

# Regional rivers water quality monitoring programme: Data report 2017

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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 22<sup>nd</sup> since the implementation of the regional rivers monitoring programme (RERIMP) in 1993<sup>1</sup> and follows the format of the previous data report (Tulagi, 2017). Copies of reports as described in the list of references (page 46) 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](http://www.waikatoregion.govt.nz/request) or in electronic format from the publications page of the Waikato Regional Council website: [www.waikatoregion.govt.nz/publications](http://www.waikatoregion.govt.nz/publications).

## 1.2 Report content

The report provides information on the routine monthly monitoring of water quality at 102 locations across the Waikato region, and includes:

- year 2017 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 2017. 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).

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<sup>1</sup> Waikato River reported separately — in process.

**Table 1: Guidelines and standards for physico-chemical water quality for ecological health and for human uses of water. See Appendix I for a description of the guidelines and standards used.**

Water quality measure	Relevance <sup>1</sup>	Satisfactory	Excellent
<b>Ecological health</b>			
Dissolved oxygen (% of saturation)	aquatic life (breathing)	>80	>90
pH	aquatic life (acidity)	6.5–9	7–8
Turbidity (NTU)	plant growth (clarity)	<5	<2
Ammoniacal-N (g N/m <sup>3</sup> )	aquatic life (toxicity)	<0.88	<0.1
Temperature (°C)	(May-Sep)	<12	<10
	(Oct-Apr)	<20	<16
Total phosphorus (g/m <sup>3</sup> )	nuisance plant growth	<0.04	<0.01
Total nitrogen (g/m <sup>3</sup> )	nuisance plant growth	<0.5	<0.1
<b>Human uses—recreation</b>			
Baseflow water clarity (m)	visibility	>1.6	>4
<i>Escherichia coli</i> (no./100 mL)	human health	<550	<55
Median <i>E. coli</i> (no./100 mL)	human health	<126	<23

<sup>1</sup> Refer to Appendix II for further information. These guidelines and standards are also described on the Waikato Regional Council Internet site [www.waikatoregion.govt.nz](http://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 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](http://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. The boundaries of these water quality zones are shown on Figure 1.



**Table 2: Waikato Regional Council's sampling locations**

Map No.	Location name	Location number	Map Ref.
<b>Coromandel</b>			
1	Hikutaia River at Old Maratoto Rd	169-2	T12:471-312
2	Kauaeranga River at Smiths Cableway/Recorder	234-11	T12:404-461
102	Ohinemuri River at Karangahake	619-16*	T13:506-172
9	Ohinemuri River at Queens Head	619-19	T13:576-170
8	Ohinemuri River at SH25 Bridge	619-20	T13:641-213
6	Tairua River at Morrisons Bridge Hikuia	971-40	T12:567-548
3	Tapu River at Tapu-Coroglen Rd	954-5	T11:332-658
4	Waiau River at E309 Rd Ford	1105-3	T11:357-866
10	Waitekauri River at U/S Ohinemuri Confluence	1239-32	T13:566-168
5	Waiwawa River at SH25 Coroglen	1257-3	T11:503-717
7	Wharekawa River at SH25	1312-3	T12:628-478
<b>Hauraki</b>			
12	Mangawhero Stm (Kaihere) at Mangawara Rd	489-2	S13:249-195
20	Oraka Stm at Lake Rd	669-6	T15:536-607
15	Piako River at Kiwitahi	749-10	T14:398-856
13	Piako River at Paeroa-Tahuna Rd Bridge	749-15	T13:318-068
17	Piakonui Stm at Piakonui Rd	753-4	T14:417-719
18	Waihou River at Okauia	1122-18	T14:602-756
101	Waihou River at Te Aroha	1122-34*	T13:494-028
21	Waihou River at Whites Rd	1122-41	T15:572-500
22	Waiohotu Stm at Waiohotu Rd (Off SH5)	1173-2	T15:665-513
19	Waiomou Stm at Matamata-Tauranga Rd	1174-4	T15:623-683
11	Waitakaruru River (Hauraki Plains) at Coxhead Rd Bridge	1230-1	S12:194-339
16	Waitoa River at Landsdowne Rd Bridge	1249-15	T14:517-783
14	Waitoa River at Mellon Rd Recorder	1249-18	T13:426-047
<b>Tributaries to the lower Waikato River</b>			
23	Awaroa River (Waiuku) at Otua Rd Bridge opp Moseley Rd	41-9	R12:662-319
34	Awaroa Stm (Rotowaro) at Sansons Bridge–Rotowaro-Huntly	39-11	S14:948-997
44	Karapiro Stm at Hickey Rd Bridge	230-5	T15:331-639
37	Kirikirihoa Stm at Tauhara Drive	253-4	S14:095-817
36	Komakorau Stm at Henry Rd	258-4	S14:091-949
45	Little Waipa Stm at Arapuni – Putaruru Rd	335-1	T15:489-462
39	Mangakotukutuku Stm (Rukuhia) at Peacock Rd	398-1	S14:127-743
47	Mangamingi Stm (Tokoroa) at Paraonui Rd Bridge	407-1	T16:588-302
40	Mangaone Stm at Annebrooke Rd Bridge	417-7	S14:159-744
41	Mangaonua Stm at Hoeka Rd	421-10	S14:205-776
42	Mangaonua Stm (a.k.a Waitakaruru Stm) at Te Miro Rd	421-16	T14:314-731
28	Mangatangi River at SH2 Maramarua	453-6	S12:042-372
27	Mangatawhiri River at Lyons Rd at Buckingsham Bridge	459-6	S12:997-427
35	Mangawara Stm at Rutherford Rd Bridge	481-7	S13:084-023
43	Mangawhero Stm (Cambridge) at Cambridge-Ohaupo Rd	488-1	S15:217-653
33	Matahuru Stm at Waiterimu Rd Br	516-5	S13:083-109
25	Ohaeroa Stm at SH22 Bridge	612-9	R12:834-303
24	Opuatia Stm at Ponganui Rd	665-5	R13:773-245
46	Pokaiwhenua Stm at Arapuni-Putaruru Rd	786-2	T15:491-458
31	Waerenga Stm at Taniwha Rd	1098-1	S13:131-217
38	Waitawhiriwhiri Stm at Edgecumbe Street	1236-2	S14:102-787
26	Whakapipi Stm at SH22 Bridge	1282-8	R12:812-365
48	Whakauru Stm at U/S SH1 Bridge	1287-7	T16:614-282
29	Whangamarino River at Island Block Rd	1293-7	S12:954-308
30	Whangamarino River at Jefferies Rd Bridge	1293-9	S13:084-273
32	Whangape Stm at Rangiriri-Glen Murray Rd	1302-1	S13:950-154

\* New site, no 5year median value.

Map No.	Location name	Location number	Map Ref.
<b>Waipa River and tributaries</b>			
50	Kaniwhaniwha Stm at Wright Rd	222-16	S15:985-680
56	Mangaohoi Stm at South Branch Maru Rd	411-9	T15:329-471
61	Mangaokewa Stm at Lawrence St Bridge	414-6	S16:998-162
51	Mangapiko Stm (Pirongia/Te Awamutu) at Bowman Rd	438-3	S15:093-560
58	Mangapu River at Otorohanga	443-3	S16:033-318
55	Mangatutu Stm (Waikeria) at Walker Rd Bridge	476-7	S15:203-422
52	Mangauika Stm at Te Awamutu Borough Water Supply Intake	477-10	S15:980-504
49	Ohote Stm at Whatawhata/Horotiu Rd	624-5	S14:997-794
54	Puniu River at Bartons Corner Rd Bridge	818-2	S15:115-500
62	Waipa River at Mangaokewa Rd	1191-5	S17:233-028
53	Waipa River at Pukehoua Bridge on Baffin Road	1191-10	S15:028-541
59	Waipa River at SH3 Otorohanga	1191-12	S16:036-322
57	Waitomo Stm at SH31 Otorohanga	1253-5	S16:022-335
60	Waitomo Stm at Tumutumu Rd	1253-7	S16:938-249
<b>Tributaries to the upper Waikato River</b>			
69	Kawaunui Stm at SH5 Bridge	240-5	U17:021-081
65	Mangaharakeke Stm (Atiamuri) at SH30 (Off Jct SH1)	359-1	U16:733-129
71	Mangakara Stm (Reporoa) at SH5	380-2	U17:996-003
63	Mangakino River (Whakamaru) at Sandel Rd	388-1	T17:486-013
67	Otamakokore Stm at Hossack Rd	683-4	U16:955-166
74	Pueto Stm at Broadlands Rd Bridge	802-1	U17:938-827
66	Tahunaatara Stm at Ohakuri Rd	934-1	U16:785-138
73	Torepatutahi Stm at Vaile Rd Bridge	1057-6	U17:985-965
70	Waiotapu Stm at Campbell Rd Bridge	1186-2	U17:024-082
72	Waiotapu Stm at Homestead Rd Bridge	1186-4	U17:003-000
64	Waipapa Stm (Mokai) at Tirohanga Rd Bridge	1202-7	T17:685-047
68	Whirinaki Stm at Corbett Rd	1323-1	U16:957-171
<b>West coast</b>			
84	Awakino River at Gribbon Rd	33-6	R17:702-918
82	Awakino River at SH3 Awakau Rd Junction	33-9	R18:588-799
81	Manganui River at Off Manganui Rd	410-4	R17:554-831
85	Mangaotaki River at SH3 Bridge	428-3	R17:764-963
79	Marokopa River at Speedies Rd (Off Te Anga Rd)	513-3	R16:708-256
83	Mokau River at Awakau Rd	556-2	R18:601-785
88	Mokau River at Mangaokewa Rd (Off SH30)	556-5	S17:096-017
86	Mokau River at Totoro Rd Recorder	556-9	R17:759-907
87	Mokauiti Stm at Three Way Point – Aria	557-5	R17:828-929
77	Ohautira River at Waingaro - Te Uku Rd	616-1	R14:842-803
78	Oparau River at Langdon Rd (Off Okupata Rd)	658-1	R15:799-494
80	Tawarau River at Off Speedies Rd	976-1	R16:718-249
75	Waingaro River (Pukemiro) at Ruakiwi Rd Off SH22	1167-4	R14:837-837
76	Waitetuna River at Te Uku-Waingaro Rd	1247-2	R14:842-742
<b>Inflows to Lake Taupo</b>			
91	Hinemaiaia River at SH1	171-5	U18:722-567
96	Kuratau River at Te Rae Street	282-5	T18:502-536
95	Kuratau River at SH41 Moerangi	282-4	T18:356-537
89	Mapara Stm at Off Mapara Rd (Whakaipo Reserve)	504-2	T18:681-750
92	Tauranga-Taupo River at 20 Metres U/S SH1 Bridge	971-5	T18:614-506
94	Tokaanu Power Station Tailrace Canal at SH41 Bridge	1491-1	T19:504-435
93	Tokaanu Stm at Off SH41 Turangi	1045-3	T19:517-423
99	Waihaha River at SH32	1106-4	T18:434-747
90	Waitahanui River at Blake Rd	1226-1	U18:781-627
100	Whangamata Stm (Kinloch) at Whangamata Rd	1300-1	T17:649-804
98	Whanganui Stream at Lakeside Lake Taupo	1301-1	T18:473-653
97	Whareroa Stream at Lakeside Lake Taupo	1318-4	T18:515-568



## 2.2 Sample collection

Sample collection occurs monthly. The 102 locations sampled by Waikato Regional Council staff are divided between 7 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 ( $\pm 1$  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 12). 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 2013) summarises the trends and patterns in regional water quality during 1993 to 2012.

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 2017 and provides the spatial contour plots using water quality data from four parameters, based on median values for the last five years. Section 3.2 compares the results with water quality guidelines and standards for compliance.

### **3.1 Regional rivers monitoring programme summary statistics**

**Table 3: Sample statistics for 2017.**

Location	Absorbance of filtered sample at 340 nm (1/cm)							
	Count	Mean	Median	Min	Max	IQR	Skew	13-17 median
<b>Coromandel</b>								
Hikutaia River at Old Maratoto Rd	12	0.016	0.016	0.012	0.023	0.006	0.50	0.015
Kauaeranga River at Smiths Cableway/Recorder	12	0.016	0.014	0.009	0.034	0.012	1.26	0.012
Ohinemuri River at Karangahake	5	0.012	0.013	0.008	0.014	0.004	-0.83	-
Ohinemuri River at Queens Head	12	0.012	0.012	0.007	0.018	0.005	0.27	0.013
Ohinemuri River at SH25 Br	12	0.012	0.011	0.006	0.022	0.006	0.96	0.013
Tairua River at Morrisons Br Hikuai	12	0.015	0.014	0.010	0.031	0.005	2.33	0.014
Tapu River at Tapu-Coroglen Rd	12	0.013	0.011	0.008	0.026	0.005	1.66	0.009
Waiiau River at E309 Rd Ford	12	0.016	0.016	0.011	0.021	0.003	0.44	0.015
Waitekauri River at U/S Ohinemuri Conflu	11	0.011	0.011	0.006	0.020	0.001	1.74	0.011
Waiwawa River at SH25 Coroglen	12	0.020	0.018	0.010	0.039	0.008	1.37	0.017
Wharekawa River at SH25	12	0.015	0.015	0.009	0.021	0.007	0.06	0.016
<b>Hauraki</b>								
Mangawhero Stm (Kaihere) at Mangawara Rd	12	0.017	0.013	0.010	0.048	0.007	2.80	0.018
Oraka Stm at Lake Rd	12	0.018	0.016	0.010	0.034	0.005	1.59	0.015
Piako River at Kiwitahi	12	0.046	0.046	0.028	0.069	0.010	0.34	0.043
Piako River at Paeroa-Tahuna Rd Br	12	0.094	0.092	0.071	0.143	0.017	1.68	0.072
Piakonui Stm at Piakonui Rd	12	0.028	0.027	0.018	0.054	0.010	1.84	0.029
Waihou River at Okauia	12	0.020	0.018	0.010	0.037	0.009	1.16	0.014
Waihou River at Te Aroha	12	0.025	0.018	0.010	0.065	0.018	1.53	-
Waihou River at Whites Rd	12	0.002	0.001	0.001	0.012	0.001	3.25	0.001
Waiohotu Stm at Waiohotu Rd (Off SH5)	12	0.047	0.040	0.033	0.089	0.018	1.74	0.045
Waiomou Stm at Matamata-Tauranga Rd	12	0.024	0.020	0.013	0.056	0.005	2.60	0.020
Waitakaruru River (Hauraki Plains) at Coxhead Rd Br	12	0.071	0.069	0.043	0.113	0.029	0.59	0.069
Waitoa River at Landsdowne Rd Br	12	0.044	0.037	0.030	0.083	0.012	1.74	0.041
Waitoa River at Mellon Rd Recorder	12	0.049	0.044	0.031	0.103	0.020	1.79	0.042
<b>Tributaries of the Lower Waikato</b>								
Awaroa River (Waiuku) at Otaua Rd Br opp Moseley Rd	12	0.041	0.039	0.021	0.064	0.021	0.32	0.037
Awaroa Stm (Rotowaro) at Sansons Br @ Rotowaro-Huntly Rd	12	0.019	0.020	0.012	0.024	0.008	-0.39	0.023
Karapiro Stm at Hickey Rd Bridge	12	0.045	0.044	0.024	0.082	0.016	1.25	0.050
Kirikiroa Stm at Tauhara Dr	12	0.061	0.060	0.042	0.091	0.024	0.66	0.050
Komakorau Stm at Henry Rd	12	0.229	0.235	0.030	0.410	0.221	0.08	0.128
Little Waipa Stm at Arapuni - Putaruru Rd	12	0.015	0.015	0.006	0.027	0.006	0.29	0.013
Mangakotukutuku Stm (Rukuhia) at Peacocks Rd	12	0.443	0.465	0.083	0.780	0.430	-0.13	0.235
Mangamingi Stm (Tokoroa) at Paraonui Rd Br	12	0.027	0.024	0.020	0.040	0.010	0.95	0.026
Mangaone Stm (Waikato) at Annebrooke Rd Br	12	0.058	0.054	0.039	0.094	0.019	1.08	0.047
Mangaonua Stm at Hoeka Rd	12	0.042	0.039	0.029	0.067	0.015	0.97	0.034
Mangaonua Stm at Te Miro Rd (a.k.a Waitakaruru stm)	12	0.028	0.027	0.023	0.043	0.006	1.78	0.028
Mangatangi River at SH2 Maramarua	12	0.050	0.045	0.031	0.086	0.020	1.21	0.047
Mangatawhiri River at Lyons Rd At Buckingham Br	12	0.022	0.022	0.019	0.028	0.003	1.06	0.025
Mangawara Stm at Rutherford Rd Br	12	0.235	0.225	0.066	0.430	0.153	0.38	0.144
Mangawhero Stm (Cambridge) at Cambridge-Ohaupo Rd	12	0.255	0.275	0.053	0.460	0.272	-0.08	0.102
Matahuru Stm at Waiterimu Road Below Confluence	12	0.133	0.130	0.065	0.270	0.069	1.07	0.095
Ohaeroa Stm at SH22 Br	12	0.025	0.024	0.015	0.045	0.017	0.80	0.025
Opuatia Stm at Ponganui Rd	12	0.024	0.024	0.016	0.032	0.010	-0.07	0.028
Pokaiwhenua Stm at Arapuni - Putaruru Rd	12	0.027	0.019	0.011	0.127	0.010	3.34	0.017
Waerenga Stm at Taniwha Rd	12	0.026	0.022	0.016	0.048	0.013	1.36	0.026
Waitawhiriwhiri Stm at Edgecumbe Street	12	0.216	0.210	0.074	0.380	0.219	0.09	0.121
Whakapipi Stm at SH22 Br	12	0.032	0.030	0.025	0.047	0.008	1.27	0.035
Whakauru Stm at U/S SH1 Br	12	0.035	0.029	0.023	0.115	0.011	3.23	0.023
Whangamarino River at Island Block Rd	12	0.165	0.155	0.054	0.360	0.085	1.09	0.127
Whangamarino River at Jefferies Rd Br	12	0.054	0.047	0.030	0.110	0.024	1.44	0.045
Whangape Stm at Rangiriri-Glen Murray Rd	12	0.085	0.083	0.060	0.133	0.016	1.64	0.072

IQR = Inter quartile range

Location	Count	Mean	Median	Min	Max	IQR	Skew	13-17 median
<b>Waipa River and Tributaries</b>								
Kaniwhaniwha Stm at Wright Rd	12	0.023	0.023	0.017	0.035	0.007	1.05	0.024
Mangaohoi Stm at South Branch Maru Rd	12	0.008	0.007	0.005	0.024	0.001	2.48	0.007
Mangaokewa Stm at Lawrence Street Br	11	0.030	0.025	0.010	0.057	0.016	0.80	0.036
Mangapiko Stm (Pirongia/Te Awamutu) at Bowman Rd	12	0.127	0.117	0.072	0.200	0.081	0.28	0.085
Mangapu River at Otorohanga	11	0.026	0.024	0.012	0.041	0.012	0.16	0.028
Mangatutu Stm (Waikeria) at Walker Rd Br	12	0.025	0.018	0.013	0.091	0.011	2.97	0.018
Mangauika Stm at Te Awamutu Borough W/S Intake	12	0.009	0.006	0.004	0.021	0.004	1.69	0.006
Ohote Stm at Whatawhata/Horotiu Rd	12	0.230	0.225	0.178	0.320	0.046	1.01	0.170
Puniu River at Bartons Corner Rd Br	12	0.032	0.027	0.016	0.093	0.008	2.99	0.028
Waipa River at Mangaokewa Rd	11	0.053	0.042	0.031	0.104	0.037	1.17	0.051
Waipa River at Pukehoua Bridge on Baffin Road	12	0.027	0.029	0.020	0.033	0.008	-0.36	-
Waipa River at SH3 Otorohanga	11	0.027	0.024	0.020	0.051	0.008	2.35	0.025
Waitomo Stm at SH31 Otorohanga	12	0.020	0.017	0.014	0.030	0.011	0.64	0.019
Waitomo Stm at Tumutumu Rd	12	0.013	0.011	0.008	0.029	0.007	1.78	0.013
<b>Tributaries of the Upper Waikato</b>								
Kawaunui Stm at SH5 Br	12	0.032	0.028	0.023	0.078	0.005	3.22	0.027
Mangaharakeke Stm (Atiamuri) at SH30 (Off Jct SH1)	12	0.031	0.029	0.025	0.046	0.007	1.49	0.030
Mangakara Stm (Reporoa) at SH5	12	0.020	0.018	0.015	0.039	0.006	2.31	0.018
Mangakino Stm (Whakamaru) at Sandel Rd	12	0.017	0.014	0.008	0.041	0.009	2.01	0.012
Otamakokore Stm at Hossack Rd	12	0.051	0.041	0.025	0.173	0.006	3.25	0.040
Pueto Stm at Broadlands Rd Br	12	0.010	0.010	0.007	0.013	0.002	0.10	0.010
Tahunaatara Stm at Ohakuri Rd	12	0.046	0.037	0.026	0.116	0.012	2.45	0.034
Torepatutahi Stm at Vaile Rd Br	12	0.018	0.016	0.009	0.045	0.004	2.72	0.013
Waiotapu Stm at Campbell Rd Br	12	0.008	0.008	0.004	0.017	0.003	1.62	0.005
Waiotapu Stm at Homestead Rd Br	12	0.031	0.030	0.019	0.052	0.006	1.42	0.022
Waipapa Stm (Mokai) at Tirohanga Rd Br	12	0.016	0.016	0.011	0.024	0.005	0.72	0.013
Whirinaki Stm at Corbett Rd	12	0.006	0.006	0.003	0.010	0.005	0.47	0.003
<b>West Coast</b>								
Awakino River at Gribbon Rd	11	0.011	0.006	0.004	0.045	0.006	2.89	0.006
Awakino River at SH3 Awakano Rd Junction	11	0.014	0.010	0.008	0.053	0.004	3.18	0.013
Manganui River at Off Manganui Rd	11	0.010	0.008	0.006	0.024	0.003	2.61	0.008
Mangaotaki River at SH3 Br	11	0.017	0.013	0.010	0.048	0.004	2.83	0.016
Marokopa River at Speedies Rd (Off Te Anga Rd)	12	0.018	0.016	0.012	0.033	0.007	1.55	0.016
Mokau River at Awakau Rd	11	0.036	0.029	0.024	0.072	0.016	1.77	0.033
Mokau River at Mangaokewa Rd (Off SH30)	11	0.040	0.033	0.022	0.069	0.027	0.89	0.047
Mokau River at Totoro Rd Recorder	11	0.030	0.029	0.020	0.042	0.014	0.38	0.029
Mokauiti Stm at Three Way Point - Aria	11	0.055	0.050	0.029	0.089	0.036	0.50	0.054
Ohautira Stm at Waingaro Te Uku Rd	12	0.020	0.017	0.013	0.038	0.011	1.28	0.021
Oparau River at Langdon Rd (Off Okupata Rd)	12	0.018	0.015	0.011	0.036	0.008	1.53	0.016
Tawarau River at Off Speedies Rd	12	0.017	0.015	0.011	0.032	0.007	1.47	0.015
Waingaro River (Pukemiro) at Ruakiwi Rd Off SH22	12	0.029	0.026	0.016	0.054	0.015	1.09	0.032
Waitetuna River at Te Uku-Waingaro Rd	12	0.022	0.018	0.014	0.035	0.012	0.92	0.024
<b>Inflows to Lake Taupo</b>								
Hinemaiaia River at SH1	12	0.013	0.012	0.009	0.017	0.004	0.71	0.014
Kuratau River at SH41 Moerangi	12	0.020	0.019	0.015	0.029	0.007	0.72	0.018
Kuratau River at Te Rae Street	12	0.019	0.020	0.015	0.025	0.006	0.31	0.020
Mapara Stm (Lake Taupo) at Off Mapara Rd (Whakaipo Res)	12	0.041	0.039	0.024	0.060	0.007	0.93	0.037
Tauranga-Taupo River at 20 Metres U/S SH1 Bridge	12	0.009	0.007	0.006	0.026	0.002	3.10	0.007
Tokaanu Power Station Tailrace Canal at SH41 Bridge Over Canal	12	0.006	0.006	0.004	0.009	0.002	0.88	0.006
Tokaanu Stm at Off SH41 Turangi	12	0.001	0.001	0.001	0.003	0.001	1.64	0.001
Waihaha River at SH32	12	0.011	0.008	0.006	0.026	0.007	1.79	0.009
Waitahanui River at Blake Rd	12	0.004	0.004	0.002	0.006	0.003	0.46	0.003
Whangamata Stm (Kinloch) at Whangamata Rd	12	0.013	0.013	0.003	0.025	0.005	0.76	0.006
Whanganui Stm at Lakeside Lake Taupo	12	0.016	0.015	0.009	0.032	0.008	1.22	0.014
Whareroa Stm (Taupo) at Lakeside Lake Taupo	12	0.020	0.019	0.015	0.032	0.004	1.69	0.017

IQR = Inter quartile range

Location	Absorbance of filtered sample at 440 nm (1/cm)							
	Count	Mean	Median	Min	Max	IQR	Skew	13-17 median
<b>Coromandel</b>								
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	0.004	0.003	0.002	0.007	0.002	1.32	0.003
Ohinemuri River at Karangahake	5	0.002	0.002	0.001	0.003	0.002	0.00	-
Ohinemuri River at Queens Head	12	0.002	0.002	0.001	0.005	0.002	0.91	0.003
Ohinemuri River at SH25 Br	12	0.002	0.002	0.001	0.005	0.003	0.89	0.003
Tairua River at Morrisons Br Hikuai	12	0.003	0.003	0.001	0.007	0.002	1.10	0.003
Tapu River at Tapu-Coroglen Rd	12	0.003	0.002	0.001	0.006	0.002	1.15	0.001
Waiau River at E309 Rd Ford	12	0.003	0.003	0.002	0.004	0.001	0.06	0.003
Waitekauri River at U/S Ohinemuri Conflu	11	0.002	0.002	0.001	0.004	0.002	0.73	0.002
Waiwawa River at SH25 Coroglen	12	0.005	0.004	0.002	0.008	0.002	1.11	0.004
Wharekawa River at SH25	12	0.003	0.003	0.002	0.005	0.002	0.26	0.003
<b>Hauraki</b>								
Mangawhero Stm (Kaihere) at Mangawara Rd	12	0.004	0.003	0.002	0.012	0.001	2.99	0.004
Oraka Stm at Lake Rd	12	0.004	0.003	0.001	0.007	0.001	0.97	0.003
Piako River at Kiwitahi	12	0.009	0.008	0.005	0.013	0.002	0.57	0.008
Piako River at Paeroa-Tahuna Rd Br	12	0.016	0.015	0.013	0.026	0.003	2.01	0.012
Piakonui Stm at Piakonui Rd	12	0.006	0.006	0.004	0.011	0.002	1.83	0.006
Waihou River at Okauia	12	0.004	0.004	0.001	0.007	0.003	0.38	0.003
Waihou River at Te Aroha	12	0.005	0.004	0.001	0.014	0.003	1.59	-
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	0.009	0.008	0.007	0.018	0.004	1.66	0.009
Waiomou Stm at Matamata-Tauranga Rd	12	0.005	0.004	0.002	0.011	0.002	1.55	0.004
Waitakaruru River (Hauraki Plains) at Coxhead Rd Br	12	0.013	0.013	0.008	0.021	0.005	0.62	0.012
Waitoa River at Landsdowne Rd Br	12	0.008	0.006	0.005	0.015	0.002	1.68	0.007
Waitoa River at Mellon Rd Recorder	12	0.009	0.007	0.005	0.019	0.004	1.86	0.007
<b>Tributaries of the Lower Waikato</b>								
Awaroa River (Waiuku) at Otaua Rd Br opp Moseley Rd	12	0.007	0.006	0.003	0.012	0.004	0.71	0.006
Awaroa Stm (Rotowaro) at Sansons Br @ Rotowaro-Huntly Rd	12	0.003	0.003	0.001	0.005	0.001	-0.59	0.004
Karapiro Stm at Hickey Rd Bridge	12	0.009	0.009	0.004	0.019	0.003	1.50	0.009
Kirikiri Stm at Tauhara Dr	12	0.010	0.010	0.007	0.015	0.003	1.10	0.008
Komakorau Stm at Henry Rd	12	0.035	0.034	0.006	0.065	0.032	0.19	0.020
Little Waipa Stm at Arapuni - Putaruru Rd	12	0.003	0.003	0.001	0.006	0.002	0.20	0.003
Mangakotukutuku Stm (Rukuhia) at Peacocks Rd	12	0.078	0.083	0.015	0.146	0.075	-0.06	0.042
Mangamingi Stm (Tokoroa) at Paraonui Rd Br	12	0.005	0.005	0.004	0.009	0.003	1.21	0.005
Mangaone Stm (Waikato) at Annebrooke Rd Br	12	0.010	0.010	0.007	0.016	0.004	0.98	0.008
Mangaonua Stm at Hoeka Rd	12	0.007	0.007	0.005	0.012	0.003	1.02	0.005
Mangaonua Stm at Te Miro Rd (a.k.a Waitakaruru stm)	12	0.006	0.006	0.005	0.009	0.001	1.92	0.005
Mangatangi River at SH2 Maramarua	12	0.009	0.008	0.006	0.016	0.003	1.58	0.008
Mangatawhiri River at Lyons Rd At Buckingham Br	12	0.004	0.004	0.004	0.006	0.001	1.93	0.005
Mangawara Stm at Rutherford Rd Br	12	0.038	0.035	0.011	0.072	0.022	0.63	0.021
Mangawhero Stm (Cambridge) at Cambridge-Ohaupo Rd	12	0.042	0.047	0.008	0.078	0.044	-0.09	0.017
Matahuru Stm at Waiterimu Road Below Confluence	12	0.023	0.023	0.012	0.044	0.010	1.12	0.015
Ohaeroa Stm at SH22 Br	12	0.005	0.004	0.003	0.009	0.003	0.96	0.005
Opuatia Stm at Ponganui Rd	12	0.004	0.004	0.003	0.006	0.001	0.14	0.005
Pokaiwhenua Stm at Arapuni - Putaruru Rd	12	0.009	0.004	0.001	0.073	0.002	3.44	0.003
Waerenga Stm at Taniwha Rd	12	0.005	0.005	0.003	0.011	0.003	1.31	0.005
Waitawhiriwhiri Stm at Edgumbe Street	12	0.037	0.039	0.012	0.063	0.039	-0.03	0.020
Whakapipi Stm at SH22 Br	12	0.006	0.006	0.005	0.009	0.002	1.49	0.006
Whakauru Stm at U/S SH1 Br	12	0.009	0.006	0.004	0.043	0.003	3.38	0.005
Whangamarino River at Island Block Rd	12	0.033	0.031	0.010	0.075	0.017	1.19	0.023
Whangamarino River at Jefferies Rd Br	12	0.010	0.009	0.005	0.020	0.005	1.26	0.007
Whangape Stm at Rangiriri-Glen Murray Rd	12	0.015	0.014	0.011	0.026	0.003	2.54	0.012

