

Regional rivers water quality monitoring programme data report 2019

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1 Introduction

1.1 Background

To effectively manage water quality, the regional rivers monitoring programme addresses the following questions:

1. What is the quality of the water now?
2. Why is the water of the observed level of quality?
3. Is water quality getting better or worse? If so - what makes it change?
4. How can we improve the quality, ecological health and integrity of the region's rivers and streams?

The monitoring information allows Waikato Regional Council to:

- determine compliance with classification standards.
- assess the suitability of the resource for various beneficial uses and values of the water.
- monitor the impact of major discrete point source discharges on water quality.
- monitor the impacts of diffuse discharges on water quality.
- provide a basis for evaluating the effectiveness of resource management measures.

This dataset is invaluable for the evaluation of the region's rivers: their state, the pressures on them and our response to these pressures. We need to continue to gather comprehensive, reliable, and good quality data on the region's rivers to protect and enhance their values into the future.

This report is the 24th since the implementation of the regional rivers monitoring programme (RERIMP) in 1993¹. A major redesign of the programme was implemented in 2018 to incorporate 10 new sites - from the Healthy Rivers Plan Change I. The RERIMP report series remain the same.

This report follows the format of the previous data report (Tulagi, 2019). Copies of reports as described in the list of references (page 60) can be obtained by contacting Waikato Regional Council (the Library) on 0800 800 401 and filling out the request for service form at: www.waikatoregion.govt.nz/request or in electronic format from the publications page of the Waikato Regional Council website: www.waikatoregion.govt.nz/publications.

1.2 Report content

The report provides information on the routine monthly monitoring of water quality at 110 locations across the Waikato region, and includes:

- year 2019 summary statistics tabulated by parameter and reported together.
- spatial contour plots for four water quality parameters using spatial interpolation of the median of the previous 5 years.
- summary tables identifying the number of samples meeting 'satisfactory' and 'excellent' water quality guidelines and standards.

1.3 Water quality guidelines and standards

Table 1 lists the physical, chemical (physico-chemical) and microbiological water quality guidelines and standards used to assess the condition of the region's rivers in 2019. The standards relate to either the protection of the ecological health of rivers and streams or to the suitability for direct-contact water-based recreation (for example swimming).

¹ Waikato River reported separately — in process.

Table 1: Guidelines and standards for physiochemical water quality for ecological health and for human uses of water

Water quality measure	Relevance ¹	Satisfactory	Excellent
Ecological health			
Dissolved Oxygen (% saturation)	aquatic life (breathing)	>80	>90
pH	aquatic life (acidity)	6.5-9	7-8
Turbidity (NTU)	plant life (clarity)	<5	<2
Ammoniacal Nitrogen (g/m ³)	aquatic life (toxicity)	<0.88	<0.1
Water Temperature (°C) (May-Sep)	fish (spawning)	<12	<10
(Oct-Apr)	fish health	<20	<16
Total Phosphorus (g/m ³)	nuisance plant growth	<0.04	<0.01
Total Nitrogen (g/m ³)	nuisance plant growth	<0.5	<0.1
Human uses - recreation			
Black Disk (m)	visibility	>1.6	>4
<i>Escherichia coli</i> (/100ml)	human health	<550	<55
Median <i>Escherichia coli</i> (/100ml)	human health	<126	<23
Human uses - water supply			
Chlorophyll <i>a</i> (g/m ³)	filter blockage	<0.02	<0.005
Human uses - drinking water			
Arsenic (g/m ³)	human health (toxicity)	<0.01	-
Boron (g/m ³)	human health (toxicity)	<1.4	-

¹Refer to Appendix I for description of guideline and standards values used. These guidelines and standards are also defined on the Waikato Regional Council Internet site www.waikatoregion.govt.nz

In each case two values are shown. The less stringent values define water that is “satisfactory” for the desired use; these are mostly based on existing national and other guidelines and standards (Appendix I). The more stringent values identify “excellent” water and reflect expert opinion.

2 Regional rivers monitoring design

2.1 Sampling locations

Routine water quality monitoring locations of the regional rivers monitoring programme are summarised in Table 2 and illustrated in Figure 1. One hundred and ten sites were sampled monthly by Waikato Regional Council. A further five locations form part of NIWA’s National Rivers Water Quality Network, whose data can be found on the NIWA website (www.niwa.co.nz).

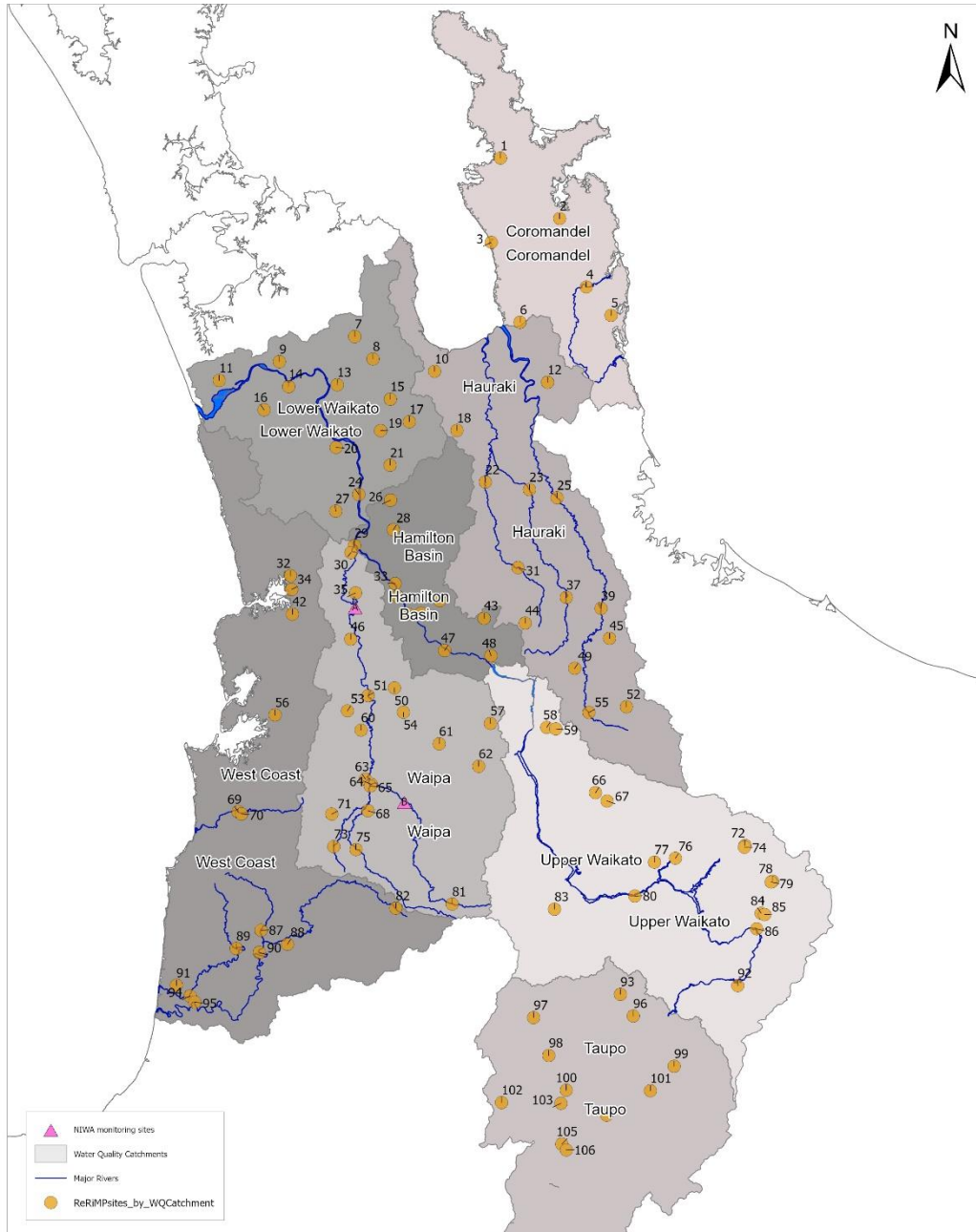
The sampling locations are reasonably evenly distributed across the Waikato region (Figure 1). To assist assessment of water quality, sites in the region were divided into 7 water quality zones. This division is based on expert opinion, and reflects river catchments and some broad ecological features, including geology, altitude, winter temperatures, vegetation cover and land use. Sampling locations within each water quality zone are shown on Table 2.

Table 2: Waikato Regional Council's sampling locations

Map No.	Location name	Location number	Location coordinate
Coromandel			
1	Waiau River at E309 Rd Ford	1105-3	1825236, 5925022
24	Waitekauri River at U/S Ohinemuri Confluence	1239-32	1846306, 5855261
2	Waiwawa River at SH25 Coroglen	1257-3	1839816, 5910119
5	Wharekawa River at SH25	1312-3	1852498, 5886250
12	Hikutaia River at Old Maratoto Rd	169-2	1836841, 5869743
6	Kauaeranga River at Smiths Cableway/Recorder	234-11	1830040, 5884528
22	Ohinemuri River at Karangahake	619-16	1840337, 5855574
23	Ohinemuri River at Queens Head	619-19	1847342, 5855482
19	Ohinemuri River at SH25 Bridge	619-20	1853847, 5859843
3	Tapu River at Tapu-Coroglen Rd	954-5	1822967, 5904237
4	Tairua River at Morrisons Bridge Hikutia	940-10	1846396, 5893251
Hauraki			
51	Waihou River at Okauia	1122-18	1850033, 5813970
33	Waihou River at Te Aroha	1122-34	1839179, 5841242
73	Waihou River at Whites Rd	1122-41	1847029, 5788310
69	Waiohotu Stm at Waiohotu Rd (Off SH5)	1173-2	1856291, 5789715
60	Waiomou Stm at Matamata-Tauranga Rd	1174-4	1852108, 5806591
10	Waitakaruru River (Hauraki Plains) at Coxhead Rd Br	1230-1	1808982, 5872419
48	Waitoa River at Landsdowne Rd Bridge	1249-15	1841455, 5816681
31	Waitoa River at Mellon Rd Recorder	1249-18	1832368, 5843261
20	Mangawhero Stm (Kaihere) at Mangawara Rd	489-2	1814506, 5857854
65	Oraka Stm at Lake Rd	669-6	1843532, 5799203
39	Piako River at Kiwitahi	749-10	1829552, 5824019
30	Piako River at Paeroa-Tahuna Rd Bridge	749-15	1821502, 5845142
59	Piakonui Stm at Piakonui Rd	753-4	1831309, 5810336
Tributaries to the upper Waikato River			
111	Torepatutahi Stm at Vaile Rd Bridge	1057-6	1888409, 5734946
102	Waiotapu Stm at Campbell Rd Bridge	1186-2	1892343, 5746710
110	Waiotapu Stm at Homestead Rd Bridge	1186-4	1890373, 5738454
105	Waipapa Stm (Mokai) at Tirohanga Rd Bridge	1202-7	1858355, 5743037
95	Whirinaki Stm at Corbett Rd	1323-1	1885524, 5755511
104	Kawaunui Stm at SH5 Bridge	240-5	1891976, 5746482
101	Mangaharakeke Stm (Atiamuri) at SH30 (Off Jct SH1)	359-1	1863201, 5751371
109	Mangakara Stm (Reporoa) at SH5	380-2	1889506, 5738783
108	Mangakino River (Whakamaru) at Sandel Rd	388-1	1838547, 5739797
97	Otamakokore Stm at Hossack Rd	683-4	1885383, 5755059
117	Pueto Stm at Broadlands Rd Bridge	802-1	1883743, 5720920
100	Tahunaatara Stm at Ohakuri Rd	934-1	1868367, 5752370
Waipa River and tributaries			
84	Waipa River at SH3 Otorohanga	1191-12	1793417, 5770550
67	Waipa River at Pukehoua Bridge on Baffin Road	1191-2	1792588, 5792454
106	Waipa River at Mangaokewa Rd	1191-5	1813330, 5741060
83	Waitomo Stm at SH31 Otorohanga	1253-5	1791948, 5771850
92	Waitomo Stm at Tumutumu Rd	1253-7	1783624, 5763236
61	Kaniwhaniwha Stm at Wright Rd	222-16	1788300, 5806382
75	Mangaohoi Stm at South Branch Maru Rd	411-9	1822734, 5785595
98	Mangaokewa Stm at Lawrence St Bridge	414-6	1789612, 5754501
66	Mangapiko Stm (Pirongia/Te Awamutu) at Bowman Rd	438-3	1799086, 5794363
85	Mangapu River at Otorohanga	443-3	1793118, 5770149
81	Mangatutu Stm (Waikeria) at Walker Rd Bridge	476-7	1810109, 5780575
71	Mangauika Stm at Te Awamutu Borough Water Intake	477-10	1787494, 5788722
44	Ohote Stm at Whatawhata/Horotiu Rd	624-5	1789493, 5817795
72	Puniu River at Bartons Corner Rd Bridge	818-2	1801295, 5788365
38	Firewood Creek at Waingarua Road Bridge	124-8	1788353, 5827726
96	Mangarama Stm at Gadsby Road Bridge	1391-1*	1784134, 5755235
89	Mangarapa Stm at Old Te Kuiti Rd Bridge	444-1*	1792544, 5764098
78	Moakurarua River at Warratah Farm Bridge	553-12*	1790853, 5783949
82	Punui River at Wharepapa Sth Road Bridge	818-40*	1819868, 5775028
37	Waipa River at Ngaruawahia Br	1191-6*	1789220, 5829466

Map No.	Location name	Location number	Location coordinate
Tributaries to the lower Waikato River			
18	Waerenga Stm at Taniwha Rd	1098-1	1802756, 5860005
46	Waitawhiriwhiri Stm at Edgumbe Street	1236-2	1799902, 5816915
9	Whakapipi Stm at SH22 Bridge	1282-8	1770704, 5874826
87	Whakauru Stm at U/S SH1 Bridge	1287-7	1851510, 5766456
13	Whangamarino River at Island Block Rd	1293-7	1784968, 5869103
16	Whangamarino River at Jefferies Rd Bridge	1293-9	1798066, 5865561
26	Whangape Stm at Rangiriri-Glen Murray Rd	1302-1	1784703, 5853683
64	Karapiro Stm at Hickey Rd Bridge	230-5	1822883, 5802300
42	Kirikiriroa Stm at Tauhara Drive	253-4	1799248, 5820070
36	Komakorau Stm at Henry Rd	258-4	1798800, 5833361
76	Little Waipa Stm at Arapuni – Putaruru Rd	335-1	1836614, 5784613
35	Awaroa Stm (Rotowaro) at Sansons Br–Rotowaro-Huntly	39-11	17846617, 837950
53	Mangakotukutuku Stm (Rukuhia) at Peacockes Rd	398-1	1802506, 5812573
86	Mangamingi Stm (Tokoroa) at Paraonui Rd Bridge	407-1	1848650, 5768522
52	Mangaone Stm at Annebrooke Rd Bridge	417-7	1805661, 5812778
11	Awaroa River (Waiuku) at Otaua Rd Bridge opp Moseley Rd	41-9	1755860, 5870203
49	Mangaonua Stm at Hoeka Rd	421-10	1810244, 5815925
57	Mangaonua Stm (a.k.a Waitakaruru Stm) at Te Miro Rd	421-16	1821181, 5811525
8	Mangatangi River at SH2 Maramarua	453-6	1793779, 5875482
7	Mangatawhiri River at Lyons Rd at Buckingham Bridge	459-6	1789293, 5881001
34	Mangawara Stm at Rutherford Rd Bridge	481-7	1798115, 5840673
62	Mangawhero Stm (Cambridge) at Cambridge-Ohaupo Rd	488-1	1811449, 5803595
27	Matahuru Stm at Waiterimu Rd Br	516-5	1798000, 5849274
15	Ohaeroa Stm at SH22 Bridge	612-9	1773012, 5868668
17	Opuatia Stm at Ponganui Rd	665-5	1766922, 5862941
77	Pokaiwhenua Stm at Arapuni-Putaruru Rd	786-2	1838866, 5784259
32	Lake Waahi Outlet at Te Ohaaki Bridge	1097-1*	1790273, 5842096
21	Northern Outlet Canal at Downstream of Control Gate	3021-3*	1795678, 5857803
West coast			
41	Waingaro River (Pukemiro) at Ruakiwi Rd Off SH22	1167-4	1773441, 5822030
54	Waitetuna River at Te Uku-Waingaro Rd	1247-2	1773923, 5812566
114	Awakino River at Gribbon Rd	33-6	1760059, 5730104
120	Awakino River at SH3 Awakau Rd Junction	33-9	1748705, 5718389
116	Manganui River at Off Manganui Rd	410-4	1745321, 5721017
112	Mangaotaki River at SH3 Bridge	428-3	1766193, 5734587
90	Marokopa River at Speedies Rd (Off Te Anga Rd)	513-3	1760521, 5763807
121	Mokau River at Awakau Rd	556-2	1749850, 5716869
107	Mokau River at Mangaokewa Rd (Off SH30)	556-5	1799420, 5740045
115	Mokau River at Totoro Rd Recorder	556-9	1765756, 5729127
113	Mokauiti Stm at Three Way Point – Aria	557-5	1772711, 5731165
43	Ohautira River at Waingaro - Te Uku Rd	616-1	1773746, 5818631
74	Oparau River at Langdon Rd (Off Okupata Rd)	658-1	1769651, 5787687
91	Tawarau River at Off Speedies Rd	976-1	1761387, 5763275
Inflows to Lake Taupo			
135	Tokaanu Stm at Off SH41 Turangi	1045-3	1841470, 5680399
123	Waihaha River at SH32	1106-4	1833389, 5713044
125	Waitahanui River at Blake Rd	1226-1	1868051, 5701057
119	Whangamata Stm (Kinloch) at Whangamata Rd	1300-1	1854803, 5718799
124	Whanganui Stream at Lakeside Lake Taupo	1301-1	1837143, 5703708
128	Whareroa Stream at Lakeside Lake Taupo	1318-4	1841456, 5695161
134	Tokaanu Power Station Tailrace Canal at SH41 Bridge	1491-1	1840329, 5681866
129	Hinemaiaia River at SH1	171-5	1862185, 5695020
130	Kuratau River at SH41 Moerangi	282-4	1825502, 5692096
131	Kuratau River at Te Rae Street	282-5	1840133, 5691927
122	Mapara Stm at Off Mapara Rd (Whakaipo Reserve)	504-2	1857975, 5713452
132	Tauranga-Taupo River at 20 Metres U/S SH1 Bridge	971-5	1851416, 5688991

*New site, no 5year median value.




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 Major Rivers data sourced from NZTopo Database.
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ReRiMP and NIWA monitoring sites by Water Quality Catchment

0 10 20 30 40 50
 km
 Scale at A3
 = 1:900,000

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Figure 1: Monitoring locations

2.2 Sample collection

Sample collection occurs monthly. The 110 locations sampled by Waikato Regional Council staff are divided between 9 sampling runs. The runs are sampled in the same order each month, and by the same group of field staff. Sampling is assigned to either the second, third or fourth week of each month. A similar time of sampling (± 1 hour) is maintained for subsequent visits to a location to minimise the effect of any diurnal variation on water quality parameters, thereby increasing long term trend detection power.

2.3 Water quality parameters

Water quality of the region's rivers is assessed by measuring up to 32 parameters (19 routinely). Some parameters are measured in the field, but most are analysed by laboratories using standard analytical methods. Details of field measurements and analytical methods are given in *Appendix II*.

2.4 Quality control, data storage and analysis

Quality control measures are undertaken in accordance with Waikato Regional Council's standards including procedures for the collection, transport and storage of samples, and methods for data verification and quality assurance to ensure the consistency of data across the programme. Samples are sent to IANZ registered laboratories for analysis. Back-up samples are held for two months until results have been verified by routine quality assurance procedures. All data from field measurements and laboratory analyses are stored in Waikato Regional Council's database called WISKI.

Data analysis was performed using WQStats program. For the purpose of data analysis, non-detect results (i.e. results with "less than" values) were assumed to be equal to half the corresponding limit of detection (i.e. $<x = x/2$), and results greater than the value reported were taken as equal to the value reported (i.e. $>x = x$).

The water quality spatial contour plots were created using Surfer (version 16). To present the spatial contour plots the kriging spatial interpolation procedure was used to estimate the variable at unsampled locations, using weighted sums of the variable at neighbouring sample points. The procedure is designed to minimize the variance of the estimation errors. In some cases, artificial sites were used at points downstream of lowland sample sites to show a catchment flow-through effect.

2.5 Reports

A report on Regional Water Quality Trends (Vant, 2018) summarises the trends and patterns in regional water quality during 1993 to 2017.

The data contained in these regional rivers reports is updated to the Waikato Regional Council website, which also provides a link to details of the water quality guidelines and standards used to assess the condition of the region's rivers, as well as other information relating to lakes, rivers and wetlands. View this information at <http://www.waikatoregion.govt.nz/fresh-water-quality>.

3 Results

The results are divided into two sections. Section 3.1 has a statistical summary of routine monitoring of the region's rivers in 2019 and provides the spatial contour plots using water quality data from four parameters, based on median values for the last five years. In addition to the routine statistics, low level metals, major ions and pesticides were measured at selected sites from March 2018 to February 2019. Summaries of these additional tests are included in this report. Section 3.2 compares the results with water quality guidelines and standards for compliance.

3.1 Regional rivers monitoring programme

3.1.1 Summary statistics

Table 3: Sample statistics for 2019

Location	Absorbance (340nm) /cm							15-19 median
	Count	Mean	Median	Min	Max	IQR	Skew	
Coromandel								
Hikutaia River at Old Maratoto Rd	12	0.016	0.016	0.014	0.024	0.004	1.83	0.016
Kauaeranga River at Smiths Cableway/Recorder	12	0.017	0.016	0.008	0.035	0.013	0.76	0.014
Ohinemuri River at Karangahake	12	0.015	0.016	0.010	0.025	0.005	0.94	-
Ohinemuri River at Queens Head	12	0.014	0.014	0.004	0.024	0.007	0.01	0.015
Ohinemuri River at SH25 Br	12	0.011	0.011	0.006	0.022	0.005	1.42	0.012
Tairua River at Morrisons Br Hikuai	12	0.021	0.017	0.007	0.083	0.006	3.21	0.015
Tapu River at Tapu-Coroglen Rd	12	0.011	0.010	0.006	0.019	0.007	0.80	0.010
Waiau River at E309 Rd Ford	12	0.018	0.017	0.014	0.027	0.006	1.13	0.017
Waitekauri River at U/S Ohinemuri Conflu	12	0.010	0.010	0.002	0.014	0.003	-1.38	0.011
Waiwawa River at SH25 Coroglen	12	0.023	0.022	0.012	0.056	0.011	2.15	0.020
Wharekawa River at SH25	12	0.019	0.018	0.014	0.028	0.006	0.73	0.018
Hauraki								
Mangawhero Stm (Kaihere) at Mangawara Rd	12	0.032	0.021	0.015	0.104	0.018	2.05	0.018
Oraka Stm at Lake Rd	12	0.015	0.012	0.009	0.053	0.003	3.34	0.014
Piako River at Kiwitahi	12	0.051	0.046	0.034	0.087	0.020	1.26	0.045
Piako River at Paeroa-Tahuna Rd Br	12	0.075	0.076	0.035	0.123	0.033	0.09	0.078
Piakonui Stm at Piakonui Rd	12	0.034	0.032	0.022	0.054	0.013	0.76	0.031
Waihou River at Okauia	12	0.015	0.013	0.008	0.030	0.011	1.08	0.014
Waihou River at Te Aroha	12	0.017	0.015	0.009	0.033	0.005	1.48	-
Waihou River at Whites Rd	12	0.003	0.001	0.001	0.016	0.001	3.34	0.001
Waiohotu Stm at Waiohotu Rd (Off SH5)	12	0.039	0.035	0.010	0.105	0.007	2.61	0.045
Waiomou Stm at Matamata-Tauranga Rd	12	0.022	0.020	0.013	0.042	0.015	0.90	0.019
Waitakaruru River (Hauraki Plains) at Coxhead Rd Br	12	0.074	0.063	0.038	0.135	0.051	0.75	0.071
Waitoa River at Landsdowne Rd Br	12	0.047	0.044	0.030	0.080	0.023	0.96	0.040
Waitoa River at Mellon Rd Recorder	12	0.045	0.045	0.034	0.062	0.009	0.95	0.043
Tributaries to the Lower Waikato								
Awaroa River (Waiuku) at Otatau Rd Br opp Moseley Rd	12	0.038	0.037	0.019	0.065	0.022	0.42	0.038
Awaroa Stm (Rotowaro) at Sansons Br @ Rotowaro-Huntly Rd	12	0.020	0.018	0.010	0.041	0.009	1.77	0.021
Karapiro Stm at Hickey Rd Bridge - Cambridge	12	0.053	0.046	0.028	0.083	0.028	0.59	0.047
Kirikiri Stm at Tauhara Dr	12	0.047	0.048	0.037	0.055	0.009	-0.54	0.050
Komakorau Stm at Henry Rd	12	0.121	0.120	0.081	0.190	0.034	1.00	0.132
Little Waipa Stm at Arapuni - Putaruru Rd	12	0.012	0.008	0.004	0.044	0.006	2.84	0.013
Mangakotukutuku Stm (Rukuhia) at Peacocks Rd	12	0.268	0.187	0.069	0.780	0.334	1.21	0.235
Mangamingi Stm (Tokoroa) at Paraonui Rd Br	12	0.030	0.025	0.019	0.098	0.005	3.34	0.026
Mangaone Stm (Waikato) at Annebrooke Rd Br	12	0.044	0.043	0.031	0.059	0.015	0.26	0.048
Mangaonua Stm at Hoeka Rd	12	0.046	0.049	0.027	0.066	0.024	-0.03	0.036
Mangaonua Stm at Te Miro Rd (a.k.a Waitakaruru stm)	12	0.030	0.029	0.023	0.044	0.006	1.23	0.028
Mangatangi River at SH2 Maramara	12	0.048	0.043	0.029	0.083	0.029	0.95	0.047
Mangatawhiri River at Lyons Rd At Buckingham Br	12	0.029	0.020	0.017	0.086	0.014	2.58	0.023
Mangawara Stm at Rutherford Rd Br	12	0.124	0.105	0.060	0.200	0.069	0.34	0.157
Mangawhero Stm (Cambridge) at Cambridge-Ohaupo Rd	12	0.134	0.081	0.049	0.390	0.070	1.82	0.127
Matahuru Stm at Waiterimu Road Below Confluence	12	0.079	0.080	0.036	0.115	0.047	-0.11	0.089
Northern Outlet Canal (a.k.a.Pungarehu Canal) at D/S of Ctrl Gate	12	0.055	0.056	0.034	0.098	0.023	1.16	-
Ohaeroa Stm at SH22 Br	12	0.028	0.027	0.018	0.048	0.011	0.92	0.025
Opuatia Stm at Ponganui Rd	12	0.029	0.027	0.020	0.045	0.009	1.15	0.027
Pokaiwhenua Stm at Puketurua	12	0.017	0.015	0.009	0.050	0.005	3.02	0.017
Waahi Stm at Te Ohaki Rd	12	0.043	0.043	0.031	0.050	0.006	-0.78	-
Waerenga Stm at Taniwha Rd	12	0.028	0.025	0.017	0.053	0.011	1.55	0.024
Waitawhiriwhiri Stm at Edgumbe Street	12	0.108	0.100	0.047	0.230	0.061	1.15	0.111
Whakapipi Stm at SH22 Br	12	0.036	0.035	0.026	0.050	0.014	0.34	0.033
Whakauru Stm at U/S SH1 Br	12	0.035	0.024	0.019	0.146	0.006	3.35	0.025
Whangamarino River at Island Block Rd	12	0.107	0.094	0.051	0.200	0.066	0.68	0.129
Whangamarino River at Jefferies Rd Br	12	0.044	0.040	0.027	0.072	0.021	0.74	0.041
Whangape Stm at Rangiriri-Glen Murray Rd	12	0.077	0.071	0.045	0.132	0.036	0.96	0.072

IQR = Inter quartile range. - less than five-year record available.

Location	Count	Mean	Median	Min	Max	IQR	Skew	15-19 median
Waipa River and Tributaries								
Firewood Creek at Waingaro Road Bridge	12	0.029	0.031	0.018	0.041	0.015	0.00	-
Kaniwhaniwha Stm at Wright Rd	12	0.025	0.027	0.016	0.034	0.013	-0.07	0.027
Mangaohoi Stm at South Branch Maru Rd	12	0.012	0.008	0.004	0.048	0.006	2.95	0.007
Mangaokewa Stm at Lawrence Street Br	12	0.037	0.034	0.001	0.089	0.009	1.33	0.034
Mangapiko Stm (Pirongia/Te Awamutu) at Bowman Rd	12	0.072	0.070	0.051	0.110	0.016	1.15	0.086
Mangapu River at Otorohanga	12	0.029	0.029	0.020	0.038	0.009	0.08	0.030
Mangarama at Gadsby Rd	11	0.026	0.022	0.010	0.045	0.023	0.17	-
Mangarapa Stm at Otorohanga Rd	12	0.026	0.027	0.015	0.036	0.008	-0.15	-
Mangatutu Stm (Waikeria) at Walker Rd Br	12	0.026	0.019	0.012	0.098	0.006	3.20	0.019
Mangauika Stm at Te Awamutu Borough W/S Intake	12	0.010	0.009	0.005	0.021	0.005	1.41	0.007
Moakurua Stm at Warratah Farm Bridge	12	0.019	0.018	0.014	0.035	0.004	2.69	-
Ohote Stm at Whatawhata/Horotiu Rd	12	0.142	0.146	0.078	0.197	0.084	-0.21	0.184
Puniu River at Bartons Corner Rd Br	12	0.027	0.026	0.013	0.038	0.009	-0.33	0.028
Puniu River at Wharepapa Rd Bridge	12	0.028	0.026	0.014	0.048	0.019	0.43	-
Waipa River at Mangaokewa Rd	12	0.044	0.045	0.024	0.064	0.011	-0.05	0.049
Waipa River at Ngaruawahia Br	12	0.039	0.039	0.027	0.053	0.014	0.07	-
Waipa River at Pukehoua Bridge on Baffin Road	12	0.029	0.029	0.020	0.040	0.008	0.21	-
Waipa River at SH3 Otorohanga	12	0.028	0.027	0.018	0.038	0.009	0.28	0.027
Waitomo Stm at SH31 Otorohanga	12	0.019	0.018	0.014	0.038	0.006	2.28	0.018
Waitomo Stm at Tumutumu Rd	12	0.013	0.013	0.009	0.022	0.004	1.51	0.013
Tributaries to the Upper Waikato								
Kawaunui Stm at SH5 Br	12	0.027	0.022	0.016	0.076	0.007	2.93	0.028
Mangaharakeke Stm (Atiamuri) at SH30 (Off Jct SH1)	12	0.033	0.028	0.022	0.090	0.007	3.18	0.029
Mangakara Stm (Reporoa) at SH5	12	0.023	0.018	0.015	0.059	0.007	2.65	0.018
Mangakino Stm (Whakamaru) at Sandel Rd	12	0.020	0.013	0.007	0.053	0.018	1.35	0.013
Otamakokore Stm at Hossack Rd	12	0.049	0.036	0.020	0.210	0.013	3.17	0.039
Pueto Stm at Broadlands Rd Br	12	0.011	0.010	0.009	0.021	0.002	3.11	0.010
Tahunaatara Stm at Ohakuri Rd	12	0.035	0.028	0.020	0.122	0.011	3.25	0.034
Torepatutahi Stm at Vaile Rd Br	12	0.013	0.011	0.009	0.028	0.004	2.14	0.013
Waiotapu Stm at Campbell Rd Br	12	0.006	0.005	0.003	0.010	0.003	1.18	0.006
Waiotapu Stm at Homestead Rd Br	12	0.023	0.021	0.016	0.049	0.003	2.92	0.025
Waipapa Stm (Mokai) at Tirohanga Rd Br	12	0.016	0.012	0.010	0.052	0.002	3.25	0.013
Whirinaki Stm at Corbett Rd	12	0.005	0.003	0.002	0.015	0.004	1.91	0.003
West Coast								
Awakino River at Gribbon Rd	12	0.009	0.008	0.004	0.022	0.005	1.91	0.006
Awakino River at SH3 Awakau Rd Junction	11	0.012	0.012	0.007	0.021	0.006	0.90	0.012
Manganui River at Off Manganui Rd	12	0.010	0.010	0.007	0.016	0.004	1.03	0.008
Mangaotaki River at SH3 Br	12	0.016	0.015	0.011	0.021	0.006	0.04	0.015
Marokopa River at Speedies Rd (Off Te Anga Rd)	12	0.017	0.017	0.012	0.023	0.003	0.22	0.016
Mokau River at Awakau Rd	12	0.033	0.031	0.024	0.045	0.013	0.46	0.032
Mokau River at Mangaokewa Rd (Off SH30)	12	0.048	0.042	0.030	0.090	0.018	1.47	0.043
Mokau River at Totoro Rd Recorder	12	0.028	0.026	0.019	0.038	0.009	0.48	0.029
Mokauiti Stm at Three Way Point - Aria	12	0.060	0.050	0.033	0.118	0.036	1.21	0.054
Ohautira Stm at Waingaro Te Uku Rd	12	0.021	0.021	0.010	0.029	0.008	0.11	0.021
Oparau River at Langdon Rd (Off Okupata Rd)	12	0.020	0.020	0.013	0.029	0.008	0.28	0.018
Tawarau River at Off Speedies Rd	12	0.016	0.015	0.012	0.024	0.005	1.31	0.015
Waingaro River (Pukemiro) at Ruakiwi Rd Off SH22	12	0.037	0.038	0.019	0.062	0.022	0.36	0.032
Waitetuna River at Te Uku-Waingaro Rd	12	0.026	0.026	0.015	0.040	0.009	0.52	0.025
Inflows to Lake Taupo								
Hinemaiaia River at SH1	12	0.016	0.013	0.010	0.040	0.004	2.58	0.013
Kuratau River at SH41 Moerangi	12	0.021	0.019	0.014	0.040	0.006	1.68	0.018
Kuratau River at Te Rae Street T10	12	0.023	0.021	0.013	0.047	0.011	1.87	0.020
Mapara Stm (Lake Taupo) at Off Mapara Rd (Whakaipo Res) T1	12	0.038	0.037	0.003	0.058	0.014	-1.10	0.037
Tauranga-Taupo River at 20 Metres U/S SH1 Bridge	12	0.010	0.008	0.006	0.019	0.006	1.17	0.007
Tokaanu Power Station Tailrace Canal at SH41 Bridge Over Canal	12	0.006	0.006	0.003	0.010	0.002	0.81	0.006
Tokaanu Stm at Off SH41 Turangi	12	0.004	0.001	0.001	0.024	0.001	2.80	0.001
Waihaha River at SH32	12	0.014	0.009	0.007	0.034	0.012	1.31	0.009
Waitahanui River at Blake Rd	12	0.007	0.004	0.002	0.030	0.005	2.69	0.003
Whangamata Stm (Kinloch) at Whangamata Rd	12	0.008	0.008	0.004	0.016	0.005	1.09	0.007
Whanganui Stm at Lakeside Lake Taupo T8	12	0.022	0.016	0.011	0.062	0.014	2.10	0.016
Whareroa Stm (Taupo) at Lakeside Lake Taupo T9	12	0.021	0.018	0.014	0.049	0.006	2.49	0.018

IQR = Inter quartile range. - less than five-year record available.

Absorbance (440nm) (/cm)								
Location	Count	Mean	Median	Min	Max	IQR	Skew	15-19 median
Coromandel								
Hikutaia River at Old Maratoto Rd	12	0.003	0.003	0.002	0.005	0.001	0.33	0.003
Kauaeranga River at Smiths Cableway/Recorder	12	0.003	0.004	0.001	0.007	0.004	0.28	0.003
Ohinemuri River at Karangahake	12	0.003	0.004	0.001	0.005	0.002	-0.54	-
Ohinemuri River at Queens Head	12	0.003	0.003	0.001	0.005	0.002	0.15	0.003
Ohinemuri River at SH25 Br	12	0.002	0.002	0.001	0.006	0.002	1.51	0.002
Tairua River at Morrisons Br Hikuai	12	0.007	0.004	0.001	0.044	0.001	3.41	0.003
Tapu River at Tapu-Coroglen Rd	12	0.002	0.002	0.001	0.004	0.003	0.52	0.002
Waiau River at E309 Rd Ford	12	0.004	0.004	0.001	0.006	0.002	-0.36	0.004
Waitekauri River at U/S Ohinemuri Conflu	12	0.002	0.002	0.001	0.003	0.002	0.16	0.002
Waiwawa River at SH25 Coroglen	12	0.005	0.005	0.001	0.012	0.003	1.31	0.005
Wharekawa River at SH25	12	0.004	0.004	0.002	0.006	0.002	0.11	0.004
Hauraki								
Mangawhero Stm (Kaihere) at Mangawara Rd	12	0.007	0.005	0.004	0.020	0.004	1.93	0.004
Oraka Stm at Lake Rd	12	0.003	0.002	0.001	0.012	0.001	3.09	0.003
Piako River at Kiwitahi	12	0.010	0.009	0.006	0.016	0.004	1.02	0.008
Piako River at Paeroa-Tahuna Rd Br	12	0.013	0.014	0.003	0.022	0.006	-0.36	0.013
Piakonui Stm at Piakonui Rd	12	0.007	0.007	0.005	0.011	0.002	0.86	0.006
Waihou River at Okauia	12	0.003	0.003	0.001	0.006	0.003	0.59	0.003
Waihou River at Te Aroha	12	0.004	0.003	0.001	0.007	0.001	0.82	-
Waihou River at Whites Rd	12	0.001	0.001	0.001	0.003	0.000	3.46	0.001
Waiohotu Stm at Waiohotu Rd (Off SH5)	12	0.008	0.007	0.003	0.021	0.002	2.76	0.009
Waiomou Stm at Matamata-Tauranga Rd	12	0.005	0.005	0.003	0.009	0.004	0.81	0.004
Waitakaruru River (Hauraki Plains) at Coxhead Rd Br	12	0.014	0.012	0.006	0.028	0.012	0.75	0.013
Waitoa River at Landsdowne Rd Br	12	0.009	0.008	0.005	0.016	0.005	1.11	0.007
Waitoa River at Mellon Rd Recorder	12	0.008	0.008	0.006	0.010	0.002	0.58	0.007
Tributaries to the Lower Waikato								
Awaroa River (Waiuku) at Otaua Rd Br opp Moseley Rd	12	0.007	0.007	0.003	0.013	0.004	0.62	0.006
Awaroa Stm (Rotowaro) at Sansons Br @ Rotowaro-Huntly Rd	12	0.003	0.003	0.002	0.007	0.002	1.69	0.003
Karapiro Stm at Hickey Rd Bridge - Cambridge	12	0.010	0.009	0.005	0.016	0.006	0.64	0.008
Kirikiriroa Stm at Tauhara Dr	12	0.008	0.008	0.005	0.009	0.001	-0.82	0.008
Komakorau Stm at Henry Rd	12	0.019	0.019	0.012	0.026	0.006	0.40	0.021
Little Waipa Stm at Arapuni - Putaruru Rd	12	0.003	0.002	0.001	0.011	0.002	3.03	0.003
Mangakotukutuku Stm (Rukuhia) at Peacocks Rd	12	0.045	0.032	0.012	0.127	0.054	1.19	0.039
Mangamingi Stm (Tokoroa) at Paraonui Rd Br	12	0.006	0.005	0.001	0.020	0.001	2.85	0.006
Mangaone Stm (Waikato) at Annebrooke Rd Br	12	0.008	0.008	0.005	0.011	0.002	-0.17	0.008
Mangaonua Stm at Hoeka Rd	12	0.008	0.009	0.004	0.012	0.005	-0.06	0.006
Mangaonua Stm at Te Miro Rd (a.k.a Waitakaruru stm)	12	0.006	0.006	0.005	0.009	0.002	0.91	0.006
Mangatangi River at SH2 Maramarua	12	0.009	0.008	0.005	0.017	0.006	1.04	0.008
Mangatawhiri River at Lyons Rd At Buckingham Br	12	0.006	0.004	0.003	0.017	0.003	2.38	0.005
Mangawara Stm at Rutherford Rd Br	12	0.020	0.020	0.010	0.030	0.011	0.00	0.025
Mangawhero Stm (Cambridge) at Cambridge-Ohaupo Rd	12	0.022	0.014	0.009	0.060	0.013	1.72	0.022
Matahuru Stm at Waiterimu Road Below Confluence	12	0.013	0.014	0.007	0.018	0.006	-0.20	0.015
Northern Outlet Canal (a.k.a.Pungarehu Canal) at D/S of Ctrl Gate	12	0.012	0.010	0.007	0.030	0.004	2.23	-
Ohaeroa Stm at SH22 Br	12	0.006	0.006	0.003	0.009	0.003	0.58	0.005
Opuatia Stm at Ponganui Rd	12	0.005	0.005	0.003	0.010	0.002	1.78	0.005
Pokaiwhenua Stm at Puketurua	12	0.004	0.003	0.001	0.011	0.001	2.42	0.004
Waahi Stm at Te Ohaki Rd	12	0.007	0.007	0.005	0.008	0.001	-1.06	-
Waerenga Stm at Taniwha Rd	12	0.006	0.006	0.003	0.012	0.003	1.44	0.005
Waitawhiriwhiri Stm at Edgecumbe Street	12	0.018	0.017	0.008	0.039	0.010	1.28	0.020
Whakapipi Stm at SH22 Br	12	0.007	0.007	0.005	0.010	0.004	0.34	0.006
Whakauru Stm at U/S SH1 Br	12	0.007	0.006	0.001	0.031	0.002	3.16	0.005
Whangamarino River at Island Block Rd	12	0.021	0.019	0.009	0.040	0.015	0.64	0.024
Whangamarino River at Jefferies Rd Br	12	0.008	0.008	0.005	0.012	0.004	0.41	0.007
Whangape Stm at Rangiriri-Glen Murray Rd	12	0.013	0.012	0.007	0.024	0.007	1.10	0.012

IQR = Inter quartile range. - less than five-year record available.

