone

Supplied by: Ardmore and Waikato WTPs

	Turbidity	*E. coli*	Chlorine Residual	pH	Total coliforms
	NTU	MPN/100 mL	mg/L	pH unit	MPN/100 mL
Minimum	0.00	0.00	0.25	7.40	0.00
Median	0.15	0.00	1.05	8.00	0.00
Average	0.17	0.00	1.02	7.87	0.03
Maximum	0.80	0.00	1.71	8.20	3.10
Count of Results	195	195	195	195	195

Laingholm Distribution Network Zone

Supplied by: Huia WTP

	Turbidity	*E. coli*	Chlorine Residual	pH	Total coliforms
	NTU	MPN/100 mL	mg/L	pH unit	MPN/100 mL
Minimum	0.00	0.00	0.27	7.50	0.00
Median	0.20	0.00	0.69	7.90	0.00
Average	0.36	0.00	0.70	8.03	0.00
Maximum	9.60	0.00	1.58	8.80	0.00
Count of Results	123	123	123	123	123

Mangere Distribution Network Zone

Supplied by: Ardmore and Waikato WTPs

	Turbidity	*E. coli*	Chlorine Residual	pH	Total coliforms
	NTU	MPN/100 mL	mg/L	pH unit	MPN/100 mL
Minimum	0.05	0.00	0.44	7.50	0.00
Median	0.20	0.00	0.93	7.70	0.00
Average	0.21	0.00	0.91	7.70	0.00
Maximum	0.80	0.00	1.59	8.00	0.00
Count of Results	282	282	282	282	282

Manurewa Distribution Network Zone

Supplied by: Ardmore and Waikato WTPs

	Turbidity	*E. coli*	Chlorine Residual	pH	Total coliforms
	NTU	MPN/100 mL	mg/L	pH unit	MPN/100 mL
Minimum	0.10	0.00	0.26	7.40	0.00
Median	0.20	0.00	0.89	7.70	0.00
Average	0.21	0.00	0.87	7.74	0.00
Maximum	1.50	0.00	1.70	8.20	0.00
Count of Results	271	271	271	271	271

Maungawhau Distribution Network Zone

Supplied by: Ardmore, Huia, and Waikato WTPs

	Turbidity	*E. coli*	Chlorine Residual	pH	Total coliforms
	NTU	MPN/100 mL	mg/L	pH unit	MPN/100 mL
Minimum	0.00	0.00	0.25	7.20	0.00
Median	0.15	0.00	0.76	7.70	0.00
Average	0.19	0.00	0.75	7.68	0.00
Maximum	2.00	0.00	1.29	8.00	1.00
Count of Results	616	616	616	616	616

Montana Distribution Network Zone

Supplied by: Huia WTP

	Turbidity	*E. coli*	Chlorine Residual	pH	Total coliforms
	NTU	MPN/100 mL	mg/L	pH unit	MPN/100 mL
Minimum	0.10	0.00	0.24	7.30	0.00
Median	0.15	0.00	0.83	7.70	0.00
Average	0.21	0.00	0.78	7.76	0.00
Maximum	2.30	0.00	1.19	8.70	0.00
Count of Results	178	178	178	178	178

Mt Hobson Distribution Network Zone

Supplied by: Ardmore and Waikato WTPs

	Turbidity	*E. coli*	Chlorine Residual	pH	Total coliforms
	NTU	MPN/100 mL	mg/L	pH unit	MPN/100 mL
Minimum	0.10	0.00	0.12	7.40	0.00
Median	0.20	0.00	0.55	7.70	0.00
Average	0.21	0.00	0.54	7.69	0.01
Maximum	1.20	0.00	1.08	8.00	2.00
Count of Results	223	223	223	223	223

Muriwai Distribution Network Zone

Supplied by: Muriwai WTP

	Turbidity	*E. coli*	Chlorine Residual	pH	Total coliforms
	NTU	MPN/100 mL	mg/L	pH unit	MPN/100 mL
Minimum	0.00	0.00	0.64	7.10	0.00
Median	0.10	0.00	1.04	7.40	0.00
Average	0.18	0.29	1.04	7.37	0.36
Maximum	3.40	25.00*	1.52	7.70	31.00*
Count of Results	85	85	85	85	85

* The *E. coli* result of 25.0 MPN/100mL was reported to the Auckland Regional Public Health Service and Taumata Arowai. Investigations confirmed that this result was not representative of the water in supply. Compliance with the DWSNZ was maintained.