IQR = Inter quartile range



Location	Count	Mean	Median	Min	Max	IQR	Skew	13-17 median
<b>Waipa River and Tributaries</b>								
Kaniwhaniwha Stm at Wright Rd	12	0.004	0.004	0.003	0.007	0.001	1.09	0.005
Mangaohoi Stm at South Branch Maru Rd	12	0.002	0.001	0.001	0.005	0.000	2.56	0.001
Mangaokewa Stm at Lawrence Street Br	11	0.006	0.005	0.001	0.012	0.003	0.81	0.007
Mangapiko Stm (Pirongia/Te Awamutu) at Bowman Rd	12	0.022	0.019	0.014	0.038	0.012	0.78	0.015
Mangapu River at Otorohanga	11	0.005	0.004	0.002	0.008	0.003	0.58	0.005
Mangatutu Stm (Waikeria) at Walker Rd Br	12	0.005	0.004	0.003	0.019	0.002	2.95	0.004
Mangauika Stm at Te Awamutu Borough W/S Intake	12	0.002	0.001	0.001	0.004	0.001	1.64	0.001
Ohote Stm at Whatawhata/Horotiu Rd	12	0.039	0.038	0.030	0.056	0.007	1.12	0.028
Puniu River at Bartons Corner Rd Br	12	0.006	0.005	0.003	0.019	0.002	3.05	0.005
Waipa River at Mangaokewa Rd	11	0.010	0.008	0.006	0.020	0.007	1.17	0.010
Waipa River at Pukehoua Bridge on Baffin Road	12	0.005	0.006	0.004	0.006	0.002	-0.57	-
Waipa River at SH3 Otorohanga	11	0.005	0.004	0.004	0.010	0.002	2.29	0.005
Waitomo Stm at SH31 Otorohanga	12	0.004	0.003	0.002	0.006	0.002	0.71	0.003
Waitomo Stm at Tumutumu Rd	12	0.002	0.002	0.001	0.006	0.002	1.45	0.002
<b>Tributaries of the Upper Waikato</b>								
Kawaunui Stm at SH5 Br	12	0.006	0.005	0.004	0.015	0.001	3.18	0.005
Mangaharakeke Stm (Atiamuri) at SH30 (Off Jct SH1)	12	0.006	0.006	0.005	0.009	0.002	1.07	0.006
Mangakara Stm (Reporoa) at SH5	12	0.004	0.003	0.003	0.008	0.002	1.87	0.004
Mangakino Stm (Whakamaru) at Sandel Rd	12	0.004	0.003	0.001	0.009	0.003	1.04	0.002
Otamakokore Stm at Hossack Rd	12	0.011	0.008	0.006	0.037	0.001	3.30	0.008
Pueto Stm at Broadlands Rd Br	12	0.001	0.001	0.001	0.002	0.001	1.33	0.001
Tahunaatara Stm at Ohakuri Rd	12	0.009	0.007	0.005	0.023	0.004	2.19	0.007
Torepatutahi Stm at Vaile Rd Br	12	0.003	0.003	0.001	0.009	0.002	2.35	0.002
Waiotapu Stm at Campbell Rd Br	12	0.001	0.001	0.001	0.003	0.001	1.93	0.001
Waiotapu Stm at Homestead Rd Br	12	0.005	0.005	0.003	0.008	0.002	0.69	0.004
Waipapa Stm (Mokai) at Tirohanga Rd Br	12	0.003	0.003	0.002	0.006	0.001	1.31	0.002
Whirinaki Stm at Corbett Rd	12	0.001	0.001	0.001	0.003	0.000	2.56	0.001
<b>West Coast</b>								
Awakino River at Gribbon Rd	11	0.002	0.001	0.001	0.009	0.001	2.61	0.001
Awakino River at SH3 Awakau Rd Junction	11	0.003	0.002	0.001	0.011	0.002	2.74	0.003
Manganui River at Off Manganui Rd	11	0.002	0.001	0.001	0.005	0.000	2.42	0.001
Mangaotaki River at SH3 Br	11	0.003	0.002	0.001	0.009	0.001	2.30	0.003
Marokopa River at Speedies Rd (Off Te Anga Rd)	12	0.004	0.003	0.002	0.007	0.002	1.19	0.003
Mokau River at Awakau Rd	11	0.007	0.006	0.004	0.015	0.003	1.97	0.006
Mokau River at Mangaokewa Rd (Off SH30)	11	0.008	0.006	0.004	0.015	0.006	0.97	0.009
Mokau River at Totoro Rd Recorder	11	0.006	0.006	0.003	0.008	0.003	-0.21	0.006
Mokauiti Stm at Three Way Point - Aria	11	0.010	0.009	0.005	0.017	0.007	0.52	0.009
Ohautira Stm at Waingaro Te Uku Rd	12	0.004	0.004	0.002	0.009	0.003	1.26	0.004
Oparau River at Langdon Rd (Off Okupata Rd)	12	0.004	0.003	0.002	0.007	0.002	1.18	0.003
Tawarau River at Off Speedies Rd	12	0.004	0.003	0.002	0.007	0.003	1.01	0.003
Waingaro River (Pukemiro) at Ruakiwi Rd Off SH22	12	0.006	0.005	0.003	0.010	0.003	1.07	0.006
Waitetuna River at Te Uku-Waingaro Rd	12	0.005	0.004	0.003	0.008	0.003	0.85	0.005
<b>Inflows to Lake Taupo</b>								
Hinemaiaia River at SH1	12	0.003	0.003	0.001	0.004	0.001	0.15	0.003
Kuratau River at SH41 Moerangi	12	0.004	0.004	0.003	0.005	0.002	0.35	0.003
Kuratau River at Te Rae Street	12	0.004	0.004	0.003	0.005	0.001	0.72	0.004
Mapara Stm (Lake Taupo) at Off Mapara Rd (Whakaipo Res)	12	0.008	0.008	0.005	0.013	0.001	1.33	0.007
Tauranga-Taupo River at 20 Metres U/S SH1 Bridge	12	0.001	0.001	0.001	0.005	0.000	3.14	0.001
Tokaanu Power Station Tailrace Canal at SH41 Bridge Over Canal	12	0.001	0.001	0.001	0.001	0.000	0.00	0.001
Tokaanu Stm at Off SH41 Turangi	12	0.001	0.001	0.001	0.001	0.000	0.00	0.001
Waihaha River at SH32	12	0.002	0.001	0.001	0.006	0.003	1.10	0.001
Waitahanui River at Blake Rd	12	0.001	0.001	0.001	0.001	0.000	0.00	0.001
Whangamata Stm (Kinloch) at Whangamata Rd	12	0.003	0.003	0.001	0.005	0.002	0.65	0.001
Whanganui Stm at Lakeside Lake Taupo	12	0.003	0.004	0.001	0.007	0.003	0.41	0.003
Whareroa Stm (Taupo) at Lakeside Lake Taupo	12	0.004	0.004	0.003	0.007	0.001	1.63	0.003

IQR = Inter quartile range

Location	Black Disk (m)							
	Count	Mean	Median	Min	Max	IQR	Skew	13-17 median
<b>Coromandel</b>								
Hikutaia River at Old Maratoto Rd	11	2.61	2.40	1.40	4.60	1.46	0.95	3.18
Kauaeranga River at Smiths Cableway/Recorder	12	3.26	2.48	0.85	6.00	3.89	0.35	3.68
Ohinemuri River at Karangahake	5	2.81	2.75	2.37	3.22	0.46	-0.16	-
Ohinemuri River at Queens Head	11	3.30	3.30	0.85	6.00	1.24	0.28	3.15
Ohinemuri River at SH25 Br	11	3.25	3.00	0.55	6.00	2.11	0.27	3.15
Tairua River at Morrisons Br Hikuai	-	-	-	-	-	-	-	-
Tapu River at Tapu-Coroglen Rd	12	3.25	2.69	0.94	7.00	2.11	1.06	3.86
Waiau River at E309 Rd Ford	12	2.14	2.39	0.85	3.71	1.79	-0.04	2.59
Waitekauri River at U/S Ohinemuri Conflu	10	3.12	3.45	0.51	4.10	1.18	-1.55	3.50
Waiwawa River at SH25 Coroglen	11	3.22	2.79	1.05	8.00	2.86	1.28	3.21
Wharekawa River at SH25	11	2.30	2.39	0.52	4.60	1.29	0.61	2.44
<b>Hauraki</b>								
Mangawhero Stm (Kaihere) at Mangawara Rd	12	0.80	0.78	0.20	1.80	0.16	1.41	0.91
Oraka Stm at Lake Rd	12	0.75	0.63	0.40	1.37	0.45	1.03	0.98
Piako River at Kiwitahi	12	1.12	1.36	0.38	1.72	0.66	-0.62	1.53
Piako River at Paeroa-Tahuna Rd Br	11	0.76	0.76	0.13	1.65	0.56	0.53	0.97
Piakonui Stm at Piakonui Rd	12	1.16	1.11	0.93	1.65	0.22	1.38	1.51
Waihou River at Okauia	11	0.87	0.75	0.48	1.48	0.40	0.95	1.09
Waihou River at Te Aroha	12	0.78	0.70	0.33	1.86	0.31	1.87	-
Waihou River at Whites Rd	12	5.14	5.20	3.11	6.50	1.74	-0.36	5.20
Waiohotu Stm at Waiohotu Rd (Off SH5)	-	-	-	-	-	-	-	-
Waiomou Stm at Matamata-Tauranga Rd	12	1.02	0.92	0.72	1.83	0.24	1.73	1.28
Waitakaruru River (Hauraki Plains) at Coxhead Rd Br	12	0.95	0.84	0.19	2.10	0.71	0.70	0.95
Waitoa River at Landsdowne Rd Br	12	1.18	0.98	0.27	3.70	0.71	1.71	1.47
Waitoa River at Mellon Rd Recorder	12	0.78	0.58	0.35	2.20	0.62	1.79	1.23
<b>Tributaries of the Lower Waikato</b>								
Awaroa River (Waiuku) at Otaua Rd Br opp Moseley Rd	12	0.40	0.40	0.24	0.72	0.16	1.21	0.40
Awaroa Stm (Rotowaro) at Sansons Br @ Rotowaro-Huntly Rd	11	0.85	0.80	0.38	1.51	0.41	0.66	0.94
Karapiro Stm at Hickey Rd Bridge	12	0.75	0.75	0.36	1.13	0.44	-0.03	0.83
Kirikiriroa Stm at Tauhara Dr	12	0.46	0.44	0.10	0.78	0.37	-0.13	0.46
Komakorau Stm at Henry Rd	11	0.18	0.12	0.06	0.43	0.17	1.22	0.18
Little Waipa Stm at Arapuni - Putaruru Rd	12	1.63	1.65	0.67	2.80	1.06	0.09	1.63
Mangakotukutuku Stm (Rukuhia) at Peacocks Rd	12	0.40	0.40	0.13	0.71	0.14	0.20	0.50
Mangamingi Stm (Tokoroa) at Paraonui Rd Br	12	0.83	0.82	0.54	1.30	0.35	0.57	0.76
Mangaone Stm (Waikato) at Annebrooke Rd Br	12	0.97	0.82	0.40	1.66	0.50	0.63	1.16
Mangaonua Stm at Hoeka Rd	12	0.85	0.80	0.23	2.25	0.51	1.53	1.07
Mangaonua Stm at Te Miro Rd (a.k.a Waitakaruru stm)	12	1.04	0.95	0.61	1.70	0.38	0.82	1.29
Mangatangi River at SH2 Maramarua	12	0.43	0.42	0.20	0.89	0.21	1.15	0.51
Mangatawhiri River at Lyons Rd At Buckingham Br	12	1.43	1.50	0.23	2.90	1.50	0.11	1.69
Mangawara Stm at Rutherford Rd Br	12	0.19	0.15	0.12	0.34	0.12	0.93	0.27
Mangawhero Stm (Cambridge) at Cambridge-Ohaupo Rd	12	0.25	0.23	0.17	0.51	0.03	2.80	0.23
Matahuru Stm at Waiterimu Road Below Confluence	12	0.02	0.02	0.01	0.04	0.01	1.12	0.02
Ohaeroa Stm at SH22 Br	10	0.90	0.85	0.16	1.90	0.51	0.31	0.86
Opuatia Stm at Ponganui Rd	12	0.46	0.43	0.12	1.20	0.46	1.03	0.51
Pokaiwhenua Stm at Arapuni - Putaruru Rd	12	0.99	0.95	0.57	1.50	0.42	0.23	1.12
Waerenga Stm at Taniwha Rd	12	0.72	0.67	0.15	1.24	0.57	0.00	0.86
Waitawhiriwhiri Stm at Edgumbe Street	12	0.33	0.36	0.07	0.44	0.14	-1.39	0.42
Whakapipi Stm at SH22 Br	12	1.31	1.33	0.18	2.65	0.93	0.25	1.49
Whakauru Stm at U/S SH1 Br	12	0.48	0.48	0.18	0.78	0.12	-0.02	0.63
Whangamarino River at Island Block Rd	12	0.27	0.19	0.10	0.83	0.23	1.75	0.21
Whangamarino River at Jefferies Rd Br	12	0.30	0.28	0.11	0.50	0.19	0.27	0.40
Whangape Stm at Rangiriri-Glen Murray Rd	12	0.17	0.13	0.04	0.45	0.15	1.45	0.18

IQR = Inter quartile range

Location	Count	Mean	Median	Min	Max	IQR	Skew	13-17 median
<b>Waipa River and Tributaries</b>								
Kaniwhaniwha Stm at Wright Rd	10	0.79	0.72	0.23	1.71	0.39	1.30	0.88
Mangaohoi Stm at South Branch Maru Rd	12	1.57	1.45	0.50	2.70	0.72	0.37	1.55
Mangaokewa Stm at Lawrence Street Br	10	0.65	0.60	0.04	1.40	0.54	0.44	0.85
Mangapiko Stm (Pirongia/Te Awamutu) at Bowman Rd	10	0.52	0.35	0.05	1.26	0.51	0.98	0.70
Mangapu River at Otorohanga	7	0.49	0.42	0.18	0.94	0.48	0.68	0.60
Mangatutu Stm (Waikeria) at Walker Rd Br	12	1.28	1.19	0.05	2.43	0.68	0.26	1.63
Mangauika Stm at Te Awamutu Borough W/S Intake	10	6.97	7.45	1.90	10.00	4.70	-0.62	4.44
Ohote Stm at Whatawhata/Horotiu Rd	12	0.55	0.52	0.19	0.98	0.23	0.43	0.59
Puniu River at Bartons Corner Rd Br	-	-	-	-	-	-	-	-
Waipa River at Mangaokewa Rd	10	1.57	1.60	0.62	2.15	0.56	-0.78	1.70
Waipa River at Pukehoua Bridge on Baffin Road	11	0.48	0.44	0.19	0.90	0.29	0.60	0.46
Waipa River at SH3 Otorohanga	10	0.88	0.95	0.12	1.93	0.92	0.29	1.14
Waitomo Stm at SH31 Otorohanga	11	0.47	0.33	0.11	1.10	0.52	0.68	0.60
Waitomo Stm at Tumutumu Rd	9	0.86	0.93	0.25	1.95	0.73	0.84	0.95
<b>Tributaries of the Upper Waikato</b>								
Kawaunui Stm at SH5 Br	12	1.26	1.09	0.57	3.00	0.75	1.78	1.47
Mangaharakeke Stm (Atiamuri) at SH30 (Off Jct SH1)	11	0.79	0.83	0.29	1.18	0.12	-0.76	0.87
Mangakara Stm (Reporoa) at SH5	11	0.66	0.59	0.33	1.17	0.38	0.63	0.88
Mangakino Stm (Whakamaru) at Sandel Rd	8	1.36	1.53	0.41	2.03	1.00	-0.78	1.83
Otamakokore Stm at Hossack Rd	12	1.20	1.14	0.55	1.80	0.31	0.30	1.22
Pueto Stm at Broadlands Rd Br	12	1.71	1.44	0.75	3.12	1.05	0.77	1.83
Tahunaatara Stm at Ohakuri Rd	12	0.91	1.05	0.30	1.29	0.46	-0.68	1.21
Torepatutahi Stm at Vaile Rd Br	-	-	-	-	-	-	-	-
Waiotapu Stm at Campbell Rd Br	12	1.07	0.98	0.65	1.90	0.24	1.46	1.15
Waiotapu Stm at Homestead Rd Br	-	-	-	-	-	-	-	-
Waipapa Stm (Mokai) at Tirohanga Rd Br	12	0.97	0.86	0.52	1.90	0.42	1.36	1.15
Whirinaki Stm at Corbett Rd	-	-	-	-	-	-	-	-
<b>West Coast</b>								
Awakino River at Gribbon Rd	10	1.76	1.87	0.06	3.30	1.56	-0.25	2.04
Awakino River at SH3 Awakau Rd Junction	10	0.98	0.90	0.06	2.05	1.22	0.17	1.30
Manganui River at Off Manganui Rd	10	0.86	0.82	0.05	1.79	1.37	0.18	1.07
Mangaotaki River at SH3 Br	10	0.70	0.66	0.06	1.60	0.50	0.76	0.79
Marokopa River at Speedies Rd (Off Te Anga Rd)	11	0.92	0.95	0.15	1.60	0.96	-0.07	1.05
Mokau River at Awakau Rd	10	0.36	0.33	0.04	0.77	0.39	0.28	0.49
Mokau River at Mangaokewa Rd (Off SH30)	-	-	-	-	-	-	-	-
Mokau River at Totoro Rd Recorder	10	0.66	0.54	0.06	2.03	0.90	1.19	0.75
Mokauiti Stm at Three Way Point - Aria	10	0.47	0.37	0.06	1.20	0.38	1.02	0.74
Ohautira Stm at Waingaro Te Uku Rd	11	0.75	0.80	0.25	1.43	0.56	0.28	0.85
Oparau River at Langdon Rd (Off Okupata Rd)	11	1.35	1.60	0.04	2.79	1.11	-0.01	1.60
Tawarau River at Off Speedies Rd	11	0.98	1.16	0.10	1.67	0.74	-0.43	1.17
Waingaro River (Pukemiro) at Ruakiwi Rd Off SH22	10	0.58	0.59	0.15	1.13	0.45	0.29	0.70
Waitetuna River at Te Uku-Waingaro Rd	10	0.66	0.60	0.20	1.22	0.43	0.50	0.73
<b>Inflows to Lake Taupo</b>								
Hinemaiaia River at SH1	12	2.20	2.20	1.08	3.23	0.62	-0.08	2.32
Kuratau River at SH41 Moerangi	12	2.96	2.82	1.54	4.60	1.78	0.31	2.69
Kuratau River at Te Rae Street	-	-	-	-	-	-	-	-
Mapara Stm (Lake Taupo) at Off Mapara Rd (Whakaipo Res)	12	1.12	0.97	0.72	1.80	0.46	0.89	1.43
Tauranga-Taupo River at 20 Metres U/S SH1 Bridge	12	2.47	2.25	0.19	4.75	1.36	0.13	3.11
Tokaanu Power Station Tailrace Canal at SH41 Bridge Over Canal	-	-	-	-	-	-	-	-
Tokaanu Stm at Off SH41 Turangi	-	-	-	-	-	-	-	-
Waihaha River at SH32	12	2.79	2.95	0.12	4.33	1.65	-0.87	3.34
Waitahanui River at Blake Rd	12	2.60	2.66	1.55	3.67	1.15	0.03	2.93
Whangamata Stm (Kinloch) at Whangamata Rd	-	-	-	-	-	-	-	-
Whanganui Stm at Lakeside Lake Taupo	-	-	-	-	-	-	-	-
Whareroa Stm (Taupo) at Lakeside Lake Taupo	-	-	-	-	-	-	-	-

IQR = Inter quartile range

Location	Conductivity at 25 DegC (mS/m)							
	Count	Mean	Median	Min	Max	IQR	Skew	13-17 median
<b>Coromandel</b>								
Hikutaia River at Old Maratoto Rd	12	8.2	8.0	7.0	9.7	1.3	0.69	8.3
Kauaeranga River at Smiths Cableway/Recorder	12	8.1	7.9	7.1	9.5	1.4	0.65	8.3
Ohinemuri River at Karangahake	5	14.3	13.7	11.0	20.2	5.4	1.12	-
Ohinemuri River at Queens Head	12	25.8	22.5	11.4	55.7	18.7	1.10	23.6
Ohinemuri River at SH25 Br	12	7.6	7.5	7.0	8.4	0.9	0.50	7.6
Tairua River at Morrisons Br Hikuai	12	5.9	5.7	4.9	7.0	1.1	0.57	6.1
Tapu River at Tapu-Coroglen Rd	12	10.0	9.5	8.8	12.0	2.1	0.84	10.4
Waiau River at E309 Rd Ford	12	9.4	9.2	8.5	10.7	1.2	0.73	9.7
Waitekauri River at U/S Ohinemuri Conflu	11	10.7	9.4	7.9	17.0	4.5	1.19	10.9
Waiwawa River at SH25 Coroglen	12	6.3	6.0	5.3	7.9	1.3	0.96	6.8
Wharekawa River at SH25	12	7.2	6.9	6.6	8.4	1.0	1.08	7.3
<b>Hauraki</b>								
Mangawhero Stm (Kaihere) at Mangawara Rd	12	11.6	11.5	10.1	12.9	1.2	0.01	11.4
Oraka Stm at Lake Rd	12	13.2	12.6	10.6	21.4	2.9	2.13	12.5
Piako River at Kiwitahi	12	15.3	15.1	14.3	16.8	1.3	0.55	15.1
Piako River at Paeroa-Tahuna Rd Br	12	21.8	23.1	17.0	24.3	4.0	-0.85	22.8
Piakonui Stm at Piakonui Rd	12	7.4	7.1	6.2	9.8	1.2	1.25	7.5
Waihou River at Okauia	12	11.4	11.6	9.5	12.4	1.4	-0.90	10.6
Waihou River at Te Aroha	12	11.6	12.2	7.5	13.4	1.1	-1.67	-
Waihou River at Whites Rd	12	8.5	8.5	8.4	8.6	0.1	0.09	8.3
Waiohotu Stm at Waiohotu Rd (Off SH5)	12	5.4	5.3	5.1	5.8	0.4	0.76	5.4
Waiomou Stm at Matamata-Tauranga Rd	12	7.3	7.5	5.8	8.2	1.1	-0.74	7.2
Waitakaruru River (Hauraki Plains) at Coxhead Rd Br	12	17.1	16.9	11.2	22.5	3.6	0.04	16.9
Waitoa River at Landsdowne Rd Br	12	16.7	16.2	12.8	20.1	4.2	0.07	17.1
Waitoa River at Mellon Rd Recorder	12	26.4	26.4	20.0	35.4	9.2	0.41	29.1
<b>Tributaries of the Lower Waikato</b>								
Awaroa River (Waiuku) at Otaua Rd Br opp Moseley Rd	12	27.9	27.2	24.8	32.5	4.1	0.55	26.8
Awaroa Stm (Rotowaro) at Sansons Br @ Rotowaro-Huntly Rd	12	66.6	62.9	35.1	112.9	34.6	0.53	67.9
Karapiro Stm at Hickey Rd Bridge	12	13.6	13.3	10.9	16.3	3.3	0.19	13.6
Kirikiriroa Stm at Tauhara Dr	12	19.8	20.5	13.2	23.0	3.2	-1.43	21.2
Komakorau Stm at Henry Rd	12	26.3	26.0	21.4	30.9	3.2	-0.07	26.1
Little Waipa Stm at Arapuni - Putaruru Rd	12	11.4	11.4	10.7	12.6	0.7	0.94	10.5
Mangakotukutuku Stm (Rukuhia) at Peacocks Rd	12	17.8	18.5	12.9	23.1	4.1	-0.02	19.3
Mangamingi Stm (Tokoroa) at Paraonui Rd Br	12	14.3	14.3	13.7	15.0	0.9	-0.09	14.2
Mangaone Stm (Waikato) at Annebrooke Rd Br	12	26.7	27.7	20.3	28.7	2.0	-2.27	27.0
Mangaonua Stm at Hoeka Rd	12	20.4	21.0	16.5	22.7	2.8	-0.81	21.2
Mangaonua Stm at Te Miro Rd (a.k.a Waitakaruru stm)	12	9.7	9.6	8.5	11.9	1.2	1.10	9.9
Mangatangi River at SH2 Maramarua	12	13.0	12.9	12.0	14.0	0.9	0.18	13.0
Mangatawhiri River at Lyons Rd At Buckingham Br	12	11.8	12.0	9.6	14.1	2.8	0.11	12.2
Mangawara Stm at Rutherford Rd Br	12	22.4	21.8	16.9	26.4	3.0	-0.47	22.1
Mangawhero Stm (Cambridge) at Cambridge-Ohaupo Rd	12	21.1	21.8	16.5	23.0	2.4	-1.49	22.0
Matahuru Stm at Waiterimu Road Below Confluence	12	13.6	13.6	11.5	15.4	1.5	-0.24	14.1
Ohaeroa Stm at SH22 Br	12	16.3	16.0	13.5	20.7	3.1	0.75	16.0
Opuatia Stm at Ponganui Rd	12	18.0	18.0	16.3	19.7	1.3	0.04	17.9
Pokaiwhenua Stm at Arapuni - Putaruru Rd	12	11.8	11.9	10.4	12.7	0.5	-1.02	11.0
Waerenga Stm at Taniwha Rd	12	12.0	11.9	10.4	14.1	1.1	0.59	12.0
Waitawhiriwhiri Stm at Edgumbe Street	12	18.5	19.0	13.7	21.9	4.3	-0.59	20.4
Whakapipi Stm at SH22 Br	12	19.8	19.9	15.0	26.5	3.3	0.61	19.3
Whakauru Stm at U/S SH1 Br	12	8.3	8.2	7.9	8.8	0.3	0.81	7.5
Whangamarino River at Island Block Rd	12	14.5	14.1	11.6	18.5	2.9	0.42	16.6
Whangamarino River at Jefferies Rd Br	12	15.6	15.7	13.9	16.7	1.3	-0.61	15.8
Whangape Stm at Rangiriri-Glen Murray Rd	12	18.2	17.4	13.2	27.5	5.6	0.93	20.6

IQR = Inter quartile range

Location	Count	Mean	Median	Min	Max	IQR	Skew	13-17 median
<b>Waipa River and Tributaries</b>								
Kaniwhaniwha Stm at Wright Rd	12	9.7	9.6	8.8	11.2	0.6	1.13	9.7
Mangaohoi Stm at South Branch Maru Rd	12	7.4	7.2	4.9	9.0	1.6	-0.56	8.1
Mangaokewa Stm at Lawrence Street Br	11	16.1	15.5	11.2	22.4	6.0	0.37	15.0
Mangapiko Stm (Pirongia/Te Awamutu) at Bowman Rd	12	18.3	17.0	13.0	29.8	4.5	1.60	19.3
Mangapu River at Otorohanga	11	19.3	18.8	15.6	24.0	5.4	0.30	18.8
Mangatutu Stm (Waikeria) at Walker Rd Br	12	6.8	6.9	5.5	8.1	1.5	-0.06	6.8
Mangauika Stm at Te Awamutu Borough W/S Intake	12	6.5	6.5	5.2	7.5	1.3	-0.27	6.4
Ohote Stm at Whatawhata/Horotiu Rd	12	16.0	15.8	12.9	18.9	2.7	0.06	17.8
Puniu River at Bartons Corner Rd Br	12	8.7	8.6	7.6	9.8	1.2	0.11	8.4
Waipa River at Mangaokewa Rd	11	5.3	5.1	4.5	6.2	0.6	0.79	5.0
Waipa River at Pukehoua Bridge on Baffin Road	12	11.9	12.1	10.2	13.3	0.7	-0.47	-
Waipa River at SH3 Otorohanga	11	8.2	8.2	7.2	9.0	0.5	-0.31	8.3
Waitomo Stm at SH31 Otorohanga	12	19.0	19.2	13.9	23.1	4.2	-0.44	18.8
Waitomo Stm at Tumutumu Rd	12	19.3	19.3	16.3	21.9	2.9	-0.18	18.9
<b>Tributaries of the Upper Waikato</b>								
Kawaunui Stm at SH5 Br	12	14.4	14.5	13.7	14.9	0.5	-0.78	14.1
Mangaharakeke Stm (Atiamuri) at SH30 (Off Jct SH1)	12	9.3	9.3	8.9	9.7	0.2	0.00	9.0
Mangakara Stm (Reporoa) at SH5	12	10.1	10.1	9.5	10.7	0.6	0.14	10.0
Mangakino Stm (Whakamaru) at Sandel Rd	12	6.9	6.7	6.2	7.7	0.7	0.52	6.7
Otamakokore Stm at Hossack Rd	12	32.6	30.6	29.1	41.4	3.6	1.56	39.9
Pueto Stm at Broadlands Rd Br	12	11.7	11.7	11.4	12.3	0.3	1.15	11.7
Tahunaatara Stm at Ohakuri Rd	12	8.3	8.3	7.9	8.9	0.3	0.72	7.8
Torepatutahi Stm at Vaile Rd Br	12	11.7	11.8	9.4	13.1	2.0	-0.56	9.5
Waiotapu Stm at Campbell Rd Br	12	61.8	58.3	52.7	79.1	8.7	1.25	73.6
Waiotapu Stm at Homestead Rd Br	12	39.8	37.9	33.0	53.0	7.7	1.14	50.5
Waipapa Stm (Mokai) at Tirohanga Rd Br	12	41.6	41.8	36.8	48.1	5.2	0.50	43.9
Whirinaki Stm at Corbett Rd	12	7.3	7.4	6.9	7.7	0.4	-0.14	6.8
<b>West Coast</b>								
Awakino River at Gribbon Rd	11	7.0	7.1	5.2	7.8	0.5	-1.93	7.0
Awakino River at SH3 Awakino Rd Junction	11	14.6	14.1	9.4	20.7	5.2	0.27	12.7
Manganui River at Off Manganui Rd	11	10.4	10.3	8.6	12.2	1.4	0.03	10.5
Mangaotaki River at SH3 Br	11	13.4	13.5	10.7	14.4	1.1	-1.83	13.4
Marokopa River at Speedies Rd (Off Te Anga Rd)	12	13.9	13.9	11.2	16.3	2.0	-0.17	14.1
Mokau River at Awakau Rd	11	13.8	14.2	9.0	17.7	4.7	-0.28	12.5
Mokau River at Mangaokewa Rd (Off SH30)	11	6.7	6.8	5.7	7.6	0.9	-0.17	6.6
Mokau River at Totoro Rd Recorder	11	12.0	12.4	10.0	13.5	2.2	-0.41	11.8
Mokauiti Stm at Three Way Point - Aria	11	11.3	11.0	9.3	16.1	2.1	1.58	10.7
Ohautira Stm at Waingaro Te Uku Rd	12	14.1	14.0	12.0	16.2	2.3	0.05	13.8
Oparau River at Langdon Rd (Off Okupata Rd)	12	8.7	8.6	6.3	10.8	1.0	-0.21	8.5
Tawarau River at Off Speedies Rd	12	13.1	13.0	10.2	15.5	2.0	-0.29	13.3
Waingaro River (Pukemiro) at Ruakiwi Rd Off SH22	12	15.0	14.7	12.8	18.3	1.4	1.06	14.3
Waitetuna River at Te Uku-Waingaro Rd	12	10.2	10.1	9.1	11.3	1.2	0.15	10.0
<b>Inflows to Lake Taupo</b>								
Hinemaiaia River at SH1	12	5.7	5.8	4.6	6.9	1.4	-0.03	5.9
Kuratau River at SH41 Moerangi	12	4.3	4.1	3.6	5.2	0.6	0.59	4.3
Kuratau River at Te Rae Street	12	7.2	6.8	5.8	9.9	1.6	1.12	6.6
Mapara Stm (Lake Taupo) at Off Mapara Rd (Whakaipo Res)	12	12.7	12.7	12.4	13.0	0.4	0.09	12.5
Tauranga-Taupo River at 20 Metres U/S SH1 Bridge	12	4.6	4.7	2.5	6.2	1.2	-0.62	4.7
Tokaanu Power Station Tailrace Canal at SH41 Bridge Over Canal	12	12.0	12.5	10.0	14.0	2.2	-0.32	12.5
Tokaanu Stm at Off SH41 Turangi	12	10.3	10.3	10.1	10.5	0.2	0.00	10.0
Waihaha River at SH32	12	4.7	4.7	4.1	5.6	0.5	0.83	4.7
Waitahanui River at Blake Rd	12	7.4	7.5	7.0	7.7	0.4	-0.37	7.5
Whangamata Stm (Kinloch) at Whangamata Rd	12	8.9	8.9	8.8	9.1	0.2	0.47	8.8
Whanganui Stm at Lakeside Lake Taupo	12	5.6	5.7	4.6	7.1	0.7	0.75	5.6
Whareroa Stm (Taupo) at Lakeside Lake Taupo	12	7.6	7.6	6.9	8.4	0.9	0.17	7.7