Location	Count	Mean	Median	Min	Max	IQR	Skew	15-19 median
Waipa River and Tributaries								
Firewood Creek at Waingaro Road Bridge	12	0.006	0.006	0.004	0.008	0.004	0.17	-
Kaniwhaniwha Stm at Wright Rd	12	0.005	0.006	0.002	0.008	0.002	-0.33	0.005
Mangaohoi Stm at South Branch Maru Rd	12	0.003	0.002	0.001	0.011	0.002	2.65	0.001
Mangaokewa Stm at Lawrence Street Br	12	0.008	0.007	0.001	0.019	0.003	1.70	0.007
Mangapiko Stm (Pirongia/Te Awamutu) at Bowman Rd	12	0.013	0.012	0.010	0.018	0.003	0.94	0.015
Mangapu River at Otorohanga	12	0.006	0.006	0.004	0.008	0.002	0.29	0.006
Mangarama at Gadsby Rd	11	0.005	0.004	0.002	0.008	0.004	0.22	-
Mangarapa Stm at Otorohanga Rd	12	0.005	0.005	0.003	0.008	0.001	1.06	-
Mangatutu Stm (Waikeria) at Walker Rd Br	12	0.005	0.004	0.002	0.020	0.002	2.99	0.004
Mangauika Stm at Te Awamutu Borough W/S Intake	12	0.002	0.002	0.001	0.004	0.002	1.02	0.001
Moakurua Stm at Warratah Farm Bridge	12	0.004	0.004	0.003	0.007	0.002	1.47	-
Ohote Stm at Whatawhata/Horotiu Rd	12	0.024	0.026	0.011	0.035	0.015	-0.22	0.031
Puniu River at Bartons Corner Rd Br	12	0.006	0.005	0.003	0.008	0.002	0.02	0.006
Puniu River at Wharepapa Rd Bridge	12	0.006	0.006	0.003	0.010	0.005	0.28	-
Waipa River at Mangaokewa Rd	12	0.009	0.009	0.005	0.013	0.003	0.09	0.010
Waipa River at Ngaruawahia Br	12	0.008	0.008	0.004	0.011	0.003	0.12	-
Waipa River at Pukehoua Bridge on Baffin Road	12	0.006	0.006	0.004	0.009	0.001	0.91	-
Waipa River at SH3 Otorohanga	12	0.005	0.005	0.004	0.008	0.002	0.92	0.005
Waitomo Stm at SH31 Otorohanga	12	0.004	0.003	0.002	0.008	0.001	2.38	0.003
Waitomo Stm at Tumutumu Rd	12	0.003	0.003	0.001	0.005	0.002	0.41	0.003
Tributaries to the Upper Waikato								
Kawaunui Stm at SH5 Br	12	0.005	0.005	0.001	0.015	0.002	2.21	0.005
Mangaharakeke Stm (Atiamuri) at SH30 (Off Jct SH1)	12	0.006	0.005	0.001	0.018	0.002	2.36	0.006
Mangakara Stm (Reporoa) at SH5	12	0.005	0.004	0.003	0.012	0.001	2.51	0.004
Mangakino Stm (Whakamaru) at Sandel Rd	12	0.004	0.003	0.001	0.012	0.004	1.31	0.003
Otamakokore Stm at Hossack Rd	12	0.011	0.008	0.004	0.045	0.004	3.10	0.008
Pueto Stm at Broadlands Rd Br	12	0.002	0.002	0.001	0.004	0.001	1.73	0.001
Tahunaatara Stm at Ohakuri Rd	12	0.008	0.006	0.003	0.026	0.002	3.21	0.007
Torepatutahi Stm at Vaile Rd Br	12	0.003	0.003	0.001	0.006	0.001	1.47	0.002
Waiotapu Stm at Campbell Rd Br	12	0.001	0.001	0.001	0.001	0.000	0.00	0.001
Waiotapu Stm at Homestead Rd Br	12	0.004	0.004	0.001	0.009	0.001	1.31	0.004
Waipapa Stm (Mokai) at Tirohanga Rd Br	12	0.003	0.003	0.001	0.012	0.001	2.91	0.003
Whirinaki Stm at Corbett Rd	12	0.001	0.001	0.001	0.003	0.000	2.06	0.001
West Coast								
Awakino River at Gribbon Rd	12	0.002	0.002	0.001	0.005	0.002	1.56	0.001
Awakino River at SH3 Awakau Rd Junction	11	0.003	0.003	0.001	0.004	0.002	-0.39	0.003
Manganui River at Off Manganui Rd	12	0.002	0.001	0.001	0.004	0.001	1.64	0.001
Mangaotaki River at SH3 Br	12	0.003	0.003	0.002	0.005	0.002	0.26	0.003
Marokopa River at Speedies Rd (Off Te Anga Rd)	12	0.004	0.004	0.002	0.005	0.001	0.15	0.003
Mokau River at Awakau Rd	12	0.006	0.006	0.004	0.009	0.003	0.50	0.006
Mokau River at Mangaokewa Rd (Off SH30)	12	0.010	0.009	0.006	0.018	0.004	1.32	0.009
Mokau River at Totoro Rd Recorder	12	0.005	0.005	0.004	0.008	0.002	0.99	0.006
Mokauiti Stm at Three Way Point - Aria	12	0.011	0.009	0.006	0.023	0.007	1.22	0.010
Ohautira Stm at Waingaro Te Uku Rd	12	0.004	0.004	0.002	0.007	0.003	0.41	0.004
Oparau River at Langdon Rd (Off Okupata Rd)	12	0.005	0.005	0.003	0.007	0.003	0.22	0.004
Tawarau River at Off Speedies Rd	12	0.003	0.003	0.001	0.005	0.002	-0.39	0.003
Waingaro River (Pukemiro) at Ruakiwi Rd Off SH22	12	0.007	0.007	0.004	0.012	0.006	0.25	0.006
Waitetuna River at Te Uku-Waingaro Rd	12	0.005	0.006	0.003	0.009	0.002	0.72	0.005
Inflows to Lake Taupo								
Hinemaiaia River at SH1	12	0.003	0.003	0.001	0.009	0.002	2.10	0.003
Kuratau River at SH41 Moerangi	12	0.004	0.003	0.002	0.007	0.002	1.03	0.003
Kuratau River at Te Rae Street T10	12	0.005	0.005	0.001	0.010	0.003	0.82	0.004
Mapara Stm (Lake Taupo) at Off Mapara Rd (Whakaipo Res) T1	12	0.008	0.008	0.001	0.012	0.003	-1.05	0.008
Tauranga-Taupo River at 20 Metres U/S SH1 Bridge	12	0.002	0.001	0.001	0.004	0.001	1.50	0.001
Tokaanu Power Station Tailrace Canal at SH41 Bridge Over Canal	12	0.001	0.001	0.001	0.002	0.000	2.06	0.001
Tokaanu Stm at Off SH41 Turangi	12	0.002	0.001	0.001	0.005	0.000	2.56	0.001
Waihaha River at SH32	12	0.003	0.002	0.001	0.006	0.004	0.68	0.002
Waitahanui River at Blake Rd	12	0.002	0.001	0.001	0.006	0.001	2.64	0.001
Whangamata Stm (Kinloch) at Whangamata Rd	12	0.002	0.002	0.001	0.003	0.002	0.57	0.001
Whanganui Stm at Lakeside Lake Taupo T8	12	0.005	0.004	0.002	0.014	0.003	2.08	0.004
Whareroa Stm (Taupo) at Lakeside Lake Taupo T9	12	0.004	0.004	0.003	0.011	0.002	2.55	0.004

IQR = Inter quartile range. - less than five-year record available.

Black Disk (m)								
Location	Count	Mean	Median	Min	Max	IQR	Skew	15-19 median
Coromandel								
Hikutaia River at Old Maratoto Rd	12	3.2	3.6	1.7	4.2	1.5	-0.47	3.2
Kauaeranga River at Smiths Cableway/Recorder	12	3.9	4.6	1.3	5.6	2.6	-0.69	3.8
Ohinemuri River at Karangahake	12	3.3	3.6	1.2	4.7	1.3	-0.91	3.1
Ohinemuri River at Queens Head	12	3.3	3.6	1.1	4.5	1.0	-1.50	3.5
Ohinemuri River at SH25 Br	12	3.6	3.6	1.1	5.2	1.2	-0.93	3.4
Tairua River at Morrisons Br Hikuai	-	-	-	-	-	-	-	-
Tapu River at Tapu-Coroglen Rd	12	4.6	4.8	1.7	7.0	1.4	-0.63	4.4
Waiau River at E309 Rd Ford	12	2.5	2.8	1.3	3.9	1.5	-0.19	2.6
Waitekauri River at U/S Ohinemuri Conflu	12	4.1	4.1	2.0	5.5	0.8	-1.08	3.8
Waiwawa River at SH25 Coroglen	12	3.6	3.2	1.5	6.4	1.8	0.53	3.3
Wharekawa River at SH25	11	2.9	2.9	0.7	4.4	1.4	-0.69	2.5
Hauraki								
Mangawhero Stm (Kaihere) at Mangawara Rd	12	0.9	1.0	0.1	1.3	0.4	-1.22	0.9
Oraka Stm at Lake Rd	12	1.0	1.0	0.4	1.5	0.5	-0.30	0.9
Piako River at Kiwitahi	12	1.7	1.8	0.4	2.6	0.8	-0.88	1.4
Piako River at Paeroa-Tahuna Rd Br	12	0.8	0.7	0.3	1.8	0.5	1.45	0.9
Piakonui Stm at Piakonui Rd	12	1.5	1.3	0.8	2.7	0.7	1.12	1.3
Waihou River at Okauia	10	1.1	1.2	0.5	1.8	0.4	-0.31	1.0
Waihou River at Te Aroha	12	1.1	1.2	0.3	1.5	0.8	-0.61	0.9
Waihou River at Whites Rd	12	4.4	4.4	1.9	5.4	0.8	-1.95	5.0
Waiohotu Stm at Waiohotu Rd (Off SH5)	-	-	-	-	-	-	-	-
Waiomou Stm at Matamata-Tauranga Rd	12	1.2	1.3	0.5	1.8	0.5	-0.46	1.3
Waitakaruru River (Hauraki Plains) at Coxhead Rd Br	12	1.3	1.4	0.0	2.8	1.4	-0.15	1.1
Waitoa River at Landsdowne Rd Br	12	1.6	1.6	0.3	3.1	1.2	0.32	1.2
Waitoa River at Mellon Rd Recorder	12	0.7	0.8	0.2	1.2	0.1	-0.83	0.8
Tributaries to the Lower Waikato								
Awaroa River (Waiuku) at Otaua Rd Br opp Moseley Rd	12	0.5	0.5	0.2	1.1	0.3	1.20	0.4
Awaroa Stm (Rotowaro) at Sansons Br @ Rotowaro-Huntly Rd	12	1.2	1.2	0.7	2.0	0.6	0.39	1.1
Karapiro Stm at Hickey Rd Bridge - Cambridge	11	1.0	0.9	0.3	1.4	0.6	-0.49	0.9
Kirikirihoa Stm at Tauhara Dr	12	0.4	0.4	0.2	0.8	0.2	0.88	0.4
Komakorau Stm at Henry Rd	12	0.1	0.1	0.1	0.3	0.0	2.61	0.1
Little Waipa Stm at Arapuni - Putaruru Rd	12	2.1	1.9	0.5	3.4	1.5	-0.06	1.7
Mangakotukutuku Stm (Rukuhia) at Peacocks Rd	12	0.5	0.5	0.2	0.8	0.3	0.00	0.5
Mangamingi Stm (Tokoroa) at Paraonui Rd Br	12	0.7	0.7	0.1	1.0	0.3	-0.77	0.8
Mangaone Stm (Waikato) at Annebrooke Rd Br	12	0.8	0.7	0.5	1.1	0.3	0.63	1.0
Mangaonua Stm at Hoeka Rd	12	0.7	0.6	0.2	1.4	0.6	0.59	0.9
Mangaonua Stm at Te Miro Rd (a.k.a Waitakaruru stm)	12	1.3	1.4	0.4	1.8	0.5	-0.87	1.2
Mangatangi River at SH2 Maramarua	10	0.5	0.4	0.2	0.8	0.3	0.44	0.5
Mangatawhiri River at Lyons Rd At Buckingham Br	12	2.0	1.9	0.1	4.0	1.9	0.06	1.9
Mangawara Stm at Rutherford Rd Br	12	0.2	0.2	0.1	0.4	0.1	1.03	0.2
Mangawhero Stm (Cambridge) at Cambridge-Ohaupo Rd	12	0.2	0.2	0.1	0.3	0.0	-0.34	0.2
Matahuru Stm at Waiterimu Road Below Confluence	12	0.0	0.0	0.0	0.0	0.0	-0.20	0.0
Northern Outlet Canal (a.k.a.Pungarehu Canal) at D/S of Ctrl Gate	12	0.1	0.1	0.1	0.7	0.0	3.27	-
Ohaeroa Stm at SH22 Br	12	0.8	0.8	0.1	1.2	0.5	-0.63	0.9
Opuatia Stm at Ponganui Rd	12	0.5	0.5	0.1	1.0	0.3	0.22	0.5
Pokaiwhenua Stm at Puketurua	12	1.3	1.4	0.1	2.0	0.7	-0.79	1.1
Waahi Stm at Te Ohaki Rd	11	0.3	0.2	0.2	0.4	0.1	1.45	-
Waerenga Stm at Taniwha Rd	12	0.8	0.7	0.1	1.5	0.9	0.30	0.7
Waitawhiriwhiri Stm at Edgecumbe Street	12	0.3	0.3	0.2	0.5	0.1	-0.31	0.4
Whakapipi Stm at SH22 Br	12	1.9	1.8	0.1	3.8	1.5	0.10	1.6
Whakauru Stm at U/S SH1 Br	12	0.5	0.5	0.1	0.7	0.3	-0.66	0.5
Whangamarino River at Island Block Rd	12	0.2	0.2	0.1	0.4	0.1	1.98	0.2
Whangamarino River at Jefferies Rd Br	12	0.2	0.2	0.1	0.5	0.1	0.73	0.3
Whangape Stm at Rangiriri-Glen Murray Rd	12	0.1	0.1	0.0	0.3	0.1	1.48	0.1

IQR = Inter quartile range. - less than five-year record available or not measured.

Location	Count	Mean	Median	Min	Max	IQR	Skew	15-19 median
Waipa River and Tributaries								
Firewood Creek at Waingaro Road Bridge	12	0.8	0.9	0.7	1.1	0.2	0.73	-
Kaniwhaniwha Stm at Wright Rd	12	0.8	0.7	0.5	1.0	0.2	0.13	0.7
Mangaohoi Stm at South Branch Maru Rd	12	1.4	1.5	0.5	2.0	0.6	-0.89	1.5
Mangaokewa Stm at Lawrence Street Br	12	1.1	1.3	0.1	2.2	1.2	-0.19	0.8
Mangapiko Stm (Pirongia/Te Awamutu) at Bowman Rd	12	0.6	0.6	0.3	1.1	0.3	0.67	0.6
Mangapu River at Otorohanga	10	0.8	0.7	0.2	1.5	0.3	0.05	0.6
Mangarama at Gadsby Rd	1	1.5	1.5	1.5	1.5	-	0.00	-
Mangarapa Stm at Otorohanga Rd	10	1.6	1.8	0.7	2.7	1.4	-0.07	-
Mangatutu Stm (Waikeria) at Walker Rd Br	12	1.6	1.7	0.2	2.6	1.0	-0.54	1.5
Mangauika Stm at Te Awamutu Borough W/S Intake	12	3.6	3.6	2.2	4.9	2.1	-0.03	4.6
Moakurua Stm at Warratah Farm Bridge	12	1.2	1.1	0.2	2.7	1.2	0.50	1.1
Ohote Stm at Whatawhata/Horotiu Rd	12	0.5	0.5	0.3	0.7	0.1	0.31	0.5
Puniu River at Bartons Corner Rd Br	12	0.9	0.8	0.3	2.3	0.4	2.07	0.7
Puniu River at Wharepapa Rd Bridge	12	1.2	1.2	0.5	2.3	1.0	0.30	-
Waipa River at Mangaokewa Rd	12	1.8	2.0	0.0	2.6	0.5	-1.63	1.8
Waipa River at Ngaruawahia Br	12	0.6	0.6	0.1	0.9	0.2	-1.04	-
Waipa River at Pukehoua Bridge on Baffin Road	12	0.8	0.7	0.2	1.2	0.2	0.05	-
Waipa River at SH3 Otorohanga	12	1.6	1.7	0.3	2.9	1.4	-0.07	1.2
Waitomo Stm at SH31 Otorohanga	12	0.9	0.9	0.2	1.8	0.8	0.29	0.5
Waitomo Stm at Tumutumu Rd	12	1.3	1.2	0.2	2.1	1.0	-0.17	1.0
Tributaries to the Upper Waikato								
Kawaunui Stm at SH5 Br	12	1.2	1.3	0.7	1.8	0.6	-0.08	1.3
Mangaharakeke Stm (Atiamuri) at SH30 (Off Jct SH1)	12	0.9	1.1	0.2	1.5	0.3	-1.09	0.9
Mangakara Stm (Reporoa) at SH5	11	0.9	0.9	0.5	1.8	0.4	1.47	0.8
Mangakino Stm (Whakamaru) at Sandel Rd	12	1.7	1.7	0.6	2.7	1.2	-0.14	1.8
Otamakokore Stm at Hossack Rd	12	1.4	1.5	0.4	2.2	0.4	-0.62	1.2
Pueto Stm at Broadlands Rd Br	12	1.6	1.6	1.0	2.2	0.4	0.26	1.6
Tahunaatara Stm at Ohakuri Rd	12	1.2	1.3	0.1	1.7	0.4	-1.66	1.1
Torepatutahi Stm at Vaile Rd Br	-	-	-	-	-	-	-	-
Waiotapu Stm at Campbell Rd Br	12	1.1	1.1	0.5	1.7	0.3	0.04	1.1
Waiotapu Stm at Homestead Rd Br	-	-	-	-	-	-	-	-
Waipapa Stm (Mokai) at Tirohanga Rd Br	12	1.2	1.2	0.5	1.6	0.4	-0.87	1.2
Whirinaki Stm at Corbett Rd	-	-	-	-	-	-	-	-
West Coast								
Awakino River at Gribbon Rd	12	2.5	2.5	0.3	4.5	1.2	-0.28	2.3
Awakino River at SH3 Awakau Rd Junction	11	2.1	2.2	0.1	3.9	1.4	-0.20	1.6
Manganui River at Off Manganui Rd	12	1.6	1.8	0.1	2.2	0.8	-1.33	1.2
Mangaotaki River at SH3 Br	12	1.5	1.4	0.2	2.9	1.2	0.13	0.9
Marokopa River at Speedies Rd (Off Te Anga Rd)	12	1.3	1.3	0.2	2.2	1.0	-0.32	1.0
Mokau River at Awakau Rd	12	0.6	0.6	0.1	1.0	0.4	-0.32	0.5
Mokau River at Mangaokewa Rd (Off SH30)	12	1.1	1.2	0.2	1.9	0.7	-0.25	1.1
Mokau River at Totoro Rd Recorder	11	1.5	1.5	0.2	2.5	1.3	-0.50	0.8
Mokauiti Stm at Three Way Point - Aria	12	0.9	0.9	0.2	1.7	0.7	-0.17	0.6
Ohautira Stm at Waingaro Te Uku Rd	12	1.2	1.3	0.6	1.8	0.8	-0.27	0.9
Oparau River at Langdon Rd (Off Okupata Rd)	12	1.5	1.6	0.4	2.3	1.1	-0.52	1.7
Tawarau River at Off Speedies Rd	12	1.4	1.6	0.2	2.0	0.7	-1.17	1.2
Waingaro River (Pukemiro) at Ruakiwi Rd Off SH22	12	0.9	0.9	0.2	1.7	0.6	0.19	0.8
Waitetuna River at Te Uku-Waingaro Rd	12	0.9	0.9	0.3	1.5	0.6	0.07	0.7
Inflows to Lake Taupo								
Hinemaiaia River at SH1	12	2.5	2.5	0.7	3.8	0.9	-0.78	2.4
Kuratau River at SH41 Moerangi	12	2.6	2.5	1.0	4.2	1.4	0.19	2.7
Kuratau River at Te Rae Street T10	-	-	-	-	-	-	-	-
Mapara Stm (Lake Taupo) at Off Mapara Rd (Whakaipo Res) T1	12	1.1	1.2	0.6	1.5	0.2	-0.90	1.2
Tauranga-Taupo River at 20 Metres U/S SH1 Bridge	12	2.7	2.4	0.8	4.2	2.1	-0.13	2.9
Tokaanu Power Station Tailrace Canal at SH41 Bridge Over Canal	-	-	-	-	-	-	-	-
Tokaanu Stm at Off SH41 Turangi	-	-	-	-	-	-	-	-
Waihaha River at SH32	12	3.0	3.2	1.3	4.6	1.7	-0.33	3.1
Waitahanui River at Blake Rd	12	3.2	3.4	1.6	4.4	1.2	-0.66	2.8
Whangamata Stm (Kinloch) at Whangamata Rd	-	-	-	-	-	-	-	-
Whanganui Stm at Lakeside Lake Taupo T8	-	-	-	-	-	-	-	-
Whareroa Stm (Taupo) at Lakeside Lake Taupo T9	-	-	-	-	-	-	-	-

IQR = Inter quartile range. - = less than five-year record available or not measured.

Conductivity at 25 DegC (mS/m)								
Location	Count	Mean	Median	Min	Max	IQR	Skew	15-19 median
Coromandel								
Hikutaia River at Old Maratoto Rd	12	8.4	8.6	6.4	9.7	1.7	-0.66	8.1
Kauaeranga River at Smiths Cableway/Recorder	12	7.4	7.5	5.6	9.3	1.7	-0.01	7.8
Ohinemuri River at Karangahake	12	18.0	16.8	8.7	30.9	9.9	0.57	-
Ohinemuri River at Queens Head	12	31.6	29.1	9.9	59.2	23.0	0.42	23.4
Ohinemuri River at SH25 Br	12	7.8	8.0	6.3	8.8	1.6	-0.42	7.6
Tairua River at Morrisons Br Hikuai	12	6.1	6.2	5.1	6.9	0.8	-0.35	6.0
Tapu River at Tapu-Coroglen Rd	12	10.4	10.9	8.0	12.2	2.0	-0.70	10.2
Waiau River at E309 Rd Ford	12	9.8	10.1	7.8	10.8	1.3	-0.94	9.6
Waitekauri River at U/S Ohinemuri Conflu	12	11.5	11.4	7.1	15.8	4.8	-0.04	10.9
Waiwawa River at SH25 Coroglen	12	6.7	6.8	5.4	8.1	1.1	-0.12	6.6
Wharekawa River at SH25	12	7.2	7.5	5.6	8.3	1.4	-0.61	7.2
Hauraki								
Mangawhero Stm (Kaihere) at Mangawara Rd	12	11.6	12.3	7.3	13.2	1.5	-1.73	11.6
Oraka Stm at Lake Rd	12	14.7	13.6	11.0	26.2	4.6	2.04	13.2
Piako River at Kiwitahi	12	15.0	14.8	13.0	16.8	1.7	-0.03	14.9
Piako River at Paeroa-Tahuna Rd Br	12	22.7	22.7	20.2	24.7	3.0	-0.06	22.3
Piakonui Stm at Piakonui Rd	12	8.0	7.9	6.1	10.2	2.5	0.23	7.4
Waihou River at Okauia	12	10.7	10.7	9.6	11.6	1.0	-0.19	10.8
Waihou River at Te Aroha	12	11.4	11.3	10.9	12.2	0.7	0.74	-
Waihou River at Whites Rd	12	8.6	8.6	8.1	9.3	0.3	0.56	8.5
Waiohotu Stm at Waiohotu Rd (Off SH5)	12	5.4	5.6	3.3	5.9	0.6	-2.60	5.4
Waiomou Stm at Matamata-Tauranga Rd	12	7.0	6.8	6.6	7.9	0.6	1.17	7.0
Waitakaruru River (Hauraki Plains) at Coxhead Rd Br	12	16.8	18.0	9.7	21.2	4.8	-0.72	17.0
Waitoa River at Landsdowne Rd Br	12	16.8	16.5	13.1	20.9	4.5	0.26	16.6
Waitoa River at Mellon Rd Recorder	12	30.1	30.6	22.5	38.3	12.2	-0.07	28.4
Tributaries to the Lower Waikato								
Awaroa River (Waiuku) at Otaua Rd Br opp Moseley Rd	12	26.6	25.6	22.2	37.0	2.5	1.98	25.9
Awaroa Stm (Rotowaro) at Sansons Br @ Rotowaro-Huntly Rd	12	78.8	79.1	44.1	115.0	28.8	0.18	67.5
Karapiro Stm at Hickey Rd Bridge - Cambridge	12	14.2	14.8	11.0	16.6	3.6	-0.55	13.6
Kirikirihoa Stm at Tauhara Dr	12	20.3	20.6	9.5	34.8	1.4	0.60	20.7
Komakorau Stm at Henry Rd	12	26.8	25.1	24.1	36.6	3.9	1.99	25.7
Little Waipa Stm at Arapuni - Putaruru Rd	12	10.9	10.8	10.6	11.3	0.4	0.57	10.9
Mangakotukutuku Stm (Rukuhia) at Peacocks Rd	12	19.8	19.5	13.8	25.1	1.8	0.21	19.1
Mangamingi Stm (Tokoroa) at Paraonui Rd Br	12	12.5	12.7	9.3	14.3	0.8	-1.45	13.9
Mangaone Stm (Waikato) at Annebrooke Rd Br	12	27.0	27.1	24.4	29.0	1.8	-0.42	27.1
Mangaonua Stm at Hoeka Rd	12	20.4	20.6	16.2	24.5	2.2	-0.42	20.8
Mangaonua Stm at Te Miro Rd (a.k.a Waitakaruru stm)	12	10.5	10.5	8.4	12.1	2.1	-0.27	9.9
Mangatangi River at SH2 Maramarua	12	13.1	13.2	10.4	14.4	1.2	-1.32	13.3
Mangatawhiri River at Lyons Rd At Buckingham Br	12	12.1	13.1	5.8	13.8	1.7	-2.36	12.1
Mangawara Stm at Rutherford Rd Br	12	24.2	23.3	20.8	30.9	3.1	1.41	22.3
Mangawhero Stm (Cambridge) at Cambridge-Ohaupo Rd	12	21.9	21.9	20.2	22.8	1.4	-0.57	21.9
Matahuru Stm at Waiterimu Road Below Confluence	12	15.0	13.9	12.7	21.3	3.0	1.52	13.7
Northern Outlet Canal (a.k.a.Pungarehu Canal) at D/S of Ctrl Gate	12	15.8	15.5	13.9	17.8	2.9	0.20	-
Ohaeroa Stm at SH22 Br	12	17.4	18.9	13.0	21.1	6.1	-0.30	16.6
Opuatia Stm at Ponganui Rd	12	18.2	18.2	15.3	20.7	3.1	-0.05	18.0
Pokaiwhenua Stm at Puketurua	12	11.2	11.4	8.1	12.3	0.6	-2.31	11.4
Waahi Stm at Te Ohaki Rd	12	43.0	41.9	33.0	55.7	14.2	0.33	-
Waerenga Stm at Taniwha Rd	12	12.0	12.2	9.9	13.2	1.2	-0.98	11.9
Waitawhiriwhiri Stm at Edgecumbe Street	12	18.7	19.9	8.6	23.2	3.6	-1.49	20.0
Whakapipi Stm at SH22 Br	12	20.4	22.1	12.6	25.2	6.8	-0.63	19.8
Whakauru Stm at U/S SH1 Br	12	8.4	8.5	7.1	8.8	0.3	-2.49	8.2
Whangamarino River at Island Block Rd	12	16.6	16.2	14.4	21.4	1.4	1.61	16.0
Whangamarino River at Jefferies Rd Br	12	15.6	15.5	13.8	17.6	1.5	0.30	15.6
Whangape Stm at Rangiriri-Glen Murray Rd	12	22.8	22.0	17.1	32.2	8.4	0.63	20.7

IQR = Inter quartile range. - = less than five-year record available.

Location	Count	Mean	Median	Min	Max	IQR	Skew	15-19 median
Waipa River and Tributaries								
Firewood Creek at Waingaro Road Bridge	12	12.4	12.4	10.0	15.1	2.6	0.19	-
Kaniwhaniwha Stm at Wright Rd	12	10.6	10.4	9.2	12.5	1.5	0.60	10.1
Mangaohoi Stm at South Branch Maru Rd	12	8.5	8.6	7.2	9.6	1.2	-0.22	7.9
Mangaokewa Stm at Lawrence Street Br	12	17.4	15.8	10.9	25.6	9.3	0.39	15.5
Mangapiko Stm (Pirongia/Te Awamutu) at Bowman Rd	12	18.4	17.3	15.9	24.9	2.5	1.66	17.9
Mangapu River at Otorohanga	12	20.5	20.5	15.8	26.5	6.7	0.17	19.3
Mangarama at Gadsby Rd	11	24.4	26.2	17.2	28.9	5.7	-0.73	-
Mangarapa Stm at Otorohanga Rd	12	18.8	20.0	13.7	23.3	6.0	-0.22	-
Mangatutu Stm (Waikeria) at Walker Rd Br	12	7.1	7.3	5.6	8.1	1.1	-0.71	7.0
Mangauika Stm at Te Awamutu Borough W/S Intake	12	7.4	7.7	5.7	9.0	1.7	-0.02	6.6
Moakurua Stm at Warratah Farm Bridge	12	11.4	11.3	10.3	13.2	1.2	0.91	-
Ohote Stm at Whatawhata/Horotiu Rd	12	18.1	18.1	16.1	21.7	2.5	0.74	17.4
Puniu River at Bartons Corner Rd Br	12	8.8	8.8	7.6	9.6	1.4	-0.17	8.6
Puniu River at Wharepapa Rd Bridge	12	6.5	6.5	5.4	7.7	1.2	0.04	-
Waipa River at Mangaokewa Rd	12	5.4	5.3	4.4	7.2	1.1	0.96	5.1
Waipa River at Ngaruawahia Br	12	12.9	12.8	10.6	14.6	2.4	-0.26	-
Waipa River at Pukehoua Bridge on Baffin Road	12	12.3	12.2	10.7	14.5	1.8	0.57	-
Waipa River at SH3 Otorohanga	12	8.6	8.5	6.9	10.1	0.8	0.18	8.3
Waitomo Stm at SH31 Otorohanga	12	21.1	20.6	16.2	25.3	5.6	-0.11	18.8
Waitomo Stm at Tumutumu Rd	12	20.5	20.2	16.8	24.3	5.0	0.15	18.9
Tributaries to the Upper Waikato								
Kawaunui Stm at SH5 Br	12	14.4	14.4	13.9	15.5	0.7	0.91	14.4
Mangaharakeke Stm (Atiamuri) at SH30 (Off Jct SH1)	12	9.2	9.1	8.7	10.2	0.4	1.68	9.2
Mangakara Stm (Reporoa) at SH5	12	10.6	11.1	8.6	11.8	1.4	-0.97	10.1
Mangakino Stm (Whakamaru) at Sandel Rd	12	6.8	6.8	5.9	7.7	1.0	-0.01	6.7
Otamakokore Stm at Hossack Rd	12	37.1	38.4	22.8	40.5	2.1	-2.95	37.0
Pueto Stm at Broadlands Rd Br	12	12.1	12.1	11.7	12.4	0.5	-0.15	11.8
Tahunaatara Stm at Ohakuri Rd	12	7.9	8.0	7.4	8.4	0.2	-0.28	8.0
Torepatutahi Stm at Vaile Rd Br	12	10.3	10.3	9.9	10.8	0.5	0.35	10.3
Waiotapu Stm at Campbell Rd Br	12	67.3	67.9	61.8	72.0	3.8	-0.34	66.9
Waiotapu Stm at Homestead Rd Br	12	45.7	46.4	38.0	50.8	5.7	-0.60	44.3
Waipapa Stm (Mokai) at Tirohanga Rd Br	12	43.7	44.2	38.3	46.9	3.7	-0.69	43.9
Whirinaki Stm at Corbett Rd	12	7.0	7.0	6.8	7.3	0.2	0.49	7.0
West Coast								
Awakino River at Gribbon Rd	12	8.7	7.3	6.2	24.9	0.8	3.37	7.1
Awakino River at SH3 Awakano Rd Junction	11	15.7	13.6	8.1	28.4	8.5	0.90	13.2
Manganui River at Off Manganui Rd	12	11.8	11.5	8.8	14.9	3.1	0.08	10.5
Mangaotaki River at SH3 Br	12	14.2	14.3	12.0	16.2	1.9	-0.24	13.7
Marokopa River at Speedies Rd (Off Te Anga Rd)	12	14.9	15.1	11.0	17.6	3.0	-0.42	14.0
Mokau River at Awakau Rd	12	16.0	14.9	10.0	26.3	6.7	0.88	12.8
Mokau River at Mangaokewa Rd (Off SH30)	12	7.1	7.0	5.4	9.8	1.3	1.01	6.8
Mokau River at Totoro Rd Recorder	12	12.9	12.9	10.5	15.8	2.8	0.18	12.2
Mokauiti Stm at Three Way Point - Aria	12	12.7	11.5	9.6	17.1	5.0	0.70	11.0
Ohautira Stm at Waingaro Te Uku Rd	12	14.7	14.8	12.4	16.8	2.8	0.00	13.9
Oparau River at Langdon Rd (Off Okupata Rd)	12	9.3	9.3	7.1	11.7	2.5	0.19	8.7
Tawarau River at Off Speedies Rd	12	13.9	14.1	10.2	16.7	2.8	-0.43	13.1
Waingaro River (Pukemiro) at Ruakiwi Rd Off SH22	12	16.1	15.9	12.9	20.8	4.7	0.46	15.0
Waitetuna River at Te Uku-Waingaro Rd	12	11.0	11.0	9.2	12.7	1.8	0.02	10.6
Inflows to Lake Taupo								
Hinemaiaia River at SH1	12	6.3	6.4	4.7	7.6	1.5	-0.53	5.9
Kuratau River at SH41 Moerangi	12	4.6	4.5	3.7	6.4	1.0	1.07	4.4
Kuratau River at Te Rae Street T10	12	7.2	7.0	3.4	10.8	2.0	0.07	6.8
Mapara Stm (Lake Taupo) at Off Mapara Rd (Whakaipo Res) T1	12	12.7	12.7	12.1	13.3	0.7	-0.07	12.6
Tauranga-Taupo River at 20 Metres U/S SH1 Bridge	12	4.7	4.7	3.1	6.3	1.4	-0.02	4.7
Tokaanu Power Station Tailrace Canal at SH41 Bridge Over Canal	12	13.2	12.9	9.7	19.0	4.6	0.59	12.2
Tokaanu Stm at Off SH41 Turangi	12	10.2	10.2	9.7	11.7	0.6	2.12	10.2
Waihaha River at SH32	12	4.8	4.6	4.0	6.0	1.3	0.42	4.7
Waitahanui River at Blake Rd	12	7.7	7.7	7.0	8.5	0.6	0.15	7.5
Whangamata Stm (Kinloch) at Whangamata Rd	12	9.1	9.2	8.8	9.4	0.3	-0.13	8.9
Whanganui Stm at Lakeside Lake Taupo T8	12	6.1	6.1	4.8	7.7	1.5	0.22	5.7
Whareroa Stm (Taupo) at Lakeside Lake Taupo T9	12	7.8	7.8	6.9	8.6	1.0	-0.13	7.8

IQR = Inter quartile range. - = less than five-year record available.

Dissolved Oxygen (% sat.)								
Location	Count	Mean	Median	Min	Max	IQR	Skew	15-19 median
Coromandel								
Hikutaia River at Old Maratoto Rd	12	92	93	87	97	6	-0.54	95
Kauaeranga River at Smiths Cableway/Recorder	12	97	97	93	100	2	-0.69	98
Ohinemuri River at Karangahake	12	107	107	99	114	7	-0.21	-
Ohinemuri River at Queens Head	12	106	104	97	130	10	1.88	103
Ohinemuri River at SH25 Br	12	109	110	98	122	9	0.15	108
Tairua River at Morrisons Br Hikuai	12	97	97	92	102	5	0.11	97
Tapu River at Tapu-Coroglen Rd	12	100	100	98	103	2	0.20	101
Waiau River at E309 Rd Ford	12	100	99	96	104	4	0.37	101
Waitekauri River at U/S Ohinemuri Conflu	12	104	104	98	111	5	0.26	103
Waiwawa River at SH25 Coroglen	12	99	99	96	103	5	0.19	100
Wharekawa River at SH25	12	97	96	89	104	6	0.07	97
Hauraki								
Mangawhero Stm (Kaihere) at Mangawara Rd	12	99	98	92	109	3	1.13	98
Oraka Stm at Lake Rd	12	91	92	86	94	3	-1.02	92
Piako River at Kiwitahi	11	86	84	53	111	20	-0.44	87
Piako River at Paeroa-Tahuna Rd Br	12	83	83	73	90	7	-0.47	83
Piakonui Stm at Piakonui Rd	11	99	99	98	102	2	0.38	99
Waihou River at Okauia	11	94	94	92	97	2	0.49	93
Waihou River at Te Aroha	11	89	90	86	92	2	-0.54	-
Waihou River at Whites Rd	12	96	96	94	100	3	0.61	99
Waiohotu Stm at Waiohotu Rd (Off SH5)	12	93	94	79	96	2	-3.04	93
Waiomou Stm at Matamata-Tauranga Rd	11	96	97	93	100	3	-0.01	94
Waitakaruru River (Hauraki Plains) at Coxhead Rd Br	12	91	89	76	107	9	0.32	91
Waitoa River at Landsdowne Rd Br	11	94	90	85	106	12	0.74	88
Waitoa River at Mellon Rd Recorder	11	78	78	71	84	7	-0.04	75
Tributaries to the Lower Waikato								
Awaroa River (Waiuku) at Otaua Rd Br opp Moseley Rd	12	88	89	51	129	12	0.08	84
Awaroa Stm (Rotowaro) at Sansons Br @ Rotowaro-Huntly Rd	12	83	85	68	93	12	-0.64	85
Karapiro Stm at Hickey Rd Bridge - Cambridge	11	90	90	84	98	10	0.41	90
Kirikiriroa Stm at Tauhara Dr	12	74	73	66	82	10	0.08	72
Komakorau Stm at Henry Rd	12	65	64	53	74	13	-0.15	66
Little Waipa Stm at Arapuni - Putaruru Rd	12	92	92	83	105	7	0.60	98
Mangakotukutuku Stm (Rukuhia) at Peacocks Rd	11	88	88	82	93	8	-0.25	89
Mangamingi Stm (Tokoroa) at Paraonui Rd Br	12	98	98	93	101	3	-1.34	98
Mangaone Stm (Waikato) at Annebrooke Rd Br	12	80	80	72	85	8	-0.42	77
Mangaonua Stm at Hoeka Rd	12	83	82	75	88	6	-0.43	81
Mangaonua Stm at Te Miro Rd (a.k.a Waitakaruru stm)	11	99	99	90	101	1	-2.62	99
Mangatangi River at SH2 Maramarua	12	87	87	76	96	7	-0.40	86
Mangatawhiri River at Lyons Rd At Buckingham Br	12	110	112	91	127	18	-0.30	108
Mangawara Stm at Rutherford Rd Br	12	72	74	61	80	9	-0.64	71
Mangawhero Stm (Cambridge) at Cambridge-Ohaupo Rd	11	88	87	85	93	4	0.93	87
Matahuru Stm at Waiterimu Road Below Confluence	12	86	86	78	91	4	-0.82	85
Northern Outlet Canal (a.k.a.Pungarehu Canal) at D/S of Ctrl Gate	12	96	95	88	116	9	1.62	-
Ohaeroa Stm at SH22 Br	12	93	94	83	99	5	-0.99	96
Opuatia Stm at Ponganui Rd	12	93	94	83	98	7	-0.91	95
Pokaiwhenua Stm at Puketurua	12	96	95	88	102	4	-0.69	97
Waahi Stm at Te Ohaki Rd	12	77	83	49	98	29	-0.50	-
Waerenga Stm at Taniwha Rd	12	96	95	89	103	6	0.05	97
Waitawhiriwhiri Stm at Edgecumbe Street	12	79	79	70	89	11	0.17	83
Whakapipi Stm at SH22 Br	12	90	93	65	98	8	-1.97	94
Whakauru Stm at U/S SH1 Br	12	94	96	71	97	2	-3.30	96
Whangamarino River at Island Block Rd	12	73	69	39	131	33	1.01	56
Whangamarino River at Jefferies Rd Br	12	78	79	68	87	8	-0.11	77
Whangape Stm at Rangiriri-Glen Murray Rd	12	77	91	14	102	39	-1.30	86

IQR = Inter quartile range. - = less than five-year record available.