North Shore South Distribution Network Zone

Supplied by: Ardmore and Waikato WTPs

	Turbidity	*E. coli*	Chlorine Residual	pH	Total coliforms
	NTU	MPN/100 mL	mg/L	pH unit	MPN/100 mL
Minimum	0.05	0.00	0.25	7.30	0.00
Median	0.15	0.00	0.69	7.70	0.00
Average	0.22	0.00	0.70	7.75	0.00
Maximum	5.10	0.00	1.47	9.00	2.00
Count of Results	488	488	488	488	488

North Shore West Distribution Network Zone

Supplied by: Ardmore, Huia, and Waikato WTPs

	Turbidity	*E. coli*	Chlorine Residual	pH	Total coliforms
	NTU	MPN/100 mL	mg/L	pH unit	MPN/100 mL
Minimum	0.00	0.00	0.13	7.40	0.00
Median	0.20	0.00	0.73	7.70	0.00
Average	0.20	0.00	0.75	7.79	0.01
Maximum	1.10	0.00	1.56	8.70	2.00
Count of Results	592	592	592	592	592

Onehunga Distribution Network Zone

Supplied by: Onehunga WTP

	Turbidity	*E. coli*	Chlorine Residual	pH	Total coliforms
	NTU	MPN/100 mL	mg/L	pH unit	MPN/100 mL
Minimum	0.00	0.00	0.69	7.50	0.00
Median	0.05	0.00	1.10	7.90	0.00
Average	0.09	0.00	1.09	7.85	0.00
Maximum	0.50	0.00	1.75	8.10	0.00
Count of Results	135	135	135	135	135

Oratia Distribution Network Zone

Supplied by: Ardmore, Huia, Waikato, and Waitakere WTPs

	Turbidity	*E. coli*	Chlorine Residual	pH	Total coliforms
	NTU	MPN/100 mL	mg/L	pH unit	MPN/100 mL
Minimum	0.05	0.00	0.23	7.30	0.00
Median	0.20	0.00	0.76	7.90	0.00
Average	0.22	0.00	0.74	7.90	0.00
Maximum	0.90	0.00	1.35	8.80	0.00
Count of Results	123	123	123	123	123

Otahuhu Distribution Network Zone

Supplied by: Ardmore and Waikato WTPs

	Turbidity	*E. coli*	Chlorine Residual	pH	Total coliforms
	NTU	MPN/100 mL	mg/L	pH unit	MPN/100 mL
Minimum	0.10	0.00	0.47	7.40	0.00
Median	0.20	0.00	0.94	7.70	0.00
Average	0.43	0.00	0.94	7.67	0.00
Maximum	12.00	0.00	1.57	7.90	0.00
Count of Results	111	111	111	111	111

Otara / Papatoetoe / Manukau Central Distribution Network Zone

Supplied by: Ardmore and Waikato WTPs

	Turbidity	*E. coli*	Chlorine Residual	pH	Total coliforms
	NTU	MPN/100 mL	mg/L	pH unit	MPN/100 mL
Minimum	0.10	0.00	0.37	7.30	0.00
Median	0.20	0.00	0.97	7.70	0.00
Average	0.28	0.00	0.95	7.67	0.05
Maximum	4.60	0.00	1.51	8.20	7.50
Count of Results	256	256	256	256	256

Patumahoe Distribution Network Zone

Supplied by: Ardmore and Waikato WTPs

	Turbidity	*E. coli*	Chlorine Residual	pH	Total coliforms
	NTU	MPN/100 mL	mg/L	pH unit	MPN/100 mL
Minimum	0.05	0.00	0.24	7.40	0.00
Median	0.20	0.00	0.77	7.70	0.00
Average	0.29	0.00	0.76	7.71	0.00
Maximum	5.60	0.00	1.25	8.10	0.00
Count of Results	98	98	98	98	98