IQR = Inter quartile range

Location	Dissolved Oxygen (% sat.)							
	Count	Mean	Median	Min	Max	IQR	Skew	13-17 median
<b>Coromandel</b>								
Hikutaia River at Old Maratoto Rd	12	94	95	84	97	3	-2.43	95
Kauaeranga River at Smiths Cableway/Recorder	12	98	97	92	103	2	0.19	99
Ohinemuri River at Karangahake	5	103	100	99	112	8	1.27	-
Ohinemuri River at Queens Head	12	104	101	92	122	9	1.16	104
Ohinemuri River at SH25 Br	12	106	102	95	124	13	0.85	108
Tairua River at Morrisons Br Hikuai	12	97	97	89	101	3	-1.87	98
Tapu River at Tapu-Coroglen Rd	12	101	100	99	105	2	1.57	101
Waiau River at E309 Rd Ford	12	102	101	99	106	3	1.00	102
Waitekauri River at U/S Ohinemuri Conflu	11	101	100	96	108	6	0.62	102
Waiwawa River at SH25 Coroglen	12	99	99	90	104	2	-1.48	100
Wharekawa River at SH25	12	97	96	89	108	4	0.77	98
<b>Hauraki</b>								
Mangawhero Stm (Kaihere) at Mangawara Rd	12	97	96	94	99	2	0.59	96
Oraka Stm at Lake Rd	12	93	93	88	95	3	-1.02	91
Piako River at Kiwitahi	12	87	89	64	99	14	-1.12	88
Piako River at Paeroa-Tahuna Rd Br	12	81	84	70	88	7	-1.00	83
Piakonui Stm at Piakonui Rd	12	99	98	96	103	2	0.76	98
Waihou River at Okauia	12	93	93	90	95	1	-1.24	93
Waihou River at Te Aroha	11	84	88	58	90	3	-2.77	-
Waihou River at Whites Rd	12	99	99	95	103	4	0.03	100
Waiohotu Stm at Waiohotu Rd (Off SH5)	12	91	92	83	94	4	-1.49	93
Waiomou Stm at Matamata-Tauranga Rd	12	93	93	91	95	3	-0.05	94
Waitakaruru River (Hauraki Plains) at Coxhead Rd Br	12	91	94	68	101	9	-1.47	93
Waitoa River at Landsdowne Rd Br	12	86	87	69	99	8	-0.77	87
Waitoa River at Mellon Rd Recorder	12	68	72	40	82	11	-1.37	73
<b>Tributaries of the Lower Waikato</b>								
Awaroa River (Waiuku) at Otaua Rd Br opp Moseley Rd	12	84	82	63	118	11	1.24	86
Awaroa Stm (Rotowaro) at Sansons Br @ Rotowaro-Huntly Rd	12	86	86	72	94	8	-1.00	85
Karapiro Stm at Hickey Rd Bridge	12	89	90	80	95	6	-0.76	90
Kirikiriroa Stm at Tauhara Dr	12	73	74	58	83	8	-0.75	72
Komakorau Stm at Henry Rd	12	63	63	35	73	11	-1.87	66
Little Waipa Stm at Arapuni - Putaruru Rd	12	101	99	89	114	10	0.41	100
Mangakotukutuku Stm (Rukuhia) at Peacocks Rd	12	88	87	84	91	4	0.08	89
Mangamingi Stm (Tokoroa) at Paraonui Rd Br	12	99	98	95	102	3	0.03	100
Mangaone Stm (Waikato) at Annebrooke Rd Br	12	74	74	62	81	10	-0.59	78
Mangaonua Stm at Hoeka Rd	12	76	81	45	83	7	-2.60	81
Mangaonua Stm at Te Miro Rd (a.k.a Waitakaruru stm)	12	98	98	96	100	2	0.10	98
Mangatangi River at SH2 Maramarua	12	85	87	70	94	7	-1.21	87
Mangatawhiri River at Lyons Rd At Buckingham Br	12	103	103	92	116	15	0.27	109
Mangawara Stm at Rutherford Rd Br	12	61	68	6	76	13	-2.35	72
Mangawhero Stm (Cambridge) at Cambridge-Ohaupo Rd	12	86	86	81	90	3	-0.28	86
Matahuru Stm at Waiterimu Road Below Confluence	12	76	83	8	89	8	-3.17	84
Ohaeroa Stm at SH22 Br	12	89	96	9	105	4	-3.31	95
Opuatia Stm at Ponganui Rd	12	87	94	9	98	2	-3.42	95
Pokaiwhenua Stm at Arapuni - Putaruru Rd	12	97	97	94	100	3	0.10	98
Waerenga Stm at Taniwha Rd	12	91	98	9	104	6	-3.32	97
Waitawhiriwhiri Stm at Edgecumbe Street	12	82	82	76	86	5	-0.49	84
Whakapipi Stm at SH22 Br	12	85	95	8	100	7	-2.66	92
Whakauru Stm at U/S SH1 Br	12	97	96	93	103	2	1.69	97
Whangamarino River at Island Block Rd	11	50	42	2	128	46	0.89	59
Whangamarino River at Jefferies Rd Br	12	72	78	7	86	14	-2.85	76
Whangape Stm at Rangiriri-Glen Murray Rd	12	68	77	7	105	60	-0.70	87

IQR = Inter quartile range

Location	Count	Mean	Median	Min	Max	IQR	Skew	13-17 median
<b>Waipa River and Tributaries</b>								
Kaniwhaniwha Stm at Wright Rd	12	87	87	83	91	5	-0.14	86
Mangaohoi Stm at South Branch Maru Rd	12	98	99	92	101	3	-1.35	99
Mangaokewa Stm at Lawrence Street Br	11	94	95	91	98	6	0.00	95
Mangapiko Stm (Pirongia/Te Awamutu) at Bowman Rd	12	94	89	64	132	21	0.77	96
Mangapu River at Otorohanga	11	90	90	81	95	4	-1.22	93
Mangatutu Stm (Waikeria) at Walker Rd Br	12	94	94	83	101	4	-1.34	95
Mangauika Stm at Te Awamutu Borough W/S Intake	12	98	98	96	101	2	0.24	99
Ohote Stm at Whatawhata/Horotiu Rd	12	50	56	14	76	35	-0.40	53
Puniu River at Bartons Corner Rd Br	12	90	92	71	95	4	-2.63	92
Waipa River at Mangaokewa Rd	11	101	101	98	104	2	0.31	101
Waipa River at Pukehoua Bridge on Baffin Road	12	90	91	76	95	2	-2.60	-
Waipa River at SH3 Otorohanga	11	99	98	93	115	6	1.59	99
Waitomo Stm at SH31 Otorohanga	12	95	94	89	105	7	0.76	96
Waitomo Stm at Tumutumu Rd	12	100	99	95	107	6	0.69	100
<b>Tributaries of the Upper Waikato</b>								
Kawaunui Stm at SH5 Br	12	87	87	82	90	2	-1.05	86
Mangaharakeke Stm (Atiamuri) at SH30 (Off Jct SH1)	12	93	93	90	96	3	-0.04	93
Mangakara Stm (Reporoa) at SH5	12	92	92	87	94	2	-0.92	92
Mangakino Stm (Whakamaru) at Sandel Rd	12	102	102	99	105	3	0.22	102
Otamakokore Stm at Hossack Rd	12	89	88	56	102	12	-1.64	97
Pueto Stm at Broadlands Rd Br	12	92	93	89	96	3	-0.08	94
Tahunaatara Stm at Ohakuri Rd	12	100	100	97	106	4	0.68	102
Torepatutahi Stm at Vaile Rd Br	12	92	88	75	109	24	0.38	97
Waiotapu Stm at Campbell Rd Br	12	87	88	82	89	3	-1.40	87
Waiotapu Stm at Homestead Rd Br	12	83	85	60	91	6	-2.22	87
Waipapa Stm (Mokai) at Tirohanga Rd Br	12	98	98	96	101	4	0.18	98
Whirinaki Stm at Corbett Rd	12	100	99	94	113	6	1.45	97
<b>West Coast</b>								
Awakino River at Gribbon Rd	11	100	101	97	104	3	-0.19	101
Awakino River at SH3 Awakau Rd Junction	11	102	103	96	108	8	-0.01	102
Manganui River at Off Manganui Rd	11	98	98	90	102	5	-0.67	100
Mangaotaki River at SH3 Br	11	101	102	93	104	3	-1.86	102
Marokopa River at Speedies Rd (Off Te Anga Rd)	12	102	101	99	106	3	0.75	102
Mokau River at Awakau Rd	11	95	94	89	99	6	-0.19	95
Mokau River at Mangaokewa Rd (Off SH30)	11	98	98	95	102	3	0.07	99
Mokau River at Totoro Rd Recorder	11	102	102	98	106	4	-0.08	102
Mokauiti Stm at Three Way Point - Aria	11	93	93	86	103	6	0.87	93
Ohautira Stm at Waingaro Te Uku Rd	12	94	94	91	97	2	0.35	94
Oparau River at Langdon Rd (Off Okupata Rd)	12	103	103	97	109	6	0.05	105
Tawarau River at Off Speedies Rd	12	102	102	98	107	3	0.83	102
Waingaro River (Pukemiro) at Ruakiwi Rd Off SH22	12	93	94	89	98	4	-0.13	93
Waitetuna River at Te Uku-Waingaro Rd	12	97	97	94	100	2	0.42	96
<b>Inflows to Lake Taupo</b>								
Hinemaiaia River at SH1	12	98	98	94	106	3	1.37	99
Kuratau River at SH41 Moerangi	12	93	94	89	97	4	-0.30	94
Kuratau River at Te Rae Street T10	12	96	96	82	103	7	-1.20	99
Mapara Stm (Lake Taupo) at Off Mapara Rd (Whakaipo Res) T1	12	85	85	82	88	2	-0.30	86
Tauranga-Taupo River at 20 Metres U/S SH1 Bridge	12	97	96	92	102	4	0.49	98
Tokaanu Power Station Tailrace Canal at SH41 Bridge Over Canal	12	99	98	91	109	7	0.50	100
Tokaanu Stm at Off SH41 Turangi	12	81	81	76	87	4	0.15	82
Waihaha River at SH32	12	100	100	97	105	5	0.46	101
Waitahanui River at Blake Rd	12	96	97	88	100	2	-1.89	98
Whangamata Stm (Kinloch) at Whangamata Rd	12	93	93	89	96	2	-0.58	94
Whanganui Stm at Lakeside Lake Taupo T8	12	100	99	95	105	4	0.21	99
Whareroa Stm (Taupo) at Lakeside Lake Taupo T9	12	94	95	89	98	2	-0.68	96

IQR = Inter quartile range

Location	Dissolved Oxygen (g/m <sup>3</sup> )							
	Count	Mean	Median	Min	Max	IQR	Skew	13-17 median
<b>Coromandel</b>								
Hikutaia River at Old Maratoto Rd	12	9.6	10.0	7.4	10.8	1.4	-1.13	10.0
Kauaeranga River at Smiths Cableway/Recorder	12	9.9	10.1	7.9	11.0	1.2	-1.01	10.0
Ohinemuri River at Karangahake	5	10.4	10.4	9.7	10.8	0.7	-0.82	-
Ohinemuri River at Queens Head	12	10.1	10.4	8.0	10.9	0.8	-1.85	10.4
Ohinemuri River at SH25 Br	12	10.3	10.4	9.0	11.4	1.1	-0.30	10.5
Tairua River at Morrisons Br Hikuai	12	9.6	9.9	7.7	10.6	1.4	-0.97	9.9
Tapu River at Tapu-Coroglen Rd	12	10.2	10.5	8.8	11.0	1.1	-0.80	10.3
Waiau River at E309 Rd Ford	12	10.3	10.4	8.9	11.3	1.5	-0.41	10.4
Waitekauri River at U/S Ohinemuri Conflu	11	10.0	10.1	8.4	10.8	1.2	-0.81	10.1
Waiwawa River at SH25 Coroglen	12	10.0	10.3	8.6	11.0	1.3	-0.54	10.1
Wharekawa River at SH25	12	9.7	9.9	7.8	10.7	1.0	-1.12	9.9
<b>Hauraki</b>								
Mangawhero Stm (Kaihere) at Mangawara Rd	12	9.9	10.0	9.2	10.6	1.2	-0.09	9.9
Oraka Stm at Lake Rd	12	9.6	9.7	8.7	10.9	1.0	0.32	9.5
Piako River at Kiwitahi	12	8.7	9.5	5.6	10.1	2.1	-1.00	8.9
Piako River at Paeroa-Tahuna Rd Br	12	8.1	8.4	6.2	9.8	2.0	-0.35	8.3
Piakonui Stm at Piakonui Rd	12	10.2	10.2	9.6	11.0	0.7	0.35	10.2
Waihou River at Okauia	12	9.7	9.7	8.7	11.0	1.0	0.47	9.6
Waihou River at Te Aroha	11	8.6	8.9	5.4	9.7	1.3	-1.93	-
Waihou River at Whites Rd	12	10.4	10.4	10.0	10.9	0.4	0.50	10.4
Waiohotu Stm at Waiohotu Rd (Off SH5)	12	9.8	9.9	8.4	11.6	1.5	0.23	9.9
Waiomou Stm at Matamata-Tauranga Rd	12	9.8	9.8	8.8	11.2	0.9	0.50	9.7
Waitakaruru River (Hauraki Plains) at Coxhead Rd Br	12	9.2	9.5	6.1	10.4	1.5	-1.27	9.3
Waitoa River at Landsdowne Rd Br	12	8.6	8.9	6.4	9.7	1.4	-0.98	9.0
Waitoa River at Mellon Rd Recorder	12	7.1	7.5	3.6	11.1	2.3	0.02	7.5
<b>Tributaries of the Lower Waikato</b>								
Awaroa River (Waiuku) at Otaua Rd Br opp Moseley Rd	12	8.1	8.2	6.1	10.0	1.2	-0.13	8.7
Awaroa Stm (Rotowaro) at Sansons Br @ Rotowaro-Huntly Rd	12	8.8	9.1	6.7	10.4	2.3	-0.35	8.6
Karapiro Stm at Hickey Rd Bridge	12	9.1	9.2	7.2	10.6	1.7	-0.22	9.0
Kirikiri Stm at Tauhara Dr	12	7.3	7.3	5.4	8.9	1.2	-0.12	7.2
Komakorau Stm at Henry Rd	12	6.3	6.1	3.4	8.0	1.7	-0.74	6.7
Little Waipa Stm at Arapuni - Putaruru Rd	12	10.4	10.5	8.8	11.3	1.0	-0.91	10.3
Mangakotukutuku Stm (Rukuhia) at Peacocks Rd	12	8.8	8.7	7.7	10.0	1.2	0.37	9.0
Mangamingi Stm (Tokoroa) at Paraonui Rd Br	12	10.0	10.0	8.9	11.1	0.8	0.04	10.0
Mangaone Stm (Waikato) at Annebrooke Rd Br	12	7.7	7.8	5.9	9.1	2.1	-0.27	8.0
Mangaonua Stm at Hoeka Rd	12	7.9	8.3	4.2	9.2	1.5	-1.78	8.3
Mangaonua Stm at Te Miro Rd (a.k.a Waitakaruru stm)	12	9.9	9.8	8.9	10.9	1.0	0.08	10.1
Mangatangi River at SH2 Maramarua	12	8.4	8.4	6.6	9.7	1.6	-0.37	8.3
Mangatawhiri River at Lyons Rd At Buckingham Br	12	10.1	10.4	8.6	12.4	1.5	0.49	10.5
Mangawara Stm at Rutherford Rd Br	12	11.3	7.0	4.1	61.1	2.0	3.42	7.3
Mangawhero Stm (Cambridge) at Cambridge-Ohaupo Rd	12	8.7	8.7	7.7	9.9	1.2	0.27	8.7
Matahuru Stm at Waiterimu Road Below Confluence	12	14.3	8.6	7.1	78.3	1.8	3.45	8.4
Ohaeroa Stm at SH22 Br	12	16.6	10.4	8.2	89.9	1.1	3.46	9.7
Opuatia Stm at Ponganui Rd	12	16.5	10.3	8.2	91.0	1.5	3.46	9.7
Pokaiwhenua Stm at Arapuni - Putaruru Rd	12	10.0	10.0	9.1	11.1	0.8	0.38	10.1
Waerenga Stm at Taniwha Rd	12	16.9	10.6	8.1	91.3	1.1	3.46	9.9
Waitawhiriwhiri Stm at Edgumbe Street	12	8.0	8.1	6.8	9.0	1.1	-0.16	8.4
Whakapipi Stm at SH22 Br	12	15.5	10.1	5.4	83.7	1.3	3.44	9.2
Whakauru Stm at U/S SH1 Br	12	10.1	10.1	9.0	11.4	0.9	0.24	10.0
Whangamarino River at Island Block Rd	12	5.3	4.5	0.2	12.4	5.6	0.52	5.7
Whangamarino River at Jefferies Rd Br	12	13.1	8.5	5.8	68.7	2.4	3.43	7.8
Whangape Stm at Rangiriri-Glen Murray Rd	12	13.1	8.3	1.8	74.2	5.5	3.29	8.8

IQR = Inter quartile range



Location	Count	Mean	Median	Min	Max	IQR	Skew	13-17 median
<b>Waipa River and Tributaries</b>								
Kaniwhaniwha Stm at Wright Rd	12	9.0	9.1	7.6	10.1	1.6	-0.14	8.8
Mangaohoi Stm at South Branch Maru Rd	12	10.0	10.1	8.8	10.8	1.1	-0.39	9.9
Mangaokewa Stm at Lawrence Street Br	11	9.9	10.1	8.6	10.7	1.5	-0.54	10.0
Mangapiko Stm (Pirongia/Te Awamutu) at Bowman Rd	12	9.2	9.3	6.2	11.9	1.2	-0.31	9.7
Mangapu River at Otorohanga	11	9.0	8.8	8.2	10.0	1.4	0.14	9.1
Mangatutu Stm (Waikeria) at Walker Rd Br	12	9.7	10.0	8.1	10.7	1.6	-0.56	9.9
Mangauika Stm at Te Awamutu Borough W/S Intake	12	10.3	10.4	9.6	11.0	1.0	-0.04	10.4
Ohote Stm at Whatawhata/Horotiu Rd	12	5.1	5.7	1.3	8.3	4.1	-0.24	5.2
Puniu River at Bartons Corner Rd Br	12	9.1	9.2	6.8	10.4	1.3	-0.97	9.3
Waipa River at Mangaokewa Rd	11	10.1	10.4	9.0	10.7	1.1	-0.72	10.2
Waipa River at Pukehoua Bridge on Baffin Road	12	9.0	8.9	7.7	10.2	1.4	0.07	-
Waipa River at SH3 Otorohanga	11	9.9	10.0	9.1	10.5	0.8	-0.28	10.1
Waitomo Stm at SH31 Otorohanga	12	9.6	9.5	8.9	10.4	0.7	0.26	9.8
Waitomo Stm at Tumutumu Rd	12	10.2	10.3	9.5	10.5	0.4	-1.52	10.4
<b>Tributaries of the Upper Waikato</b>								
Kawaunui Stm at SH5 Br	12	8.5	8.6	7.5	9.6	0.9	0.17	8.4
Mangaharakeke Stm (Atiamuri) at SH30 (Off Jct SH1)	12	9.5	9.6	8.6	10.7	0.6	0.33	9.5
Mangakara Stm (Reporoa) at SH5	12	9.3	9.4	8.4	10.4	1.0	0.16	9.3
Mangakino Stm (Whakamaru) at Sandel Rd	12	10.8	10.9	9.8	11.6	1.0	-0.20	10.8
Otamakokore Stm at Hossack Rd	12	8.0	8.3	4.8	9.1	0.7	-2.17	8.4
Pueto Stm at Broadlands Rd Br	12	9.4	9.4	8.7	10.0	0.5	0.09	9.4
Tahunaatara Stm at Ohakuri Rd	12	10.3	10.3	9.1	11.6	0.9	0.13	10.5
Torepatutahi Stm at Vaile Rd Br	12	9.2	9.2	7.6	10.7	1.8	-0.32	9.8
Waiotapu Stm at Campbell Rd Br	12	6.7	6.7	6.1	7.4	0.7	0.23	6.5
Waiotapu Stm at Homestead Rd Br	12	7.8	8.0	5.3	8.8	0.8	-1.76	8.0
Waipapa Stm (Mokai) at Tirohanga Rd Br	12	8.5	8.5	7.8	9.2	0.5	0.29	8.3
Whirinaki Stm at Corbett Rd	12	10.2	10.3	9.4	11.2	0.4	0.31	10.1
<b>West Coast</b>								
Awakino River at Gribbon Rd	11	10.6	10.5	10.0	11.3	0.5	0.36	10.6
Awakino River at SH3 Awakano Rd Junction	11	10.4	10.2	9.3	11.6	0.9	0.40	10.5
Manganui River at Off Manganui Rd	11	10.2	10.2	8.8	11.5	0.8	-0.24	10.2
Mangaotaki River at SH3 Br	11	10.5	10.5	9.5	11.2	0.8	-0.55	10.5
Marokopa River at Speedies Rd (Off Te Anga Rd)	12	10.5	10.6	9.8	11.4	0.8	0.07	10.7
Mokau River at Awakau Rd	11	9.6	9.9	8.4	10.7	1.9	-0.37	9.7
Mokau River at Mangaokewa Rd (Off SH30)	11	10.2	10.4	9.2	10.8	1.0	-0.60	10.3
Mokau River at Totoro Rd Recorder	11	10.4	10.7	9.2	11.1	1.2	-0.66	10.4
Mokauiti Stm at Three Way Point - Aria	11	9.3	9.2	8.1	10.5	1.0	0.16	9.2
Ohautira Stm at Waingaro Te Uku Rd	12	9.9	10.2	8.8	10.9	1.6	-0.21	10.0
Oparau River at Langdon Rd (Off Okupata Rd)	12	10.6	10.6	9.9	11.5	0.7	0.68	10.6
Tawarau River at Off Speedies Rd	12	10.6	10.7	10.0	11.3	0.9	-0.02	10.6
Waingaro River (Pukemiro) at Ruakiwi Rd Off SH22	12	9.5	9.7	8.0	10.7	1.5	-0.18	9.7
Waitetuna River at Te Uku-Waingaro Rd	12	10.0	10.3	8.9	10.9	1.7	-0.26	10.1
<b>Inflows to Lake Taupo</b>								
Hinemaiaia River at SH1	12	10.5	10.6	9.3	11.4	1.4	-0.23	10.4
Kuratau River at SH41 Moerangi	12	9.9	10.1	8.8	10.9	1.1	-0.23	9.9
Kuratau River at Te Rae Street	12	9.9	10.1	7.8	11.0	1.7	-0.65	10.0
Mapara Stm (Lake Taupo) at Off Mapara Rd (Whakaipo Res)	12	9.1	9.2	8.2	9.9	0.7	-0.11	9.3
Tauranga-Taupo River at 20 Metres U/S SH1 Bridge	12	10.5	10.5	9.1	11.6	1.3	-0.32	10.4
Tokaanu Power Station Tailrace Canal at SH41 Bridge Over Canal	12	10.2	10.3	8.5	11.4	1.2	-0.63	10.3
Tokaanu Stm at Off SH41 Turangi	12	8.5	8.5	7.7	9.0	0.3	-0.72	8.4
Waihaha River at SH32	12	10.5	10.5	9.5	11.4	0.8	0.00	10.5
Waitahanui River at Blake Rd	12	10.4	10.6	9.2	11.0	0.6	-1.21	10.6
Whangamata Stm (Kinloch) at Whangamata Rd	12	10.0	10.1	9.2	11.0	0.6	0.16	10.2
Whanganui Stm at Lakeside Lake Taupo	12	10.6	10.7	9.3	11.7	1.1	-0.06	10.5
Whareroa Stm (Taupo) at Lakeside Lake Taupo	12	10.0	10.2	8.9	11.2	1.0	0.15	10.1

IQR = Inter quartile range

Location	Dissolved Reactive Phosphorus (g/m <sup>3</sup> )							13-17 median
	Count	Mean	Median	Min	Max	IQR	Skew	
<b>Coromandel</b>								
Hikutaia River at Old Maratoto Rd	12	0.003	0.002	0.002	0.005	0.001	1.54	0.002
Kauaeranga River at Smiths Cableway/Recorder	12	0.002	0.002	0.002	0.006	0.000	3.46	0.002
Ohinemuri River at Karangahake	5	0.003	0.002	0.002	0.005	0.002	0.88	-
Ohinemuri River at Queens Head	12	0.004	0.002	0.002	0.009	0.002	1.63	0.002
Ohinemuri River at SH25 Br	12	0.006	0.006	0.002	0.012	0.003	0.87	0.004
Tairua River at Morrisons Br Hikuai	12	0.002	0.002	0.002	0.004	0.000	3.46	0.002
Tapu River at Tapu-Coroglen Rd	12	0.002	0.002	0.002	0.002	0.000	0.00	0.002
Waiau River at E309 Rd Ford	12	0.002	0.002	0.002	0.002	0.000	0.00	0.002
Waitekauri River at U/S Ohinemuri Conflu	11	0.003	0.002	0.002	0.014	0.000	3.00	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	0.002	0.000	0.00	0.002
<b>Hauraki</b>								
Mangawhero Stm (Kaihere) at Mangawara Rd	12	0.034	0.033	0.022	0.049	0.009	0.74	0.036
Oraka Stm at Lake Rd	12	0.062	0.059	0.044	0.085	0.026	0.30	0.075
Piako River at Kiwitahi	12	0.031	0.026	0.009	0.059	0.012	0.80	0.040
Piako River at Paeroa-Tahuna Rd Br	12	0.112	0.089	0.031	0.250	0.096	1.03	0.200
Piakonui Stm at Piakonui Rd	12	0.009	0.008	0.005	0.016	0.003	1.47	0.011
Waihou River at Okauia	12	0.062	0.060	0.046	0.086	0.014	0.88	0.061
Waihou River at Te Aroha	12	0.049	0.052	0.024	0.073	0.017	-0.51	-
Waihou River at Whites Rd	12	0.073	0.072	0.066	0.080	0.008	0.24	0.074
Waiohotu Stm at Waiohotu Rd (Off SH5)	12	0.012	0.011	0.007	0.018	0.006	0.55	0.013
Waiomou Stm at Matamata-Tauranga Rd	12	0.018	0.019	0.012	0.026	0.006	0.25	0.018
Waitakaruru River (Hauraki Plains) at Coxhead Rd Br	12	0.020	0.019	0.012	0.036	0.004	1.84	0.021
Waitoa River at Landsdowne Rd Br	12	0.022	0.019	0.005	0.056	0.010	1.41	0.021
Waitoa River at Mellon Rd Recorder	12	0.067	0.055	0.027	0.132	0.049	0.69	0.059
<b>Tributaries of the Lower Waikato</b>								
Awaroa River (Waiuku) at Otaua Rd Br opp Moseley Rd	12	0.009	0.006	0.002	0.051	0.007	3.19	0.002
Awaroa Stm (Rotowaro) at Sansons Br @ Rotowaro-Huntly Rd	12	0.007	0.002	0.002	0.054	0.000	3.46	0.002
Karapiro Stm at Hickey Rd Bridge	12	0.039	0.035	0.008	0.068	0.014	0.21	0.044
Kirikiri Stm at Tauhara Dr	12	0.011	0.010	0.006	0.017	0.005	0.79	0.011
Komakorau Stm at Henry Rd	12	0.021	0.023	0.002	0.041	0.028	0.01	0.010
Little Waipa Stm at Arapuni - Putaruru Rd	12	0.056	0.052	0.038	0.111	0.017	2.21	0.055
Mangakotukutuku Stm (Rukuhia) at Peacocks Rd	12	0.637	0.485	0.059	1.490	0.960	0.50	0.203
Mangamingi Stm (Tokoroa) at Paraonui Rd Br	12	0.181	0.185	0.116	0.300	0.071	0.93	0.245
Mangaone Stm (Waikato) at Annebrooke Rd Br	12	0.068	0.066	0.051	0.109	0.012	2.07	0.065
Mangaonua Stm at Hoeka Rd	12	0.014	0.011	0.005	0.032	0.015	0.89	0.012
Mangaonua Stm at Te Miro Rd (a.k.a Waitakaruru stm)	12	0.012	0.012	0.004	0.022	0.004	0.65	0.016
Mangatangi River at SH2 Maramarua	12	0.020	0.019	0.012	0.027	0.008	0.13	0.020
Mangatawhiri River at Lyons Rd At Buckingham Br	12	0.010	0.009	0.005	0.018	0.005	1.12	0.012
Mangawara Stm at Rutherford Rd Br	12	0.104	0.092	0.016	0.270	0.091	1.00	0.058
Mangawhero Stm (Cambridge) at Cambridge-Ohaupo Rd	12	0.161	0.154	0.010	0.440	0.196	0.73	0.043
Matahuru Stm at Waiterimu Road Below Confluence	12	0.031	0.030	0.022	0.054	0.009	1.87	0.024
Ohaeroa Stm at SH22 Br	12	0.007	0.006	0.002	0.018	0.004	1.39	0.008
Opuatia Stm at Ponganui Rd	12	0.006	0.006	0.002	0.012	0.003	0.73	0.006
Pokaiwhenua Stm at Arapuni - Putaruru Rd	12	0.081	0.081	0.059	0.141	0.020	1.96	0.090
Waerenga Stm at Taniwha Rd	12	0.019	0.018	0.011	0.035	0.010	1.07	0.019
Waitawhiriwhiri Stm at Edgumbe Street	12	0.071	0.057	0.008	0.166	0.096	0.61	0.029
Whakapipi Stm at SH22 Br	12	0.022	0.021	0.007	0.057	0.007	2.37	0.024
Whakauru Stm at U/S SH1 Br	12	0.036	0.036	0.026	0.059	0.013	1.06	0.028
Whangamarino River at Island Block Rd	12	0.010	0.006	0.002	0.041	0.009	2.35	0.006
Whangamarino River at Jefferies Rd Br	12	0.027	0.027	0.002	0.053	0.015	0.21	0.028
Whangape Stm at Rangiriri-Glen Murray Rd	12	0.005	0.002	0.002	0.031	0.001	3.34	0.002