Location	Count	Mean	Median	Min	Max	IQR	Skew	15-19 median
Waipa River and Tributaries								
Firewood Creek at Waingaro Road Bridge	12	87	87	78	95	10	-0.22	-
Kaniwhaniwha Stm at Wright Rd	12	92	91	89	99	2	1.58	88
Mangaohoi Stm at South Branch Maru Rd	12	99	99	97	101	1	0.18	99
Mangaokewa Stm at Lawrence Street Br	12	90	92	81	97	7	-0.73	94
Mangapiko Stm (Pirongia/Te Awamutu) at Bowman Rd	12	102	96	92	130	11	1.67	95
Mangapu River at Otorohanga	12	91	91	85	98	6	-0.33	92
Mangarama at Gadsby Rd	10	106	105	82	131	18	0.38	-
Mangarapa Stm at Otorohanga Rd	12	100	100	83	120	19	0.30	-
Mangatutu Stm (Waikeria) at Walker Rd Br	12	96	96	91	101	4	0.03	95
Mangauika Stm at Te Awamutu Borough W/S Intake	12	98	98	95	99	1	-1.39	99
Moakurua Stm at Warratah Farm Bridge	12	96	95	91	101	3	0.59	-
Ohote Stm at Whatawhata/Horotiu Rd	12	50	45	28	80	33	0.31	49
Puniu River at Bartons Corner Rd Br	12	96	94	85	119	2	2.01	92
Puniu River at Wharepapa Rd Bridge	12	104	103	100	119	6	2.17	-
Waipa River at Mangaokewa Rd	12	98	99	95	101	4	-0.43	101
Waipa River at Ngaruawahia Br	12	84	82	73	92	9	-0.34	-
Waipa River at Pukehoua Bridge on Baffin Road	12	91	92	85	94	3	-1.29	-
Waipa River at SH3 Otorohanga	12	102	102	93	121	8	1.26	98
Waitomo Stm at SH31 Otorohanga	12	96	96	87	104	8	-0.23	95
Waitomo Stm at Tumutumu Rd	12	98	98	94	101	2	-0.28	99
Tributaries to the Upper Waikato								
Kawaunui Stm at SH5 Br	12	86	86	83	88	2	-0.86	87
Mangaharakeke Stm (Atiamuri) at SH30 (Off Jct SH1)	12	93	93	87	95	2	-1.74	93
Mangakara Stm (Reporoa) at SH5	12	91	91	88	94	3	-0.35	91
Mangakino Stm (Whakamaru) at Sandel Rd	12	102	102	100	104	1	-0.40	102
Otamakokore Stm at Hossack Rd	12	90	92	53	100	10	-2.57	94
Pueto Stm at Broadlands Rd Br	12	94	94	91	97	2	-0.38	93
Tahunaatara Stm at Ohakuri Rd	12	101	101	97	106	4	0.38	101
Torepatutahi Stm at Vaile Rd Br	12	94	92	88	101	6	0.50	94
Waiotapu Stm at Campbell Rd Br	12	88	88	85	90	2	-0.33	88
Waiotapu Stm at Homestead Rd Br	12	87	85	74	99	7	0.37	85
Waipapa Stm (Mokai) at Tirohanga Rd Br	12	98	98	95	101	3	-0.06	98
Whirinaki Stm at Corbett Rd	12	98	98	92	102	4	-0.62	99
West Coast								
Awakino River at Gribbon Rd	12	100	100	95	105	4	-0.15	101
Awakino River at SH3 Awakau Rd Junction	11	104	104	93	118	8	0.47	102
Manganui River at Off Manganui Rd	12	99	99	93	104	4	-0.36	99
Mangaotaki River at SH3 Br	12	100	100	96	103	3	-0.59	102
Marokopa River at Speedies Rd (Off Te Anga Rd)	12	102	103	94	106	4	-1.20	102
Mokau River at Awakau Rd	12	93	93	84	97	5	-0.94	95
Mokau River at Mangaokewa Rd (Off SH30)	12	96	96	93	99	3	0.04	98
Mokau River at Totoro Rd Recorder	12	100	99	96	105	4	0.83	102
Mokauiti Stm at Three Way Point - Aria	12	91	92	75	105	7	-0.07	92
Ohautira Stm at Waingaro Te Uku Rd	12	96	96	93	100	2	0.49	95
Oparau River at Langdon Rd (Off Okupata Rd)	12	101	100	95	106	4	0.26	103
Tawarau River at Off Speedies Rd	12	103	103	101	107	4	0.18	102
Waingaro River (Pukemiro) at Ruakiwi Rd Off SH22	12	98	96	90	115	6	1.49	94
Waitetuna River at Te Uku-Waingaro Rd	12	97	97	94	102	2	0.27	97
Inflows to Lake Taupo								
Hinemaiaia River at SH1	12	98	99	93	102	2	-0.82	99
Kuratau River at SH41 Moerangi	12	93	93	90	97	4	0.08	94
Kuratau River at Te Rae Street T10	12	99	100	87	103	3	-2.51	99
Mapara Stm (Lake Taupo) at Off Mapara Rd (Whakaipo Res) T1	12	89	89	84	97	2	1.36	86
Tauranga-Taupo River at 20 Metres U/S SH1 Bridge	12	97	97	94	101	2	0.02	97
Tokaanu Power Station Tailrace Canal at SH41 Bridge Over Canal	12	101	99	95	109	4	0.84	99
Tokaanu Stm at Off SH41 Turangi	12	81	81	79	85	2	0.68	82
Waihaha River at SH32	12	102	101	99	106	3	0.22	101
Waitahanui River at Blake Rd	12	98	98	96	100	1	0.12	98
Whangamata Stm (Kinloch) at Whangamata Rd	12	95	94	93	96	2	0.04	94
Whanganui Stm at Lakeside Lake Taupo T8	12	101	100	91	110	4	-0.30	100
Whareroa Stm (Taupo) at Lakeside Lake Taupo T9	12	96	96	93	98	3	-0.07	95

IQR = Inter quartile range. - = less than five-year record available.

Dissolved Oxygen (g/m ³)								
Location	Count	Mean	Median	Min	Max	IQR	Skew	15-19 median
Coromandel								
Hikutaia River at Old Maratoto Rd	12	9.5	9.7	7.9	10.6	1.8	-0.39	10.0
Kauaeranga River at Smiths Cableway/Recorder	12	9.9	10.0	8.1	10.9	1.7	-0.54	10.2
Ohinemuri River at Karangahake	12	10.4	10.5	9.3	11.3	0.9	-0.39	-
Ohinemuri River at Queens Head	12	10.2	10.3	8.9	11.4	0.8	-0.44	10.4
Ohinemuri River at SH25 Br	12	10.5	10.7	9.3	11.2	0.8	-0.85	10.5
Tairua River at Morrisons Br Hikuai	12	9.6	9.7	8.3	10.6	1.4	-0.25	9.9
Tapu River at Tapu-Coroglen Rd	12	10.3	10.5	9.1	11.3	1.2	-0.36	10.5
Waiau River at E309 Rd Ford	12	10.3	10.5	8.8	11.3	1.2	-0.75	10.5
Waitekauri River at U/S Ohinemuri Conflu	12	10.2	10.3	8.9	11.1	0.8	-0.55	10.3
Waiwawa River at SH25 Coroglen	12	9.9	10.2	8.2	10.8	1.3	-0.80	10.2
Wharekawa River at SH25	12	9.6	9.7	8.5	10.7	1.4	-0.14	9.9
Hauraki								
Mangawhero Stm (Kaihere) at Mangawara Rd	12	9.8	9.9	8.5	10.8	0.9	-0.43	10.0
Oraka Stm at Lake Rd	12	9.3	9.5	8.3	10.3	0.7	-0.46	9.5
Piako River at Kiwitahi	11	8.7	8.9	4.7	11.3	1.6	-1.02	9.1
Piako River at Paeroa-Tahuna Rd Br	12	8.4	8.4	6.7	10.3	1.7	0.24	8.3
Piakonui Stm at Piakonui Rd	11	10.3	10.5	9.3	11.3	0.8	-0.30	10.3
Waihou River at Okauia	11	9.7	9.9	8.9	10.4	0.8	-0.59	9.7
Waihou River at Te Aroha	11	9.2	9.3	8.4	10.0	0.9	-0.04	-
Waihou River at Whites Rd	12	10.1	10.2	9.6	10.5	0.5	-0.56	10.3
Waiohotu Stm at Waiohotu Rd (Off SH5)	12	9.9	10.1	7.7	11.2	1.1	-0.85	9.9
Waiomou Stm at Matamata-Tauranga Rd	11	10.1	10.2	9.2	10.8	1.0	-0.37	9.8
Waitakaruru River (Hauraki Plains) at Coxhead Rd Br	12	9.0	9.2	6.8	10.5	1.2	-0.86	9.2
Waitoa River at Landsdowne Rd Br	11	9.6	9.6	8.5	10.5	0.7	-0.35	9.1
Waitoa River at Mellon Rd Recorder	11	7.9	7.9	6.6	9.3	0.9	0.19	7.5
Tributaries to the Lower Waikato								
Awaroa River (Waiuku) at Otaua Rd Br opp Moseley Rd	12	8.6	9.5	4.6	10.7	1.7	-1.44	8.6
Awaroa Stm (Rotowaro) at Sansons Br @ Rotowaro-Huntly Rd	12	8.3	8.3	6.4	10.2	2.2	-0.06	8.4
Karapiro Stm at Hickey Rd Bridge - Cambridge	11	9.2	9.0	7.8	10.5	1.7	-0.04	9.0
Kirikiriroa Stm at Tauhara Dr	12	7.3	7.3	6.2	8.7	1.7	0.08	7.2
Komakorau Stm at Henry Rd	12	6.5	6.6	5.0	8.1	2.0	-0.04	6.7
Little Waipa Stm at Arapuni - Putaruru Rd	12	9.5	9.6	8.0	10.6	1.2	-0.57	10.2
Mangakotukutuku Stm (Rukuhia) at Peacocks Rd	11	8.9	8.8	8.1	10.0	1.2	0.38	8.8
Mangamingi Stm (Tokoroa) at Paraonui Rd Br	12	10.0	10.1	8.7	11.2	1.0	0.08	10.0
Mangaone Stm (Waikato) at Annebrooke Rd Br	12	8.2	8.3	6.6	9.8	1.7	-0.18	7.9
Mangaonua Stm at Hoeka Rd	12	8.4	8.5	6.8	9.3	1.4	-0.66	8.3
Mangaonua Stm at Te Miro Rd (a.k.a Waitakaruru stm)	11	10.2	10.4	9.3	10.9	1.1	-0.49	10.2
Mangatangi River at SH2 Maramarua	12	8.5	8.8	6.9	10.0	1.6	-0.33	8.4
Mangatawhiri River at Lyons Rd At Buckingham Br	12	10.8	10.7	8.5	13.0	1.5	0.19	10.4
Mangawara Stm at Rutherford Rd Br	12	7.3	7.7	5.7	8.8	1.8	-0.37	7.4
Mangawhero Stm (Cambridge) at Cambridge-Ohaupo Rd	11	9.0	9.2	8.2	9.9	1.1	-0.01	8.7
Matahuru Stm at Waiterimu Road Below Confluence	12	8.5	8.8	7.3	9.7	1.2	-0.29	8.5
Northern Outlet Canal (a.k.a.Pungarehu Canal) at D/S of Ctrl Gate	12	9.5	9.8	7.5	11.3	2.2	-0.33	-
Ohaeroa Stm at SH22 Br	12	9.5	9.6	7.8	10.7	1.3	-0.51	9.9
Opuatia Stm at Ponganui Rd	12	9.5	9.7	7.7	11.0	1.5	-0.43	9.7
Pokaiwhenua Stm at Puketurua	11	10.0	10.1	9.1	10.7	0.9	-0.28	10.0
Waahi Stm at Te Ohaki Rd	12	7.5	7.4	4.4	10.3	4.2	-0.25	-
Waerenga Stm at Taniwha Rd	12	9.9	10.1	8.2	11.5	1.4	-0.30	10.1
Waitawhiriwhiri Stm at Edgecumbe Street	12	7.7	7.6	6.5	9.1	1.8	0.19	8.2
Whakapipi Stm at SH22 Br	12	9.1	9.6	6.1	10.7	1.5	-1.18	9.6
Whakauru Stm at U/S SH1 Br	12	9.7	10.0	6.7	11.0	1.2	-1.51	10.0
Whangamarino River at Island Block Rd	12	7.3	6.8	4.4	13.4	1.9	1.60	5.7
Whangamarino River at Jefferies Rd Br	12	8.1	8.2	6.3	9.9	1.8	0.07	8.3
Whangape Stm at Rangiriri-Glen Murray Rd	12	7.8	9.0	1.3	10.8	4.3	-1.16	8.7

IQR = Inter quartile range. - = less than five-year record available.

Location	Count	Mean	Median	Min	Max	IQR	Skew	15-19 median
Waipa River and Tributaries								
Firewood Creek at Waingaro Road Bridge	12	8.8	8.8	7.4	10.3	2.1	-0.06	-
Kaniwhaniwha Stm at Wright Rd	12	9.1	9.3	7.9	9.8	1.3	-0.69	8.9
Mangaohoi Stm at South Branch Maru Rd	12	9.9	9.9	8.7	10.9	1.3	-0.03	10.0
Mangaokewa Stm at Lawrence Street Br	12	9.6	9.9	7.4	11.8	2.3	-0.21	10.0
Mangapiko Stm (Pirongia/Te Awamutu) at Bowman Rd	12	10.2	10.1	8.1	13.4	1.6	0.89	9.4
Mangapu River at Otorohanga	12	9.1	9.2	7.6	10.6	1.5	-0.09	9.1
Mangarama at Gadsby Rd	10	10.9	10.9	8.7	12.8	2.7	-0.09	-
Mangarapa Stm at Otorohanga Rd	12	9.9	10.0	8.0	10.9	0.9	-1.13	-
Mangatutu Stm (Waikeria) at Walker Rd Br	12	9.8	9.8	8.4	11.2	2.2	0.21	9.8
Mangauika Stm at Te Awamutu Borough W/S Intake	12	10.3	10.5	9.2	11.8	1.3	0.07	10.4
Moakurua Stm at Warratah Farm Bridge	12	9.9	10.1	8.3	11.6	1.4	-0.18	-
Ohote Stm at Whatawhata/Horotiu Rd	12	5.0	4.6	2.5	8.3	3.7	0.29	4.8
Puniu River at Bartons Corner Rd Br	12	9.7	10.0	8.0	10.7	1.8	-0.59	9.4
Puniu River at Wharepapa Rd Bridge	12	10.6	10.4	9.8	12.0	0.9	1.00	-
Waipa River at Mangaokewa Rd	12	9.8	10.0	8.7	11.5	1.4	0.30	10.2
Waipa River at Ngaruawahia Br	12	8.4	8.2	6.7	9.9	1.8	0.03	-
Waipa River at Pukehoua Bridge on Baffin Road	12	9.3	9.5	7.7	10.9	1.6	-0.18	-
Waipa River at SH3 Otorohanga	12	10.2	10.1	8.6	11.4	0.9	-0.41	10.1
Waitomo Stm at SH31 Otorohanga	12	9.6	9.7	8.1	10.9	1.1	-0.15	9.7
Waitomo Stm at Tumutumu Rd	12	10.1	10.3	9.2	10.9	0.9	-0.35	10.4
Tributaries to the Upper Waikato								
Kawaunui Stm at SH5 Br	12	8.4	8.4	7.6	9.3	0.8	0.30	8.4
Mangaharakeke Stm (Atiamuri) at SH30 (Off Jct SH1)	12	9.4	9.5	8.2	10.3	1.0	-0.30	9.5
Mangakara Stm (Reporoa) at SH5	12	9.3	9.3	8.4	10.3	1.1	0.31	9.3
Mangakino Stm (Whakamaru) at Sandel Rd	12	10.7	10.7	9.7	12.0	1.2	0.37	10.8
Otamakokore Stm at Hossack Rd	12	7.9	8.2	4.7	8.8	1.2	-2.08	8.3
Pueto Stm at Broadlands Rd Br	12	9.5	9.5	8.8	10.1	0.7	0.18	9.4
Tahunaatara Stm at Ohakuri Rd	12	10.4	10.5	9.2	11.5	1.3	-0.19	10.3
Torepatutahi Stm at Vaile Rd Br	12	9.3	9.2	8.5	10.0	1.0	0.05	9.5
Waiotapu Stm at Campbell Rd Br	12	6.8	6.9	6.4	7.4	0.6	0.10	6.6
Waiotapu Stm at Homestead Rd Br	12	8.0	8.0	6.6	8.8	1.1	-0.67	7.9
Waipapa Stm (Mokai) at Tirohanga Rd Br	12	8.4	8.5	7.8	9.0	0.8	0.01	8.4
Whirinaki Stm at Corbett Rd	12	10.1	10.2	9.1	10.6	0.4	-1.26	10.2
West Coast								
Awakino River at Gribbon Rd	12	10.4	10.7	9.1	11.8	1.6	-0.09	10.6
Awakino River at SH3 Awakano Rd Junction	11	10.5	10.5	9.3	12.2	1.5	0.53	10.5
Manganui River at Off Manganui Rd	12	10.2	10.4	8.9	11.7	1.4	-0.04	10.2
Mangaotaki River at SH3 Br	12	10.4	10.5	9.0	12.2	1.6	0.18	10.6
Marokopa River at Speedies Rd (Off Te Anga Rd)	12	10.6	10.7	9.1	12.0	1.5	-0.14	10.7
Mokau River at Awakau Rd	12	9.3	9.6	7.8	11.2	1.5	-0.01	9.7
Mokau River at Mangaokewa Rd (Off SH30)	12	10.0	10.3	8.8	11.5	1.6	-0.08	10.3
Mokau River at Totoro Rd Recorder	12	10.1	10.5	8.6	12.1	1.7	0.00	10.5
Mokauiti Stm at Three Way Point - Aria	12	9.1	9.5	6.6	11.2	1.7	-0.59	9.5
Ohautira Stm at Waingaro Te Uku Rd	12	9.8	10.0	8.5	10.8	1.5	-0.46	9.9
Oparau River at Langdon Rd (Off Okupata Rd)	12	10.5	10.8	8.8	12.4	1.7	-0.15	10.6
Tawarau River at Off Speedies Rd	12	10.8	10.8	9.6	12.1	0.8	0.34	10.7
Waingaro River (Pukemiro) at Ruakiwi Rd Off SH22	12	9.7	9.9	8.1	10.5	0.6	-1.46	9.7
Waitetuna River at Te Uku-Waingaro Rd	12	9.8	9.9	8.5	10.9	1.6	-0.33	10.1
Inflows to Lake Taupo								
Hinemaiaia River at SH1	12	10.4	10.5	9.2	12.0	1.4	0.36	10.4
Kuratau River at SH41 Moerangi	12	9.9	9.8	8.7	11.4	1.3	0.20	9.9
Kuratau River at Te Rae Street T10	12	10.1	10.0	8.9	11.7	1.7	0.37	9.9
Mapara Stm (Lake Taupo) at Off Mapara Rd (Whakaipo Res) T1	12	9.4	9.4	8.8	10.3	0.8	0.51	9.2
Tauranga-Taupo River at 20 Metres U/S SH1 Bridge	12	10.4	10.4	9.0	11.8	1.5	0.00	10.4
Tokaanu Power Station Tailrace Canal at SH41 Bridge Over Canal	12	10.2	10.2	9.1	11.4	1.3	0.07	10.3
Tokaanu Stm at Off SH41 Turangi	12	8.4	8.4	7.8	8.8	0.5	-0.34	8.4
Waihaha River at SH32	12	10.6	10.6	9.6	12.0	1.1	0.49	10.6
Waitahanui River at Blake Rd	12	10.6	10.4	10.1	11.4	0.6	0.83	10.5
Whangamata Stm (Kinloch) at Whangamata Rd	12	10.3	10.1	9.7	11.4	0.7	1.06	10.1
Whanganui Stm at Lakeside Lake Taupo T8	12	10.6	10.6	9.0	12.0	1.5	-0.13	10.6
Whareroa Stm (Taupo) at Lakeside Lake Taupo T9	12	10.2	10.1	8.9	11.6	1.3	0.12	10.1

IQR = Inter quartile range. - = less than five-year record available.

Dissolved Reactive Phosphorus (g/m ³)								
Location	Count	Mean	Median	Min	Max	IQR	Skew	15-19 median
Coromandel								
Hikutaia River at Old Maratoto Rd	12	0.002	0.002	0.002	0.005	0.000	2.26	0.002
Kauaeranga River at Smiths Cableway/Recorder	12	0.002	0.002	0.002	0.002	0.000	0.00	0.002
Ohinemuri River at Karangahake	12	0.002	0.002	0.002	0.004	0.000	3.46	-
Ohinemuri River at Queens Head	12	0.003	0.002	0.002	0.005	0.001	1.47	0.002
Ohinemuri River at SH25 Br	12	0.004	0.002	0.002	0.010	0.005	0.94	0.005
Tairua River at Morrisons Br Hikuai	12	0.002	0.002	0.002	0.002	0.000	0.00	0.002
Tapu River at Tapu-Coroglen Rd	12	0.002	0.002	0.002	0.005	0.000	3.46	0.002
Waiau River at E309 Rd Ford	12	0.002	0.002	0.002	0.005	0.000	3.46	0.002
Waitekauri River at U/S Ohinemuri Conflu	12	0.002	0.002	0.002	0.002	0.000	0.00	0.002
Waiwawa River at SH25 Coroglen	12	0.002	0.002	0.002	0.002	0.000	0.00	0.002
Wharekawa River at SH25	12	0.002	0.002	0.002	0.005	0.000	3.46	0.002
Hauraki								
Mangawhero Stm (Kaihere) at Mangawara Rd	12	0.034	0.036	0.013	0.045	0.007	-1.29	0.035
Oraka Stm at Lake Rd	12	0.199	0.162	0.051	0.650	0.120	2.19	0.075
Piako River at Kiwitahi	12	0.029	0.027	0.017	0.047	0.011	0.93	0.033
Piako River at Paeroa-Tahuna Rd Br	12	0.161	0.141	0.047	0.350	0.170	0.47	0.128
Piakonui Stm at Piakonui Rd	12	0.009	0.010	0.002	0.014	0.007	-0.39	0.010
Waihou River at Okauia	12	0.080	0.070	0.050	0.138	0.058	0.73	0.060
Waihou River at Te Aroha	12	0.062	0.064	0.043	0.084	0.016	0.27	-
Waihou River at Whites Rd	12	0.067	0.067	0.060	0.072	0.007	-0.40	0.072
Waiohotu Stm at Waiohotu Rd (Off SH5)	12	0.010	0.011	0.005	0.013	0.003	-1.22	0.012
Waiomou Stm at Matamata-Tauranga Rd	12	0.015	0.015	0.010	0.022	0.005	0.36	0.017
Waitakaruru River (Hauraki Plains) at Coxhead Rd Br	12	0.015	0.013	0.007	0.023	0.010	0.24	0.019
Waitoa River at Landsdowne Rd Br	12	0.015	0.016	0.002	0.024	0.012	-0.54	0.019
Waitoa River at Mellon Rd Recorder	12	0.044	0.040	0.033	0.090	0.010	2.68	0.057
Tributaries to the Lower Waikato								
Awaroa River (Waiuku) at Otaua Rd Br opp Moseley Rd	12	0.013	0.002	0.002	0.120	0.003	3.43	0.002
Awaroa Stm (Rotowaro) at Sansons Br @ Rotowaro-Huntly Rd	12	0.002	0.002	0.002	0.004	0.000	3.46	0.002
Karapiro Stm at Hickey Rd Bridge - Cambridge	12	0.042	0.043	0.023	0.057	0.026	-0.23	0.041
Kirikirihoa Stm at Tauhara Dr	12	0.007	0.008	0.002	0.011	0.003	-0.55	0.010
Komakorau Stm at Henry Rd	12	0.006	0.006	0.002	0.010	0.005	0.01	0.009
Little Waipa Stm at Arapuni - Putaruru Rd	12	0.049	0.044	0.035	0.112	0.014	2.84	0.052
Mangakotukutuku Stm (Rukuhia) at Peacocks Rd	12	0.267	0.124	0.047	1.180	0.271	2.19	0.210
Mangamingi Stm (Tokoroa) at Paraonui Rd Br	12	0.166	0.148	0.118	0.260	0.059	1.16	0.182
Mangaone Stm (Waikato) at Annebrooke Rd Br	12	0.059	0.060	0.039	0.081	0.011	0.21	0.061
Mangaonua Stm at Hoeka Rd	12	0.007	0.007	0.002	0.016	0.006	0.60	0.009
Mangaonua Stm at Te Miro Rd (a.k.a Waitakaruru stm)	12	0.012	0.013	0.005	0.019	0.008	-0.22	0.012
Mangatangi River at SH2 Maramarua	12	0.016	0.015	0.008	0.039	0.009	1.78	0.019
Mangatawhiri River at Lyons Rd At Buckingham Br	12	0.010	0.010	0.006	0.017	0.004	0.99	0.011
Mangawara Stm at Rutherford Rd Br	12	0.033	0.031	0.006	0.072	0.032	0.39	0.049
Mangawhero Stm (Cambridge) at Cambridge-Ohaupo Rd	12	0.064	0.025	0.012	0.290	0.053	2.16	0.038
Matahuru Stm at Waiterimu Road Below Confluence	12	0.015	0.015	0.008	0.025	0.004	0.85	0.024
Northern Outlet Canal (a.k.a.Pungarehu Canal) at D/S of Ctrl Gate	12	0.003	0.002	0.002	0.007	0.000	2.12	-
Ohaeroa Stm at SH22 Br	12	0.008	0.007	0.004	0.020	0.002	2.24	0.008
Opuatia Stm at Ponganui Rd	12	0.006	0.005	0.002	0.015	0.005	1.57	0.006
Pokaiwhenua Stm at Puketurua	12	0.078	0.073	0.056	0.149	0.013	2.66	0.086
Waahi Stm at Te Ohaki Rd	12	0.002	0.002	0.002	0.002	0.000	0.00	-
Waerenga Stm at Taniwha Rd	12	0.019	0.017	0.005	0.051	0.012	1.38	0.017
Waitawhiriwhiri Stm at Edgecumbe Street	12	0.015	0.013	0.005	0.036	0.013	1.24	0.023
Whakapipi Stm at SH22 Br	12	0.036	0.025	0.012	0.115	0.021	1.88	0.023
Whakauru Stm at U/S SH1 Br	12	0.050	0.026	0.020	0.280	0.006	3.36	0.030
Whangamarino River at Island Block Rd	12	0.004	0.002	0.002	0.012	0.004	1.54	0.005
Whangamarino River at Jefferies Rd Br	12	0.022	0.022	0.012	0.033	0.007	0.14	0.024
Whangape Stm at Rangiriri-Glen Murray Rd	12	0.002	0.002	0.002	0.006	0.000	3.46	0.002

IQR = Inter quartile range. - = less than five-year record available.

Location	Count	Mean	Median	Min	Max	IQR	Skew	15-19 median
Waipa River and Tributaries								
Firewood Creek at Waingaro Road Bridge	12	0.004	0.005	0.002	0.007	0.003	0.12	-
Kaniwhaniwha Stm at Wright Rd	12	0.008	0.006	0.002	0.022	0.003	2.45	0.007
Mangaohoi Stm at South Branch Maru Rd	12	0.041	0.039	0.024	0.068	0.018	0.71	0.036
Mangaokewa Stm at Lawrence Street Br	12	0.013	0.011	0.005	0.031	0.004	1.74	0.013
Mangapiko Stm (Pirongia/Te Awamutu) at Bowman Rd	12	0.060	0.051	0.027	0.110	0.057	0.51	0.087
Mangapu River at Otorohanga	12	0.014	0.014	0.006	0.023	0.008	0.42	0.016
Mangarama at Gadsby Rd	11	0.008	0.008	0.002	0.013	0.002	-0.18	-
Mangarapa Stm at Otorohanga Rd	12	0.016	0.010	0.005	0.085	0.004	3.39	-
Mangatutu Stm (Waikeria) at Walker Rd Br	12	0.006	0.006	0.002	0.012	0.004	0.48	0.009
Mangauika Stm at Te Awamutu Borough W/S Intake	12	0.006	0.006	0.002	0.010	0.003	-0.14	0.004
Moakurua Stm at Warratah Farm Bridge	12	0.006	0.007	0.002	0.009	0.005	-0.61	-
Ohote Stm at Whatawhata/Horotiu Rd	12	0.014	0.016	0.005	0.023	0.013	-0.10	0.020
Puniu River at Bartons Corner Rd Br	12	0.017	0.017	0.010	0.026	0.005	0.35	0.021
Puniu River at Wharepapa Rd Bridge	12	0.024	0.025	0.012	0.036	0.010	-0.19	-
Waipa River at Mangaokewa Rd	12	0.004	0.004	0.002	0.012	0.004	1.53	0.005
Waipa River at Ngaruawahia Br	12	0.014	0.014	0.009	0.021	0.005	0.52	-
Waipa River at Pukehoua Bridge on Baffin Road	12	0.012	0.012	0.007	0.017	0.004	0.37	-
Waipa River at SH3 Otorohanga	12	0.007	0.007	0.002	0.020	0.005	1.51	0.007
Waitomo Stm at SH31 Otorohanga	12	0.005	0.006	0.002	0.010	0.004	0.24	0.006
Waitomo Stm at Tumutumu Rd	12	0.008	0.009	0.005	0.010	0.002	-0.94	0.009
Tributaries to the Upper Waikato								
Kawaunui Stm at SH5 Br	12	0.047	0.043	0.028	0.092	0.021	1.51	0.046
Mangaharakeke Stm (Atiamuri) at SH30 (Off Jct SH1)	12	0.035	0.030	0.022	0.100	0.010	3.01	0.030
Mangakara Stm (Reporoa) at SH5	12	0.081	0.041	0.032	0.500	0.011	3.42	0.043
Mangakino Stm (Whakamaru) at Sandel Rd	12	0.038	0.037	0.026	0.056	0.015	0.62	0.037
Otamakokore Stm at Hossack Rd	12	0.145	0.132	0.112	0.310	0.024	3.11	0.142
Pueto Stm at Broadlands Rd Br	12	0.059	0.059	0.052	0.070	0.005	1.03	0.064
Tahunaatara Stm at Ohakuri Rd	12	0.035	0.028	0.025	0.100	0.005	3.32	0.034
Torepatutahi Stm at Vaile Rd Br	12	0.071	0.070	0.060	0.093	0.008	1.39	0.076
Waiotapu Stm at Campbell Rd Br	12	0.004	0.002	0.002	0.010	0.004	1.23	0.002
Waiotapu Stm at Homestead Rd Br	12	0.031	0.030	0.019	0.051	0.009	0.99	0.030
Waipapa Stm (Mokai) at Tirohanga Rd Br	12	0.073	0.069	0.059	0.111	0.017	1.84	0.081
Whirinaki Stm at Corbett Rd	12	0.054	0.053	0.043	0.066	0.010	0.40	0.059
West Coast								
Awakino River at Gribbon Rd	12	0.010	0.009	0.006	0.015	0.006	0.60	0.012
Awakino River at SH3 Awakanu Rd Junction	11	0.006	0.005	0.002	0.011	0.007	0.05	0.009
Manganui River at Off Manganui Rd	12	0.009	0.009	0.005	0.019	0.006	1.20	0.012
Mangaotaki River at SH3 Br	12	0.009	0.009	0.002	0.018	0.004	0.26	0.010
Marokopa River at Speedies Rd (Off Te Anga Rd)	12	0.011	0.011	0.008	0.016	0.004	0.54	0.014
Mokau River at Awakau Rd	12	0.005	0.006	0.002	0.008	0.005	-0.11	0.007
Mokau River at Mangaokewa Rd (Off SH30)	12	0.014	0.012	0.008	0.027	0.008	1.27	0.013
Mokau River at Totoro Rd Recorder	12	0.009	0.008	0.002	0.017	0.006	0.43	0.010
Mokauiti Stm at Three Way Point - Aria	12	0.009	0.006	0.002	0.056	0.007	3.21	0.008
Ohautira Stm at Waingaro Te Uku Rd	12	0.018	0.018	0.011	0.022	0.007	-0.38	0.020
Oparau River at Langdon Rd (Off Okupata Rd)	12	0.005	0.005	0.002	0.011	0.005	0.87	0.006
Tawarau River at Off Speedies Rd	12	0.012	0.011	0.009	0.017	0.003	1.28	0.014
Waingaro River (Pukemiro) at Ruakiwi Rd Off SH22	12	0.007	0.007	0.002	0.013	0.005	0.28	0.009
Waitetuna River at Te Uku-Waingaro Rd	12	0.010	0.010	0.007	0.015	0.003	0.25	0.012
Inflows to Lake Taupo								
Hinemaiaia River at SH1	12	0.025	0.025	0.017	0.034	0.011	0.05	0.023
Kuratau River at SH41 Moerangi	12	0.002	0.002	0.002	0.002	0.000	0.00	0.002
Kuratau River at Te Rae Street T10	12	0.006	0.004	0.002	0.028	0.004	2.54	0.005
Mapara Stm (Lake Taupo) at Off Mapara Rd (Whakaipo Res) T1	12	0.111	0.106	0.099	0.129	0.016	0.61	0.124
Tauranga-Taupo River at 20 Metres U/S SH1 Bridge	12	0.012	0.012	0.008	0.017	0.005	0.11	0.012
Tokaanu Power Station Tailrace Canal at SH41 Bridge Over Canal	12	0.002	0.002	0.002	0.005	0.000	2.26	0.002
Tokaanu Stm at Off SH41 Turangi	12	0.071	0.071	0.061	0.078	0.007	-0.68	0.074
Waihaha River at SH32	12	0.016	0.015	0.011	0.026	0.009	0.65	0.016
Waitahanui River at Blake Rd	12	0.039	0.038	0.033	0.043	0.006	0.17	0.040
Whangamata Stm (Kinloch) at Whangamata Rd	12	0.061	0.061	0.051	0.074	0.007	0.47	0.065
Whanganui Stm at Lakeside Lake Taupo T8	12	0.010	0.011	0.002	0.016	0.008	-0.25	0.008
Whareroa Stm (Taupo) at Lakeside Lake Taupo T9	12	0.020	0.020	0.015	0.026	0.007	0.32	0.018

IQR = Inter quartile range. - = less than five-year record available.

Total Phosphorus (g/m ³)								
Location	Count	Mean	Median	Min	Max	IQR	Skew	15-19 median
Coromandel								
Hikutaia River at Old Maratoto Rd	12	0.009	0.008	0.006	0.017	0.002	1.99	0.008
Kauaeranga River at Smiths Cableway/Recorder	12	0.005	0.002	0.002	0.020	0.004	2.74	0.004
Ohinemuri River at Karangahake	12	0.008	0.008	0.004	0.016	0.003	1.72	-
Ohinemuri River at Queens Head	12	0.012	0.011	0.007	0.024	0.006	1.44	0.010
Ohinemuri River at SH25 Br	12	0.012	0.010	0.008	0.018	0.007	0.60	0.011
Tairua River at Morrisons Br Hikuai	12	0.004	0.003	0.002	0.008	0.004	0.56	0.004
Tapu River at Tapu-Coroglen Rd	12	0.004	0.004	0.002	0.008	0.004	0.27	0.004
Waiau River at E309 Rd Ford	12	0.009	0.009	0.002	0.018	0.002	0.64	0.006
Waitekauri River at U/S Ohinemuri Conflu	12	0.006	0.006	0.002	0.008	0.002	-0.68	0.006
Waiwawa River at SH25 Coroglen	12	0.003	0.002	0.002	0.005	0.001	1.47	0.002
Wharekawa River at SH25	12	0.006	0.006	0.002	0.012	0.003	0.40	0.006
Hauraki								
Mangawhero Stm (Kaihere) at Mangawara Rd	12	0.056	0.049	0.044	0.126	0.008	3.17	0.048
Oraka Stm at Lake Rd	12	0.242	0.215	0.071	0.720	0.118	2.10	0.125
Piako River at Kiwitahi	12	0.066	0.063	0.040	0.096	0.041	0.20	0.065
Piako River at Paeroa-Tahuna Rd Br	12	0.252	0.229	0.110	0.440	0.220	0.33	0.260
Piakonui Stm at Piakonui Rd	12	0.023	0.023	0.016	0.038	0.006	1.60	0.021
Waihou River at Okauia	12	0.112	0.107	0.068	0.173	0.070	0.20	0.084
Waihou River at Te Aroha	12	0.098	0.097	0.070	0.139	0.029	0.58	-
Waihou River at Whites Rd	12	0.076	0.074	0.072	0.084	0.003	1.77	0.076
Waiohotu Stm at Waiohotu Rd (Off SH5)	12	0.028	0.027	0.020	0.038	0.008	0.63	0.029
Waiomou Stm at Matamata-Tauranga Rd	12	0.036	0.035	0.028	0.054	0.007	1.62	0.034
Waitakaruru River (Hauraki Plains) at Coxhead Rd Br	12	0.078	0.040	0.022	0.330	0.044	2.38	0.052
Waitoa River at Landsdowne Rd Br	12	0.053	0.047	0.017	0.100	0.021	0.65	0.050
Waitoa River at Mellon Rd Recorder	12	0.133	0.115	0.084	0.280	0.057	1.78	0.129
Tributaries to the Lower Waikato								
Awaroa River (Waiuku) at Otaua Rd Br opp Moseley Rd	12	0.048	0.032	0.013	0.190	0.015	2.96	0.039
Awaroa Stm (Rotowaro) at Sansons Br @ Rotowaro-Huntly Rd	12	0.012	0.010	0.004	0.029	0.006	1.52	0.011
Karapiro Stm at Hickey Rd Bridge - Cambridge	12	0.102	0.105	0.067	0.129	0.047	-0.40	0.093
Kirikiriroa Stm at Tauhara Dr	12	0.072	0.069	0.048	0.186	0.022	2.96	0.058
Komakorau Stm at Henry Rd	12	0.103	0.100	0.084	0.124	0.017	0.19	0.101
Little Waipa Stm at Arapuni - Putaruru Rd	12	0.076	0.060	0.049	0.240	0.020	3.24	0.071
Mangakotukutuku Stm (Rukuhia) at Peacocks Rd	12	0.458	0.390	0.162	1.430	0.296	2.02	0.475
Mangamingi Stm (Tokoroa) at Paraonui Rd Br	12	0.247	0.215	0.168	0.490	0.093	2.01	0.240
Mangaone Stm (Waikato) at Annebrooke Rd Br	12	0.131	0.130	0.107	0.171	0.013	1.20	0.125
Mangaonua Stm at Hoeka Rd	12	0.082	0.081	0.032	0.162	0.036	0.99	0.067
Mangaonua Stm at Te Miro Rd (a.k.a Waitakaruru stm)	12	0.028	0.029	0.020	0.036	0.007	-0.32	0.029
Mangatangi River at SH2 Maramarua	12	0.082	0.070	0.040	0.186	0.050	1.45	0.072
Mangatawhiri River at Lyons Rd At Buckingham Br	12	0.045	0.020	0.012	0.300	0.013	3.39	0.024
Mangawara Stm at Rutherford Rd Br	12	0.206	0.198	0.138	0.300	0.071	0.62	0.210
Mangawhero Stm (Cambridge) at Cambridge-Ohaupo Rd	12	0.225	0.148	0.100	0.730	0.047	2.20	0.157
Matahuru Stm at Waiterimu Road Below Confluence	12	0.082	0.081	0.060	0.108	0.025	0.11	0.094
Northern Outlet Canal (a.k.a.Pungarehu Canal) at D/S of Ctrl Gate	12	0.154	0.165	0.090	0.194	0.036	-0.93	-
Ohaeroa Stm at SH22 Br	12	0.033	0.025	0.020	0.101	0.013	2.83	0.027
Opuatia Stm at Ponganui Rd	12	0.032	0.025	0.014	0.092	0.014	2.36	0.027
Pokaiwhenua Stm at Puketurua	12	0.115	0.097	0.083	0.290	0.015	3.26	0.110
Waahi Stm at Te Ohaki Rd	12	0.052	0.050	0.034	0.068	0.011	0.09	-
Waerenga Stm at Taniwha Rd	12	0.063	0.041	0.026	0.240	0.033	2.91	0.042
Waitawhiriwhiri Stm at Edgecumbe Street	12	0.081	0.073	0.058	0.157	0.022	2.18	0.093
Whakapipi Stm at SH22 Br	12	0.078	0.057	0.024	0.260	0.058	2.05	0.051
Whakauru Stm at U/S SH1 Br	12	0.128	0.068	0.046	0.660	0.022	3.10	0.073
Whangamarino River at Island Block Rd	12	0.121	0.119	0.079	0.167	0.053	0.18	0.137
Whangamarino River at Jefferies Rd Br	12	0.121	0.093	0.056	0.310	0.089	1.59	0.100
Whangape Stm at Rangiriri-Glen Murray Rd	12	0.161	0.135	0.050	0.350	0.147	0.71	0.122

IQR = Inter quartile range. - = less than five-year record available.