Snells / Algies Distribution Network Zone

Supplied by: Snells / Algies WTP

	Turbidity	*E. coli*	Chlorine Residual	pH	Total coliforms
	NTU	MPN/100 mL	mg/L	pH unit	MPN/100 mL
Minimum	0.00	0.00	0.74	8.30	0.00
Median	0.05	0.00	1.21	8.40	0.00
Average	0.08	0.00	1.21	8.39	0.00
Maximum	0.25	0.00	1.66	8.60	0.00
Count of Results	98	98	98	98	98

Swanson Distribution Network Zone

Supplied by: Ardmore, Huia, Waikato, and Waitakere WTPs

	Turbidity	*E. coli*	Chlorine Residual	pH	Total coliforms
	NTU	MPN/100 mL	mg/L	pH unit	MPN/100 mL
Minimum	0.10	0.00	0.24	7.40	0.00
Median	0.25	0.00	0.75	7.80	0.00
Average	0.24	0.00	0.73	7.83	0.00
Maximum	0.60	0.00	1.15	8.50	0.00
Count of Results	146	146	146	146	146

Te Henga Distribution Network Zone

Supplied by: Ardmore, Huia, Waikato, and Waitakere WTPs

	Turbidity	*E. coli*	Chlorine Residual	pH	Total coliforms
	NTU	MPN/100 mL	mg/L	pH unit	MPN/100 mL
Minimum	0.10	0.00	0.03	7.10	0.00
Median	0.20	0.00	0.72	7.90	0.00
Average	0.27	0.00	0.67	7.87	3.25
Maximum	1.10	0.00	1.26	8.50	200.00
Count of Results	123	123	123	123	123

Waiuku Distribution Network Zone

Supplied by: Cornwall Road, Victoria Avenue, and Waiuku Road WTPs

	Turbidity	*E. coli*	Chlorine Residual	pH	Total coliforms
	NTU	MPN/100 mL	mg/L	pH unit	MPN/100 mL
Minimum	0.00	0.00	0.46	7.90	0.00
Median	0.10	0.00	1.05	8.00	0.00
Average	0.10	0.00	1.04	8.00	0.00
Maximum	0.35	0.00	1.51	8.30	0.00
Count of Results	111	111	111	111	111

Warkworth Distribution Network Zone

Supplied by: Warkworth Wells WTP

	Turbidity	*E. coli*	Chlorine Residual	pH	Total coliforms
	NTU	MPN/100 mL	mg/L	pH unit	MPN/100 mL
Minimum	0.00	0.00	0.28	7.50	0.00
Median	0.05	0.00	0.69	7.70	0.00
Average	0.08	0.00	0.69	7.74	0.00
Maximum	0.35	0.00	1.34	7.80	0.00
Count of Results	97	97	97	97	97

Wellsford Distribution Network Zone

Supplied by: Wellsford WTP

	Turbidity	*E. coli*	Chlorine Residual	pH	Total coliforms
	NTU	MPN/100 mL	mg/L	pH unit	MPN/100 mL
Minimum	0.10	0.00	0.13	6.90	0.00
Median	0.10	0.00	0.68	7.30	0.00
Average	0.15	0.00	0.65	7.34	0.00
Maximum	0.45	0.00	1.29	7.70	0.00
Count of Results	110	110	110	110	110

Whenuapai Distribution Network Zone

Supplied by: Ardmore, Huia, Waikato, and Waitakere WTPs

	Turbidity	*E. coli*	Chlorine Residual	pH	Total coliforms
	NTU	MPN/100 mL	mg/L	pH unit	MPN/100 mL
Minimum	0.10	0.00	0.30	7.40	0.00
Median	0.20	0.00	0.82	7.70	0.00
Average	0.24	0.00	0.81	7.76	0.01
Maximum	3.20	0.00	1.16	8.20	1.00
Count of Results	172	172	172	172	172