IQR = Inter quartile range

Location	Count	Mean	Median	Min	Max	IQR	Skew	13-17 median
<b>Waipa River and Tributaries</b>								
Kaniwhaniwha Stm at Wright Rd	12	0.008	0.007	0.005	0.012	0.002	1.23	0.007
Mangaohoi Stm at South Branch Maru Rd	12	0.031	0.031	0.010	0.048	0.020	-0.10	0.040
Mangaokewa Stm at Lawrence Street Br	11	0.013	0.013	0.002	0.025	0.004	0.54	0.015
Mangapiko Stm (Pirongia/Te Awamutu) at Bowman Rd	12	0.124	0.107	0.059	0.290	0.076	1.46	0.115
Mangapu River at Otorohanga	11	0.019	0.015	0.002	0.041	0.017	0.78	0.019
Mangatutu Stm (Waikeria) at Walker Rd Br	12	0.016	0.010	0.006	0.081	0.005	3.30	0.009
Mangauika Stm at Te Awamutu Borough W/S Intake	12	0.004	0.004	0.002	0.008	0.003	0.90	0.002
Ohote Stm at Whatawhata/Horotiu Rd	12	0.028	0.026	0.011	0.067	0.011	1.94	0.020
Puniu River at Bartons Corner Rd Br	12	0.027	0.021	0.010	0.104	0.007	3.19	0.022
Waipa River at Mangaokewa Rd	11	0.005	0.004	0.002	0.013	0.006	0.88	0.006
Waipa River at Pukehoua Bridge on Baffin Road	12	0.016	0.016	0.010	0.029	0.007	1.33	-
Waipa River at SH3 Otorohanga	11	0.006	0.007	0.002	0.012	0.004	0.21	0.008
Waitomo Stm at SH31 Otorohanga	12	0.011	0.006	0.004	0.049	0.003	2.91	0.006
Waitomo Stm at Tumutumu Rd	12	0.014	0.009	0.008	0.066	0.004	3.41	0.010
<b>Tributaries of the Upper Waikato</b>								
Kawaunui Stm at SH5 Br	12	0.042	0.041	0.032	0.066	0.015	0.99	0.049
Mangaharakeke Stm (Atiamuri) at SH30 (Off Jct SH1)	12	0.029	0.028	0.021	0.038	0.006	0.54	0.032
Mangakara Stm (Reporoa) at SH5	12	0.043	0.040	0.035	0.052	0.011	0.59	0.048
Mangakino Stm (Whakamaru) at Sandel Rd	12	0.036	0.035	0.026	0.050	0.011	0.51	0.038
Otamakokore Stm at Hossack Rd	12	0.149	0.144	0.112	0.240	0.024	1.77	0.150
Pueto Stm at Broadlands Rd Br	12	0.063	0.062	0.053	0.077	0.006	1.06	0.072
Tahunaatara Stm at Ohakuri Rd	12	0.038	0.033	0.025	0.074	0.017	1.63	0.034
Torepatutahi Stm at Vaile Rd Br	12	0.075	0.074	0.056	0.096	0.006	0.34	0.084
Waiotapu Stm at Campbell Rd Br	12	0.004	0.003	0.002	0.013	0.004	2.00	0.002
Waiotapu Stm at Homestead Rd Br	12	0.029	0.028	0.017	0.036	0.009	-0.45	0.033
Waipapa Stm (Mokai) at Tirohanga Rd Br	12	0.076	0.077	0.057	0.098	0.018	0.23	0.089
Whirinaki Stm at Corbett Rd	12	0.058	0.059	0.049	0.063	0.007	-0.61	0.061
<b>West Coast</b>								
Awakino River at Gribbon Rd	11	0.014	0.014	0.010	0.018	0.004	0.24	0.013
Awakino River at SH3 Awakano Rd Junction	11	0.008	0.007	0.002	0.012	0.004	-0.21	0.009
Manganui River at Off Manganui Rd	11	0.011	0.013	0.004	0.015	0.006	-1.07	0.013
Mangaotaki River at SH3 Br	11	0.012	0.010	0.004	0.021	0.004	0.95	0.012
Marokopa River at Speedies Rd (Off Te Anga Rd)	12	0.014	0.014	0.011	0.023	0.001	2.38	0.014
Mokau River at Awakau Rd	11	0.008	0.008	0.005	0.011	0.003	0.37	0.008
Mokau River at Mangaokewa Rd (Off SH30)	11	0.012	0.011	0.002	0.024	0.005	0.61	0.014
Mokau River at Totoro Rd Recorder	11	0.015	0.010	0.007	0.056	0.006	2.96	0.010
Mokauiti Stm at Three Way Point - Aria	11	0.009	0.007	0.002	0.019	0.005	1.08	0.008
Ohautira Stm at Waingaro Te Uku Rd	12	0.019	0.019	0.013	0.023	0.007	-0.30	0.019
Oparau River at Langdon Rd (Off Okupata Rd)	12	0.006	0.006	0.002	0.009	0.003	-0.34	0.007
Tawarau River at Off Speedies Rd	12	0.015	0.015	0.011	0.020	0.004	0.25	0.015
Waingaro River (Pukemiro) at Ruakiwi Rd Off SH22	12	0.010	0.009	0.005	0.021	0.006	1.24	0.010
Waitetuna River at Te Uku-Waingaro Rd	12	0.011	0.011	0.008	0.016	0.004	0.70	0.012
<b>Inflows to Lake Taupo</b>								
Hinemaiaia River at SH1	12	0.023	0.022	0.017	0.030	0.008	0.27	0.025
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	12	0.007	0.006	0.002	0.018	0.004	1.59	0.004
Mapara Stm (Lake Taupo) at Off Mapara Rd (Whakaipo Res)	12	0.128	0.126	0.108	0.171	0.018	1.52	0.125
Tauranga-Taupo River at 20 Metres U/S SH1 Bridge	12	0.013	0.013	0.006	0.016	0.004	-0.80	0.014
Tokaanu Power Station Tailrace Canal at SH41 Bridge Over Canal	12	0.003	0.002	0.002	0.008	0.002	1.92	0.002
Tokaanu Stm at Off SH41 Turangi	12	0.076	0.075	0.069	0.082	0.006	0.03	0.076
Waihaha River at SH32	12	0.017	0.016	0.011	0.025	0.007	0.28	0.018
Waitahanui River at Blake Rd	12	0.040	0.041	0.035	0.044	0.004	-0.66	0.042
Whangamata Stm (Kinloch) at Whangamata Rd	12	0.069	0.066	0.056	0.115	0.009	2.76	0.067
Whanganui Stm at Lakeside Lake Taupo	12	0.009	0.009	0.005	0.016	0.004	1.14	0.009
Whareroa Stm (Taupo) at Lakeside Lake Taupo	12	0.016	0.016	0.012	0.022	0.006	0.40	0.020

IQR = Inter quartile range

Location	Total Phosphorus (g/m <sup>3</sup> )							
	Count	Mean	Median	Min	Max	IQR	Skew	13-17 median
<b>Coromandel</b>								
Hikutaia River at Old Maratoto Rd	12	0.008	0.007	0.002	0.012	0.004	0.15	0.008
Kauaeranga River at Smiths Cableway/Recorder	12	0.005	0.003	0.002	0.013	0.006	1.06	0.004
Ohinemuri River at Karangahake	5	0.008	0.009	0.004	0.011	0.003	-1.34	-
Ohinemuri River at Queens Head	12	0.010	0.009	0.006	0.023	0.003	2.16	0.010
Ohinemuri River at SH25 Br	12	0.015	0.013	0.007	0.033	0.010	1.36	0.011
Tairua River at Morrisons Br Hikuai	12	0.004	0.002	0.002	0.013	0.003	2.13	0.004
Tapu River at Tapu-Coroglen Rd	12	0.005	0.004	0.002	0.010	0.006	0.63	0.004
Waiau River at E309 Rd Ford	12	0.006	0.006	0.002	0.009	0.003	-0.19	0.006
Waitekauri River at U/S Ohinemuri Conflu	11	0.009	0.007	0.005	0.026	0.004	2.66	0.006
Waiwawa River at SH25 Coroglen	12	0.005	0.005	0.002	0.011	0.004	0.81	0.003
Wharekawa River at SH25	12	0.005	0.004	0.002	0.022	0.004	2.79	0.005
<b>Hauraki</b>								
Mangawhero Stm (Kaihere) at Mangawara Rd	12	0.043	0.043	0.027	0.060	0.012	0.10	0.047
Oraka Stm at Lake Rd	12	0.096	0.092	0.061	0.134	0.025	0.31	0.113
Piako River at Kiwitahi	12	0.066	0.067	0.046	0.094	0.026	0.36	0.062
Piako River at Paeroa-Tahuna Rd Br	12	0.224	0.192	0.122	0.390	0.149	0.70	0.270
Piakonui Stm at Piakonui Rd	12	0.018	0.018	0.012	0.024	0.005	-0.06	0.020
Waihou River at Okauia	12	0.087	0.077	0.066	0.133	0.021	1.49	0.079
Waihou River at Te Aroha	12	0.086	0.083	0.060	0.131	0.020	0.95	-
Waihou River at Whites Rd	12	0.076	0.076	0.070	0.086	0.006	1.06	0.078
Waiohotu Stm at Waiohotu Rd (Off SH5)	12	0.028	0.026	0.018	0.049	0.011	1.18	0.025
Waiomou Stm at Matamata-Tauranga Rd	12	0.038	0.036	0.027	0.060	0.013	1.03	0.033
Waitakaruru River (Hauraki Plains) at Coxhead Rd Br	12	0.057	0.050	0.033	0.128	0.029	1.82	0.052
Waitoa River at Landsdowne Rd Br	12	0.062	0.055	0.011	0.120	0.045	0.35	0.045
Waitoa River at Mellon Rd Recorder	12	0.179	0.186	0.049	0.290	0.140	-0.14	0.108
<b>Tributaries of the Lower Waikato</b>								
Awaroa River (Waiuku) at Otaua Rd Br opp Moseley Rd	12	0.058	0.048	0.022	0.164	0.047	1.92	0.036
Awaroa Stm (Rotowaro) at Sansons Br @ Rotowaro-Huntly Rd	12	0.016	0.010	0.004	0.077	0.007	3.13	0.010
Karapiro Stm at Hickey Rd Bridge	12	0.083	0.087	0.055	0.107	0.018	-0.55	0.088
Kirikiri Stm at Tauhara Dr	12	0.085	0.058	0.043	0.270	0.035	2.45	0.058
Komakorau Stm at Henry Rd	12	0.095	0.099	0.042	0.133	0.043	-0.65	0.089
Little Waipa Stm at Arapuni - Putaruru Rd	12	0.080	0.074	0.054	0.159	0.019	2.36	0.074
Mangakotukutuku Stm (Rukuhia) at Peacocks Rd	12	0.843	0.670	0.179	1.820	0.830	0.64	0.425
Mangamingi Stm (Tokoroa) at Paraonui Rd Br	12	0.219	0.220	0.169	0.330	0.060	1.24	0.310
Mangaone Stm (Waikato) at Annebrooke Rd Br	12	0.137	0.135	0.073	0.230	0.038	0.89	0.112
Mangaonua Stm at Hoeka Rd	12	0.084	0.071	0.021	0.200	0.053	1.26	0.053
Mangaonua Stm at Te Miro Rd (a.k.a Waitakaruru stm)	12	0.026	0.028	0.014	0.034	0.009	-0.64	0.028
Mangatangi River at SH2 Maramarua	12	0.083	0.082	0.032	0.170	0.054	0.91	0.062
Mangatawhiri River at Lyons Rd At Buckingham Br	12	0.024	0.023	0.014	0.035	0.007	0.32	0.024
Mangawara Stm at Rutherford Rd Br	12	0.277	0.250	0.130	0.470	0.171	0.65	0.185
Mangawhero Stm (Cambridge) at Cambridge-Ohaupo Rd	12	0.321	0.290	0.110	0.810	0.275	1.05	0.153
Matahuru Stm at Waiterimu Road Below Confluence	12	0.133	0.100	0.056	0.330	0.063	1.67	0.091
Ohaeroa Stm at SH22 Br	12	0.033	0.025	0.008	0.088	0.016	1.68	0.026
Opuatia Stm at Ponganui Rd	12	0.042	0.034	0.012	0.119	0.039	1.53	0.027
Pokaiwhenua Stm at Arapuni - Putaruru Rd	12	0.114	0.098	0.082	0.210	0.038	1.76	0.108
Waerenga Stm at Taniwha Rd	12	0.048	0.042	0.018	0.116	0.023	1.81	0.042
Waitawhiriwhiri Stm at Edgecumbe Street	12	0.168	0.151	0.053	0.390	0.119	1.16	0.092
Whakapipi Stm at SH22 Br	12	0.052	0.043	0.023	0.100	0.029	0.87	0.051
Whakauru Stm at U/S SH1 Br	12	0.077	0.066	0.044	0.161	0.036	1.61	0.054
Whangamarino River at Island Block Rd	12	0.129	0.120	0.044	0.220	0.113	0.23	0.131
Whangamarino River at Jefferies Rd Br	12	0.117	0.098	0.052	0.250	0.082	1.02	0.085
Whangape Stm at Rangiriri-Glen Murray Rd	12	0.134	0.098	0.055	0.310	0.118	1.09	0.110

IQR = Inter quartile range

Location	Count	Mean	Median	Min	Max	IQR	Skew	13-17 median
<b>Waipa River and Tributaries</b>								
Kaniwhaniwha Stm at Wright Rd	12	0.028	0.025	0.013	0.064	0.012	2.00	0.024
Mangaohoi Stm at South Branch Maru Rd	12	0.040	0.037	0.028	0.053	0.017	0.24	0.052
Mangaokewa Stm at Lawrence Street Br	11	0.059	0.030	0.021	0.183	0.027	1.82	0.034
Mangapiko Stm (Pirongia/Te Awamutu) at Bowman Rd	12	0.255	0.240	0.110	0.510	0.131	0.83	0.225
Mangapu River at Otorohanga	11	0.077	0.059	0.035	0.210	0.031	2.43	0.047
Mangatutu Stm (Waikeria) at Walker Rd Br	12	0.042	0.023	0.009	0.260	0.010	3.41	0.019
Mangauika Stm at Te Awamutu Borough W/S Intake	12	0.009	0.009	0.002	0.023	0.005	1.85	0.008
Ohote Stm at Whatawhata/Horotiu Rd	12	0.099	0.097	0.061	0.156	0.016	1.07	0.084
Puniu River at Bartons Corner Rd Br	12	0.070	0.055	0.024	0.250	0.030	2.95	0.048
Waipa River at Mangaokewa Rd	11	0.021	0.014	0.010	0.086	0.010	3.11	0.016
Waipa River at Pukehoua Bridge on Baffin Road	12	0.048	0.045	0.032	0.082	0.026	0.88	-
Waipa River at SH3 Otorohanga	11	0.039	0.016	0.012	0.189	0.021	3.00	0.020
Waitomo Stm at SH31 Otorohanga	12	0.059	0.050	0.017	0.131	0.074	0.71	0.027
Waitomo Stm at Tumutumu Rd	12	0.031	0.026	0.017	0.076	0.015	1.80	0.020
<b>Tributaries of the Upper Waikato</b>								
Kawaunui Stm at SH5 Br	12	0.075	0.066	0.044	0.190	0.022	2.84	0.072
Mangaharakeke Stm (Atiamuri) at SH30 (Off Jct SH1)	12	0.054	0.045	0.039	0.076	0.021	0.68	0.051
Mangakara Stm (Reporoa) at SH5	12	0.070	0.064	0.053	0.114	0.013	1.97	0.070
Mangakino Stm (Whakamaru) at Sandel Rd	12	0.051	0.046	0.029	0.105	0.018	1.65	0.048
Otamakokore Stm at Hossack Rd	12	0.164	0.148	0.125	0.290	0.039	2.32	0.149
Pueto Stm at Broadlands Rd Br	12	0.076	0.075	0.068	0.088	0.009	0.54	0.084
Tahunaatara Stm at Ohakuri Rd	12	0.065	0.052	0.042	0.162	0.013	2.31	0.049
Torepatutahi Stm at Vaile Rd Br	12	0.088	0.087	0.073	0.109	0.018	0.42	0.094
Waiotapu Stm at Campbell Rd Br	12	0.069	0.075	0.012	0.110	0.022	-0.92	0.067
Waiotapu Stm at Homestead Rd Br	12	0.125	0.126	0.064	0.188	0.061	-0.13	0.096
Waipapa Stm (Mokai) at Tirohanga Rd Br	12	0.086	0.082	0.063	0.126	0.018	1.32	0.092
Whirinaki Stm at Corbett Rd	12	0.061	0.061	0.055	0.065	0.004	-0.60	0.063
<b>West Coast</b>								
Awakino River at Gribbon Rd	11	0.043	0.020	0.011	0.250	0.012	3.14	0.016
Awakino River at SH3 Awakun Rd Junction	11	0.045	0.014	0.010	0.310	0.016	3.24	0.017
Manganui River at Off Manganui Rd	11	0.048	0.022	0.008	0.240	0.036	2.73	0.023
Mangaotaki River at SH3 Br	11	0.046	0.022	0.012	0.290	0.016	3.27	0.023
Marokopa River at Speedies Rd (Off Te Anga Rd)	12	0.031	0.023	0.018	0.106	0.007	3.01	0.024
Mokau River at Awakau Rd	11	0.056	0.026	0.016	0.200	0.050	2.01	0.030
Mokau River at Mangaokewa Rd (Off SH30)	11	0.035	0.026	0.018	0.094	0.006	2.42	0.031
Mokau River at Totoro Rd Recorder	11	0.057	0.044	0.015	0.230	0.051	2.53	0.028
Mokauiti Stm at Three Way Point - Aria	11	0.057	0.045	0.021	0.210	0.013	3.07	0.031
Ohautira Stm at Waingaro Te Uku Rd	12	0.033	0.032	0.023	0.052	0.006	1.46	0.034
Oparau River at Langdon Rd (Off Okupata Rd)	12	0.036	0.012	0.008	0.280	0.008	3.42	0.015
Tawarau River at Off Speedies Rd	12	0.034	0.023	0.016	0.131	0.007	2.87	0.024
Waingaro River (Pukemiro) at Ruakiwi Rd Off SH22	12	0.039	0.032	0.021	0.089	0.023	1.68	0.031
Waitetuna River at Te Uku-Waingaro Rd	12	0.033	0.031	0.015	0.054	0.011	0.55	0.031
<b>Inflows to Lake Taupo</b>								
Hinemaiaia River at SH1	12	0.029	0.029	0.022	0.033	0.007	-0.28	0.032
Kuratau River at SH41 Moerangi	12	0.004	0.004	0.002	0.011	0.004	1.48	0.004
Kuratau River at Te Rae Street T10	12	0.012	0.011	0.008	0.024	0.005	1.62	0.013
Mapara Stm (Lake Taupo) at Off Mapara Rd (Whakaipo Res) T1	12	0.143	0.141	0.119	0.180	0.016	0.82	0.144
Tauranga-Taupo River at 20 Metres U/S SH1 Bridge	12	0.018	0.016	0.010	0.037	0.006	1.63	0.016
Tokaanu Power Station Tailrace Canal at SH41 Bridge Over Canal	12	0.010	0.010	0.005	0.016	0.004	0.37	0.012
Tokaanu Stm at Off SH41 Turangi	12	0.076	0.075	0.071	0.083	0.005	0.58	0.078
Waihaha River at SH32	12	0.025	0.022	0.015	0.073	0.003	3.28	0.022
Waitahanui River at Blake Rd	12	0.046	0.045	0.040	0.053	0.005	0.64	0.046
Whangamata Stm (Kinloch) at Whangamata Rd	12	0.081	0.078	0.070	0.148	0.006	3.29	0.074
Whanganui Stm at Lakeside Lake Taupo T8	12	0.013	0.013	0.009	0.020	0.005	0.84	0.014
Whareroa Stm (Taupo) at Lakeside Lake Taupo T9	12	0.031	0.027	0.016	0.089	0.011	2.83	0.031

IQR = Inter quartile range

Location	Ammoniacal Nitrogen (g/m <sup>3</sup> )							
	Count	Mean	Median	Min	Max	IQR	Skew	13-17 median
<b>Coromandel</b>								
Hikutaia River at Old Maratoto Rd	12	0.006	0.005	0.005	0.012	0.000	2.09	0.005
Kauaeranga River at Smiths Cableway/Recorder	12	0.005	0.005	0.005	0.005	0.000	0.00	0.005
Ohinemuri River at Karangahake	5	0.020	0.020	0.005	0.032	0.018	-0.42	-
Ohinemuri River at Queens Head	12	0.100	0.052	0.005	0.270	0.146	0.86	0.051
Ohinemuri River at SH25 Br	12	0.011	0.005	0.005	0.029	0.013	1.12	0.005
Tairua River at Morrisons Br Hikuai	12	0.006	0.005	0.005	0.014	0.000	3.46	0.005
Tapu River at Tapu-Coroglen Rd	12	0.005	0.005	0.005	0.005	0.000	0.00	0.005
Waiau River at E309 Rd Ford	12	0.005	0.005	0.005	0.005	0.000	0.00	0.005
Waitekauri River at U/S Ohinemuri Conflu	11	0.009	0.005	0.005	0.024	0.008	1.44	0.005
Waiwawa River at SH25 Coroglen	12	0.005	0.005	0.005	0.010	0.000	3.46	0.005
Wharekawa River at SH25	12	0.005	0.005	0.005	0.010	0.000	3.46	0.005
<b>Hauraki</b>								
Mangawhero Stm (Kaihere) at Mangawara Rd	12	0.006	0.005	0.005	0.012	0.000	2.09	0.005
Oraka Stm at Lake Rd	12	0.058	0.026	0.005	0.450	0.014	3.42	0.032
Piako River at Kiwitahi	12	0.033	0.027	0.005	0.069	0.055	0.42	0.005
Piako River at Paeroa-Tahuna Rd Br	12	0.066	0.059	0.005	0.131	0.062	0.16	0.032
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	0.015	0.012	0.005	0.063	0.011	2.89	0.011
Waihou River at Te Aroha	12	0.025	0.021	0.005	0.075	0.023	1.47	-
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	0.005	0.005	0.005	0.005	0.000	0.00	0.005
Waiomou Stm at Matamata-Tauranga Rd	12	0.014	0.012	0.005	0.031	0.014	0.80	0.010
Waitakaruru River (Hauraki Plains) at Coxhead Rd Br	12	0.047	0.029	0.005	0.170	0.070	1.37	0.013
Waitoa River at Landsdowne Rd Br	12	0.025	0.018	0.005	0.073	0.028	1.14	0.012
Waitoa River at Mellon Rd Recorder	12	0.090	0.071	0.005	0.196	0.104	0.54	0.038
<b>Tributaries of the Lower Waikato</b>								
Awaroa River (Waiuku) at Otaua Rd Br opp Moseley Rd	12	0.083	0.079	0.014	0.182	0.075	0.64	0.040
Awaroa Stm (Rotowaro) at Sansons Br @ Rotowaro-Huntly Rd	12	0.058	0.047	0.014	0.136	0.044	0.94	0.042
Karapiro Stm at Hickey Rd Bridge	12	0.029	0.020	0.005	0.123	0.022	2.62	0.019
Kirikiri Stm at Tauhara Dr	12	0.293	0.240	0.113	0.760	0.166	1.78	0.250
Komakorau Stm at Henry Rd	12	0.660	0.625	0.153	1.230	0.710	0.20	0.690
Little Waipa Stm at Arapuni - Putaruru Rd	12	0.049	0.005	0.005	0.480	0.012	3.45	0.011
Mangakotukutuku Stm (Rukuhia) at Peacocks Rd	12	0.251	0.235	0.015	0.560	0.163	0.70	0.178
Mangamingi Stm (Tokoroa) at Paraonui Rd Br	12	0.287	0.330	0.055	0.430	0.205	-0.70	0.270
Mangaone Stm (Waikato) at Annebrooke Rd Br	12	0.020	0.019	0.005	0.050	0.018	0.87	0.017
Mangaonua Stm at Hoeka Rd	12	0.073	0.081	0.005	0.121	0.066	-0.63	0.077
Mangaonua Stm at Te Miro Rd (a.k.a Waitakaruru stm)	12	0.006	0.005	0.005	0.020	0.000	3.46	0.005
Mangatangi River at SH2 Maramarua	12	0.032	0.028	0.005	0.078	0.044	0.67	0.014
Mangatawhiri River at Lyons Rd At Buckingham Br	12	0.008	0.005	0.005	0.035	0.000	3.25	0.005
Mangawara Stm at Rutherford Rd Br	12	0.415	0.470	0.185	0.550	0.170	-0.92	0.315
Mangawhero Stm (Cambridge) at Cambridge-Ohaupo Rd	12	0.152	0.149	0.005	0.360	0.127	0.59	0.099
Matahuru Stm at Waiterimu Road Below Confluence	12	0.100	0.072	0.021	0.260	0.078	1.27	0.059
Ohaeroa Stm at SH22 Br	12	0.010	0.005	0.005	0.021	0.010	0.96	0.005
Opuatia Stm at Ponganui Rd	12	0.013	0.013	0.005	0.023	0.011	-0.01	0.011
Pokaiwhenua Stm at Arapuni - Putaruru Rd	12	0.014	0.010	0.005	0.032	0.020	0.47	0.005
Waerenga Stm at Taniwha Rd	12	0.014	0.011	0.005	0.045	0.011	1.92	0.012
Waitawhiriwhiri Stm at Edgumbe Street	12	0.526	0.475	0.310	0.780	0.225	0.76	0.580
Whakapipi Stm at SH22 Br	12	0.014	0.015	0.005	0.033	0.015	0.66	0.013
Whakauru Stm at U/S SH1 Br	12	0.013	0.009	0.005	0.031	0.011	1.14	0.010
Whangamarino River at Island Block Rd	12	0.110	0.064	0.005	0.400	0.123	1.71	0.052
Whangamarino River at Jefferies Rd Br	12	0.063	0.046	0.005	0.168	0.064	0.91	0.034
Whangape Stm at Rangiriri-Glen Murray Rd	12	0.021	0.011	0.005	0.053	0.038	0.67	0.005

IQR = Inter quartile range

Location	Count	Mean	Median	Min	Max	IQR	Skew	13-17 median
<b>Waipa River and Tributaries</b>								
Kaniwhaniwha Stm at Wright Rd	12	0.024	0.024	0.005	0.041	0.010	-0.03	0.022
Mangaohoi Stm at South Branch Maru Rd	12	0.006	0.005	0.005	0.015	0.000	3.46	0.005
Mangaokewa Stm at Lawrence Street Br	11	0.019	0.016	0.005	0.071	0.008	2.78	0.013
Mangapiko Stm (Pirongia/Te Awamutu) at Bowman Rd	12	0.084	0.084	0.005	0.250	0.086	1.07	0.039
Mangapu River at Otorohanga	11	0.027	0.028	0.005	0.054	0.019	0.15	0.021
Mangatutu Stm (Waikeria) at Walker Rd Br	12	0.015	0.010	0.005	0.080	0.009	3.23	0.005
Mangauika Stm at Te Awamutu Borough W/S Intake	12	0.005	0.005	0.005	0.005	0.000	0.00	0.005
Ohote Stm at Whatawhata/Horotiu Rd	12	0.086	0.082	0.005	0.200	0.055	0.39	0.067
Puniu River at Bartons Corner Rd Br	12	0.034	0.025	0.005	0.133	0.012	2.61	0.017
Waipa River at Mangaokewa Rd	11	0.009	0.010	0.005	0.016	0.006	0.39	0.005
Waipa River at Pukehoua Bridge on Baffin Road	12	0.039	0.030	0.012	0.076	0.037	0.59	-
Waipa River at SH3 Otorohanga	11	0.020	0.019	0.005	0.062	0.019	1.64	0.012
Waitomo Stm at SH31 Otorohanga	12	0.031	0.023	0.005	0.112	0.034	1.93	0.016
Waitomo Stm at Tumutumu Rd	12	0.014	0.005	0.005	0.103	0.000	3.45	0.005
<b>Tributaries of the Upper Waikato</b>								
Kawaunui Stm at SH5 Br	12	0.015	0.009	0.005	0.064	0.013	2.53	0.014
Mangaharakeke Stm (Atiamuri) at SH30 (Off Jct SH1)	12	0.017	0.005	0.005	0.114	0.011	3.32	0.005
Mangakara Stm (Reporoa) at SH5	12	0.021	0.019	0.010	0.041	0.011	1.12	0.026
Mangakino Stm (Whakamaru) at Sandel Rd	12	0.008	0.005	0.005	0.030	0.000	2.36	0.005
Otamakokore Stm at Hossack Rd	12	0.014	0.012	0.005	0.029	0.016	0.52	0.005
Pueto Stm at Broadlands Rd Br	12	0.007	0.005	0.005	0.014	0.006	1.11	0.005
Tahunaatara Stm at Ohakuri Rd	12	0.024	0.005	0.005	0.161	0.013	3.13	0.005
Torepatutahi Stm at Vaile Rd Br	12	0.006	0.005	0.005	0.014	0.000	2.14	0.005
Waiotapu Stm at Campbell Rd Br	12	0.837	0.810	0.690	1.100	0.185	1.01	0.990
Waiotapu Stm at Homestead Rd Br	12	0.323	0.325	0.167	0.470	0.085	-0.33	0.320
Waipapa Stm (Mokai) at Tirohanga Rd Br	12	0.005	0.005	0.005	0.005	0.000	0.00	0.005
Whirinaki Stm at Corbett Rd	12	0.005	0.005	0.005	0.005	0.000	0.00	0.005
<b>West Coast</b>								
Awakino River at Gribbon Rd	11	0.008	0.005	0.005	0.030	0.000	2.93	0.005
Awakino River at SH3 Awakano Rd Junction	11	0.010	0.005	0.005	0.027	0.010	1.44	0.005
Manganui River at Off Manganui Rd	11	0.008	0.005	0.005	0.021	0.008	1.49	0.005
Mangaotaki River at SH3 Br	11	0.008	0.005	0.005	0.025	0.006	1.96	0.005
Marokopa River at Speedies Rd (Off Te Anga Rd)	12	0.006	0.005	0.005	0.011	0.000	3.46	0.005
Mokau River at Awakau Rd	11	0.026	0.020	0.005	0.093	0.014	2.19	0.014
Mokau River at Mangaokewa Rd (Off SH30)	11	0.008	0.005	0.005	0.031	0.000	2.78	0.005
Mokau River at Totoro Rd Recorder	11	0.015	0.005	0.005	0.056	0.014	1.95	0.005
Mokauiti Stm at Three Way Point - Aria	11	0.025	0.025	0.005	0.054	0.021	0.69	0.019
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	0.006	0.005	0.005	0.015	0.000	3.46	0.005
Tawarau River at Off Speedies Rd	12	0.008	0.005	0.005	0.037	0.000	3.46	0.005
Waingaro River (Pukemiro) at Ruakiwi Rd Off SH22	12	0.010	0.005	0.005	0.021	0.010	0.72	0.008
Waitetuna River at Te Uku-Waingaro Rd	12	0.008	0.005	0.005	0.032	0.003	3.05	0.005
<b>Inflows to Lake Taupo</b>								
Hinemaiaia River at SH1	12	0.006	0.005	0.005	0.011	0.000	2.10	0.005
Kuratau River at SH41 Moerangi	12	0.005	0.005	0.005	0.005	0.000	0.00	0.005
Kuratau River at Te Rae Street T10	12	0.006	0.005	0.005	0.013	0.000	2.08	0.005
Mapara Stm (Lake Taupo) at Off Mapara Rd (Whakaipo Res) T1	12	0.010	0.008	0.005	0.019	0.010	0.37	0.010
Tauranga-Taupo River at 20 Metres U/S SH1 Bridge	12	0.006	0.005	0.005	0.011	0.000	3.46	0.005
Tokaanu Power Station Tailrace Canal at SH41 Bridge Over Canal	12	0.005	0.005	0.005	0.005	0.000	0.00	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	0.005	0.000	0.00	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	0.019	0.003	1.94	0.005
Whanganui Stm at Lakeside Lake Taupo T8	12	0.005	0.005	0.005	0.005	0.000	0.00	0.005
Whareroa Stm (Taupo) at Lakeside Lake Taupo T9	12	0.005	0.005	0.005	0.005	0.000	0.00	0.005