Location	Count	Mean	Median	Min	Max	IQR	Skew	15-19 median
Waipa River and Tributaries								
Firewood Creek at Waingaro Road Bridge	12	0.024	0.024	0.015	0.032	0.009	0.05	-
Kaniwhaniwha Stm at Wright Rd	12	0.029	0.026	0.016	0.052	0.014	1.15	0.030
Mangaohoi Stm at South Branch Maru Rd	12	0.060	0.058	0.038	0.093	0.031	0.49	0.049
Mangaokewa Stm at Lawrence Street Br	12	0.053	0.033	0.022	0.178	0.031	2.08	0.036
Mangapiko Stm (Pirongia/Te Awamutu) at Bowman Rd	12	0.155	0.154	0.084	0.240	0.098	0.15	0.210
Mangapu River at Otorohanga	12	0.046	0.041	0.021	0.097	0.021	1.22	0.053
Mangarama at Gadsby Rd	11	0.053	0.024	0.013	0.310	0.018	3.15	-
Mangarapa Stm at Otorohanga Rd	12	0.047	0.034	0.015	0.135	0.027	1.74	-
Mangatutu Stm (Waikeria) at Walker Rd Br	12	0.030	0.021	0.010	0.136	0.008	3.27	0.021
Mangauika Stm at Te Awamutu Borough W/S Intake	12	0.009	0.009	0.005	0.019	0.003	1.83	0.008
Moakurua Stm at Warratah Farm Bridge	12	0.028	0.021	0.010	0.074	0.022	1.39	-
Ohote Stm at Whatawhata/Horotiu Rd	12	0.098	0.102	0.047	0.137	0.056	-0.29	0.096
Puniu River at Bartons Corner Rd Br	12	0.053	0.048	0.032	0.126	0.021	2.40	0.051
Puniu River at Wharepapa Rd Bridge	12	0.055	0.053	0.030	0.093	0.011	0.93	-
Waipa River at Mangaokewa Rd	12	0.067	0.019	0.010	0.540	0.030	3.40	0.016
Waipa River at Ngaruawahia Br	12	0.056	0.057	0.038	0.088	0.018	0.95	-
Waipa River at Pukehoua Bridge on Baffin Road	12	0.043	0.038	0.032	0.086	0.015	2.23	-
Waipa River at SH3 Otorohanga	12	0.027	0.022	0.010	0.077	0.022	1.85	0.022
Waitomo Stm at SH31 Otorohanga	12	0.027	0.022	0.016	0.054	0.012	1.50	0.033
Waitomo Stm at Tumutumu Rd	12	0.020	0.017	0.010	0.044	0.006	1.87	0.022
Tributaries to the Upper Waikato								
Kawaunui Stm at SH5 Br	12	0.083	0.069	0.051	0.148	0.036	1.16	0.076
Mangaharakeke Stm (Atiamuri) at SH30 (Off Jct SH1)	12	0.066	0.049	0.040	0.139	0.027	1.57	0.053
Mangakara Stm (Reporoa) at SH5	12	0.116	0.069	0.055	0.600	0.025	3.38	0.070
Mangakino Stm (Whakamaru) at Sandel Rd	12	0.056	0.053	0.038	0.111	0.016	2.39	0.051
Otamakokore Stm at Hossack Rd	12	0.176	0.152	0.134	0.450	0.018	3.37	0.152
Pueto Stm at Broadlands Rd Br	12	0.082	0.082	0.076	0.090	0.007	0.45	0.083
Tahunaatara Stm at Ohakuri Rd	12	0.064	0.048	0.043	0.240	0.007	3.44	0.050
Torepatutahi Stm at Vaile Rd Br	12	0.096	0.095	0.088	0.117	0.011	1.58	0.094
Waiotapu Stm at Campbell Rd Br	12	0.056	0.056	0.029	0.074	0.024	-0.37	0.069
Waiotapu Stm at Homestead Rd Br	12	0.101	0.092	0.075	0.173	0.034	1.59	0.112
Waipapa Stm (Mokai) at Tirohanga Rd Br	12	0.094	0.086	0.075	0.165	0.014	2.81	0.092
Whirinaki Stm at Corbett Rd	12	0.064	0.062	0.059	0.078	0.006	1.55	0.063
West Coast								
Awakino River at Gribbon Rd	12	0.018	0.017	0.010	0.044	0.006	2.42	0.018
Awakino River at SH3 Awakau Rd Junction	11	0.021	0.016	0.008	0.056	0.006	1.75	0.018
Manganui River at Off Manganui Rd	12	0.033	0.019	0.010	0.159	0.008	3.04	0.023
Mangaotaki River at SH3 Br	12	0.028	0.021	0.014	0.080	0.016	2.55	0.023
Marokopa River at Speedies Rd (Off Te Anga Rd)	12	0.026	0.024	0.015	0.058	0.007	2.00	0.027
Mokau River at Awakau Rd	12	0.032	0.027	0.018	0.062	0.012	1.52	0.031
Mokau River at Mangaokewa Rd (Off SH30)	12	0.043	0.030	0.020	0.116	0.025	1.88	0.031
Mokau River at Totoro Rd Recorder	12	0.034	0.030	0.017	0.074	0.021	1.40	0.032
Mokauiti Stm at Three Way Point - Aria	12	0.049	0.042	0.019	0.108	0.036	1.12	0.042
Ohautira Stm at Waingaro Te Uku Rd	12	0.032	0.033	0.023	0.037	0.006	-1.16	0.035
Oparau River at Langdon Rd (Off Okupata Rd)	12	0.017	0.015	0.007	0.040	0.010	1.61	0.015
Tawarau River at Off Speedies Rd	12	0.026	0.022	0.015	0.062	0.005	2.37	0.025
Waingaro River (Pukemiro) at Ruakiwi Rd Off SH22	12	0.032	0.031	0.018	0.044	0.010	0.13	0.034
Waitetuna River at Te Uku-Waingaro Rd	12	0.031	0.032	0.024	0.038	0.010	0.01	0.033
Inflows to Lake Taupo								
Hinemaiaia River at SH1	12	0.036	0.037	0.027	0.047	0.011	0.07	0.032
Kuratau River at SH41 Moerangi	12	0.007	0.006	0.002	0.019	0.008	1.26	0.005
Kuratau River at Te Rae Street T10	12	0.015	0.012	0.008	0.036	0.007	2.25	0.013
Mapara Stm (Lake Taupo) at Off Mapara Rd (Whakaipo Res) T1	12	0.143	0.142	0.119	0.163	0.008	-0.32	0.147
Tauranga-Taupo River at 20 Metres U/S SH1 Bridge	12	0.017	0.017	0.014	0.021	0.004	0.16	0.016
Tokaanu Power Station Tailrace Canal at SH41 Bridge Over Canal	12	0.012	0.012	0.008	0.016	0.004	0.01	0.012
Tokaanu Stm at Off SH41 Turangi	12	0.079	0.078	0.074	0.083	0.007	0.03	0.079
Waihaha River at SH32	12	0.025	0.024	0.016	0.037	0.011	0.28	0.022
Waitahanui River at Blake Rd	12	0.046	0.046	0.042	0.052	0.005	0.62	0.046
Whangamata Stm (Kinloch) at Whangamata Rd	12	0.074	0.073	0.065	0.086	0.009	0.44	0.075
Whanganui Stm at Lakeside Lake Taupo T8	12	0.019	0.018	0.009	0.034	0.011	0.70	0.015
Whareroa Stm (Taupo) at Lakeside Lake Taupo T9	12	0.037	0.035	0.029	0.062	0.008	2.44	0.032

IQR = Inter quartile range. - = less than five-year record available.

Ammoniacal Nitrogen (g/m ³)								
Location	Count	Mean	Median	Min	Max	IQR	Skew	15-19 median
Coromandel								
Hikutaia River at Old Maratoto Rd	12	0.007	0.005	0.005	0.025	0.000	3.14	0.005
Kauaeranga River at Smiths Cableway/Recorder	12	0.011	0.005	0.005	0.076	0.000	3.46	0.005
Ohinemuri River at Karangahake	12	0.025	0.005	0.005	0.137	0.028	2.68	-
Ohinemuri River at Queens Head	12	0.105	0.035	0.005	0.430	0.164	1.47	0.058
Ohinemuri River at SH25 Br	12	0.006	0.005	0.005	0.018	0.000	3.46	0.005
Tairua River at Morrisons Br Hikuai	12	0.006	0.005	0.005	0.020	0.000	3.46	0.005
Tapu River at Tapu-Coroglen Rd	12	0.011	0.005	0.005	0.076	0.000	3.46	0.005
Waiau River at E309 Rd Ford	12	0.007	0.005	0.005	0.031	0.000	3.46	0.005
Waitekauri River at U/S Ohinemuri Conflu	12	0.006	0.005	0.005	0.021	0.000	3.46	0.005
Waiwawa River at SH25 Coroglen	12	0.007	0.005	0.005	0.029	0.000	3.46	0.005
Wharekawa River at SH25	12	0.006	0.005	0.005	0.018	0.000	3.46	0.005
Hauraki								
Mangawhero Stm (Kaihere) at Mangawara Rd	12	0.008	0.005	0.005	0.019	0.006	1.58	0.005
Oraka Stm at Lake Rd	12	0.180	0.053	0.005	1.210	0.178	3.04	0.034
Piako River at Kiwitahi	12	0.016	0.005	0.005	0.081	0.006	2.30	0.015
Piako River at Paeroa-Tahuna Rd Br	12	0.053	0.044	0.005	0.153	0.049	1.28	0.046
Piakonui Stm at Piakonui Rd	12	0.005	0.005	0.005	0.005	0.000	0.00	0.005
Waihou River at Okauia	12	0.024	0.016	0.005	0.076	0.034	1.19	0.013
Waihou River at Te Aroha	12	0.030	0.024	0.005	0.064	0.020	0.94	-
Waihou River at Whites Rd	12	0.006	0.005	0.005	0.013	0.000	3.46	0.005
Waiohotu Stm at Waiohotu Rd (Off SH5)	12	0.006	0.005	0.005	0.013	0.000	3.46	0.005
Waiomou Stm at Matamata-Tauranga Rd	12	0.014	0.011	0.005	0.045	0.009	1.85	0.010
Waitakaruru River (Hauraki Plains) at Coxhead Rd Br	12	0.024	0.005	0.005	0.110	0.017	1.98	0.014
Waitoa River at Landsdowne Rd Br	12	0.017	0.016	0.005	0.051	0.018	1.43	0.013
Waitoa River at Mellon Rd Recorder	12	0.082	0.053	0.017	0.270	0.078	1.66	0.065
Tributaries to the Lower Waikato								
Awaroa River (Waiuku) at Otaua Rd Br opp Moseley Rd	12	0.049	0.033	0.005	0.119	0.049	0.98	0.047
Awaroa Stm (Rotowaro) at Sansons Br @ Rotowaro-Huntly Rd	12	0.047	0.039	0.020	0.122	0.035	1.66	0.045
Karapiro Stm at Hickey Rd Bridge - Cambridge	12	0.040	0.027	0.005	0.176	0.010	2.58	0.024
Kirikirihoa Stm at Tauhara Dr	12	0.236	0.250	0.096	0.410	0.085	0.16	0.230
Komakorau Stm at Henry Rd	12	0.674	0.760	0.158	1.110	0.555	-0.39	0.715
Little Waipa Stm at Arapuni - Putaruru Rd	12	0.015	0.011	0.005	0.055	0.012	2.28	0.011
Mangakotukutuku Stm (Rukuhia) at Peacocks Rd	12	0.212	0.220	0.083	0.550	0.159	1.57	0.210
Mangamingi Stm (Tokoroa) at Paraonui Rd Br	12	0.129	0.121	0.021	0.280	0.092	0.69	0.270
Mangaone Stm (Waikato) at Annebrooke Rd Br	12	0.032	0.031	0.018	0.045	0.016	0.01	0.022
Mangaonua Stm at Hoeka Rd	12	0.087	0.084	0.017	0.150	0.042	-0.10	0.083
Mangaonua Stm at Te Miro Rd (a.k.a Waitakaruru stm)	12	0.006	0.005	0.005	0.014	0.000	3.46	0.005
Mangatangi River at SH2 Maramarua	12	0.037	0.024	0.005	0.144	0.036	2.13	0.022
Mangatawhiri River at Lyons Rd At Buckingham Br	12	0.006	0.005	0.005	0.014	0.000	3.46	0.005
Mangawara Stm at Rutherford Rd Br	12	0.390	0.450	0.185	0.620	0.235	-0.27	0.400
Mangawhero Stm (Cambridge) at Cambridge-Ohaupo Rd	12	0.130	0.112	0.078	0.220	0.081	0.61	0.110
Matahuru Stm at Waiterimu Road Below Confluence	12	0.051	0.044	0.026	0.104	0.034	1.18	0.058
Northern Outlet Canal (a.k.a.Pungarehu Canal) at D/S of Ctrl Gate	12	0.012	0.005	0.005	0.032	0.013	1.20	-
Ohaeroa Stm at SH22 Br	12	0.013	0.013	0.005	0.026	0.009	0.41	0.010
Opuatia Stm at Ponganui Rd	12	0.012	0.014	0.005	0.026	0.012	0.47	0.011
Pokaiwhenua Stm at Puketurua	12	0.018	0.011	0.005	0.126	0.007	3.40	0.011
Waahi Stm at Te Ohaki Rd	12	0.014	0.012	0.005	0.027	0.016	0.26	-
Waerenga Stm at Taniwha Rd	12	0.023	0.019	0.005	0.066	0.017	1.46	0.013
Waitawhiriwhiri Stm at Edgecumbe Street	12	0.595	0.620	0.360	0.780	0.220	-0.43	0.565
Whakapipi Stm at SH22 Br	12	0.024	0.014	0.005	0.101	0.014	2.19	0.012
Whakauru Stm at U/S SH1 Br	12	0.032	0.016	0.005	0.240	0.013	3.39	0.012
Whangamarino River at Island Block Rd	12	0.224	0.020	0.005	1.050	0.345	1.69	0.063
Whangamarino River at Jefferies Rd Br	12	0.074	0.047	0.030	0.230	0.061	1.95	0.047
Whangape Stm at Rangiriri-Glen Murray Rd	12	0.227	0.008	0.005	2.600	0.012	3.46	0.005

IQR = Inter quartile range. - = less than five-year record available.

Location	Count	Mean	Median	Min	Max	IQR	Skew	15-19 median
Waipa River and Tributaries								
Firewood Creek at Waingaro Road Bridge	12	0.016	0.016	0.005	0.027	0.005	-0.26	-
Kaniwhaniwha Stm at Wright Rd	12	0.018	0.020	0.005	0.025	0.009	-0.82	0.022
Mangaohoi Stm at South Branch Maru Rd	12	0.012	0.008	0.005	0.031	0.012	1.17	0.005
Mangaokewa Stm at Lawrence Street Br	12	0.020	0.017	0.005	0.043	0.026	0.48	0.014
Mangapiko Stm (Pirongia/Te Awamutu) at Bowman Rd	12	0.063	0.067	0.005	0.121	0.069	-0.05	0.058
Mangapu River at Otorohanga	12	0.021	0.023	0.005	0.051	0.016	0.86	0.023
Mangarama at Gadsby Rd	11	0.021	0.011	0.005	0.098	0.021	2.68	-
Mangarapa Stm at Otorohanga Rd	12	0.063	0.017	0.005	0.520	0.032	3.36	-
Mangatutu Stm (Waikeria) at Walker Rd Br	12	0.013	0.014	0.005	0.024	0.012	0.36	0.005
Mangauika Stm at Te Awamutu Borough W/S Intake	12	0.006	0.005	0.005	0.016	0.000	3.46	0.005
Moakurua Stm at Warratah Farm Bridge	12	0.012	0.012	0.005	0.030	0.011	1.07	-
Ohote Stm at Whatawhata/Horotiu Rd	12	0.065	0.065	0.005	0.151	0.056	0.68	0.074
Puniu River at Bartons Corner Rd Br	12	0.020	0.022	0.005	0.029	0.010	-0.80	0.022
Puniu River at Wharepapa Rd Bridge	12	0.016	0.005	0.005	0.099	0.009	3.30	-
Waipa River at Mangaokewa Rd	12	0.016	0.005	0.005	0.053	0.021	1.38	0.005
Waipa River at Ngaruawahia Br	12	0.030	0.028	0.005	0.067	0.022	0.54	-
Waipa River at Pukehoua Bridge on Baffin Road	12	0.024	0.025	0.005	0.048	0.023	0.22	-
Waipa River at SH3 Otorohanga	12	0.019	0.013	0.005	0.073	0.020	2.27	0.013
Waitomo Stm at SH31 Otorohanga	12	0.016	0.012	0.005	0.043	0.012	1.40	0.017
Waitomo Stm at Tumutumu Rd	12	0.009	0.008	0.005	0.016	0.009	0.20	0.005
Tributaries to the Upper Waikato								
Kawaunui Stm at SH5 Br	12	0.017	0.014	0.005	0.042	0.015	0.95	0.012
Mangaharakeke Stm (Atiamuri) at SH30 (Off Jct SH1)	12	0.018	0.012	0.005	0.074	0.016	2.32	0.005
Mangakara Stm (Reporoa) at SH5	12	0.064	0.026	0.018	0.440	0.022	3.37	0.023
Mangakino Stm (Whakamaru) at Sandel Rd	12	0.006	0.005	0.005	0.011	0.000	3.46	0.005
Otamakokore Stm at Hossack Rd	12	0.043	0.005	0.005	0.450	0.003	3.46	0.005
Pueto Stm at Broadlands Rd Br	12	0.006	0.005	0.005	0.016	0.000	3.46	0.005
Tahunaatara Stm at Ohakuri Rd	12	0.012	0.005	0.005	0.060	0.006	3.05	0.005
Torepatutahi Stm at Vaile Rd Br	12	0.020	0.015	0.005	0.085	0.011	2.94	0.005
Waiotapu Stm at Campbell Rd Br	12	0.873	0.860	0.810	0.980	0.065	1.01	0.870
Waiotapu Stm at Homestead Rd Br	12	0.258	0.285	0.111	0.390	0.163	-0.16	0.290
Waipapa Stm (Mokai) at Tirohanga Rd Br	12	0.006	0.005	0.005	0.013	0.000	2.08	0.005
Whirinaki Stm at Corbett Rd	12	0.006	0.005	0.005	0.011	0.000	3.46	0.005
West Coast								
Awakino River at Gribbon Rd	12	0.005	0.005	0.005	0.005	0.000	0.00	0.005
Awakino River at SH3 Awakau Rd Junction	11	0.008	0.005	0.005	0.021	0.007	1.51	0.005
Manganui River at Off Manganui Rd	12	0.006	0.005	0.005	0.014	0.000	2.14	0.005
Mangaotaki River at SH3 Br	12	0.009	0.005	0.005	0.017	0.008	0.68	0.005
Marokopa River at Speedies Rd (Off Te Anga Rd)	12	0.007	0.005	0.005	0.020	0.000	2.06	0.005
Mokau River at Awakau Rd	12	0.018	0.016	0.005	0.037	0.011	0.71	0.014
Mokau River at Mangaokewa Rd (Off SH30)	12	0.008	0.005	0.005	0.019	0.008	1.23	0.005
Mokau River at Totoro Rd Recorder	12	0.011	0.009	0.005	0.023	0.010	0.63	0.010
Mokauiti Stm at Three Way Point - Aria	12	0.029	0.019	0.005	0.131	0.032	2.41	0.022
Ohautira Stm at Waingaro Te Uku Rd	12	0.005	0.005	0.005	0.005	0.000	0.00	0.005
Oparau River at Langdon Rd (Off Okupata Rd)	12	0.007	0.005	0.005	0.020	0.000	2.95	0.005
Tawarau River at Off Speedies Rd	12	0.009	0.005	0.005	0.032	0.003	2.11	0.005
Waingaro River (Pukemiro) at Ruakiwi Rd Off SH22	12	0.011	0.012	0.005	0.022	0.010	0.66	0.012
Waitetuna River at Te Uku-Waingaro Rd	12	0.010	0.012	0.005	0.015	0.009	-0.19	0.010
Inflows to Lake Taupo								
Hinemaiaia River at SH1	12	0.005	0.005	0.005	0.005	0.000	0.00	0.005
Kuratau River at SH41 Moerangi	12	0.008	0.005	0.005	0.016	0.006	1.18	0.005
Kuratau River at Te Rae Street T10	12	0.008	0.005	0.005	0.020	0.003	1.94	0.005
Mapara Stm (Lake Taupo) at Off Mapara Rd (Whakaipo Res) T1	12	0.008	0.005	0.005	0.015	0.007	0.69	0.005
Tauranga-Taupo River at 20 Metres U/S SH1 Bridge	12	0.005	0.005	0.005	0.005	0.000	0.00	0.005
Tokaanu Power Station Tailrace Canal at SH41 Bridge Over Canal	12	0.006	0.005	0.005	0.013	0.000	3.46	0.005
Tokaanu Stm at Off SH41 Turangi	12	0.005	0.005	0.005	0.005	0.000	0.00	0.005
Waihaha River at SH32	12	0.005	0.005	0.005	0.010	0.000	3.46	0.005
Waitahanui River at Blake Rd	12	0.005	0.005	0.005	0.005	0.000	0.00	0.005
Whangamata Stm (Kinloch) at Whangamata Rd	12	0.007	0.005	0.005	0.015	0.004	1.39	0.005
Whanganui Stm at Lakeside Lake Taupo T8	12	0.008	0.005	0.005	0.023	0.003	2.21	0.005
Whareroa Stm (Taupo) at Lakeside Lake Taupo T9	12	0.006	0.005	0.005	0.011	0.000	3.46	0.005

IQR = Inter quartile range. - = less than five-year record available.

Nitrate/Nitrite Nitrogen (g/m ³)								
Location	Count	Mean	Median	Min	Max	IQR	Skew	15-19 median
Coromandel								
Hikutaia River at Old Maratoto Rd	12	0.06	0.01	0.00	0.25	0.09	1.52	0.03
Kauaeranga River at Smiths Cableway/Recorder	12	0.01	0.00	0.00	0.07	0.01	1.94	0.02
Ohinemuri River at Karangahake	12	0.41	0.36	0.03	0.89	0.47	0.46	-
Ohinemuri River at Queens Head	12	0.80	0.81	0.09	1.43	0.73	-0.16	1.00
Ohinemuri River at SH25 Br	12	0.50	0.42	0.24	1.00	0.37	1.08	0.50
Tairua River at Morrisons Br Hikuai	12	0.03	0.01	0.00	0.13	0.04	1.80	0.02
Tapu River at Tapu-Coroglen Rd	12	0.01	0.01	0.00	0.04	0.01	1.43	0.00
Waiau River at E309 Rd Ford	12	0.04	0.02	0.00	0.19	0.06	1.89	0.02
Waitekauri River at U/S Ohinemuri Conflu	12	0.10	0.05	0.01	0.34	0.11	1.54	0.12
Waiwawa River at SH25 Coroglen	12	0.01	0.01	0.00	0.06	0.01	2.11	0.01
Wharekawa River at SH25	12	0.05	0.02	0.00	0.21	0.05	1.84	0.05
Hauraki								
Mangawhero Stm (Kaihere) at Mangawara Rd	12	0.36	0.33	0.23	0.84	0.09	2.75	0.35
Oraka Stm at Lake Rd	12	2.20	2.20	1.64	2.40	0.15	-2.05	2.20
Piako River at Kiwitahi	12	0.95	0.46	0.00	3.70	1.39	1.49	0.82
Piako River at Paeroa-Tahuna Rd Br	12	1.53	1.06	0.36	4.10	1.72	1.22	1.56
Piakonui Stm at Piakonui Rd	12	0.24	0.20	0.12	0.50	0.13	1.19	0.29
Waihou River at Okauia	12	1.25	1.19	1.09	1.55	0.22	0.81	1.23
Waihou River at Te Aroha	12	1.23	1.24	0.90	1.51	0.16	-0.55	1.22
Waihou River at Whites Rd	12	0.88	0.87	0.83	0.93	0.04	0.50	-
Waiohotu Stm at Waiohotu Rd (Off SH5)	12	0.19	0.18	0.15	0.24	0.04	0.59	0.18
Waiomou Stm at Matamata-Tauranga Rd	12	0.58	0.49	0.41	0.99	0.21	1.42	0.52
Waitakaruru River (Hauraki Plains) at Coxhead Rd Br	12	0.22	0.15	0.00	0.79	0.34	1.20	0.28
Waitoa River at Landsdowne Rd Br	12	1.43	1.38	0.78	2.50	0.84	0.65	1.51
Waitoa River at Mellon Rd Recorder	12	2.09	1.93	1.15	3.70	0.81	1.11	2.10
Tributaries to the Lower Waikato								
Awaroa River (Waiuku) at Otaua Rd Br opp Moseley Rd	12	1.45	1.22	0.83	2.20	0.79	0.36	1.52
Awaroa Stm (Rotowaro) at Sansons Br @ Rotowaro-Huntly Rd	12	0.41	0.45	0.16	0.76	0.30	0.31	0.48
Karapiro Stm at Hickey Rd Bridge - Cambridge	12	0.74	0.52	0.30	1.71	0.80	1.02	0.66
Kirikirihoa Stm at Tauhara Dr	12	0.64	0.63	0.34	1.14	0.22	0.90	0.74
Komakorau Stm at Henry Rd	12	1.67	1.32	0.92	5.50	0.29	3.25	1.42
Little Waipa Stm at Arapuni - Putaruru Rd	12	2.00	2.00	1.84	2.30	0.13	1.14	2.00
Mangakotukutuku Stm (Rukuhia) at Peacockes Rd	12	0.95	0.85	0.53	2.00	0.31	1.96	0.87
Mangamingi Stm (Tokoroa) at Paraonui Rd Br	12	2.13	2.05	1.67	2.60	0.55	0.02	2.50
Mangaone Stm (Waikato) at Annebrooke Rd Br	12	2.40	2.30	2.10	2.90	0.35	0.72	2.40
Mangaonua Stm at Hoeka Rd	12	1.39	1.32	1.11	1.84	0.27	0.98	1.43
Mangaonua Stm at Te Miro Rd (a.k.a Waitakaruru stm)	12	0.58	0.44	0.31	1.17	0.37	1.20	0.48
Mangatangi River at SH2 Maramarua	12	0.33	0.20	0.02	1.25	0.45	1.45	0.30
Mangatawhiri River at Lyons Rd At Buckingham Br	12	0.09	0.03	0.00	0.45	0.10	2.07	0.07
Mangawara Stm at Rutherford Rd Br	12	1.20	0.84	0.65	4.20	0.47	3.02	0.90
Mangawhero Stm (Cambridge) at Cambridge-Ohaupo Rd	12	2.09	2.20	1.53	3.10	0.68	0.56	2.10
Matahuru Stm at Waiterimu Road Below Confluence	12	0.74	0.63	0.14	1.63	0.75	0.68	0.79
Northern Outlet Canal (a.k.a.Pungarehu Canal) at D/S of Ctrl Gate	12	0.00	0.00	0.00	0.01	0.00	3.00	-
Ohaeroa Stm at SH22 Br	12	1.69	1.79	1.08	2.20	0.44	-0.55	1.75
Opuatia Stm at Ponganui Rd	12	0.82	0.85	0.45	1.09	0.29	-0.60	0.82
Pokaiwhenua Stm at Puketurua	12	1.99	1.95	1.26	2.30	0.41	-1.15	2.10
Waahi Stm at Te Ohaki Rd	12	0.18	0.02	0.00	0.80	0.29	1.54	-
Waerenga Stm at Taniwha Rd	12	0.81	0.77	0.38	1.49	0.52	0.54	0.87
Waitawhiriwhiri Stm at Edgecumbe Street	12	0.76	0.80	0.45	1.05	0.22	-0.48	0.85
Whakapipi Stm at SH22 Br	12	3.58	3.60	2.40	5.30	1.45	0.51	4.05
Whakauru Stm at U/S SH1 Br	12	1.21	1.19	1.10	1.38	0.14	0.74	1.02
Whangamarino River at Island Block Rd	12	0.25	0.11	0.00	1.12	0.26	1.83	0.13
Whangamarino River at Jefferies Rd Br	12	0.79	0.64	0.13	2.60	0.70	1.71	0.71
Whangape Stm at Rangiriri-Glen Murray Rd	12	0.16	0.00	0.00	0.87	0.20	1.83	0.02

IQR = Inter quartile range. - = less than five-year record available.

Location	Count	Mean	Median	Min	Max	IQR	Skew	15-19 median
Waipa River and Tributaries								
Firewood Creek at Waingaro Road Bridge	12	0.52	0.41	0.31	0.98	0.38	0.89	-
Kaniwhaniwha Stm at Wright Rd	12	0.34	0.22	0.02	0.94	0.51	0.85	0.40
Mangaohoi Stm at South Branch Maru Rd	12	0.21	0.21	0.11	0.33	0.06	0.23	0.21
Mangaokewa Stm at Lawrence Street Br	12	0.62	0.61	0.26	1.16	0.44	0.43	0.63
Mangapiko Stm (Pirongia/Te Awamutu) at Bowman Rd	12	1.30	1.15	0.72	2.00	0.75	0.31	1.71
Mangapu River at Otorohanga	12	0.74	0.64	0.05	1.72	0.65	0.59	0.83
Mangarama at Gadsby Rd	11	0.94	0.82	0.62	2.10	0.33	2.45	-
Mangarapa Stm at Otorohanga Rd	12	0.80	0.68	0.14	1.96	0.82	0.77	-
Mangatutu Stm (Waikeria) at Walker Rd Br	12	0.39	0.32	0.11	0.88	0.31	1.06	0.36
Mangauika Stm at Te Awamutu Borough W/S Intake	12	0.08	0.05	0.02	0.22	0.09	1.26	0.19
Moakurua Stm at Warratah Farm Bridge	12	0.40	0.36	0.11	0.86	0.39	0.55	-
Ohote Stm at Whatawhata/Horotiu Rd	12	0.53	0.44	0.13	1.18	0.59	0.76	0.50
Puniu River at Bartons Corner Rd Br	12	0.73	0.63	0.39	1.28	0.35	0.99	0.71
Puniu River at Wharepapa Rd Bridge	12	0.59	0.56	0.38	0.98	0.15	1.20	-
Waipa River at Mangaokewa Rd	12	0.38	0.37	0.22	0.57	0.20	0.19	0.34
Waipa River at Ngaruawahia Br	12	0.75	0.63	0.28	1.49	0.51	0.85	-
Waipa River at Pukehoua Bridge on Baffin Road	12	0.61	0.45	0.21	1.34	0.48	0.91	-
Waipa River at SH3 Otorohanga	12	0.46	0.32	0.07	1.13	0.45	0.95	0.49
Waitomo Stm at SH31 Otorohanga	12	0.53	0.48	0.27	1.04	0.36	0.91	0.59
Waitomo Stm at Tumutumu Rd	12	0.62	0.61	0.54	0.79	0.09	1.06	0.62
Tributaries to the Upper Waikato								
Kawaunui Stm at SH5 Br	12	3.21	3.25	2.30	3.50	0.20	-2.30	3.00
Mangaharakeke Stm (Atiamuri) at SH30 (Off Jct SH1)	12	0.60	0.56	0.43	0.77	0.26	0.20	0.67
Mangakara Stm (Reporoa) at SH5	12	1.62	1.66	1.31	1.80	0.10	-1.41	1.58
Mangakino Stm (Whakamaru) at Sandel Rd	12	0.76	0.75	0.57	0.92	0.12	-0.24	0.75
Otamakokore Stm at Hossack Rd	12	0.84	0.82	0.68	1.09	0.16	0.80	0.96
Pueto Stm at Broadlands Rd Br	12	0.66	0.66	0.61	0.71	0.03	0.32	0.63
Tahunaatara Stm at Ohakuri Rd	12	0.72	0.67	0.55	0.98	0.23	0.79	0.69
Torepatutahi Stm at Vaile Rd Br	12	0.65	0.64	0.55	0.83	0.13	0.70	0.59
Waiotapu Stm at Campbell Rd Br	12	1.08	1.07	0.89	1.19	0.12	-0.76	0.95
Waiotapu Stm at Homestead Rd Br	12	1.45	1.49	1.07	1.62	0.07	-2.31	1.48
Waipapa Stm (Mokai) at Tirohanga Rd Br	12	1.43	1.40	1.32	1.58	0.19	0.56	1.42
Whirinaki Stm at Corbett Rd	12	0.84	0.83	0.79	0.94	0.04	1.72	0.83
West Coast								
Awakino River at Gribbon Rd	12	0.08	0.06	0.02	0.21	0.08	1.15	0.09
Awakino River at SH3 Awakau Rd Junction	11	0.19	0.14	0.02	0.59	0.27	1.20	0.21
Manganui River at Off Manganui Rd	12	0.09	0.06	0.00	0.27	0.15	0.85	0.11
Mangaotaki River at SH3 Br	12	0.68	0.63	0.38	1.26	0.37	0.92	0.69
Marokopa River at Speedies Rd (Off Te Anga Rd)	12	0.28	0.27	0.14	0.44	0.13	0.40	0.28
Mokau River at Awakau Rd	12	0.48	0.47	0.00	1.08	0.39	0.41	0.54
Mokau River at Mangaokewa Rd (Off SH30)	12	0.49	0.49	0.29	0.86	0.28	0.66	0.44
Mokau River at Totoro Rd Recorder	12	0.60	0.55	0.22	1.38	0.42	1.20	0.61
Mokauiti Stm at Three Way Point - Aria	12	0.37	0.28	0.00	1.34	0.40	1.77	0.34
Ohautira Stm at Waingaro Te Uku Rd	12	0.22	0.13	0.02	0.58	0.34	0.63	0.32
Oparau River at Langdon Rd (Off Okupata Rd)	12	0.12	0.05	0.01	0.47	0.21	1.40	0.11
Tawarau River at Off Speedies Rd	12	0.32	0.31	0.19	0.44	0.12	0.21	0.33
Waingaro River (Pukemiro) at Ruakiwi Rd Off SH22	12	0.38	0.30	0.00	1.06	0.66	0.58	0.54
Waitetuna River at Te Uku-Waingaro Rd	12	0.32	0.31	0.06	0.64	0.39	0.29	0.44
Inflows to Lake Taupo								
Hinemaiaia River at SH1	12	0.10	0.11	0.05	0.15	0.05	-0.47	0.11
Kuratau River at SH41 Moerangi	12	0.20	0.17	0.08	0.67	0.06	3.00	0.29
Kuratau River at Te Rae Street T10	12	0.66	0.63	0.10	1.17	0.33	-0.07	0.68
Mapara Stm (Lake Taupo) at Off Mapara Rd (Whakaipo Res) T1	12	0.76	0.77	0.69	0.83	0.09	-0.15	0.74
Tauranga-Taupo River at 20 Metres U/S SH1 Bridge	12	0.06	0.06	0.04	0.09	0.04	0.21	0.06
Tokaanu Power Station Tailrace Canal at SH41 Bridge Over Canal	12	0.01	0.01	0.00	0.02	0.01	1.15	0.00
Tokaanu Stm at Off SH41 Turangi	12	0.45	0.45	0.41	0.47	0.02	-0.87	0.45
Waihaha River at SH32	12	0.10	0.09	0.06	0.16	0.04	1.08	0.10
Waitahanui River at Blake Rd	12	0.43	0.43	0.39	0.46	0.04	-0.14	0.40
Whangamata Stm (Kinloch) at Whangamata Rd	12	1.63	1.65	1.45	1.83	0.12	0.00	1.37
Whanganui Stm at Lakeside Lake Taupo T8	12	0.35	0.37	0.20	0.48	0.07	-0.40	0.35
Whareroa Stm (Taupo) at Lakeside Lake Taupo T9	12	0.69	0.63	0.50	1.10	0.24	1.18	0.69

IQR = Inter quartile range. - = less than five-year record available.

Total Kjeldahl Nitrogen (g/m ³)								
Location	Count	Mean	Median	Min	Max	IQR	Skew	15-19 median
Coromandel								
Hikutaia River at Old Maratoto Rd	12	0.08	0.09	0.03	0.11	0.04	-0.76	0.09
Kauaeranga River at Smiths Cableway/Recorder	12	0.06	0.08	0.03	0.13	0.07	0.14	0.09
Ohinemuri River at Karangahake	12	0.21	0.14	0.09	0.73	0.13	2.69	-
Ohinemuri River at Queens Head	12	0.34	0.30	0.11	0.66	0.33	0.56	0.30
Ohinemuri River at SH25 Br	12	0.13	0.12	0.08	0.20	0.08	0.55	0.14
Tairua River at Morrisons Br Hikuai	12	0.07	0.07	0.03	0.10	0.03	-0.54	0.08
Tapu River at Tapu-Coroglen Rd	12	0.05	0.06	0.03	0.10	0.03	0.33	0.08
Waiau River at E309 Rd Ford	12	0.07	0.08	0.03	0.11	0.01	-1.05	0.08
Waitekauri River at U/S Ohinemuri Conflu	12	0.10	0.09	0.06	0.15	0.04	0.83	0.10
Waiwawa River at SH25 Coroglen	12	0.08	0.08	0.05	0.11	0.04	0.08	0.08
Wharekawa River at SH25	12	0.08	0.08	0.05	0.12	0.03	0.77	0.10
Hauraki								
Mangawhero Stm (Kaihere) at Mangawara Rd	12	0.25	0.12	0.08	1.21	0.17	2.93	0.12
Oraka Stm at Lake Rd	12	0.38	0.26	0.16	1.40	0.25	2.65	0.34
Piako River at Kiwitahi	12	0.43	0.32	0.24	1.26	0.12	2.54	0.38
Piako River at Paeroa-Tahuna Rd Br	12	0.62	0.54	0.40	1.23	0.18	1.94	0.64
Piakonui Stm at Piakonui Rd	12	0.17	0.16	0.09	0.27	0.05	0.64	0.17
Waihou River at Okauia	12	0.18	0.17	0.08	0.40	0.11	1.26	0.21
Waihou River at Te Aroha	12	0.22	0.19	0.10	0.44	0.15	0.96	-
Waihou River at Whites Rd	12	0.07	0.03	0.03	0.34	0.07	2.57	0.05
Waiohotu Stm at Waiohotu Rd (Off SH5)	12	0.16	0.14	0.09	0.32	0.08	1.36	0.16
Waiomou Stm at Matamata-Tauranga Rd	12	0.17	0.17	0.08	0.38	0.10	1.42	0.19
Waitakaruru River (Hauraki Plains) at Coxhead Rd Br	12	0.53	0.26	0.21	2.40	0.21	2.66	0.32
Waitoa River at Landsdowne Rd Br	12	0.40	0.36	0.23	0.79	0.17	1.66	0.39
Waitoa River at Mellon Rd Recorder	12	0.61	0.47	0.33	1.40	0.19	1.82	0.67
Tributaries to the Lower Waikato								
Awaroa River (Waiuku) at Otaua Rd Br opp Moseley Rd	12	0.49	0.44	0.35	0.85	0.14	1.67	0.59
Awaroa Stm (Rotowaro) at Sansons Br @ Rotowaro-Huntly Rd	12	0.25	0.25	0.19	0.30	0.05	-0.09	0.27
Karapiro Stm at Hickey Rd Bridge - Cambridge	12	0.37	0.37	0.26	0.56	0.13	0.72	0.37
Kirikiriroa Stm at Tauhara Dr	12	0.54	0.54	0.32	0.76	0.08	0.04	0.64
Komakorau Stm at Henry Rd	12	1.61	1.70	0.98	2.60	0.58	0.59	2.00
Little Waipa Stm at Arapuni - Putaruru Rd	12	0.18	0.15	0.09	0.58	0.08	2.92	0.21
Mangakotukutuku Stm (Rukuhia) at Peacocks Rd	12	1.15	0.90	0.40	2.50	1.45	0.59	1.18
Mangamingi Stm (Tokoroa) at Paraonui Rd Br	12	0.71	0.55	0.35	2.70	0.24	3.26	0.69
Mangaone Stm (Waikato) at Annebrooke Rd Br	12	0.45	0.45	0.29	0.69	0.16	0.57	0.45
Mangaonua Stm at Hoeka Rd	12	0.48	0.50	0.27	0.92	0.19	1.22	0.45
Mangaonua Stm at Te Miro Rd (a.k.a Waitakaruru stm)	12	0.20	0.19	0.15	0.30	0.05	1.38	0.22
Mangatangi River at SH2 Maramarua	12	0.45	0.29	0.20	1.38	0.31	2.11	0.36
Mangatawhiri River at Lyons Rd At Buckingham Br	12	0.26	0.11	0.10	1.72	0.05	3.37	0.13
Mangawara Stm at Rutherford Rd Br	12	1.15	1.12	0.67	2.00	0.49	0.85	1.24
Mangawhero Stm (Cambridge) at Cambridge-Ohaupo Rd	12	0.89	0.68	0.41	2.50	0.38	2.08	0.83
Matahuru Stm at Waiterimu Road Below Confluence	12	0.58	0.56	0.39	0.91	0.22	0.84	0.62
Northern Outlet Canal (a.k.a.Pungarehu Canal) at D/S of Ctrl Gate	12	4.01	3.95	1.44	6.30	2.10	0.05	-
Ohaeroa Stm at SH22 Br	12	0.32	0.27	0.19	0.71	0.12	2.09	0.28
Opuatia Stm at Ponganui Rd	12	0.33	0.33	0.15	0.60	0.14	0.65	0.30
Pokaiwhenua Stm at Puketurua	12	0.31	0.20	0.15	1.38	0.10	3.34	0.26
Waahi Stm at Te Ohaki Rd	12	0.95	0.90	0.65	1.45	0.25	1.17	-
Waerenga Stm at Taniwha Rd	12	0.37	0.28	0.15	1.51	0.10	3.19	0.27
Waitawhiriwhiri Stm at Edgecumbe Street	12	1.12	1.12	0.69	1.40	0.19	-0.69	1.29
Whakapipi Stm at SH22 Br	12	0.42	0.35	0.30	1.16	0.06	3.26	0.36
Whakauru Stm at U/S SH1 Br	12	0.38	0.33	0.26	0.80	0.18	2.10	0.33
Whangamarino River at Island Block Rd	12	1.76	1.77	1.07	2.70	0.96	0.41	1.84
Whangamarino River at Jefferies Rd Br	12	0.63	0.47	0.31	1.58	0.37	1.91	0.51
Whangape Stm at Rangiriri-Glen Murray Rd	12	3.08	1.70	0.28	7.20	4.45	0.64	1.79

IQR = Inter quartile range. - = less than five-year record available.

Location	Count	Mean	Median	Min	Max	IQR	Skew	15-19 median
Waipa River and Tributaries								
Firewood Creek at Waingaro Road Bridge	12	0.20	0.18	0.14	0.28	0.08	0.63	-
Kaniwhaniwha Stm at Wright Rd	12	0.24	0.19	0.13	0.68	0.06	3.10	0.23
Mangaohoi Stm at South Branch Maru Rd	12	0.14	0.11	0.07	0.39	0.04	2.72	0.15
Mangaokewa Stm at Lawrence Street Br	12	0.34	0.22	0.16	1.04	0.10	2.06	0.24
Mangapiko Stm (Pirongia/Te Awamutu) at Bowman Rd	12	0.61	0.63	0.30	0.82	0.20	-0.64	0.71
Mangapu River at Otorohanga	12	0.31	0.28	0.19	0.58	0.09	1.68	0.31
Mangarama at Gadsby Rd	11	0.36	0.21	0.14	1.41	0.13	2.93	-
Mangarapa Stm at Otorohanga Rd	12	0.34	0.25	0.18	0.79	0.22	1.50	-
Mangatutu Stm (Waikeria) at Walker Rd Br	12	0.21	0.16	0.10	0.92	0.04	3.37	0.16
Mangauika Stm at Te Awamutu Borough W/S Intake	12	0.06	0.06	0.03	0.11	0.06	0.37	0.06
Moakurua Stm at Warratah Farm Bridge	12	0.21	0.17	0.11	0.53	0.11	1.72	-
Ohote Stm at Whatawhata/Horotiu Rd	12	0.77	0.73	0.48	1.29	0.29	1.04	0.79
Puniu River at Bartons Corner Rd Br	12	0.29	0.25	0.17	0.64	0.14	1.86	0.28
Puniu River at Wharepapa Rd Bridge	12	0.27	0.29	0.12	0.56	0.16	0.92	-
Waipa River at Mangaokewa Rd	12	0.58	0.20	0.11	4.80	0.11	3.45	0.19
Waipa River at Ngaruawahia Br	12	0.32	0.31	0.22	0.49	0.13	0.80	-
Waipa River at Pukehoua Bridge on Baffin Road	12	0.29	0.26	0.18	0.62	0.05	2.72	-
Waipa River at SH3 Otorohanga	12	0.25	0.22	0.14	0.45	0.12	1.20	0.22
Waitomo Stm at SH31 Otorohanga	12	0.36	0.17	0.12	2.10	0.11	3.34	0.24
Waitomo Stm at Tumutumu Rd	12	0.13	0.12	0.07	0.33	0.07	2.15	0.14
Tributaries to the Upper Waikato								
Kawaunui Stm at SH5 Br	12	0.32	0.30	0.17	0.54	0.15	0.57	0.32
Mangaharakeke Stm (Atiamuri) at SH30 (Off Jct SH1)	12	0.29	0.18	0.13	0.86	0.21	1.78	0.22
Mangakara Stm (Reporoa) at SH5	12	0.41	0.27	0.16	1.76	0.13	3.08	0.30
Mangakino Stm (Whakamaru) at Sandel Rd	12	0.14	0.11	0.03	0.40	0.07	1.97	0.15
Otamakokore Stm at Hossack Rd	12	0.37	0.20	0.16	2.20	0.06	3.44	0.27
Pueto Stm at Broadlands Rd Br	12	0.08	0.08	0.06	0.10	0.02	-0.01	0.10
Tahunaatara Stm at Ohakuri Rd	12	0.26	0.18	0.08	1.33	0.07	3.37	0.22
Torepatutahi Stm at Vaile Rd Br	12	0.12	0.12	0.06	0.22	0.04	1.46	0.13
Waiotapu Stm at Campbell Rd Br	12	0.96	0.96	0.82	1.10	0.09	0.09	1.04
Waiotapu Stm at Homestead Rd Br	12	0.52	0.56	0.26	0.82	0.31	0.22	0.62
Waipapa Stm (Mokai) at Tirohanga Rd Br	12	0.38	0.15	0.13	2.80	0.04	3.45	0.17
Whirinaki Stm at Corbett Rd	12	0.06	0.07	0.03	0.10	0.05	-0.05	0.07
West Coast								
Awakino River at Gribbon Rd	12	0.08	0.06	0.03	0.21	0.06	1.42	0.07
Awakino River at SH3 Awakau Rd Junction	11	0.16	0.10	0.07	0.37	0.14	1.33	0.12
Manganui River at Off Manganui Rd	12	0.15	0.10	0.03	0.75	0.06	3.08	0.11
Mangaotaki River at SH3 Br	12	0.22	0.18	0.12	0.45	0.14	1.27	0.19
Marokopa River at Speedies Rd (Off Te Anga Rd)	12	0.16	0.16	0.09	0.31	0.05	1.75	0.15
Mokau River at Awakau Rd	12	0.29	0.27	0.16	0.57	0.16	1.14	0.26
Mokau River at Mangaokewa Rd (Off SH30)	12	0.32	0.27	0.11	1.06	0.17	2.51	0.22
Mokau River at Totoro Rd Recorder	12	0.25	0.22	0.16	0.47	0.05	1.60	0.24
Mokauiti Stm at Three Way Point - Aria	12	0.36	0.37	0.20	0.48	0.15	-0.42	0.34
Ohautira Stm at Waingaro Te Uku Rd	12	0.12	0.13	0.07	0.15	0.04	-0.80	0.15
Oparau River at Langdon Rd (Off Okupata Rd)	12	0.13	0.12	0.08	0.19	0.05	0.53	0.12
Tawarau River at Off Speedies Rd	12	0.15	0.13	0.07	0.37	0.08	2.08	0.13
Waingaro River (Pukemiro) at Ruakiwi Rd Off SH22	12	0.26	0.27	0.15	0.33	0.07	-0.70	0.26
Waitetuna River at Te Uku-Waingaro Rd	12	0.19	0.17	0.09	0.38	0.05	1.64	0.18
Inflows to Lake Taupo								
Hinemaiaia River at SH1	12	0.09	0.08	0.03	0.17	0.05	0.62	0.09
Kuratau River at SH41 Moerangi	12	0.11	0.10	0.03	0.30	0.05	1.43	0.10
Kuratau River at Te Rae Street T10	12	0.13	0.14	0.06	0.19	0.07	-0.21	0.15
Mapara Stm (Lake Taupo) at Off Mapara Rd (Whakaipo Res) T1	12	0.21	0.21	0.15	0.27	0.04	-0.19	0.21
Tauranga-Taupo River at 20 Metres U/S SH1 Bridge	12	0.06	0.06	0.03	0.10	0.06	0.10	0.06
Tokaanu Power Station Tailrace Canal at SH41 Bridge Over Canal	12	0.10	0.09	0.05	0.19	0.07	0.91	0.11
Tokaanu Stm at Off SH41 Turangi	12	0.03	0.03	0.03	0.06	0.00	3.46	0.03
Waihaha River at SH32	12	0.10	0.09	0.03	0.17	0.08	0.35	0.09
Waitahanui River at Blake Rd	12	0.04	0.03	0.03	0.08	0.04	0.69	0.07
Whangamata Stm (Kinloch) at Whangamata Rd	12	0.15	0.15	0.08	0.29	0.05	1.35	0.15
Whanganui Stm at Lakeside Lake Taupo T8	12	0.11	0.11	0.03	0.22	0.07	0.56	0.12
Whareroa Stm (Taupo) at Lakeside Lake Taupo T9	12	0.18	0.16	0.12	0.29	0.07	1.06	0.18

IQR = Inter quartile range. - = less than five-year record available.

Total Nitrogen (g/m ³)								
Location	Count	Mean	Median	Min	Max	IQR	Skew	15-19 median
Coromandel								
Hikutaia River at Old Maratoto Rd	12	0.14	0.10	0.03	0.36	0.12	1.28	0.13
Kauaeranga River at Smiths Cableway/Recorder	12	0.08	0.08	0.03	0.16	0.09	0.21	0.12
Ohinemuri River at Karangahake	12	0.62	0.49	0.14	1.61	0.48	1.20	-
Ohinemuri River at Queens Head	12	1.14	1.26	0.20	2.09	0.76	0.03	1.39
Ohinemuri River at SH25 Br	12	0.62	0.55	0.36	1.17	0.35	1.06	0.64
Tairua River at Morrisons Br Hikuai	12	0.10	0.08	0.03	0.21	0.06	1.12	0.11
Tapu River at Tapu-Coroglen Rd	12	0.07	0.06	0.03	0.11	0.05	0.21	0.08
Waiau River at E309 Rd Ford	12	0.12	0.10	0.03	0.26	0.05	1.24	0.11
Waitekauri River at U/S Ohinemuri Conflu	12	0.19	0.17	0.07	0.42	0.12	1.15	0.26
Waiwawa River at SH25 Coroglen	12	0.09	0.09	0.06	0.14	0.04	0.10	0.10
Wharekawa River at SH25	12	0.13	0.10	0.07	0.33	0.07	1.84	0.15
Hauraki								
Mangawhero Stm (Kaihere) at Mangawara Rd	12	0.61	0.47	0.33	1.65	0.14	2.15	0.48
Oraka Stm at Lake Rd	12	2.58	2.46	2.23	3.70	0.33	2.30	2.62
Piako River at Kiwitahi	12	1.38	0.84	0.26	4.42	1.42	1.52	1.25
Piako River at Paeroa-Tahuna Rd Br	12	2.15	1.60	0.85	5.33	1.87	1.42	2.24
Piakonui Stm at Piakonui Rd	12	0.41	0.40	0.24	0.72	0.16	1.07	0.46
Waihou River at Okauia	12	1.44	1.38	1.20	1.95	0.32	1.13	1.44
Waihou River at Te Aroha	12	1.45	1.43	1.17	1.95	0.18	1.29	-
Waihou River at Whites Rd	12	0.95	0.93	0.88	1.23	0.08	2.52	0.89
Waiohotu Stm at Waiohotu Rd (Off SH5)	12	0.35	0.33	0.29	0.48	0.07	1.16	0.35
Waiomou Stm at Matamata-Tauranga Rd	12	0.75	0.67	0.51	1.37	0.27	1.45	0.70
Waitakaruru River (Hauraki Plains) at Coxhead Rd Br	12	0.74	0.44	0.21	2.69	0.50	1.94	0.55
Waitoa River at Landsdowne Rd Br	12	1.83	1.64	1.14	3.29	0.86	1.27	2.15
Waitoa River at Mellon Rd Recorder	12	2.70	2.38	1.59	5.10	1.05	1.45	2.98
Tributaries to the Lower Waikato								
Awaroa River (Waiuku) at Otaua Rd Br opp Moseley Rd	12	1.94	1.81	1.18	2.67	0.98	0.15	2.14
Awaroa Stm (Rotowaro) at Sansons Br @ Rotowaro-Huntly Rd	12	0.66	0.69	0.41	1.04	0.28	0.60	0.76
Karapiro Stm at Hickey Rd Bridge - Cambridge	12	1.11	0.94	0.63	2.27	0.78	1.22	1.12
Kirikiriroa Stm at Tauhara Dr	12	1.18	1.18	0.79	1.69	0.38	0.30	1.43
Komakorau Stm at Henry Rd	12	3.28	2.74	2.42	8.10	0.55	3.12	3.30
Little Waipa Stm at Arapuni - Putaruru Rd	12	2.19	2.14	1.98	2.57	0.27	1.02	2.27
Mangakotukutuku Stm (Rukuhia) at Peacocks Rd	12	2.10	1.61	1.06	3.94	1.78	0.80	1.99
Mangamingi Stm (Tokoroa) at Paraonui Rd Br	12	2.84	2.77	2.26	4.37	0.43	1.99	3.35
Mangaone Stm (Waikato) at Annebrooke Rd Br	12	2.85	2.77	2.43	3.39	0.39	0.58	2.85
Mangaonua Stm at Hoeka Rd	12	1.87	1.78	1.51	2.76	0.45	1.47	1.87
Mangaonua Stm at Te Miro Rd (a.k.a Waitakaruru stm)	12	0.77	0.65	0.50	1.47	0.35	1.38	0.79
Mangatangi River at SH2 Maramarua	12	0.78	0.52	0.22	2.01	0.88	0.94	0.68
Mangatawhiri River at Lyons Rd At Buckingham Br	12	0.35	0.15	0.10	1.83	0.19	2.77	0.21
Mangawara Stm at Rutherford Rd Br	12	2.35	2.09	1.37	6.20	0.83	2.71	2.17
Mangawhero Stm (Cambridge) at Cambridge-Ohaupo Rd	12	2.99	2.84	1.94	5.60	0.63	2.03	3.07
Matahuru Stm at Waiterimu Road Below Confluence	12	1.32	1.16	0.53	2.54	0.89	0.75	1.54
Northern Outlet Canal (a.k.a.Pungarehu Canal) at D/S of Ctrl Gate	12	4.01	3.95	1.44	6.30	2.10	0.05	-
Ohaeroa Stm at SH22 Br	12	2.01	2.05	1.52	2.47	0.38	-0.07	2.07
Opuatia Stm at Ponganui Rd	12	1.15	1.10	0.95	1.40	0.32	0.51	1.14
Pokaiwhenua Stm at Puketurua	12	2.30	2.14	2.02	2.64	0.49	0.38	2.49
Waahi Stm at Te Ohaki Rd	12	1.13	1.05	0.78	1.78	0.53	0.73	-
Waerenga Stm at Taniwha Rd	12	1.18	1.07	0.67	2.26	0.57	1.17	1.17
Waitawhiriwhiri Stm at Edgecumbe Street	12	1.89	1.94	1.14	2.45	0.43	-0.76	2.15
Whakapipi Stm at SH22 Br	12	4.00	3.92	2.81	5.65	1.19	0.49	4.45
Whakauru Stm at U/S SH1 Br	12	1.59	1.51	1.44	2.10	0.16	2.19	1.38
Whangamarino River at Island Block Rd	12	2.02	2.09	1.13	3.44	1.23	0.40	2.00
Whangamarino River at Jefferies Rd Br	12	1.41	1.17	0.51	3.40	1.01	1.32	1.32
Whangape Stm at Rangiriri-Glen Murray Rd	12	3.24	2.08	0.28	7.20	4.14	0.60	2.00

IQR = Inter quartile range. - = less than five-year record available.

Location	Count	Mean	Median	Min	Max	IQR	Skew	15-19 median
Waipa River and Tributaries								
Firewood Creek at Waingaro Road Bridge	12	0.72	0.61	0.51	1.15	0.33	0.96	-
Kaniwhaniwha Stm at Wright Rd	12	0.57	0.47	0.22	1.19	0.48	0.70	0.72
Mangaohoi Stm at South Branch Maru Rd	12	0.34	0.30	0.21	0.72	0.12	2.23	0.37
Mangaokewa Stm at Lawrence Street Br	12	0.96	0.86	0.46	1.73	0.68	0.78	1.00
Mangapiko Stm (Pirongia/Te Awamutu) at Bowman Rd	12	1.91	1.74	1.23	2.78	0.87	0.44	2.45
Mangapu River at Otorohanga	12	1.05	0.87	0.28	2.30	0.67	0.96	1.28
Mangarama at Gadsby Rd	11	1.30	1.07	0.79	2.59	0.51	1.53	-
Mangarapa Stm at Otorohanga Rd	12	1.14	0.93	0.32	2.40	1.12	0.69	-
Mangatutu Stm (Waikeria) at Walker Rd Br	12	0.60	0.48	0.27	1.13	0.45	0.86	0.55
Mangauika Stm at Te Awamutu Borough W/S Intake	12	0.13	0.12	0.04	0.25	0.12	0.15	0.26
Moakurua Stm at Warratah Farm Bridge	12	0.62	0.57	0.29	1.17	0.52	0.62	-
Ohote Stm at Whatawhata/Horotiu Rd	12	1.31	1.34	0.62	1.93	0.81	-0.06	1.43
Puniu River at Bartons Corner Rd Br	12	1.02	0.93	0.60	1.60	0.41	0.80	1.08
Puniu River at Wharepapa Rd Bridge	12	0.87	0.82	0.62	1.32	0.34	0.82	-
Waipa River at Mangaokewa Rd	12	0.95	0.58	0.36	5.30	0.14	3.42	0.57
Waipa River at Ngaruawahia Br	12	1.07	0.99	0.53	1.98	0.43	1.08	-
Waipa River at Pukehoua Bridge on Baffin Road	12	0.89	0.73	0.45	1.96	0.44	1.39	-
Waipa River at SH3 Otorohanga	12	0.70	0.52	0.32	1.55	0.44	1.24	0.70
Waitomo Stm at SH31 Otorohanga	12	0.88	0.71	0.43	2.60	0.48	2.25	0.87
Waitomo Stm at Tumutumu Rd	12	0.76	0.74	0.62	1.12	0.13	2.01	0.77
Tributaries to the Upper Waikato								
Kawaunui Stm at SH5 Br	12	3.53	3.60	2.84	3.86	0.22	-1.79	3.37
Mangaharakeke Stm (Atiamuri) at SH30 (Off Jct SH1)	12	0.88	0.83	0.62	1.61	0.36	1.43	0.93
Mangakara Stm (Reporoa) at SH5	12	2.03	1.90	1.74	3.39	0.14	3.19	1.88
Mangakino Stm (Whakamaru) at Sandel Rd	12	0.90	0.87	0.75	1.24	0.20	1.28	0.89
Otamakokore Stm at Hossack Rd	12	1.21	1.06	0.93	2.88	0.27	3.14	1.25
Pueto Stm at Broadlands Rd Br	12	0.74	0.73	0.69	0.78	0.05	0.39	0.71
Tahunaatara Stm at Ohakuri Rd	12	0.97	0.86	0.68	1.96	0.35	2.29	0.95
Torepatutahi Stm at Vaile Rd Br	12	0.77	0.77	0.66	0.92	0.11	0.43	0.75
Waiotapu Stm at Campbell Rd Br	12	2.03	2.08	1.86	2.15	0.21	-0.45	2.04
Waiotapu Stm at Homestead Rd Br	12	1.97	1.95	1.78	2.33	0.32	0.59	2.10
Waipapa Stm (Mokai) at Tirohanga Rd Br	12	1.81	1.63	1.47	4.12	0.21	3.37	1.63
Whirinaki Stm at Corbett Rd	12	0.90	0.90	0.82	1.01	0.08	0.43	0.90
West Coast								
Awakino River at Gribbon Rd	12	0.16	0.11	0.08	0.33	0.10	1.28	0.15
Awakino River at SH3 Awakau Rd Junction	11	0.34	0.29	0.10	0.84	0.23	1.31	0.31
Manganui River at Off Manganui Rd	12	0.24	0.13	0.08	0.95	0.13	2.45	0.24
Mangaotaki River at SH3 Br	12	0.90	0.83	0.55	1.57	0.30	1.19	0.95
Marokopa River at Speedies Rd (Off Te Anga Rd)	12	0.43	0.43	0.29	0.75	0.14	1.24	0.43
Mokau River at Awakau Rd	12	0.77	0.72	0.24	1.65	0.46	1.08	0.85
Mokau River at Mangaokewa Rd (Off SH30)	12	0.81	0.74	0.46	1.66	0.38	1.58	0.75
Mokau River at Totoro Rd Recorder	12	0.86	0.81	0.44	1.85	0.36	1.59	0.93
Mokauiti Stm at Three Way Point - Aria	12	0.73	0.56	0.43	1.81	0.27	2.14	0.67
Ohautira Stm at Waingaro Te Uku Rd	12	0.34	0.28	0.14	0.73	0.30	0.79	0.49
Oparau River at Langdon Rd (Off Okupata Rd)	12	0.25	0.21	0.11	0.62	0.19	1.45	0.24
Tawarau River at Off Speedies Rd	12	0.46	0.43	0.31	0.81	0.14	1.59	0.45
Waingaro River (Pukemiro) at Ruakiwi Rd Off SH22	12	0.63	0.57	0.20	1.35	0.61	0.69	0.82
Waitetuna River at Te Uku-Waingaro Rd	12	0.51	0.49	0.22	0.92	0.38	0.40	0.62
Inflows to Lake Taupo								
Hinemaiaia River at SH1	12	0.19	0.19	0.08	0.28	0.09	-0.12	0.19
Kuratau River at SH41 Moerangi	12	0.31	0.27	0.15	0.78	0.17	2.06	0.39
Kuratau River at Te Rae Street T10	12	0.79	0.77	0.21	1.30	0.30	-0.15	0.83
Mapara Stm (Lake Taupo) at Off Mapara Rd (Whakaipo Res) T1	12	0.97	0.97	0.89	1.07	0.13	0.15	0.97
Tauranga-Taupo River at 20 Metres U/S SH1 Bridge	12	0.12	0.11	0.06	0.19	0.05	0.35	0.12
Tokaanu Power Station Tailrace Canal at SH41 Bridge Over Canal	12	0.11	0.09	0.05	0.19	0.07	0.79	0.11
Tokaanu Stm at Off SH41 Turangi	12	0.47	0.48	0.44	0.52	0.02	0.52	0.49
Waihaha River at SH32	12	0.19	0.19	0.11	0.24	0.04	-1.01	0.19
Waitahanui River at Blake Rd	12	0.47	0.47	0.42	0.54	0.03	0.66	0.47
Whangamata Stm (Kinloch) at Whangamata Rd	12	1.78	1.79	1.58	2.12	0.16	0.90	1.57
Whanganui Stm at Lakeside Lake Taupo T8	12	0.47	0.47	0.39	0.58	0.10	0.17	0.47
Whareroa Stm (Taupo) at Lakeside Lake Taupo T9	12	0.86	0.80	0.66	1.32	0.30	1.19	0.87

IQR = Inter quartile range. - = less than five-year record available.

Turbidity (NTU)								
Location	Count	Mean	Median	Min	Max	IQR	Skew	15-19 median
Coromandel								
Hikutaia River at Old Maratoto Rd	12	1.5	1.4	0.6	2.8	0.8	0.67	1.5
Kauaeranga River at Smiths Cableway/Recorder	12	1.4	0.8	0.3	4.6	1.6	1.54	1.5
Ohinemuri River at Karangahake	12	1.2	0.9	0.4	3.3	0.9	1.57	-
Ohinemuri River at Queens Head	12	1.2	1.0	0.4	3.8	0.7	1.86	1.1
Ohinemuri River at SH25 Br	12	1.1	0.8	0.5	2.8	0.9	1.62	1.1
Tairua River at Morrisons Br Hikuai	12	1.1	0.8	0.5	3.9	0.4	3.02	1.1
Tapu River at Tapu-Coroglen Rd	12	1.2	0.7	0.3	4.5	1.0	1.80	1.1
Waiau River at E309 Rd Ford	12	3.1	1.9	1.1	8.3	3.2	1.30	2.7
Waitekauri River at U/S Ohinemuri Conflu	12	0.5	0.5	0.3	1.2	0.4	1.44	0.9
Waiwawa River at SH25 Coroglen	12	1.3	1.0	0.5	4.8	0.6	2.88	1.2
Wharekawa River at SH25	12	1.8	1.3	0.8	7.6	0.9	2.98	1.9
Hauraki								
Mangawhero Stm (Kaihere) at Mangawara Rd	12	20.2	5.0	4.0	154.0	2.7	3.23	7.7
Oraka Stm at Lake Rd	12	6.5	4.0	2.1	32.0	2.5	3.30	6.1
Piako River at Kiwitahi	12	4.3	2.9	1.8	14.9	2.1	2.21	4.1
Piako River at Paeroa-Tahuna Rd Br	12	10.8	8.8	3.2	27.0	6.6	1.52	9.8
Piakonui Stm at Piakonui Rd	12	4.0	3.6	2.0	7.4	2.4	0.83	4.2
Waihou River at Okauia	12	4.3	3.4	2.0	11.8	1.8	2.39	4.7
Waihou River at Te Aroha	12	5.9	4.1	2.5	16.6	4.0	1.69	-
Waihou River at Whites Rd	12	0.5	0.5	0.3	1.4	0.3	2.03	0.6
Waiohotu Stm at Waiohotu Rd (Off SH5)	12	5.2	4.9	1.8	10.6	3.2	0.97	4.7
Waiomou Stm at Matamata-Tauranga Rd	12	4.1	3.4	2.2	9.1	2.1	1.57	4.4
Waitakaruru River (Hauraki Plains) at Coxhead Rd Br	12	34.3	4.1	1.4	230.0	23.7	2.55	7.7
Waitoa River at Landsdowne Rd Br	12	6.5	3.7	1.8	25.0	6.1	2.27	5.6
Waitoa River at Mellon Rd Recorder	12	14.1	10.7	7.0	48.0	2.5	2.93	10.4
Tributaries to the Lower Waikato								
Awaroa River (Waiuku) at Otaua Rd Br opp Moseley Rd	12	10.3	8.7	4.1	24.0	5.0	1.64	14.5
Awaroa Stm (Rotowaro) at Sansons Br @ Rotowaro-Huntly Rd	12	4.6	3.8	1.2	8.1	3.9	0.19	5.8
Karapiro Stm at Hickey Rd Bridge - Cambridge	12	8.1	6.3	3.4	23.0	3.9	2.12	7.2
Kirikiriroa Stm at Tauhara Dr	12	23.8	24.0	8.2	38.0	12.5	-0.17	24.0
Komakorau Stm at Henry Rd	12	82.6	87.0	44.0	109.0	35.5	-0.56	79.5
Little Waipa Stm at Arapuni - Putaruru Rd	12	2.0	1.6	0.5	6.0	1.0	2.12	2.1
Mangakotukutuku Stm (Rukuhia) at Peacocks Rd	12	19.9	17.4	10.7	41.0	10.3	1.48	21.5
Mangamingi Stm (Tokoroa) at Paraonui Rd Br	12	10.9	5.1	3.0	63.0	2.7	3.18	5.2
Mangaone Stm (Waikato) at Annebrooke Rd Br	12	10.0	9.1	6.0	18.2	2.2	1.50	8.8
Mangaonua Stm at Hoeka Rd	12	17.7	17.1	6.9	40.0	12.4	1.20	13.0
Mangaonua Stm at Te Miro Rd (a.k.a Waitakaruru stm)	12	4.2	3.4	2.2	12.0	1.9	2.49	4.3
Mangatangi River at SH2 Maramarua	12	22.1	15.3	7.7	80.0	14.6	2.43	14.8
Mangatawhiri River at Lyons Rd At Buckingham Br	12	35.5	2.5	1.0	380.0	4.5	3.45	3.1
Mangawara Stm at Rutherford Rd Br	12	48.2	41.5	25.0	76.0	22.0	0.47	46.0
Mangawhero Stm (Cambridge) at Cambridge-Ohaupo Rd	12	49.6	46.5	25.0	116.0	9.5	2.63	45.0
Matahuru Stm at Waiterimu Road Below Confluence	12	29.5	29.5	11.8	52.0	17.1	0.18	34.5
Northern Outlet Canal (a.k.a.Pungarehu Canal) at D/S of Ctrl Gate	12	92.6	89.5	55.0	133.0	48.0	0.01	-
Ohaeroa Stm at SH22 Br	12	12.5	7.2	4.4	52.0	3.1	2.43	7.8
Opuatia Stm at Ponganui Rd	12	17.5	12.6	6.8	54.0	8.1	1.97	14.8
Pokaiwhenua Stm at Puketurua	12	8.2	1.9	1.0	75.0	0.8	3.44	4.0
Waahi Stm at Te Ohaki Rd	12	30.3	29.0	13.8	53.0	17.6	0.51	-
Waerenga Stm at Taniwha Rd	12	23.5	8.1	3.7	179.0	9.4	3.34	8.8
Waitawhiriwhiri Stm at Edgecumbe Street	12	30.0	31.0	22.0	40.0	10.5	0.06	34.0
Whakapipi Stm at SH22 Br	12	9.6	2.5	1.1	70.0	6.7	3.26	4.9
Whakauru Stm at U/S SH1 Br	12	13.3	8.9	3.0	50.0	6.6	2.50	9.0
Whangamarino River at Island Block Rd	12	40.8	40.5	15.2	61.0	14.5	-0.43	37.5
Whangamarino River at Jefferies Rd Br	12	42.7	33.5	11.5	110.0	38.0	1.10	27.5
Whangape Stm at Rangiriri-Glen Murray Rd	12	89.8	79.5	22.0	290.0	87.5	1.73	55.5

IQR = Inter quartile range. - = less than five-year record available.

Location	Count	Mean	Median	Min	Max	IQR	Skew	15-19 median
Waipa River and Tributaries								
Firewood Creek at Waingaro Road Bridge	12	7.8	7.4	3.5	10.8	3.0	-0.26	-
Kaniwhaniwha Stm at Wright Rd	12	5.9	6.3	2.9	7.7	2.1	-0.83	8.0
Mangaohoi Stm at South Branch Maru Rd	12	2.3	1.4	0.9	7.3	1.6	1.94	1.8
Mangaokewa Stm at Lawrence Street Br	12	16.4	3.3	1.5	111.0	13.3	2.97	6.5
Mangapiko Stm (Pirongia/Te Awamutu) at Bowman Rd	12	14.2	13.3	6.2	30.0	8.3	1.14	13.7
Mangapu River at Otorohanga	12	12.5	6.9	1.9	48.0	10.5	1.89	12.2
Mangarama at Gadsby Rd	11	39.1	5.2	1.7	320.0	12.9	3.19	-
Mangarapa Stm at Otorohanga Rd	12	9.1	4.2	1.5	41.0	10.0	2.26	-
Mangatutu Stm (Waikeria) at Walker Rd Br	12	5.0	2.6	0.9	31.0	3.2	3.29	3.5
Mangauika Stm at Te Awamutu Borough W/S Intake	12	0.8	0.6	0.3	1.6	0.7	0.81	1.4
Moakurua Stm at Warratah Farm Bridge	12	8.8	4.2	1.1	34.0	9.9	1.67	-
Ohote Stm at Whatawhata/Horotiu Rd	12	14.2	13.5	7.1	21.0	8.6	0.19	14.4
Puniu River at Bartons Corner Rd Br	12	8.3	7.3	1.5	29.0	5.7	2.14	7.2
Puniu River at Wharepapa Rd Bridge	12	5.0	2.9	1.5	15.7	5.6	1.48	-
Waipa River at Mangaokewa Rd	12	24.0	2.2	1.0	220.0	4.1	3.28	2.5
Waipa River at Ngaruawahia Br	12	11.4	9.7	2.8	37.0	4.3	2.76	-
Waipa River at Pukehoua Bridge on Baffin Road	12	11.1	8.7	2.8	45.0	4.8	2.99	-
Waipa River at SH3 Otorohanga	12	6.2	2.9	1.0	28.0	2.8	2.07	4.0
Waitomo Stm at SH31 Otorohanga	12	10.2	5.5	2.4	37.0	10.3	1.75	16.5
Waitomo Stm at Tumutumu Rd	12	7.5	4.1	1.7	39.0	3.7	2.92	7.0
Tributaries to the Upper Waikato								
Kawaunui Stm at SH5 Br	12	4.0	2.7	2.0	9.5	3.4	1.32	4.0
Mangaharakeke Stm (Atiamuri) at SH30 (Off Jct SH1)	12	7.5	5.0	2.6	24.0	2.3	2.01	6.6
Mangakara Stm (Reporoa) at SH5	12	6.5	3.9	1.8	23.0	2.7	2.15	6.4
Mangakino Stm (Whakamaru) at Sandel Rd	12	2.2	1.3	0.8	7.6	1.5	2.17	2.1
Otamakokore Stm at Hossack Rd	12	3.0	2.3	1.6	10.6	0.9	3.25	3.4
Pueto Stm at Broadlands Rd Br	12	2.6	2.7	1.3	3.6	1.0	-0.29	3.1
Tahunaatara Stm at Ohakuri Rd	12	4.0	2.1	1.4	23.0	1.7	3.37	3.6
Torepatutahi Stm at Vaile Rd Br	12	1.4	1.2	0.7	2.5	0.9	0.78	1.2
Waiotapu Stm at Campbell Rd Br	12	7.3	7.2	1.8	12.5	1.4	-0.08	7.6
Waiotapu Stm at Homestead Rd Br	12	10.8	10.3	5.0	19.4	7.1	0.42	13.7
Waipapa Stm (Mokai) at Tirohanga Rd Br	12	3.6	2.9	1.9	12.1	0.9	3.21	3.6
Whirinaki Stm at Corbett Rd	12	0.6	0.4	0.2	2.1	0.2	2.48	0.6
West Coast								
Awakino River at Gribbon Rd	12	2.7	1.1	0.6	15.5	0.6	2.65	1.4
Awakino River at SH3 Awakanu Rd Junction	11	8.6	1.6	0.5	42.0	2.1	1.92	3.3
Manganui River at Off Manganui Rd	12	17.9	2.3	1.2	120.0	2.2	2.37	4.8
Mangaotaki River at SH3 Br	12	7.6	2.7	1.2	36.0	3.0	2.06	5.5
Marokopa River at Speedies Rd (Off Te Anga Rd)	12	5.6	2.5	1.1	31.0	3.0	2.91	4.6
Mokau River at Awakau Rd	12	18.4	10.6	3.6	88.0	7.7	2.54	13.9
Mokau River at Mangaokewa Rd (Off SH30)	12	6.0	3.5	1.6	33.0	2.2	3.25	3.7
Mokau River at Totoro Rd Recorder	12	10.4	3.7	0.8	48.0	5.9	2.00	7.7
Mokauiti Stm at Three Way Point - Aria	12	14.0	7.3	2.6	55.0	4.7	2.00	10.3
Ohautira Stm at Waingaro Te Uku Rd	12	4.8	4.1	1.7	12.1	3.7	1.53	7.4
Oparau River at Langdon Rd (Off Okupata Rd)	12	4.3	2.4	1.5	15.5	2.5	2.01	3.0
Tawarau River at Off Speedies Rd	12	7.2	2.4	1.3	50.0	1.5	3.14	3.6
Waingaro River (Pukemiro) at Ruakiwi Rd Off SH22	12	9.6	8.0	2.4	31.0	5.7	2.17	10.2
Waitetuna River at Te Uku-Waingaro Rd	12	7.5	6.2	2.4	24.0	5.4	2.20	9.7
Inflows to Lake Taupo								
Hinemaiaia River at SH1	12	1.6	1.2	0.9	4.5	0.5	2.18	1.3
Kuratau River at SH41 Moerangi	12	1.8	1.6	1.1	3.8	0.7	1.69	1.7
Kuratau River at Te Rae Street T10	12	1.3	1.2	0.6	2.8	0.5	1.81	1.3
Mapara Stm (Lake Taupo) at Off Mapara Rd (Whakaipo Res) T1	12	3.0	3.2	1.0	4.4	1.0	-0.75	3.4
Tauranga-Taupo River at 20 Metres U/S SH1 Bridge	12	1.8	1.1	0.5	6.0	1.7	1.65	1.1
Tokaanu Power Station Tailrace Canal at SH41 Bridge Over Canal	12	1.2	1.1	0.6	1.9	0.7	0.51	1.4
Tokaanu Stm at Off SH41 Turangi	12	0.3	0.2	0.1	0.4	0.2	0.09	0.2
Waihaha River at SH32	12	0.9	0.7	0.4	2.1	0.7	1.30	0.9
Waitahanui River at Blake Rd	12	0.9	0.7	0.4	1.7	0.5	1.23	1.2
Whangamata Stm (Kinloch) at Whangamata Rd	12	1.8	1.7	0.8	3.0	1.1	0.34	1.7
Whanganui Stm at Lakeside Lake Taupo T8	12	1.7	1.4	1.0	3.3	0.6	1.63	1.8
Whareroa Stm (Taupo) at Lakeside Lake Taupo T9	12	3.9	3.6	2.6	7.7	1.2	2.29	3.8

IQR = Inter quartile range. - = less than five-year record available.

Location	pH							
	Count	Mean	Median	Min	Max	IQR	Skew	15-19 median
Coromandel								
Hikutaia River at Old Maratoto Rd	12	7.2	7.2	7.0	7.5	0.3	0.84	7.1
Kauaeranga River at Smiths Cableway/Recorder	12	7.1	7.2	6.8	7.5	0.3	0.19	7.2
Ohinemuri River at Karangahake	12	7.6	7.6	7.1	8.3	0.8	0.45	-
Ohinemuri River at Queens Head	12	7.4	7.3	6.9	8.5	0.5	1.77	7.1
Ohinemuri River at SH25 Br	12	7.2	7.2	6.8	7.4	0.2	-0.89	7.2
Tairua River at Morrisons Br Hikuai	12	7.0	7.0	6.7	7.4	0.2	0.66	7.1
Tapu River at Tapu-Coroglen Rd	12	7.6	7.6	7.4	7.8	0.2	0.19	7.5
Waiau River at E309 Rd Ford	12	7.4	7.5	7.1	7.7	0.3	-0.32	7.3
Waitekauri River at U/S Ohinemuri Conflu	12	7.3	7.3	7.1	7.6	0.2	0.43	7.2
Waiwawa River at SH25 Coroglen	12	7.1	7.1	6.4	7.5	0.2	-1.06	7.2
Wharekawa River at SH25	12	7.0	7.0	6.7	7.3	0.2	-0.40	7.1
Hauraki								
Mangawhero Stm (Kaihere) at Mangawara Rd	12	7.4	7.4	7.1	7.7	0.3	-0.13	7.4
Oraka Stm at Lake Rd	12	7.4	7.4	7.2	7.4	0.1	-1.29	7.3
Piako River at Kiwitahi	12	7.2	7.2	6.7	7.4	0.2	-1.34	7.1
Piako River at Paeroa-Tahuna Rd Br	12	7.3	7.4	6.8	7.7	0.2	-1.00	7.3
Piakonui Stm at Piakonui Rd	12	7.3	7.3	7.1	7.6	0.2	0.20	7.3
Waihou River at Okauia	12	7.4	7.4	7.0	7.6	0.1	-0.86	7.3
Waihou River at Te Aroha	12	7.3	7.3	6.9	7.5	0.2	-0.90	-
Waihou River at Whites Rd	12	6.9	6.9	6.8	7.2	0.1	1.07	7.0
Waiohotu Stm at Waiohotu Rd (Off SH5)	12	7.2	7.2	6.7	7.5	0.1	-1.36	7.2
Waiomou Stm at Matamata-Tauranga Rd	12	7.2	7.2	7.0	7.4	0.1	0.81	7.1
Waitakaruru River (Hauraki Plains) at Coxhead Rd Br	12	7.3	7.4	6.9	7.7	0.3	-0.33	7.2
Waitoa River at Landsdowne Rd Br	12	7.2	7.1	6.9	7.5	0.3	0.24	7.1
Waitoa River at Mellon Rd Recorder	12	7.4	7.5	6.9	7.7	0.4	-1.02	7.3
Tributaries to the Lower Waikato								
Awaroa River (Waiuku) at Otaua Rd Br opp Moseley Rd	12	7.4	7.5	6.6	8.4	0.9	0.21	7.2
Awaroa Stm (Rotowaro) at Sansons Br @ Rotowaro-Huntly Rd	12	7.9	7.9	7.6	8.2	0.4	0.03	7.8
Karapiro Stm at Hickey Rd Bridge - Cambridge	12	7.3	7.3	6.8	7.6	0.2	-0.90	7.2
Kirikiriroa Stm at Tauhara Dr	12	6.9	7.0	6.0	7.3	0.4	-1.80	6.9
Komakorau Stm at Henry Rd	12	6.7	6.8	6.0	7.1	0.2	-0.96	6.7
Little Waipa Stm at Arapuni - Putaruru Rd	12	7.0	7.0	6.8	7.1	0.2	-0.52	7.0
Mangakotukutuku Stm (Rukuhia) at Peacocks Rd	12	6.9	7.1	5.9	7.3	0.4	-1.72	7.0
Mangamingi Stm (Tokoroa) at Paraonui Rd Br	12	7.5	7.6	7.1	7.7	0.2	-1.29	7.4
Mangaone Stm (Waikato) at Annebrooke Rd Br	12	7.5	7.5	7.3	7.7	0.2	0.36	7.4
Mangaonua Stm at Hoeka Rd	12	7.0	7.0	6.8	7.1	0.1	-1.47	7.0
Mangaonua Stm at Te Miro Rd (a.k.a Waitakaruru stm)	12	7.5	7.5	7.2	7.7	0.3	0.16	7.4
Mangatangi River at SH2 Maramarua	12	7.2	7.3	6.8	7.4	0.2	-1.03	7.2
Mangatawhiri River at Lyons Rd At Buckingham Br	12	7.5	7.5	6.9	8.0	0.2	-0.21	7.4
Mangawara Stm at Rutherford Rd Br	12	6.9	6.9	6.2	7.4	0.3	-0.51	6.8
Mangawhero Stm (Cambridge) at Cambridge-Ohaupo Rd	12	7.0	7.1	6.4	7.2	0.2	-1.80	7.0
Matahuru Stm at Waiterimu Road Below Confluence	12	7.2	7.3	6.6	7.6	0.6	-0.65	7.1
Northern Outlet Canal (a.k.a.Pungarehu Canal) at D/S of Ctrl Gate	12	8.7	8.6	7.7	9.5	0.9	-0.21	-
Ohaeroa Stm at SH22 Br	12	7.5	7.6	7.2	7.8	0.3	-0.18	7.4
Opuatia Stm at Ponganui Rd	12	7.6	7.7	7.5	7.7	0.2	-0.80	7.5
Pokaiwhenua Stm at Puketurua	12	7.2	7.2	7.1	7.4	0.2	0.51	7.2
Waahi Stm at Te Ohaki Rd	12	7.8	7.8	7.6	8.2	0.2	1.04	-
Waerenga Stm at Taniwha Rd	12	7.4	7.4	7.2	7.6	0.2	-0.23	7.3
Waitawhiriwhiri Stm at Edgecumbe Street	12	7.1	7.1	6.7	7.4	0.3	-0.19	7.0
Whakapipi Stm at SH22 Br	12	7.5	7.5	7.3	7.6	0.3	-0.22	7.4
Whakauru Stm at U/S SH1 Br	12	7.4	7.4	6.9	7.6	0.2	-2.05	7.4
Whangamarino River at Island Block Rd	12	7.1	7.1	6.7	8.3	0.4	1.88	7.0
Whangamarino River at Jefferies Rd Br	12	7.2	7.3	6.7	7.4	0.2	-1.55	7.1
Whangape Stm at Rangiriri-Glen Murray Rd	12	7.7	7.7	7.3	8.2	0.3	0.56	7.5

IQR = Inter quartile range. - = less than five-year record available.