IQR = Inter quartile range

Location	Nitrate/Nitrite Nitrogen (g/m <sup>3</sup> )							
	Count	Mean	Median	Min	Max	IQR	Skew	13-17 median
<b>Coromandel</b>								
Hikutaia River at Old Maratoto Rd	12	0.09	0.08	0.00	0.22	0.14	0.39	0.02
Kauaeranga River at Smiths Cableway/Recorder	12	0.05	0.04	0.00	0.17	0.10	0.80	0.03
Ohinemuri River at Karangahake	5	0.60	0.70	0.18	0.84	0.31	-1.36	-
Ohinemuri River at Queens Head	12	0.98	1.12	0.16	1.24	0.21	-1.90	0.95
Ohinemuri River at SH25 Br	12	0.60	0.68	0.07	0.97	0.40	-0.76	0.46
Tairua River at Morrisons Br Hikuai	12	0.04	0.04	0.00	0.12	0.06	0.67	0.02
Tapu River at Tapu-Coroglen Rd	12	0.01	0.00	0.00	0.04	0.01	2.44	0.00
Waiau River at E309 Rd Ford	12	0.04	0.03	0.00	0.09	0.06	0.52	0.01
Waitekauri River at U/S Ohinemuri Conflu	11	0.19	0.22	0.00	0.37	0.24	-0.30	0.11
Waiwawa River at SH25 Coroglen	12	0.02	0.01	0.00	0.06	0.02	1.77	0.01
Wharekawa River at SH25	12	0.08	0.07	0.00	0.21	0.10	0.59	0.04
<b>Hauraki</b>								
Mangawhero Stm (Kaihere) at Mangawara Rd	12	0.40	0.45	0.22	0.52	0.13	-1.04	0.32
Oraka Stm at Lake Rd	12	2.32	2.30	1.87	2.70	0.35	-0.10	2.10
Piako River at Kiwitahi	12	1.57	1.56	0.00	3.30	1.78	0.01	0.76
Piako River at Paeroa-Tahuna Rd Br	12	1.73	1.84	0.00	3.30	0.72	-0.12	1.32
Piakonui Stm at Piakonui Rd	12	0.42	0.44	0.12	0.67	0.30	-0.27	0.22
Waihou River at Okauia	12	1.40	1.49	0.97	1.69	0.53	-0.58	1.15
Waihou River at Te Aroha	12	1.28	1.39	0.71	1.65	0.55	-0.60	-
Waihou River at Whites Rd	12	0.85	0.85	0.75	0.90	0.04	-1.39	0.76
Waiohotu Stm at Waiohotu Rd (Off SH5)	12	0.19	0.20	0.13	0.26	0.08	-0.06	0.15
Waiomou Stm at Matamata-Tauranga Rd	12	0.72	0.81	0.29	1.06	0.55	-0.27	0.51
Waitakaruru River (Hauraki Plains) at Coxhead Rd Br	12	0.30	0.34	0.00	0.61	0.47	-0.19	0.21
Waitoa River at Landsdowne Rd Br	12	2.00	2.00	0.99	2.90	0.93	-0.26	1.50
Waitoa River at Mellon Rd Recorder	12	2.49	2.50	0.96	3.70	0.85	-0.62	2.03
<b>Tributaries of the Lower Waikato</b>								
Awaroa River (Waiuku) at Otaua Rd Br opp Moseley Rd	12	1.68	1.86	0.40	2.50	0.83	-0.87	1.45
Awaroa Stm (Rotowaro) at Sansons Br @ Rotowaro-Huntly Rd	12	0.48	0.49	0.10	0.69	0.26	-0.78	0.58
Karapiro Stm at Hickey Rd Bridge	12	0.95	0.96	0.21	1.87	0.60	0.28	0.62
Kirikiriroa Stm at Tauhara Dr	12	0.99	1.01	0.68	1.41	0.24	0.19	0.77
Komakorau Stm at Henry Rd	12	1.49	1.41	1.04	2.30	0.48	0.95	1.35
Little Waipa Stm at Arapuni - Putaruru Rd	12	2.39	2.45	1.62	2.90	0.77	-0.55	1.67
Mangakotukutuku Stm (Rukuhia) at Peacocks Rd	12	0.99	0.93	0.72	1.48	0.22	1.23	0.83
Mangamingi Stm (Tokoroa) at Paraonui Rd Br	12	2.82	2.95	1.99	3.40	0.80	-0.75	2.60
Mangaone Stm (Waikato) at Annebrooke Rd Br	12	2.37	2.35	1.81	2.90	0.60	0.16	2.50
Mangaonua Stm at Hoeka Rd	12	1.54	1.58	0.95	2.10	0.47	-0.16	1.48
Mangaonua Stm at Te Miro Rd (a.k.a Waitakaruru stm)	12	0.71	0.71	0.28	1.21	0.51	0.10	0.47
Mangatangi River at SH2 Maramarua	12	0.34	0.40	0.00	0.74	0.42	-0.02	0.23
Mangatawhiri River at Lyons Rd At Buckingham Br	12	0.11	0.10	0.00	0.24	0.21	0.10	0.06
Mangawara Stm at Rutherford Rd Br	12	0.99	0.95	0.51	1.85	0.43	1.15	0.82
Mangawhero Stm (Cambridge) at Cambridge-Ohaupo Rd	12	2.06	2.02	1.32	2.90	0.40	0.27	1.93
Matahuru Stm at Waiterimu Road Below Confluence	12	0.75	0.79	0.06	1.40	0.43	-0.22	0.72
Ohaeroa Stm at SH22 Br	12	1.79	1.76	1.49	2.20	0.45	0.38	1.62
Opuatia Stm at Ponganui Rd	12	0.90	0.85	0.63	1.13	0.26	0.09	0.77
Pokaiwhenua Stm at Arapuni - Putaruru Rd	12	2.39	2.45	1.77	2.80	0.61	-0.70	1.84
Waerenga Stm at Taniwha Rd	12	0.95	1.08	0.36	1.30	0.45	-0.84	0.84
Waitawhiriwhiri Stm at Edgumbe Street	12	0.89	0.88	0.52	1.28	0.24	0.11	0.85
Whakapipi Stm at SH22 Br	12	4.81	5.05	3.40	5.90	1.35	-0.52	3.60
Whakauru Stm at U/S SH1 Br	12	1.06	1.08	0.67	1.36	0.46	-0.37	0.47
Whangamarino River at Island Block Rd	12	0.18	0.11	0.00	0.51	0.30	0.72	0.13
Whangamarino River at Jefferies Rd Br	12	0.72	0.71	0.02	1.44	0.83	-0.10	0.63
Whangape Stm at Rangiriri-Glen Murray Rd	12	0.15	0.06	0.00	0.92	0.19	2.78	0.02

IQR = Inter quartile range



Location	Count	Mean	Median	Min	Max	IQR	Skew	13-17 median
<b>Waipa River and Tributaries</b>								
Kaniwhaniwha Stm at Wright Rd	12	0.43	0.43	0.07	0.74	0.49	-0.24	0.40
Mangaohoi Stm at South Branch Maru Rd	12	0.26	0.31	0.13	0.36	0.16	-0.37	0.21
Mangaokewa Stm at Lawrence Street Br	11	0.74	0.87	0.31	1.04	0.45	-0.68	0.57
Mangapiko Stm (Pirongia/Te Awamutu) at Bowman Rd	12	2.21	2.40	0.66	2.90	0.80	-1.26	1.69
Mangapu River at Otorohanga	11	1.00	1.15	0.46	1.26	0.45	-0.90	0.81
Mangatutu Stm (Waikeria) at Walker Rd Br	12	0.58	0.76	0.15	1.01	0.56	-0.22	0.33
Mangauika Stm at Te Awamutu Borough W/S Intake	12	0.17	0.21	0.03	0.24	0.13	-1.04	0.21
Ohote Stm at Whatawhata/Horotiu Rd	12	0.57	0.58	0.01	1.12	0.34	-0.35	0.47
Puniu River at Bartons Corner Rd Br	12	1.06	1.26	0.34	1.94	0.79	0.03	0.66
Waipa River at Mangaokewa Rd	11	0.37	0.43	0.18	0.51	0.21	-0.61	0.30
Waipa River at Pukehoua Bridge on Baffin Road	12	0.81	0.94	0.26	1.17	0.57	-0.49	-
Waipa River at SH3 Otorohanga	11	0.63	0.77	0.11	0.99	0.58	-0.58	0.44
Waitomo Stm at SH31 Otorohanga	12	0.58	0.62	0.30	0.74	0.23	-0.85	0.53
Waitomo Stm at Tumutumu Rd	12	0.65	0.69	0.45	0.75	0.10	-1.34	0.62
<b>Tributaries of the Upper Waikato</b>								
Kawaunui Stm at SH5 Br	12	3.00	3.10	2.10	3.70	0.65	-0.73	2.60
Mangaharakeke Stm (Atiamuri) at SH30 (Off Jct SH1)	12	0.82	0.85	0.45	1.17	0.40	-0.28	0.53
Mangakara Stm (Reporoa) at SH5	12	1.68	1.75	1.21	1.91	0.33	-1.09	1.30
Mangakino Stm (Whakamaru) at Sandel Rd	12	0.87	0.92	0.57	1.09	0.30	-0.76	0.67
Otamakokore Stm at Hossack Rd	12	1.53	1.61	0.67	2.50	1.08	0.04	0.76
Pueto Stm at Broadlands Rd Br	12	0.65	0.70	0.48	0.79	0.19	-0.51	0.47
Tahunaatara Stm at Ohakuri Rd	12	0.94	0.97	0.48	1.39	0.44	-0.18	0.61
Torepatutahi Stm at Vaile Rd Br	12	0.86	0.90	0.35	1.33	0.51	-0.17	0.49
Waiotapu Stm at Campbell Rd Br	12	0.90	0.92	0.66	1.00	0.14	-1.34	0.92
Waiotapu Stm at Homestead Rd Br	12	1.67	1.71	1.06	2.20	0.56	-0.44	1.33
Waipapa Stm (Mokai) at Tirohanga Rd Br	12	1.50	1.52	1.13	1.79	0.36	-0.27	1.28
Whirinaki Stm at Corbett Rd	12	0.89	0.87	0.70	1.15	0.12	0.75	0.78
<b>West Coast</b>								
Awakino River at Gribbon Rd	11	0.11	0.14	0.04	0.16	0.07	-0.50	0.12
Awakino River at SH3 Awakau Rd Junction	11	0.27	0.33	0.08	0.40	0.20	-0.45	0.23
Manganui River at Off Manganui Rd	11	0.16	0.17	0.02	0.27	0.15	-0.27	0.14
Mangaotaki River at SH3 Br	11	0.76	0.81	0.42	1.00	0.33	-0.42	0.69
Marokopa River at Speedies Rd (Off Te Anga Rd)	12	0.30	0.32	0.19	0.37	0.11	-0.41	0.29
Mokau River at Awakau Rd	11	0.55	0.62	0.19	0.78	0.38	-0.52	0.43
Mokau River at Mangaokewa Rd (Off SH30)	11	0.53	0.58	0.22	0.78	0.36	-0.42	0.34
Mokau River at Totoro Rd Recorder	11	0.69	0.75	0.27	1.01	0.37	-0.64	0.55
Mokauiti Stm at Three Way Point - Aria	11	0.44	0.47	0.10	0.82	0.40	0.02	0.29
Ohautira Stm at Waingaro Te Uku Rd	12	0.29	0.31	0.03	0.52	0.29	-0.47	0.33
Oparau River at Langdon Rd (Off Okupata Rd)	12	0.16	0.19	0.02	0.33	0.26	-0.09	0.13
Tawarau River at Off Speedies Rd	12	0.34	0.34	0.23	0.43	0.11	-0.19	0.33
Waingaro River (Pukemiro) at Ruakiwi Rd Off SH22	12	0.49	0.58	0.00	0.97	0.56	-0.43	0.50
Waitetuna River at Te Uku-Waingaro Rd	12	0.42	0.44	0.13	0.74	0.33	-0.26	0.44
<b>Inflows to Lake Taupo</b>								
Hinemaiaia River at SH1	12	0.12	0.12	0.09	0.16	0.03	0.47	0.10
Kuratau River at SH41 Moerangi	12	0.31	0.31	0.19	0.44	0.11	0.06	0.30
Kuratau River at Te Rae Street T10	12	0.71	0.73	0.48	1.02	0.16	0.43	0.66
Mapara Stm (Lake Taupo) at Off Mapara Rd (Whakaipo Res) T1	12	0.72	0.72	0.64	0.79	0.09	-0.27	0.77
Tauranga-Taupo River at 20 Metres U/S SH1 Bridge	12	0.06	0.06	0.01	0.10	0.03	-0.89	0.06
Tokaanu Power Station Tailrace Canal at SH41 Bridge Over Canal	12	0.00	0.00	0.00	0.01	0.00	0.98	0.00
Tokaanu Stm at Off SH41 Turangi	12	0.49	0.48	0.44	0.56	0.06	0.41	0.44
Waihaha River at SH32	12	0.10	0.11	0.05	0.14	0.04	-0.38	0.11
Waitahanui River at Blake Rd	12	0.39	0.39	0.37	0.43	0.02	1.23	0.40
Whangamata Stm (Kinloch) at Whangamata Rd	12	1.29	1.28	1.00	1.67	0.31	0.56	1.35
Whanganui Stm at Lakeside Lake Taupo T8	12	0.42	0.44	0.23	0.55	0.17	-0.55	0.31
Whareroa Stm (Taupo) at Lakeside Lake Taupo T9	12	0.81	0.89	0.54	1.06	0.28	-0.39	0.68

IQR = Inter quartile range

Location	Total Kjeldahl Nitrogen (g/m <sup>3</sup> )							
	Count	Mean	Median	Min	Max	IQR	Skew	13-17 median
<b>Coromandel</b>								
Hikutaia River at Old Maratoto Rd	12	0.11	0.11	0.07	0.17	0.05	0.43	0.08
Kauaeranga River at Smiths Cableway/Recorder	12	0.11	0.10	0.03	0.22	0.10	0.68	0.07
Ohinemuri River at Karangahake	5	0.19	0.18	0.13	0.28	0.08	1.13	-
Ohinemuri River at Queens Head	12	0.34	0.30	0.17	0.65	0.21	0.80	0.25
Ohinemuri River at SH25 Br	12	0.18	0.16	0.10	0.44	0.08	2.33	0.13
Tairua River at Morrisons Br Hikuai	12	0.10	0.09	0.03	0.22	0.06	0.91	0.07
Tapu River at Tapu-Coroglen Rd	12	0.09	0.09	0.05	0.20	0.05	1.49	0.07
Waiau River at E309 Rd Ford	12	0.10	0.10	0.05	0.16	0.03	0.43	0.08
Waitekauri River at U/S Ohinemuri Conflu	11	0.16	0.15	0.06	0.34	0.09	0.99	0.10
Waiwawa River at SH25 Coroglen	12	0.09	0.09	0.05	0.16	0.03	1.24	0.07
Wharekawa River at SH25	12	0.10	0.10	0.03	0.19	0.06	0.46	0.08
<b>Hauraki</b>								
Mangawhero Stm (Kaihere) at Mangawara Rd	12	0.12	0.12	0.07	0.22	0.03	1.81	0.11
Oraka Stm at Lake Rd	12	0.36	0.35	0.20	0.72	0.12	1.63	0.31
Piako River at Kiwitahi	12	0.49	0.44	0.30	0.70	0.29	0.36	0.36
Piako River at Paeroa-Tahuna Rd Br	12	0.96	0.93	0.46	1.76	0.36	0.79	0.57
Piakonui Stm at Piakonui Rd	12	0.18	0.18	0.14	0.24	0.07	0.38	0.16
Waihou River at Okauia	12	0.26	0.26	0.17	0.47	0.13	1.22	0.20
Waihou River at Te Aroha	12	0.34	0.35	0.15	0.51	0.10	-0.36	-
Waihou River at Whites Rd	12	0.06	0.06	0.03	0.15	0.05	1.17	0.03
Waiohotu Stm at Waiohotu Rd (Off SH5)	12	0.20	0.17	0.11	0.39	0.08	1.36	0.15
Waiomou Stm at Matamata-Tauranga Rd	12	0.22	0.22	0.15	0.31	0.07	0.33	0.18
Waitakaruru River (Hauraki Plains) at Coxhead Rd Br	12	0.40	0.34	0.23	0.81	0.21	1.34	0.34
Waitoa River at Landsdowne Rd Br	12	0.54	0.48	0.32	1.05	0.27	1.37	0.38
Waitoa River at Mellon Rd Recorder	12	0.91	0.92	0.35	1.50	0.57	0.11	0.49
<b>Tributaries of the Lower Waikato</b>								
Awaroa River (Waiuku) at Otaua Rd Br opp Moseley Rd	12	0.68	0.62	0.48	1.31	0.14	2.58	0.56
Awaroa Stm (Rotowaro) at Sansons Br @ Rotowaro-Huntly Rd	12	0.28	0.31	0.21	0.36	0.10	-0.18	0.27
Karapiro Stm at Hickey Rd Bridge	12	0.38	0.38	0.26	0.52	0.14	0.25	0.31
Kirikiriroa Stm at Tauhara Dr	12	0.92	0.75	0.63	2.30	0.22	2.57	0.65
Komakorau Stm at Henry Rd	12	2.10	2.25	0.90	2.60	0.67	-1.31	1.85
Little Waipa Stm at Arapuni - Putaruru Rd	12	0.29	0.23	0.13	0.81	0.11	2.74	0.21
Mangakotukutuku Stm (Rukuhia) at Peacocks Rd	12	1.67	1.85	0.57	3.00	1.19	-0.03	1.09
Mangamingi Stm (Tokoroa) at Paraonui Rd Br	12	0.74	0.74	0.48	1.04	0.30	0.09	0.68
Mangaone Stm (Waikato) at Annebrooke Rd Br	12	0.57	0.57	0.32	0.89	0.17	0.58	0.39
Mangaonua Stm at Hoeka Rd	12	0.53	0.53	0.27	0.93	0.24	0.60	0.39
Mangaonua Stm at Te Miro Rd (a.k.a Waitakaruru stm)	12	0.23	0.23	0.16	0.32	0.07	0.50	0.22
Mangatangi River at SH2 Maramarua	12	0.49	0.48	0.21	1.03	0.28	1.13	0.35
Mangatawhiri River at Lyons Rd At Buckingham Br	12	0.15	0.14	0.10	0.25	0.07	1.11	0.14
Mangawara Stm at Rutherford Rd Br	12	1.55	1.44	0.58	2.60	0.89	0.10	1.17
Mangawhero Stm (Cambridge) at Cambridge-Ohaupo Rd	12	1.29	1.28	0.50	2.10	0.92	0.01	0.72
Matahuru Stm at Waiterimu Road Below Confluence	12	0.92	0.69	0.40	2.30	0.53	1.62	0.63
Ohaeroa Stm at SH22 Br	12	0.36	0.31	0.17	0.71	0.20	1.23	0.28
Opuatia Stm at Ponganui Rd	12	0.33	0.31	0.23	0.54	0.13	1.08	0.30
Pokaiwhenua Stm at Arapuni - Putaruru Rd	12	0.32	0.27	0.19	0.60	0.14	1.32	0.25
Waerenga Stm at Taniwha Rd	12	0.32	0.29	0.19	0.63	0.14	1.64	0.27
Waitawhiriwhiri Stm at Edgecumbe Street	12	1.52	1.45	1.06	2.60	0.24	2.19	1.19
Whakapipi Stm at SH22 Br	12	0.39	0.40	0.26	0.57	0.12	0.58	0.36
Whakauru Stm at U/S SH1 Br	12	0.37	0.35	0.27	0.81	0.09	2.89	0.27
Whangamarino River at Island Block Rd	12	1.84	1.98	0.81	3.10	1.09	0.07	1.79
Whangamarino River at Jefferies Rd Br	12	0.61	0.50	0.28	1.55	0.28	2.12	0.45
Whangape Stm at Rangiriri-Glen Murray Rd	12	1.64	1.37	0.45	3.20	1.26	0.54	1.89

IQR = Inter quartile range

Location	Count	Mean	Median	Min	Max	IQR	Skew	13-17 median
<b>Waipa River and Tributaries</b>								
Kaniwhaniwha Stm at Wright Rd	12	0.26	0.24	0.17	0.51	0.06	2.00	0.22
Mangaohoi Stm at South Branch Maru Rd	12	0.15	0.15	0.08	0.34	0.07	1.94	0.14
Mangaokewa Stm at Lawrence Street Br	11	0.39	0.28	0.19	1.07	0.14	1.97	0.24
Mangapiko Stm (Pirongia/Te Awamutu) at Bowman Rd	12	1.03	0.98	0.39	2.30	0.57	1.45	0.62
Mangapu River at Otorohanga	11	0.46	0.37	0.24	0.96	0.26	1.41	0.28
Mangatutu Stm (Waikeria) at Walker Rd Br	12	0.25	0.17	0.11	1.15	0.07	3.35	0.15
Mangauika Stm at Te Awamutu Borough W/S Intake	12	0.07	0.07	0.03	0.18	0.07	1.00	0.06
Ohote Stm at Whatawhata/Horotiu Rd	12	1.02	1.08	0.59	1.38	0.27	-0.56	0.71
Puniu River at Bartons Corner Rd Br	12	0.44	0.34	0.23	1.47	0.18	2.88	0.26
Waipa River at Mangaokewa Rd	11	0.21	0.18	0.14	0.50	0.09	2.60	0.19
Waipa River at Pukehoua Bridge on Baffin Road	12	0.38	0.34	0.24	0.70	0.20	1.16	-
Waipa River at SH3 Otorohanga	11	0.28	0.24	0.14	0.93	0.13	2.89	0.20
Waitomo Stm at SH31 Otorohanga	12	0.37	0.28	0.13	1.03	0.22	1.82	0.22
Waitomo Stm at Tumutumu Rd	12	0.19	0.17	0.11	0.35	0.09	1.20	0.14
<b>Tributaries of the Upper Waikato</b>								
Kawaunui Stm at SH5 Br	12	0.37	0.34	0.21	0.75	0.11	1.78	0.31
Mangaharakeke Stm (Atiamuri) at SH30 (Off Jct SH1)	12	0.28	0.24	0.20	0.48	0.10	1.60	0.20
Mangakara Stm (Reporoa) at SH5	12	0.31	0.31	0.21	0.41	0.08	0.19	0.27
Mangakino Stm (Whakamaru) at Sandel Rd	12	0.22	0.17	0.10	0.62	0.06	2.13	0.13
Otamakokore Stm at Hossack Rd	12	0.38	0.34	0.19	1.04	0.09	2.97	0.25
Pueto Stm at Broadlands Rd Br	12	0.12	0.11	0.07	0.24	0.04	2.24	0.09
Tahunaatara Stm at Ohakuri Rd	12	0.34	0.28	0.17	0.86	0.11	2.20	0.22
Torepatutahi Stm at Vaile Rd Br	12	0.17	0.18	0.09	0.26	0.04	-0.07	0.11
Waiotapu Stm at Campbell Rd Br	12	1.01	1.00	0.82	1.22	0.22	0.35	1.10
Waiotapu Stm at Homestead Rd Br	12	0.83	0.88	0.40	1.08	0.22	-1.13	0.67
Waipapa Stm (Mokai) at Tirohanga Rd Br	12	0.21	0.22	0.09	0.44	0.07	1.36	0.16
Whirinaki Stm at Corbett Rd	12	0.09	0.09	0.03	0.16	0.06	0.25	0.06
<b>West Coast</b>								
Awakino River at Gribbon Rd	11	0.12	0.07	0.03	0.54	0.08	2.67	0.06
Awakino River at SH3 Awakano Rd Junction	11	0.22	0.11	0.09	1.18	0.05	3.24	0.12
Manganui River at Off Manganui Rd	11	0.17	0.11	0.06	0.69	0.06	2.96	0.10
Mangaotaki River at SH3 Br	11	0.30	0.19	0.13	1.44	0.04	3.29	0.18
Marokopa River at Speedies Rd (Off Te Anga Rd)	12	0.22	0.16	0.09	0.61	0.12	1.76	0.12
Mokau River at Awakau Rd	11	0.36	0.25	0.17	0.89	0.22	1.57	0.24
Mokau River at Mangaokewa Rd (Off SH30)	11	0.26	0.23	0.10	0.62	0.11	1.96	0.21
Mokau River at Totoro Rd Recorder	11	0.41	0.34	0.17	1.18	0.24	2.21	0.25
Mokauiti Stm at Three Way Point - Aria	11	0.39	0.32	0.22	1.02	0.08	2.52	0.31
Ohautira Stm at Waingaro Te Uku Rd	12	0.17	0.15	0.10	0.33	0.09	1.30	0.15
Oparau River at Langdon Rd (Off Okupata Rd)	12	0.25	0.10	0.07	1.85	0.06	3.44	0.11
Tawarau River at Off Speedies Rd	12	0.20	0.14	0.10	0.78	0.05	3.00	0.14
Waingaro River (Pukemiro) at Ruakiwi Rd Off SH22	12	0.26	0.25	0.18	0.59	0.08	2.79	0.23
Waitetuna River at Te Uku-Waingaro Rd	12	0.19	0.18	0.11	0.36	0.05	1.87	0.17
<b>Inflows to Lake Taupo</b>								
Hinemaiaia River at SH1	12	0.09	0.10	0.03	0.14	0.04	-0.73	0.09
Kuratau River at SH41 Moerangi	12	0.11	0.11	0.03	0.19	0.08	-0.20	0.09
Kuratau River at Te Rae Street T10	12	0.15	0.17	0.09	0.20	0.06	-0.55	0.15
Mapara Stm (Lake Taupo) at Off Mapara Rd (Whakaipo Res) T1	12	0.22	0.23	0.14	0.30	0.10	-0.10	0.19
Tauranga-Taupo River at 20 Metres U/S SH1 Bridge	12	0.08	0.07	0.03	0.22	0.03	2.23	0.06
Tokaanu Power Station Tailrace Canal at SH41 Bridge Over Canal	12	0.11	0.11	0.06	0.16	0.07	0.06	0.09
Tokaanu Stm at Off SH41 Turangi	12	0.04	0.03	0.03	0.08	0.04	0.56	0.03
Waihaha River at SH32	12	0.10	0.11	0.03	0.23	0.06	0.74	0.08
Waitahanui River at Blake Rd	12	0.08	0.09	0.03	0.15	0.06	-0.04	0.08
Whangamata Stm (Kinloch) at Whangamata Rd	12	0.23	0.25	0.09	0.35	0.11	-0.37	0.13
Whanganui Stm at Lakeside Lake Taupo T8	12	0.12	0.14	0.05	0.16	0.05	-1.14	0.10
Whareroa Stm (Taupo) at Lakeside Lake Taupo T9	12	0.24	0.21	0.16	0.51	0.08	2.24	0.17

IQR = Inter quartile range

Location	Total Nitrogen (g/m <sup>3</sup> )							
	Count	Mean	Median	Min	Max	IQR	Skew	13-17 median
<b>Coromandel</b>								
Hikutaia River at Old Maratoto Rd	12	0.20	0.19	0.10	0.30	0.14	0.15	0.12
Kauaeranga River at Smiths Cableway/Recorder	12	0.16	0.14	0.03	0.29	0.18	0.14	0.10
Ohinemuri River at Karangahake	5	0.79	0.83	0.46	0.99	0.26	-1.17	-
Ohinemuri River at Queens Head	12	1.32	1.42	0.34	1.75	0.40	-1.53	1.23
Ohinemuri River at SH25 Br	12	0.78	0.84	0.25	1.16	0.46	-0.52	0.59
Tairua River at Morrisons Br Hikuai	12	0.15	0.14	0.07	0.26	0.07	0.76	0.09
Tapu River at Tapu-Coroglen Rd	12	0.10	0.10	0.05	0.20	0.05	1.14	0.08
Waiau River at E309 Rd Ford	12	0.14	0.14	0.06	0.22	0.06	0.03	0.10
Waitekauri River at U/S Ohinemuri Conflu	11	0.35	0.40	0.13	0.62	0.17	0.05	0.23
Waiwawa River at SH25 Coroglen	12	0.11	0.10	0.07	0.17	0.04	0.95	0.08
Wharekawa River at SH25	12	0.18	0.17	0.11	0.34	0.04	1.66	0.14
<b>Hauraki</b>								
Mangawhero Stm (Kaihere) at Mangawara Rd	12	0.52	0.54	0.35	0.66	0.10	-0.52	0.45
Oraka Stm at Lake Rd	12	2.68	2.69	2.08	3.42	0.44	0.40	2.45
Piako River at Kiwitahi	12	2.06	2.05	0.30	3.80	2.06	-0.07	1.21
Piako River at Paeroa-Tahuna Rd Br	12	2.69	2.76	0.46	4.48	1.18	-0.51	1.94
Piakonui Stm at Piakonui Rd	12	0.60	0.62	0.31	0.84	0.35	-0.25	0.37
Waihou River at Okauia	12	1.66	1.77	1.17	2.04	0.62	-0.42	1.35
Waihou River at Te Aroha	12	1.62	1.72	1.11	1.99	0.75	-0.48	-
Waihou River at Whites Rd	12	0.91	0.92	0.85	0.96	0.04	-0.63	0.80
Waiohotu Stm at Waiohotu Rd (Off SH5)	12	0.39	0.39	0.31	0.52	0.06	1.08	0.32
Waiomou Stm at Matamata-Tauranga Rd	12	0.94	1.05	0.46	1.32	0.55	-0.33	0.68
Waitakaruru River (Hauraki Plains) at Coxhead Rd Br	12	0.70	0.70	0.23	1.22	0.72	0.07	0.55
Waitoa River at Landsdowne Rd Br	12	2.54	2.65	1.31	3.32	0.75	-0.81	1.83
Waitoa River at Mellon Rd Recorder	12	3.40	3.55	1.31	4.55	0.67	-1.44	2.52
<b>Tributaries of the Lower Waikato</b>								
Awaroa River (Waiuku) at Otaua Rd Br opp Moseley Rd	12	2.36	2.55	1.01	3.06	0.92	-1.05	2.04
Awaroa Stm (Rotowaro) at Sansons Br @ Rotowaro-Huntly Rd	12	0.76	0.78	0.31	1.00	0.30	-0.80	0.90
Karapiro Stm at Hickey Rd Bridge	12	1.33	1.34	0.52	2.30	0.67	0.26	0.95
Kirikiriroa Stm at Tauhara Dr	12	1.91	1.81	1.31	2.98	0.45	1.16	1.46
Komakorau Stm at Henry Rd	12	3.58	3.70	2.31	4.60	0.95	-0.63	3.13
Little Waipa Stm at Arapuni - Putaruru Rd	12	2.67	2.69	1.86	3.61	0.81	0.09	1.99
Mangakotukutuku Stm (Rukuhia) at Peacocks Rd	12	2.66	2.75	1.29	4.48	1.09	0.32	1.81
Mangamingi Stm (Tokoroa) at Paraonui Rd Br	12	3.57	3.68	2.60	4.09	0.58	-1.06	3.50
Mangaone Stm (Waikato) at Annebrooke Rd Br	12	2.94	2.90	2.42	3.63	0.59	0.50	2.87
Mangaonua Stm at Hoeka Rd	12	2.07	2.09	1.37	2.66	0.74	-0.32	1.84
Mangaonua Stm at Te Miro Rd (a.k.a Waitakaruru stm)	12	0.94	0.89	0.45	1.49	0.49	0.23	0.71
Mangatangi River at SH2 Maramarua	12	0.83	0.95	0.22	1.50	0.67	-0.14	0.53
Mangatawhiri River at Lyons Rd At Buckingham Br	12	0.26	0.25	0.11	0.48	0.26	0.25	0.21
Mangawara Stm at Rutherford Rd Br	12	2.54	2.37	1.09	4.11	1.09	0.21	2.02
Mangawhero Stm (Cambridge) at Cambridge-Ohaupo Rd	12	3.35	3.56	2.33	3.97	0.89	-0.76	2.84
Matahuru Stm at Waiterimu Road Below Confluence	12	1.66	1.65	0.54	3.16	1.19	0.24	1.43
Ohaeroa Stm at SH22 Br	12	2.15	2.18	1.76	2.37	0.26	-0.80	1.95
Opuatia Stm at Ponganui Rd	12	1.23	1.23	0.95	1.47	0.28	-0.14	1.09
Pokaiwhenua Stm at Arapuni - Putaruru Rd	12	2.72	2.87	2.05	3.10	0.59	-0.95	2.12
Waerenga Stm at Taniwha Rd	12	1.27	1.38	0.72	1.69	0.47	-0.41	1.11
Waitawhiriwhiri Stm at Edgumbe Street	12	2.41	2.33	1.93	3.28	0.33	1.47	2.13
Whakapipi Stm at SH22 Br	12	5.20	5.41	3.85	6.20	1.21	-0.52	3.96
Whakauru Stm at U/S SH1 Br	12	1.43	1.41	0.95	2.17	0.46	0.45	0.73
Whangamarino River at Island Block Rd	12	2.02	2.06	0.85	3.49	0.80	0.51	1.96
Whangamarino River at Jefferies Rd Br	12	1.32	1.29	0.38	2.18	1.29	-0.16	1.15
Whangape Stm at Rangiriri-Glen Murray Rd	12	1.79	1.44	0.87	3.20	0.97	0.80	2.07