Location	Count	Mean	Median	Min	Max	IQR	Skew	15-19 median
Waipa River and Tributaries								
Firewood Creek at Waingaro Road Bridge	12	7.1	7.1	6.9	7.6	0.2	1.56	-
Kaniwhaniwha Stm at Wright Rd	12	7.3	7.3	6.9	7.6	0.4	-0.14	7.2
Mangaohoi Stm at South Branch Maru Rd	12	7.6	7.6	7.3	7.7	0.2	-0.51	7.4
Mangaokewa Stm at Lawrence Street Br	12	7.5	7.5	7.3	7.7	0.1	0.14	7.4
Mangapiko Stm (Pirongia/Te Awamutu) at Bowman Rd	12	7.6	7.5	7.1	8.7	0.6	1.31	7.3
Mangapu River at Otorohanga	12	7.7	7.8	7.3	8.0	0.2	-1.12	7.6
Mangarama at Gadsby Rd	11	8.0	8.1	7.2	8.5	0.4	-1.07	-
Mangarapa Stm at Otorohanga Rd	12	7.8	7.8	7.1	8.3	0.4	-0.86	-
Mangatutu Stm (Waikeria) at Walker Rd Br	12	7.2	7.3	7.1	7.4	0.2	-0.13	7.2
Mangauika Stm at Te Awamutu Borough W/S Intake	12	7.5	7.5	7.3	7.8	0.2	0.80	7.4
Moakurua Stm at Warratah Farm Bridge	12	7.5	7.6	7.3	7.7	0.3	-0.49	-
Ohote Stm at Whatawhata/Horotiu Rd	12	6.8	6.8	6.3	7.2	0.4	0.25	6.8
Puniu River at Bartons Corner Rd Br	12	7.2	7.2	7.0	7.7	0.3	1.22	7.2
Puniu River at Wharepapa Rd Bridge	12	7.5	7.4	7.1	8.5	0.5	1.62	-
Waipa River at Mangaokewa Rd	12	7.3	7.3	7.1	7.6	0.3	0.16	7.4
Waipa River at Ngaruawahia Br	12	7.3	7.3	7.1	7.6	0.3	0.40	-
Waipa River at Pukehoua Bridge on Baffin Road	12	7.5	7.5	7.2	7.7	0.3	-0.16	-
Waipa River at SH3 Otorohanga	12	7.3	7.3	6.8	7.8	0.2	-0.35	7.3
Waitomo Stm at SH31 Otorohanga	12	7.8	7.9	7.3	8.1	0.3	-0.96	7.7
Waitomo Stm at Tumutumu Rd	12	8.0	8.0	7.8	8.1	0.2	-0.47	7.9
Tributaries to the Upper Waikato								
Kawaunui Stm at SH5 Br	12	7.1	7.1	7.0	7.2	0.0	0.21	7.0
Mangaharakeke Stm (Atiamuri) at SH30 (Off Jct SH1)	12	7.3	7.3	7.0	7.5	0.1	-1.33	7.3
Mangakara Stm (Reporoa) at SH5	12	7.2	7.2	7.1	7.4	0.2	0.57	7.1
Mangakino Stm (Whakamaru) at Sandel Rd	12	7.5	7.4	7.3	7.9	0.2	1.62	7.3
Otamakokore Stm at Hossack Rd	12	8.0	8.0	7.2	8.2	0.2	-2.54	8.0
Pueto Stm at Broadlands Rd Br	12	7.5	7.5	7.4	7.6	0.1	0.74	7.4
Tahunaatara Stm at Ohakuri Rd	12	7.5	7.5	7.2	7.8	0.2	-0.50	7.4
Torepatutahi Stm at Vaile Rd Br	12	7.3	7.3	7.1	7.4	0.2	-0.85	7.3
Waiotapu Stm at Campbell Rd Br	12	5.7	5.7	5.3	6.0	0.4	-0.13	5.5
Waiotapu Stm at Homestead Rd Br	12	6.9	6.9	6.7	7.2	0.2	0.74	6.8
Waipapa Stm (Mokai) at Tirohanga Rd Br	12	7.7	7.7	7.4	7.8	0.1	-1.93	7.7
Whirinaki Stm at Corbett Rd	12	7.2	7.3	7.0	7.4	0.2	-0.36	7.3
West Coast								
Awakino River at Gribbon Rd	12	7.5	7.4	7.1	8.2	0.4	1.10	7.4
Awakino River at SH3 Awakau Rd Junction	11	7.7	7.7	7.2	8.4	0.4	0.74	7.5
Manganui River at Off Manganui Rd	12	7.4	7.5	7.1	7.7	0.3	-0.44	7.4
Mangaotaki River at SH3 Br	12	7.9	7.9	7.6	8.1	0.2	-0.46	7.8
Marokopa River at Speedies Rd (Off Te Anga Rd)	12	8.1	8.1	7.7	8.4	0.2	0.00	7.9
Mokau River at Awakau Rd	12	7.6	7.5	7.2	7.8	0.2	-0.36	7.4
Mokau River at Mangaokewa Rd (Off SH30)	12	7.3	7.4	7.0	7.5	0.2	-0.76	7.3
Mokau River at Totoro Rd Recorder	12	7.8	7.8	7.3	8.3	0.2	0.00	7.6
Mokauiti Stm at Three Way Point - Aria	12	7.3	7.4	6.7	7.9	0.2	-0.31	7.3
Ohautira Stm at Waingaro Te Uku Rd	12	7.5	7.5	7.2	7.7	0.3	-0.10	7.4
Oparau River at Langdon Rd (Off Okupata Rd)	12	7.5	7.6	7.2	7.7	0.3	-0.61	7.4
Tawarau River at Off Speedies Rd	12	8.0	8.0	7.7	8.3	0.3	0.12	7.9
Waingaro River (Pukemiro) at Ruakiwi Rd Off SH22	12	7.6	7.6	7.2	8.2	0.4	0.72	7.4
Waitetuna River at Te Uku-Waingaro Rd	12	7.3	7.4	6.4	7.7	0.3	-2.21	7.4
Inflows to Lake Taupo								
Hinemaiaia River at SH1	12	7.5	7.5	7.3	7.8	0.2	0.09	7.4
Kuratau River at SH41 Moerangi	12	7.2	7.1	6.9	7.7	0.5	0.64	7.2
Kuratau River at Te Rae Street T10	12	7.5	7.6	7.0	7.7	0.2	-1.88	7.4
Mapara Stm (Lake Taupo) at Off Mapara Rd (Whakaipo Res) T1	12	7.6	7.5	7.4	7.8	0.1	1.03	7.4
Tauranga-Taupo River at 20 Metres U/S SH1 Bridge	12	7.4	7.4	7.1	7.6	0.2	-0.40	7.3
Tokaanu Power Station Tailrace Canal at SH41 Bridge Over Canal	12	7.6	7.6	7.4	7.8	0.2	0.00	7.4
Tokaanu Stm at Off SH41 Turangi	12	7.3	7.3	7.1	7.6	0.3	0.07	7.2
Waihaha River at SH32	12	7.3	7.3	7.2	7.5	0.2	0.31	7.2
Waitahanui River at Blake Rd	12	7.5	7.5	7.4	7.7	0.1	0.14	7.4
Whangamata Stm (Kinloch) at Whangamata Rd	12	7.5	7.4	7.4	7.6	0.1	0.99	7.4
Whanganui Stm at Lakeside Lake Taupo T8	12	7.5	7.5	7.4	7.7	0.2	0.39	7.3
Whareroa Stm (Taupo) at Lakeside Lake Taupo T9	12	7.6	7.5	7.4	7.8	0.1	1.12	7.4

IQR = Inter quartile range. - = less than five-year record available.

<i>Escherichia coli</i> (/100ml)								
Location	Count	Mean	Median	Min	Max	IQR	Skew	15-19 median
Coromandel								
Hikutaia River at Old Maratoto Rd	12	428	395	120	900	410	0.49	260
Kauaeranga River at Smiths Cableway/Recorder	12	228	95	40	1700	90	3.39	120
Ohinemuri River at Karangahake	12	65	30	10	300	37	2.48	-
Ohinemuri River at Queens Head	12	162	75	38	1100	55	3.35	80
Ohinemuri River at SH25 Br	12	127	105	20	330	105	1.20	150
Tairua River at Morrisons Br Hikuai	12	300	95	34	2500	100	3.41	85
Tapu River at Tapu-Coroglen Rd	12	84	50	10	230	70	1.39	100
Waiau River at E309 Rd Ford	12	196	105	50	700	185	2.05	115
Waitekauri River at U/S Ohinemuri Conflu	12	105	130	10	160	95	-0.71	90
Waiwawa River at SH25 Coroglen	12	96	100	10	200	95	0.46	100
Wharekawa River at SH25	12	280	280	80	600	265	0.44	220
Hauraki								
Mangawhero Stm (Kaihere) at Mangawara Rd	12	267	75	30	1900	170	3.22	47
Oraka Stm at Lake Rd	12	868	600	170	4000	310	3.23	400
Piako River at Kiwitahi	12	797	520	160	3800	745	2.77	430
Piako River at Paeroa-Tahuna Rd Br	12	1468	900	290	5000	1480	1.58	660
Piakonui Stm at Piakonui Rd	12	152	110	20	400	185	0.92	85
Waihou River at Okauia	12	618	470	120	1800	660	1.42	310
Waihou River at Te Aroha	12	924	520	180	4500	825	2.66	-
Waihou River at Whites Rd	12	153	120	30	400	90	1.50	67
Waiohotu Stm at Waiohotu Rd (Off SH5)	12	149	25	5	1400	55	3.43	46
Waiomou Stm at Matamata-Tauranga Rd	12	683	515	160	2400	295	2.54	400
Waitakaruru River (Hauraki Plains) at Coxhead Rd Br	12	5683	155	80	54000	1940	3.30	235
Waitoa River at Landsdowne Rd Br	12	1396	1200	290	3300	1570	0.92	650
Waitoa River at Mellon Rd Recorder	12	1818	1350	320	8000	1020	2.80	415
Tributaries to the Lower Waikato								
Awaroa River (Waiuku) at Otaua Rd Br opp Moseley Rd	12	1389	305	40	13000	390	3.43	305
Awaroa Stm (Rotowaro) at Sansons Br @ Rotowaro-Huntly Rd	12	266	205	50	800	205	1.94	245
Karapiro Stm at Hickey Rd Bridge - Cambridge	12	750	405	120	3100	765	2.13	240
Kirikiriroa Stm at Tauhara Dr	12	1138	400	180	7000	465	3.00	505
Komakorau Stm at Henry Rd	12	4244	2000	270	29000	2300	3.33	1400
Little Waipa Stm at Arapuni - Putaruru Rd	12	2100	310	80	19000	1025	3.40	280
Mangakotukutuku Stm (Rukuhia) at Peacocks Rd	12	1113	750	150	5000	555	2.93	800
Mangamingi Stm (Tokoroa) at Paraonui Rd Br	12	9353	850	240	90000	2700	3.39	685
Mangaone Stm (Waikato) at Annebrooke Rd Br	12	1112	1050	380	2000	720	0.33	620
Mangaonua Stm at Hoeka Rd	12	2567	2100	800	4800	3050	0.44	1200
Mangaonua Stm at Te Miro Rd (a.k.a Waitakaruru stm)	12	273	185	50	800	255	1.40	210
Mangatangi River at SH2 Maramarua	12	5373	425	90	48000	775	3.20	405
Mangatawhiri River at Lyons Rd At Buckingham Br	12	1688	360	30	15000	625	3.40	265
Mangawara Stm at Rutherford Rd Br	12	2720	2350	440	7000	2000	1.20	1600
Mangawhero Stm (Cambridge) at Cambridge-Ohaupo Rd	12	1625	1550	600	3700	500	1.69	800
Matahuru Stm at Waiterimu Road Below Confluence	12	855	800	300	1500	820	0.13	700
Northern Outlet Canal (a.k.a.Pungarehu Canal) at D/S of Ctrl Gate	12	150	80	10	1000	90	3.30	-
Ohaeroa Stm at SH22 Br	12	1887	680	120	15000	665	3.40	415
Opuatia Stm at Ponganui Rd	12	1542	255	100	14000	340	3.36	345
Pokaiwhenua Stm at Puketurua	12	3690	430	240	39000	375	3.46	315
Waahi Stm at Te Ohaki Rd	12	109	100	10	220	145	0.10	-
Waerenga Stm at Taniwha Rd	12	4637	1200	400	39000	1150	3.38	700
Waitawhiriwhiri Stm at Edgecumbe Street	12	3609	1800	330	15000	1800	1.95	1400
Whakapipi Stm at SH22 Br	12	2307	750	80	20000	615	3.41	400
Whakauru Stm at U/S SH1 Br	12	10063	850	160	100000	800	3.39	900
Whangamarino River at Island Block Rd	12	318	140	10	1300	355	1.67	110
Whangamarino River at Jefferies Rd Br	12	5725	1000	200	32000	800	2.06	1100
Whangape Stm at Rangiriri-Glen Murray Rd	12	119	60	10	400	155	1.37	85

IQR = Inter quartile range. - = less than five-year record available.

Location	Count	Mean	Median	Min	Max	IQR	Skew	15-19 median
Waipa River and Tributaries								
Firewood Creek at Waingaro Road Bridge	12	432	265	130	1300	365	1.59	-
Kaniwhaniwha Stm at Wright Rd	12	448	390	90	1300	405	1.49	490
Mangaohoi Stm at South Branch Maru Rd	12	2119	85	5	24000	247	3.46	95
Mangaokewa Stm at Lawrence Street Br	12	6632	650	210	67000	1240	3.43	480
Mangapiko Stm (Pirongia/Te Awamutu) at Bowman Rd	12	1278	1150	240	3000	800	0.85	700
Mangapu River at Otorohanga	12	834	700	210	2900	605	2.47	600
Mangarama at Gadsby Rd	11	547	230	130	3400	243	3.19	-
Mangarapa Stm at Otorohanga Rd	12	924	700	150	2300	805	1.15	-
Mangatutu Stm (Waikeria) at Walker Rd Br	12	400	135	110	1700	255	2.07	160
Mangauika Stm at Te Awamutu Borough W/S Intake	12	50	25	1	230	65	1.99	18
Moakurua Stm at Warratah Farm Bridge	12	1775	285	60	18000	235	3.46	-
Ohote Stm at Whatawhata/Horotiu Rd	12	743	700	160	1600	755	0.51	355
Puniu River at Bartons Corner Rd Br	12	581	160	90	2100	730	1.56	275
Puniu River at Wharepapa Rd Bridge	12	1487	210	50	9000	1415	2.54	-
Waipa River at Mangaokewa Rd	12	491	225	60	3400	235	3.35	170
Waipa River at Ngaruawahia Br	12	298	230	50	1200	95	3.07	-
Waipa River at Pukehoua Bridge on Baffin Road	12	644	285	80	2200	915	1.35	-
Waipa River at SH3 Otorohanga	12	578	305	110	2000	480	1.78	230
Waitomo Stm at SH31 Otorohanga	12	953	800	140	4200	840	2.53	630
Waitomo Stm at Tumutumu Rd	12	293	190	80	1100	240	2.58	200
Tributaries to the Upper Waikato								
Kawaunui Stm at SH5 Br	12	1638	1450	110	5400	2100	1.27	180
Mangaharakeke Stm (Atiamuri) at SH30 (Off Jct SH1)	12	2748	295	140	17000	615	2.21	295
Mangakara Stm (Reporoa) at SH5	12	1350	450	60	11000	355	3.39	255
Mangakino Stm (Whakamaru) at Sandel Rd	12	781	175	20	7000	455	3.38	71
Otamakokore Stm at Hossack Rd	12	2970	530	130	28000	845	3.43	330
Pueto Stm at Broadlands Rd Br	12	69	55	30	200	35	2.14	33
Tahunaatara Stm at Ohakuri Rd	12	2585	165	60	29000	85	3.46	190
Torepatutahi Stm at Vaile Rd Br	12	408	300	50	1400	300	1.77	100
Waiotapu Stm at Campbell Rd Br	12	16	5	5	100	5	3.10	4
Waiotapu Stm at Homestead Rd Br	12	623	295	30	3400	500	2.83	170
Waipapa Stm (Mokai) at Tirohanga Rd Br	12	1019	170	10	10000	255	3.45	115
Whirinaki Stm at Corbett Rd	12	162	45	5	1000	50	2.42	40
West Coast								
Awakino River at Gribbon Rd	12	137	60	20	450	145	1.47	90
Awakino River at SH3 Awakau Rd Junction	11	277	100	28	1500	160	2.64	150
Manganui River at Off Manganui Rd	12	453	265	37	2800	235	3.31	210
Mangaotaki River at SH3 Br	12	395	265	80	1200	490	1.25	350
Marokopa River at Speedies Rd (Off Te Anga Rd)	12	314	150	70	2000	130	3.36	170
Mokau River at Awakau Rd	12	274	180	50	1000	160	1.99	170
Mokau River at Mangaokewa Rd (Off SH30)	12	763	155	40	4500	800	2.45	140
Mokau River at Totoro Rd Recorder	12	358	140	40	2500	145	3.37	210
Mokauiti Stm at Three Way Point - Aria	12	591	270	70	2300	405	1.88	230
Ohautira Stm at Waingaro Te Uku Rd	12	603	430	120	1800	385	1.64	380
Oparau River at Langdon Rd (Off Okupata Rd)	12	308	200	100	1100	125	2.10	190
Tawarau River at Off Speedies Rd	12	271	170	30	1200	200	2.67	175
Waingaro River (Pukemiro) at Ruakiwi Rd Off SH22	12	332	140	80	2200	125	3.40	235
Waitetuna River at Te Uku-Waingaro Rd	12	573	395	140	1800	575	1.69	410
Inflows to Lake Taupo								
Hinemaiaia River at SH1	12	50	22	5	290	38	3.05	21
Kuratau River at SH41 Moerangi	12	55	10	5	180	108	0.86	10
Kuratau River at Te Rae Street T10	12	78	85	5	200	110	0.47	40
Mapara Stm (Lake Taupo) at Off Mapara Rd (Whakaipo Res) T1	12	160	100	30	600	135	1.90	60
Tauranga-Taupo River at 20 Metres U/S SH1 Bridge	12	55	60	5	100	50	-0.31	21
Tokaanu Power Station Tailrace Canal at SH41 Bridge Over Canal	12	10	8	5	30	7	1.83	5
Tokaanu Stm at Off SH41 Turangi	12	50	20	5	290	35	2.77	11
Waihaha River at SH32	12	32	17	5	100	55	1.08	13
Waitahanui River at Blake Rd	12	29	25	5	100	25	1.92	20
Whangamata Stm (Kinloch) at Whangamata Rd	12	243	115	30	1700	75	3.36	85
Whanganui Stm at Lakeside Lake Taupo T8	12	97	70	20	270	75	1.41	41
Whareroa Stm (Taupo) at Lakeside Lake Taupo T9	12	183	165	60	480	115	1.74	130

IQR = Inter quartile range. - = less than five-year record available.

Enterococci (/100ml)								
Location	Count	Mean	Median	Min	Max	IQR	Skew	15-19 median
Coromandel								
Hikutaia River at Old Maratoto Rd	12	251	160	5	1000	355	1.70	150
Kauaeranga River at Smiths Cableway/Recorder	12	271	77	5	2200	90	3.21	80
Ohinemuri River at Karangahake	12	17	10	5	48	26	1.03	-
Ohinemuri River at Queens Head	12	80	20	5	370	97	1.89	20
Ohinemuri River at SH25 Br	12	44	30	5	130	63	1.10	41
Tairua River at Morrisons Br Hikuai	12	759	30	5	8200	70	3.44	40
Tapu River at Tapu-Coroglen Rd	12	128	80	5	480	47	1.89	90
Waiau River at E309 Rd Ford	12	152	85	18	420	205	0.83	115
Waitekauri River at U/S Ohinemuri Conflu	12	32	25	5	90	40	1.05	30
Waiwawa River at SH25 Coroglen	12	188	100	5	540	339	0.90	76
Wharekawa River at SH25	12	167	120	5	420	271	0.46	105
Hauraki								
Mangawhero Stm (Kaihere) at Mangawara Rd	12	564	260	10	3400	390	2.83	105
Oraka Stm at Lake Rd	12	977	355	100	6500	395	3.11	320
Piako River at Kiwitahi	12	643	285	50	3000	770	2.27	235
Piako River at Paeroa-Tahuna Rd Br	12	1073	485	270	3300	1500	1.25	475
Piakonui Stm at Piakonui Rd	12	279	70	10	1500	330	2.55	95
Waihou River at Okauia	12	457	320	50	2600	190	3.30	265
Waihou River at Te Aroha	12	633	300	70	3100	315	2.47	-
Waihou River at Whites Rd	12	128	100	5	500	130	1.74	34
Waiohotu Stm at Waiohotu Rd (Off SH5)	12	276	80	5	1800	323	2.94	32
Waiomou Stm at Matamata-Tauranga Rd	12	466	280	50	2100	415	2.54	310
Waitakaruru River (Hauraki Plains) at Coxhead Rd Br	12	1739	155	10	16000	785	3.34	150
Waitoa River at Landsdowne Rd Br	12	982	615	100	4000	1050	2.09	390
Waitoa River at Mellon Rd Recorder	12	813	425	140	2000	1275	0.81	390
Tributaries to the Lower Waikato								
Awaroa River (Waiuku) at Otaua Rd Br opp Moseley Rd	12	363	95	5	2600	326	3.13	100
Awaroa Stm (Rotowaro) at Sansons Br @ Rotowaro-Huntly Rd	12	117	120	10	290	160	0.42	120
Karapiro Stm at Hickey Rd Bridge - Cambridge	12	237	260	30	640	245	0.88	195
Kirikiriroa Stm at Tauhara Dr	12	826	375	40	4500	445	2.56	410
Komakorau Stm at Henry Rd	12	1349	900	130	4600	1730	1.38	460
Little Waipa Stm at Arapuni - Putaruru Rd	12	1516	220	40	14000	155	3.32	175
Mangakotukutuku Stm (Rukuhia) at Peacocks Rd	12	995	625	40	3600	1195	1.75	750
Mangamingi Stm (Tokoroa) at Paraonui Rd Br	12	3293	395	60	31000	1680	3.38	370
Mangaone Stm (Waikato) at Annebrooke Rd Br	12	1072	1000	310	2500	750	1.08	600
Mangaonua Stm at Hoeka Rd	12	2692	2000	320	9000	3810	1.29	750
Mangaonua Stm at Te Miro Rd (a.k.a Waitakaruru stm)	12	502	280	30	1700	660	1.37	330
Mangatangi River at SH2 Maramarua	12	3523	300	20	34000	1235	3.37	155
Mangatawhiri River at Lyons Rd At Buckingham Br	12	648	145	5	3300	1015	2.18	115
Mangawara Stm at Rutherford Rd Br	11	2511	1500	80	15000	2175	2.97	900
Mangawhero Stm (Cambridge) at Cambridge-Ohaupo Rd	12	945	470	140	4300	500	2.21	485
Matahuru Stm at Waiterimu Road Below Confluence	11	376	380	120	660	263	0.09	320
Northern Outlet Canal (a.k.a.Pungarehu Canal) at D/S of Ctrl Gate	12	94	50	5	290	155	0.87	-
Ohaeroa Stm at SH22 Br	12	653	265	30	4200	515	3.03	195
Opuatia Stm at Ponganui Rd	12	453	135	5	3400	300	3.28	155
Pokaiwhenua Stm at Puketurua	12	3322	275	40	36000	335	3.45	225
Waahi Stm at Te Ohaki Rd	12	74	60	5	160	80	0.42	-
Waerenga Stm at Taniwha Rd	12	1103	420	40	4600	1700	1.66	225
Waitawhiriwhiri Stm at Edgecumbe Street	12	1752	825	190	6900	2030	1.90	700
Whakapipi Stm at SH22 Br	12	1773	395	60	14000	1150	3.26	395
Whakauru Stm at U/S SH1 Br	12	5139	675	30	41000	1680	3.06	590
Whangamarino River at Island Block Rd	12	132	65	5	500	195	1.56	56
Whangamarino River at Jefferies Rd Br	12	3719	560	140	23000	3020	2.59	460
Whangape Stm at Rangiriri-Glen Murray Rd	12	245	75	5	1900	170	3.23	40

IQR = Inter quartile range. - = less than five-year record available.

Location	Count	Mean	Median	Min	Max	IQR	Skew	15-19 median
Waipa River and Tributaries								
Firewood Creek at Waingaro Road Bridge	12	281	290	40	610	300	0.15	-
Kaniwhaniwha Stm at Wright Rd	12	268	125	10	1400	325	2.54	220
Mangaohoi Stm at South Branch Maru Rd	12	2495	80	4	26000	677	3.42	47
Mangaokewa Stm at Lawrence Street Br	12	3238	335	40	34000	815	3.45	310
Mangapiko Stm (Pirongia/Te Awamutu) at Bowman Rd	12	578	250	40	3100	140	2.48	240
Mangapu River at Otorohanga	12	526	325	5	3000	420	3.04	240
Mangarama at Gadsby Rd	11	258	200	10	610	323	0.32	-
Mangarapa Stm at Otorohanga Rd	12	420	255	5	1700	495	1.78	-
Mangatutu Stm (Waikeria) at Walker Rd Br	12	449	90	20	4100	204	3.41	115
Mangauika Stm at Te Awamutu Borough W/S Intake	12	56	35	2	180	90	1.01	30
Moakurua Stm at Warratah Farm Bridge	12	575	155	5	5200	215	3.42	-
Ohote Stm at Whatawhata/Horotiu Rd	12	177	195	30	350	140	-0.21	175
Puniu River at Bartons Corner Rd Br	12	350	85	18	3000	156	3.39	120
Puniu River at Wharepapa Rd Bridge	12	531	245	19	2400	634	1.93	-
Waipa River at Mangaokewa Rd	12	275	65	5	2300	205	3.34	63
Waipa River at Ngaruawahia Br	12	125	100	20	440	70	2.48	-
Waipa River at Pukehoua Bridge on Baffin Road	12	207	170	25	900	130	2.88	-
Waipa River at SH3 Otorohanga	12	166	130	5	620	130	2.08	130
Waitomo Stm at SH31 Otorohanga	12	455	110	6	2700	350	2.68	180
Waitomo Stm at Tumutumu Rd	12	181	115	5	420	335	0.50	90
Tributaries to the Upper Waikato								
Kawaunui Stm at SH5 Br	12	991	420	130	2800	1250	1.02	315
Mangaharakeke Stm (Atiamuri) at SH30 (Off Jct SH1)	12	1362	340	28	10000	560	2.89	250
Mangakara Stm (Reporoa) at SH5	12	763	495	30	2600	995	1.34	240
Mangakino Stm (Whakamaru) at Sandel Rd	12	203	85	5	1200	215	2.63	33
Otamakokore Stm at Hossack Rd	12	3062	215	30	32000	775	3.44	165
Pueto Stm at Broadlands Rd Br	12	64	49	5	150	103	0.38	31
Tahunaatara Stm at Ohakuri Rd	12	2186	78	10	25000	155	3.46	120
Torepatutahi Stm at Vaile Rd Br	12	354	285	20	1200	515	1.24	84
Waiotapu Stm at Campbell Rd Br	12	19	10	1	100	15	2.84	6
Waiotapu Stm at Homestead Rd Br	12	423	230	10	2300	335	2.60	100
Waipapa Stm (Mokai) at Tirohanga Rd Br	12	2045	130	5	23000	189	3.46	80
Whirinaki Stm at Corbett Rd	12	226	120	5	1200	318	2.47	60
West Coast								
Awakino River at Gribbon Rd	12	100	45	5	320	194	0.98	40
Awakino River at SH3 Awakino Rd Junction	11	81	20	4	310	135	1.39	50
Manganui River at Off Manganui Rd	12	121	52	4	700	138	2.71	58
Mangaotaki River at SH3 Br	12	359	90	20	2800	195	3.33	125
Marokopa River at Speedies Rd (Off Te Anga Rd)	12	78	35	5	390	55	2.26	45
Mokau River at Awakau Rd	12	67	40	8	220	70	1.48	40
Mokau River at Mangaokewa Rd (Off SH30)	12	705	65	10	5400	300	2.90	80
Mokau River at Totoro Rd Recorder	12	118	52	7	700	65	2.96	80
Mokauiti Stm at Three Way Point - Aria	12	281	155	10	1600	239	2.69	120
Ohautira Stm at Waingaro Te Uku Rd	12	273	175	12	1100	329	1.85	170
Oparau River at Langdon Rd (Off Okupata Rd)	12	119	80	10	320	130	1.10	56
Tawarau River at Off Speedies Rd	12	77	53	5	320	93	2.13	47
Waingaro River (Pukemiro) at Ruakiwi Rd Off SH22	12	127	70	30	720	66	3.24	80
Waitetuna River at Te Uku-Waingaro Rd	12	268	235	30	550	400	0.33	260
Inflows to Lake Taupo								
Hinemaiaia River at SH1	12	33	15	5	200	24	3.16	10
Kuratau River at SH41 Moerangi	12	23	10	5	100	24	2.40	5
Kuratau River at Te Rae Street T10	12	92	75	4	320	123	1.34	35
Mapara Stm (Lake Taupo) at Off Mapara Rd (Whakaipo Res) T1	12	245	140	5	900	440	1.19	120
Tauranga-Taupo River at 20 Metres U/S SH1 Bridge	12	32	15	3	100	43	1.28	10
Tokaanu Power Station Tailrace Canal at SH41 Bridge Over Canal	12	5	5	1	9	1	-0.22	3
Tokaanu Stm at Off SH41 Turangi	12	31	14	5	130	32	2.16	10
Waihaha River at SH32	12	35	5	1	300	17	3.31	5
Waitahanui River at Blake Rd	12	23	15	5	53	38	0.55	11
Whangamata Stm (Kinloch) at Whangamata Rd	12	296	265	30	760	250	1.04	170
Whanganui Stm at Lakeside Lake Taupo T8	12	80	30	5	280	146	1.15	26
Whareroa Stm (Taupo) at Lakeside Lake Taupo T9	12	224	165	10	550	315	0.56	95

IQR = Inter quartile range. - = less than five-year record available.

Water Temperature (°C)								
Location	Count	Mean	Median	Min	Max	IQR	Skew	15-19 median
Coromandel								
Hikutaia River at Old Maratoto Rd	12	14.4	13.5	10.5	19.8	6.8	0.46	13.5
Kauaeranga River at Smiths Cableway/Recorder	12	15.0	13.9	10.3	21.8	7.8	0.38	14.3
Ohinemuri River at Karangahake	12	16.8	16.7	11.7	24.4	8.1	0.29	-
Ohinemuri River at Queens Head	12	16.7	16.4	11.9	22.1	8.1	0.11	15.9
Ohinemuri River at SH25 Br	12	16.8	16.4	12.3	23.4	7.1	0.33	15.9
Tairua River at Morrisons Br Hikuai	12	16.4	15.8	11.6	23.7	8.2	0.38	15.9
Tapu River at Tapu-Coroglen Rd	12	14.5	13.8	9.4	21.2	6.6	0.40	14.0
Waiau River at E309 Rd Ford	12	14.2	13.4	9.6	19.6	6.0	0.36	13.9
Waitekauri River at U/S Ohinemuri Conflu	12	16.2	16.0	11.5	23.0	7.5	0.31	15.2
Waiwawa River at SH25 Coroglen	12	15.8	15.5	10.8	22.9	7.6	0.36	14.9
Wharekawa River at SH25	12	16.1	14.9	11.1	22.9	7.6	0.36	15.3
Hauraki								
Mangawhero Stm (Kaihere) at Mangawara Rd	12	15.6	14.3	11.2	21.6	6.4	0.61	13.8
Oraka Stm at Lake Rd	12	14.5	14.2	10.6	19.6	3.1	0.42	14.2
Piako River at Kiwitahi	12	15.6	15.0	10.3	20.6	6.9	0.07	15.7
Piako River at Paeroa-Tahuna Rd Br	12	15.3	14.2	9.7	20.6	6.2	0.16	15.4
Piakonui Stm at Piakonui Rd	12	13.4	13.1	9.5	17.1	4.5	0.19	13.6
Waihou River at Okauia	12	14.2	13.7	11.2	17.8	4.1	0.28	14.0
Waihou River at Te Aroha	12	14.7	14.1	10.7	18.6	4.7	0.12	-
Waihou River at Whites Rd	12	13.0	13.0	12.0	14.1	1.2	0.19	13.1
Waiohotu Stm at Waiohotu Rd (Off SH5)	12	11.5	11.5	7.2	15.8	4.3	-0.06	11.6
Waiomou Stm at Matamata-Tauranga Rd	12	13.7	13.0	10.4	17.3	4.6	0.22	13.6
Waitakaruru River (Hauraki Plains) at Coxhead Rd Br	12	16.2	14.8	11.4	21.7	7.7	0.36	15.8
Waitoa River at Landsdowne Rd Br	12	14.9	14.3	9.9	19.2	6.1	0.05	15.2
Waitoa River at Mellon Rd Recorder	12	15.5	15.3	10.1	20.7	6.4	0.07	16.0
Tributaries to the Lower Waikato								
Awaroa River (Waiuku) at Otaua Rd Br opp Moseley Rd	12	17.0	15.2	12.0	24.4	8.1	0.49	16.7
Awaroa Stm (Rotowaro) at Sansons Br @ Rotowaro-Huntly Rd	12	15.9	16.3	11.6	20.1	6.2	0.01	15.3
Karapiro Stm at Hickey Rd Bridge - Cambridge	12	14.8	14.3	10.6	19.3	5.7	0.22	15.2
Kirikiriroa Stm at Tauhara Dr	12	15.7	15.2	12.4	19.7	4.9	0.39	15.7
Komakorau Stm at Henry Rd	12	15.8	15.2	11.8	20.9	5.6	0.37	15.0
Little Waipa Stm at Arapuni - Putaruru Rd	12	13.8	13.9	10.1	17.2	3.0	-0.31	14.2
Mangakotukutuku Stm (Rukuhia) at Peacocks Rd	12	15.2	14.9	11.3	19.5	4.9	0.32	15.8
Mangamingi Stm (Tokoroa) at Paraonui Rd Br	12	13.5	13.1	8.4	19.1	4.8	-0.03	13.7
Mangaone Stm (Waikato) at Annebrooke Rd Br	12	14.3	13.6	9.2	19.8	5.0	0.40	14.2
Mangaonua Stm at Hoeka Rd	12	14.9	14.2	12.2	19.6	4.4	0.73	14.5
Mangaonua Stm at Te Miro Rd (a.k.a Waitakaruru stm)	12	14.2	13.6	10.6	18.0	5.1	0.30	14.2
Mangatangi River at SH2 Maramarua	12	16.6	14.9	11.6	22.8	8.0	0.37	16.4
Mangatawhiri River at Lyons Rd At Buckingham Br	12	16.6	14.7	11.4	23.1	7.3	0.42	16.0
Mangawara Stm at Rutherford Rd Br	12	15.8	15.6	11.2	21.0	6.5	0.27	15.6
Mangawhero Stm (Cambridge) at Cambridge-Ohaupo Rd	12	14.4	14.4	11.6	17.5	4.1	0.22	14.6
Matahuru Stm at Waiterimu Road Below Confluence	12	15.8	15.2	11.5	20.6	6.4	0.30	15.5
Northern Outlet Canal (a.k.a.Pungarehu Canal) at D/S of Ctrl Gate	12	16.5	15.3	10.4	23.2	7.7	0.20	-
Ohaeroa Stm at SH22 Br	12	14.7	13.4	10.1	18.9	6.3	0.35	14.4
Opuatia Stm at Ponganui Rd	12	15.1	13.3	10.4	20.9	7.5	0.47	14.8
Pokaiwhenua Stm at Puketurua	12	13.7	13.4	9.6	17.8	3.7	-0.01	13.8
Waahi Stm at Te Ohaki Rd	12	17.6	17.3	11.6	23.7	8.3	0.15	-
Waerenga Stm at Taniwha Rd	12	14.3	13.2	9.3	19.9	6.4	0.36	14.3
Waitawhiriwhiri Stm at Edgecumbe Street	12	16.7	16.4	13.4	20.9	5.4	0.34	16.9
Whakapipi Stm at SH22 Br	12	15.5	13.9	11.3	20.6	6.6	0.42	15.7
Whakauru Stm at U/S SH1 Br	12	12.5	12.0	7.9	17.7	4.5	0.02	12.5
Whangamarino River at Island Block Rd	12	17.8	16.2	11.9	24.4	8.8	0.22	17.2
Whangamarino River at Jefferies Rd Br	12	14.6	13.2	9.9	20.0	7.1	0.34	15.0
Whangape Stm at Rangiriri-Glen Murray Rd	12	16.5	15.1	11.2	22.3	8.3	0.30	16.1

IQR = Inter quartile range. - = less than five-year record available.