IQR = Inter quartile range

Location	Count	Mean	Median	Min	Max	IQR	Skew	13-17 median
<b>Waipa River and Tributaries</b>								
Kaniwhaniwha Stm at Wright Rd	12	0.69	0.61	0.29	1.21	0.53	0.19	0.62
Mangaohoi Stm at South Branch Maru Rd	12	0.41	0.41	0.31	0.67	0.11	1.61	0.36
Mangaokewa Stm at Lawrence Street Br	11	1.13	1.08	0.58	2.11	0.60	0.82	0.87
Mangapiko Stm (Pirongia/Te Awamutu) at Bowman Rd	12	3.24	3.49	1.05	4.80	0.70	-1.05	2.43
Mangapu River at Otorohanga	11	1.46	1.49	0.72	2.22	0.71	0.04	1.18
Mangatutu Stm (Waikeria) at Walker Rd Br	12	0.83	0.94	0.26	2.16	0.57	1.36	0.51
Mangauika Stm at Te Awamutu Borough W/S Intake	12	0.24	0.27	0.07	0.39	0.11	-0.70	0.27
Ohote Stm at Whatawhata/Horotiu Rd	12	1.60	1.71	0.60	2.07	0.43	-1.39	1.28
Puniu River at Bartons Corner Rd Br	12	1.50	1.65	0.57	3.41	0.92	1.21	0.94
Waipa River at Mangaokewa Rd	11	0.58	0.61	0.34	0.77	0.13	-0.75	0.55
Waipa River at Pukehoua Bridge on Baffin Road	12	1.19	1.23	0.61	1.74	0.76	-0.13	-
Waipa River at SH3 Otorohanga	11	0.91	1.08	0.26	1.70	0.73	-0.04	0.63
Waitomo Stm at SH31 Otorohanga	12	0.96	0.97	0.52	1.65	0.51	0.63	0.75
Waitomo Stm at Tumutumu Rd	12	0.84	0.86	0.58	1.05	0.14	-0.50	0.77
<b>Tributaries of the Upper Waikato</b>								
Kawaunui Stm at SH5 Br	12	3.37	3.44	2.53	4.07	0.63	-0.63	2.97
Mangaharakeke Stm (Atiamuri) at SH30 (Off Jct SH1)	12	1.10	1.13	0.69	1.54	0.41	0.00	0.73
Mangakara Stm (Reporoa) at SH5	12	1.99	2.01	1.49	2.32	0.35	-0.75	1.55
Mangakino Stm (Whakamaru) at Sandel Rd	12	1.09	1.12	0.67	1.54	0.35	0.06	0.79
Otamakokore Stm at Hossack Rd	12	1.91	1.97	0.86	2.89	1.11	-0.25	1.04
Pueto Stm at Broadlands Rd Br	12	0.77	0.80	0.57	0.94	0.21	-0.22	0.57
Tahunaatara Stm at Ohakuri Rd	12	1.27	1.34	0.70	1.73	0.39	-0.66	0.86
Torepatutahi Stm at Vaile Rd Br	12	1.03	1.09	0.47	1.52	0.50	-0.20	0.59
Waiotapu Stm at Campbell Rd Br	12	1.91	1.92	1.67	2.13	0.24	-0.11	2.06
Waiotapu Stm at Homestead Rd Br	12	2.50	2.61	1.64	3.15	0.58	-0.64	1.95
Waipapa Stm (Mokai) at Tirohanga Rd Br	12	1.71	1.71	1.35	2.02	0.37	-0.18	1.44
Whirinaki Stm at Corbett Rd	12	0.98	0.97	0.76	1.26	0.19	0.57	0.84
<b>West Coast</b>								
Awakino River at Gribbon Rd	11	0.24	0.22	0.10	0.68	0.14	2.22	0.18
Awakino River at SH3 Awakino Rd Junction	11	0.49	0.43	0.17	1.54	0.23	2.59	0.37
Manganui River at Off Manganui Rd	11	0.34	0.29	0.11	0.92	0.17	1.93	0.24
Mangaotaki River at SH3 Br	11	1.05	1.07	0.60	2.04	0.31	1.69	0.89
Marokopa River at Speedies Rd (Off Te Anga Rd)	12	0.52	0.48	0.34	0.93	0.20	1.27	0.42
Mokau River at Awakau Rd	11	0.91	0.96	0.43	1.50	0.56	0.06	0.67
Mokau River at Mangaokewa Rd (Off SH30)	11	0.80	0.85	0.48	1.14	0.43	-0.07	0.61
Mokau River at Totoro Rd Recorder	11	1.10	1.08	0.56	1.93	0.55	0.63	0.86
Mokauiti Stm at Three Way Point - Aria	11	0.83	0.75	0.43	1.59	0.49	0.94	0.63
Ohautira Stm at Waingaro Te Uku Rd	12	0.46	0.43	0.14	0.75	0.33	-0.02	0.51
Oparau River at Langdon Rd (Off Okupata Rd)	12	0.41	0.27	0.10	2.14	0.25	3.18	0.25
Tawarau River at Off Speedies Rd	12	0.54	0.49	0.37	1.11	0.17	2.20	0.45
Waingaro River (Pukemiro) at Ruakiwi Rd Off SH22	12	0.75	0.79	0.26	1.30	0.62	-0.03	0.81
Waitetuna River at Te Uku-Waingaro Rd	12	0.61	0.62	0.27	0.97	0.33	-0.01	0.62
<b>Inflows to Lake Taupo</b>								
Hinemaiaia River at SH1	12	0.20	0.20	0.11	0.27	0.04	-0.51	0.18
Kuratau River at SH41 Moerangi	12	0.42	0.42	0.28	0.53	0.14	-0.28	0.41
Kuratau River at Te Rae Street T10	12	0.86	0.85	0.65	1.15	0.11	0.73	0.80
Mapara Stm (Lake Taupo) at Off Mapara Rd (Whakaipo Res) T1	12	0.94	0.95	0.82	1.01	0.09	-0.79	0.97
Tauranga-Taupo River at 20 Metres U/S SH1 Bridge	12	0.14	0.13	0.07	0.27	0.06	0.99	0.11
Tokaanu Power Station Tailrace Canal at SH41 Bridge Over Canal	12	0.11	0.11	0.06	0.17	0.07	0.07	0.10
Tokaanu Stm at Off SH41 Turangi	12	0.53	0.53	0.48	0.63	0.06	0.93	0.47
Waihaha River at SH32	12	0.21	0.19	0.11	0.28	0.10	-0.04	0.17
Waitahanui River at Blake Rd	12	0.47	0.48	0.42	0.53	0.05	-0.18	0.48
Whangamata Stm (Kinloch) at Whangamata Rd	12	1.52	1.55	1.11	1.91	0.40	-0.06	1.50
Whanganui Stm at Lakeside Lake Taupo T8	12	0.54	0.57	0.35	0.69	0.11	-0.94	0.41
Whareroa Stm (Taupo) at Lakeside Lake Taupo T9	12	1.05	1.10	0.74	1.39	0.32	0.02	0.85

IQR = Inter quartile range

Location	Turbidity (NTU)							
	Count	Mean	Median	Min	Max	IQR	Skew	13-17 median
<b>Coromandel</b>								
Hikutaia River at Old Maratoto Rd	12	2.4	2.2	0.8	4.6	1.8	0.48	1.3
Kauaeranga River at Smiths Cableway/Recorder	12	3.3	2.5	0.5	7.8	4.5	0.60	1.2
Ohinemuri River at Karangahake	5	1.6	1.6	0.9	2.1	0.7	-0.54	-
Ohinemuri River at Queens Head	12	1.7	1.5	0.6	4.2	1.7	1.08	1.1
Ohinemuri River at SH25 Br	12	2.2	1.2	0.6	8.8	1.6	2.38	1.0
Tairua River at Morrisons Br Hikuai	12	2.0	1.3	0.6	8.5	0.8	2.50	0.9
Tapu River at Tapu-Coroglen Rd	12	3.3	2.5	0.4	9.8	3.3	1.28	1.1
Waiau River at E309 Rd Ford	12	4.1	3.4	1.2	8.1	4.6	0.52	2.3
Waitekauri River at U/S Ohinemuri Conflu	11	2.0	1.1	0.6	9.2	1.5	2.93	0.8
Waiwawa River at SH25 Coroglen	12	3.2	3.0	0.5	8.6	3.0	1.15	1.1
Wharekawa River at SH25	12	3.2	2.4	0.9	11.8	2.1	2.33	2.0
<b>Hauraki</b>								
Mangawhero Stm (Kaihere) at Mangawara Rd	12	12.6	8.9	5.8	46.0	4.3	2.79	7.9
Oraka Stm at Lake Rd	12	8.8	8.6	2.5	14.0	4.5	0.00	6.0
Piako River at Kiwitahi	12	7.1	5.1	2.4	17.7	6.5	1.28	3.8
Piako River at Paeroa-Tahuna Rd Br	12	22.1	13.7	2.7	70.0	19.9	1.52	7.1
Piakonui Stm at Piakonui Rd	12	5.5	6.1	3.2	8.4	2.9	-0.01	4.0
Waihou River at Okauia	12	7.0	6.5	2.6	11.3	5.0	0.13	4.6
Waihou River at Te Aroha	12	9.8	9.7	2.5	19.6	6.5	0.49	-
Waihou River at Whites Rd	12	0.8	0.7	0.3	1.6	0.6	0.85	0.6
Waiohotu Stm at Waiohotu Rd (Off SH5)	12	4.6	4.3	2.5	9.9	1.6	2.08	4.5
Waiomou Stm at Matamata-Tauranga Rd	12	6.4	7.1	2.2	11.2	2.9	-0.16	4.6
Waitakaruru River (Hauraki Plains) at Coxhead Rd Br	12	13.2	10.4	1.8	51.0	10.5	2.26	7.7
Waitoa River at Landsdowne Rd Br	12	11.5	6.7	1.1	32.0	13.3	1.08	4.4
Waitoa River at Mellon Rd Recorder	12	17.7	18.9	3.1	33.0	18.1	-0.19	6.2
<b>Tributaries of the Lower Waikato</b>								
Awaroa River (Waiuku) at Otaua Rd Br opp Moseley Rd	12	16.4	17.4	8.8	30.0	7.7	0.88	15.7
Awaroa Stm (Rotowaro) at Sansons Br @ Rotowaro-Huntly Rd	12	9.1	6.4	3.7	19.8	9.6	0.99	6.2
Karapiro Stm at Hickey Rd Bridge	12	10.3	8.5	4.4	26.0	4.8	2.10	5.9
Kirikiriroa Stm at Tauhara Dr	12	33.4	25.0	13.3	95.0	22.3	1.72	24.5
Komakorau Stm at Henry Rd	12	70.0	75.0	11.0	132.0	76.0	-0.02	72.5
Little Waipa Stm at Arapuni - Putaruru Rd	12	3.4	3.1	1.1	7.4	3.7	0.56	2.3
Mangakotukutuku Stm (Rukuhia) at Peacocks Rd	12	24.4	20.6	12.0	53.0	15.5	1.27	22.0
Mangamingi Stm (Tokoroa) at Paraonui Rd Br	12	5.9	5.1	2.5	11.7	3.3	1.01	5.6
Mangaone Stm (Waikato) at Annebrooke Rd Br	12	9.8	9.8	3.6	17.6	5.1	0.14	7.9
Mangaonua Stm at Hoeka Rd	12	17.2	13.2	3.9	38.0	12.6	0.84	10.1
Mangaonua Stm at Te Miro Rd (a.k.a Waitakaruru stm)	12	6.5	6.1	2.2	13.1	5.2	0.49	4.1
Mangatangi River at SH2 Maramarua	12	23.0	19.4	9.0	50.0	14.3	1.20	13.6
Mangatawhiri River at Lyons Rd At Buckingham Br	12	9.9	5.5	1.3	31.0	9.9	1.44	3.6
Mangawara Stm at Rutherford Rd Br	12	49.1	47.0	19.7	79.0	18.0	0.24	39.5
Mangawhero Stm (Cambridge) at Cambridge-Ohaupo Rd	12	37.2	35.5	22.0	51.0	16.5	-0.03	46.0
Matahuru Stm at Waiterimu Road Below Confluence	12	53.5	35.0	17.4	174.0	14.5	2.06	32.0
Ohaeroa Stm at SH22 Br	12	18.7	8.2	3.3	54.0	24.9	1.15	8.6
Opuatia Stm at Ponganui Rd	12	33.7	18.2	5.7	129.0	37.2	1.97	15.1
Pokaiwhenua Stm at Arapuni - Putaruru Rd	12	5.6	4.9	2.3	13.1	3.3	1.40	3.7
Waerenga Stm at Taniwha Rd	12	15.6	9.0	4.8	64.0	9.6	2.64	8.0
Waitawhiriwhiri Stm at Edgumbe Street	12	35.3	27.5	11.2	105.0	30.4	1.88	31.5
Whakapipi Stm at SH22 Br	12	11.4	5.7	1.6	45.0	10.2	1.91	5.5
Whakauru Stm at U/S SH1 Br	12	9.5	8.7	5.8	16.5	3.5	1.21	7.4
Whangamarino River at Island Block Rd	12	30.1	24.5	3.4	60.0	28.8	0.38	32.5
Whangamarino River at Jefferies Rd Br	12	32.5	28.5	12.1	85.0	21.7	1.61	22.0
Whangape Stm at Rangiriri-Glen Murray Rd	12	74.7	53.0	14.7	220.0	58.0	1.53	53.0

IQR = Inter quartile range

Location	Count	Mean	Median	Min	Max	IQR	Skew	13-17 median
<b>Waipa River and Tributaries</b>								
Kaniwhaniwha Stm at Wright Rd	12	11.2	9.8	4.8	28.0	4.8	2.35	7.6
Mangaohoi Stm at South Branch Maru Rd	12	2.0	1.6	0.8	6.0	0.7	2.51	1.9
Mangaokewa Stm at Lawrence Street Br	11	37.1	7.2	3.0	280.0	11.7	3.10	5.8
Mangapiko Stm (Pirongia/Te Awamutu) at Bowman Rd	12	22.3	22.5	4.8	51.0	14.4	0.70	11.8
Mangapu River at Otorohanga	11	41.2	18.5	5.4	260.0	28.3	3.13	10.8
Mangatutu Stm (Waikeria) at Walker Rd Br	12	11.2	5.2	1.6	85.0	2.8	3.42	3.0
Mangauika Stm at Te Awamutu Borough W/S Intake	12	2.4	1.4	0.3	10.1	1.7	2.51	1.6
Ohote Stm at Whatawhata/Horotiu Rd	12	13.4	14.6	4.2	18.8	5.3	-1.00	11.3
Puniu River at Bartons Corner Rd Br	12	12.5	11.1	3.5	39.0	7.1	2.31	6.5
Waipa River at Mangaokewa Rd	11	3.1	2.2	1.5	7.6	1.8	1.75	2.2
Waipa River at Pukehoua Bridge on Baffin Road	12	17.9	13.9	9.0	44.0	9.2	1.76	-
Waipa River at SH3 Otorohanga	11	14.8	5.4	1.9	74.0	14.8	2.62	4.0
Waitomo Stm at SH31 Otorohanga	12	29.2	21.8	5.8	87.0	25.8	1.41	11.6
Waitomo Stm at Tumutumu Rd	12	12.5	9.1	2.5	35.0	13.3	1.11	6.7
<b>Tributaries of the Upper Waikato</b>								
Kawaunui Stm at SH5 Br	12	4.0	3.2	1.8	8.6	2.3	1.20	3.5
Mangaharakeke Stm (Atiamuri) at SH30 (Off Jct SH1)	12	8.2	7.1	3.6	15.7	3.8	1.15	6.1
Mangakara Stm (Reporoa) at SH5	12	8.7	7.9	3.3	16.4	5.9	0.68	5.8
Mangakino Stm (Whakamaru) at Sandel Rd	12	3.7	2.3	1.3	11.2	1.7	1.85	1.9
Otamakokore Stm at Hossack Rd	12	3.5	3.6	1.9	4.6	1.3	-0.59	3.5
Pueto Stm at Broadlands Rd Br	12	3.2	3.3	1.4	4.8	1.8	-0.18	3.0
Tahunaatara Stm at Ohakuri Rd	12	5.0	3.9	2.1	11.0	2.6	1.42	3.3
Torepatutahi Stm at Vaile Rd Br	12	1.0	0.9	0.6	2.2	0.4	1.78	1.3
Waiotapu Stm at Campbell Rd Br	12	8.1	8.1	5.2	12.5	2.5	0.56	7.1
Waiotapu Stm at Homestead Rd Br	12	17.1	20.0	6.4	26.0	10.5	-0.35	12.4
Waipapa Stm (Mokai) at Tirohanga Rd Br	12	5.6	4.7	1.9	15.7	3.8	1.97	3.8
Whirinaki Stm at Corbett Rd	12	0.7	0.6	0.4	1.3	0.4	1.04	0.7
<b>West Coast</b>								
Awakino River at Gribbon Rd	11	19.9	1.7	0.7	190.0	3.8	3.31	1.5
Awakino River at SH3 Awakano Rd Junction	11	31.8	3.5	1.7	260.0	13.6	3.22	3.6
Manganui River at Off Manganui Rd	11	31.8	8.7	1.8	197.0	21.8	2.74	5.8
Mangaotaki River at SH3 Br	11	20.8	5.4	2.3	148.0	10.9	3.21	5.9
Marokopa River at Speedies Rd (Off Te Anga Rd)	12	10.8	4.9	2.8	56.0	7.9	2.95	4.1
Mokau River at Awakau Rd	11	46.0	11.5	8.0	210.0	37.8	2.15	14.4
Mokau River at Mangaokewa Rd (Off SH30)	11	5.5	3.4	2.0	22.0	2.9	2.90	3.6
Mokau River at Totoro Rd Recorder	11	28.1	9.6	3.2	126.0	34.3	2.08	7.5
Mokauiti Stm at Three Way Point - Aria	11	33.5	25.0	5.1	139.0	26.0	2.28	9.0
Ohautira Stm at Waingaro Te Uku Rd	12	13.0	7.3	3.8	42.0	13.5	1.64	8.6
Oparau River at Langdon Rd (Off Okupata Rd)	12	25.6	3.3	1.6	240.0	4.3	3.40	3.2
Tawarau River at Off Speedies Rd	12	11.6	3.7	2.3	68.0	6.9	2.94	3.4
Waingaro River (Pukemiro) at Ruakiwi Rd Off SH22	12	23.2	13.4	3.2	84.0	22.6	1.74	11.8
Waitetuna River at Te Uku-Waingaro Rd	12	16.3	10.1	4.6	49.0	17.2	1.46	10.4
<b>Inflows to Lake Taupo</b>								
Hinemaiaia River at SH1	12	1.7	1.5	0.8	4.1	0.7	1.79	1.2
Kuratau River at SH41 Moerangi	12	1.9	1.7	1.0	4.1	1.0	1.74	1.6
Kuratau River at Te Rae Street T10	12	1.5	1.4	0.8	2.1	0.6	0.06	1.2
Mapara Stm (Lake Taupo) at Off Mapara Rd (Whakaipo Res) T1	12	4.0	3.4	2.1	10.7	1.9	2.46	3.3
Tauranga-Taupo River at 20 Metres U/S SH1 Bridge	12	3.9	1.4	0.4	31.0	1.8	3.41	1.0
Tokaanu Power Station Tailrace Canal at SH41 Bridge Over Canal	12	1.3	1.3	0.7	2.0	0.6	-0.24	1.3
Tokaanu Stm at Off SH41 Turangi	12	0.2	0.2	0.1	0.4	0.2	0.68	0.2
Waihaha River at SH32	12	1.3	1.1	0.4	4.0	0.9	1.91	0.8
Waitahanui River at Blake Rd	12	1.8	1.5	0.6	4.2	1.3	1.27	1.0
Whangamata Stm (Kinloch) at Whangamata Rd	12	2.9	2.6	0.7	5.3	3.2	0.22	1.7
Whanganui Stm at Lakeside Lake Taupo T8	12	2.0	1.9	1.2	3.8	0.8	1.34	1.4
Whareroa Stm (Taupo) at Lakeside Lake Taupo T9	12	7.4	4.6	2.3	29.0	4.7	2.70	3.4

IQR = Inter quartile range

Location	pH							
	Count	Mean	Median	Min	Max	IQR	Skew	13-17 median
<b>Coromandel</b>								
Hikutaia River at Old Maratoto Rd	12	7.0	7.0	6.5	7.6	0.3	0.39	7.1
Kauaeranga River at Smiths Cableway/Recorder	12	7.1	7.0	6.7	7.4	0.3	0.08	7.1
Ohinemuri River at Karangahake	5	7.3	7.2	7.0	7.8	0.3	1.84	-
Ohinemuri River at Queens Head	12	7.1	7.1	6.8	7.4	0.3	-0.12	7.1
Ohinemuri River at SH25 Br	12	7.0	7.0	6.4	7.6	0.5	-0.12	7.2
Tairua River at Morrisons Br Hikuai	12	7.0	7.0	6.4	7.3	0.3	-1.35	7.1
Tapu River at Tapu-Coroglen Rd	12	7.4	7.4	7.1	7.7	0.3	-0.15	7.4
Waiau River at E309 Rd Ford	12	7.3	7.3	6.9	7.7	0.2	0.39	7.3
Waitekauri River at U/S Ohinemuri Conflu	11	7.1	7.1	6.7	7.4	0.3	-0.64	7.1
Waiwawa River at SH25 Coroglen	12	7.1	7.1	6.8	7.4	0.2	-0.50	7.2
Wharekawa River at SH25	12	6.9	7.0	6.3	7.2	0.2	-1.98	7.1
<b>Hauraki</b>								
Mangawhero Stm (Kaihere) at Mangawara Rd	12	7.3	7.4	7.0	7.8	0.2	0.66	7.4
Oraka Stm at Lake Rd	12	7.2	7.2	7.0	7.5	0.1	0.96	7.2
Piako River at Kiwitahi	12	7.1	7.2	6.8	7.4	0.5	-0.19	7.1
Piako River at Paeroa-Tahuna Rd Br	12	7.2	7.2	6.8	7.6	0.7	0.20	7.3
Piakonui Stm at Piakonui Rd	12	7.2	7.3	6.9	7.5	0.2	-0.43	7.3
Waihou River at Okauia	12	7.2	7.2	7.0	7.4	0.2	0.06	7.3
Waihou River at Te Aroha	12	7.1	7.2	6.7	7.6	0.3	0.23	-
Waihou River at Whites Rd	12	6.9	7.0	6.8	7.1	0.2	-0.06	7.0
Waiohotu Stm at Waiohotu Rd (Off SH5)	12	7.1	7.1	6.9	7.4	0.4	0.08	7.2
Waiomou Stm at Matamata-Tauranga Rd	12	7.1	7.1	6.6	7.2	0.2	-1.94	7.1
Waitakaruru River (Hauraki Plains) at Coxhead Rd Br	12	7.2	7.2	6.9	7.5	0.4	-0.06	7.2
Waitoa River at Landsdowne Rd Br	12	7.0	7.0	6.7	7.3	0.2	0.15	7.1
Waitoa River at Mellon Rd Recorder	12	7.2	7.1	6.6	7.7	0.4	0.01	7.3
<b>Tributaries of the Lower Waikato</b>								
Awaroa River (Waiuku) at Otaua Rd Br opp Moseley Rd	12	7.1	7.2	6.5	7.7	0.6	-0.06	7.3
Awaroa Stm (Rotowaro) at Sansons Br @ Rotowaro-Huntly Rd	12	7.9	7.9	7.5	8.1	0.3	-0.46	7.8
Karapiro Stm at Hickey Rd Bridge	12	7.2	7.2	7.0	7.5	0.3	0.61	7.2
Kirikiri Stm at Tauhara Dr	12	6.9	7.0	6.7	7.3	0.2	0.61	6.9
Komakorau Stm at Henry Rd	12	6.6	6.6	6.0	7.2	0.7	0.27	6.7
Little Waipa Stm at Arapuni - Putaruru Rd	12	7.0	7.0	6.9	7.3	0.2	1.47	7.0
Mangakotukutuku Stm (Rukuhia) at Peacocks Rd	12	6.8	7.0	6.0	7.3	0.6	-0.74	7.0
Mangamingi Stm (Tokoroa) at Paraonui Rd Br	12	7.3	7.3	7.1	7.8	0.2	1.30	7.4
Mangaone Stm (Waikato) at Annebrooke Rd Br	12	7.4	7.4	7.3	7.6	0.2	0.71	7.3
Mangaonua Stm at Hoeka Rd	12	7.0	7.0	6.5	7.3	0.4	-0.48	7.0
Mangaonua Stm at Te Miro Rd (a.k.a Waitakaruru stm)	12	7.3	7.3	6.8	7.6	0.4	-0.40	7.3
Mangatangi River at SH2 Maramarua	12	7.1	7.1	6.8	7.5	0.4	0.39	7.2
Mangatawhiri River at Lyons Rd At Buckingham Br	12	7.3	7.4	6.9	7.6	0.4	-0.33	7.4
Mangawara Stm at Rutherford Rd Br	12	6.7	6.7	6.1	7.1	0.6	-0.29	6.8
Mangawhero Stm (Cambridge) at Cambridge-Ohaupo Rd	12	6.9	7.0	6.6	7.4	0.5	0.30	7.0
Matahuru Stm at Waiterimu Road Below Confluence	12	7.0	7.0	6.4	7.3	0.5	-0.48	7.1
Ohaeroa Stm at SH22 Br	12	7.4	7.4	7.2	7.5	0.3	-0.29	7.4
Opuatia Stm at Ponganui Rd	12	7.4	7.4	7.2	7.7	0.2	0.69	7.5
Pokaiwhenua Stm at Arapuni - Putaruru Rd	12	7.2	7.1	7.0	7.7	0.2	2.06	7.2
Waerenga Stm at Taniwha Rd	12	7.2	7.2	7.0	7.5	0.3	0.15	7.3
Waitawhiriwhiri Stm at Edgecumbe Street	12	7.0	7.0	6.7	7.3	0.3	0.53	7.0
Whakapipi Stm at SH22 Br	12	7.3	7.3	7.1	7.4	0.2	-0.32	7.3
Whakauru Stm at U/S SH1 Br	12	7.4	7.4	7.3	7.4	0.1	-0.39	7.4
Whangamarino River at Island Block Rd	12	6.9	6.9	6.4	7.3	0.5	0.05	7.0
Whangamarino River at Jefferies Rd Br	12	7.1	7.1	6.8	7.4	0.3	0.05	7.1
Whangape Stm at Rangiriri-Glen Murray Rd	12	7.4	7.5	7.0	8.0	0.5	0.15	7.4