Location	Count	Mean	Median	Min	Max	IQR	Skew	15-19 median
Waipa River and Tributaries								
Firewood Creek at Waingaro Road Bridge	12	14.8	14.4	10.9	19.5	4.7	0.50	-
Kaniwhaniwha Stm at Wright Rd	12	16.1	15.2	12.2	22.3	7.9	0.58	15.2
Mangaohoi Stm at South Branch Maru Rd	12	14.3	14.2	10.3	18.7	5.8	0.14	14.0
Mangaokewa Stm at Lawrence Street Br	12	13.7	12.5	6.6	20.8	8.1	0.34	13.6
Mangapiko Stm (Pirongia/Te Awamutu) at Bowman Rd	12	17.1	17.2	10.3	24.5	9.6	-0.04	17.2
Mangapu River at Otorohanga	12	16.0	14.1	9.6	21.8	9.0	0.33	14.7
Mangarama at Gadsby Rd	11	15.2	14.6	9.6	20.8	6.0	0.28	-
Mangarapa Stm at Otorohanga Rd	12	15.8	15.0	8.9	21.8	8.0	0.07	-
Mangatutu Stm (Waikeria) at Walker Rd Br	12	15.0	15.0	9.3	21.8	8.3	0.10	14.1
Mangauika Stm at Te Awamutu Borough W/S Intake	12	12.2	11.1	7.1	16.4	4.5	0.11	12.5
Moakurua Stm at Warratah Farm Bridge	12	14.1	13.1	7.1	19.8	6.7	0.03	-
Ohote Stm at Whatawhata/Horotiu Rd	12	15.9	15.2	12.3	20.7	6.0	0.42	16.3
Puniu River at Bartons Corner Rd Br	12	15.5	15.9	9.4	22.1	8.6	0.00	15.2
Puniu River at Wharepapa Rd Bridge	12	14.8	14.4	9.0	22.7	6.5	0.43	-
Waipa River at Mangaokewa Rd	12	13.7	12.4	7.3	19.7	6.6	0.11	12.6
Waipa River at Ngaruawahia Br	12	16.0	15.4	10.9	21.8	7.6	0.21	-
Waipa River at Pukehoua Bridge on Baffin Road	12	15.1	13.2	8.7	21.0	8.3	0.38	-
Waipa River at SH3 Otorohanga	12	15.7	14.3	8.7	22.8	6.4	0.22	14.3
Waitomo Stm at SH31 Otorohanga	12	15.5	14.2	9.3	22.2	6.6	0.34	14.9
Waitomo Stm at Tumutumu Rd	12	14.1	13.5	10.3	17.1	4.1	0.01	13.9
Tributaries to the Upper Waikato								
Kawaunui Stm at SH5 Br	12	15.3	15.4	11.2	19.3	3.3	-0.24	15.0
Mangaharakeke Stm (Atiamuri) at SH30 (Off Jct SH1)	12	13.5	13.2	9.9	17.3	3.9	-0.04	13.6
Mangakara Stm (Reporoa) at SH5	12	13.0	13.0	9.2	17.0	3.0	-0.07	13.6
Mangakino Stm (Whakamaru) at Sandel Rd	12	12.1	12.2	7.6	17.3	4.6	0.17	12.0
Otamakokore Stm at Hossack Rd	12	20.0	19.8	16.2	25.2	4.7	0.38	20.5
Pueto Stm at Broadlands Rd Br	12	13.6	14.0	10.7	15.8	2.6	-0.58	13.8
Tahunaatara Stm at Ohakuri Rd	12	13.2	12.9	8.3	19.4	4.8	0.21	13.3
Torepatutahi Stm at Vaile Rd Br	12	14.2	14.1	10.4	18.0	3.7	-0.08	14.3
Waiotapu Stm at Campbell Rd Br	12	26.8	26.9	22.9	31.2	3.1	0.12	27.7
Waiotapu Stm at Homestead Rd Br	12	17.9	18.1	13.2	22.8	4.6	-0.07	18.0
Waipapa Stm (Mokai) at Tirohanga Rd Br	12	21.7	22.0	18.5	25.0	2.9	-0.06	22.2
Whirinaki Stm at Corbett Rd	12	12.2	12.5	10.1	14.0	2.0	-0.45	12.4
West Coast								
Awakino River at Gribbon Rd	12	13.9	12.7	7.5	19.9	7.6	0.40	12.8
Awakino River at SH3 Awakau Rd Junction	11	15.4	14.3	8.3	21.3	9.1	0.19	14.2
Manganui River at Off Manganui Rd	12	13.5	12.7	7.8	20.4	5.0	0.63	13.5
Mangaotaki River at SH3 Br	12	13.9	13.1	7.3	19.5	7.5	0.22	13.5
Marokopa River at Speedies Rd (Off Te Anga Rd)	12	14.0	13.0	8.2	18.8	6.2	0.07	13.8
Mokau River at Awakau Rd	12	15.7	13.8	8.5	22.7	9.5	0.38	14.6
Mokau River at Mangaokewa Rd (Off SH30)	12	11.9	11.1	7.2	17.4	4.3	0.38	12.2
Mokau River at Totoro Rd Recorder	12	15.1	13.7	7.8	21.2	7.9	0.15	14.4
Mokauiti Stm at Three Way Point - Aria	12	15.4	14.0	7.6	22.8	8.3	0.26	14.4
Ohautira Stm at Waingaro Te Uku Rd	12	14.8	14.2	10.5	19.9	6.7	0.34	13.9
Oparau River at Langdon Rd (Off Okupata Rd)	12	14.0	12.8	6.4	19.6	7.7	0.01	14.1
Tawarau River at Off Speedies Rd	12	13.9	13.0	8.4	18.1	5.8	-0.04	13.5
Waingaro River (Pukemiro) at Ruakiwi Rd Off SH22	12	16.3	15.8	11.2	22.3	7.6	0.33	15.6
Waitetuna River at Te Uku-Waingaro Rd	12	15.5	15.0	11.4	20.6	7.2	0.33	14.7
Inflows to Lake Taupo								
Hinemaiaia River at SH1	12	11.5	11.2	6.3	17.2	5.2	0.17	11.3
Kuratau River at SH41 Moerangi	12	9.5	9.7	5.1	14.6	3.8	0.27	9.9
Kuratau River at Te Rae Street T10	12	13.1	12.4	6.9	20.9	6.5	0.45	12.4
Mapara Stm (Lake Taupo) at Off Mapara Rd (Whakaipo Res) T1	12	10.8	11.0	8.2	13.6	2.1	0.08	11.1
Tauranga-Taupo River at 20 Metres U/S SH1 Bridge	12	10.9	10.8	6.2	17.9	5.2	0.53	10.5
Tokaanu Power Station Tailrace Canal at SH41 Bridge Over Canal	12	13.1	12.7	7.7	19.4	7.9	0.10	12.7
Tokaanu Stm at Off SH41 Turangi	12	12.1	11.9	11.1	14.7	1.1	1.62	12.0
Waihaha River at SH32	12	11.5	11.4	6.1	17.2	5.3	0.23	11.0
Waitahanui River at Blake Rd	12	10.5	10.6	8.2	12.5	1.9	-0.30	10.8
Whangamata Stm (Kinloch) at Whangamata Rd	12	10.0	10.1	7.1	12.3	1.8	-0.26	10.5
Whanganui Stm at Lakeside Lake Taupo T8	12	11.8	11.3	6.0	19.6	5.1	0.61	10.9
Whareroa Stm (Taupo) at Lakeside Lake Taupo T9	12	10.9	11.0	6.5	16.5	3.9	0.42	11.0

IQR = Inter quartile range. - = less than five-year record available.

3.1.2 Major ion statistics

Table 4: Major Ions Statistics for 2019

Alkalinity (units: (g/m ³) CaCO ₃)							
Location	Count	Mean	Median	Min	Max	IQR	Skew
Kauaeranga River at Smiths Cableway/Recorder	12	12.2	12.6	9.1	15.7	3.2	-0.2
Ohinemuri River at Karangahake	12	14.6	14.0	10.2	21.0	4.7	0.6
Piako River at Paeroa-Tahuna Rd Br	12	36.6	36.5	22.0	57.0	19.5	0.2
Piakonui Stm at Piakonui Rd	12	16.3	16.0	10.8	24.0	7.9	0.4
Tapu River at Tapu-Coroglen Rd	12	26.2	26.5	18.8	32.0	3.5	-0.5
Waiau River at E309 Rd Ford	12	20.5	20.5	13.8	25.0	3.1	-0.7
Waihou River at Okauia	12	26.3	26.5	23.0	29.0	2.0	-0.6
Waihou River at Whites Rd	12	27.2	27.0	27.0	28.0	0.0	1.8
Waipa River at Pukehoua Bridge on Baffin Road	12	32.2	34.0	24.0	39.0	7.0	-0.3
Waipa River at SH3 Otorohanga	12	17.6	18.2	12.4	22.0	5.7	-0.2
Waitoa River at Mellon Rd Recorder	12	52.8	47.0	26.0	92.0	31.5	0.4

Calcium - dissolved (g/m ³)							
Location	Count	Mean	Median	Min	Max	IQR	Skew
Kauaeranga River at Smiths Cableway/Recorder	12	3.6	3.6	2.9	5.0	0.8	0.8
Ohinemuri River at Karangahake	12	12.9	11.0	6.3	25.0	6.8	0.9
Piako River at Paeroa-Tahuna Rd Br	12	10.8	11.1	9.0	12.1	1.9	-0.4
Piakonui Stm at Piakonui Rd	12	2.6	2.5	1.9	3.8	1.2	0.4
Tapu River at Tapu-Coroglen Rd	12	5.9	5.9	4.3	7.3	0.9	-0.1
Waiau River at E309 Rd Ford	12	4.4	4.4	3.2	5.4	0.6	-0.3
Waihou River at Okauia	12	4.1	4.1	3.6	4.9	0.6	0.7
Waihou River at Whites Rd	12	2.9	2.9	2.8	2.9	0.1	-0.3
Waipa River at Pukehoua Bridge on Baffin Road	12	10.7	10.4	8.6	13.2	1.4	0.3
Waipa River at SH3 Otorohanga	12	4.9	5.0	3.8	5.7	0.6	-0.5
Waitoa River at Mellon Rd Recorder	12	12.9	13.4	10.4	14.5	1.2	-1.1

Chloride - dissolved (g/m ³)							
Location	Count	Mean	Median	Min	Max	IQR	Skew
Kauaeranga River at Smiths Cableway/Recorder	12	8.6	8.7	7.7	9.6	0.7	-0.1
Ohinemuri River at Karangahake	12	10.9	11.2	8.3	12.4	2.0	-0.6
Piako River at Paeroa-Tahuna Rd Br	12	18.8	19.0	15.3	22.0	2.0	-0.3
Piakonui Stm at Piakonui Rd	12	9.9	9.6	8.6	12.6	1.0	1.5
Tapu River at Tapu-Coroglen Rd	12	10.9	11.0	9.6	11.9	1.1	-0.4
Waiau River at E309 Rd Ford	12	13.2	13.4	11.5	14.2	0.7	-0.8
Waihou River at Okauia	12	9.3	9.1	7.7	10.7	2.1	0.1
Waihou River at Whites Rd	12	5.9	6.0	5.6	6.2	0.3	-0.3
Waipa River at Pukehoua Bridge on Baffin Road	12	11.7	11.7	8.3	15.0	2.7	-0.1
Waipa River at SH3 Otorohanga	12	9.8	10.0	6.4	12.9	1.7	-0.3
Waitoa River at Mellon Rd Recorder	12	23.6	24.5	15.9	27.0	3.5	-1.3

Bicarbonate (units: (g/m ³) HCO ₃)							
Location	Count	Mean	Median	Min	Max	IQR	Skew
Kauaeranga River at Smiths Cableway/Recorder	12	14.9	15.3	11.1	19.1	3.9	-0.2
Ohinemuri River at Karangahake	12	17.7	17.1	12.4	25.0	5.7	0.5
Piako River at Paeroa-Tahuna Rd Br	12	44.4	44.5	27.0	69.0	23.0	0.2
Piakonui Stm at Piakonui Rd	12	19.7	19.3	13.1	29.0	9.3	0.4
Tapu River at Tapu-Coroglen Rd	12	31.8	32.0	23.0	38.0	4.5	-0.6
Waiau River at E309 Rd Ford	12	24.8	25.5	16.8	30.0	3.5	-0.9
Waihou River at Okauia	12	32.1	32.5	28.0	35.0	2.5	-0.6
Waihou River at Whites Rd	12	33.2	33.0	33.0	34.0	*	1.8
Waipa River at Pukehoua Bridge on Baffin Road	12	39.0	41.0	30.0	47.0	8.5	-0.3
Waipa River at SH3 Otorohanga	12	21.4	22.0	15.1	27.0	6.9	-0.2
Waitoa River at Mellon Rd Recorder	12	64.4	57.5	32.0	112.0	38.5	0.4

*=0

Potassium - dissolved (g/m ³)							
Location	Count	Mean	Median	Min	Max	IQR	Skew
Kauaeranga River at Smiths Cableway/Recorder	12	0.90	0.89	0.77	1.13	0.15	0.76
Ohinemuri River at Karangahake	12	2.23	2.25	1.96	2.70	0.30	0.60
Piako River at Paeroa-Tahuna Rd Br	12	5.63	5.65	4.70	6.30	0.80	-0.38
Piakonui Stm at Piakonui Rd	12	1.39	1.37	1.02	1.99	0.22	0.78
Tapu River at Tapu-Coroglen Rd	12	1.06	1.05	0.92	1.27	0.15	0.72
Waiau River at E309 Rd Ford	12	1.07	1.04	0.90	1.27	0.14	0.41
Waihou River at Okauia	12	4.93	4.85	4.30	5.40	0.70	-0.19
Waihou River at Whites Rd	12	4.39	4.35	4.30	4.60	0.15	0.89
Waipa River at Pukehoua Bridge on Baffin Road	12	2.35	2.35	1.91	3.10	0.30	0.94
Waipa River at SH3 Otorohanga	12	1.92	1.85	1.67	2.40	0.21	1.12
Waitoa River at Mellon Rd Recorder	12	6.92	6.65	6.10	8.70	0.95	1.15

Magnesium - dissolved (g/m ³)							
Location	Count	Mean	Median	Min	Max	IQR	Skew
Kauaeranga River at Smiths Cableway/Recorder	12	1.6	1.6	1.2	2.1	0.3	0.6
Ohinemuri River at Karangahake	12	2.5	2.4	1.8	4.2	0.6	1.6
Piako River at Paeroa-Tahuna Rd Br	12	5.2	5.2	4.0	6.4	0.7	0.2
Piakonui Stm at Piakonui Rd	12	1.4	1.4	1.1	2.0	0.5	0.4
Tapu River at Tapu-Coroglen Rd	12	2.4	2.5	2.0	3.1	0.4	0.5
Waiau River at E309 Rd Ford	12	2.1	2.1	1.7	2.6	0.2	0.3
Waihou River at Okauia	12	2.0	2.1	1.8	2.2	0.1	-0.3
Waihou River at Whites Rd	12	1.7	1.7	1.6	1.7	0.1	0.0
Waipa River at Pukehoua Bridge on Baffin Road	12	1.9	1.9	1.6	2.2	0.3	-0.4
Waipa River at SH3 Otorohanga	12	1.5	1.6	1.2	1.8	0.2	-1.2
Waitoa River at Mellon Rd Recorder	12	6.3	6.4	4.9	8.1	1.5	0.1

Sodium - dissolved (g/m ³)							
Location	Count	Mean	Median	Min	Max	IQR	Skew
Kauaeranga River at Smiths Cableway/Recorder	12	6.9	6.9	6.0	8.6	0.9	1.0
Ohinemuri River at Karangahake	12	9.1	8.9	7.2	11.9	2.6	0.4
Piako River at Paeroa-Tahuna Rd Br	12	18.2	17.1	12.2	26.0	7.2	0.3
Piakonui Stm at Piakonui Rd	12	8.7	8.6	7.5	10.3	1.3	0.5
Tapu River at Tapu-Coroglen Rd	12	9.6	9.5	8.6	11.6	0.4	1.8
Waiau River at E309 Rd Ford	12	10.2	10.1	8.9	11.8	1.0	0.5
Waihou River at Okauia	12	11.5	11.2	9.6	13.6	2.0	0.2
Waihou River at Whites Rd	12	9.7	9.6	9.3	10.6	0.5	1.3
Waipa River at Pukehoua Bridge on Baffin Road	12	8.8	8.8	6.3	12.4	2.1	0.6
Waipa River at SH3 Otorohanga	12	7.7	7.7	5.4	10.5	1.1	0.4
Waitoa River at Mellon Rd Recorder	12	29.0	27.0	17.1	46.0	16.2	0.3

Sulphate (g/m ³)							
Location	Count	Mean	Median	Min	Max	IQR	Skew
Kauaeranga River at Smiths Cableway/Recorder	12	7.0	6.9	4.6	10.0	2.1	0.3
Ohinemuri River at Karangahake	12	32.2	26.0	12.6	67.0	24.7	0.8
Piako River at Paeroa-Tahuna Rd Br	12	20.1	20.5	0.3	28.0	8.8	-1.3
Piakonui Stm at Piakonui Rd	12	3.2	1.6	1.0	21.0	0.6	3.0
Tapu River at Tapu-Coroglen Rd	12	4.7	4.8	3.6	5.7	0.6	-0.4
Waiau River at E309 Rd Ford	12	3.8	3.8	3.3	4.4	0.6	0.2
Waihou River at Okauia	12	4.1	3.9	2.8	6.4	1.7	0.7
Waihou River at Whites Rd	12	1.5	1.6	1.2	2.2	0.2	1.3
Waipa River at Pukehoua Bridge on Baffin Road	12	4.6	4.1	2.7	8.6	2.7	0.9
Waipa River at SH3 Otorohanga	12	3.8	3.7	2.2	6.2	2.0	0.5
Waitoa River at Mellon Rd Recorder	12	31.0	32.5	19.9	36.0	4.5	-1.2

Total Anions (g/m ³)							
Location	Count	Mean	Median	Min	Max	IQR	Skew
Kauaeranga River at Smiths Cableway/Recorder	12	0.6	0.7	0.5	0.8	0.1	0.1
Ohinemuri River at Karangahake	12	1.3	1.2	0.8	2.2	0.6	0.8
Piako River at Paeroa-Tahuna Rd Br	12	1.8	1.8	1.5	2.3	0.4	0.5
Piakonui Stm at Piakonui Rd	12	0.7	0.7	0.6	1.1	0.1	1.7
Tapu River at Tapu-Coroglen Rd	12	0.9	0.9	0.8	1.1	0.1	-0.2
Waiau River at E309 Rd Ford	12	0.9	0.9	0.7	1.0	0.1	-0.4
Waihou River at Okauia	12	1.0	1.0	0.9	1.1	0.1	-0.1
Waihou River at Whites Rd	12	0.8	0.8	0.8	0.8	0.02	-0.1
Waipa River at Pukehoua Bridge on Baffin Road	12	1.1	1.1	0.9	1.3	0.1	-0.7
Waipa River at SH3 Otorohanga	12	0.7	0.8	0.6	0.9	0.1	-0.7
Waitoa River at Mellon Rd Recorder	12	2.5	2.6	1.8	3.4	0.8	0.2

Total Cations (g/m ³)							
Location	Count	Mean	Median	Min	Max	IQR	Skew
Kauaeranga River at Smiths Cableway/Recorder	12	0.6	0.7	0.5	0.8	0.1	0.9
Ohinemuri River at Karangahake	12	1.3	1.2	0.8	2.2	0.5	1.0
Piako River at Paeroa-Tahuna Rd Br	12	1.9	1.9	1.5	2.4	0.4	0.2
Piakonui Stm at Piakonui Rd	12	0.7	0.7	0.6	0.8	0.1	0.4
Tapu River at Tapu-Coroglen Rd	12	0.9	0.9	0.8	1.2	0.1	0.6
Waiau River at E309 Rd Ford	12	0.9	0.9	0.7	1.0	0.1	0.1
Waihou River at Okauia	12	1.0	1.0	0.9	1.1	0.1	0.3
Waihou River at Whites Rd	12	0.8	0.8	0.8	0.9	0.03	0.6
Waipa River at Pukehoua Bridge on Baffin Road	12	1.1	1.1	0.9	1.4	0.1	-0.1
Waipa River at SH3 Otorohanga	12	0.8	0.8	0.6	1.0	0.1	-0.1
Waitoa River at Mellon Rd Recorder	12	2.6	2.6	1.9	3.6	0.9	0.3

3.1.3 Low level metals statistics

Table 5: Low Level Metals Statistics for 2019

Aluminium (g/m ³)							
Location	Count	Mean	Median	Min	Max	IQR	Skew
Kauaeranga River at Smiths Cableway/Recorder	12	0.12	0.08	0.02	0.38	0.10	1.4
Ohinemuri River at Karangahake	12	0.11	0.06	0.03	0.28	0.15	0.9
Piako River at Paeroa-Tahuna Rd Br	12	0.54	0.27	0.12	2.90	0.28	2.6
Piakonui Stm at Piakonui Rd	12	0.17	0.17	0.08	0.29	0.08	0.6
Tapu River at Tapu-Coroglen Rd	12	0.11	0.08	0.01	0.43	0.11	2.0
Waiau River at E309 Rd Ford	12	0.13	0.08	0.05	0.43	0.12	1.8
Waihou River at Okauia	12	0.21	0.17	0.08	0.51	0.18	1.0
Waihou River at Whites Rd	12	0.03	0.02	0.02	0.07	0.02	1.3
Waipa River at Pukehoua Bridge on Baffin Road	12	0.58	0.42	0.18	1.62	0.52	1.2
Waipa River at SH3 Otorohanga	12	0.51	0.15	0.05	3.50	0.38	2.7
Waitoa River at Mellon Rd Recorder	12	0.36	0.29	0.10	0.97	0.28	1.3

Arsenic (g/m ³)							
Location	Count	Mean	Median	Min	Max	IQR	Skew
Kauaeranga River at Smiths Cableway/Recorder	12	0.0003	0.0003	0.0003	0.0006	0.0001	2.76
Ohinemuri River at Karangahake	12	0.0006	0.0007	0.0003	0.0013	0.0006	0.30
Piako River at Paeroa-Tahuna Rd Br	12	0.001	0.001	0.0003	0.0018	0.0003	0.20
Piakonui Stm at Piakonui Rd	12	0.0003	0.0003	0.0003	0.0003	0.00003	1.15
Tapu River at Tapu-Coroglen Rd	12	0.0003	0.0003	0.0003	0.0003	0.00003	1.15
Waiau River at E309 Rd Ford	12	0.0006	0.0007	0.0003	0.0009	0.0003	-0.70
Waihou River at Okauia	12	0.0004	0.0005	0.0003	0.0007	0.0004	0.06
Waihou River at Whites Rd	12	0.0004	0.0005	0.0003	0.0006	0.0003	-0.21
Waipa River at Pukehoua Bridge on Baffin Road	12	0.0005	0.0005	0.0003	0.0012	0.0004	1.02
Waipa River at SH3 Otorohanga	12	0.0003	0.0003	0.0003	0.0011	0.0001	2.97
Waitoa River at Mellon Rd Recorder	12	0.0011	0.0011	0.0007	0.0017	0.0005	0.53

Boron (g/m ³)							
Location	Count	Mean	Median	Min	Max	IQR	Skew
Kauaeranga River at Smiths Cableway/Recorder	12	0.009	0.009	0.007	0.012	0.003	0.24
Ohinemuri River at Karangahake	12	0.012	0.012	0.011	0.013	0.001	*
Piako River at Paeroa-Tahuna Rd Br	12	0.022	0.023	0.016	0.027	0.007	-0.22
Piakonui Stm at Piakonui Rd	12	0.011	0.011	0.01	0.013	0.001	0.28
Tapu River at Tapu-Coroglen Rd	12	0.011	0.011	0.01	0.014	0.002	0.86
Waiau River at E309 Rd Ford	12	0.012	0.012	0.011	0.014	0.002	0.49
Waihou River at Okauia	12	0.019	0.019	0.016	0.02	0.002	-0.85
Waihou River at Whites Rd	12	0.013	0.013	0.012	0.013	0.001	*
Waipa River at Pukehoua Bridge on Baffin Road	12	0.021	0.019	0.012	0.034	0.011	0.58
Waipa River at SH3 Otorohanga	12	0.013	0.013	0.01	0.018	0.002	0.78
Waitoa River at Mellon Rd Recorder	12	0.053	0.057	0.035	0.068	0.02	-0.29

*= 0

Cadmium (g/m ³)							
Location	Count	Mean	Median	Min	Max	IQR	Skew
Kauaeranga River at Smiths Cableway/Recorder	12	0.00001	0.00001	0.00001	0.00001	*	1.0
Ohinemuri River at Karangahake	12	0.00001	0.00001	0.00001	0.00002	0.00001	0.75
Piako River at Paeroa-Tahuna Rd Br	12	0.00004	0.00003	0.00001	0.00012	0.00003	1.73
Piakonui Stm at Piakonui Rd	12	0.00001	0.00001	0.00001	0.00003	*	2.51
Tapu River at Tapu-Coroglen Rd	12	0.00001	0.00001	0.00001	0.00002	*	3.02
Waiau River at E309 Rd Ford	12	0.00001	0.00001	0.00001	0.00002	*	3.02
Waihou River at Okauia	12	0.00002	0.00001	0.00001	0.0001	0.00001	2.85
Waihou River at Whites Rd	12	0.00001	0.00001	0.00001	0.00001	*	3.02
Waipa River at Pukehoua Bridge on Baffin Road	12	0.00002	0.00002	0.00001	0.00005	0.00002	1.05
Waipa River at SH3 Otorohanga	12	0.00001	0.00001	0.00001	0.00006	0.00001	2.28
Waitoa River at Mellon Rd Recorder	12	0.00004	0.00004	0.00001	0.00009	0.00003	0.58

*=0

Cobalt (g/m ³)							
Location	Count	Mean	Median	Min	Max	IQR	Skew
Kauaeranga River at Smiths Cableway/Recorder	12	0.0002	0.0002	0.0001	0.0004	0.0001	1.90
Ohinemuri River at Karangahake	12	0.0002	0.0002	0.0001	0.0003	0.0001	-0.02
Piako River at Paeroa-Tahuna Rd Br	12	0.0008	0.0007	0.0003	0.0025	0.0004	2.25
Piakonui Stm at Piakonui Rd	12	0.0002	0.0002	0.0001	0.0003	0.0001	0.21
Tapu River at Tapu-Coroglen Rd	12	0.00004	0.00004	0.00002	0.0001	0.00004	1.33
Waiau River at E309 Rd Ford	12	0.0001	0.0001	0.00003	0.0002	0.00004	2.22
Waihou River at Okauia	12	0.0001	0.0001	0.0001	0.0002	0.0001	0.89
Waihou River at Whites Rd	12	0.00002	0.00002	0.00002	0.00002	*	*
Waipa River at Pukehoua Bridge on Baffin Road	12	0.0005	0.0004	0.0002	0.0011	0.0003	1.37
Waipa River at SH3 Otorohanga	12	0.0004	0.0002	0.0001	0.0021	0.0004	2.32
Waitoa River at Mellon Rd Recorder	12	0.0008	0.0009	0.0004	0.0014	0.0005	0.28

*=0

Chromium (g/m ³)							
Location	Count	Mean	Median	Min	Max	IQR	Skew
Kauaeranga River at Smiths Cableway/Recorder	12	0.0004	0.0003	0.0003	0.0007	*	1.88
Ohinemuri River at Karangahake	12	0.0004	0.0003	0.0003	0.0009	*	2.22
Piako River at Paeroa-Tahuna Rd Br	12	0.0005	0.0003	0.0003	0.0023	0.0002	2.65
Piakonui Stm at Piakonui Rd	12	0.0003	0.0003	0.0003	0.0006	*	3.02
Tapu River at Tapu-Coroglen Rd	12	0.0003	0.0003	0.0003	0.0006	*	3.02
Waiau River at E309 Rd Ford	12	0.0003	0.0003	0.0003	0.0003	*	*
Waihou River at Okauia	12	0.0003	0.0003	0.0003	0.0003	*	*
Waihou River at Whites Rd	12	0.0003	0.0003	0.0003	0.0003	*	*
Waipa River at Pukehoua Bridge on Baffin Road	12	0.0006	0.0005	0.0003	0.0017	0.0006	1.41
Waipa River at SH3 Otorohanga	12	0.0005	0.0003	0.0003	0.0019	*	2.94
Waitoa River at Mellon Rd Recorder	12	0.0007	0.0007	0.0003	0.002	0.0004	1.78

*=0

Copper (g/m ³)							
Location	Count	Mean	Median	Min	Max	IQR	Skew
Kauaeranga River at Smiths Cableway/Recorder	12	0.0005	0.0005	0.0002	0.0008	0.0002	0.07
Ohinemuri River at Karangahake	12	0.0006	0.0005	0.0002	0.0014	0.0004	1.15
Piako River at Paeroa-Tahuna Rd Br	12	0.002	0.0014	0.001	0.0062	0.0009	2.36
Piakonui Stm at Piakonui Rd	12	0.0006	0.0006	0.0004	0.0012	0.0002	1.41
Tapu River at Tapu-Coroglen Rd	12	0.0004	0.0004	0.0002	0.0007	0.0003	0.33
Waiau River at E309 Rd Ford	12	0.0005	0.0004	0.0002	0.0012	0.0003	1.75
Waihou River at Okauia	12	0.0005	0.0004	0.0001	0.0008	0.0004	0.03
Waihou River at Whites Rd	12	0.0001	0.0001	0.0001	0.0002	0.0001	1.27
Waipa River at Pukehoua Bridge on Baffin Road	12	0.0013	0.0011	0.0006	0.0035	0.0007	1.56
Waipa River at SH3 Otorohanga	12	0.001	0.0006	0.0004	0.0046	0.0003	2.75
Waitoa River at Mellon Rd Recorder	12	0.0013	0.001	0.0006	0.0024	0.0007	0.90

Iron - dissolved (g/m ³)							
Location	Count	Mean	Median	Min	Max	IQR	Skew
Kauaeranga River at Smiths Cableway/Recorder	12	0.063	0.066	0.035	0.101	0.031	0.34
Ohinemuri River at Karangahake	12	0.085	0.081	0.052	0.129	0.024	0.51
Piako River at Paeroa-Tahuna Rd Br	12	0.75	0.72	0.44	1.1	0.385	0.14
Piakonui Stm at Piakonui Rd	12	0.186	0.174	0.108	0.37	0.055	1.47
Tapu River at Tapu-Coroglen Rd	12	0.045	0.041	0.012	0.101	0.042	0.71
Waiau River at E309 Rd Ford	12	0.098	0.085	0.059	0.21	0.038	1.66
Waihou River at Okauia	12	0.121	0.112	0.095	0.189	0.037	1.20
Waihou River at Whites Rd	12	0.005	0.003	0.003	0.018	0.003	1.82
Waipa River at Pukehoua Bridge on Baffin Road	12	0.268	0.24	0.155	0.46	0.189	0.50
Waipa River at SH3 Otorohanga	12	0.237	0.2	0.158	0.52	0.089	2.03
Waitoa River at Mellon Rd Recorder	12	0.473	0.475	0.25	0.63	0.205	-0.22

Iron (g/m ³)							
Location	Count	Mean	Median	Min	Max	IQR	Skew
Kauaeranga River at Smiths Cableway/Recorder	12	0.13	0.1	0.06	0.42	0.08	2.12
Ohinemuri River at Karangahake	12	0.18	0.18	0.12	0.26	0.09	0.20
Piako River at Paeroa-Tahuna Rd Br	12	1.96	1.65	1.09	5.9	0.63	2.65
Piakonui Stm at Piakonui Rd	12	0.37	0.35	0.2	0.64	0.2	0.66
Tapu River at Tapu-Coroglen Rd	12	0.1	0.1	0.02	0.27	0.08	1.00
Waiau River at E309 Rd Ford	12	0.24	0.14	0.09	1.16	0.09	2.86
Waihou River at Okauia	12	0.36	0.33	0.22	0.65	0.19	0.96
Waihou River at Whites Rd	12	0.03	0.02	0.01	0.05	0.02	1.09
Waipa River at Pukehoua Bridge on Baffin Road	12	1.09	0.94	0.65	1.96	0.48	1.10
Waipa River at SH3 Otorohanga	12	0.87	0.58	0.3	3.7	0.48	2.63
Waitoa River at Mellon Rd Recorder	12	2.14	2.14	0.93	4.5	1.22	0.99

Mercury (g/m ³)							
Location	Count	Mean	Median	Min	Max	IQR	Skew
Kauaeranga River at Smiths Cableway/Recorder	12	0.00001	0.00001	0.00001	0.00001	*	*
Ohinemuri River at Karangahake	12	0.00001	0.00001	0.00001	0.00001	*	*
Piako River at Paeroa-Tahuna Rd Br	12	0.00001	0.00001	0.00001	0.00002	*	3.02
Piakonui Stm at Piakonui Rd	12	0.00001	0.00001	0.00001	0.00001	*	*
Tapu River at Tapu-Coroglen Rd	12	0.00001	0.00001	0.00001	0.00001	*	*
Waiau River at E309 Rd Ford	12	0.00001	0.00001	0.00001	0.00001	*	*
Waihou River at Okauia	12	0.00001	0.00001	0.00001	0.00001	*	*
Waihou River at Whites Rd	12	0.00001	0.00001	0.00001	0.00001	*	*
Waipa River at Pukehoua Bridge on Baffin Road	12	0.00001	0.00001	0.00001	0.00001	*	*
Waipa River at SH3 Otorohanga	12	0.00001	0.00001	0.00001	0.00003	*	3.02
Waitoa River at Mellon Rd Recorder	12	0.00001	0.00001	0.00001	0.00001	*	*

*=0

Lithium (g/m ³)							
Location	Count	Mean	Median	Min	Max	IQR	Skew
Kauaeranga River at Smiths Cableway/Recorder	12	0.0006	0.0006	0.0004	0.0011	0.0001	1.96
Ohinemuri River at Karangahake	12	0.0044	0.004	0.0019	0.0082	0.0028	0.62
Piako River at Paeroa-Tahuna Rd Br	12	0.0035	0.0035	0.0027	0.0044	0.0012	0.17
Piakonui Stm at Piakonui Rd	12	0.0014	0.0015	0.0011	0.0018	0.0004	0.15
Tapu River at Tapu-Coroglen Rd	12	0.0006	0.0006	0.0005	0.0006	0.0001	-0.71
Waiau River at E309 Rd Ford	12	0.0006	0.0006	0.0005	0.0007	*	-0.18
Waihou River at Okauia	12	0.0069	0.0072	0.0054	0.0076	0.0011	-1.02
Waihou River at Whites Rd	12	0.0081	0.0081	0.0077	0.0086	0.0005	0.27
Waipa River at Pukehoua Bridge on Baffin Road	12	0.0046	0.0045	0.0028	0.0073	0.0024	0.51
Waipa River at SH3 Otorohanga	12	0.0041	0.0041	0.0027	0.0066	0.0015	0.64
Waitoa River at Mellon Rd Recorder	12	0.0075	0.0073	0.005	0.0096	0.0029	-0.09

*=0

Manganese - dissolved (g/m ³)							
Location	Count	Mean	Median	Min	Max	IQR	Skew
Kauaeranga River at Smiths Cableway/Recorder	12	0.009	0.009	0.006	0.012	0.003	0.14
Ohinemuri River at Karangahake	12	0.009	0.01	0.002	0.015	0.008	-0.34
Piako River at Paeroa-Tahuna Rd Br	12	0.111	0.105	0.064	0.193	0.031	1.13
Piakonui Stm at Piakonui Rd	12	0.007	0.006	0.003	0.021	0.004	2.05
Tapu River at Tapu-Coroglen Rd	12	0.002	0.002	0.002	0.003	0.001	0.48
Waiau River at E309 Rd Ford	12	0.003	0.003	0.002	0.005	0.001	0.06
Waihou River at Okauia	12	0.013	0.012	0.008	0.018	0.007	0.24
Waihou River at Whites Rd	12	0.001	0.001	0.001	0.004	0.001	1.84
Waipa River at Pukehoua Bridge on Baffin Road	12	0.032	0.027	0.001	0.101	0.015	1.88
Waipa River at SH3 Otorohanga	12	0.033	0.034	0.015	0.054	0.019	0.05
Waitoa River at Mellon Rd Recorder	12	0.151	0.146	0.094	0.23	0.06	0.45

Manganese (g/m ³)							
Location	Count	Mean	Median	Min	Max	IQR	Skew
Kauaeranga River at Smiths Cableway/Recorder	12	0.012	0.011	0.008	0.03	0.003	2.62
Ohinemuri River at Karangahake	12	0.015	0.014	0.007	0.023	0.006	0.29
Piako River at Paeroa-Tahuna Rd Br	12	0.192	0.164	0.111	0.46	0.063	2.08
Piakonui Stm at Piakonui Rd	12	0.024	0.021	0.013	0.05	0.013	1.23
Tapu River at Tapu-Coroglen Rd	12	0.004	0.004	0.002	0.008	0.002	1.08
Waiau River at E309 Rd Ford	12	0.006	0.005	0.003	0.02	0.002	2.48
Waihou River at Okauia	12	0.031	0.027	0.019	0.047	0.016	0.54
Waihou River at Whites Rd	12	0.002	0.001	0.001	0.006	0.001	1.92
Waipa River at Pukehoua Bridge on Baffin Road	12	0.084	0.071	0.053	0.146	0.053	0.79
Waipa River at SH3 Otorohanga	12	0.059	0.046	0.021	0.191	0.032	2.26
Waitoa River at Mellon Rd Recorder	12	0.215	0.215	0.122	0.34	0.074	0.37

Molybdenum (g/m ³)							
Location	Count	Mean	Median	Min	Max	IQR	Skew
Kauaeranga River at Smiths Cableway/Recorder	12	0.00003	0.00003	0.00003	0.00003	*	-1.00
Ohinemuri River at Karangahake	12	0.00014	0.00012	0.00006	0.0003	0.0001	1.02
Piako River at Paeroa-Tahuna Rd Br	12	0.00017	0.00016	0.00008	0.00033	0.00011	0.60
Piakonui Stm at Piakonui Rd	12	0.00003	0.00003	0.00003	0.00006	*	3.02
Tapu River at Tapu-Coroglen Rd	12	0.00003	0.00003	0.00003	0.00003	*	-1.00
Waiau River at E309 Rd Ford	12	0.00003	0.00003	0.00003	0.00003	*	-1.00
Waihou River at Okauia	12	0.00012	0.00012	0.00009	0.00014	0.00002	-0.07
Waihou River at Whites Rd	12	0.00011	0.00011	0.00008	0.00014	0.00002	0.06
Waipa River at Pukehoua Bridge on Baffin Road	12	0.00008	0.00008	0.00005	0.00013	0.00004	0.57
Waipa River at SH3 Otorohanga	12	0.00005	0.00004	0.00003	0.00007	0.00003	0.20
Waitoa River at Mellon Rd Recorder	12	0.0004	0.00033	0.00017	0.00086	0.00031	0.86

*=0

Nickel (g/m ³)							
Location	Count	Mean	Median	Min	Max	IQR	Skew
Kauaeranga River at Smiths Cableway/Recorder	12	0.0002	0.0002	0.0002	0.0006	*	3.02
Ohinemuri River at Karangahake	12	0.0003	0.0002	0.0002	0.0005	0.0001	1.43
Piako River at Paeroa-Tahuna Rd Br	12	0.0007	0.0008	0.0003	0.0011	0.0001	-0.45
Piakonui Stm at Piakonui Rd	12	0.0002	0.0002	0.0002	0.0002	*	-1.00
Tapu River at Tapu-Coroglen Rd	12	0.0002	0.0002	0.0002	0.0002	*	-1.00
Waiau River at E309 Rd Ford	12	0.0002	0.0002	0.0002	0.0005	*	3.02
Waihou River at Okauia	12	0.0002	0.0002	0.0002	0.0002	*	-1.00
Waihou River at Whites Rd	12	0.0002	0.0002	0.0002	0.0002	*	-1.00
Waipa River at Pukehoua Bridge on Baffin Road	12	0.0004	0.0003	0.0002	0.0009	0.0003	1.07
Waipa River at SH3 Otorohanga	12	0.0004	0.0002	0.0002	0.0014	0.0003	2.28
Waitoa River at Mellon Rd Recorder	12	0.0011	0.0011	0.0005	0.0015	0.0004	-0.09

*=0

Lead (g/m ³)							
Location	Count	Mean	Median	Min	Max	IQR	Skew
Kauaeranga River at Smiths Cableway/Recorder	12	0.00007	0.00003	0.00003	0.00023	0.00007	1.51
Ohinemuri River at Karangahake	12	0.0002	0.00019	0.00008	0.00041	0.00011	0.87
Piako River at Paeroa-Tahuna Rd Br	12	0.00091	0.00055	0.00027	0.0047	0.00048	2.69
Piakonui Stm at Piakonui Rd	12	0.00017	0.00016	0.00009	0.00029	0.00012	0.59
Tapu River at Tapu-Coroglen Rd	12	0.00004	0.00003	0.00003	0.00009	*	2.22
Waiau River at E309 Rd Ford	12	0.0001	0.00006	0.00003	0.0005	0.00009	2.42
Waihou River at Okauia	12	0.00022	0.00018	0.00007	0.00052	0.00018	0.99
Waihou River at Whites Rd	12	0.00004	0.00003	0.00003	0.00008	*	2.06
Waipa River at Pukehoua Bridge on Baffin Road	12	0.00057	0.00041	0.00019	0.0015	0.00042	1.31
Waipa River at SH3 Otorohanga	12	0.00041	0.00014	0.00003	0.003	0.00027	2.81
Waitoa River at Mellon Rd Recorder	12	0.00051	0.00051	0.00015	0.00109	0.00033	0.67

*=0

Antimony (g/m ³)							
Location	Count	Mean	Median	Min	Max	IQR	Skew
Kauaeranga River at Smiths Cableway/Recorder	12	0.00003	0.00003	0.00003	0.00008	*	3.02
Ohinemuri River at Karangahake	12	0.00014	0.0001	0.00007	0.00026	0.00013	0.45
Piako River at Paeroa-Tahuna Rd Br	12	0.00003	0.00003	0.00003	0.00003	*	-1.00
Piakonui Stm at Piakonui Rd	12	0.00003	0.00003	0.00003	0.00003	*	-1.00
Tapu River at Tapu-Coroglen Rd	12	0.00003	0.00003	0.00003	0.00006	*	3.02
Waiau River at E309 Rd Ford	12	0.00003	0.00003	0.00003	0.00005	*	3.02
Waihou River at Okauia	12	0.00003	0.00003	0.00003	0.00003	*	-1.00
Waihou River at Whites Rd	12	0.00003	0.00003	0.00003	0.00003	*	-1.00
Waipa River at Pukehoua Bridge on Baffin Road	12	0.00003	0.00003	0.00003	0.00003	*	-1.00
Waipa River at SH3 Otorohanga	12	0.00004	0.00003	0.00003	0.00009	*	3.02
Waitoa River at Mellon Rd Recorder	12	0.00004	0.00003	0.00003	0.00009	0.00001	2.21