IQR = Inter quartile range



Location	Count	Mean	Median	Min	Max	IQR	Skew	13-17 median
<b>Waipa River and Tributaries</b>								
Kaniwhaniwha Stm at Wright Rd	12	7.2	7.2	6.9	7.4	0.2	0.16	7.2
Mangaohoi Stm at South Branch Maru Rd	12	7.3	7.4	6.5	7.7	0.3	-1.35	7.4
Mangaokewa Stm at Lawrence Street Br	11	7.4	7.4	7.2	7.6	0.3	-0.14	7.4
Mangapiko Stm (Pirongia/Te Awamutu) at Bowman Rd	12	7.2	7.1	6.6	8.2	1.0	0.68	7.3
Mangapu River at Otorohanga	11	7.6	7.5	7.3	8.9	0.5	2.30	7.6
Mangatutu Stm (Waikeria) at Walker Rd Br	12	7.1	7.2	6.5	7.6	0.3	-0.77	7.2
Mangauika Stm at Te Awamutu Borough W/S Intake	12	7.3	7.3	7.0	7.5	0.2	-0.03	7.3
Ohote Stm at Whatawhata/Horotiu Rd	12	6.7	6.7	6.4	7.0	0.4	-0.09	6.8
Puniu River at Bartons Corner Rd Br	12	7.0	7.1	6.6	7.4	0.2	-0.53	7.1
Waipa River at Mangaokewa Rd	11	7.3	7.3	7.0	7.7	0.4	0.28	7.4
Waipa River at Pukehoua Bridge on Baffin Road	12	7.2	7.3	6.8	7.5	0.3	-0.77	-
Waipa River at SH3 Otorohanga	11	7.0	6.9	6.4	7.5	0.4	-0.09	7.3
Waitomo Stm at SH31 Otorohanga	12	7.7	7.7	7.3	8.0	0.4	0.09	7.7
Waitomo Stm at Tumutumu Rd	12	7.8	7.8	7.6	8.1	0.2	0.29	7.8
<b>Tributaries of the Upper Waikato</b>								
Kawaunui Stm at SH5 Br	12	6.8	6.8	6.5	7.1	0.2	-0.33	6.9
Mangaharakeke Stm (Atiamuri) at SH30 (Off Jct SH1)	12	7.3	7.3	7.0	7.5	0.2	-0.18	7.4
Mangakara Stm (Reporoa) at SH5	12	7.0	7.0	6.7	7.7	0.3	1.52	7.1
Mangakino Stm (Whakamaru) at Sandel Rd	12	7.3	7.3	7.2	7.6	0.2	0.92	7.3
Otamakokore Stm at Hossack Rd	12	7.8	7.8	7.3	8.1	0.2	-0.81	8.0
Pueto Stm at Broadlands Rd Br	12	7.4	7.4	7.1	7.5	0.2	-0.66	7.3
Tahunaatara Stm at Ohakuri Rd	12	7.3	7.4	7.0	7.4	0.1	-2.03	7.4
Torepatutahi Stm at Vaile Rd Br	12	7.2	7.2	7.0	7.5	0.2	0.68	7.2
Waiotapu Stm at Campbell Rd Br	12	5.3	5.4	4.4	5.9	0.6	-0.54	5.5
Waiotapu Stm at Homestead Rd Br	12	6.7	6.7	6.3	7.2	0.2	0.36	6.8
Waipapa Stm (Mokai) at Tirohanga Rd Br	12	7.6	7.6	7.5	7.7	0.1	-0.44	7.7
Whirinaki Stm at Corbett Rd	12	7.2	7.3	7.0	7.5	0.2	0.18	7.3
<b>West Coast</b>								
Awakino River at Gribbon Rd	11	7.4	7.4	7.0	7.6	0.2	-0.55	7.4
Awakino River at SH3 Awakau Rd Junction	11	7.5	7.4	7.2	7.7	0.4	0.11	7.5
Manganui River at Off Manganui Rd	11	7.2	7.3	6.8	7.6	0.4	-0.56	7.4
Mangaotaki River at SH3 Br	11	7.7	7.7	7.4	7.9	0.2	-0.65	7.7
Marokopa River at Speedies Rd (Off Te Anga Rd)	12	7.8	7.8	7.5	8.0	0.2	-0.65	7.8
Mokau River at Awakau Rd	11	7.4	7.4	7.0	7.6	0.2	-0.98	7.4
Mokau River at Mangaokewa Rd (Off SH30)	11	7.3	7.4	7.0	7.7	0.3	0.04	7.2
Mokau River at Totoro Rd Recorder	11	7.6	7.6	7.3	7.8	0.2	-0.54	7.5
Mokauiti Stm at Three Way Point - Aria	11	7.2	7.2	6.8	7.4	0.4	-0.68	7.3
Ohautira Stm at Waingaro Te Uku Rd	12	7.3	7.2	7.0	7.7	0.2	1.01	7.3
Oparau River at Langdon Rd (Off Okupata Rd)	12	7.4	7.4	7.0	7.8	0.3	0.00	7.4
Tawarau River at Off Speedies Rd	12	7.9	7.8	7.6	8.1	0.2	0.29	7.8
Waingaro River (Pukemiro) at Ruakiwi Rd Off SH22	12	7.4	7.4	7.1	7.7	0.3	0.34	7.4
Waitetuna River at Te Uku-Waingaro Rd	12	7.3	7.3	7.0	7.7	0.3	0.23	7.3
<b>Inflows to Lake Taupo</b>								
Hinemaiaia River at SH1	12	7.3	7.3	7.2	7.5	0.2	0.26	7.4
Kuratau River at SH41 Moerangi	12	7.1	7.1	6.7	7.4	0.2	-0.92	7.2
Kuratau River at Te Rae Street T10	12	7.4	7.4	7.1	8.2	0.3	2.34	7.4
Mapara Stm (Lake Taupo) at Off Mapara Rd (Whakaipo Res) T1	12	7.4	7.4	7.2	7.6	0.1	0.39	7.4
Tauranga-Taupo River at 20 Metres U/S SH1 Bridge	12	7.2	7.3	6.8	7.5	0.1	-1.48	7.3
Tokaanu Power Station Tailrace Canal at SH41 Bridge Over Canal	12	7.4	7.4	7.2	7.7	0.1	0.52	7.4
Tokaanu Stm at Off SH41 Turangi	12	7.2	7.2	7.0	7.5	0.1	1.12	7.2
Waihaha River at SH32	12	7.2	7.2	7.0	7.6	0.2	1.38	7.3
Waitahanui River at Blake Rd	12	7.4	7.4	7.3	7.5	0.1	0.00	7.4
Whangamata Stm (Kinloch) at Whangamata Rd	12	7.3	7.3	7.2	7.5	0.1	0.67	7.3
Whanganui Stm at Lakeside Lake Taupo T8	12	7.3	7.3	7.1	7.7	0.1	1.76	7.3
Whareroa Stm (Taupo) at Lakeside Lake Taupo T9	12	7.3	7.3	7.1	7.5	0.2	-0.19	7.3

IQR = Inter quartile range

Location	Escherichia coli (/100ml)							
	Count	Mean	Median	Min	Max	IQR	Skew	13-17 median
<b>Coromandel</b>								
Hikutaia River at Old Maratoto Rd	12	480	325	160	1200	375	1.30	255
Kauaeranga River at Smiths Cableway/Recorder	12	365	120	45	1800	203	2.07	120
Ohinemuri River at Karangahake	5	97	80	22	240	114	1.38	-
Ohinemuri River at Queens Head	12	313	125	70	1800	215	3.03	70
Ohinemuri River at SH25 Br	12	770	235	30	6900	340	3.42	105
Tairua River at Morrisons Br Hikuai	12	115	70	18	380	156	1.36	70
Tapu River at Tapu-Coroglen Rd	12	175	170	80	310	145	0.50	90
Waiau River at E309 Rd Ford	12	164	165	70	360	95	1.14	100
Waitekauri River at U/S Ohinemuri Conflu	11	1130	240	37	4500	1845	1.43	80
Waiwawa River at SH25 Coroglen	12	128	95	25	350	95	1.38	60
Wharekawa River at SH25	12	666	365	27	2400	895	1.45	215
<b>Hauraki</b>								
Mangawhero Stm (Kaihere) at Mangawara Rd	12	55	42	12	150	30	1.71	40
Oraka Stm at Lake Rd	12	641	355	9	1800	610	1.32	310
Piako River at Kiwitahi	12	629	405	170	1900	440	1.80	260
Piako River at Paeroa-Tahuna Rd Br	12	2538	1400	220	7200	4510	0.84	500
Piakonui Stm at Piakonui Rd	12	74	52	18	280	50	2.54	50
Waihou River at Okauia	12	954	425	140	5800	395	3.05	230
Waihou River at Te Aroha	12	977	315	150	6000	570	2.86	-
Waihou River at Whites Rd	12	91	54	28	230	90	1.12	46
Waiohotu Stm at Waiohotu Rd (Off SH5)	12	238	34	6	2000	110	3.25	50
Waiomou Stm at Matamata-Tauranga Rd	12	1079	370	190	4200	1015	1.78	330
Waitakaruru River (Hauraki Plains) at Coxhead Rd Br	12	490	300	130	2800	230	3.31	240
Waitoa River at Landsdowne Rd Br	12	844	560	220	3700	670	2.72	400
Waitoa River at Mellon Rd Recorder	12	894	405	160	3500	770	1.95	325
<b>Tributaries of the Lower Waikato</b>								
Awaroa River (Waiuku) at Otaua Rd Br opp Moseley Rd	12	1388	355	60	6000	1405	1.81	250
Awaroa Stm (Rotowaro) at Sansons Br @ Rotowaro-Huntly Rd	12	255	245	100	500	100	0.72	250
Karapiro Stm at Hickey Rd Bridge	12	447	355	37	1300	460	1.41	210
Kirikiriroa Stm at Tauhara Dr	12	2086	600	210	13000	840	2.79	505
Komakorau Stm at Henry Rd	12	1150	1100	230	2300	1170	0.25	1000
Little Waipa Stm at Arapuni - Putaruru Rd	12	1314	290	150	11000	235	3.33	250
Mangakotukutuku Stm (Rukuhia) at Peacocks Rd	12	2766	1050	330	17000	1700	2.85	435
Mangamingi Stm (Tokoroa) at Paraonui Rd Br	12	797	545	170	1700	915	0.49	500
Mangaone Stm (Waikato) at Annebrooke Rd Br	12	1035	650	250	3900	800	2.28	555
Mangaonua Stm at Hoeka Rd	12	1053	1005	22	1900	1000	0.01	1050
Mangaonua Stm at Te Miro Rd (a.k.a Waitakaruru stm)	12	498	260	100	2900	295	3.26	160
Mangatangi River at SH2 Maramarua	12	831	550	190	4100	465	3.08	370
Mangatawhiri River at Lyons Rd At Buckingham Br	12	291	250	70	520	170	0.37	230
Mangawara Stm at Rutherford Rd Br	12	2639	1850	470	5700	3950	0.50	1100
Mangawhero Stm (Cambridge) at Cambridge-Ohaupo Rd	12	568	460	210	1200	385	1.12	500
Matahuru Stm at Waiterimu Road Below Confluence	12	4060	700	250	34000	1300	3.27	550
Ohaeroa Stm at SH22 Br	12	450	390	110	1400	245	2.11	350
Opuatia Stm at Ponganui Rd	12	605	460	150	2000	430	1.84	380
Pokaiwhenua Stm at Arapuni - Putaruru Rd	12	617	290	130	1900	670	1.41	230
Waerenga Stm at Taniwha Rd	12	1463	695	310	5700	1590	1.82	500
Waitawhiriwhiri Stm at Edgumbe Street	11	3671	1900	280	20000	1600	2.78	800
Whakapipi Stm at SH22 Br	12	723	500	210	2200	550	1.62	320
Whakauru Stm at U/S SH1 Br	12	1441	1350	390	3300	950	1.14	650
Whangamarino River at Island Block Rd	12	276	105	25	1100	271	1.76	110
Whangamarino River at Jefferies Rd Br	12	1703	800	500	7900	1000	2.77	800
Whangape Stm at Rangiriri-Glen Murray Rd	12	155	70	11	1000	120	3.17	120

IQR = Inter quartile range

Location	Count	Mean	Median	Min	Max	IQR	Skew	13-17 median
<b>Waipa River and Tributaries</b>								
Kaniwhaniwha Stm at Wright Rd	12	689	650	230	1500	560	0.91	360
Mangaohoi Stm at South Branch Maru Rd	12	81	35	7	220	131	0.72	78
Mangaokewa Stm at Lawrence Street Br	11	1844	320	170	16000	513	3.29	460
Mangapiko Stm (Pirongia/Te Awamutu) at Bowman Rd	12	4495	950	15	44000	1235	3.45	400
Mangapu River at Otorohanga	11	2200	600	310	14000	1155	2.98	485
Mangatutu Stm (Waikeria) at Walker Rd Br	12	2058	165	100	21000	395	3.43	130
Mangauika Stm at Te Awamutu Borough W/S Intake	12	68	23	1	590	21	3.42	18
Ohote Stm at Whatawhata/Horotiu Rd	12	511	265	110	2000	410	2.07	205
Puniu River at Bartons Corner Rd Br	12	3693	600	80	35000	1125	3.41	180
Waipa River at Mangaokewa Rd	11	403	120	34	2200	230	2.41	170
Waipa River at Pukehoua Bridge on Baffin Road	12	593	340	180	2300	390	2.38	-
Waipa River at SH3 Otorohanga	11	935	330	100	5200	910	2.86	180
Waitomo Stm at SH31 Otorohanga	12	1450	950	260	5600	1410	1.94	340
Waitomo Stm at Tumutumu Rd	12	300	225	100	600	260	0.83	190
<b>Tributaries of the Upper Waikato</b>								
Kawaunui Stm at SH5 Br	12	573	180	70	2200	805	1.62	150
Mangaharakeke Stm (Atiamuri) at SH30 (Off Jct SH1)	12	614	385	80	2300	505	1.79	250
Mangakara Stm (Reporoa) at SH5	12	854	135	50	8000	390	3.42	180
Mangakino Stm (Whakamaru) at Sandel Rd	12	747	48	8	5200	74	2.31	42
Otamakokore Stm at Hossack Rd	12	541	355	30	2600	330	2.87	260
Pueto Stm at Broadlands Rd Br	12	32	25	14	68	21	1.24	25
Tahunaatara Stm at Ohakuri Rd	12	2189	270	100	18000	145	3.01	140
Torepatutahi Stm at Vaile Rd Br	12	128	115	31	400	99	1.95	70
Waiotapu Stm at Campbell Rd Br	12	85	4	1	900	4	3.41	2
Waiotapu Stm at Homestead Rd Br	12	311	140	8	1900	225	3.01	130
Waipapa Stm (Mokai) at Tirohanga Rd Br	12	339	95	24	2900	120	3.43	100
Whirinaki Stm at Corbett Rd	12	73	50	19	370	38	3.18	32
<b>West Coast</b>								
Awakino River at Gribbon Rd	11	648	90	25	4300	364	2.65	74
Awakino River at SH3 Awakano Rd Junction	11	1302	130	80	12000	163	3.29	140
Manganui River at Off Manganui Rd	11	634	160	70	3600	255	2.38	160
Mangaotaki River at SH3 Br	11	1783	340	210	16000	298	3.31	350
Marokopa River at Speedies Rd (Off Te Anga Rd)	12	392	215	100	1800	225	2.80	140
Mokau River at Awakau Rd	11	508	250	43	1700	598	1.44	140
Mokau River at Mangaokewa Rd (Off SH30)	11	1744	160	40	17000	288	3.31	120
Mokau River at Totoro Rd Recorder	11	1265	230	120	8700	998	3.08	205
Mokauiti Stm at Three Way Point - Aria	11	801	210	110	6400	175	3.30	215
Ohautira Stm at Waingaro Te Uku Rd	12	368	335	140	700	330	0.62	350
Oparau River at Langdon Rd (Off Okupata Rd)	12	762	225	59	6800	265	3.44	120
Tawarau River at Off Speedies Rd	12	498	280	90	3200	290	3.29	150
Waingaro River (Pukemiro) at Ruakiwi Rd Off SH22	12	347	245	65	1300	240	2.07	250
Waitetuna River at Te Uku-Waingaro Rd	12	376	345	100	800	295	0.73	400
<b>Inflows to Lake Taupo</b>								
Hinemaiaia River at SH1	12	29	28	4	80	36	0.85	18
Kuratau River at SH41 Moerangi	12	32	18	1	110	43	1.40	10
Kuratau River at Te Rae Street T10	12	63	48	3	170	61	1.11	33
Mapara Stm (Lake Taupo) at Off Mapara Rd (Whakaipo Res) T1	12	1769	135	21	18000	235	3.40	60
Tauranga-Taupo River at 20 Metres U/S SH1 Bridge	12	29	14	5	100	42	1.42	17
Tokaanu Power Station Tailrace Canal at SH41 Bridge Over Canal	12	9	2	1	50	9	2.60	3
Tokaanu Stm at Off SH41 Turangi	12	14	9	4	51	12	2.01	9
Waihaha River at SH32	12	46	16	2	320	33	3.16	10
Waitahanui River at Blake Rd	12	30	22	5	150	20	3.10	19
Whangamata Stm (Kinloch) at Whangamata Rd	12	264	105	30	1000	180	1.85	80
Whanganui Stm at Lakeside Lake Taupo T8	12	67	51	3	170	108	0.42	28
Whareroa Stm (Taupo) at Lakeside Lake Taupo T9	11	149	140	22	420	132	1.40	100

IQR = Inter quartile range

Location	Enterococci (/100ml)							
	Count	Mean	Median	Min	Max	IQR	Skew	13-17 median
<b>Coromandel</b>								
Hikutaia River at Old Maratoto Rd	12	216	180	17	600	310	0.70	160
Kauaeranga River at Smiths Cableway/Recorder	12	106	50	8	420	132	1.92	90
Ohinemuri River at Karangahake	5	19	14	3	49	17	1.69	-
Ohinemuri River at Queens Head	12	100	22	4	470	98	1.86	19
Ohinemuri River at SH25 Br	12	394	36	2	4000	146	3.44	41
Tairua River at Morrisons Br Hikuai	12	95	40	2	510	103	2.50	41
Tapu River at Tapu-Coroglen Rd	12	185	110	15	550	196	1.25	72
Waiau River at E309 Rd Ford	12	163	100	9	540	186	1.39	93
Waitekauri River at U/S Ohinemuri Conflu	11	153	36	5	550	281	1.21	34
Waiwawa River at SH25 Coroglen	12	130	93	3	430	189	1.19	69
Wharekawa River at SH25	12	408	95	1	2200	536	2.25	100
<b>Hauraki</b>								
Mangawhero Stm (Kaihere) at Mangawara Rd	12	230	63	8	1200	219	2.23	60
Oraka Stm at Lake Rd	12	554	225	56	2000	675	1.45	260
Piako River at Kiwitahi	12	413	185	57	1900	310	2.45	130
Piako River at Paeroa-Tahuna Rd Br	12	901	450	160	2500	1445	1.06	300
Piakonui Stm at Piakonui Rd	12	160	66	12	550	301	1.12	75
Waihou River at Okauia	12	681	195	59	4000	365	2.48	160
Waihou River at Te Aroha	12	274	190	50	790	309	1.20	-
Waihou River at Whites Rd	12	45	17	4	170	61	1.49	23
Waiohotu Stm at Waiohotu Rd (Off SH5)	11	260	8	1	1500	170	2.07	18
Waiomou Stm at Matamata-Tauranga Rd	12	753	260	45	3900	985	2.46	280
Waitakaruru River (Hauraki Plains) at Coxhead Rd Br	12	285	170	26	1100	309	1.87	130
Waitoa River at Landsdowne Rd Br	12	329	275	51	720	315	0.66	255
Waitoa River at Mellon Rd Recorder	12	403	445	22	900	300	0.43	235
<b>Tributaries of the Lower Waikato</b>								
Awaroa River (Waiuku) at Otaua Rd Br opp Moseley Rd	12	195	145	17	660	220	1.43	61
Awaroa Stm (Rotowaro) at Sansons Br @ Rotowaro-Huntly Rd	12	90	85	20	210	89	0.76	90
Karapiro Stm at Hickey Rd Bridge	12	280	175	51	1400	180	3.02	140
Kirikiriroa Stm at Tauhara Dr	12	1018	615	70	4600	755	2.31	315
Komakorau Stm at Henry Rd	12	630	410	70	2200	750	1.63	400
Little Waipa Stm at Arapuni - Putaruru Rd	12	545	85	26	4900	231	3.40	140
Mangakotukutuku Stm (Rukuhia) at Peacocks Rd	12	1216	1300	130	2900	1605	0.31	415
Mangamingi Stm (Tokoroa) at Paraonui Rd Br	12	395	195	38	1700	399	2.01	330
Mangaone Stm (Waikato) at Annebrooke Rd Br	12	427	290	46	1500	540	1.70	450
Mangaonua Stm at Hoeka Rd	12	583	460	140	1500	470	1.31	530
Mangaonua Stm at Te Miro Rd (a.k.a Waitakaruru stm)	12	539	225	44	2300	445	1.92	240
Mangatangi River at SH2 Maramarua	12	413	135	39	2400	385	2.84	130
Mangatawhiri River at Lyons Rd At Buckingham Br	12	236	90	28	1600	128	3.13	80
Mangawara Stm at Rutherford Rd Br	12	1338	635	180	5000	1355	1.78	620
Mangawhero Stm (Cambridge) at Cambridge-Ohaupo Rd	12	568	405	150	1800	350	2.12	445
Matahuru Stm at Waiterimu Road Below Confluence	12	748	340	110	3300	485	2.17	250
Ohaeroa Stm at SH22 Br	12	354	195	16	1800	353	2.30	180
Opuatia Stm at Ponganui Rd	12	178	185	19	370	234	0.05	160
Pokaiwhenua Stm at Arapuni - Putaruru Rd	12	316	180	37	1600	266	2.87	130
Waerenga Stm at Taniwha Rd	12	674	205	29	6100	248	3.43	150
Waitawhiriwhiri Stm at Edgumbe Street	12	1817	850	290	4100	2975	0.51	600
Whakapipi Stm at SH22 Br	12	1089	480	140	4800	1165	1.98	310
Whakauru Stm at U/S SH1 Br	12	676	370	51	2300	805	1.38	420
Whangamarino River at Island Block Rd	12	261	48	16	2200	123	3.36	54
Whangamarino River at Jefferies Rd Br	12	907	330	230	3900	600	2.09	360
Whangape Stm at Rangiriri-Glen Murray Rd	12	115	50	10	430	165	1.44	50

IQR = Inter quartile range

Location	Count	Mean	Median	Min	Max	IQR	Skew	13-17 median
<b>Waipa River and Tributaries</b>								
Kaniwhaniwha Stm at Wright Rd	12	378	150	49	1800	307	2.29	200
Mangaohoi Stm at South Branch Maru Rd	12	67	22	4	210	142	0.88	48
Mangaokewa Stm at Lawrence Street Br	11	554	210	40	3200	556	2.76	245
Mangapiko Stm (Pirongia/Te Awamutu) at Bowman Rd	12	4118	210	3	46000	306	3.46	190
Mangapu River at Otorohanga	11	1511	160	35	13000	559	3.22	180
Mangatutu Stm (Waikeria) at Walker Rd Br	12	2904	110	15	32000	450	3.45	105
Mangauika Stm at Te Awamutu Borough W/S Intake	12	107	18	1	800	102	3.07	17
Ohote Stm at Whatawhata/Horotiu Rd	12	155	145	22	330	135	0.56	100
Puniu River at Bartons Corner Rd Br	12	3427	110	10	39000	289	3.46	105
Waipa River at Mangaokewa Rd	11	358	35	6	2100	491	2.31	41
Waipa River at Pukehoua Bridge on Baffin Road	12	367	135	37	2800	201	3.35	-
Waipa River at SH3 Otorohanga	11	703	130	22	3400	373	1.89	82
Waitomo Stm at SH31 Otorohanga	12	326	140	17	1000	483	1.11	160
Waitomo Stm at Tumutumu Rd	12	141	62	6	900	129	3.09	60
<b>Tributaries of the Upper Waikato</b>								
Kawaunui Stm at SH5 Br	12	557	225	28	3000	644	2.35	170
Mangaharakeke Stm (Atiamuri) at SH30 (Off Jct SH1)	12	532	145	16	2500	743	1.76	150
Mangakara Stm (Reporoa) at SH5	12	151	44	7	600	151	1.73	130
Mangakino Stm (Whakamaru) at Sandel Rd	12	119	33	2	450	150	1.48	25
Otamakokore Stm at Hossack Rd	12	295	135	5	1900	177	3.08	140
Pueto Stm at Broadlands Rd Br	12	218	26	6	1900	138	3.32	20
Tahunaatara Stm at Ohakuri Rd	12	755	130	17	5400	187	2.61	80
Torepatutahi Stm at Vaile Rd Br	12	87	60	8	240	104	0.95	48
Waiotapu Stm at Campbell Rd Br	12	133	7	1	1500	10	3.46	4
Waiotapu Stm at Homestead Rd Br	12	100	27	17	560	94	2.65	98
Waipapa Stm (Mokai) at Tirohanga Rd Br	12	388	41	9	2100	282	1.99	60
Whirinaki Stm at Corbett Rd	12	63	31	17	210	84	1.58	23
<b>West Coast</b>								
Awakino River at Gribbon Rd	11	326	60	3	1700	295	2.00	40
Awakino River at SH3 Awakau Rd Junction	11	479	50	4	4000	267	3.18	50
Manganui River at Off Manganui Rd	11	401	60	6	2100	138	1.94	40
Mangaotaki River at SH3 Br	11	598	80	20	4500	241	2.98	150
Marokopa River at Speedies Rd (Off Te Anga Rd)	12	85	52	10	260	124	1.18	40
Mokau River at Awakau Rd	11	169	26	4	1000	211	2.61	57
Mokau River at Mangaokewa Rd (Off SH30)	11	698	55	5	7000	112	3.31	65
Mokau River at Totoro Rd Recorder	11	473	130	11	3800	244	3.25	75
Mokauiti Stm at Three Way Point - Aria	11	445	110	20	3400	314	3.18	95
Ohautira Stm at Waingaro Te Uku Rd	12	166	95	17	600	227	1.48	180
Oparau River at Langdon Rd (Off Okupata Rd)	12	261	49	5	2000	133	3.03	45
Tawarau River at Off Speedies Rd	12	82	42	6	290	102	1.46	40
Waingaro River (Pukemiro) at Ruakiwi Rd Off SH22	12	141	60	25	520	158	1.71	60
Waitetuna River at Te Uku-Waingaro Rd	12	237	125	28	1100	243	2.56	190
<b>Inflows to Lake Taupo</b>								
Hinemaiaia River at SH1	12	23	13	1	130	24	2.87	10
Kuratau River at SH41 Moerangi	12	16	8	1	60	28	1.30	3
Kuratau River at Te Rae Street T10	12	52	35	4	220	47	1.86	20
Mapara Stm (Lake Taupo) at Off Mapara Rd (Whakaipo Res) T1	12	486	195	6	2800	575	2.46	90
Tauranga-Taupo River at 20 Metres U/S SH1 Bridge	12	31	17	1	130	30	1.78	8
Tokaanu Power Station Tailrace Canal at SH41 Bridge Over Canal	12	12	3	1	60	16	2.07	2
Tokaanu Stm at Off SH41 Turangi	12	9	2	1	26	18	0.75	7
Waihaha River at SH32	12	26	7	1	140	42	2.21	4
Waitahanui River at Blake Rd	12	35	14	2	200	19	2.53	11
Whangamata Stm (Kinloch) at Whangamata Rd	12	342	104	12	2100	226	2.55	90
Whanganui Stm at Lakeside Lake Taupo T8	12	78	19	3	280	152	1.12	19
Whareroa Stm (Taupo) at Lakeside Lake Taupo T9	12	210	145	10	580	368	0.57	47

IQR = Inter quartile range

Location	Water Temperature (°C)							
	Count	Mean	Median	Min	Max	IQR	Skew	13-17 median
<b>Coromandel</b>								
Hikutaia River at Old Maratoto Rd	12	14.8	13.6	10.1	21.8	6.0	0.68	13.7
Kauaeranga River at Smiths Cableway/Recorder	12	15.4	14.6	10.7	23.4	6.7	0.77	15.2
Ohinemuri River at Karangahake	5	15.0	13.6	11.2	21.4	5.7	1.12	-
Ohinemuri River at Queens Head	12	16.7	15.9	11.8	23.5	6.8	0.63	16.6
Ohinemuri River at SH25 Br	12	16.6	16.0	11.4	22.3	5.9	0.44	16.1
Tairua River at Morrisons Br Hikuai	12	16.4	15.8	11.2	23.3	6.6	0.62	16.1
Tapu River at Tapu-Coroglen Rd	12	15.0	13.8	10.4	21.7	6.5	0.59	14.3
Waiau River at E309 Rd Ford	12	15.1	14.0	10.7	21.4	5.6	0.60	14.2
Waitekauri River at U/S Ohinemuri Conflu	11	16.1	15.4	10.9	21.9	7.5	0.40	15.3
Waiwawa River at SH25 Coroglen	12	15.8	14.5	10.7	22.4	6.9	0.61	15.5
Wharekawa River at SH25	12	16.2	15.7	10.5	22.3	6.4	0.42	15.6
<b>Hauraki</b>								
Mangawhero Stm (Kaihere) at Mangawara Rd	12	14.3	14.0	11.4	18.0	4.8	0.21	14.3
Oraka Stm at Lake Rd	12	13.9	13.9	9.5	17.3	4.7	-0.27	14.2
Piako River at Kiwitahi	12	16.3	16.4	10.5	24.4	6.9	0.39	15.8
Piako River at Paeroa-Tahuna Rd Br	12	15.8	15.9	10.9	21.8	6.8	0.24	15.7
Piakonui Stm at Piakonui Rd	12	13.8	13.6	9.7	18.4	4.4	0.16	13.4
Waihou River at Okauia	12	13.9	14.0	9.2	17.5	5.1	-0.29	14.4
Waihou River at Te Aroha	12	15.2	15.2	11.3	19.7	5.8	0.17	-
Waihou River at Whites Rd	12	13.2	13.3	12.0	14.5	1.4	0.04	13.3
Waiohotu Stm at Waiohotu Rd (Off SH5)	12	11.5	11.7	6.0	15.6	5.4	-0.35	11.6
Waiomou Stm at Matamata-Tauranga Rd	12	13.5	13.3	8.1	17.4	5.6	-0.30	13.9
Waitakaruru River (Hauraki Plains) at Coxhead Rd Br	12	16.1	16.1	11.3	21.4	7.1	0.12	16.2
Waitoa River at Landsdowne Rd Br	12	15.7	15.8	10.5	21.6	6.4	0.19	15.7
Waitoa River at Mellon Rd Recorder	12	15.8	16.1	7.8	21.5	7.1	-0.27	16.0
<b>Tributaries of the Lower Waikato</b>								
Awaroa River (Waiuku) at Otatau Rd Br opp Moseley Rd	12	17.1	16.7	12.3	24.0	8.0	0.28	16.9
Awaroa Stm (Rotowaro) at Sansons Br @ Rotowaro-Huntly Rd	12	15.2	14.4	10.1	20.9	7.3	0.09	15.0
Karapiro Stm at Hickey Rd Bridge	12	15.3	15.7	9.9	20.9	6.2	0.03	15.5
Kirikiri Stm at Tauhara Dr	12	15.9	16.6	12.1	19.0	4.4	-0.26	15.1
Komakorau Stm at Henry Rd	12	15.7	15.6	12.0	19.7	6.0	-0.10	15.0
Little Waipa Stm at Arapuni - Putaruru Rd	12	13.9	14.2	10.5	16.9	4.0	-0.25	14.3
Mangakotukutuku Stm (Rukuhia) at Peacocks Rd	12	15.7	16.0	11.0	20.0	5.9	-0.05	15.5
Mangamingi Stm (Tokoroa) at Paraonui Rd Br	12	13.7	13.7	9.2	18.3	5.4	-0.01	13.9
Mangaone Stm (Waikato) at Annebrooke Rd Br	12	14.2	14.6	9.8	17.7	4.8	-0.32	14.1
Mangaonua Stm at Hoeka Rd	12	14.7	14.8	10.2	19.7	5.0	0.08	14.3
Mangaonua Stm at Te Miro Rd (a.k.a Waitakaruru stm)	12	15.0	15.0	10.2	20.0	5.3	0.08	14.3
Mangatangi River at SH2 Maramarua	12	16.8	16.1	11.7	23.1	7.2	0.29	16.7
Mangatawhiri River at Lyons Rd At Buckingham Br	11	16.9	16.1	11.6	23.2	7.2	0.31	16.7
Mangawara Stm at Rutherford Rd Br	12	15.6	15.7	11.1	20.9	6.9	0.13	15.6
Mangawhero Stm (Cambridge) at Cambridge-Ohaupo Rd	12	15.1	15.3	10.9	18.5	4.9	-0.22	14.6
Matahuru Stm at Waiterimu Road Below Confluence	12	15.2	15.3	10.4	20.7	5.5	0.11	15.2
Ohaeroa Stm at SH22 Br	12	14.5	14.2	10.4	18.8	4.4	0.24	14.7
Opuatia Stm at Ponganui Rd	12	15.0	14.5	10.4	20.9	6.5	0.31	14.8
Pokaiwhenua Stm at Arapuni - Putaruru Rd	12	13.7	13.7	9.2	17.3	5.1	-0.22	14.0
Waerenga Stm at Taniwha Rd	12	14.5	13.8	10.1	19.5	6.2	0.28	14.9
Waitawhiriwhiri Stm at Edgumbe Street	12	17.0	17.2	12.8	21.1	5.5	-0.11	16.7
Whakapipi Stm at SH22 Br	12	15.7	15.5	12.1	20.9	5.8	0.27	15.8
Whakauru Stm at U/S SH1 Br	12	12.3	12.6	7.6	16.0	4.8	-0.30	12.5
Whangamarino River at Island Block Rd	12	17.9	17.6	10.6	26.8	9.3	0.26	17.6
Whangamarino River at Jefferies Rd Br	12	15.1	14.9	10.4	20.7	6.7	0.18	15.2
Whangape Stm at Rangiriri-Glen Murray Rd	12	16.8	16.9	10.0	23.4	7.3	-0.02	16.4

IQR = Inter quartile range

Location	Count	Mean	Median	Min	Max	IQR	Skew	13-17 median
<b>Waipa River and Tributaries</b>								
Kaniwhaniwha Stm at Wright Rd	12	14.6	13.9	10.3	20.3	6.6	0.19	14.6
Mangaohoi Stm at South Branch Maru Rd	11	13.9	13.9	9.3	20.7	5.1	0.66	14.1
Mangaokewa Stm at Lawrence Street Br	11	13.5	13.1	10.6	16.9	5.0	0.22	13.7
Mangapiko Stm (Pirongia/Te Awamutu) at Bowman Rd	12	16.8	16.0	10.1	25.9	7.6	0.50	17.1
Mangapu River at Otorohanga	11	15.5	14.9	11.3	20.8	6.1	0.33	15.2
Mangatutu Stm (Waikeria) at Walker Rd Br	12	14.3	13.8	9.3	21.4	6.1	0.49	13.8
Mangauika Stm at Te Awamutu Borough W/S Intake	12	12.8	12.8	9.3	15.9	4.3	-0.26	12.5
Ohote Stm at Whatawhata/Horotiu Rd	12	16.4	17.0	11.1	21.9	6.8	-0.02	16.1
Puniu River at Bartons Corner Rd Br	12	15.1	14.8	9.6	21.8	6.4	0.31	14.8
Waipa River at Mangaokewa Rd	11	13.2	12.7	10.1	18.4	4.9	0.57	12.8
Waipa River at Pukehoua Bridge on Baffin Road	12	15.5	15.1	10.6	21.0	6.8	0.08	-
Waipa River at SH3 Otorohanga	11	15.5	14.5	11.9	20.8	6.4	0.52	14.6
Waitomo Stm at SH31 Otorohanga	12	15.3	14.8	10.5	20.1	5.6	0.10	14.9
Waitomo Stm at Tumutumu Rd	12	14.3	13.9	11.2	17.8	3.9	0.14	13.9
<b>Tributaries of the Upper Waikato</b>								
Kawaunui Stm at SH5 Br	12	15.2	15.4	10.8	18.7	4.8	-0.18	14.7
Mangaharakeke Stm (Atiamuri) at SH30 (Off Jct SH1)	12	13.2	13.5	8.9	16.2	4.5	-0.37	13.5
Mangakara Stm (Reporoa) at SH5	12	13.5	13.7	9.9	16.8	4.3	-0.10	13.3
Mangakino Stm (Whakamaru) at Sandel Rd	12	12.0	12.0	8.3	15.5	4.7	-0.08	12.3
Otamakokore Stm at Hossack Rd	12	19.1	19.0	13.9	23.4	5.7	-0.20	21.0
Pueto Stm at Broadlands Rd Br	12	13.5	13.7	10.5	15.9	3.1	-0.23	13.7
Tahunaatara Stm at Ohakuri Rd	12	13.3	13.3	8.0	17.5	6.0	-0.16	13.5
Torepatutahi Stm at Vaile Rd Br	12	14.0	14.3	9.3	17.5	5.2	-0.28	14.1
Waiotapu Stm at Campbell Rd Br	12	27.2	27.1	23.2	31.0	5.6	-0.07	28.2
Waiotapu Stm at Homestead Rd Br	11	17.3	16.9	13.1	22.0	5.4	0.42	18.6
Waipapa Stm (Mokai) at Tirohanga Rd Br	12	21.8	21.7	18.0	24.8	4.5	-0.23	22.8
Whirinaki Stm at Corbett Rd	12	12.8	13.1	10.4	14.5	2.8	-0.41	12.3
<b>West Coast</b>								
Awakino River at Gribbon Rd	11	13.0	12.8	10.5	15.9	3.3	0.24	13.0
Awakino River at SH3 Awakino Rd Junction	11	14.5	13.9	10.3	20.2	4.6	0.60	14.3
Manganui River at Off Manganui Rd	11	13.4	12.2	11.0	17.0	4.6	0.51	13.7
Mangaotaki River at SH3 Br	11	13.8	13.4	10.8	17.0	4.5	0.20	13.7
Marokopa River at Speedies Rd (Off Te Anga Rd)	12	14.2	13.7	9.9	18.3	5.0	0.01	13.8
Mokau River at Awakau Rd	11	14.8	14.2	10.0	20.0	6.2	0.21	14.6
Mokau River at Mangaokewa Rd (Off SH30)	11	12.8	12.8	10.0	16.1	4.1	0.24	12.4
Mokau River at Totoro Rd Recorder	11	14.6	14.4	10.3	18.7	5.5	0.13	14.4
Mokauiti Stm at Three Way Point - Aria	11	14.7	14.4	9.7	20.0	6.2	0.14	14.4
Ohautira Stm at Waingaro Te Uku Rd	12	13.8	13.1	9.4	18.4	6.1	0.07	13.2
Oparau River at Langdon Rd (Off Okupata Rd)	12	14.7	14.0	9.7	20.1	5.6	0.04	14.3
Tawarau River at Off Speedies Rd	12	13.9	13.4	9.7	17.9	4.9	0.03	13.5
Waingaro River (Pukemiro) at Ruakiwi Rd Off SH22	12	15.4	14.4	10.1	21.7	6.9	0.22	14.6
Waitetuna River at Te Uku-Waingaro Rd	12	14.4	13.6	9.9	19.3	6.6	0.11	14.1
<b>Inflows to Lake Taupo</b>								
Hinemaiaia River at SH1	12	11.0	11.1	7.1	14.6	5.8	-0.14	11.6
Kuratau River at SH41 Moerangi	12	9.7	9.2	6.0	12.8	3.8	-0.12	9.8
Kuratau River at Te Rae Street T10	12	12.9	12.3	7.8	19.0	7.5	0.24	13.3
Mapara Stm (Lake Taupo) at Off Mapara Rd (Whakaipo Res) T1	12	10.9	10.8	8.1	13.0	2.5	-0.37	11.1
Tauranga-Taupo River at 20 Metres U/S SH1 Bridge	12	10.3	10.0	5.6	14.1	6.3	-0.12	10.7
Tokaanu Power Station Tailrace Canal at SH41 Bridge Over Canal	11	12.3	12.4	7.7	17.8	7.9	0.18	12.7
Tokaanu Stm at Off SH41 Turangi	12	11.9	11.9	11.2	13.1	1.0	0.56	12.1
Waihaha River at SH32	12	11.2	11.0	6.8	14.7	4.8	-0.14	11.5
Waitahanui River at Blake Rd	12	10.6	10.8	8.7	12.1	2.4	-0.38	10.8
Whangamata Stm (Kinloch) at Whangamata Rd	12	10.4	10.4	7.5	12.9	2.3	-0.35	10.3
Whanganui Stm at Lakeside Lake Taupo T8	12	11.3	11.0	6.6	15.3	5.5	-0.05	11.6
Whareroa Stm (Taupo) at Lakeside Lake Taupo T9	12	11.1	11.1	6.8	14.1	4.2	-0.30	11.4

IQR = Inter quartile range

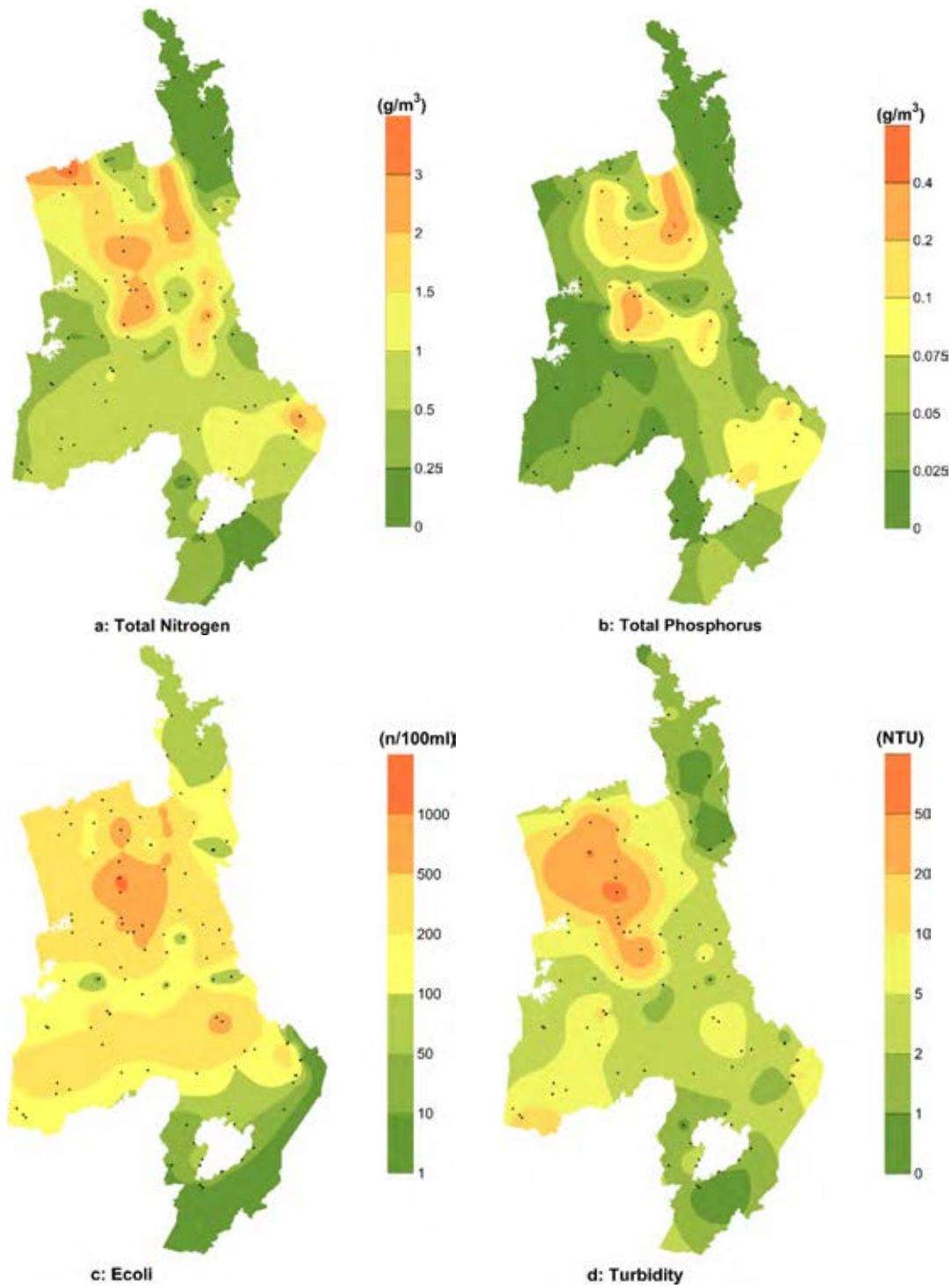


Figure 2: Spatial contour plots of four water quality parameters (based on 5 year median values, 2013-2017); a: Total Nitrogen, b: Total Phosphorus, c: *Escherichia coli*, d: Turbidity.



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

Table 4: Number of samples (2017) complying with the "satisfactory" and "excellent" water quality guidelines and standards.

Location	SATISFACTORY										EXCELLENT									
	ECOLOGICAL HEALTH					RECREATION					ECOLOGICAL HEALTH					RECREATION				
	DO	pH	Turb	NH <sub>4</sub> N	Temp	TP	TN	BDisk	E coli	Median E coli	DO	pH	Turb	NH <sub>4</sub> N	Temp	TP	TN	BDisk	E coli	Median E coli
<b>Coromandel</b>																				
Hikutaia River at Old Maratoto Rd	12	12	12	12	8	12	12	10 <sup>1</sup>	9	N	11	8	5	12	3	9	0	1 <sup>1</sup>	0	N
Kauaeranga River at Smiths Cableway/Recorder	12	12	8	12	9	12	12	9	10	Y	12	9	6	12	3	9	5	4	3	N
Ohinemuri River at Karangahake	5 <sup>7</sup>	5 <sup>7</sup>	5 <sup>7</sup>	5 <sup>7</sup>	2 <sup>7</sup>	5 <sup>7</sup>	1 <sup>7</sup>	5 <sup>7</sup>	5 <sup>7</sup>	Y <sup>7</sup>	5 <sup>7</sup>	5 <sup>7</sup>	4 <sup>7</sup>	5 <sup>7</sup>	0 <sup>7</sup>	3 <sup>7</sup>	0 <sup>7</sup>	0 <sup>7</sup>	2 <sup>7</sup>	N <sup>7</sup>
Ohinemuri River at Queens Head	12	12	12	12	5	12	1	10 <sup>1</sup>	11	Y	12	10	8	7	1	8	0	2 <sup>1</sup>	0	N
Ohinemuri River at SH25 Br	12	11	11	12	5	12	2	10 <sup>1</sup>	11	N	12	8	8	12	1	4	0	3 <sup>1</sup>	4	N
Tairua River at Morrisons Br Hikuai	12	11	11	12	5	12	12	-	12	Y	11	9	10	12	1	11	3	-	5	N
Tapu River at Tapu-Coroglen Rd	12	12	9	12	9	12	12	11	12	N	12	12	5	12	3	11	7	3	0	N
Waiau River at E309 Rd Ford	12	12	8	12	8	12	12	8	12	N	12	11	3	12	3	12	2	0	0	N
Waitekauri River at U/S Ohinemuri Conflu	11 <sup>1</sup>	11 <sup>1</sup>	10 <sup>1</sup>	11 <sup>1</sup>	6 <sup>1</sup>	11 <sup>1</sup>	10 <sup>1</sup>	9 <sup>2</sup>	7 <sup>1</sup>	N <sup>1</sup>	11 <sup>1</sup>	8 <sup>1</sup>	7 <sup>1</sup>	11 <sup>1</sup>	2 <sup>1</sup>	8 <sup>1</sup>	0 <sup>1</sup>	2 <sup>2</sup>	1 <sup>1</sup>	N <sup>1</sup>
Waiwawa River at SH25 Coroglen	12	12	11	12	6	12	12	8 <sup>1</sup>	12	Y	11	10	4	12	2	11	6	3 <sup>1</sup>	3	N
Wharekawa River at SH25	12	11	10	12	5	12	12	7 <sup>1</sup>	8	N	11	6	4	12	2	11	0	1 <sup>1</sup>	2	N
<b>Hauraki</b>																				
Mangawhero Stm (Kaihere) at Mangawara Rd	12	12	0	12	11	4	4	1	12	Y	12	12	0	12	3	0	0	0	8	N
Oraka Stm at Lake Rd	12	12	1	12	10	0	0	0	9	N	11	12	0	11	4	0	0	0	1	N
Piako River at Kiwitahi	10	12	6	12	8	0	2	1	8	N	5	8	0	12	1	0	0	0	0	N
Piako River at Paeroa-Tahuna Rd Br	8	12	1	12	8	0	1	1 <sup>1</sup>	3	N	0	8	0	9	1	0	0	0 <sup>1</sup>	0	N
Piakonui Stm at Piakonui Rd	12	12	5	12	12	12	3	1	12	Y	12	11	0	12	4	0	0	0	6	N
Waihou River at Okauia	12	12	4	12	11	0	0	0 <sup>1</sup>	8	N	11	12	0	12	4	0	0	0 <sup>1</sup>	0	N
Waihou River at Te Aroha	9 <sup>1</sup>	12	2	12	10	0	0	1	9	N	1 <sup>1</sup>	9	0	12	2	0	0	0	0	N
Waihou River at Whites Rd	12	12	12	12	7	0	0	12	12	Y	12	7	12	12	7	0	0	11	6	N
Waihotu Stm at Waihotu Rd (Off SH5)	12	12	9	12	12	10	11	-	11	Y	9	8	0	12	11	0	0	-	7	N
Waiomou Stm at Matamata-Tauranga Rd	12	12	3	12	11	7	1	2	8	N	12	11	0	12	5	0	0	0	0	N
Waitakaruru River (Hauraki Plains) at Coxhead Rd Br	10	12	3	12	6	4	4	2	11	N	9	9	1	11	1	0	0	0	0	N
Waitoa River at Landsdowne Rd Br	10	12	3	12	8	3	0	2	6	N	3	8	2	12	2	0	0	0	0	N
Waitoa River at Mellon Rd Recorder	1	12	1	12	7	0	0	1	7	N	0	9	0	8	2	0	0	0	0	N
<b>Tributaries of the Lower Waikato</b>																				
Awaroa River (Waiuku) at Otatau Rd Br opp Moseley Rd	8	12	0	12	3	5	0	0	7	N	2	7	0	8	0	0	0	0	0	N
Awaroa Stm (Rotowaro) at Sansons Br @ Rotowaro-Huntly Rd	10	12	3	12	10	11	1	0 <sup>1</sup>	12	N	4	11	0	10	2	6	0	0 <sup>1</sup>	0	N
Karapiro Stm at Hickey Rd Bridge	12	12	1	12	8	0	0	0	8	N	6	12	0	11	3	0	0	0	1	N
Kirikiriroa Stm at Tauhara Dr	2	12	0	12	7	0	0	0	6	N	0	6	0	0	0	0	0	0	0	N
Komakorau Stm at Henry Rd	0	7	0	8	7	0	0	0 <sup>1</sup>	3	N	0	2	0	0	1	0	0	0 <sup>1</sup>	0	N
Little Waipa Stm at Arapuni - Putaruru Rd	12	12	9	12	10	0	0	6	10	N	11	8	4	11	3	0	0	0	0	N
Mangakotukutuku Stm (Rukuhia) at Peacocks Rd	12	10	0	12	8	0	0	0	3	N	2	6	0	2	1	0	0	0	0	N
Mangamingi Stm (Tokoroa) at Paraonui Rd Br	12	12	6	12	11	0	0	0	6	N	12	12	0	1	6	0	0	0	0	N
Mangaone Stm (Waikato) at Annebrooke Rd Br	2	12	2	12	10	0	0	2	5	N	0	12	0	12	5	0	0	0	0	N
Mangaonua Stm at Hoeka Rd	7	12	1	12	9	1	0	1	2	N	0	7	0	7	3	0	0	0	1	N
Mangaonua Stm at Te Miro Rd (a.k.a Waitakaruru stm)	12	12	6	12	9	12	2	1	11	N	12	11	0	12	2	0	0	0	0	N
Mangatangi River at SH2 Maramarua	9	12	0	12	5	1	3	0	6	N	2	8	0	12	1	0	0	0	0	N
Mangatawhiri River at Lyons Rd At Buckingham Br	12	12	6	12	4 <sup>1</sup>	12	12	5	12	N	12	11	2	12	0 <sup>1</sup>	0	0	0	0	N
Mangawara Stm at Rutherford Rd Br	0	8	0	12	9	0	0	0	1	N	0	3	0	0	1	0	0	0	0	N
Mangawhero Stm (Cambridge) at Cambridge-Ohaupo Rd	12	12	0	12	9	0	0	0	8	N	0	6	0	4	2	0	0	0	0	N
Matahuru Stm at Waiterimu Road Below Confluence	8	11	0	12	8	0	0	-	5	N	0	6	0	7	1	0	0	-	0	N
Ohaeroa Stm at SH22 Br	11	12	2	12	10	10	0	1 <sup>2</sup>	10	N	10	12	0	12	2	1	0	0 <sup>2</sup>	0	N
Opuatia Stm at Ponganui Rd	11	12	0	12	10	6	0	0	8	N	10	12	0	12	2	0	0	0	0	N
Pokaiwhenua Stm at Arapuni - Putaruru Rd	12	12	7	12	11	0	0	0	8	N	12	12	0	12	5	0	0	0	0	N
Waerenga Stm at Taniwha Rd	11	12	1	12	12	5	0	0	4	N	10	12	0	12	2	0	0	0	0	N
Waitawhiriwhiri Stm at Edgecumbe Street	9	12	0	12	5	0	0	0	2 <sup>1</sup>	N <sup>1</sup>	0	6	0	0	0	0	0	0 <sup>1</sup>	N <sup>1</sup>	
Whakapipi Stm at SH22 Br	10	12	6	12	6	5	0	3	6	N	9	12	2	12	2	0	0	0	0	N
Whakauru Stm at U/S SH1 Br	12	12	0	12	11	0	0	0	1	N	12	12	0	12	9	0	0	0	0	N
Whangamarino River at Island Block Rd	2 <sup>1</sup>	11	1	12	4	0	0	0	10	Y	2 <sup>1</sup>	4	0	8	0	0	0	0	3	N
Whangamarino River at Jefferies Rd Br	6	12	0	12	10	0	1	0	1	N	0	9	0	10	2	0	0	0	0	N
Whangape Stm at Rangiriri-Glen Murray Rd	5	12	0	12	6	0	0	0	11	Y	5	12	0	12	1	0	0	0	5	N

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

Tributaries of the Upper Waikato																				
Kawaunui Stm at SH5 Br	12	12	10	12	9	0	0	3	8	N	0	3	2	12	3	0	0	0	0	N
Mangaharakeke Stm (Atiamuri) at SH30 (Off Jct SH1)	12	12	1	12	11	1	0	0 <sup>1</sup>	9	N	11	12	0	11	6	0	0	0 <sup>1</sup>	0	N
Mangakara Stm (Reporoa) at SH5	12	12	1	12	10	0	0	0 <sup>1</sup>	11	N	11	8	0	12	6	0	0	0 <sup>1</sup>	1	N
Mangakino Stm (Whakamaru) at Sandel Rd	12	12	10	12	11	4	0	3 <sup>4</sup>	10	Y	12	12	3	12	10	0	0	0 <sup>4</sup>	6	N
Otamakokore Stm at Hossack Rd	11	12	12	12	2	0	0	2	9	N	5	11	1	12	0	0	0	0	1	N
Pueto Stm at Broadlands Rd Br	12	12	12	12	10	0	0	5	12	Y	10	12	2	12	7	0	0	0	10	N
Tahunaatara Stm at Ohakuri Rd	12	12	8	12	11	0	0	0	10	N	12	12	0	11	5	0	0	0	0	N
Torepatutahi Stm at Vaile Rd Br	10	12	12	12	11	0	1	-	12	Y	5	12	11	12	4	0	0	-	3	N
Waiotapu Stm at Campbell Rd Br	12	0	0	8	0	2	0	1	11	Y	0	0	0	0	0	0	0	0	10	Y
Waiotapu Stm at Homestead Rd Br	10	11	0	12	3 <sup>1</sup>	0	0	-	11	N	3	1	0	0	0 <sup>1</sup>	0	0	-	2	N
Waipapa Stm (Mokai) at Tirohanga Rd Br	12	12	6	12	0	0	0	1	11	Y	12	12	1	12	0	0	0	0	2	N
Whirinaki Stm at Corbett Rd	12	12	12	12	11	0	0	-	12	Y	12	12	12	12	7	0	0	-	8	N

West Coast																				
Awakino River at Gribbon Rd	11 <sup>1</sup>	11 <sup>1</sup>	8 <sup>1</sup>	11 <sup>1</sup>	10 <sup>1</sup>	9 <sup>1</sup>	10 <sup>1</sup>	6 <sup>2</sup>	9 <sup>1</sup>	Y <sup>1</sup>	11 <sup>1</sup>	11 <sup>1</sup>	6 <sup>1</sup>	11 <sup>1</sup>	6 <sup>1</sup>	0 <sup>1</sup>	1 <sup>1</sup>	0 <sup>2</sup>	3 <sup>1</sup>	N <sup>1</sup>
Awakino River at SH3 Awakau Rd Junction	11 <sup>1</sup>	11 <sup>1</sup>	6 <sup>1</sup>	11 <sup>1</sup>	8 <sup>1</sup>	9 <sup>1</sup>	8 <sup>1</sup>	2 <sup>2</sup>	9 <sup>1</sup>	N <sup>1</sup>	11 <sup>1</sup>	11 <sup>1</sup>	1 <sup>1</sup>	11 <sup>1</sup>	2 <sup>1</sup>	0 <sup>1</sup>	0 <sup>1</sup>	0 <sup>2</sup>	0 <sup>1</sup>	N <sup>1</sup>
Manganui River at Off Manganui Rd	11 <sup>1</sup>	11 <sup>1</sup>	5 <sup>1</sup>	11 <sup>1</sup>	9 <sup>1</sup>	7 <sup>1</sup>	9 <sup>1</sup>	2 <sup>2</sup>	9 <sup>1</sup>	N <sup>1</sup>	11 <sup>1</sup>	10 <sup>1</sup>	1 <sup>1</sup>	11 <sup>1</sup>	3 <sup>1</sup>	2 <sup>1</sup>	0 <sup>1</sup>	0 <sup>2</sup>	0 <sup>1</sup>	N <sup>1</sup>
Mangaotaki River at SH3 Br	11 <sup>1</sup>	11 <sup>1</sup>	5 <sup>1</sup>	11 <sup>1</sup>	8 <sup>1</sup>	10 <sup>1</sup>	0 <sup>1</sup>	0 <sup>2</sup>	8 <sup>1</sup>	N <sup>1</sup>	11 <sup>1</sup>	11 <sup>1</sup>	0 <sup>1</sup>	11 <sup>1</sup>	2 <sup>1</sup>	0 <sup>1</sup>	0 <sup>1</sup>	0 <sup>2</sup>	0 <sup>1</sup>	N <sup>1</sup>
Marokopa River at Speedies Rd (Off Te Anga Rd)	12	12	6	12	10	10	7	0 <sup>1</sup>	10	N	12	12	0	12	3	0	0	0 <sup>1</sup>	0	N
Mokau River at Awakau Rd	11 <sup>1</sup>	11 <sup>1</sup>	0 <sup>1</sup>	11 <sup>1</sup>	8 <sup>1</sup>	6 <sup>1</sup>	2 <sup>1</sup>	0 <sup>2</sup>	7 <sup>1</sup>	N <sup>1</sup>	10 <sup>1</sup>	11 <sup>1</sup>	0 <sup>1</sup>	11 <sup>1</sup>	2 <sup>1</sup>	0 <sup>1</sup>	0 <sup>1</sup>	0 <sup>2</sup>	2 <sup>1</sup>	N <sup>1</sup>
Mokau River at Mangaokewa Rd (Off SH30)	11 <sup>1</sup>	11 <sup>1</sup>	7 <sup>1</sup>	11 <sup>1</sup>	10 <sup>1</sup>	9 <sup>1</sup>	2 <sup>1</sup>	-	9 <sup>1</sup>	N <sup>1</sup>	11 <sup>1</sup>	11 <sup>1</sup>	0 <sup>1</sup>	11 <sup>1</sup>	5 <sup>1</sup>	0 <sup>1</sup>	0 <sup>1</sup>	-	3 <sup>1</sup>	N <sup>1</sup>
Mokau River at Totoro Rd Recorder	11 <sup>1</sup>	11 <sup>1</sup>	4 <sup>1</sup>	11 <sup>1</sup>	9 <sup>1</sup>	5 <sup>1</sup>	0 <sup>1</sup>	1 <sup>2</sup>	7 <sup>1</sup>	N <sup>1</sup>	11 <sup>1</sup>	11 <sup>1</sup>	0 <sup>1</sup>	11 <sup>1</sup>	2 <sup>1</sup>	0 <sup>1</sup>	0 <sup>1</sup>	0 <sup>2</sup>	0 <sup>1</sup>	N <sup>1</sup>
Mokauiti Stm at Three Way Point - Aria	11 <sup>1</sup>	11 <sup>1</sup>	0 <sup>1</sup>	11 <sup>1</sup>	8 <sup>1</sup>	3 <sup>1</sup>	3 <sup>1</sup>	0 <sup>2</sup>	10 <sup>1</sup>	N <sup>1</sup>	7 <sup>1</sup>	10 <sup>1</sup>	0 <sup>1</sup>	11 <sup>1</sup>	3 <sup>1</sup>	0 <sup>1</sup>	0 <sup>1</sup>	0 <sup>2</sup>	0 <sup>1</sup>	N <sup>1</sup>
Ohautira Stm at Waingaro Te Uku Rd	12	12	3	12	11	10	7	0 <sup>1</sup>	9	N	12	12	0	12	4	0	0	0 <sup>1</sup>	0	N
Oparau River at Langdon Rd (Off Okupata Rd)	12	12	7	12	9	11	11	5 <sup>1</sup>	11	N	12	12	1	12	3	4	0	0 <sup>1</sup>	0	N
Tawarau River at Off Speedies Rd	12	12	7	12	11	10	6	1 <sup>1</sup>	11	N	12	11	0	12	3	0	0	0 <sup>1</sup>	0	N
Waingaro River (Pukemiro) at Ruakiwi Rd Off SH22	12	12	2	12	8	8	4	0 <sup>2</sup>	10	N	11	12	0	12	2	0	0	0 <sup>2</sup>	0	N
Waitetuna River at Te Uku-Waingaro Rd	12	12	1	12	11	10	3	0 <sup>2</sup>	10	N	12	12	0	12	3	0	0	0 <sup>2</sup>	0	N

Inflows to Lake Taupo																				
Hinemaiaia River at SH1	12	12	12	12	12	12	10	12	Y	12	12	10	12	11	0	0	0	0	11	N
Kuratau River at SH41 Moerangi	12	12	12	12	12	12	9	11	12	Y	11	10	7	12	12	11	0	3	9	Y
Kuratau River at Te Rae Street T10	12	12	12	12	12	12	0	-	12	Y	11	11	10	12	7	4	0	-	6	N
Mapara Stm (Lake Taupo) at Off Mapara Rd (Whakaipo Res) T1	12	12	10	12	12	0	0	1	10	N	0	12	0	12	9	0	0	0	2	N
Tauranga-Taupo River at 20 Metres U/S SH1 Bridge	12	12	11	12	12	12	10	12	Y	12	11	8	12	12	0	3	2	10	Y	
Tokaanu Power Station Tailrace Canal at SH41 Bridge Over Canal	12	12	12	12	11 <sup>1</sup>	12	12	-	12	Y	12	12	12	12	7 <sup>1</sup>	6	5	-	12	Y
Tokaanu Stm at Off SH41 Turangi	8	12	12	12	12	0	3	-	12	Y	0	12	12	12	7	0	0	-	12	Y
Waihaha River at SH32	12	12	12	12	12	11	12	11	12	Y	12	12	10	12	11	0	0	2	10	Y
Waitahanui River at Blake Rd	12	12	12	12	12	0	8	11	12	Y	11	12	8	12	10	0	0	0	11	Y
Whangamata Stm (Kinloch) at Whangamata Rd	12	12	10	12	12	0	0	-	10	Y	10	12	5	12	11	0	0	-	2	N
Whanganui Stm at Lakeside Lake Taupo T8	12	12	12	12	12	12	3	-	12	Y	12	12	8	12	11	2	0	-	6	N
Whareroa Stm (Taupo) at Lakeside Lake Taupo T9	12	12	7	12	12	11	0	-	11 <sup>1</sup>	N <sup>1</sup>	11	12	0	12	11	0	0	-	1 <sup>1</sup>	N <sup>1</sup>

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 <23/100 ml or the excellent guideline of <23/100 ml for recreational use.

# References

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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 <sup>3</sup>	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 <sup>3</sup>	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 <sup>3</sup>	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 <sup>1</sup>	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 <sub>4</sub> -N	Ammoniacal Nitrogen (Total)	Filtration, Phenol/Hypochlorite Colorimetry. Discrete analyser. APHA method 4500-NH <sub>3</sub> F (modified).
NNN	Nitrite/Nitrate Nitrogen	Automated Cadmium reduction. Flow injection analyser. APHA method 4500 – NO <sub>3</sub> -I (modified).
pH	pH	Lab Meter @ 25°C. APHA method 4500-H <sup>+</sup> 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 <sub>org</sub> 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

<sup>1</sup> 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, 22<sup>nd</sup> Edition, 2012, APHA, AWWA, WEF