*=0

Thallium (g/m ³)							
Location	Count	Mean	Median	Min	Max	IQR	Skew
Kauaeranga River at Smiths Cableway/Recorder	12	0.00001	0.00001	0.00001	0.00002	*	2.61
Ohinemuri River at Karangahake	12	0.00003	0.00003	0.00002	0.00004	0.00001	0.56
Piako River at Paeroa-Tahuna Rd Br	12	0.00005	0.00004	0.00003	0.00012	0.00002	2.12
Piakonui Stm at Piakonui Rd	12	0.00001	0.00001	0.00001	0.00001	0.00001	0.78
Tapu River at Tapu-Coroglen Rd	12	0.00001	0.00001	0.00001	0.00001	*	1.00
Waiau River at E309 Rd Ford	12	0.00001	0.00001	0.00001	0.00001	*	3.02
Waihou River at Okauia	12	0.00002	0.00002	0.00001	0.00003	0.00001	0.43
Waihou River at Whites Rd	12	0.00001	0.00001	0.00001	0.00001	*	1.00
Waipa River at Pukehoua Bridge on Baffin Road	12	0.00003	0.00002	0.00002	0.00005	0.00001	1.45
Waipa River at SH3 Otorohanga	12	0.00002	0.00001	0.00001	0.00006	0.00002	1.74
Waitoa River at Mellon Rd Recorder	12	0.00005	0.00004	0.00003	0.00007	0.00001	0.77

*=0

Uranium (g/m ³)							
Location	Count	Mean	Median	Min	Max	IQR	Skew
Kauaeranga River at Smiths Cableway/Recorder	12	0.00002	0.00002	0.00002	0.00002	*	3.02
Ohinemuri River at Karangahake	12	0.00002	0.00002	0.00002	0.00003	0.00001	1.15
Piako River at Paeroa-Tahuna Rd Br	12	0.0001	0.00007	0.00003	0.00042	0.00003	2.77
Piakonui Stm at Piakonui Rd	12	0.00002	0.00002	0.00002	0.00004	0.00001	1.85
Tapu River at Tapu-Coroglen Rd	12	0.00002	0.00002	0.00002	0.00002	*	-1.00
Waiau River at E309 Rd Ford	12	0.00002	0.00002	0.00002	0.00004	*	3.02
Waihou River at Okauia	12	0.00005	0.00005	0.00003	0.00009	0.00003	0.55
Waihou River at Whites Rd	12	0.00005	0.00005	0.00004	0.00006	0.00002	*
Waipa River at Pukehoua Bridge on Baffin Road	12	0.00008	0.00007	0.00005	0.00017	0.00003	1.48
Waipa River at SH3 Otorohanga	12	0.00004	0.00002	0.00002	0.00025	0.00002	2.85
Waitoa River at Mellon Rd Recorder	12	0.00007	0.00006	0.00004	0.00015	0.00003	1.65

*=0

Zinc (g/m ³)							
Location	Count	Mean	Median	Min	Max	IQR	Skew
Kauaeranga River at Smiths Cableway/Recorder	12	0.0014	0.0011	0.0008	0.004	0.0005	1.97
Ohinemuri River at Karangahake	12	0.0034	0.0026	0.0013	0.0113	0.0021	2.27
Piako River at Paeroa-Tahuna Rd Br	12	0.0097	0.0076	0.0035	0.032	0.0067	1.93
Piakonui Stm at Piakonui Rd	12	0.0016	0.001	0.0003	0.0064	0.0012	2.31
Tapu River at Tapu-Coroglen Rd	12	0.0004	0.0003	0.0003	0.001	0.0004	1.15
Waiau River at E309 Rd Ford	12	0.0006	0.0005	0.0003	0.0012	0.0006	0.41
Waihou River at Okauia	12	0.003	0.0026	0.0013	0.0058	0.0025	0.65
Waihou River at Whites Rd	12	0.0005	0.0003	0.0003	0.0012	0.0005	1.07
Waipa River at Pukehoua Bridge on Baffin Road	12	0.0041	0.003	0.0011	0.0111	0.003	1.30
Waipa River at SH3 Otorohanga	12	0.0034	0.002	0.0006	0.0165	0.0032	2.25
Waitoa River at Mellon Rd Recorder	12	0.0083	0.0076	0.0003	0.0189	0.0056	0.61

Zinc - dissolved (g/m ³)							
Location	Count	Mean	Median	Min	Max	IQR	Skew
Kauaeranga River at Smiths Cableway/Recorder	12	0.001	0.0008	0.0003	0.0034	0.0005	2.04
Ohinemuri River at Karangahake	12	0.0019	0.0019	0.0009	0.0031	0.0017	0.24
Piako River at Paeroa-Tahuna Rd Br	12	0.0039	0.0037	0.0019	0.0083	0.0029	0.91
Piakonui Stm at Piakonui Rd	12	0.0003	0.0003	0.0003	0.0006	*	3.02
Tapu River at Tapu-Coroglen Rd	12	0.0003	0.0003	0.0003	0.0003	*	-1.00
Waiau River at E309 Rd Ford	12	0.0004	0.0003	0.0003	0.0016	*	3.02
Waihou River at Okauia	12	0.0012	0.0011	0.0003	0.0023	0.0006	0.60
Waihou River at Whites Rd	12	0.0004	0.0003	0.0003	0.0009	*	1.79
Waipa River at Pukehoua Bridge on Baffin Road	12	0.0007	0.0004	0.0003	0.0018	0.0006	1.17
Waipa River at SH3 Otorohanga	12	0.001	0.0009	0.0003	0.0023	0.0012	0.54
Waitoa River at Mellon Rd Recorder	12	0.0035	0.0025	0.0009	0.0082	0.0038	0.89

*=0

3.1.4 Pesticides

Table 6: Results for the 3 detectable pesticides (values shown in bold). All other pesticides analysed were below detection level

DATE dd/mm/yy	TIME* hh:mm	Acetochl g/m ³	Atrazine g/m ³	Terbutylazine g/m ³
1122_18 Waihou River at Okauia				
26/03/2018	08:03	< 0.00004	< 0.00004	< 0.00002
23/04/2018	09:01	< 0.00004	< 0.00004	< 0.00002
22/05/2018	09:08	< 0.00004	< 0.00004	< 0.00002
26/06/2018	09:02	< 0.00004	< 0.00004	0.00003
24/07/2018	08:57	< 0.00004	< 0.00004	< 0.00002
28/08/2018	09:02	< 0.00004	< 0.00004	< 0.00002
11/09/2018	09:59	< 0.00004	< 0.00004	< 0.00002
9/10/2018	08:48	< 0.00004	< 0.00004	< 0.00002
13/11/2018	09:15	< 0.00004	< 0.00004	< 0.00002
6/12/2018	09:13	0.00007	< 0.00004	0.00002
15/01/2019	09:13	0.00004	< 0.00004	< 0.00002
12/02/2019	08:50	< 0.00004	< 0.00004	< 0.00002
1191_2 Waipa River at Pukehoua Bridge on Baffin Road				
21/03/2018	09:42	< 0.00004	< 0.00004	0.00002
18/04/2018	10:51	< 0.00004	< 0.00004	0.00003
16/05/2018	10:45	< 0.00004	< 0.00004	< 0.00002
20/06/2018	10:40	< 0.00004	< 0.00004	0.00002
18/07/2018	10:56	< 0.00004	< 0.00004	< 0.00002
22/08/2018	10:48	< 0.00004	< 0.00004	< 0.00002
19/09/2018	08:36	< 0.00004	< 0.00004	< 0.00002
17/10/2018	07:36	0.0005	0.00034	< 0.00002
21/11/2018	08:03	0.00006	< 0.00004	< 0.00002
13/12/2018	07:44	< 0.00004	< 0.00004	< 0.00002
23/01/2019	07:27	< 0.00004	< 0.00004	< 0.00002
20/02/2019	07:33	< 0.00004	< 0.00004	< 0.00002
749_15 Piako River at Paeroa-Tahuna Road Bridge				
13/03/2018	09:24	< 0.00004	< 0.00004	0.00008
10/04/2018	09:06	< 0.00004	< 0.00004	0.00003
8/05/2018	09:04	< 0.00004	< 0.00004	0.00002
12/06/2018	08:05	< 0.00004	< 0.00004	0.00004
10/07/2018	09:05	< 0.00004	< 0.00004	0.00003
14/08/2018	09:06	< 0.00004	< 0.00004	0.00002
11/09/2018	08:37	< 0.00004	< 0.00004	< 0.00002
9/10/2018	07:36	< 0.00004	< 0.00004	< 0.00002
13/11/2018	08:05	< 0.00004	< 0.00004	0.00003
6/12/2018	07:58	0.00008	0.00008	0.00005
15/01/2019	07:58	< 0.00004	< 0.00004	0.00035
12/02/2019	07:39	< 0.00004	< 0.00004	0.00003

< = less than the value stated

*Time = New Zealand Standard Time

Table 7: Organochlorine, organonitrogen and organophosphorus pesticides analysed including methods and detection limits (DL)

Code	Parameter	#DL	*Method	Code	Parameter	#DL	*Method	Code	Parameter	#DL	*Method
2,4"-DDD	2,4"-DDD	a	GC-ECD	Dicloran	Dicloran	g	GC-MS	Oxadiazol	Oxadiazon	b	GC-MS
2,4"-DDE	2,4"-DDE	a	GC-ECD	Dieldrin	Dieldrin	c	GC-ECD	Oxyfluof	Oxyfluofen	e	GC-MS
2,4"-DDT	2,4"-DDT	a	GC-ECD	Difenoco	Difenoconazole	d	GC-MS	Paclobot	Paclobotrazol	b	GC-MS
4,4"-DDD	4,4"-DDD	a	GC-ECD	Dimethoa	Dimethoate	d	GC-MS	Parathie	Parathion-ethyl	b	GC-MS
4,4"-DDE	4,4"-DDE	a	GC-ECD	Diphenyl	Diphenylamine	d	GC-MS	Parathim	Parathion-methyl	b	GC-MS
4,4"-DDT	4,4"-DDT	a	GC-ECD	Diuron	Diuron	b	GC-MS	Pendimet	Pendimethalin	b	GC-MS
Acetochl	Acetochlor	b	GC-MS	Endosul	Endosulfan I	a	GC-ECD	Permethr	Permethrin	e	GC-MS
Alachlor	Alachlor	b	GC-MS	Endosull	Endosulfan II	a	GC-ECD	Pirimica	Pirimicarb	b	GC-MS
Aldrin	Aldrin	c	GC-ECD	Endosulp	Endosulfan sulphate	a	GC-ECD	Pirimiph	Pirimiphos Methyl	b	GC-MS
Alpha-BH	Alpha-BHC	a	GC-ECD	Endrin	Endrin	c	GC-ECD	ppDDT	ppDDT	f	GC-ECD
Atrazind	Atrazine-desethyl	b	GC-MS	Endrin a	Endrin aldehyde	c	GC-ECD	Prochlor	Prochloraz	g	GC-MS
Atrazine	Atrazine	b	GC-MS	Endrin K	Endrin Ketone	a	GC-ECD	Procymid	Procymidone	b	GC-MS
Atrazini	Atrazinisoooprop	d	GC-MS	Fenpropi	Fenpropimorph	b	GC-MS	Prometry	Prometryn	e	GC-MS
Azaconaz	Azaconazole	e	GC-MS	Fluazifo	Fluazifop-p-butyl	b	GC-MS	Propachl	Propachlor	b	GC-MS
Azinphos	Azinphos-methyl	d	GC-MS	Fluometu	Fluometuron	b	GC-MS	Propanil	Propanil	g	GC-ECD
Benalaxy	Benalaxyl	e	GC-MS	Flusilaz	Flusilazole	b	GC-MS	Propazin	Propazine	e	GC-MS
Beta-BHC	Beta-BHC	a	GC-ECD	Fluvalin	Fluvalinate	b	GC-MS	Propicon	Propiconazole	b	GC-MS
Bitertan	Bitertanol	d	GC-MS	Furalaxy	Furalaxyl	e	GC-MS	Pyriprox	Pyriproxifen	b	GC-MS
Bromacil	Bromacil	b	GC-MS	Gamma-BH	Gamma-BHC (Lindane)	a	GC-ECD	Quizalet	Quizalofop-ethyl	b	GC-MS
Bromopro	Bromopropylate	b	GC-MS	Haloxypm	Haloxypop-methyl	b	GC-MS	Simazine	Simazine	b	GC-MS
Butachlo	Butachlor	b	GC-MS	Heptachl	Heptachlor	c	GC-ECD	Simetryn	Simetryn	b	GC-MS
Captan	Captan	d	GC-MS	Heptaepo	Heptachlor epoxide	c	GC-ECD	Sulfentr	Sulfentrazone	g	GC-MS
Carbaryl	Carbaryl	b	GC-MS	Hexachlo	Hexachlorobenzene	b	GC-ECD	TCMTB	TCMTB	d	GC-MS
Carbofenothion	Carbofenothion	b	GC-MS	Hexacona	Hexaconazole	b	GC-MS	Tebucona	Tebuconazole	b	GC-MS
Carbofur	Carbofuran	b	GC-MS	Hexazino	Hexazinone	e	GC-MS	Terbacil	Terbacil	b	GC-MS
Chlorflu	Chlorfluazuron	b	GC-MS	IPBC	IPBC (3-Iodo-2-propynyl -n-butylcarbamate)	g	GC-MS	Terbufos	Terbufos	b	GC-MS
Chloroth	Chlorothalonil	b	GC-MS	Kresoxim	Kresoxim-methyl	e	GC-MS	Terbumet	Terbumeton	b	GC-MS
Chlorpyf	Chlorpyrifos	b	GC-MS	Linuron	Linuron	h	GC-MS	Terbutde	Terbuthylazine desethyl	b	GC-MS
Chlorpym	Chlorpyrifos-methyl	b	GC-MS	Malathio	Malathion	b	GC-MS	Terbutry	Terbuthylazine	b	GC-MS
Chlortol	Chlortoluron	d	GC-MS	Metalaxy	Metalaxyl	b	GC-MS	Terbutryn	Terbutryn	b	GC-MS
cis-Chlo	cis-Chlordane	c	GC-ECD	Methoxyc	Methoxychlor	c	GC-ECD	Thiabend	Thiabendazole	g	GC-MS
Cynanazi	Cynanazine	b	GC-MS	Metolach	Metolachlor	b	GC-MS	Thiobenc	Thiobencarb	b	GC-MS
Cyfluthr	Cyfluthrin	b	GC-MS	Metribuz	Metribuzin	b	GC-MS	Tolyflua	Tolyfluand	e	GC-MS
Cyhaloth	Cyhalothrin	b	GC-MS	Molinate	Molinate	d	GC-MS	Total Ch	Total Chlordane (cis+trans)*100/42	e	GC-ECD
Cypermeth	Cypermethrin	d	GC-MS	Myclobut	Myclobutanil	b	GC-MS	trans-Ch	trans-Chlordane	c	GC-ECD
Delta-BH	Delta-BHC	a	GC-ECD	Naled	Naled	g	GC-MS	Triazoph	Triazophos	b	GC-MS
Deltamet	Deltamethrin	f	GC-MS	Norflura	Norflurazon	d	GC-MS	Triflura	Trifluralin	b	GC-MS
Diazinon	Diazinon	e	GC-MS					Vinclozo	Vinclozolin	b	GC-MS
Dichlofl	Dichlofluand	b	GC-MS								
Dichlorv	Dichlorvos	d	GC-MS								

Detection limits (g/m³)
a 0.00001
b 0.00004
c 0.000005
d 0.00008
e 0.00002
f 0.00006
g 0.0002
h 0.00005

Method

GC-MS: Solid phase or liquid extraction, GPC (if required), GC-MS analysis
GC-ECD: Solid phase or liquid extraction, SPE cleanup (if required), dual column GC-ECD analysis

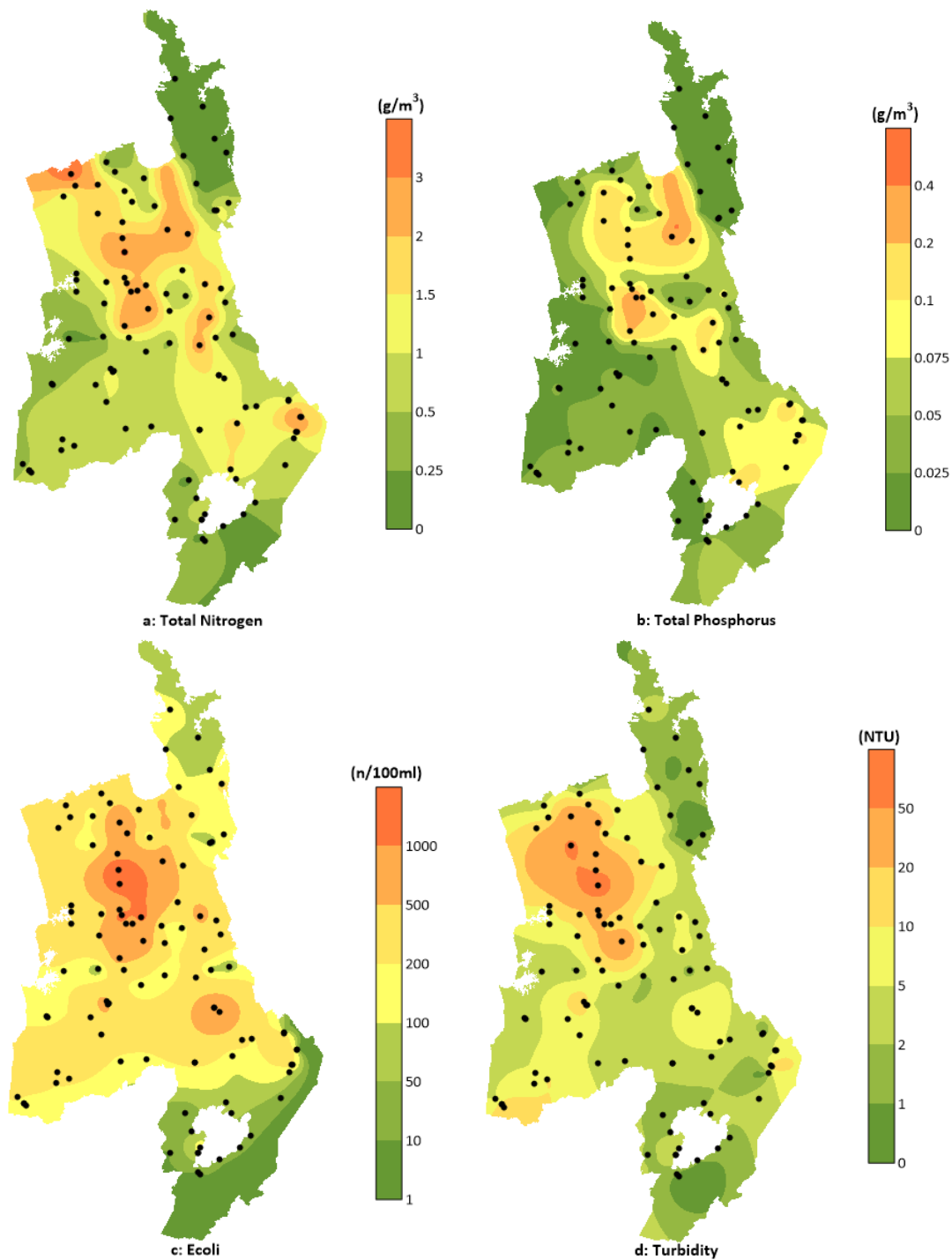


Figure 2: Spatial contour plots of four water quality parameters (based on 5 year median values, 2015-2019); a: Total Nitrogen, b: Total Phosphorus, c: Escherichia coli, d: Turbidity

3.2 Regional rivers monitoring programme comparison with water quality guidelines and standards

Table 8: Number of samples (2019) complying with the "satisfactory" and "excellent" water quality guidelines and standards

Location	SATISFACTORY										EXCELLENT										
	ECOLOGICAL HEALTH					RECREATION					ECOLOGICAL HEALTH					RECREATION					
	DO	pH	Turb_NTU	NH ₄ N	Temp	TP	TN	BDisk	<i>E coli</i>	Median <i>E coli</i>	DO	pH	Turb_NTU	NH ₄ N	Temp	TP	TN	BDisk	<i>E coli</i>	Median <i>E coli</i>	
Coromandel																					
Hikutaia River at Old Maratoto Rd	12	12	12	12	11	12	12	12	8	N	9	12	9	12	3	10	6	2	0	N	
Kauaeranga River at Smiths Cableway/Recorder	12	12	12	12	10	12	12	10	11	Y	12	10	9	12	2	11	7	7	4	N	
Ohinemuri River at Karangahake	12	12	12	12	4	12	6	10	12	Y	12	10	10	11	1	10	0	3	9	N	
Ohinemuri River at Queens Head	12	12	12	12	4	12	2	11	11	Y	12	9	10	7	1	4	0	2	4	N	
Ohinemuri River at SH25 Br	12	12	12	12	3	12	5	11	12	Y	12	10	11	12	1	4	0	4	2	N	
Tairua River at Morrisons Br Hikuai	12	12	12	12	5	12	12	-	11	Y	12	7	11	12	1	12	8	-	4	N	
Tapu River at Tapu-Coroglen Rd	12	12	12	12	10	12	12	12	12	Y	12	12	10	12	4	12	9	9	7	N	
Waiau River at E309 Rd Ford	12	12	10	12	11	12	12	9	11	Y	12	12	7	12	4	10	6	0	2	N	
Waitekauri River at U/S Ohinemuri Conflu	12	12	12	12	7	12	12	12	12	N	12	12	12	12	1	12	1	7	4	N	
Waiwawa River at SH25 Coroglen	12	11	12	12	8	12	12	11	12	Y	12	10	11	12	1	12	6	5	5	N	
Wharekawa River at SH25	12	12	11	12	6	12	12	10 ¹	11	N	11	9	10	12	2	11	6	1 ¹	0	N	
Hauraki																					
Mangawhero Stm (Kaihere) at Mangawara Rd	12	12	6	12	7	0	8	0	11	Y	12	12	0	12	3	0	0	0	6	N	
Oraka Stm at Lake Rd	12	12	8	11	9	0	0	0	3	N	9	12	0	7	3	0	0	0	0	N	
Piako River at Kiwitahi	8 ¹	12	9	12	8	0	4	9	7	N	4 ¹	10	3	12	2	0	0	0	0	N	
Piako River at Paeroa-Tahuna Rd Br	10	12	1	12	7	0	0	1	5	N	1	10	0	10	3	0	0	0	0	N	
Piakonui Stm at Piakonui Rd	11 ¹	12	8	12	11	12	10	4	12	Y	11 ¹	12	0	12	5	0	0	0	2	N	
Waihou River at Okauia	11 ¹	12	9	12	9	0	0	1 ²	7	N	11 ¹	12	0	12	3	0	0	0 ²	0	N	
Waihou River at Te Aroha	11 ¹	12	7	12	9	0	0	0	6	N	4 ¹	11	0	12	2	0	0	0	0	N	
Waihou River at Whites Rd	12	12	12	12	7	0	0	12	12	Y	12	4	12	12	7	0	0	10	1	N	
Waiohotu Stm at Waiohotu Rd (Off SH5)	11	12	6	12	12	12	12	-	11	Y	11	11	1	12	10	0	0	-	8	N	
Waiomou Stm at Matamata-Tauranga Rd	11 ¹	12	9	12	11	10	0	2	7	N	11 ¹	12	0	12	3	0	0	0	0	N	
Waitakaruru River (Hauraki Plains) at Coxhead Rd Br	11	12	7	12	5	6	6	5	8	N	5	10	2	11	2	0	0	0	0	N	
Waitoa River at Landsdowne Rd Br	11 ¹	12	7	12	9	2	0	6	3	N	6 ¹	10	1	12	3	0	0	0	0	N	
Waitoa River at Mellon Rd Recorder	4 ¹	12	0	12	7	0	0	0	3	N	0 ¹	11	0	9	1	0	0	0	0	N	
Tributaries to the Upper Waikato																					
Kawaunui Stm at SH5 Br	12	12	9	12	9	0	0	1	4	N	0	12	1	12	2	0	0	0	0	N	
Mangaharakeke Stm (Atiamuri) at SH30 (Off Jct SH1)	12	12	6	12	10	0	0	0	7	N	11	12	0	12	6	0	0	0	0	N	
Mangakara Stm (Reporoa) at SH5	12	12	7	12	10	0	0	1 ¹	8	N	9	12	1	11	8	0	0	0 ¹	0	N	
Mangakino Stm (Whakamaru) at Sandel Rd	12	12	11	12	12	2	0	7	9	N	12	12	9	12	9	0	0	0	5	N	
Otamakokore Stm at Hossack Rd	11	12	11	12	2	0	0	2	6	N	8	7	2	11	0	0	0	0	0	N	
Pueto Stm at Broadlands Rd Br	12	12	12	12	9	0	0	5	12	Y	12	12	1	12	7	0	0	0	6	N	
Tahunaatara Stm at Ohakuri Rd	12	12	11	12	12	0	0	2	11	N	12	12	6	12	7	0	0	0	0	N	
Torepatutahi Stm at Vaile Rd Br	12	12	12	12	9	0	0	-	10	N	10	12	10	12	4	0	0	-	1	N	
Waiotapu Stm at Campbell Rd Br	12	0	1	8	0	2	0	1	12	Y	1	0	1	0	0	0	0	0	11	Y	
Waiotapu Stm at Homestead Rd Br	11	12	0	12	4	0	0	-	9	N	3	4	0	0	0	0	0	-	1	N	
Waipapa Stm (Mokai) at Tirohanga Rd Br	12	12	11	12	0	0	0	2	11	N	12	12	1	12	0	0	0	0	1	N	
Whirinaki Stm at Corbett Rd	12	12	12	12	11	0	0	-	10	Y	12	12	11	12	7	0	0	-	7	N	

Waipa River and Tributaries																			
Firewood Creek at Waingaro Road Bridge	10	12	1	12	9	12	0	0	9	N	5	11	0	12	3	0	0	0	N
Kaniwhaniwha Stm at Wright Rd	12	12	3	12	3	9	7	0	8	N	11	11	0	12	3	0	0	0	N
Mangaohoi Stm at South Branch Maru Rd	12	12	11	12	10	1	11	5	11	Y	12	12	8	12	3	0	0	4	N
Mangaokewa Stm at Lawrence Street Br	12	12	7	12	9	7	2	4	5	N	7	12	3	12	5	0	0	0	N
Mangapiko Stm (Pirongia/Te Awamutu) at Bowman Rd	12	12	0	12	5	0	0	0	2	N	12	10	0	9	1	0	0	0	N
Mangapu River at Otorohanga	12	12	4	12	6	6	1	0 ²	5	N	9	12	1	12	3	0	0	0 ²	N
Mangarama at Gadsby Rd	11 ¹	12	4	12	7	9	0	0 ¹¹	9	N	10 ¹	5	1	11	3	0	0	0 ¹¹	N
Mangarapa Stm at Otorohanga Rd	12	12	7	12	7	8	2	6 ²	3	N	9	9	3	11	3	0	0	0 ²	N
Mangatutu Stm (Waikeria) at Walker Rd Br	12	12	10	12	8	11	7	7	10	N	12	12	4	12	3	0	0	0	N
Mangauika Stm at Te Awamutu Borough W/S Intake	12	12	12	12	12	12	12	12	Y	12	12	12	12	6	7	5	5	9	N
Moakurua Stm at Warratah Farm Bridge	12	12	7	12	10	9	6	3	10	N	12	12	3	12	4	0	0	0	N
Ohote Stm at Whatawhata/Horotiu Rd	0	11	0	12	5	0	0	0	5	N	0	3	0	11	2	0	0	0	N
Puniu River at Bartons Corner Rd Br	12	12	5	12	8	4	0	1	8	N	11	12	1	12	2	0	0	0	N
Puniu River at Wharepapa Rd Bridge	12	12	8	12	10	2	0	4	7	N	12	11	5	12	3	0	0	1	N
Waipa River at Mangaokewa Rd	12	12	9	12	11	8	3	10	11	N	12	12	5	12	3	0	0	0	N
Waipa River at Ngaruawahia Br	10	12	1	12	7	1	0	0	11	N	3	12	0	12	1	0	0	1	N
Waipa River at Pukehoua Bridge on Baffin Road	12	12	2	12	7	6	2	0	8	N	8	12	0	12	4	0	0	0	N
Waipa River at SH3 Otorohanga	12	12	10	12	6	10	5	7	9	N	12	10	5	12	3	0	0	0	N
Waitomo Stm at SH31 Otorohanga	12	12	6	12	6	10	3	2	5	N	9	10	0	12	3	0	0	0	N
Waitomo Stm at Tumutumu Rd	12	12	7	12	8	11	0	4	11	N	12	8	1	12	3	0	0	0	N

Tributaries to the Lower Waikato																			
Awaroa River (Waiuku) at Otatau Rd Br opp Moseley Rd	10	12	1	12	3	9	0	0	9	N	5	8	0	10	2	0	0	0	N
Awaroa Stm (Rotowaro) at Sansons Br @ Rotowaro-Huntly Rd	7	12	7	12	7	12	4	2	11	N	2	8	2	11	1	5	0	0	N
Karapiro Stm at Hickey Rd Bridge - Cambridge	11 ¹	12	4	12	9	0	0	0 ¹	6	N	4 ¹	11	0	11	2	0	0	0 ¹	N
Kirikiroa Stm at Tauhara Dr	1	11	0	12	7	0	0	0	8	N	0	6	0	1	3	0	0	0	N
Komakorau Stm at Henry Rd	0	10	0	9	7	0	0	0	2	N	0	2	0	0	2	0	0	0	N
Little Waipa Stm at Arapuni - Putaruru Rd	12	12	11	12	10	0	0	8	8	N	8	8	8	12	5	0	0	0	N
Mangakotukutuku Stm (Rukuhia) at Peacocks Rd	11 ¹	10	0	12	8	0	0	0	4	N	5 ¹	9	0	4	3	0	0	0	N
Mangamingi Stm (Tokoroa) at Paraonui Rd Br	12	12	5	12	10	0	0	0	2	N	12	12	0	5	5	0	0	0	N
Mangaone Stm (Waikato) at Annebrooke Rd Br	7	12	0	12	9	0	0	0	2	N	0	12	0	12	4	0	0	0	N
Mangaonua Stm at Hoeka Rd	10	12	0	12	7	1	0	0	0	N	0	11	0	8	3	0	0	0	N
Mangaonua Stm at Te Miro Rd (a.k.a Waitakaruru stm)	11 ¹	12	10	12	9	12	0	2	10	N	11 ¹	12	0	12	3	0	0	0	N
Mangatangi River at SH2 Maramarua	10	12	0	12	5	0	6	0 ²	7	N	4	11	0	11	2	0	0	0 ²	N
Mangatawhiri River at Lyons Rd At Buckingham Br	12	12	8	12	5	10	10	8	7	N	12	11	5	12	2	0	0	1	N
Mangawara Stm at Rutherford Rd Br	0	10	0	12	6	0	0	0	1	N	0	5	0	0	3	0	0	0	N
Mangawhero Stm (Cambridge) at Cambridge-Ohaupo Rd	11 ¹	11	0	12	8	0	0	0	0	N	2 ¹	10	0	4	4	0	0	0	N
Matahuru Stm at Waiterimu Road Below Confluence	11	12	0	12	7	0	0	-	4	N	1	8	0	11	2	0	0	-	N
Northern Outlet Canal (a.k.a.Pungarehu Canal) at D/S of Ctrl Gate	12	8	0	12	6	0	0	0	11	Y	9	2	0	12	2	0	0	0	N
Ohaeroa Stm at SH22 Br	12	12	1	12	9	9	0	0	5	N	9	12	0	12	3	0	0	0	N
Opuatia Stm at Ponganui Rd	12	12	0	12	6	10	0	0	9	N	9	12	0	12	3	0	0	0	N
Pokaiwhenua Stm at Puketuru	12	12	10	12	10	0	0	4	9	N	11	12	6	11	7	0	0	0	N
Waahi Stm at Te Ohaki Rd	7	12	0	12	4	1	0	0 ¹	12	Y	3	10	0	12	0	0	0	0 ¹	N
Waerenga Stm at Taniwha Rd	12	12	4	12	9	6	0	0	2	N	11	12	0	12	4	0	0	0	N
Waitawhiriwhiri Stm at Edgumbe Street	5	12	0	12	5	0	0	0	3	N	0	9	0	0	0	0	0	0	N
Whakapipi Stm at SH22 Br	10	12	8	12	8	4	0	7	5	N	8	12	4	11	2	0	0	0	N
Whakauru Stm at U/S SH1 Br	11	12	1	12	11	0	0	0	2	N	11	11	0	11	8	0	0	0	N
Whangamarino River at Island Block Rd	4	12	0	11	3	0	0	0	9	N	2	6	0	7	1	0	0	0	N
Whangamarino River at Jefferies Rd Br	4	12	0	12	9	0	0	0	3	N	0	11	0	9	3	0	0	0	N
Whangape Stm at Rangiriri-Glen Murray Rd	8	12	0	11	5	0	1	0	12	Y	7	11	0	11	2	0	0	0	N

West Coast																				
Awakino River at Gribbon Rd	12	12	10	12	11	11	12	10	12	Y	12	11	10	12	4	0	3	2	6	N
Awakino River at SH3 Awakau Rd Junction	11 ¹	11 ¹	9 ¹	11 ¹	6 ¹	9 ¹	9 ¹	8 ¹	9 ¹	Y ¹	11 ¹	10 ¹	8 ¹	11 ¹	4 ¹	2 ¹	0 ¹	0 ¹	3 ¹	N ¹
Manganui River at Off Manganui Rd	12	12	10	12	9	10	10	8	11	N	12	12	5	12	5	0	2	0	1	N
Mangaotaki River at SH3 Br	12	12	10	12	11	11	0	5	8	N	12	11	5	12	4	0	0	0	0	N
Marokopa River at Speedies Rd (Off Te Anga Rd)	12	12	10	12	11	11	10	5	11	N	12	6	5	12	4	0	0	0	0	N
Mokau River at Awakau Rd	12	12	3	12	6	10	4	0	10	N	9	12	0	12	4	0	0	0	1	N
Mokau River at Mangaokewa Rd (Off SH30)	12	12	9	12	12	7	2	3	8	N	12	12	2	12	5	0	0	0	4	N
Mokau River at Totoro Rd Recorder	12	12	8	12	7	9	1	5 ¹	11	N	12	11	3	12	4	0	0	0 ¹	1	N
Mokauiti Stm at Three Way Point - Aria	11	12	4	12	7	5	3	1	9	N	7	11	0	11	3	0	0	0	0	N
Ohautira Stm at Waingaro Te Uku Rd	12	12	8	12	11	12	9	3	7	N	12	12	1	12	3	0	0	0	0	N
Oparau River at Langdon Rd (Off Okupata Rd)	12	12	10	12	11	11	11	5	10	N	12	12	5	12	4	2	0	0	0	N
Tawarau River at Off Speedies Rd	12	12	10	12	10	10	9	6	11	N	12	8	5	12	4	0	0	0	1	N
Waingaro River (Pukemiro) at Ruakiwi Rd Off SH22	12	12	3	12	4	10	5	1	11	N	11	11	0	12	1	0	0	0	0	N
Waitetuna River at Te Uku-Waingaro Rd	12	11	5	12	8	12	6	0	7	N	12	11	0	12	3	0	0	0	0	N
Inflows to Lake Taupo																				
Hinemaiaia River at SH1	12	12	12	12	12	8	12	10	12	Y	12	12	10	12	10	0	1	0	10	Y
Kuratau River at SH41 Moerangi	12	12	12	12	12	12	11	10	12	Y	11	11	9	12	11	9	0	1	7	Y
Kuratau River at Te Rae Street T10	12	12	12	12	11	12	1	-	12	Y	11	12	11	12	9	2	0	-	5	N
Mapara Stm (Lake Taupo) at Off Mapara Rd (Whakaipo Res)	12	12	12	12	12	0	0	0	11	Y	2	12	1	12	11	0	0	0	3	N
Tauranga-Taupo River at 20 Metres U/S SH1 Bridge	12	12	11	12	12	12	12	9	12	Y	12	12	9	12	10	0	3	2	6	N
Tokaanu Power Station Tailrace Canal at SH41 Bridge Over Canal	12	12	12	12	12	12	12	-	12	Y	12	12	12	12	7	1	7	-	12	Y
Tokaanu Stm at Off SH41 Turangi	9	12	12	12	12	0	11	-	12	Y	0	12	12	12	7	0	0	-	9	Y
Waihaha River at SH32	12	12	12	12	12	12	12	9	12	Y	12	12	11	12	10	0	0	3	9	Y
Waitahanui River at Blake Rd	12	12	12	12	12	0	10	11	12	Y	12	12	12	12	11	0	0	3	11	N
Whangamata Stm (Kinloch) at Whangamata Rd	12	12	12	12	12	0	0	-	11	Y	12	12	7	12	11	0	0	-	2	N
Whanganui Stm at Lakeside Lake Taupo T8	12	12	12	12	12	12	7	-	12	Y	12	12	10	12	10	1	0	-	4	N
Whareroa Stm (Taupo) at Lakeside Lake Taupo T9	12	12	11	12	12	8	0	-	12	N	12	12	0	12	10	0	0	-	0	N

Superscripts denote the number of missing samples when there were fewer than 12 in the year.

Median *E coli* refers to whether the sample median meets the satisfactory guideline of <126/100 ml or the excellent guideline of <23/100 ml for recreational use

- = not measured

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Appendix I: Water quality guidelines and standards

Details of water quality guidelines and standards for “satisfactory” water quality

Parameter	Critical Value(s)	Source
Dissolved oxygen	>80% of saturation concentration	RMA Third Schedule, Classes AE, F, and FS.
pH	6.5–9	ANZECC (1992) and Canadian guidelines for freshwater aquatic life (1987).
Turbidity	<5 NTU	Studies of adverse effects on underwater light—and thus on plant and invertebrate production—in certain South Island streams (Davies-Colley 1991).
Ammoniacal-nitrogen	<0.88 g N/m ³	USEPA (1998) value for 1-hour exposure at pH 9.
Temperature	<12°C (May – Sep) <20°C (Oct – Apr)	Waikato Regional Council Draft Regional Plan standards for trout fisheries and trout spawning (1997).
Total phosphorus	<0.04 g/m ³	From upper quartile values for 77 New Zealand rivers in NIWA’s National Water Quality Network (after Smith & Maasdam 1994)—note that the guidelines for “excellent” conditions are the lower quartile concentrations for these rivers.
Total nitrogen	<0.5 g/m ³	From upper quartile values for 77 New Zealand rivers in NIWA’s National Water Quality Network (after Smith & Maasdam 1994)—note that the guidelines for “excellent” conditions are the lower quartile concentrations for these rivers.
Water clarity at baseflow	>1.6 m	“Baseflow” defined as flows less than the upper decile flow. Guideline from Ministry for the Environment (1994).
<i>Escherichia coli</i>	<550/100 mL	Ministry of the Environment (2003) Microbiological Water Quality Guidelines for Marine and Freshwater Recreational Areas.
Median <i>Escherichia coli</i>	<126/100 mL	Ministry of the Environment (1999) guidelines for the management of recreational and marine shellfish-gathering waters.

Appendix II: Water quality monitoring parameters

Field instruments and analytical methods

Regional River monitoring programme - water quality parameters and analytical methods

Id ¹	Parameter	Method
A340F	Absorbance @ 340 nm filtered	Spectrophotometer, 1 cm path length, APHA method 5910B
A440F	Absorbance @ 440 nm filtered	Spectrophotometer, 1 cm path length, APHA method 5910B
A780	Absorbance @ 780 nm filtered	Spectrophotometer, 1 cm path length, APHA method 5910B
BDISK	Black disk	Field measurement, horizontal water transparency (20mm, 60mm, 100mm, 200mm disk) in river or trough (20mm only)
COND	Conductivity	Lab Meter @ 25°C. APHA method 2510B
DO	Dissolved oxygen	Field measurement (Hach DO meter, model HQ 30d)
DO (% Sat)	Dissolved oxygen (percent saturation)	Field measurement (Hach DO meter, model HQ 30d)
DRP	Dissolved reactive Phosphorus	Filtration, Molybdenum Blue Colorimetry. Discrete analyser. APHA 4500 PE (modified)
E. coli	Escherichia coli	Membrane Filtration (mFC Agar) confirmation by MUG Agar. APHA method 9222 G
ENT	Enterococci bacteria	Membrane Filtration (mE Agar) confirmation by EIA Agar. APHA method 9230 C
FC	Faecal coliforms	Membrane Filtration (mFC Agar). APHA method 9222 D
NH ₄ -N	Ammoniacal Nitrogen (Total)	Filtration, Phenol/Hypochlorite Colorimetry. Discrete analyser. APHA method 4500-NH ₃ F (modified).
NNN	Nitrite/Nitrate Nitrogen	Automated Cadmium reduction. Flow injection analyser. APHA method 4500 – NO ₃ -I (modified).
pH	pH	Lab Meter @ 25°C. APHA method 4500-H ⁺ B
TEMP	Temperature	Field measurement (Hach DO meter, model HQ 30d)
TKN	Total Kjeldahl-Nitrogen	Acid digestion. Phenol/Hypochlorite colorimetry. Discrete analyser. APHA method 4500-N _{org} D
TN	Total Nitrogen	Calculated from NNN + TKN (Nitrite/Nitrate Nitrogen + Total Kjeldahl-Nitrogen)
TP	Total Phosphorus As Reductant	Acid persulphate digestion, Colorimetry. Discrete Analyser. APHA method 4500-P B & E (modified). Also modified to include the use of reductant to eliminate interference from arsenic present in the sample. NAWASCA Pub 38, 1982
TURB	Turbidity	Turbidity Meter Hach 2100N. APHA method 2130 B

¹ Water quality parameter identification code refers to Waikato Regional Council's water quality database (WISKI) parameter short name.

APHA = Standards Methods for the Examination of Water and Wastewater, 22nd Edition, 2012, APHA, AWWA, WEF